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1887

1887.

(SECOND SESSION.)

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NEW SOUTH WALES.

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VOTES

AND

PROCEEDINGS

OF THE

LEGISLATIVE ASSEMBLY

DURING THE SECOND SESSION

OF

1887,

WITH THE VARIOUS DOCUMENTS CONNECTED THEREWITH.

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IN FIVE VOLUMES.  
VOL. V.

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SYDNEY :

CHARLES POTTER, GOVERNMENT PRINTER, PHILLIP-STREET.

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LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

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SECOND SESSION, 1887.

IN FIVE VOLUMES.  
(With Supplementary Cover containing Plans.)

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BLUE BOOK

FOR THE YEAR

1886,

COMPILED FROM OFFICIAL RETURNS IN THE OFFICE OF THE  
GOVERNMENT STATISTICIAN

Presented to Parliament by Command.



SYDNEY:

BY AUTHORITY CHARLES POTTER, GOVERNMENT PRINTER, PHILLIP STREET.

1887.

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NEW SOUTH WALES.

BLUE BOOK,  
1886.

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Governors, Parliaments, &c.

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Captain A. Phillip, R.N. ....	26 January, 1788 ...	10 December, 1792.
Captain F. Grose (Lieutenant-Governor) .....	11 December, 1792 ...	12 December, 1794.
Captain Paterson, New South Wales Corps (Lieutenant-Governor) .....	13 December, 1794 ...	1 September, 1795.
Captain Hunter, R.N. ....	7 September, 1795 ...	27 September, 1800.
Captain P. G. King, R.N.....	28 September, 1800 ...	12 August, 1806.
Captain W. Bligh, R.N. ....	13 August, 1806 ...	26 January, 1808.
During Governor Bligh's suspension the Government was successively administered by—		
Lieutenant-Colonel G. Johnstone .....	} All of the New South Wales Corps, afterwards } 102nd Regiment .....	26 January, 1808 ... 28 December, 1809.
Lieutenant-Colonel Foveaux .....		
Colonel William Paterson .....		
Major-General L. Macquarie .....	1 January, 1810 ...	1 December, 1821.
Major-General Sir T. Brisbane, K.C.B. ....	1 December, 1821 ...	1 December, 1825.
Colonel Stewart, 3rd Regiment or Buffs (Acting Governor) .....	6 December, 1825 ...	18 December, 1825.
Lieutenant-General R. Darling .....	19 December, 1825 ...	21 October, 1831.
Colonel Lindsay, C.B. (Acting Governor) .....	22 October, 1831 ...	2 December, 1831.
Major-General Sir Richard Bourke, K.C.B. ....	3 December, 1831 ...	5 December, 1837.
Lieutenant-Colonel K. Snodgrass (Acting Governor) .....	6 December, 1837 ...	23 February, 1838.
Sir George Gipps .....	24 February, 1838 ...	11 July, 1846.
Sir Maurice O'Connell ..	12 July, 1846 ...	2 August, 1846.
Sir Charles A. Fitz Roy .....	3 August, 1846 ...	17 January, 1855.
Sir William Thomas Denison, K.C.B. ....	20 January, 1855 ...	22 January, 1861.
Lieutenant-Colonel John F. Kempt (Administrator) .....	23 January, 1861 ...	21 March, 1861.
The Right Honorable Sir John Young, K.C.B., G.C.M.G. {	Administrator .....	22 March, 1861 ... 15 May, 1861.
	Governor-in-Chief .....	16 May, 1861 ... 24 December, 1867.
Sir Trevor Chute, K.C.B. (Administrator) .....	25 December, 1867 ...	7 January, 1868.
Right Honorable the Earl of Belmore (P.C.) .....	8 January, 1868 ...	22 February, 1872.
Sir Alfred Stephen, Knt., C.B. (Administrator) .....	23 February, 1872 ...	2 June, 1872.
Sir Hercules George Robert Robinson, G.C.M.G., Governor-in-Chief .....	3 June, 1872 ...	19 March, 1879.
Sir Alfred Stephen, K.C.M.G., C.B. (Lieutenant-Governor) .....	20 March, 1879 ...	3 August, 1879.
The Right Honorable Sir Augustus William Frederick Spencer Loftus, P.C., G.C.B. (commonly called Lord Augustus Loftus) ... ..	4 August, 1879 ...	9 November, 1885.
Sir Alfred Stephen, G.C.M.G., C.B. (Lieutenant-Governor).....	10 November, 1885 ...	11 December, 1885.
The Right Honourable Charles Robert Baron Carrington, P.C., G.C.M.G.....	12 December, 1885 ...	(Still in office.)

## NEW SOUTH WALES—1886.

3.

## PARLIAMENTS.

RETURN showing the NUMBER OF PARLIAMENTS since the establishment of RESPONSIBLE GOVERNMENT, when opened for the DISPATCH OF BUSINESS, and DISSOLUTION OF SAME; also, the NUMBER OF SESSIONS in each Parliament.

**FIRST PARLIAMENT.**

Opened, 22nd May, 1856.....Dissolved, 19th December, 1857.

SESSION 1.—(1856-7.)

22nd May, 1856, to 18th March, 1857.

SESSION 2.—(1857.)

11th August, 1857, to 18th December, 1857.

**SECOND PARLIAMENT.**

Opened, 23rd March, 1858.....Dissolved, 11th April, 1859.

SESSION 1.—(1858.)

23rd March, 1858, to 26th November, 1858.

SESSION 2.—(1858-9.)

8th December, 1858, to 9th April, 1859.

**THIRD PARLIAMENT.**

Opened, 30th August, 1859.....Dissolved, 10th November, 1860.

SESSION 1.—(1859-60.)

30th August, 1859, to 4th July, 1860.

SESSION 2.—(1860.)

25th September, 1860, to 8th November, 1860.

**FOURTH PARLIAMENT.**

Opened, 10th January, 1861.....Dissolved, 10th November, 1864.

SESSION 1.—(1861.)

10th January, 1861, to 11th May, 1861.

SESSION 2.—(1861-2.)

3rd September, 1861, to 20th January, 1862.

SESSION 3.—(1862.)

27th May, 1862, to 20th December, 1862.

SESSION 4.—(1863-4.)

23rd June, 1863, to 22nd April, 1864.

SESSION 5.—(1864.)

18th October, 1864, to 9th November, 1864.

**FIFTH PARLIAMENT.**

Opened, 24th January, 1865.....Dissolved, 15th November, 1869.

SESSION 1.—(1865.)

24th January, 1865, to 21st June, 1865.

SESSION 2.—(1865-6.)

24th October, 1865, to 7th April, 1866.

SESSION 3.—(1866.)

24th July, 1866, to 22nd December, 1866.

SESSION 4.—(1867-8.)

2nd July, 1867, to 27th April, 1868.

SESSION 5.—(1868-9.)

13th October, 1868, to 1st April, 1869.

SESSION 6.—(1869.)

28th September, 1869, to 13th November, 1869.

**SIXTH PARLIAMENT.**

Opened, 27th January, 1870.....Dissolved, 3rd February, 1872.

SESSION 1.—(1870.)

27th January, 1870, to 7th May, 1870.

SESSION 2.—(1870-1.)

11th August, 1870, to 22nd June, 1871.

SESSION 3.—(1871-2.)

14th November, 1871, to 1st February, 1872.

**SEVENTH PARLIAMENT.**

Opened, 30th April, 1872.....Dissolved, 28th November, 1874.

SESSION 1.—(1872.)

30th April, 1872, to 13th August, 1872.

SESSION 2.—(1872-3.)

5th November, 1872, to 25th April, 1873.

SESSION 3.—(1873-4.)

9th September, 1873, to 25th June, 1874.

SESSION 4.—(1874.)

3rd November, 1874, to 26th November, 1874.

**EIGHTH PARLIAMENT.**

Opened, 27th January, 1875.....Dissolved, 12th October, 1877.

SESSION 1.—(1875.)

27th January, 1875, to 11th August, 1875.

SESSION 2.—(1875-6.)

16th November, 1875, to 22nd August, 1876.

SESSION 3.—(1876-7.)

12th December, 1876, to 11th October, 1877.

**NINTH PARLIAMENT.**

Opened, 27th November, 1877.....Dissolved, 9th November, 1880.

SESSION 1.—(1877-8.)

27th November, 1877, to 21st May, 1878.

SESSION 2.—(1878-9.)

10th September, 1878, to 24th July, 1879.

SESSION 3.—(1879-80.)

28th October, 1879, to 13th July, 1880.

**TENTH PARLIAMENT.**

Opened, 15th December, 1880.....Dissolved, 23rd November, 1882.

SESSION 1.—(1880-81.)

15th December, 1880, to 6th April, 1881.

SESSION 2.—(1881.)

5th July, 1881, to 20th December, 1881.

SESSION 3.—(1882.)

22nd August, 1882, to 21st November, 1882.

**ELEVENTH PARLIAMENT.**

Opened, 3rd January, 1883.....Dissolved, 7th October, 1885.

SESSION 1.—(1883.)

3rd January, 1883, to 2nd May, 1883.

SESSION 2.—(1883.)

29th May, 1883, to 1st June, 1883.

SESSION 3.—(1883-4.)

9th October, 1883, to 1st November, 1884.

SESSION 4.—(1884.)

19th November, 1884, to 27th November, 1884.

SESSION 5.—(1885.)

17th March, 1885, to 26th March, 1885.

SESSION 6.—(1885.)

8th September, 1885, to 1st October, 1885.

**TWELFTH PARLIAMENT.**

Opened, 17th November, 1885.....Dissolved, 26th January, 1887.

SESSION 1.—(1885-6.)

17th November, 1885, to 25th October, 1886.

SESSION II.—(1887.)

18th to 25th January, 1887.

## MINISTRIES.

RETURN showing the different MINISTRIES since the establishment of RESPONSIBLE GOVERNMENT; also, Date of Appointment to and Retirement from Office.

Name.	Office.	From	To	Remarks.
<b>DONALDSON MINISTRY—No. 1.</b>				
Stuart A. Donaldson <sup>1</sup> .....	Colonial Secretary .....	} 6 June, 1856 ...	25 Aug., 1856.	Also Secretary for Lands and Works during same period. Representative of Government in Legislative Council.
Thomas Holt .....	Colonial Treasurer .....			
William M. Manning <sup>1</sup> .....	Attorney-General .....			
John Bayley Darvall <sup>1</sup> .....	Solicitor-General .....			
George R. Nichols .....	Auditor-General .....			
William C. Mayne .....	.....	.....	.....	
<b>COWPER MINISTRY—No. 2.</b>				
Charles Cowper .....	Colonial Secretary .....	} 26 Aug., 1856... 12 Sept., 1856...	2 Oct., 1856. ... Ditto .....	Also Auditor-General, from 26 August to 17 September. Representative of Government in Legislative Council.
Robert Campbell .....	Colonial Treasurer .....			
Terence A. Murray .....	Secretary for Lands and Works .....			
James Martin .....	Attorney-General .....			
Alfred J. P. Lutwyche .....	Solicitor-General .....			
<b>PARKER MINISTRY—No. 3.</b>				
Henry W. Parker .....	Colonial Secretary .....	} 3 Oct., 1856 ...	7 Sept., 1857. Ditto .....	Representative of Government in Legislative Council—formerly Colonial Secretary.
Stuart A. Donaldson .....	Colonial Treasurer .....			
John Hay .....	Secretary for Lands and Works .....			
William M. Manning .....	Attorney-General .....			
John Bayley Darvall ...	Solicitor-General .....			
Edward Wise .....	Attorney-General .....			
Edward Deas-Thomson, C.B. <sup>2</sup> .....	Solicitor-General .....	26 May, 1857... Ditto .....	7 Sept., 1857. Ditto.	
<b>COWPER MINISTRY—No. 4.</b>				
Charles Cowper .....	Colonial Secretary .....	} 7 Sept., 1857... Ditto .....	26 Oct., 1859. 3 Jan., 1858.	Deceased.
Richard Jones .....	Colonial Treasurer .....			
Robert Campbell .....	Colonial Treasurer .....	} 4 Jan., 1858... 18 April, 1859...	30 Mar., 1859... 26 Oct., 1859.	
Elias C. Weckes .....	Secretary for Lands and Public Works .....			
Terence A. Murray .....	Secretary for Lands and Public Works .....	} 7 Sept., 1857... 13 Jan., 1858...	12 Jan., 1858. 30 Sept., 1859.	
John Robertson .....	Secretary for Lands .....			
John Robertson .....	Secretary for Public Works .....	} 1 Oct., 1859... 7 Sept., 1857...	26 Oct., 1859. 8 Nov., 1858.	
Edward Flood .....	Secretary for Public Works .....			
James Martin .....	Attorney General .....	} 7 Sept., 1857... 15 Nov., 1858...	Ditto. 28 Feb., 1859.	
Alfred J. P. Lutwyche .....	Attorney General .....			
Lyttleton H. Bayley .....	Attorney General .....	} 1 Mar., 1859... 7 Sept., 1857...	26 Oct., 1859. .....	Appointed Attorney-General
Alfred J. P. Lutwyche .....	Attorney General .....			
William Bede Dalley .....	Solicitor-General .....	} 15 Nov., 1858... 21 Feb., 1859...	11 Feb., 1859... 26 Oct., 1859....	Re-appointed 3 November, 1859. Representative of Government in Legislative Council.
John F. Hargrave .....	Solicitor-General .....			
John Dickson .....	.....			
<b>FORSTER MINISTRY—No. 5.</b>				
William Forster .....	Colonial Secretary .....	} 27 Oct., 1859... Ditto .....	8 Mar., 1860... 13 Feb., 1860....	Representative of Government in Legislative Council. Appointed Puisne Judge.
Saul Samuel .....	Colonial Treasurer .....			
John Black .....	Secretary for Lands .....			
Geoffrey Eagar .....	Secretary for Public Works .....			
Edward Wise .....	Attorney-General .....	} 21 Feb., 1860... 3 Nov., 1859...	8 Mar., 1860... 8 Mar., 1860....	Appointed Attorney-General, 2 April, 1860. (Robertson Ministry.)
Sir W. M. Manning, Knt. .....	Attorney-General .....			
John F. Hargrave .....	Solicitor-General .....			

<sup>1</sup> Appointed Members of the Executive Council on the 29th April, 1856; but they did not take office until the 6th June, as some preliminary arrangements were necessary before they vacated their seats as Members of the Legislative Assembly. Mr. Alexander Warren was also appointed a Member of the Executive Council on the 21st May, 1856, but resigned without entering upon the duties of the office. <sup>2</sup> Vice-President of the Executive Council.

## NEW SOUTH WALES—1886.

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Name.	Office.	From	To	Remarks.
<b>MINISTRIES—continued.</b>				
<b>ROBERTSON MINISTRY—No. 6. (To 9 January, 1861.)</b>				
John Robertson .....	Secretary for Lands.....	} 9 Mar., 1860... } 2 April, 1860... }	} Merged into } Cowper } Ministry.	Premier to 9 January, 1861.  Representative of Government in Legislative Council.
Charles Cowper .....	Colonial Secretary .....			
Elias C. Weekes .....	Colonial Treasurer .....			
William M. Arnold.....	Secretary for Public Works			
John F. Hargrave .....	Attorney-General.....			
<b>COWPER MINISTRY—No. 7. (From 10 January, 1861.)</b>				
Charles Cowper .....	Colonial Secretary .....	9 Mar., 1860...	15 Oct., 1863 ...	Premier from 10 January, 1861.
Elias Carpenter Weekes succeeded by Thomas Ware Smart ... }	Colonial Treasurer .....	9 Mar., 1860...	20 Mar., 1863.	
John Robertson .....	Secretary for Lands.....	21 Mar., 1863...	15 Oct., 1863.	Appointed Solicitor-General.
William M. Arnold.....	Secretary for Public Works	9 Mar., 1860...	15 Oct., 1863.	
John F. Hargrave .....	Attorney-General.....	9 Mar., 1860...	15 Oct., 1863.	
John F. Hargrave succeeded by John Bayley Darvall ... }		2 April, 1860...	31 July, 1863 ...	
John Bayley Darvall ... }	Solicitor-General .....	1 Aug., 1863...	15 Oct., 1863.	
John F. Hargrave .....		1 Aug., 1863...	15 Oct., 1863 ...	
Charles Cowper, junr.....	Clerk of the Executive Council.	.....	.....	Representative of Government in Legislative Council. A Member of the Government, without a Seat in the Cabinet.
<b>MARTIN MINISTRY—No. 8.</b>				
James Martin .....	Attorney-General.....	} 16 Oct., 1863... }	} 2 Feb., 1865. }	Representative of Government in Legislative Council—formerly Attorney-General.
William Forster .....	Colonial Secretary .....			
Geoffrey Eagar .....	Colonial Treasurer .....			
Peter Faucett .....	Solicitor-General .....			
John Bowie Wilson.....	Secretary for Lands .....			
Arthur T. Holroyd .....	Secretary for Public Works			
John Hubert Plunkett <sup>2</sup> ...	.....	.....	.....	
<b>COWPER MINISTRY—No. 9.</b>				
Charles Cowper <sup>2</sup> .....	Colonial Secretary .....	3 Feb., 1865...	21 Jan., 1866.	Appointed Secretary for Public Works.
Thomas Ware Smart ... succeeded by Saul Samuel .....	Colonial Treasurer .....	3 Feb., 1865...	19 Oct., 1865 ...	
John Hubert Plunkett... succeeded by Marshall Burdekin .....		Attorney-General.....	20 Oct., 1865...	3 Jan., 1866 ...
John Hubert Plunkett... succeeded by John Bayley Darvall ... }	.....		4 Jan., 1866...	21 Jan., 1866.
John Hubert Plunkett... succeeded by John Hubert Plunkett... }		.....	3 Feb., 1865...	20 June, 1865.
John Hubert Plunkett... succeeded by John Hubert Plunkett... }	.....		25 Aug., 1865...	21 Jan., 1866 ...
John Fletcher Hargrave... John Robertson .....		Solicitor-General .....	3 Feb., 1865...	21 June, 1865.
John Robertson .....	Secretary for Lands.....	3 Feb., 1865...	19 Oct., 1865.	
William M. Arnold..... succeeded by John Robertson .....		.....	20 Oct., 1865...	31 Oct., 1865 ...
John Robertson .....	Secretary for Public Works		1 Jan., 1866...	21 Jan., 1866.
William M. Arnold..... succeeded by Thomas Ware Smart ... }		.....	3 Feb., 1865...	19 Oct., 1865 ...
Thomas Ware Smart ... James A. Cunneen .....	Postmaster-General.....		20 Oct., 1865...	21 Jan., 1866.
James A. Cunneen .....	.....	1 Oct., 1865...	21 Jan., 1866 ...	A Member of the Government without a Seat in the Cabinet.
<b>MARTIN MINISTRY—No. 10.</b>				
The Honorable James Martin, Q.C. <sup>2</sup>	Attorney-General.....	22 Jan., 1866...	26 Oct., 1868.	Resigned.
Henry Parkes .....	Colonial Secretary .....	22 Jan., 1866...	17 Sept., 1868 ...	
Henry Parkes succeeded by Joseph Docker .....		.....	28 Sept., 1868...	26 Oct., 1868 ...
Joseph Docker .....	Colonial Treasurer .....		} 22 Jan., 1866... }	} 26 Oct., 1868. }
Geoffrey Eagar .....	Secretary for Lands .....			
John Bowie Wilson.....	Secretary for Public Works	} 22 Jan., 1866... }	} 26 Oct., 1868. }	.....
James Byrnes .....	Solicitor-General .....			
Robert Macintosh Isaacs... Joseph Docker .....	Postmaster-General.....	22 Jan., 1866...	27 Sept., 1868 ...	Appointed Colonial Secretary. Representative of Government in the Legislative Council.
Joseph Docker succeeded by Atkinson Alfd. Pk. Tighe }		.....	29 Sept., 1868...	

<sup>1</sup> From which date Mr. Cowper took his Seat in the Legislative Assembly as Premier.    <sup>2</sup> Vice-President of the Executive Council.

Name	Office.	From	To	Remar
<b>MINISTRIES—continued.</b>				
<b>ROBERTSON MINISTRY—No. 11.</b>				
John Robertson .....	Colonial Secretary .....	27 Oct., 1868 ...	12 Jan., 1870 ...	Resigned.
Saul Samuel .....	Colonial Treasurer .....	27 Oct., 1868 ...	} See Cowper Ministry, No. 12.	A Member of the Government, without a Seat in the Cabinet. In receipt of a Pen- sion of £800 per annum, but not drawn during tenure of office.
William Forster .....	Secretary for Lands .....	27 Oct., 1868 ...		
John Sutherland .....	Secretary for Public Works .....	27 Oct., 1868 ...		
Sir William Montagu Manning, Knt., Q.C.	Attorney-General .....	31 Oct., 1868 ...		
Joshua Frey Josephson } succeeded by	} Solicitor-General .....	27 Oct., 1868 ...	9 Sept., 1869 ...	Appointed District Court Judge.
Julian Emanuel Salomons }		18 Dec., 1869 ...	} See Cowper Ministry, No. 12.	Representative of Government in Legislative Council, with a Seat in the Cabinet.
Daniel Egan .....	Postmaster-General .....	27 Oct., 1868 ...		
Robert Owen .....	.....	27 Oct., 1868 ...		
<b>COWPER MINISTRY—No. 12.</b>				
Charles Cowper <sup>1</sup> .....	Colonial Secretary .....	13 Jan., 1870 ...	15 Dec., 1870 ...	Appointed Agent-General for the Colony, 6 December, 1870, but held office as Coloni- al Secretary till 15 December, 1870.
Saul Samuel .....	Colonial Treasurer .....	27 Oct., 1868 ...	15 Dec., 1870.	Resigned.
William Forster .....	} Secretary for Lands.....	27 Oct., 1868 ...	14 April, 1870 ...	
John Robertson .....		} Secretary for Public Works	13 Aug., 1870 ...	15 Dec., 1870.
John Sutherland .....	27 Oct., 1868 ...		15 Dec., 1870.	
Sir William Montagu Manning, Knt., Q.C.	Attorney-General.....		31 Oct., 1868 ...	15 Dec., 1870 ...
Julian Emanuel Salomons..	Solicitor-General .....	18 Dec., 1869 ...	15 Dec., 1870.	Representative of the Government in the Legislative Council with a seat in the Cabinet from 11 August, 1870, to 15 December, 1870.
Daniel Egan .....	Postmaster-General .....	27 Oct., 1868 ...	16 Oct., 1870 ...	Deceased.
Robert Owen .....	.....	27 Oct., 1868 ...	1 Aug., 1870 ...	Representative of the Government in the Legislative Council, with a Seat in the Cabinet. Resigned both offices, 1 August, 1870.
<b>MARTIN MINISTRY—No. 13.</b>				
The Honorable Sir James Martin, Knt., Q.C.	Attorney-General .....	} 16 Dec., 1870 ...	} 13 May, 1872.	Representative of Government in the Legis- lative Council.
John Robertson .....	Colonial Secretary .....			
George William Lord .....	Colonial Treasurer .....			
The Honorable John Bowie Wilson.	Secretary for Lands.....			
James Byrnes .....	Secretary for Public Works			
William Charles Windeyer	Solicitor-General .....			
The Honorable Joseph Docker.	Postmaster-General .....			
<b>PARKES MINISTRY—No. 14.</b>				
Henry Parkes .....	Colonial Secretary .....	14 May, 1872 ...	8 Feb., 1875.	Resigned.
William Richman Pid- dington .....	} Colonial Treasurer .....	14 May, 1872 ...	.....	
George Alfred Lloyd ...		} Secretary for Lands.....	5 Dec., 1872 ...	} 8 Feb., 1875.
James Squire Farnell .....	14 May, 1872 ...			
Robert Palmer Abbott.....	Secretary for Mines .....		27 July, 1874 ...	
John Sutherland .....	Secretary for Public Works	15 May, 1872 ...	19 Nov., 1873 ...	Resigned.
Edward Butler.....	} Attorney-General.....	15 May, 1872 ...	} 8 Feb., 1875.	Without a Seat in the Cabinet. From 9 December, 1873.
Joseph George Long Innes		20 Nov., 1873 ...		
George Wigram Allen.....	Minister of Justice and Public Instruction.	9 Dec., 1873 ...		
Joseph George Long Innes	Solicitor-General .....	14 May, 1872 ...	19 Nov., 1873 ...	Representative of the Government in the Legislative Council. Appointed Attorney- General.
George Alfred Lloyd ...	} Postmaster-General .....	14 May, 1872 ...	4 Dec., 1872 ...	Appointed Colonial Treasurer.
Saul Samuel, C.M.G. ...		5 Dec., 1872 ...	} 8 Feb., 1875 {	} Vice-President of the Executive Council and Representative of Government in Legis- lative Council.
Saul Samuel, C.M.G. ....	.....	14 May, 1872 ...		

<sup>1</sup> Vice-President of the Executive Council from 11 January, 1870.<sup>2</sup> Vice-President of the Executive Council.

## NEW SOUTH WALES—1886.

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Name.	Office.	From	To	Remarks.
<i>MINISTRIES—continued.</i>				
<b>ROBERTSON MINISTRY—No. 15.</b>				
John Robertson .....	Colonial Secretary .....	9 Feb., 1875...	21 Mar., 1877.	Appointed Agent-General for the Colony, resident in England.
William Forster .....	Colonial Treasurer .....	9 Feb., 1875...	7 Feb., 1876...	
succeeded by Alexander Stuart.....		Minister of Justice and Public Instruction.	8 Feb., 1876...	21 Mar., 1877.
Joseph Docker.....	Secretary for Lands .....		9 Feb., 1875...	.....
Thomas Garrett .....		Secretary for Public Works	6 Feb., 1877..	21 Mar., 1877.
succeeded by Ezekiel Alexander Baker }	Attorney-General .....		9 Feb., 1875...	21 Mar., 1877.
John Lackey.....	Secretary for Mines.....	John Lucas .....		
William Bede Dalley .....	Postmaster-General.....			
<b>PARKES MINISTRY—No. 16.</b>				
Henry Parkes .....	Colonial Secretary .....	} 22 Mar., 1877...	16 Aug., 1877.	Member of the Government without a Seat in the Executive Council. Representative of the Government in the Legislative Council.
William Richman Piddington.	Colonial Treasurer .....			
Francis Bathurst Suttor ...	Minister of Justice and Public Instruction.			
Richard Driver.....	Secretary for Lands.....			
James Hoskins .....	Secretary for Public Works			
William Charles Windeyer	Attorney-General.....			
George Alfred Lloyd .....	Secretary for Mines.....			
Saul Samuel, C.M.G. ....	Postmaster-General.....			
<b>ROBERTSON MINISTRY—No. 17.</b>				
Sir John Robertson, K.C.M.G.	Colonial Secretary .....	} 17 Aug., 1877...	17 Dec., 1877.	Vice-President of the Executive Council; Representative of the Government in the Legislative Council. Resigned.
William Alexander Long..	Colonial Treasurer .....			
Joseph Docker.....	Minister of Justice and Public Instruction.			
Thomas Garrett .....	Secretary for Lands.....	17 Aug., 1877...	19 Nov., 1877...	Appointed Secretary for Lands.
succeeded by Ezekiel Alexander Baker }		Secretary for Public Works	20 Nov., 1877.	
Edward Combes .....	Attorney-General.....		17 Aug., 1877.	} 19 Nov., 1877...
William Bede Dalley .....	Secretary for Mines.....	17 Aug., 1877...	} 17 Dec., 1877.	
Ezekiel Alexander Baker }		Postmaster-General.....		20 Nov., 1877...
succeeded by Archibald Hamilton Jacob.				
John Davies.....				
<b>FARNELL MINISTRY—No. 18.</b>				
James Squire Farnell .....	Secretary for Lands.....	} 18 Dec., 1877...	20 Dec., 1878.	In receipt of a pension of £426 13s. 4d. per annum, but not drawn during tenure of office.
Michael Fitzpatrick .....	Colonial Secretary .....			
Henry Emanuel Cohen ...	Colonial Treasurer .....			
Joseph Leary .....	Minister of Justice and Public Instruction.			
John Sutherland .....	Secretary for Public Works			
William John Foster .....	Attorney-General.....			
William Henry Suttor ...	Secretary for Mines.....			
John Fitzgerald Burns ...	Postmaster-General.....			
NOTE.—John Marks, M.L.C., was appointed on the 14th January, 1878, Vice-President of the Executive Council and Representative of the Government in the Legislative Council.				

Name.	Office.	From	To	Remarks.
<b>MINISTRIES—continued.</b>				
<b>PARKES MINISTRY—No. 19.</b>				
Sir Henry Parkes, K.C.M.G. ....	Colonial Secretary.....	21 Dec., 1878...	4 Jan., 1883...	Absent from the Colony on account of ill-health. Also Secretary for Lands.
Sir John Robertson, K.C.M.G. (Acting). ...		29 Dec., 1881...	19 Aug., 1882...	
James Watson .....	Colonial Treasurer .....	21 Dec., 1878...	4 Jan., 1883.	In consequence of the passing of the "Public Instruction Act of 1880," the functions of this office were divided by the appointment of two Ministers.
Francis Bathurst Suttor...	Minister of Justice and Public Instruction.	21 Dec., 1878...	30 April, 1880...	
Sir John Robertson, K.C.M.G. ....	Vice-President of the Executive Council ..... Representative of the Government in the Legislative Council..... Minister of Public Instruction.	21 Dec., 1878 ...	10 Nov., 1881.	
Francis Bathurst Suttor...	Minister of Public Instruc- tion.	1 May, 1880...		
Francis Bathurst Suttor succeeded by Sir Joseph George Long Innes, Knt.....	Minister of Justice .....	14 Nov., 1881...	4 Jan., 1883.	Appointed Postmaster-General.
William John Foster .....		1 May, 1880...	10 Aug., 1880...	
William Charles Windeyer succeeded by Robert Wisdom .....	Attorney-General .....	11 Aug., 1880...	13 Oct., 1881...	Appointed a Judge of the Supreme Court.
James Hoskins.....		14 Oct., 1881 ...	4 Jan., 1883.	
Sir John Robertson, K.C.M.G. ....	Secretary for Lands .....	21 Dec., 1878...	10 Aug., 1879...	Appointed a Temporary Judge of the Supreme Court.
John Lackey .....		13 Aug., 1879...	4 Jan., 1883.	
Saul Samuel, C.M.G. ....	Secretary for Public Works	21 Dec., 1878...	28 Dec., 1881...	Resigned.
Francis Bathurst Suttor...		29 Dec., 1881...	4 Jan., 1883.	
Stephen Campbell Brown succeeded by Alexander Campbell .....	Postmaster-General .....	21 Dec., 1878...	10 Aug., 1880...	Appointed Agent-General for the Colony. -
Ezekiel Alexander Baker...		21 Dec., 1878...	13 Aug., 1881...	
Francis Bathurst Suttor... (Acting). ...	Secretary for Mines .....	30 Aug., 1881...	11 Oct., 1881...	Also Postmaster-General.
Arthur Renwick, M.D. ...		12 Oct., 1881 ...	11 Oct., 1881...	
Frederick Matthew Darley, Q.C. ....	Vice-President of the Executive Council ... Representative of the Government in the Legislative Council ...	14 Nov., 1881...	4 Jan., 1883.	
<b>STUART MINISTRY—No. 20.</b>				
Alexander Stuart.....	Colonial Secretary .....	5 Jan., 1883...	6 Oct., 1885...	Absent from the Colony on account of ill-health.
George Richard Dibbs ...	Colonial Treasurer .....	5 Jan., 1883...	6 Oct., 1885...	Charged with the duties of Secretary for Public Works during the illness of Mr. Wright, from 10 June, 1884.
George Houston Reid.....	Minister of Public In- struction.	5 Jan., 1883...	6 Mar., 1884...	Resigned.
William Joseph Trickett...		2 May, 1884...	6 Oct., 1885...	
Henry Emanuel Cohen ...	Minister of Justice .....	5 Jan., 1883...	6 Oct., 1885...	A Member of the Legislative Council. Repre- sentative of the Government in the Legis- lative Council. Charged also with the duties of Colonial Secretary during the illness of Mr. Stuart, from 7th October, 1884, to 11th May, 1885.
William Bede Dalley, Q.C.	Attorney-General .....	5 Jan., 1883...	6 Oct., 1885...	
James Squire Farnell .....	Secretary for Lands.....	5 Jan., 1883 ...	6 Oct., 1885...	
Henry Copeland .....	Secretary for Public Works .....	5 Jan., 1883...	28 Mar., 1883...	Resigned.
Alexander Stuart..... (Acting). ...		29 Mar., 1883...	27 May, 1883...	
Francis Augustus Wright..	Postmaster-General .....	28 May, 1883...	6 Oct., 1885...	Appointed Secretary for Public Works.
Francis Augustus Wright..		5 Jan., 1883...	27 May, 1883...	
William Joseph Trickett...	Minister of Public Instruc- tion.	28 May, 1883...	1 May, 1884...	Appointed Minister of Public Instruction.
James Norton ...		28 May, 1883...	1 May, 1884...	
Joseph Palmer Abbott ...	Secretary for Mines.....	2 May, 1884...	6 Oct., 1885...	A Member of the Legislative Council.
Sir Patrick Alfred Jennings, K.C.M.G.	Vice-President of the Executive Council.	5 Jan., 1883...	6 Oct., 1885...	
		5 Jan., 1883...	31 July, 1883...	Resigned.

## NEW SOUTH WALES—1886.

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Name.	Office.	From.	To	Remarks.
<b>MINISTRIES—continued.</b>				
<b>DIBBS MINISTRY—No. 21.</b>				
George Richard Dibbs ... succeeded by Sir Patrick Alfred Jennings, K.C.M.G. ....	Colonial Secretary.....	{ 7 Oct., 1885 ... 10 Oct., 1885 ...	9 Oct., 1885 ... 21 Dec., 1885 ...	Premier. Appointed Colonial Treasurer.
George Richard Dibbs ... William Joseph Trickett...				
James Squire Farnell ..... succeeded by Thomas Michael Slattery	Minister of Justice .....	{ 7 Oct., 1885 ... 2 Nov., 1885 ...	9 Oct., 1885 ... 21 Dec., 1885.	A Member of the Legislative Council. Representative of the Government in the Legislative Council. Resigned.
John Henry Want ..... Joseph Palmer Abbott ...				
Henry Septimus Badgery succeeded by William John Lyne.....	Secretary for Public Works.	{ 7 Oct., 1885 ... 2 Nov., 1885 ...	31 Oct., 1885 ... 21 Dec., 1885.	Resigned.
John See .....				
Francis Augustus Wright succeeded by George Thornton.....	Secretary for Mines .....	{ 7 Oct., 1885 ... 13 Nov., 1885 ...	17 Oct., 1885 ... 21 Dec., 1885 ...	Resigned.  A Member of the Legislative Council. Representative of the Government in the Legislative Council.
<b>ROBERTSON MINISTRY—No. 22.</b>				
Sir John Robertson, K.C.M.G.	Colonial Secretary .....	{ 22 Dec., 1885 ...	25 Feb., 1886 ...	Premier.
John Fitzgerald Burns ... John Henry Young.....	Colonial Treasurer ..... Minister of Public Instruc- tion.			
Louis Francis Heydon ... George Bowen Simpson ... Gerald Spring .....	Minister of Justice ..... Attorney-General .....	{ 22 Dec., 1885 ...	4 Feb., 1886 ...	Resigned. A Member of the Legislative Council. Representative of the Government in the Legislative Council.
Jacob Garrard .....	Secretary for Lands .....			
Daniel O'Connor .....	Secretary for Public Works	{ 22 Dec., 1885 ...	25 Feb., 1886 ...	
Robert Matteson Vaughn	Postmaster-General..... Secretary for Mines.....			
<b>JENNINGS MINISTRY—No. 23.</b>				
George Richard Dibbs ... Sir Patrick Alfred Jen- nings, K.C.M.G.	Colonial Secretary .....	{ 26 Feb., 1886 ...	Still in office ...	Premier.
Arthur Renwick, M.D....	Colonial Treasurer .....			
James Patrick Garvan ... John Henry Want .....	Minister of Public In- struction.	{ 26 Feb., 1886 ...	Still in office .....	
Henry Copeland .....	Minister of Justice .....			
William John Lyne .....	Attorney-General..... Secretary for Lands.....	{ 26 Feb., 1886 ...	23 Dec., 1886 ...	Resigned.
Francis Bathurst Sutor... James Fletcher .....	Secretary for Public Works. Postmaster-General.....			
Charles Kinnaird Mac- kellar, M.B., C.M.	Secretary for Mines.....	{ 24 Dec., 1886 ...	Still in office.....	A Member of the Legislative Council. Representative of the Government in the Legislative Council.



## EXECUTIVE COUNCIL.

RETURN of MEMBERS composing the EXECUTIVE COUNCIL during the Year 1886.

Name.	From	To	Whether holding any and what other Civil or Military Office.
The Right Honorable Charles Robert, Baron Carrington, P.C., G.C.M.G., Governor.	12 Dec., 1885 .....	Still in office .....	Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies, and Vice-Admiral of the same.
The Honorable Sir John Robertson, K.C.M.G.	22 Dec., 1885 .....	25 Feb., 1886 .....	Colonial Secretary.
The Honorable John F. Burns .....	22 " " .....	25 " " .....	Colonial Treasurer.
The Honorable George Bowen Simpson .....	22 " " .....	25 " " .....	Attorney-General.
The Honorable Louis F. Heydon .....	22 " " .....	25 " " .....	Minister of Justice.
The Honorable James H. Young .....	22 " " .....	25 " " .....	Minister of Public Instruction.
The Honorable Gerald Spring .....	22 " " .....	25 " " .....	Secretary for Lands.
The Honorable Jacob Garrard .....	22 " " .....	25 " " .....	Secretary for Public Works.
The Honorable Robert M. Vaughn .....	22 " " .....	25 " " .....	Secretary for Mines.
The Honorable Daniel O'Connor .....	22 " " .....	25 " " .....	Postmaster-General.
The Honorable Sir P. A. Jennings, K.C.M.G.	26 Feb., 1886 .....	Still in office .....	Colonial Treasurer.
The Honorable George R. Dibbs .....	26 " " .....	" .....	Colonial Secretary.
The Honorable John H. Want .....	26 " " .....	" .....	Attorney-General.
The Honorable James P. Garvan .....	26 " " .....	" .....	Minister of Justice.
The Honorable Arthur Renwick .....	26 " " .....	" .....	Minister of Public Instruction.
The Honorable Henry Copeland .....	26 " " .....	" .....	Secretary for Lands.
The Honorable William J. Lyne .....	26 " " .....	" .....	Secretary for Public Works.
The Honorable James Fletcher .....	26 " " .....	23 Dec., 1886 .....	Secretary for Mines.
The Honorable Francis B. Suttor .....	26 " " .....	Still in office .....	Postmaster-General.
The Honorable Charles K. Mackellar .....	26 " " .....	" .....	Representative of Government in Upper House. Secretary for Mines from 24th December, 1886.

## PRESIDENTS—LEGISLATIVE COUNCIL.

SUCCESSION of PRESIDENTS of the LEGISLATIVE COUNCIL, showing the dates on which they were appointed and ceased to hold office.

Name.	From	To
The Honorable Sir Alfred Stephen, Knt. ....	20 May, 1856 .....	28 January, 1857.
The Honorable John Hubert Plunkett, Q.C. ....	29 January, 1857 .....	6 February, 1858.
The Honorable Sir William Westbrooke Burton, Knt. ....	9 February, 1858 .....	10 May, 1861.
The Honorable William Charles Wentworth .....	24 June, 1861 .....	9 October, 1862.
The Honorable Terence Aubrey Murray .....	14 October, 1862 .....	22 June, 1873.
The Honorable Sir Terence Aubrey Murray, Knt. ....		
The Honorable John Hay .....	8 July, 1873 .....	Still holds office.
The Honorable Sir John Hay, K.C.M.G. ....		

## MEMBERS—LEGISLATIVE COUNCIL.

RETURN of MEMBERS composing the LEGISLATIVE COUNCIL in the Year 1886.

Name.	Date of Appointment.	Remarks.
The Honorable Robert Palmer Abbott .....	18 September, 1883.	
The Honorable William Adams Brodribb .....	29 December, 1881.	Deceased.
The Honorable William Busby .....	1 July, 1867.	
The Honorable William Byrnes .....	24 June, 1861.	
The Honorable Thomas Cadell .....	29 December, 1881.	Resigned.
The Honorable John Campbell .....	24 June, 1861.	Deceased.
The Honorable Alexander Campbell .....	3 June, 1864.	
The Honorable Charles Campbell .....	25 January, 1870.	
The Honorable Samuel Charles .....	31 August, 1885.	
The Honorable James Chisholm .....	17 October, 1864.	
The Honorable George Henry Cox .....	17 June, 1863.	
The Honorable John Mildred Creed .....	31 August, 1885.	
The Honorable William Bede Dalley, Q.C. ....	5 January, 1883.	
The Honorable Henry Carey Dangar .....	18 September, 1883.	
The Honorable Frederick Matthew Darley, Q.C. ....	28 September, 1868.	Resigned.
The Honorable Leopold Fane De Salis .....	14 July, 1874.	
The Honorable Alexander Dodds .....	31 August, 1885.	
The Honorable John Eales .....	10 December, 1880.	
The Honorable James Squire Farnell .....	7 October, 1885.	
The Honorable Edward Flood .....	7 October, 1879.	
The Honorable Alexander Gordon, Q.C. ....	18 September, 1883.	Resigned.
The Honorable William Grahame .....	19 January, 1875.	
The Honorable William Halliday .....	31 August, 1885.	
The Honorable Sir John Hay, K.C.M.G. ....	26 June, 1867 .....	President.
The Honorable Richard Hill .....	10 December, 1880.	
The Honorable Archibald Hamilton Jacob .....	18 September, 1883.	
The Honorable Philip Gidley King .....	10 December, 1880.	
The Honorable Edward Knox .....	29 December, 1881.	
The Honorable John Lackey .....	31 August, 1885.	
The Honorable George Lee .....	29 December, 1881.	
The Honorable William Alexander Long .....	31 August, 1885.	
The Honorable Francis Lord .....	17 October, 1864.	
The Honorable John Lucas .....	10 December, 1880.	
The Honorable John Macintosh .....	29 December, 1881.	
The Honorable Charles Kinnaird Mackellar, M.B., C.M. ....	31 August, 1885.	{ Member of the Executive Council and Representative of the Government, from 24 March, 1886.
The Honorable William Macleay .....	29 October, 1877.	
The Honorable Henry Moore .....	28 September, 1868.	
The Honorable Charles Moore .....	10 December, 1880.	
The Honorable Henry Mort .....	29 December, 1881.	
The Honorable Henry Moses .....	31 August, 1885.	
The Honorable James Henry Neale .....	18 September, 1883.	
The Honorable James Norton .....	7 October, 1879.	
The Honorable Edward David Stuart Ogilvie .....	24 November, 1863.	
The Honorable William Richman Piddington .....	7 October, 1879.	Chairman of Committees.
The Honorable John Richardson .....	28 September, 1868.	
The Honorable Richard Hutchinson Roberts .....	29 December, 1881.	
The Honorable Jeremiah Brice Rundle .....	29 December, 1881.	
The Honorable John Nagle Ryan .....	18 September, 1883.	
The Honorable George Bowen Simpson, Q.C. ....	22 December, 1885 .....	{ Attorney-General and Representative of the Government, from 23 December, 1885, to 25 February, 1886.
The Honorable John Smith .....	10 December, 1880.	
The Honorable Sir Alfred Stephen, G.C.M.G., C.B., .....	8 Mar., 1875, 8 Aug., 1879, and 16 Dec., 1885.	
The Honorable John Stewart .....	7 October, 1879.	
The Honorable Sir Alexander Stuart, K.C.M.G. ....	7 October, 1885.	Deceased.
The Honorable William Henry Suttor .....	10 December, 1880.	
The Honorable John Bligh Suttor .....	29 December, 1881.	Deceased.
The Honorable Samuel Henry Terry .....	29 December, 1881.	
The Honorable George Thornton .....	29 October, 1877.	
The Honorable John Brown Watt .....	29 October, 1874.	
The Honorable Edmund Webb .....	29 December, 1881.	
The Honorable James White .....	14 July, 1874.	

## SPEAKERS—LEGISLATIVE ASSEMBLY.

SUCCESSION of SPEAKERS of the LEGISLATIVE ASSEMBLY, and the dates on which they were elected, re-elected, and ceased to hold office.

Name.	Date when first elected.	Dates when re-elected.	Date of expiration of office.
The Honorable Sir Daniel Cooper, Knt. The Honorable Terence Aubrey Murray	22 May, 1856... 31 January, 1860...	23 March, 1858; 31 August, 1859 10 January, 1861.....	31 January, 1860—Resigned. 14 October, 1862—Appointed President of the Legislative Council.
The Honorable John Hay ..... The Honorable William Munnings Arnold	14 October, 1862... 1 November, 1865...	24 January, 1865..... 27 January, 1870; 30 April, 1872; 27 January, 1875.	31 October, 1865—Resigned. 1 March, 1875—Deceased.
The Honorable Sir George Wigram Allen, Knt. The Honorable Edmund Barton .....	23 March, 1875... 3 January, 1883...	30 March, 1875; 27 November, 1877; 15 December, 1880. 17 November, 1885 .....	23 November, 1882—Parliament dissolved. Still in office.

## LEGISLATIVE ASSEMBLY.

(Opened, 17 November, 1885. Dissolved, 26 January, 1887.)

RETURN of MEMBERS composing the LEGISLATIVE ASSEMBLY, as returned at the General Election in the month of October, 1885.

Electoral District.	Name.	Date when elected.	Remarks.
Albury .....	George Day .....	General Election, October, 1885.	See "Executive Council."
Argyle .....	William Hillier Holborow .....		
Balmain .....	Francis Tait .....	6 January, 1886.	See "Executive Council."
Balranald .....	Jacob Garrard .....		
Bathurst .....	Solomon Herbert Hyam .....	General Election, October, 1885.	Accepted office as Postmaster-General; seat declared vacant, 2 March, 1886; re-elected. See "Executive Council."
	John Stuart Hawthorne .....		
The Bogan .....	Robert Bliss Wilkinson .....	9 March, 1886.	Accepted office as Colonial Treasurer; seat declared vacant, 2 March, 1886; re-elected. See "Executive Council."
	John Cramsie .....		
	Francis Bathurst Suttor .....	9 March, 1886.	Chairman of Committees from 14 July, 1886.
	George Edwin Cass .....		
Boorowa .....	Sir Patrick Alfred Jennings, K.C.M.G.	General Election, October, 1885.	Resigned, 29 December, 1886.
Bourke .....	Thomas Michael Slattery .....	7 November, 1885.	
Braidwood .....	William Bowie Stewart Campbell Sawers .....	General Election, October, 1885.	Chairman of Committees to 25 March, 1886.
Camden .....	Russell Barton .....		
Canterbury .....	Alexander Ryrie .....	General Election, October, 1885.	Accepted office as Minister of Justice; seat declared vacant, 2 March, 1886; re-elected. See "Executive Council."
Carcoar .....	John Kidd .....		
The Clarence .....	Thomas Garrett .....	9 March, 1886.	See "Executive Council."
Central Cumberland	Mark John Hammond .....		
Durham .....	William Henson .....	General Election, October, 1885.	Accepted office as Attorney-General; seat declared vacant, 2 March, 1886; re-elected. See "Executive Council."
Eden .....	Septimus Alfred Stephen .....		
Forbes .....	William George Judd .....	6 January, 1886.	Accepted office as Secretary for Public Works; seat declared vacant, 2 March, 1886; re-elected. See "Executive Council."
The Glebe .....	Ezekiel Alexander Baker .....		
Glen Innes .....	Charles Launelot Garland .....	8 March, 1886.	See "Executive Council."
Gloucester .....	John Mitchell Purves .....		
Goulburn .....	Andrew Hardie McCulloch, junior..	General Election, October, 1885.	Accepted office as Minister of Justice; seat declared vacant, 2 March, 1886; re-elected. See "Executive Council."
Grafton .....	Nathaniel George Bull .....		
Grenfell .....	Varney Parkes .....	General Election, October, 1885.	Resigned, 25 May, 1886.
Gundagai .....	Herbert Harrington Brown .....		
Gunnedah .....	James Patrick Garvan .....	9 March, 1886.	See "Executive Council."
The Gwydir .....	Henry Clarke .....	General Election, October, 1885.	
Hartley .....	Alfred Stokes .....		6 January, 1886.
The Hastings and Manning	Walter Thomas Coonan .....	8 March, 1886.	
The Hawkesbury .....	William Camac Wilkinson, M.D. ....		General Election, October, 1885.
The Hume .....	John Meeks .....		
The Hunter .....	William John Fergusson .....	General Election, October, 1885.	Accepted office as Secretary for Public Works; seat declared vacant, 2 March, 1886; re-elected. See "Executive Council."
	Robert Huddle Driberg White .....		
	William Teece .....	General Election, October, 1885.	See "Executive Council."
	John See .....		
	Robert Matteson Vaughn .....	General Election, October, 1885.	See "Executive Council."
	John Henry Want .....		
	Joseph Palmer Abbott .....	General Election, October, 1885.	See "Executive Council."
	William Robert Campbell .....		
	Thomas Henry Hassall .....	10 June, 1886.	Accepted office as Secretary for Public Works; seat declared vacant, 2 March, 1886; re-elected. See "Executive Council."
	Walter Scott Targett .....	General Election, October, 1885.	
	James Henry Young .....	General Election, October, 1885.	See "Executive Council."
	Charles James Roberts, C.M.G. ....		
	Alexander Bowman .....	General Election, October, 1885.	See "Executive Council."
	William John Lyne .....		
	James Hayes .....	General Election, October, 1885.	See "Executive Council."
	John Fitzgerald Burns .....		

## NEW SOUTH WALES—1886.

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RETURN of MEMBERS composing the LEGISLATIVE ASSEMBLY—*continued.*

Electoral District.	Name.	Date when elected.	Remarks.
The Upper Hunter.	Robert George Dundas Fitzgerald...	General Election, October, 1885.	Resigned, 23 December, 1886.
Illawarra .....	Thomas Hungerford .....		
Inverell .....	Andrew Lysaght .....		
Kiama .....	Samuel Wilkinson Moore .....		
The Macleay .....	Harman John Tarrant .....		
East Macquarie ...	Robert Burdett Smith .....		
West Macquarie ...	Sydney Smith .....		
East Maitland .....	John Shepherd .....		
West Maitland .....	Lewis Lloyd .....		
Molong .....	James Nixon Brunker .....		
Monaro .....	Richard Windeyer Thompson .....		
Morpeth .....	Andrew Ross, M.D. ....		
	Henry Dawson .....		
Mudgee .....	Harold Wilberforce Hindmarsh Stephen	29 June, 1886.	
	Robert Wisdom .....		
The Murray .....	Sir John Robertson, K.C.M.G. ....	General Election, October, 1885.	
	William Chandos Wall .....		
The Murrumbidgee	Adolphus George Taylor .....	9 March, 1886.	Accepted office of Colonial Secretary; seat declared vacant, 2 March, 1886; re-elected. See "Executive Council."
	Thomas Frederick De Courcy Browne		
The Namoi .....	John Moore Chanter .....	General Election, October, 1885.	
The Nepean .....	Robert Barbour .....		
Newcastle .....	George Richard Dibbs .....	6 March, 1886.	Accepted office as Secretary for Mines; seat declared vacant, 2 March, 1886; re-elected. See "Executive Council."
	James Gormly .....		
New England .....	Alexander Thorley Bolton .....	General Election, October, 1885.	
	Charles Collins .....		
Newtown .....	Thomas Richard Smith .....	6 March, 1886.	Accepted office as Secretary for Mines; seat declared vacant, 2 March, 1886; re-elected. See "Executive Council."
	James Fletcher .....		
Northumberland ...	George Alfred Lloyd .....	General Election, October, 1885.	Resigned, 20 December, 1886.
Orange .....	James Inglis .....		
Paddington .....	William Consett Proctor .....	General Election, October, 1885.	Chairman of Committees from 30 March, 1886, to 13 July, 1886.
Parramatta .....	William John Foster .....		
Patrick's Plains .....	James Francis Smith .....	9 March, 1886.	Accepted office of Minister of Public Instruction; seat declared vacant, 2 March, 1886; re-elected. See "Executive Council."
Queanbeyan .....	Frederick Jamison Gibbes .....		
Redfern .....	Joseph Creer .....	General Election, October, 1885.	
	Ninian Melville .....		
The Richmond .....	William Clarke .....	6 March, 1886.	Accepted office of Secretary for Lands; seat declared vacant, 2 March, 1886; re-elected. See "Executive Council."
Shoalhaven .....	Thomas Dalton .....		
St. Leonards .....	John Cash Neild .....	General Election, October, 1885.	Speaker.
	William Joseph Trickett .....		
East Sydney .....	Robert Butcher .....	5 January, 1886.	See "Executive Council."
	Hugh Taylor .....		
South Sydney .....	Albert John Gould .....	General Election, October, 1885.	
	Edward William O'Sullivan .....		
West Sydney .....	John Sutherland .....	5 January, 1886.	See "Executive Council."
	Arthur Renwick, M.D. ....		
Tamworth .....	Thomas Michael Williamson .....	General Election, October, 1885.	
Tenterfield .....	Thomas Thomson Ewing .....		
Tumut .....	Patrick Hogan .....	6 March, 1886.	Accepted office of Secretary for Lands; seat declared vacant, 2 March, 1886; re-elected. See "Executive Council."
Wellington .....	Frederick Thomas Humphery .....		
Wentworth .....	Sir Henry Parkes, K.C.M.G. ....	General Election, October, 1885.	
Wollombi .....	Isaac Ellis Ives .....		
Yass Plains .....	Edmund Barton .....	17 December, 1886.	Resigned, 29 November, 1886. See "Executive Council."
	George Houston Reid .....		
Young .....	Henry Copeland .....	6 January, 1886.	
	Sydney Burdekin .....		
	John Davies, C.M.G. ....	20 December, 1886.	
	James Matthew Toohy .....		
	Joseph Benjamin Olliffe .....	General Election, October, 1885.	Declared not duly elected by Committee of Elections and Qualifications, 22 December, 1885. Declared duly elected by Committee of Elections and Qualifications, 22 December, 1885.
	Archibald Forsyth .....		
	Alexander Kethel .....	General Election, October, 1885.	
	Daniel O'Connor .....		
	Francis Abigail .....	General Election, October, 1885.	
	John Douglas Young .....		
	Robert Henry Levien .....	General Election, October, 1885.	
	Michael Burke .....		
	Charles Alfred Lee .....	General Election, October, 1885.	
	Travers Jones .....		
	David Alexander Ferguson .....	General Election, October, 1885.	
	Edward Quin .....		
	William Peter Macgregor .....	General Election, October, 1885.	
	Lyall Scott .....		
	Richard Stevenson .....	17 December, 1886.	
	Louis Francis Heydon .....		
	Thomas Colls .....	6 January, 1886.	
	Gerald Spring .....		
	William John Watson .....	General Election, October, 1885.	
	James Archibald Mackinnon .....		



## PART II.

## Executive and Legislative Establishments.

## SUMMARY.

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## EXECUTIVE AND LEGISLATIVE.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>GOVERNOR-IN-CHIEF.</b>					
His Excellency the Governor and Commander-in-Chief.	The Right Honorable Charles Robert Baron Carrington, P.C., G.C.M.G. <sup>1</sup>	20 Mar., 1885 Entered upon official duty, 12 Dec., 1885	Her Majesty, by Commission .....	7,000 0 0	12 Dec., 1885.
Private Secretary .....	Edward William Wallington. <sup>2</sup>	12 Dec., 1885	Governor .....	400 0 0	12 Dec., 1885.
Aide-de-Camp .....	Richard Frederick Trench Gascoigne. <sup>3</sup>	12 Dec., 1885	Ditto .....	358 0 0	12 Dec., 1885.
Extra Aides-de-Camp ...	The Right Honorable Montague Peregrine Albenarle, Lord Bertie. <sup>4</sup>	12 Dec., 1885	Ditto .....	Nil.	12 Dec., 1885.
	R. I. O. Sheriffe, Lieutenant, Prince of Wales' Own Norfolk Artillery Militia.	16 April, 1886	Ditto .....	Nil.	16 April, 1886
Clerk to Private Secretary..	William Byrnes .....	1 July, 1871	Governor and Executive Council	410 0 0	1 July, 1871.
Messenger (1) <sup>b</sup> .....	.....	.....	.....	160 0 0	.....
Mounted Orderlies :—					
Sergeant (1) .....	.....	.....	.....	10/- p diem.	.....
Orderlies (3) .....	.....	.....	.....	{ 1 at 7/6 "	.....
			.....	{ 2 at 7/- "	.....

<sup>1</sup> Allowed a residence. Governor of Norfolk Island, without salary. <sup>2</sup> Lieutenant, 3rd Battalion, Oxfordshire Light Infantry. <sup>3</sup> Allowed £146 per annum in lieu of forage and incidental expenses, and £175 per annum house allowance. Major, Yorkshire Hussars. <sup>4</sup> Lieutenant, 4th Battalion, Northamptonshire Regiment. <sup>b</sup> Allowed a house.

**EXECUTIVE COUNCIL.**

Clerk of the Executive Council.	Alexander Campbell Budge	16 Oct., 1863	Governor and Executive Council	700 0 0	1 Nov., 1858.
Clerk .....	Edward R. Deas-Thomson	9 July, 1883	Ditto .....	240 0 0	11 Feb., 1880.
Messenger (1) .....	.....	.....	.....	150 0 0	.....
Office-keeper (1) <sup>1</sup> .....	.....	.....	.....	18 0 0	.....

<sup>1</sup> Office-keeper, Colonial Secretary's Office, 3s. 4d. per diem.

**LEGISLATIVE COUNCIL.**

President.....	Sir John Hay, K.C.M.G.	8 July, 1873	Governor and Executive Council, by Commission under the Great Seal of the Colony.	1,200 0 0	3 Oct., 1856.*
Chairman of Committees ...	William Richman Piddington.	17 Mar., 1885	Elected by Legislative Council (Sessionally).	500 0 0	14 May, 1872.*
Clerk of the Council and Clerk of the Parliaments.	John Jackson Calvert ...	1 April, 1871	Governor and Executive Council, by Commission under the Great Seal of the Colony.	760 0 0	1 Aug., 1853.
Clerk Assistant .....	Adolphus Philip Clapin ...	1 April, 1871	Governor and Executive Council	550 0 0	1 Aug., 1850.
Usher of the Black Rod ...	Stewart Marjoribanks Mowle.	1 Aug., 1883	{ Governor and Executive Council, by Commission under the Great Seal of the Colony.	440 0 0	21 Aug., 1852.
Shorthand Writer .....	John Agar Scarr .....	20 May, 1856	Governor and Executive Council	600 0 0	4 May, 1847.
1st Clerk .....	Leonard Smirnoff Cooper.	1 Aug., 1883	Ditto .....	440 0 0	17 Dec., 1858.
2nd Clerk .....	William Leonard Edwards <sup>1</sup>	1 Aug., 1883	Ditto .....	340 0 0	21 June, 1864.
3rd Clerk .....	Edward Adam Garland ...	1 Aug., 1883	Ditto .....	290 0 0	14 Oct., 1868.
4th Clerk .....	Francis Laurence Clapin...	1 Aug., 1883	Ditto .....	240 0 0	1 Aug., 1883.
Principal Messenger (1) ...	.....	1 Feb., 1879	The President .....	190 0 0	.....
Doorkeeper (1) .....	.....	.....	Ditto .....	150 0 0	.....
Assistant Messengers (4) ...	.....	.....	Ditto .....	135 0 0	each.

<sup>1</sup> Allowed twelve months' leave of absence on half pay from 25 March.

\* Services not continuous.

NOTE.—The Clerk of the Council gives security to the amount of £300.

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>LEGISLATIVE ASSEMBLY.</b>							
Speaker .....	Edmund Barton .....	3 Jan., 1883 re-elected 17 Nov., 1885	Elected by Legislative Assembly	1,500	0	0	26 July, 1878.*
Chairman of Committees ...	Thomas Garrett <sup>1</sup> .....	3 Dec., 1885	Ditto .....	800	0	0	8 Mar., 1865.*
	succeeded by William Joseph Trickett <sup>2</sup> ..	30 Mar., 1886	Ditto .....	800	0	0	28 May, 1883.*
Clerk of Assembly.....	Thomas Michael Slattery... succeeded by	14 July, 1886	Ditto .....	800	0	0	23 Aug., 1864.*
	Stephen Wilson Jones <sup>3</sup> ...	22 Oct., 1869	Governor and Executive Council, by Commission.	960	0	0	2 Nov., 1843.*
Acting ditto .....	Frederick William Webb..	27 Jan., 1886	Ditto .....	725	0	0	20 Oct., 1851
Clerk Assistant .....	Frederick William Webb <sup>4</sup>	1 Feb., 1873	Governor and Executive Council	725	0	0	20 Oct., 1851.
2nd Clerk Assistant .....	John Arthur Vivian .....	1 Feb., 1873	Ditto .....	600	0	0	1 Nov., 1855.
Sergeant-at-Arms .....	Laurence Joseph Harnett..	7 May, 1873	Governor and Executive Council, by Commission.	490	0	0	25 Sept., 1860.*
Clerk of Records .....	Richard Aldous Arnold <sup>5</sup> ...	7 May, 1873	Governor and Executive Council	490	0	0	3 Jan., 1867.
Clerk of Select Committees..	Richard Windeyer Robert- son.	7 May, 1873	Ditto .....	440	0	0	13 Nov., 1866.
Clerk of Printing Branch...	William Munnings Mon- tagu Arnold.	7 May, 1873	Ditto .....	390	0	0	1 Feb., 1867.
Clerk in Charge of Printed Papers.	Charles Broughton Boydell	1 Oct., 1884	Ditto .....	340	0	0	1 Feb., 1873.
Clerks .....	Frank Walsh .....	1 Oct., 1884	Ditto .....	340	0	0	4 Aug., 1874.
	Arthur Charles Logan ...	1 Oct., 1884	Ditto .....	265	0	0	1 July, 1880.
	William Stewart Mowle ...	1 Jan., 1884	Ditto .....	200	0	0	1 Jan., 1884.
Principal Messenger (1) ...	.....	.....	Clerk of Legislative Assembly ...	220	0	0	
Principal Doorkeeper (1) ...	.....	.....	Ditto .....	165	0	0	
Assistant Messengers (9) ...	.....	.....	Speaker .....	155	0	0	
	.....	.....	.....	140	0	0	
	.....	.....	.....	130	0	0	
Lavatory Attendant (1) ...	.....	.....	Ditto .....	100	0	0	

<sup>1</sup> To the 25 March—resigned. <sup>2</sup> To the 13 July—resigned. <sup>3</sup> Gives security for £400. Allowed leave of absence on half pay for twelve months from the 27 January, 1885. <sup>4</sup> To 26 January—see above. <sup>5</sup> Gives security for £200. \* Services not continuous.

## LEGISLATIVE COUNCIL AND ASSEMBLY.

Steward and Housekeeper...	William George Cassidy <sup>1</sup> ...	23 Oct., 1875	Governor and Executive Council	290	0	0	23 Oct., 1875.
Assistant Housekeeper <sup>1</sup> ...	.....	.....	President of the Legislative Council and Speaker of the Legislative Assembly.	85	0	0	
Watchman (1) .....	.....	.....	Ditto .....	150	0	0	
House Servant (1) <sup>1</sup> .....	.....	.....	Ditto .....	135	0	0	
Stable-man <sup>1</sup> .....	.....	.....	Ditto .....	135	0	0	
Assistant Stableman .....	.....	.....	Ditto .....	135	0	0	
Outdoor Servant (1) .....	.....	.....	Ditto .....	135	0	0	
Cook (1) .....	.....	.....	Ditto .....	200	0	0	
Refreshment-room Waiters (3)	.....	.....	Ditto .....	150	0	0	
Female Servants (3) <sup>1</sup> .....	.....	.....	Ditto .....	135	0	0	each.
Scullery-maid (1) <sup>1</sup> .....	.....	.....	Ditto .....	75	0	0	"
			Ditto .....	75	0	0	

<sup>1</sup> Allowed a house, fuel, and light.

## PARLIAMENTARY LIBRARY.

Librarian.....	Robert Rogers <sup>1</sup> .....	1 Jan., 1879	Governor and Executive Council	490	0	0	5 April, 1861.
First Attendant .....	John Riley .....	1 Jan., 1879	Ditto .....	340	0	0	14 Sept., 1863.
Second do. ....	Ernest Etienne Wahlberg	8 Sept., 1881	Ditto .....	265	0	0	1 Mar., 1876.

<sup>1</sup> Gives security to the amount of £200.





## PART III.

## Branch Royal Mint.

## SUMMARY.

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## BRANCH ROYAL MINT.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment to the Mint.
				£ s. d.	
<b>BRANCH ROYAL MINT.</b>					
Deputy Master .....	Robert Hunt <sup>1</sup> .....	1 Jan., 1878	Her Majesty, by Warrant under the Royal Signet and Sign Manual.	1,100 0 0	8 July, 1853.
Senior Clerk and Melter ...	Edward Offord Heywood <sup>1</sup>	1 Oct., 1870	The Lords Commissioners of Her Majesty's Treasury, by Warrant.	600 0 0	11 Jan., 1859.
Senior Assayer .....	Dr. Adolph Leibius, M.A.	18 Aug., 1870	Ditto .....	700 0 0	31 Mar., 1859.
Assayer .....	John Warner M'Cutcheon	1 Oct., 1870	Ditto .....	600 0 0	22 Nov., 1853.
Senior Clerks .....	Lyndon Bolton Carpenter	1 Jan., 1869	The Lords Commissioners of Her Majesty's Treasury.	500 0 0	1 Jan., 1859.
	John Ford Adams .....	1 Jan., 1869	Ditto .....	500 0 0	1 July, 1861.
Assay Clerk and Assistant...	E. H. S. von Arnheim.....	1 July, 1878	Ditto .....	300 0 0	8 Jan., 1873.
Bullion Clerk.....	David John Kirkwood Colley.	1 Feb., 1879	Ditto .....	275 0 0	1 July, 1875.
Junior Clerks .....	John H. Campbell .....	1 Jan., 1884	Ditto .....	120 0 0	1 Jan., 1884.
	Thomas E. Roseby .....	1 Jan., 1885	Ditto .....	110 0 0	1 Jan., 1885.
Registrar and Accountant...	Archibald Gardner .....	1 Feb., 1879	Ditto .....	400 0 0	22 June, 1853.
Foreman of Machinery, and Engineer.	Joseph Newton .....	14 May, 1855	Ditto .....	300 0 0	14 May, 1855.
Weigher and Balance Mechanician.	Charles Bolton.....	1 Jan., 1867	Ditto .....	250 0 0	14 May, 1855.
Foreman of Coining Department.	Henry Bradstock.....	22 Nov., 1853	Ditto .....	250 0 0	22 Nov., 1853.
Foreman of Melting Department.	Thomas Gilchrist.....	1 Jan., 1872	Ditto .....	250 0 0	8 Nov., 1858.
Second Foreman of Coining Department.	William D. Newton.....	1 July, 1884	Ditto .....	210 0 0	6 Feb., 1871.
Second Foreman of Melting Department.	William Bannerman .....	1 April, 1885	Ditto .....	205 0 0	11 Oct., 1854.
Messenger and Office-keeper (1) <sup>2</sup>	.....	.....	Ditto .....	150 0 0	13 May, 1855.
Messenger (1) .....	.....	.....	Ditto .....	92 10 0	29 Jan., 1878.
Housekeeper (1) <sup>2</sup> .....	.....	.....	Ditto .....	50 0 0	15 April, 1867.
Artificers, Workmen, and Boys (18).	.....	.....	Ditto .....	From 12s. to 2s. per diem.	

<sup>1</sup> Allowed quarters.                      <sup>2</sup> Allowed quarters, fuel, and light.

NOTE.—The Sydney Branch of the Royal Mint is under the immediate control of the Lords Commissioners of Her Majesty's Treasury.

## PENSIONS.

PAID under the Sydney Mint Act of 1865.

Name.	Amount of Pension.	Authority under which the Pension was granted.	Date from which the Pension commenced.	Service for which the Pension was granted.
Major-General Sir Edward W. Ward, R.E., K.C.M.G.	£ s. d. 217 10 6	The Lords Commissioners of Her Majesty's Treasury.	1 August, 1877	Late Deputy Master.
Charles Elouis.....	671 13 4	Ditto .....	1 Jan., 1878	Late Deputy Master.
Elliott Arthur Knipe.....	128 10 0	Ditto .....	1 March, 1863	Late Registrar and Accountant.
Hugh Gilchrist .....	152 10 0	Ditto .....	1 April, 1872	Late Senior Clerk.

## PART IV.

## Colonial Secretary,

AND THE

DEPARTMENTS UNDER HIS SUPERVISION AND CONTROL.

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## COLONIAL SECRETARY.

Office.	Name.	Date of Appointment.	By whom appointed, and under what instrument.	Annual Salary.			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>COLONIAL SECRETARY.</b>							
Colonial Secretary .....	Sir John Robertson, K.C.M.G. succeeded by George Richard Dibbs.....	22 Dec., 1885	Governor, by Commission.....	2,000	0	0	13 Jan., 1858.*
Principal Under Secretary..	Critchett Walker, J.P. ...	26 Feb., 1886 7 April, 1879	Ditto .....	2,000	0	0	5 Jan., 1883.*
Clerks—Chief.....	John James Macartney Beatty, M.A., LL.D. <sup>1</sup> succeeded by Edward Wise M'Kenny ...	1 Aug., 1879	Governor and Executive Council	650	0	0	28 Oct., 1856.*
First .....	Edward Wise M'Kenny ...	20 April, 1886	Lieutenant-Governor and Executive Council.	650	0	0	1 Sept., 1868.
Second .....	Edward Wise M'Kenny ...	7 April, 1879	Governor and Executive Council	525	0	0	7 Nov., 1862.
Third .....	Thomas Pedder M'Levie... succeeded by Thomas Pedder M'Levie...	20 April, 1886 1 Aug., 1879	Lieutenant-Governor and Executive Council.	500	0	0	7 Nov., 1862.
Accountant .....	James John Taylor .....	20 April, 1886	Governor and Executive Council	465	0	0	13 Dec., 1865.
Clerk-in-charge Miscellaneous Branch.	James John Taylor .....	1 Aug., 1879	Lieutenant-Governor and Executive Council.	465	0	0	13 Dec., 1865.
Fourth .....	John George Cohen.....	20 April, 1886	Governor and Executive Council	390	0	0	4 May, 1867.
Fifth .....	James Edward Ormiston... succeeded by James Adam Brodie .....	1 Aug., 1879	Lieutenant-Governor and Executive Council.	390	0	0	4 May, 1867.
Sixth .....	John George Cohen.....	20 April, 1886	Governor and Executive Council	370	0	0	1 Sept., 1868.
Seventh .....	James Adam Brodie .....	1 April, 1885	Ditto .....	340	0	0	1 Jan., 1875.
Eighth .....	James Adam Brodie .....	1 Jan., 1886	Ditto .....	320	0	0	12 April, 1875.
Ninth .....	John George Cohen..... succeeded by Wyndham Harry Patterson	1 Aug., 1879	Lieutenant-Governor and Executive Council.	350	0	0	1 Sept., 1868.
Tenth .....	James Adam Brodie <sup>2</sup> .....	1 May, 1886 1 April, 1875	Governor and Executive Council	240	0	0	1 Jan., 1879.
Eleventh .....	Wyndham Harry Patterson succeeded by James John Kelly .....	20 April, 1886	Lieutenant-Governor and Executive Council.	240	0	0	12 April, 1875.
Twelfth .....	James John Kelly .....	1 May, 1886	Governor and Executive Council	240	0	0	1 Jan., 1879.
Thirteenth .....	James John Kelly .....	20 April, 1886	Ditto .....	240	0	0	15 Nov., 1879.
Fourteenth .....	Charles Ignatius Callachor succeeded by James John Kelly .....	1 May, 1886 13 May, 1885	Ditto .....	240	0	0	15 Nov., 1879.
Fifteenth .....	Charles Ignatius Callachor succeeded by Marsham a'Beckett M'Carthy ..	20 April, 1886	Ditto .....	220	0	0	1 Jan., 1883.
Sixteenth .....	Marsham a'Beckett M'Carthy <sup>3</sup> ..	1 May, 1886 1 Jan., 1886	Ditto .....	220	0	0	1 Jan., 1883.
Seventeenth .....	Alfred Patrick Albert Delany ..	1 May, 1886	Ditto .....	220	0	0	2 April, 1883.
Eighteenth .....	Charles Ignatius Callachor succeeded by Alfred Patrick Albert Delaney ..	1 April, 1885	Ditto .....	190	0	0	2 April, 1883.
Nineteenth .....	Alfred Patrick Albert Delaney ..	20 April, 1886	Ditto .....	140	0	0	22 Aug., 1884.
Twentieth .....	Evelyn Albert William Thurlow succeeded by Evelyn Albert William Thurlow <sup>4</sup>	1 May, 1886 1 Nov., 1884	Ditto .....	140	0	0	22 Aug., 1884.
Twenty-first .....	George Willoughby Whatmore	1 April, 1885	Ditto .....	140	0	0	1 Nov., 1884.
Twenty-second .....	Tancred de Carteret Armstrong	12 Nov., 1885	Lieutenant-Governor and Executive Council.	140	0	0	1 Nov., 1884.
Twenty-third .....	Harry Maurice Joscelyne <sup>5</sup>	23 June, 1886	Ditto .....	140	0	0	1 April, 1885.
Twenty-fourth .....	William Sydney Christie	14 Oct., 1886	Governor and Executive Council	140	0	0	19 Nov., 1884.
Twenty-fifth .....	William Sydney Christie <sup>6</sup> succeeded by Charles Howard Helsham	11 Jan., 1886	Ditto .....	140	0	0	23 June, 1886.
Twenty-sixth .....	Harry Addington Unwin..	6 Dec., 1886	Ministerial .....	75	0	0	14 Oct., 1885.
Twenty-seventh .....	George William Newcombe	1 Jan., 1886	Ditto .....	50	0	0	14 Oct., 1885.
Twenty-eighth .....	Samuel Walker Chettle ...	1 Jan., 1884	Ditto .....	260	0	0	6 Dec., 1886.
Twenty-ninth .....	Frederick Wahab Stoddard	1 July, 1886	Governor and Executive Council	290	0	0	1 Jan., 1882.
Thirtieth .....	Sydney Fotheringham ...	1 Aug., 1886	Ditto .....	290	0	0	1 Aug., 1848.
Thirty-first .....	William Sydney Goldfinch	1 July, 1886	Ditto .....	220	0	0	1 July, 1886.
Thirty-second .....	William Abbott de Mouncey ..	1 Oct., 1886	Ditto .....	220	0	0	1 Aug., 1886.
Thirty-third .....	William Abbott de Mouncey ..	21 Dec., 1886	Ditto .....	170	0	0	1 July, 1886.
Thirty-fourth .....	.....	.....	Ditto .....	145	0	0	1 Oct., 1886.
Thirty-fifth .....	.....	.....	Ditto .....	120	0	0	21 Dec., 1886.
Thirty-sixth .....	.....	.....	Ditto .....	195	0	0	.....
Thirty-seventh .....	.....	.....	Ditto .....	195	0	0	.....
Thirty-eighth .....	.....	.....	Ditto .....	140	0	0	.....
Thirty-ninth .....	.....	.....	Ditto .....	110	0	0	.....
Fortieth .....	.....	.....	Ditto .....	87	0	0	.....
Forty-first .....	.....	.....	Ditto .....	55	0	0	.....
Forty-second .....	.....	.....	Ditto .....	115	0	0	.....
Forty-third .....	.....	.....	Ditto .....	105	0	0	.....
Messengers (6) .....	.....	.....	.....	1 at	195	0	0
Officekeeper .....	.....	.....	.....	1 <sup>7</sup> at	195	0	0
Officecleaners (3) .....	.....	.....	.....	1 at	140	0	0
Cleaners of corridors (4) ...	.....	.....	.....	3 at	110	0	0
				1 <sup>8</sup> at	87	0	0
				3 at	55	0	0
				3 at	115	0	0
				1 at	105	0	0

<sup>1</sup> Deceased—19 April, 1886.<sup>2</sup> To 1 January, 1886—promoted to Clerk-in-charge of Miscellaneous Branch.<sup>3</sup> Transferred from H.M. Customs.<sup>4</sup> Promoted to Ninth Clerk.<sup>5</sup> Transferred from the Registrar General's Office.<sup>6</sup> Transferred from the Audit Office, and promoted to Junior Clerk on 14th October, 1886.<sup>7</sup> Allowed quarters.<sup>8</sup> Allowed quarters, fuel, and light; Office-keeper, Executive Council Office, £18 per annum.

\* Services not continuous.

## NEW SOUTH WALES—1886.

23

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>COLONIAL SECRETARY—continued.</b>							
<b>REGISTRAR-GENERAL.</b>							
Registrar-General and Chairman of Land Titles Commissioners .....	Edward Grant Ward, J.P. <sup>1</sup>	15 Dec., 1870	Governor and Executive Council	800	0	0	1 Jan., 1863.
STATISTICAL BRANCH. Compiler of General Statistics.	John Duff <sup>2</sup>	1 May, 1882	Ditto .....	390	0	0	1 July, 1854.*
Accountant and Compiler of Vital Statistics.	William Lachlan Dawes <sup>3</sup>	29 Jan., 1869	Ditto .....	390	0	0	8 Sept., 1858.
Corresponding & Record Clerk	Frederick Charles William Elyard	25 Mar., 1884	Ditto .....	315	0	0	1 April, 1857.
Clerk in charge of Registration Room.	William Ridley .....	26 Aug., 1872	Ditto .....	290	0	0	26 Aug., 1872.
Clerks .....	Edmund Conroy Hopkins..	1 Oct., 1878	Ditto .....	200	0	0	1 July, 1872.
	Robert William Codrington <sup>4</sup>	1 June, 1883	Ditto .....	200	0	0	29 Sept., 1872.
	Wm. W. Bucknell, jun. ...	1 Sept., 1884	Ditto .....	190	0	0	13 Mar., 1879.
	John Butler .....	1 June, 1886	Ditto .....	165	0	0	1 Jan., 1882.
	Selby Marshall Cook <sup>2</sup> .....	1 Sept., 1883	Ditto .....	115	0	0	1 Sept., 1883.
	Norman Black .....	8 Sept., 1884	Ditto .....	90	0	0	8 Sept., 1884.
Messenger (1) .....	.....	.....	Registrar-General .....	125	0	0	.....
<b>LAND TITLES BRANCH.</b>							
Land Titles Commissioners	Richard Jones .....	1 Jan., 1863	Governor and Executive Council	588	0	0	7 Sept., 1857.
	Edward Greville .....	10 Jan., 1884	Ditto .....	588	0	0	10 Jan., 1884.
Examiners of Titles .....	Edmund Burton .....	6 July, 1868	Governor and Executive Council	860	0	0	— Mar., 1841.*
	Henry Dyer Maddock .....	1 Oct., 1878	Ditto .....	860	0	0	1 Oct., 1878.
	Francis Joseph Plomley <sup>5</sup>	1 Jan., 1882	Ditto .....	830	0	0	1 Jan., 1882.
	succeeded by						
	Hugh Henry Ould .....	23 July, 1886	Ditto .....	830	0	0	10 Sept., 1878.
Junior Examiner of Titles..	Alfred Parry Long .....	23 July, 1886	Ditto .....	725	0	0	23 July, 1886.
Deputy Registrar-General...	Henry Charles Edwin Newcombe.	14 April, 1882	Ditto .....	550	0	0	22 April, 1852.
Principal Draftsman .....	Robert Mead Pearson .....	1 April, 1866	Ditto .....	650	0	0	1 Oct., 1855.
Draftsmen .....	Wilfred De Courcy Lewis	1 July, 1874	Ditto .....	390	0	0	16 Mar., 1863.
	James Lyon Spark .....	23 July, 1874	Ditto .....	315	0	0	3 June, 1863.
	William Frederick Kloster	30 May, 1878	Ditto .....	265	0	0	30 May, 1878.
	Albert Newcombe .....	13 Jan., 1869	Ditto .....	240	0	0	16 Oct., 1863.
	Joseph Nicholas Pyne ...	12 July, 1880	Ditto .....	240	0	0	12 July, 1880.
	Charles Thomas Board ...	12 Sept., 1872	Ditto .....	200	0	0	12 Sept., 1872.
	Frederick George Melville	1 Jan., 1883	Ditto .....	200	0	0	1 Jan., 1883.
	Anthony Mark Solomon...	18 Nov., 1882	Ditto .....	190	0	0	18 Nov., 1882.
	Henry Charles Barnston Parnell.	1 Jan., 1883	Ditto .....	190	0	0	1 Jan., 1883.
	Ernest Layton .....	16 Nov., 1881	Ditto .....	190	0	0	16 Nov., 1881.
	Stephen Anthony .....	4 Aug., 1883	Ditto .....	190	0	0	4 Aug., 1883.
	Edwin Arthur Pearson ...	13 Oct., 1884	Ditto .....	140	0	0	13 Oct., 1884.
	Thomas Roscoe Parnell ...	14 Nov., 1884	Ditto .....	140	0	0	14 Nov., 1884.
Probationary Draftsman ...	Arthur H. Drury .....	16 Nov., 1886	Colonial Secretary (Sec. 21 Civil S. Act, 1884).	50	0	0	16 Nov., 1886.
Examiners' Clerk .....	William Shirley Muddle	15 Dec., 1870	Governor and Executive Council	390	0	0	1 Jan., 1863.
Search Clerk .....	Christopher William Campion Hatton.	22 May, 1884	Ditto .....	390	0	0	22 May, 1884.
Clerks .....	Charles Hardwick Keele...	1 Mar., 1873	Ditto .....	340	0	0	1 Mar., 1873.
	Henry John Noble .....	1 Mar., 1884	Ditto .....	290	0	0	12 July, 1875.
	John Connery .....	19 Aug., 1875	Ditto .....	265	0	0	7 April, 1859.*
	Thomas Crawford Abbott	21 Mar., 1884	Ditto .....	265	0	0	22 July, 1877.
	Edward Tasman Deane ...	30 Aug., 1878	Ditto .....	240	0	0	30 Aug., 1878.
	Charles Henry Mallon ...	1 Sept., 1879	Ditto .....	190	0	0	1 Sept., 1879.
	Thomas Joseph M'Donald	7 June, 1880	Ditto .....	190	0	0	7 June, 1880.
	Walter Fitzgerald .....	1 Sept., 1884	Ditto .....	190	0	0	1 June, 1880.
	John Butler <sup>6</sup> .....	10 Jan., 1885	Ditto .....	145	0	0	1 Jan., 1882.
	Henry Stephen Harpur ...	1 Sept., 1883	Ditto .....	140	0	0	10 May, 1882.
	William Henry Young ...	21 Mar., 1884	Ditto .....	140	0	0	20 Nov., 1882.
	John Walter Croker .....	21 May, 1884	Ditto .....	140	0	0	9 May, 1883.
	Henry Nisbet Armstrong.	1 Dec., 1884	Ditto .....	140	0	0	1 July, 1880.
	Samuel James Heuston ...	20 Nov., 1884	Ditto .....	115	0	0	10 May, 1884.
	John Cornelius de Saumerez Mann,	27 Aug., 1884	Ditto .....	90	0	0	27 Aug., 1884.
	Ernest Sinclair Macdermott.	17 Feb., 1885	Ditto .....	90	0	0	17 Feb., 1885.
Probationary Clerk .....	Leslie Thomas Coberoff...	10 June, 1886	Under Sec. 21, Civil Service Act of 1884.	50	0	0	10 June, 1886.
Temporary Clerk .....	Arthur Curtis .....	16 Aug., 1886	Ditto .....	100	0	0	16 Aug., 1886.
Messenger .....	(1) <sup>1</sup> .....	.....	Registrar-General .....	50	0	0	.....
Book Porter .....	(1) .....	.....	Ditto .....	100	0	0	.....
Assistant do. ....	(1) .....	.....	Ditto .....	100	0	0	.....

<sup>1</sup> Gives security to the amount of £700.<sup>2</sup> See Statistician's Department.<sup>3</sup> Gives security to the amount of £200.<sup>4</sup> Transferred to Deeds Branch, 1 June, 1886.<sup>5</sup> Resigned, 27 May, 1886.<sup>6</sup> Transferred to Statistical Branch, 9 June, 1886.<sup>7</sup> Allowed quarters, fuel, and light.

\* Services not continuous.

Office.	Name.	Date of Appointment.	By whom appointed, and under what instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>COLONIAL SECRETARY—REGISTRAR-GENERAL—continued.</b>					
<b>VALUATORS UNDER THE REAL PROPERTY ACT.</b>					
	William Pritchard .....	9 Sept., 1880	Governor and Executive Council, under 26 Vic., sec. 21.	Nil.	9 Sept., 1880.
	John Oswald Gilchrist .....	12 Aug., 1880	Ditto .....		12 Aug., 1880.
	Robert Fitz-Stubbs .....	31 May, 1880	Ditto .....		31 May, 1880.
	John Alexander Portus .....	21 May, 1881	Ditto .....		21 May, 1881.
	Edward Compton Batt .....	6 Jan., 1881	Ditto .....		6 Jan., 1881.
	Edward Wrench <sup>1</sup> .....	26 Oct., 1886	Ditto .....		26 Oct., 1886.
	John Henry Munro .....	17 Jan., 1881	Ditto .....		17 Jan., 1881.
<b>DEEDS BRANCH.</b>					
Deputy Registrar-General	W. A. Abbott <sup>2</sup> .....	7 Mar., 1884	Governor and Executive Council	440 0 0	16 Mar., 1859.
Chief Clerk and .....	H. W. Gillam .....	17 June, 1882	Ditto .....	340 0 0	6 May, 1867.
Deputy Registrar of Deeds	H. C. S. Hiddilston <sup>3</sup> .....	25 Mar., 1884	Governor, under Act 20 Vic. No. 27....	290 0 0	19 Jan., 1877.
Cashier .....	F. Yarnton <sup>4</sup> .....	19 Jan., 1877	Ditto .....	220 0 0	26 Sept., 1870.
Clerk .....	.....	.....	.....	.....	.....
	succeeded by				
	Robert W. Codrington .....	1 June, 1886	Ditto .....	220 0 0	29 Sept., 1872.
	M. Cooper .....	1 Sept., 1884	Ditto .....	200 0 0	29 Oct., 1878.
	W. J. Hopper .....	1 Sept., 1884	Ditto .....	140 0 0	21 May, 1883.
	S. E. Raper .....	1 Sept., 1884	Ditto .....	140 0 0	1 June, 1883.
	R. E. Waddington .....	5 Dec., 1884	Ditto .....	140 0 0	2 Mar., 1882.*
	C. G. M'Shane .....	1 Dec., 1884	Ditto .....	90 0 0	1 Dec., 1884.
Book Porter .....	.....	.....	Registrar-General .....	120 0 0	.....
Office-keeper to the Department	.....	.....	Ditto .....	50 0 0	.....
<b>† DISTRICT REGISTRARS OF BIRTHS, DEATHS, AND MARRIAGES.</b>					
<b>Registrar-General—</b>					
East Sydney .....	Edward Grant Ward, J.P.	15 Dec., 1870	Governor and Executive Council	See page 23	
South Sydney .....		and			
West Sydney .....		1 April, 1881			
Albany and the Hume .....	Chas. A. Conley .....	1 Feb., 1882	Registrar-General .....		
Argyle and Goulburn .....	L. W. A. Macarthur .....	1 July, 1883	Ditto .....		
	W. M. Macfarlane (Acting) .....	1 April, 1886	Ditto .....		
	Chas. Robertson (Acting) .....	9 Aug., 1886	Ditto .....		
Assistant (Crookwell) .....	Walter S. Gunn .....	1 April, 1881	Ditto .....		
Balmain .....	W. Parker .....	1 April, 1881	Ditto .....		
Assistant (Leichhardt) .....	James S. Hellier .....	1 July, 1882	Ditto .....		
Balranald (Hay) .....	W. Chisholm .....	5 Feb., 1885	Ditto .....		
Assistant (Balranald) .....	N. Lockhart .....	22 Feb., 1883	Ditto .....		
Assistant (Hillston) .....	Michael Hogan .....	1 Aug., 1884	Ditto .....		
Bathurst; also East Macquarie & West Macquarie.	C. Grant .....	1 April, 1883	Ditto .....		
Assistant, East Macquarie (Sofala)	John P. Hayes .....	19 June, 1881	Ditto .....		
The Bogan (Dubbo) .....	L. M'Guinn .....	1 April, 1881	Ditto .....		
	J. J. Kingsmill (Acting) .....	1 Oct., 1886	Ditto .....		
Assistant (Dubbo) .....	Luke M'Guinn, jun. <sup>5</sup> .....	1 April, 1884	Ditto .....		
The Bogan (Nyngan) .....	Alaric Anderson .....	12 Mar., 1885	Ditto .....		
Burrowa .....	W. E. Wotton .....	1 Sept., 1883	Ditto .....		
(Coonamble) .....	Andrew T. Cochrane .....	1 July, 1885	Ditto .....		
Coonamble (The Bogan) .....	Andrew T. Cochrane .....	1 July, 1885	Ditto .....		
Bourke .....	W. M. Macfarlane .....	6 Nov., 1885	Ditto .....		
" .....	R. J. J. W. Jervaulx .....	25 Dec., 1885	Ditto .....		
(Barrington) .....	R. G. H. Bell .....	25 Mar., 1886	Ditto .....		
" .....	Michael Murphy .....	16 Dec., 1886	Ditto .....		
(Cobar) .....	Alfred H. Davis (Acting) .....	24 Feb., 1886	Ditto .....		
" .....	Geo. M. Marsh (Acting) .....	25 June, 1886	Ditto .....		
" .....	T. C. K. M'Kell .....	29 Sept., 1886	Ditto .....		
Assistant (Barrington) .....	Patrick J. Carland .....	6 Nov., 1884	Ditto .....		
" (Brewarrina) .....	Edward Davis Millen .....	22 Dec., 1884	Ditto .....		
Assistant (Cobar) .....	F. S. Osborn .....	16 Aug., 1883	Ditto .....		
Braidwood .....	C. E. Oslear .....	25 July, 1883	Ditto .....		
	Jas. Aldcorn (Acting) .....	17 Nov., 1886	Ditto .....		
Camden .....	J. B. Martin .....	1 April, 1881	Ditto .....		
Assistant (Campbelltown) .....	W. B. Simpson .....	24 Feb., 1885	Ditto .....		
" .....	Paul Le Jeune (Acting) .....	1 July, 1886	Ditto .....		
" .....	Edward M. Cohen (Acting) .....	1 Oct., 1886	Ditto .....		
" (Picton) .....	W. R. Antill .....	1 April, 1881	Ditto .....		
" (Berrima) .....	F. R. Wilshire .....	1 April, 1881	Ditto .....		
" .....	F. Galbraith (Acting) .....	21 Feb., 1886	Ditto .....		
" (Robertson) .....	D. Moffitt .....	1 April, 1881	Ditto .....		
" .....	Annie D. Moffitt .....	30 Sept., 1886	Ditto .....		
Canterbury (Burwood) .....	M. B. Young .....	1 April, 1881	Ditto .....		
Assistant (Ashfield) .....	George Watson .....	1 May, 1884	Ditto .....		
" (Petersham) .....	F. A. Morgan .....	1 Oct., 1885	Ditto .....		
" (St. Peter's) .....	V. Pampillonia .....	1 Oct., 1885	Ditto .....		
Carcoar .....	W. B. Warner .....	1 April, 1881	Ditto .....		
" .....	N. Connolly (Acting) .....	18 Feb., 1886	Ditto .....		
" (Cowra) .....	W. L. Fawcett (Acting) .....	23 May, 1886	Ditto .....		
Assistant .....	W. G. B. Smith .....	27 Nov., 1885	Ditto .....		

<sup>1</sup> Vice John Little, deceased.<sup>2</sup> Gives security for £300.<sup>3</sup> Gives security for £500.<sup>4</sup> Deceased, 31 May, 1886<sup>5</sup> Deceased.

\* Services not continuous.

† From 1 April, 1881, the districts were re-arranged to assimilate them with the Electoral Districts.

All District Registrars are allowed 2s. per entry; also all fees paid to them for searches, certified copies, and marriages.

NEW SOUTH WALES—1886.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government
<b>COLONIAL SECRETARY—REGISTRAR-GENERAL—continued.</b>					
The Clarence (Maclean) ...	J. W. Madgwick .....	1 Dec., 1881	Registrar-General .....		
Assistant " ..	Jim M'Kensey .....	11 April, 1886	Ditto .....		
Central Cumberland and Parramatta.	A. J. Flanders .....	1 April, 1885	Ditto .....		
Assistant (Ryde) .....	Geo. Wickham .....	1 April, 1881	Ditto .....		
" (Liverpool) .....	G. M. Pope .....	1 April, 1881	Ditto .....		
" (Granville) .....	W. Long .....	1 April, 1881	Ditto .....		
Durham (Clarence Town) ..	John Rayner .....	8 Nov., 1886	Ditto .....		
Assistant (Dungog) .....	Jas. Lyall .....	1 June, 1881	Ditto .....		
" (Paterson) .....	C. G. Smith .....	1 April, 1881	Ditto .....		
Eden (Bega) .....	Geo. Thompson (Acting) ..	12 April, 1886	Ditto .....		
" ..	W. L. Brown .....	1885	Ditto .....		
" ..	J. T. Locke .....	27 Aug., 1885	Ditto .....		
Assistant (Eden) .....	C. W. Thomas (Acting) ..	30 Sept., 1886	Ditto .....		
" (Moruya) .....	John Edwards (Acting) ..	17 Dec., 1886	Ditto .....		
Forbes .....	J. W. Lees .....	1 July, 1883	Ditto .....		
Assistant (Parkes) .....	F. J. Fowler .....	24 Feb., 1885	Ditto .....		
" (Condobolin) .....	Alfred Ling .....	21 Aug., 1886	Ditto .....		
" (Nymagee) .....	Edmond A. T. Pery .....	13 Dec., 1884	Ditto .....		
Glebe .....	W. C. Weston .....	1 April, 1881	Ditto .....		
Glen Innes .....	E. A. Grainger .....	10 July, 1885	Ditto .....		
" (Vegetable Creek, now Emmaville.)	S. H. Smith .....	1 Oct., 1883	Ditto .....		
Gloucester (Stroud) .....	J. A. R. Elmslie .....	26 Feb., 1886	Ditto .....		
Assistant (Raymond Terrace) ..	F. W. Artlett .....	8 May, 1884	Ditto .....		
Assistant (Copeland) .....	V. D. H. Besnard .....	1 May, 1885	Ditto .....		
Grafton .....	Frank F. Potts (Acting) ..	16 April, 1886	Ditto .....		
Grenfell .....	J. M. Sheahan .....	18 July, 1885	Ditto .....		
Assistant " (Temora) .....	T. Laman .....	1 April, 1881	Ditto .....		
Assistant " (Barmedman) .....	Henry Laman (Acting) ..	16 May, 1886	Ditto .....		
Gundagai .....	C. R. Middleton .....	1 Jan., 1882	Ditto .....		
Assistant (Cootamundra) .....	Chas. De Boos .....	2 Jan., 1883	Ditto .....		
Gunnedah .....	W. Clark .....	1 April, 1881	Ditto .....		
Assistant (Quirindi) .....	W. H. Hazelton .....	1 Oct., 1882	Ditto .....		
The Gwydir (Warialda) .....	Jas. Davoren (Acting) ..	1 July, 1886	Ditto .....		
Assistant (Moree) .....	R. Zouch .....	1 April, 1881	Ditto .....		
" (Bingara) .....	Bernard M'Keon (Acting) ..	6 July, 1886	Ditto .....		
Hartley (Lithgow) .....	C. W. Weekes .....	1 Nov., 1882	Ditto .....		
" (Oberon) .....	C. H. B. Primrose .....	1 April, 1881	Ditto .....		
Hastings and Manning River (Taree).	W. B. Connell .....	1 July, 1885	Ditto .....		
Assistant " (Port Macquarie) ..	Harold W. Tilley (Acting) ..	30 Nov., 1886	Ditto .....		
Hawkesbury (Windsor) .....	R. H. V. Alnutt .....	6 Nov., 1884	Ditto .....		
Assistant (Richmond) .....	T. H. Wilkinson .....	27 May, 1882	Ditto .....		
" (Wiseman's Ferry) .....	W. E. Henry .....	16 July, 1885	Ditto .....		
Hume (Corowa) .....	W. C. Lawson .....	1 Jan., 1885	Ditto .....		
The Hunter (Greta) .....	W. P. Macdermott .....	1 April, 1881	Ditto .....		
Assistant (East Maitland) .....	Josiah Metcalf .....	1 Jan., 1886	Ditto .....		
The Upper Hunter (Scone) ..	J. A. Creagh .....	1 April, 1881	Ditto .....		
Assistant (Mus'lbroom) .....	John G. Walker (Acting) ..	10 July, 1886	Ditto .....		
" (Cassilis) .....	R. Maunsell .....	1 April, 1881	Ditto .....		
" (Murrurundi) .....	W. H. H. Becke .....	1 April, 1881	Ditto .....		
" (Denman) .....	O. A. S. Fitzpatrick .....	1 Oct., 1885	Ditto .....		
" (Merriwa) .....	J. T. Marks .....	1 May, 1885	Ditto .....		
Illawarra (Wollongong) .....	F. G. Battye .....	1 Jan., 1886	Ditto .....		
Assistant (Woonoona) .....	Thomas Jones .....	1 April, 1881	Ditto .....		
Inverell .....	F. S. Isaacs .....	1 Jan., 1885	Ditto .....		
Kiama .....	H. J. Leary .....	1 July, 1883	Ditto .....		
The Macleay River (Kempsey) ..	T. Foley .....	1 April, 1881	Ditto .....		
Assistant (Woolongong) .....	W. M. Macfarlane (Acting) ..	1 Jan., 1886	Ditto .....		
Assistant (Woonoona) .....	Henry S. Hawkins .....	1 April, 1886	Ditto .....		
Inverell .....	G. R. Evans .....	1 April, 1881	Ditto .....		
Kiama .....	H. J. Connell .....	1 Oct., 1884	Ditto .....		
The Macleay River (Kempsey) ..	Thomas A. Bowen (Acting) ..	8 Dec., 1886	Ditto .....		
Assistant (Woolongong) .....	E. W. Fegan .....	25 June, 1885	Ditto .....		
Assistant (Woolongong) .....	Alfred A. Turner .....	1 April, 1881	Ditto .....		
Inverell .....	Edward Ramsay .....	1 April, 1881	Ditto .....		
Kiama .....	J. H. Tompson .....	1 Feb., 1885	Ditto .....		
The Macleay River (Kempsey) ..	G. T. T. Butler (Acting) ..	1 April, 1886	Ditto .....		
Assistant (Woolongong) .....	Frederick S. Osborn .....	1 Aug., 1886	Ditto .....		
Assistant (Woolongong) .....	H. Connell .....	1 April, 1881	Ditto .....		
Inverell .....	L. W. A. Macarthur (Acting) ..	4 Nov., 1886	Ditto .....		
Kiama .....	C. A. Grubb .....	5 July, 1883	Ditto .....		
The Macleay River (Kempsey) ..	J. W. Wilson .....	20 Jan., 1886	Ditto .....		
Assistant (Woolongong) .....	H. Dillon .....	24 Aug., 1886	Ditto .....		
Assistant (Woolongong) .....	T. C. K. M'Keil .....	11 Mar., 1882	Ditto .....		
Inverell .....	George Day .....	23 July, 1885	Ditto .....		
Kiama .....	F. S. Isaacs .....	1 Jan., 1885	Ditto .....		
The Macleay River (Kempsey) ..	Thos. Hughes .....	1 Jan., 1883	Ditto .....		
Assistant (Woolongong) .....	J. E. Fenwick .....	1 May, 1882	Ditto .....		

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Office.	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary.	Date of first appointment under the Colonial Government.
<b>COLONIAL SECRETARY—REGISTRAR-GENERAL—continued.</b>					
Molong .....	H. J. Jeffreys .....	1 Oct, 1882	Registrar-General .....		
	J. H. Nisbett (Acting) ..	23 April, 1886	Ditto .....		
Monaro (Cooma) .....	A. Salway .....	29 Sept, 1882	Ditto .....		
(Delegate) .....	Chas. Stuart .....	1 Jan., 1886	Ditto .....		
(Bombala) .....	W. A. Dovers .....	31 Aug, 1886	Ditto .....		
(Nimitybelle) .....	G. W. Myers .....	1 July, 1886	Ditto .....		
Assistant (Bombala) ..	M. E. Burke .....	24 Jan., 1885	Ditto .....		
Morpeth .....	James Keating .....	1 April, 1881	Ditto .....		
Mudgee .....	R. H. Acheson .....	1 Jan., 1885	Ditto .....		
Assistant (Gulgong) ..	W. L. Brown .....	23 May, 1884	Ditto .....		
(Tambaroora) .....	J. S. Willard .....	1 April, 1881	Ditto .....		
(Hill End) .....	H. S. Hawkins .....	17 May, 1884	Ditto .....		
" .....	A. Le Messurier (Acting)	1 Mar, 1886	Ditto .....		
" .....	Jas. Watt .....	22 June, 1886	Ditto .....		
" .....	W. A. Steel .....	22 Dec, 1886	Ditto .....		
(Rylstone) .....	W. W. Armstrong .....	1 April, 1881	Ditto .....		
The Murray (Demighuin) ..	W. H. Hooper .....	1 April, 1881	Ditto .....		
Assistant (Moulamein) ..	Thos. Linton .....	14 June, 1881	Ditto .....		
(Moama) .....	J. B. Casey .....	10 May, 1885	Ditto .....		
(Jerilderie) .....	A. D. Fowler .....	1 Dec., 1882	Ditto .....		
The Murrumbidgee (Wagga Wagga)	E. H. Tompson .....	14 June, 1881	Ditto .....		
Assistant (Loftus) .....	A. O. Butler (Acting) ..	22 Sept, 1886	Ditto .....		
(Narrandera) .....	A. Elliott .....	1 Jan, 1885	Ditto .....		
" .....	G. F. Scott .....	1 Jan, 1885	Ditto .....		
" .....	L. S. Donaldson (Acting)	31 July, 1886	Ditto .....		
(Urana) .....	H. H. Lublin .....	8 Dec, 1882	Ditto .....		
(Hillston) .....	Michael Hogan .....	1 Aug, 1884	Ditto .....		
The Namoi (Coonabarabran)	F. W. Edwards .....	1 April, 1881	Ditto .....		
Assistant (Coonamble) ..	A. T. Cochran .....	1 July, 1885	Ditto .....		
(Narrabri) .....	Henry J. Bolding .....	24 Dec, 1884	Ditto .....		
(Walgett) .....	W. H. Wright .....	16 Jan, 1885	Ditto .....		
" .....	H. Dillon (Acting) .....	21 Feb, 1886	Ditto .....		
The Nepean (Penrith) ..	J. K. Cleeve .....	1 April, 1881	Ditto .....		
Newcastle .....	F. W. Lochhead .....	1 Jan., 1886	Ditto .....		
(Hamilton) .....	James Ray .....	1 Feb, 1886	Ditto .....		
New England (Armidale) ..	L. S. Gordon .....	1 Oct, 1882	Ditto .....		
" .....	L. H. Smith (Acting) ..	1 May, 1886	Ditto .....		
Assistant (Walcha) .....	E. Marriott .....	10 April, 1883	Ditto .....		
(Uralla) .....	A. M' Rae .....	1 Oct, 1885	Ditto .....		
" .....	Henry Roman (Acting) ..	30 Sept, 1886	Ditto .....		
" .....	James Watt .....	31 Dec, 1885	Ditto .....		
(Bundarra) .....	Joseph Reynolds .....	1 Feb, 1883	Ditto .....		
Newtown .....	Alfred Newman .....	1 Oct., 1885	Ditto .....		
Northumberland (Lambton)	W. F. Dent .....	1 April, 1881	Ditto .....		
Assistant (Wallsend) ..	Thos. Alnwick .....	1 April, 1881	Ditto .....		
(Minni) .....	E. T. Costin .....	1 July, 1885	Ditto .....		
" .....	Thomas Wells .....	17 Feb., 1886	Ditto .....		
Orange .....	F. B. Hales .....	1 May, 1885	Ditto .....		
Paddington .....	H. Gale .....	1 April, 1881	Ditto .....		
Assistant (Randwick) ..	Wm Bethune .....	1 April, 1881	Ditto .....		
" .....	C. W. E. Bedford .....	1 April, 1886	Ditto .....		
(Waverley) .....	R. T. Orr .....	1 Feb, 1882	Ditto .....		
(Woollahra) .....	H. North .....	1 July, 1885	Ditto .....		
" .....	Eliza M. North .....	1 Mar., 1886	Ditto .....		
Patrick's Plains .....	F. J. Robinson .....	1 April, 1881	Ditto .....		
Queanbeyan .....	C. H. Emery .....	18 Aug, 1882	Ditto .....		
Redfern .....	C. Warburton .....	1 April, 1881	Ditto .....		
Assistant (Waterloo) ..	Jas. Skinner .....	12 Mar., 1884	Ditto .....		
(Redfern) .....	John English .....	17 April, 1886	Ditto .....		
The Richmond (Casino) ..	M. M. Campbell .....	1 April, 1881	Ditto .....		
Assistant (Lismore) .....	C. Coghlan .....	17 April, 1884	Ditto .....		
(Tweed River) .....	Joshua Bray .....	1 April, 1881	Ditto .....		
Shoalhaven .....	Wm Lovegrove .....	1 April, 1881	Ditto .....		
Assistant (Milton) .....	J. T. Hobbes .....	11 Jan, 1884	Ditto .....		
(Broughton Creek) ..	Henry Taylor .....	1 May, 1886	Ditto .....		
St. Leonards .....	R. D. Ward .....	1 April, 1881	Ditto .....		
Assistant (Manly) .....	Æ. M. Stephen .....	1 April, 1881	Ditto .....		
(St. Leonards) .....	F. W. Birch (Acting) .....	22 Feb., 1886	Ditto .....		
Tamworth .....	J. L. King .....	1 Jan, 1885	Ditto .....		
Assistant (Nundle) .....	Saml. Kermode .....	1 April, 1881	Ditto .....		
(Manilla) .....	D. E. Veness .....	1 July, 1882	Ditto .....		
(Barraba) .....	K. T. Garland .....	1 Oct., 1885	Ditto .....		
(Tamworth) .....	Henry A. Ledger (Acting)	2 July, 1886	Ditto .....		
Tenterfield .....	F. Burne .....	1 Jan, 1885	Ditto .....		
Tumut (Adelong) .....	John James .....	1 April, 1881	Ditto .....		
Assistant (Tumut) .....	W. H. Hilton .....	13 Nov, 1884	Ditto .....		
Wellington .....	W. Carson .....	1 May, 1884	Ditto .....		
" .....	Jas. Anderson (Acting) ..	20 Dec, 1886	Ditto .....		
Wentworth .....	A. N. Barnett .....	1 Nov, 1884	Ditto .....		
Assistant (Wilcannia) ..	Walterus Brown, senr. ..	28 May, 1885	Ditto .....		
" .....	Frank Leng .....	10 Feb, 1886	Ditto .....		
(Menindie) .....	J. R. Holding .....	22 Aug, 1885	Ditto .....		
(Silverton) .....	J. Saunders .....	8 Jan, 1885	Ditto .....		
(Milparinka) .....	C. M. King .....	1 April, 1882	Ditto .....		
(Wentworth) .....	M. S. Love (Acting) ..	11 July, 1886	Ditto .....		

All District Registrars are allowed 2s. per entry; also all fees paid to them for searches, certified copies, and marriages.

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>COLONIAL SECRETARY—REGISTRAR-GENERAL—continued.</b>					
Wollombi (Millfield).....	E. Hinchcliffe .....	1 July, 1883	Registrar-General .....		
Assistant (Wollombi)	J. C. J. Smith .....	2 May, 1885	Ditto .....		
„ (St. Albans,	T. J. Thompson .....	1 April, 1881	Ditto .....		
„ M'Donald River),					
„ (Gosford, Bris-	A. J. Kingsmill .....	1 April, 1881	Ditto .....		
bane Water).					
„ (Wiseman's	J. T. Marx .....	1 July, 1885	Ditto .....		
Ferry).					
„ (Gosford) ...	Joseph Hay (Acting) ..	7 Dec, 1886	Ditto .....		
Yass Plains (Yass) .....	G. Addison .....	1 July, 1885	Ditto .....		
Assistant (Gunning) ...	J. F. Kenyon .....	1 April, 1881	Ditto .....		
„ „	Selwyn Pembroke (Acting)	7 Jan, 1886	Ditto .....		
Young.....	A. W. Honour .....	3 April, 1885	Ditto .....		
Assistant (Murrumburrah).	C. Cutcliffe .....	1 April, 1881	Ditto .....		
Lord Howe Island.....	W. G. Stevens .....	1 May, 1882	Ditto .....		
					All District Registrars are allowed 2s per entry; also all fees paid to them for searches, certified copies, & marriages.
<b>GOVERNMENT STATISTICIAN.</b>					
Government Statistician..	T. A. Coghlan. ...	5 July, 1886	Governor and Executive Council	825 0 0	1 Oct., 1870.*
Chief Compiler. ....	John Duff	16 Aug, 1886	Ditto .....	390 0 0	1 July, 1854.*
Compilers ..	Edmond Marin La Meslée.	16 Aug, 1886	Colonial Secretary. ....	320 0 0	— Feb., 1878.
	Greville Philipps Tregarthen	16 Aug, 1886	Ditto ..	320 0 0	1 May, 1886.
Clerks.....	James Reginald Scroggie	16 Aug, 1886	Ditto .....	250 0 0	26 Feb., 1885.
	R. G. Foenander	16 Aug, 1886	Ditto .....	225 0 0	19 Jan., 1885.
	Selby Marshall Cook.	16 Aug, 1886	Governor and Executive Council	115 0 0	1 Sept., 1883.
	Edward Brandreth Casey.	16 Aug, 1886	Colonial Secretary. ....	50 0 0	16 Aug., 1886.
Messenger (1) .....	.....	.....	.....	100 0 0	.....
					* Services not continuous.
<b>DEPARTMENT OF AUDIT.</b>					
Auditor General .....	Edward Alexander Renne	16 July, 1883	Governor and Executive Council	960 0 0	1 Sept., 1846.
Inspector of Accounts .....	David William Gregory..	16 July, 1883	Ditto .....	650 0 0	21 Feb., 1862.
Assistant Inspector .	Drummond Gilchrist ..	16 July, 1883	Ditto ..	490 0 0	4 Aug, 1858.
Assistant Inspector, Rail-	William Rooke Row .....	17 Sept., 1883	Ditto .....	440 0 0	— April, 1870.
way Audit.					
Principal Ledger-keeper	Thomas John Moppett ..	1 Jan, 1880	Ditto ..	390 0 0	3 June, 1853.*
Examiner, Revenue Audit	Charles Whittell .....	1 Jan, 1880	Ditto ..	390 0 0	1 Mar., 1863.
Examiner, Expenditure	Ambrose Freeman .....	16 July, 1883	Ditto .....	390 0 0	1 June, 1866.
Audit.					
Assistant Examiner, Re-	Alfred Farish Hindmarsh	1 Jan, 1880	Ditto .....	350 0 0	11 June, 1874.
venue Branch.	Stephen.				
Junior Inspector, Railway	James M'Kern .....	1 Sept., 1883	Ditto .....	340 0 0	1 Aug., 1870.
Audit.					
Clerks .....	James Mitchell .....	14 Jan, 1870	Ditto ..	340 0 0	14 Jan., 1870.
	Joseph Edward Scrutton..	1 Nov., 1870†	Ditto ..	340 0 0	1 Nov., 1870.
Junior Inspector, Railway	Henry Eustace Notting ..	17 Sept., 1883†	Ditto ..	340 0 0	5 April, 1877.
Audit.					
Clerks .....	James Tracton Dennis .	1 Feb., 1873†	Ditto ..	315 0 0	1 June, 1870.
	George Gay Hole .....	1 Mar, 1875†	Ditto ..	315 0 0	22 Oct., 1872.
	William John Jordan .....	1 Jan., 1876†	Ditto ..	290 0 0	1 Dec., 1856.*
	James Coates .....	1 June, 1875†	Ditto ..	290 0 0	1 July, 1873.
	William Hunter Smith .....	17 Sept, 1883†	Ditto ..	265 0 0	9 May, 1881.*
	Alexander Law .....	1 June, 1877	Ditto ..	265 0 0	1 June, 1877.
	Andrew George M'Shane	1 Jan, 1876†	Ditto ..	240 0 0	8 May, 1875.
	John Robinson ..	1 Jan, 1883†	Ditto ..	240 0 0	14 May, 1879.
	Robert Hawkes Ellis ..	1 Jan., 1883†	Ditto ..	200 0 0	1 May, 1879.
	Francis Thorley Bolton ..	1 Mar., 1878	Ditto ..	200 0 0	1 Mar., 1878.
	John Sidney Shaw ..	1 Jan, 1883†	Ditto ..	200 0 0	19 May, 1879.
(Railway Audit Branch)	Thomas Robert Burns	1 April, 1877	Ditto ..	200 0 0	1 April, 1877.
	Moppett.				
	William Joseph Langley .	1 Jan., 1883†	Ditto ..	190 0 0	1 June, 1882.
	John Thomas Eldridge ...	20 Jan, 1879	Ditto ..	190 0 0	20 Jan., 1879.
	Samuel Lister Lister	4 Sept., 1883	Ditto ..	190 0 0	4 Sept., 1883.
	John Hiddilston ..	1 Jan., 1883†	Ditto ..	190 0 0	1 Mar., 1879.
	Henry Walter Champion	1 Jan., 1883†	Ditto ..	165 0 0	2 May, 1879.
	Hamilton M'Cann ..	1 Jan, 1883†	Ditto ..	165 0 0	12 May, 1879.
	James Byres Laing ..	1 Jan, 1883†	Ditto ..	165 0 0	15 April, 1882.
	Charles Wm. Sherlock .	14 Mar, 1884†	Ditto ..	165 0 0	15 June, 1875.*
	Ernest Albert Ironside ...	1 Feb, 1881	Ditto ..	140 0 0	1 July, 1879.
	Henry Kidd Harpur ...	1 Jan, 1883†	Ditto ..	140 0 0	26 Sept., 1881.
	Charles Tucker Derwent	3 Dec., 1883	Ditto ..	140 0 0	3 Dec., 1883.
	Notton.				
	Alexander Bissett Amess .	1 Sept, 1883†	Ditto ..	140 0 0	28 May, 1883.
	John Andrew Davis ..	1 Nov, 1884†	Ditto ..	140 0 0	17 July, 1883.
	Wm. Arthur M'Crea ...	1 Oct, 1884†	Ditto ..	75 0 0	14 Sept., 1883.
	Chas. E. A. MacNevin <sup>1</sup> .	1 Oct., 1884	Ditto ..	75 0 0	1 Oct., 1884.

1 To 31 March—resigned

\* Services not continuous.

† Salary previous to this date paid from Contingent Vote.



## NEW SOUTH WALES—1886.

29

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.		
				£ s. d.			
<b>COLONIAL SECRETARY—INSPECTOR GENERAL OF POLICE—continued.</b>							
Sub-Inspectors, 2nd Class <sup>1</sup> — <i>continued.</i>	Alfred Potter .....	1 Jan., 1884	Governor and Executive Council	250 0 0	11 Aug., 1873.		
	Daniel Byrne .....	1 Jan., 1884	Ditto .....	250 0 0	8 May, 1862.		
	Roger Fenton .....	1 Jan., 1884	Ditto .....	250 0 0	22 Oct., 1856.		
	Robert Lattimer .....	1 May, 1885	Ditto .....	250 0 0	11 April, 1861.		
	Burns Miles .....	1 Oct., 1885	Ditto .....	250 0 0	8 Feb., 1863.		
	Robert Barry .....	1 Oct., 1886	Ditto .....	250 0 0	23 Aug., 1870.		
	William Long .....	1 Oct., 1886	Ditto .....	250 0 0	2 Dec., 1858.		
	John Bell .....	1 Oct., 1886	Ditto .....	250 0 0	2 June, 1875.		
Acting Sub-Inspector <sup>1</sup> .....	Thomas Cameron .....		Ditto .....	10/6 <sup>p</sup> diem.			
Police Storekeeper .....	Stephen Steele .....	1 Jan., 1880	Ditto .....	250 0 0	7 Aug., 1863.		
<i>Mounted Police<sup>1</sup> :—</i>							
Sergeants, 1st Class (30) ...	Average numbers.		Inspector-General of Police, under Police Regulation Act.	0 10 6	} per diem, each.		
Sergeants, 2nd Class (50) ...			Ditto .....	0 9 3			
Senior Constables (120) ...			Ditto .....	0 8 0			
Constables, 1st Class (200) ...			Ditto .....	0 7 6			
Ordinary Constables (241) ...			Ditto .....	0 7 0			
Probationary Constables (39) ...			Ditto .....	0 6 0			
<i>Foot Police<sup>1</sup> :—</i>							
Sergeants, 1st Class (26) ...				Ditto .....		0 10 6	} per diem, each.
Sergeants, 2nd Class (37) ...				Ditto .....		0 9 3	
Senior Constables (106) ...				Ditto .....		0 8 0	
Constables, 1st Class (212) ...			Ditto .....	0 7 6			
Ordinary Constables (300) ...			Ditto .....	0 7 0			
Probationary Constables (39) ...			Ditto .....	0 6 0			
Senior-Sergeant and Armourer ...			Ditto .....	0 12 0			
<i>Detective Branch :—</i>							
Officer-in-charge .....	Inspector W. Camphin ...	18 Dec., 1882	Governor and Executive Council	325 0 0	13 May, 1858.		
Detectives—1st Class (3) ...			Inspector-General of Police, under Police Regulation Act.	0 12 0	} per diem, each.		
" (3) ...			Ditto .....	0 11 0			
2nd Class (3) ...			Ditto .....	0 10 0			
3rd Class (6) ...			Ditto .....	0 9 0			
<b>IMMIGRATION AGENT.</b>							
Agent for Immigration ...	George Foster Wise .....	1 Nov., 1862	Governor and Executive Council	550 0 0	— Feb., 1851.*		
Chief Clerk and Accountant	Frank Burford Treatt .....	1 June, 1877	Ditto .....	490 0 0†	1 Oct., 1875.		
Clerks .....	Francis Jacob Josephson ...	21 June, 1878	Ditto .....	190 0 0	21 June, 1878.		
	Thos. Cooper Hinchcliffe ..	21 May, 1884	Ditto .....	190 0 0	21 July, 1875.		
(Temporary) .....	James Miller .....	19 May, 1883	Colonial Secretary .....	125 0 0	19 May, 1883.		
(on account of free railway passes to unemployed.)							
Messenger .....	Henry Adams .....	1 Feb., 1883	Ditto .....	125 0 0	1 Feb., 1883.		
Matron <sup>1</sup> .....	Lucy Hannah Hicks .....	13 May, 1861, succeeded by to 22 Feb., 1886.	Administrator of Government and Executive Council.	50 0 0	13 May, 1861.		
	Cecilia Jane Hyrons .....	23 Feb., 1886.	Colonial Secretary .....	150 0 0	5 Oct., 1885.		
Depôt servant .....			Ditto .....	36 0 0			
Office-cleaner .....			Ditto .....	36 0 0			
Clerk (temporary) .....	William Calcutt .....	3 Dec., 1884	Ditto .....	120 0 0	25 Sept., 1884.		
<sup>1</sup> Allowed £20 per annum for rations.      * Services not continuous.      † Includes £100 per annum for special services in connection with unemployed to 6th May.							
<b>IMMIGRATION BOARD.</b>							
Members (Chairman) .....	Henry Norman MacLaurin, M.D., L.R.C.S., S.M.R.C.S.	1 Sept., 1885	Governor and Executive Council	} Paid by fees* {	1 Sept., 1885.		
	George Foster Wise .....	22 Dec., 1862	Ditto .....		— Feb., 1851.		
	Very Rev. J. F. Sheridan ...	7 Dec., 1863	Ditto .....		7 Dec., 1863.		
	John Milbourne Marsh ...	8 Aug., 1877	Ditto .....		7 Jan., 1859.		
	Rev. John Douse Langley ...	19 Aug., 1884	Ditto .....		19 Aug., 1884.		
	Rev. Samuel Wilkinson ...	13 Feb., 1878	Ditto .....		13 Feb., 1878.		
	Rev. David Smith, M.A. ...	20 Feb., 1885	Ditto .....		20 Feb., 1885.		
* Allowed 10s. at each Board Meeting (except Mr. Wise).							
<b>MEDICAL BOARD.</b>							
Members (President) .....	Charles M'Kay, M.D. ....	8 Nov., 1882	Governor and Executive Council	} Nil. {	8 Dec., 1865.		
	Owen Spencer Evans, M.R.C.S.E.	18 Nov., 1872	Ditto .....		21 Mar., 1861.		
	Robert Dalzell Ward, M.R.C.S.E.	20 Aug., 1873	Ditto .....		27 Sept., 1853.		
	Arthur Renwick, M.D. ...	20 Aug., 1873	Ditto .....		20 Aug., 1873.		
	Frederick Milford, M.D. ...	18 Oct., 1875	Ditto .....		18 Oct., 1875.		
	Cosby Morgan, M.D. ....	19 Mar., 1877	Ditto .....		19 Mar., 1877.		
	Thomas Peter Anderson Stuart, M.D., Professor	14 June, 1883	Ditto .....		14 June, 1883.		
	W. H. Goode, M.D. ....	31 Mar., 1886	Ditto .....				
	H. G. A. Wright, M.R.C.S.E. ..	31 Mar., 1886	Ditto .....				
	* Walter Fawkes Mackenzie, M.R.C.S., E.	31 Mar., 1886	Ditto .....				
	succeeded by						
	P. Sydney Jones, M.D., F.R.C.S.E.	17 Nov., 1886.	Ditto .....				
Secretary .....	Andrew Houlson, M.B., C.M. ...	2 Nov., 1877	Ditto .....		100 0 0	2 Nov., 1877.	
* Deceased.							

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>COLONIAL SECRETARY—continued.</b>					
<b>DEPARTMENT OF THE MEDICAL ADVISER TO THE GOVERNMENT.</b>					
Medical Adviser to the Government.	H. N. MacLaurin, M.D.	1 Sept., 1885	Governor and Executive Council	400 0 0	1 Sept., 1885.
Secretary to the Medical Adviser to the Government	Edmund Sager .....	1 Jan., 1884	Ditto .....	75 0 0	18 Aug., 1879.
Deputy-Medical Adviser to the Government.	John Ashburton Thompson, M.D.	1 Aug., 1885	Ditto .....	200 0 0	23 July, 1884.
Clerk .....	Clarence Simms .....	1 Dec., 1886	Ditto .....	140 0 0	1 Oct., 1883.
Dispenser, Sydney Gaol .....	Thomas Stapleton .....	1 Feb., 1880	Ditto .....	190 0 0	1 Nov., 1875.
Dispenser, Parramatta District.	George Cunynghame .....	1 July, 1886	Ditto .....	270 0 0	5 Feb., 1880.
Dispenser, Maitland Gaol.	William Spink .....	1 April, 1884	Ditto .....	140 0 0	1 April, 1878.
Visiting Surgeons and Dispensers—					
Medical Officer, Hospital for the Insane, Newcastle.	Richard Harris .....	7 Oct., 1871	Ditto .....	75 0 0	12 Sept., 1867.
Visiting Ophthalmic Surgeon to the Government Asylums for the Infirm and Destitute, at Parramatta and Liverpool.	W. Odillo Maher, M.D....	20 Feb., 1886	Ditto .....	200 0 0	20 Feb., 1886.
Surgeon, N.S.S. "Vernon." Industrial School, Biloela, Ordnance Department.	} Owen Spencer Evans ...	{ 1 Nov., 1871	} Ditto .....	{ 50 0 0	} 21 Mar., 1861.
		{ 22 June, 1871		{ 50 0 0	
		{ 1 April, 1871		{ 50 0 0	
Surgeon, Sydney Gaol, and Reception House for the Insane, also Shaftesbury Reformatory.	} Maurice J. O'Connor .....	{ 1 July, 1878	} Ditto .....	{ 350 0 0	} 1 July, 1878.
		{ 1 Jan., 1883		{ 100 0 0	
Surgeon and Dispenser, Berrima Gaol.	George Proud Lambert ...	10 May, 1876	Ditto .....	200 0 0	1 Jan., 1867.
Surgeon, Albury Gaol .....	Arthur Andrews .....	4 Feb., 1876	Ditto .....	40 0 0	4 Feb., 1876.
Armidale Gaol .....	George Wigan .....	18 Dec., 1883	Ditto .....	40 0 0	18 Dec., 1883.
Bathurst Gaol .....	William F. Bassett .....	10 Feb., 1870	Ditto .....	65 0 0	1851.*
Goulburn Gaol .....	P. H. Gentle .....	1 Nov., 1875	Ditto .....	65 0 0	1 Oct., 1869.
Grafton Gaol .....	Robert Purdie .....	1 Jan., 1880	Ditto .....	40 0 0	1 Jan., 1880.
Deniliquin Gaol .....	A. W. F. Noyes .....	1 Feb., 1873	Ditto .....	40 0 0	23 April, 1869.
Hay Gaol .....	P. F. Casey .....	— July, 1882	Ditto .....	40 0 0	— July, 1882.
Maitland Gaol .....	R. G. Alcorn .....	1 April, 1884	Ditto .....	70 0 0	28 June, 1881.
Mudgee Gaol .....	Chas. Swanston .....	10 Mar., 1885	Ditto .....	50 0 0	10 Mar., 1885.
Tamworth Gaol .....	P. H. White .....	1 July, 1881	Ditto .....	40 0 0	1 July, 1881.
Yass Gaol .....	A. K. Hoets .....	1 Aug., 1884	Ditto .....	40 0 0	1 Aug., 1884.
Young Gaol .....	John T. Healey .....	13 June, 1878	Ditto .....	40 0 0	13 June, 1878.
Wagga Wagga Gaol .....	Erasmus Wren .....	1 Aug., 1875	Ditto .....	40 0 0	1 Aug., 1875.
Dispenser, Bathurst Gaol...	H. H. Sutherland .....	28 Sept., 1883	Ditto .....	100 0 0	28 Sept., 1883.
" Goulburn Gaol.....	John Ferguson .....	1886	Ditto .....	150 0 0	1886
* Services not continuous.					
<b>COAST HOSPITAL BRANCH.</b>					
Medical Superintendent <sup>1</sup> ...	William Peirce, M.D.....	1 July, 1886	Governor and Executive Council	425 0 0	1885.
Dispenser and Storekeeper <sup>1</sup>	B. W. G. Heyeleman.....	1 May, 1884	Colonial Secretary .....	240 0 0	1 May, 1884.
Matron .....	Isabella Dickson .....	1 Feb., 1886	Governor and Executive Council	100 0 0	1 Feb., 1886.
Head Nurse .....	Jane McCreedy .....	1 July, 1885	Medical Adviser .....	75 0 0	1 July, 1885.
Senior Nurses (6) .....	.....	.....	Ditto .....	50 0 0	each.
Junior Nurses (10) .....	.....	.....	Ditto .....	40 0 0	"
Wardsmen (3) .....	.....	.....	Ditto .....	35 0 0	"
General Attendants (3) .....	.....	.....	Ditto .....	60 0 0	"
Cook (man).....	.....	.....	Ditto .....	72 0 0	"
Cook (female) .....	.....	.....	Ditto .....	60 0 0	"
Scullery-man .....	.....	.....	Ditto .....	60 0 0	"
Laundresses (2) .....	.....	.....	Ditto .....	50 0 0	"
General Servants (3) .....	.....	.....	Ditto .....	40 0 0	"
Carpenter <sup>2</sup> .....	.....	.....	Ditto .....	132 0 0	"
Carpenter's Assistant .....	.....	.....	Ditto .....	72 0 0	"
Ambulance Drivers (2) .....	.....	.....	Ditto .....	72 0 0	"
Stableman .....	.....	.....	Ditto .....	60 0 0	"
Grounds Attendant.....	.....	.....	Ditto .....	72 0 0	"
Dispensary Boy .....	.....	.....	Ditto .....	26 0 0	"
<sup>1</sup> Allowed quarters, fuel, and light. <sup>2</sup> Allowed a house. All the other officials are allowed quarters, rations, fuel, and light.					
<b>GOVERNMENT MEDICAL OFFICERS AND VACCINATORS.</b>					
Districts—					
Sydney .....	W. E. Strong <sup>1</sup> .....	19 Oct., 1886.	Governor and Executive Council	675 0 0	
Adelong .....	William M. Lyttleton.....	4 May, 1883	Ditto .....		
Albury .....	Arthur Andrews .....	12 Jan., 1876	Ditto .....		
Armidale .....	George Wigan .....	18 Dec., 1883	Ditto .....		
Bathurst .....	William Frederick Bassett	4 Oct., 1870	Ditto .....		
Bega .....	Montague Fred. Evershed	13 Oct., 1882	Ditto .....		
Berrima .....	George Proud Lambert .....	6 Feb., 1877	Ditto .....		
Bombala .....	Arthur William Eddie .....	12 Nov., 1884	Ditto .....		
Braidwood .....	Rees Llewellyn .....	2 Feb., 1875	Ditto .....		
Bulli and Coal Cliff.....	Thomas James Sturt .....	24 Oct., 1881	Ditto .....		
<sup>1</sup> Allowed a residence and office in the city.					

## NEW SOUTH WALES—1886.

31

Office.	Name.	Date of Appointment	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government
<b>COLONIAL SECRETARY—MEDICAL ADVISER, VACCINATION, MEDICAL OFFICERS, ETC.—continued.</b>					
<b>GOVERNMENT MEDICAL OFFICERS AND VACCINATORS—continued.</b>					
<i>Districts—contd.</i>					
Broulee .....	Edward Boot .....	27 Oct., 1869	Governor and Executive Council		
Broughton Creek .....	Thomas Ross Lewers .....	24 July, 1883	Ditto .....		
Blayney .....	Charles Gaboural Thorp <sup>1</sup>	28 Aug., 1885	Ditto .....		
Balranald .....	Eugene Wilton Anderson	5 June, 1885	Ditto .....		
Brisbane Water .....	Robert Calder .....	23 Sept., 1884	Ditto .....		
Bowral .....	Bernard James Newmarch	7 Aug., 1885	Ditto .....		
Burrowa .....	John Protheroe	14 May, 1886	Ditto .....		
Broken Hill .....	William Griffiths	17 Sept., 1886	Ditto .....		
Camden .....	George Goode <sup>1</sup>	19 April, 1876	Ditto .....		
	Charles G. Leacock ..	8 Oct., 1886	Ditto .....		
	William Kely	24 June, 1884	Ditto .....		
Carcoar .....	John Chfford	20 May, 1879	Ditto .....		
Cooma .....	Alfred Agassiz <sup>1</sup>	6 June, 1882	Ditto .....		
Cootamundra .....	J. F. Anderson .....	10 Dec., 1886	Ditto .....		
	Edward Stanley Tresidder <sup>1</sup>	15 May, 1885	Ditto .....		
	H. I. Tresidder	20 July, 1886	Ditto .....		
Corowa .....	Thomas Loughrey	2 Oct., 1883	Ditto .....		
Crookwell .....	A. E. Fitz-Patrick ..	19 Jan., 1886	Ditto .....		
Cobar .....	Adam Richard Stacpoole <sup>2</sup>	27 Mar., 1885	Ditto .....		
	D. C. Newman ..	10 Dec., 1886	Ditto .....		
Candelo .....	A. H. Meeke	23 July, 1886	Ditto .....		
Deniliquin .....	Alfred William Finch Noyes	27 Oct., 1869	Ditto .....		
Dubbo .....	Edward Glover Tennant <sup>1</sup>	13 May, 1881	Ditto .....		
	H. G. S. Warren .....	9 April, 1886	Ditto .....		
	Arthur William M. Math	6 Feb., 1885	Ditto .....		
Dungog .....	John Macdonald Brennand	7 Sept., 1883	Ditto .....		
Dowling .....	Lloyd Davenport Parry <sup>2</sup>	18 Dec., 1885	Ditto .....		
Emmaville .....	Horace Charles Sandford.	1 Feb., 1884	Ditto .....		
Forbes .....	Fred. Hamilton Wrigley	14 Aug., 1883	Ditto .....		
Glen Innes .....	Peter Hume Gentle .....	10 Nov., 1875	Ditto .....		
Goulburn .....	Robert Purdie .....	21 July, 1876	Ditto .....		
Grafton .....	Alexander Stark Ogg <sup>1</sup> .....	27 May, 1885	Ditto .....		
Gundagai .....	Samuel Aloys Dowe .....	18 Sept., 1877	Ditto .....		
Gunnedah .....	Joseph Patrick Kealy ..	21 July, 1885	Ditto .....		
Gulgong .....	Robert Edward Rygate	3 Oct., 1884	Ditto .....		
Grenfell .....	Harold Lytton Cummings <sup>2</sup>	23 Oct., 1885	Ditto .....		
Gunning .....	Morris Asher .....	1 Feb., 1884	Ditto .....		
Hartley .....	Philip Forth Casey .....	17 Mar., 1882	Ditto .....		
Hay .....	Charles William Pardey	21 April, 1885	Ditto .....		
Hillston .....	William Bissett Knowles	27 May, 1885	Ditto .....		
Inverell .....	David William Balfour Wilkie <sup>2</sup>	4 Dec., 1885	Ditto .....		
Junee .....	W. W. Elmslie .....	11 June, 1886	Ditto .....		
	Charles William Lacey <sup>3</sup>	4 Mar., 1885	Ditto .....		
Kiama .....	Caleb Terrey .....	29 Oct., 1886	Ditto .....		
Liverpool .....	William Edmund Strong <sup>1</sup>	25 Jan., 1877	Ditto .....		
Lambton .....	John Brady Nash <sup>2</sup> ..	10 July, 1883	Ditto .....		
	J. J. Stapleton .....	26 Feb., 1886	Ditto .....		
Lower Clarence River	James Brown Crabbe	11 Dec., 1879	Ditto .....		
Lower Richmond River	William Bradley Violette <sup>2</sup>	4 Mar., 1885	Ditto .....		
Matland .....	Richard Fortune Blackwell	27 Mar., 1877	Ditto .....		
Molong .....	Stanislaus Maguire	15 Feb., 1884	Ditto .....		
Mudgee .....	Charles Swanston	10 Mar., 1885	Ditto .....		
Murrurundi .....	Henry Rufus Bell .....	13 May, 1881	Ditto .....		
Murrumburrah .....	John Clement Souter <sup>2</sup> .....	6 Feb., 1885	Ditto .....		
	G. P. Baldwin .....	5 Feb., 1886	Ditto .....		
Muswellbrook & Merton	Robert Edward Grigson	10 Nov., 1875	Ditto .....		
Manning River .....	Hy Joseph Firth Groves <sup>2</sup>	8 April, 1884	Ditto .....		
	H. M. Curayne .....	11 June, 1886	Ditto .....		
Moree .....	Henrich Lihe .....	28 Aug., 1885	Ditto .....		
Manly and Pittwater	Walter Hugh Tabbits ..	27 Mar., 1885	Ditto .....		
Merrima .....	Bartholomew Taylor Russell	5 June, 1885	Ditto .....		
Narrandera .....	James Mitchell .....	6 Feb., 1885	Ditto .....		
Newcastle .....	Richard Harris	7 Jan., 1879	Ditto .....		
Orange .....	John Frederick Codrington <sup>1</sup>	2 July, 1875	Ditto .....		
	C. F. Coxwell .....	25 June, 1886	Ditto .....		
Parramatta .....	Charles Edward Rowling	31 Dec., 1885 and 26 Sept., 1884	Ditto .....		
Patrick's Plains .....	Richard Read .....	7 Sept., 1880 and 19 July, 1878	Ditto .....		
Penrith .....	Owen Cornelius Brady	25 July, 1879	Ditto .....		
Port Stephens .....	William Stroud Partridge	28 Aug., 1885	Ditto .....		
Parkes .....	Arthur Alma Johnson	28 Aug., 1885 and 15 July, 1881	Ditto .....		
Queanbeyan .....	Sydney Longden Richardson	21 Mar., 1884	Ditto .....		
Qurindi .....	Laurence John Halket <sup>2</sup>	27 May, 1885	Ditto .....		
	T. E. Atkins .....	25 June, 1886	Ditto .....		
Raymond Terrace .....	Henry Louis Harris	6 Nov., 1883	Ditto .....		
Richmond River .....	Ludwick Bernstem	17 July, 1879	Ditto .....		
Rylstone .....	Arthur Wigley Bateman.	15 July, 1881	Ditto .....		
Ryde .....	Thomas Massey Harding ..	25 April, 1884	Ditto .....		

Paid by fees

<sup>1</sup> Resigned.<sup>2</sup> Left the district<sup>3</sup> Deceased

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.		
<b>COLONIAL SECRETARY—MEDICAL ADVISER, VACCINATION, MEDICAL OFFICERS, ETC.—<i>continued.</i></b>							
<b>GOVERNMENT MEDICAL OFFICERS AND VACCINATORS—<i>continued.</i></b>							
<b>Country Districts—<i>contd.</i></b>							
Scone .....	Frederick Charles Stevenson ..	24 Dec., 1885	Governor and Executive Council	} Paid by fees			
Shoalhaven .....	John Parker Brereton .....	4 May, 1877	Ditto .....				
Silverton .....	John Thomson .....	11 July, 1884	Ditto .....				
Sunny Corner .....	Alexander Mackintosh <sup>1</sup> .....	23 Oct., 1885	Ditto .....				
	J. F. Grady .....	29 Oct., 1886	Ditto .....				
St. Leonards & Lane Cove	C. A. D. Clarke .....	3 Jan., 1883	Ditto .....				
Tenterfield .....	John Monteith Warren .....	10 July, 1883	Ditto .....				
Tweed River .....	John Alfred Pybus <sup>1</sup> .....	31 July, 1885	Ditto .....				
Tamworth .....	Patrick Henry White .....	13 June, 1884	Ditto .....				
Tumut .....	Harry Wharton Mason .....	10 Oct., 1884	Ditto .....				
Urana .....	James Fisher Anderson <sup>1</sup> .....	23 Sept., 1884	Ditto .....				
Wagga Wagga .....	Erasmus Wren .....	5 Dec., 1876	Ditto .....				
Wallsend .....	John Brady Nash .....	24 Dec., 1885	Ditto .....				
Wee Waa .....	Charles Meziere de Lepervanche	15 Dec., 1870	Ditto .....				
Wellington .....	Robert Rygate .....	27 Oct., 1869	Ditto .....				
Wentworth .....	Henry Breton .....	22 Aug., 1879	Ditto .....				
Windsor .....	Louis Conrad Jockel .....	30 Oct., 1877	Ditto .....				
Wollongong .....	James Thompson .....	4 Oct., 1881	Ditto .....				
Wilcannia .....	John Scott Wilson .....	6 Nov., 1883	Ditto .....				
Walgett .....	Wahab M <sup>c</sup> Murray <sup>2</sup> .....	5 Dec., 1884	Ditto .....				
	F. O. Hodson <sup>3</sup> .....	26 Feb., 1886	Ditto .....				
	P. B. Wilson .....	10 Aug., 1886	Ditto .....				
Wingham .....	M. L. Cameron .....	13 Sept., 1886	Ditto .....				
Yass .....	Alton Kingsley Hoets .....	16 Sept., 1884	Ditto .....				
Young .....	John Theophilus Heeley .....	8 Feb., 1878	Ditto .....				
<b>ADDITIONAL VACCINATORS.</b>							
	G. F. Dansey .....	23 June, 1871	Governor and Executive Council			} Paid by fees.	
	Patrick M <sup>c</sup> Donagh .....	13 Oct., 1876	Ditto .....				
	William Henry Goode .....	28 June, 1881	Ditto .....				
Sydney and Suburbs	William Frederick Ewington .....	14 Sept., 1883	Ditto .....				
	L. G. Davidson .....	26 Sept., 1884	Ditto .....				
	T. M. Kendall .....	26 Sept., 1884	Ditto .....				
	W. D. C. Williams .....	26 Sept., 1884	Ditto .....				
	Alexander Philip .....	31 Mar., 1885	Ditto .....				
Ashfield (see Burwood and Petersham).	Richard Theophilus Jones	25 Aug., 1875	Ditto .....				
Balmain .....	Owen Spencer Evans .....	1 Oct., 1861	Ditto .....				
	Charles U. Carruthers .....	28 June, 1881	Ditto .....				
	Owen F. S. Evans .....	19 Aug., 1881	Ditto .....				
Botany (see Redfern and Waterloo).	Joseph Parker .....	22 July, 1881	Ditto .....				
Burwood (see Ashfield and Petersham).	Richard Theophilus Jones	25 Aug., 1875	Ditto .....				
Cook's River .....	T. R. Horton .....	22 June, 1886	Ditto .....				
Hunter's Hill .....	Francis D. Niblett .....	28 June, 1881	Ditto .....				
Newtown .....	William G. Sedgwick .....		Ditto .....				
Petersham (see Ashfield and Burwood).	Richard Theophilus Jones	25 Aug., 1875	Ditto .....				
Redfern (see Botany and Waterloo).	Joseph Parker .....	22 July, 1881	Ditto .....				
Ryde .....	Herbert Blaxland .....	9 Aug., 1881	Ditto .....				
St. Leonards .....	Robert D. Ward .....	27 Sept., 1853	Ditto .....				
Waterloo (see Botany and Redfern).	Joseph Parker .....	22 July, 1881	Ditto .....				
Woollahra .....	Frederick Harrison Quaife	21 Dec., 1868	Ditto .....				
	Frederick Cumming .....	30 July, 1880	Ditto .....				
<b>Country Districts—</b>							
Albury .....	William C. Woods .....	26 Sept., 1884	Ditto .....				
Armidale (see Uralla) ..	F. H. Woods .....	19 Aug., 1881	Ditto .....				
Armidale .....	William Murray .....	14 Aug., 1885	Ditto .....				
Cowra .....	Felix P. Bartlett .....	19 Aug., 1881	Ditto .....				
	Edward R. Smith .....	7 July, 1885	Ditto .....				
Forbes .....	Edward P. M <sup>c</sup> Donnell .....	26 Sept., 1884	Ditto .....				
Goulburn .....	Selby M. Morton .....	20 Dec., 1878	Ditto .....				
	Robert M <sup>c</sup> Killop .....	15 Feb., 1884	Ditto .....				
	Henry Ray .....	26 Sept., 1884	Ditto .....				
Liverpool .....	G. P. Baldwin <sup>1</sup> .....	7 Aug., 1885	Ditto .....				
Maitland West .....	Robert J. Pierce .....	2 Aug., 1872	Ditto .....				
	Robert G. Alcorn .....	28 June, 1881	Ditto .....				
	William D. Power .....	19 Aug., 1881	Ditto .....				
Maitland East and West	Alexander K. Morson .....	20 Jan., 1868 and 30 Oct., 1867.	Ditto .....				
Mount Hope (see Nymagee).	Giulio Vanzetti .....	3 Oct., 1884	Ditto .....				
Narrabri .....	Thomas B. Walley .....	28 June, 1881	Ditto .....				

<sup>1</sup> Resigned.<sup>2</sup> Left the district.<sup>3</sup> Deceased.

## NEW SOUTH WALES—1886.

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Office	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government
<b>COLONIAL SECRETARY—MEDICAL ADVISER, VACCINATION, MEDICAL OFFICERS, ETC.—continued.</b>					
<b>ADDITIONAL VACCINATORS—continued</b>					
<b>Country Districts—contd.</b>					
Newcastle .....	Cosby W. Morgan .....	10 Dec, 1878	Governor and Executive Council		
	John Harris .....	9 Sept, 1879	Ditto .....		
	William C. Ashe .....	26 Sept, 1884	Ditto .....		
	Joseph L. Beeston ..	26 Sept, 1884	Ditto .....		
	James Inglis .....	26 Sept, 1884	Ditto .....		
	Giulio Vanzetti .....	6 Feb, 1885	Ditto .....		
Nymagee (see Mount Hope).					
Oberon .....	John Eaton .....	25 Oct, 1872	Ditto .....		
Parramatta .....	Walter Brown .....	5 Nov., 1863	Ditto .....		
	James Smith .....	23 Feb, 1877	Ditto .....		
	Charles Johnson .....	25 July, 1879	Ditto .....		
	Isaac Waugh .....	28 June, 1881	Ditto .....		
	George H. Phillips ..	26 Sept, 1884	Ditto .....		
	William Tristram .....	9 Sept, 1881	Ditto .....		
Patrick's Plains ..	Joseph F. Bond .....	30 May, 1876	Ditto .....		
Penrith .....	William S. Cortis .....	20 Feb, 1885	Ditto .....		
Port Macquarie .....	Thomas A. Machattie ..	28 June, 1881	Ditto .....		
Rockley .....	Alexander J. Hood .....	26 Sept., 1884	Ditto .....		
Rocky Mouth .....	Robert J. Allan .....	19 Dec, 1884	Ditto .....		
Raymond Terrace ..	Francis H. Woods .....	19 Aug, 1881	Ditto .....		
Uralla (see Armidale)...	Christian U. D. Schrader	12 May, 1876	Ditto .....		
Walcha .....	Richard B. Warren .....	7 Aug, 1885	Ditto .....		
Wagga Wagga .....	R. H. Treloar .....	26 Feb, 1886	Ditto .....		
Wickham .....	Timothy W. Lee .....	6 Nov, 1883	Ditto .....		
Wollongong .....	George B. C. Pultney ..	23 Sept, 1884	Ditto .....		
Walbundrie .....	Allen Campbell .....	19 Nov, 1859	Ditto .....		
Yass .....	Philip T. Thane .....	21 Nov, 1884	Ditto .....		

Paid by fees.

## LUNACY.

## OFFICIAL VISITORS TO HOSPITALS AND LICENSED HOUSES FOR THE INSANE.

Official Visitors (Chairman) Hospital for the Insane, Gladesville and Callan Park, and Licensed House for the Insane, Cook's River.	Sir Alfred Roberts, Knt M R C S E. <sup>1</sup>	7 June, 1867 30 Mar, 1876, as President	Governor and Executive Council	150 0 0	7 Mar, 1867.
Official Visitors, Hospital for the Insane, Parramatta.	Charles James Manning (Barrister-at-law). James Charles Cox, M.D. Walter Brown, M.D. (Chairman). <sup>2</sup> Isaac Waugh, M B Frederick W. Gibson (Barrister-at-law).	18 July, 1884 16 Jan, 1883 1 Jan, 1886 1 Jan., 1886 1 Jan., 1886	Ditto .....	150 0 0 150 0 0 50 0 0 50 0 0 50 0 0	18 July, 1884. 16 Jan., 1883. 20 Dec., 1860. 1 Jan., 1886. 1 Jan., 1886.

<sup>1</sup> Allowed £50 per annum for clerical assistance.<sup>2</sup> Allowed £10 per annum for clerical assistance.

## HOSPITALS FOR THE INSANE GENERALLY.

Inspector General of the Insane	Frederic Norton Manning, M.D. <sup>1</sup>	1 July, 1879	Governor and Executive Council	1,060 0 0	1 Nov., 1867.
Clerk and Accountant	Ethelred Bennett .....	22 Dec., 1884	Ditto .....	390 0 0	24 April, 1874.
Messenger and Boatman (1)	.....	.....	Inspector-General of the Insane	118 0 0	.....

<sup>1</sup> Gives security for £500.

## HOSPITAL FOR THE INSANE, GLADESVILLE

Medical Superintendent	Eric Sinclair <sup>1</sup>	1 Sept., 1883	Governor and Executive Council	650 0 0	9 Jan., 1882.
Assistant Medical Officer	Chisholm Ross <sup>2</sup>	2 Feb, 1884	Ditto .....	415 0 0	2 Feb, 1884.
Assistant Superintendent	Edward Marsden Betts <sup>3</sup>	1 Dec, 1872	Ditto .....	390 0 0	23 May, 1859.*
Clerk	John Edington Moore <sup>4</sup>	1 Sept, 1876	Colonial Secretary .....	210 0 0	27 May, 1872.
Assistant Clerk	William George Acocks <sup>5</sup> succeeded by Hugh R. B. M'Gill <sup>6</sup> .....	28 May, 1883 1 Feb, 1886	Ditto .....	120 0 0	28 May, 1883.
Dispenser	William Peterson <sup>7</sup>	22 Feb, 1882	Governor and Executive Council	120 0 0	1 June, 1880.
Matron	Bessie Ann Simpson <sup>8</sup>	17 June, 1881	Ditto .....	190 0 0	22 Feb., 1882.
Chief Attendant	Thomas Folkard <sup>9</sup>	1 July, 1864	Ditto .....	150 0 0	17 June, 1881.
Senior Attendants	(8) <sup>10</sup> .....	.....	Medical Superintendent .....	150 0 0	14 Nov., 1859.
	(8) <sup>11</sup> .....	.....	Ditto .....	102 0 0	each.
	(7) <sup>11</sup> .....	.....	Ditto .....	90 0 0	"
	(7) <sup>11</sup> .....	.....	Ditto .....	84 0 0	"
Junior Attendants <sup>12</sup>	(6) <sup>11</sup> .....	.....	Ditto .....	78 0 0	"
	(3) .....	.....	Ditto .....	72 0 0	"
	(1) .....	.....	Ditto .....	52 0 0	"
Senior Nurses <sup>12</sup>	(6) .....	.....	Ditto .....	60 0 0	"
	(5) .....	.....	Ditto .....	50 0 0	"

<sup>1</sup> Allowed quarters, also £45 per annum in lieu of provisions and fuel. <sup>2</sup> Gives security to the amount of £500. <sup>3</sup> Allowed quarters, also £45 per annum in lieu of provisions and fuel. <sup>4</sup> Allowed a house, and £45 per annum in lieu of provisions and fuel. <sup>5</sup> Gives security to the amount of £250. <sup>6</sup> Allowed £30 per annum for house rent, and £30 per annum in lieu of provisions, fuel, and light. <sup>7</sup> Transferred to Lands Office, Albury, 31 Jan, 1886. <sup>8</sup> Allowed £30 per annum in lieu of provisions, fuel, and light. <sup>9</sup> Allowed a house, fuel and light, and provisions. <sup>10</sup> Allowed quarters, rations of provisions, fuel, and light. <sup>11</sup> Allowed quarters, fuel, and light, and uniform clothing. <sup>12</sup> Allowed rations of provisions, fuel, and light, and uniform clothing.

NOTE.—Matron and Attendants allowed £12 each per annum towards house rent

\* Services not continuous.



Office	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.		Date of first Appointment under the Colonial Government.
				£	s. d.	
<b>COLONIAL SECRETARY—LUNACY—continued.</b>						
<b>HOSPITAL FOR THE INSANE, GLADESVILLE—continued.</b>						
Junior Nurses <sup>1</sup> .....	{ (7) .....	.....	Medical Superintendent .....	46	0 0	each.
Needlewoman <sup>1</sup> .....	{ (7) .....	.....	Ditto .....	40	0 0	"
Artisan Attendants <sup>1</sup> .....	{ (1) .....	.....	Ditto .....	60	0 0	"
.....	{ (1) from 15 March, 1886 .....	.....	Ditto .....	0	8 0	per diem.
.....	{ (1) .....	.....	Ditto .....	0	7 6	"
.....	{ (2) .....	.....	Ditto .....	0	7 0	" each.
Grounds Attendant <sup>2</sup> .....	{ (1) { to 25 July, 1886 .....	.....	Ditto .....	90	0 0	"
Store Attendant <sup>3</sup> .....	{ (1) { from 26 July .....	.....	Ditto .....	84	0 0	"
Cooks .....	{ (1) <sup>3</sup> .....	.....	Ditto .....	102	0 0	"
Out-door Attendants.....	{ (1) <sup>1</sup> .....	.....	Ditto .....	102	0 0	"
.....	{ (1) <sup>3</sup> .....	.....	Ditto .....	72	0 0	"
.....	{ (1) <sup>1</sup> .....	.....	Ditto .....	90	0 0	"
Gatekeepers .....	{ (1) <sup>2</sup> { to 30 June .....	.....	Ditto .....	78	0 0	"
.....	{ (1) { from 1 July .....	.....	Ditto .....	78	0 0	"
.....	{ (1) <sup>1</sup> .....	.....	Ditto .....	50	0 0	"
Gardener <sup>2</sup> .....	{ (1) .....	.....	Ditto .....	84	0 0	"
Carter <sup>2</sup> .....	{ (1) .....	.....	Ditto .....	84	0 0	"
Laundresses <sup>4</sup> .....	{ (2) .....	.....	Ditto .....	50	0 0	each.
.....	{ (2) .....	.....	Ditto .....	46	0 0	"
Housemaid .....	{ (1) .....	.....	Ditto .....	50	0 0	"
Engineers .....	{ (1) <sup>5</sup> .....	.....	Ditto .....	0	11 6	per diem.
.....	{ (1) .....	.....	Ditto .....	3	3 0	per week.
Chaplains:—						
Church of England ...	Rev. William Lumsdaine ..	16 Oct., 1882	Governor and Executive Council	50	0 0	
Roman Catholic ..	Rev. Zephirin Murare ..	1 Jan., 1868	Ditto .....	50	0 0	
Branch Establishment—						
Attendant-in-charge	David Meppom .....	25 April, 1881	Medical Superintendent.....	120	0 0	
Senior Attendants ...	{ (2) <sup>7</sup> .....	.....	Ditto .....	102	0 0	each.
.....	{ (2) <sup>7</sup> .....	.....	Ditto .....	90	0 0	"
.....	{ (2) <sup>1</sup> .....	.....	Ditto .....	84	0 0	"
Junior Attendants ...	{ (3) <sup>1</sup> .....	.....	Ditto .....	78	0 0	"
.....	{ (2) <sup>1</sup> .....	.....	Ditto .....	72	0 0	"
Cook .....	{ (1) <sup>1</sup> .....	.....	Ditto .....	96	0 0	"
Gatekeeper ...	{ (1) <sup>2</sup> .....	.....	Ditto .....	72	0 0	"
<sup>1</sup> Allowed quarters, rations, fuel, and light, and uniform clothing <sup>2</sup> Allowed a house, also a ration of provisions, fuel, and light, and uniform clothing. <sup>3</sup> Allowed a ration of provisions, fuel, and light, and uniform clothing <sup>4</sup> Allowed rations of provisions, fuel, and light <sup>5</sup> Allowed a house. <sup>6</sup> Allowed a house, also a ration of provisions, fuel, and light <sup>7</sup> Allowed rations of provisions, fuel, and light, and uniform clothing. <sup>8</sup> Allowed a house. <sup>9</sup> Allowed a house, also a ration of provisions, fuel, and light NOTE—Medical Attendants allowed £12 each per annum towards house rent.						
<b>HOSPITAL FOR THE INSANE, PARRAMATTA.</b>						
Medical Superintendent	Edwin Godson <sup>1</sup> .. . . .	1 Sept., 1883	Governor and Executive Council	650	0 0	1 Oct., 1881.
Chaplains —						
Church of England ..	J R Blomfield .. . . .	1 Oct., 1868	Ditto .....	50	0 0	16 Mar., 1851.
Roman Catholic	John Rigney .. . . .	1 Feb., 1874	Ditto .....	50	0 0	16 July, 1838.
Assistant Medical Officer	William Cotter Williamson <sup>1</sup>	8 Jan., 1884	Ditto .....	415	0 0	18 Jan., 1882.*
Assistant Superintendent	Henry Colley <sup>2</sup> .. . . .	25 June, 1877	Ditto .....	340	0 0	1 Feb., 1872.
Clerk .....	Leslie Clement Rowling <sup>3</sup>	22 Dec., 1884	Ditto .....	215	0 0	1 Jan., 1878.
Assistant Clerk .....	Sidney Charles Mayo ..	22 Dec., 1884	Ditto .....	165	0 0	20 April, 1884.
Matron .....	Jane Burn <sup>4</sup> .. . . .	1 June, 1865	Ditto .....	150	0 0	1 June, 1865.
Dispenser .....	William Henry Lester <sup>5</sup> ..	20 Aug., 1883	Ditto .....	190	0 0	20 Aug., 1883.
Chief Attendant .....	James Wharf <sup>4</sup> .. . . .	20 Sept., 1877	Ditto .....	150	0 0	1 June, 1864.
Senior Attendants <sup>5</sup> (9)	.....	.....	Medical Superintendent .....	102	0 0	each.
Do do (12) ..	.....	.....	Ditto .....	90	0 0	"
Junior Attendants <sup>6</sup> (18)	.....	.....	Ditto .....	84	0 0	"
Do do (8) ..	.....	.....	Ditto .....	78	0 0	"
Nurse-in-charge <sup>6</sup> (1)	.....	.....	Ditto .....	72	0 0	"
Senior Nurses <sup>6</sup> (8)	.....	.....	Ditto .....	60	0 0	each.
Do do (5) ..	.....	.....	Ditto .....	50	0 0	"
Junior Nurses <sup>6</sup> (14)	.....	.....	Ditto .....	46	0 0	"
Cooks (male) (3) <sup>6</sup> ..	.....	.....	Ditto .....	102	0 0	"
.....	.....	.....	{ 1 at .....	90	0 0	"
.....	.....	.....	{ 1 at .....	78	0 0	"
.....	.....	.....	{ 1 at .....	96	0 0	"
.....	.....	.....	{ 1 at .....	78	0 0	"
Store Attendants (2) <sup>6</sup> ..	.....	.....	Ditto .....	90	0 0	"
Gardener <sup>7</sup> .....	.....	.....	Ditto .....	84	0 0	"
Carters (2) <sup>6</sup> .. . . .	.....	.....	Ditto .....	72	0 0	"
Gate-keepers <sup>6</sup> (2)	.....	.....	Ditto .....	78	0 0	each.
Out-door Attendants <sup>6</sup> (2)	.....	.....	Ditto .....	78	0 0	"
Messengers (2) <sup>6</sup> .. . . .	.....	.....	Ditto .....	66	0 0	"
.....	.....	.....	{ 1 at .....	50	0 0	"
.....	.....	.....	{ 1 at .....	50	0 0	"
.....	.....	.....	{ 1 at .....	46	0 0	"
Laundresses (2) <sup>5</sup> .....	.....	.....	Ditto .....	38	0 0	"
Housemaid <sup>6</sup> .....	.....	.....	Ditto .....	60	0 0	"
Needlewoman <sup>5</sup> .....	.....	.....	Ditto .....	90	0 0	"
Grounds Attendant <sup>7</sup> ..	.....	.....	Ditto .....	90	0 0	"
Artisan Attendants <sup>8</sup> (3)	.....	.....	Ditto .....	0	7 6	per diem.
.....	.....	.....	{ 2 at .....	0	7 0	"
.....	.....	.....	{ 1 at .....	0	10 0	each.
.....	.....	.....	{ 1 at .....	0	8 0	"
Engine-drivers (2) <sup>9</sup> .....	.....	.....	Ditto .....	0	8 0	"
<sup>1</sup> Allowed a house and £45 per annum in lieu of provisions and fuel <sup>2</sup> Allowed quarters, and £45 per annum in lieu of provisions and fuel <sup>3</sup> Allowed £45 per annum in lieu of quarters, and £30 per annum in lieu of provisions and fuel <sup>4</sup> Allowed quarters, fuel, and light, and £23 per annum in lieu of provisions <sup>5</sup> Allowed quarters, provisions, fuel, and light <sup>6</sup> Allowed quarters, provisions, fuel, light, and uniform clothing. <sup>7</sup> Allowed a cottage, provisions, fuel, light, and uniform clothing <sup>8</sup> One allowed quarters, provisions, fuel, and light, and two allowed provisions only. <sup>9</sup> One allowed a cottage, provisions, fuel, and light, and one allowed provisions only. <sup>10</sup> Services not continuous						

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>COLONIAL SECRETARY—LUNACY—continued.</b>					
RECEPTION-HOUSE FOR THE INSANE, DARLINGHURST.					
Superintendent .....	Frederick Fowler <sup>1</sup> .....	1 July, 1868	Governor and Executive Council	240 0 0	8 Jan., 1862.
Matron .....	Eliza Ann Fowler <sup>2</sup> .....	17 Mar., 1882	Administrator of Government and Executive Council.	60 0 0	1 April, 1872.*
Medical Visitor (see p. 30).			Inspector-General of the Insane	1 at 102 0 0	
Attendants (5) .....				1 at 96 0 0	each.
				2 at 90 0 0	
				1 at 84 0 0	
Nurses (4) .....			Ditto	1 at 56 0 0	
				3 at 50 0 0	
<sup>1</sup> Gives security for £200. Allowed £20 per annum in lieu of provisions. <sup>2</sup> Allowed £20 per annum in lieu of provisions. * Services not continuous. NOTE.—With the exception of the Medical Visitor all reside in the building, and the attendants and nurses are allowed rations of provisions, fuel, and light, and uniform clothing, and in addition the married attendants receive £12 towards house rent.					
HOSPITAL FOR THE INSANE, NEWCASTLE.					
Superintendent .....	Frederic Cane <sup>1</sup> .....	1 April, 1872	Administrator of Government and Executive Council.	260 0 0	22 Feb., 1868.
Matron .....	Elizabeth Cane <sup>1</sup> .....	12 June, 1872	Ditto	75 0 0	12 June, 1872.
Chief Attendant and Storekeeper	Edwin Waller <sup>2</sup> .....	11 Jan., 1874	Inspector-General of the Insane	140 0 0	1 Jan., 1859.
Medical Visitor (see p. 30).			Ditto	102 0 0	each.
Senior Attendants (2) <sup>3</sup> .....				1 at 90 0 0	
Junior Attendants (5) <sup>3</sup> .....			Ditto	2 at 84 0 0	
				2 at 78 0 0	
Senior Nurses (3) <sup>2</sup> .....			Ditto	1 at 60 0 0	
				2 at 55 0 0	
Junior Nurses (6) <sup>3</sup> .....			Ditto	2 at 50 0 0	
				4 at 46 0 0	
Needlewoman (1) .....			Ditto	50 0 0	
Male Servants (4) <sup>2</sup> .....			Ditto	1 at 90 0 0	
				2 at 78 0 0	
				1 at 66 0 0	
Female Servants (3) <sup>2</sup> .....			Ditto	2 at 50 0 0	
				1 at 46 0 0	
Artisan Attendants (2) <sup>2</sup> .....			Ditto	1 at 0 7 6	per diem.
				1 at 0 7 0	
Chaplains:—					
Church of England .....	Rev. Arthur E. Selwyn .....	1 Jan., 1872	Governor and Executive Council	30 0 0	1 Jan., 1853.
Roman Catholic .....	Rev. Peter Meagher .....	5 Nov., 1883	Ditto	30 0 0	5 Nov., 1883.
<sup>1</sup> Allowed quarters, and £30 per annum in lieu of provisions. <sup>2</sup> Allowed quarters, and a ration of provisions, fuel, and light. <sup>3</sup> Allowed quarters, and a ration of provisions, fuel, and light, and uniform clothing. Married attendants allowed £12 per annum towards house rent.					
HOSPITAL FOR THE INSANE, CALLAN PARK.					
Medical Superintendent .....	Herbert Blaxland <sup>1</sup> .....	9 Dec., 1881	Governor and Executive Council	650 0 0	5 June, 1879.
Assistant Medical Officer .....	George E. Miles <sup>2</sup> .....	19 July, 1886	Ditto	375 0 0	19 July, 1886.
Assistant Superintendent .....	Arthur Whiting <sup>2</sup> .....	22 Dec., 1884	Ditto	340 0 0	24 April, 1869.*
Clerk .....	Charles H. Richardson <sup>3</sup> .....	22 Dec., 1884	Ditto	190 0 0	1 Sept., 1879.
Dispenser .....	John T. Floyd <sup>4</sup> .....	11 Aug., 1885	Ditto	170 0 0	11 Aug., 1885.
Matron .....	Marion A. Fairbairn <sup>4</sup> .....	12 Oct., 1885	Ditto	140 0 0	9 Dec., 1884.
Chief Attendant .....	Wm. Little <sup>4</sup> .....	13 Oct., 1877	Inspector-General of the Insane	140 0 0	6 May, 1863.
Senior Attendants (7) <sup>5</sup> .....			Medical Superintendent	102 0 0	each.
Do (5) <sup>5</sup> .....			Ditto	90 0 0	
Junior Attendants (3) <sup>5</sup> .....			Ditto	84 0 0	
Do (11) <sup>5</sup> .....			Ditto	78 0 0	
Do (10) <sup>5</sup> .....			Ditto	72 0 0	
Senior Nurses (5) <sup>6</sup> .....			Ditto	60 0 0	
Do (1) <sup>6</sup> .....			Ditto	50 0 0	
Junior Nurses (5) <sup>6</sup> .....			Ditto	46 0 0	
Do (10) <sup>6</sup> .....			Ditto	40 0 0	
Store Attendant (1) <sup>7</sup> .....			Ditto	102 0 0	
Grounds do (1) <sup>7</sup> .....			Ditto	84 0 0	
Gardener (1) <sup>7</sup> .....			Ditto	84 0 0	
Out-door Attendant (1) <sup>6</sup> .....			Ditto	78 0 0	
Needlewoman (1) <sup>6</sup> .....			Ditto	60 0 0	
Cooks (3) <sup>6</sup> .....			Ditto	1 at 72 0 0	
				1 at 50 0 0	
				1 at 40 0 0	
Carter (1) <sup>7</sup> .....			Ditto	78 0 0	
Messenger (1) <sup>5</sup> .....			Ditto	84 0 0	
Gatekeeper (1) <sup>7</sup> .....			Ditto	78 0 0	
Laundresses (3) <sup>6</sup> .....			Ditto	1 at 56 0 0	
				1 at 50 0 0	
				1 at 46 0 0	
Artisans (2) <sup>8</sup> .....			Ditto	1 at 0 7 6	per diem.
				1 at 0 7 0	
Engine-drivers (2) <sup>9</sup> .....			Ditto	1 at 0 10 0	
				1 at 0 8 0	
Chaplains:—					
Church of England .....	Rev. Edward David Madgwick .....	12 Mar., 1881	Governor and Executive Council	30 0 0	12 Mar., 1881.
Roman Catholic .....	Rev. Thomas O'Reilly .....	1 July, 1883	Ditto	30 0 0	3 July, 1883.
<sup>1</sup> Allowed a house, and £45 per annum in lieu of provisions, fuel, and light. <sup>2</sup> Allowed quarters, and £45 per annum in lieu of provisions, fuel, and light. <sup>3</sup> Allowed quarters, and £30 per annum in lieu of provisions, fuel, and light. <sup>4</sup> Allowed quarters, and £30 per annum in lieu of provisions, fuel, and light. <sup>5</sup> Allowed quarters, provisions, fuel, light, and uniform clothing, and married attendants £12 per annum towards house rent. <sup>6</sup> Allowed quarters, provisions, fuel, light, and uniform clothing. <sup>7</sup> Allowed a cottage and a ration of provisions, fuel, light, and uniform clothing. <sup>8</sup> Carpenter allowed a cottage and a ration of provisions, fuel, and light; tailor allowed a ration of provisions, fuel, and light. <sup>9</sup> One engine-driver allowed a cottage and a ration of provisions, fuel, and light, and one allowed quarters and ration of provisions, fuel, and light. * Services not continuous.					
Medical Superintendent gives security for £500, and Assistant Superintendent for £200.					

Office.	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary	Date of first Appointment under the Colonial Government
				£ s. d.	

COLONIAL SECRETARY—LUNACY—continued.

MASTER IN LUNACY.

Master in Lunacy . . . . .	Henry Francis Barton . . . . .	30 Jan., 1885	Governor and Executive Council	250 0 0	30 Jan., 1885.
Chief Clerk . . . . .	Henry Edwards . . . . .	1 Mar., 1885	Ditto . . . . .	390 0 0	22 Oct., 1877.
Accountant . . . . .	Francis George Langstaff* . . . . .	11 May, 1885	Ditto . . . . .	300 0 0	14 Jan., 1875.
Second Clerk . . . . .	Theophilus John Ducker . . . . .	12 Nov., 1885	Ditto . . . . .	240 0 0	1 Jan., 1883.
Third Clerk . . . . .	Henry Dexter Cannan . . . . .	1 July, 1879	Lieutenant-Governor and Executive Council.	190 0 0	13 April, 1871.

\* Died 15 November, 1886

INSPECTOR OF PUBLIC CHARITIES.

Inspector <sup>1</sup> . . . . .	Hugh Robison . . . . .	12 Sept., 1876	Governor and Executive Council	650 0 0	12 Sept., 1876.
Inquiry Officer and Clerk to Inspector. <sup>1</sup>	S. E. Treseder . . . . .	1 Oct., 1883	Do . . . . .	240 0 0	17 Dec., 1881.
2nd Clerk . . . . .	W. S. Hilliard . . . . .	30 Mar., 1885	Colonial Secretary	190 0 0	30 Mar., 1885.
Messenger* . . . . .	. . . . .	6 Aug., 1884	Do . . . . .	110 0 0	10 Feb., 1879.
Housekeeper* . . . . .	. . . . .	6 Aug., 1884	Do . . . . .	40 0 0	6 Aug., 1884.

<sup>1</sup> Vote to cover travelling expenses of Department, £200      \* Also for Medical Board and Pharmaceutical Board.

GOVERNMENT ASYLUMS FOR THE INFIRM AND DESTITUTE.

Manager . . . . .	Frederic King <sup>1</sup> . . . . .	25 Mar., 1876	Governor and Executive Council	550 0 0	14 Mar., 1862.
Clerk and Accountant . . . . .	Frederick Augustus Rossiter . . . . .	1 July, 1881	Ditto . . . . .	200 0 0	1 July, 1881.
Clerk . . . . .	Francis George Corcoran . . . . .	9 July, 1883	Ditto . . . . .	140 0 0	9 July, 1883.
Do . . . . .	Sydney Alexander Osmiston . . . . .	18 Dec., 1884	Ditto . . . . .	140 0 0	18 Dec., 1884.
Messenger . . . . .	. . . . .	1 Jan., 1878	Ditto . . . . .	120 0 0	1 Jan., 1878.
Office-cleaner <sup>2</sup> . . . . .	. . . . .	. . . . .	. . . . .	80 0 0	. . . . .

THE NEWINGTON ASYLUM

Surgeon . . . . .	(Vide Medical Vote, p 30)					
Dispenser . . . . .						
Superintendent . . . . .		Lucy H. Hicks <sup>3</sup>	27 May, 1869	Governor and Executive Council	240 0 0	13 May, 1861.
Sub-Matron . . . . .		Margaret Gorman <sup>3</sup> . . . . .	1 Mar., 1886	Ditto . . . . .	75 0 0	1 Mar., 1886.
Cooks, Nurses, &c. . . . .		. . . . .	. . . . .	Manager . . . . .	from 2d to 1s per diem.	

GEORGE STREET ASYLUM, PARRAMATTA.

Surgeon . . . . .	(See page 30)					
Dispenser . . . . .						
Matron . . . . .		C. H. M. Dennis <sup>3</sup> . . . . .	13 Mar., 1862	Governor and Executive Council	240 0 0	13 Mar., 1862.
Sub-Matron . . . . .		E. R. L. Dennis <sup>3</sup> . . . . .	1 Jan., 1880	Ditto . . . . .	95 0 0	1 Jan., 1880.
Wardsmen, Cooks, &c. . . . .		. . . . .	. . . . .	Manager . . . . .	from 2d. to 1s per diem.	

MACQUARIE-STREET ASYLUM, PARRAMATTA.

Surgeon . . . . .	(See page 30)					
Dispenser . . . . .						
Superintendent . . . . .		Sarah Cunynghame <sup>3</sup> . . . . .	10 Feb., 1876	Colonial Secretary . . . . .	190 0 0	10 Feb., 1876.
Wardsmen, Cooks, &c. . . . .		. . . . .	. . . . .	Manager . . . . .	2d. to 1s per diem.	

LIVERPOOL ASYLUM.

Surgeon Superintendent . . . . .	W. E. Strong, M.D. <sup>4</sup> . . . . .	20 June, 1871	Governor and Executive Council	450 0 0	20 June, 1871.
	succeeded by				
	J. A. Beattie <sup>4</sup> . . . . .	1 Oct., 1886	Ditto . . . . .	450 0 0	1 Oct., 1886.
Dispenser . . . . .	J. P. Lawlor . . . . .	15 Oct., 1886	Ditto . . . . .	150 0 0	15 Oct., 1886.
Superintendent . . . . .	Mary Burnside . . . . .	13 Mar., 1862	Ditto . . . . .	240 0 0	13 Mar., 1862.
Sub-Matron . . . . .	Jane Burnside . . . . .	1 Jan., 1881	Colonial Secretary . . . . .	95 0 0	1 Jan., 1881.
Wardsmen, Cooks, &c. . . . .	. . . . .	. . . . .	Manager . . . . .	from 2d to 1s per diem	

<sup>1</sup> Gives security to the amount of £1,000      <sup>2</sup> Allowed quarters, fuel, and light      <sup>3</sup> Allowed quarters, fuel, and light, and £20 per annum in lieu of rations  
<sup>4</sup> Allowed £58 10s house rent, also fuel and light, and £20 per annum in lieu of rations.

COMMISSIONERS TO ADVISE THE GOVERNMENT IN MATTERS CONNECTED WITH THE DEFENCE OF THE COLONY FROM FOREIGN AGGRESSION

Commissioners . . . . .	Major-General John Soame Richardson, C.B. (President) <sup>1</sup>	} 8 Sept., 1870	{ Governor and Executive Council, under the Great Seal of the Colony . . . . .	} Nil.	} 17 Feb., 1865.
	William Macleay, M.L.C.				
	James Barnett <sup>2</sup>				
	Edward Orpen Moriarty <sup>3</sup>				
	Francis Hixson <sup>4</sup>				
	Edward Charles Cracknell <sup>5</sup>	} 15 July, 1872	} Ditto . . . . .	} Nil.	} 4 Aug., 1860.
	The Hon Sir James Martin, Knt, Q.C. <sup>6</sup> *				
	Colonel C. F. Roberts, C.M.G. <sup>7</sup>				
	. . . . .	} 11 Sept., 1876	} Ditto . . . . .	} Nil.	} 1 May, 1849.
	. . . . .				
	. . . . .				1 Jan., 1863.
	. . . . .				1 Jan., 1858.
	. . . . .				26 Aug., 1856.†
	. . . . .				28 Aug., 1876.

<sup>1</sup> Commanding Military Forces      <sup>2</sup> Colonial Architect      <sup>3</sup> Engineer-in-Chief for Harbours and River Navigation, &c      <sup>4</sup> President of the Marine Board—Captain Commanding Naval Brigade      <sup>5</sup> Superintendent of Electric Telegraphs      <sup>6</sup> Chief Justice      <sup>7</sup> Colonel Commanding Artillery Forces  
\* Deceased, 4 November, 1886.      † Services not continuous

Office.	Name.	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>COLONIAL SECRETARY—continued.</b>					
<b>MILITARY FORCES.</b>					
<b>STAFF.</b>					
Commanding Military Forces.	Major-General John Soame Richardson, C.B. <sup>1</sup>	15 Aug., 1885	Governor and Executive Council	600 0 0	17 Feb., 1865.
Assistant Adjutant-General	Major Henry Douglas Mackenzie <sup>2</sup>	29 Mar., 1885	Ditto .....	400 0 0	31 July, 1877.
Chief Paymaster .....	Lieut.-Colonel Thomas Baynes <sup>4</sup>	1 Jan., 1880	Ditto .....	365 0 0	21 Aug., 1854.
Deputy-Assistant Quartermaster-General.	Major James Edward Doidge Taunton. <sup>3</sup>	18 July, 1885	Ditto .....	300 0 0	31 July, 1877.
Instructor of Musketry.....	Captain William Andrew Cuthe l. <sup>5</sup>	1 May, 1885	Ditto .....	300 0 0	1 Mar., 1885.
Quartermaster .....	Haviland Le Mesurier, <sup>4</sup> appointed Lieutenant Permanent Artillery, 12/11/85	10 June, 1885	Ditto .....	250 0 0	10 June, 1885.
Captain (unattached) .....	Pelliam Brooke Loftis .....	25 Sept., 1885	Ditto .....	.....	.....
Military Instructor .....	Brevet-Colonel Edmund George Henry Bingham, R.A. <sup>10</sup>	21 Dec., 1885	Ditto .....	800 0 0	8 Sept., 1885.
Military Instructor .....	Major Cooper Penrose, R.E. <sup>11</sup>	8 Sept., 1885	Ditto .....	700 0 0	8 Sept., 1885.
Military Instructor .....	Captain William St. Pierre Bunbury, R.A. <sup>11</sup> Promoted Major, 6/12/86	8 Sept., 1885	Ditto .....	500 0 0	8 Sept., 1885.
Military Instructor .....	Captain Clement Henry Milward, R.A. <sup>15</sup>	8 Sept., 1885	Ditto .....	500 0 0	8 Sept., 1885.
Adjutant, 2nd Regt., N.S.W. Vol. Infantry.	Major Charles George Norris. <sup>16</sup>	26 June, 1885	Ditto .....	250 0 0	28 Oct., 1878.
Adjutant, 1st Regt., N.S.W. Vol. Infantry.	Captain Charles Falkner Bartlett. <sup>6</sup>	22 Nov., 1883	Ditto .....	250 0 0	12 Mar., 1875.
Adjutant, N.S.W. Regiment Volunteer Artillery.	Captain Robert Adwood Natlan. <sup>9</sup>	12 Nov., 1885	Ditto .....	250 0 0	2 Aug., 1871.
Adjutant, 3rd Regt., N.S.W. Vol. Infantry.	Captain James Hill <sup>6</sup> ..	20 Aug., 1884	Ditto .....	250 0 0	8 June, 1865.
Adjutant, 4th Regt., N.S.W. Vol. Infantry.	Lieutenant Morris Marian Boam. <sup>5</sup>	29 Aug., 1884	Ditto .....	250 0 0	23 Jan., 1875
Commanding Reserve Corps Metropolitan, Western, and Southern Districts.	Lieutenant-Colonel Thomas Milard Benton Eden. <sup>12</sup>	21 May, 1885	Ditto .....	400 0 0	21 May, 1885.
Adjutant Reserve Corps, Southern District.	Captain Montagu William Bayly. <sup>6</sup>	18 July, 1885	Ditto .....	250 0 0	13 May, 1885.
Commanding Reserve Corps Metropolitan and Western District.	Lieutenant-Colonel Robert Peel Raymond. <sup>13</sup> Promoted Brevet-Colonel, 21/12/85; died, 19/10/86.	29 June, 1885	Ditto .....	300 0 0	16 Jan., 1841.
Adjutant Reserve Corps, Metropolitan and Western District.	Captain Charles William Pleydell Bouverie. <sup>6</sup>	18 July, 1885	Ditto .....	250 0 0	18 Nov., 1878.
Commanding Reserve Corps, Northern District.	Lieutenant-Colonel Alexander Wilkinson. <sup>13</sup>	26 Aug., 1885	Ditto .....	300 0 0	3 Feb., 1866.
Adjutant Reserve Corps, Northern District.	Lieut. Henry Glendower Bodychan Sparrow. <sup>3</sup>	18 July, 1885	Ditto .....	250 0 0	27 Feb., 1885.
Chief Clerk .....	William Holmes <sup>7</sup> .....	26 Oct., 1870	Commandant .....	12/- per diem	18 Oct., 1860.
Assistant do. ....	William Smith <sup>5</sup> .....	7 May, 1877	Ditto .....	8/- ..	7 May, 1877.
Accountant, Pay Office ..	Claude Solomon ..	11 May, 1886	Colonial Secretary .....	200 0 0	11 May, 1886.
Paymaster's Clerk .....	Gore Willock Loney <sup>9</sup> ..	22 Sept., 1885	Major-General Commanding ..	10/6 per diem	11 Aug., 1875.
Assistant do .....	John Kavanagh <sup>8</sup> .....	7 Mar., 1885	Acting Commandant .....	7/6 ..	7 Mar., 1885.
Assistant do .....	John Evans <sup>9</sup> .....	13 Apr., 1885	Ditto .....	10/- ..	13 Apr., 1885.
Assistant do. ....	Arthur Holmes <sup>14</sup> ..	1 Mar., 1886	Major-General Commanding ..	7/- ..	1 Mar., 1886.
Assistant do. ....	James Devery <sup>8</sup> .....	2 Sept., 1884	Commandant .....	7/6 ..	12 Sept., 1883.
Temporary Assistant Paymaster's Clerks	John Taylor Finlay <sup>5</sup> ..	29 Sept., 1885	Major-General Commanding....	7/6 ..	19 Jan., 1877.
Deputy Assistant Quartermaster-General's Clerk.	George William Berry <sup>14</sup>	3 Feb., 1886	Ditto .....	7/- ..	3 Feb., 1886.
Assistant do do	Alexander M'Intyre <sup>5</sup> ..	26 Aug., 1885	Ditto .....	7/6 ..	26 Aug., 1885.
Temporary do do	Joseph Murphy <sup>8</sup> .....	15 April, 1885	Acting Commandant .....	7/6 ..	15 April, 1885.
Armoury Clerk .....	James Thos. Blakely <sup>14</sup>	9 Feb., 1886	Major-General Commanding ..	7/- ..	9 Feb., 1886
Engineer do .....	Kyran John O'Dea <sup>17</sup>	6 May, 1885	Acting Commandant ..	7/- ..	6 May, 1885.
Brigade Sergeant-Major (i) <sup>9</sup>	Charles Edward Murray <sup>8</sup> ..	29 Sept., 1885	Major-General Commanding ...	7/6 ..	29 Sept., 1885.
Brigade Quartermaster-Sergeant (i) <sup>9</sup>	.....	.....	Commandant .....	10/6 ..	.....
Armourer (i) <sup>4</sup>	.....	.....	Ditto .....	10/6 ..	.....
„ (Assistant) (i) <sup>18</sup>	.....	.....	Ditto .....	9/- ..	.....
„ (Assistant) (i) <sup>18</sup>	.....	.....	Ditto .....	7/- ..	.....

<sup>1</sup> Lodging allowance, £200 per annum, £100 for stabling, with rations of provisions, fuel, and light, and forage for two horses  
<sup>2</sup> Lodging allowance, £120 a year, and £50 for stabling, with rations of provisions, fuel, and light, and forage for a horse.  
<sup>3</sup> Lodging allowance, £90 per annum, £50 for stabling, rations of provisions, fuel, and light, and forage for a horse  
<sup>4</sup> Lodging allowance, £150 per annum, £50 for stabling, rations of provisions, fuel, and light, and forage for a horse  
<sup>5</sup> Lodging allowance, £65 per annum, £80 a year stabling and groom's allowance, and forage for a horse  
<sup>6</sup> Lodging allowance, £90 per annum, £80 a year stabling and groom's allowance, and forage for a horse  
<sup>7</sup> Allowed quarters, rations of provisions, fuel, and light.  
<sup>8</sup> Allowed 12s. 6d. a week for rent, provisions, fuel, and light.  
<sup>9</sup> Allowed 18s. 8d. a week rent, provisions, fuel, and light.  
<sup>10</sup> Lodging allowance, £150 per annum, £80 a year stabling and groom's allowance, and forage for a horse.  
<sup>11</sup> Lodging allowance, £120 per annum, and forage for a horse.  
<sup>12</sup> Lodging allowance, £150 per annum, £80 a year stabling and groom's allowance, and forage for a horse.  
<sup>13</sup> Forage for a horse.  
<sup>14</sup> Allowed 12s. 6d. a week for rent, rations of provisions, fuel, and light.  
<sup>15</sup> Allowed £90 per annum for lodging and forage for a horse.  
<sup>16</sup> Lodging allowance, £120 a year, £80 stabling and groom's allowance, and forage for a horse  
<sup>17</sup> Allowed 12s. 6d. a week for rent  
<sup>18</sup> Allowed 10s. a week for rent.

Office,	Name.	Date of Appointment.	By whom appointed, and under what Instrument,	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>COLONIAL SECRETARY—MILITARY FORCES—continued.</b>					
Sergeant-Instructor of Musketry (1) <sup>1</sup>	.....	.....	Commandant .....	9/6 per diem	
General Storeman <sup>2</sup> .....	.....	.....	Ditto .....	8/- "	each.
Drill Instructors (61) .....	{ (3) <sup>1</sup> .....	} .....	Ditto .....	3 at 10/- "	"
	{ (1) <sup>1</sup> .....		Ditto .....	1 at 9/- "	"
	{ (14) <sup>2</sup> .....		Ditto .....	8 at 8/6 "	"
Staff Bugler and Messenger (1) <sup>3</sup>	{ (43) <sup>3</sup> .....		Ditto .....	49 at 8/- "	"
Messenger, Regimental Officers.	.....	.....	Major-General Commanding .....	7/- "	
Caretaker, Torpedo Stores...	.....	.....	Commandant .....	8/- "	
Markers, Rifle Range (2) <sup>4</sup> ...	.....	.....	Ditto .....	6/- "	"
Caretaker of Rifle Range (1) <sup>4</sup>	.....	.....	Ditto .....	8/- "	"
Artillery Storeman (1) <sup>4</sup> ...	.....	.....	Ditto .....	6/- "	"
Labourers, Victoria Barracks (2).	.....	.....	.....	6/- "	"
Principal Medical Officer...	Surgeon George Frederick Dansey <sup>5</sup>	17 July, 1875	Governor and Executive Council	60 0 0	21 May, 1867.
Surgeons .....	Patrick McDonagh <sup>5</sup> .....	21 Jan., 1878	Ditto .....	40 0 0	9 June, 1873.
	James M'Leod <sup>5</sup> .....	21 May, 1885	Ditto .....	40 0 0	21 May, 1885.
	Frederick Wadham <sup>5</sup> .....	21 May, 1885	Ditto .....	40 0 0	21 May, 1885.
	Stanhope Hastings MacCulloch <sup>5</sup>	3 June, 1885	Ditto .....	40 0 0	3 June, 1885.
<b>HONORARY STAFF.</b>					
Chaplain, Church of England.	Rev. George Fairfowl Macarthur.	8 June, 1868	Governor and Executive Council	Nil.	8 June, 1868.
Chaplain, Wesleyan .....	Rev. Samuel Wilkinson ...	2 Sept., 1884	Ditto .....	Nil.	2 Sept., 1884.
Chaplain, Church of England.	Rev. Herbert John Rose...	22 Oct., 1885	Ditto .....	Nil.	22 Oct., 1885.

<sup>1</sup> Allowed, 18s. 8d. a week for rent, also a ration of provisions, fuel, and light.

<sup>2</sup> Allowed 15s. a week for rent.

<sup>3</sup> Allowed 12s. 6d. a week for rent.

<sup>4</sup> Allowed quarters.

<sup>5</sup> Allowed £25 a year for hire of horse.

### PERMANENT AND VOLUNTEER MILITARY FORCES.

#### PERMANENT MILITARY FORCE.

Commanding New South Wales Artillery.	Colonel Charles Fyssh Roberts, C.M.G. <sup>1</sup>	28 Aug., 1876	Governor and Executive Council	500 0 0	1 Jan., 1873.
Majors, New South Wales Artillery.	Warner Wright Spalding <sup>2</sup> , C.M.G. (Col.)	28 Aug., 1876	Ditto .....	385 0 0	1 Aug., 1871.
	Michael Murphy (Lt.-Col.) <sup>2</sup>	19 Sept., 1878	Ditto .....	385 0 0	28 Aug., 1876.
	George John Airey (Lt.-Col.) <sup>2</sup>	20 Sept., 1878	Ditto .....	385 0 0	1 Aug., 1871.
Captain, New South Wales Artillery.	Pembroke Lathrop Murray <sup>3</sup>	28 Oct., 1878	Ditto .....	256 0 0	16 Jan., 1874.
Do do ...	Frederick Thomas Bendge Baynes. <sup>5</sup>	25 June, 1884	Ditto .....	256 0 0	28 Aug., 1876.
Do do ...	Henry Park Airey .....	29 Mar., 1885	Ditto .....	256 0 0	31 July, 1877.
Lieutenants, New South Wales Artillery.	Henry Le Patourel <sup>4</sup> .....	9 April, 1875	Ditto .....	238 0 0	9 April, 1875.
	† Henry Park Airey <sup>3</sup> .....	31 July, 1877	Ditto .....	238 0 0	31 July, 1877.
	Arthur Henry Patrick Savage. <sup>5</sup>	25 Nov., 1878	Ditto .....	238 0 0	25 Nov., 1878.
	Augustus George Harrington Morris. <sup>5</sup>	29 Sept., 1883	Ditto .....	238 0 0	29 Sept., 1883.
	William Throsby Bridges <sup>3</sup>	19 May, 1885	Ditto .....	238 0 0	
	Leslie Herbert Kyngdon <sup>3</sup> ..	12 Nov., 1885	Ditto .....	238 0 0	
	Havilland Le Mesurier <sup>3</sup> ...	12 Nov., 1885	Ditto .....	238 0 0	
Staff Surgeon-Major .....	William Daniel Campbell Williams. <sup>4</sup>	1 Oct., 1883	Ditto .....	274 0 0	1 Oct., 1883.
<b>Acting Chaplains—</b>					
<b>Dawes Point—</b>					
Church of England .....	Rev. Robert Lethbridge King.	3 Mar., 1881	Governor and Executive Council		3 Mar., 1881.
Roman Catholic .....	Rev. Pierre Piquet .....	12 July, 1881	Ditto .....		12 July, 1881.
Victoria Barracks—					
Church of England .....	Rev. Zachary Barry.....	11 Oct., 1876	Ditto .....		11 Oct., 1876.
Roman Catholic .....	Rev. Thomas Stephen Leonard.	13 Mar., 1878	Ditto .....		13 Mar., 1878.
Presbyterian .....	Rev. Archibald Gilchrist...	10 Dec., 1885	Ditto .....		10 Dec., 1885.
South Head—					
Church of England .....	Rev. Henry Wallace Mort	10 Sept., 1877	Ditto .....		10 Sept., 1877.
Batteries North side of Harbour—					
Church of England ...	Rev. Stephen Henry Child	15 Feb., 1880	Ditto .....		15 Feb., 1880.

<sup>1</sup> Quarters, with rations of provisions, fuel, and light, forage for two horses, £100 a year stabling allowance, and £10 for uniform.

<sup>2</sup> Allowed quarters, rations of provisions, fuel, and light, and forage for one horse. Command pay, 1s. 6d. per diem, and £10 for uniform.

<sup>3</sup> Allowed quarters, rations of provisions, fuel, and light, forage for a horse, and £10 for uniform.

<sup>4</sup> Allowed rations of provisions, fuel, and light, £64 horse hire, £120 a year lodging money, and £10 for uniform.

<sup>5</sup> Allowed quarters, rations of provisions, fuel, and light, forage for one horse, £10 for uniform, and £37 as Acting Adjutant.

<sup>6</sup> Allowed quarters, rations of provisions, fuel, and light, forage for one horse, £50 for stabling, and £10 for uniform. † Promoted.

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>COLONIAL SECRETARY—PERMANENT AND VOLUNTEER MILITARY FORCES—continued.</b>					
<b>PERMANENT MILITARY FORCE—continued.</b>					
<b>VOLUNTEER ARTILLERY.</b>					
Commanding Artillery Forces.	Colonel Charles Fysshé Roberts, C.M.G.	28 Aug., 1876	Governor and Executive Council	(See p. 38)	1 Jan., 1873.
Commanding N.S.W. Regt., Vol. Artillery.	Lieut.-Colonel Frederick Wells. <sup>1</sup> (Brevet-Colonel, 21 Dec., 1885).	19 Dec., 1881	Ditto .....	100 0 0	28 Mar., 1859.
Major, N.S.W. Regt., Vol. Artillery.	John Cochrane Remington	14 Mar., 1884	Ditto .....	50 0 0	1 Aug., 1871.
Major, N.S.W. Regt., Vol. Artillery.	Percy Owen <sup>2</sup> .....	23 Feb., 1885	Ditto .....	50 0 0	15 June, 1871.
Captain, N.S.W. Regt., Vol. Artillery.	Percy Owen <sup>3</sup> .....	4 Nov., 1878	Ditto .....	40 0 0	15 June, 1871.
Captain, N.S.W. Regt., Vol. Artillery.	Henry Chapman .....	4 Oct., 1880	Ditto .....	40 0 0	11 Aug., 1873.
Captain, N.S.W. Regt., Vol. Artillery.	James Sven Wigram .....	11 Mar., 1882	Ditto .....	40 0 0	31 Jan., 1876.
Captain, N.S.W. Regt., Vol. Artillery.	James Kirkaldy .....	29 July, 1882	Ditto .....	40 0 0	30 Nov., 1872.
Captain, N.S.W. Regt., Vol. Artillery.	Adam Mackinlay .....	29 July, 1882	Ditto .....	40 0 0	25 Nov., 1873.
Captain, N.S.W. Regt., Vol. Artillery.	Henry Osborne MacCabe..	25 Jan., 1884	Ditto .....	40 0 0	25 Jan., 1884.
Captain, N.S.W. Regt., Vol. Artillery.	William Weld Wren .....	7 Aug., 1885	Ditto .....	40 0 0	7 Aug., 1885.
Captain, N.S.W. Regt., Vol. Artillery.	Walter Graham Robertson	22 Mar., 1886	Ditto .....	40 0 0	7 Feb., 1874.
Captain, N.S.W. Regt., Vol. Artillery.	Charles Bourne Airey.....	8 May, 1886	Ditto .....	40 0 0	26 July, 1876.
1st Lieutenant, N.S.W. Regt., Vol. Artillery.	John Ebenezer Aggar.....	29 July, 1882	Ditto .....	30 0 0	13 April, 1874.
1st Lieutenant, N.S.W. Regt., Vol. Artillery.	Robert Haylock Owen <sup>4</sup> ...	29 July, 1882	Ditto .....	30 0 0	10 Jan., 1881.
1st Lieutenant, N.S.W. Regt., Vol. Artillery.	Charles John Lester .....	21 June, 1886 29 July, 1882	Ditto .....	30 0 0	23 Nov., 1881.
1st Lieutenant, N.S.W. Regt., Vol. Artillery.	Walter Graham Robertson <sup>3</sup>	4 Nov., 1878	Ditto .....	30 0 0	7 Feb., 1874.
1st Lieutenant, N.S.W. Regt., Vol. Artillery.	Charles Bourne Airey <sup>3</sup> ...	4 Oct., 1880	Ditto .....	30 0 0	26 July, 1876.
1st Lieutenant, N.S.W. Regt., Vol. Artillery.	John Moore Smail .....	8 April, 1884	Ditto .....	30 0 0	18 April, 1882.
1st Lieutenant, N.S.W. Regt., Vol. Artillery.	Thos. Davey Hamilton Foster.	22 May, 1885	Ditto .....	30 0 0	9 Mar., 1885.
1st Lieutenant, N.S.W. Regt., Vol. Artillery.	William Scott .....	26 Aug., 1885	Ditto .....	30 0 0	26 Aug., 1885.
1st Lieutenant, N.S.W. Regt., Vol. Artillery.	Adam Thompson Pringle...	2 Sept., 1886	Ditto .....	30 0 0	22 Sept., 1882.
1st Lieutenant, N.S.W. Regt., Vol. Artillery.	Frederick William Orr ...	2 Sept., 1886	Ditto .....	30 0 0	9 Oct., 1884.
1st Lieutenant, N.S.W. Regt., Vol. Artillery.	William Moore.....	7 Dec., 1886	Ditto .....	30 0 0	21 Oct., 1884.
2nd Lieutenant, N.S.W. Regt., Vol. Artillery.	Adam Thomson Pringle <sup>3</sup> ...	22 Sept., 1882	Ditto .....	25 0 0	22 Sept., 1882.
2nd Lieutenant, N.S.W. Regt., Vol. Artillery.	John James Langdon <sup>4</sup> .....	30 Sept., 1882	Ditto .....	25 0 0	30 Sept., 1882.
2nd Lieutenant, N.S.W. Regt., Vol. Artillery.	Percy Thomas Owen <sup>4</sup> .....	13 Feb., 1886 9 June, 1884	Ditto .....	25 0 0	9 June, 1884.
2nd Lieutenant, N.S.W. Regt., Vol. Artillery.	Fred. Wm. Orr <sup>3</sup> .....	24 Sept., 1886 9 Oct., 1884	Ditto .....	25 0 0	9 Oct., 1884.
2nd Lieutenant, N.S.W. Regt., Vol. Artillery.	William Moore <sup>3</sup> .....	21 Oct., 1884	Ditto .....	25 0 0	21 Oct., 1884.
2nd Lieutenant, N.S.W. Regt., Vol. Artillery.	Maurice Alfred Hilliard <sup>4</sup> ..	21 May, 1885 3 June, 1886	Ditto .....	25 0 0	21 May, 1885.
2nd Lieutenant, N.S.W. Regt., Vol. Artillery.	James Richard Muir .....	14 Aug., 1885	Ditto .....	25 0 0	14 Aug., 1885.
2nd Lieutenant, N.S.W. Regt., Vol. Artillery.	Albert Louis Manning ...	26 Aug., 1885	Ditto .....	25 0 0	26 Aug., 1885.
2nd Lieutenant, N.S.W. Regt., Vol. Artillery.	Alexander John Wilkinson	27 Mar., 1886	Ditto .....	25 0 0	27 Mar., 1886.
2nd Lieutenant, N.S.W. Regt., Vol. Artillery.	Richard Macdonald Seymour Wells.	14 Oct., 1886	Ditto .....	25 0 0	14 Oct., 1886.
2nd Lieutenant, N.S.W. Regt., Vol. Artillery.	Frederick Samuel Williams	13 Dec., 1886	Ditto .....	25 0 0	20 Mar., 1886.
<b>VOLUNTEER INFANTRY.</b>					
Commanding 1st Regt., Vol. Infantry.	Lieut.-Colonel Thomas Richards. <sup>1</sup> & <sup>5</sup> Retired	14 Oct., 1885 10 Nov., 1886	Ditto .....	100 0 0	7 Feb., 1845.
Commanding 2nd Regt., Vol. Infantry.	Lieut.-Colonel John Hay Goodlet. <sup>1</sup> (Brevet-Colonel, 6 April, 1886.)	16 Dec., 1875	Ditto .....	100 0 0	4 Dec., 1860.

<sup>1</sup> Allowed forage for a horse.<sup>2</sup> Allowed £25 a year for horse-hire.<sup>3</sup> Promoted.<sup>4</sup> Resigned.<sup>5</sup> Retired.

Office.	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary.			Date of first Appointment under the Colonial Government
				£	s.	d.	
<b>COLONIAL SECRETARY—PERMANENT AND VOLUNTEER MILITARY FORCES—continued.</b>							
<i>VOLUNTEER INFANTRY—continued.</i>							
Commanding 3rd Regt., Vol. Infantry.	Lieut.-Colonel William Hillier Holborow. <sup>1</sup>	1 Jan., 1880	Governor and Executive Council	100	0	0	12 Jan., 1870.
Commanding 4th Regt., Vol. Infantry.	Lieut.-Colonel Charles Frederick Stokes. <sup>1</sup>	28 Aug., 1885	Ditto .....	100	0	0	18 Dec., 1873.
Major, 2nd Regt., Vol. Infantry.	Henry John Chisholm <sup>2</sup>	2 Nov., 1885	Ditto ..	50	0	0	4 Nov., 1859.
Major, 1st Regt., Vol. Infantry.	Thomas Richards <sup>2</sup> . . . .	23 May, 1870	Ditto . . . . .	50	0	0	7 Feb., 1845
Major, 1st Regt., Vol. Infantry.	Promoted, and succeeded by William Thomas Farrell <sup>2</sup>	2 Nov., 1885	Ditto . . . . .	50	0	0	23 April, 1861.
Major, 3rd Regt., Vol. Infantry.	Alfred Paul <sup>2</sup> . . . . .	31 Dec., 1881	Ditto . . . . .	50	0	0	19 Nov., 1869.
Major, 1st Regt., Vol. Infantry.	(Brevet Lt. Colonel, 18 July, 1835) Charles Abraham Wilson <sup>2</sup>	2 Nov., 1885	Ditto . . . . .	50	0	0	23 April, 1861.
Major, 2nd Regt., Vol. Infantry.	Wm Freck Longfield <sup>2</sup> .	2 Nov., 1885	Ditto . . . . .	50	0	0	17 Oct., 1848.
Major, 4th Regt., Vol. Infantry.	Charles Mark Ranelaud <sup>2</sup>	2 Nov., 1885	Ditto . . . . .	50	0	0	3 Mar., 1882.
Major, 4th Regt., Vol. Infantry.	Albert John Gould	5 July, 1886	Ditto . . . . .	50	0	0	9 May, 1873.
Brevet-Major, unattached Commanding Engineer Corps.	Francis Augustus Wright	22 Dec., 1885	Ditto . . . . .	Nil.			20 Dec., 1873.
	Major Thomas Rowe (Brevet Lt. Colonel, 6 April, 1886)	1 Jan., 1880	Ditto . . . . .	70	0	0	28 Mar., 1872.
Captain, 3rd Regt., Vol. Infantry.	Henry James Byrnes	14 Feb., 1871	Ditto . . . . .	40	0	0	30 May, 1866.
Captain, 2nd Regt., Vol. Infantry.	John William Guise .	14 Feb., 1871	Ditto . . . . .	40	0	0	16 Nov., 1866
Captain, 3rd Regt., Vol. Infantry.	William Farmer Linsley	7 June, 1876	Ditto . . . . .	40	0	0	30 Jan., 1869
Captain, 1st Regt., Vol. Infantry.	William Johnston .	11 June, 1880	Ditto . . . . .	40	0	0	20 Oct., 1868
Captain, 1st Regt., Vol. Infantry.	John Humphrey Morris..	4 Oct., 1880	Ditto . . . . .	40	0	0	14 Feb., 1871
Captain, 1st Regt., Vol. Infantry.	Henry Blackshaw ....	4 Oct., 1880	Ditto . . . . .	40	0	0	12 Sept., 1874.
Captain, Mudgee Reserve.	George Davidson ...	27 Feb., 1884	Ditto . . . . .	Nil.			31 July, 1874.
Captain, Ulladulla Reserve Corps.	William Millard .....	27 Feb., 1884	Ditto . . . . .	Nil.			11 July, 1869.
Captain, 4th Regt., Vol. Infantry.	Albert John Gould <sup>2</sup> ..	14 Mar., 1884	Ditto . . . . .	40	0	0	9 May, 1873
Captain, Engineer Corps.	Thomas Samuel Parrott (Brevet Major, 18 July, 1883)	8 April, 1884	Ditto .....	40	0	0	20 Aug., 1874
Captain, 4th Regt., Vol. Infantry.	Richard Anderson Waddy	8 April, 1884	Ditto . . . . .	40	0	0	8 April, 1884.
Captain, 3rd Regt., Vol. Infantry.	Charles James Graham <sup>4</sup>	8 May, 1884	Ditto . . . . .	40	0	0	31 Dec., 1881
Captain, 2nd Regt., Vol. Infantry.	William Burnet . . . . .	24 Nov., 1884	Ditto . . . . .	40	0	0	17 April, 1867.
Captain, 1st Regt., Vol. Infantry.	Harry Berkeley Fitzhardinge.	31 Mar., 1885	Ditto .....	40	0	0	31 Mar., 1885.
Captain, 1st Regt., Vol. Infantry.	Geo. Robert Nichols <sup>5</sup> ..	31 Mar., 1885	Ditto . . . . .	40	0	0	31 Mar., 1885.
Captain, 2nd Regt., Vol. Infantry.	Thomas Honey . . . . .	9 Mar., 1885	Ditto . . . . .	40	0	0	6 April, 1872.
Captain, 3rd Regt., Vol. Infantry.	John Alex Wharrie	28 Mar., 1885	Ditto . . . . .	40	0	0	28 Mar., 1885.
Captain, 3rd Regt., Vol. Infantry.	Geo. Rutherford Siggins	28 Mar., 1885	Ditto . . . . .	40	0	0	28 Mar., 1885.
Captain, 4th Regt., Vol. Infantry.	Henry Harold Septimus Chippendale.	27 Jan., 1885	Ditto . . . . .	40	0	0	27 Jan., 1885
Captain, 4th Regt., Vol. Infantry.	Robert George Dundas Fitzgerald.	9 Mar., 1885	Ditto .....	40	0	0	9 Mar., 1885
Captain, 4th Regt., Vol. Infantry.	John Brady Nash ...	19 May, 1885	Ditto . . . . .	40	0	0	19 May, 1885.
Captain, 4th Regt., Vol. Infantry.	Edwin Charles Hunt ....	29 Sept., 1885	Ditto . . . . .	40	0	0	29 Sept., 1885.
Captain, 1st Regt., Vol. Infantry.	John Warner M'Cutcheon	2 Nov., 1885	Ditto . . . . .	40	0	0	1 Oct., 1870.
Captain, 1st Regt., Vol. Infantry.	James Cranna ..	2 Nov., 1885	Ditto . . . . .	40	0	0	5 Dec., 1871.
Captain, 2nd Regt., Vol. Infantry.	Charles Henry Evans	7 Oct., 1885	Ditto . . . . .	40	0	0	7 Oct., 1885.
Captain, 2nd Regt., Vol. Infantry.	Henry Lovibond .	18 June, 1885	Ditto . . . . .	40	0	0	18 June, 1885.
Captain, 2nd Regt., Vol. Infantry.	Donald Fraser . . . . .	2 Nov., 1885	Ditto . . . . .	40	0	0	4 Dec., 1873.
Captain, 2nd Regt., Vol. Infantry.	Alexander Fraser ...	2 Nov., 1885	Ditto . . . . .	40	0	0	4 Dec., 1873
Captain, 4th Regt., Vol. Infantry.	Granville John Burnage	2 Nov., 1885	Ditto . . . . .	40	0	0	14 Feb., 1883
Captain, 4th Regt., Vol. Infantry.	William John Sloan	2 Nov., 1885	Ditto . . . . .	40	0	0	17 May, 1869.

<sup>1</sup> Allowed forage for a horse.<sup>2</sup> Allowed £25 a year for horse hire<sup>3</sup> Promoted<sup>4</sup> Died, 18 March, 1886.<sup>5</sup> Resigned, 28 May, 1886.

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>COLONIAL SECRETARY—PERMANENT AND VOLUNTEER MILITARY FORCES—continued.</b>							
<i>VOLUNTEER INFANTRY—continued.</i>							
Captain, 3rd Regt., Vol. Infantry.	James Cassidy .....	7 July, 1886	Governor and Executive Council	40	0	0	29 April, 1874.
Captain, 3rd Regt., Vol. Infantry.	William James Hill.....	21 Oct., 1886	Ditto .....	40	0	0	10 Aug., 1880.
Captain, 4th Regt., Vol. Infantry.	Alister Stuart Bowman ...	25 Oct., 1886	Ditto .....	40	0	0	14 Mar., 1884.
Captain, 3rd Regt., Vol. Infantry.	George Walker Waddell...	23 Nov., 1886	Ditto .....	40	0	0	8 Aug., 1883.
Hon. Captain, Sydney Grammar School Cadet Corps.	Albert Bythsea Weigall...	28 Nov., 1871	Ditto .....	Nil.			28 Nov., 1871.
Hon. Captain, King's School Cadet Corps.	George Fairfowl Macarthur <sup>1</sup>	12 Mar., 1874 28 July, 1886 Resigned	Ditto .....	Nil.			12 Mar., 1874.
Hon. Captain, Newington College Cadet Corps.	Thomas Baker .....	13 July, 1883	Ditto .....	Nil.			13 July, 1883.
Hon. Captain, Windsor Grammar School Cadet Corps.	Rev. Bernard Kernan .....	11 June, 1886	Ditto .....	Nil.			11 June, 1886.
Hon. Captain, King's School, Cadet Corps.	Rev. Charles St. John Gray	12 Aug., 1886	Ditto .....	Nil.			12 Aug., 1886.
Hon. Captain, St. Ignatius College Cadet Corps.	Rev. Thomas Gartlan .....	26 Aug., 1886	Ditto .....	Nil.			26 Aug., 1886.
1st Lieutenant, 3rd Regt., Vol. Infantry.	Charles Septimus Guest...	30 Oct., 1874	Ditto .....	30	0	0	30 Oct., 1874.
Lieutenant, Engineer Corps	Charles Stuart Cansdell ...	23 May, 1875	Ditto .....	30	0	0	4 Nov., 1874.
1st Lieutenant, 3rd Regt., Vol. Infantry.	Thomas James Barnett ...	27 Aug., 1879	Ditto .....	30	0	0	16 May, 1868.
1st Lieutenant, 1st Regt., Vol. Infantry.	Charles Edward Finch <sup>2</sup> ...	20 Nov., 1882 16 Jan., 1886 Retired	Ditto .....	30	0	0	1 July, 1860.
1st Lieutenant, 2nd Regt., Vol. Infantry.	Wesley Powell Mulholland	30 May, 1883	Ditto .....	30	0	0	7 May, 1874.
1st Lieutenant, 3rd Regt., Vol. Infantry.	James Anderson .....	14 Nov., 1883	Ditto .....	30	0	0	22 Feb., 1881.
1st Lieutenant, 3rd Regt., Vol. Infantry.	James Cassidy <sup>3</sup> .....	22 Nov., 1883	Ditto .....	30	0	0	29 April, 1874.
1st Lieutenant, Mudgee Corps Reserve.	William Fred. Woods.....	27 Feb., 1884	Ditto .....	Nil.			31 July, 1874.
1st Lieutenant, Ulladulla Corps Reserve.	James Cork .....	27 Feb., 1884	Ditto .....	Nil.			2 Feb., 1875.
1st Lieutenant, 4th Regt., Vol. Infantry.	Alister Stuart Bowman <sup>3</sup> ...	14 Mar., 1884	Ditto .....	30	0	0	14 Mar., 1884.
1st Lieutenant, 3rd Regt., Vol. Infantry.	George Walker Waddell <sup>3</sup> ...	17 Nov., 1884	Ditto .....	30	0	0	8 Aug., 1883.
1st Lieutenant, 2nd Regt., Vol. Infantry.	George Bagot Stack.....	24 Nov., 1884	Ditto .....	30	0	0	14 Jan., 1863.
1st Lieutenant, 1st Regt., Vol. Infantry.	George Shepherd.....	1 May, 1885	Ditto .....	30	0	0	1 May, 1885.
Lieutenant, Engineer Corps	Henry Paul Ramsay Cope-land.	19 May, 1885	Ditto .....	30	0	0	19 May, 1885.
1st Lieutenant, 3rd Regt., Vol. Infantry.	James Gordon Legge <sup>1</sup> .....	21 May, 1885 6 April, 1886 Resigned	Ditto .....	30	0	0	21 May, 1885.
1st Lieutenant, 3rd Regt., Vol. Infantry.	William James Hill <sup>3</sup> .....	7 Aug., 1885	Ditto .....	30	0	0	10 Aug., 1880.
1st Lieutenant, 4th Regt., Vol. Infantry.	William Henry Moulton..	14 Aug., 1885	Ditto .....	30	0	0	14 Aug., 1885.
1st Lieutenant, 4th Regt., Vol. Infantry.	Wm. Francis Xavier Byrne	14 Aug., 1885	Ditto .....	30	0	0	14 Aug., 1885.
1st Lieutenant, 1st Regt., Vol. Infantry.	Frederick Hulleat Galbraith.	23 Oct., 1885	Ditto .....	30	0	0	23 Oct., 1885.
1st Lieutenant, 2nd Regt., Vol. Infantry.	Marmaduke Arthur Hornidge <sup>1</sup> .	23 Oct., 1885 7 Sept., 1886 Resigned	Ditto .....	30	0	0	23 Oct., 1885.
1st Lieutenant, 1st Regt., Vol. Infantry.	Robert George.....	2 Nov., 1885	Ditto .....	30	0	0	3 Oct., 1872.
1st Lieutenant, 1st Regt., Vol. Infantry.	John Ronald Macdonald <sup>1</sup> ..	2 Nov., 1885 2 Feb., 1886 Resigned	Ditto .....	30	0	0	7 Nov., 1881.
1st Lieutenant, 1st Regt., Vol. Infantry.	Henry Chas. Lennox Anderson.	2 Nov., 1885	Ditto .....	30	0	0	20 Nov., 1882.
1st Lieutenant, 2nd Regt., Vol. Infantry.	Henry Frederick Chilcott..	2 Nov., 1885	Ditto .....	30	0	0	10 April, 1876.
1st Lieutenant, 2nd Regt., Vol. Infantry.	Alexander Gilchrist.....	2 Nov., 1885	Ditto .....	30	0	0	18 May, 1874.
1st Lieutenant, 2nd Regt., Vol. Infantry.	Henry Honey .....	22 Dec., 1885	Ditto .....	30	0	0	21 May, 1885.
1st Lieutenant, 4th Regt., Vol. Infantry.	Henry Warren Scobie.....	2 Nov., 1885	Ditto .....	30	0	0	8 April, 1884.
1st Lieutenant, 4th Regt., Vol. Infantry.	Archibald Langwill .....	2 Nov., 1885	Ditto .....	30	0	0	10 Jan., 1885.
1st Lieutenant, 4th Regt., Vol. Infantry.	John Gill Grayston.....	27 Nov., 1885	Ditto .....	30	0	0	9 Mar., 1885.
1st Lieutenant, 4th Regt., Vol. Infantry.	Stephen Pegum .....	30 Nov., 1885	Ditto .....	30	0	0	30 Nov., 1885.
1st Lieutenant, 1st Regt., Vol. Infantry.	Victor Le Gay Brereton...	30 Jan., 1886	Ditto .....	30	0	0	30 June, 1883.
1st Lieutenant, 1st Regt., Vol. Infantry.	David Miller .....	30 Jan., 1886	Ditto .....	30	0	0	21 May, 1885.

<sup>1</sup> Resigned.    <sup>2</sup> Retired.    <sup>3</sup> Promoted.



Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>COLONIAL SECRETARY—PERMANENT AND VOLUNTEER MILITARY FORCES—continued.</b>							
<i>VOLUNTEER INFANTRY—continued.</i>							
1st Lieutenant, 3rd Regt., Vol. Infantry.	Christie James Gosper ...	30 Jan., 1886	Governor and Executive Council	30	0	0	30 Jan., 1886.
1st Lieutenant, 4th Regt., Vol. Infantry.	Edward Bowman.....	22 Feb., 1886	Ditto .....	30	0	0	22 Feb., 1886.
1st Lieutenant, 3rd Regt., Vol. Infantry.	William Henry Webb ..	7 July, 1886	Ditto .....	30	0	0	22 Mar., 1884.
1st Lieutenant, 4th Regt., Vol. Infantry.	William Wells Robinson..	25 Oct., 1886	Ditto .....	30	0	0	14 Mar., 1884.
1st Lieutenant, 3rd Regt., Vol. Infantry.	John Dalton.....	23 Nov., 1886	Ditto .....	30	0	0	10 Dec., 1884.
1st Lieutenant, 1st Regt., Vol. Infantry.	Samuel Malcolm Morgan Dennis.	7 Dec., 1886	Ditto .....	30	0	0	7 Aug., 1885.
2nd Lieutenant, 3rd Regt., Vol. Infantry.	William John Ferris .....	22 Feb., 1881	Ditto .....	25	0	0	22 Feb., 1881.
2nd Lieutenant, 1st Regt., Vol. Infantry.	Victor Le Gay Brereton <sup>2</sup> ...	30 June, 1883	Ditto .....	25	0	0	30 June, 1883.
2nd Lieutenant, 2nd Regt., Vol. Infantry.	John Stuart Edwards Mason.	30 June, 1883	Ditto .....	25	0	0	30 June, 1883.
2nd Lieutenant, 4th Regt., Vol. Infantry.	William Wells Robinson <sup>2</sup> ..	14 Mar., 1884	Ditto .....	25	0	0	14 Mar., 1884.
2nd Lieutenant, 3rd Regt., Vol. Infantry.	William Henry Webb <sup>2</sup> ...	22 Mar., 1884	Ditto .....	25	0	0	22 Mar., 1884.
2nd Lieutenant, 3rd Regt., Vol. Infantry.	John Dalton <sup>2</sup> .....	10 Dec., 1884	Ditto .....	25	0	0	10 Dec., 1884.
2nd Lieutenant, 2nd Regt., Vol. Infantry.	Clarence Harold Wilkinson	22 Dec., 1884	Ditto .....	25	0	0	22 Dec., 1884.
2nd Lieutenant, 4th Regt., Vol. Infantry.	John Archibald Neilson...	27 Jan., 1885	Ditto .....	25	0	0	27 Jan., 1885.
2nd Lieutenant, 1st Regt., Vol. Infantry.	David Miller <sup>2</sup> .....	21 May, 1885	Ditto .....	25	0	0	21 May, 1885.
2nd Lieutenant, 1st Regt., Vol. Infantry.	Samuel Malcolm Morgan Dennis. <sup>2</sup>	7 Aug., 1885	Ditto .....	25	0	0	7 Aug., 1885.
2nd Lieutenant, 4th Regt., Vol. Infantry.	Samuel Williams .....	7 Aug., 1885	Ditto .....	25	0	0	7 Aug., 1885.
2nd Lieutenant, 3rd Regt., Vol. Infantry.	Richard Jeffrey Inch .....	14 Aug., 1885	Ditto .....	25	0	0	14 Aug., 1885.
2nd Lieutenant, 3rd Regt., Vol. Infantry.	Cecil William Edward Bedford <sup>1</sup> . Resigned	14 Aug., 1885 15 April, 1886	Ditto .....	25	0	0	14 Aug., 1885.
2nd Lieutenant, 1st Regt., Vol. Infantry.	George Frederick James Plunkett <sup>1</sup> . Resigned	14 Aug., 1885 24 Mar., 1886	Ditto .....	25	0	0	14 Aug., 1885.
2nd Lieutenant, 4th Regt., Vol. Infantry.	Alfred Beckett.....	27 Nov., 1885	Ditto .....	25	0	0	27 Nov., 1885.
2nd Lieutenant, 4th Regt., Vol. Infantry.	John Mullen Hyde.....	27 Nov., 1885	Ditto .....	25	0	0	27 Nov., 1885.
2nd Lieutenant, 4th Regt., Vol. Infantry.	Henry Cooke <sup>1</sup> .....	30 Nov., 1885 3 Sept., 1886	Ditto .....	25	0	0	30 Nov., 1885.
2nd Lieutenant, 1st Regt., Vol. Infantry.	William Alfred Leggatt ...	7 Dec., 1885	Ditto .....	25	0	0	7 Dec., 1885.
2nd Lieutenant, 1st Regt., Vol. Infantry.	Robert Hugh Acheson ...	22 Dec., 1885	Ditto .....	25	0	0	22 Dec., 1885.
2nd Lieutenant, 2nd Regt., Vol. Infantry.	Morton Hart Manning <sup>3</sup> ...	31 Jan., 1886	Ditto .....	25	0	0	31 Jan., 1886
2nd Lieutenant, 2nd Regt., Vol. Infantry.	William Charles Shipway	31 Jan., 1886	Ditto .....	25	0	0	31 Jan., 1886
2nd Lieutenant, 1st Regt., Vol. Infantry.	William James Norman Oldershaw.	22 Feb., 1886	Ditto .....	25	0	0	22 Feb., 1886
2nd Lieutenant, 1st Regt., Vol. Infantry.	Arthur Tower .....	22 Feb., 1886	Ditto .....	25	0	0	22 Feb., 1886
2nd Lieutenant, 1st Regt., Vol. Infantry.	William Holmes .....	22 Feb., 1886	Ditto .....	25	0	0	22 Feb., 1886
2nd Lieutenant, 4th Regt., Vol. Infantry.	Albert Arthur Veness.....	2 Mar., 1886	Ditto .....	25	0	0	2 Mar., 1886
2nd Lieutenant, 1st Regt., Vol. Infantry.	John Wilkinson Melrose...	10 April, 1886	Ditto .....	25	0	0	10 April, 1886
2nd Lieutenant, 1st Regt., Vol. Infantry.	Alfred Joshua Bennett ...	10 April, 1886	Ditto .....	25	0	0	10 April, 1866
Quarter Master, 2nd Regt., Vol. Infantry.	Timothy James Cremen, (2nd Lieutenant).	20 April, 1886	Ditto .....	25	0	0	20 April, 1886
2nd Lieutenant, 3rd Regt., Vol. Infantry.	David Dick Dye.....	19 June, 1886	Ditto .....	25	0	0	19 June, 1886
2nd Lieutenant, 2nd Regt., Vol. Infantry.	John Stephen Brown .....	7 July, 1886	Ditto .....	25	0	0	7 July, 1886
2nd Lieutenant, 4th Regt., Vol. Infantry.	William Seymour Wells...	19 July, 1886	Ditto .....	25	0	0	19 July, 1886
2nd Lieutenant, 3rd Regt., Vol. Infantry.	David Mitchell.....	17 Aug., 1886	Ditto .....	25	0	0	17 Aug., 1886
Quarter Master, 1st Regt., Vol. Infantry.	William Foskett, (2nd Lieutenant).	17 Aug., 1886	Ditto .....	25	0	0	17 Aug., 1886
2nd Lieutenant, 3rd Regt., Vol. Infantry.	William Henry Hudson ...	21 Sept., 1886	Ditto .....	25	0	0	21 Sept., 1886
2nd Lieutenant, 2nd Regt., Vol. Infantry.	Charles Moore Stevenson..	25 Oct., 1886	Ditto .....	25	0	0	25 Oct., 1886

<sup>1</sup> Resigned.<sup>2</sup> Promoted.<sup>3</sup> Died, 31 July, 1886.

## NEW SOUTH WALES—1886.

Office.	Name.	Date of Appointment.	By whom appointed, and under what instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>COLONIAL SECRETARY—PERMANENT AND VOLUNTEER MILITARY FORCES—continued.</b>					
<i>VOLUNTEER INFANTRY—continued.</i>					
2nd Lieutenant, 2nd Regt., Vol. Infantry.	James Simmons.....	25 Oct., 1886	Governor and Executive Council	25 0 0	25 Oct., 1886
2nd Lieutenant, 4th Regt., Vol. Infantry.	James Macartney Rooke...	25 Oct., 1886	Ditto .....	25 0 0	25 Oct., 1886
2nd Lieutenant, 2nd Regt., Vol. Infantry.	Robert Murray M'Cheyne Anderson.	13 Dec., 1886	Ditto .....	25 0 0	13 Dec., 1886
<i>TORPEDO AND SIGNALLING CORPS.</i>					
Major Commanding .....	Edward Charles Cracknell	8 Oct., 1877	Governor and Executive Council	200 0 0	1 Jan., 1858.
Captain .....	Philip Billingsley Walker. (Brevet Major	6 Feb., 1878 27 June, 1885)	Ditto .....	100 0 0	18 Feb., 1858.
Captain .....	William Wilson .....	9 July, 1885	Ditto .....	100 0 0	1 Nov., 1858.
1st Lieutenants .....	Alfred Broughton .....	31 May, 1882	Ditto .....	60 0 0	10 Aug. 1880.
	Thomas Hammand.....	9 July, 1885	Ditto .....	60 0 0	20 Nov., 1882.
	John Yates Nelson .....	9 July, 1885	Ditto .....	60 0 0	9 July, 1885.
	John Sinclair Alexander...	9 July, 1885	Ditto .....	60 0 0	9 July, 1885.
2nd Lieutenants.....	Rupert Bedford .....	9 July, 1885	Ditto .....	40 0 0	9 July, 1885.
	John Reginald Scroggie <sup>1</sup> ...	9 July, 1885	Ditto .....	40 0 0	9 July, 1885.
	Resigned	25 Aug., 1886			
	Robert Rowan Pinder Hickson <sup>1</sup>	9 July, 1885	Ditto .....	40 0 0	9 July, 1885.
	Resigned	7 Sept., 1886			
	John Euston Squier <sup>1</sup> .....	9 July, 1885	Ditto .....	40 0 0	9 July, 1885.
	Resigned	25 Aug., 1886			
<i>NAVAL BRIGADE.</i>					
Captain Commanding .....	Francis Hixson, R.N. (pro- vided with quarters.)	1 May, 1863	Governor and Executive Council	5/- $\Psi$ diem	1 Jan., 1863.
Commanders .....	G. S. Lindeman, R.N. ....	8 Sept., 1879	Ditto .....	} 4/ $\Psi$ diem each. }	26 April, 1872.
	H. R. Cross .....	1 Feb., 1885	Ditto .....		13 Oct., 1863.
	A. J. Lewington .....	1 May, 1885	Ditto .....		9 June, 1865.
Clerk and Accountant .....	A. Hinton .....	1 May, 1863	Ditto .....	} 3/6 $\Psi$ diem	14 May, 1855.
Lieutenants .....	Q. L. Deloitte .....	1 June, 1869	Ditto .....		9 June, 1865.
	F. J. Jackson .....	8 Sept., 1879	Ditto .....		11 Oct., 1869.
	F. Gardner .....	1 Feb., 1885	Ditto .....	} 4/ $\Psi$ diem each. }	1 Jan., 1872.
	V. Cohen .....	1 May, 1885	Ditto .....		1 July, 1867.
	A. G. Milson .....	1 May, 1885	Ditto .....		30 June, 1871.
	F. R. Connor, R.N. ....	1 May, 1885	Ditto .....	} 4/ $\Psi$ diem each. }	1 May, 1885.
	F. L. Partridge, R.N. ....	12 Jan., 1881	Ditto .....		12 Jan., 1881.
	succeeded by				
Sub-Lieutenants .....	W. K. Oatley .....	1 Mar., 1886	Ditto .....	} 2/ $\Psi$ diem each. }	11 Oct., 1869.
	H. Gilfillan .....	3 Sept., 1879	Ditto .....		5 April, 1871.
	W. Broomfield.....	1 Mar., 1884	Ditto .....		27 Aug., 1879.
	H. Cross .....	1 Feb., 1885	Ditto .....		2 June, 1882.
	J. Church .....	1 May, 1885	Ditto .....		15 April, 1873.
	H. Jacob .....	12 May, 1885	Ditto .....		5 May, 1875.
	F. W. Hixson .....	1 May, 1885	Ditto .....		20 June, 1877.
	T. B. Dibbs .....	1 May, 1885	Ditto .....		1 May, 1885.
	S. Day .....	1 Mar. 1886	Ditto .....		8 Jan., 1880.
	O. S. Evans .....	5 Oct., 1863	Ditto .....		21 Mar., 1861.
Staff Surgeon.....	S. T. Knaggs .....	8 Feb., 1872	Ditto .....	} Nil.	8 Feb., 1872.
Surgeon .....	D. Kendall .....	30 May, 1885	Ditto .....		30 May, 1885.
„ Assistant .....	D. Baker.....	30 May, 1885	Ditto .....		30 May, 1885.
Midshipmen .....	E. Day .....	27 Mar., 1884	Captain Commanding.....		4 June, 1880.
	C. Binnie .....	27 Mar., 1884	Ditto .....		24 Jan., 1881.
	H. O. N. Hixson.....	27 Mar., 1884	Ditto .....		24 Jan., 1881.
	H. L. Hixson .....	14 April, 1885	Ditto .....		1 July, 1882.
	S. H. Street .....	14 April, 1885	Ditto .....		15 Aug., 1882.
	G. Hickson .....	21 Feb., 1885	Ditto .....		12 Nov., 1883.
	R. G. Tait.....	14 April, 1885	Ditto .....		23 Aug., 1882.
	J. E. Dawson .....	14 April, 1885	Ditto .....	23 Feb., 1883.	
	H. Binnie .....	14 April, 1885	Ditto .....	} 1/ $\Psi$ diem each. }	2 April, 1880.
	S. W. Spain .....	17 April, 1885	Ditto .....		20 May, 1880.
	G. McFarland .....	6 June, 1885	Ditto .....		30 May, 1883.
	F. A. Wright .....	6 June, 1885	Ditto .....		29 May, 1883.
	A. C. Fraser.....	6 June, 1885	Ditto .....		29 Aug., 1883.
	F. Hitchens .....	1 Nov., 1885	Ditto .....		16 April, 1880.
	G. Banks .....	1 Feb., 1886	Ditto .....		16 April, 1885.
Cadets .....	H. A. Evans.....	25 Feb., 1885	Ditto .....		25 Feb., 1885.
	J. T. Adams.....	11 April 1885	Ditto .....		11 April, 1885.
	H. D. Scroggie.....	11 April, 1885	Ditto .....		11 April, 1885.
	W. K. Johnson .....	11 April, 1885	Ditto .....	11 April, 1885.	
	J. H. Lambton.....	11 April, 1885	Ditto .....	11 April, 1885.	
	W. E. Manning .....	11 April, 1885	Ditto .....	11 April, 1885.	
	M. Shaw .....	11 April, 1885	Ditto .....	11 April, 1885.	
	C. A. Jacob .....	14 April, 1885	Ditto .....	11 April, 1885.	
	F. Church.....	16 April, 1885	Ditto .....	14 April, 1885.	
	H. Sweetland .....	8 May, 1885	Ditto .....	16 April, 1885.	
	W. Thompson .....	14 May, 1885	Ditto .....	8 May, 1885.	
	F. J. Milford .....	16 May, 1885	Ditto .....	14 May, 1885.	
	Thos. Paige .....	18 May, 1885	Ditto .....	16 May, 1885.	
	E. B. Lewington .....	1 Feb., 1886	Ditto .....	18 May, 1885.	
				1 Feb., 1886.	

<sup>1</sup> Resigned.

## BLUE BOOK OF

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>COLONIAL SECRETARY—PERMANENT AND VOLUNTEER MILITARY FORCES—continued.</b>					
<b>NAVAL BRIGADE—continued.</b>					
Gunnery Instructor, Sydney	W. G. Rickwood .....	1 Mar. 1885	Governor and Executive Council	200 0 0	1 Mar., 1885.
Assistant Do. ....	W. Baxter .....	8 May, 1885	Ditto .....	144 0 0	8 May, 1885.
Gunnery Instructor, Newcastle.	J. Dagwell .....	20 Oct., 1863	Ditto .....	52 0 0	20 Oct., 1863.
Warrant Officers (14) .....	.....	.....	Captain Commanding .....	18 0 0	each.
Petty Officers (14) .....	.....	.....	Ditto .....	15 0 0	"
A.B.'s (582) .....	.....	.....	Ditto .....	12 0 0	"
<b>VOLUNTEER RESERVE CORPS.</b>					
<b>CAVALRY.</b>					
Major Commanding .....	Malcolm Melville Macdonald <sup>1</sup> ..	29 Sept., 1885	Governor and Executive Council	50 0 0	5 Feb., 1885.
<b>SYDNEY LANCERS.</b>					
Captain .....	Algernon James Metcalf <sup>2</sup> ..	29 Sept., 1885	Ditto .....	Nil.	29 Sept., 1885.
	Resigned	3 June, 1886			
Honorary Colonel .....	His Excellency The Right Honorable Charles Robert Baron Carrington, P.C., G.C.M.G.	9 Feb., 1886	Ditto .....	Nil.	9 Feb., 1886.
Captain .....	Alexander James Dodds ..	16 Mar., 1886	Ditto .....	Nil.	29 Sept., 1885.
Captain .....	Thomas Forster Knox .....	30 July, 1886	Ditto .....	Nil.	29 Sept., 1885.
1st Lieutenant .....	John Mitchell Purres .....	16 Mar., 1886	Ditto .....	Nil.	16 Mar., 1886.
2nd Lieutenant .....	Henry Chetwyn l Doyle <sup>2</sup> ..	16 Mar., 1886	Ditto .....	Nil.	16 Mar., 1886.
	Resigned	14 July, 1886			
2nd Lieutenant .....	Walter Liberty Vernon ..	16 Mar., 1886	Ditto .....	Nil.	16 Mar., 1886.
1st Lieutenant .....	Alexander James Dodds <sup>3</sup> ..	29 Sept., 1885	Ditto .....	Nil.	29 Sept., 1885.
2nd Lieutenant .....	Thomas Forster Knox <sup>3</sup> ..	29 Sept., 1885	Ditto .....	Nil.	29 Sept., 1885.
<b>ILLAWARRA LIGHT HORSE.</b>					
Captain .....	Edward Henry Weston ..	27 Nov., 1885	Ditto .....	Nil.	27 Nov., 1885.
1st Lieutenant .....	Ernest John Marks .....	16 Mar., 1886	Ditto .....	Nil.	16 Mar., 1886.
2nd Lieutenant .....	Maurice Alfred Hilliard ..	19 July, 1886	Ditto .....	Nil.	21 May, 1885.
<b>WEST CAMDEN LIGHT HORSE.</b>					
Captain .....	James Alex. Kenneth Mackay <sup>3</sup> ..	14 Aug., 1885	Ditto .....	Nil.	14 Aug., 1885.
	Resigned	3 Nov., 1886			
Captain .....	John James Walters .....	8 Dec., 1886	Ditto .....	Nil.	8 Dec., 1886.
1st Lieutenant .....	James Graham .....	29 Sept., 1885	Ditto .....	Nil.	29 Sept., 1885.
2nd Lieutenant .....	Henry Molesworth Oxley ..	29 Sept., 1885	Ditto .....	Nil.	29 Sept., 1885.
<b>WEST MITTLAND LIGHT HORSE.</b>					
Captain .....	Henry Trenchard .....	22 Feb., 1886	Ditto .....	Nil.	22 Feb., 1886.
1st Lieutenant .....	Leslie Septimus M'Dougall ..	17 May, 1886	Ditto .....	Nil.	17 May, 1886.
<b>ULMARRA LIGHT HORSE.</b>					
Captain .....	William Goodger .....	10 April, 1886	Ditto .....	Nil.	10 April, 1886.
1st Lieutenant .....	Francis Asbury Halliday ..	7 June, 1886	Ditto .....	Nil.	7 June, 1886.
2nd Lieutenant .....	Arthur James Flanders ..	7 June, 1886	Ditto .....	Nil.	7 June, 1886.
<b>UPPER CLARENCE LIGHT HORSE.</b>					
Captain .....	Charles Henry Edwd. Chauvel ..	16 Mar., 1886	Ditto .....	Nil.	16 Mar., 1886.
Captain .....	James Dunbar Smith .....	16 Mar., 1886	Ditto .....	Nil.	16 Mar., 1886.
1st Lieutenant .....	Kenneth Hutchison .....	16 Mar., 1886	Ditto .....	Nil.	16 Mar., 1886.
1st Lieutenant .....	Charles Arthur Cameron Chauvel ..	17 May, 1886	Ditto .....	Nil.	17 May, 1886.
2nd Lieutenant .....	Henry George Chauvel ..	16 Mar., 1886	Ditto .....	Nil.	16 Mar., 1886.
2nd Lieutenant .....	Robert Douglas M'Pherson ..	17 May, 1886	Ditto .....	Nil.	17 May, 1886.
<b>GRAFTON CAVALRY.</b>					
Captain .....	John Henry Munro .....	10 April, 1886	Ditto .....	Nil.	10 April, 1886.
1st Lieutenant .....	Edward Lloyd Rutledge ..	7 June, 1886	Ditto .....	Nil.	7 June, 1886.
2nd Lieutenant .....	Charles Fred. Napier North ..	7 June, 1886	Ditto .....	Nil.	7 June, 1886.
<b>ARTILLERY.</b>					
<b>BALMAIN NO. 1 BATTERY.</b>					
Captain .....	James Macdonald .....	14 Aug., 1885	Ditto .....	Nil.	14 Aug., 1885.
1st Lieutenant .....	Alexander Fraser <sup>2</sup> .....	14 Aug., 1885	Ditto .....	Nil.	14 Aug., 1885.
	Resigned	23 Nov., 1886			
2nd Lieutenant .....	Alexander Martin Milne ..	14 Aug., 1885	Ditto .....	Nil.	14 Aug., 1885.
<b>BALMAIN NO. 2 BATTERY.</b>					
Captain .....	Thomas Steel Phillips .....	10 Sept., 1885	Ditto .....	Nil.	10 Sept., 1885.
1st Lieutenant .....	James D'Arcy .....	10 Sept., 1885	Ditto .....	Nil.	10 Sept., 1885.
2nd Lieutenant .....	James Davis Dunne .....	10 Sept., 1885	Ditto .....	Nil.	10 Sept., 1885.

<sup>1</sup> Forage for one horse.<sup>2</sup> Resigned.<sup>3</sup> Promoted.

## NEW SOUTH WALES—1886.

Office.	Name.	Date of Appointment	By whom appointed, and under what Instrument.	Annual Salary	Date of first Appointment under the Colonial Government
				£ s. d.	
<b>COLONIAL SECRETARY—VOLUNTEER RESERVE CORPS—continued.</b>					
<b>ARTILLERY—continued.</b>					
<b>ST LEONARDS BATTERY.</b>					
Captain .....	Henry Haughton Bulton Bradley.	12 May, 1885	Governor and Executive Council	Nil.	1 Aug, 1871.
1st Lieutenant .....	Alfred William Fairfax	16 June, 1885	Ditto .....	Nil.	16 June, 1885.
2nd Lieutenant .....	Fred Samuel Williams <sup>1</sup>	20 Mar, 1886	Ditto .....	Nil.	20 Mar., 1886.
<b>BOTANY BATTERY.</b>					
Captain .....	Joseph Boyd	29 Sept., 1885	Ditto .....	Nil.	29 Sept., 1885.
1st Lieutenant .....	John Alex Martin	30 Jan., 1886	Ditto .....	Nil.	30 Jan., 1886.
2nd Lieutenant .....	Alfred Stanley Blake	22 Dec, 1885	Ditto .....	Nil.	22 Dec., 1885
<b>INFANTRY—METROPOLITAN AND WESTERN DISTRICT.</b>					
<b>PLYMOUTH RESERVE INFANTRY.</b>					
Major .....	Alfred William East	31 Dec, 1886	Ditto .....	Nil.	23 Oct, 1885.
Adjutant .....	Captain Louis Maclean Boddam	31 Dec, 1886	Ditto .....	Nil.	9 Aug, 1885.
<b>FORBES CORPS.</b>					
Captain .....	The Honorable Edmond Aubrey Templar Pery.	7 Aug, 1885	Ditto .....	Nil.	7 Aug, 1885.
1st Lieutenant .....	Robert Stirling	24 Oct, 1885	Ditto .....	Nil.	24 Oct, 1885
2nd Lieutenant .....	Edward Patrick Macdonnell <sup>2</sup>	29 Sept., 1885	Ditto .....	Nil.	29 Sept., 1885.
2nd Lieutenant .....	George Warner	31 July, 1886 24 Nov, 1886	Ditto .....	Nil.	24 Nov., 1886
<b>HUNTER'S HILL CORPS</b>					
Captain .....	Louis Maclean Boddam <sup>5</sup>	7 Aug, 1885	Ditto .....	Nil.	1 Jan, 1883
1st Lieutenant .....	James Henry Watson	24 Oct., 1885	Ditto .....	Nil.	24 Oct., 1885
2nd Lieutenant .....	Alfred Weeks	7 Aug, 1885	Ditto .....	Nil.	7 Aug., 1885.
<b>ASHEFIELD CORPS.</b>					
Captain .....	Thomas Mosci <sup>2</sup>	26 Aug, 1885 23 May, 1886	Ditto .....	Nil.	26 Aug, 1885.
1st Lieutenant .....	Stephen Mallarky <sup>3</sup>	23 Oct, 1885	Ditto .....	Nil.	23 Oct, 1885
2nd Lieutenant .....	Jasper Gaze Wiseman <sup>3</sup>	24 Oct, 1885	Ditto .....	Nil.	24 Oct, 1885.
Captain .....	Stephen Mallarky	17 July, 1886	Ditto .....	Nil.	17 July, 1886
1st Lieutenant .....	Jasper Gaze Wiseman	24 Sept, 1886	Ditto .....	Nil.	24 Sept, 1886.
2nd Lieutenant .....	George Frederick Liggins	24 Sept, 1886	Ditto .....	Nil.	24 Sept., 1886.
<b>BURWOOD CORPS.</b>					
Captain .....	Frederick Augustus Broughton	26 Aug, 1885	Ditto .....	Nil.	26 Aug, 1885
1st Lieutenant .....	Henry Lomas Smith	24 Oct., 1885	Ditto .....	Nil.	24 Oct, 1885
2nd Lieutenant .....	Herbert John Fairfax	24 Oct, 1885	Ditto .....	Nil.	24 Oct, 1885
<b>NEWTOWN CORPS.</b>					
Captain .....	John Francis Tabrett <sup>2</sup>	30 Nov, 1885 9 Aug, 1886	Ditto .....	Nil.	30 Nov, 1885.
2nd Lieutenant .....	George Hudson Sparkes <sup>3</sup>	22 Dec., 1885	Ditto .....	Nil.	22 Dec., 1885.
1st Lieutenant .....	George Hudson Sparkes <sup>2</sup>	5 Feb, 1886	Ditto .....	Nil.	22 Dec, 1885.
2nd Lieutenant .....	John Salmon <sup>2</sup>	16 Mar, 1886	Ditto .....	Nil.	16 Mar, 1886.
Captain .....	George Hudson Sparkes <sup>3</sup>	3 Nov, 1886	Ditto .....	Nil.	22 Dec, 1885.
1st Lieutenant .....	William Frank Dobbin	30 Aug, 1886 7 Dec, 1886	Ditto .....	Nil.	7 Dec., 1886.
<b>MARRICKVILLE CORPS.</b>					
Captain .....	Alfred William East <sup>2</sup>	23 Oct, 1885	Ditto .....	Nil.	23 Oct., 1885.
2nd Lieutenant .....	John Grice	7 Dec, 1885	Ditto .....	Nil.	7 Dec., 1885
<b>SCOTTISH RIFLE CORPS.</b>					
Major .....	John Macdonald <sup>4</sup>	26 Oct., 1885	Ditto .....	Nil.	26 Oct., 1885.
Captain .....	Alexander Gray	16 Mar, 1886	Ditto .....	Nil.	16 Mar, 1886
Captain .....	Gerald Ross Campbell	16 Mar, 1886	Ditto .....	Nil.	16 Mar, 1886
Captain .....	Richard Bendge Baynes	22 Mar, 1886	Ditto .....	Nil.	22 Mar., 1886
1st Lieutenant .....	George Wilson	16 Mar., 1886	Ditto .....	Nil.	16 Mar, 1886.
1st Lieutenant .....	Richard Webb Halkett	22 Mar., 1886	Ditto .....	Nil.	22 Mar, 1886.
<b>DUBBO CORPS.</b>					
Captain .....	Walter Robert Hamilton Pope	10 April, 1886	Ditto .....	Nil.	10 April, 1886
1st Lieutenant .....	Neil Keir M'Diarmid	18 Jan, 1886	Ditto .....	Nil.	18 Jan, 1886
2nd Lieutenant .....	Robert George Dulhunty <sup>2</sup>	18 Jan, 1886	Ditto .....	Nil.	18 Jan, 1886.
2nd Lieutenant .....	Robert Kitchen	11 May, 1886 5 July, 1886	Ditto .....	Nil.	5 July, 1886.

<sup>1</sup> Transferred to partially paid Artillery, 13 December, 1886.<sup>2</sup> Resigned<sup>3</sup> Promoted<sup>4</sup> Drowned, 7 December, 1886.<sup>5</sup> Appointed Adjutant.<sup>6</sup> Regiment, 31 December, 1886

Office	Name.	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary	Date of first Appointment under the Colonial Government
				£ s. d.	
<b>COLONIAL SECRETARY—VOLUNTEER RESERVE CORPS—continued.</b>					
<b>SOUTHERN DISTRICT.</b>					
<b>BRAIDWOOD CORPS.</b>					
Captain	John Wallace	14 Aug., 1885	Governor and Executive Council	Nil.	14 Aug., 1885.
1st Lieutenant	Henry Lutwitz Mater	22 Dec., 1885	Ditto	Nil.	14 Aug., 1885.
<b>ALBURY, No. 1 Company.</b>					
Captain	David John Abercrombie <sup>1</sup>	14 Aug., 1885	Ditto	Nil.	14 Aug., 1885.
	Resigned	28 July, 1886			
1st Lieutenant	Fredk. Augustus Ramsay	5 July, 1886	Ditto	Nil.	5 July, 1886.
	Resigned	20 Oct., 1886			
	and succeeded by				
1st Lieutenant	Francis Alfred Whitmore <sup>2</sup> Thomas	31 Dec., 1886	Ditto	Nil.	31 Dec., 1886.
2nd Lieutenant	Edward William Hulle <sup>1</sup>	27 Mar., 1886	Ditto	Nil.	27 Mar., 1886.
	Resigned	20 Oct., 1886			
<b>ALBURY, No. 2 Company.</b>					
Captain	Foster Albert Cooper <sup>1</sup>	14 Aug., 1885	Ditto	Nil.	14 Aug., 1885.
	Resigned	24 Dec., 1886			
2nd Lieutenant	William Robert Mathews <sup>1</sup>	13 Feb., 1886	Ditto	Nil.	13 Feb., 1886.
	Resigned	30 June, 1886			
<b>MITTAGONG CORPS.</b>					
1st Lieutenant	John M'Roberts <sup>1</sup>	20 Jan., 1886	Ditto	Nil.	20 Jan., 1886.
	Resigned	28 July, 1886			
<b>YOUNG CORPS.</b>					
Captain	John Theophilus Heely	29 Sept., 1885	Ditto	Nil.	29 Sept., 1885.
1st Lieutenant	Charles Edward Wallen	18 Jan., 1886	Ditto	Nil.	18 Jan., 1886.
2nd Lieutenant	William Samuel Millard	18 Jan., 1886	Ditto	Nil.	18 Jan., 1886.
<b>CAMPBELLTOWN CORPS.</b>					
1st Lieutenant	William Lyttle Moore <sup>2</sup>	9 Sept., 1885	Ditto	Nil.	9 Sept., 1885.
2nd Lieutenant	David George Brodie <sup>2</sup>	29 Sept., 1885	Ditto	Nil.	29 Sept., 1885.
Captain	William Lyttle Moore	2 Mar., 1886	Ditto	Nil.	9 Sept., 1885.
1st Lieutenant	David George Brodie	2 Mar., 1886	Ditto	Nil.	29 Sept., 1885.
2nd Lieutenant	Alexander Campbell	29 April, 1886	Ditto	Nil.	29 April, 1886.
<b>BURRAWANG CORPS.</b>					
Captain	William Barrett	9 Sept., 1885	Ditto	Nil.	9 Sept., 1885.
1st Lieutenant	William Moses <sup>1</sup>	9 Sept., 1885	Ditto	Nil.	9 Sept., 1885.
	Resigned	25 Aug., 1886			
<b>MORUYA CORPS.</b>					
Captain	Henry Toose	22 Dec., 1885	Ditto	Nil.	22 Dec., 1885.
	Resigned	13 July, 1886			
2nd Lieutenant	William Henry Conolly	5 Feb., 1886	Ditto	Nil.	5 Feb., 1886.
<b>HAY CORPS.</b>					
Captain	Frederic Wood Reed	11 June, 1885	Ditto	Nil.	11 June, 1885.
1st Lieutenant	Henry Thomas Haynes	2 Oct., 1885	Ditto	Nil.	2 Oct., 1885.
<b>NOWRA CORPS.</b>					
Captain	Alfred Henry Martin	2 Mar., 1886	Ditto	Nil.	2 Mar., 1886.
1st Lieutenant	Hyam Asa Moss <sup>1</sup>	13 Feb., 1886	Ditto	Nil.	13 Feb., 1886.
	Resigned	23 July, 1886			
<b>BUNGENDORE CORPS.</b>					
Captain	Hanham Arundel Lambert <sup>1</sup>	14 Aug., 1885	Ditto	Nil.	14 Aug., 1885.
	Resigned	13 Sept., 1886			
1st Lieutenant	Watson Augustus Steel <sup>1</sup>	30 Nov., 1885	Ditto	Nil.	30 Nov., 1885.
	Resigned	7 Oct., 1886			
2nd Lieutenant	Dennis John Collins <sup>1</sup>	30 Jan., 1886	Ditto	Nil.	30 Jan., 1886.
	Resigned	5 Mar., 1886			
<b>BEGA CORPS.</b>					
Captain	Frederick Bland	11 Dec., 1885	Ditto	Nil.	11 Dec., 1885.
1st Lieutenant	Evan Robert Ritchie	5 Feb., 1886	Ditto	Nil.	5 Feb., 1886.
<b>COOMA CORPS.</b>					
Captain	Thomas Wren Faulkner	18 Jan., 1886	Ditto	Nil.	18 Jan., 1886.
1st Lieutenant	Edward Thos. Farquhar Gomm	13 Feb., 1886	Ditto	Nil.	13 Feb., 1886.
2nd Lieutenant	Henry Thomas Larkins	2 Mar., 1886	Ditto	Nil.	2 Mar., 1886.
<b>CAMDEN CORPS.</b>					
Captain	Frederick William Arthur Downes.	24 Oct., 1885	Ditto	Nil.	24 Oct., 1885.
1st Lieutenant	Edward George Eagar	27 Nov., 1885	Ditto	Nil.	27 Nov., 1885.
2nd Lieutenant	Enoch William Booty <sup>1</sup>	27 Nov., 1885	Ditto	Nil.	27 Nov., 1885.
	Resigned	3 Sept., 1886			
2nd Lieutenant	Robert Julius Moxon	7 Dec., 1886	Ditto	Nil.	7 Dec., 1886.
<b>NARRANDERA CORPS.</b>					
Captain	Lester Stuart Donaldson <sup>1</sup>	30 Jan., 1886	Ditto	Nil.	30 Jan., 1886.
	Resigned	10 June, 1886			
1st Lieutenant	Charles Baldwin Minnett <sup>1</sup>	30 Jan., 1886	Ditto	Nil.	30 Jan., 1886.
	Resigned	30 June, 1886			
2nd Lieutenant	Robert John Jones	30 Jan., 1886	Ditto	Nil.	30 Jan., 1886.

<sup>1</sup> Resigned<sup>2</sup> Promoted.

## NEW SOUTH WALES—1886.

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Office	Name.	Date of Appointment	By whom appointed, and under what Instrument.	Annual Salary	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>COLONIAL SECRETARY—VOLUNTEER RESERVE CORPS—continued.</b>					
<b>BOWRAL CORPS.</b>					
Captain	John Lang Campbell <sup>1</sup>	30 Jan., 1886	Governor and Executive Council	Nil.	30 Jan., 1886.
	Resigned	20 Sept., 1886			
<b>PICTON CORPS.</b>					
Captain	John Macquarie Antill	13 Feb., 1886	Ditto	Nil.	13 Feb., 1886.
1st Lieutenant	James Paterson	22 Dec., 1885	Ditto	Nil.	22 Dec., 1885.
2nd Lieutenant	William Adam Lumsden <sup>1</sup>	5 Feb., 1886	Ditto	Nil.	5 Feb., 1886.
	Resigned	30 June, 1886			
2nd Lieutenant	Thomas James Hilder	25 Oct., 1886	Ditto	Nil.	25 Oct., 1886.
<b>JOADJA CREEK CORPS.</b>					
Captain	Patrick Thompson Taylor	30 July, 1886	Ditto	Nil.	30 July., 1886.
1st Lieutenant	Christopher Shelly Moor	31 Dec., 1886	Ditto	Nil.	31 Dec., 1886.
2nd Lieutenant	Edward Macpherson Easson	23 July, 1886	Ditto	Nil.	23 July, 1886.
<b>QUEANBEYAN CORPS.</b>					
Captain	George Tomsitt	14 Oct., 1886	Ditto	Nil.	14 Oct., 1886.
1st Lieutenant	Herbert Joseph Dixie	25 Oct., 1886	Ditto	Nil.	25 Oct., 1886.
<b>NORTHERN DISTRICT.</b>					
<b>MURRURUNDI CORPS.</b>					
Captain	George Moorcroft Moxham	7 Aug., 1885	Ditto	Nil.	7 Aug., 1885.
1st Lieutenant	William Samuel Goard	14 Aug., 1885	Ditto	Nil.	14 Aug., 1885.
<b>INVERELL CORPS, No. 1 Company.</b>					
Captain	Alexander Macintosh	24 Oct., 1885	Ditto	Nil.	24 Oct., 1885.
1st Lieutenant	Henry Moore	24 Oct., 1885	Ditto	Nil.	24 Oct., 1885.
2nd Lieutenant	Percy Ernest Starton	10 April, 1886	Ditto	Nil.	10 April, 1886.
<b>INVERELL CORPS, No. 2 Company.</b>					
Captain	Charles Cameron Loxton <sup>1</sup>	7 June, 1886	Ditto	Nil.	7 June, 1886.
	Resigned	11 Dec., 1886			
1st Lieutenant	Louis Bergenyer	7 June, 1886	Ditto	Nil.	7 June, 1886.
2nd Lieutenant	Joseph William Parkins	7 June, 1886	Ditto	Nil.	7 June, 1886.
<b>TENTERFIELD CORPS.</b>					
Captain	Charles Alfred See	24 Oct., 1885	Ditto	Nil.	24 Oct., 1885.
1st Lieutenant	George Lynch Hill <sup>1</sup>	24 Oct., 1885	Ditto	Nil.	24 Oct., 1885.
	Resigned	20 Dec., 1886			
2nd Lieutenant	Joseph Seaton Maitland	20 Jan., 1886	Ditto	Nil.	20 Jan., 1886.
<b>ARMIDALE CORPS</b>					
Captain	John Moore	20 Jan., 1886	Ditto	Nil.	20 Jan., 1886.
1st Lieutenant	Edward Dadd	17 May, 1886	Ditto	Nil.	17 May, 1886.
2nd Lieutenant	John Jackson Bliss	29 April, 1886	Ditto	Nil.	29 April, 1886.
<b>GLEN INNES CORPS.</b>					
Captain	Moreton Hyde Fitzhardinge	29 Sept., 1885	Ditto	Nil.	29 Sept., 1885.
1st Lieutenant	Francis Hamilton Wrigley	29 Sept., 1885	Ditto	Nil.	29 Sept., 1885.
2nd Lieutenant	Robert William Arnott	29 Sept., 1885	Ditto	Nil.	29 Sept., 1885.
<b>TAREE CORPS.</b>					
Captain	Henry Joseph Frith Groves <sup>1</sup>	14 Aug., 1885	Ditto	Nil.	14 Aug., 1885.
	Resigned	27 May, 1886			
2nd Lieutenant	Thomas West Bollard	29 Sept., 1885	Ditto	Nil.	29 Sept., 1885.
<b>URALLA CORPS.</b>					
Captain	Arthur Hayward Richardson	24 Oct., 1885	Ditto	Nil.	24 Oct., 1885.
1st Lieutenant	William James Galloway	24 Oct., 1885	Ditto	Nil.	24 Oct., 1885.
2nd Lieutenant	Michael John M'Mahon	24 Oct., 1885	Ditto	Nil.	24 Oct., 1885.
<b>GRAFTON, No. 1 Company.</b>					
Captain	Barton Lodge <sup>1</sup>	26 Oct., 1885	Ditto	Nil.	26 Oct., 1885.
	Resigned	24 Dec., 1886			
1st Lieutenant	Edward Joseph Tierney	30 Dec., 1885	Ditto	Nil.	30 Dec., 1885.
2nd Lieutenant	John Charles M'Intosh <sup>1</sup>	30 Dec., 1885	Ditto	Nil.	30 Dec., 1885.
	Resigned	16 Feb., 1886			
2nd Lieutenant	Thomas Trafusis Bawden	16 Mar., 1886	Ditto	Nil.	16 Mar., 1886.
<b>GRAFTON, No. 2 Company.</b>					
Captain	Conly Dickey	26 Oct., 1885	Ditto	Nil.	26 Oct., 1885.
1st Lieutenant	Samuel Denton	30 Dec., 1885	Ditto	Nil.	30 Dec., 1885.
2nd Lieutenant	Frederick M'Guren <sup>1</sup>	30 Dec., 1885	Ditto	Nil.	30 Dec., 1885.
	Resigned	18 Feb., 1886			
2nd Lieutenant	William Clarke	16 Mar., 1886	Ditto	Nil.	16 Mar., 1886.
<b>QUIRINDI CORPS.</b>					
Captain	Richard Aldridge Allen	22 Dec., 1885	Ditto	Nil.	22 Dec., 1885.
1st Lieutenant	John William Tebbutt	22 Dec., 1885	Ditto	Nil.	22 Dec., 1885.
2nd Lieutenant	Robert Henry Venn Allmutter	22 Dec., 1885	Ditto	Nil.	22 Dec., 1885.

<sup>1</sup> Resigned.

Office.	Name.	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary	Date of first Appointment under the Colonial Government
				£ s. d.	
<b>COLONIAL SECRETARY—VOLUNTEER RESERVE CORPS—continued.</b>					
<b>NARRABRI CORPS.</b>					
Capt un .....	George Samuel Evans Dale	22 Dec, 1885	Governor and Executive Council	Nil.	22 Dec, 1885.
1st Lieutenant .....	Charles Alexander Ross	20 Jan, 1886	Ditto .....	Nil.	20 Jan, 1886
2nd Lieutenant .....	Guhelmus Williams	22 Dec, 1885	Ditto .....	Nil.	22 Dec, 1885.
<b>MEDICAL STAFF.</b>					
Surgeon .....	Charles Edward Rowling	19 June, 1886	Ditto .....	Nil.	19 June, 1886.
Surgeon .....	Horace Sandford	19 June, 1886	Ditto .....	Nil.	19 June, 1886
Surgeon .....	Bernard James Newmarsh	19 June, 1886	Ditto .....	Nil.	19 June, 1886
Surgeon .....	Joseph Foreman	19 June, 1886	Ditto .....	Nil.	19 June, 1886.
<b>H.M.C.S. "WOLVERENE."*</b>					
Commander .....	Francis P. Taylor, Lieut, R.N.	26 April, 1882	Governor and Executive Council	300 0 0	26 April, 1882.
Lieutenant .....	George S. Bosanquet, R.N.	5 Mar., 1885	Ditto .....	300 0 0	5 Mar., 1885.
Navigating Lieutenant	Robert Smith	6 Mar., 1885	Ditto .....	300 0 0	6 Mar., 1885.
Chief Engineer .....	John Walker	4 July, 1882	Ditto .....	300 0 0	4 July, 1882.
Paymaster .....	Ebenzer J. Thomas	1 Aug., 1882	Ditto .....	200 0 0	16 Jan., 1882.
Gunner and Instructor	James Costello	22 Sept., 1884	Colonial Secretary	182 10 0	22 Sept., 1884.
Boatswain and Instructor	Jeremiah M'Carthy	24 Nov., 1883	Ditto .....	182 10 0	24 Nov., 1883.
Carpenter (1) .....	.....	.....	.....	0 8 0	per diem.
Master at-Arms (1) .....	.....	.....	.....	0 7 0	.....
Boatswain's Mates (2) .....	.....	.....	.....	0 6 0	each.
Quarter-masters (3) .....	.....	.....	.....	0 6 0	.....
Able Seamen (15) .....	.....	.....	.....	0 5 0	.....
Ordinary Seamen (2) .....	.....	.....	.....	0 2 6	.....
Leading Stoker (1) .....	.....	.....	.....	0 7 0	.....
1st-Class Stokers (5) .....	.....	.....	.....	0 6 0	each.
2nd-Class Stokers (3) .....	.....	.....	.....	0 4 8	.....
Ship's Steward (1) .....	.....	.....	.....	0 6 0	.....
Ship's Cook (1) .....	.....	.....	.....	0 6 0	.....
Ward-room Steward (1) .....	.....	.....	.....	0 5 0	.....
Commander's Servant (1) .....	.....	.....	.....	0 4 0	.....
Warrant Officer's Servant (1) .....	.....	.....	.....	0 3 0	.....
Ward-room Servant (1) .....	.....	.....	.....	0 2 0	.....
Boys (4) .....	.....	.....	.....	0 1 0	.....
* Disbanded 30th June, 1886.					
<b>AGENT-GENERAL FOR THE COLONY OF NEW SOUTH WALES (RESIDENT IN LONDON).</b>					
Agent General for the Colony (resident in London).	Sir Saul Samuel, K.C.M.G., C.B.	12 Aug., 1880	Governor and Executive Council, by Commission.	2,000 0 0	27 Oct., 1859.*
Secretary .....	Samuel Yardley	1 April, 1879	Governor and Executive Council (vide Gazette, 8 August, 1884)	860 0 0	1 April, 1879
Chief Clerk .....	William Robinson	23 Feb., 1863	Ditto .....	340 0 0	21 Mar., 1862.
Accountant .....	John Alfred Wade	1 July, 1872	Ditto .....	340 0 0	1 July, 1872.
Indent Clerk .....	Thomas Mason	1 Nov., 1880	Ditto .....	190 0 0	23 Oct., 1876.
Shorthand-writer and Clerk	Richard Thornton	9 Feb., 1885	Agent-General	176 0 0	9 Feb., 1885.
Clerk .....	Henry Gordon	11 May, 1882	Governor and Executive Council (vide Gazette, 8 August, 1884)	90 0 0	11 May, 1882.
Messengers .....	Thomas James Evans	21 April, 1883	Agent-General .....	59 16 0	21 April, 1883.
.....	Albert Edmund Page	20 Feb., 1885	Ditto .....	31 4 0	20 Feb., 1885
<b>EMIGRATION BRANCH.</b>					
Emigration Officer .....	Thomas Hughes Phillips	14 Dec., 1878	Governor and Executive Council (vide Gazette, 8 August, 1884)	465 0 0	6 Mar., 1878.
Clerks .....	Frederick Arthur Selwyn	12 May, 1879	Ditto .....	265 0 0	12 May, 1879
.....	John Alexander	1 June, 1874	Ditto .....	240 0 0	1 June, 1874.
.....	Edw. Russell Wait	1 July, 1883	Ditto .....	170 0 0	7 May, 1877.*
.....	Henry William Woolgar	12 Mar., 1877	Ditto .....	112 0 0	12 Mar., 1877.
.....	Alfred Bean	6 Dec., 1880	Ditto .....	87 0 0	6 Dec., 1880.
* Services not continuous					
<b>INSPECTOR OF KEROSENE FOR THE COLONY.</b>					
Inspector .....	Charles Watt	6 Sept., 1871	Governor and Executive Council	Paid by fees.	
<b>ANALYTICAL CHEMIST.</b>					
Analytical Chemist .....	Charles Watt	1 Sept., 1871	Governor and Executive Council	525 0 0	1 Sept., 1871.
Assistant do .....	William M. Hamlet	1 Jan., 1885	Ditto .....	320 0 0	1 Jan., 1885.
Assistant do .....	John Mingaye	1 Jan., 1884	Ditto .....	200 0 0	1 Jan., 1884.
<b>BOARD TO ACT ON BEHALF OF THE GOVERNMENT IN THE MATTER OF INTERNATIONAL EXCHANGES OF LITERARY AND SCIENTIFIC WORKS, OFFICIAL PUBLICATIONS, &amp;c.</b>					
Members .....	Robert Cooper Walker	21 Jan., 1879	Governor and Executive Council	Nil.	1 April, 1855.
.....	Robert Rogers	21 Jan., 1879	Ditto .....	Nil.	5 April, 1860.

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	

## COLONIAL SECRETARY—continued.

## STATE CHILDREN'S RELIEF DEPARTMENT.

President .....	Arthur Renwick, M.D., M.P.	19 April, 1881	Governor and Executive Council.	Nil.	
Members of State Children's Relief Board.	Lady Allen .....				
	Mrs. Mary Ischam Garran .....				
	Mrs. Marian Jefferis .....				
	Mrs. Mary Elizabeth Windeyer.*				
	Lady Jennings.....	30 Sept., 1881	Ditto .....	Nil.	
	Mrs. Louisa Victoria Barry	4 Oct., 1884	Ditto .....	Nil.	
	Thomas Michael Slattery, M.P.	20 Oct., 1882	Ditto .....	Nil.	
Chief Inspector and Boarding-out Officer.	William J. Trickett, M.P.	23 Oct., 1885	Ditto .....	Nil.	
	Sydney Maxted† <sup>1</sup> .....	26 May, 1881	Ditto .....	450 0 0	1 Aug., 1878
Inspector .....	William Eury .....	22 Dec., 1882	Ditto .....	290 0 0	22 Dec., 1882.
Secretary and Inspector ...	Alfred W. Green† .....	13 Oct., 1884	Ditto .....	240 0 0	21 Oct., 1872.
Matron .....	Sophia Amy Maxted <sup>2</sup> .....	23 Aug., 1884	Ditto .....	110 0 0	23 Aug., 1884.
Sub-Matron .....	Mary Jowett <sup>2</sup> .....	23 Aug., 1884	Ditto .....	85 0 0	1 Jan., 1870.

\* Resigned, 20 December, 1886. † Gives security for £500. <sup>1</sup> Allowed quarters, fuel, and light, and £30 per annum in lieu of rations. <sup>2</sup> Allowed quarters, fuel, and light, and £20 per annum in lieu of rations.

## FRIENDLY SOCIETIES.

Registrar .....	Alexander Oliver, M.A. ...	20 Jan., 1874	Governor and Executive Council.	Fees. 109 0 0	1 Aug., 1865.
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## TRADE UNIONS.

Registrar .....	Alexander Oliver, M.A. ...	.....	Appointed by Trades Union Act of 1881, 45 Vic. No. 12.	15 0 0	1 Aug., 1865.
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## BOTANIC GARDENS, ETC.

Director .....	Charles Moore <sup>1</sup> .....	1 Feb., 1848	Secretary of State .....	550 0 0	1 Feb., 1848.
Secretary and Accountant...	John M'Lachlan <sup>2</sup> .....	27 July, 1886	Governor and Executive Council	265 0 0	18 Mar., 1876.
Overseer .....	George Harwood <sup>2</sup> .....	1 June, 1884	Ditto .....	185 0 0	1 Jan., 1883.
Bailiff (1) .....	.....	.....	Director .....	120 0 0	
Botanical Collector (1) .....	.....	.....	Ditto .....	0 10 0	} per diem.
Carpenter (1) .....	.....	.....	Ditto .....	0 8 6	
Propagator (1) .....	.....	.....	Ditto .....	0 8 0	
Gardeners (19) .....	.....	.....	Ditto .....	0 7 0	

GOVERNMENT DOMAINS.					
Overseer .....	James Jones <sup>2</sup> .....	1 June, 1884	Governor and Executive Council	150 0 0	1 June, 1884.
Bailiff .....	Finlay M'Kay <sup>2</sup> .....	1 Oct., 1875	Director .....	120 0 0	1 Oct., 1875.
Workmen (12) .....	.....	.....	Ditto .....	0 7 0	per diem, each.

NURSERY GARDEN, CAMPBELLTOWN.					
Superintendent .....	John M'Ewen <sup>2</sup> .....	1 June, 1884	Colonial Secretary .....	170 0 0	1 June, 1884.

<sup>1</sup> Allowed a house and fuel; also half forage for a horse, but never claimed. Gives security to the amount of £400. <sup>2</sup> Allowed a house.

## ZOOLOGICAL STATION, WATSON'S BAY.

Trustees of Land set apart for a Zoological Station, Watson's Bay.	James Charles Cox, M.D....	9 June, 1879	Lieutenant-Governor and Executive Council.		
	William A. Haswell, M.A., Ed.				
	James Norton .....				
	Edward Pierson Ramsay... Baron N. de Miklouho-Maclay.				
	Edward S. Combes, M.L.A., C.M.G.	16 June, 1881			
	Professor Liversidge, F.R.S.				

## CIVIL SERVICE BOARD.

Chairman .....	Geoffrey Eagar <sup>1</sup> .....	1 Jan., 1885	Governor and Executive Council	100 0 0	1 July, 1871.		
Members.....	John Williams <sup>2</sup> .....					100 0 0	1 June, 1859.
	Archibald Colquhoun Fraser <sup>3</sup> ...					100 0 0	11 Dec., 1854.
	Charles Augustus Goodchap <sup>4</sup> ...					100 0 0	7 Jan., 1854.
	Thomas Littlejohn .....	1 Jan., 1886	Ditto .....	100 0 0	1 Jan., 1886.		
Secretary.....	Edward Gillett Worcester Palmer.	1 Jan., 1885	Ditto .....	500 0 0	2 Mar., 1876.		
Accountant.....	Robert William Bachlor...	15 Jan., 1885	Ditto .....	390 0 0	1 June, 1877.		
Clerk .....	Robert Ashley Gilfillan ...	1 Dec., 1886	Ditto .....	220 0 0	1 Aug., 1883.		
Messenger*.....	.....	.....	.....	120 0 0			
Office-cleaner* .....	.....	.....	.....	30 0 0			

<sup>1</sup> Under Secretary for Finance and Trade. <sup>2</sup> Crown Solicitor. <sup>3</sup> Clerk of the Peace. <sup>4</sup> Commissioner for Railways. Retired, 31 December, 1886; succeeded by Critchett Walker, Principal Under Secretary. \* Allowed quarters, fuel and light.



Office.	Name.	Date of Appointment.	By whom appointed, and under what instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>COLONIAL SECRETARY—continued.</b>					
<b>ABORIGINES PROTECTION BOARD.</b>					
Members.....	The Honorable P. G. King	} 5 June, 1883	Governor and Executive Council		
	The Honorable R. Hill ...				
	Dr. H. J. Tarrant, M.L.A.	} 20 July, 1886	Ditto .....		
	W. J. Foster, Esq.....				
	E. Fosbery, Esq. ....	} 5 June, 1883	Ditto .....		
	H. Robison, Esq. ....				
Secretary.....	T. Gethin Coote .....	1 May, 1883	Ditto .....	240 0 0	— May, 1882.
<b>CITY OF SYDNEY IMPROVEMENT BOARD.</b>					
Chairman of the Board ...	Benjamin Backhouse .....	21 Aug., 1879	Governor and Executive Council	Paid by fees (derived from amounts lodged by persons appealing or referring to the Board), at the rate of £1 1s. per member each meeting when present; if occupied more than one hour, then £2 2s. each Per annum. £380 150	21 Aug., 1879.
Members.....	William Bailey, J.P. ....	24 Sept., 1879	Ditto .....		24 Sept., 1879.
	Frank Senior, J.P. ....	21 Aug., 1879	Ditto .....		21 Aug., 1879.
	Craig Dixon, M.D., F.R.C.S.E.	2 Sept., 1880	Ditto .....		2 Sept., 1880.
	George Evans .....	25 Jan., 1883	Ditto .....		25 Jan., 1883.
Registrar and Board Officer	*Frederic Charles Rooke ...	1 Jan., 1886	Ditto .....		1 Aug., 1870.
Clerk .....	John D. Nelson .....	1 Jan., 1887	Ditto .....		1 Aug., 1870.
<p>* Clerk in the Pay Branch, Treasury, 1st January, 1882, to 21st June, 1882—salary £250 per annum; then transferred. Note.—The office of Secretary has been discontinued; the notice of F. C. Rooke's appointment (with salary at the rate of £380 per annum) as Registrar and Board Officer is dated 19th January, 1887, and appears in <i>Government Gazette</i>, No. 43, of 25th January, 1887, although the office was created by the vote on the Estimates for 1886, and the Executive Council minute directs the appointment to take effect from 1st January, 1886. The notice of John D. Nelson's appointment as Clerk appears in <i>Government Gazette</i>, No. 43, of 25th January, 1887.</p>					
<b>NEW SOUTH WALES COMMISSION FOR THE COLONIAL AND INDIAN EXHIBITION, LONDON, 1886.</b>					
President .....	The Honorable Sir James Martin, Knt., Chief Justice.*	16 Jan., 1885	Governor and Executive Council, by Commission.	} Nil.	
Vice-Presidents .....	The Honorable Sir Alfred Stephen, G.C.M.G., C.B., M.L.C.	16 Jan., 1885	Ditto .....		
	The Honorable Sir John Hay, K.C.M.G., President of the Legislative Council.	16 Jan., 1885	Ditto .....		
	The Honorable Edmund Barton, Speaker of the Legislative Assembly.	16 Jan., 1885	Ditto .....		
	The Honorable Sir John Robertson, K.C.M.G., M.P.	16 Jan., 1885	Ditto .....		
	Sir Patrick Alfred Jennings, K.C.M.G., J.P., M.P.	16 Jan., 1885	Ditto .....		
	Edward Combes, Esq., C.M.G., J.P., M.P.	16 Jan., 1885	Ditto .....		
	Sir Edward Strickland, K.C.B.	16 Jan., 1885	Ditto .....		
Executive Commissioner for N. S. Wales, in Sydney.	Sir Patrick Alfred Jennings, K.C.M.G., M.P.	16 Jan., 1885	Ditto .....		
Members of Commission ...	Robert Dudley Adams, Esq.	16 Jan., 1885	Ditto .....		
	James Barnet, Esq., Colonial Architect.	16 Jan., 1885	Ditto .....		
	Russell Barton, Esq., M.P.	16 Jan., 1885	Ditto .....		
	Alfred Bennett, Esq. ....	16 Jan., 1885	Ditto .....		
	John Nixon Brunker, Esq., J.P., M.P.	16 Jan., 1885	Ditto .....		
	John Fitzgerald Burns, Esq., J.P., M.P.	16 Jan., 1885	Ditto .....		
	Michael Chapman, Esq., J.P., M.P.	16 Jan., 1885	Ditto .....		
	Henry Clarke, Esq., J.P., M.P.	16 Jan., 1885	Ditto .....		
	William Clarke, Esq., M.P.	16 Jan., 1885	Ditto .....		
	The Honorable Henry Emanuel Cohen, M.P., Minister of Justice.	16 Jan., 1885	Ditto .....		
* Now deceased.					

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>COLONIAL SECRETARY—COLONIAL AND INDIAN EXHIBITION—continued.</b>					
Members of Commission— <i>continued.</i>	James Reading Fairfax, Esq.	16 Jan., 1885	Governor and Executive Council, by Commission.	Nil.	
	Edmund Fosbery, Esq., J.P., Inspector-General of Police.	16 Jan., 1885	Ditto .....		
	Frederick Augustus Franklin, Esq., J.P., C.E.	16 Jan., 1885	Ditto .....		
	Alfred Reginald Fremlin, Esq., M.P.	16 Jan., 1885	Ditto .....		
	John Hardie, Esq., J.P.	16 Jan., 1885	Ditto .....		
	Charles Hayes, Esq., Secretary to the Chamber of Commerce.	16 Jan., 1885	Ditto .....		
	Robert G. Higgins, Esq., J.P.	16 Jan., 1885	Ditto .....		
	Frederick Thomas Humphrey, Esq., J.P., M.P.	16 Jan., 1885	Ditto .....		
	William Alston Hutcheson, Esq., M.P.	16 Jan., 1885	Ditto .....		
	The Honorable Archibald Hamilton Jacobs, J.P., M.L.C.	16 Jan., 1885	Ditto .....		
	Richard Jones, jun., Esq.	16 Jan., 1885	Ditto .....		
	The Honorable Philip Gidley King, J.P., M.L.C.	16 Jan., 1885	Ditto .....		
	Benjamin Wolfe Levy, Esq.	16 Jan., 1885	Ditto .....		
	Thomas Littlejohn, Esq., President of the Chamber of Commerce.	16 Jan., 1885	Ditto .....		
	Archibald Liversidge, Esq., F.R.S., Professor of Chemistry in the University of Sydney.	16 Jan., 1885	Ditto .....		
	The Honorable William Macleay, J.P., M.L.C.	16 Jan., 1885	Ditto .....		
	William M'Mellan, Esq.	16 Jan., 1885	Ditto .....		
	David Marks, Esq., J.P.	16 Jan., 1885	Ditto .....		
	George Merriman, Esq., J.P., M.P.	16 Jan., 1885	Ditto .....		
	Eliezer Levi Montefiore, Esq., J.P.	16 Jan., 1885	Ditto .....		
	Charles Moore, Esq., F.L.S., Director of the Botanic Gardens.	16 Jan., 1885	Ditto .....		
	Augustus Morris, Esq.	16 Jan., 1885	Ditto .....		
	The Honorable Henry Mort, J.P., M.L.C.	16 Jan., 1885	Ditto .....		
	Henry Moses, Esq., J.P., M.P.	16 Jan., 1885	Ditto .....		
	William Gilmour Murray, Esq.	16 Jan., 1885	Ditto .....		
	Louis Phillips, Esq., J.P.	16 Jan., 1885	Ditto .....		
	Robert Matcham Pitt, Esq.	16 Jan., 1885	Ditto .....		
	Thomas Playfair, Esq., J.P., Mayor of Sydney.	16 Jan., 1885	Ditto .....		
	John Pope, Esq., J.P.	16 Jan., 1885	Ditto .....		
	John Mitchell Purves, Esq., M.A., M.P.	16 Jan., 1885	Ditto .....		
	Edward Quin, Esq., M.P.	16 Jan., 1885	Ditto .....		
	Charles James Roberts, Esq., C.M.G., J.P., M.P.	16 Jan., 1885	Ditto .....		
	John See, Esq., J.P., M.P.	16 Jan., 1885	Ditto .....		
	Thomas M. Slattery, Esq., M.P.	16 Jan., 1885	Ditto .....		
	Robert Burdett Smith, Esq., J.P., M.P.	16 Jan., 1885	Ditto .....		
	Charles Frederick Stokes, Esq., J.P.	16 Jan., 1885	Ditto .....		
	The Honorable George Thornton, J.P., M.L.C.	16 Jan., 1885	Ditto .....		
	The Honorable William Joseph Trickett, M.P., Minister of Public Instruction.	16 Jan., 1885	Ditto .....		
	Walter Hussey Vivian, Esq., J.P.	16 Jan., 1885	Ditto .....		
	John Walsh, Esq.	16 Jan., 1885	Ditto .....		
Critchett Walker, Esq., J.P., Principal Under Secretary.	16 Jan., 1885	Ditto .....			
The Honorable James White, J.P., M.L.C.	16 Jan., 1885	Ditto .....			

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.			
				£ s. d.				
<b>COLONIAL SECRETARY—COLONIAL AND INDIAN EXHIBITION—continued.</b>								
Members of Commission— <i>continued.</i>	Robert Hoddle Driberg White, Esq., J.P., M.P.	16 Jan., 1885	Governor and Executive Council, by Commission.	Nil.				
	Charles Smith Wilkinson, Esq., F.G.S., F.L.S., Geological Surveyor.	16 Jan., 1885	Ditto .....					
	Harrie Wood, Esq., J.P., Under Secretary for Mines.	16 Jan., 1885	Ditto .....					
	Edmund Bingham Woodhouse, Esq., J.P.	16 Jan., 1885	Ditto .....					
	The Honorable Francis Augustus Wright, J.P., M.P., Secretary for Public Works.	16 Jan., 1885	Ditto .....					
	John Young, Esq., J.P. ...	16 Jan., 1885	Ditto .....					
	Joseph P. Abbott, Esq., M.P.	8 April, 1885	Ditto .....					
	Phillip Francis Adams, Esq., Surveyor-General.	8 April, 1885	Ditto .....					
	The Honorable Geoffrey Eagar, Under Secretary for Finance and Trade.	8 April, 1885	Ditto .....					
	William John Lyne, Esq., M.P.	8 April, 1885	Ditto .....					
	Charles Kinnaird Mackellar, Esq., A.M., M.B., C.M., Medical Adviser to the Government.	8 April, 1885	Ditto .....					
	John Mackenzie, Esq., F.G.S., Government Examiner of Coal-fields.	8 April, 1885	Ditto .....					
	Edward Pierson Ramsay, Esq., F.L.S., F.G.S., Curator of the Australian Museum.	8 April, 1885	Ditto .....					
	Henry Chamberlaine Russell, Esq., B.A., F.R.A.S., Government Astronomer.	8 April, 1885	Ditto .....					
	Robert Bliss Wilkinson, Esq., M.P.	8 April, 1885	Ditto .....					
	John Davies, Esq., C.M.G., M.P.	12 Jan., 1886	Ditto .....					
	Secretary to N.S.W. Commission.	Alexander Cumming, Esq.	22 Jan., 1885			Appointment recommended by the Commission and approved by the Colonial Secretary, under section 31 Civil Service Act of 1884.	600 0 0	— Feb., 1882.
	<b>NEW SOUTH WALES COMMISSION—ADELAIDE JUBILEE INTERNATIONAL EXHIBITION, 1887.</b>							
	President .....	The Honorable Frederick Matthew Darley, Q.C., Chief Justice.	12 Jan., 1887			Governor and Executive Council, by Commission.	Nil.	
	Vice-President .....	The Honorable Arthur Renwick, M.D., M.P.	12 Jan., 1887			Ditto .....		
Members of Commission ...	Sir Edward Strickland, K.C.B.	12 Jan., 1887	Ditto .....					
	Robert Dudley Adams, Esq.	12 Jan., 1887	Ditto .....					
	John Fitzgerald Burns, Esq., M.P.	12 Jan., 1887	Ditto .....					
	Frederick Augustus Franklin, Esq., C.E., J.P.	12 Jan., 1887	Ditto .....					
	Thomas Littlejohn, Esq. ...	12 Jan., 1887	Ditto .....					
	Charles Moore, Esq., F.L.S., Director of the Botanic Gardens.	12 Jan., 1887	Ditto .....					
	Eliezer Levi Montefiore, Esq., J.P.	12 Jan., 1887	Ditto .....					
	Augustus Morris, Esq. ...	12 Jan., 1887	Ditto .....					
	John Mitchell Purves, Esq., M.P.	12 Jan., 1887	Ditto .....					
	Charles Smith Wilkinson, Esq., F.G.S., F.L.S., Geological Surveyor.	12 Jan., 1887	Ditto .....					
	William Wright Richardson, Esq., J.P.	12 Jan., 1887	Ditto .....					
	John Davies, Esq., C.M.G., M.P.	12 Jan., 1887	Ditto .....					
	Alfred Hilder, Esq., J.P. ...	12 Jan., 1887	Ditto .....					
	John Jackson Calvert, Esq., J.P., Clerk of the Parliaments.	12 Jan., 1887	Ditto .....					
	Secretary .....	Alexander Cumming, Esq.	19 Jan., 1887	Governor and Executive Council	600 0 0	— Feb., 1882.		

Office	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary	Date of first Appointment under the Colonial Government
				£ s. d.	

COLONIAL SECRETARY—continued.

COMMISSIONERS OF FISHERIES.

President	James C. Cox, M.D.	18 Oct., 1882	Governor and Executive Council	} Nil.	
Commission	S. H. Hyam, Esq.	11 June, 1886	Ditto		
	Edward P. Ramsay, Esq., F.L.S.	30 Oct., 1882	Ditto		
	James R. Hill, Esq.	13 Jan., 1885	Ditto		
	Alexander Oliver, Esq., M.A.	15 May, 1885	Ditto		

FISHERIES COMMISSION.

Chief Inspector of Fisheries and Secretary.	Lindsay G. Thompson	1 May, 1881	Governor and Executive Council	440 0 0	8 Feb., 1853.
Clerks	Edward J. Ellis	1 Jan., 1884	Ditto	290 0 0	5 June, 1879.
	John O'Grady	1 April, 1882	Ministerial	140 0 0	1 April, 1882.
Inspectors of Fisheries	Thomas Temperley	12 July, 1881	Governor and Executive Council	240 0 0	1 July, 1865.
	James Quinan <sup>1</sup>	11 July, 1881	Ditto	220 0 0	11 July, 1881.
	George G. Benson <sup>1</sup>	19 Dec., 1882	Ditto	240 0 0	19 Dec., 1882.
Clerks	C. D. St. Pinnock	— May, 1885	Ditto	200 0 0	— May, 1885.
Assistant Inspectors	Thos. Mulhall	18 Jan., 1881	Governor and Executive Council	150 0 0	18 Jan., 1848.
	A. Gylor	19 Aug., 1881	Ditto	150 0 0	19 Aug., 1881.
	Hy. Curran	19 Aug., 1881	Ditto	150 0 0	19 Aug., 1881.
	Peter Smith	19 Aug., 1881	Ditto	150 0 0	19 Aug., 1881.
	Chas. Gordon	19 Aug., 1881	Ditto	150 0 0	19 Aug., 1881.
	F. W. Smithers	6 Dec., 1882	Ditto	150 0 0	1 Feb., 1877.
	Wm Boyd	1 Jan., 1884	Ditto	150 0 0	10 May, 1882.
	J. D. Grant	1 Jan., 1884	Ditto	150 0 0	14 Dec., 1882.
	J. C. White <sup>2</sup>	18 Oct., 1884	Ditto	150 0 0	18 Oct., 1884.
	succeeded by				
	Chas. H. Otway	1 May, 1886	Ditto	150 0 0	1 May, 1886.
	O. Wilshire	20 Mar., 1883	Ditto	75 0 0	12 Oct., 1877.
	R. Seymour	14 Jan., 1882	Ditto	75 0 0	14 Jan., 1882.
	Bourne Russell	26 Feb., 1884	Ditto	20 0 0	1 Aug., 1860.
	A. Sutherland	21 May, 1884	Ditto	20 0 0	28 Mar., 1884
	W. M'Gregor	16 Aug., 1881	Ditto	20 0 0	17 June, 1870.
	J. A. Jameson	16 Aug., 1881	Ditto	20 0 0	1 May, 1879.
	A. H. Kendall	15 Nov., 1883	Ditto	20 0 0	6 June, 1883
	Thos. Stewart	13 Aug., 1881	Ditto	20 0 0	24 July, 1868.
	W. J. Wlites	16 Aug., 1881	Ditto	20 0 0	23 May, 1874.
	T. Lannan, junior	13 June, 1883	Ditto	20 0 0	13 April, 1859.
	A. T. Black	3 July, 1883	Ditto	20 0 0	25 April, 1867.
	W. Simpson <sup>3</sup>	May, 1885	Ditto	20 0 0	May, 1885.
	F. Nelson	June, 1885	Ditto	20 0 0	June, 1885.
Engineer	F. G. Young	Sept., 1884	Ministerial	120 0 0	Oct., 1870.
Messenger	W. Lannan	23 Jan., 1884	Ditto	104 0 0	23 Jan., 1884.
Boatmen	R. Hellings	19 June, 1882	Ditto	120 0 0	19 June, 1882.
	G. Glading	28 Aug., 1882	Ditto	120 0 0	28 Aug., 1882.
	F. Aldrich	17 Nov., 1884	Ditto	108 0 0	17 Nov., 1884.
	H. W. C. Windeyer	May, 1883	Ditto	108 0 0	May, 1883.
	J. F. Hespe	May, 1885	Ditto	108 0 0	May, 1885.
	W. N. Cain	Dec., 1884	Ditto	108 0 0	Dec., 1884.
	D. W. Benson	Sept., 1884	Ditto	150 0 0	Jan., 1882.
	Jas. Massingham <sup>4</sup>	1 Aug., 1886	Ditto	108 0 0	1 Aug., 1886.

<sup>1</sup> Services dispensed with and paid to 7 December, 1886.

<sup>2</sup> Resigned

<sup>3</sup> Resigned—30 September, 1886. Vacancy not filled up

<sup>4</sup> In the place of

D. W. Benson, removed to Illawarra.



## PART V.

## Treasurer and Secretary for Finance and Trade,

AND THE

DEPARTMENTS UNDER HIS SUPERVISION AND CONTROL.

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COLONIAL TREASURER.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>TREASURY.</b>					
Treasurer and Secretary for Finance and Trade.	J. F. Burns .....	22 Dec., 1885	Governor, by Commission .....	1,500 0 0	5 Jan., 1883.
Ditto .....	succeeded by Sir P. Jennings, K.C.M.G.	26 Feb., 1886	Ditto .....	1,500 0 0	26 Feb., 1886.
Under Secretary for Finance and Trade.	Hon. G. Eagar.....	1 Feb., 1872	Governor and Executive Council, by Commission.	960 0 0	1 July, 1871.
Chief Inspector of Public Revenue Collectors' Accounts.	James Thomson <sup>1</sup> .....	1 Feb., 1872	Governor and Executive Council	800 0 0	17 May, 1855.
Inspectors of Public Revenue Collectors' Accounts.	Francis Kirkpatrick.....	1 Sept., 1876	Ditto .....	700 0 0	10 Nov., 1858.
	Charles Hart Townley Pinhey.	1 May, 1878	Ditto .....	650 0 0	7 Jan., 1862.
	James J. Hinchy .....	21 Dec., 1882	Ditto .....	650 0 0	8 July, 1864.
	N. Lockyer .....	7 Sept., 1883	Ditto .....	550 0 0	1 Jan., 1870.
Accountant .....	James Pearson .....	1 Sept., 1876	Ditto .....	700 0 0	4 Jan., 1859.
Sub-Accountant.....	James N. Oatley .....	1 Sept., 1876	Ditto .....	440 0 0	1 June, 1862.
Principal Bookkeepers .....	Thomas P. Brennan.....	1 Sept., 1876	Ditto .....	390 0 0	28 June, 1857.
	C. L. Boyce .....	21 Dec., 1882	Ditto .....	390 0 0	1 Aug., 1874.
Clerks .....	James W. Meikle .....	22 Oct., 1872	Ditto .....	315 0 0	— Dec., 1870.
	Edward Cleland .....	1 Sept., 1875	Ditto .....	315 0 0	1 Mar., 1875.
	Thomas Gainford .....	16 Dec., 1875	Ditto .....	290 0 0	16 Dec., 1875.
	W. A. Lesley .....	13 Dec., 1877	Ditto .....	280 0 0	13 Dec., 1877.
	R. H. Reilly.....	21 Dec., 1882	Ditto .....	270 0 0	2 Oct., 1877.
	William Paige .....	3 Oct., 1877	Ditto .....	250 0 0	3 Oct., 1877.
	H. N. Ellis .....	8 July, 1878	Ditto .....	245 0 0	8 July, 1878.
	A. Lynch .....	21 Dec., 1882	Ditto .....	240 0 0	2 Jan., 1882.
	C. S. Trouton .....	1 Jan., 1883	Ditto .....	200 0 0	1 Jan., 1883.
	F. Bayliss.....	1 Aug., 1884	Ditto .....	150 0 0	1 Dec., 1883.
Probationers .....	H. Macpherson .....	19 Jan., 1885	Ditto .....	140 0 0	19 Jan., 1885.
	C. B. Read .....	18 Jan., 1886	Ditto .....	75 0 0	18 Jan., 1886.
	G. A. Heath.....	25 Jan., 1886	Ditto .....	75 0 0	25 Jan., 1886.
Receiver .....	William Newcombe.....	20 Dec., 1864	Ditto .....	700 0 0	1 Feb., 1849.
Assistant Receiver.....	Philip J. Holdsworth .....	1 May, 1878	Ditto .....	440 0 0	12 May, 1868.
Registrar of Conditional Purchases.	W. H. Barraclough.....	22 Dec., 1884	Ditto .....	440 0 0	3 Nov., 1873.
Registrar of Leases .....	E. Hanson .....	22 Dec., 1884	Ditto .....	415 0 0	19 Aug., 1872.
Clerks .....	G. E. Brodie .....	22 Dec., 1884	Ditto .....	315 0 0	1 Jan., 1870.
	F. C. Levinge .....	22 Dec., 1884	Ditto .....	290 0 0	1 July, 1864.
	A. S. Maddocks .....	22 Dec., 1884	Ditto .....	290 0 0	22 June, 1878.
	Charles M'Kern .....	22 Oct., 1885	Ditto .....	280 0 0	7 May, 1875.
	W. Husband .....	22 Oct., 1885	Ditto .....	270 0 0	15 Oct., 1877.
	C. E. F. Robberds .....	22 Dec., 1884	Ditto .....	265 0 0	24 Mar., 1879.
	John Barton.....	22 Oct., 1885	Ditto .....	260 0 0	8 Jan., 1878.
	James Robson .....	22 Oct., 1885	Ditto .....	250 0 0	14 Jan., 1880.
	C. R. Welch.....	22 Oct., 1885	Ditto .....	240 0 0	12 April, 1883.
	C. H. Carter.....	22 Oct., 1885	Ditto .....	240 0 0	21 July, 1879.
	D. Smith <sup>2</sup> .....	22 Dec., 1884	Ditto .....	240 0 0	1 Dec., 1883.
	S. T. Cox .....	22 Dec., 1884	Ditto .....	200 0 0	22 Dec., 1884.
	V. Horniman .....	7 Sept., 1883	Ditto .....	190 0 0	23 Jan., 1882.
	L. P. Brennand .....	7 Sept., 1883	Ditto .....	165 0 0	1 July, 1880.
	W. Parr .....	7 Sept., 1883	Ditto .....	165 0 0	19 June, 1882.
	W. A. Thomson .....	22 Dec., 1884	Ditto .....	140 0 0	20 Oct., 1884.
Paymaster .....	James Daniel Cronin .....	1 Aug., 1865	Ditto .....	700 0 0	18 Feb., 1854.
Do (Assistant).....	Thomas W. Nicholl.....	12 Oct., 1875	Ditto .....	390 0 0	16 July, 1866.
Chief Clerk .....	P. E. Williams.....	30 Dec., 1884	Ditto .....	390 0 0	1 Oct., 1872.
Clerks .....	W. R. Pownall.....	19 Sept., 1882	Ditto .....	315 0 0	9 Feb., 1874.
	H. B. Brewer .....	19 Aug., 1878	Ditto .....	290 0 0	19 Aug., 1878.
	H. M. Cozens .....	10 Dec., 1886	Ditto .....	190 0 0	15 Aug., 1879.
	C. Walker <sup>3</sup> .....	1 Oct., 1882	Ditto .....	165 0 0	1 Oct., 1882.
		to 14 Aug. 1886			
	R. Cleland .....	23 Dec., 1884	Ditto .....	185 0 0	9 April, 1883.
Probationer .....	John Stokes .....	— June, 1886	Ditto .....	50 0 0	— June, 1886.
Examiner of Accounts .....	Richard A. Canter .....	1 May, 1878	Ditto .....	550 0 0	13 Feb., 1862.
Assistant Examiner .....	S. R. Corkhill .....	15 Oct., 1882	Ditto .....	340 0 0	13 April, 1871.
Clerks .....	A. P. Pearson .....	10 Dec., 1886	Ditto .....	240 0 0	2 Sept., 1878.
	J. Graham .....	1 Dec., 1883	Ditto .....	200 0 0	1 Dec., 1883.
Clerk of Correspondence and Secretary to Tender Board	Robert Mander Ross .....	23 Sept., 1878	Ditto .....	490 0 0	1 April, 1873.
Clerk (Contracts) .....	G. A. Allerton.....	21 Jan., 1880	Ditto .....	265 0 0	21 Jan., 1880.
Clerks .....	F. H. Galloway .....	18 April, 1883	Ditto .....	190 0 0	18 April, 1883.
	S. A. Gausson .....	18 Aug., 1884	Ditto .....	140 0 0	18 Aug., 1884.
Registrar .....	J. S. Walford .....	8 Nov., 1885	Ditto .....	390 0 0	26 Aug., 1867.
Clerks .....	Robert Rutherford .....	23 Dec., 1884	Ditto .....	290 0 0	15 Feb., 1875.
	J. H. Robinson .....	8 Nov., 1885	Ditto .....	240 0 0	21 Jan., 1879.
	A. W. Johnstone.....	1 Oct., 1883	Ditto .....	140 0 0	1 Oct., 1883.
Probationer.....	Percy Swire .....	25 Jan., 1886	Ditto .....	75 0 0	25 Jan., 1886.
Private Secretary to the Premier.	Robert Scarlett <sup>4</sup> .....	10 Oct., 1885	Ditto .....	390 0 0	1 June, 1885.
Collector and Depositor of Public Moneys.	W. F. Crimstone.....	12 Aug., 1878	Ditto .....	290 0 0	12 Aug., 1878.

<sup>1</sup> Allowed £25 per annum for special services.

<sup>2</sup> Services not continuous—28 February, 1884 to 21 December, 1884.

<sup>3</sup> Resigned 14 August, 1886.

<sup>4</sup> Allowed £75 per annum for special duty.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>COLONIAL TREASURER—TREASURY—continued.</b>					
Messengers (4) .....	.....	.....	Minister .....	175 0 0	
				125 0 0	
				95 0 0	
				75 0 0	
Houskeepers (2) <sup>1</sup> .....	.....	.....	Ditto .....	85 0 0	
				75 0 0	

<sup>1</sup> Allowed quarters, fuel, and light, and one allowed £25 per annum for additional work  
The following Officers give security:—

Office.	Name.	Amount of Security.	Office.	Name.	Amount of Security.
Under Secretary .....	Geoffrey Eager .....	£2,000	Clerk (Revenue Branch) .....	G. H. Carter .....	150
Receiver .....	William Newcombe .....	2,000	Do do .....	D. Smith .....	150
First Clerk (Revenue Branch) .....	P. J. Holdsworth .....	1,000	Do do .....	S. R. Cox .....	150
Clerk do .....	W. H. Banaclough .....	500	Do do .....	V. Horniman .....	100
Do do .....	E. Hanson .....	500	Do do .....	P. Brennan .....	100
Do do .....	G. E. Brodie .....	250	Do do .....	William Parr .....	100
Do do .....	F. C. Levinge .....	250	Do do .....	W. A. Thompson .....	100
Do do .....	A. S. Maddocks .....	250	Paymaster .....	J. D. Cronin .....	2,000
Do do .....	C. M'Kern .....	250	Assistant Paymaster .....	T. W. Nicholl .....	1,000
Do do .....	W. Husband .....	250	Chief Clerk .....	P. E. Williams .....	1,000
Do do .....	C. E. Robberds .....	150	Clerk .....	Wm. Fownall .....	250
Do do .....	J. Barton .....	150	Do .....	H. B. Brewer .....	250
Do do .....	J. Robson .....	150	Do .....	Robert Cleland .....	100
Do do .....	C. R. Welsh .....	150	Collector and Depositor of Public Moneys .....	W. F. Cimstone .....	1,500

**CUSTOMS.**

Collector of Customs and Registrar of Shipping.	James Powell .....	1 Aug., 1881	Governor and Executive Council, by Commission.	1,000 0 0	1 Aug., 1881.
Cashier	Robert Small .....	1 April, 1885	Governor and Executive Council	550 0 0	8 Aug., 1860.
Chief Clerk	Louis Buchanan .....	1 Dec., 1885	Ditto	550 0 0	1 Jan., 1867.
1st Clerk	Henry John Rucker .....	1 Oct., 1884	Ditto	440 0 0	16 Jan., 1849.
3rd ditto	William Henry Burton .....	1 April, 1885	Ditto	390 0 0	13 April, 1870.
4th ditto	Stephen Rickard Burke .....	1 April, 1885	Ditto	390 0 0	18 Jan., 1863.
5th ditto	John Joseph Madden .....	1 April, 1885	Ditto	340 0 0	22 Feb., 1864.
6th ditto	James Jones .....	1 April, 1885	Ditto	290 0 0	1 Aug., 1859.
7th ditto	James Neathway Brown .....	1 April, 1885	Ditto	290 0 0	27 Dec., 1870.
8th ditto	John Joseph Hill .....	1 April, 1885	Ditto	290 0 0	1 Jan., 1864.
9th ditto	Charles Wesley Caldwell .....	1 April, 1885	Ditto	290 0 0	11 Feb., 1874.
10th ditto	John Joseph Coates .....	1 April, 1885	Ditto	290 0 0	1 July, 1865.
11th ditto	James Edward Powell .....	1 April, 1885	Ditto	290 0 0	1 April, 1882.
12th ditto	Thomas Wm. A. Connolly .....	1 April, 1885	Ditto	265 0 0	4 Jan., 1870.
13th ditto	Thomas Rhomer Miller .....	1 April, 1885	Ditto	265 0 0	5 April, 1875.
14th ditto	William Richard Gainford <sup>1</sup> .....	1 April, 1885	Ditto	265 0 0	30 May, 1877.
15th ditto	John Charles Beer .....	1 April, 1885	Ditto	240 0 0	16 Mar., 1877.
16th ditto	John Lappin .....	1 April, 1885	Ditto	240 0 0	2 Aug., 1877.
17th ditto	John Lister M'Lintock .....	1 April, 1885	Ditto	240 0 0	13 Sept., 1879.
18th ditto	Frederick Hugh Elliott .....	1 April, 1885	Ditto	240 0 0	2 Feb., 1876.
19th ditto	Allen Ford .....	1 April, 1885	Ditto	200 0 0	18 Mar., 1879.
20th ditto	Hamilton D. Elrington .....	1 April, 1885	Ditto	200 0 0	22 Oct., 1879.
21st Clerk	John Anderson .....	1 April, 1885	Ditto	190 0 0	26 April, 1875.
22nd ditto	Bertram Harker .....	1 April, 1885	Ditto	190 0 0	2 Jan., 1882.
23rd ditto	Thomas Venn Smith .....	1 Feb., 1886	Ditto	165 0 0	19 Feb., 1884.
24th ditto	Thomas Venn Smith .....	1 April, 1885	Ditto	165 0 0	19 Feb., 1884.
	succeeded by				
25th ditto	Sidney Arnold Stanley .....	1 Feb., 1886	Ditto	165 0 0	1 July, 1884.
	Sidney Arnold Stanley .....	1 April, 1885	Ditto	165 0 0	1 July, 1884.
	succeeded by				
26th ditto	Howard Stanley Morgan .....	1 Feb., 1886	Ditto	140 0 0	1 Sept., 1883.
	Howard Stanley Morgan .....	1 April, 1885	Ditto	140 0 0	1 Sept., 1883.
	succeeded by				
27th ditto	Alfred S. Taylor .....	1 Feb., 1886	Ditto	140 0 0	12 July, 1884.
	Sydney Dibbs .....	1 April, 1885	Ditto	140 0 0	19 Sept., 1883.
28th ditto	George Hill .....	1 April, 1885	Ditto	115 0 0	1 Mar., 1882.
29th ditto	John Musgrave .....	1 April, 1885	Ditto	100 0 0	1 May, 1884.
Junior Clerk	Arthur R. Barry .....	1 May, 1886	Ditto	80 0 0	1 Aug., 1885.
Ditto	William E. Thompson .....	1 May, 1886	Ditto	80 0 0	11 June, 1879.
1st Landing Surveyor	Augustus Berney .....	21 Mar., 1866	} Re-appointed	Ditto	650 0 0
		4 Jan., 1869			
2nd Landing Surveyor and Inspector of Invoices.	John Baxter .....	1 May, 1886	Ditto	575 0 0	8 Feb., 1865.
Gaugers, Examining Officers, and Timber Measurers	Charles E. Gordon .....	1 Dec., 1884	Ditto	405 0 0	1 April, 1853.
	John Cunningham .....	1 Dec., 1884	Ditto	405 0 0	16 May, 1853.
	David Howell .....	1 Aug., 1881	Ditto	390 0 0	16 July, 1869.
	Samuel Harper .....	1 Aug., 1881	Ditto	390 0 0	14 Nov., 1862.
	Richard J. Griffin .....	1 Aug., 1881	Ditto	390 0 0	16 Mar., 1861.*
1st Landing Waiter	Arthur Irwin Ormsby .....	1 April, 1866	Ditto	455 0 0	5 Jan., 1847.
2nd ditto	William R. T. Passmore .....	1 Dec., 1884	Ditto	430 0 0	22 Aug., 1853.
3rd ditto	John Newman Stubbin .....	1 Dec., 1884	Ditto	405 0 0	22 Dec., 1853.
4th ditto	Charles Duberly .....	1 Dec., 1884	Ditto	350 0 0	11 Feb., 1862.
5th ditto	William Beck .....	1 Dec., 1884	Ditto	350 0 0	19 Nov., 1853.
6th ditto	Robert Lawton Eames .....	1 Dec., 1884	Ditto	350 0 0	26 Aug., 1859.
7th ditto	Robert Christison .....	1 Dec., 1884	Ditto	350 0 0	12 April, 1866.
8th ditto	John Borghurst Spencer .....	1 Dec., 1884	Ditto	350 0 0	18 Dec., 1862.
9th ditto	John Baxter <sup>2</sup> .....	1 Dec., 1884	Ditto	350 0 0	8 Feb., 1865.
10th ditto	William Robertson .....	1 Dec., 1884	Ditto	350 0 0	1 Jan., 1864.

<sup>1</sup> To 30 April—resigned      <sup>2</sup> To 30 April—appointed 2nd Landing Surveyor.      \* See notes not continuous.



Office.	Name	Date of Appointment.	By whom appointed, and under what Instrument	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>COLONIAL TREASURER—CUSTOMS—continued.</b>					
11th Landing Waiter	Frederick Wm. Twine	1 Dec., 1884	Governor and Executive Council	350 0 0	24 Feb., 1868.
12th ditto	Thomas Carrick	1 Dec., 1884	Ditto	350 0 0	4 Mar., 1865.
13th ditto	Robert John Curran	1 Dec., 1884	Ditto	350 0 0	9 May, 1867.
14th ditto	Albany Clement Doutry.	1 Dec., 1884	Ditto	350 0 0	29 Dec., 1870.*
15th ditto	Hamilton L Low	1 Dec., 1884	Ditto	350 0 0	24 June, 1856.*
16th ditto	John Francis M'Donall	1 Dec., 1884	Ditto	315 0 0	5 Mar., 1863.
17th ditto	John Palmer Leeder	1 Dec., 1884	Ditto	290 0 0	1 Nov., 1879.
18th ditto	Ehjah Keating	1 Dec., 1884	Ditto	290 0 0	17 Jan., 1868.
19th ditto	Lion Henry Walford	1 Dec., 1884	Ditto	290 0 0	19 Aug., 1870.
20th ditto	Michael M'Dermott	1 Dec., 1884	Ditto	290 0 0	4 June, 1854.
21st ditto	John Kennedy	1 Dec., 1884	Ditto	290 0 0	24 Dec., 1870.
22nd ditto	Harry Passmore	1 Dec., 1884	Ditto	290 0 0	26 Nov., 1877.
23rd ditto	William Hamburger	1 May, 1886	Ditto	270 0 0	12 July, 1880.
24th ditto	Edward Lander	1 May, 1886	Ditto	270 0 0	21 April, 1882.
26th ditto	George B. St. John	1 May, 1886	Ditto	245 0 0	29 July, 1881.
27th ditto	Augustus H W. deBerenger	1 May, 1886	Ditto	245 0 0	12 Dec., 1882.
28th ditto	Thomas Henry Pearse	1 May, 1886	Ditto	220 0 0	27 June, 1882.
29th ditto	Arthur Phillips	1 May, 1886	Ditto	220 0 0	20 Nov., 1884.
Assistant Examining Officer	Edward James Flaherty	1 Jan., 1883	Ditto	200 0 0	10 July, 1875.
Ditto	Robert Hilhard <sup>1</sup>	1 Jan., 1883	Ditto	200 0 0	28 Mar., 1874.
	succeeded by				
	Oswald S Maddocks	1 Oct., 1886	Ditto	200 0 0	18 Mar., 1879.
Tide Surveyor	William Smyth	25 Sept., 1876	Ditto	415 0 0	7 Feb., 1864.
Assistant Tide Surveyor	Archibald Woods	1 July, 1884	Ditto	340 0 0	25 Oct., 1881.
Warehouse Registrar and Inspector of Warehouses	Thomas Fancourt	30 May, 1859	Ditto	550 0 0	20 Dec., 1847.
Assistant Warehouse-keeper	William Bethune	1 Jan., 1884	Ditto	290 0 0	1 Feb., 1871.
1st Locker	Christopher Warburton <sup>2</sup>	1 Mar., 1884	Ditto	295 0 0	30 Oct., 1859.
	succeeded by				
	Henry Ikin	1 Aug., 1886	Ditto	315 0 0	23 April, 1860.
2nd ditto	Henry Ikin	1 Mar., 1884	Ditto	315 0 0	23 April, 1860.
	succeeded by				
	Samuel M. Beard	1 Aug., 1886	Ditto	315 0 0	26 Aug., 1868.
3rd ditto	Samuel Matthew Beard	1 Mar., 1884	Ditto	315 0 0	26 Aug., 1868.
	succeeded by				
	Anthony C. Donelan	1 Aug., 1886	Ditto	290 0 0	1 Aug., 1861.
4th ditto	Anthony Charles Donelan	1 Mar., 1884	Ditto	290 0 0	1 Aug., 1861.
	succeeded by				
	John Bourne Crego	1 Aug., 1886	Ditto	290 0 0	23 Oct., 1879.
5th ditto	Patrick Joseph M'Mahon <sup>3</sup>	1 Mar., 1884	Ditto	270 0 0	23 May, 1866.
	succeeded by				
	James Shaughnessy	1 Aug., 1886	Ditto	290 0 0	9 Dec., 1870.
6th ditto	Dennis Dempsey <sup>4</sup>	1 Mar., 1884	Ditto	270 0 0	31 Oct., 1866.
	succeeded by				
	John Bourne Crego	1 Mar., 1886	Ditto	290 0 0	23 Oct., 1879.
	succeeded by				
	James Henry Peake	1 Aug., 1886	Ditto	290 0 0	24 Sept., 1879.
7th ditto	James Shaughnessy	1 Mar., 1884	Ditto	290 0 0	9 Dec., 1870.
	succeeded by				
	Nathaniel Neale <sup>5</sup>	1 Aug., 1886	Ditto	265 0 0	1 Aug., 1868.
8th ditto	James Henry Peake	1 Mar., 1884	Ditto	290 0 0	24 Sept., 1879.
	succeeded by				
	John O'Donnell	1 Aug., 1886	Ditto	265 0 0	17 April, 1862.
9th ditto	Nathaniel Neale	1 Mar., 1884	Ditto	265 0 0	1 Aug., 1868.
	succeeded by				
	Patrick J. Davis	1 Aug., 1886	Ditto	265 0 0	26 May, 1876.
10th ditto	John O'Donnell	1 Mar., 1884	Ditto	265 0 0	17 April, 1862.
	succeeded by				
	James Cecil Fussell	1 Aug., 1886	Ditto	240 0 0	25 Nov., 1876.
11th ditto	Patrick James Davis	1 Dec., 1884	Ditto	265 0 0	26 May, 1876.
	succeeded by				
	Walter Hamilton Anson	1 Aug., 1886	Ditto	240 0 0	7 Mar., 1872.
12th ditto	James Cecil Fussell	1 Dec., 1884	Ditto	240 0 0	25 Nov., 1876.
	succeeded by				
	Philip Brophy	1 Aug., 1886	Ditto	240 0 0	17 June, 1867.
13th ditto	Walter Hamilton Anson	1 Dec., 1884	Ditto	240 0 0	7 Mar., 1872.
	succeeded by				
	John Cunningham	1 Aug., 1886	Ditto	240 0 0	16 Mar., 1868.*
14th ditto	Philip Brophy	1 Dec., 1884	Ditto	240 0 0	17 June, 1867.
	succeeded by				
	Jacob Cloudy	1 Aug., 1886	Ditto	240 0 0	1 Feb., 1884.
15th ditto	John Cunningham	1 Dec., 1884	Ditto	240 0 0	16 Mar., 1868.*
	succeeded by				
	David Pringle	1 Aug., 1886	Ditto	240 0 0	6 May, 1884.
16th ditto	Jacob Cloudy	1 Mar., 1886	Ditto	240 0 0	1 Feb., 1884.
	succeeded by				
	Michael Fay	1 Aug., 1886	Ditto	240 0 0	15 Oct., 1861.
17th ditto	Jacob Cloudy	1 Dec., 1884	Ditto	240 0 0	1 Feb., 1884.
	succeeded by				
	Torrence Albert T. Woods <sup>6</sup>	1 Mar., 1886	Ditto	220 0 0	11 Mar., 1875.
	succeeded by				
	Patrick Rooney	1 Aug., 1886	Ditto	240 0 0	19 Feb., 1876.

<sup>1</sup> Died, 26 August<sup>2</sup> To 30 April—deceased<sup>3</sup> To 30 June—disrated<sup>4</sup> Retired, 14 Feb<sup>5</sup> Died, 29 November<sup>6</sup> Retired, 19 July

\* Services not continuous.

## NEW SOUTH WALES—1886.

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Office.	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government
<b>COLONIAL TREASURER—CUSTOMS—continued.</b>					
18th Locker .....	Terence Albert T. Woods. succeeded by David Pringle .....	1 Dec., 1884 1 Mar., 1886	Governor and Executive Council Ditto .....	220 0 0 240 0 0	11 Mar., 1875. 6 May, 1884.
19th ditto .....	Pierce Nihill .....	1 Aug., 1886	Ditto .....	240 0 0	11 July, 1861.
	David Pringle .....	1 Dec., 1884	Ditto .....	240 0 0	6 May, 1884.
	Michael Fay .....	1 Mar., 1886	Ditto .....	240 0 0	15 Oct., 1861.
20th ditto .....	John Bruton .....	1 Aug., 1886	Ditto .....	240 0 0	18 Aug., 1864.
	Michael Fay .....	1 Dec., 1884	Ditto .....	240 0 0	15 Oct., 1861.
	Patrick Rooney .....	1 Mar., 1886	Ditto .....	240 0 0	19 Feb., 1876.
	James Bennett .....	1 Aug., 1886	Ditto .....	220 0 0	23 Feb., 1883.
21st ditto ..	Robert J. Somerville .....	1 May, 1886	Ditto .....	220 0 0	26 Nov., 1877.
22nd ditto ..	Thomas M. Fancourt .....	1 May, 1886	Ditto .....	220 0 0	1 Dec., 1884.
Assistant Locker .....	Patrick Rooney <sup>1</sup> .....	1 June, 1883	Ditto .....	200 0 0	19 Feb., 1876.
Ditto .....	James Bennett <sup>2</sup> .....	1 Dec., 1884	Ditto .....	200 0 0	23 Feb., 1883.
Ditto .....	Mathew E. Robson .....	1 Aug., 1886	Ditto .....	200 0 0	12 July, 1880.
Ditto .....	Robert James Wilson .....	1 May, 1886	Ditto .....	185 0 0	21 April, 1882.
Ditto .....	Thomas O'Brien .....	1 May, 1886	Ditto .....	185 0 0	30 Dec., 1882.
Ditto .....	William Cunningham .....	1 May, 1886	Ditto .....	170 0 0	10 April, 1884.
Ditto .....	William E. Bladon .....	1 May, 1886	Ditto .....	170 0 0	21 April, 1881.
Ditto .....	John Wallace Lovett .....	1 May, 1886	Ditto .....	120 0 0	1 Dec., 1884.
Inspector of Tobacco Factories.	Frank Alexander Eagar .....	1 Mar., 1884	Ditto .....	440 0 0	30 April, 1868.
Assistant Inspector of Tobacco Factories.	John Charles Robert Brown .....	1 April, 1884	Ditto .....	390 0 0	14 May, 1868.
Locker at Tobacco Factory	Cornelius M'Auliffe <sup>3</sup> .....	1 Dec., 1884	Ditto .....	200 0 0	16 Dec., 1876.
Ditto .....	Julus Besnard Evans .....	1 Dec., 1884	Ditto .....	200 0 0	26 Nov., 1877.
Ditto .....	William Benson .....	1 Dec., 1884	Ditto .....	200 0 0	6 Dec., 1862.*
Ditto .....	George Beauchamp St John <sup>4</sup> .....	1 Dec., 1884	Ditto .....	200 0 0	29 July, 1881.
Ditto .....	George Findlay .....	1 Dec., 1884	Ditto .....	200 0 0	20 Sept., 1882.
Collector's Messenger (1) ...	.....	.....	Collector of Customs	150 0 0	
Warrant Messenger (1) ..	.....	.....	Governor and Executive Council	170 0 0	
Porter, Queen's Warehouse (1)	.....	.....	Collector of Customs ..	135 0 0	
Boy Messengers (11) .....	.....	.....	Ditto .....	1 at 60 0 0 4 at 50 0 0 6 at 40 0 0	each. " "
Coxswains (2) .....	.....	.....	Colonial Treasurer ..	125 0 0	"
Boatmen (6) .....	.....	.....	Ditto .....	113 0 0	"
Housekeeper <sup>5</sup> (1) .....	.....	.....	Ditto .....	70 0 0	"
Watchman (1) .....	.....	.....	Ditto .....	120 0 0	"
<b>OUT-PORT BRANCH.</b>					
<b>BROKEN BAY.</b>					
Coast Waiter .....	Albert Thomas Black <sup>5</sup> .....	1 Oct., 1868	Governor and Executive Council	290 0 0	2 April, 1867.
Boatmen (2) .....	.....	.....	Colonial Treasurer ..	113 0 0	each.
<b>NEWCASTLE.</b>					
Sub-Collector .....	William Robert Logan <sup>6</sup> .....	1 April, 1870	Governor and Executive Council	550 0 0	1 Feb., 1847.
Tide Surveyor .....	William Henry Whyte .....	1 April, 1882	Ditto .....	390 0 0	19 Jan., 1869.
Landing Waiter .....	Thomas Bartle .....	1 Nov., 1884	Ditto .....	290 0 0	14 June, 1873.
Locker .....	John Halbert .....	9 July, 1874	Ditto .....	290 0 0	14 Oct., 1870.
Clerk .....	William Clay Rush .....	9 July, 1874	Ditto .....	290 0 0	24 Oct., 1871.
Ditto .....	Henry Ellis Hannell .....	1 Nov., 1884	Ditto .....	240 0 0	1 Jan., 1876.
Ditto .....	Edwin Arthur Brunker .....	1 Nov., 1884	Ditto .....	200 0 0	1 April, 1882.
Wharfinger (Stockton)	J. T. Castle .....	21 Dec., 1885	Colonial Treasurer .....	200 0 0	— Jan., 1882.
Messenger and Office-keeper <sup>6</sup> (1)	.....	.....	Ditto .....	108 0 0	
Boy Messenger (1) ..	.....	.....	Ditto .....	50 0 0	
Coxswain (1) .....	.....	.....	Governor .....	144 0 0	
Boatmen (3) .....	.....	.....	Colonial Treasurer ..	113 0 0	each.
<b>MORPETH.</b>					
Sub-Collector .....	Arthur Tidman Lloyd <sup>7</sup> .....	1 Aug., 1884	Governor and Executive Council	390 0 0	9 Sept., 1872.*
Assistant Officer .....	Frank Mayo .....	1 Dec., 1884	Ditto .....	160 0 0	1 Dec., 1884.
<b>GRAFTON.</b>					
Sub-Collector .....	William James Browne <sup>6</sup> .....	1 Mar., 1878	Ditto .....	300 0 0	18 Aug., 1864
Officer of Customs (Clarence Heads).	Henry M'Auley .....	1 Mar., 1883	Ditto .....	52 0 0	28 Jan., 1823
Messenger (1) .....	.....	.....	Colonial Treasurer .....	65 0 0	
<b>TWEED RIVER.</b>					
Sub-Collector .....	Alfred Green <sup>8</sup> .....	9 Mar., 1880	Governor and Executive Council	270 0 0	4 July, 1862 <sup>10</sup>
	succeeded by Edward Osler <sup>9</sup> .....	1 June, 1886	Ditto .....	290 0 0	5 Feb., 1877
Boatmen (2) .....	.....	.....	Colonial Treasurer ..	113 0 0	each.

<sup>1</sup> Appointed 20th Locker, 1st March. <sup>2</sup> Appointed 20th Locker, 1st August <sup>3</sup> To 31 December—appointed Landing Waiter. <sup>4</sup> To 30 April—appointed Landing Waiter <sup>5</sup> Provided with quarters <sup>6</sup> Allowed £50 per annum for house rent <sup>7</sup> Allowed £50 per annum for house rent, £30 per annum for forage, and £20 per annum for office rent <sup>8</sup> Died 9 May <sup>9</sup> Allowed £50 per annum in lieu of quarters <sup>10</sup> Services not continuous

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>COLONIAL TREASURER—CUSTOMS—continued.</b>					
<b>ACTING OFFICERS OF CUSTOMS.</b>					
Kiama .....	Henry Connell .....	11 July, 1864	Governor and Executive Council	52 0 0	21 Aug., 1844.
Shoalhaven .....	William Lovegrove .....	1 Jan., 1873	Ditto .....	52 0 0	1 Jan., 1857.
Macleay River .....	John A. Jamieson .....	1 Oct., 1883	Ditto .....	25 0 0	1 May, 1879.
Bateman's Bay .....	James M'Carthy .....	16 Feb., 1877	Ditto .....	52 0 0	16 Feb., 1877.
Tathra .....	John Van Hemert .....	27 Feb., 1880	Ditto .....	25 0 0	15 Oct., 1879.
Eden .....	George Plunkett Keon <sup>1</sup> .....	20 June, 1881	Ditto .....	52 0 0	28 Dec., 1845.
Richmond River .....	George R. Easton .....	1 Feb., 1882	Ditto .....	52 0 0	28 Mar., 1855.
Port Macquarie .....	Edward St. A. Kingsford .....	18 July, 1884	Ditto .....	25 0 0	26 June, 1858.
<b>WOLLONGONG.</b>					
Preventive Officer .....	Frederick Reynolds Cole .....	1 Feb., 1883	Ditto .....	186 0 0	1 Sept., 1865.
<b>PORT STEPHENS.</b>					
Preventive Officer .....	Thomas Laman .....	1 Sept., 1883	Ditto .....	186 0 0	1 Sept., 1876*
<b>BOTANY.</b>					
Preventive Officer .....	Peter Clark <sup>1</sup> .....	1 Feb., 1882	Ditto .....	160 0 0	1 Mar., 1867.
<b>BORDER BRANCH.</b>					
<b>MURRAY RIVER.</b>					
<i>Moama.</i>					
Sub-Collector .....	Charles Chatfield Pope <sup>2</sup> .....	1 Feb., 1882	Ditto .....	390 0 0	19 Feb., 1864.
Assistant Officer .....	Walter Davies <sup>3</sup> .....	3 April, 1880	Ditto .....	290 0 0	31 Jan., 1872.
Clerk .....	John Montgomery Duncan <sup>3</sup> .....	1 Aug., 1875	Ditto .....	215 0 0	1 Aug., 1875.
Acting Officer (Barham Crossing) .....	Walter Cousins .....	15 July, 1884	Colonial Treasurer .....	50 0 0	1 July, 1883.
Messenger (1) .....	.....	.....	Ditto .....	96 0 0	.....
Bridge Watchman (1) .....	.....	.....	Ditto .....	120 0 0	.....
<i>Albury.</i>					
Sub-Collector .....	John Swyny <sup>4</sup> .....	4 July, 1868	Governor and Executive Council	390 0 0	18 Jan., 1859.
Clerk .....	Patrick Joyce <sup>4</sup> .....	1 Feb., 1872	Ditto .....	290 0 0	9 July, 1866.
Assistant Officer .....	William Whitehand <sup>4 11</sup> .....	26 June, 1876	Ditto .....	240 0 0	26 June, 1876.
Acting Officer (Upper Murray) .....	Sydenham Bowden .....	25 May, 1880	Ditto .....	25 0 0	25 May, 1880.
Bridge Watchman (1) .....	.....	.....	Colonial Treasurer .....	120 0 0	.....
Messenger (1) .....	.....	.....	.....	52 0 0	.....
<i>Howlong.</i>					
Sub-Collector .....	William Augustus Hunt <sup>5</sup> .....	1 Feb., 1873	Governor and Executive Council	240 0 0	12 July, 1852.*
<i>Wentworth.</i>					
Sub-Collector .....	Daniel Joseph M'Kenry <sup>6</sup> .....	1 Sept., 1875	Ditto .....	390 0 0	1 Jan., 1858.
Clerk .....	Henry Duncan Brown .....	1 Jan., 1883	Ditto .....	165 0 0	7 Sept., 1878.
Messenger (1) .....	.....	.....	Colonial Treasurer .....	96 0 0	.....
<i>Swan Hill.</i>					
Sub-Collector .....	John Wyse <sup>7</sup> .....	18 Aug., 1864	Governor and Executive Council	290 0 0	1 Aug., 1862.
<i>Euston.</i>					
Sub-Collector .....	Mark King <sup>8</sup> .....	19 May, 1881	Ditto .....	290 0 0	1 April, 1866.
<i>Corowa.</i>					
Sub-Collector .....	Anthony George Morley <sup>10</sup> .....	1 April, 1885	Ditto .....	340 0 0	20 Sept., 1877.
Clerk .....	Richard Thompson .....	1 Jan., 1884	Ditto .....	240 0 0	15 Feb., 1878.
Acting Officer (Mulwala) .....	William Walsh <sup>12</sup> .....	1 Oct., 1884	Ditto .....	10 0 0	1 Oct., 1884.
<i>Tocumwall.</i>					
Sub-Collector .....	Charles D. Whitty <sup>9</sup> .....	1 Jan., 1886	Ditto .....	290 0 0	25 Oct., 1882.
<i>Mulwala.</i>					
Sub-Collector .....	William Whitehand <sup>4</sup> .....	1 July, 1886	Ditto .....	270 0 0	26 June, 1876.
<b>QUEENSLAND BORDER.</b>					
<i>Boggabilla.</i>					
Sub-Collector .....	Howard Treherne Capper <sup>9</sup> .....	8 June, 1876	Ditto .....	265 0 0	8 June, 1876.
<i>Barrington.</i>					
Locker .....	Patrick James Gorman .....	1 Sept., 1884	Ditto .....	290 0 0	3 Sept., 1874.
<i>Stanthorpe.</i>					
Officer of Customs .....	James Edward Smith <sup>10</sup> .....	12 July, 1881	Ditto .....	290 0 0	26 June, 1873.
<b>SOUTH AUSTRALIAN BORDER.</b>					
<i>Thackaringa and Silvertown.</i>					
Acting Sub-Collector .....	Richard Mooney <sup>10</sup> .....	1 July, 1884	Ditto .....	290 0 0	14 Mar., 1876.
Assistant Officer .....	William J. Mallon <sup>10</sup> .....	1 Feb., 1886	Ditto .....	290 0 0	22 Mar., 1879.
<b>INLAND BONDED WAREHOUSES.</b>					
<b>BOURKE.</b>					
Locker .....	Malcolm Scrymgour <sup>10</sup> .....	15 July, 1875	Ditto .....	290 0 0	15 July, 1875.
Assistant Officer .....	Edward Daniel Martin .....	1 Aug., 1884	Colonial Treasurer .....	52 0 0	1 Aug., 1884.
<sup>1</sup> Provided with quarters. <sup>2</sup> Provided with quarters, and allowed £50 per annum for forage. <sup>3</sup> Allowed £50 per annum in lieu of quarters. <sup>4</sup> Allowed £50 per annum in lieu of quarters, and £50 per annum for forage. <sup>5</sup> Allowed £50 per annum for forage, £25 per annum for house rent, and £20 per annum for office rent. <sup>6</sup> Receives £50 per annum for house rent, and £50 per annum for forage. <sup>7</sup> Receives £50 per annum for forage, and £20 per annum for office rent. <sup>8</sup> Receives £50 per annum for forage. <sup>9</sup> Receives £50 per annum for forage, and £25 per annum for house rent. <sup>10</sup> Receives £50 per annum for house rent. <sup>11</sup> To 30 June—appointed Sub-Collector, Mulwala. <sup>12</sup> To 31 March—services dispensed with.    * Services not continuous.					

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>COLONIAL TREASURER—CUSTOMS—continued.</b>					
<b>DENILIKUIN.</b>					
Locker.....	Thomas Tayton Faris <sup>1</sup> .....	1 Nov., 1880	Governor and Executive Council	290 0 0	1 May, 1866.
Assistant Officer .....	Henry William Marsh ...	1 Jan., 1883	Ditto .....	200 0 0	1 Feb., 1879.
<b>WILCANNIA.</b>					
Sub-Collector.....	Michael John D'Arcy <sup>2</sup> .....	11 July, 1876	Ditto .....	290 0 0	10 Dec., 1875.
<b>BREWARRINA.</b>					
Sub-Collector.....	John Swift <sup>3</sup> .....	1 May, 1877	Ditto .....	290 0 0	15 June, 1870.
<b>COBAR.</b>					
Locker.....	Frederick Horace James <sup>1</sup> ...	16 Nov., 1880	Ditto .....	290 0 0	4 Feb., 1878.
<b>TENTERFIELD.</b>					
Sub-Collector.....	George Lynch Hill <sup>4</sup> .....	1 June, 1882	Ditto .....	272 0 0	1 Aug., 1863.

<sup>1</sup> Receives £50 per annum for house rent.<sup>2</sup> Receives £50 per annum for house rent, and £50 per annum for forage.<sup>3</sup> Receives £52 per annum for houserent. <sup>4</sup> Receives £78 per annum for house rent, and £50 per annum for forage.

NOTE.—The following Officers give security:—Collector of Customs, £3,000; Cashier £2,000, Landing Surveyors, Sub-Collectors, Newcastle and Albury, and Lockers at Bourke and Deniliquin, each £1,000; Landing Waiters, Tide Surveyors, Warehouse Registrar, Coast Waiter, Broken Bay, Sub-Collectors Wilcannia, Brewarrina, Boggabilla, Tenterfield, Morpeth, Grafton, Tweed River, Moama, Tocumwall, Swan Hill, Wentworth, Euston, Corowa, Howlong, and Thackaringa, and Lockers at Cobar, Barrington, and Louth, and Officers of Customs at Stanthorpe and Thackaringa, each £500; Clerks, Lockers, at Sydney, Preventive Officers, Botany, Wollongong, and Port Stephens, and Assistant Officers, each £100.

**BOARD OF COMMISSIONERS OF CUSTOMS.**

Commissioners	Customs	Boulton Molineaux .....	1 July, 1879, re-appointed 9 Dec., 1884	Lieutenant-Governor and Execu- tive Council.	} £600 per annum divisible among the Commission- ers as fees.	1 July, 1879.
		John Rendell Street .....	1 July, 1879, re-appointed 9 Dec., 1884	Governor and Executive Council Lieutenant-Governor and Execu- tive Council.		1 July, 1879.
		Michael Metcalfe .....	1 April, 1882	Governor and Executive Council Ditto .....		1 April, 1882.
Secretary.....		William Henry Burton ...	19 Aug., 1879	Ditto .....		13 April, 1870.

**STAMP DUTIES.**

Commissioner.....	William Hemming .....	1 July, 1880	Governor and Executive Council	650 0 0	1 May, 1865.
Deputy Commissioner and Accountant.	Richard Nicholas Johnson <sup>1</sup>	1 Jan., 1882	Ditto .....	340 0 0	1 July, 1867.*
Entry and Issue Clerk .....	Thomas Joseph Sullivan...	1 Jan., 1882	Ditto .....	340 0 0	1 Sept., 1881.
Clerk of Correspondence and Recorder of Wills.	Edward John Smith .....	1 July, 1880	Ditto .....	290 0 0	1 July, 1880.
Cashier .....	Frederick William Walther	12 Oct., 1885	Ditto .....	240 0 0	1 July, 1880.
Clerks .....	Frederick William Fligg ...	12 Oct., 1885	Ditto .....	190 0 0	30 Jan., 1880.
	James St. George George...	12 Oct., 1885	Ditto .....	190 0 0	25 April, 1878
	Samuel Ernest Baylis .....	12 Oct., 1885	Ditto .....	165 0 0	12 Oct., 1885.
	John Louis Cosgrove .....	9 Oct., 1882	Ditto .....	95 0 0	9 Oct., 1882.
Probationer .....	Francis Charles Bauer.....	11 Mar., 1885	Colonial Treasurer.....	75 0 0	11 Mar., 1885.
	Leslie Thomas Hughes ...	1 Feb., 1886	Ditto .....	50 0 0	1 Feb., 1886.
				75 0 0	from 1 August.
Foreman of Stampers .....	William Foskett .....	1 July, 1880	Governor and Executive Council	290 0 0	24 Jan., 1865.
Stamper .....	Harry Thornthwaite .....	1 Jan., 1881	Ditto .....	170 0 0	1 Jan., 1881.
Assistant Stampers .....	John Byers .....	1 July, 1880	Ditto .....	140 0 0	1 July, 1880.
	Charles Lea .....	1 July, 1880	Ditto .....	140 0 0	1 July, 1880.
	George Hall .....	1 Jan., 1881	Ditto .....	140 0 0	1 Jan., 1881.
	Charles Moore .....	1 Jan., 1883.	Ditto .....	140 0 0	1 Jan., 1883.
	Sydney Cummins.....	1 Jan., 1883	Ditto .....	140 0 0	1 Jan., 1883.
	John G. H. F. Brunner ...	1 Jan., 1883	Ditto .....	140 0 0	1 Jan., 1883.
Messenger (1) <sup>2</sup> .....			Colonial Treasurer .....	120 0 0	
Housekeeper (1) <sup>2</sup> .....			Ditto .....	95 0 0	

<sup>1</sup> Appointed Deputy Commissioner—to date from 1 September, 1885.<sup>2</sup> Allowed quarters, fuel, and light.<sup>\*</sup> Services not continuous.

NOTE.—The following Officers give security:—Commissioner, £2,000; Deputy Commissioner, £500; Entry and Issue Clerk, £500; Clerk of Correspondence and Recorder of Wills, £250; Cashier, £500; Clerks—Messrs. Fligg, George, and Baylis—each £200; Mr. Cosgrove, £100; Foreman of Stampers, £500; Stamper, £200; Assistant Stampers—Messrs. Byers, Lea, Hall, Moore, Cummins, and Brunner—each £200; Messenger, £200.

**COLONIAL DISTILLERIES AND SUGAR REFINERIES.**

Chief Inspector of Distil- leries and Refineries.	George H. Barney .....	1 June, 1880	Governor and Executive Council, by Commission.	725 0 0	14 April, 1855.
Senior Inspectors of Dis- tilleries.	Robert Blake <sup>1</sup> .....	1 Jan., 1851	Governor, by Commission.....	500 0 0	1 Feb., 1840.
Inspector of Distilleries and Refineries.	John Wye Weekes <sup>1</sup> .....	1 June, 1880	Governor and Executive Council	500 0 0	9 June, 1863.
	Dalway Bell .....	11 Sept., 1878	Ditto .....	440 0 0	5 Mar., 1867.
Inspector of Distilleries ...	Thomas Cains Jamison <sup>1</sup> ...	1 June, 1880	Ditto .....	390 0 0	15 July, 1846.*
Inspectors of Sugar Re- fineries.	Paul Le Jeune .....	1 May, 1885	Ditto .....	340 0 0	1 Jan., 1882.
	succeeded by				
	William Butler Simpson	1 July, 1886	Ditto .....	340 0 0	1857.
	Ernest G. L. Lumsdaine...	11 Dec., 1883	Ditto .....	290 0 0	18 Dec., 1877.
Clerk and Acting Inspector	Samuel F. Williams .....	11 Dec., 1883	Ditto .....	240 0 0	14 May, 1883.
Gatekeeper (1) .....			Chief Inspector of Distilleries...	120 0 0	
Messenger (1) .....			Ditto .....	90 0 0	
Boatman, Harwood Island(1)			Colonial Treasurer.....	120 0 0	
Watchman (1) .....			Ditto .....	108 0 0	

<sup>1</sup> Allowed at the rate of £50 per annum for house rent during their services at the Harwood Island Distillery, Clarence River. <sup>\*</sup> Services not continuous.

NOTE.—The following Officers give security:—Chief Inspector, £1,000; Inspectors, £500 each; Acting Inspector, £300.

Office.	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government.
<b>COLONIAL TREASURER—continued.</b>					
<b>STORES AND STATIONERY.</b>					
Superintendent and Inspector of Stores.	William Oliver Hopkins <sup>1</sup>	1 Oct., 1880	Governor and Executive Council	450 0 0	1 Feb., 1879.
Accountant	Arthur E Harper	1 Aug., 1880	Ditto	390 0 0	1 Aug., 1880.
Chief Clerk	George O'Donnell	19 Sept., 1878	Ditto	240 0 0	1 Nov., 1866.
Record Clerk	Edmund Scanlan	1 Dec., 1885	Ditto	190 0 0	6 May, 1878.
Clerks	John R. Evans	1 Dec., 1885	Ditto	240 0 0	12 July, 1875.
	Joseph Cohen	23 Dec., 1884	Ditto	240 0 0	1 Sept., 1878.
	Charles Streat	18 Oct., 1880	Ditto	200 0 0	1 Nov., 1878.
	Maxwell Thomson	1 Jan., 1878	Ditto	200 0 0	15 Sept., 1875.
	David M'Lachlan	1 Jan., 1878	Ditto	200 0 0	16 June, 1876.
	Edwin Tunks	18 Oct., 1880	Colonial Treasurer	200 0 0	11 April, 1878.
	Louis F. Sachse	1 Dec., 1885	Governor and Executive Council	165 0 0	1 Sept., 1878.
Stock-keeper	John H. Wilkinson	1 Dec., 1885	Ditto	290 0 0	1 Dec., 1882.
Stationer			Colonial Treasurer	210 0 0	
Foreman			Ditto	240 0 0	
Packer			Ditto	160 0 0	
Assistant Stock-keeper			Ditto	150 0 0	
Messengers (2) <sup>2</sup>			Ditto	120 0 0	each.
Carters (2)			Ditto	140 0 0	
Labourers (3)			Ditto	127 0 0	"
<sup>1</sup> Allowed £100 per annum in lieu of quarters, fuel, and light <sup>2</sup> Allowed £30 per annum in lieu of quarters, fuel, and light.					
<b>GOVERNMENT PRINTER.</b>					
Government Printer, and Inspector of Postage Stamps	Thomas Richards <sup>1</sup>	1 June, 1859	Governor and Executive Council, by Commission	650 0 0	7 Feb., 1845.
Superintendent	succeeded by Charles Potter <sup>2</sup>	17 June, 1859	Governor and Executive Council	550 0 0	15 Dec., 1851.*
	Charles Potter	1 Nov., 1886	Ditto		
Superintendent	succeeded by George Stephen Chapman	9 Feb., 1860	Ditto	390 0 0	12 Jan., 1852.
	George Stephen Chapman	6 Dec., 1886	Ditto		
Chief Clerk and Cashier	George Kellick <sup>3</sup>	18 Nov., 1875	Ditto	525 0 0 from 6 Dec.	1 April, 1851.
Accountant	Charles W. Bloomfield <sup>4</sup>	4 Aug., 1883	Ditto	390 0 0	— June, 1854.
Overseers	Geo. Stephen Chapman <sup>5</sup>	1 Mar., 1874	Ditto	340 0 0	12 Jan., 1852.
	Walter D'Arnetta	1 Mar., 1874	Ditto	390 0 0	1 July, 1847.*
Foreman of Bookbinding Branch.	Augustus Fredk Furber	15 Nov., 1860	Ditto	350 0 0	5 Nov., 1860.
Foreman of Press Branch	George Alfred Thrum <sup>6</sup>	1 Mar., 1874	Colonial Treasurer	350 0 0	— Nov., 1843.*
Sub-Overseers	Peter Buchanan	1 Oct., 1863	Ditto	340 0 0	25 Feb., 1852.
	Charles Griffiths	1 Mar., 1874	Governor and Executive Council	340 0 0	7 Jan., 1852.
	John Mercer	27 Nov., 1876	Colonial Treasurer	315 0 0	7 May, 1855.
	James Steward	6 Nov., 1879	Ditto	240 0 0	15 Feb., 1854.
	James Small	6 Nov., 1879	Ditto	290 0 0	24 Dec., 1855.
	William Hayes	1 July, 1880	Ditto	265 0 0	6 Jan., 1857.
	Henry Roberts	1 July, 1880	Ditto	315 0 0	23 Aug., 1871.
	William P. Clennett	1 July, 1880	Ditto	265 0 0	19 Feb., 1872.
	Henry Martyn	7 Sept., 1885	Ditto	315 0 0	2 Mar., 1852.
	Charles Moore Kellick	7 Sept., 1885	Ditto	290 0 0	20 Jan., 1860.
Warehouseman	Charles Sydney Ormiston	2 May, 1873	Ditto	290 0 0	1 Oct., 1856.
Clerk in charge (Publishing Branch).	Gilbert Johnston	1 June, 1870	Ditto	290 0 0	1 June, 1870.
	Frederick Carvosso Dowsett	26 Sept., 1878	Ditto	200 0 0	1 June, 1858.
Clerks (Sale)	Henry M'Kern	6 Aug., 1883	Ditto	340 0 0	3 Jan., 1862.
	Frederick Hosier <sup>7</sup>	8 Oct., 1861	Governor and Executive Council	365 0 0	4 May, 1853.
Computer	Frederick James Ironside	25 Nov., 1861	Ditto	325 0 0	— Aug., 1847.*
	Joseph John Spruson	12 Aug., 1864	Ditto	320 0 0	12 Aug., 1864.
Readers	William M'Kern	1 Dec., 1875	Colonial Treasurer	315 0 0	9 Nov., 1857.
	Robert Fairweather	6 Nov., 1879	Ditto	290 0 0	8 Oct., 1860.
Reviser	Peter Race	19 Jan., 1879	Ditto	220 0 0	12 Nov., 1860.
	John Clements <sup>8</sup>	8 Oct., 1879	Ditto	210 0 0	14 Jan., 1867.
Entry Clerk and Store-keeper.	Nathan Hollingworth	2 Mar., 1882	Ditto	315 0 0	5 Dec., 1859.
	James Dutton	8 Feb., 1877	Ditto	340 0 0	— July, 1854.
Compositors, Machinists, Pressmen, Bookbinders, Assistants, and others	(127)		Ditto	At rates varying from £225 a year to 7s. per diem.	
Improvers, Apprentices, Folders and Sewers, and others	(147)		Ditto	At rates varying from 1s. 6d to 8s. per diem, according to length of service.	
<sup>1</sup> To 31 October—Retired under the provisions of the Civil Service Act <sup>2</sup> Gives security as Inspector of Postage Stamps to the amount of £1,000 <sup>3</sup> Gives security to the amount of £500 <sup>4</sup> Gives security to the amount of £250. <sup>5</sup> To 5 December—promoted <sup>6</sup> To 21 October—deceased. <sup>7</sup> To 21 June—deceased. <sup>8</sup> To 20 June—deceased.      * Services not continuous.					

Office.	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>COLONIAL TREASURER—GOVERNMENT PRINTER—continued.</b>					
<b>STAMP BRANCH.</b>					
Foreman .. . . . .	Abraham Western Chapman	1 Jan., 1857	Governor and Executive Council	340 0 0	1 Jan 1857.
Sub-Overseer .. . . .	Allan Robertson	1 July, 1880	Colonial Treasurer	320 0 0	29 Oct., 1867.
Assistants .. . . . (8)	.....	.....	Colonial Treasurer	{ 1 at 210 0 0 { 1 at 185 0 0 { 2 at 0 10 0 { 2 at 0 6 0 { 1 at 0 4 0 { 1 at 0 3 0	per diem each.
<b>TICKET PRINTING.</b>					
Foreman .. . . . .	James Ball	15 June, 1857	Commissioners under Railway Act	340 0 0	15 June, 1857.
Printer .. . . . .	James Huthnance	1 Jan, 1865	Governor and Executive Council	200 0 0	1 Jan., 1865.
Assistants .. . . . (4)	.....	.....	Colonial Treasurer	{ 1 at 160 0 0 { 1 at 150 0 0 { 1 at 0 6 0 { 1 at 0 4 0	per diem.
<b>PHOTO-LITHOGRAPHY, PHOTOGRAPHY, AND PHOTO-MECHANICAL BRANCH.</b>					
Manager .. . . . .	John Sharkey	1 Jan., 1869	Colonial Treasurer	390 0 0	17 Aug., 1863.
Draftsman .. . . . .	Stephen Mallarky	1 April, 1870	Ditto	315 0 0	1 Nov., 1864.
Operators .. . . . (5)	.....	.....	Ditto	{ 1 at 290 0 0 { 1 at 240 0 0 { 1 at 200 0 0 { 2 at 160 0 0	per diem.
Printers .. . . . (2)	.....	.....	Ditto	{ 1 at 0 10 0 { 1 at 0 9 0 { 1 at 0 6 0 { 1 at 0 4 0	per diem.
Assistants .. . . . (10)	.....	.....	Ditto	{ 2 at 0 3 0 { 2 at 0 2 6 { 3 at 0 2 0 { 1 at 0 1 6	each.

**ORDNANCE AND BARRACK DEPARTMENT.**

Ordnance Storekeeper and Barrack Master.	Juhen Thomas Blanchard <sup>1</sup>	10 Sept., 1875	Governor and Executive Council	450 0 0	15 Dec., 1862.
Assistant Ordnance Storekeeper.	Charles Bouverie Thirkell Deceased	10 Aug., 1878 3 Sept., 1886	Ditto	265 0 0	1 Oct., 1875.
Inspector of Magazines	Thomas Rodgers <sup>2</sup>	1 Oct., 1876	Ditto	240 0 0	30 Sept., 1868.
Visiting Surgeon	O S Evans	1 April, 1871	Ditto	50 0 0	21 Mar., 1861.
Clerks	Vivian Wilham Wilhams	1 July, 1881	Ditto	200 0 0	1 Dec., 1876.
	William James Brown	1 July, 1881	Ditto	190 0 0	17 May, 1880.
	Walter Chapman Paton	1 Jan, 1879	Ditto	165 0 0	10 Sept., 1877.
	William James Burns	1 Jan, 1884	Ditto	140 0 0	1 July, 1881.
Foremen of Magazines	Arthur Edward Clarke	12 Nov, 1884	Ditto	115 0 0	12 Nov., 1884.
	Robert Pearce Olpherts <sup>3</sup>	27 Oct, 1882	Ditto	215 0 0	27 Oct., 1882.
	William Weldon <sup>3</sup>	22 Aug, 1878	Ditto	240 0 0	27 Jan, 1871.
	Charles Mackinnon <sup>3</sup>	23 Oct, 1882	Ditto	240 0 0	23 Oct., 1882.
Captain of Steamer	Henry Bellett	8 Dec, 1884	Colonial Treasurer	160 0 0	8 Dec., 1884.
Engineer of Steamer	Thomas Crowley <sup>4</sup>	28 Sept, 1876	Governor and Executive Council	160 0 0	21 April, 1868.
Cooper and Warder	James Williams <sup>3</sup>	11 Aug, 1876	Colonial Treasurer	8s. per diem	11 Aug, 1876.
Magazine Warder and Watchman.	Richard C. Tunnichiffe <sup>6</sup>	5 Mar, 1879	Ditto	8s. "	1877.
Magazine Warders	Joseph Hanson <sup>3</sup>	5 Oct., 1876	Ditto	7s. "	5 Oct, 1876.
	John Tumbrell <sup>3</sup>	1 Nov, 1880	Ditto	7s. "	1 Nov, 1880.
	Robert Magee <sup>3</sup>	15 Aug, 1883	Ditto	7s. "	15 Aug, 1883.
	Henry Arnemann <sup>3</sup>	8 May, 1883	Ditto	7s. "	8 May, 1883.
	Joseph Reynolds <sup>5</sup>	4 Jan., 1884	Ditto	7s. "	1858.*
	Charles Bengston <sup>3</sup>	2 June, 1883	Ditto	7s. "	2 June, 1883.
	Henry Turner <sup>5</sup>	28 Dec, 1871	Ditto	7s. "	28 Dec., 1871.
	Thomas Pierce <sup>5</sup>	1 Jan, 1875	Ditto	7s. "	1 Jan, 1875.
	Stephen Fisher <sup>5</sup>	22 Aug., 1870	Ditto	7s. "	22 Aug., 1870.
	James Curran <sup>5</sup>	22 Aug, 1870	Ditto	7s. "	22 Aug, 1870.
	Thomas Georgeson <sup>3</sup>	20 Oct, 1882	Colonial Treasurer	7s. "	20 Oct, 1882.
	Samuel Irving <sup>3</sup>	23 Nov, 1882	Ditto	7s. "	23 Nov, 1882.
	Resigned	31 Jan., 1886			
	John D. Nelson <sup>3</sup>	23 Nov, 1882	Ditto	7s. "	— Mar, 1882.
	Resigned	30 April, 1886			
	Henry Hooper <sup>3</sup>	1 April, 1884	Ditto	7s. "	— June, 1883.
	Peter Francis <sup>3</sup>	3 Sept, 1884	Ditto	7s. "	3 Sept., 1884.
Warders	James Mitchell <sup>3</sup>	13 Aug, 1885	Ditto	7s. "	13 Aug., 1885.
	J. W. Smith <sup>3</sup>	20 Nov, 1885	Ditto	7s. "	20 Nov., 1885.
Acting Warders	R. Johnstone <sup>3</sup>	1 Dec, 1885	Ditto	7s. "	1 Dec., 1885.
	J Dunlea <sup>3</sup>	6 April, 1886	Ditto	7s. "	6 April, 1886.
Cook for Middle Harbour	J W. Aitken <sup>3</sup>	1 Nov., 1886	Ditto	7s. "	1 Nov., 1886.
Armourer	Peter Burn	14 June, 1879	Governor and Executive Council	£185 per ann	14 June, 1879.
Overseer of Stores	Daniel Reilly <sup>3</sup>	1 May, 1880	Ditto	7s per diem	— July, 1868.

<sup>1</sup> Allowed a house, fuel, and light, and 3s 6d per day in lieu of forage rations, also medical attendance and medicines <sup>2</sup> Allowed quarters <sup>3</sup> Allowed quarters, fuel, light, and 1s per day in lieu of rations, also medical attendance and medicines <sup>4</sup> Allowed quarters, fuel, and light, medical attendance, and medicines <sup>5</sup> Allowed fuel, light, and 1s per day for rations, medical attendance, and medicines. <sup>6</sup> Allowed fuel and light, and medical attendance and medicines. \* Services not continuous.

Office.	Name.	Date of Appointment	By whom appointed, and under what Instrument.	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government.	
<b>COLONIAL TREASURER—ORDNANCE AND BARRACK DEPARTMENT—continued.</b>						
Ordnance and Barrack Labourers. <sup>1</sup>	Patrick Santry .....	1 Dec, 1871	Colonial Treasurer .....	7s. per diem	1 Dec, 1871.	
	Thomas Campbell .....	11 Dec, 1875	Ditto .....	7s. "	24 Dec, 1868.	
	Robert Jackson ..	1 Oct, 1870	Ditto .....	7s. "	1 Oct, 1870.	
	James Barron .....	1 Oct, 1876	Ditto .....	7s. "	1 April, 1876	
	David Watson .....	1 May, 1873	Ditto .....	7s. "	1 May, 1873.	
	James Cousins .....	1 Oct, 1869	Ditto .....	7s. "	1 Oct, 1869	
	Timothy Mahony .....	14 Sept, 1870	Ditto .....	7s. "	14 Sept, 1870	
	Samuel Small .....	13 Jan, 1871	Ditto .....	7s. "	— Mar, 1865.	
		Retired	31 Mar., 1886			
		Philip Kelly .....	28 Sept, 1876	Ditto .....	7s. "	28 Sept, 1876.
Boatmen, Goat Island <sup>2</sup> ...	Joseph Love .....	28 Sept, 1876	Ditto .....	7s. "	28 Sept, 1876	
Lampighter, Victoria Barracks.			Ditto .....	1s. "		
Messenger .....	Charles A. Cozens .....	25 Sept., 1879	Ditto .....	£60 per ann.	25 Sept, 1879	
<b>TEMPORARY STAFF—</b>						
Overseer of Magazine ...	William Horn .....	12 Aug, 1885	Ministerial ... ..	7s 6d per diem	12 Aug, 1885	
Labourer .....	Thomas Holmes .....	13 Aug, 1885 to 30 Nov., 1886	Ditto .....	7s. "	13 Aug, 1885	

**FLOATING MAGAZINE, NEWCASTLE.**

Working Overseer, Clerk, and Forest Ranger.	Charles Dunn <sup>3</sup> .....	1 Nov, 1872	Colonial Treasurer .....	£200 per ann	1 Nov, 1872.
Magazine Warders ...	Thomas Parker <sup>4</sup> .....	7 May, 1883	Ditto .....	7s per diem	7 May, 1883
	George M'Kear <sup>4</sup> .....	16 July, 1883	Ditto .....	7s. "	16 July, 1883.
	Peter Henderson <sup>4</sup> .....	9 Nov, 1883	Ditto .....	7s. "	9 Nov, 1883.
	T. Butler <sup>4</sup> .....	5 June, 1885	Ditto .....	7s. "	5 June, 1885.
Magazine Warder and Engineer.	William Beger <sup>4</sup> .....	7 Nov, 1883	Ditto .....	7s. "	7 Nov, 1883.
Magazine Warder and Watchman.	John Sherry <sup>4</sup> .....	1 Jan, 1882	Ditto .....	7s. "	1 Jan., 1882.

**FLOATING MAGAZINE, BROKEN BAY.**

Working Overseer .....	William Aitken <sup>4</sup> .....	20 Oct., 1882	Governor and Executive Council	£160 per ann	10 Feb, 1879.	
Magazine Warders ...	George Murray .....	4 Sept, 1884	Colonial Treasurer .....	7s per diem	4 Sept., 1884	
	Bryan O'Brien <sup>5</sup> .....	22 Oct, 1884	Ditto .....	7s. "	22 Oct, 1884.	
		Resigned	30 Nov, 1886			
		C. J. M'Carthy <sup>5</sup> .....	1 Dec., 1886	Ditto ..	7s. "	1 Dec., 1886.

<sup>1</sup> Allowed fuel and light, and one allowed quarters <sup>2</sup> Allowed fuel and light, and medical attendance and medicines. <sup>3</sup> Allowed quarters, fuel, and light, and £12 per annum as Forest Ranger <sup>4</sup> Allowed quarters, fuel, and light, and 1s per day for rations. <sup>5</sup> Allowed quarters, fuel, light, and 1s per day in lieu of rations, also medical attendance and medicines  
NOTE—The floating Magazine at Newcastle is placed under Captain Allan, Harbour Master, who receives £50 per annum for supervision.

**BOARD OF HEALTH AND QUARANTINE.**

President and Health Officer for Port Jackson.	H. N. MacLaurin, M.D. <sup>1</sup>	1 Sept., 1885	Governor and Executive Council	630 0 0	1 Sept, 1885
Members .....	The Mayor of Sydney .....	} 5 Jan., 1882	Ditto .....	Nil.	
	The Under Secretary for Finance and Trade.				
	The Inspector-General of Police.				
	The Hon C K. Mackellar M B, M.L.C. <sup>6</sup>				
	Sir Alfred Roberts, Knt, M.R.C.S., Eng.				
Secretary .....	Samuel T. Knaggs, M.D. ...	10 Aug, 1885	Ditto .....	} 2 2 0 per sitting.	
Inspector .....	George Marshall, M.D. ...	10 Aug, 1885	Ditto .....		
	Edmund Sager <sup>2</sup> .....	28 Aug, 1882	Ditto .....	265 0 0	18 Aug., 1879.
	J. Ashburton Thompson, M.D. <sup>3</sup>	1 Aug, 1885	Ditto ..	550 0 0	1 Aug, 1885.
Clerk .....	Clarence Simms .....	19 Dec, 1884	Colonial Treasurer .....	115 0 0	1 Oct, 1883.
Cadet .....	Arthur R. Gullick .....	10 July, 1885	Ditto ..	70 0 0	10 July, 1885.
Special Quarantine Officer and Messenger.	David Davidson .....	1 Sept., 1885	President .....	108 0 0	12 July, 1881.
Office-keeper (1) ...			Ditto .....	50 0 0	
Assistant Health Officer at Watson's Bay <sup>4</sup>	J. C. Sibley, M.D. ....	24 Nov, 1882	Governor and Executive Council	550 0 0	16 April, 1880.*
Coxswain of Boat <sup>5</sup> ...			President .....	120 0 0	
Boatmen (3) <sup>5</sup> ...			Ditto .....	108 0 0	each.
Superintendent, Quarantine Station. <sup>4</sup>	J. F. Vincent .....	2 June, 1884	Governor and Executive Council	232 0 0	2 Mar., 1884.
Wardsman, ditto <sup>5</sup>			President .....	120 0 0	
Quarantine Officers ditto(5) <sup>7</sup>			Ditto .....	108 0 0	each.
Coxswain of Quarantine Tender. (1) <sup>5</sup>			Ditto .....	108 0 0	
Driver of Quarantine Tender. (1) <sup>5</sup>			Ditto .....	120 0 0	
Health Officer, Newcastle.	Richard Harris, M.R.C.S., Eng.	23 Aug, 1875	Ditto .....	220 0 0	23 Aug., 1875.

<sup>1</sup> Also Emigration Officer, and Medical Adviser to the Government <sup>2</sup> Also Secretary to the Medical Adviser to the Government <sup>3</sup> Also Deputy Medical Adviser to the Government. <sup>4</sup> Allowed quarters, fuel and light <sup>5</sup> Allowed quarters <sup>6</sup> Dr. Mackellar who was appointed a Member of the Board of Health on the 5th January, 1882, held the office of Health Officer and President from the 19th July, 1882, to 31st August, 1885, when he was appointed a Member of the Legislative Council <sup>7</sup> Services not continuous.

NEW SOUTH WALES—1886.

Office.	Name.	Date of Appointment.	By whom appointed, and under what instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>COLONIAL TREASURER—continued.</b>					
<b>SHIPPING MASTERS.</b>					
<b>SYDNEY.</b>					
Shipping Master .....	John W. Brown <sup>1</sup> .....	9 Mar., 1880	Governor and Executive Council	465 0 0	9 Mar., 1880.
Deputy Shipping Master .....	James Thorpe <sup>2</sup> .....	20 Nov., 1879	Ditto .....	290 0 0	16 April, 1866.
First Clerk and Accountant .....	Richd. L. Smith <sup>2</sup> .....	1 Jan., 1882	Ditto .....	265 0 0	12 Aug., 1881.
Clerk and Cashier .....	Ernest H. Llewelyn <sup>2</sup> .....	1 July, 1881	Ditto .....	200 0 0	17 Oct., 1876.
Clerks .....	Wm. Gannon .....	1 July, 1881	Ditto .....	190 0 0	5 Oct., 1877.
	Thos. Godbolt .....	1 July, 1881	Ditto .....	140 0 0	10 July, 1870.
	John H. K. Brown .....	1 Jan., 1877	Ditto .....	190 0 0	8 Feb., 1853.
	Alexr. B. Wood .....	7 July, 1883	Ditto .....	115 0 0	7 July, 1883.
Messenger (1) <sup>3</sup> .....	.....	.....	Colonial Treasurer .....	150 0 0	.....
Officekeeper (1) <sup>4</sup> .....	.....	.....	Shipping Master .....	30 0 0	.....
<b>NEWCASTLE.</b>					
Shipping Master .....	Clarence H. Hannell .....	10 Mar., 1863	Governor and Executive Council	390 0 0	10 Mar., 1863.
Cashier and Accountant .....	Jeremiah J. Mason .....	1 Jan., 1883	Ditto .....	240 0 0	1 Aug., 1865.
Clerk .....	Edward Fletcher .....	1 Feb., 1886	Ditto .....	115 0 0	1 Feb., 1886.
Messenger (1) .....	.....	.....	Colonial Treasurer .....	52 0 0	.....
<sup>1</sup> Gives security for £500. <sup>2</sup> Gives security for £250. <sup>3</sup> Designation altered to "Director of Seamen," 20 March. <sup>4</sup> Allowed £30 in lieu of quarters.					
<b>MARINE BOARD OF NEW SOUTH WALES.</b>					
President .....	Francis Hixson .....	2 April, 1872	Administrator of Government and Executive Council.	700 0 0	1 Jan., 1863.
Vice-President .....	John Broomfield .....	2 April, 1878	Elected by Shipowners .....	109 4	2 April, 1872.
Members .....	Henry T. Fox .....	15 Jan., 1875	Governor and Executive Council	109 4	23 Feb., 1859.
	Archibald M'Lean .....	1 April, 1878	Elected by Shipowners .....	109 4	1 Oct., 1873.
	Benjamin Jenkins .....	1 Aug., 1878	Ditto .....	109 4	1 Aug., 1878.
	William Robertson .....	10 Mar., 1880	Governor and Executive Council	109 4	10 Mar., 1880.
	R. T. Moodie .....	15 Feb., 1884	Ditto .....	109 4	15 Feb., 1884.
Secretary .....	George S. Lindeman .....	1 Mar., 1875	Ditto .....	440 0 0	26 April, 1872.
Clerk and Accountant .....	Alfred Hinton .....	20 Oct., 1864	Ditto .....	290 0 0	14 May, 1855.
Engineer, Surveyor, and Inspector.	William Cruickshank .....	1 June, 1881	Ditto .....	600 0 0	13 May, 1874.
Assistant ditto .....	H. Selfe .....	1 June, 1881	Ditto .....	390 0 0	1 June, 1881.
Ditto .....	A. D. Marshall .....	24 Mar., 1885	Ditto .....	320 0 0	24 Mar., 1885.
Shipwright Surveyor and Inspector.	Richard Johnson <sup>1</sup> .....	8 May, 1872	Administrator of Government and Executive Council.	320 0 0	11 Feb., 1862.
	Wm. M'Ritchie .....	14 June, 1886	Governor and Executive Council	340 0 0	14 June, 1886.
Examiner in Navigation, Pilotage, and Seamanship.	J. H. Bedford .....	20 July, 1885	Ditto .....	340 0 0	1 Jan., 1881.
Inspector .....	Isaac Lee .....	1 Feb., 1879	Ditto .....	50 0 0	1 Mar., 1859.
Water Bailiff .....	Isaac Lee .....	1 Feb., 1875	Ditto .....	225 0 0	1 Mar., 1859.
Inspector and Surveyor .....	E. D. Maides .....	14 May, 1885	Ditto .....	260 0 0	1 Nov., 1876.
Clerk .....	T. Rule .....	15 Jan., 1886	Ditto .....	75 0 0	15 Jan., 1886.
Messenger .....	John Parsonage .....	2 April, 1872	Administrator of Government and Executive Council.	135 0 0	1 Jan., 1863.
<b>CLARENCE RIVER.</b>					
Engineer Surveyor .....	Patrick Frazer .....	2 April, 1872	Governor and Executive Council	54 3 6	30 June, 1866.
Shipwright ditto .....	J. N. Schomberg .....	18 Aug., 1875	Ditto .....	48 0 0	18 Aug., 1875.
<b>MACLEAY RIVER.</b>					
Engineer Surveyor .....	J. Hamilton .....	1 Feb., 1881	Ditto .....	10 10 0	1 Nov., 1864.
Shipwright ditto .....	J. G. May .....	30 June, 1865	Ditto .....	7 10 0	30 June, 1865.
<b>NEWCASTLE.</b>					
Engineer Surveyor .....	J. Rorison .....	1 Sept., 1878	Ditto .....	84 0 0	1 May, 1870.
Shipwright ditto .....	Thomas Brooks .....	15 Feb., 1871	Ditto .....	70 10 0	15 Feb., 1871.
<b>MANNING RIVER.</b>					
Engineer Surveyor .....	J. Carruthers .....	1 Oct., 1882	Ditto .....	Nil.	1 Oct., 1882.
Shipwright ditto .....	J. Macdonald .....	1 July, 1879	Ditto .....	Nil.	1 July, 1879.
<b>RICHMOND RIVER.</b>					
Engineer Surveyor .....	D. Farmer .....	1 June, 1880	Ditto .....	8 8 0	1 June, 1880.
Shipwright ditto .....	D. Alley .....	1 May, 1880	Ditto .....	25 10 0	1 May, 1880.
<b>MARINE BOARD, NEWCASTLE.</b>					
Chairman .....	David Tait Allan .....	1 Sept., 1858	Ditto .....	109 4	1 Sept., 1858.
Members .....	R. B. Wallace .....	4 July, 1873	Ditto .....	54 12	4 July, 1873.
	Herbert Cross .....	4 July, 1873	Ditto .....	54 12	4 July, 1873.
	C. F. Stokes .....	5 Feb., 1875	Ditto .....	54 12	18 Dec., 1873.
	J. Reid .....	1 Dec., 1879	Ditto .....	54 12	1 Dec., 1879.
Secretary and Inspector .....	W. F. Weatherill .....	18 July, 1873	Ditto .....	340 0 0	18 July, 1873.
Inspector and Surveyor .....	A. Bertram .....	1 Oct., 1877	Ditto .....	270 0 0	1 Oct., 1877.
Boatman (1) .....	.....	.....	President .....	130 0 0	.....
Messenger (1) .....	.....	.....	Ditto .....	130 0 0	.....
<b>SYDNEY.</b>					
Harbour Master .....	Henry Pettit .....	8 Dec., 1884	Governor and Executive Council	390 0 0	1 June, 1877.
Assistant Harbour Masters .....	F. Bracegirde .....	8 Dec., 1884	Ditto .....	290 0 0	8 Dec., 1884.
	T. R. Thompson .....	1 June, 1885	Ditto .....	220 0 0	1 June, 1885.
Clerk to Harbour Master .....	John Lawrence .....	21 Oct., 1864	Ditto .....	240 0 0	21 Oct., 1864.
Boatswain (1) .....	.....	.....	Colonial Treasurer .....	157 0 0	.....
Boatmen (18) .....	.....	.....	President .....	{ 4 at 130 0 0 each	.....
				{ 14 at 118 0 0 ,,	
<sup>1</sup> To 30 May, 1886.					



Office.	Name.	Date of Appointment.	By whom appointed, and under what instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>COLONIAL TREASURER—MARINE BOARD OF NEW SOUTH WALES—continued.</b>					
LIGHT-HOUSE, SOUTH HEAD. Superintendent .....	Joseph Siddins.....	1 Jan., 1846	Governor .....	200 0 0	1 Jan., 1846.
Lightkeepers (2) .....	.....	.....	Colonial Treasurer ..... { 1 at 1 at	134 0 0 118 0 0	
Engineer, Electric Light ...	H. Patterson.....	1 June, 1883	Governor and Executive Council	270 0 0	1 June, 1883.
Assistant, ditto .....	W. H. Thomas.....	1 June, 1883	Ditto .....	120 0 0	1 June, 1883.
HORNBY LIGHT-HOUSE. Superintendent .....	William May .....	1 Feb., 1875	Ditto .....	200 0 0	12 May, 1874.
Lightkeepers (2) .....	.....	.....	Colonial Treasurer ..... { 1 at 1 at	134 0 0 118 0 0	
LIGHT-SHIP "BRAMBLE." Superintendent .....	J. Leddra .....	18 Mar., 1885	Governor and Executive Council	200 0 0	9 Dec., 1879.
Lightkeepers (4) .....	.....	.....	Colonial Treasurer ..... { 1 at 3 at	134 0 0 118 0 0	
LIGHT-HOUSE, CAPE ST. GEORGE. Superintendent .....	Henry Gibson .....	18 Sept., 1873	Governor and Executive Council	200 0 0	8 May, 1858.
Lightkeepers (2) .....	.....	.....	Colonial Treasurer ..... { 1 at 1 at	134 0 0 118 0 0	
LIGHT-HOUSE, FORT STEPHENS. Superintendent .....	James Priest .....	1 Sept., 1875	Governor and Executive Council	200 0 0	13 Feb., 1862.
Lightkeepers (2) .....	.....	.....	Colonial Treasurer ..... { 1 at 1 at	134 0 0 118 0 0	
LIGHT-HOUSE, NEWCASTLE. Superintendent .....	Jesse Haanell .....	1 Jan., 1858	Governor and Executive Council	250 0 0	1 Jan., 1858.
Lightkeepers (2) .....	.....	.....	Colonial Treasurer ..... { 1 at 1 at	134 0 0 118 0 0	
LIGHT-SHIP "NEWCASTLE." Lightkeeper (1) .....	.....	.....	Ditto .....	134 0 0	
PORT DENISON LIGHT. Lightkeeper (1) .....	Daniel Maley .....	9 June, 1885	Ditto .....	134 0 0	
BARRENJOBY LIGHT. Superintendent .....	G. Mulhall .....	1 July, 1885	Governor and Executive Council	200 0 0	1 June, 1858.
Lightkeepers (2) .....	.....	.....	Colonial Treasurer ..... { 1 at 1 at	134 0 0 118 0 0	
WOLLONGONG LIGHT. Lightkeepers (2) .....	.....	.....	Ditto .....	134 0 0	each.
ULLADULLA LIGHT. Lightkeeper .....	William Gamble .....	1 Mar., 1872	Administrator of Government and Executive Council.	158 0 0	1 Mar., 1872.
NELSON'S BAY LIGHT. Lightkeeper .....	William Glover .....	21 Oct., 1869	Colonial Treasurer.....	134 0 0	21 Oct., 1869.
SRAL ROCKS LIGHT-HOUSE. Superintendent .....	D. Watson .....	5 Nov., 1878	Governor and Executive Council	200 0 0	5 Nov., 1878.
Lightkeepers (2) .....	.....	.....	Colonial Treasurer..... { 1 at 1 at	134 0 0 118 0 0	
LIGHT-HOUSE, SOUTH SOLITARY. Superintendent .....	R. Kelly .....	1 Nov., 1885	Governor and Executive Council	200 0 0	24 Aug., 1881.
Lightkeepers (2) .....	.....	.....	Colonial Treasurer ..... { 1 at 1 at	134 0 0 118 0 0	
LIGHT-HOUSE, MONTAGUE ISLAND. Superintendent .....	J. Burgess .....	1 Aug., 1881	Governor and Executive Council	200 0 0	9 Sept., 1879.
Lightkeepers (2) .....	.....	.....	Colonial Treasurer ..... { 1 at 1 at	134 0 0 118 0 0	
LIGHT-HOUSE, GREEN CAPE. Superintendent .....	J. Skelton .....	12 Sept., 1882	Governor and Executive Council	200 0 0	9 Sept., 1879.
Lightkeepers (2) .....	.....	.....	Colonial Treasurer ..... { 1 at 1 at	134 0 0 118 0 0	
SYDNEY. Sea Pilots .....	Robert Cork.....	16 Aug., 1867	Governor and Executive Council	370 0 0	16 Aug., 1867.
.....	David Christison .....	1 Feb., 1868	Ditto .....	370 0 0	1 Feb., 1868.
.....	Andrew W. Jack.....	20 Aug., 1870	Ditto .....	370 0 0	20 Aug., 1870.
.....	William Firth .....	1 Feb., 1879	Ditto .....	370 0 0	24 June, 1876.
.....	Alexander Coutts.....	16 Aug., 1867	Ditto .....	370 0 0	16 Aug., 1867.
.....	succeeded by				
.....	H. Chudley .....	1 July, 1886	Ditto .....	370 0 0	1 July, 1886.
PILOT STEAMER "CAPTAIN COOK." Master .....	Joseph Creer.....	1 Feb., 1879	Ditto .....	440 0 0	1 Nov., 1873.
1st Mate .....	T. E. Robinson .....	14 May, 1885	Ditto .....	220 0 0	1 Feb., 1879.
2nd Mate .....	W. Fraser.....	1 Sept., 1885	Ditto .....	155 0 0	1 Sept., 1885.
1st Engineer .....	E. Broderick .....	1 Feb., 1877	Ditto .....	260 0 0	1 Feb., 1877.
2nd Engineer .....	H. B. Irwin .....	1 Mar., 1882	Ditto .....	188 0 0	1 Mar., 1882.
Firemen (4) .....	.....	.....	President.....	142 0 0	each.
Boatmen (10) .....	.....	.....	Ditto .....	118 0 0	"
Lookout-men (2) .....	.....	.....	Ditto .....	118 0 0	"
Cook and Provodore (1) ...	.....	.....	Ditto .....	118 0 0	"
TWOFOLD BAY. Harbour Master.....	Bourne Russell .....	1 Aug., 1860	Governor and Executive Council	290 0 0	1 Aug., 1860.
Boatmen (4) .....	.....	.....	President.....	118 0 0	each.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>COLONIAL TREASURER—MARINE BOARD OF NEW SOUTH WALES—continued.</b>					
<b>NEWCASTLE.</b>					
Harbour Master & Inspector	H. Newton .....	1 Jan., 1885	Governor and Executive Council	490 0 0	1 Oct., 1873.
Assistant Do	J. Bain .....	1 Jan., 1885	Ditto .....	340 0 0	12 May, 1873.
Pilots .....	James Taylor .....	9 Sept., 1858	Ditto .....	320 0 0	9 Sept., 1858.
	G. Melville .....	1 Aug., 1873	Ditto .....	320 0 0	1 Aug., 1873.
	David Powell .....	1 Oct., 1873	Ditto .....	320 0 0	10 July, 1859.
	Joseph H. Dagwell .....	21 Mar., 1864	Ditto .....	320 0 0	20 Oct., 1863.
	Alex. Hacking .....	1 Nov., 1881	Ditto .....	320 0 0	1 Nov., 1881.
	J. Romney .....	1 Mar., 1885	Ditto .....	320 0 0	1 Mar., 1885.
Carpenter (1) .....	.....	.....	President .....	162 0 0	.....
Boatmen (24) .....	.....	.....	Ditto .....	{ 2 at 154 0 0 22 at 126 0 0	.....
Pilot, Richmond River .....	George R. Easton .....	1 April, 1855	Governor .....	195 0 0	1 April, 1855.
Boatmen (6) .....	.....	.....	President .....	{ 1 at 130 0 0 5 at 118 0 0	each.
Pilot, Clarence River .....	H. McAuley .....	28 Jan., 1883	Governor and Executive Council	195 0 0	28 Jan., 1883.
Boatmen (5) .....	.....	.....	President .....	118 0 0	each.
Pilot, Macleay River .....	J. Jamieson .....	1 May, 1879	Governor and Executive Council	195 0 0	1 May, 1879.
Boatmen (5) .....	.....	.....	President .....	118 0 0	each.
Pilot, Manning River .....	John Muir .....	16 April, 1875	Governor and Executive Council	195 0 0	16 April, 1875.
Boatmen (5) .....	.....	.....	President .....	118 0 0	each.
Pilot, Port Macquarie .....	Edward St. A. Kingsford	26 June, 1858	Governor and Executive Council	195 0 0	26 June, 1858.
Boatmen (5) .....	.....	.....	President .....	118 0 0	each.
Pilot, Moruya .....	A. Sutherland .....	25 Mar., 1884	Governor and Executive Council	195 0 0	25 Mar., 1884.
Boatmen (2) .....	.....	.....	President .....	118 0 0	each.
Pilot, Bellinger River .....	Thomas Stewart .....	23 July, 1868	Governor and Executive Council	195 0 0	23 July, 1868.
Boatmen (4) .....	.....	.....	President .....	118 0 0	each.
Pilot, Tweed River .....	William M'Gregor .....	17 June, 1870	Governor and Executive Council	195 0 0	17 June, 1870.
Boatmen (5) .....	.....	.....	President .....	118 0 0	each.
Pilot, Wollongong .....	Robert Houslar .....	2 July, 1867	Governor and Executive Council	195 0 0	2 July, 1867.
Pilot, Shoalhaven .....	Thomas Bishop .....	4 Feb., 1881	Ditto .....	195 0 0	4 Feb., 1881.
Boatmen (4) .....	.....	.....	President .....	118 0 0	each.
Pilot, Nambuccra .....	W. J. Whites .....	13 May, 1874	Governor and Executive Council	195 0 0	13 May, 1874.
Boatmen (2) .....	.....	.....	President .....	118 0 0	each.
Pilot, Camden Haven .....	J. Leonard .....	10 July, 1878	Governor and Executive Council	195 0 0	10 July, 1878.
Boatmen (2) .....	.....	.....	President .....	118 0 0	each.
Pilot, Lake Macquarie .....	Thomas Boyd .....	20 Jan., 1882	Governor and Executive Council	195 0 0	20 Jan., 1882.
Boatmen (2) .....	.....	.....	President .....	118 0 0	each.
Pilot, Cape Hawke .....	A. H. Kendall .....	6 June, 1883	Governor and Executive Council	195 0 0	6 June, 1883.
Boatmen (2) .....	.....	.....	President .....	118 0 0	each.
Pilot in charge of Moorings, Kiama.	T. Tullock .....	1 Sept., 1872	Governor and Executive Council	170 0 0	1 Sept., 1872.
Pilot in charge of Moorings, Gerringong.	J. Sharpe .....	1 Dec., 1878	Ditto .....	25 0 0	1 Dec., 1878.
Pilot in charge of Moorings, Shellharbour.	J. D. Hoy .....	1 Nov., 1876	Ditto .....	50 0 0	1 Nov., 1876.
Pilot in charge of Moorings, Tathra.	C. B. Meyer .....	1 Jan., 1878	Ditto .....	25 0 0	1 Jan., 1878.
Signal Stations—	.....	.....	Ditto .....	.....	.....
Signal Master, Fort Phillip	George J. Moffitt .....	1 Jan., 1863	Ditto .....	214 0 0	8 May, 1858.
Assistant	Charles Hanson .....	1 Jan., 1865	Colonial Treasurer .....	118 0 0	1 Mar., 1863.
Signal Master, South Head	James Graham .....	10 Feb., 1852	Governor .....	214 0 0	15 Oct., 1847.
Junior Operator .....	J. Francis .....	1 Feb., 1878	President .....	135 0 0	1 Feb., 1878.
Newcastle—	.....	.....	.....	.....	.....
Signal-man .....	J. Oldfield .....	1 Aug., 1876	Colonial Treasurer .....	130 0 0	1 Aug., 1876.
Night look-out man .....	J. Crapps .....	1 Sept., 1879	Ditto .....	130 0 0	1 Sept., 1879.
Additional look-out man .....	M. Hickey .....	1 Oct., 1884	Ditto .....	106 0 0	1 Oct., 1884.
Telegraph Operators—	.....	.....	.....	.....	.....
Port Office .....	John Lawrence .....	1 Jan., 1870	Ditto .....	52 0 0	21 Oct., 1864.
Port Stephens .....	J. Priest .....	1 Sept., 1875	Ditto .....	26 0 0	13 Sept., 1862.
Signal-man, Brunswick River	G. Simpson .....	1 Sept., 1880	Ditto .....	52 0 0	1 Sept., 1880.
<b>GLEBE ISLAND ABATTOIR.</b>					
Inspector .....	Joseph Jager <sup>1</sup> .....	3 Dec., 1886	Governor and Executive Council	265 0 0	8 April, 1867.
„ Acting .....	Joseph Jager <sup>1</sup> .....	1 Mar., 1884	Colonial Treasurer .....	265 0 0	8 April, 1867.
Assistant Inspector .....	George W. Shelley .....	3 Dec., 1886	Governor and Executive Council	267 0 0	10 Feb., 1883.
„ Acting .....	George W. Shelley .....	6 Mar., 1884	Colonial Treasurer .....	267 0 0	10 Feb., 1883.
Overseer* .....	Harry B. Holliday <sup>2</sup> .....	10 Oct., 1883	Ditto .....	150 0 0	10 Oct., 1883.
Jobbing Carpenter (1) .....	.....	.....	Ditto .....	110 0 0	.....
Labourers (2) .....	.....	.....	Ditto .....	100 0 0	each.
„ (2) <sup>3</sup> .....	.....	.....	Ditto .....	80 0 0 <sup>4</sup>	„

<sup>1</sup> With residence valued at £52 per annum. <sup>2</sup> With residence valued at £26 per annum. <sup>3</sup> With residence valued at £20 per annum. <sup>4</sup> One allowed £12 per annum for opening and closing Abattoirs. \* Office abolished, 17 November, 1886.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>COLONIAL TREASURER—continued.</b>					
<b>BOARD FOR INSPECTING AND MAINTAINING THE SUPPLY OF COLONIAL WARLIKE STORES.</b>					
President .....	Major-General John Soame Richardson, C.B.	1 Jan., 1870	Governor and Executive Council	} Nil.	17 Feb., 1865.
Members .....	Colonel Charles F. Roberts, C.M.G.	1 Dec., 1876	Ditto .....		1 Jan., 1873.
	Colonel W. W. Spalding, C.M.G.	21 Mar., 1882	Ditto .....		1 Aug., 1871.
	Lieut.-Colonel George John Airey.	24 Jan., 1872	Ditto .....		1 Aug., 1871.
	Captain Francis Hixson ...	1 Jan., 1870	Ditto .....		1 Jan., 1863.
Secretary .....	Julien Thomas Blanchard	20 July, 1876	Ditto .....		15 Dec., 1862.
	Edward Orpen Moriarty...	1 Jan., 1870	Ditto .....		1 May, 1849.
	C. F. B. Thirkell* .....	10 Aug., 1878	Ditto .....		1 Oct., 1875.
* Deceased 3rd September.					
<b>IMPERIAL PENSION OFFICE.</b>					
Clerk-in-charge .....	George Evans Labertouche	1 Oct., 1872	Governor and Executive Council	390 0 0	1 Oct., 1872.
<b>BOARD OF PHARMACY.</b>					
President of the Board of Pharmacy.	Charles McKay, M.D.....	22 Dec., 1882	Governor and Executive Council	} Nil.	8 Dec., 1865.
Members .....	Henry Norman MacLaurin, M.D.	31 Aug., 1885	Ditto .....		31 Aug., 1885.
	William H. McCarthy ...	14 June, 1882	Under 40 Vict. No. 9, section 9.		14 June, 1882.
	James Mayne .....	10 July, 1883	Ditto .....		10 July, 1883.
	Bozon Frederick Bozon ...	22 July, 1884	Ditto .....		19 Sept., 1876.
	Thomas Boucher Melhuish	6 July, 1886	Ditto .....		6 July, 1886.
	Henry William Sadler ...	6 July, 1886	Ditto .....		6 July, 1886.
	John Simpson Abraham...	3 Aug., 1886	Ditto .....		10 June, 1879.
Secretary and Registrar.....	Edward Thornton .....	4 Jan., 1887	Ditto .....		4 Jan., 1887.
	Wm. Townley Pinhey, J.P.	6 Sept., 1878	Governor and Executive Council		120 0 0
<b>PUBLIC WHARVES.</b>					
<i>Circular Quay.</i>					
Manager .....	John Jackson .....	1 Nov., 1884	Governor and Executive Council	465 0 0	1 Nov., 1884.
	George Packer .....	1 Feb., 1874	Ditto .....	290 0 0	1 Feb., 1874.
	John Warren .....	1 Feb., 1874	Ditto .....	190 0 0	1 Feb., 1874.
	John Webb .....	1 Dec., 1883	Ministerial .....	140 0 0	1 Dec., 1883.
	Charles Lovelock .....	28 Nov., 1881	Ministerial .....	156 0 0	28 Nov., 1881.
	W. Fender .....	26 July, 1886	Ministerial .....	130 0 0	26 July, 1886.
<i>Cowper Wharf.</i>					
Manager .....	J. W. Helliard .....	5 June, 1879	Governor and Executive Council	240 0 0	3 Mar., 1875.
	F. T. Bolton .....	25 Nov., 1885	Ministerial .....	120 0 0	25 Nov., 1885.
	Niven McDougall .....	1 Feb., 1874	Ministerial .....	143 0 0	1 Feb., 1874.
	George Waddy .....	1 Nov., 1885	Ministerial .....	104 0 0	1 Nov., 1885.

## PART VI.

## Minister of Public Instruction,

AND THE

DEPARTMENTS UNDER HIS SUPERVISION AND CONTROL.

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MINISTER OF PUBLIC INSTRUCTION.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>PUBLIC INSTRUCTION.</b>					
Minister of Public Instruction.	William Joseph Trickett <sup>1</sup> succeeded by Arthur Renwick, M.D. ...	2 May, 1884 26 Feb., 1886	Governor and Executive Council by Commission. Ditto .....	1,500 0 0 1,500 0 0	28 May, 1883. 12 Oct., 1881
Under Secretary.....	Edwin Johnson <sup>2</sup> .....	14 Nov., 1884	Governor and Executive Council	960 0 0	23 Jan., 1855.
Chief Clerk.....	George Miller <sup>3</sup> .....	1 May, 1881	Ditto .....	650 0 0	1 Feb., 1860.*
First Clerk.....	George Kingsbury Sircom	1 May, 1881	Ditto .....	440 0 0	23 April, 1878.
Statistical Clerk.....	John Huffer.....	1 Jan., 1883	Ditto .....	390 0 0	1 Jan., 1858.*
Clerk.....	Thomas W. M. Richards...	1 May, 1881	Ditto .....	350 0 0	20 Mar., 1865.
Clerk.....	John Booth .....	1 May, 1881	Ditto .....	350 0 0	16 Aug., 1867.
Clerk in Charge of Records.	Edward L. Hitchins .....	1 May, 1881	Ditto .....	350 0 0	1 Aug., 1873.
Despatch Clerk .....	F. O'Dell Monckton .....	1 May, 1881	Ditto .....	350 0 0	1 Dec., 1867.
Clerks .....	Thomas George West.....	1 May, 1881	Ditto .....	315 0 0	1 Sept., 1871.
	George Kilminster .....	1 May, 1881	Ditto .....	255 0 0	1 Sept., 1871.
	William Duffield Cansdell	1 May, 1881	Ditto .....	255 0 0	1 July, 1872.
	Joseph Hamilton Strong...	1 May, 1881	Ditto .....	255 0 0	1 July, 1874.
	Augustus Mecham .....	1 June, 1881	Ditto .....	240 0 0	— Mar., 1878.
	Thomas Kinninmont .....	1 May, 1881	Ditto .....	200 0 0	21 May, 1877.
	Thomas Green .....	1 May, 1881	Ditto .....	165 0 0	1 Oct., 1880.
	Chas. J. D. Blackmore .....	18 June, 1883	Ditto .....	115 0 0	18 June, 1883.
	John L. Caldwell.....	21 June, 1883	Ditto .....	115 0 0	21 June, 1883.
	Walter J. Durie .....	1 Aug., 1883	Ditto .....	115 0 0	1 Aug., 1883.
	Fred. J. Willard .....	2 Aug., 1883	Ditto .....	115 0 0	2 Aug., 1883.
	Charles M. Moesch .....	2 Aug., 1883	Ditto .....	115 0 0	2 Aug., 1883.
	Homer Waites .....	3 Aug., 1883	Ditto .....	115 0 0	3 Aug., 1883.
Junior Clerks .....	Alfred S. Lee <sup>4</sup> .....	27 Dec., 1883	Ditto .....	75 0 0	27 Dec., 1883.
	William C. Steward <sup>4</sup> .....	2 May, 1884	Minister .....	70 0 0	28 Mar., 1881.*
	Edward Gracie.....	19 May, 1884	Governor and Executive Council	90 0 0	19 May, 1884.
<b>ACCOUNT BRANCH.</b>					
Accountant.....	John Manifold Gibson .....	1 May, 1881	Ditto .....	550 0 0	1 Feb., 1870.
Assistant Accountant .....	Robert Munro .....	1 May, 1881	Ditto .....	390 0 0	1 Jan., 1869.
First Clerk .....	Hugh Alexander Scott .....	1 May, 1881	Ditto .....	340 0 0	9 Mar., 1874.
Clerks .....	Frederick Grönvald.....	1 May, 1881	Ditto .....	315 0 0	13 April, 1869.
	Albert Edward Bassan .....	1 May, 1881	Ditto .....	200 0 0	13 June, 1879.
	Alexander Kinninmont .....	1 May, 1881	Ditto .....	190 0 0	13 June, 1879.
	William Henry Bourke .....	1 May, 1881	Ditto .....	165 0 0	16 June, 1879.
	Francis Downes .....	24 Dec., 1884	Ditto .....	165 0 0	1 June, 1881.
	Edwin J. E. Oliver .....	30 June, 1881	Ditto .....	115 0 0	30 June, 1881.
	Edgar C. Smithers .....	12 June, 1883	Ditto .....	115 0 0	12 June, 1883.
Junior Clerks .....	Percy Leary <sup>4</sup> .....	23 July, 1883	Minister .....	75 0 0	23 July, 1883.
	John J. Pigott.....	4 Mar., 1885	Ditto .....	50 0 0	4 Mar., 1885
	Edward J. Beauman .....	8 May, 1885	Ditto .....	75 0 0	8 May, 1885
<b>PAY BRANCH.</b>					
Cashier .....	Andrew Fairfax .....	1 May, 1881	Governor and Executive Council	500 0 0	16 July, 1861.
Assistant Cashier .....	Michael Joseph M'Guanne	1 Jan., 1883	Ditto .....	265 0 0	7 Dec., 1875.
Junior Clerks .....	Gladstone Eaton <sup>4</sup> .....	1 June, 1883	Ditto .....	75 0 0	1 June, 1883.
	George A. Gilder.....	19 May, 1884	Ditto .....	90 0 0	19 May, 1884.
	Sydney Thomas Calloway	1 Aug., 1885	Minister .....	50 0 0	1 Aug., 1885
<b>ARCHITECT'S BRANCH.</b>					
Architect for Public Schools	William Edmund Kemp...	17 June, 1880	Governor and Executive Council	650 0 0	13 Nov., 1854.
Chief Draftsman .....	James Sven Wigram .....	5 July, 1880	Ditto .....	390 0 0	27 Sept., 1867.
Draftsmen .....	William Frederick Briggs	19 July, 1880	Ditto .....	265 0 0	9 Sept., 1878.
	William Mitchell.....	1 June, 1881	Ditto .....	265 0 0	9 Feb., 1875.
	Alex. John Williamson .....	30 Dec., 1884	Ditto .....	265 0 0	30 Dec., 1884.
	Herbert Henry .....	14 Feb., 1881	Ditto .....	240 0 0	14 Feb., 1881.
	Gerald Petre .....	30 Dec., 1884	Ditto .....	200 0 0	30 Dec., 1884.
Junior Draftsmen .....	Richard M'D. S. Wells .....	14 Feb., 1881	Ditto .....	140 0 0	14 Feb., 1881.
	George Robert Barnes .....	1 July, 1883	Ditto .....	130 0 0	1 July, 1881.
	Chas. Chandler .....	1 April, 1884	Ditto .....	103 0 0	1 April, 1884.
	John Wm. Tristram .....	30 Dec., 1884	Ditto .....	90 0 0	30 Dec., 1884.
First Clerk .....	Charles John Alderdice .....	6 Aug., 1880	Ditto .....	265 0 0	10 Dec., 1875.
Clerks .....	John White .....	1 Aug., 1881	Ditto .....	140 0 0	22 June, 1880.
	Charles Julius Perry .....	1 July, 1883	Ditto .....	140 0 0	15 June, 1881.
	John S. D'Arcy .....	24 Dec., 1884	Ditto .....	140 0 0	24 June, 1881.
Clerks of Works .....	Edward Poulton .....	1 Jan., 1881	Ditto .....	390 0 0	14 Mar., 1877.
	George William Hartnell	1 Jan., 1881	Ditto .....	390 0 0	— Sept., 1877.
	Frederick Dadley .....	1 Jan., 1881	Ditto .....	315 0 0	22 May, 1878.
	William Hook Margrie .....	1 Jan., 1881	Ditto .....	290 0 0	18 Mar., 1878.
	William Thomas Horne .....	1 Jan., 1881	Ditto .....	290 0 0	26 Sept., 1879.
	Roden Foster Crichton .....	23 May, 1881	Ditto .....	290 0 0	23 May, 1881.
	Donald A. Porter.....	4 June, 1881	Ditto .....	240 0 0	4 June, 1881.
	Henry Catt .....	4 June, 1881	Ditto .....	240 0 0	4 Oct., 1881.
	Ebenezer Gostelow .....	1 Sept., 1882	Ditto .....	240 0 0	1 Sept., 1882.
	Robert M'Donald .....	1 Jan., 1883	Ditto .....	240 0 0	25 Mar., 1878.
	David Duncan .....	21 Aug., 1882	Ditto .....	240 0 0	21 Aug., 1882.
	Thos. Nurthen .....	1 Nov., 1884	Ditto .....	240 0 0	1 Nov., 1884.

<sup>1</sup> To 25 February, 1886.

<sup>2</sup> Gives security, £1,000.

<sup>3</sup> Appointed Chief Clerk under Council of Education, 1 February, 1875.

Gives security, £500.

<sup>4</sup> Appointed on probation and subject to passing Civil Service examination.

\* Services not continuous.



Office	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government
<b>MINISTER OF PUBLIC INSTRUCTION—PUBLIC INSTRUCTION—continued.</b>					
<i>INSPECTORAL STAFF—continued.</i>					
<i>Wagga Wagga District.</i>					
District Inspector	Gerald O'Byrne	18 May, 1880	Governor and Executive Council	600 0 0	1 April, 1860.
Inspector	Lancelot E. Lawford, M.A.	1 July, 1883	Ditto	490 0 0	1 July, 1883.
Assistant Inspectors	Stewart Wright, B.A.	1 July, 1883	Ditto	390 0 0	1 July, 1883.
	J. D. St. Clair Maclardy, M.A.	1 July, 1883	Ditto	370 0 0	1 July, 1883.
<i>Wellington District.</i>					
District Inspector	William Henry Johnson	5 May, 1882	Ditto	600 0 0	— Feb., 1860.
Inspector	John P. Rooney	23 Dec., 1884	Ditto	490 0 0	30 Mar., 1864.
Assistant Inspector	John Leslie Smith, B.A.	1 Mar., 1886	Ditto	390 0 0	27 July, 1880.
<b>PUBLIC SCHOOLS CADET CORPS.</b>					
Captain Commanding	Henry William Strong <sup>2</sup>	7 April, 1873	Ditto	1350 0 0	27 Aug., 1866.
Instructor to Artillery Cadet Corps.				46 0 0	
Instructor to Public Schools Cadet Corps.				144 0 0	
<b>SCHOOL ATTENDANCE BRANCH.</b>					
Principal School Attendance Officer.	Alfred Whittam Sladen, J.P.	23 June, 1880	Governor and Executive Council	440 0 0	— April, 1861.*
Clerk	James Green	13 Oct., 1882	Ditto	240 0 0	17 July, 1857.
School Attendance and Payment Officers.	George Turner	23 Sept., 1880	Ditto	220 0 0	1 June, 1856.
	Robert George	5 Jan., 1881	Ditto	210 0 0	1 Oct., 1852.
	William G. Wilson	5 Jan., 1881	Ditto	210 0 0	5 Jan., 1881.
	Rowland T. Sutton	5 Jan., 1881	Ditto	210 0 0	5 Jan., 1881.
	John J. Carolan	23 Feb., 1882	Ditto	210 0 0	1 Oct., 1864.
	William Long	1 April, 1882	Ditto	210 0 0	1 Jan., 1860.
	Edward Sharp	7 Dec., 1881	Ditto	210 0 0	1 May, 1853.*
	Wilham Deane	5 May, 1881	Ditto	210 0 0	1 July, 1883.
	Patrick Downey	5 May, 1881	Ditto	210 0 0	1 Sept., 1864.
	Henry Evans	17 May, 1881	Ditto	210 0 0	17 Jan., 1867.
	Emanuel Lyne	5 May, 1881	Ditto	210 0 0	5 June, 1865.
	Alfred Asher	5 May, 1881	Ditto	210 0 0	5 May, 1881.
	David Swan	5 May, 1881	Ditto	210 0 0	1 Jan., 1861.
	William L. Bernard	5 May, 1881	Ditto	210 0 0	1 Jan., 1860.
	Abraham S. Ling	5 May, 1881	Ditto	210 0 0	— April, 1863.
	Denis Dwyer	5 May, 1881	Ditto	210 0 0	5 May, 1881.
	Charles H. Stratford	5 May, 1881	Ditto	210 0 0	1 Feb., 1862.
	George C. James	5 May, 1881	Ditto	210 0 0	14 Mar., 1870.
	William Turner	21 Feb., 1882	Ditto	210 0 0	14 Mar., 1870.
	Thomas H. Crommelin	3 Mar., 1882	Ditto	210 0 0	— Jan., 1872.*
	William J. Huggart	5 May, 1881	Ditto	210 0 0	9 Nov., 1860.
	Henry Goldsmith	5 May, 1881	Ditto	210 0 0	1 April, 1856.
	Walter Robert Curran	5 May, 1881	Ditto	210 0 0	5 May, 1881.
	John Kealy	5 May, 1881	Ditto	210 0 0	1 June, 1860.
	George M. Fitzpatrick	3 Mar., 1882	Ditto	210 0 0	11 Feb., 1876.
	Frederick A. H. Cork	3 Mar., 1882	Ditto	210 0 0	3 Mar., 1882.
	Charles C. Fagan	3 Mar., 1882	Ditto	210 0 0	3 Mar., 1882.
	Wm. Henry Bayly	12 June, 1883	Ditto	210 0 0	1 Oct., 1881.
	Edward Justehus	— May, 1883	Ditto	210 0 0	— Jan., 1860.*
	Samuel Russell	1 April, 1882	Ditto	210 0 0	— July, 1862.*
	Henry S. Carpenter	21 Feb., 1882	Ditto	210 0 0	1 April, 1863.*
	Frederick J. White	21 Feb., 1882	Ditto	210 0 0	21 Feb., 1882.
Andrew M'George	3 Mar., 1882	Ditto	210 0 0	3 Mar., 1882.	
Charles Hill Thomson	3 Mar., 1882	Ditto	210 0 0	19 April, 1849.	
Luke Tierney	1 July, 1883	Ditto	210 0 0	1 Jan., 1859.	
James C. Thornton	3 Mar., 1882	Ditto	210 0 0	3 Mar., 1882.	
Pat. J. Cusack	12 June, 1883	Ditto	210 0 0	7 July, 1873.*	
John Wilson	1 Jan., 1883	Ditto	210 0 0	1 May, 1868.	
Pat. O'D. Molony	1 Jan., 1883	Ditto	210 0 0	15 Mar., 1851.	
T. G. Weir	17 Jan., 1884	Ditto	150 0 0	1 Jan., 1858.*	
Wm. W. Dixon	1 Feb., 1884	Ditto	210 0 0	— June, 1862.	
Carl Meyer	1 July, 1883	Ditto	210 0 0	3 Sept., 1873.	
Malcolm Groat	1 Jan., 1883	Ditto	210 0 0	— June, 1854.*	
Francis Fawcett	6 Feb., 1885	Ditto	210 0 0	14 Feb., 1876.	
Herbert Valliant Wigg	15 Feb., 1885	Ditto	210 0 0	2 Nov., 1880.	
Assistant Officers	Charles Clotworthy Walkinshaw	5 May, 1881	Ditto	170 0 0	27 Feb., 1880.
	Geo. Sanders	1 Jan., 1883	Ditto	170 0 0	— 1852.
	R. J. Fawcett	1 Jan., 1886	Ditto	200 0 0	1 Oct., 1872.
	L. M. B. Mills	1 Jan., 1886	Ditto	200 0 0	
	Wm. Apsey	1 Jan., 1886	Ditto	200 0 0	
Messengers (4)	1 at			150 0 0	
	1 at			135 0 0	
	1 at			70 0 0	
	1 at			50 0 0	
Officekeepers (4)	1 at			100 0 0	
	1 at			72 0 0	
	1 at			52 0 0	
	1 at			52 0 0	

<sup>1</sup> £100 transferred from Fort-street Traming School for Superintendent of Drill of forage. <sup>2</sup> Allowed £90 per annum in lieu of quarters, and £64 per annum in lieu of services not continuous.

The Chief Inspector, Deputy Chief Inspector, District Inspectors, and Inspectors when travelling on service, and distant 2 miles from their Head Quarters, receive an allowance of 10s per diem; and when on a journey which necessitates absence from Head Quarters at night, 25s per diem. When the cost of conveyance exceeds 10s per diem an allowance to cover such excess is paid.

The Architect for Public Schools receives 15s per diem travelling allowance and cost of conveyance.

The Clerks of Works receive 12s per diem travelling allowance and cost of conveyance.

The Principal School Attendance and Payments Officer receives the same allowance as is paid to School Inspectors.

School Attendance and Payments Officers' travelling allowances are —For Metropolitan Officers, District Nos 1, 2, 3, and 4, £20 per annum. Country Officers are allowed travelling expenses in accordance with the requirements of their several districts.

The Traming Master is allowed quarters valued at £100 per annum; occupied until required for other purposes.

Office.	Name.	Date of Appointment.	By whom appointed, and under what instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	

MINISTER OF PUBLIC INSTRUCTION—PUBLIC INSTRUCTION—continued.

PROTESTANT ORPHAN SCHOOL.

Matron <sup>1</sup> *	Annie Oakes Pringle	16 Mar., 1875	Governor and Executive Council	240 0 0	16 Mar., 1875.
Master <sup>2</sup> *	Henry Schwartzkoff	9 June, 1881	Ditto	200 0 0	20 June, 1860.
Surgeon	Chas. E. Rowling†	1 Jan., 1883	Ditto		28 April, 1871.
Schoolmaster	John J. Vivian†	1 July, 1881	Ditto	216 0 0	1 Jan., 1879.
Girls' Attendant, acting as Sub-Matron. <sup>3</sup> *	Eliza Asselin	8 Aug., 1884	Matron	52 0 0	8 Aug., 1884.
Drillmaster <sup>4</sup>	John Harris§	1 April, 1878	Governor and Executive Council	90 0 0	1 April, 1878.
Male Attendants (3) <sup>5</sup>			Matron	{ 1 at 55 0 0 2 at 50 0 0	each.
Female Attendants (6) <sup>3</sup>			Ditto	{ 5 at 35 0 0 1 at 30 0 0	"

<sup>1</sup> Allowed quarters and washing; also a ration of provisions, fuel, and light, also a ration of provisions for each child. <sup>2</sup> Allowed quarters and washing; also a ration of provisions fuel, and light, and half a ration of provisions for each child. <sup>3</sup> Allowed quarters, rations of provisions, fuel, and light. <sup>4</sup> Allowed quarters, rations of provisions, fuel, and light; also half a ration of provisions for each child. <sup>5</sup> One allowed £10 per annum in lieu of quarters, two allowed quarters; all allowed rations of provisions, fuel, and light.  
 \* Paid to 30 September, 1886. † Dr. Rowling paid from O. School Vote only to 31 October, 1885. Acting as Government Medical Officer, Parramatta, since 1 November. § Paid to 28 July, 1886. ¶ Paid to 31 August, 1886. || Paid from Medical Vote.

ROMAN CATHOLIC ORPHAN SCHOOL.

*Matron	Margaret Mary Gertrude Byrne.	1 Oct., 1876	Governor and Executive Council	200 0 0	1 Feb., 1859.
*Sub-Matron	Catherine Woodbury	1 Aug., 1875	Ditto	70 0 0	1 Aug., 1875.
*Teachers	{ Girls' Alice M'Closkey	1 Oct., 1876	Ditto	70 0 0	1 Aug., 1876.
	{ Infants' Bridget D'Arcy	1 Sept., 1881	Ditto	70 0 0	1 Sept., 1881.
Surgeon	Charles Rowling	1 April, 1882	Ditto		1 April, 1882.
*Drillmaster	Michael O'Shea	1 Nov., 1871	Ditto	90 0 0	1 Nov., 1871.
Attendants			Matron	{ 1 at 60 0 0† 1 at 50 0 0† 1 at 45 0 0† 5 at 35 0 0†	each.
Clerk to Committee	Thomas Cooper Makinson.	1 Aug., 1856.	Governor and Executive Council	80 0 0†	1 Aug., 1856.

NOTE.—All allowed quarters, except the Clerk to Committee, and the wood-cutter; the baker allowed £26 per annum in lieu. Each allowed a ration of provisions, except Clerk to Committee. \* Paid to 30 September, 1886. † Paid to 31 August, 1886. || Paid from Medical Vote.

INDUSTRIAL SCHOOLS.

NAUTICAL SCHOOL SHIP "VERNON."

Commander and Superintendent.	Frederick William Neitenstein.	1 April, 1878	Governor and Executive Council	*450 0 0	6 Oct., 1873.
Lieutenant	William Henry Mason	1 April, 1878	Ditto	215 0 0	1 April, 1878.
Visiting Surgeon	Owen Spencer Evans, M.R.C.S.	(See page 30.)	Ditto		
Schoolmaster	James William Ball	16 May, 1881	Ditto	208 0 0	14 Nov., 1859.
Second Officer	Adolphus Peter Robilliard	14 June, 1881	Ditto	160 0 0	6 April, 1876.
Assistant Schoolmaster (1)			Ditto	100 0 0	
Carpenter (1)			Ditto	150 0 0	
Boatswain (1)			Ditto	114 0 0	
Tailor (1)			Ditto	168 0 0	
Senior Seaman (1)			Commander and Superintendent	90 0 0	
Seamen (3)			Ditto	84 0 0	each.
Cook and Steward (1)			Ditto	120 0 0	
General Assistant (1)			Ditto	96 0 0	
Bandmaster (1)			Ditto	120 0 0	

\* With quarters, rations, fuel, and light, of the estimated value of £100.

NOTE.—Each person is allowed quarters, rations, fuel, and light, except surgeon, tailor, and bandmaster. The Commander and Superintendent give security to the amount of £250.

BILOELA INDUSTRIAL SCHOOL FOR GIRLS, PARRAMATTA RIVER.

Superintendent	Selina Georgina Walker <sup>1</sup>	1 April, 1875	Governor and Executive Council	240 0 0	1 April, 1875.
Assistant Superintendent	Marian Brackenreg <sup>2</sup>	15 Mar., 1871	Ditto	125 0 0	15 Mar., 1871.
Teacher	Margaret Kelly <sup>3</sup>	3 Oct., 1867	Ditto	150 0 0	3 Oct., 1867.
Visiting Surgeon		(See page 30.)			
Clerk and Storekeeper	Edith Maud Walker <sup>3</sup>	1 Jan., 1882	Ditto	90 0 0	15 April, 1881.
Assistant Matrons	Caroline Brackenreg <sup>3</sup>	1 Mar., 1871	Colonial Secretary	60 0 0	1 Mar., 1871.
	Mary E. Brearley <sup>3</sup>	14 May, 1885	Minister of Public Instruction	60 0 0	14 May, 1885.
Laundress (1)	Jane Thompson <sup>3</sup>	25 June, 1886	Superintendent	30 0 0	25 June, 1886.
Carter and Messenger (1)	William Saunders <sup>3</sup>	26 May, 1871	Colonial Secretary	75 0 0	26 May, 1871.
Cook	Bridget Yates	1 April, 1884	Superintendent	30 0 0	1 Aug., 1875.
Additional Messenger or Watchman.	Thos. Dignam <sup>4</sup>	21 April, 1884	Minister of Public Instruction	100 0 0	16 Feb., 1863.

The Superintendent gives security to the amount of £250.

<sup>1</sup> Allowed a house; also a double ration of provisions, fuel, and light. <sup>2</sup> Allowed a cottage; also a ration of provisions, fuel, and light. <sup>3</sup> Allowed quarters, rations of provisions, fuel, and light. <sup>4</sup> Allowed a ration of provisions and travelling expenses.



Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>MINISTER OF PUBLIC INSTRUCTION—continued.</b>					
<b>AUSTRALIAN MUSEUM.</b>					
Official Trustees.....	His Honor the Chief Justice .....		{ Under the provisions of the Act 27 Vic. No. 2.		
	The Honble. the Colonial Secretary .....				
	The Honble. the Colonial Treasurer.....				
	The Honble. the Attorney-General.....				
	The President of the Medical Board.....				
	The Surveyor-General.....				
	The Auditor-General .....				
	The Colonial Architect .....				
	The Collector of Customs..				
Crown Trustee .....	The Honble. Sir Alfred Stephen, C.B., G.C.M.G., M.L.C.	5 Feb., 1880			
Elective Trustees .....	James C. Cox, M.D., F.L.S., C.M.Z.S.	1 June, 1865			
	John Belisario, D.D.S. ...	6 Nov., 1873			
	Archibald Liversidge, F.R.S.	5 Feb., 1874			
	Sir Alfred Roberts, Knt., M.R.C.S.E.	6 Aug., 1874			
	The Honble. James Norton, M.L.C.	6 Aug., 1874			
	H. H. B. Bradley .....	7 Nov., 1878			
	Robert Hunt, F.G.S. ....	2 Oct., 1879			
	Charles Moore, F.L.S. ....	18 Dec., 1879			
	C. S. Wilkinson, F.G.S. ...	1 June, 1880			
	The Hon. P. G. King, M.L.C.	5 July, 1881			
	W. J. Stephens, M.A.....	11 June, 1883			
	Edmund Fosbery.....	7 Sept., 1886			
Curator .....	Edward Pierson Ramsay, F.L.S., F.R.S.E. <sup>1</sup>	22 Sept., 1874	Trustees, and approved by Governor and Executive Council.	600 0 0	
Secretary.....	Sutherland Sinclair.....	11 Sept., 1882	Trustees .....	300 0 0	
Ticket Writer.....	G. H. Barrow .....	1 Aug., 1881	Ditto .....	200 0 0	
Assistants in Zoology ...	J. D. Ogilby.....	14 Jan., 1885	Ditto .....	175 0 0	
	A. S. Olliff .....	1 Feb., 1885	Ditto .....	175 0 0	
Taxidermist .....	John Adolphus Thorpe ..	3 June, 1869	Ditto .....	225 0 0	
Articulator and Photographer (1).	Henry Barnes .....	15 Mar., 1860	Ditto .....	225 0 0	
Carpenter (1) .....	R. Barnes <sup>2</sup> .....	— 1866	Ditto .....	156 10 0	
Assistants .....	W. H. Hill .....	1 June, 1885	Ditto .....	120 0 0	
Attendants (3) .....	M. O'Grady .....	— 1854	Ditto .....	132 0 0	
	S. Lovell <sup>2</sup> .....	— 1880	Ditto .....	120 0 0	
	H. Barnes, junior.....	— 1878	Ditto .....	48 0 0	
Female Attendant (1) .....	A. Dashwood <sup>2</sup> .....		Ditto .....	65 0 0	
Night Watchman .....	B. Lucas <sup>2</sup> .....	23 Feb., 1883	Ditto .....	100 0 0	
Messenger (1).....			Ditto .....	26 0 0	
Labourer (1).....			Ditto .....	28 16 0	
Engaged in connection with the preparation of Scientific Catalogues.	J. Brazier, C.M.Z.S.* .....	16 Nov., 1880	Ditto .....	200 0 0	
	F. Ratte* .....	15 Nov., 1881	Ditto .....	20 0 0	per month.
	T. Whitelegge* .....	— 1883	Ditto .....	0 10 0	per day.
<sup>1</sup> Resides on the premises, and allowed fuel and light; receives £100 per annum for services in connection with the opening of the Museum on Sundays.					
<sup>2</sup> Receives an allowance of 10s. for each Sunday service. * Services not continuous.					
<b>TECHNOLOGICAL MUSEUM.</b>					
Committee of Management	Sir Alfred Roberts, Knt., M.R.C.S.E. (Chairman.)	15 Jan., 1880	Trustees of Australian Museum	Nil.	
	Archibald Liversidge, F.R.S., F.G.S.	15 Jan., 1880	Ditto .....	Nil.	
	Robert Hunt .....	15 Jan., 1880	Ditto .....	Nil.	
Curator and Secretary <sup>1</sup> .....	Joseph Henry Maiden.....	3 Oct., 1881	Ditto .....	350 0 0	3 Oct., 1881.
Clerk .....	George Herald Pettigrew	1 Mar., 1886	Ditto .....	150 0 0	1 Mar., 1886.
Night Watchman .....		9 Feb., 1884	Ditto .....	100 0 0	9 Feb., 1884.
Attendant (1) <sup>2</sup> .....		1 July, 1881	Ditto .....	10 16 8	per month.
Attendant (1) <sup>2</sup> .....		9 Feb., 1884	Ditto .....	10 0 0	"
Messenger (1).....		4 Mar., 1884	Ditto .....	3 5 0	"
Messenger (1).....		26 June, 1885	Ditto .....	3 0 0	"
Carpenters (2) .....		28 Nov., 1881	Ditto .....	0 10 0	per diem each.
		& 22 May, 1882			
Painter .....		11 Feb., 1884	Ditto .....	0 10 0	"
Printer .....		7 Jan., 1885	Ditto .....	0 10 0	"
<sup>1</sup> Allowed £50 per annum in addition for Sunday duty. <sup>2</sup> Receives 10s. for each Sunday attendance.					

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>MINISTER OF PUBLIC INSTRUCTION—continued.</b>					
<b>FREE PUBLIC LIBRARY.</b>					
Trustees .....	Professor William John Stephens, M.A., F.G.S. (Chairman).	19 April, 1870			
	The Rt. Hon. William Bede Dalley, P.C., Q.C., M.L.C.	10 Nov., 1870			15 Nov., 1858.*
	The Honble. William Macleay, M.L.C., F.L.S.	10 Mar., 1870			
	The Honble. John Stewart, M.L.C.	20 April, 1873			
	Edward Greville, Esq., J.P.	9 Aug., 1878	Governor and Executive Council	Nil.	
	The Honble. James Norton, M.L.C.	1 Nov., 1878			
	His Honor Sir J. G. L. Innes, Knt.	11 Feb., 1879			6 June, 1870.*
	His Honor Mr. Justice Windeyer.	29 April, 1884			20 Jan., 1859.*
	The Honble. Edmund Barton, M.P.	1 Sept., 1885			26 July, 1878.*
	Alexander Oliver, Esq., M.A.	30 Dec., 1885			1 Aug., 1865.
Principal Librarian and Secretary.	Robert Cooper Walker <sup>1</sup> ..	1 Oct., 1869	Ditto .....	650 0 0	1 April, 1855.*
Assistant Librarian and Compiler.	Doctor Richard Hawley ..	1 Oct., 1869	Ditto .....	430 0 0	1 Oct., 1869.
Cataloguing Clerk .....	Orlando Stevens <sup>2</sup> .....	1 April, 1884	Ditto .....	240 0 0	1 Mar., 1877.
Overseer—Night .....	George Gifford .....	1 Mar., 1884	Ditto .....	200 0 0	1 Mar., 1877.
Attendants—Day .....	.....	.....	Principal Librarian .....	{ 2 at 148 0 0	each.
				{ 1 at 120 0 0	
				{ 1 at 75 0 0	
				{ 1 at 168 0 0	
Attendants—Night .....	.....	.....	Ditto .....	{ 1 at 120 0 0	
				{ 1 at 75 0 0	
Messenger and Cleaner <sup>2</sup> ..	.....	.....	Ditto .....	160 0 0	
Messenger .....	.....	.....	Ditto .....	60 0 0	
Lending Branch—					
Librarian .....	Michael Francis Cullen ..	1 May, 1885	Governor and Executive Council	390 0 0	12 Jan., 1863.
Assistant Librarian .....	Alfred Augustus Richardson.	1 Mar., 1884	Ditto .....	260 0 0	1 Oct., 1869.
Entry Clerk .....	Edward Hawley .....	1 Mar., 1884	Ditto .....	256 0 0	15 Aug., 1879.
Registrar for Country Libraries.	David Weir .....	1 July, 1883	Ditto .....	200 0 0	1 July, 1880.
Attendants .....	.....	.....	Principal Librarian .....	{ 2 at 140 0 0	each.
				{ 1 at 120 0 0	
Messengers .....	.....	.....	Ditto .....	2 at 60 0 0	„
<sup>1</sup> Allowed quarters, fuel, and light; gives security to the amount of £300. <sup>2</sup> Allowed quarters, fuel, and light.    * Services not continuous.					
<b>OBSERVATORY.</b>					
Government Astronomer ...	Henry Chamberlaine Russell <sup>1</sup> ..	12 July, 1870	Governor and Executive Council	760 0 0	1 Jan., 1859.
Astronomical Assistant.....	Henry Alfred Lenehan <sup>2</sup> ..	9 Aug., 1870	Ditto .....	440 0 0	9 Aug., 1870.
Meteorological Assistant ...	Edwin George Savage.....	13 Sept., 1869	Ditto .....	240 0 0	13 Sept., 1869.
Astronomical Observer .....	James Arthur Pollock.....	1 Jan., 1886	Ditto .....	270 0 0	1 Jan., 1886.
Map Compiler* .....	Charles Egeson .....	21 Jan., 1886	Ditto .....	240 0 0	21 Jan., 1886.
Meteorological Observer ...	Henry Ambrose Hunt.....	21 Jan., 1886	Ditto .....	145 0 0	21 Jan., 1886.
Officer-in-charge of New-castle Time-ball.	W. F. Weatherill .....	22 Feb., 1878	Minister of Justice and Public Instruction.	75 0 0	18 July, 1873.
Instrument-maker.....	W. G. Masters .....	16 Mar., 1886	Ditto .....	200 0 0	16 Mar., 1886.
Messenger (1) <sup>3</sup> .....	.....	.....	Astronomer .....	100 0 0	
<sup>1</sup> Allowed a residence; also £100 for astronomical work for Trigonometrical Survey. Gives security to the amount of £250. <sup>2</sup> Allowed £50 per annum in lieu of house. <sup>3</sup> Allowed a residence.    * Frank Murcott Bladen, transferred to Government Printing Office.					
<b>CHURCH AND SCHOOL LANDS.</b>					
Officer-in-charge <sup>1</sup> .....	Crosbie Blake Brownrigg ..	20 Oct., 1880	The Governor (as Trustee for the Church and School Estate.)	490 0 0	1 Jan., 1863.
Surveyor and Inspector ...	John Macharg .....	14 July, 1883	Governor and Executive Council	370 0 0	24 Sept., 1868.*
Draftsman .....	John Bush .....	20 Oct., 1880	The Governor (as Trustee for the Church and School Estate).	300 0 0	20 Oct., 1880.
2nd Class Draftsman .....	John Edward Holland ..	28 Oct., 1880	Ditto .....	200 0 0	28 Oct., 1880.
Corresponding and Record Clerk.	William Beaumont Melville <sup>2</sup> ..	28 Oct., 1880	Ditto .....	170 0 0	28 Oct., 1880.
<sup>1</sup> Gives security for £500. <sup>2</sup> Removed from the service, 10 April, 1886.    * Services not continuous.					

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.	
				£ s. d.		
<b>MINISTER OF PUBLIC INSTRUCTION—continued.</b>						
<b>NATIONAL ART GALLERY OF NEW SOUTH WALES.</b>						
Trustees .....	Sir Alfred Stephen, Lieutenant-Governor, C.B., G.C.M.G., M.L.C.	25 Feb., 1876	Governor and Executive Council	Nil.	30 April, 1839.	
	Eliczer Levi Montefiore ...	25 Feb., 1876	Ditto .....		Nil.	20 Aug., 1863.
	Eccleston Du Faur .....	25 Feb., 1876	Ditto .....			
	James Reading Fairfax ...	25 Feb., 1876	Ditto .....			
	Henry Carey Dangar, M.L.C. ...	8 Aug., 1876	Ditto .....			
	Edward Combes, C.M.G., M.P. ...	22 Mar., 1881	Ditto .....			
	Sir Patk. A. Jennings, M.P. ...	9 June, 1885	Ditto .....			
	Josiah Mullens.....	9 June, 1885	Ditto .....			
	W. J. Trickett, M.L.A. ...	—Mar., 1886.	Ditto .....			
	The Honble. the Minister for Public Instruction (for the time-being).	.....	Ditto .....			
Secretary and Treasurer ...	W. P. Warton .....	22 Mar., 1886	Trustees .....	150 0 0		
Housekeeper (1) <sup>1</sup> .....	.....	1 May, 1876	Ditto .....	75 0 0		
Custodian (1) .....	.....	2 Sept., 1881	Ditto .....	208 0 0		
Attendant (1).....	.....	9 Sept., 1883	Ditto .....	156 0 0		
Attendant (1).....	H. G. Barringham .....	8 Jan., 1886	Ditto .....	130 0 0		
Attendants, (3) Extra (on Sundays and Public Holidays, as required).	.....	.....	Ditto .....	0 10 0	per diem each.	
Night Watchman .....	H. G. Barringham .....	8 Jan., 1886.	Ditto .....	0 2 0	per night:	
	<sup>1</sup> Resides on the premises, and allowed fuel and light.					
<b>BOARD OF TECHNICAL EDUCATION.</b>						
President .....	Edward Combes, C.E., C.M.G.					
Vice-President .....	*Henry Chamberlaine Russell, B.A., F.R.A.S., F.R.S.					
Members.....	James Barnet .....					
	Thomas Bowerman Belgrave, M.D., M.R.C.S. (Edin.)					
	Owen Blacket, C.E. ....					
	Archd. Liversidge, F.R.S.					
	Angus Mackay† .....	1 Aug., 1883	Governor and Executive Council	Nil.		
	Richard Lennon Murray...					
	William Gilmour Murray.					
	John Norton Oxley.....					
	George Francis Poole .....					
	Norman Selfe, M.I.C.E. ...					
	John Sutherland, M.P. ...					
	Charles Smith Wilkinson, F.G.S., F.L.S.					
	Hon. William Charles Windeyer, Puisne Judge.					
	Alderman John Young, J.P.					
	William Hosking Edmunds	22 Oct., 1883	Ditto .....	Nil.		
	Jacob Garrard, M.P. ....	23 Nov., 1884	Ditto .....	Nil.		
	Alexander Kethel, M.P. ...	1 Dec., 1885	Ditto .....	Nil.		
	Ezekiah Alexander Baker, M.P.					
	Thomas Frederick De Coursey Browne, M.P.					
	Angus Cameron, J.P. ....	25 June, 1886	Ditto .....	Nil.		
	Travers Jones, M.P. ....					
	Lewis Lloyd, M.P. ....					
	Samuel Wilkinson Moore, M.P.					
Secretary.....	Edward Dowling.....	2 Aug., 1883	Ditto .....	550 0 0	4 Aug., 1856.	
	* Appointed Vice-President 30th January, 1885. † Resigned, 29 June, 1886.					

## PART VII.

## Minister of Justice,

AND THE

DEPARTMENTS UNDER HIS SUPERVISION AND CONTROL.

## SUMMARY.

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## MINISTER OF JUSTICE.

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				£ s. d.	
<b>DEPARTMENT OF JUSTICE.</b>					
Minister of Justice .....	Louis Frederick Heydon... succeeded by	21 Dec., 1885	Governor and Executive Council, by Commission.	1,500 0 0	21 Dec., 1885.
Under Secretary of Justice	James Patrick Garvan.....	26 Feb., 1886	Ditto .....	1,500 0 0	26 Feb., 1886.
	William Edmond Plunkett J.P. <sup>1</sup>	9 Dec., 1873	Governor and Executive Council	960 0 0	15 Nov., 1847.
Chief Clerk .....	Thomas Edwin MacNevin <sup>2</sup>	1 Jan., 1875	Ditto .....	550 0 0	11 Feb., 1868.
1st Clerk (in charge of records.)	Henry John Chisholm ...	1 Jan., 1875	Ditto .....	440 0 0	4 Nov., 1859.
2nd Clerk (in charge of correspondence.)	Charles Davis Rainsford...	11 July, 1878	Ditto .....	340 0 0	1 Nov., 1875.
3rd Clerk .....	John Rainsford .....	11 July, 1878	Ditto .....	240 0 0	15 Sept., 1874.
4th Clerk .....	Robert Neil M'Diarmid ...	11 July, 1878	Ditto .....	240 0 0	1 Nov., 1870.
5th Clerk .....	John B. O'Connor .....	1 May, 1881	Ditto .....	240 0 0	1 Nov., 1877.
6th Clerk .....	Matthew Joseph Walsh ...	1 May, 1881	Ditto .....	190 0 0	11 July, 1878.
7th Clerk .....	James Watt <sup>3</sup> .....	24 Oct., 1881	Ditto .....	165 0 0	10 Sept., 1879.
Junior Clerk .....	Edward William Robinson	1 Oct., 1884	Ditto .....	140 0 0	1 April, 1882.
Extra Clerks .....	Samuel Hawthorne .....	1 Oct., 1884	Ditto .....	240 0 0	25 Sept., 1882.
	William Stafford .....	1 Oct., 1884	Ditto .....	240 0 0	9 April, 1883.
Accountant.....	Samuel G. Barff <sup>4</sup> .....	1 Sept., 1883	Ditto .....	340 0 0	9 Sept., 1878.
Assistant Accountant .....	Beilby P. P. Kemp <sup>5</sup> .....	1 Mar., 1884	Ditto .....	255 0 0	1 Jan., 1879.
Messengers (3) .....				{ 1 at 1 at 1 at	120 0 0 75 0 0 52 0 0
Housekeeper (1) <sup>6</sup> .....					75 0 0

<sup>1</sup> Gives security to the amount of £500. <sup>2</sup> Gives security to the amount of £300. <sup>3</sup> To 31 May, appointed C.P.S., Hill End. <sup>4</sup> Gives security to the amount of £500.  
<sup>5</sup> Gives security to the amount of £250. <sup>6</sup> Allowed quarters, fuel, and light.

## SUPREME COURT.

Chief Justice .....	Sir James Martin, Knight <sup>1</sup> succeeded by	19 Nov., 1873	Governor and Executive Council, by Commission.	3,500 0 0	26 Aug., 1856.*
	Julian E. Salomons, Q.C. succeeded by	15 Nov., 1886	Ditto .....	3,500 0 0	18 Dec., 1869.*
	Frederick Matthew Darley, Q.C.	29 Nov., 1886	Ditto .....	3,500 0 0	29 Nov., 1886.
Puisne Judges—					
1st .....	Peter Faucett .....	4 Oct., 1876	Ditto .....	2,600 0 0	16 Oct., 1863.*
2nd .....	Sir William Montagu Manning, Knight.	28 April, 1876	Ditto .....	2,600 0 0	1 Oct., 1837.*
3rd .....	William Charles Windeyer	11 Aug., 1879	Ditto .....	2,600 0 0	20 Jan., 1859.*
4th .....	Sir Joseph George Long Innes, Knight.	14 Oct., 1881	Ditto .....	2,600 0 0	6 June, 1870.*
Master in Equity .....	Henry Francis Barton <sup>2</sup> ...	20 Jan., 1885	Ditto .....	1,000 0 0	20 Jan., 1885.
Prothonotary .....	Frederick Chapman <sup>†</sup> .....	9 April, 1880	Ditto .....	750 0 0	9 April, 1880.
Chief Clerk of the Supreme Court.	James Alexander Read <sup>4</sup> ...	1 Feb., 1876	Governor and Executive Council	440 0 0	1 Mar., 1857.
2nd Clerk .....	Charles James Burns <sup>3</sup> .....	1 Feb., 1876	Ditto .....	345 0 0	1 Jan., 1870.
	succeeded by				
	Persse Rainsford <sup>1</sup> .....	1 Mar., 1886	Ditto .....	290 0 0	1 Dec., 1872.
3rd ditto .....	Thomas Edward Murphy <sup>4</sup>	1 Mar., 1886	Ditto .....	240 0 0	1 June, 1877.
4th Clerk .....	Reginald Charles Monday	1 Mar., 1886	Ditto .....	220 0 0	1 Sept., 1881.
5th ditto .....	John George Leary .....	1 Mar., 1886	Ditto .....	140 0 0	6 Jan., 1880.
Ecclesiastical Clerk .....	Thomas William Garrett <sup>4</sup>	1 July, 1881	Ditto .....	340 0 0	1 Jan., 1874.
6th Clerk .....	George Ernest Curtis .....	1 Mar., 1886	Ditto .....	140 0 0	1 July, 1883.
7th Clerk .....	Joseph Murphy .....	1 Mar., 1886	Ditto .....	140 0 0	1 Jan., 1885.
8th Clerk .....	C. E. A. MacNevin .....	1 Mar., 1886	Ditto .....	120 0 0	24 Sept., 1884.
Accountant .....	Charles Muzio Deane <sup>3</sup> .....	1 Sept., 1879	Ditto .....	340 0 0	1 Sept., 1879.
Custodian of Wills .....	Frederic Rudolf Barlee, M.A.	5 July, 1884	Ditto .....	240 0 0	1 Jan., 1883.
Assistant Custodian of Wills and Copying Clerk.	Alfred Newman .....	1 Sept., 1884	Ditto .....	190 0 0	1 Sept., 1884.
Chief Clerk, Equity Office...	William Henry Hargraves <sup>5</sup>	1 Mar., 1885	Ditto .....	550 0 0	12 Feb., 1857.
2nd Clerk, ditto .....	William Alexander Balcombe <sup>4</sup> ...	1 Dec., 1883	Ditto .....	290 0 0	1 Mar., 1882.
3rd Clerk .....	Edward Baly .....	1 Dec., 1883	Ditto .....	200 0 0	22 April, 1869.
Accountant.....	William Charles Valentine Gibbes. <sup>6</sup>	1 June, 1883	Ditto .....	340 0 0	6 May, 1872.
Associate to—					
Chief Justice .....	William John Martin.....	18 Aug., 1881	Ditto .....	275 0 0	18 Aug., 1881.
Mr. Justice Faucett .....	Arthur George Plunkett...	1 Mar., 1882	Ditto .....	260 0 0	1 April, 1881.
Sir William M. Manning	Frederick W. Orr .....	1 June, 1885	Ditto .....	245 0 0	1 June, 1885.
Mr. Justice Windeyer...	Harold M. Cockshott <sup>†</sup> .....	1 Mar., 1884	Ditto .....	200 0 0	1 Mar., 1884.
	succeeded by				
	L. Whitfeld <sup>‡</sup> .....	1 Aug., 1886	Ditto .....	200 0 0	1 Aug., 1886.
Sir J. G. L. Innes .....	Walter Bevan .....	1 Nov., 1881	Ditto .....	200 0 0	1 Nov., 1881.
	succeeded by				
	G. P. Tregarthen .....	1 May, 1886	Ditto .....	200 0 0	1 May, 1886.
	succeeded by				
	Walter R. Dibbs.....	16 Aug., 1886	Ditto .....	200 0 0	16 Aug., 1886.

<sup>1</sup> Died 4 November, 1886. <sup>2</sup> Gives security to the amount of £2,000. <sup>3</sup> Gives security to the amount of £500. <sup>4</sup> Gives security to the amount of £250.  
<sup>5</sup> Gives security to the amount of £1,000. <sup>6</sup> Services not continuous. <sup>†</sup> Acts also as Registrar of the Divorce Court, at present without salary.  
<sup>‡</sup> Receives £50 as Divorce Clerk.

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.	
				£ s. d.		
<b>MINISTER OF JUSTICE—SUPREME COURT—continued.</b>						
French, German, and Italian Interpreter.	Charles Otto Michel, B.A. <sup>1</sup>	1 Sept., 1879	Governor and Executive Council	320 0 0	1 Sept., 1879.	
Oriental Interpreter .....	John Meer Hasmot .....	1 Sept., 1885	Ditto .....	190 0 0	1 Sept., 1885.	
Messenger to Prothonotary Office-cleaner (1) .....	(1) .....	.....	Prothonotary .....	120 0 0	.....	
Messenger to Master in Equity (1) .....	.....	.....	Ditto .....	62 0 0	.....	
Record Clerk to the Master in Equity.	William Weaver .....	1 July, 1885	Minister of Justice.....	150 0 0	25 Aug., 1879.	
Temporary Junior Clerk ...	Lindsey D. Deane .....	15 May, 1886	Ditto .....	100 0 0	15 May, 1886.	
					<sup>1</sup> Receives £50 from Customs Department.	
<b>DIVORCE AND MATRIMONIAL CAUSES COURT.</b>						
Judge .....	William Charles Windeyer	12 Aug., 1879	Governor and Executive Council, by Commission.	} Nil. {	20 Jan., 1859.*	
Registrar.....	Frederick Chapman .....	9 April, 1880	Governor and Executive Council		9 April, 1880.	
Deputy Registrar .....	James Alexander Read ...	12 Jan., 1876	Ditto .....		1 Mar., 1857.	
Clerk .....	Harold M. Cockshott .....	1 Mar., 1884	Ditto .....		1 Mar., 1884.	
	succeeded by					
	Lewis Whitfeld .....	1 Aug., 1886	Ditto .....	50 0 0	1 Aug., 1886.	
					* Services not continuous.	
<b>CURATOR OF INTESTATE ESTATES.</b>						
Curator of Intestate Estates	Theodore Powell, M.A. ...	31 Dec., 1884	Rule of Court.....	525 0 0	18 Oct., 1877.	
Clerks .....	Horace Webb .....	1 Sept., 1885	Minister of Justice.....	200 0 0	1 Sept., 1885	
	Pierce J. M'Encroe .....	16 April, 1886	Ditto .....	200 0 0	9 Feb., 1872.*	
					* Services not continuous.	
					NOTE.—The offices provided for on Estimates 1886 have not yet been filled up.	
<b>SHERIFF.</b>						
Sheriff .....	Charles Cowper .....	12 Aug., 1874	Governor and Executive Council, by Commission, in pursuance of Act 7 Vic. No. 13.	810 0 0	1 Sept., 1861.*	
Under Sheriff.....	C. E. B. Maybury .....	6 Jan., 1882	Governor and Executive Council	490 0 0	— July, 1871.	
Chief Clerk.....	George Morgan .....	1 May, 1883	Ditto .....	340 0 0	1 Sept., 1869.	
Second Clerk .....	J. M. Wilshire .....	1 May, 1883	Ditto .....	290 0 0	1 Jan., 1881.	
Third Clerk .....	John Sims .....	1 May, 1883	Ditto .....	240 0 0	1 Sept., 1881.	
Fourth Clerk .....	Percy Allman .....	1 May, 1883	Ditto .....	190 0 0	1 Oct., 1882.	
Fifth Clerk.....	C. C. Watson .....	1 May, 1883	Ditto .....	165 0 0	1 Sept., 1882.	
Sixth Clerk .....	E. J. Hawkesley .....	1 May, 1883	Ditto .....	115 0 0	1 May, 1883.	
Sheriff's Officers :—						
Sydney—						
Head Sheriff's Officer (1)	.....	.....	Ditto .....	260 0 0	} each.	
Assistant Sheriff's Officers (7).	.....	.....	.....	1 at 210 0 0		
				1 at 185 0 0		
				4 at 160 0 0		
				1 at 150 0 0		
Country Districts—						
Newcastle .....	} (2) .....	.....	Ditto .....	210 0 0	„	
Maitland .....		.....	.....	.....	.....	.....
Goulburn .....		.....	.....	.....	.....	.....
Bathurst .....		.....	.....	.....	.....	.....
Wagga Wagga .....		.....	.....	.....	.....	.....
Deniliquin .....		.....	.....	.....	.....	.....
Albury .....		.....	.....	.....	.....	.....
Armidale .....		.....	.....	.....	.....	.....
Tamworth.....		.....	.....	.....	.....	.....
Mudgee.....		.....	.....	.....	.....	.....
Yass .....		.....	.....	.....	.....	.....
Dubbo .....		.....	.....	.....	.....	.....
Grafton .....		.....	.....	.....	.....	.....
Glen Innes .....		.....	.....	.....	.....	.....
Young .....		.....	.....	.....	.....	.....
Bega .....		.....	.....	.....	.....	.....
Port Macquarie .....		.....	.....	Ditto .....	160 0 0	„
Forbes .....		.....	.....	.....	.....	.....
Tenterfield .....		.....	.....	.....	.....	.....
Lismore.....		.....	.....	.....	.....	.....
Narrabri .....		.....	.....	.....	.....	.....
Bourke .....		.....	.....	.....	.....	.....
Wilcannia.....		.....	.....	.....	.....	.....
Hay .....		.....	.....	.....	.....	.....
Coonamble .....		.....	.....	.....	.....	.....
Bowral .....		.....	.....	.....	.....	.....
Walgett .....		.....	.....	.....	.....	.....
Silverton .....		.....	.....	.....	.....	.....
Cooma .....	.....	.....	.....	.....	.....	
Inverell .....	.....	.....	.....	.....	.....	
Muswellbrook .....	} (2) .....	.....	Ditto .....	150 0 0	„	
Wentworth .....		.....	.....	.....	.....	.....
					* Services not continuous.	
					NOTE.—The Sheriff gives security for £1,000; the Under Sheriff, for £750; Chief Clerk, £250; the 2nd, 3rd, 4th, 5th, and 6th Clerks, £100 each, and the Sheriff's Officers, £500 each.	

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.	
<b>MINISTER OF JUSTICE—SHERIFF—continued.</b>						
Messenger, Sydney (1) .....	.....	.....	Sheriff .....	100 0 0	each.	
Office-cleaner (1) .....	.....	.....	Ditto .....	52 0 0		
Tipstaff and Crier (1) .....	.....	.....	Chief Justice .....	162 0 0		
Tipstaves (4) .....	.....	.....	(1) Mr. Justice Faucett .....	150 0 0		
			(1) Sir William Montagu Manning.	150 0 0		
			(1) Mr. Justice Windeyer .....	150 0 0		
			(1) Sir George Innes .....	150 0 0		
Court-keeper, Supreme Court, King-street.	.....	.....	Sheriff .....	125 0 0		
Court-keeper at Darlinghurst.	.....	.....	Ditto .....	50 0 0		
Court-cleaners, Darlinghurst (2).	.....	.....	Ditto .....	{ 1 at 114 0 0 1 at 72 0 0		
Court-cleaners, Supreme Court, King-street (3).	.....	.....	Ditto .....	{ 2 at 52 0 0 1 at 26 0 0		
Court-keepers, Circuit Towns (14).	.....	.....	Ditto .....	From £20 to £150 each.		
NOTE.—The Messenger gives security for £100.						
<b>INSOLVENT COURT.</b>						
Chief Commissioner of Insolvent Estates.	George Hibbert Deffell ...	1 July, 1865	Governor and Executive Council, by Commission, under Act 20 Vic. No. 24.	1,500 0 0	23 Aug., 1856.	
Registrar in Insolvency and Accountant.	Arthur Henry .....	13 May, 1872	Administrator of Government and Executive Council.	490 0 0	1 Dec., 1869.	
Chief Clerk .....	Henry James Greville ...	6 June, 1877	Governor and Executive Council	340 0 0	8 Jan., 1853.	
2nd Clerk .....	Aubrey Murray Palmer Mowle.	6 June, 1877	Ditto .....	290 0 0	21 May, 1864.	
3rd Clerk .....	Henry Edward Maxted ...	1 July, 1877	Ditto .....	240 0 0	30 Mar., 1874.	
4th Clerk .....	James Fitzpatrick Carroll.	1 Jan., 1885	Ditto .....	190 0 0	9 Oct., 1883.	
5th Clerk .....	Harold A. Rich .....	1 Jan., 1885	Ditto .....	140 0 0	1 Jan., 1885.	
Bailiff and Messenger .....	Enoch William Booty ...	19 May, 1860	Ditto .....	180 0 0	19 May, 1860.	
Court-keeper, Crier, and Attendant (1).	.....	.....	Chief Commissioner .....	130 0 0		
Messenger (1) .....	.....	.....	Ditto .....	104 0 0		
Office-cleaner (1) .....	.....	.....	.....	26 0 0		
<b>DISTRICT COURTS.</b>						
METROPOLITAN AND HUNTER DISTRICT COURTS.						
Judges .....	James Sheen Dowling .....	1 Oct., 1861	Governor and Executive Council, by Commission.	1,500 0 0	1 Jan., 1851.	
Registrar, Sydney .....	William Hattam Wilkinson	21 July, 1874	Ditto .....	1,500 0 0	22 Feb., 1860.	
	John Alfred Lucas <sup>1</sup> .....	1 May, 1881	Ditto .....	550 0 0	1 Mar., 1859.	
1st Clerk and Registrar ...	William John Halloran <sup>1</sup> ...	1 May, 1881	Governor and Executive Council	390 0 0	9 Dec., 1865.	
2nd Clerk .....	Allan Rowling <sup>1</sup> .....	1 May, 1881	Ditto .....	315 0 0	1 Nov., 1871.	
3rd Clerk .....	Alexander Horniman .....	1 May, 1881	Ditto .....	290 0 0	1 May, 1874.	
4th Clerk .....	Frederick Ernest Crook ...	1 May, 1881	Ditto .....	240 0 0	24 Oct., 1875.	
Bailiffs (4) .....	.....	.....	District Court Judges.....	{ 1 at 210 0 0 3 at 104 0 0	each.	
Messenger (1) .....	.....	.....	Ditto .....	120 0 0		
Officekeeper (1) <sup>2</sup> .....	.....	.....	Ditto .....	50 0 0		
Assistant Officekeeper .....	.....	.....	Ditto .....	50 0 0		
Registrars—						
Maitland .....	Francis Sheriff Isaacs .....	1 Dec., 1884	Governor and Executive Council	.....	1 Jan., 1868.	
Newcastle .....	H. W. H. Huntington ...	1 Jan., 1885	Ditto .....	.....	17 Oct., 1879.	
Singleton .....	William Dudding .....	1 May, 1859	Ditto .....	.....	4 April, 1847.	
Parramatta .....	George Wickham .....	1 Sept., 1878	Ditto .....	.....	5 Mar., 1847.	
Windsor .....	William H. Hughes Becke	1 April, 1874	Ditto .....	.....	8 June, 1853.	
Campbelltown .....	William Butler Simpson ...	1 Mar., 1885	Ditto .....	.....	30 Jan., 1875.	
	succeeded by					
	Paul Le Jeune .....	1 July, 1886	Ditto .....	.....	1 Feb., 1882.	
Penrith .....	John Kingdon Cleeve, P.M.	13 Jan., 1868	Ditto .....	.....	3 July, 1865.	
Muswellbrook .....	Timothy Foley .....	16 Dec., 1867	Ditto .....	.....	1 Dec., 1867.	
Scone .....	Henry Joseph Leary .....	1 July, 1883	Ditto .....	.....	1 Jan., 1882.	
Bailiffs (9) .....	.....	.....	District Court Judges.....	{ 1 at 100 0 0 2 at 60 0 0 3 at 50 0 0 2 at 40 0 0 1 at 30 0 0	each. " "	
<p><sup>1</sup> Commissioner of the Supreme Court for taking Affidavits—Fees.    <sup>2</sup> Allowed quarters and fuel.</p> <p>NOTE.—The following Officers give security:—The Registrar, Sydney, £750; the 1st and 2nd Clerks, £400 each; 3rd and 4th Clerks, each £150; the Registrars, Country Districts, and the Bailiffs, each £250.</p>						

NEW SOUTH WALES—1886.

Office.	Name	Date of Appointment.	By whom appointed, and under what Instrument	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government.
<b>MINISTER OF JUSTICE—DISTRICT COURTS—continued.</b>					
<b>SOUTHERN DISTRICT COURTS</b>					
Judge .....	Alfred M'Farland ..	7 Nov., 1868	Governor and Executive Council, by Commission.	1,500 0 0	30 May, 1861.
Registrars—					
Goulburn .....	Leslie W. A. Macarthur	1 July, 1883	Governor and Executive Council	.....	15 April, 1874.
Wollongong .....	David Ross Jamieson	1 Nov., 1885	Ditto .....	.....	1 Mar., 1883.
Kiama .....	Henry Connell, P.M. . .	1 June, 1863	Ditto .....	.....	21 Aug., 1844.
Nowra .....	William Lovegrove ..	15 Oct., 1861	Ditto .....	.....	1 Jan., 1857.
Queanbeyan .....	Obadiah Willans ..	1 Dec., 1864	Ditto .....	.....	14 Nov., 1864.
Cooma .....	Donald E. Troughton	1 Dec., 1884	Ditto .....	.....	17 Sept., 1875.
Bombala .....	James Giles, J.P.	9 Jan., 1871	Ditto .....	.....	3 June, 1862.
Bega .....	John Davis, P.M.	1 Jan., 1870	Ditto .....	.....	1 Dec., 1865
Moruya .....	John Kenny .....	1 June, 1885	Ditto .....	.....	1 Jan., 1878.
Eden .....	Joseph Whitehead Lees, J.P.	1 July, 1883	Ditto .....	.....	26 Nov., 1858.*
Braidwood .....	Charles Edward Oslear ..	1 July, 1883	Ditto .....	.....	24 Aug., 1880.
Yass .....	Glentworth Addison ..	10 Jan., 1885	Ditto .....	.....	1 Jan., 1882.
Milton .....	John T. Hobbes .....	1 May, 1884	Ditto .....	.....	10 Oct., 1878.
Moss Vale .....	William Somerset Bridges	1 Jan., 1882	Ditto .....	.....	22 Aug., 1879.
Gunning .....	John F. Kenyon .....	1 Jan., 1882	Ditto .....	.....	11 Sept., 1876.
Bailiffs (15) .....	.....	.....	District Court Judge ..	{ 1 at 80 0 0 2 at 60 0 0 1 at 50 0 0 1 at 45 0 0 7 at 40 0 0 2 at 30 0 0 1 at 20 0 0	each.
NOTE.—The Bailiffs give security to the amount of £250. * Services not continuous.					
<b>SOUTH WESTERN DISTRICT COURTS.</b>					
Judge .....	David Grant Forbes .....	8 June, 1875	Governor and Executive Council, by Commission.	1,500 0 0	1 Jan., 1851.
Registrars—					
Albury .....	Thomas Edm Blomfield	1 June, 1885	Governor and Executive Council	.....	1 Dec., 1876.*
Gundagai .....	Charles Wye Weekes .....	19 Oct., 1875	Ditto .....	.....	19 Oct., 1875.
Tumut .....	Charles James Lloyd	1 Jan., 1886	Ditto .....	.....	2 July, 1881.
Burrowa .....	William John Ebenezer Wotton, J.P.	1 Sept., 1866	Ditto .....	.....	17 Jan., 1862.
Wagga Wagga .....	Edm H. Tompson, J.P.	15 Feb., 1864	Ditto .....	.....	29 Jan., 1864.
Deniliquin .....	Lachlan Wentworth Broughton	1 Oct., 1882	Ditto .....	.....	1 Oct., 1882.
Wentworth .....	Arthur Nelson Barnett .	1 Dec., 1884	Ditto .....	.....	1 Mar., 1877.
Hay .....	William Chisholm	1 Jan., 1885	Ditto .....	.....	11 Jan., 1876.
Young .....	William Cooper Rodgerston	1 June, 1885	Ditto .....	.....	22 Aug., 1879.
Corowa .....	Albert Kennedy Beveridge	1 Dec., 1885	Ditto .....	.....	28 Mar., 1870.
Glenfell .....	William Foxton Robertson	1 July, 1883	Ditto .....	.....	29 May, 1869
Bahawal .....	Edward Liscombe Rowling, P.M. succeeded by Norman Lockhart . . .	1 July, 1883 1 Sept., 1886	Ditto .....	.....	1 Jan., 1878.
Lismore .....	Cornelius Coghlan .	1 May, 1884	Ditto .....	.....	22 Feb., 1883.
Cootamundra .....	C. H. B. Primrose, P.M. .	1 Jan., 1881	Ditto .....	.....	1 April, 1878.
Narrandera .....	George Frederick Scott .	1 Jan., 1885	Ditto .....	.....	22 Aug., 1872.
Temora .....	Frederick Marsh .....	1 Nov., 1886	Ditto .....	.....	18 June 1863.
	Reginald Zouch .....	1 Jan., 1883	Ditto .....	.....	8 April, 1852.*
Bailiffs (16) .....	.....	.....	District Court Judge ..	{ 2 at 50 0 0 8 at 40 0 0 1 at 30 0 0 3 at 25 0 0 2 at 20 0 0	each.
NOTE.—The Bailiffs give security to the amount of £250 each. * Services not continuous.					
<b>NORTHERN DISTRICT COURTS</b>					
Judge .....	Charles Edward Robertson Murray.	7 Dec., 1880	Governor and Executive Council, by Commission.	1,500 0 0	1 Aug., 1864.
Registrars—					
Armidale .....	Charles L C Badham	1 July, 1883	Governor and Executive Council	.....	19 Aug., 1870.
Narrabri .....	Duncan M'Dougall ..	1 Jan., 1885	Ditto .....	.....	1 July, 1883.
Tamworth .....	John Lethbridge King	1 Jan., 1885	Ditto .....	.....	16 Aug., 1870.
Murrumbidgee .....	George Rupert Evans	1 June, 1878	Ditto .....	.....	1 June, 1878.
Tenterfield .....	Frederick Buine ..	1 Jan., 1885	Ditto .....	.....	11 Aug., 1880.
Glen Innes .....	Vere D. H. Besnard	1 May, 1885	Ditto .....	.....	7 April, 1879.
Inverell .....	James Holloway Tompson. succeeded by Frederick Stuart Osborn	1 Jan., 1885 1 May, 1886	Ditto .....	.....	1 July, 1869.
Gunnedah .....	William Bligh Connell ..	1 June, 1885	Ditto .....	.....	1 Jan., 1871.
Emmaville .....	John Michael Sheahan .	1 July, 1885	Ditto .....	.....	1 Sept., 1880.
Bingera .....	William Corbett Lawson	1 Jan., 1885	Ditto .....	.....	5 Sept., 1876.
Walinda .....	Thomas Henry Wilkinson	18 April, 1882	Ditto .....	.....	1 Mar., 1880.
Morice .....	William E. Henry, P.M.	1 July, 1885	Ditto .....	.....	21 Dec., 1880.
Bailiffs (12) .....	.....	.....	District Court Judge .....	{ 1 at 45 0 0 9 at 40 0 0 2 at 30 0 0	each.
NOTE.—The Bailiffs give security to the amount of £250 each * Services not continuous.					



Office.	Name.	Date of Appointment	By whom appointed, and under what Instrument.	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government
<b>MINISTER OF JUSTICE—DISTRICT COURTS—continued.</b>					
<b>WESTERN DISTRICT COURTS</b>					
Judge .....	Ernest Brougham Docker..	7 June, 1884	Governor and Executive Council, by Commission.	1,500 0 0	1 Nov., 1871.
Registrars—					
Bathurst .....	Henry Hely Hutchinson .	1 Jan., 1882	Governor and Executive Council	.. . . .	1 Aug, 1880.
Dubbo .....	Luke M'Gunn .....	1 Nov., 1861	Ditto .. . . .	.. . . .	1 Nov., 1861.
Wellington .....	William Carson	1 May, 1884	Ditto .. . . .	.. . . .	30 Oct, 1872.
Orange .....	Frederick Barnwell Hales (Deputy).	1 May, 1885	Judge Docker	.. . . .	1 April, 1861.*
Forbes .....	Edmond A. T. Pery .....	1 Dec, 1884	Governor and Executive Council	.. . . .	1 June, 1881.
Carcoar .....	William Badcock-Warner, J.P.	1 Nov, 1877	Ditto .. . . .	25 0 0	
Mudgee .....	Robert Hugh Acheson .....	1 Dec., 1884	Ditto .. . . .	.. . . .	5 Aug, 1878.
Molong .. . . .	John Hyde Nisbet . . . . .	1 Sept, 1875	Ditto .. . . .	.. . . .	1 Sept., 1875.
Lithgow .. . . .	Henry Lumsdaine	1 Jan., 1885	Ditto .. . . .	.. . . .	1 Dec., 1845.*
Cowra .. . . .	William G. B. Smith ...	1 Dec., 1885	Ditto .. . . .	.. . . .	4 Nov, 1872.
Merrriwa . . . . .	Edward William Fegan...	1 Sept., 1885	Ditto .. . . .	.. . . .	17 Oct., 1878.
Warren .....	Luke M'Gunn... . . . .	1 April, 1884	Ditto .. . . .	.. . . .	1 Nov., 1861.
Bailiffs (12) .....	.....	.. . . .	District Court Judge	{ 1 at 50 0 0 2 at 45 0 0 6 at 40 0 0 2 at 30 0 0 1 at 25 0 0	each.
NOTE —The Bailiffs give security to the amount of £250 each * Services not continuous.					
<b>NORTH-WESTERN DISTRICT COURTS.</b>					
Judge .....	Alfred Paxton Backhouse	7 June, 1884	Governor and Executive Council, by Commission.	1,500 0 0	1 Oct., 1878.
Registrars—					
Bourke .. . . .	Vincent Brown, J.P. . . . .	1 Jan, 1885	Governor and Executive Council	.. . . .	1 July, 1883.
Casino .. . . .	Malcolm M'intyre Campbell	1 April, 1875	Ditto .. . . .	.. . . .	1 April, 1875.
Taree .. . . .	Jasper Albert Creagh, P M	3 Nov., 1882	Ditto .. . . .	.. . . .	1 Feb, 1875.
Port Macquarie . . . . .	Richard Maunsell, P M.	17 Nov, 1879	Ditto .. . . .	.. . . .	8 Oct, 1877.
Kempsey .. . . .	George Stevenson .....	1 Aug, 1883	Ditto .. . . .	.. . . .	12 May, 1881.
	succeeded by				
Grafton .. . . .	George T. S. Boileau .....	1 July, 1886	Ditto .. . . .	.. . . .	1 Sept., 1880.
Coonabarabran .....	William Clarke	1 April, 1880	Ditto .. . . .	.. . . .	5 Sept., 1876.
Coonamble .. . . .	Frederick Wm Edwards, P M	1 Oct, 1878	Ditto .. . . .	.. . . .	28 Oct, 1863.
Wilcannia .. . . .	Robert Raymond Bailey, P M	1 Oct, 1878	Ditto .. . . .	.. . . .	8 July, 1878.
Walgett .. . . .	George H Gower, P.M	1 Feb., 1883	Ditto .. . . .	.. . . .	17 Dec, 1874.
Maclean .. . . .	Walter Bland Brown ..	1 Jan., 1885	Ditto .. . . .	.. . . .	1 Nov, 1882.
Hillston .. . . .	Jim M'Kensey .....	1 July, 1884	Ditto .. . . .	.. . . .	7 Oct., 1875.
Cobar .. . . .	Michael Hogan .....	1 Dec., 1884	Ditto .. . . .	.. . . .	1 Jan., 1884.
	Frederick Stuart Osborn .	1 Aug, 1883	Ditto .. . . .	.. . . .	1 Jan., 1871.
	succeeded by				
Menindie .....	Thomas Charles Kerr M'Kell	1 Oct., 1886	Ditto .. . . .	.. . . .	1 Oct., 1875.
	James R. Holding . . . . .	1 Aug, 1885	Ditto .. . . .	.. . . .	1 June, 1873.*
Bailiffs (14) .....	.....	.....	District Court Judge	{ 1 at 60 0 0 1 at 45 0 0 8 at 40 0 0 4 at 30 0 0	each.
NOTE —The Bailiffs give security to the amount of £250 each * Services not continuous.					
<b>CORONERS.</b>					
Sydney.....	Henry Shuell, J.P. . . . .	11 July, 1866	Governor and Executive Council, by Commission.	650 0 0	22 Nov., 1853.
Clerk .. . . .	Charles Smith ..	1 April, 1883	Governor and Executive Council	240 0 0	1 April, 1883.
Country Districts—					
Adelong, Tumut, and Tumbarumba.	Frederick Wheeler Vyner, P.M.	21 Oct., 1868	Governor and Executive Council, by Commission	} Each allowed 20s. for each Inquest, and travelling expenses 9d. per mile one way	1 Jan, 1865.
Albury .....	H M'Crummin Keightley, P.M.	24 Sept, 1883	Ditto .. . . .		10 July, 1854.
Armidale .....	James M'Lean .....	12 Sept, 1874	Ditto .. . . .		12 Sept, 1874.
Ballina .. . . .	Edward Ross, J.P. . . . .	10 Oct., 1884	Ditto .. . . .		10 Oct, 1884.
Bathurst .....	Benjamin Lee, P.M. . . . .	2 Sept, 1881	Ditto .. . . .		12 Aug, 1874.
Balranald .....	William Vaughan May Cooke, P M.	6 May, 1881	Ditto .. . . .		6 May, 1881.
Bellinger and Nambuccra	T C. K. M'Kell ..	3 Mar., 1882	Ditto .. . . .		1 Oct, 1875.
Bega .. . . .	M. J. Peden .. . . .	13 Oct, 1882	Ditto .. . . .		13 Oct, 1882.
Bourke .. . . .	William Hilton Daniell	9 Dec, 1881	Ditto .. . . .		9 Dec, 1881.
Bingera .. . . .	W. C Lawson, P.M.	9 Jan, 1885	Ditto .. . . .		1 Mar., 1880.
Bradwood .. . . .	John William Buckle Bunn	1 Jan, 1870	Ditto .. . . .	8 Oct, 1862.	
Brewarrina .. . . .	E C Millen	13 Jan., 1885	Ditto .. . . .	13 Jan, 1885.	
Broulee and Moruya .....	William Stewart Caswell, P M	1 Sept, 1857	Ditto .. . . .	7 June, 1847.	
Brisbane Water .....	Edward Reeve, P M.	20 Sept, 1875	Ditto .. . . .	1 Sept, 1875.	
Berrina .. . . .	Charles Landsay Nicholson	25 Oct, 1866	Ditto .. . . .	25 Oct, 1866.	
Binalong and Burrowa .	William Douglas Campbell, J P	30 Nov, 1858	Ditto .. . . .	30 Nov, 1858.	

Office	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government
<b>MINISTER OF JUSTICE—CORONERS—continued.</b>					
<i>Country Districts—continued.</i>					
Bombala	Joseph Davies Stafford	19 June, 1872	Governor and Executive Council, by Commission.		19 June, 1872.
Bullah Delah	Charles Hugh Fawcett, P M	24 Aug, 1883	Ditto		31 Oct., 1862.
Buckley's Crossing	William Robert Hepburn, J P	17 Dec, 1883	Ditto		17 Dec., 1883.
Burrowa	W J. E. Wotton	8 Dec, 1885	Ditto		17 Jan., 1862.
Carcoar	James Oliver Dodd	18 Feb, 1875	Ditto		5 Feb, 1874.
Casino	Charles Eldon Crommelin	18 Aug, 1886	Ditto		18 Aug., 1886.
Camden, Campbelltown, Narellan, and Appin.	Robert Beattie	12 Sept, 1882	Ditto		12 Sept., 1882.
Cobar	A. Roxburgh	31 Dec., 1885	Ditto		31 Dec., 1885.
Condobolin	Hugh Espie Stevenson	30 April, 1883	Ditto		30 April, 1883.
Crookwell	Thomas Hughes Prosser	13 July, 1886	Ditto		13 July, 1886.
Cootamundra	E. P. Barnes	13 Nov, 1883	Ditto		13 Nov., 1883.
Cooma	F. B. Montague	8 Dec., 1885	Ditto		8 Dec., 1885.
Coonamble	Robert R. Bailey, P.M.	13 Sept., 1878	Ditto		8 July, 1878.
Coonabarabran	Frederick Wilhm Edwards	26 Feb, 1878	Ditto		28 Oct., 1863.
Copeland	C. De Boos, P M	20 May, 1885	Ditto		1 Dec., 1874.
Corowa	A. K. Beveridge, P.M.	24 Dec, 1885	Ditto		28 Mar., 1870.
Cowra	T West	10 Oct, 1882	Ditto		10 Oct., 1882.
Denilquim	Alfred Wm Finch Noyes.	1 Feb, 1867	Ditto		1 Feb, 1867.
Dowling	Percy Hale Sheaffe	11 Dec, 1878	Ditto		4 May, 1869.
Dubbo	W S Caswell, P.M	6 May, 1884	Ditto		7 June, 1847.
Dungog	Edward Piper	10 Sept, 1886	Ditto		10 Sept., 1886.
Emmaville	Thomas Chandler	29 July, 1884	Ditto		29 July, 1884.
Forbes	William Brooke, J P	29 July, 1884	Ditto		29 July, 1884.
Glen Innes	George Martin, P.M.	18 Nov., 1886	Ditto		3 Mar, 1868.
Gongolgon	Arthur Grainger Langmore	20 Mar, 1875	Ditto		20 Mar., 1875.
Goulburn	Augustine Matthew Betts	17 June, 1870	Ditto		17 June, 1870.
Gundagai	Charles Wye Weekes, C P S	11 April, 1876	Ditto		19 Oct., 1875.
Gunning	J. F. Kenyon	8 Dec., 1886	Ditto		11 Sept., 1876.
Gunnedah	P. Brougham, P.M.	9 Jan., 1885	Ditto		5 Sept., 1876.
Grafton	Conley Dickey	2 Mar, 1886	Ditto		2 Mar., 1886.
Grenfell	William Howarth	4 Jan, 1881	Ditto		4 Jan., 1881.
Hartley	Thomas Henry Neale	12 Mar, 1874	Ditto		16 Aug., 1873.
Hay	Joseph Ede Pearce	26 Oct., 1872	Ditto		24 July, 1862.
Hill End	W A. Steel, P M.	30 Jan., 1883	Ditto		19 Nov., 1872.
Hillston	Neil Charles O'Neill, P M	9 Aug, 1878	Ditto		26 April, 1870.
Ironbarks	Henry Lovibond	10 Oct, 1884	Ditto		10 Oct., 1884.
Inverell	William Wilberforce Fraser	15 Dec, 1875	Ditto		1 Sept., 1875.
Jerrilderie	James D. Rankin.	26 Mar., 1878	Ditto		26 Mar., 1878.
Kempsey	John Ducat	9 Mar, 1877	Ditto		9 Mar., 1877.
Kiandra	J. M. Lett, J. P.	7 Aug, 1884	Ditto		7 Aug., 1884.
Kiama	Henry Connell, P.M.	27 July, 1870	Ditto		21 Aug., 1844.
Laggan, Bmda, Taralga, and Crookwell.	W. S. Gunn, C.P.S.	13 June, 1882	Ditto		5 Sept., 1876.
Lower Hawkesbury	H. Wilson	14 Sept, 1886	Ditto		14 Sept., 1886.
Lismore	Ludwik Bernstein, M.D	21 Nov., 1884	Ditto		21 Nov., 1884.
Liverpool	F. A. Kenyon	7 May, 1886	Ditto		7 May, 1886.
Lower Clarence	J. B. Crabbe	13 Mar, 1883	Ditto		11 Dec., 1879.
Loftus	A. Elliott, C.P.S	31 May, 1886	Ditto		12 Mar., 1878.
Manning River	William Allan	20 Feb, 1871	Ditto		20 Feb., 1871.
Menindie	Wyman Brown, P.M.	27 May, 1884	Ditto		1 June, 1879.
Macleay River (Kempsey)	Wm. Henry Thornton, J.P.	1 Aug, 1868	Ditto		29 June, 1857.
Milton	J. T. Hobbes, C P S.	27 Aug, 1885	Ditto		10 Oct., 1878.
Moama	J. B. Casey	8 Dec., 1886	Ditto		21 April, 1853.
Mudgee	William D. Meares, P M.	30 Dec., 1878	Ditto		10 April, 1842.
Murrurundi	Hamilton Maynard	6 Sept., 1881	Ditto		6 Sept., 1881.
Muswellbrook	E. Bowman	8 Dec., 1886	Ditto		8 Dec., 1886.
Murrumburrah	Thos Barnes	8 June, 1883	Ditto		8 June, 1883.
Molong	P. F. A. Kinna	7 Feb., 1883	Ditto		7 Feb., 1883.
Moree	W. E. Henry, C P.S.	31 May, 1886	Ditto		2 May, 1873.
Moruya	G. Maunsell, P.M.	24 Sept, 1883	Ditto		13 Mar., 1858.
Merruwa	F. T. Rusden, P.M.	22 Jan, 1886	Ditto		25 July, 1830.
Narrandera	W. G. Elwin	8 Mar., 1878	Ditto		8 Mar., 1878.
Narrabri	H. J. Bolding, P.M	13 May, 1885	Ditto		22 Feb, 1866.
Newcastle	Samuel Chapman, J.P.	9 April, 1884	Ditto		9 April, 1884.
Nymagee	Charles Cator	22 Jan., 1886	Ditto		22 Jan., 1886.
Nundle	Edward Jones	5 April, 1884	Ditto		5 April, 1884.
O'Connell Plains	Robert S Back	29 May, 1883	Ditto		29 May, 1883.
Orange	George Towson, J.P.	31 May, 1871	Ditto		31 May, 1871.
Patrick's Plains	Hy Glennie, J P (Surgeon)	7 Feb, 1867	Ditto		7 Feb, 1867.
Paterson and Matland	Alfred Vindin, J.P.	15 June, 1880	Ditto		15 June, 1880.
Parramatta and Liverpool.	John Ebenezer Bowden	23 May, 1872	Administrator of Government and Executive Council, by Commission.		23 May, 1872.
Parkes	William Clifton Weston	10 June, 1879	Lieutenant-Governor and Executive Council, by Commission.		23 June, 1864.
Picton	William Redfern Antill	11 Jan., 1876	Governor and Executive Council, by Commission.		30 Mar., 1857.
Port Macquarie	W. A. Forster	1 July, 1886	Ditto		1 July, 1886.
Port Stephens (Stroud)	Thomas Nicholls, J P.	14 Jan, 1861	Ditto		14 Jan, 1861.
Penrith	John King Lethbridge, C P S	11 Aug, 1874	Ditto		4 Sept, 1862.
Queanbeyan	Thomas Parr	26 July, 1881	Ditto		26 July, 1881.
Raymond Terrace	J. S. Hart, J.P.	31 Dec, 1886	Ditto		31 Dec., 1886.

Each allowed 20s. for each Inquest, and travelling expenses 9d. per mile one way.

Office.	Name.	Date of Appointment.	By whom appointed, and under what instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>MINISTER OF JUSTICE—CORONERS—continued.</b>					
Country Districts— <i>continued.</i>					
Richmond River .....	M. M. Campbell, J.P. ....	10 Oct., 1884	Governor and Executive Council, by Commission.	Each allowed 20s. for each Inquest, and travelling expenses 9d. per mile one way.	10 Oct., 1884.
Rockley .....	Jacob Barnes .....	3 Mar., 1882	Ditto .....		3 Mar., 1882.
Ryde .....	J. E. Manning .....	7 May, 1886	Ditto .....		7 May, 1886
Rylstone .....	William Weild Armstrong, J.P. ....	29 Aug., 1876	Ditto .....		1 July, 1854.
Scone .....	W. F. Parker, P.M. ....	14 Aug., 1883	Ditto .....		26 April, 1862.
Shoalhaven .....	Z. G. Bice, J.P. ....	7 May, 1886	Ditto .....		7 May, 1886.
Singleton .....	R. H. Mathews .....	27 Mar., 1886	Ditto .....		27 Mar., 1886.
Sofala .....	Henry Hinton, J.P. ....	25 July, 1883	Ditto .....		25 July, 1883.
Tamworth .....	David Williamson Irving, P.M. ....	2 May, 1873	Ditto .....		24 June, 1861.
Taralga .....	W. H. Whiting .....	25 May, 1886	Ditto .....		25 May, 1886.
Tomora .....	James Baker, P.M. ....	13 Mar., 1883	Ditto .....		30 June, 1874.
Tenterfield .....	James Brisbane Graham, P.M. ....	15 July, 1879	Ditto .....		1 Mar., 1859.
Trunkey and Tuena .....	Thomas Arkell Smith .....	11 Sept., 1871	Ditto .....		1 Aug., 1871.
Urana .....	P. R. Brett .....	12 Sept., 1882	Ditto .....		12 Sept., 1882.
Uralla .....	Henry Roman .....	16 Oct., 1886	Ditto .....		16 Oct., 1886.
Vegetable Creek .....	Dr. John T. Burgoyne .....	1 Nov., 1881	Ditto .....		1 Nov., 1881.
Wagga Wagga .....	L. A. Fosbery .....	8 Dec., 1882	Ditto .....		8 Dec., 1882.
Walgett .....	H. G. Kenrick .....	10 Dec., 1885	Ditto .....		10 Dec., 1885.
Woodburn .....	W. B. Violette .....	24 Feb., 1885	Ditto .....		24 Feb., 1885.
Wollongong .....	Charles F. Smith .....	7 Feb., 1882	Ditto .....		7 Feb., 1882.
Wollombi .....	John Snell Milne .....	7 Oct., 1875	Ditto .....		5 Nov., 1866.
Walcha .....	Michael John Walsh .....	26 April, 1878	Ditto .....		26 April, 1878.
Warialda .....	W. V. M. Cooke .....	22 Jan., 1886	Ditto .....		1 May, 1867.
Wee Waa .....	Charles Edward Smith .....	4 Sept., 1868	Ditto .....		25 Mar., 1851.
Wentworth .....	M. S. Love, P.M. ....	21 June, 1883	Ditto .....		1 May, 1868.
Wellington .....	Robert Rygate .....	27 Sept., 1872	Ditto .....		27 Oct., 1869.
Wilcannia .....	G. H. Gower, P.M. ....	4 June, 1886	Ditto .....		17 Dec., 1874.
Windsor .....	James Bligh Johnston, J.P. ....	31 July, 1871	Ditto .....	31 July, 1871.	
Yass .....	Isidore Maurice Blake, J.P. ....	1 Jan., 1848	Ditto .....	1 Jan., 1848.	
Young .....	Samuel Robinson, P.M. ....	23 Feb., 1877	Ditto .....	15 April, 1872.	

**PETTY SESSIONS.****POLICE MAGISTRATES, CLERKS OF PETTY SESSIONS, &c.**

<b>SYDNEY.</b>					
Central Police Office— Stipendiary Magistrates ...	James Buchanan .....	1 Jan., 1882	Governor and Executive Council, by Commission.	860 0 0	6 Jan., 1852.
	George O'Malley Clarke... Thomas Kingsmill Abbott	1 Jan., 1882 1 Jan., 1882	Ditto .....	860 0 0 860 0 0	1 Jan., 1854. 14 Dec., 1867.
Clerk of Petty Sessions ...	† Cornelius Delohery	26 Feb., 1882	Governor and Executive Council	550 0 0	23 July, 1860.
Assistant Clerk of Petty Sessions and Chief Deposition Clerk, a Magistrate.	William Robert Stewart <sup>1</sup> ...	27 July, 1883	Ditto .....	490 0 0	1 Dec., 1866.
3rd Clerk .....	Charles Alfred H. Redgrave	27 July, 1883	Ditto .....	340 0 0	1 Sept., 1874.
4th Clerk .....	Henry Francis Mason .....	1 Sept., 1885	Ditto .....	240 0 0	28 Feb., 1882.
5th Clerk .....	Stephen Lawrence Guy ...	1 Sept., 1885	Ditto .....	165 0 0	28 Feb., 1882.
6th Clerk .....	James Daniel Walker .....	1 Sept., 1885	Ditto .....	145 0 0	28 Feb., 1882.
7th Clerk .....	William Mackie Fincham .....	1 Sept., 1885	Ditto .....	144 0 0	10 July, 1883.
8th Clerk .....	Edward Meyer Cohen .....	1 Sept., 1885	Ditto .....	144 0 0	1 Dec., 1884.
9th Clerk .....	Michael Joseph Fitzpatrick	1 Sept., 1885	Ditto .....	140 0 0	— June, 1876.*
10th Clerk .....	Horace F. Roberts .....	1 July, 1886	Ditto .....	120 0 0	1 July, 1886.
Extra Clerk, Licensing Court business.	Sidney Benson .....	1 Jan., 1883	Ditto .....	240 0 0	1 Sept., 1880.
Extra Clerk .....	Charles Robertson .....	1 Jan., 1883	Ditto .....	200 0 0	1 June, 1880.
Messenger <sup>2</sup> .....	.....	.....	Police Magistrate .....	125 0 0	.....
Officekeeper <sup>2</sup> .....	.....	.....	Ditto .....	60 0 0	.....
<sup>1</sup> Gives security for £100. <sup>2</sup> Allowed quarters, fuel, and light.    † Receives fees as Registrar of Small Debts Court.    * Services not continuous.					
Water Police Office— Stipendiary Magistrates ...	John Milbourne Marsh <sup>1</sup> ... Glentworth Walsh Fraser Addison.	1 Jan., 1882 1 Jan., 1882	Governor and Executive Council Ditto .....	860 0 0 860 0 0	7 Jan., 1859. 14 April, 1858.
	Whittingdale Johnson .....	1 May, 1885	Ditto .....	860 0 0	10 July, 1849.
Clerk of Petty Sessions, a Magistrate.	George Henry Smithers, J.P. <sup>2</sup>	1 Dec., 1884	Ditto .....	550 0 0	23 Oct., 1868.
Assistant do .....	† Francis Burnand Davidson <sup>3</sup>	17 Sept., 1875	Ditto .....	440 0 0	15 Jan., 1855.*
3rd Clerk .....	† Charles Newton Payten ...	17 Sept., 1875	Ditto .....	290 0 0	1 Nov., 1873.
4th Clerk .....	† Charles Jennings .....	17 April, 1880	Ditto .....	240 0 0	1 Oct., 1879.
Accountant .....	J. M. A. Bonthorne <sup>4</sup> .....	1 May, 1885	Ditto .....	240 0 0	1 Jan., 1882.
5th Clerk .....	James Leslie Williams .....	1 Dec., 1885	Ditto .....	140 0 0	1 July, 1884.
6th Clerk .....	Henry L. Horniman .....	1 Dec., 1885	Ditto .....	140 0 0	1 Oct., 1884.
7th Clerk .....	Joseph Burnett .....	1 Dec., 1885	Ditto .....	140 0 0	17 Sept., 1883.
8th Clerk .....	E. W. Crane .....	1 June, 1886	Ditto .....	120 0 0	1 April, 1881.
Extra Clerks .....	Joseph Hay .....	1 June, 1885	.....	183 0 0	1 Jan., 1876.*
	Archibald Chisholm <sup>5</sup> .....	17 Feb., 1885	.....	146 0 0	17 Feb., 1885.
	M. J. Dunphy .....	1 Oct., 1886	.....	183 0 0	1 Oct., 1886.
Messenger (1) .....	.....	.....	.....	110 0 0	.....
Court and Office keeper(1) <sup>6</sup>	.....	.....	.....	60 0 0	.....
Assistant do (1)	.....	.....	.....	52 0 0	.....
<sup>1</sup> Superintendent of Water Police. <sup>2</sup> Gives security to the amount of £500.    Commissioner of the Supreme Courts of New South Wales, Victoria, and Queensland. <sup>3</sup> Commissioner of the Supreme Court of New South Wales. <sup>4</sup> Gives security to amount of £250. <sup>5</sup> To 1 October, 1886.    Appointed Acting Assistant C.P.S., Penrith. <sup>6</sup> Allowed quarters, fuel, and light.    * Services not continuous.    † Give security to amount of £100 each.					

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>MINISTER OF JUSTICE—PETTY SESSIONS—continued.</b>					
<b>COUNTRY DISTRICTS.</b>					
<b>POLICE MAGISTRATES, CLERKS OF PETTY SESSIONS, &amp;c.—continued.</b>					
Albury—					
Police Magistrate.....	Henry M'Crummin Keightley..	1 Sept., 1883	Governor and Executive Council	550 0 0	10 July, 1854.
Clerk of Petty Sessions ...	Thomas Edwin Blomfield..	1 June, 1885	Ditto .....	320 0 0	1 Dec., 1876.*
Armidale—					
Police Magistrate .....	Charles Edward Smith ...	1 Jan., 1885	Ditto .....	550 0 0	25 Mar., 1851.
Clerk of Petty Sessions ...	Charles L. C. Badham ...	1 July, 1883	Ditto .....	440 0 0	19 Aug., 1870.
Assistant Clerk of Petty Sessions	Andrewes Reeve .....	1 Dec., 1884	Ditto .....	140 0 0	1 Dec., 1884.
Bathurst—					
Police Magistrate .....	Benjamin Lee .....	12 Aug., 1874	Ditto .....	550 0 0	12 Aug., 1874.
Clerk of Petty Sessions ...	H. H. Hutchinson .....	6 Jan., 1882	Ditto .....	440 0 0	1 Aug., 1880.
Assistant Clerk of Petty Sessions	James Brassington .....	1 Sept., 1882	Ditto .....	140 0 0	1 Sept., 1882.
Balmain—					
Clerk of Petty Sessions ...	Edward Wm. Byrne .....	1 Sept., 1883	Ditto .....	340 0 0	13 Aug., 1862.
Assistant Clerk of Petty Sessions	Russell W. Robberds .....	1 Jan., 1885	Ditto .....	190 0 0	5 Aug., 1879.*
Balranald—					
Police Magistrate .....	Edward L. Rowling .....	1 July, 1883	Ditto .....	440 0 0	1 Jan., 1878.
Clerk of Petty Sessions ...	Norman Lockhart .....	1 Jan., 1884	Ditto .....	50 0 0	22 Feb., 1883.
Barraba—					
Clerk of Petty Sessions ...	Kennedy Theodore Garland	1 June, 1883	Ditto .....	200 0 0	8 Sept., 1882.
Bega—					
Police Magistrate and Clerk of Petty Sessions.	John Davis .....	1 Dec., 1865	Ditto .....	440 0 0	1 Dec., 1865.
Berrima—					
Police Magistrate and Clerk of Petty Sessions.	Fredk. Robertson Wilshire	11 Mar., 1872	Administrator of the Government and Executive Council.	550 0 0	1 Mar., 1862.*
Assistant Clerk of Petty Sessions.	Fredk. Galbraith.....	1 Nov., 1877	Governor and Executive Council	190 0 0	1 Nov., 1877.
Bingera—					
Police Magistrate and Clerk of Petty Sessions.	William Corbett Lawson...	1 Jan., 1885	Ditto .....	440 0 0	1 Mar., 1880.
Boat Harbour—					
Police Magistrate and Clerk of Petty Sessions.	T. C. K. M'Kell .....	1 Feb., 1882	Ditto .....	340 0 0	1 Oct., 1875.
	succeeded by				
	Hubert Dillon .....	1 Aug., 1886	Ditto .....	340 0 0	1 Jan., 1873.
Bombala—					
Police Magistrate and Clerk of Petty Sessions.	James Giles .....	16 Dec., 1870	Ditto .....	390 0 0	3 June, 1862.
Bourke—					
Police Magistrate .....	Alexander Ogilvie Grant..	8 Aug., 1870	Ditto .....	550 0 0	27 Jan., 1846.
Clerk of Petty Sessions ...	Vincent Brown.....	1 Jan., 1885	Ditto .....	340 0 0	1 July, 1883.
Assistant Clerk of Petty Sessions	R. J. J. W. Jervaulx .....	1 Jan., 1886	Ditto .....	190 0 0	10 Mar., 1882.
Braidwood—					
Police Magistrate .....	James Aldcorn.....	5 Sept., 1876	Ditto .....	415 0 0	14 June, 1867.
Clerk of Petty Sessions ...	Charles Edward Oslear ...	1 July, 1883	Ditto .....	390 0 0	24 Aug., 1880.
Branxton—					
Clerk of Petty Sessions ...	Frederick G. Adrian .....	1 July, 1883	Ditto .....	240 0 0	19 Sept., 1877.
Brewarrina—					
Police Magistrate and Clerk of Petty Sessions.	Albert Kennedy Beveridge	1 July, 1883	Ditto .....	440 0 0	28 Mar., 1870.
	succeeded by				
	James Holloway Tompson	1 Feb., 1886	Ditto .....	440 0 0	1 July, 1869.
Bulli—					
Clerk of Petty Sessions ...	Benjamin Greene.....	1 June, 1885	Ditto .....	190 0 0	1 Feb., 1882.
Burrowa—					
Police Magistrate and Clerk of Petty Sessions.	William J. E. Wotton .....	1 April, 1885	Ditto .....	490 0 0	17 Jan., 1862.
Campbelltown—					
Clerk of Petty Sessions ...	Wm. Butler Simpson .....	1 Mar., 1885	Ditto .....	390 0 0	30 Jan., 1875.
	succeeded by				
	Paul Le Jeune.....	1 July, 1886	Ditto .....	390 0 0	1 Feb., 1882.
Camden—					
Clerk of Petty Sessions ...	John B. Martin .....	1 Sept., 1852	Ditto .....	340 0 0	1 Sept., 1852.
Carcoar—					
Police Magistrate.....	Nathaniel Connolly.....	7 Oct., 1883	Ditto .....	490 0 0	18 May, 1852.*
Clerk of Petty Sessions ...	Wm. Badcock-Warner ...	1 May, 1885	Ditto .....	140 0 0	1 Nov., 1877.
Casino—					
Police Magistrate.....	James Bray .....	1 July, 1883	Ditto .....	490 0 0	1 Jan., 1866.
Clerk of Petty Sessions ...	M. M'Intyre Campbell ...	1 April, 1875	Ditto .....	440 0 0	21 Oct., 1872.
Cassilis—					
Clerk of Petty Sessions ...	Charles J. Lloyd .....	1 Dec., 1884	Ditto .....	340 0 0	2 July, 1881.
	succeeded by				
	Henry S. Hawkins .....	1 Mar., 1886	Ditto .....	340 0 0	1 Oct., 1877.
Clarence Town—					
Clerk of Petty Sessions ...	Thomas M. Williams .....	1 Feb., 1882	Ditto .....	240 0 0	20 Dec., 1864.*
Cobar—					
Police Magistrate.....	Thomas A. Davies .....	1 Mar., 1885	Ditto .....	470 0 0	4 Oct., 1881.
	succeeded by				
	T. C. K. M'Kell <sup>1</sup> .....	1 Oct., 1886	Ditto .....	340 0 0	1 Jan., 1873.
Police Magistrate and Clerk of Petty Sessions.	Frederick Stuart Osborn <sup>2</sup>	1 Aug., 1883	Ditto .....	320 0 0	1 Jan., 1871.

<sup>1</sup> Allowance of £100 per annum.<sup>2</sup> To 30 April—promoted to Inverell.

\* Services not continuous.

NOTE.—The Police Magistrates receive 20s. with and 25s. without forage, per diem, as travelling allowance. The Clerks of Petty Sessions give security for the due performance of their duties.

Office	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary			Date of first Appointment under the Colonial Government
				£	s.	d.	
<b>MINISTER OF JUSTICE—PETTY SESSIONS—continued.</b>							
POLICE MAGISTRATES, CLERKS OF PETTY SESSIONS, &c—continued							
COUNTRY DISTRICTS—continued.							
Condoblin—							
Clerk of Petty Sessions	Edward Albert Grainger	1 July, 1885	Governor and Executive Council	240	0	0	17 April, 1880
Cooma—							
Police Magistrate	Robert Dawson	10 Aug, 1857	Ditto ...	490	0	0	12 Jan, 1847.
Clerk of Petty Sessions	Donald E Troughton	1 Dec, 1884	Ditto	390	0	0	17 Sept, 1875
Coonabarabran—							
Police Magistrate and Clerk of Petty Sessions	Frederick William Edwards	1 Jan, 1867	Ditto . ...	390	0	0	28 Oct, 1863
Coonamble—							
Police Magistrate . ...	R R Bailey	8 July, 1878	Ditto ...	390	0	0	1 April, 1878.
Clerk of Petty Sessions	Andrew T Cochrane	1 Jan, 1885	Ditto	190	0	0	1 June, 1883
Cootamundra—							
Police Magistrate and Clerk of Petty Sessions.	Charles H B Primrose .	1 June, 1878	Ditto	440	0	0	22 Aug, 1872.
Copeland—							
Police Magistrate and Clerk of Petty Sessions	Charles De Boos ..	1 Jan, 1883	Ditto .	440	0	0	1 Dec, 1874.
Corowa—							
Police Magistrate and Clerk of Petty Sessions.	Albert Kennedy Beveridge	1 Dec., 1885	Ditto	390	0	0	28 Mar., 1870.
Cowra—							
Clerk of Petty Sessions	William G B Smith	1 Dec, 1885	Ditto	390	0	0	4 Nov, 1872
Crookwell—							
Clerk of Petty Sessions	Walter S Gunn, J P	5 Sept, 1876	Ditto	290	0	0	5 Sept, 1876.
Deniliquin—							
Police Magistrate	Rudolf R Morisset	16 Dec, 1882	Ditto	550	0	0	1 Feb, 1875
Clerk of Petty Sessions	Lachlan W. Broughton	14 Sept, 1882	Ditto	290	0	0	14 Sept, 1882.
Denman—							
Clerk of Petty Sessions	Henry H Connell	1 Oct, 1884	Ditto	190	0	0	1 July, 1883.
Dubbo—							
Police Magistrate	William Stewart Caswell	1 April, 1884	Ditto	550	0	0	7 June, 1847.
Clerk of Petty Sessions	Luke M'Gunn	1 Nov, 1861	Ditto	390	0	0	1 Nov, 1861.
Assistant Clerk of Petty Sessions	Luke M'Gunn, jun <sup>1</sup>	1 June, 1883	Ditto	120	0	0	17 June, 1881
Dungog—							
Police Magistrate and Clerk of Petty Sessions.	Charles G Smith	1 Sept, 1875	Ditto	340	0	0	1 May, 1861.
Eden—							
Police Magistrate	George Plunkett Keon	26 July, 1864	Ditto	440	0	0	28 Dec, 1845.
Clerk of Petty Sessions	Joseph W Lees ..	1 July, 1883	Ditto .....	290	0	0	26 Nov., 1858.*
Emmaville—							
Clerk of Petty Sessions ...	John Michael Sheahan	1 July, 1885	Ditto ...	240	0	0	5 Sept, 1876
Forbes—							
Police Magistrate	Ernest Augustine Lambie Sharpe	1 Jan, 1881	Ditto	490	0	0	22 July, 1873.
Clerk of Petty Sessions	Edmund A T Peiy	1 Dec, 1884	Ditto ..	340	0	0	1 June, 1881.
Glen Innes—							
Police Magistrate	George Martin	1 Sept, 1875	Ditto	490	0	0	3 Mar, 1868
Clerk of Petty Sessions	Vere D H Besnard	1 May, 1885	Ditto	290	0	0	7 April, 1879.
Gosford—							
Police Magistrate	Edward Reeve	1 Sept, 1875	Ditto	390	0	0	16 Oct, 1848 *
Clerk of Petty Sessions	Arthur J Kingsmill, J P	1 Jan., 1880	Ditto	290	0	0	1 Jan, 1880.
Goulburn—							
Police Magistrate	Charles Somerville Alexander	1 July, 1883	Ditto ..	550	0	0	8 Feb, 1861.
Clerk of Petty Sessions	Leslie W. A. Macarthur	1 July, 1883	Ditto ...	390	0	0	15 April, 1874.
Assistant Clerk of Petty Sessions	Arthur Blix	1 Jan, 1883	Ditto	140	0	0	1 Jan, 1883
Grafton—							
Police Magistrate	A L M'Dougall	5 Sept, 1876	Ditto	550	0	0	5 Sept, 1876
Clerk of Petty Sessions	William Clarke	1 April, 1880	Ditto	490	0	0	16 Mar, 1874.
Assistant Clerk of Petty Sessions	Grantley A Hyde .	20 Nov, 1882	Ditto	140	0	0	20 Nov, 1882.
Grenfell—							
Clerk of Petty Sessions	William Foxton Robertson	1 July, 1883	Ditto ...	490	0	0	29 May, 1869.
Gulgong—							
Police Magistrate	Phulp Snape	1 Feb, 1881	Ditto	440	0	0	1 June, 1871
Clerk of Petty Sessions	Henry De Boos	1 June, 1885	Ditto	240	0	0	1 April, 1864.
Gundagai—							
Police Magistrate	Henry Gordon	1 April, 1885	Ditto	390	0	0	1 Dec, 1841.
Clerk of Petty Sessions	Charles Wye Weekes	19 Oct, 1875	Ditto	440	0	0	19 Oct, 1875.
Gunnedah—							
Police Magistrate ..	Patrick Brougham ..	1 Jan, 1885	Ditto ..	440	0	0	5 Sept., 1876.
Clerk of Petty Sessions	Wm Bligh Connell	1 June, 1885	Ditto ..	190	0	0	1 Sept, 1880.
Gunning—							
Clerk of Petty Sessions	John Frederic Kenyon, J P	11 Sept, 1876	Ditto	390	0	0	11 Sept, 1876
Hartley—							
Police Magistrate and Clerk of Petty Sessions.	Thomas H Neale	16 Aug, 1873	Ditto	440	0	0	16 Aug, 1873

<sup>1</sup> To 14 July—deceased      \* Services not continuous

NOTE—The Police Magistrates receive 20s with and 25s without forage, per diem, as travelling allowance      The Clerks of Petty Sessions give security for the due performance of their duties

## NEW SOUTH WALES—1886.

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Office	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government
<b>MINISTER OF JUSTICE—PETTY SESSIONS—continued.</b>					
POLICE MAGISTRATES, CLERKS OF PETTY SESSIONS, &c—continued					
COUNTRY DISTRICTS—continued.					
Hay—					
Police Magistrate ...	Joseph E. Pearce	1 May, 1870	Governor and Executive Council	490 0 0	24 July, 1862.
Clerk of Petty Sessions	William Chisholm	1 Jan., 1885	Ditto	390 0 0	11 Jan., 1876.
Hill End—					
Police Magistrate	Watson Augustus Steel	1 Jan., 1883	Ditto	490 0 0	19 Nov., 1872.
Clerk of Petty Sessions	Henry S Hawkins	1 May, 1884	Ditto	290 0 0	1 Oct., 1877.
	succeeded by James Watt	1 June, 1886	Ditto	220 0 0	10 Sept., 1879.
Hillston—					
Police Magistrate	N. C. O'Neill	1 June, 1878	Ditto	390 0 0	26 April, 1870.
Clerk of Petty Sessions	Michael Hogan	1 May, 1885	Ditto	140 0 0	1 Jan., 1884.
Inverell—					
Police Magistrate	William W. Fraser	1 Sept., 1875	Ditto	490 0 0	1 Sept., 1875.
Clerk of Petty Sessions	James Holloway Thompson	1 Jan., 1885	Ditto	440 0 0	1 July, 1869.
	succeeded by Frederick Stuart Osborn	1 May, 1886	Ditto	370 0 0	1 Jan., 1871.
Assistant Clerk of Petty Sessions.	Walter Scott <sup>1</sup>	1 Nov., 1885	Ditto	...	1 Oct., 1885.
Kempsey—					
Police Magistrate	Thomas A. Davies	1 July, 1886	Ditto	470 0 0	4 Oct., 1881.
Clerk of Petty Sessions	George Stevenson	1 Aug., 1883	Ditto	340 0 0	12 May, 1881.
	succeeded by George Boileau	1 July, 1886	Ditto	340 0 0	1 Sept., 1880.
Kiama—					
Police Magistrate and Clerk of Petty Sessions.	Henry Connell	1 Aug., 1874	Ditto	500 0 0	21 Aug., 1844.
Lismore—					
Clerk of Petty Sessions	Cornelius Coghlan	1 May, 1884	Ditto	340 0 0	1 April, 1878.
Lithgow—					
Clerk of Petty Sessions	Henry Lumsdaine	1 Jan., 1885	Ditto	245 0 0	1 Dec., 1845.*
Liverpool—					
Clerk of Petty Sessions	Wm. Hy. Goodman	1 Mar., 1882	Ditto	190 0 0	28 July, 1877.
Loftus—					
Clerk of Petty Sessions	Alfred Ellhott	1 Oct., 1884	Ditto	240 0 0	12 Mar., 1878.
Macleay—					
Clerk of Petty Sessions	Jim M'Kensey	1 July, 1884	Ditto	240 0 0	7 Oct., 1875.
Maitland—					
Police Magistrate	Leopold Yates	1 April, 1884	Ditto	550 0 0	10 July, 1862.
Clerk of Petty Sessions	Francis Sheriff Isaacs	1 Dec., 1884	Ditto	490 0 0	1 Jan., 1868.
Assistant Clerk of Petty Sessions.	Cecil Collingwood Vindin	1 Sept., 1885	Ditto	140 0 0	1 Sept., 1885.
Messenger				50 0 0	
Marulan—					
Clerk of Petty Sessions	Robert Waddell	1 Mar., 1884	Governor and Executive Council	190 0 0	16 Nov., 1880.
Merrwa—					
Police Magistrate	Francis T Rusden	1 Jan., 1886	Ditto	440 0 0	25 July, 1830.*
Clerk of Petty Sessions	Edward Wm. Fegan	1 Sept., 1885	Ditto	240 0 0	17 Oct., 1878.
Milparinka—					
Police Magistrate and Clerk of Petty Sessions.	Charles M'Arthur King	7 Jan., 1882	Ditto	550 0 0	1 Jan., 1882.
Milton—					
Clerk of Petty Sessions	John T Hobbes	1 May, 1884	Ditto	340 0 0	10 Oct., 1878.
Moama—					
Acting Clerk of Petty Sessions.	John B Casey	1 May., 1885	Ditto	200 0 0	.....
Molong—					
Clerk of Petty Sessions	John Hyde Nisbet	1 Sept., 1875	Ditto	340 0 0	1 Sept., 1875.
Moree—					
Police Magistrate and Clerk of Petty Sessions.	William E Henry	1 July, 1885	Ditto	390 0 0	2 May, 1873.
Moruya—					
Police Magistrate	George Maunsell	1 Sept., 1883	Ditto	490 0 0	13 Mar., 1858.
Clerk of Petty Sessions	John Kenny	1 June, 1885	Ditto	290 0 0	1 Jan., 1878.
Moss Vale—					
Clerk of Petty Sessions	William W. S. Bridges	22 Aug., 1879	Ditto	240 0 0	22 Aug., 1879
Mudgee—					
Police Magistrate	William D. Meares	1 Sept., 1875	Ditto	550 0 0	10 April, 1842.
Clerk of Petty Sessions	Robert Hugh Acheson	1 Dec., 1884	Ditto	440 0 0	5 Aug., 1878.
Murrumburrah—					
Clerk of Petty Sessions	Charles Cutcliffe, B A.	1 May, 1875	Ditto	290 0 0	1 May, 1875.
Murrurundi—					
Clerk of Petty Sessions	Geo. Rupert Evans	1 June, 1878	Ditto	440 0 0	1 April, 1878.
Muswellbrook—					
Clerk of Petty Sessions	Timothy Foley	16 Dec., 1867	Ditto	390 0 0	1 Dec., 1867.
Assistant Clerk of Petty Sessions	James Vincent Foley	1 Mar., 1882	Ditto	115 0 0	1 Mar., 1882.

<sup>1</sup> Paid by Department of Lands      \* Services not continuous

NOTE—The Police Magistrates receive 20s with and 25s without forage, per diem, as travelling allowance. The Clerks of Petty Sessions give security for the due performance of their duties.

Office.	Name.	Date of Appointment.	By whom appointed, and under what instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>MINISTER OF JUSTICE—PETTY SESSIONS—continued.</b>					
<b>POLICE MAGISTRATES, CLERKS OF PETTY SESSIONS, &amp;c.—continued.</b>					
<i>COUNTRY DISTRICTS—continued.</i>					
Narrabri—					
Police Magistrate and Clerk of Petty Sessions.	Henry J. Bolding .....	1 Jan., 1885	Governor and Executive Council	490 0 0	22 Feb., 1866.
Assistant Clerk of Petty Sessions.	Duncan M'Dougall .....	1 July, 1883	Ditto .....	140 0 0	1 July, 1883.
Narrangera—					
Police Magistrate .....	Lester Stuart Donaldson...	1 May, 1885	Ditto .....	490 0 0	19 Sept., 1871.
Clerk of Petty Sessions ...	G. F. Scott .....	1 Jan., 1885	Ditto .....	440 0 0	18 June, 1863.
	succeeded by				
	Frederick Marsh .....	1 Nov., 1886	Ditto .....	420 0 0	8 April, 1852.*
Newcastle—					
Police Magistrate.....	James Mair .....	1 Jan., 1882	Ditto .....	650 0 0	3 Oct., 1862.
Clerk of Petty Sessions ...	Alexander Lumsdaine.....	5 Sept., 1876	Ditto .....	390 0 0	10 June, 1872.
Assistant Clerk of Petty Sessions.	Henry William Hemsworth	1 Jan., 1885	Ditto .....	265 0 0	17 Oct., 1879.
	Huntington.				
Messenger (1) .....				60 0 0	
Newtown—					
Clerk of Petty Sessions ...	Francis S. Fielder, J.P. ...	1 Oct., 1879	Governor and Executive Council	340 0 0	10 Nov., 1874.
Nowra—					
Clerk of Petty Sessions ...	William Lovegrove .....	1 Jan., 1857	Ditto .....	440 0 0	1 Jan., 1857.
Nundle—					
Clerk of Petty Sessions ...	Edward Jones .....	1 Feb., 1884	Ditto .....	240 0 0	1 Feb., 1884.
Orange—					
Police Magistrate.....	John Tom Lane .....	1 Jan., 1867	Ditto .....	490 0 0	1 Jan., 1867.
Clerk of Petty Sessions ...	F. B. Hales (Acting) .....	1 May, 1885	Ditto .....	300 0 0	1 April, 1861.*
Assistant Clerk of Petty Sessions.	James E. M'Shane <sup>1</sup> .....	1 Oct., 1884	Ditto .....	140 0 0	1 Oct., 1884.
Purkes—					
Clerk of Petty Sessions ...	William C. Weston .....	1 July, 1878	Ditto .....	390 0 0	23 June, 1864.
Parramatta—					
Clerk of Petty Sessions ...	George Wickham .....	1 Sept., 1878	Ditto .....	440 0 0	5 Mar., 1847.
Assistant Clerk of Petty Sessions.	Francis Cox Baylis .....	1 Sept., 1884	Ditto .....	140 0 0	1 Sept., 1884.
Paterson—					
Clerk of Petty Sessions ...	Wm. Le Brun Brown .....	1 June, 1885	Ditto .....	240 0 0	13 Feb., 1882.
Penrith—					
Police Magistrate and Clerk of Petty Sessions.	John K. Cleve .....	13 Jan., 1868	Ditto .....	390 0 0	3 July, 1865.
Assistant Clerk of Petty Sessions.	James E. M'Shane .....	1 Dec., 1886	Ditto .....	140 0 0	1 Oct., 1884.
Picton—					
Clerk of Petty Sessions ...	Charles Frederick Butler...	1 Nov., 1884	Ditto .....	190 0 0	1 Aug., 1880.
Port Macquarie—					
Police Magistrate and Clerk of Petty Sessions.	Richard Maunsell .....	17 Nov., 1879	Ditto .....	340 0 0	17 Nov., 1879.
Queanbeyan—					
Police Magistrate.....	John Chadwick Woore ...	1 July, 1883	Ditto .....	490 0 0	7 Mar., 1862.
Clerk of Petty Sessions ...	Obadiah Willans .....	14 Nov., 1864	Ditto .....	440 0 0	14 Nov., 1864.
Quirindi—					
Clerk of Petty Sessions ...	Robert Henry Venn Almutt ...	15 Sept., 1884	Ditto .....	220 0 0	15 Sept., 1884.
Raymond Terrace—					
Police Magistrate and Clerk of Petty Sessions.	Charles Robert Middleton	11 Oct., 1875	Ditto .....	340 0 0	11 Oct., 1875.
Redfern—					
Clerk of Petty Sessions ...	Fredk. P. Mcarees, J.P. ...	1 Feb., 1882	Ditto .....	340 0 0	1 July, 1875.
Assistant Clerk of Petty Sessions.	Harcourt Holcombe .....	1 Jan., 1885	Ditto .....	190 0 0	1 Jan., 1885.
Richmond—					
Clerk of Petty Sessions ...	Ossory Arthur Stanton Fitzpatrick.	1 Oct., 1884	Ditto .....	115 0 0	1 Oct., 1884.
Ryde—					
Clerk of Petty Sessions ...	George M. Pope .....	18 June, 1863	Ditto .....	240 0 0	30 Mar., 1857.
Rylstone—					
Clerk of Petty Sessions ...	William W. Armstrong ...	1 July, 1854	Ditto .....	340 0 0	1 July, 1854.
Scone—					
Police Magistrate.....	William Fox Parker .....	1 July, 1883	Ditto .....	490 0 0	26 April, 1862.
Clerk of Petty Sessions ...	Henry J. Leary .....	1 July, 1883	Ditto .....	240 0 0	1 Jan., 1882.
Singleton—					
Police Magistrate.....	Jas. N. Brooks .....	1 May, 1875	Ditto .....	490 0 0	1 June, 1853.
Clerk of Petty Sessions ...	William Dudding, J.P. ...	23 Sept., 1854	Ditto .....	340 0 0	4 April, 1847.
Silverton—					
Police Magistrate and Clerk of Petty Sessions.	Wyman Brown .....	3 July, 1884	Ditto .....	440 0 0	1 June, 1879.
St. Leonards—					
Clerk of Petty Sessions ...	Stephen Murphy .....	1 Sept., 1883	Ditto .....	340 0 0	12 April, 1867.*
Stroud—					
Police Magistrate.....	Charles Hugh Fawcett ...	1 Dec., 1885	Ditto .....	290 0 0	31 Oct., 1862.*
Clerk of Petty Sessions ...	Thomas Laman, J.P. ....	13 April, 1859	Ditto .....	290 0 0	13 April, 1859.

<sup>1</sup> To 30 November—transferred to Penrith.

\* Services not continuous.

NOTE.—The Police Magistrates receive 20s. with and 25s. without forage, per diem, as travelling allowance. The Clerks of Petty Sessions give security for the due performance of their duties.

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>MINISTER OF JUSTICE—PETTY SESSIONS—continued.</b>					
<b>POLICE MAGISTRATES, CLERKS OF PETTY SESSIONS, &amp;c.—continued.</b>					
<i>COUNTRY DISTRICTS—continued.</i>					
Tamworth—					
Police Magistrate.....	David W. Irving .....	1 Oct., 1863	Governor and Executive Council	550 0 0	24 June, 1861.
Clerk of Petty Sessions ...	John Lethbridge King ...	1 Jan., 1885	Ditto .....	440 0 0	16 Aug., 1870.
Taree—					
Police Magistrate and Clerk of Petty Sessions.	Jasper Albert Creagh .....	1 July, 1883	Ditto .....	440 0 0	1 Feb., 1875.
Temora—					
Police Magistrate.....	James Baker .....	1 Jan., 1883	Ditto .....	490 0 0	30 June, 1874.*
Clerk of Petty Sessions ...	Reginald Zouch .....	11 Aug., 1880	Ditto .....	340 0 0	11 Aug., 1880.
Tenterfield—					
Police Magistrate .....	James B. Graham .....	14 June, 1875	Ditto .....	490 0 0	1 Mar., 1859.
Clerk of Petty Sessions ...	Frederick Burne .....	1 Jan., 1885	Ditto .....	390 0 0	11 Aug., 1880.
Tingha—					
Clerk of Petty Sessions ...	William Norton .....	1 Sept., 1884	Ditto .....	240 0 0	1 June, 1881.
Trunkey—					
Police Magistrate and Clerk of Petty Sessions.	Thos. Arkell Smith .....	1 Aug., 1871	Ditto .....	390 0 0	1 Aug., 1871.
Tumberumba—					
Police Magistrate and Clerk of Petty Sessions.	Joseph Francis Makinson	1 July, 1883	Ditto .....	440 0 0	7 July, 1875.
Tumut—					
Police Magistrate.....	Frederick W. Vyner .....	1 July, 1871	Ditto .....	490 0 0	1 Jan., 1865.
Clerk of Petty Sessions ...	Charles J. Lloyd .....	1 Jan., 1886	Ditto .....	340 0 0	2 July, 1881.
Tweed River (Murwillumbah)—					
Police Magistrate and Clerk of Petty Sessions.	Joshua Bray.....	1 Oct., 1875	Ditto .....	390 0 0	17 Sept., 1875.
Uralla—					
Clerk of Petty Sessions ...	Alexander M'Rae <sup>1</sup> .....	1 Aug., 1885	Ditto .....	240 0 0	1 June, 1878.
Urana—					
Clerk of Petty Sessions ...	Richard B. Hayes .....	1 Mar., 1884	Ditto .....	390 0 0	1 Nov., 1876.
Wagga Wagga—					
Police Magistrate.....	Henry Baylis .....	28 July, 1862	Ditto .....	550 0 0	9 Aug., 1852.
Clerk of Petty Sessions ...	Edwin H. Tompson, J.P.	29 Jan., 1864	Ditto .....	340 0 0	29 Jan., 1864.
Walcha—					
Clerk of Petty Sessions ...	Edward Marriott.....	1 Mar., 1883	Ditto .....	440 0 0	12 Aug., 1862.
Walgett—					
Police Magistrate.....	Hubert Dillon .....	1 Feb., 1882	Ditto .....	440 0 0	1 Jan., 1873.
	succeeded by				
	George F. Scott .....	1 Aug., 1886	Ditto .....	440 0 0	18 June, 1863.
Clerk of Petty Sessions ...	Walter Bland Brown .....	1 Jan., 1885	Ditto .....	240 0 0	1 Nov., 1882.
Waratah—					
Police Magistrate.....	Robert I. Perrott.....	17 Nov., 1879	Ditto .....	490 0 0	1 Aug., 1859.
Clerk of Petty Sessions ...	Henry H. S. Chippendall	1 May, 1884	Ditto .....	240 0 0	1 Jan., 1878.
Warialda—					
Police Magistrate.....	Wm. Vaughan May Cooke	1 Jan., 1886	Ditto .....	440 0 0	1 May, 1867.
Clerk of Petty Sessions ...	Thos. H. Wilkinson.....	18 April, 1882	Ditto .....	390 0 0	21 Dec., 1880.
Wellington—					
Police Magistrate.....	Reginald Hare.....	1 Nov., 1885	Ditto .....	390 0 0	1 Mar., 1862.
Clerk of Petty Sessions ...	William Carson .....	1 May, 1884	Ditto .....	390 0 0	30 Oct., 1872.
Wentworth—					
Police Magistrate.....	Milton S. Love.....	1 Mar., 1883	Ditto .....	440 0 0	1 May, 1868.
Clerk of Petty Sessions ...	Arthur Nelson Barnett <sup>2</sup> ...	1 Dec., 1884	Ditto .....	.....	1 Mar., 1877.
Wilcannia—					
Police Magistrate and Clerk of Petty Sessions.	George H. Gower... ..	1 Feb., 1883	Ditto .....	440 0 0	17 Dec., 1874.
Windsor—					
Police Magistrate and Clerk of Petty Sessions.	Wm. Henry Hughes Becke	1 April, 1874	Ditto .....	440 0 0	8 June, 1853.
Wollombi—					
Police Magistrate and Clerk of Petty Sessions.	William Henry Thomas..	1 April, 1885	Ditto .....	390 0 0	12 April, 1864.
Wollongong—					
Police Magistrate.....	Alfred A. Turner.....	1 Jan., 1853	Ditto .....	490 0 0	23 May, 1848.
Clerk of Petty Sessions...	David R. Jamieson .....	1 Nov., 1885	Ditto .....	170 0 0	1 Mar., 1883.
Yass—					
Police Magistrate.....	Arthur M. Fisher .....	1 Feb., 1882	Ditto .....	550 0 0	17 Sept., 1875.
Clerk of Petty Sessions...	Glentworth Addison .....	1 Jan., 1885	Ditto .....	220 0 0	1 Jan., 1882.
Young—					
Police Magistrate.....	Samuel Robinson .....	1 Aug., 1876	Ditto .....	550 0 0	15 April, 1872.
Clerk of Petty Sessions ...	Wm. Cooper Rodgerson...	1 June, 1885	Ditto .....	390 0 0	22 Aug., 1879.
Emergency Clerk of Petty Sessions.	William Macpherson Macfarlane	1 Dec., 1884	Ditto .....	340 0 0	1 July, 1883.
Assistant Emergency Clerk of Petty Sessions.	F. B. Hales .....	1 Dec., 1886	Ditto .....	320 0 0	1 April, 1861.*

<sup>1</sup> To 10 November—deceased. <sup>2</sup> Paid by Lands Department. \* Services not continuous.

NOTE.—The Police Magistrates receive 20s. with and 25s. without forage, per diem, as travelling allowance. The Clerks of Petty Sessions give security for the due performance of their duties.



Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>MINISTER OF JUSTICE—PETTY SESSIONS—<i>continued.</i></b>					
<b>POLICE MAGISTRATES, CLERKS OF PETTY SESSIONS, &amp;c.—<i>continued.</i></b>					
Police acting as Clerks of Petty Sessions—					
<b>DISTRICTS—</b>					
Rockley (1) .....	.....	.....	Governor and Executive Council	20 0 0	
Goodooga .....	} (4) .....	.....	Ditto .....	15 0 0	each.
Lawrence .....					
Louth .....					
Wanaaring .....					
Adelong .....	} (57) .....	.....	Ditto .....	10 0 0	"
Angledool .....					
Araluen .....					
Ashford .....					
Ballina .....					
Baradine .....					
Barmedman .....					
Barraba .....					
Barrington .....					
Bateman's Bay .....					
Bendemeer .....					
Binalong .....					
Blackville .....					
Blayney .....					
Boggabri .....					
Booligal .....					
Broke .....					
Broken Hill .....					
Broughton Creek .....					
Brunswick .....					
Buckley's Crossing .....					
Bulladelah .....					
Bulli .....					
Bundarra .....					
Bungendore .....					
Bungwall .....					
Burruga .....					
Byrock .....					
Camden Haven .....					
Candelo .....					
Canowindra .....					
Carrahoob .....					
Cessnock .....					
Clare .....					
Clarence Town .....					
Clifton .....					
Cobargo .....					
Cobborah .....					
Collarenebri .....					
Collector .....					
Coolah .....					
Cooranbong .....					
Coraki .....					
Cudgellico .....					
Cudal .....					
Cudgen .....					
Dandaloo .....					
Darlington Point .....					
Delegate .....					
Denison Town .....					
Ellalong .....					
Euabalong .....					
Eurobodalla .....					
Euston .....					
Forster .....					
Frogmore .....					
Germanton .....					
Gilgandra .....					
Gladstone .....					
Gresford .....					
Gundaroo .....					
Hargraves .....					
Howlong .....					
Ivanhoe .....					
Jerilderie .....					
Jerry's Plains .....					
Jugiong .....					
Kangaroo Valley .....					
Kiandra .....					
Manila .....					
Marengo .....					
Marsdens .....					
	} (62) .....	.....	Ditto .....	10 0 0	"

NOTE.—The Police Magistrates receive 20s. with and 25s. without forage, per diem, as travelling allowance. The Clerks of Petty Sessions give security for the due performance of their duties.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first appointment under the Colonial Government.
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MINISTER OF JUSTICE—PETTY SESSIONS—*continued.*

POLICE ACTING AS CLERKS OF PETTY SESSIONS—*continued.*

DISTRICTS—*continued.*

Mathoura .....					
Menindie .....					
Michelago .....					
Mitchell .....					
Mittagong .....					
Mogil Mogil .....					
Morangarell .....					
Mossgiel .....					
Moulamein .....					
Mount M'Donald .....					
Mount Hope .....					
Mulwalla .....					
Nambucca .....					
Nelligen .....					
Nimitybelle .....					
Nymagee .....					
Nyngan .....					
Oberon .....					
Obley .....					
Panbula .....					
Pilliga .....					
Pooncarie .....					
Purnamoota .....					
Quambone .....	(62) .....	.....	Governor and Executive Council	10 0 0	each.
Rydal .....					
Rye Park .....					
Seymour .....					
Shellharbour .....					
Sofala .....					
St. Albans .....					
Stuart Town .....					
Tamba Springs .....					
Taralga .....					
Tibooburra .....					
Tocumwal .....					
Toogong .....					
Tuena .....					
Ulmara .....					
Wallabadah .....					
Wallerawang .....					
Wardell .....					
Warren .....					
Wee Waa .....					
Wilson's Downfall .....					
Wollar .....					
Woodburn .....					
Yetman .....					

COMPTROLLER-GENERAL OF PRISONS.

Comptroller-General <sup>1</sup> .....	Harold Maclean .....	1 Jan., 1874	Governor and Executive Council	860 0 0	20 Mar., 1846.
Deputy Comptroller <sup>2</sup> .....	Robert Albert Goff .....	13 Sept., 1884	Ditto .....	440 0 0	{ 14 Jan., 1873.* 1 July, 1875.
Chief Clerk .....	Arthur H. Collis .....	13 Sept., 1884	Ditto .....	340 0 0	23 April, 1875.
First Clerk .....	Samuel M'Cauley .....	13 Sept., 1884	Ditto .....	290 0 0	15 Jan., 1876.
Second Clerk and Accountant. <sup>2</sup> .....	Sydney Septimus Russell .....	13 Sept., 1884	Ditto .....	240 0 0	16 May, 1879.
Third Clerk .....	Richard Thomas MacNevin .....	13 Sept., 1884	Ditto .....	165 0 0	17 Nov., 1881.
Fourth Clerk .....	Arthur C. Martin .....	1 Oct., 1884	Ditto .....	150 0 0	
Fifth Clerk .....	.....	.....	Comptroller-General .....	120 0 0	
Messenger (1) <sup>3</sup> .....	.....	.....	Ditto .....	25 0 0	
Housekeeper .....	.....	.....			

<sup>1</sup> Comptroller-General gives security to the amount of £1,000. <sup>2</sup> Deputy Comptroller and Accountant each give security to the amount of £500.  
<sup>3</sup> Allowed quarters, fuel, and light. \* Temporarily, from 14 January, 1873.

GAOL, SYDNEY.

Visiting Justice .....	William Chatfield .....	5 Dec., 1865	Governor and Executive Council	200 0 0	1 Mar., 1851.*
Governor .....	John Cecil Read <sup>1</sup> .....	16 Feb., 1861	Administrator of the Government and Executive Council.	575 0 0	26 July, 1855.
Matron .....	Frances Mary Challis <sup>2</sup> .....	1 Aug., 1878	Governor and Executive Council	150 0 0	1 April, 1878.
Visiting Surgeon (see p. 30)	Thomas James Barnett .....	1 Sept., 1878	Ditto .....	340 0 0	16 May, 1868.
Dispenser (see p. 30)	George Gray Brodie .....	15 Dec., 1885	Ditto .....	198 0 0	1 April, 1884.
Clerks .....	Francis William Grant .....	1 Jan., 1882	Ditto .....	240 0 0	1 Sept., 1867.*
Schoolmaster .....	Forsythe.				
Chief Warder .....	John Lovett <sup>1</sup> .....	25 Feb., 1883	Ditto .....	250 0 0	3 Sept., 1846.*

<sup>1</sup> Resides in the Gaol; allowed fuel and light. <sup>2</sup> Resides in the Gaol; allowed a ration of provisions, fuel, and light. \* Services not continuous.  
NOTE.—The Principal Gaoler gives security to the amount of £500.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>MINISTER OF JUSTICE—GAOL, SYDNEY—continued.</b>					
Senior Warders (4) .....	.....	.....	Comptroller-General of Prisons...	1 at 10 0 1 at 9 9 1 at 9 6 1 at 9 3	per diem. " " "
Warders, 1st Class (6) <sup>1</sup> .....	.....	.....	Ditto .....	9 0	per diem each.
Warders, 2nd Class (9).....	.....	.....	Ditto .....	8 3	" "
Warders, 3rd Class (29) .....	.....	.....	Ditto .....	8 0	" "
Sub-Matron (1).....	.....	.....	Ditto .....	105 0 0	
Forewoman (1) <sup>2</sup> .....	.....	.....	Ditto .....	72 0 0	
Female Warders (9) <sup>2</sup> .....	.....	.....	Ditto .....	62 0 0	each.
Suprintendent Prison Industries.	.....	.....	Ditto .....	340 0 0	
Storekeeper.....	.....	.....	.....	290 0 0	
Overseers (5) .....	.....	.....	Ditto .....	1 at £250, 1 at £179, 3 at 11/6 per diem each.	
Foremen (2) .....	.....	.....	Ditto .....	9 0	per diem each.
Messenger (1).....	.....	.....	Ditto .....	8 0	" "
Carter (1) .....	.....	.....	Ditto .....	7 0	" "
Chaplains—					
Church of England.....	Rev. Charles H. Rich .....	6 Nov., 1864	Governor and Executive Council	120 0 0	6 Nov., 1864.
Roman Catholic .....	Rev. J. J. Byrne .....	8 Dec., 1885	Ditto .....	120 0 0	8 Dec., 1885.
Presbyterian.....	Rev. Robert Kerr <sup>3</sup> .....	23 Mar., 1884	Ditto .....	50 0 0	23 Mar., 1884.
<p><sup>1</sup> One resident; the others allowed 1s. per diem each for quarters. The gatekeeper allowed fuel and light.      <sup>2</sup> Resides in the Gaol; allowed a ration of provisions, fuel, and light.      <sup>3</sup> Decensed, 13 December, 1886.</p>					
<b>GAOL, ALBURY.</b>					
Visiting Justice .....	Henry McC. Keightley ...	19 Nov., 1883	Governor and Executive Council	Nil.	10 July, 1854.
Gaoler .....	Frederick A. Ramsay <sup>1</sup> .....	25 June, 1883	Ditto .....	240 0 0	16 Jan., 1878.
Matron .....	Kate Maria Ramsay <sup>1</sup> .....	25 June, 1883	Ditto .....	48 0 0	1 Mar., 1882.
Visiting Surgeon (see p. 30)	.....	.....	Comptroller-General of Prisons...	9 3	per diem.
Senior Warder <sup>2</sup> .....	.....	.....	Ditto .....	8 0	" each.
Warders (6) .....	.....	.....	Ditto .....	8 0	" each.
Chaplains:—					
Church of England .....	Rev. Alfred Davidson Acocks.	9 Mar., 1878	Governor and Executive Council	20 0 0	9 Mar., 1878.
Roman Catholic .....	Rev. J. Dunne .....	19 May, 1882	Ditto .....	20 0 0	19 May, 1882.
<p><sup>1</sup> Resides in the Gaol; allowed fuel and light.      <sup>2</sup> 1s. per diem lodging allowance.</p>					
NOTE.—The Gaoler gives security to the amount of £100.					
<b>GAOL, ARMIDALE.</b>					
Visiting Justice .....	Charles E. Smith.....	20 Feb., 1885	Governor and Executive Council	Nil.	
Gaoler.....	Samuel Caldwell <sup>1</sup> .....	18 June, 1863	Governor and Executive Council, upon recommendation of Sheriff	240 0 0	24 Oct., 1830.*
Matron .....	Isabella Caldwell <sup>1</sup> .....	18 June, 1863	Ditto .....	48 0 0	18 June, 1863.
Visiting Surgeon (see p. 30)	.....	.....	Comptroller-General of Prisons...	9 3	per diem.
Senior Warder (1) <sup>2</sup> .....	.....	.....	Ditto .....	8 3	" "
Second Class Warder .....	.....	.....	Ditto .....	8 0	" each.
Warders (4) .....	.....	.....	Ditto .....	8 0	" each.
Chaplains:—					
Church of England .....	Rev. James Ross .....	21 Jan., 1879	Governor and Executive Council	20 0 0	21 Jan., 1879.
Roman Catholic .....	Rev. Patrick James O'Connor.	17 July, 1878	Ditto .....	20 0 0	17 July, 1878.
<p><sup>1</sup> Resides in the Gaol; allowed fuel and light.      <sup>2</sup> Allowed 1s. per diem for rent.      * Services not continuous.</p>					
NOTE.—The Gaoler gives security to the amount of £100.					
<b>GAOL, BATHURST.</b>					
Visiting Justice .....	Benjamin Lee .....	12 Aug., 1874	Governor and Executive Council	Nil.	12 Aug., 1874.
Gaoler.....	Alexander Forbes <sup>1</sup> .....	13 May, 1867	Governor and Executive Council, upon recommendation of Sheriff	265 0 0	19 Aug., 1857.
Visiting Surgeon (see p. 30)	.....	.....	Ditto .....	48 0 0	21 May, 1867.
Dispenser (see p. 30)	.....	.....	Ditto .....	174 0 0	1 Jan., 1864.
Matron .....	Alice Forbes <sup>1</sup> .....	21 May, 1867	Comptroller-General of Prisons...	0 9 6	per diem.
Clerk and Schoolmaster .....	John Wood Johnston <sup>2</sup> .....	1 Jan., 1874	Ditto .....	0 9 3	" "
Chief Warder (1) <sup>3</sup> .....	.....	.....	Ditto .....	0 8 0	" each.
Senior Warder (1) <sup>4</sup> .....	.....	.....	Ditto .....	62 0 0	" "
Warders (9) <sup>5</sup> .....	.....	.....	Ditto .....	0 11 6	per diem.
Female Warders (3) <sup>6</sup> .....	.....	.....	Ditto .....	0 11 6	per diem.
Overseer (1) .....	.....	.....	Ditto .....	0 11 6	per diem.
Chaplains:—					
Church of England.....	The Bishop of Bathurst...	30 May, 1883	Governor and Executive Council	30 0 0	30 May, 1883.
Roman Catholic .....	Rev. Joseph Patrick Byrne	1 July, 1874	Ditto .....	30 0 0	1 July, 1874.
<p><sup>1</sup> Allowed quarters, fuel, and light.      <sup>2</sup> Allowed £26 per annum for house rent.      <sup>3</sup> Allowed fuel and light and £26 per annum for house rent; also uniform clothing.      <sup>4</sup> Allowed 1s. per diem for rent; also uniform clothing.      <sup>5</sup> Allowed uniform clothing and quarters for the single warders.      <sup>6</sup> Allowed quarters; also a ration of provisions, fuel, and light, and uniform clothing.</p>					
NOTE.—The Gaoler gives security to the amount of £500.					

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>MINISTER OF JUSTICE—continued.</b>					
<b>GAOL, BERRIMA.</b>					
Visiting Justice .....	Frederick Robertson Wilshire.*	11 Mar., 1872	Administrator of the Government and Executive Council.	Nil.	1 Mar., 1862.*
Gaoler .....	Vacant .....	.....	.....	300 0 0	.....
Matron .....	Vacant .....	.....	.....	48 0 0	.....
Visiting Surgeon (see p. 30)	.....	.....	.....	.....	.....
Clerk and Schoolmaster .....	Christopher Vaughan Foss	1 June, 1878	Governor and Executive Council	198 0 0	5 June, 1867.
Chief Warder (1) <sup>1</sup> .....	.....	.....	Comptroller-General of Prisons...	0 10 0	per diem.
Senior Warder (1) <sup>2</sup> .....	.....	.....	Ditto .....	0 9 3	"
First Class Warders (3) <sup>2</sup> .....	.....	.....	Ditto .....	0 9 0	" each.
Third Class Warders (13) .....	.....	.....	Ditto .....	0 8 0	" "
Trades Overseer (1) .....	.....	.....	Governor and Executive Council	0 11 6	"
Chaplains:—	.....	.....	.....	.....	.....
Church of England .....	Rev. George Sheppard	23 Dec., 1878	Ditto .....	100 0 0	23 Dec., 1878.
Roman Catholic .....	Rev. W. Keogan	1 Aug., 1881	Ditto .....	100 0 0	1 Aug., 1881.
	succeeded by	.....	.....	.....	.....
	Revd. A. W. Petre	2 Feb., 1886	Ditto .....	100 0 0	.....
<sup>1</sup> Allowed quarters, fuel, and light. <sup>2</sup> Receives 1s. per diem lodging allowance.    * Services not continuous. NOTE.—The Gaoler gives security to the amount of £500.					
<b>GAOL, DENILIQUIN.</b>					
Visiting Justice .....	Rudolph Roxburgh Morisset	6 Mar., 1883	Governor and Executive Council	Nil.	1 Feb., 1875.
Gaoler .....	John Paton <sup>1</sup> .....	7 Oct., 1875	Ditto .....	220 0 0	28 May, 1861.
Matron .....	Amelia M. C. Paton <sup>1</sup> .....	7 Oct., 1875	Ditto .....	48 0 0	7 Oct., 1875.
Visiting Surgeon (see p. 30)	.....	.....	.....	.....	.....
Warders (5) .....	.....	.....	Comptroller-General of Prisons...	0 8 0	per diem each.
Chaplains:—	.....	.....	.....	.....	.....
Church of England .....	Rev. Samuel B. Holt	22 Mar., 1883	Governor and Executive Council	20 0 0	22 Mar., 1883.
Roman Catholic .....	Rev. Timothy Hanley	16 June, 1882	Ditto .....	20 0 0	16 June, 1882.
<sup>1</sup> Resides in the Gaol; allowed fuel and light.    NOTE.—The Gaoler gives security to the amount of £100.					
<b>GAOL, GOULBURN.</b>					
Visiting Justice .....	Chas. S. Alexander	27 July, 1883	Governor and Executive Council	Nil.	8 Feb., 1861.
Gaoler .....	Peter Herbert <sup>1</sup> .....	10 Feb., 1882	Ditto .....	340 0 0	1 Mar., 1865.
Visiting Surgeon (see p. 30)	.....	.....	.....	.....	.....
Dispenser (see p. 30).	.....	.....	.....	.....	.....
Matron .....	Ann Herbert <sup>1</sup> .....	10 Feb., 1882	Ditto .....	100 0 0	10 Feb., 1882.
Clerk .....	George Gray Brodie	1 April, 1884	Ditto .....	198 0 0	1 May, 1884.
	succeeded by	.....	.....	.....	.....
	William Hy. Delaney	15 Dec., 1885	Ditto .....	198 0 0	15 Dec., 1885.
Storekeeper & Schoolmaster	Saml. Pollock	1 May, 1884	Ditto .....	178 0 0	1 May, 1884.
Chief Warder (1) <sup>2</sup> .....	.....	.....	Comptroller-General of Prisons...	200 0 0	.....
Senior Warders (2) <sup>3</sup> .....	.....	.....	Ditto .....	0 9 6	per diem each.
First Class Warders (5) <sup>3</sup> .....	.....	.....	Ditto .....	0 9 0	" "
Second Class Warders (4) .....	.....	.....	Ditto .....	0 8 3	" "
Ordinary Warders (24) .....	.....	.....	Ditto .....	0 8 0	" "
Female Warders (5) <sup>4</sup> .....	.....	.....	Ditto .....	{ 1 at £105 4 at £ 62	.....
Overseers <sup>1</sup> (2) .....	.....	.....	Ditto .....	179 0 0	each.
Messenger <sup>1</sup> .....	.....	.....	Ditto .....	0 7 0	"
Foremen (2) .....	.....	.....	Ditto .....	0 9 0	" "
Chaplains:—	.....	.....	.....	.....	.....
Church of England .....	Rev. G. M. Irvine	.....	Governor and Executive Council	60 0 0	.....
Roman Catholic .....	Rev. Thos. J. Carroll	2 Mar., 1885	Ditto .....	60 0 0	2 Mar., 1885.
<sup>1</sup> Allowed quarters and fuel. <sup>2</sup> Allowed £26 per annum in lieu of quarters. <sup>3</sup> Allowed 1s. per diem in lieu of quarters. <sup>4</sup> Allowed quarters and rations. NOTE.—The Gaoler gives security to the amount of £500.					
<b>GAOL, GRAFTON.</b>					
Visiting Justice .....	Andrew Lewis M'Dougall.	1 Dec., 1879	Governor and Executive Council	Nil.	5 Sept., 1876.
Gaoler .....	Jeremiah Frewin <sup>1</sup> .....	1 Dec., 1879	Ditto .....	240 0 0	1 July, 1851.*
Matron .....	Margaret Frewin <sup>1</sup> .....	1 Dec., 1879	Ditto .....	48 0 0	1 Aug., 1874.
Visiting Surgeon (see p. 30)	.....	.....	.....	.....	.....
Senior Warder .....	.....	.....	Comptroller-General of Prisons...	0 9 3	per diem.
First Class Warder <sup>2</sup> .....	.....	.....	Ditto .....	0 9 0	"
Warders (2) .....	.....	.....	Ditto .....	0 8 0	" each.
Chaplains:—	.....	.....	.....	.....	.....
Church of England .....	Rev. Charles Cape Greenway	1 Jan., 1880	Governor and Executive Council	20 0 0	1 Jan., 1880.
Roman Catholic .....	Rev. John O'Sullivan	1 Jan., 1880	Ditto .....	20 0 0	1 Jan., 1880.
<sup>1</sup> Allowed quarters, fuel, and light. <sup>2</sup> Receives 1s. per diem lodging allowance.    * Services not continuous. NOTE.—The Gaoler gives security to the amount of £100.					

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>MINISTER OF JUSTICE—continued.</b>					
<b>GAOL, HAY.</b>					
Visiting Justice .....	Joseph E. Pearce.....	14 Mar., 1871	Governor and Executive Council	Nil.	24 July, 1862.
Gaoler .....	Ghiblim Everett <sup>1</sup> .....	17 Mar., 1882	Ditto .....	240 0 0	19 Sept., 1863.
Matron .....	Mary Ann Everett .....	17 Mar., 1882	Ditto .....	48 0 0	17 Mar., 1882.
Visiting Surgeon (see p. 30)					
Senior Warder (1) <sup>2</sup> .....				0 9 3	per diem.
Warders (4) .....				0 8 0	„ each.
Chaplains:—					
Church of England .....	Rev. Jas. McArthur .....	17 July, 1883	Governor and Executive Council	20 0 0	17 July, 1883.
Roman Catholic .....	Rev. Martin Vaughan.....	13 June, 1885	Ditto .....	20 0 0	13 June, 1885.
<sup>1</sup> Resides in the Gaol; allowed fuel and light.    Gives security for £250. <sup>2</sup> Allowed 1s. per diem in lieu of quarters.					
<b>GAOL, MAITLAND.</b>					
Visiting Justice* .....	Leopold Yates .....	10 April, 1884	Governor and Executive Council	Nil.	10 July, 1862.
Gaoler.....	George Henry Stace <sup>1</sup> .....	14 June, 1867	Ditto .....	254 0 0	14 June, 1867.
Visiting Surgeon (see p. 30)					
Matron .....	Helen Kandiana Stace <sup>1</sup> .....	14 June, 1867	Ditto .....	68 0 0	14 June, 1867.
Clerk and Schoolmaster .....	John Percival Lackey.....	1 June, 1878	Ditto .....	200 0 0	1 Nov., 1876.
Chief Warder (1) <sup>1</sup> .....			Comptroller-General of Prisons...	0 10 0	per diem.
Senior Warder (1) <sup>2</sup> .....			Ditto .....	0 9 3	„
First Class Warders (3) <sup>2</sup> .....			Ditto .....	0 9 0	„ each.
Second Class Warders (2) .....			Ditto .....	0 8 3	„
Third Class Warders (13) .....			Ditto .....	0 8 0	„
Female Warders (2) <sup>1</sup> .....			Ditto .....	62 0 0	each.
Chaplains:—					
Church of England .....	Rev. Lovick Tyrrell.....	16 Nov., 1875	Governor and Executive Council	30 0 0	16 Nov., 1875.
Roman Catholic .....	Rev. Patrick O'Leary .....	30 Oct., 1883	Ditto .....	30 0 0	30 Oct., 1883.
<sup>1</sup> Allowed quarters, fuel, and light. <sup>2</sup> Allowed 1s. per diem in lieu of quarters.    * Mr. Edward E. Wright acting as Visiting Justice during absence of Mr. Yates.					
NOTE.—The Gaoler gives security to the amount of £500.					
<b>GAOL, MUDGEE.</b>					
Visiting Justice .....	William Devenish Meares.	8 Oct., 1875	Governor and Executive Council	Nil.	10 April, 1842.*
Gaoler .....	John Dick <sup>1</sup> .....	1 Aug., 1869	Ditto .....	240 0 0	26 Feb., 1868.
Matron .....	Maria Dick <sup>1</sup> .....	1 Feb., 1869	Ditto .....	48 0 0	1 Feb., 1869.
Visiting Surgeon (see p. 30)					
Third Class Warders (7) .....			Comptroller-General of Prisons...	0 8 0	per diem each.
Female Warder (1) .....			Ditto .....	0 8 0	„
Overseer (1) .....			Ditto .....	0 11 6	„
Chaplains:—					
Church of England .....	Rev. H. T. A. Bentzen .....	1 Jan., 1880	Governor and Executive Council	20 0 0	1 Jan., 1880.
Roman Catholic .....	Rev. Michael Campion .....	27 May, 1885	Ditto .....	20 0 0	27 May, 1885.
<sup>1</sup> Resides in the Gaol; allowed fuel and light.    * Services not continuous.					
NOTE.—The Gaoler gives security to the amount of £100.					
<b>GAOL, PARRAMATTA.</b>					
Visiting Justice .....	Neil Stewart.....	22 Aug., 1878	Governor and Executive Council	100 0 0	22 Aug., 1878.*
Gaoler .....	John Garda Hussey <sup>1</sup> .....	26 June, 1866	Governor and Executive Council, upon recommendation of Sheriff	388 0 0	1 Mar., 1862.
Matron .....	Jane Watt <sup>1</sup> .....	26 June, 1866	Ditto .....	20 0 0	26 June, 1866.
Visiting Surgeon (see p. 30)					
Dispenser (see p. 30)					
Storekeeper and Schoolmaster.	Douglas Horsley Rowley	1 Sept., 1878	Governor and Executive Council	265 0 0	4 Oct., 1873.
Clerk .....	Michael Howard .....	1 May, 1882	Ditto .....	200 0 0	1 May, 1882.
Chief Warder .....	Alexander Watt <sup>1</sup> .....	22 June, 1866	Ditto .....	200 0 0	1 Oct., 1860.
Senior Warder (1) <sup>2</sup> .....			Comptroller-General of Prisons..	0 9 6	per diem.
First Class Warders (5) <sup>3</sup> .....			Ditto .....	0 9 0	„ each.
Second Class Warders (2) .....			Ditto .....	0 8 3	„
Third Class Warders (26) .....			Ditto .....	0 8 0	„
Overseers (4) .....			Ditto .....	225 0 0	„
Carter (1) .....			Ditto .....	0 7 0	„
Messenger (1) .....			Ditto .....	0 7 0	„
Chaplains:—					
Church of England .....	Rev. John R. Blomfield .....	1 Oct., 1868	Governor and Executive Council	60 0 0	16 Mar., 1851.
Roman Catholic .....	Rev. H. B. Curr .....	27 Dec., 1878	Ditto .....	60 0 0	27 Dec., 1878.
Presbyterian .....	Rev. James Daniel Murray	1 Jan., 1877	Ditto .....	40 0 0	1 Jan., 1877.
<sup>1</sup> Allowed a house, fuel, and light. <sup>2</sup> Allowed 10s. per week in lieu of quarters. <sup>3</sup> Each allowed 1s. per diem in lieu of house rent.					
NOTE.—The Gaoler gives security to the amount of £500.    * Services not continuous.					

NEW SOUTH WALES—1886.

Office.	Name.	Date of Appointment.	By whom appointed, and under what instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>MINISTER OF JUSTICE—continued.</b>					
<b>GAOL, TAMWORTH</b>					
Visiting Justice .....	David W. Irving .....	19 Dec., 1864	Governor and Executive Council	Nil.	24 June, 1861.
Gaoler .....	Donald M'Lean <sup>1</sup> .....	31 Mar., 1881	Ditto .....	240 0 0	13 Mar., 1862.
Matron .....	Jessie M'Lean .....	31 Mar., 1881	Ditto .....	48 0 0	31 Mar., 1881.
Visiting Surgeon (see p. 30)	.....	.....	Comptroller-General of Prisons...	0 9 3	per diem.
Senior Warder (1) <sup>2</sup> .....	.....	.....	Ditto .....	0 9 0	"
First Class Warder (1) <sup>2</sup> .....	.....	.....	Ditto .....	0 8 0	" each.
Warders (5) .....	.....	.....	.....	.....	.....
Chaplains:—					
Church of England .....	Rev. W. J. K. Piddington	7 May, 1880	Governor and Executive Council	20 0 0	7 May, 1880.
Roman Catholic .....	Rev. P. H. Ryan .....	5 Dec., 1879	Ditto .....	20 0 0	5 Dec. 1879.
	..... succeeded by Rev. J. T. Clancy .....	7 Feb., 1886	Ditto .....	20 0 0	7 Feb., 1886.
<sup>1</sup> Resides in the Gaol; allowed fuel and light Gives security for £250. <sup>2</sup> Allowed 1s. per diem in lieu of quarters.					
<b>PUBLIC WORKS PRISON, TRIAL BAY.</b>					
Superintendent .....	William Small .....	1 Oct., 1885	Governor and Executive Council	495 0 0	1 Feb., 1862.
Chief Warder (1) .....	.....	.....	Comptroller-General of Prisons...	0 10 0	per diem.
First Class Warder (2) .....	.....	.....	Ditto .....	0 8 3	" each.
Third Class Warder (14) .....	.....	.....	Ditto .....	0 8 0	"
Visiting Justice .....	John Lynn .....	1 April, 1886	Governor and Executive Council	100 0 0	1 April, 1886.
Chaplain—Roman Catholic	Rev. P. J. M'Guinness .....	28 April, 1886	Ditto .....	100 0 0	28 April, 1886.
<b>GAOL, WAGGA WAGGA.</b>					
Visiting Justice .....	Henry Baylis .....	10 Jan., 1866	Governor and Executive Council	Nil.	9 Aug., 1852.
Gaoler .....	Thomas Rankin <sup>1</sup> .....	1 Nov., 1876	Ditto .....	220 0 0	6 Nov., 1861.
Matron .....	Maria Rankin <sup>1</sup> .....	1 Nov., 1876	Ditto .....	48 0 0	25 June, 1867.
Visiting Surgeon (see p. 30)	.....	.....	Comptroller-General of Prisons..	0 8 0	per diem each.
Warders (4) .....	.....	.....	.....	.....	.....
Chaplains:—					
Church of England .....	Rev. William Henry Pownall.	9 Mar., 1878	Governor and Executive Council	20 0 0	9 Mar., 1878.
Roman Catholic .....	Rev. Michael Buckley .....	10 Nov., 1882	Ditto .....	20 0 0	10 May, 1882.
	..... succeeded by Rev. Michael Phelan .....	1 Feb., 1886	Ditto .....	20 0 0	1 Feb., 1886.
<sup>1</sup> Resides in the Gaol; allowed fuel and light. NOTE.—The Gaoler gives security to the amount of £100.					
<b>GAOL, WOLLONGONG.</b>					
Visiting Justice .....	Alfred A. Turner.....	26 Feb., 1875	Governor and Executive Council	Nil.	23 May, 1848.
Gaoler .....	Francis Flaherty <sup>1</sup> .....	18 Aug., 1884	Ditto .....	240 0 0	— Sept., 1863.
Matron .....	Margaret Flaherty <sup>1</sup> .....	18 Aug., 1884	Ditto .....	48 0 0	18 Aug., 1884.
Third Class Warders (5) .....	.....	.....	Comptroller-General of Prisons..	0 8 0	per diem each.
Chaplains:—					
Church of England .....	Rev. J. C. Ewing.....	26 Mar., 1885	Governor and Executive Council	20 0 0	.....
Roman Catholic .....	Rev. John Hayes .....	11 Mar., 1885	Ditto .....	20 0 0	.....
	..... succeeded by Rev. S. J. A. Sheehy .....	— April, 1886	Ditto .....	20 0 0	.....
<sup>1</sup> Allowed quarters, fuel, and light.					
<b>GAOL, YASS.</b>					
Visiting Justice* .....	Arthur Money Fisher.....	3 Mar., 1882	Governor and Executive Council	Nil.	17 Sept., 1875.
Gaoler .....	Thomas Allen <sup>1</sup> .....	25 June, 1883	Ditto .....	220 0 0	24 May, 1861.
Matron .....	Mary Allen <sup>1</sup> .....	25 June, 1883	Ditto .....	48 0 0	24 April, 1862.
Visiting Surgeon (see p. 30)	.....	.....	Comptroller-General of Prisons..	0 9 0	per diem.
First Class Warder (1) <sup>2</sup> .....	.....	.....	Ditto .....	0 8 0	" each.
Warders (4) .....	.....	.....	.....	.....	.....
Chaplains:—					
Church of England.....	Rev. Alured D. Faunce ...	23 Jan., 1880	Governor and Executive Council	20 0 0	23 Jan., 1880.
Roman Catholic .....	Rev. P. J. O'Keefe .....	11 Mar., 1878	Ditto .....	20 0 0	11 Mar., 1878.
<sup>1</sup> Resides in the Gaol; allowed fuel and light. <sup>2</sup> Allowed 1s. per diem lodging allowance.      * John F. Kenyon acting during temporary absence of Mr. Fisher. NOTE.—The Gaoler gives security to the amount of £100.					
<b>GAOL, YOUNG.</b>					
Visiting Justice .....	Samuel Robinson.....	.....	Governor and Executive Council	Nil.	15 April, 1872.
Gaoler .....	Joseph Gates <sup>1</sup> .....	1 April, 1878	Ditto .....	240 0 0	1 Feb., 1846.*
Matron .....	Mary A. Gates <sup>1</sup> .....	1 April, 1878	Ditto .....	48 0 0	1 Jan., 1861.
Visiting Surgeon (see p. 30)	.....	.....	Comptroller-General of Prisons..	0 8 3	per diem.
Second Class Warder (1) .....	.....	.....	Ditto .....	0 8 0	" each.
Third Class Warders (6) .....	.....	.....	.....	.....	.....
Chaplains:—					
Church of England .....	Rev. Chas. Kingsmill .....	24 Feb., 1886	Ditto .....	20 0 0	24 Feb., 1886.
Roman Catholic .....	Rev. William M'Grath .....	1 April, 1880	Governor and Executive Council	20 0 0	1 April, 1880.
<sup>1</sup> Allowed quarters, fuel, and light.      * Services not continuous. NOTE.—The Gaoler gives security to the amount of £250.					

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>MINISTER OF JUSTICE—continued.</b>					
<b>POLICE GAOLS.</b>					
Acting Gaolers—					
Bega .....	(34)	.....	Minister of Justice .....	{ 10 at 20 0 0 { 24 at 15 0 0	each.
Bourke .....					
Braidwood .....					
Bingera .....					
Campbelltown .....					
Casino .....					
Cooma .....					
Coonabarabran .....					
Coonamble .....					
Cootamundra .....					
Forbes .....					
Glen Innes .....					
Grenfell .....					
Gunnedah .....					
Gundagai .....					
Hillston .....					
Inverell .....					
Moree .....					
Murrurundi .....					
Muswellbrook .....					
Narrabri .....					
Orange .....					
Port Macquarie .....					
Queanbeyan .....					
Singleton .....					
Taree .....					
Tenterfield .....					
Walgett .....					
Warialda .....					
Wellington .....					
Wentworth .....					
West Kempsey .....					
Wilcannia .....					
Windsor .....					
Acting Matrons—					
1 for each Gaol .....	(34)	.....	Ditto .....	{ 26 at 10 0 0 { 8 at 5 0 0	each.
Warders—					
Bega (1), Bourke (3), Braidwood (2), Casino (1), Cooma (1), Coonabarabran (1), Coonamble (1), Dubbo (5), Forbes (1), Glen Innes (1), Gunnedah (1), Gundagai (1), Inverell (1), Narrabri (1), Orange (2), Port Macquarie (1), Queanbeyan (1), Tenterfield (1), Wellington (2), Walgett (1), Wentworth (2), Wilcannia (3), Windsor (2).	(36)	.....	Comptroller-General of Prisons...	0 8 0	per diem each.
1 Senior Warder at Dubbo.	.....	.....	Ditto .....	0 9 3	per diem.
Visiting Justices—					
1 at each Gaol .....	.....	.....	Governor and Executive Council	Nil.	
Church of England and Roman Catholic Chaplains—					
Dubbo, Orange, Bourke, Wentworth, Wellington, and Wilcannia ...	.....	.....	Ditto .....	10 0 0	each.
<b>SHAFTESBURY REFORMATORY FOR GIRLS, SOUTH HEAD.</b>					
Matron .....	Agnes King <sup>1</sup> .....	5 Feb., 1869	Governor and Executive Council	168 0 0	26 Aug., 1867.
Assistant Matron .....	Mary Agnes Barton <sup>2</sup> .....	6 Nov., 1876	Colonial Secretary .....	85 0 0	6 Nov., 1876.
Visiting Surgeon (see p. 30)	.....	.....	Ditto .....	120 0 0	
Gardener and Caretaker (1)	.....	.....	Ditto .....	120 0 0	
Chaplains:—					
Church of England .....	Rev. H. W. Mort .....	1 Jan., 1883	Governor and Executive Council	25 0 0	1 Jan., 1883.
Roman Catholic .....	Rev. Laurence Dunne .....	1 Oct., 1883	Ditto .....	25 0 0	1 Oct., 1883.
<sup>1</sup> Allowed quarters, rations, fuel, and light. Gives security, £250. <sup>2</sup> Allowed quarters, rations, fuel, and light.					
<b>REGISTRAR OF COPYRIGHT.</b>					
Registrar of Copyright.....	Thomas Richards* .....	1 July, 1879	Lieutenant-Governor and Executive Council.	150 0 0	7 Feb., 1845.
	succeeded by				
	Joseph John Spruson .....	1 Nov., 1886	Governor and Executive Council	150 0 0	12 Aug., 1864.
Assistant Registrar of Copyright.	Joseph John Spruson .....	1 July, 1879	Lieutenant-Governor and Executive Council.	50 0 0	12 Aug., 1864.
	succeeded by				
	[Successor not yet appointed.]	.....	.....	.....	.....
* Retired under Civil Service Act, 1 November, 1886.					

## PART VIII.

## Attorney-General.

## SUMMARY.

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## ATTORNEY-GENERAL.

Office.	Name	Date of Appointment	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government
				£ s. d.	
<b>ATTORNEY-GENERAL.</b>					
Attorney-General .....	George Bowen Simpson	22 Dec., 1885	Governor, by Commission ..	1,500 0 0	22 Dec., 1885.
	succeeded by				
	John Henry Want	26 Feb., 1886	Ditto	1,500 0 0	7 Nov., 1885
Secretary . . . . .	William Wilberforce Stephen	6 Nov., 1880	Governor and Executive Council	700 0 0	1 July, 1852.
Clerk . . . . .	Herbert Frederic Morris...	1 June, 1884	Ditto	196 0 0	1 June, 1884
Messenger . . . . .	John Conerty	1 May, 1885	Attorney-General ..	114 0 0	1 May, 1885.
<b>PARLIAMENTARY DRAFTSMAN.</b>					
Parliamentary Draftsman	Alexander Ohver, M A....	1 June, 1878	Governor and Executive Council	1,030 0 0	1 Aug., 1865.
Clerk . . . . .	Edwin Lewis Scott .	1 July, 1878	Ditto	320 0 0	1 July, 1878.
Messenger ...	William Goulding .....		Attorney-General ..	100 0 0	
<b>CROWN SOLICITOR.</b>					
Crown Solicitor .....	John Williams . . .	1 June, 1859	Governor and Executive Council, by Commission.	1,060 0 0	1 June, 1859.
Chief Clerk... ..	Walter Charles Stafford (Acting).	1 July, 1886	Governor and Executive Council	500 0 0	14 April, 1881.
Clerks .....	John James Lee	15 July, 1872	Ditto	440 0 0	15 Feb., 1845.
	Michael Sheridan Harte	15 July, 1872	Ditto	390 0 0	20 July, 1859.
Conveyancing Clerk ..	Charles E. Parkinson . .	16 Aug., 1883	Ditto	340 0 0	16 Aug., 1883.
Clerk .....	Vacant .		Ditto	300 0 0	.....
Short-hand Clerk . . .	Alfred E. Wiltry .....	1 June, 1886	Ditto	300 0 0	1 June, 1886.
Clerks .....	Harold F. Norrie .....	1 Dec., 1879	Ditto	240 0 0	1 Nov., 1875.
	Ernest H. Wilshire .	1 Feb., 1879	Ditto	190 0 0	1 Mar., 1878.
	Frederick S. Wilhams	1 Jan., 1883	Ditto	190 0 0	1 Jan., 1883.
Engrossing Clerk .....	Philip Kelly	1 April, 1885	Ditto	196 0 0	1 April, 1885.
Cadet .....	A. C. Fraser, junior .	1 Aug., 1885	Ditto	50 0 0	1 Aug., 1885.
Messenger ..	Charles Martin	— Aug., 1867	Departmental . . . . .	150 0 0	— Aug., 1867.
Assistant Messenger ..	John Gonsolves .....	23 May, 1883	Ditto	75 0 0	23 May, 1883.
<b>QUARTER SESSIONS.</b>					
Chairmen <sup>1</sup> :—					
Metropolitan and Hunter District.	James Sheen Dowling .	1 Oct., 1861	Governor and Executive Council, by Commission.		1 Jan., 1851.
	William Hattam Wilkinson	21 July, 1874	Ditto		22 Feb., 1860.
Southern District . . .	Alfred M'Farland .	7 Nov., 1868	Ditto		30 May, 1861.
South-western District	David Grant Forbes	8 June, 1875	Ditto		1 Jan., 1851.
Western District . . .	Ernest Brougham Docker	7 June, 1884	Ditto		1 Nov., 1871.
Northern District	Charles Edward Robertson Murray.	1 Jan., 1881	Ditto		1 Aug., 1864.*
North-western and Eastern District.	Alfred Paxton Backhouse	7 Jan., 1884	Ditto		1 Oct., 1878.
Crown Prosecutors <sup>2</sup> :—					
Sydney . . . . .	Patrick Joseph Healy	24 Jan., 1882	Ditto	860 0 0	1 Jan., 1878.
Metropolitan and Hunter District (other places than Sydney).	Edward Lee	1 Jan., 1878	Ditto	525 0 0	1 Jan., 1858.*
Southern District . . .	Robert Pitcairn	1 Nov., 1885	Ditto	550 0 0	24 Jan., 1882.
South-western District .	John Dillon	1 Nov., 1885	Ditto	550 0 0	1 Jan., 1882.
Western District . . . . .	John Jeremiah Teece <sup>4</sup>	1 Feb., 1876	Ditto	550 0 0	1 Feb., 1876.
Northern District	Grantley Hyde Fitzhardinge <sup>3</sup>	20 Oct., 1882	Ditto	550 0 0	1 Jan., 1881.
North-western and Eastern District.	Walton Lockyer Merewether <sup>3</sup>	20 Oct., 1882	Ditto	550 0 0	20 Oct., 1882.
Departmental :—					
Clerk of the Peace for the Colony.	Archibald Colquhoun Fraser <sup>4</sup> .	1 Jan., 1870	Ditto	860 0 0	11 Dec., 1854.
Chief Clerk . . . . .	William Richard Beaver <sup>5</sup> .	1 April, 1881	Governor and Executive Council	440 0 0	1 Jan., 1872.
1st Clerk and Accountant	Frederick Wright Garstang <sup>6</sup>	15 June, 1883	Ditto	290 0 0	15 June, 1883.
2nd Clerk . . . . .	George Gurney, B.A. <sup>7</sup> †	1 April, 1881	Ditto	265 0 0	11 Aug., 1877.
3rd Clerk . . . . .	Jerome James Gurry <sup>7</sup>	1 June, 1883	Ditto	200 0 0	23 Mar., 1878.
4th Clerk	John Henry Williams <sup>7</sup>	1 June, 1883	Ditto	200 0 0	1 Jan., 1872.*
Clerks .....	Temple Frederick Sinclair Nathan <sup>7</sup>	1 Nov., 1884	Ditto	240 0 0	23 July, 1849.*
	John Swinchatt Dodson <sup>7</sup>	1 Nov., 1884	Ditto	200 0 0	1 Oct., 1864.*
	Malcolm Macfarlane <sup>7</sup> . . .	1 Nov., 1884	Ditto	196 0 0	1 Nov., 1884.
Messenger ...	...	...	Clerk of the Peace	120 0 0	...

<sup>1</sup> Also District Court Judges—Those for the Metropolitan and Coast District allowed 30s, the others £2, per diem travelling expenses when absent on duty

<sup>2</sup> Each allowed 30s per diem when absent on duty <sup>3</sup> Crown Prosecutors for the Northern and North-eastern and Western Districts, allowed 40s per diem.

<sup>4</sup> Allowed 30s per diem travelling expenses when absent on duty Gives security to the amount of £1,000 <sup>5</sup> Gives security to the amount of £300.

<sup>6</sup> Gives security to the amount of £500 <sup>7</sup> Gives security to the amount of £100. <sup>†</sup> To 15th December—deceased. \* Services not continuous

N.B.—Mr. Herbert Riverston McCulloch (Barrister at Law) acted as Crown Prosecutor for Southern District, from 1st March to 31st May.

Note.—The Crown Prosecutors are allowed to practise their profession

## PART IX.

## Secretary for Lands,

AND THE

DEPARTMENTS UNDER HIS SUPERVISION AND CONTROL.

## SUMMARY.

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## SECRETARY FOR LANDS.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>LANDS.</b>							
Secretary for Lands .....	Gerald Spring .....	22 Dec., 1885	Governor and Executive Council,	1,500	0	0	22 Dec., 1885.
	succeeded by	to 25 Feb., 1886	by Commission.				
	Henry Copeland .....	26 Feb., 1886	Ditto .....	1,500	0	0	5 Jan., 1883.*
Under Secretary.....	Charles Nicholson Jewel Oliver.	7 Nov., 1880	Ditto .....	960	0	0	27 Mar., 1866.
Assistant Under Secretary..	Stephen Freeman .....	9 Aug., 1886	Governor and Executive Council	725	0	0	22 Oct., 1862.
Registrar.....	Francis Henry Wilson ..	15 Sept., 1885	Ditto .....	700	0	0	19 Feb., 1862.*
Chairman, L.L.B., Goulburn	Abram Orpen Moriarty ..	1 Jan., 1885	Ditto .....	860	0	0	10 Jan., 1846.*
Albury ...	Thomas A. Browne .....	1 Jan., 1885	Ditto .....	750	0	0	7 April, 1871.
Bourke ...	Geo. C. Tompson.....	1 Jan., 1885	Ditto .....	750	0	0	1 Sept., 1863.
Cooma ...	William Jacomb Conder..	1 Jan., 1885	Ditto .....	750	0	0	14 June, 1876.
Acting Chairman, L.L.B., Dubbo	Stephen Freeman <sup>1</sup> .....	3 Nov., 1885	Ditto .....	650	0	0	22 Oct., 1862.
	succeeded by						
Chairman, L.L.B., Dubbo...	William Clare Cardew ..	25 Oct., 1886	Ditto .....	750	0	0	14 Aug., 1873.
Forbes ...	James R. Edwards .....	15 Sept., 1885	Ditto .....	750	0	0	14 Mar., 1862.
Glen Innes	Sydney Blythe .....	1 Jan., 1885	Ditto .....	750	0	0	21 Oct., 1858.
Grafton ...	William Blackman .....	1 Jan., 1885	Ditto .....	750	0	0	14 June, 1859.
Hay ...	Archibald John Park .....	1 Jan., 1885	Ditto .....	750	0	0	1 Jan., 1883.
Moree ...	W. Clare Cardew <sup>2</sup> .....	1 Jan., 1885	Ditto .....	750	0	0	14 Aug., 1873.
	succeeded by						
Acting Chairman, L.L.B., Moree	Colin James M'Master <sup>3</sup> ..	25 Oct., 1886	Ditto .....	Nil.			1 Oct., 1876.
Chairman, L.L.B., Maitland..	James Vernon .....	1 Jan., 1885	Ditto .....	750	0	0	14 Jan., 1864.
Orange ...	Charles E. Finch.....	1 Jan., 1885	Ditto .....	750	0	0	1 July, 1860.
Sydney ...	Thomas Warre Harriott..	1 Jan., 1885	Ditto .....	750	0	0	7 Mar., 1862.
Tamworth ..	J. Macdonald .....	1 Jan., 1885	Ditto .....	750	0	0	6 Feb., 1851.
Wagga ...	Frederick W. Watt .....	1 Jan., 1885	Ditto .....	750	0	0	15 June, 1863.
Wilcannia..	Frederick J. A. Trollope..	1 Jan., 1885	Ditto .....	750	0	0	1 Sept., 1876.
Clerk of Correspondence	Victor Cohen .....	1 Jan., 1885	Ditto .....	490	0	0	1 July, 1867.*
Clerk in charge L.L.B., Goulburn	John G. Blaxland .....	1 Jan., 1885	Ditto .....	490	0	0	1 July, 1869.
Clerks .....	William H. Capper.....	1 Jan., 1874	Ditto .....	440	0	0	1 Jan., 1874.
	Robert H. De Low .....	1 Jan., 1881	Ditto .....	440	0	0	1 Jan., 1881.
Clerk in charge L.L.B., Albury..	B. S. Levick .....	1 Jan., 1885	Ditto .....	440	0	0	1 July, 1878.
Orange ...	Edye Hayles Stobo <sup>4</sup> .....	1 Jan., 1885	Ditto .....	440	0	0	15 July, 1872.
Bourke ...	Major Lackey .....	1 Jan., 1885	Ditto .....	440	0	0	1 Dec., 1873.
Cooma ...	Alfred Salwey .....	1 Jan., 1885	Ditto .....	440	0	0	1 July, 1875.
Dubbo ...	Henry Roxburgh.....	1 Jan., 1885	Ditto .....	440	0	0	30 Jan., 1874.
Forbes ...	Joseph Denis Donovan ..	1 Jan., 1885	Ditto .....	440	0	0	20 Aug., 1872.
Maitland...	Henry A. Fitzpatrick .....	1 Jan., 1885	Ditto .....	440	0	0	15 Oct., 1866.
Moree ...	Samuel L. Cohen <sup>5</sup> .....	1 Jan., 1885	Ditto .....	440	0	0	10 April, 1879.
Tamworth..	William Ardill.....	1 Jan., 1885	Ditto .....	440	0	0	5 May, 1874.
Clerk in charge L.L.B., Grafton..	John Wiseman.....	1 Jan., 1885	Ditto .....	420	0	0	8 April, 1863.
Clerk .....	Charles E. Neate .....	1 Jan., 1867	Ditto .....	420	0	0	1 Jan., 1859.
	Wagga ... Charles J. Hutton <sup>6</sup> .....	1 Jan., 1885	Ditto .....	420	0	0	23 May, 1881.
	succeeded by	to 3 Nov., 1886					
Clerks .....	William Macdonald.....	23 Nov., 1871	Ditto .....	390	0	0	23 Nov., 1871.
	Frederick M'Kern .....	1 Jan., 1880	Ditto .....	390	0	0	1 Jan., 1880.
	C. W. Thomas .....	10 April, 1886	Ditto .....	390	0	0	1 June, 1878.
Clerk in charge L.L.B., Glen Inne	H. T. Makin.....	1 Jan., 1885	Ditto .....	390	0	0	8 July, 1873.
Hay .....	A. B. Crew .....	19 Oct., 1885	Ditto .....	390	0	0	3 Sept., 1875.
Sydney ...	Vere Hunt <sup>10</sup> .....	15 Sept., 1885	Ditto .....	390	0	0	17 Sept., 1863.
	succeeded by						
	C. W. Thomas .....	22 Dec., 1886	Ditto .....	390	0	0	1 June, 1878.
	C. W. Thomas <sup>7</sup> .....	1 Jan., 1885	Ditto .....	390	0	0	1 June, 1878.
Clerk .....	Edward Brown.....	18 Sept., 1879	Ditto .....	370	0	0	26 Aug., 1857.
Clerk and Accountant .....	Edmund O'Dwyer <sup>8</sup> .....	1 Jan., 1885	Ditto .....	370	0	0	8 May, 1862.
	to 2 Jan., 1886						
Clerks .....	Edmund Patterson .....	1 Jan., 1867	Ditto .....	340	0	0	1 Jan., 1866.
	Frederick Williams .....	1 Jan., 1867	Ditto .....	340	0	0	15 Jan., 1865.
	Thomas Phillip Banks <sup>9</sup> ..	11 Feb., 1867	Ditto .....	340	0	0	11 Feb., 1867.
	Thomas E. L. Newman ..	1 July, 1869	Ditto .....	340	0	0	1 July, 1869.
	Hubert P. Rich .....	24 July, 1871	Ditto .....	340	0	0	24 July, 1871.
	J. R. Yorke .....	1 Jan., 1877	Ditto .....	340	0	0	18 May, 1876.
	J. R. Neate .....	1 Dec., 1885	Ditto .....	340	0	0	1 April, 1862.
	Edwin Canrobert Landers	3 July, 1872	Ditto .....	340	0	0	3 July, 1872.
	James Percy M'Guanne..	1 Jan., 1877	Ditto .....	340	0	0	7 April, 1876.
	J. H. North .....	1 Jan., 1884	Ditto .....	315	0	0	1 Jan., 1884.
	Frank Williams .....	1 Jan., 1867	Ditto .....	290	0	0	1 Jan., 1866.
	Charles Cope .....	1 Oct., 1872	Ditto .....	290	0	0	1 Oct., 1872.
	William H. Adams .....	19 Mar., 1877	Ditto .....	290	0	0	13 Sept., 1875.
	James Pitcairn Croft .....	1 Nov., 1880	Ditto .....	290	0	0	1 Oct., 1875.
Sub-Accountant .....	Thomas Ireland .....	1 Jan., 1883	Ditto .....	290	0	0	1 Jan., 1883.

<sup>1</sup> Appointed Assistant Under Secretary from 9 August, 1886.

<sup>2</sup> Transferred to a similar position at Dubbo from 25 October, 1886.

<sup>3</sup> Also District

Surveyor, Moree.

<sup>4</sup> Also Crown Lands Agent, Orange.

<sup>5</sup> Also Crown Lands Agent, Moree.

<sup>6</sup> Dismissed, from 4 November, 1886.

<sup>7</sup> Transferred

to Head Office from 17 April, 1885—see above.

<sup>8</sup> Died, 3 January, 1886.

<sup>9</sup> Dismissed, from 26 November, 1886.

<sup>10</sup> Dismissed, 3 October, 1886.

\* Services not continuous.

NEW SOUTH WALES—1886.

Office	Name.	Date of Appointment.	By whom appointed, and under what instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government
<b>SECRETARY FOR LANDS—continued.</b>					
Clerks .....	Andrew C Thomson <sup>1</sup> .....	1 May, 1881	Governor and Executive Council	290 0 0	1 May, 1881.
	George A. Daniel .....	to 30 June, 1886	Ditto .....	290 0 0	6 April, 1881.
	James Bailie .....	1 July, 1886	Ditto .....	290 0 0	12 Nov., 1874.
	Herbert Phillips .....	1 July, 1878	Ditto .....	290 0 0	26 Mar., 1878.
	Frederick M. Edson .....	1 Sept., 1880	Ditto .....	290 0 0	3 June, 1870.
	Frederick W. Vincent .....	14 June, 1866	Ditto .....	265 0 0	22 Mar., 1848.*
	William A. Daly <sup>2</sup> .....	22 July, 1886	Ditto .....	250 0 0	..
	Frederick Smith .....	1 Jan., 1877	Ditto .....	240 0 0	1 April, 1876.
	T M. Harpur .....	1 Jan., 1877	Ditto .....	240 0 0	7 April, 1876.
	Clement Dillon .....	1 Jan., 1877	Ditto .....	240 0 0	14 Sept., 1876.
	Herbert L. Thompson .....	1 Sept., 1879	Ditto .....	240 0 0	29 July, 1878.
	H Inder .....	1 Dec., 1884	Ditto .....	240 0 0	1 Dec., 1884.
	W. Farnsworth .....	1 Dec., 1884	Ditto .....	240 0 0	1 Dec., 1884.
	Thomas Davis .....	1 Jan., 1885	Ditto .....	240 0 0	16 May, 1877.
	James Neathway Devlin .....	1 Jan., 1877	Ditto .....	240 0 0	1 Jan., 1874.
	Charles B Johnson .....	1 Jan., 1877	Ditto .....	240 0 0	11 Sept., 1876.
	Fredk. S. Murray .....	4 Oct., 1880	Ditto .....	240 0 0	4 Oct., 1880.
	Fredk. G Bremer .....	22 Aug., 1876	Ditto .....	240 0 0	12 Nov., 1874.
	J R R Miles .....	1 July, 1878	Ditto .....	240 0 0	1 July, 1875.
	James Edmund O'Dwyer .....	1 May, 1881	Ditto .....	240 0 0	1 Sept., 1876.
	William Sturrock .....	1 Sept., 1878	Ditto .....	240 0 0	21 Sept., 1876.
	Fredk. Richard Chambers .....	1 Jan., 1882	Ditto .....	240 0 0	1 Jan., 1882.
	Edwin Kippax .....	20 Sept., 1879	Ditto .....	240 0 0	21 Sept., 1876.
	Mountiford R. Longfield .....	1 Jan., 1882	Ditto .....	240 0 0	1 Jan., 1882.
	William A. M'Phee .....	1 Oct., 1876	Ditto .....	240 0 0	20 Sept., 1875.
	W. J. Smythe .....	1 Oct., 1883	Ditto .....	240 0 0	1 Oct., 1883.
	A. J. Viles .....	9 June, 1882	Ditto .....	240 0 0	4 Oct., 1874.*
	Joseph Green .....	1 May, 1877	Ditto .....	240 0 0	19 Jan., 1876.
	Basil John F. Aterbury .....	22 Sept., 1885	Ditto .....	240 0 0	22 Sept., 1885.
	George H. Parker .....	19 Aug., 1885	Ditto .....	240 0 0	19 Aug., 1885.
	John A. M'Lenman <sup>3</sup> .....	1 Sept., 1882	Ditto .....	195 0 0	1 April, 1879.
	William J. Callaway .....	8 Feb., 1882	Ditto .....	to 31 July, 1886 190 0 0	8 Feb., 1882.
	F. B. Swetc <sup>4</sup> .....	1 Jan., 1883	Ditto .....	190 0 0	1 Jan., 1883.
	Walter E Tindale .....	23 April, 1882	Ditto .....	190 0 0	23 April, 1882.
	Walter H Stuart .....	1 Sept., 1882	Ditto .....	190 0 0	1 Sept., 1882.
	E F. Way .....	1 Jan., 1883	Ditto .....	190 0 0	1 Jan., 1883.
	J H. Snell .....	1 Jan., 1883	Ditto .....	190 0 0	1 Jan., 1883.
	Fredk Bennett .....	10 June, 1883	Ditto .....	190 0 0	10 June, 1883.
	Archibald M'Clatchie .....	1 Aug., 1883	Ditto .....	190 0 0	1 Aug., 1883.
	Claude Grant Arnold .....	1 Nov., 1873	Ditto .....	190 0 0	1 Nov., 1873.
	Alexander Blackman .....	1 May, 1882	Ditto .....	190 0 0	1 May, 1882.
	F Z Moriarty .....	19 June, 1883	Ditto .....	190 0 0	19 June, 1883.
	Edward George Williams .....	17 June, 1879	Lieutenant-Governor and Executive Council.	190 0 0	21 April, 1875.
G F D Wainwright <sup>5</sup> .....	1 Jan., 1882	Governor and Executive Council	190 0 0	1 Jan., 1882.	
H. J. Aylward .....	13 Mar., 1882	Ditto .....	190 0 0	13 Mar., 1882.	
F. W. Stephenson .....	19 June, 1883	Ditto .....	165 0 0	19 June, 1883.	
W. L. Davis .....	1 July, 1883	Ditto .....	165 0 0	24 April, 1882.	
A E. Meads .....	8 Nov., 1884	Ditto .....	165 0 0	20 Jan., 1884.	
Wilfrid Lionel Volckman .....	1 Nov., 1886	Ditto .....	170 0 0	13 Mar., 1885.	
Willoughby Marsh .....	11 June, 1883	Ditto .....	140 0 0	11 June, 1883.	
E J. Pownall .....	25 June, 1883	Ditto .....	140 0 0	25 June 1883.	
Saml. A. Jordan .....	6 Aug., 1883	Ditto .....	140 0 0	6 Aug., 1883.	
Austin A. Wallis .....	22 Aug., 1883	Ditto .....	140 0 0	22 Aug., 1883.	
Arthur M'Donald .....	30 Aug., 1883	Ditto .....	140 0 0	30 Aug., 1883.	
John T Dillon .....	1 Sept., 1883	Ditto .....	140 0 0	1 Sept., 1883.	
James Allan Ramsay .....	13 April, 1885	Ditto .....	140 0 0	24 Mar., 1884.	
Wentworth O Russell .....	1 Oct., 1883	Ditto .....	140 0 0	1 Oct., 1883.	
Arthur J. Lander .....	26 July, 1883	Ditto .....	100 0 0	26 July, 1883.	
William Booth <sup>6</sup> .....	23 Aug., 1883	Ditto .....	100 0 0	23 Aug., 1883.	
Charles Craig .....	1 May, 1884	Ditto .....	100 0 0	1 May, 1884.	
George Drury .....	10 Mar., 1884	Ditto .....	100 0 0	10 Mar., 1884.	
Richard Alfred M'Donnell .....	1 May, 1884	Ditto .....	100 0 0	1 May, 1884.	
Percival H. O'Meagher <sup>7</sup> .....	5 June, 1883	Ditto .....	80 0 0	5 June, 1883.	
Cumberland Ranger .....	James M'Keon .....	1 June, 1878	Ditto .....	210 0 0	1 June, 1878.
			1 at 150 0 0		
			1 at 157 0 0	Including £25 allowance for watchman.	
Messengers (13) .....			1 at 130 0 0	each.	
			4 at 125 0 0	"	
			2 at 100 0 0	"	
			3 at 60 0 0	"	
			1 at 50 0 0	"	
			1 at 110 0 0	Including £35 allowance for quarters	
			1 at 78 0 0		
			1 at 70 0 0		
Office cleaners (11) .....			5 at 52 0 0	each.	
			1 at 50 0 0		
			1 at 25 0 0		
			1 at 112 0 0	Corridor cleaner, £12 allowance.	

<sup>1</sup> Exchanged with G A Daniel (Mines Department) from 1 July, 1886 <sup>2</sup> Transferred to L L Board Office, Hay, 22 July, 1886. <sup>3</sup> Transferred from Local Land Board Office, Hay, to Head Office, at £150 per annum, from 1 August, 1886 <sup>4</sup> Granted six months' leave of absence, without pay, from 21 September, 1885 <sup>5</sup> Resigned, 2 December, 1880. <sup>6</sup> Probationer, subject to passing the Civil Service Examination. <sup>7</sup> Resigned, 9 January, 1886. \* Services not continuous.



Office	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary			Date of first Appointment under the Colonial Government.
				£	s	d.	
<b>SECRETARY FOR LANDS—AGENTS FOR THE SALE OF CROWN LANDS—continued.</b>							
<i>DISTRICTS—continued.</i>							
*Brisbane Water (Gosford)	A J Kingsmill ..	1 Jan., 1885	Governor and Executive Council	Nil			1 Jan., 1880
*Broulee (Moruya)	W H Thomas	1 Jan., 1885	Ditto ..	Nil			12 April, 1869
Burrowa	John R Macdonald <sup>1</sup>	1 Aug., 1885	Ditto ..	320	0	0	1 Feb., 1873.
		to 10 Nov., 1885					
*Camden	John B. Martin	1 Jan., 1885	Ditto ... ..	Nil			1 Sept., 1852.
*Campbelltown	William Butler Simpson <sup>2</sup>	1 Mar., 1885	Ditto ... ..	Nil			30 Jan., 1875.
	succeeded by						
	Paul Le Jeune ..	1 July, 1886	Ditto ..	Nil			1 Feb., 1882
Carcoar	J Howard Louche	1 Jan., 1885	Ditto ..	340	0	0	22 Aug., 1876
*Casino	M M Campbell	1 Jan., 1885	Ditto ... ..	Nil			1 April, 1875.
*Cassilis	Charles John Lloyd ...	1 Jan., 1885	Ditto ..	Nil.			1 Dec., 1884.
	succeeded by						
	*Henry Storey Hawkins ..	1 Mar., 1886	Ditto . . . .	Nil			1 Oct., 1877.
*Cobar	F S. Osborn .....	1 Jan., 1885	Ditto ....	Nil			1 Jan., 1871.
Condobolin	Fyson A Slack <sup>1</sup>	1 Jan., 1885	Ditto ..	320	0	0	1 Mar., 1880.
	succeeded by	to 25 Feb., 1886					
	*Edward A Grainger . .	26 Feb., 1886	Ditto .....	50	0	0	17 April, 1880.
Cooma	E. T. F Gomm	1 Jan., 1885	Ditto ..	390	0	0	15 Jan., 1876.
Coonabarabran	C E Nicholson	1 Jan., 1885	Ditto ..	340	0	0	26 July, 1876.
Coonamble	James M'Gunn <sup>1</sup> ...	7 Aug., 1885	Ditto .....	320	0	0	3 June, 1876.
		to 16 Nov., 1886					
*Cootamundra	C H B Primrose	1 Jan., 1885	Ditto .....	Nil			22 Aug., 1872.
Corowa	F G Battye	12 Jan., 1885	Ditto ... ..	340	0	0	1 Sept., 1882.
*Cowra	W B Simpson	1 Jan., 1885	Ditto ..	Nil			18 April, 1859.
Deniliquin	C J. B Helm	1 Jan., 1885	Ditto ..	340	0	0	25 Sept., 1876.
Dubbo	Nathaniel Walls	1 Jan., 1885	Ditto ..	390	0	0	12 Oct., 1872.
*Dungog	C G Smith	1 Jan., 1885	Ditto ..	Nil.			1 May, 1861.
*Eden	J W. Lees	1 Jan., 1885	Ditto ..	Nil.			30 June, 1874.
Forbes							
Glen Innes	G T S Boileau <sup>3</sup> ..	1 Jan., 1885	Ditto .....	320	0	0	1 Sept., 1880.
	succeeded by						
	George Stevenson	1 July, 1886	Ditto ..	340	0	0	12 May, 1881.
Goulburn	Oby A Willans	1 April, 1885	Ditto ..	340	0	0	1 Sept., 1875.
*Grafton	William Clarke	1 Jan., 1885	Ditto ... ..	Nil.			16 Mar., 1874.
*Grenfell	W. F Robertson	1 Jan., 1885	Ditto ..	Nil.			29 May, 1869.
Gundagai	Montague S Machen	1 Jan., 1885	Ditto ..	340	0	0	4 Sept., 1883.
Gunnedah	A P D Hamilton	1 Jan., 1885	Ditto ..	390	0	0	12 Aug., 1878.
*Gunning	J F Kenyon	1 Jan., 1885	Ditto ..	Nil.			11 Sept., 1876.
*Hartley (Lithgow)	Edmund A T Pery	1 Jan., 1885	Ditto ..	Nil			1 June, 1881.
Hay	Charles H Gale	1 Jan., 1885	Ditto ..	340	0	0	1 Dec., 1881.
Hillston	J R Linsley <sup>4</sup> .....	1 Jan., 1885	Ditto ..	270	0	0	1 Jan., 1880.
	succeeded by						
	*Michael Hogan ..	15 June, 1886	Ditto ..	100	0	0	1 Jan., 1884.
*Inverell	J H Thompson	1 Jan., 1885	Ditto ..	Nil.			1 July, 1869
	succeeded by						
	Frederick Stuart Osborn	1 May, 1886	Ditto ..	Nil			1 Jan., 1871.
*Kiama	Henry Connell	1 Jan., 1885	Ditto ..	Nil.			21 Aug., 1844.
Lismore	Prosper De Mestre	1 July, 1885	Ditto ..	340	0	0	4 July, 1876.
*Liverpool	W. H. Goodman	1 Jan., 1885	Ditto ..	Nil.			28 July, 1877.
M'Leay River (West Kempsey)	Charles A Grubb <sup>1</sup> ...	1 Jan., 1885	Ditto ..	270	0	0	5 April, 1882.
	succeeded by						
	J R Linsley	1 July, 1886	Ditto ..	290	0	0	1 Jan., 1880.
*Manning River (Taree)	D C S. Bruce	1 Dec., 1885	Ditto ...	240	0	0	1 June, 1883.
*Matland	Francis Sheriff Isaacs	1 Jan., 1885	Ditto ..	Nil			1 Jan., 1868.
Metropolitan (Sydney)	Robt H De Low	1 Jan., 1885	Ditto ..	Nil.			1 Jan., 1881.
*Milton	J T Hobbes	1 Jan., 1885	Ditto ..	Nil.			10 Oct., 1878.
Mitchell (Wilcannia)	Frank Leng	22 July, 1885	Ditto ..	240	0	0	1 Nov., 1882.
Molong	H J Jeffreys	1 Jan., 1885	Ditto ..	340	0	0	10 Sept., 1882.
*Moree	J B Tooher <sup>1</sup>	1 Sept., 1885	Ditto ..	320	0	0	6 Aug., 1877
	succeeded by	to 15 Mar., 1886					
	Saml. L Cohen <sup>5</sup>	17 Mar., 1886	Ditto ...	Nil.			10 April, 1879
Mudgee	C J Horsley	1 Jan., 1885	Ditto ..	340	0	0	1 Sept., 1882.
*Murrurundi	G R Evans	1 Jan., 1885	Ditto ..	Nil			1 June, 1878
*Musclebrook	T. Foley	1 Jan., 1885	Ditto ..	75	0	0	1 Dec., 1867.
Narrabri	D F Kelly	1 Jan., 1885	Ditto ..	290	0	0	
*Narrandera	G. F. Scott	1 Jan., 1885	Ditto ..	Nil			18 June, 1863.
	succeeded by						
	*Fredk Marsh		Ditto ..	Nil			8 April, 1852
*Newcastle	A Lumsdaine	1 Jan., 1885	Ditto ..	Nil.			10 June, 1872.
*Orange	William T. Evans	1 Jan., 1885	Ditto ..	Nil			20 April, 1851
*Parkes	William C Weston	1 Jan., 1885	Ditto ..	Nil			23 June, 1864
*Parramatta	George Wickham	1 Jan., 1885	Ditto ..	Nil			5 Mar., 1847.
*Pateison	William Le Brun Brown	1 June, 1885	Ditto ..	Nil			13 Feb., 1882.
Patrick's Plains (Singleton)	Frederick J P Hepworth.	1 Jan., 1885	Ditto ..	340	0	0	6 Sept., 1875
*Penrith	J K Cleeve, junr	1 Jan., 1885	Ditto ...	Nil.			3 July, 1865
*Port Macquarie	Robert Maunsell	1 Jan., 1885	Ditto ..	Nil.			1 Feb., 1877.
*Port Stephens (Stroud)	T Laman	1 Jan., 1885	Ditto ..	Nil			13 April, 1859.
Queanbeyan	Charles H Emery	1 Jan., 1885	Ditto ..	340	0	0	1 Sept., 1882

<sup>1</sup> Dismissed    <sup>2</sup> Appointed Senior Inspector Distilleries Department, Sydney    <sup>3</sup> Transferred to the position of Clerk of Petty Sessions and Registrar of the District Court at Kempsey, vice George Stevenson    <sup>4</sup> Transferred to a similar position at Macleay River, West Kempsey, from 1 July, 1886    <sup>5</sup> Also Clerk in charge, Local Land Board, Moree    <sup>6</sup> Indicates receives salary from Department of Justice as Police Magistrate or Clerk of Petty Sessions

Office	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary			Date of first appointment under the Colonial Government.
				£	s.	d.	
<b>SECRETARY FOR LANDS—AGENTS FOR THE SALE OF CROWN LANDS—continued.</b>							
<i>DISTRICTS—continued.</i>							
*Raymond Terrace	C R Middleton	1 Jan., 1885	Governor and Executive Council	Nil.			11 Oct., 1875
*Rylstone	William W Armstrong	1 Jan., 1885	Ditto	Nil.			1 July, 1854
Scone	F G Gaggin	1 Jan., 1885	Ditto	290	0	0	1 Sept., 1882
*Shoalhaven (Nowra)	William Lovegrove	1 Jan., 1885	Ditto	Nil.			1 Jan., 1857.
Tamworth	E G Markham	1 Jan., 1885	Ditto	340	0	0	1 Jan., 1878
*Tenterfield	Fredk. Burne	1 Jan., 1885	Ditto	Nil.			1 April, 1881.
*Tumut	Charles James Lloyd	1 Jan., 1886	Ditto	Nil.			
*Tweed River (Murwillumbah)	Jeshua Bray	1 Jan., 1885	Ditto	Nil.			17 Sept., 1875.
*Urana	R B Hays	1 Jan., 1885	Ditto	Nil.			1 Sept., 1875
Wagga Wagga	Fredk. D. A. Korff	1 Jan., 1885	Ditto	440	0	0	10 Nov., 1871.
*Walcha	E. Marriott	1 Jan., 1885	Ditto	Nil.			12 Aug., 1862.
Walgett	W. A. Daly <sup>1</sup>	1 Jan., 1885	Ditto	320	0	0	
		to 4 July, 1886					
*Warialda	T. H. Wilkinson	1 Jan., 1885	Ditto	Nil.			30 Jan., 1874.
*Wellington	W. Carson	1 Jan., 1885	Ditto	Nil.			30 Oct., 1872.
Wentworth	A. N. Barnett	1 Jan., 1885	Ditto	340	0	0	1 Nov., 1854
*Windsor	William H. H. Becke	1 Jan., 1885	Ditto	Nil.			8 June, 1853.
*Wollombi	H Gordon	1 Jan., 1885	Ditto	Nil.			1 May, 1859.
*Wollongong	David Ross Jameson	1 Nov., 1885	Ditto	50	0	0	1 Mar., 1883.
*Yass	A. M. Fisher	1 Jan., 1885	Ditto	Nil.			27 Sept., 1875.
Young	Theodore Horton <sup>2</sup>	1 Jan., 1885	Ditto	370	0	0	14 Aug., 1871
		to 31 Aug., 1886					
		<sup>1</sup> Recalled to Head Office, 5 July, 1886. <sup>2</sup> Dismissed					
		<sup>*</sup> Indicates receives salary from Department of Justice as Police Magistrate or Clerk of Petty Sessions					
<b>EMERGENCY LAND AGENTS.</b>							
	John Edwards <sup>1</sup>	1 May, 1883	Governor and Executive Council	340	0	0	1 May, 1872.*
	Octavius A. C. Boot <sup>1</sup>	1 May, 1883	Ditto	340	0	0	15 June, 1876.
	George H. Gibson <sup>1</sup>	1 May, 1883	Ditto	340	0	0	1 May, 1883
		<sup>1</sup> Receives allowance of 12s per diem when absent from Head quarters. <sup>*</sup> Services not continuous					
<b>ASSISTANT CROWN LANDS AGENTS.</b>							
Albury	William George Acocks	1 Jan., 1886	Governor and Executive Council	140	0	0	28 May, 1883
*Berrima	F. Galbraith	1 Oct., 1882	Ditto	Nil.			1 Nov., 1877.
Coonamble	James W. Taylor	1 June, 1885	Ditto	190	0	0	1 Jan., 1883.
Cooma	James Mackins	1 June, 1885	Ditto	190	0	0	1 Oct., 1883.
*Grafton	Grantley Hyde	1 Sept., 1884	Ditto	50	0	0	20 Nov., 1882.
Inverell	Walter Scott	1 Oct., 1885	Ditto	190	0	0	1 Oct., 1885.
*Maitland	C. C. Vindin	1 Sept., 1885	Ditto	50	0	0	
*Muswellbrook	J. V. Foley	1 Sept., 1884	Ditto	75	0	0	1 Mar., 1882.
*Parramatta	F C Bayliss	1 Sept., 1884	Ditto	50	0	0	1 Sept., 1884
Wagga Wagga	Robert Hughes	11 June, 1883	Ditto	120	0	0	1 Jan., 1883.
*Yass	G. Addison	1 Sept., 1884	Ditto	50	0	0	1 Jan., 1882.
		<sup>*</sup> Indicates receives salary from Department of Justice as Police Magistrate or Clerk of Petty Sessions.					
<b>SURVEY OF LANDS.</b>							
Surveyor-General	Philip Francis Adams <sup>1</sup>	17 Mar., 1868	Governor and Executive Council	1,160	0	0	19 Sept., 1857
Deputy Surveyor-General	Robert David Fitzgerald	1 Jan., 1873	Ditto	1,060	0	0	1 Aug., 1856.
District Surveyors	*Edward Twynam	1 Jan., 1863	Ditto	880	0	0	24 Nov., 1855.
	*James Holbrook Wood <sup>2</sup>	1 Aug., 1866	Ditto	880	0	0	1 Dec., 1860.
	*Arthur Dewhurst	1 Jan., 1875	Ditto	880	0	0	8 June, 1858.
	*Constantine Francis Bolton	1 Jan., 1875	Ditto	880	0	0	10 April, 1860.
	*Arthur Charles Betts <sup>3</sup>	7 June, 1875	Ditto	880	0	0	1 May, 1868.
	*Patrick Riddle Donaldson <sup>2</sup>	1 Jan., 1876	Ditto	880	0	0	1 Dec., 1864.
	*Joseph Witter Allworth.	7 Oct., 1880	Ditto	880	0	0	1 Aug., 1863.
	*Francis George Finley	1 May, 1882	Ditto	880	0	0	29 Jan., 1874.
	*Henry Augustus Crouch	1 June, 1883	Ditto	880	0	0	1 Feb., 1874.
	*John Williams Deering	1 Jan., 1885	Ditto	880	0	0	18 Feb., 1863.
	*Thomas Henry Smith	1 Jan., 1885	Ditto	880	0	0	1 Sept., 1864.
	*George Henry Sheaffe	1 Jan., 1885	Ditto	880	0	0	21 May, 1878.
	*Robert M'Donald	1 Jan., 1885	Ditto	880	0	0	22 July, 1870.
	*Colin James M'Master <sup>4</sup>	1 Jan., 1885	Ditto	880	0	0	1 Oct., 1876.
	*Edward M'Farlane <sup>5</sup>	1 Jan., 1885	Ditto	880	0	0	22 Nov., 1865.
	*William Orr <sup>6</sup>	26 Mar., 1885	Ditto	880	0	0	21 May, 1878.
1st Class Surveyors	William Albert Braylesford Greaves.	1 Jan., 1885	Ditto	805	0	0	15 Feb., 1853.
	*Frederick Poate <sup>7</sup>	1 Jan., 1882	Ditto	720	0	0	1 Dec., 1880.
	*James Campsie Dalghish	1 Jan., 1885	Ditto	695	0	0	5 June, 1867.
	*Charles Howard Wansbrough	1 Oct., 1877	Ditto	695	0	0	1 Aug., 1875.
	George Caleb Hedgeland	7 Oct., 1880	Ditto	695	0	0	14 July, 1871.
	William Henry O'Malley Wood <sup>8</sup>	1 Jan., 1882	Ditto	695	0	0	1 Oct., 1877.
		<sup>1</sup> Allowed £100 for forage <sup>2</sup> Gives security to the amount of £1,000 <sup>3</sup> Granted forage allowance of £50 per annum from January to May, 1886. <sup>4</sup> Granted allowance of £100 per annum for Moree District <sup>5</sup> Granted allowance of £100 per annum for Bourke District <sup>6</sup> Granted allowance of £100 per annum for Wilcannia District. <sup>7</sup> Transferred from General Survey Staff from 1 January, 1886 <sup>8</sup> Granted equipment allowance of £230, and extra forage allowance of £50 for 1886 <sup>*</sup> Granted forage allowance of £25 per annum from January to September, 1886. <sup>*</sup> Specially licensed under the provisions of the Real Property Act.					

NEW SOUTH WALES—1886.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government.
<b>SECRETARY FOR LANDS—SURVEY OF LANDS—continued.</b>					
1st Class Surveyors—continued.	*Edwin Guthridge Vickery <sup>1</sup>	1 May, 1882	Governor and Executive Council	695 0 0	21 May, 1878.
	*James Lambert Tritton	1 May, 1882	Ditto	695 0 0	21 May, 1878.
	*William Henry Nash	1 Jan, 1883	Ditto	695 0 0	11 Dec, 1878.
	*William Gibbon Walker...	1 Jan, 1883	Ditto	695 0 0	1 Aug, 1879.
	*Arthur Sharp	1 Jan., 1883	Ditto	645 0 0	14 May, 1879.
	*Alfred Ebsworth <sup>2</sup>	1 Jan, 1883	Ditto	645 0 0	24 Oct, 1879.
	*Edward Ebsworth	1 Jan, 1883	Ditto	645 0 0	5 Oct, 1880.
	*Thomas Willans Conolly	1 Jan, 1883	Ditto	645 0 0	20 April, 1881.
	*Charles Walter Lang	1 Jan., 1883	Ditto	645 0 0	1 Jan., 1882.
	Edward James Halliday	1 Jan, 1883	Ditto	645 0 0	19 Dec, 1874.
	*Maurice Barlow	1 Jan, 1883	Ditto	645 0 0	1 Jan, 1882.
2nd Class Surveyors	Charles Joseph Metcalfe	8 Mar, 1878	Ditto	580 0 0	8 Mar, 1878.
	*Enoch John Cobercroft	1 Jan, 1882	Ditto	580 0 0	1 Jan, 1882.
	*Charles Thurburn	1 Jan., 1882	Ditto	580 0 0	1 Jan, 1882.
	Archibald Wellesley Chapman	1 Jan, 1882	Ditto	580 0 0	1 Jan, 1882.
	*John Edward Hicks	1 Jan, 1882	Ditto	580 0 0	1 Jan, 1882.
	*John Hector Lucas	1 June, 1882	Ditto	458 0 0	1 June, 1882.
	*Charles Robert Scrivener <sup>3</sup>	1 June, 1882	Ditto	580 0 0	11 Dec, 1876.
	*George Loder Dowe	24 July, 1882	Ditto	580 0 0	24 July, 1882.
	*Roderick Baylis Mackenzie	1 Jan, 1883	Ditto	580 0 0	1 Jan., 1883.
	*John Richmond	1 Jan, 1883	Ditto	580 0 0	1 Jan, 1883.
	*Valentine Blomfield Ryley	1 Jan, 1883	Ditto	580 0 0	1 Jan., 1883.
	Henry Hogarth	1 Jan, 1883	Ditto	580 0 0	1 Jan, 1883
	*Stephen Mills	1 Jan., 1883	Ditto	458 0 0	1 Jan, 1883
	*Stephen Edward Perdrrian <sup>4</sup>	1 Jan, 1883	Ditto	580 0 0	1 Jan, 1883.
	*Arthur Eric Mackay <sup>5</sup> ...	1 Jan, 1883	Ditto	580 0 0	1 Jan, 1883.
	*James Ogle Burgess	1 Jan, 1883	Ditto	580 0 0	1 Jan, 1883.
	*James Anderson <sup>2a</sup>	1 Jan, 1883	Ditto	575 0 0	1 Jan, 1883.
	Pe'egrine Fernandez Smyth	1 Jan, 1883	Ditto	580 0 0	1 Jan, 1883.
	Anthony Frederick Channer	1 Jan, 1883	Ditto	580 0 0	1 Jan, 1883
	*Thomas Graham Wilson <sup>6</sup>	1 Jan, 1883	Ditto	458 0 0	1 Jan, 1883
	*James Martin Kelly <sup>7</sup>	1 Jan, 1883	Ditto	550 0 0	1 Jan, 1883
	Walter Neville Suddall <sup>7</sup>	1 Jan, 1883	Ditto	670 0 0	1 Jan, 1883.
	*Walter Wallace Mills <sup>8</sup>	1 Jan, 1883	Ditto	448 0 0	1 Jan, 1883.
	*Francis John Gregson <sup>8</sup> ..	1 Jan., 1883	Ditto	570 0 0	1 Jan, 1883.
	Gerald Pennefather	1 Nov, 1883	Ditto	570 0 0	1 Nov, 1883.
	*Arthur Hulance Bray	1 April, 1884	Ditto	570 0 0	1 April, 1884.
	*John Broughton <sup>9</sup>	1 April, 1884	Ditto	570 0 0	1 April, 1884.
	*William Mann Thompson	1 April, 1884	Ditto	448 0 0	1 April, 1884.
	*Alfred Henry Chesterman	1 April, 1884	Ditto	570 0 0	1 April, 1884.
	Thomas Henry Hall Goodwin	1 Jan, 1885	Ditto	670 0 0	1 Jan, 1885.
	*William Sum <sup>6</sup>	1 Jan, 1885	Ditto	570 0 0	1 Jan., 1885.
	William Henry Nalder	2 July, 1885	Ditto	570 0 0	1 July, 1885.
	*Francis James Essington Bootle <sup>9</sup> .	1 July, 1885	Ditto	570 0 0	1 July, 1885.
	*William Makin Thomas..	1 July, 1885	Ditto	448 0 0	1 July, 1885.
	*Pe'er Vilhelm Tuxen <sup>10</sup>	1 July, 1885	Ditto	670 0 0	1 July, 1885.
	*Henry Weir Graeme	1 July, 1885	Ditto	570 0 0	1 July, 1885.
Chief Draftsman	John Wolston Ellis	14 Mar, 1876	Ditto	700 0 0	28 Sept, 1853.
1st Class Draftsmen, Head Office.	Thomas Harvie Lewis	13 Aug, 1859	Ditto	650 0 0	1 Feb, 1849.
	James Alexander Collin Willis	1 Jan, 1865	Ditto	600 0 0	18 Feb, 1854.
	Arthur James Stopps	10 Oct, 1877	Ditto	600 0 0	1 Jan., 1864.
	John Sangster	6 Aug, 1867	Ditto	550 0 0	1 Oct, 1857.
Chief Draftsman, Goulburn Local Office.	Walter Dickenson Armstrong.	1 Jan., 1885	Ditto	550 0 0	19 Jan., 1863
Chief Draftsman, Metropolitan Office.	William Freeman	1 Jan., 1885	Ditto	550 0 0	1 Oct., 1862.
Chief Draftsman, Orange Local Office	Edward Maber Spark Gerard.	1 Jan, 1885	Ditto	550 0 0	8 June, 1864.
Chief Draftsman, Glen Innes Local Office.	Theodore Elwin	1 Jan, 1885	Ditto	550 0 0	5 Oct., 1865.
Chief Draftsman, Albury Local Office	Daniel Henry Chisholm	1 Jan., 1885	Ditto	550 0 0	20 July, 1864.
Chief Draftsman, Wagga Wagga Local Office.	Thomas Felician Callachan	1 Jan, 1885	Ditto	550 0 0	1 Jan, 1865
Chief Draftsman, Maitland Local Office.	Stanley Lees Peyton	1 Jan., 1885	Ditto	550 0 0	19 Nov, 1868.
Chief Draftsman, Grafton Local Office.	Goodwin Robert Packer	1 Jan., 1885	Ditto	550 0 0	19 Nov, 1868.
Chief Draftsman, Cooma Local Office.	Harry Hare	1 Jan., 1885	Ditto	550 0 0	1 May, 1870.
Chief Draftsman, Forbes Local Office.	Arthur John Burnell <sup>11</sup>	1 Jan, 1885	Ditto	525 0 0	1 July, 1869.
Chief Draftsman, Forbes Local Office.	Louis George Julian Bennett <sup>12</sup>	1 Jan., 1885	Ditto	550 0 0	29 June, 1863
Chief Draftsman, Hay Local Office.	Albert Richard Gall	1 Jan, 1885	Ditto	550 0 0	1 June, 1871
Chief Draftsman, Tamworth Local Office.	William Henry Hall	1 Jan., 1885	Ditto	550 0 0	1 Jan, 1872

<sup>1</sup> Died, 17 April, 1886    <sup>2</sup> Resigned, 26 January, 1886.    <sup>3</sup> Died, 24 November, 1886.    <sup>4</sup> Transferred from General Survey Staff from 1 January, 1886  
 Granted equipment allowance of £230 and extra forage allowance of £50 for 1886    <sup>5</sup> Granted equipment allowance of £230 for 1886    <sup>6</sup> Granted allowance of £100 for Bourke District and equipment allowance of £230 for 1886    <sup>7a</sup> Increment not allowed for 1886    <sup>7b</sup> Transferred from General Survey Staff from 1 January, 1886.    <sup>8</sup> Transferred from General Survey Staff from 1 January, 1886, and granted £100 per annum allowance for district west of River Darling    <sup>9</sup> Transferred from Topographical Staff from 1 January, 1886.    <sup>10</sup> Granted forage allowance of £50 per annum for 1886.    <sup>11</sup> Retired from the service, 25 January, 1886.    <sup>12</sup> Transferred from Dubbo to Forbes    <sup>13</sup> Specially licensed under the provisions of the Real Property Act





Office.	Name	Date of Appointment	By whom appointed, and under what Instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.	
<b>SECRETARY FOR LANDS—SURVEY OF LANDS—continued.</b>						
3rd Class Draftsmen—continued.	Crosbie Baynes Kelly <sup>1</sup>	14 Aug., 1883	Governor and Executive Council	265 0 0	14 Aug., 1883.	
	Michael Patrick <sup>2</sup>	14 Aug., 1883	Ditto	265 0 0	14 Aug., 1883.	
	Joseph George Richards Fewings	14 Aug., 1883	Ditto	265 0 0	14 Aug., 1883.	
	Cosmo Alfred Waiby Fowler	14 Aug., 1883	Ditto	265 0 0	14 Aug., 1883.	
	Malcolm Shaw	14 Aug., 1883	Ditto	265 0 0	14 Aug., 1883.	
	Matthew Rogerson	14 Aug., 1883	Ditto	265 0 0	14 Aug., 1883.	
	Ernest Henry Biden <sup>2</sup>	14 Aug., 1883	Ditto	265 0 0	14 Aug., 1883.	
	Charles Edwards, junior	4 Mar., 1884	Ditto	265 0 0	4 Mar., 1884.	
	Edmund Weir Brierly	1 Oct., 1883	Ditto	265 0 0	3 April, 1882.	
	Leonard Abels van Wessem	1 Oct., 1883	Ditto	265 0 0	17 April, 1882.	
	Michael John Francis Gread <sup>3</sup>	1 Jan., 1886	Ditto	240 0 0	1 April, 1876.	
	George Henry James Hardwick	1 Oct., 1883	Ditto	240 0 0	20 Mar., 1882.	
	Edgar Sparry Lloyd	1 Oct., 1883	Ditto	240 0 0	1 Mar., 1882.	
	Joseph Bede White.....	1 Sept., 1884	Ditto	240 0 0	1 Feb., 1883.	
	Charles Wesley Cripps <sup>1</sup>	1 Sept., 1884	Ditto	240 0 0	22 Feb., 1883.	
	Thomas Freeman <sup>3</sup>	16 Jan., 1883	Ditto	220 0 0	16 Jan., 1883.	
	Herbert Bond Pinnington.	1 Sept., 1884	Ditto	190 0 0	27 Jan., 1883.	
	Patrick Joseph Cahill	25 Oct., 1884	Ditto	190 0 0	1 Jan., 1884.	
	Supernumerary Draftsmen ..	James Henry Foulcher <sup>4</sup>	27 Jan., 1883	Ditto	115 0 0	27 Jan., 1883.
		Donald Fraser	1 Jan., 1884	Ditto	115 0 0	1 Jan., 1884.
Henry Bartley.....		23 Jan., 1883	Ditto	115 0 0	23 Jan., 1883.	
Ralph Noble ..		1 Jan., 1884	Ditto	115 0 0	1 Jan., 1884.	
Percie Chater Charlton		1 Jan., 1884	Ditto	115 0 0	1 Jan., 1884.	
Walter David Loveridge ...		1 Sept., 1884	Ditto	115 0 0	1 Sept., 1884.	
Ernest James Spark ..		1 Sept., 1884	Ditto	115 0 0	1 Sept., 1884.	
Carl Theodore Morath ..		24 July, 1884	Ditto	115 0 0	24 July, 1884.	
Edwin Shelton		21 July, 1884	Ditto	115 0 0	21 July, 1884.	
John Ramsay Allan		1 Sept., 1884	Ditto	115 0 0	1 Sept., 1884.	
Francis Ernest Fry		1 Jan., 1885	Ditto	115 0 0	1 Jan., 1885.	
James Herlhy ..		1 Jan., 1885	Ditto	115 0 0	1 Jan., 1885.	
Henry Iredale French <sup>5</sup>		1 Oct., 1884	Ditto	115 0 0	1 Oct., 1884.	
Arthur Joseph Perkins		25 Oct., 1884	Ditto	115 0 0	25 Oct., 1884.	
Goulburn Reynolds.						
Alfred Plowman		1 Jan., 1884	Ditto	115 0 0	1 Jan., 1884.	
Colm Christie <sup>6</sup>		1 Jan., 1885	Ditto	115 0 0	1 Jan., 1885.	
Oakley Wallace Small		29 Sept., 1884	Ditto	115 0 0	29 Sept., 1884.	
William Gleeson.		1 Sept., 1884	Ditto	115 0 0	1 Sept., 1884.	
George William Sherring		1 Jan., 1885	Ditto	115 0 0	1 Jan., 1885.	
Chief Lithographer ...	Josiah Tayler	1 Jan., 1875	Ditto	490 0 0	1 Jan., 1864.	
	John Edmund Miller Russell	1 Oct., 1877	Ditto	350 0 0	1 Oct., 1877.	
Lithographic Draftsmen ...	John Blenman Cobham	1 Jan., 1878	Ditto	350 0 0	1 Jan., 1875.	
	James Michael Kennedy	1 Jan., 1879	Ditto	350 0 0	1 Jan., 1879.	
	Edward Wilham Minchen	1 Jan., 1879	Ditto	350 0 0	1 Jan., 1879.	
	Ebenezer Reginald Morris	1 Jan., 1879	Ditto	350 0 0	1 Jan., 1879.	
	Charles Stewart Christie	1 Jan., 1879	Ditto	265 0 0	1 Jan., 1875.	
	Frederick William Sharp	1 Jan., 1879	Ditto	240 0 0	1 July, 1878.	
	Gordon Douglas McDonnell Duff	1 Oct., 1882	Ditto	190 0 0	1 July, 1878.	
	John Eccles <sup>7</sup>	1 Jan., 1865	Ditto	320 0 0	1 Jan., 1865.	
	James Tweedie Inglis	1 Sept., 1876	Ditto	235 0 0	1 Sept., 1876.	
	Peter Ford	17 Oct., 1871	Ditto	200 0 0	17 Oct., 1871.	
Lithographic Engraver	John Bernauer	1 Jan., 1874	Ditto	150 0 0	1 Jan., 1874.	
	George William Sharp	1 Jan., 1869	Ditto	340 0 0	1 Oct., 1866.	
	Clerk in Compiling Branch.	Charles George Zouch	21 Oct., 1878	Ditto	190 0 0	21 Oct., 1878.
	Clerk, Auction Sales	William Richard Norton Dove	1 Jan., 1884	Ditto	240 0 0	1 Jan., 1879.
	Examiner of Diagrams on Crown Grants.	William Webster	1 Jan., 1876	Ditto	350 0 0	1 Jan., 1876.
	Assistant do	Olof Hakanson Hemming	1 July, 1879	Ditto	315 0 0	1 July, 1879.
	Description Writers	Richard George Underwood	12 Jan., 1867	Ditto	350 0 0	1 Oct., 1860.
		William James Neill	1 Oct., 1877	Ditto	315 0 0	1 Oct., 1877.
		John Swinton Murray <sup>8</sup>	26 June, 1878	Ditto	245 0 0	26 June, 1878.
		Charles James Callaway	7 Aug., 1882	Ditto	200 0 0	7 Aug., 1882.
George Washington Walker		1 Jan., 1879	Ditto	200 0 0	1 Jan., 1879.	
Assistant ditto		James Lutton	13 Sept., 1883	Ditto	150 0 0	13 Sept., 1883.
Custodian of Plans		Clement Tremayne Rodd <sup>9</sup>	1 Oct., 1873	Ditto	290 0 0	6 Mar., 1867.
Assistant ditto		Robert Campbell Oatley	1 July, 1882	Ditto	190 0 0	1 July, 1882.
Clerk in Charting Branch		Edward Stack	1 Jan., 1869	Ditto	240 0 0	1 Jan., 1869.
Exhibitor and Salesman of Public Maps.		Richard Lawton Eames <sup>10</sup>	4 Oct., 1881	Ditto	240 0 0	4 Oct., 1881.
Assistant ditto ditto	Robert Stobo, jun.	1 Jan., 1882	Ditto	190 0 0	1 Jan., 1882.	
Clerks in Local Survey Offices.	Alfred Bruce Ranelaud <sup>11</sup>	1 Jan., 1882	Ditto	240 0 0	1 Jan., 1879.	
	Robert M'Clelland <sup>11</sup>	1 Jan., 1882	Ditto	240 0 0	10 May, 1869.	
	Alexander Francis Macdonnell <sup>11</sup>	1 Jan., 1882	Ditto	240 0 0	1 Jan., 1882.	
	David Miller	1 Jan., 1882	Ditto	340 0 0	1 June, 1875.	
	John Frederick Landers <sup>12</sup>	29 April, 1879	Ditto	550 0 0	13 Feb., 1855.	
	First Clerk	John Davidson	29 April, 1879	Ditto	440 0 0	19 May, 1856.
	Accountant	Thomas Evans <sup>13</sup>	29 April, 1879	Ditto	440 0 0	28 Sept., 1863.
	Examiner of Accounts	Frederick Evans Barnes <sup>14</sup>	29 April, 1879	Ditto	350 0 0	5 May, 1866.
	Clerk	Henry Percy Baly <sup>11</sup>	1 Jan., 1872	Ditto	340 0 0	1 July, 1869.
	Pay Clerk	Thomas Alphen <sup>14</sup>	27 Oct., 1884	Ditto	290 0 0	1 Mar., 1875.
Clerks	Frank George Hack	1 Nov., 1884	Ditto	290 0 0	24 Mar., 1873.	
	Edward James Joseph Briscoe	1 Jan., 1876	Ditto	240 0 0	1 Jan., 1876.	
	John Joseph Sheahan <sup>11</sup>	1 Oct., 1877	Ditto	240 0 0	1 Oct., 1877.	
	Matthew M'Mahon <sup>11</sup>	1 Oct., 1877	Ditto	200 0 0	1 Oct., 1877.	

<sup>1</sup> Granted an allowance of £5 per annum to meet extra cost of living in the country in the country  
<sup>2</sup> Transferred from Occupation of Lands to Survey Staff, from 1 Jan., 1886  
<sup>3</sup> Appointed Field Assistant, 1 January, 1886  
<sup>4</sup> Died, 19 October, 1886  
<sup>5</sup> Retired from the Service, July, 1886  
<sup>6</sup> Appointed Field Assistant, 1 January, 1886  
<sup>7</sup> Receives an allowance of £50 per annum for use of his patent process of lithography.  
<sup>8</sup> Retired from the Service, July, 1886  
<sup>9</sup> Granted six months leave, owing to ill health  
<sup>10</sup> Gives security for £200.  
<sup>11</sup> Transferred to Local Survey Offices  
<sup>12</sup> Gives security for £1,000.  
<sup>13</sup> Gives security for £750.  
<sup>14</sup> Gives security for £400

Office.	Name.	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary	Date of first Appointment under the Colonial Government
<b>SECRETARY FOR LANDS—SURVEY OF LANDS—continued.</b>					
Clerks— <i>continued.</i> .....	Philip Eld Eldershaw ...	1 Jan., 1876	Governor and Executive Council	200 0 0	1 Jan., 1876.
	Richard Callaway	1 Jan., 1878	Ditto ..	200 0 0	1 Jan., 1878.
	Percy Powell Tuckerman <sup>1</sup>	1 Jan., 1881	Ditto ..	190 0 0	1 Jan., 1881.
	James M'Neill	1 Jan., 1881	Ditto ..	190 0 0	1 Jan., 1881.
	William Walton Callman	1 Jan., 1881	Ditto ...	190 0 0	1 Jan., 1881.
	John Simpson	8 Mar., 1881	Ditto ..	190 0 0	8 Mar., 1881.
Telephone Operator ...	Ernest Howe	1 Jan., 1884	Ditto ..	75 0 0	1 Jan., 1884.
Messengers (5) . . . . .	.....	.....	.....	2 at 150 0 0 1 at 130 0 0 1 at 110 0 0 1 at 75 0 0 1 at 100 0 0 1 at 98 0 0 7 at 52 0 0 1 at 90 0 0	each.
Office-keepers (10) . . . . .	.....	.....	.....	.....	each. Corridor cleaner
<i>Triangulation of the Colony :—</i>					
Field Astronomer .....	Joseph Brooks <sup>2</sup>	23 June, 1879	Governor and Executive Council	490 0 0	23 June, 1879.
2nd Class Surveyor . . . . .	*Francis John Gregson <sup>3</sup>	1 Jan., 1883	Ditto ..	570 0 0	1 Jan., 1883
Bailiff-in-charge of Trig. Marks.	Edward Henry Taylor <sup>4</sup>	1 Jan., 1879	Ditto ...	240 0 0	1 Jan., 1879.
Chief Computer .....	Henry Spendlove Hawkins	1 Oct., 1877	Ditto ..	490 0 0	1 Oct., 1877.
Computer ...	John Burt Trivett ..	1 Jan., 1881	Ditto ..	315 0 0	1 Jan., 1881.
<i>General Survey of the Colony :—</i>					
1st Class Surveyor .....	*Francis Benson William Woolrych	1 Jan., 1885	Ditto ..	805 0 0	1 Jan., 1855.†
Inspecting Surveyor .....	*Duncan Mearns Maitland	12 Aug., 1879	Ditto ..	683 0 0	1 Aug., 1879.
1st Class Surveyor .....	*Frederick Poate <sup>5</sup>	1 Jan., 1882	Ditto ..	720 0 0	1 Dec., 1880.
2nd Class Surveyors .....	Hans Fransmen Madsen	1 June, 1882	Ditto ..	458 0 0	1 June, 1882.
	Charles Robert Scrivener <sup>6</sup>	1 June, 1882	Ditto ..	580 0 0	11 Dec., 1876.†
	*Thomas Graham Wilson <sup>7</sup>	1 Jan., 1883	Ditto ..	458 0 0	1 Jan., 1883
	Walter Neville Sendall <sup>8</sup>	1 Jan., 1883	Ditto ..	670 0 0	1 Jan., 1883.
	Octavius Farolade Rozzoli	1 Jan., 1883	Ditto ..	448 0 0	1 Jan., 1883.
	George Handley Knibbs	1 Jan., 1883	Ditto ..	448 0 0	1 Jan., 1883.
	*Robert James Arthur Roberts	1 Jan., 1883	Ditto ..	448 0 0	1 Jan., 1883.
	*Walter Wallace Mills <sup>9</sup>	1 Jan., 1883	Ditto ..	448 0 0	1 Jan., 1883.
	*William Sim <sup>9</sup>	1 Jan., 1885	Ditto ..	570 0 0	1 Jan., 1885.
<i>Office Staff :—</i>					
Draftsman-in-charge .....	*Thomas Frederick Furber	1 Sept., 1880	Ditto ..	550 0 0	25 Sept., 1869.
Draftsmen and Computers	James Monsell Spry	1 Oct., 1877	Ditto ..	415 0 0	1 Oct., 1877.
	Arthur Lewington Lloyd	1 July, 1878	Ditto ..	350 0 0	1 June, 1871.
	Charles George Ireland ..	21 May, 1878	Ditto ..	350 0 0	1 Sept., 1876.
	Charles William Cropper	1 July, 1882	Ditto ..	350 0 0	1 July, 1882.
	Hamilton Welchman ...	1 July, 1882	Ditto ..	340 0 0	1 July, 1882.
	Henry George Chute ...	1 July, 1882	Ditto ..	340 0 0	1 July, 1882.
	Orville Dimelow ...	1 Feb., 1884	Ditto ..	340 0 0	1 Feb., 1884.
	William Jahn .....	1 Jan., 1883	Ditto ..	265 0 0	1 Jan., 1883.
Licensed Surveyors on temporary salary.	*Sigmund Frederick V. Anheimm	25 Aug., 1886	Secretary for Lands	314 2 8†	26 June, 1879
	Stephen Ramsay Beatty ..	3 Aug., 1883	Ditto ..	973 3 6†	6 July, 1883
	*Francis Langham Burdett	2 Dec., 1879	Ditto ..	837 5 0†	3 Feb., 1874.
	*Preston Chambers ...	6 Aug., 1883	Ditto ..	904 2 6†	2 Jan., 1880.
	Edgar Chennals Scott Chapman	12 Feb., 1884	Ditto ..	931 15 1†	12 Feb., 1884.
	*George Warring Dewdney	17 Mar., 1884	Ditto ..	1,017 3 9†	19 Feb., 1883.
	Herbert Arthur Evans <sup>6</sup>	23 Feb., 1883	Ditto ..	232 1 11†	19 Feb., 1883.
	William Henry Foster	18 July, 1883	Ditto ..	958 5 6†	6 July, 1883.
	*Callaghan Francis Garvan	2 Jan., 1883	Ditto ..	994 15 11†	27 June, 1879.
	*Robert Gustavus Glasson	17 July, 1883	Ditto ..	1,048 5 0†	28 Jan., 1882.
	*William Matheson Gordon	1 Jan., 1885	Ditto ..	984 2 6†	19 Feb., 1883.
	*Frederick William Hawkins	14 May, 1886	Ditto ..	628 17 1†	28 Jan., 1882.
	*Charles Wynford Horneman	22 Feb., 1884	Ditto ..	981 9 9†	10 Jan., 1881.
	Edwin Hill Johnson ...	16 Aug., 1881	Ditto ..	985 0 0†	27 June, 1881.
	William Lettbridge King	21 Jan., 1884	Ditto ..	1,006 18 4†	10 Jan., 1884.
	Marcus Lucas ...	1 Mar., 1884	Ditto ..	572 19 11†	19 Feb., 1883.
	*David Hslop Murray	17 Dec., 1883	Ditto ..	907 19 6†	30 June, 1882.
	*George MacCallum ..	1 July, 1881	Ditto ..	736 14 6†	27 June, 1879.
	Algernon Peake	1 Mar., 1886	Ditto ..	563 19 11†	26 June, 1884.
	*Sydney James Pinnington <sup>7</sup>	16 July, 1881	Ditto ..	450 0 4†	27 June, 1881.
	John Pool .....	24 Nov., 1882	Ditto ..	979 18 0†	10 Jan., 1881.
	*Andrew Robb .....	17 Oct., 1882	Ditto ..	1,013 15 0†	28 Jan., 1882.
	*Henry Shute, jun ...	1 June, 1884	Ditto ..	655 17 5†	22 Jan., 1884.
	*Thomas Biddulph Upcott Sloman	1 Jan., 1885	Ditto ..	567 15 7†	26 June, 1884.
	*George May Stafford ...	1 Oct., 1882	Ditto ..	946 2 6†	28 Jan., 1882.
	*Samuel Albert Steane ...	1 Nov., 1883	Ditto ..	646 8 0†	19 Feb., 1883.
	Thomas Malcolm Stephen	1 Mar., 1885	Ditto ..	511 3 7†	26 June, 1884.
	Richard Neville Somerville	15 Jan., 1884	Ditto ..	932 7 6†	10 Jan., 1884.
	*James Frederick Truscott	1 Dec., 1884	Ditto ..	542 10 11†	6 July, 1883.
	*Lancelot Alexander Wilkinson <sup>8</sup>	1 Mar., 1884	Ditto ..	82 11 4†	27 June, 1879.

<sup>1</sup> Transferred to Local Survey Office <sup>2</sup> Designation altered to Field Astronomer <sup>3</sup> Transferred to General Establishment from 1 January, 1886 <sup>4</sup> Designation altered from Overseer of Piling Parties <sup>5</sup> Appointed Inspecting Surveyor from 1 January, 1886 <sup>6</sup> Employed on fees from 28 March, 1885. <sup>7</sup> Appointed Temporary Draftsman, from 4 Nov., 1886 <sup>8</sup> Resigned, 31 January, 1886 <sup>9</sup> Specially licensed under the provisions of the Real Property Act. † Services not continuous. ‡ These amounts include salary, equipment, and wages of party.

Office	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary	Date of first Appointment under the Colonial Government
				£ s d	
SECRETARY FOR LANDS—SURVEY OF LANDS— <i>continued</i>					
				Fees.—	
Licensed Surveyors .....	*William Abernethy	27 June, 1879	Secretary for Lands	881 17 5	
	Phillip Francis Burnet Adams	26 June, 1884	Ditto .....	1,514 1 3	
	*Edward Richard Allworth	2 July, 1880	Ditto	1,415 8 11	
	*William Anderson	13 Sept, 1864	Ditto	1,172 12 3	
	Joseph Andrews .....	26 June, 1884	Ditto ..	880 3 4	
	*Sigmund Frederiek V Arnheim	26 June, 1884	Ditto ... ..	474 1 6	
	*George Arthur	6 Feb, 1875	Ditto	337 12 4	
	Charles Daniel Adams	5 Jan, 1885	Ditto .....	655 10 0	
	*Charles Throsby Arnheim	30 June, 1882	Ditto ...	144 3 4	
	*Acheson & Schleicher	.. .. .	Ditto	476 11 11	
	*Richard Barling	16 April, 1869	Ditto .....	554 16 3	
	*Herman Leslie Barrington	26 June, 1884	Ditto ... ..	872 19 0	
	*Edward Hugh Barton	12 July, 1872	Ditto	2,051 5 3	
	*James John Baylis	22 Jan, 1878	Ditto	845 12 3	
	*Thomas Henry Bell	15 Feb, 1876	Ditto .....	615 18 2	
	*William Berthon	25 July, 1873	Ditto .....	357 13 11	
	*Thomas Lndon Biddulph	27 June, 1876	Ditto ..	1,277 13 5	
	*James Russell Blacket	2 July, 1878	Ditto .....	1,117 5 3	
	*Tarburton Bossley	3 Nov, 1874	Ditto ..	38 10 8	
	*Arthur Piddington Burgess	3 July, 1878	Ditto .....	762 13 6	
	Edward James Burgess	25 July, 1873	Ditto	18 11 4	
	*William Frederiek Busby	28 Jan, 1882	Ditto .....	1,303 17 9	
	*Richard Bornstein	8 Dec, 1884	Ditto .....	533 15 6	
	William Bellars Bridges	26 June, 1884	Ditto ... ..	1,085 12 6	
	*John Hope Balmain	12 July, 1872	Ditto	25 2 7	
	Stuart Harborne Belcher	20 Jan, 1886	Ditto	848 5 1	
	Vincent Ignatius Blake	29 June, 1885	Ditto	671 9 6	
	*Michael Joseph Callaghan	15 Feb, 1876	Ditto	90 15 4	
	*Alfred Wernam Canning	28 Jan, 1882	Ditto .....	1,046 5 4	
	*George Bonton Carter	15 Feb, 1876	Ditto .....	877 2 10	
	*John Sofala Chard .....	1 Oct, 1867	Ditto	92 14 1	
	*Charles Snell Chauncey ..	27 June, 1879	Ditto .....	906 17 2	
	William Bede Christie	14 July, 1871	Ditto ..	321 18 7	
	*Francis Clarke . . . .	19 Feb, 1883	Ditto ..	989 14 0	
	*Edwin John Commins	2 Jan, 1880	Ditto	1,172 13 2	
	*George William Commins	21 May, 1862	Ditto	997 4 0	
	*James M'Dowell Conroy	6 Feb, 1875	Ditto ..	880 4 1	
	*William Cowley	29 Jan, 1873	Ditto .....	666 5 5	
	Henry Percival Cowper .	7 July, 1882	Ditto .....	1,046 6 7	
	*Wilham Creed	15 Oct, 1872	Ditto .....	686 5 0	
	*Charles Rawdon Cunningham	26 June, 1884	Ditto ... ..	724 18 10	
	*Josiah Brunel Combes	31 Dec, 1863	Ditto ...	74 17 9	
	*Alfred Hugh Conroy	5 Jan, 1885	Ditto ...	1,318 14 11	
	*Percy Cowley	19 Feb, 1883	Ditto	674 1 0	
	J. F. Campbell	10 Jan., 1884	Ditto	447 6 9	
	*Charles Coane . . . .	26 June, 1884	Ditto .....	216 5 9	
	*John Haydon Cardew	2 Jan., 1880	Ditto	382 15 0	
	*William Herbert Christie	9 Nov, 1863	Ditto ..	846 4 6	
	*Walter Ranmie Davidson	16 April, 1869	Ditto	1,201 4 2	
	*Harold Mapletoft Davis	14 April, 1862	Ditto	10 9 0	
	*Edward Harnett Dawson	12 Jan, 1877	Ditto	173 13 6	
	*James Dawson	27 June, 1876	Ditto .....	600 13 4	
	*Samuel Hugh Dawson .	2 Jan, 1882	Ditto ... ..	1,058 18 5	
	*Augustus Dewhurst ..	29 June, 1877	Ditto ...	1,260 1 1	
	*George Gibson Donaldson	22 Jan., 1878	Ditto	1 15 0	
	*William Drummond	11 Feb, 1868	Ditto	525 3 8	
	Herbert Arthur Evans	19 Feb, 1883	Ditto	1,004 17 11	
	*Wilham James Farrer	3 Aug, 1875	Ditto	972 0 8	
	John Fitzgerald Finn	6 July, 1883	Ditto ..	742 8 11	
	*Hamilton Fisher	29 Jan, 1873	Ditto	515 10 0	
	*Robert Fisher	12 Jan, 1877	Ditto	1,755 11 4	
	*John Edmund Flynn	10 Jan, 1881	Ditto	1,231 16 10	
	*Henry Folkard	2 Jan, 1880	Ditto	850 8 10	
	Richard M Galloway	2 July, 1880	Ditto	531 8 10	
	*Broughton Clayton Garland	3 Feb, 1871	Ditto	1,185 8 10	
	John Garland	5 July, 1886	Ditto	590 12 10	
	John Camden Goodridge..	26 June, 1884	Ditto ..	896 8 6	
	*James Granter	15 Feb, 1876	Ditto	1,212 1 5	
	Herbert Greenland ... ..	19 Jan, 1872	Ditto	26 0 9	
	*Alfred Francis Hall	29 June, 1885	Ditto ..	472 18 8	
	*John Hall <sup>1</sup>	9 Jan, 1854	Ditto ... ..	7 14 0	
	*Charles Adrian Harper	19 Nov, 1862	Ditto .....	772 7 6	
	*Walter Andrew Harper .	6 July, 1883	Ditto ..	565 3 0	
	*Edgar Arnold Harris	14 July, 1871	Ditto	526 11 6	
	Henry Hartung ...	10 Jan, 1884	Ditto	931 3 8	
	*Frederick Wilham Hawkins	28 Jan, 1882	Ditto	522 14 3	
	*Herbert Valentine Haynes	26 June, 1884	Ditto .. ..	1,163 3 9	

<sup>1</sup> Deceased

\* Specially licensed under the provisions of the Real Property Act

Office	Name	Date of appointment	By whom appointed and under what instrument	Annual Salary	Date of first Appointment under the Colonial Government
				£ s d	
SECRETARY FOR LANDS—SURVEY OF LANDS— <i>continued.</i>					
Licensed Surveyors— <i>continued</i>	*Cornelius Haylock <sup>1</sup>	18 June, 1867	Secretary for Lands ...	Fees — 13 12 6	
	*Otto Albert Herboin	10 Jan, 1881	Ditto	726 15 9	
	*James Jerome Higgins	28 Nov, 1865	Ditto	9 14 2	
	*Henry Charles Holmes	27 June, 1879	Ditto	893 9 3	
	*Henry Courtois Hosie	21 Sept, 1859	Ditto	975 1 8	
	*Marcus Orphen Hungerford	22 Jan, 1878	Ditto	910 6 8	
	*Frederick Verdon Hunter	23 Dec, 1875	Ditto	1,303 10 5	
	Frederick William Irby	2 July, 1880	Ditto	852 1 3	
	*Frank Isaac	22 Jan, 1878	Ditto	1,010 11 7	
	William Jones	27 June, 1881	Ditto	1,377 19 10	
	Edward J H Knapp	9 June, 1858	Ditto	19 10 3	
	*Charles William Bray King	3 Feb, 1874	Ditto	1,632 17 1	
	*John Dawson Kirkwood	6 July, 1883	Ditto	1,087 14 5	
	*Arthur Landon	15 Feb, 1876	Ditto	804 19 2	
	*John Samuel Langtree <sup>1</sup>	28 Jan, 1882	Ditto	18 4 0	
	*John Henry Laycock	27 June, 1879	Ditto	68 18 6	
	Francis Thomas Lardner	15 Feb, 1876	Ditto	794 10 8	
	*James Ewart Lester	28 Jan, 1882	Ditto	2,218 6 6	
	*Walter Alfred Lipscomb	15 Oct, 1872	Ditto	1,688 10 4	
	Alfred Lisle	12 July, 1872	Ditto	855 0 1	
	Archibald Lockhart	5 Jan, 1885	Ditto	1,145 17 1	
	*George Loder	12 July, 1872	Ditto ... ..	1,094 14 11	
	*Arnold Wellesley Love	12 Jan, 1877	Ditto ... ..	1,250 12 6	
	*Charles Cameon Loxton	15 Feb, 1876	Ditto ... ..	719 11 7	
	*John Frederick Loxton	12 July, 1872	Ditto	74 0 6	
	Thomas Henry Loxton	27 June, 1879	Ditto	1,384 13 3	
	*James Herbert Lupton	7 July, 1882	Ditto	968 0 0	
	Adam Maitland	6 Feb, 1875	Ditto	1,294 6 4	
	Horace Frederick Kerr Mann	22 Jan, 1878	Ditto	739 9 1	
	*Evelyn Robert Manning	29 June, 1877	Ditto	392 6 5	
	*Harold Clyde Manning	19 Feb, 1883	Ditto	1,842 0 2	
	James Charles Martin	27 June, 1879	Ditto	989 14 11	
	Clarence Arthur Martin	26 June, 1884	Ditto	712 14 11	
	*John Griffin Martyn	12 Jan, 1877	Ditto	1,203 0 3	
	John Manners	29 June, 1885	Ditto	808 6 4	
	*Robert William Meldrum	3 Feb, 1874	Ditto	1,606 2 5	
	Michael Vincent Murphy	26 June, 1884	Ditto	368 12 0	
	George Voss Mocatta	19 Feb, 1883	Ditto	334 7 1	
	Fénélon Mott	5 Jan, 1885	Ditto	560 3 0	
	*Francis Sisson Murray	26 June, 1884	Ditto	391 6 5	
	*William Mylecharane	25 Oct, 1867	Ditto	75 5 1	
	*Henry Osborne MacCabe	29 June, 1877	Ditto	19 8 5	
	Thomas Charles M'Cord	3 Feb, 1874	Ditto	27 18 6	
	*John M'Culloch	16 June, 1857	Ditto	260 15 10	
	*John M'Dermid MacDonald	12 July, 1872	Ditto	125 9 1	
	*Stewart Alexander M'Dougall	6 Feb, 1875	Ditto	1,173 3 8	
	*Herbert Mandeville Nash	12 Jan, 1877	Ditto	2,272 7 6	
	John Mawdsley Nash	29 June, 1885	Ditto	645 19 3	
	*Stephen Nicholson	10 Jan, 1881	Ditto	1,321 16 10	
	*Charles Frederick Napier North	27 June, 1879	Ditto	1,418 9 9	
	*Henry Arthur Davies O Connor	3 Feb, 1874	Ditto	1,347 0 5	
	*Henry Morris Leibgebei Pike	27 June, 1879	Ditto	33 12 0	
	*Napoleon Paton	29 June, 1877	Ditto	1,601 4 7	
	John Saxon Peppercorn	27 June, 1881	Ditto	269 18 7	
	*Richard Gladesville Piatt	30 June, 1882	Ditto	1,368 10 10	
	*Ceil Pennefather	2 July, 1880	Ditto	733 13 7	
	Alfred Ernest Pratt	20 Jan, 1886	Ditto	304 12 9	
	*William Allwood Rae	28 Oct, 1873	Ditto	739 9 8	
	Paul Rigaut	7 Aug, 1874	Ditto	1,452 14 10	
	*John Ernest Robberds	28 Jan, 1882	Ditto	535 18 4	
	*Rowand Ronald	3 Nov, 1874	Ditto	905 1 9	
	*Frank Russell	12 July, 1872	Ditto	229 13 3	
	*Joseph Ryan	2 July, 1878	Ditto	1,255 12 7	
	*Duncan Albert Riddle	29 June, 1885	Ditto	110 4 0	
	*Edmund Sanderson	24 Nov, 1855	Ditto	183 3 9	
	*Adelbert Schleicher	29 Jan, 1873	Ditto	10 0 0	
	*William Newton Scott	3 Aug, 1875	Ditto	689 13 10	
	*Damel Bateman Sellars	12 Jan, 1877	Ditto	1,454 6 7	
	Arthur Hastings William Senior <sup>1</sup>	26 June, 1884	Ditto	54 3 8	
	*Arthur Newton Small	2 July, 1880	Ditto ... ..	1,368 17 9	
	Iwin Smith	5 July, 1881	Ditto ... ..	868 11 4	
	Gualter Soares	26 June, 1884	Ditto	121 16 9	
	*Fritz Peter Solling	25 July, 1873	Ditto ...	1,304 18 4	
	*Anthony Louis Stinson	2 July, 1878	Ditto	873 9 2	
	*Edwin Sawtell	25 Oct, 1867	Ditto	75 12 0	

<sup>1</sup> Deceased    \* Specially licensed under the provisions of the Real Property Act

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment	By whom appointed, and under what instrument.	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government.
<b>SECRETARY FOR LANDS—SURVEY OF LANDS—continued.</b>					
Licensed Surveyors— <i>continued.</i>	Harley Tarrant ... ..	10 Jan., 1884	Secretary for Lands .....	Fees:— 1,628 6 9	
	*Joseph Tarrant . . . .	27 June, 1879	Ditto . . . . .	1,237 1 2	
	*Henry Margrave Terry ..	27 June, 1881	Ditto .....	1,426 17 9	
	*Henry Adam Torry	27 June, 1879	Ditto .....	1,261 14 6	
	*Vivian Fitzroy Tozer	16 April, 1869	Ditto .....	1,495 1 3	
	*Oliver Trickett . . . .	27 June, 1876	Ditto .....	1,381 7 4	
	*Joseph John Tucker	22 Jan., 1878	Ditto .....	1,371 13 7	
	*Edwin Woodward Turner	15 Feb., 1876	Ditto .....	1,893 7 11	
	Arthur Doncaster Thursby	29 June, 1885	Ditto .....	415 19 8	
	Joseph Edward Walker ..	2 July, 1880	Ditto .....	311 8 6	
	*Walter Benjamin Hamilton Warner.	6 July, 1883	Ditto .....	981 18 1	
	*Charles Edward Webb	2 July, 1878	Ditto .....	533 3 5	
	*John Weingarh .....	6 July, 1883	Ditto ..	229 14 9	
	Henry O'Sullivan White...	12 Jan., 1877	Ditto .....	854 18 3	
	*Lancelot Alexander Wilkinson.	27 June, 1879	Ditto .....	2 2 0	
*Charles Worth	29 Jan., 1873	Ditto	402 2 9		
*Arthur Branscombe Wood	26 June, 1884	Ditto ..	1,151 11 0		
* Specially licensed under the provisions of the Real Property Act.					
NOTE—The area measured by these officers during the year 1886 under the repealed Acts amounted to 151,353 acres 2 roods 26 perches, and 1,010 miles 60 chains 83 links linear measurement, at a cost of £11,978 6s 4d, viz —Conditional Purchases, 57,265 acres 0 roods 35 perches, Auction, 22,700 acres 0 roods 39 perches, Government and Public Purposes, 2,219 acres 2 roods 20 perches, Improvement Purchases, 68,856 acres 0 roods 12 perches; Volunteer Land Orders, 50 acres, Special Leases 262 acres 2 roods.					
The area measured during 1886, under the Crown Lands Act of 1884, amounted to 7,283,087 acres 2 roods 26 perches, and 4,348 miles 3 chains 88 links linear measurement, viz —Conditional Purchases, 625,105 acres 1 rood 30 perches, Additional Conditional Purchases, 92,977 acres 2 roods 1 perch, Conditional Leases, 1,480,457 acres 3 roods 29 perches, Converted Pre-leases, 2,237,978 acres 0 roods 1 perch, Special Leases, 476 acres 1 rood 8 perches, Auction, 84,203 acres 2 roods 3 perches, Volunteer Land Orders, 900 acres, Homestead Leases, 2,737,970 acres, Reserves, 16,897 acres 0 roods 39 perches; Public Purposes, 2,028 acres 1 rood 3 perches, Special Purchases, 35 acres 0 roods 20 perches, Improvement Purchases, 130 acres 1 rood 12 perches, Miscellaneous Surveys, 3,928 acres.					
<b>COURT OF CLAIMS.</b>					
Commissioners— (President) .....	Arthur Todd Holroyd ...	20 Sept., 1865	Governor and Executive Council, by Commission.	Nil.	16 Sept., 1856.
	William Owen, Q.C. . .	1 Aug., 1861	Ditto .. . . .		1 Aug., 1861.
	Wm. Hattam Wilkinson	30 Sept., 1864	Ditto .. . . .		22 Feb., 1860.
Secretary... ..	Wm. George Pennington..	1 Sept., 1859	Governor and Executive Council		1 Sept., 1859.
	succeeded by Joseph Bernard Murray White.	10 Sept., 1886	Ditto .. . . .		10 Sept., 1886.
NOTE.—The Commissioners are allowed a fee of £2 2s and the Secretary £2 for each case.					



PART X.

Secretary for Public Works,

AND THE

DEPARTMENTS UNDER HIS SUPERVISION AND CONTROL.

SUMMARY.

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SECRETARY FOR PUBLIC WORKS.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>PUBLIC WORKS.</b>							
Secretary for Public Works	Jacob Garrard .....	22 Nov., 1885	Governor and Executive Council, by Commission.	1,500	0	0	22 Nov., 1885.*
	succeeded by						
	W. J. Lyne .....	26 Feb., 1886	Ditto .....	1,500	0	0	1 Nov., 1885.*
Under Secretary	John Rae, A.M. <sup>1</sup> .....	15 Jan., 1861	Ditto .....	960	0	0	1 Jan., 1854.
Chief Clerk	William Forde .....	1 Jan., 1883	Governor and Executive Council	600	0	0	1 Mar., 1859.
First do	A. Springthorpe .....	1 Jan., 1883	Ditto .....	390	0	0	1 Feb., 1875.
Second do	J. O. Trimble .....	1 Jan., 1883	Ditto .....	340	0	0	1 Jan., 1874.
Third do	George J. Forsyth .....	1 Jan., 1883	Ditto .....	315	0	0	22 Feb., 1877.
Fourth do	W. F. Mitchell .....	10 May, 1883	Ditto .....	240	0	0	10 May, 1883.
Fifth do	H. E. Roseby .....	1 Jan., 1883	Ditto .....	190	0	0	11 Dec., 1878.
Sixth do	H. U. Hillyar .....	1 Dec., 1885	Secretary for Public Works	165	0	0	24 Sep., 1883.
Temporary Clerk	J. W. Holliman .....	11 Aug., 1884	Ditto .....	12/	per diem		14 Mar., 1884.
Messengers (2)	.....	.....	Ditto .....	195	0	0	
Boy Messenger (1)	.....	.....	Ditto .....	155	0	0	
Housekeepers (5)	.....	.....	Ditto .....	85	0	0	
			Ditto .....	102	0	0	
			Ditto .....	72	0	0	each.

<sup>1</sup> Gives security to the amount of £200.

<sup>2</sup> Allowed £50 per annum in lieu of quarters.  
\* Services not continuous.

<sup>3</sup> Allowed £25 per annum in lieu of quarters.

BOARD FOR OPENING TENDERS FOR PUBLIC WORKS.

Members (Chairman)	John Rae .....	} .....	Governor and Executive Council	Nil.	} 1 Jan., 1854. 27 Mar., 1856. 1 May, 1849. 18 Jan., 1854.* 4 Aug., 1860. 1 Mar., 1859.
	John Whitton .....				
	E. O. Moriarty .....				
	W. C. Bennett .....				
	James Barnet .....				
Secretary	Wm. Forde .....				

\* Services not continuous.

RAILWAYS.

Commissioner	Charles A. Goodchap <sup>1</sup> .....	21 Jan., 1878	Governor and Executive Council, by Commission.	1,250	0	0	7 Jan., 1854.
Secretary	Donald Vernon .....	21 Jan., 1878	Governor and Executive Council	750	0	0	— Aug., 1859.
Assistant Secretary	A. Richardson .....	1 Nov., 1886	Ditto .....	650	0	0	27 Aug., 1867
Chief Clerk	George Berner .....	1 Oct., 1878	Ditto .....	525	0	0	22 Jan., 1869.
	succeeded by						
	Duncan C. M'Lachlan .....	1 July, 1886	Ditto .....	500	0	0	1 Aug., 1869.
Corresponding Clerk	Duncan C. M'Lachlan .....	21 May, 1880	Ditto .....	390	0	0	1 Aug., 1869.
	succeeded by						
	Hugh M'Lachlan .....	1 July, 1866	Ditto .....	350	0	0	1 Feb., 1875.
Clerk	Hugh M'Lachlan .....	2 Jan., 1884	Ditto .....	350	0	0	1 Feb., 1875.
	succeeded by						
	J. E. Pickering .....	1 July, 1886	Ditto .....	260	0	0	28 Feb., 1874.
	J. E. Pickering .....	1 Mar., 1885	Secretary for Public Works	235	0	0	28 Feb., 1874.
	succeeded by						
Record Clerk	Lancelot P. Iredale .....	12 Aug., 1872	Governor and Executive Council	390	0	0	4 Mar., 1867.
Land-valuers	James Byrnes <sup>4</sup> .....	22 July, 1878	Ditto .....	725	0	0	20 July, 1875.
	succeeded by						
	J. B. Thompson .....	30 Oct., 1886	Ditto .....	600	0	0	14 Jan., 1881.
	J. B. Thompson .....	14 Jan., 1881	Ditto .....	600	0	0	14 Jan., 1881.
Assistant Land-valuer	F. S. M'Dermott .....	1 Jan., 1886	Secretary for Public Works	550	0	0	1 Jan., 1886.
	succeeded by						
	Adam A. Jackson .....	1 Jan., 1878	Ditto .....	440	0	0	19 Nov., 1874.
Surveyor and Draftsman	Frederick G. Rae .....	1 Jan., 1878	Ditto .....	340	0	0	2 April, 1874.
Draftsman	John J. Ware .....	19 Sept., 1878	Governor and Executive Council	275	0	0	15 May, 1877.
Clerks	Alfred Brown <sup>2</sup> .....	1 Jan., 1878	Secretary for Public Works	340	0	0	1 Jan., 1876.
	Eugene Lewis .....	1 Jan., 1877	Governor and Executive Council	235	0	0	10 Jan., 1870.
	James S. Spurway .....	21 Mar., 1876	Ditto .....	265	0	0	21 Mar., 1876.
	William Mosely .....	1 May, 1879	Secretary for Public Works	220	0	0	1 May, 1879.
	succeeded by						
	Michael O'Brien .....	1 Nov., 1880	Ditto .....	235	0	0	1 Jan., 1877.
	Nicholas O'Lane .....	14 Dec., 1877	Ditto .....	200	0	0	14 Dec., 1877.
	Robert G. Duff .....	23 Sept., 1881	Ditto .....	220	0	0	23 Sept., 1881.
	V. W. B. Wall .....	25 Nov., 1880	Ditto .....	200	0	0	6 Jan., 1879.
	Arthur J. Mason .....	1 Nov., 1882	Ditto .....	220	0	0	4 Oct., 1880.
	C. Adrian Badham .....	1 Jan., 1885	Ditto .....	350	0	0	21 Jan., 1884.
	Chas. Henry Schwartzkoff .....	16 Nov., 1878	Ditto .....	185	0	0	16 Nov., 1878.
	James B. Byrnes .....	19 Feb., 1879	Ditto .....	155	0	0	19 Feb., 1879.
	Percy E. Roberts .....	18 July, 1881	Ditto .....	185	0	0	18 July, 1881.
	A. J. Husk <sup>3</sup> .....	26 Feb., 1886	Ditto .....	215	0	0	25 May, 1881.
	William E. Tunks .....	1 Mar., 1881	Ditto .....	190	0	0	1 Mar., 1881.
	William Hayman .....	8 Aug., 1882	Ditto .....	135	0	0	3 Feb., 1879.

<sup>1</sup> Gives security to the amount of £1,000.

<sup>2</sup> Allowed £50 for shorthand services.

<sup>3</sup> Transferred from Locomotive Department.

<sup>4</sup> Deceased.

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>SECRETARY FOR PUBLIC WORKS—RAILWAYS—continued.</b>					
Clerks—continued.....	Percy G. Williams .....	1 Dec., 1882	Secretary for Public Works.....	105 0 0	1 Dec., 1882.
	Ernest Yates .....	1 Aug., 1883	Ditto .....	120 0 0	1 Aug., 1883.
	Charles Copeland Bennett	26 June, 1884	Ditto .....	150 0 0	26 June, 1884.
	Alfred Hellyer .....	1 Aug., 1884	Ditto .....	170 0 0	1 Nov., 1882.
	Robert Miller .....	1 Nov., 1885	Ditto .....	125 0 0	5 April, 1881.
				to 30 June, 155 0 0 from 1 July.	
	Frank Vogel.....	23 Jan., 1881	Governor and Executive Council	200 0 0	8 Mar., 1875.
				to 30 June, 205 0 0 from 1 July.	
	William H. Hennessy.....	1 Mar., 1884	Secretary for Public Works.....	150 0 0	1 Mar., 1884.
	William T. Dawson.....	26 June, 1884	Commissioner for Railways.....	90 0 0	26 June, 1884.
	Reseigh Martin.....	30 Jan., 1884	Ditto .....	200 0 0	30 Jan., 1884.
	Geo. A. Stephenson.....	13 April, 1885	Secretary for Public Works.....	250 0 0	7 Nov., 1877.
	Patk. Kane.....	1 April, 1885	Commissioner for Railways.....	170 0 0	1 Dec., 1864.
	Albert Lane.....	8 Aug., 1882	Ditto .....	120 0 0	8 Aug., 1882.
	F. Abigail.....	15 Dec., 1885	Secretary for Public Works.....	105 0 0	11 Jan., 1883.
	E. Fitzgerald.....	16 Dec., 1885	Ditto .....	90 0 0	5 Dec., 1883.
	J. Ewen <sup>1</sup> .....	27 Sept., 1886	Ditto .....	105 0 0	21 Jan., 1881.
	Samuel Harper.....	14 Aug., 1882	Ditto .....	90 0 0	14 Aug., 1882.
	A. T. Smithyman.....	24 Aug., 1885	Ditto .....	90 0 0	24 Aug., 1885.
	John P. Ryan.....	3 Dec., 1885	Ditto .....	75 0 0	3 Dec., 1885.
	George Barbour.....	12 Aug., 1886	Ditto .....	10/ per diem to 20 Nov.	12 Aug., 1886.
	George Bunbury.....	16 Sept., 1886	Ditto .....	10/ per diem to 20 Nov.	16 Sept., 1886.
	Walter M. Azzoni.....	21 July, 1886	Ditto .....	10/ per diem	21 July, 1886.
	R. A. Kelly.....	10 Feb., 1886	Ditto .....	9/ "	10 Feb., 1886.
	P. J. Bell.....	1 Feb., 1886	Ditto .....	10/ per week to 31 July, 52 0 0 from 1 Aug.	1 Feb., 1886.
Draftsman.....	Dennis F. Bullen.....	23 April, 1884	Ditto .....	240 0 0	23 April, 1884.
Inspector.....	Frank O'Brien.....	27 June, 1883	Ditto .....	12/ per diem to 15 Jan., 15/ per diem from 16 Jan.	27 June, 1883.
Messengers (5).....			Ditto .....	1 at 135 0 0 and 1/ per diem 1 at 125 0 0 1 at 60 0 0 1 at 7/ per diem 1 at 42/ per week	extra duties.
Boy Messengers (2).....			Ditto .....	1 at 25/ " 1 at 20/ "	
Housekeepers (3).....			Ditto .....	1 at 70 0 0 1 at 60 0 0 1 at 30 0 0	
<i>Examining Branch.</i>					
Examiner.....	John P. Finegan.....	5 April, 1882	Governor and Executive Council	415 0 0	1 Mar., 1867.
Assistant Examiner.....	Thomas Skellett.....	1 July, 1884	Secretary for Public Works.....	315 0 0	19 Oct., 1869.
Clerks.....	A. W. Tompson.....	5 April, 1882	Ditto .....	305 0 0	23 May, 1871.
	M. B. Doyle.....	1 July, 1884	Ditto .....	265 0 0	13 Aug., 1877.
	Charles Coben.....	1 July, 1884	Ditto .....	235 0 0	22 Jan., 1879.
	Vernon Dixon.....	5 April, 1882	Ditto .....	200 0 0	28 Jan., 1880.
	P. A. Rowley.....	1 July, 1884	Ditto .....	190 0 0	11 Feb., 1879.
	Gregory Kerr.....	1 July, 1884	Ditto .....	200 0 0	11 June, 1879.
	Arthur J. D'Arrietta.....	23 May, 1881	Commissioner for Railways.....	185 0 0	23 May, 1881.
	James J. M'Shane.....	7 Mar., 1884	Secretary for Public Works.....	185 0 0	7 Mar., 1884.
	C. C. Molony.....	17 April, 1882	Commissioner for Railways.....	185 0 0	17 April, 1882.
	W. R. Darby.....	19 June, 1882	Ditto .....	170 0 0	— April, 1879.
	A. J. L. Holt.....	1 Oct., 1882	Ditto .....	170 0 0	31 Dec., 1878.
	John Sellar.....	25 Oct., 1880	Ditto .....	150 0 0	25 Oct., 1880.
	Arthur Henry.....	1 Dec., 1882	Ditto .....	150 0 0	1 Dec., 1882.
	P. Kelleher.....	6 June, 1885	Ditto .....	9/ per diem.	6 June, 1885.
	Chas. O'Sullivan.....	1 Jan., 1885	Ditto .....	90 0 0	30 June, 1884.
	Herbert Badham.....	25 May, 1885	Ditto .....	50 0 0 to 24 May, 75 0 0 from 25 May.	25 May, 1885.
	Ernest Hume.....	1 May, 1886	Ditto .....	75 0 0	1 May, 1886.
	Robt. J. Sheridan, junr.....	5 May, 1886	Ditto .....	10/ per week to 4 Aug., 75 0 0 from 5 Aug.	5 May, 1886.
<i>Accountant's Branch.</i>					
Accountant.....	Francis J. Wickham.....	1 Sept., 1875	Governor and Executive Council	600 0 0	20 May, 1860.
Assistant Accountant.....	John Vernon*.....	1 Sept., 1882	Secretary for Public Works.....	440 0 0	1 Feb., 1869.
Principal Book-keeper.....	Joseph S. Dean.....	1 Sept., 1882	Governor and Executive Council	390 0 0	2 Feb., 1874.
Assistant Book-keeper.....	James Glen.....	1 Sept., 1882	Ditto .....	340 0 0	18 Mar., 1870.*

<sup>1</sup> Transferred from Tramways.

\* Receives £80 extra for special duties.

Office.	Name.	Date of Appointment.	By whom appointed, and under what instrument	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government
<b>SECRETARY FOR PUBLIC WORKS—RAILWAYS—continued.</b>					
<i>Accountant's Branch—continued.</i>					
Clerks .....	Reginald Lyons .....	9 Jan., 1883	Secretary for Public Works ....	235 0 0	9 Jan., 1883.
	William Hellyer .....	13 June, 1878	Governor and Executive Council	265 0 0	13 June, 1878.
	Adam Ogilvy .....	22 Jan., 1880	Ditto .....	240 0 0	22 Jan., 1880.
	Thos. De Courcy .....	13 Aug., 1885	Commissioner for Railways	220 0 0	1 April, 1869.
	Percy Board.....	25 Oct., 1880	Secretary for Public Works ...	150 0 0	25 Oct., 1880.
				to 30 June, 155 0 0 from 1 July.	
	Patk Harold Kelly .....	23 April, 1885	Commissioner for Railways .....	90 0 0	23 April, 1885.
	J. F. Holmes .....	1 May, 1885	Ditto .....	10/ per diem	1 May, 1885.
<i>Pay Branch.</i>					
Paymaster .....	John T. Bryant <sup>1</sup> .....	1 Jan., 1883	Governor and Executive Council	490 0 0	26 July, 1860.
Cashier .....	James R. Neale <sup>2</sup> .....	1 Jan., 1883	Ditto .....	440 0 0	1 Jan., 1867.
Pay Clerks .....	Richard Ramsden <sup>3</sup> .....	19 Feb., 1877	Secretary for Public Works ....	320 0 0	23 Jan., 1875.
	Frank C. Allworth <sup>4</sup> .....	7 May, 1878	Ditto .....	265 0 0	19 Jan., 1878.
	Frederick C. Thompson <sup>3</sup> .....	1 June, 1880	Ditto .....	235 0 0	1 Feb., 1875.
	Frank Farrell <sup>3</sup> .....	23 Feb., 1886	Commissioner for Railways ....	205 0 0	1 April, 1880.
	John Fitzsimmons <sup>4</sup> .....	1 Nov., 1882	Governor and Executive Council	235 0 0	1 Jan., 1876.
	Francis Coogan <sup>4</sup> .....	1 April, 1882	Secretary for Public Works ....	220 0 0	6 Oct., 1875.
	Fergus N. Langlev <sup>3</sup> .....	11 Mar., 1885	Ditto .....	220 0 0	23 Nov., 1877
Clerks .....	Ernest B. Taylor <sup>3</sup> .....	3 Nov., 1885	Ditto .....	220 0 0	1 Nov., 1878.
	Fredk. Griffin <sup>4</sup> .....	1 Nov., 1882	Ditto .....	220 0 0	1 Feb., 1877.
<i>Engineer-in-Chief for Railways.</i>					
PERMANENT STAFF.					
Engineer-in-Chief .....	John Whitton <sup>5</sup> .....	27 Mar., 1856	Governor and Executive Council	1,800 0 0	27 Mar., 1856.
Inspecting Engineer for Railways in Progress.	Wm. B. Wade <sup>6</sup> a. . . . .	1 Aug., 1879	Ministerial . . . . .	850 0 0	8 Feb., 1859* <sup>7</sup>
Assistant Engineer	John William Drewett	1 Jan., 1882	Governor and Executive Council	750 0 0	11 June, 1856.
Assistant Engineer for Trial Surveys.	Herbert Palmer a ....	1 April, 1874	Ministerial . . . . .	750 0 0	19 Sept., 1867.
Chief Clerk .....	William Henry Quodling	8 Oct., 1857	Governor and Executive Council	550 0 0	8 Oct., 1857.
Record Clerk .....	A. R. Monday .....	10 Sept., 1881	Ministerial .. . . .	290 0 0	20 May, 1872.
Bookkeeper .....	E. R. C. Bromley .....	5 July, 1882	Ditto .....	290 0 0	15 Dec., 1881.
Correspondence Clerk	John W E Pugh .....	3 Aug., 1882	Ditto .....	290 0 0	3 Aug., 1882.
Examiner of Accounts...	H. K. Carpenter . . . . .	1 Jan., 1885	Governor and Executive Council	240 0 0	22 June, 1876.
Clerks .....	G. J. Martin .....	1 June, 1881	Ministerial .. . . .	170 0 0	1 July, 1871.
	W. T. Bourchier .....	8 Oct., 1885	Governor and Executive Council	140 0 0	6 Feb., 1884.
Draftsmen .....	F E Pike .....	1 Jan., 1885	Ministerial .....	92 0 0	9 Jan., 1884.
	G. W. A. Bayley... ..	1 Sept., 1867	Governor and Executive Council	465 0 0	1 Sept., 1867.
	H. Barker .....	1 July, 1869	Ditto .....	440 0 0	16 Sept., 1867.
	E. R. Thomas .....	14 Nov., 1866	Ditto .....	350 0 0	14 Nov., 1866.
	C. S. Cansdell .....	1 April, 1879	Ditto .....	350 0 0	4 Nov., 1874.
	R. F. Mann .....	1 April, 1879	Ditto .....	315 0 0	14 Dec., 1875.
	J. A. Radcliffe .....	1 June, 1877	Ministerial .....	340 0 0	— Nov., 1875.
	D. G. G. Commons .....	14 June, 1878	Ditto .....	340 0 0	14 June, 1878.
	F. H. Kneivitt .....	22 Nov., 1880	Ditto .....	340 0 0	22 Nov., 1880.
	Alf. Hayward .....	27 Nov., 1882	Ditto .....	290 0 0	27 Nov., 1882.
	A. Hilliger .....	5 Jan., 1881	Ditto .....	265 0 0	5 Jan., 1881.
	Alf. Barnby .....	27 July, 1881	Ditto .....	240 0 0	27 July, 1881.
	C. A. Dafgard .....	25 Aug., 1881	Ditto .....	240 0 0	25 Aug., 1881.
	O. Albers .....	28 July, 1881	Ditto .....	240 0 0	28 July, 1881.
	F. Bergin .....	8 Mar., 1882	Ditto .....	240 0 0	8 Mar., 1882.
	A. M. Howarth .....	17 May, 1884	Ditto .....	240 0 0	17 May, 1884.
	G. B. Roskell <sup>7</sup> .....	19 May, 1884	Ditto .....	240 0 0	19 May, 1884.
	L. Gundlach .....	3 Aug., 1882	Ditto .....	240 0 0	3 Aug., 1882.
	R. Stenhouse .....	15 Feb., 1875	Ditto .....	165 0 0	7 April, 1884.
Custodian of Plans .....				110 0 0	
Messenger <sup>8</sup> .....					
TEMPORARY STAFF.					
District Engineer .....	George Jamieson <sup>9</sup> b . . . . .	1 Oct., 1877	Ministerial .....	500 0 0	— 1856* <sup>10</sup>
	T. R. Firth b .....	1 Sept., 1880	Ditto .....	600 0 0	3 Mar., 1863* <sup>11</sup>
	C. E. Nicholas .....	29 June, 1878	Ditto .....	500 0 0	29 June, 1878.
	W. Glover <sup>10</sup> b .....	1 July, 1879	Ditto .....	500 0 0	6 Sept., 1875.
	H. Deane b .....	1 Jan., 1881	Ditto .....	600 0 0	20 Feb., 1880.
	A. Randall <sup>11</sup> b .....	9 Feb., 1881	Ditto .....	500 0 0	8 Jan., 1879.
	J. D. Francis b .....	20 Jan., 1882	Ditto .....	350 0 0	1 June, 1877.
	D. C. Simpson b .....	20 Feb., 1882	Ditto .....	500 0 0	1 June, 1881.* <sup>12</sup>
	B. C. Simpson b .....	1 Sept., 1882	Ditto .....	500 0 0	1 Sept., 1882.
	W. Hutchinson b .....	8 Jan., 1883	Ditto .....	500 0 0	8 Jan., 1883.
	G. F. Mann b .....	20 Sept., 1883	Ditto .....	500 0 0	1 Sept., 1857.* <sup>13</sup>
	S. Alexander b .....	22 Oct., 1883	Ditto .....	500 0 0	22 Oct., 1883.
	J. Wright b .....	1 Nov., 1884	Ditto .....	500 0 0	1 Nov., 1884.
	F. W. Small b .....	1 Dec., 1884	Ditto .....	500 0 0	1 Dec., 1884.
	C. O. Burge b .....	13 July, 1885	Ditto .....	500 0 0	13 Feb., 1885.
Assistants to District Engineers.	F. A. Campbell <sup>12</sup> c .....	1 July, 1879	Ditto .....	300 0 0	1 July, 1879.
	W. C. Wakeford <sup>13</sup> c .....	30 July, 1879	Ditto .....	250 0 0	30 July, 1879.
	W. C. Grey c .....	1 Mar., 1880	Ditto .....	250 0 0	5 Jan., 1874.
	Jas. Frazer c .....	1 April, 1882	Ditto .....	250 0 0	8 July, 1878.
	C. M'D. Stuart c .....	25 Aug., 1883	Ditto .....	300 0 0	28 April, 1882.

<sup>1</sup> Gives security to the amount of £2,000    <sup>2</sup> Gives security to the amount of £1,000.    <sup>3</sup> Gives security to the amount of £400    <sup>4</sup> Gives security to the amount of £300.    <sup>5</sup> Allowed £150 per annum for forage, and 40s per day when travelling on duty.    <sup>6</sup> Deceased—12 July, 1886    <sup>7</sup> Resigned—30 May, 1886  
<sup>8</sup> Allowed £25 per annum in lieu of quarters    <sup>9</sup> Retired—31 May, 1886    <sup>10</sup> Retired—17 March, 1886.    <sup>11</sup> Resigned—31 January, 1886    <sup>12</sup> Services dispensed with—31 May, 1886    <sup>13</sup> Resigned—13 June, 1886    <sup>14</sup> Allowed £150 per annum for forage and equipment, and 30s per diem when travelling on duty.    <sup>15</sup> Allowed £100 per annum when in field, and 8s per day for forage for two horses.    <sup>16</sup> Allowed £100 per annum for equipment.    \* Services not continuous

NOTE.—Mr. Mann, keeping three horses, is allowed 12s per day, and Mr. Nicholas, keeping one horse, 4s per day temporarily.

Office.	Name	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary	Date of first Appointment under the Colonial Government
				£ s. d.	
<b>SECRETARY FOR PUBLIC WORKS—RAILWAYS—continued.</b>					
<i>Engineer-in-Chief for Railways -Temporary Staff—continued.</i>					
Assistants to District Engineers—continued.	J. M. Stawell <i>a</i> .. . . .	1 Jan, 1884	Ministerial .. . . .	300 0 0	11 Jan, 1882.
	C H. Lenthall <i>a</i> .. . . .	1 June, 1879	Ditto .. . . .	200 0 0	1 May, 1878.
	Thos. Rhodes <i>a</i> .. . . .	2 Aug, 1881	Ditto .. . . .	200 0 0	2 Aug, 1881.
	W. E. Dunn <i>a</i> .. . . .	1 Oct, 1882	Ditto .. . . .	200 0 0	1 April, 1882.
	J. L. Owen <i>a</i> .. . . .	1 July, 1883	Ditto .. . . .	150 0 0	1 July, 1883
	J. B. Mack <i>a</i> .. . . .	4 Oct., 1884	Ditto .. . . .	150 0 0	9 June, 1879.
	H. W. Parkinson <i>a</i> .. . . .	1 June, 1885	Ditto .. . . .	250 0 0	20 April, 1885.
Surveyors .. . . .	A Francis <sup>1</sup> <i>b</i> .. . . .	7 May, 1873	Ditto .. . . .	400 0 0	7 April, 1862.*
	J Cumming <sup>2</sup> <i>b</i> .. . . .	22 July, 1878	Ditto .. . . .	350 0 0	22 July, 1878.
	H. B. G. Hardy <sup>2</sup> <i>b</i> .. . . .	20 April, 1873	Ditto .. . . .	350 0 0	20 April, 1873
	N P Carver <sup>3</sup> <i>b</i> .. . . .	5 Dec, 1873	Ditto .. . . .	350 0 0	5 Dec., 1873*
	George Melrose <sup>1</sup> <i>b</i> .. . . .	19 Aug, 1881	Ditto .. . . .	350 0 0	22 April, 1873*
	C E Hogg <sup>4</sup> <i>b</i> .. . . .	21 June, 1877	Ditto .. . . .	350 0 0	21 June, 1877.
	W. J. Millner <i>b</i> .. . . .	1 Mar, 1879	Ditto .. . . .	300 0 0	1 Mar, 1879*
	F. H. Geisow <i>b</i> .. . . .	2 June, 1881	Ditto .. . . .	300 0 0	2 June, 1881.
	Oct Lloyd <i>b</i> .. . . .	14 July, 1881	Ditto .. . . .	300 0 0	14 July, 1881*
	Alfred Morris <sup>4</sup> <i>b</i> .. . . .	24 Aug, 1881	Ditto .. . . .	300 0 0	24 Aug., 1881
	John P Sharkey <i>b</i> .. . . .	18 May, 1881	Ditto .. . . .	300 0 0	18 May, 1881
	E B. Thornbury <i>b</i> .. . . .	22 Aug, 1881	Ditto .. . . .	300 0 0	22 Aug., 1881.*
	G. L. Wilkins <i>b</i> .. . . .	11 Aug, 1881	Ditto .. . . .	300 0 0	11 Aug, 1881.
	S. S. Wells <i>b</i> .. . . .	26 Oct, 1881	Ditto .. . . .	300 0 0	26 Oct, 1881.*
	W. A. Dyer <i>b</i> .. . . .	1 Sept, 1883	Ditto .. . . .	300 0 0	1 Sept., 1883.
	Alf Vine <i>b</i> .. . . .	19 Jan, 1874	Ditto .. . . .	250 0 0	30 May, 1861.*
	E C Jones <i>b</i> .. . . .	21 Feb., 1885	Ditto .. . . .	300 0 0	30 Mar, 1867.*
	W. D. Walker <i>b</i> .. . . .	12 Aug, 1879	Ditto .. . . .	250 0 0	12 Aug, 1879
	John Carter <i>b</i> .. . . .	16 May, 1881	Ditto .. . . .	250 0 0	1 Aug, 1875.
	Thos. Kennedy, jun <i>b</i> .. . . .	1 Jan, 1883	Ditto .. . . .	250 0 0	14 Feb, 1879*
	J B. Hotson <sup>5</sup> <i>b</i> .. . . .	20 Nov, 1883	Ditto .. . . .	250 0 0	1 Sept., 1876.*
	C A. Edwardes <sup>6</sup> <i>b</i> .. . . .	10 Nov, 1881	Ditto .. . . .	250 0 0	8 Sept, 1879.
	J J Jamieson <i>b</i> .. . . .	1 April, 1882	Ditto .. . . .	250 0 0	15 May, 1877.
	H T. Harwood <sup>7</sup> <i>b</i> .. . . .	1 Oct, 1882	Ditto .. . . .	250 0 0	14 Sept., 1880.
	A. Mansfield <sup>8</sup> <i>b</i> .. . . .	21 Nov, 1882	Ditto .. . . .	250 0 0	21 Nov., 1882.
	J. A. O Gibbs <sup>9</sup> <i>b</i> .. . . .	1 Jan, 1883	Ditto .. . . .	250 0 0	3 June, 1881.
	C H. Caswell <i>b</i> .. . . .	14 Feb, 1885	Ditto .. . . .	250 0 0	1 July, 1880.
Assistant Surveyors .	W. A Bullard <i>b</i> .. . . .	1 Oct, 1882	Ditto .. . . .	150 0 0	1 Jan., 1876.
	E M Hixson <i>b</i> .. . . .	17 Sept, 1883	Ditto .. . . .	150 0 0	24 Nov, 1879.
	H E. Martin <i>b</i> .. . . .	21 Sept, 1883	Ditto .. . . .	150 0 0	18 Nov., 1879.
	F E. Wickham <sup>10</sup> <i>b</i> .. . . .	3 Oct., 1883	Ditto .. . . .	150 0 0	20 Oct, 1879
	E J. Pell <i>b</i> .. . . .	1 Nov., 1884	Ditto .. . . .	150 0 0	7 July, 1879.
Clerks .. . . .	Eugene Holland .. . . .	9 Feb, 1885	Ditto .. . . .	150 0 0	9 Feb, 1885
	Robt Barbour .. . . .	24 Mar., 1885	Ditto .. . . .	120 0 0	24 Mar, 1885.
Draftsmen ...	E. E. Bruce .. . . .	16 Aug, 1881	Ditto .. . . .	250 0 0	16 Aug., 1881.
	C. E. Jamieson <sup>10</sup> .. . . .	21 Jan, 1880	Ditto .. . . .	250 0 0	21 Jan., 1880.
	G. J. Beckett .. . . .	1 June, 1880	Ditto .. . . .	250 0 0	1 June, 1880.
	C Wilberg .. . . .	30 Oct, 1882	Ditto .. . . .	250 0 0	30 Oct, 1882.
	Mont Jones <sup>11</sup> .. . . .	1 Oct, 1884	Ditto .. . . .	250 0 0	14 June, 1880*
	Julius Homan <sup>12</sup> .. . . .	14 Nov, 1881	Ditto .. . . .	200 0 0	14 Nov, 1881.
	R M O'Connell .. . . .	13 Mar., 1882	Ditto .. . . .	200 0 0	13 Mar, 1882.
	Jas Atherton .. . . .	20 Mar, 1882	Ditto .. . . .	200 0 0	20 Mar, 1882
	Chr Little .. . . .	22 Mar, 1882	Ditto .. . . .	200 0 0	22 Mar, 1882.
	L. C. Lilja .. . . .	28 Dec, 1881	Ditto .. . . .	200 0 0	28 Dec., 1881.
	O. S. Moore <sup>13</sup> .. . . .	5 April, 1883	Ditto .. . . .	200 0 0	14 Oct., 1879*
	F Fairburn .. . . .	1 Nov, 1882	Ditto .. . . .	£3 per week	1 Nov., 1882.
	J Routledge .. . . .	12 Dec., 1881	Ditto .. . . .	150 0 0	12 Dec, 1881
	D A M'Leod .. . . .	30 Oct, 1884	Ditto .. . . .	250 0 0	30 Oct, 1884.
Assistant Quantities Survey or	Jas Saville .. . . .	3 Dec, 1883	Ditto .. . . .	14s. per day	3 Dec, 1883
Draftsman .. . . .	W. Friederick .. . . .	7 Aug, 1882	Ditto .. . . .	150 0 0	7 Aug, 1882.
Draftsman .. . . .	A. Riech <sup>14</sup> .. . . .	5 Nov., 1883	Ditto .. . . .	10s per day	5 Nov, 1883.
Junior Draftsman .. . . .	G. Seale .. . . .	1 Nov., 1884	Ditto .. . . .	£2 per week	8 Aug, 1881.
Draftsman .. . . .	W. R. Cowdery <sup>15</sup> .. . . .	3 Aug, 1882	Ditto .. . . .	£2 ..	3 Aug., 1882.
Junior Draftsmen .. . . .	E. A. Bracken .. . . .	11 Sept, 1882	Ditto .. . . .	100 0 0	11 Sept, 1882.
	F Hooke .. . . .	1 Nov, 1884	Ditto .. . . .	75 0 0	16 June, 1881.
Draftsmen ...	G T. Shaw .. . . .	2 Mar, 1885	Ditto .. . . .	200 0 0	2 Mar., 1885.
	W. H. Grant .. . . .	20 Feb., 1885	Ditto .. . . .	200 0 0	20 Feb., 1885.
	L. C. Palmer <sup>16</sup> .. . . .	5 Mar, 1885	Ditto .. . . .	£3 per week	5 Mar., 1885.
	W. Burmeister <sup>17</sup> .. . . .	10 Aug, 1885	Ditto .. . . .	175 0 0	10 Aug, 1885.
	C. W. H. Thompson .. . . .	6 Aug., 1885	Ditto .. . . .	£3 per week	6 Aug, 1885.
	J. R. Baass .. . . .	10 Aug, 1885	Ditto .. . . .	200 0 0	10 Aug., 1885.
	J H Shattock <sup>14</sup> .. . . .	24 Aug, 1885	Ditto .. . . .	225 0 0	24 Aug, 1885.
	Wm. Bowry .. . . .	9 Oct, 1885	Ditto .. . . .	250 0 0	23 Feb, 1885.*
Junior Draftsman .. . . .	W M H. Burkitt .. . . .	10 June, 1885	Ditto .. . . .	150 0 0	10 June, 1885.
Draftsman .. . . .	A. W. Voysey <sup>18</sup> .. . . .	7 Sept., 1885	Ditto .. . . .	275 0 0	7 Sept., 1885*
Cadet .. . . .	N. Chalmers <sup>19</sup> .. . . .	24 Mar, 1882	Ditto .. . . .	52 0 0	24 Mar., 1882.
	H. F. Bode <sup>19</sup> .. . . .	1 Sept, 1880	Ditto .. . . .	52 0 0	1 Sept., 1880.
	J. R. S Whinfield <sup>19</sup> .. . . .	21 Dec, 1880	Ditto .. . . .	52 0 0	21 Dec, 1880.
	G Marshall <sup>19</sup> .. . . .	8 Aug, 1881	Ditto .. . . .	52 0 0	8 Aug, 1881.

<sup>1</sup> Served on Trial Surveys from 1855 to 1861, under Captains Hawkins and Martindale and Rivers Department, with slight break  
<sup>2</sup> Services dispensed with, 31 July, 1886  
<sup>3</sup> Previously employed in Surveyor General's Office  
<sup>4</sup> Resigned, 20 April, 1886  
<sup>5</sup> Between October, 1865, and March, 1873, employed in Harbours and Rivers Department, with slight break  
<sup>6</sup> Resigned, 20 March, 1880  
<sup>7</sup> Resigned, 13 March, 1886  
<sup>8</sup> Services dispensed with, 9 March, 1886  
<sup>9</sup> Services dispensed with, 30 March, 1886  
<sup>10</sup> Services dispensed with, 31 July, 1886  
<sup>11</sup> Harbour and Rivers Department, June, 1880, to June, 1881, and resigned 18 November, 1886  
<sup>12</sup> Resigned, 8 June, 1886  
<sup>13</sup> Resigned, 31 March, 1886  
<sup>14</sup> Services dispensed with, 30 September 1886  
<sup>15</sup> Resigned, 17 April, 1886.  
<sup>16</sup> Resigned, 24 April, 1886  
<sup>17</sup> Resigned, 31 July, 1886.  
<sup>18</sup> Services dispensed with 7 September, 1885  
<sup>19</sup> Paid 7s per diem when in field.  
<sup>a</sup> Allowed £100 per annum for equipment.  
<sup>b</sup> Allowed £200 per annum, when in field.  
<sup>\*</sup> Services not continuous

Office	Name	Date of Appointment	By whom appointed, and under what instrument	Annual Salary	Date of first Appointment under the Colonial Government
				£ s. d.	
<b>SECRETARY FOR PUBLIC WORKS—RAILWAYS—continued.</b>					
<i>Engineer-in-Chief for Railways—Temporary Staff—continued.</i>					
Cadets—continued.	E. E. Cox <sup>1</sup> . . . . .	26 Sept, 1881	Ministerial	52 0 0	26 Sept, 1881
	H Osborne <sup>1</sup>	17 Aug, 1882	Ditto .....	52 0 0	17 Aug., 1882
	Wm Kennedy <sup>1</sup> ... ..	18 Dec, 1882	Ditto ...	52 0 0	18 Dec, 1882
	A. G. Little <sup>1</sup>	18 June, 1883	Ditto . . .	52 0 0	18 June, 1883
	E. C. Wood <sup>2</sup> ... ..	28 April, 1885	Ditto .. ..	52 0 0	28 April, 1885
	J. S. Wade <sup>2</sup> ..	14 Dec, 1885	Ditto ... ..	52 0 0	14 Dec, 1885
	W. J. Quodling <sup>1</sup>	1 Feb, 1886	Ditto .. ..	52 0 0	1 Feb, 1886
	J. E. Davies <sup>1</sup>	6 July, 1886	Ditto	52 0 0	6 July, 1886.
	W. Poole <sup>1</sup> ...	16 Aug, 1886	Ditto	52 0 0	16 Aug, 1886.
Messenger ..	W. J. Madden	1 Nov, 1882	Departmental	75 0 0	1 Nov, 1882.
Boy Messenger . . . . .	C. A. Dalton	26 April, 1881	Ditto ..	10s. per week	26 April, 1881.
<i>Engineer for Existing Lines of Railways—</i>					
Engineer for Existing Railways	George Cowdery	15 Mar, 1881	Governor and Executive Council	1,060 0 0	24 Nov, 1862.*
Deputy Engineer . . . . .	Fred M. Avern <sup>3</sup> succeeded by Max Thompson	1 July, 1884 1 May, 1886	Secretary for Public Works Governor and Executive Council	725 0 0 600 0 0	18 Oct, 1881. 19 May, 1879
Chief Clerk	George Landers	1 Dec, 1877	Ditto ...	440 0 0	1 Feb, 1863.*
First Clerk	David H. Armstrong	1 Dec, 1877	Secretary for Public Works	320 0 0	16 Nov, 1876
Clerks	Richard Bouke	9 June, 1882	Commissioner for Railways	275 0 0	1 May, 1874
	Charles Landers	18 June, 1879	Ditto ...	220 0 0	18 June, 1879
	Nathaniel C. Burcher	16 Aug, 1882	Ditto	170 0 0	7 June, 1880
	William Caron	22 Mar, 1885	Ditto .	150 0 0	1 Nov, 1884
	James P. Finegan <sup>4</sup>	8 Aug, 1885	Ditto	120 0 0	27 July, 1884
	J. Ares A. Robinson <sup>4</sup>	21 Sept, 1885	Ditto	135 0 0	11 Nov, 1884
	John P. Sheridan	23 April, 1885	Ditto	120 0 0	21 Jan, 1884.
District Engineers . . . . .	Alex F. Watson	12 Dec, 1884	Secretary for Public Works	525 0 0	12 Dec, 1884.
	Geo Wm Townsend <sup>5</sup>	1 Mar, 1884	Ditto	500 0 0	13 April, 1874.*
	R. D. Stephens	1 Nov, 1881	Ditto	500 0 0	13 Nov, 1873
	George Bewick . . .	7 June, 1863	Governor and Executive Council	550 0 0	19 Aug, 1858
	and Max Thomson <sup>6</sup>	1 Aug, 1866 1 Sept, 1884	Secretary for Public Works ...	550 0 0	19 May, 1879.
Resident Engineers	Walter Shellshear	1 May, 1886	Ditto ...	500 0 0	1 April, 1882
	Walter Shellshear <sup>7</sup>	1 Sept., 1884	Ditto .	425 0 0	1 April, 1882
	succeeded by Gustave Fischer ..	1 May, 1886	Ditto .. .	350 0 0	10 Nov, 1881
	John Parry <sup>8</sup>	1 Jan, 1885	Ditto .. .	400 0 0	1 Mar, 1880.
	George R. Cowdery	1 Jan, 1885	Ditto	375 0 0	7 Mar, 1879
	Percy Davidson ..	1 Jan, 1885	Ditto ...	375 0 0	1 July, 1879
	Edwin M. Halligan	1 Jan, 1885	Ditto	375 0 0	2 Feb, 1875.
	Wm. M. Manly	12 May, 1882	Ditto	350 0 0	14 July, 1877.*
	Robert Kendall	1 May, 1886	Ditto ...	350 0 0	3 Nov, 1881.
Assistant Engineers ... ..	John B. Suttro	1 Jan., 1885	Ditto	350 0 0	15 Dec, 1879
	John W. Melrose	1 Jan, 1885	Ditto	330 0 0	10 April, 1874
	Robert Kendall <sup>9</sup>	1 Jan, 1885	Ditto	330 0 0	3 Nov, 1881.
	Henry Prevost	19 May, 1885	Ditto	310 0 0	12 May, 1879.*
	Hugo Paud <sup>10</sup>	1 Jan, 1885	Ditto ...	260 0 0	29 June, 1883.*
	succeeded by J. Edward Touch	14 Aug, 1886	Ditto ...	240 0 0	24 Jan, 1885
Engineer in-Charge of Interlocking.	Gustave Fischer	1 Jan, 1885	Ditto .	320 0 0	10 Nov, 1881.
Architect	John Parry	27 Nov, 1886	Ditto ...	400 0 0	1 Mar, 1880.
Assistant Architect . . . . .	Alfred Leggatt ..	1 Jan, 1885	Ditto ...	425 0 0	1 June, 1878.
Draftsmen .. . . .	Arthur Josling	1 Jan, 1885	Ditto ...	320 0 0	26 Sept, 1881.*
	Hugo Paud	14 Aug, 1886	Ditto	260 0 0	29 June, 1883.*
	Richard Speight <sup>11</sup>	1 Jan, 1885	Ditto ...	250 0 0	1 Jan., 1885
	Friederick Moore	12 Nov, 1883	Ditto	250 0 0	12 Nov, 1883.
	J. Edward Touch <sup>12</sup>	24 Jan, 1885	Ditto ..	240 0 0	24 Jan, 1885
	Wm. H. Higgs . . .	1 Jan, 1885	Ditto	230 0 0	11 Oct, 1875
	Arthur G. A. Hinder	19 June, 1883	Commissioner for Railways	210 0 0	19 June, 1883
	Percy W. Shaw	10 June, 1885	Ditto . . . .	210 0 0	10 June, 1885.
	George H. Pitt... ..	25 Aug, 1884	Ditto	175 0 0	25 Aug, 1884
				to 30 April, 200 0 0	
				from 1 May	
	Richard Shute <sup>13</sup>	11 Oct, 1883	Secretary for Public Works	190 0 0	11 Oct., 1883.
	William Nixon	2 June, 1884	Ditto	190 0 0	2 June, 1884
	Edward Jackson	1 Oct, 1884	Ditto	190 0 0	17 Nov, 1882
	H. G. W. Chetwynd .	27 July, 1885	Commissioner for Railways	182 0 0	27 July, 1885.
	Leonard Navill ...	25 June, 1883	Ditto	170 0 0	25 June, 1883
	Samuel Mann ...	1 Feb, 1884	Ditto .. . .	170 0 0	1 Feb, 1884

<sup>1</sup> Paid at the rate of seven shillings (7s) per diem when on field duty <sup>2</sup> Paid at the rate of seven shillings (7s) per diem when in field, resigned 8 July, 1880  
<sup>3</sup> To 14 March, 1886—deceased <sup>4</sup> To 10 March 1886—resigned <sup>5</sup> Engaged on Colo Valley Survey from 1 September, 1884 <sup>6</sup> To 30 April, 1886—  
appointed Deputy Engineer <sup>7</sup> To 30 April, 1886—appointed to District Engineer <sup>8</sup> To 26 November, 1880—title changed to Engineer in Charge of  
Interlocking <sup>9</sup> To 30 April 1886—appointed Resident Engineer <sup>10</sup> To 13 August, 1886—disrated to Draftsman <sup>11</sup> To 1 May, 1886—resigned  
<sup>12</sup> To 13 August, 1886—appointed Assistant Engineer <sup>13</sup> To 1 March, 1886—resigned \* Services not continuous

## NEW SOUTH WALES—1886.

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Office	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government
<b>SECRETARY FOR PUBLIC WORKS—RAILWAYS—continued.</b>					
<i>Engineer for Existing Lines of Railways—continued.</i>					
Cadets .....	F. B. S. Wells ..	17 July, 1885	Commissioner for Railways . .	130 0 0	17 Nov., 1882.*
	Fred. T. Bagshawe ...	23 Mar., 1885	Ditto . . . . .	130 0 0	23 Mar., 1885.
	William Stoddart . . .	3 Oct., 1882	Ditto . . . . .	130 0 0	3 Oct., 1882.
	George H. Wickham ..	7 Jan., 1883	Ditto . . . . .	130 0 0	7 Jan., 1883.
	Alexander Downe	10 Sept., 1884	Ditto . . . . .	110 0 0	10 Sept., 1884.
	William G. Moore . . .	14 July, 1885	Ditto . . . . .	110 0 0	14 July, 1885.
	Sidney W. Conyers ..	21 Sept., 1885	Ditto . . . . .	110 0 0	21 Sept., 1885.
	William Rothwell . . .	22 April, 1884	Ditto . . . . .	90 0 0	22 April, 1884.
	Joseph A. Doyle . . . .	30 Nov., 1883	Ditto . . . . .	90 0 0	30 Nov., 1883.
	Phillip W. Rygate . . .	15 June 1885	Ditto . . . . .	50 0 0	15 June, 1885.
				to 7 Sept., 90 0 0 from 8 Sept	
	James V. Menzies	12 May, 1884	Ditto . . . . .	70 0 0	12 May, 1884.
	William K. Johnson	28 July, 1884	Ditto . . . . .	70 0 0	28 July, 1884.
	Frank L. Mackenzie . . . .	7 Jan., 1884	Ditto . . . . .	70 0 0	7 Jan., 1884.
	Edward J. Newman . . . .	8 Sept., 1885	Ditto . . . . .	50 0 0	7 April, 1885.
				to 7 May, 70 0 0 from 8 Mar	
	Percy S. Hunt . . . . .	12 May, 1885	Ditto . . . . .	50 0 0	12 May, 1885.
				to 12 May, 70 0 0 from 13 May	
	George F. Clements . . . .	10 June, 1885	Ditto . . . . .	50 0 0	10 June, 1885.
				to 9 June, 70 0 0 from 10 June	
	Arthur Wray . . . . .	10 June, 1885	Ditto . . . . .	50 0 0	10 June, 1885.
				to 9 June, 70 0 0 from 10 June	
	Herbert L. Roberts . . . . .	4 May, 1885	Ditto . . . . .	50 0 0	4 May, 1885.
				to 3 May, 70 0 0 from 4 May	
	J. B. Thompson <sup>1</sup> . . . . .	19 Oct., 1885	Ditto . . . . .	50 0 0	19 Oct., 1885.
				to 19 Oct. 70 0 0 from 19 Oct	
	Norman Munro	11 Jan., 1886	Ditto . . . . .	£2 monthly	11 Jan., 1886.
				from 20 April, 50 0 0 from 20 Oct.	
	Claude Watson . . . . .	16 Jan., 1886	Ditto . . . . .	£2 per month	16 Jan., 1886.
				from 20 April, 50 0 0 from 20 Oct	
	Thomas Close	14 June, 1886	Ditto . . . . .	£2 per month	14 June, 1886.
				to 13 Dec., 50 0 0 from 14 Dec	
Surveyors .....	Wm Howe Baxter . . . . .	27 Oct., 1882	Ditto . . . . .	300 0 0	24 Aug., 1880
	P. H. T. Sommerville . . . . .	28 Aug., 1885	Ditto . . . . .	250 0 0	25 Jan., 1882.
	Edward Biddulph . . . . .	24 June, 1885	Ditto . . . . .	220 0 0	13 March 1883.
	Joseph Lewton . . . . .	17 Mar., 1859	Governor and Executive Council	390 0 0	5 Aug., 1858.
		and 1 Aug., 1866			
Inspector of Way and Works, Great Southern, Western, and Richmond Railways.	James Duffy	18 Jan., 1862	Ditto . . . . .	390 0 0	1 Jan., 1860.
		and 1 Aug., 1866			
Inspector of Way and Works, Great Northern Railway	Fred. C. Moor . . . . .	17 June, 1884	Commissioner for Railways . . .	60 0 0	17 June, 1884.
Custodian of Plans . . . . .			Secretary for Public Works . . .	100 0 0	
Messenger . . . . .					
<i>Engineer for Tramways—</i>					
Engineer for Tramways ..	George Cowdery . . . . .	15 Mar., 1881	Ditto . . . . .	..	24 Nov., 1862.*
Surveyors . . . . .	Thos A. Melrose . . . . .	11 April, 1882	Commissioner for Railways . . .	300 0 0	11 April, 1882.
	Michael Fitzgerald <sup>2</sup> . . . . .	19 Aug., 1881	Ditto . . . . .	280 0 0	1 Feb., 1874.*
<i>Locomotive Engineer.</i>					
Locomotive Engineer	William Scott . . . . .	5 April, 1882	Secretary for Public Works . . .	800 0 0	— Sept., 1855.
Assistant Locomotive En- gineer	George Downe . . . . .	5 Oct., 1886	Ditto . . . . .	650 0 0	30 July, 1887.
Chief Clerk . . . . .	Robt J. Sheridan . . . . .	11 April, 1882	Ditto . . . . .	520 0 0	4 Feb., 1861.
				from 1 July.	
Locomotive Foreman, Great Northern Railway.	Thos Boag	23 Nov., 1860	Governor and Executive Council	490 0 0	23 Nov., 1860
Locomotive Foreman . . . . .	John Cobb <sup>3</sup>	9 Mar., 1882	Secretary for Public Works . . .	480 0 0	— Sept., 1855.
First Clerk . . . . .	Chas A. Neale . . . . .	9 Oct., 1878	Ditto . . . . .	335 0 0	2 Dec., 1867.
Record Clerk . . . . .	M'Vey N. Falconer	9 Sept., 1878	Ditto . . . . .	260 0 0	6 Jan., 1875.

<sup>1</sup> Served six months without salary.<sup>2</sup> To 22 June, 1886—deceased<sup>3</sup> Allowed £50 per annum in lieu of house rent

\* Services not continuous.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>SECRETARY FOR PUBLIC WORKS—RAILWAYS—continued.</b>					
<i>Locomotive Engineer—continued.</i>					
Clerks . . . . .	John W. Muddle . . . . .	25 June, 1883	Commissioner for Railways . .	250 0 0	20 Oct., 1875.
	Joseph Palmer . . . . .	2 June, 1879	Ditto . . . . .	220 0 0	13 Nov., 1877.
	John R. Horton . . . . .	1 Sept., 1883	Ditto . . . . .	220 0 0	25 Aug., 1879.
	Patrick T. Finegan . . . . .	8 Jan., 1883	Ditto . . . . .	220 0 0	8 Jan., 1883.
	Fred G. D. Smith . . . . .	13 Aug., 1885	Ditto . . . . .	220 0 0	22 April, 1872.
	Arthur J. Husk <sup>1</sup> . . . . .	25 May, 1881	Ditto . . . . .	200 0 0	25 May, 1881.
	Patrick J. Duffy . . . . .	— Aug., 1883	Ditto . . . . .	185 0 0	21 Oct., 1882.
	Joseph G. Berner . . . . .	1 Dec., 1884	Secretary for Public Works . . .	170 0 0	6 Sept., 1880.
	John B. Geekie <sup>2</sup> . . . . .	23 Jan., 1886	Commissioner for Railways . . . .	180 0 0	23 Jan., 1882.
	Francis J. Read . . . . .	20 June, 1882	Ditto . . . . .	120 0 0	20 June, 1882.
	John B. Cremen . . . . .	9 April, 1883	Ditto . . . . .	105 0 0	9 April, 1883
	James A. Regan . . . . .	9 Oct., 1883	Ditto . . . . .	105 0 0	1 Feb., 1882.
	Fredk. J. Thrum . . . . .	9 Oct., 1883	Ditto . . . . .	105 0 0	27 July, 1883.
	Joseph A. Conroy . . . . .	10 Dec., 1883	Ditto . . . . .	105 0 0	10 Dec., 1883.
	John J. Kavanagh . . . . .	24 July, 1884	Ditto . . . . .	150 0 0	24 July, 1884.
	Fredk. M. Pitt . . . . .	11 Nov., 1884	Ditto . . . . .	90 0 0	11 Nov., 1884.
Draftsmen . . . . .	James Chambers . . . . .	9 Oct., 1882	Ditto . . . . .	350 0 0	24 June, 1878.*
	R. J. Thorpe <sup>3</sup> . . . . .	11 July, 1884	Secretary for Public Works . . .	320 0 0	17 July, 1878.
	James B. Cahill . . . . .	17 Jan., 1881	Commissioner for Railways . . . .	248 0 0	17 Jan., 1881.
	Thos Sowell . . . . .	25 April, 1883	Ditto . . . . .	248 0 0	— Mar., 1882.
	Louis L. Ballhausen . . . . .	28 Jan., 1879	Secretary for Public Works . . . .	220 0 0	28 Jan., 1879.
	Arthur Frost . . . . .	1 Dec., 1882	Commissioner for Railways . . . .	196 0 0	— June, 1876.
	John Goff . . . . .	27 July, 1885	Ditto . . . . .	350 0 0	7 Jan., 1884.
<i>Locomotive Overseer.</i>					
Travelling Inspector . . . . .	Edwd. A. Laughey . . . . .	21 Mar., 1883	Ditto . . . . .	370 0 0	— Sept., 1879.
Sub-Inspector . . . . .	Wm. Privett . . . . .	1 Jan., 1885	Secretary for Public Works . . . .	330 0 0	— June, 1868.
Foreman of Workshops . . . . .	Robert Scott . . . . .	20 Feb., 1883	Ditto . . . . .	375 0 0	— Jan., 1863.
Clerks . . . . .	Walter L. Newman . . . . .	— Jan., 1865	Commissioner for Railways . . . .	290 0 0	— Jan., 1865.
	Wm. Mingaye . . . . .	— May, 1879	Ditto . . . . .	170 0 0	— Nov., 1877.
	Chas Perry . . . . .	— July, 1882	Ditto . . . . .	150 0 0	— July, 1882.
Timekeepers, Sydney . . . . .	George Regan . . . . .	— May, 1868	Ditto . . . . .	305 0 0	— May, 1865.
	Francis Nicholls . . . . .	— April, 1874	Engineer-in-Chief . . . . .	250 0 0	— April, 1874.
	James M. Doyle . . . . .	— May, 1878	Commissioner for Railways . . . .	250 0 0	— May, 1878.
	Robert Caunter . . . . .	4 June, 1877	Ditto . . . . .	200 0 0	— Jan., 1875.
	Thos. Conroy . . . . .	17 June, 1881	Ditto . . . . .	200 0 0	— Nov., 1877.
Assistant Timekeepers, Sydney.	Edward Candrick . . . . .	17 April, 1882	Ditto . . . . .	120 0 0	17 April, 1882.
	Andrew Payten . . . . .	28 Feb., 1881	Ditto . . . . .	155 0 0	28 Feb., 1881.
	J. J. Coombe . . . . .	— July, 1882	Ditto . . . . .	120 0 0	— July, 1882.
	M. Naish . . . . .	2 April, 1885	Ditto . . . . .	150 0 0	19 Aug., 1884.
	John M'Leod . . . . .	12 Feb., 1885	Ditto . . . . .	135 0 0	3 Jan., 1881.
Clerk . . . . .	W. H. Gifford . . . . .	23 Feb., 1884	Ditto . . . . .	150 0 0	23 Feb., 1884.
Assistant Timekeepers	A. Tunks . . . . .	2 Feb., 1885	Commissioner for Railways . . . .	135 0 0	— Jan., 1885.
	J. Eckford . . . . .	21 Sept., 1885	Ditto . . . . .	135 0 0	— Oct., 1885.
General Superintendent of Rolling Stock.	Thos. Braid . . . . .	27 July, 1885	Ditto . . . . .	375 0 0	— May, 1879.
Inspector of Gas-works . . . . .	J. H. Mitchell . . . . .	14 May, 1885	Ditto . . . . .	370 0 0	— May, 1884.
Inspector of New Rolling Stock.	Ed. Bourn . . . . .	4 Mar., 1880	Secretary for Public Works . . . .	350 0 0	— Nov., 1856.
Foreman Blacksmith . . . . .	John Lennox . . . . .	— Mar., 1874	Commissioner for Railways . . . .	335 0 0	— June, 1869.
„ Boiler-maker . . . . .	Henry Smith . . . . .	— July, 1855	Ditto . . . . .	320 0 0	— Aug., 1861.
„ Turner . . . . .	Wm. Pratt . . . . .	— July, 1876	Ditto . . . . .	300 0 0	— May, 1876.
„ Carriage-shop . . . . .	Geo. Bingham . . . . .	— June, 1877	Ditto . . . . .	300 0 0	— May, 1857.
Assistant Foreman . . . . .	Leslie Crawford . . . . .	29 June, 1883	Ditto . . . . .	270 0 0	— April, 1863.
Foreman Carriage-painter . . . . .	John M'Namara . . . . .	— Sept., 1876	Ditto . . . . .	270 0 0	— July, 1869.
„ Pattern-maker . . . . .	Francis Boone . . . . .	— Aug., 1877	Ditto . . . . .	270 0 0	— June, 1856.
„ Boiler-maker . . . . .	John Newlands . . . . .	1 June, 1882	Ditto . . . . .	255 0 0	— Oct., 1868.
Inspecting erection of new engines.	Edwd. Atkinson . . . . .	— Nov., 1880	Ditto . . . . .	300 0 0	— Aug., 1875.
Inspector of Water Supply	Edwd. Fernley . . . . .	— Nov., 1880	Ditto . . . . .	300 0 0	— Oct., 1860.
Shed Inspectors	Geo. Derbyshire . . . . .	— Dec., 1881	Ditto . . . . .	330 0 0	— Dec., 1875.
	Jas. Grant . . . . .	— Dec., 1872	Ditto . . . . .	290 0 0	— Feb., 1856.
	Phillip Mulholland . . . . .	1 July, 1885	Ditto . . . . .	290 0 0	— Feb., 1861.
	Wm. Farquhar . . . . .	11 May, 1885	Ditto . . . . .	280 0 0	20 Nov., 1855.
	John Nicholls . . . . .	11 May, 1885	Ditto . . . . .	280 0 0	— Aug., 1864.
Electric Light Attendant	W. J. Hoare . . . . .	1 Nov., 1885	Ditto . . . . .	200 0 0	1 Nov., 1885.
Cadets (Draftsman) . . . . .	R. J. Colborne . . . . .	18 June, 1885	Ditto . . . . .	130 0 0	18 June, 1885.
	Percy Higgs . . . . .	20 Feb., 1885	Ditto . . . . .	110 0 0	27 Oct., 1879.
	John Patterson . . . . .	25 June, 1885	Ditto . . . . .	110 0 0	17 Jan., 1881.
	A. E. Holden . . . . .	10 Aug., 1885	Ditto . . . . .	70 0 0	10 Aug., 1885.
	H. Quodling . . . . .	27 Nov., 1885	Ditto . . . . .	90 0 0	25 Aug., 1880.
	A. Broad . . . . .	30 Mar., 1885	Ditto . . . . .	110 0 0	30 Mar., 1885.
	Wm. Moffitt . . . . .	16 Aug., 1886	Ditto . . . . .	50 0 0	8 Feb., 1883.
Penrith—					
Inspector . . . . .	John Tipping . . . . .	— Sept., 1863	Secretary for Public Works . . . .	370 0 0	— Sept., 1863.
Timekeeper . . . . .	Arthur F. Cope <sup>4</sup> . . . . .	17 May, 1884	Commissioner for Railways . . . .	180 0 0	31 Aug., 1881.
	succeeded by				
	M. Davison <sup>2</sup> . . . . .	19 Nov., 1886	Ditto . . . . .	195 0 0	17 Jan., 1882.
Assistant Timekeepers . . . . .	John Heron . . . . .	27 Mar., 1882	Ditto . . . . .	110 0 0	27 Mar., 1882.
	Walter Brown <sup>4</sup> . . . . .	1 Mar., 1884	Ditto . . . . .	65 0 0	1 Mar., 1884.
	succeeded by				
	P. T. Doyle <sup>4</sup> . . . . .	15 Mar., 1886	Ditto . . . . .	50 0 0	15 Mar., 1886.
	E. Fulton . . . . .	11 Jan., 1886	Ditto . . . . .	50 0 0	11 Jan., 1886.
Shed Inspectors . . . . .	Ewd. Burrows . . . . .	1 July, 1885	Ditto . . . . .	255 0 0	1 July, 1869.
	Geo. Knight . . . . .	1 July, 1885	Ditto . . . . .	255 0 0	— Oct., 1869.

<sup>1</sup> Transferred to Commissioner's Office, and allowed £25 for shorthand services

<sup>2</sup> Transferred from Bathurst

<sup>3</sup> Resigned.

<sup>4</sup> Dismissed.

\* Services not continuous.

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>SECRETARY FOR PUBLIC WORKS—RAILWAYS—continued.</b>					
<i>Locomotive Overseer—continued.</i>					
Eskbank—					
Sub-Inspector .....	Chas. Baggio .....	1 Jan., 1885	Commissioner for Railways .....	290 0 0	— Nov., 1868.
Clerk .....	Wm. Wood .....	— April, 1884	Ditto .....	150 0 0	— Mar., 1878.
Bathurst—					
Inspector .....	Joseph Turton .....	1 Mar., 1876	Ditto .....	350 0 0	— Mar., 1869.*
Clerks and Timekeepers .....	M. Davison <sup>2</sup> .....	14 Feb., 1882	Ditto .....	195 0 0	17 Jan., 1882.
	succeeded by				
Assistant Timekeeper .....	R. Phillips .....	18 Nov., 1886	Ditto .....	150 0 0	26 Nov., 1884.
Shed Inspectors .....	C. West .....	8 Feb., 1886	Ditto .....	50 0 0	8 Feb., 1886.
	Wm. Green .....	1 July, 1885	Ditto .....	255 0 0	7 Dec., 1877.
	Joseph Blackburn .....	1 July, 1885	Ditto .....	255 0 0	20 Jan., 1880.
Wellington—					
Inspector .....	C. H. Stanger .....	8 April, 1884	Ditto .....	290 0 0	20 April, 1882.
Clerk and Timekeeper .....	Thos. Seage .....	29 Jan., 1886	Ditto .....	150 0 0	21 Dec., 1882.*
Dubbo—					
Inspector .....	James Hubbard .....	8 April, 1884	Ditto .....	310 0 0	11 Feb., 1868.*
Clerk and Timekeeper .....	Alfred E. Heydon .....	1 May, 1883	Ditto .....	165 0 0	1 May, 1883.
Shed Inspector .....	Joseph Horsfield .....	1 July, 1885	Ditto .....	255 0 0	— Aug., 1871.
Pictou—					
Inspector .....	Jno. Scott .....	27 Nov., 1884	Ditto .....	290 0 0	— Feb., 1865.
Clerk and Timekeeper .....	Saml. Powell .....	24 July, 1882	Ditto .....	165 0 0	24 July, 1882.
Shed Inspector .....	Robert Wallace .....	1 July, 1885	Ditto .....	255 0 0	— June, 1869.
Goulburn—					
Inspector .....	Wm. Webster .....	22 July, 1876	Ditto .....	350 0 0	— Oct., 1856.
Timekeeper .....	N. Pendergast <sup>1</sup> .....	25 May, 1883	Ditto .....	150 0 0	15 April, 1878.
	succeeded by				
Assistant Timekeeper .....	Gregory Toohar .....	9 Mar., 1886	Ditto .....	170 0 0	9 Mar., 1886.
Shed Inspectors .....	Chas. M'Alister .....	21 Nov., 1882	Ditto .....	95 0 0	21 Nov., 1882.
	James Starkey .....	1 July, 1885	Ditto .....	255 0 0	— Feb., 1869.
	H. Hunter .....	12 July, 1885	Ditto .....	255 0 0	29 Nov., 1876.
Harden—					
Inspector .....	Jas. Hackett .....	10 Mar., 1882	Ditto .....	310 0 0	— Feb., 1876.
Clerk and Timekeeper .....	G. A. Benfield .....	23 Dec., 1884	Ditto .....	95 0 0	23 Dec., 1884.
Shed Inspector .....	W. Smith .....	1 July, 1885	Ditto .....	235 0 0	— June, 1878.
	H. Lidden .....	19 May, 1885	Ditto .....	235 0 0	— Feb., 1874.
Junee—					
Inspector .....	John Close .....	5 Oct., 1879	Ditto .....	370 0 0	— June, 1875.
Clerks and Timekeepers .....	Fredk. Lawless .....	8 Sept., 1884	Ditto .....	180 0 0	18 Dec., 1878.
	succeeded by				
	J. W. Townley <sup>3</sup> .....	24 Nov., 1886	Ditto .....	150 0 0	6 Feb., 1884.
	Jas. Kelly .....	12 Mar., 1883	Ditto .....	95 0 0	12 Mar., 1883.
Shed Inspectors .....	George Roberts .....	14 April, 1885	Ditto .....	80 0 0	14 April, 1885.
	John Bough .....	6 Aug., 1883	Ditto .....	255 0 0	— Oct., 1877.
	A. Hairsine <sup>4</sup> .....	1 July, 1885	Ditto .....	255 0 0	— June, 1876.
	succeeded by				
	B. Tildsley .....	18 June, 1886	Ditto .....	225 0 0	— Mar., 1875.
Albury.					
Shed Inspector .....	Thos. Walsh .....	9 July, 1883	Ditto .....	290 0 0	2 Oct., 1868.
<i>Locomotive Foreman's Office, Great Northern Railway.</i>					
Clerk .....	Scott L. Laing .....	25 May, 1880	Ditto .....	260 0 0	25 May, 1880.
Timekeepers .....	Robert Gardner .....	1 Sept., 1883	Ditto .....	245 0 0	— June, 1881.
	A. Fawcett <sup>2</sup> .....	17 Nov., 1882	Ditto .....	165 0 0	17 Nov., 1882.
	succeeded by				
	John E. Wallace .....	11 Mar., 1886	Ditto .....	150 0 0	14 Sept., 1881.
Clerk .....	Jas. Studdert .....	11 Feb., 1884	Ditto .....	165 0 0	11 Feb., 1884.
Timekeeper .....	A. Wood .....	24 April, 1882	Ditto .....	140 0 0	24 April, 1882.
Clerks .....	R. Dempster .....	6 June, 1883	Ditto .....	140 0 0	18 June, 1883.
	A. Gardner .....	13 Nov., 1884	Ditto .....	125 0 0	13 Nov., 1884.
	Wm. Reid .....	1 April, 1885	Ditto .....	125 0 0	1 April, 1885.
	A. G. Mends <sup>5</sup> .....	4 June, 1886	Ditto .....	125 0 0	19 Oct., 1883.
Inspector of New Rolling Stock.	Joseph Gray .....	28 Aug., 1885	Ditto .....	305 0 0	— July, 1869.
Foreman Carriage Department.	John King .....	28 Aug., 1885	Ditto .....	240 0 0	18 May, 1883.
General Foreman .....	D. Fitzpatrick .....	22 Jan., 1863	Ditto .....	350 0 0	22 Jan., 1863.
Foreman Turner .....	P. Cunningham .....	5 Feb., 1863	Ditto .....	300 0 0	5 Feb., 1863.
„ Blacksmith .....	Thos. Bryant .....	1 Dec., 1856	Ditto .....	300 0 0	1 Dec., 1856.
„ Boilermaker .....	Jas. Davidsen .....	14 Feb., 1877	Ditto .....	300 0 0	14 Feb., 1877.
Singleton—					
Inspector .....	George Newton .....	— Dec., 1861	Secretary for Public Works .....	410 0 0	— Dec., 1861.
Clerks .....	Hy. E. Godden .....	26 May, 1885	Commissioner for Railways .....	195 0 0	11 Jan., 1883.
	Arthur J. Alcorn .....	2 Oct., 1884	Ditto .....	80 0 0	2 Oct., 1884.
	R. J. Taylor .....	22 May, 1886	Ditto .....	50 0 0	22 May, 1886.
Running Shed Foreman	Wm. M'Niven .....	8 Aug., 1882	Ditto .....	270 0 0	11 Jan., 1878.
Murrurundi—					
Sub-Inspector .....	Wm. Pilfold .....	23 Dec., 1875	Ditto .....	285 0 0	23 Dec., 1875.
Narrabri—					
Running Shed and Working Foreman	Richd. H. Bryant .....	16 Aug., 1882	Ditto .....	270 0 0	16 Aug., 1882.
Armidale—					
Running Shed and Working Foreman	Thos. Peary .....	8 Aug., 1882	Ditto .....	270 0 0	— Aug., 1877.

<sup>1</sup> Dismissed. <sup>2</sup> Resigned. <sup>3</sup> Transferred from Sydney. <sup>4</sup> Disrated to driver. <sup>5</sup> Transferred from Dubbo. \* Services not continuous.



Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument	Annual Salary.			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>SECRETARY FOR PUBLIC WORKS—RAILWAYS—continued.</b>							
<i>Traffic Branch.</i>							
Traffic Manager.....	W. V. Read .....	27 Jan., 1880	Governor and Executive Council	700	0	0	26 Sept., 1855.
Assistant „ .....	D. Kirkcaldie .....	31 Mar., 1880	Ditto .....	600	0	0	19 Dec., 1876.
Chief Clerk .....	W. H. Colquhoun <sup>1</sup> .....	1 Jan., 1883	Ditto .....	265	0	0	24 Feb., 1879.
Goods Superintendent .....	G. T. Evans .....	1 Jan., 1878	Ditto .....	490	0	0	— Dec., 1867.
Coaching „ .....	H. Richardson .....	1 July, 1883	Ditto .....	490	0	0	11 June, 1866.
Station-masters—							
Sydney .....	J. Harpur <sup>2</sup> .....	1 Jan., 1883	Ditto .....	310	0	0	—, 1871.
	J. Collins .....	1 Jan., 1878	Ditto .....	400	0	0	— Mar., 1858.
	F. C. Johnson .....	1 Jan., 1878	Ditto .....	330	0	0	1 Jan., 1870.
Mortuary .....	R. Darby .....	1 July, 1886	Ditto .....	240	0	0	— Mar., 1855.
Darling Harbour .....	C. Paull .....	7 June, 1879	Ditto .....	330	0	0	— Mar., 1865.
Eveleigh .....	S. Abbott <sup>3</sup> .....	1 Jan., 1885	Ditto .....	150	0	0	— Feb., 1867.
Macedonaldtown .....	F. C. Luardet .....	1 Jan., 1882	Ditto .....	165	0	0	— Jan., 1867.
Newtown .....	S. C. Hankin .....	12 Nov., 1884	Ditto .....	270	0	0	— Jan., 1863.
Stammore .....	A. J. Gibbons <sup>3</sup> .....	16 Sept., 1884	Ditto .....	180	0	0	29 April, 1877.
Petersham .....	M. S. Brown <sup>3</sup> .....	24 Jan., 1883	Ditto .....	270	0	0	1 Oct., 1874.
Summer Hill .....	H. Ludford .....	12 Oct., 1883	Ditto .....	195	0	0	— April, 1867.
Ashfield .....	G. Bonamy .....	22 Sept., 1884	Ditto .....	310	0	0	— Aug., 1862.
Croydon .....	G. Pritchard .....	19 July, 1883	Ditto .....	180	0	0	— Oct., 1873.
Burwood .....	W. J. Titterton .....	1 June, 1874	Ditto .....	270	0	0	— Feb., 1868.
Homebush .....	G. R. Henson .....	8 July, 1881	Ditto .....	310	0	0	— Aug., 1867.
Rookwood .....	J. Morton .....	17 Oct., 1883	Ditto .....	225	0	0	— Dec., 1869.
Granville .....	James Higgs .....	1 Nov., 1872	Ditto .....	310	0	0	— April, 1857.
Fairfield .....	Charles Court .....	1 Oct., 1884	Ditto .....	180	0	0	— Jan., 1878.
	succeeded by						
	T. Hall .....	5 June, 1886	Ditto .....	180	0	0	1 Sept., 1875.
Liverpool .....	J. Stafford .....	— Nov., 1875	Ditto .....	255	0	0	— April, 1865.
Campbelltown .....	T. Ward .....	1 Oct., 1883	Ditto .....	255	0	0	— April, 1871.
Menangle .....	G. Watsford .....	2 Nov., 1885	Ditto .....	180	0	0	28 Aug., 1875.
Picton .....	D. Sheppard .....	22 Dec., 1884	Ditto .....	255	0	0	11 Nov., 1875.
Mittagong .....	J. M'Roberts .....	26 Aug., 1882	Ditto .....	255	0	0	— Nov., 1871.
Bowral .....	C. Bennett .....	25 Aug., 1882	Ditto .....	195	0	0	— Feb., 1871.
Moss Vale .....	W. Lenehan .....	2 Jan., 1885	Ditto .....	225	0	0	— July, 1869.
Bundanoon .....	E. Milne .....	1 Jan., 1883	Ditto .....	180	0	0	9 Nov., 1876.
Marulan .....	A. Moodie .....	1 Feb., 1878	Ditto .....	225	0	0	— Mar., 1856.
Inspector—							
Goulburn .....	A. Crawford .....	1 July, 1875	Ditto .....	440	0	0	— May, 1862.
Station-masters—							
Goulburn .....	R. Simpson .....	1 Jan., 1885	Ditto .....	310	0	0	1 Nov., 1875.
Bungendore .....	J. Pettingell .....	9 Sept., 1885	Ditto .....	195	0	0	16 Dec., 1884.
Tarago .....	A. E. Booth <sup>4</sup> .....	7 Jan., 1884	Ditto .....	165	0	0	1 May, 1876.
Breadalbane .....	J. H. Cox .....	20 Nov., 1884	Ditto .....	165	0	0	5 Oct., 1876.
Gunning .....	S. W. Alliband .....	12 May, 1885	Ditto .....	210	0	0	— Jan., 1873.
Yass .....	C. Burge .....	13 Mar., 1880	Ditto .....	210	0	0	— Feb., 1874.
Binalong .....	F. Rae .....	1 Sept., 1881	Ditto .....	180	0	0	16 Feb., 1875.
Harden .....	G. Parsons .....	6 Oct., 1884	Ditto .....	255	0	0	— Feb., 1867.
Wallendbeen .....	R. Smith .....	18 Dec., 1884	Ditto .....	165	0	0	— Aug., 1872.
Cootamundra .....	Haines Giddy .....	2 July, 1881	Ditto .....	255	0	0	7 Jan., 1876.
June .....	James Rowe .....	10 Mar., 1882	Ditto .....	255	0	0	— Feb., 1870.
Inspector—							
June .....	G. J. Roberts .....	1 Sept., 1880	Ditto .....	440	0	0	13 July, 1868.
Station-masters—							
South Wagga .....	S. Crook .....	31 July, 1884	Ditto .....	255	0	0	— Feb., 1864.
The Rock .....	A. Boyce .....	1 Nov., 1884	Ditto .....	165	0	0	1 May, 1877.
Culcairn .....	H. Melville .....	12 Nov., 1884	Ditto .....	165	0	0	1 May, 1871.
Albury .....	Arthur Willis .....	26 Aug., 1883	Ditto .....	330	0	0	19 Sept., 1879.
Old June .....	B. G. Potter .....	12 Dec., 1884	Ditto .....	165	0	0	10 Jan., 1876.
Coolaman .....	E. Aland .....	13 Mar., 1884	Ditto .....	165	0	0	4 Jan., 1876.
	succeeded by						
	S. Crook .....	13 Nov., 1886	Ditto .....	180	0	0	— Feb., 1864.
Narrandera .....	J. Campbell .....	20 Dec., 1884	Ditto .....	225	0	0	16 Oct., 1874.
Whlton .....	A. Jones .....	22 Oct., 1884	Ditto .....	150	0	0	27 April, 1878.
Carrathool .....	W. Harris .....	19 Dec., 1884	Ditto .....	180	0	0	30 Mar., 1877.
Hay .....	A. M'Kee .....	1 Sept., 1882	Ditto .....	310	0	0	22 Oct., 1878.
Young .....	W. Gould .....	11 May, 1885	Ditto .....	210	0	0	1 July, 1874.
Jerilderie .....	W. Allen .....	29 Oct., 1885	Ditto .....	150	0	0	19 June, 1878.
Gundagai .....	C. Horn .....	16 Oct., 1886	Ditto .....	165	0	0	— Sept., 1873.
<b>ILLAWARRA LINE.</b>							
St Peter's .....	A. Graham <sup>3</sup> .....	4 May, 1885	Ditto .....	165	0	0	— April, 1868.
Marrickville .....	W. Morse .....	1 Nov., 1884	Ditto .....	255	0	0	16 Feb., 1876.
Arncliffe .....	W. J. Marsden .....	11 Nov., 1884	Ditto .....	180	0	0	24 Nov., 1873.
Rockdale .....	H. Addison .....	24 Nov., 1884	Ditto .....	180	0	0	18 Nov., 1875.
Kogarah .....	G. Hodgkinson .....	24 Nov., 1884	Ditto .....	180	0	0	15 Sept., 1877.
Hurstville .....	T. Nicholson .....	14 Nov., 1884	Ditto .....	225	0	0	26 May, 1876.
Waterfall .....	R. Hayes .....	1 July, 1886	Ditto .....	210	0	0	16 Dec., 1875.
<b>HORNSBY LINE</b>							
Ryde .....	G. Davis .....	17 Sept., 1886	Ditto .....	195	0	0	— April, 1865.
<b>WESTERN LINE</b>							
Parramatta .....	James Watsford .....	3 Sept., 1883	Ditto .....	330	0	0	— Mar., 1867.
Seven Hills .....	J. M'Garrity .....	1 Jan., 1882	Ditto .....	180	0	0	— Jan., 1868.
Blacktown .....	T. M'Coy .....	1 July, 1879	Ditto .....	310	0	0	— Feb., 1867.
Rooty Hill .....	S. York .....	8 Mar., 1882	Ditto .....	180	0	0	— April, 1868.
St. Mary's .....	J. Waring .....	23 July, 1884	Ditto .....	225	0	0	— April, 1867.
Pennth .....	J. Bell .....	1 May, 1877	Ditto .....	270	0	0	— Sept., 1862.

<sup>1</sup> £75 per annum allowed for house rent.

<sup>2</sup> £50 per annum allowed for house rent

<sup>3</sup> £50 per annum allowed for house rent

<sup>4</sup> Dismissed.

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>SECRETARY FOR PUBLIC WORKS—RAILWAYS—continued</b>					
<i>Traffic Branch—continued.</i>					
Inspector—Penrith	E. Higgs	23 July, 1875	Governor and Executive Council	440 0 0	— Mar., 1856.
Station-masters—					
Emu Plains	J. Walker	11 June, 1880	Ditto	180 0 0	— July, 1876.
Springwood	De Carteret Lockie	27 Oct., 1885	Ditto	180 0 0	16 May, 1878.
Lawson	J. Booth	13 April, 1881	Ditto	180 0 0	— Oct., 1871.
Katoomba	C. James	1 Jan., 1883	Ditto	180 0 0	1 Dec., 1875.
Mount Victoria	G. Woodall	10 Nov., 1885	Ditto	240 0 0	— Mar., 1858.
Eskbank	R. Crawford	1 July, 1879	Ditto	310 0 0	— Sept., 1871.
Bowenfels	A. Lay	25 Dec., 1884	Ditto	165 0 0	23 July, 1879.
Wallerawang	J. Tweedie	29 Sept., 1884	Ditto	270 0 0	— Oct., 1868.
Rydal	J. M'Nab	1 May, 1877	Ditto	225 0 0	— Feb., 1870.
Tarana	J. Muir	9 Nov., 1885	Ditto	225 0 0	— Mar., 1868.
Brewongle	J. G. Bissett, sen.	1 June, 1880	Ditto	225 0 0	— Feb., 1870.
Raglan	F. Davidson	18 Feb., 1885	Ditto	165 0 0	13 Jan., 1879.
Kelso	W. Sydenham	7 Nov., 1885	Ditto	195 0 0	— Nov., 1866.
Bathurst	G. Farquhar	13 Sept., 1884	Ditto	310 0 0	— 1859.
George's Plains	J. Woodrow	27 Oct., 1884	Ditto	165 0 0	5 Mar., 1877.
Newbridge	C. Little	16 Oct., 1884	Ditto	225 0 0	— Oct., 1871.
Blayney	T. Brain	17 Oct., 1882	Ditto	255 0 0	— Feb., 1879.
Millthorpe	A. Williams, jun.	15 Oct., 1885	Ditto	150 0 0	12 Nov., 1877.
Spring Hill	T. Canty	13 May, 1885	Ditto	180 0 0	15 Jan., 1876.
Orange	F. Richardson	1 Aug., 1881	Ditto	270 0 0	— Aug., 1871.
Inspector—Wellington	M. A. Hornidge	1 June, 1886	Ditto	440 0 0	— Mar., 1868.
Station-masters—					
Wellington	T. J. Foley	1 June, 1880	Ditto	225 0 0	— Dec., 1867.
Dubbo	E. Woodgate	10 Feb., 1881	Ditto	310 0 0	— Mar., 1868.
Narramine	S. E. Hinde	24 April, 1884	Ditto	180 0 0	4 Dec., 1877.
Nevertire	R. Tibbs	27 Jan., 1884	Ditto	180 0 0	1 Nov., 1877.
Nyngan	R. Beattie	13 Dec., 1884	Ditto	180 0 0	27 Mar., 1879.
	succeeded by				
	A. Rowling	18 Oct., 1886	Ditto	195 0 0	27 Feb., 1878.
Byrock	W. Atwell	1 Nov., 1885	Ditto	150 0 0	— Feb., 1867.
Bourke	S. Pass	12 Dec., 1885	Ditto	290 0 0	— Feb., 1867.
<b>MOLONG LINE.</b>					
Borenore	R. Anderson <sup>1</sup>	21 Dec., 1885	Ditto	180 0 0	9 Mar., 1881.
Molong	E. Aland	26 Jan., 1886	Ditto	180 0 0	4 Jan., 1876.
<b>MUDGE LINE.</b>					
Rylstone	J. Tanner	2 Nov., 1885	Ditto	180 0 0	8 Dec., 1876.
Mudgee	J. G. Bissett, jun.	8 Sept., 1884	Ditto	270 0 0	— July, 1871.
<b>RICHMOND LINE.</b>					
Riverstone	H. Campion	21 Nov., 1884	Ditto	180 0 0	— Nov., 1867.
Mulgrave	T. Cavanaugh	13 Mar., 1880	Ditto	180 0 0	— Feb., 1870.
Windsor	D. Scotland	15 Oct., 1872	Ditto	270 0 0	— Mar., 1868.
Richmond	W. Lackey	1 July, 1879	Ditto	255 0 0	— April, 1872.
<i>Traffic Branch—Northern and North-western Lines.</i>					
Traffic Manager	John Higgs <sup>2</sup>	1 Oct., 1873	Ditto	550 0 0	10 Oct., 1855.
Traffic Inspectors	Edmund Herald†	8 June, 1877	Ditto	440 0 0	26 June, 1867.
	Frank Robinson	4 Aug., 1882	Ditto	440 0 0	— June, 1872.
	James J. Robertson	1 Nov., 1882	Ditto	390 0 0	17 July, 1860.*
Chief Clerk	Fred. R. Nield	14 May, 1884	Ditto	340 0 0	— Mar., 1862.
First Clerk	Thomas Miller	5 Aug., 1884	Secretary for Public Works	250 0 0	7 Mar., 1876.
Paymaster	James Burns, jun.	14 May, 1884	Governor and Executive Council	340 0 0	18 May, 1869.
Cashier	Christopher Irvine	14 May, 1884	Ditto	290 0 0	— Dec., 1871.
Pay Clerk	William Spence	1 Dec., 1885	Secretary for Public Works	185 0 0	18 Oct., 1878.
Coal Overseer	John Downie	3 Mar., 1885	Ditto	300 0 0	12 Mar., 1868.
Berthing-master	John Paton <sup>2</sup>	— Nov., 1884	Ditto	275 0 0	4 Aug., 1882.
Assistant Berthing-masters.	John M. Lamont	1 April, 1885	Ditto	170 0 0	1 April, 1885.
	William Fortune	1 Jan., 1885	Ditto	170 0 0	3 Oct., 1884.
Station-masters:—					
Newcastle	William Robins <sup>2</sup>	1 Mar., 1883	Governor and Executive Council	310 0 0	1 Sept., 1863.
	William B. Smith <sup>3</sup>	11 Nov., 1886	Ditto	310 0 0	20 Nov., 1864.
Honeysuckle Point	Patrick Dwyer <sup>2</sup>	1 Oct., 1882	Ditto	225 0 0	— June, 1859.
Hamilton	Robert Wilkinson <sup>4</sup>	3 Mar., 1885	Ditto	165 0 0	8 April, 1879.
Waratah	Hugh W. L. Holt <sup>2</sup>	8 June, 1877	Ditto	225 0 0	16 Dec., 1866.
Wallsend	John H. Walker <sup>5</sup>	1 June, 1873	Ditto	180 0 0	— May, 1863.
Hexham	Abram Carpenter <sup>2</sup>	20 Aug., 1878	Ditto	225 0 0	17 Jan., 1868.
East Maitland	John Humphreys <sup>2</sup>	1 May, 1883	Ditto	225 0 0	— May, 1863.
Morpeth	Alfred Leven <sup>2</sup>	1 Aug., 1883	Ditto	270 0 0	3 June, 1869.
High-street	Denis A. Garvan <sup>2</sup>	23 April, 1872	Administrator of Government and Executive Council.	255 0 0	1 Mar., 1862.
West Maitland	George T. Ferris <sup>2</sup>	1 Sept., 1880	Governor and Executive Council	310 0 0	1 June, 1865.
Farley	George E. Crothers <sup>2</sup>	1 Jan., 1886	Ditto	150 0 0	4 Jan., 1883.
Lochinvar	Thomas O'Brien <sup>2</sup> ‡	1 Jan., 1886	Ditto	165 0 0	16 May, 1871.
	succeeded by				
	Robert Eagleson <sup>2</sup>	24 Dec., 1886	Ditto	165 0 0	31 May, 1876.
Greta	Sydney C. Drewe <sup>2</sup>	15 Jan., 1876	Ditto	180 0 0	— May, 1869.
Branxton	Samuel Markwell <sup>2</sup>		Ditto	180 0 0	20 Feb., 1880.
Singleton	George T. Dowling <sup>3</sup>	1 Sept., 1880	Ditto	270 0 0	— Dec., 1863.
Ravensthorpe	Robert Eagleson <sup>2</sup>	1 May, 1885	Ditto	165 0 0	31 May, 1876.
Musclebrook	James Burns <sup>3</sup>	2 Aug., 1882	Ditto	255 0 0	— Mar., 1857.
Aberdeen	John M'Lean <sup>2</sup>	27 Jan., 1872	Ditto	180 0 0	29 Jan., 1861.
Scone	Edward Simpson <sup>2</sup>	1 Aug., 1882	Ditto	195 0 0	10 June, 1875.

<sup>1</sup> Allowed £50 per annum for house rent. <sup>2</sup> Provided with residence. <sup>3</sup> Allowed £50 per annum in lieu of quarters. <sup>4</sup> Allowed £30 per annum in lieu of quarters. <sup>5</sup> Allowed £25 per annum in lieu of quarters. † To 31 August. ‡ Died 23 December. \* Services not continuous.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>SECRETARY FOR PUBLIC WORKS—RAILWAYS—continued.</b>					
<i>Traffic Branch—Northern and North-Western Lines—continued.</i>					
<i>Station-masters—continued.</i>					
Murrurundi .....	George M. Moxham <sup>2</sup> .....	25 Mar., 1879	Governor and Executive Council	270 0 0	— July, 1865.
Willow Tree .....	Thomas Thomas <sup>3</sup> .....	1 Jan., 1883	Ditto .....	180 0 0	20 July, 1874.*
Quirindi .....	William L. Verdon <sup>3</sup> .....	11 July, 1882	Ditto .....	195 0 0	1 April, 1874.
Werris Creek .....	William U. Verdon <sup>3</sup> .....	13 Mar., 1879	Ditto .....	225 0 0	21 July, 1859.
Breeza .....	Charles Bailey <sup>3</sup> .....	1 Jan., 1886	Ditto .....	180 0 0	1 June, 1875.
Gunnedah .....	George Beal <sup>3</sup> .....	15 Sept., 1882	Ditto .....	225 0 0	12 July, 1874.
Boggabri .....	Benjamin M. Dingle <sup>3</sup> .....	15 Sept., 1882	Ditto .....	180 0 0	7 June, 1878.
Narrabri .....	James Wallace <sup>3</sup> .....	19 Aug., 1884	Ditto .....	310 0 0	1 Nov., 1867.
West Tamworth .....	Matthew Kenny <sup>2</sup> .....	1 Dec., 1882	Ditto .....	270 0 0	24 Mar., 1870.
	succeeded by				
	James P. Edwards <sup>1</sup> .....	11 Nov., 1886	Ditto .....	150 0 0	8 May, 1872.
Tamworth .....	George Wise <sup>3</sup> .....	1 April, 1882	Ditto .....	255 0 0	3 Feb., 1863.
Moonbi .....	Albert E. Brackenreg <sup>3</sup> .....	19 Aug., 1884	Ditto .....	180 0 0	25 Sept., 1877.
Walcha Road .....	Benj. Haslam <sup>3</sup> .....	1 Aug., 1882	Ditto .....	225 0 0	27 Feb., 1877.
Uralla .....	John Terry <sup>3</sup> .....	19 Aug., 1884	Ditto .....	225 0 0	1 Jan., 1877.
Armidale .....	Frederick W. Cox <sup>3</sup> .....	1 Feb., 1883	Ditto .....	310 0 0	21 April, 1864.
Guyra .....	Arthur Charlton <sup>3</sup> .....	19 Aug., 1884	Ditto .....	180 0 0	26 June, 1874.
Glencoe .....	Henry Eckford <sup>3</sup> .....	19 Sept., 1884	Ditto .....	180 0 0	14 Feb., 1877.
Glen Innes .....	William B. Smith <sup>3</sup> .....	19 Aug., 1884	Ditto .....	310 0 0	20 Nov., 1864.
	succeeded by				
	Matthew Kenny <sup>2</sup> .....	11 Nov., 1886	Ditto .....	270 0 0	24 Mar., 1870.
Deepwater .....	Geo. H. Benning <sup>3</sup> .....	1 Sept., 1886	Ditto .....	150 0 0	22 Mar., 1880.
Tenterfield .....	Edmund Herald <sup>3</sup> .....	1 Sept., 1886	Ditto .....	310 0 0	26 June, 1867.
<i>Traffic Audit Branch.</i>					
Traffic Auditor .....	T. Carlisle .....	2 Jan., 1880	Ditto .....	490 0 0	— May, 1862.
Assistant Traffic Auditor .....	John Seale <sup>4</sup> .....	1 May, 1867	Ditto .....	365 0 0	— Jan., 1863.
Chief Clerk .....	M. Seale .....	17 Sept., 1883	Secretary for Public Works .....	390 0 0	— Aug., 1863.
Clerk .....	T. F. Bonamy .....	1 Jan., 1885	Ditto .....	320 0 0	— Dec., 1862.
Inspectors, Station Accounts	J. R. Thomson .....	1 June, 1883	Ditto .....	320 0 0	— Aug., 1870.
	T. H. McClelland .....	1 Jan., 1883	Governor and Executive Council	305 0 0	— Aug., 1866.
	S. D. Hancox .....	3 Feb., 1882	Ditto .....	305 0 0	— Jan., 1869.
	John Sale .....	17 Sept., 1883	Secretary for Public Works .....	290 0 0	— July, 1881.
	C. H. Sidney .....	— Dec., 1883	Ditto .....	275 0 0	— Sept., 1877.
	J. H. Williams .....	1 Jan., 1885	Ditto .....	275 0 0	— Sept., 1872.
	C. M. Cane .....	1 Aug., 1874	Ditto .....	260 0 0	— Mar., 1874.
	W. Forsythe .....	16 Feb., 1883	Ditto .....	250 0 0	— Oct., 1875.
	A. Primrose <sup>5</sup> .....	1 June, 1879	Ditto .....	235 0 0	— Mar., 1879.
	H. Slatyer .....	16 July, 1873	Ditto .....	220 0 0	— July, 1873.
	E. H. Seale .....	1 Feb., 1877	Ditto .....	220 0 0	— Feb., 1877.
	S. R. Miller .....	20 Aug., 1880	Ditto .....	220 0 0	— Oct., 1876.
	F. C. Cane .....	1 Mar., 1880	Ditto .....	200 0 0	— Aug., 1878.
	W. T. Church .....	1 Oct., 1882	Ditto .....	200 0 0	— Aug., 1878.
	W. S. Wisdom .....	1 Nov., 1880	Ditto .....	200 0 0	— Aug., 1866.*
	R. S. Hughes .....	28 July, 1883	Ditto .....	200 0 0	— June, 1883.
	Frederick Oakes <sup>5</sup> .....	4 Oct., 1882	Ditto .....	185 0 0	— Aug., 1880.
	W. Coker .....	4 May, 1882	Ditto .....	185 0 0	— May, 1882.
	W. T. Chapman .....	1 Aug., 1883	Ditto .....	185 0 0	— Sept., 1877.
	J. Knox .....	— May, 1882	Ditto .....	185 0 0	4 May, 1882.
	W. Miller .....	1 Mar., 1877	Ditto .....	170 0 0	1 Mar., 1877.
	H. J. Watson .....	1 July, 1879	Ditto .....	170 0 0	1 July, 1879.
	W. Wightman .....	21 Jan., 1880	Ditto .....	170 0 0	21 Jan., 1880.
	C. H. Higgs .....	19 Jan., 1880	Ditto .....	170 0 0	19 Jan., 1880.
	F. A. Blackstone .....	— Aug., 1884	Ditto .....	170 0 0	— April, 1882.
	G. S. Bagot .....	28 Nov., 1882	Ditto .....	150 0 0	— Nov., 1882.
	T. N. Fligg <sup>6</sup> .....	19 Dec., 1882	Ditto .....	135 0 0	— Dec., 1882.
	J. Button .....	19 Dec., 1882	Ditto .....	150 0 0	— Dec., 1882.
	W. E. Davies .....	4 Oct., 1880	Ditto .....	150 0 0	— Oct., 1880.
	T. Coghlan .....	1 June, 1882	Ditto .....	150 0 0	— Mar., 1882.
	R. Parry .....	20 Sept., 1880	Ditto .....	135 0 0	— Mar., 1879.
	J. T. Chapman .....	1 May, 1881	Ditto .....	135 0 0	— May, 1881.
	Alex. Hay .....	— Dec., 1884	Ditto .....	135 0 0	— Dec., 1884.
	J. Cosgrove .....	1 Oct., 1881	Ditto .....	135 0 0	— Oct., 1879.
	C. F. Cox .....	24 Oct., 1881	Ditto .....	135 0 0	— Oct., 1881.
	D. M'Phee .....	1 Sept., 1884	Ditto .....	135 0 0	— Oct., 1879.
	F. H. Rowley .....	5 April, 1882	Ditto .....	120 0 0	— April, 1882.
	H. Newcombe <sup>7</sup> .....	17 Oct., 1881	Ditto .....	105 0 0	— Oct., 1881.
	E. A. Ireland .....	— May, 1884	Ditto .....	105 0 0	— May, 1884.
	R. Beverley .....	16 Sept., 1882	Ditto .....	105 0 0	— Jan., 1882.
	C. R. Colls .....	1 Aug., 1883	Ditto .....	105 0 0	— Aug., 1883.
	E. Newcombe .....	7 Sept., 1883	Ditto .....	105 0 0	— Sept., 1883.
	R. Kilgour .....	1 Sept., 1881	Ditto .....	105 0 0	1 Sept., 1881.
	J. J. Watts .....	10 Aug., 1882	Ditto .....	105 0 0	— Mar., 1882.
	H. James .....	— Mar., 1884	Ditto .....	75 0 0	— Mar., 1884.
	A. Harvey .....	26 Nov., 1883	Ditto .....	90 0 0	— Nov., 1883.
	A. Bates .....	— Jan., 1884	Ditto .....	90 0 0	— Jan., 1884.

<sup>1</sup> Allowed £30 per annum in lieu of quarters.

<sup>2</sup> Allowed £50 per annum in lieu of quarters.

<sup>3</sup> Provided with residence.

<sup>4</sup> Allowed £50 per annum for house rent.

<sup>5</sup> Allowed 10s. per Sunday when on duty.

<sup>6</sup> Dismissed 31 January, 1886.

<sup>7</sup> Deceased, 29 March, 1886.

\* Services not continuous.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.	
				£ s. d.		
<b>SECRETARY FOR PUBLIC WORKS—RAILWAYS—continued.</b>						
<i>Traffic Audit Branch—continued.</i>						
Clerks—continued	S. Garrett	— Dec., 1884	Secretary for Public Works	90 0 0	— Dec., 1884.	
	J. A. Healey	— Dec., 1884	Ditto	90 0 0	— Dec., 1884.	
	T. F. Rush	1 Jan., 1885	Ditto	80 0 0	— Oct., 1882.	
	C. L. Dunckeur	15 June, 1885	Ditto	75 0 0	— June, 1885.	
	J. A. Pasfield	— Jan., 1884	Ditto	65 0 0	— Jan., 1884.	
	G. Newton	21 Sept., 1885	Ditto	50 0 0	21 Sept., 1885.	
	E. Ferry	23 Feb., 1886	Ditto	50 0 0	— Feb., 1885.	
	G. O'Regan	18 June, 1886	Ditto	50 0 0	— June, 1886.	
<i>Tramways (Traffic Branch)</i>						
Superintendent	James Roberts <sup>1</sup>	20 April, 1880	Ditto	505 0 0	1 May, 1864.	
Chief Clerk	John William Tyrer <sup>2</sup>	4 Feb., 1880	Ditto	290 0 0	4 Feb., 1880.	
Clerks	Geo. W. B. Bowden <sup>3</sup>	26 July, 1881	Ditto	220 0 0	6 April, 1881.	
	Alfred Thos. Colls <sup>3</sup>	1 April, 1882	Ditto	220 0 0	1 April, 1882.	
	Jenkyn Howell Jones	26 Sept., 1882	Ditto	170 0 0	26 Sept., 1882.	
	Thos. Richd. Scholey	20 Feb., 1883	Ditto	170 0 0	20 Feb., 1883.	
	Wm. Andrew <sup>3</sup>	30 April, 1883	Ditto	120 0 0	17 May, 1879.	
	Archie Kirkpatrick <sup>3</sup>	22 May, 1886	Ditto	105 0 0	1 May, 1881.	
	George R. Sothern <sup>3</sup>	20 Aug., 1884	Ditto	170 0 0	18 June, 1869.	
	Richd. Thos. Pearce <sup>3</sup>	15 Sept., 1882	Ditto	150 0 0	8 May, 1882.	
	Robert Cox <sup>3</sup>	20 July, 1885	Ditto	135 0 0		
	Frederick Jno. Gorman <sup>3</sup>	26 April, 1883	Ditto	90 0 0	26 April, 1883.	
Ticket Clerks	Montague Walker <sup>3</sup>	20 Sept., 1886	Ditto	7s. per diem.		
	John S. Muir <sup>3</sup>	16 July, 1882	Ditto	220 0 0	26 April, 1880.	
Timekeeper	Saml. Neathway Brown	1 June, 1885	Ditto	135 0 0	30 Dec., 1884.	
<i>Tramways (Locomotive Branch)</i>						
Superintendent of Rolling Stock.	George Downe <sup>4</sup>	15 Mar., 1883	Ditto	550 0 0	30 July, 1877.	
	Thos. Midelton	5 Oct., 1886	Ditto	525 0 0	11 Aug., 1880.	
General Foreman	Henry B. Howe	26 Feb., 1883	Ditto	430 0 0	— Oct., 1864.	
First Clerk	George Macoun	25 June, 1883	Commissioner for Railways	305 0 0	20 Feb., 1879.	
Chief Draftsman	James W. Cayzer <sup>5</sup>	3 Sept., 1884	Secretary for Public Works	340 0 0	22 Nov., 1882.	
Draftsmen	Thomas F. Smith	— May, 1883	Ditto	240 0 0	12 Dec., 1879.	
	Geo. Townsend	15 Dec., 1884	Commissioner for Railways	208 0 0	22 April, 1884.	
	Jas. W. Thomson	1 June, 1881	Ditto	160 0 0	1 June, 1881.	
Record Clerk	Chas. Mullholland	18 Sept., 1883	Ditto	220 0 0	19 Sept., 1880.	
Clerks	Joseph S. Macnab	1 Dec., 1883	Ditto	220 0 0	18 April, 1882.	
	John Rutherford	7 April, 1885	Ditto	185 0 0	7 Jan., 1884.	
	Gregory A. Toohar <sup>6</sup>	4 Sept., 1880	Ditto	170 0 0	4 Sept., 1880.	
		Robert H. Austin	13 Feb., 1883	Ditto	150 0 0	— May, 1881.
		Richard Heydon	21 Sept., 1883	Ditto	105 0 0	21 Sept., 1883.
		Francis Trevillian	9 Mar., 1886	Ditto	90 0 0	1 June, 1884.
		Albert B. Brown	7 Oct., 1884	Secretary for Public Works	330 0 0	1 Nov., 1879.
		Colin F. M'Donald	2 Feb., 1885	Commissioner for Railways	220 0 0	15 Aug., 1883
		Patk. E. Fay	9 April, 1885	Ditto	135 0 0	17 April, 1884
		F. J. Newman	11 Jan., 1886	Ditto	205 0 0	22 May, 1883
<i>At Pitt street Office—</i>						
Running Foreman	John M. Blanchard	22 Nov., 1886	Ditto	155 0 0	22 Nov., 1886	
Clerks	Andrew Hargreaves	17 May, 1883	Ditto	205 0 0	3 June, 1878	
	Albert Bruce	9 Mar., 1886	Ditto	80 0 0	11 Sept., 1881	
<i>Railway Store Branch—</i>						
Superintendent of Stores	A. Richardson	1 Jan., 1883	Governor and Executive Council	490 0 0	27 Aug., 1867.	
<i>Storekeepers—</i>						
Eveleigh	H. Carruthers	1 Jan., 1883	Ditto	340 0 0	1 Dec., 1873.	
Newcastle	H. Fligg	10 April, 1861	Ditto	340 0 0	1 Feb., 1859.	
Randwick	K. J. Dobson	1 June, 1880	Secretary for Public Works	235 0 0	15 June, 1880.	
Goulburn	R. H. Bamford	25 June, 1882	Ditto	215 0 0	14 Oct., 1877.	
Bathurst	Thos. Higgins	1 Jan., 1883	Ditto	215 0 0	1 Dec., 1881.	
<i>Bookkeepers—</i>						
Eveleigh	J. W. Passley	1 Jan., 1883	Ditto	290 0 0	23 Oct., 1876.	
Newcastle	P. Cazneau	1 Mar., 1874	Ditto	250 0 0	1 Sept., 1867.	
Randwick	T. J. Gardiner	1 June, 1883	Ditto	220 0 0	1 June, 1883.	
Goulburn	Henry Tindall	31 Jan., 1884	Commissioner for Railways	180 0 0	1 June, 1883.	
Bathurst	W. H. Beattie	1 Oct., 1884	Ditto	180 0 0	1 June, 1883.	
Clerks	J. P. Dale	26 Nov., 1878	Secretary for Public Works	250 0 0	26 Nov., 1878.	
	W. Chapman	10 Mar., 1879	Ditto	235 0 0	10 Mar., 1879.	
	H. Mortimore	9 Dec., 1878	Ditto	220 0 0	9 Dec., 1878.	
	Charles Handfield	20 June, 1882	Ditto	220 0 0	20 June, 1882.	
	J. V. Mackay	18 Oct., 1881	Ditto	200 0 0	18 Oct., 1881.	
	J. B. Agnew	1 Nov., 1880	Ditto	185 0 0	3 May, 1876.	
	G. Terner	1 Aug., 1875	Ditto	185 0 0	1 Aug., 1875.	
	C. B. Teece	9 Dec., 1879	Ditto	170 0 0	9 Dec., 1879.	
	H. Franck	16 Dec., 1879	Ditto	170 0 0	16 Dec., 1879.	
	J. Baylis	10 July, 1883	Ditto	150 0 0	10 July, 1883.	
	J. D. Birrell	23 July, 1882	Ditto	150 0 0	23 July, 1882.	

<sup>1</sup> Gives security to the amount of £250—allowed £1 for Sundays when on duty.

<sup>2</sup> Gives security to the amount of £100.

<sup>3</sup> Transferred to Railway Locomotive Branch, 8th March.

<sup>4</sup> Gives security to the amount of £100—allowed 15s. 11d. for Sundays.

<sup>5</sup> Transferred to Railways as Assistant Locomotive Engineer, 5th October.

<sup>6</sup> Resigned, 22nd July.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>SECRETARY FOR PUBLIC WORKS—RAILWAYS—continued.</b>					
<i>Railway Store Branch—continued.</i>					
Clerks .....	T. Collman	7 Nov., 1884	Secretary for Public Works .....	150 0 0	15 Mar., 1882.
	W. A. Polack	6 Oct., 1882	Ditto .....	140 0 0	6 Oct., 1882.
	R. Allen	21 May, 1882	Ditto .....	140 0 0	21 May, 1882
	J. Crickard	13 Aug., 1885	Ditto .....	120 0 0	13 Aug., 1885.
	R. F. Dubois	1 July, 1882	Ditto .....	105 0 0	8 Oct., 1881.
	T. H. Webb	7 April, 1875	Ditto .....	90 0 0	7 April, 1885.
	Resigned	30 Nov., 1886			
	A. F. Manton	24 July, 1882	Commissioner for Railways ..	90 0 0	24 July, 1882.
	W. G. Hincks	11 Dec., 1884	Ditto .....	90 0 0	11 Dec., 1884.
	M. Perran	9 Mar., 1883	Ditto .....	90 0 0	9 Mar., 1883.
	A. Higgs	20 May, 1883	Ditto .....	90 0 0	20 May, 1883.
	W. H. Hankin	7 April, 1885	Ditto .....	75 0 0	7 April, 1885.
Junior Clerks .....	H. Hattersley	14 May, 1884	Ditto .....	65 0 0	14 May, 1884.
	W. Anderson	18 Mar., 1884	Ditto .....	65 0 0	18 Mar., 1884.
	Resigned	31 Dec., 1886			
	E. P. Fox	16 Mar., 1885	Ditto .....	52 0 0	16 Mar., 1885.
	W. Dixon	1 Nov., 1885	Ditto .....	52 0 0	1 Nov., 1885.
Stockkeepers .....	R. H. Bingham	1 Dec., 1881	Ditto .....	185 0 0	1 Dec., 1881.
	R. Clinch	8 Oct., 1884	Ditto .....	155 0 0	13 Oct., 1882.
	Resigned	30 June, 1886			
	W. Laughton	16 June, 1886	Ditto .....	155 0 0	15 Nov., 1874
	J. Higginson	3 Oct., 1884	Ditto .....	150 0 0	12 Aug., 1875.
Stock Clerk.....	C. Grahame	25 Sept., 1883	Ditto .....	150 0 0	25 Sept., 1883.
<b>ROADS.</b>					
Commissioner and Engineer-in-Chief.	William Christopher Bennett. <sup>1</sup>	1 Nov., 1862	Governor and Executive Council, by Commission.	1,160 0 0	18 Jan., 1854.*
Assistant Engineer .....	J. A. M'Donald	26 May, 1884	Governor and Executive Council	600 0 0	28 Aug., 1879.
Chief Clerk and Cashier	Patrick Henry Flynn <sup>2</sup>	1 Jan., 1882	Ditto .....	490 0 0	17 July, 1856.
Supervisor of Field and Office	Owen Carroll <sup>2</sup>	1 Jan., 1882	Ditto .....	440 0 0	11 July, 1868.
Accounts and Accountant.	Chas. B. Airey	25 Jan., 1882	Ditto .....	390 0 0	26 July, 1876.
Clerk Trustee Roads	William Henry Payten <sup>3</sup>	1 Jan., 1882	Ditto .....	350 0 0	15 Nov., 1871.
Assistant Accountant ..	Thos. R. Steel <sup>4</sup>	1 Jan., 1882	Ditto .....	340 0 0	22 Feb., 1873.
Clerks .....	Thos. Hiles <sup>3</sup>	1 Jan., 1884	Ditto .....	340 0 0	29 Oct., 1877.
	F. C. Logan	1 May, 1884	Ditto .....	250 0 0	3 Jan., 1884.
	Henry Manning	1 Dec., 1880	Ditto .....	265 0 0	1 July, 1865.
	Marcus B. Power	14 Sept., 1883	Ditto .....	210 0 0	24 June, 1878.
	William Holmes	1 Jan., 1884	Ditto .....	200 0 0	24 June, 1878.
	William Selkirk	1 Jan., 1884	Ditto .....	200 0 0	17 Jan., 1881.
	John Collman	14 Sept., 1883	Ditto .....	185 0 0	1 April, 1876.
	John George Oram	14 July, 1882	Ditto .....	175 0 0	1 Oct., 1874.
	Charles R. Ord	1 Jan., 1883	Ditto .....	175 0 0	29 Mar., 1880.
	Herman Milford <sup>4</sup>	1 Jan., 1883	Ditto .....	175 0 0	6 Jan., 1881.
	Thomas W. Waring	1 Jan., 1883	Secretary for Public Works	190 0 0	9 Feb., 1874.
	Patrick M'Ginley	1 Jan., 1883	Governor and Executive Council	150 0 0	8 Aug., 1879.
	Julius H. Hellman	1 Jan., 1884	Ditto .....	150 0 0	29 June, 1883.
	Duncan Scott	20 Jan., 1885	Ditto .....	150 0 0	20 Jan., 1885.
	Arthur T. Dind	25 Sept., 1882	Ditto .....	100 0 0	25 Sept., 1882.
	Ernest J. Devery	28 Jan., 1885	Secretary for Public Works	100 0 0	28 Jan., 1885.
	G. C. Hood	14 April, 1886	Ditto .....	100 0 0	14 April, 1886.
	James B. Dalton	1 July, 1884	Ditto .....	115 0 0	1 April, 1884.
Draftsmen .....	F. Hammer	1 Oct., 1884	Ditto .....	340 0 0	29 Aug., 1881.
	Percy Allan	1 Oct., 1884	Governor and Executive Council	200 0 0	8 Sept., 1878.
	W. H. Warner	9 July, 1885	Ditto .....	200 0 0	9 July, 1885.
	Robert D. Fitzgerald	1 Oct., 1884	Ditto .....	150 0 0	10 Aug., 1880.
	James H. Eames	1 Oct., 1884	Secretary for Public Works	140 0 0	1 Oct., 1881.
	Francis Keenan	18 July, 1883	Ditto .....	90 0 0	18 July, 1883.
Cadet .....	W. A. Bennett	1 Sept., 1886	Governor and Executive Council	50 0 0	1 Oct., 1885.
	T. W. C. Ward	1 Sept., 1886	Ditto .....	50 0 0	1 Sept., 1886.
	A. H. M'Taggart	25 May, 1886	Secretary for Public Works	50 0 0	25 May, 1886.
	G. Brown	21 June, 1886	Ditto .....	50 0 0	21 June, 1886.
<i>Field Establishment.</i>					
Assistant Engineers .....	Frederick Wells <sup>5</sup>	1 Jan., 1876	Governor and Executive Council	700 0 0	28 Mar., 1859.
	Arthur P. Wood <sup>5</sup>	1 Jan., 1876	Ditto .....	700 0 0	31 July, 1861.
	Edwin Joseph Statham <sup>6</sup>	1 Jan., 1876	Ditto .....	550 0 0	1 Jan., 1860.
	Ernest A. Nardin <sup>5</sup>	1 Oct., 1877	Ditto .....	550 0 0	19 Mar., 1860.
	A. W. Stilwell <sup>2</sup>	18 July, 1884	Ditto .....	550 0 0	24 April, 1876.
Road Superintendents ....	James B. Meldrum <sup>2</sup>	1 Aug., 1886	Ditto .....	440 0 0	29 April, 1863.
	William F. Bundock <sup>2</sup>	18 July, 1884	Ditto .....	440 0 0	10 May, 1863.
	Percy Scarr <sup>2</sup>	15 Oct., 1867	Ditto .....	440 0 0	15 Oct., 1867.
	John Davy Postle <sup>2</sup>	8 Nov., 1882	Ditto .....	440 0 0	1 Sept., 1878.
	John Gordon <sup>2</sup>	13 Nov., 1885	Secretary for Public Works	400 0 0	17 Feb., 1864.*
	John Coleman <sup>2</sup>	1 Oct., 1882	Governor and Executive Council	400 0 0	19 April, 1876.
	E. C. Bowyer Smyth <sup>2</sup>	23 June, 1884	Ditto .....	415 0 0	31 Aug., 1882.
	Adalbert Weber <sup>2</sup>	1 Oct., 1882	Ditto .....	415 0 0	1 Mar., 1855.*
	Peter Doyle <sup>2</sup>	1 April, 1868	Ditto .....	415 0 0	6 May, 1855.

<sup>1</sup> Allowed £100 per annum for equipment, and 30s per day when travelling on duty. Gives security to amount of £1,000. <sup>2</sup> Gives security to amount of £1,000. <sup>3</sup> Gives security to amount of £300. <sup>4</sup> Gives security to amount of £300. <sup>5</sup> Allowed 30s per day when travelling on duty. <sup>6</sup> Allowed 30s per day when travelling on duty. Gives security to amount of £1,000. \* Services not continuous.

NEW SOUTH WALES—1886.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>SECRETARY FOR PUBLIC WORKS—ROADS—continued.</b>							
<i>Field Establishment—continued.</i>							
Road Superintendents	Patrick Murray <sup>1</sup>	22 Jan., 1867	Governor and Executive Council	415	0	0	15 May, 1863.
	Stephen A. Donnelly <sup>1</sup>	20 Feb., 1867	Ditto	415	0	0	20 Feb., 1867.
	Edward G. Cronin <sup>1</sup>	18 July, 1884	Ditto	415	0	0	15 Mar., 1875.
	William J. Hanna <sup>1</sup>	1 July, 1883	Ditto	350	0	0	24 Feb., 1879.
	Robert E. Jones <sup>1</sup>	1 Jan., 1882	Ditto	350	0	0	1 Jan., 1882.
	Edward M. Allman <sup>2</sup>	1 Jan., 1882	Ditto	340	0	0	4 Mar., 1873.
	Alexander Adam <sup>2</sup>	1 May, 1882	Secretary for Public Works	340	0	0	13 July, 1882.
	Thomas P. Davies <sup>2</sup>	18 Aug., 1882	Governor and Executive Council	340	0	0	1 Sept., 1873.
	Frederick M. Baker <sup>2</sup>	8 July, 1884	Ditto	340	0	0	2 April, 1874.
	M. E. Wikner <sup>2</sup>	22 May, 1874	Ditto	340	0	0	22 May, 1874.
	James H. Adams <sup>2</sup>	1 Jan., 1882	Ditto	340	0	0	28 April, 1876.
	Henry Boot <sup>2</sup>	1 Jan., 1882	Ditto	340	0	0	10 Mar., 1877.
	W. Williamson <sup>2</sup>	3 Mar., 1882	Ditto	340	0	0	3 Mar., 1882.
	P. J. Cheffins <sup>2</sup>	1 Jan., 1883	Secretary for Public Works	300	0	0	6 Oct., 1882.
Engineer	P. G. Bruntin	1 Oct., 1884	Governor and Executive Council	300	0	0	21 June, 1884.
Road Superintendents	Edward D. Dyson <sup>1</sup>	18 July, 1884	Ditto	290	0	0	19 Mar., 1874.
	Hugh Miller <sup>1</sup>	1 June, 1878	Ditto	290	0	0	22 Dec., 1874.
	J. Symonds <sup>1</sup>	1 April, 1881	Ditto	290	0	0	12 Mar., 1878.
	J. A. Rossbach <sup>1</sup>	1 Mar., 1879	Ditto	250	0	0	25 Sept., 1874.
	J. V. Bartlett <sup>1</sup>	1 Aug., 1884	Secretary for Public Works	250	0	0	1 Aug., 1884.
	W. A. Smith <sup>1</sup>	1 Nov., 1886	Governor and Executive Council	250	0	0	1 Oct., 1884.
	Alfred H. Martin <sup>1</sup>	18 July, 1884	Ditto	240	0	0	1 July, 1877.
	J. H. Crummer <sup>1</sup>	6 Sept., 1877	Ditto	240	0	0	18 July, 1877.
	James B. Meldrum, jun. <sup>1</sup>	1 April, 1881	Ditto	240	0	0	20 Dec., 1879.
	Robert D. Baylis <sup>1</sup>	18 July, 1884	Ditto	240	0	0	1 Dec., 1880.
	John T. P. Bassett <sup>1</sup>	1 Jan., 1882	Secretary for Public Works	200	0	0	20 Mar., 1877.
	S. M. Cummins <sup>1</sup>	26 Mar., 1886	Ditto	200	0	0	1 Jan., 1882.
	F. G. Hurley <sup>1</sup>	25 Aug., 1882	Ditto	200	0	0	8 June, 1878.
	E. W. Bolton <sup>1</sup>	1 April, 1881	Governor and Executive Council	200	0	0	3 May, 1879.
	Arthur Gracie <sup>1</sup>	1 May, 1882	Secretary for Public Works	200	0	0	16 May, 1877.
	Edward H. Bawden <sup>1</sup>	1 July, 1884	Ditto	200	0	0	22 Jan., 1880.
	John N. Hay <sup>1</sup>	1 July, 1885	Ditto	200	0	0	1 April, 1880.
	O. G. Morton <sup>1</sup>	1 April, 1883	Ditto	200	0	0	16 Oct., 1880.
	George E. Wright <sup>1</sup>	1 Sept., 1884	Ditto	200	0	0	1 Sept., 1881.
	Harley D. Cox <sup>1</sup>	1 June, 1884	Ditto	200	0	0	1 Feb., 1882.
	Charles L. Smith <sup>1</sup>	1 Oct., 1884	Ditto	200	0	0	22 Aug., 1882.
	D. L. Wilson <sup>1</sup>	24 Aug., 1882	Ditto	200	0	0	24 Aug., 1882.
	R. D. M'Pherson <sup>1</sup>	1 July, 1885	Ditto	200	0	0	1 Sept., 1882.
	A. L. Clarke <sup>1</sup>	16 Nov., 1882	Ditto	200	0	0	16 Nov., 1882.
	Alexander Adams <sup>1</sup>	9 April, 1885	Ditto	200	0	0	20 May, 1884.
	Val. J. Blomfield <sup>1</sup>	10 Feb., 1882	Ditto	196	0	0	26 Oct., 1877.
	A. E. Newton <sup>1</sup>	1 Jan., 1882	Governor and Executive Council	196	0	0	1 Jan., 1882.
	W. S. Wells <sup>1</sup>	1 May, 1882	Ditto	176	0	0	1 Sept., 1878.
	R. A. Fraser <sup>1</sup>	10 Oct., 1882	Ditto	176	0	0	1 May, 1880.
Field Cadets	H. O. Moriarty	12 Aug., 1884	Secretary for Public Works	156	0	0	1 Jan., 1881.
	W. H. Rankin	1 July, 1883	Governor and Executive Council	156	0	0	14 Mar., 1882.
	L. A. Tyrrell	1 May, 1884	Secretary for Public Works	156	0	0	1 Aug., 1882.
	W. J. Chisholm	20 May, 1885	Ditto	156	0	0	20 July, 1883.
	F. G. Neilley	1 Dec., 1884	Ditto	156	0	0	7 Aug., 1883.
	G. N. Simpson	10 Jan., 1884	Ditto	156	0	0	24 Aug., 1883.
	H. F. Purdie	9 Sept., 1884	Ditto	156	0	0	23 Oct., 1883.
	T. M. Wood	12 May, 1885	Ditto	156	0	0	12 May, 1885.
	W. B. Nicholson	1 June, 1885	Ditto	156	0	0	1 June, 1885.
	R. Gill	1 July, 1885	Ditto	156	0	0	1 Oct., 1884.
	J. S. A. Taylor	1 Sept., 1886	Ditto	156	0	0	1 Sept., 1886.
Medical Officer	D. A. Munro	14 April, 1886	Ditto	156	0	0	10 Aug., 1885.
	G. T. Hankins	7 May, 1884	Ditto	100	0	0	7 May, 1884.

<sup>1</sup> Gives security to amount of £1,000    <sup>2</sup> Gives security to amount of £500.    Superintendents with salaries of £350 and upwards receive an allowance of £150 per annum each; those under that amount, £125.    Field cadets each receive an allowance of £80 per annum for travelling.    \* Services not continuous.

SEWERAGE DEPARTMENT.

Engineer-in-Chief	William C. Bennett	1 Nov., 1879	Secretary for Public Works	Nil.		18 Jan., 1854.*	
Assistant Engineers	C. H. Olfen-Bagge <sup>1</sup>	31 Dec., 1884	Governor and Executive Council	675	0	0	18 Jan., 1881.
	G. H. Stayton	26 July, 1886	Secretary for Public Works	550	0	0	25 April, 1885.*
	David M'Ordie <sup>1</sup>	31 Dec., 1884	Governor and Executive Council	470	0	0	3 May, 1880.
	John M. Small <sup>1</sup>	31 Dec., 1884	Ditto	420	0	0	20 Aug., 1875.
	James S. Mollison	9 July, 1885	Secretary for Public Works	325	0	0	9 July, 1885.
Surveyors and Draftsmen	Ralph Winder <sup>1</sup>	31 Dec., 1884	Governor and Executive Council	270	0	0	4 Jan., 1884.
	Joseph Davis <sup>1</sup>	31 Dec., 1884	Ditto	255	0	0	27 Aug., 1883.
	W. S. de L. Roberts	31 Dec., 1884	Ditto	255	0	0	1 Oct., 1884.
	Leslie A. B. Wade	31 Dec., 1884	Ditto	255	0	0	16 Oct., 1880.
	Ernest M. de Burgh	30 April, 1885	Secretary for Public Works	235	0	0	30 April, 1885.
	Heinrich Rudolph	31 Dec., 1884	Governor and Executive Council	177	0	0	6 Oct., 1882.
	Wilhelm Baltzer	31 Dec., 1884	Ditto	177	0	0	17 Sept., 1884.
	Geo. C. Badham	31 Dec., 1884	Ditto	177	0	0	1 April, 1883.
Cadet	F. L. Brown	1 Feb., 1886	Secretary for Public Works	50	0	0	1 Feb., 1886.
Chief Clerk and Accountant	F. C. Piper <sup>2</sup>	31 Dec., 1884	Governor and Executive Council	245	0	0	5 Nov., 1879.
Clerk	E. Hungerford <sup>3</sup>	28 Jan., 1885	Ditto	150	0	0	12 Sept., 1882.

<sup>1</sup> Receives £55 per annum travelling allowance.    <sup>2</sup> Gives security to amount of £500.    <sup>3</sup> Gives security to amount of £300.    \* Services not continuous.

Office.	Name.	Date of Appointment.	By whom appointed, and under what instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>SECRETARY FOR PUBLIC WORKS—COLONIAL ARCHITECT—continued.</b>					
<b>COLONIAL ARCHITECT.</b>					
Colonial Architect .....	James Barnet <sup>1</sup> .....	1 Jan., 1865	Governor and Executive Council	1,160 0 0	4 Aug., 1860.
1st Clerk of Works .....	William Coles <sup>2</sup> .....	26 Oct., 1857	Ditto .....	700 0 0	1 Oct., 1854.
Clerks of Works .....	Mortimer Wm. Lewis .....	16 Nov., 1843 <sup>3</sup>	Governor .....	600 0 0	1 Oct., 1837, to 15 Nov., 1839. 16 Nov., 1843.
	Edmund S. V. Spencer .....	1 Sept., 1872	Governor and Executive Council	500 0 0	4 Jan., 1867.
	Edwin Colley .....	1 Jan., 1874	Ditto .....	490 0 0	23 April, 1867.
	Edward Rumsey .....	1 Jan., 1877	Governor and Executive Council	465 0 0	1 Mar., 1873.
	Alfred G. Edwards .....	1 Jan., 1877	Ditto .....	415 0 0	28 Jan., 1864.
	William Roberts .....	1 Aug., 1881	Ditto .....	415 0 0	1 Mar., 1867.
	Henry H. Purkis .....	1 Jan., 1880	Ditto .....	390 0 0	1 Nov., 1870.
	James Peattie .....	1 Jan., 1874	Ditto .....	350 0 0	15 Sept., 1865.
1st Foreman of Works .....	James Kay .....	1 Jan., 1874	Ditto .....	350 0 0	10 Nov., 1864.
Foremen of Works .....	James M'Skimming .....	1 Jan., 1880	Ditto .....	340 0 0	23 June, 1865.
	John W. Wills .....	1 Jan., 1882	Ditto .....	315 0 0	1 Jan., 1876.
	William B. Simpson .....	1 April, 1883	Ditto .....	290 0 0	1 Feb., 1879.
Chief Draftsman and Instructor of Cadets.	Alfred Cook .....	1 Jan., 1874	Ditto .....	490 0 0	24 April, 1854.
Draftsmen .....	Louis Robertson .....	1 Jan., 1868	Ditto .....	415 0 0	21 June, 1860.
	A. R. Brown .....	1 June, 1884	Ditto .....	350 0 0	1 Sept., 1877.
	John Doherty .....	1 Jan., 1879	Ditto .....	290 0 0	22 June, 1874.
	Robert B. Falconer .....	14 Dec., 1875	Ditto .....	265 0 0	14 Dec., 1875.
	Edwin Burns .....	19 Mar., 1877	Ditto .....	240 0 0	19 Mar., 1877.
	Thomas Barnet .....	1 April, 1882	Ditto .....	200 0 0	1 April, 1882.
	John Dunlop .....	1 June, 1882	Ditto .....	140 0 0	1 June, 1882.
	Malcolm MacTaggart .....	21 May, 1883	Ditto .....	115 0 0	21 May, 1883.
	John Moore .....	25 July, 1883	Ditto .....	102 0 0	25 July, 1883.
	William Boyce .....	1 Oct., 1884	Ditto .....	92 0 0	1 Oct., 1884.
Chief Clerk .....	James M'Shane <sup>4</sup> .....	20 Sept., 1878	Ditto .....	550 0 0	18 June, 1859.
Clerks .....	John Thomas Neale .....	1 Sept., 1864	Ditto .....	415 0 0	9 Mar., 1861.
	George Bagot Stack .....	19 May, 1865	Ditto .....	350 0 0	14 Jan., 1863.
	James Forsythe .....	1 Jan., 1871	Ditto .....	340 0 0	27 Feb., 1869.
	Lyon Jacob Marks .....	1 Sept., 1876	Ditto .....	315 0 0	— Feb., 1870.*
	William E. Ellard .....	1 July, 1878	Ditto .....	205 0 0	1 July, 1878.
	Adolphus M. Clapin <sup>2</sup> .....	1 Aug., 1885	Ditto .....	240 0 0	12 Sept., 1879.
	Richard J. Howell .....	21 Aug., 1883	Ditto .....	220 0 0	21 Aug., 1883.
	William J. Mackey .....	4 Sept., 1885	Ditto .....	165 0 0	20 Aug., 1883.
	Vacant .....			100 0 0	
Messenger .....	Louis Dettmann .....	11 Mar., 1876	Colonial Architect .....	150 0 0	11 Mar., 1876.
Boatman .....	Henry Hayes .....	10 Oct., 1881	Ditto .....	108 0 0	10 Oct., 1881.
Officekeeper .....	Eva Dettmann <sup>5</sup> .....	1 Aug., 1884	Ditto .....	60 0 0	1 Aug., 1884.

<sup>1</sup> Forage allowance for one horse. Gives security to the amount of £1,000. <sup>2</sup> Forage allowance for a horse. <sup>3</sup> From this date to 30 June, 1859, the salary was charged to the votes for works on which employed. <sup>4</sup> Gives security to the amount of £500. <sup>5</sup> Allowed quarters, fuel, and light. \* Services not continuous.

## HARBOURS AND RIVERS NAVIGATION.

### ENGINEER'S DEPARTMENT.

Engineer-in-Chief .....	Edward Orpen Moriarty <sup>1</sup> .....	10 Oct., 1858	Governor and Executive Council	1,200 0 0	1 May, 1849.
Principal Assistant Engineer	Cecil West Darley <sup>2</sup> .....	5 July, 1881	Ditto .....	750 0 0	16 July, 1867.
Chief Draftsman .....	Henry Davies .....	12 April, 1880	Ditto .....	490 0 0	12 Aug., 1873.*
Assistant Engineer .....	Timothy A. Coghlan <sup>3</sup> .....	1 Jan., 1884	Ditto .....	440 0 0	1 Oct., 1870.
Draftsmen .....	George A. Tillet .....	1 Nov., 1874	Ditto .....	390 0 0	8 Sept., 1863.*
Chief Clerk and Accountant	Joseph Barling <sup>4</sup> .....	21 Aug., 1871	Ditto .....	550 0 0	1 Aug., 1860.
Examiner of Accounts .....	James Conley <sup>5</sup> .....	20 Jan., 1875	Ditto .....	390 0 0	20 Jan., 1875.
Clerk of Records .....	John Portus .....	23 Nov., 1870	Ditto .....	340 0 0	23 Nov., 1870.
Engineering Assistants .....	Henry B. Charles <sup>6</sup> .....	1 June, 1881	Ditto .....	140 0 0	1 June, 1881.
	George D. MacCabe <sup>6</sup> .....	1 June, 1881	Ditto .....	92 0 0	1 June, 1881.
	William D. Little <sup>6</sup> .....	1 June, 1881	Ditto .....	92 0 0	1 June, 1881.
Messenger (1) .....	.....	.....	Engineer-in-Chief .....	110 0 0	.....
Assistant Engineers—				£25 allowance	
Hunter River District...	Robert R. P. Hickson <sup>7</sup> .....	5 July, 1881	Governor and Executive Council	650 0 0	5 July, 1881.
South Coast do .....	Merion H. Moriarty <sup>3</sup> .....	1 Oct., 1874	Ditto .....	600 0 0	1 Aug., 1860.
	Alfred Williams <sup>8</sup> .....	10 Aug., 1874	Ditto .....	600 0 0	10 Aug., 1874.
District Engineers.....	Robert H. Ryan <sup>9</sup> .....	17 May, 1881	Secretary for Public Works .....	600 0 0	17 May, 1881.
	Thomas W. Keele <sup>10</sup> .....	15 Sept., 1882	Ditto .....	440 0 0	9 Mar., 1871.
	David Howison <sup>11</sup> .....	15 Sept., 1882	Ditto .....	400 0 0	3 June, 1859.*

<sup>1</sup> Allowed £100 per year for horse equipment. Gives £1,000 security. <sup>2</sup> Allowed £50 per annum in lieu of quarters, and £100 per annum for horse equipment. <sup>3</sup> Resigned, 4 July. <sup>4</sup> Gives £500 security. <sup>5</sup> Gives £200 security. <sup>6</sup> Allowed 10s. per diem travelling allowance. <sup>7</sup> Allowed £50 per annum in lieu of quarters, £100 per annum forage allowance. Gives £1,000 security. <sup>8</sup> Allowed £50 in lieu of quarters. Gives £500 security. <sup>9</sup> Allowed quarters and £52 per annum forage allowance. Gives £200 security. <sup>10</sup> Allowed £50 per annum in lieu of quarters. Gives £150 security. <sup>11</sup> Allowed £50 in lieu of quarters, 6/- per day forage allowance. Gives £150 security. \* Services not continuous.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument	Annual Salary	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>SECRETARY FOR PUBLIC WORKS—HARBOURS AND RIVER NAVIGATION—continued.</b>					
<b>ENGINEER'S DEPARTMENT—continued</b>					
Resident Engineers .....	J. B Mackenzie <sup>1</sup> .....	17 Oct., 1881	Secretary for Public Works ...	500 0 0	17 Oct., 1881.
	Charles S. Brownrigg <sup>2</sup> ...	28 July, 1877	Ditto .....	350 0 0	24 July, 1876.
	Henry D. Walsh <sup>3</sup> .....	10 Feb., 1883	Ditto .....	25s per diem	14 Jan., 1878.
	H. R Carleton <sup>4</sup> .....	10 Feb., 1883	Ditto .....	25s. "	20 Feb., 1879.
	H. J. Handley <sup>5</sup> .....	8 May, 1882	Ditto .....	300 0 0	8 May, 1882.
	Harold A. Blomfield <sup>6</sup> .....	1 July, 1884	Ditto .....	300 0 0	4 Jan., 1878.
	David F. Campbell <sup>7</sup> .....	20 Aug., 1884	Ditto .....	300 0 0	27 Jan., 1876.
	William E. Kemp <sup>8</sup> .....	7 June, 1884	Ditto .....	300 0 0	7 June, 1875.
	Robert Le Poer Trench <sup>9</sup> .....	5 Aug., 1884	Ditto .....	300 0 0	20 Oct., 1881.
	E. W. Young .....	3 June, 1886	Ditto .....	500 0 0	3 June, 1886.
	James W. Grimshaw <sup>10</sup> .....	1 June, 1882	Ditto .....	300 0 0	14 Dec., 1880
Surveyors .....	Joshua P. Josephson .....	6 May, 1868	Ditto .....	365 0 0	6 May, 1868.
	Richard F. Stack .....	25 July, 1877	Ditto .....	30s. per diem	1 Jan., 1874.*
	Edw B Price .....	2 Dec., 1885	Ditto .....	20s. "	2 Dec., 1885.
	G H. Halligan .....	4 Jan., 1878	Ditto .....	300 0 0	23 Dec., 1872.
Marine Surveyor .....	Frederick Howard, R.N. <sup>11</sup>	17 May, 1881	Governor and Executive Council	400 0 0	17 May, 1881.
Assistant Marine Surveyor	Phillip Francis .....	22 Jan., 1879	Secretary for Public Works ...	20s. per diem	22 Jan., 1879.
"	F. Howard .....	29 Sept., 1884	Ditto .....	15s per diem	29 Sept., 1884.
Draftsman	H. P R Copeland <sup>12</sup> .....	1 June, 1882	Ditto .....	260 0 0	1 July, 1878.
Field Assistants .....	John C. Rolleston <sup>10</sup> .....	1 June, 1882	Ditto .....	250 0 0	9 Sept., 1878.*
	Albert F Jacob <sup>13</sup> .....	1 Mar., 1883	Ditto .....	260 0 0	15 June, 1880.
	David G. Brodie <sup>10</sup> .....	1 June, 1882	Ditto .....	260 0 0	24 June, 1879.
	Alfred H. Clapin <sup>14</sup> .....	1 Jan., 1883	Ditto .....	12s. per diem	30 Dec., 1877.
Assistant Engineer ...	A. W. H. Anderson .....	1 Apl., 1884	Ditto .....	250 0 0	3 Jan., 1878.*
Draftsmen .....	John G. Lang .....	13 Nov., 1872	Ditto .....	340 0 0	13 Nov., 1872.
	Ashley E. M. Moore .....	1 July, 1874	Ditto .....	300 0 0	1 July, 1874.
	Theodore Pridham .....	24 Feb., 1879	Ditto .....	340 0 0	24 Feb., 1879.
	John Jasper Stone .....	9 June, 1881	Ditto .....	350 0 0	9 June, 1881.
	Henry B. Dawson .....	11 Nov., 1879	Ditto .....	300 0 0	11 Nov., 1879.
	Frank Sutchffe .....	17 Aug., 1881	Ditto .....	275 0 0	24 Oct., 1880.
	James Orr .....	20 Dec., 1881	Ditto .....	275 0 0	20 Dec., 1881.
	W. E H. Nicolle .....	31 Mar., 1882	Ditto .....	275 0 0	6 Sept., 1880.
	E A Broad .....	20 Feb., 1884	Ditto .....	250 0 0	20 Oct., 1879.*
	William Rossbach .....	1 June, 1882	Ditto .....	14s. per diem	4 July, 1877.
	Albert Wellisch .....	23 June, 1880	Ditto .....	250 0 0	23 June, 1880.
	J. Marshall .....	20 Mar., 1882	Ditto .....	250 0 0	20 Mar., 1882.
	Phillip D. Napier .....	1 July, 1881	Ditto .....	200 0 0	1 July, 1881.
	F. W. Rose .....	16 Jan., 1884	Ditto .....	12s. per diem	15 Dec., 1877.
	Andrew Fitzgerald .....	1 Jan., 1881	Ditto .....	12s. "	1 Jan., 1881.
	F. W. Clarke .....	5 Aug., 1884	Ditto .....	185 0 0	7 Sept., 1877.
	J. M. Bruce .....	3 Sept., 1880	Ditto .....	10s. per diem	3 Sept., 1880.
	Phillip J. Makinson .....	1 Oct., 1884	Ditto .....	150 0 0	7 July, 1877.
	Thomas E. Burrowes .....	9 Aug., 1877	Ditto .....	150 0 0	9 Aug., 1877.
	T. McCulloch .....	13 May, 1885	Ditto .....	250 0 0	13 May, 1885.
	A. L. Lukin .....	23 Sept., 1886	Ditto .....	15s. per diem	3 May, 1886.
	R. Owen Friend .....	23 Aug., 1886	Ditto .....	100 0 0	1 June, 1881.*
	A. E. Hezlett .....	17 June, 1878	Ditto .....	150 0 0	17 June, 1878.
	George Lane .....	14 Jan., 1879	Ditto .....	150 0 0	14 Jan., 1879.
	Frederick T. Fischer <sup>15</sup> .....	1 July, 1879	Ditto .....	150 0 0	1 July, 1879.
Cadets .....	Ernest S. Rundle <sup>16</sup> .....	1 Dec., 1881	Ditto .....	100 0 0	1 Dec., 1881.
	William James Goodsir .....	1 Dec., 1881	Ditto .....	100 0 0	1 Dec., 1881.
	Albert Edward Flavelle .....	1 Dec., 1881	Ditto .....	100 0 0	1 Dec., 1881.
	Stanley Eaton .....	1 Dec., 1881	Ditto .....	100 0 0	1 Dec., 1881.
	Herbert Skinner <sup>17</sup> .....	11 July, 1881	Ditto .....	100 0 0	11 July, 1881.
	Alfred Brooks <sup>18</sup> .....	27 July, 1883	Ditto .....	52 0 0	27 July, 1883.
	H. L. Walters .....	1 Aug., 1883	Ditto .....	75 0 0	1 Aug., 1883.
	A. D. Moriarty .....	1 Nov., 1883	Ditto .....	52 0 0	1 Nov., 1883.
	Claude Paton <sup>19</sup> .....	5 Aug., 1884	Ditto .....	52 0 0	5 Aug., 1884.
Assistant Accountant and Cashier.	Samuel Steel <sup>20</sup> .....	1 June, 1882	Governor and Executive Council	440 0 0	15 Jan., 1870.
Clerks .....	Timothy James Cremen <sup>21</sup>	1 Jan., 1882	Secretary for Public Works ....	315 0 0	5 Nov., 1877.
	Stephen Grange Rabone	19 June, 1878	Ditto .....	275 0 0	19 June, 1878.
	John P. Wyhe .....	2 Sept., 1878	Ditto .....	275 0 0	2 Sept., 1878.
	William Kelsey Oatley	1 Jan., 1873	Ditto .....	250 0 0	1 Jan., 1873.
	Reginald Owen Cummings	10 Sept., 1879	Ditto .....	250 0 0	10 Sept., 1879.
	Henry H Leigh Berthon <sup>21</sup>	16 Nov., 1874	Ditto .....	225 0 0	16 Nov., 1874.
	Arthur F. Tunks .....	2 Jan., 1877	Ditto .....	225 0 0	2 Jan., 1877.
	Henry Havelock Vidal .....	31 July, 1877	Ditto .....	225 0 0	31 July, 1877.
	Frederick Ashley Thorpe <sup>21</sup>	20 June, 1878	Ditto .....	225 0 0	20 June, 1878.
	James C. Pairman .....	4 Feb., 1882	Ditto .....	175 0 0	4 Feb., 1882.
	Michael J. Dalton .....	12 May, 1882	Ditto .....	150 0 0	9 April, 1877.
	Henry H. Cunneen .....	14 May, 1884	Ditto .....	8s per diem	1 June, 1882.
	Thomas Frederic Rossbach	1 July, 1881	Ditto .....	125 0 0	1 July, 1881.
	A. J. O Thompson .....	27 May, 1884	Engineer in-Chief .....	7s. per diem	27 May, 1884.
	Nicholas Jones .....	2 Oct., 1882	Secretary for Public Works ...	75 0 0	2 Oct., 1882.
Timekeeper, Prospect Reservoir	Thomas W. Lackey <sup>22</sup> .....	21 May, 1880	Ditto .....	20s. per diem	25 June, 1875.
Clerk to District Engineer .	Thomas H Bradley .....	25 Jan., 1881	Ditto .....	13s. "	25 Jan., 1881.
Custodian of Plans .....	John Bibb .....	20 Aug., 1868	Ditto .....	250 0 0	20 Aug., 1868.

<sup>1</sup> Gives security £300; resigned, 26 May. <sup>2</sup> Allowed £50 in lieu of quarters, 3s per day forage allowance. <sup>3</sup> Allowed quarters, £50 per annum forage allowance. <sup>4</sup> Allowed quarters. <sup>5</sup> Allowed 3s per day forage allowance, gives £300 security. <sup>6</sup> Allowed £50 per annum for quarters, and 3s per diem forage allowance, gives £150 security. <sup>7</sup> Allowed £50 per annum in lieu of quarters. <sup>8</sup> Allowed £1 per week forage. <sup>9</sup> Allowed 3s per diem forage, gives £150 security. <sup>10</sup> Allowed 3s per diem forage allowance. <sup>11</sup> Allowed £1 per diem travelling allowance, gives £200 security. <sup>12</sup> Allowed 6s per diem field allowance. <sup>13</sup> Allowed 3s per diem forage, and 3s per diem camp allowance. <sup>14</sup> Resigned, 30 June. <sup>15</sup> Deceased, 24 November. <sup>16</sup> Resigned, 31 March. <sup>17</sup> Allowed 5s per diem gauging temporary water supply. <sup>18</sup> Allowed 10s per diem travelling allowance. <sup>19</sup> Resigned, 30 June. <sup>20</sup> Gives £500 security. <sup>21</sup> Gives £200 security. <sup>22</sup> Allowed quarters. \* Services not continuous.



Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>SECRETARY FOR PUBLIC WORKS—HARBOURS AND RIVER NAVIGATION—continued.</b>					
<b>ENGINEER'S DEPARTMENT—continued.</b>					
Clarence River— In charge of Works.....	Mordaunt L. Maclean <sup>1</sup> ...	5 Aug., 1881	Governor and Executive Council	365 0 0	1 Jan., 1875.
Weigh Clerk, North B. Water	Edward W. Blakeney <sup>2</sup> ...	9 Sept., 1875	Engineer-in-Chief .....	15s. per diem	9 May, 1868.
Do. South do.	A. H. Pegus <sup>2</sup> .....	26 Aug., 1882	Ditto .....	15s. ,,	3 May, 1864.
Darling River— Superintendent .....	James M. Byrnes <sup>4</sup> .....	8 Aug., 1866	Secretary for Public Works ...	20s. ,,	8 May, 1866.
Murrumbidgee River— Superintendent .....	T. M. Perrott <sup>4</sup> .....	3 Feb., 1883	Ditto .....	20s. ,,	1 July, 1873.*
Timekeeper .....	William Tallentire <sup>2</sup> .....	.....	Engineer-in-Chief .....	14s. ,,	.....
Trial Bay— In charge of Works .....	D. S. Kirkwood <sup>4</sup> .....	5 June, 1883	Governor and Executive Council	400 0 0	1 Nov., 1864.
Superintendents of Works	E. M. Geary <sup>2</sup> .....	19 July, 1880	Secretary for Public Works .....	20s. per diem	19 July, 1880.
	William Davies <sup>5</sup> .....	1 Nov., 1875	Engineer-in-Chief .....	20s. ,,	9 Aug., 1859.
Hunter River— Clerk to Assistant Engineer.	Alexander J. Hunter <sup>4</sup> .....	7 Feb., 1882	Secretary for Public Works.....	15s. ,,	7 Feb., 1882.
Lake Macquarie— Weigh Clerk.....	James Sutton <sup>2</sup> .....	10 Feb., 1882	Ditto .....	15s. ,,	10 Feb., 1882.
Clarence River— Clerk and Timekeeper...	Joseph W. Hayes <sup>3</sup> .....	1 Aug., 1875	Ditto .....	15s. ,,	1 Aug., 1875.
South Coast— Clerk to Assistant Engineer.	A. Macgillycuddy <sup>6</sup> .....	2 Nov., 1880	Ditto .....	15s. ,,	2 Nov., 1880.
Register of Gauges— Nepean and Cataract Rivers.	H. R. Labatt <sup>7</sup> .....	14 Dec., 1875	Governor and Executive Council	104 0 0	26 Oct., 1841.
Glebe Island Bridge— Overseer (1) .....	.....	.....	Secretary for Public Works .....	156 0 0	.....
Callan Park Reclamation— Timekeeper (1) .....	.....	.....	Ditto .....	15s. per diem	.....
Assistant Messenger (1)	.....	.....	Ditto .....	75 0 0	.....
Officekeeper (1) <sup>10</sup> .....	.....	.....	Engineer-in-Chief .....	52 0 0	.....
Fitz Roy Dry Dock— Shipwright Superintendent.	Samuel Hayes <sup>8</sup> .....	6 May, 1872	Governor and Executive Council	390 0 0	6 May, 1872.
Engineer do.	James Hoey <sup>9</sup> .....	15 Dec., 1871	Ditto .....	390 0 0	26 Mar., 1868.
Engineer Mechanic .....	John Doran <sup>10</sup> .....	15 July, 1861	Ditto .....	230 0 0	15 July, 1861.
Fireman (1) .....	.....	.....	Secretary for Public Works .....	125 0 0	.....
Watchman (1) .....	.....	.....	Engineer-in-Chief .....	115 0 0	.....
Store and Time Keeper	William F. Lloyd <sup>11</sup> .....	14 Mar., 1873	Secretary for Public Works .....	290 0 0	14 Mar., 1873.
Assistant Storekeeper ...	Walter W. Hayward <sup>2</sup> ...	1 July, 1875	Ditto .....	240 0 0	1 July, 1875.
Clerk .....	Francis J. Fuller <sup>12</sup> .....	29 Jan., 1881	Engineer-in-Chief .....	242 0 0	29 Mar., 1878.*
Assistant Timekeeper ...	John Delargy <sup>13</sup> .....	9 Oct., 1874	Ditto .....	181 0 0	9 Oct., 1874.
Storeman .....	David Goggin <sup>10</sup> .....	2 Aug., 1875	Ditto .....	197 0 0	1 Dec., 1862.*
Launch "Eta"— Master .....	Edward Beeson .....	23 Sept., 1882	Secretary for Public Works.....	144 0 0	20 Nov., 1876.
Driver .....	Geo. Rees .....	1 Jan., 1885	Ditto .....	144 0 0	1 Mar., 1877.
Inspector of Dredges ...	Alex. B. Portus <sup>3</sup> .....	28 April, 1880	Governor and Executive Council	480 0 0	1 Oct., 1865.
<b>DREDGE "ALPHA."</b>					
Engineer (1) .....	.....	.....	.....	0 12 1	per diem.
Labourers (3).....	.....	.....	.....	0 7 8	" each.
Cook (1) .....	.....	.....	.....	0 7 8	"
Fireman (1) .....	.....	.....	.....	132 0 0	per annum.
<b>STEAM DREDGE "ARCHIMEDES."</b>					
Master and Chief Engineer	W. C. Bennett <sup>3</sup> .....	5 June, 1883	Governor and Executive Council	322 10 0	14 Oct., 1862.
	succeeded by David Lawson <sup>3</sup> .....	23 Nov., 1886	Ditto .....	300 0 0	14 Aug., 1883.
Mate (1).....	.....	.....	Engineer-in-Chief .....	171 12 0	.....
Coxswains (2).....	.....	.....	Ditto .....	132 0 0	each.
Seamen (2) .....	.....	.....	Ditto .....	114 8 0	"
Engineer (1) .....	.....	.....	Ditto .....	158 8 0	.....
Carpenter (1) .....	.....	.....	Ditto .....	158 8 0	.....
Fireman (1) .....	.....	.....	Ditto .....	132 0 0	.....
Blacksmith (1) .....	.....	.....	Ditto .....	158 8 0	.....
Striker (1) .....	.....	.....	Ditto .....	114 8 0	.....
Cook (1) .....	.....	.....	Ditto .....	114 8 0	.....
Watchman (1) .....	.....	.....	Ditto .....	114 8 0	.....
Boy (1) .....	.....	.....	Ditto .....	82 10 0	.....
Tug "Cyclops"— Master (1) .....	.....	.....	Ditto .....	184 16 0	.....
Seaman (1) .....	.....	.....	Ditto .....	114 8 0	.....
Engineer (1).....	.....	.....	Ditto .....	198 0 0	.....
Fireman (1) .....	.....	.....	Ditto .....	132 0 0	.....
Boy (1) .....	.....	.....	Ditto .....	82 10 0	.....
Do (1).....	.....	.....	Ditto .....	55 0 0	.....
<b>DREDGE "BETA."</b>					
Master .....	R. Macgillycuddy <sup>2</sup> .....	1 Nov., 1884	Engineer-in-Chief .....	245 0 0	11 May, 1875.
Fireman & Engine Driver (1)	.....	.....	Ditto .....	145 4 0	.....
Seamen (3).....	.....	.....	Ditto .....	114 8 0	each.

<sup>1</sup> Allowed quarters. Gives £150 security. <sup>2</sup> Gives £200 security. <sup>3</sup> Gives £300 security. <sup>4</sup> Gives £500 security. <sup>5</sup> Deceased—7 May.  
<sup>6</sup> Gives £150 security. <sup>7</sup> Allowed £10 per year for forage. <sup>8</sup> Allowed quarters and fuel; gives £300 security. <sup>9</sup> Allowed £50 in lieu of quarters.  
Gives £300 security. <sup>10</sup> Allowed quarters and fuel. <sup>11</sup> Allowed quarters and fuel. Gives £250 security. <sup>12</sup> Allowed quarters and fuel. Gives £150 security.  
<sup>13</sup> Gives £100 security. \* Services not continuous.

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>SECRETARY FOR PUBLIC WORKS—HARBOURS AND RIVER NAVIGATION—continued.</b>					
<b>DREDGE "GAMMA."</b>					
Master and Engineer	John Fitch <sup>1</sup>	18 Jan., 1882	Secretary for Public Works	257 12 0	— Nov., 1858.
Fireman (1)			Engineer-in-Chief	132 0 0	
Seamen (3)			Ditto	114 8 0	each.
<b>STEAM DREDGE "CHARON."</b>					
Master and Chief Engineer	Henry Orr <sup>1</sup>	3 Jan., 1881	Governor and Executive Council	322 10 0	18 May, 1868.
Mate (1)			Engineer-in-Chief	171 12 0	
Coxswains (2)			Ditto	132 0 0	each.
Seamen (3)			Ditto	114 8 0	"
Engineer (1)			Ditto	158 8 0	"
Fireman (1)			Ditto	132 0 0	"
Watchman (1)			Ditto	114 8 0	"
Boy (1)			Ditto	82 10 0	"
Cook (1)			Ditto	114 8 0	"
Tug "Orestes"—					
Master (1)			Ditto	237 12 0	
Engineer (1)			Ditto	237 12 0	
Firemen (2)			Ditto	132 0 0	each.
Seamen (2)			Ditto	114 8 0	"
Cook (1)			Ditto	96 0 0	"
Tug "Scylla"—					
Master (1)			Ditto	158 8 0	
Engineer (1)			Ditto	158 8 0	
<b>STEAM DREDGE "CLARENCE."</b>					
Master and Chief Engineer	Robert Steel <sup>1</sup>	24 Jan., 1884	Governor and Executive Council	322 10 0	15 Oct., 1881.
Mate (1)			Engineer-in-Chief	171 12 0	
Coxswains (2)			Ditto	132 0 0	each.
Seamen (3)			Ditto	114 8 0	"
Engineer (1)			Ditto	158 8 0	"
Fireman (1)			Ditto	132 0 0	"
Blacksmith (1)			Ditto	184 16 0	"
Striker (1)			Ditto	132 0 0	"
Carpenter (1)			Ditto	158 8 0	"
Brakesman (1)			Ditto	114 8 0	"
Cook (1)			Ditto	114 8 0	"
Boy (1)			Ditto	66 0 0	"
Boilermaker's & Engineer's Assistant.			Ditto	132 0 0	"
Tug "Dione"—					
Master (1)			Ditto	211 4 0	
Seamen (2)			Ditto	114 8 0	each.
Engineer (1)			Ditto	211 4 0	
Fireman (1)			Ditto	132 0 0	
Boy (1)			Ditto	82 10 0	
<b>STEAM DREDGE "FITZ ROY."</b>					
Master and Chief Engineer	John Hamilton <sup>1</sup>	8 Mar., 1881	Governor and Executive Council	322 10 0	8 Mar., 1881.
Mate (1)			Engineer-in-Chief	171 12 0	
Coxswain (1)			Ditto	132 0 0	
Seamen (2)			Ditto	114 8 0	each.
Engineer (1)			Ditto	158 8 0	
Fireman (1)			Ditto	132 0 0	
Blacksmith (1)			Ditto	171 12 0	
Striker (1)			Ditto	114 8 0	
Carpenter (1)			Ditto	158 8 0	
Cook (1)			Ditto	114 8 0	
Boy (1)			Ditto	55 0 0	
Tug "Hector"—					
Master (1)			Ditto	184 16 0	
Engineer (1)			Ditto	158 8 0	
Fireman (1)			Ditto	132 0 0	
Seaman (1)			Ditto	114 8 0	
<b>STEAM DREDGE "HERCULES."</b>					
Master and Chief Engineer	Alexander Halkett <sup>1</sup>	23 Sept., 1872	Governor and Executive Council	350 0 0	23 Sept., 1872.
Mate (1)			Engineer-in-Chief	171 12 0	
Engineer (1)			Ditto	158 8 0	
Carpenter (1)			Ditto	158 8 0	
Fireman (1)			Ditto	132 0 0	
Coxswains (2)			Ditto	132 0 0	each.
Seamen (5)			Ditto	114 8 0	"
Cook (1)			Ditto	114 8 0	"
Watchman (1)			Ditto	114 8 0	"
Tug "Ceres"—					
Master (1)			Ditto	237 12 0	
Engineer (1)			Ditto	237 12 0	
Firemen (2)			Ditto	132 0 0	"
Seamen (2)			Ditto	114 8 0	"
Cook (1)			Ditto	96 0 0	"
Tug "Neptune"—					
Master (1)			Ditto	250 16 0	
Engineer (1)			Ditto	264 0 0	
Fireman (2)			Ditto	132 0 0	"
Seamen (3)			Ditto	114 8 0	"
Cook and Seaman (1)			Ditto	114 8 0	"

<sup>1</sup> Gives security to the amount of £300.

Office.	Name.	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government
<b>SECRETARY FOR PUBLIC WORKS—HARBOURS AND RIVER NAVIGATION—continued.</b>					
<b>STEAM DREDGE "HUNTER"</b>					
Master and Chief Engineer	Joseph Mather <sup>1</sup>	22 Sept., 1874	Governor and Executive Council	377 10 0	22 Sept., 1874.
Mate (1)			Engineer-in-Chief	184 16 0	
Coxswains (2)			Ditto	132 0 0	each.
Seamen (2)			Ditto	114 8 0	"
Engineer (1)			Ditto	171 12 0	
Fireman (1)			Ditto	158 8 0	
Blacksmith (1)			Ditto	184 16 0	
Striker (1)			Ditto	132 0 0	
Carpenters (2)			Ditto	158 8 0	"
Brakesmen (2)			Ditto	114 8 0	"
Cook (1)			Ditto	114 8 0	
Watchman (1)			Ditto	114 8 0	
Boy (1)			Ditto	55 0 0	
<b>STEAM DREDGE "MINOS"</b>					
Master and Chief Engineer	John Mather <sup>1</sup>	— April, 1882	Governor and Executive Council	322 10 0	22 Sept., 1874.
Mate (1)			Engineer-in-Chief	171 12 0	
Engineman (1)			Ditto	158 8 0	
Carpenter (1)			Ditto	158 8 0	
Fireman (1)			Ditto	132 0 0	
Blacksmith (1)			Ditto	158 0 0	
Coxswain (1)			Ditto	132 0 0	
Seamen (3)			Ditto	114 8 0	each.
Boy (1)			Ditto	66 0 0	
Cook (1)			Ditto	114 8 0	
Tug "Achilles"—					
Master (1)			Ditto	211 4 0	
Engineer (1)			Ditto	211 4 0	
Firemen (1)			Ditto	132 0 0	
Seaman (1)			Ditto	114 8 0	
Boy (1)			Ditto	55 0 0	
Tug "Pearl"—					
Master (1)			Ditto	184 16 0	
Engineer (1)			Ditto	184 16 0	
Fireman (1)			Ditto	132 0 0	
Seaman (1)			Ditto	114 8 0	
Boy (1)			Ditto	55 0 0	
<b>STEAM DREDGE "NEWCASTLE"</b>					
Master and Chief Engineer	James Rorison <sup>1</sup>	1 May, 1870	Governor and Executive Council	377 10 0	1 May, 1870.
Mate (1)			Engineer-in-Chief	184 16 0	
Second Mate (1)			Ditto	158 8 0	
Coxswains (2)			Ditto	132 0 0	each.
Seamen (2)			Ditto	114 8 0	"
Engineer (1)			Ditto	171 12 0	
Fireman (1)			Ditto	158 8 0	
Blacksmith (1)			Ditto	184 16 0	
Strikers (2)			Ditto	132 0 0	"
Carpenter (1)			Ditto	158 8 0	
Painter (1)			Ditto	145 4 0	
Winchman (1)			Ditto	132 0 0	
Brakesmen (2)			Ditto	114 8 0	"
Oiler (1)			Ditto	114 8 0	
Cook (1)			Ditto	114 8 0	
Watchman (1)			Ditto	114 8 0	
Boys (2)			Ditto	82 10 0	"
Boilermaker Leading (1)			Ditto	198 0 0	
Boilermaker (1)			Ditto	184 16 0	
Boilermakers' & Engineer's Assistant (1).			Ditto	132 0 0	
Tug "Ajax"—					
Master (1)			Ditto	264 0 0	
Leading Seaman (1)			Ditto	132 0 0	
Seamen (3)			Ditto	114 8 0	each.
Engineer (1)			Ditto	264 0 0	
Leading Fireman (1)			Ditto	145 4 0	
Fireman (1)			Ditto	132 0 0	
Cook (1)			Ditto	114 8 0	
<b>STEAM DREDGE "PLUTO"</b>					
Master and Chief Engineer	Thomas Brodie <sup>1</sup>	1 Jan., 1881	Governor and Executive Council	322 10 0	3 June, 1877.
Mate (1)			Engineer-in-Chief	171 12 0	
Coxswain (1)			Ditto	132 0 0	
Seamen (2)			Ditto	114 8 0	each.
Fireman (1)			Ditto	145 4 0	
Blacksmith (1)			Ditto	158 8 0	
Striker (1)			Ditto	132 0 0	
Carpenter (1)			Ditto	158 8 0	
Boy (1)			Ditto	55 0 0	
Tug "Little Nell"—					
Master (1)			Ditto	211 4 0	
Engineer (1)			Ditto	211 4 0	
Fireman (1)			Ditto	132 0 0	
Seamen (2)			Ditto	114 8 0	"

<sup>1</sup> Gives security to the amount of £300

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>SECRETARY FOR PUBLIC WORKS—HARBOURS AND RIVER NAVIGATION—continued.</b>							
<b>STEAM DREDGE "SAMSON."</b>							
Master and Chief Engineer	John Laing <sup>1</sup>	1 Aug., 1868	Governor and Executive Council	377	10	0	1 Aug., 1868.
Mate (1)			Engineer-in-Chief	184	16	0	
Boilermaker and Blacksmith (1)			Ditto	184	16	0	
Engineman (1)			Ditto	171	12	0	
Carpenter (1)			Ditto	158	8	0	
Fireman (1)			Ditto	158	8	0	
Striker (1)			Ditto	132	0	0	
Coxswains (3)			Ditto	132	0	0	each.
Seamen (2)			Ditto	114	8	0	"
Brakesmen (2)			Ditto	114	8	0	"
Cook (1)			Ditto	114	8	0	"
Watchman (1)			Ditto	114	8	0	"
Boy (1)			Ditto	55	0	0	"
Tug "Thetis"—							
Master (1)			Ditto	264	0	0	
Engineer (1)			Ditto	264	0	0	
Leading Fireman (1)			Ditto	145	4	0	
Fireman (1)			Ditto	132	0	0	
Leading Seaman (1)			Ditto	132	0	0	
Seamen (2)			Ditto	114	8	0	"
Cook and Seaman (1)			Ditto	114	8	0	"
<b>STEAM DREDGE "TITAN."</b>							
Master and Chief Engineer	John Ryan <sup>1</sup>	12 Oct., 1881	Governor and Executive Council	322	10	0	1 July, 1875.
Mate (1)			Engineer-in-Chief	171	12	0	
Engine-driver (1)			Ditto	158	8	0	
Fireman (1)			Ditto	132	0	0	
Carpenter (1)			Ditto	158	8	0	
Blacksmith (1)			Ditto	158	8	0	
Striker (1)			Ditto	132	0	0	
Coxswain (1)			Ditto	132	0	0	each.
Deckhands (2)			Ditto	114	8	0	"
Deck Boy (1)			Ditto	66	0	0	"
Cook (1)			Ditto	114	8	0	"
Tug "Athena"—							
Captain (1)			Ditto	184	16	0	
Engine-driver (1)			Ditto	184	16	0	
Fireman (1)			Ditto	132	0	0	
Boy and Cook (1)			Ditto	66	0	0	
<b>STEAM DREDGE "ULYSSES."</b>							
Master and Chief Engineer	John Carruthers <sup>1</sup>	11 Nov., 1881	Governor and Executive Council	322	10	0	1 Oct., 1873.
Mate (1)			Engineer-in-Chief	171	12	0	
Engine-driver (1)			Ditto	158	8	0	
Carpenter (1)			Ditto	158	8	0	
Fireman (1)			Ditto	132	0	0	
Blacksmith (1)			Ditto	158	8	0	
Coxswain (1)			Ditto	132	0	0	each.
Seamen (3)			Ditto	114	8	0	"
Cook (1)			Ditto	114	8	0	"
Striker (1)			Ditto	114	8	0	"
Tug "Charybdis"—							
Master (1)			Ditto	211	4	0	
Engineer (1)			Ditto	198	0	0	
Fireman (1)			Ditto	132	0	0	
Seaman (1)			Ditto	114	8	0	
<b>STEAM DREDGE "VULCAN."</b>							
Master and Chief Engineer	John Robertson <sup>1</sup>	1 Feb., 1884	Governor and Executive Council	350	0	0	23 Mar., 1875.
Mate (1)			Engineer-in-Chief	171	12	0	
Coxswains (2)			Ditto	132	0	0	each.
Seamen (3)			Ditto	114	8	0	"
Engineer (1)			Ditto	171	12	0	"
Fireman (1)			Ditto	158	8	0	"
Blacksmith (1)			Ditto	184	16	0	"
Striker (1)			Ditto	132	0	0	"
Carpenter (1)			Ditto	158	8	0	"
Cook (1)			Ditto	114	8	0	"
Watchman (1)			Ditto	114	8	0	"
Steam Barge "Juno"—							
Master (1)			Ditto	250	16	0	
Engineer (1)			Ditto	264	0	0	
Firemen (2)			Ditto	132	0	0	"
Seamen (3)			Ditto	114	8	0	"
Cook (1)			Ditto	114	8	0	"

<sup>1</sup> Gives security to the amount of £300.

## BLUE BOOK OF

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>SECRETARY FOR PUBLIC WORKS—HARBOURS AND RIVER NAVIGATION—continued.</b>							
<b>STEAM DREDGE "ALCIDES."</b>							
Master and Chief Engineer	William Jones <sup>1</sup> .....	1 Oct., 1886	Governor and Executive Council	302	10	0	5 Mar., 1878.
Mate (1).....	.....	.....	Secretary for Public Works .....	171	12	0	
Engine-driver (1).....	.....	.....	Ditto .....	158	8	0	each.
Carpenter (1).....	.....	.....	Ditto .....	144	0	0	
Fireman (1).....	.....	.....	Ditto .....	120	0	0	
Blacksmith (1).....	.....	.....	Ditto .....	144	0	0	
Striker (1).....	.....	.....	Ditto .....	104	0	0	
Coxswains (2).....	.....	.....	Ditto .....	{ 1 at 132	0	0	
				{ 1 at 120	0	0	
Seamen (3).....	.....	.....	Ditto .....	{ 2 at 104	0	0	
				{ 1 at 114	8	0	
Cook (1).....	.....	.....	Ditto .....	104	0	0	
Tug "Rhea"—							
Master (1).....	.....	.....	Ditto .....	211	4	0	
Engineer (1).....	.....	.....	Ditto .....	192	0	0	
Fireman (1).....	.....	.....	Ditto .....	120	0	0	
Seaman (1).....	.....	.....	Ditto .....	104	0	0	
Cook and Seaman (1).....	.....	.....	Ditto .....	96	0	0	
<b>DREDGE "EPSILON."</b>							
Master and engine driver (1)	.....	.....	Engineer-in-Chief .....	0	14	0	per diem.
Seamen (2).....	.....	.....	Ditto .....	0	6	3½	" each.
<b>DREDGE "ZETA."</b>							
Master and engineer (1)...	.....	.....	Engineer-in-Chief .....	0	10	0	per diem.
Fireman (1).....	.....	.....	Ditto .....	0	7	0	" each.
Labourers (3).....	.....	.....	Ditto .....	0	7	0	" each.
<b>DREDGE "ETA."</b>							
Master and engine driver (1)	.....	.....	Engineer-in-Chief .....	168	0	0	each.
Fireman and assistant driver (1)	.....	.....	Ditto .....	132	0	0	
Seamen (2).....	.....	.....	Ditto .....	114	8	0	
Cook and seaman (1).....	.....	.....	Ditto .....	114	8	0	
<b>DREDGE "THETA."</b>							
Master and engine driver (1)	.....	.....	Engineer-in-Chief .....	168	0	0	each.
Fireman and assistant driver (1)	.....	.....	Ditto .....	114	8	0	
Seaman (1).....	.....	.....	Ditto .....	114	8	0	
Cook and seaman (1).....	.....	.....	Secretary for Public Works .....	114	8	0	
<b>DREDGE "IOTA."</b>							
Master and engineer (1)...	.....	.....	Secretary for Public Works .....	245	0	0	each.
Engine driver (1).....	.....	.....	Ditto .....	114	8	0	
Fireman (1).....	.....	.....	Engineer-in-Chief .....	114	8	0	
Cook and seaman (1).....	.....	.....	Ditto .....	114	8	0	
<b>TUG "GANYMEDE."</b>							
Master (1).....	.....	.....	Secretary for Public Works.....	184	16	0	each.
Engineer (1).....	.....	.....	Ditto .....	184	16	0	
Fireman (1).....	.....	.....	Ditto .....	132	0	0	
Seaman (1).....	.....	.....	Ditto .....	114	8	0	
Boy (1).....	.....	.....	Ditto .....	55	0	0	

<sup>1</sup> Gives security to the amount of £300.

## PART XI.

## Postmaster-General,

AND THE

DEPARTMENTS UNDER HIS SUPERVISION AND CONTROL.

## SUMMARY.

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## POSTMASTER-GENERAL.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>POST OFFICE.</b>							
<i>Head Office.</i>							
Postmaster-General .....	Daniel O'Connor <sup>1</sup> .....	22 Dec., 1885	Governor and Executive Council, by Commission.	1,500	0	0	22 Dec., 1885.
	succeeded by						
	Francis Bathurst Suttor...	26 Feb., 1886	Ditto .....	1,500	0	0	22 Mar., 1877.
Secretary .....	Stephen Harbord Lambton, J.P.	1 Sept., 1866	Ditto .....	960	0	0	6 Sept., 1852.
Chief Clerk .....	James Dalgarno .....	1 Jan., 1869	Governor and Executive Council	600	0	0	22 Oct., 1860.
Superintendent of Mail Branch.	Asher Australia Day .....	1 Feb., 1875	Ditto .....	600	0	0	1 Jan., 1858.
Accountant .....	William Lancaster Carter	10 Sept., 1880	Ditto .....	550	0	0	1 Feb., 1871.
Cashier .....	John Thompson <sup>2</sup> .....	5 Nov., 1878	Ditto .....	440	0	0	1 April, 1863.
Assistant Superintendent of Mail Branch.	John Terence M'Mahon...	1 Jan., 1884	Ditto .....	490	0	0	13 Mar., 1858.
Clerks .....	Joseph Clarke <sup>3</sup> .....	24 Sept., 1866	Ditto .....	390	0	0	13 Feb., 1866.
	Henry Murdoch .....	20 Dec., 1866	Ditto .....	390	0	0	4 Nov., 1861.*
	Charles Clarke .....	1 Jan., 1868	Ditto .....	390	0	0	24 Sept., 1866.
	Gervas James Ward .....	14 April, 1862	Ditto .....	340	0	0	14 April, 1862.
	William Bowers Foster ...	1 Jan., 1871	Ditto .....	340	0	0	14 May, 1868.
	Robert Robson Iredale ...	1 Jan., 1871	Ditto .....	340	0	0	16 Mar., 1869.
	Frederick Griffiths Davies	4 April, 1871	Ditto .....	340	0	0	9 Oct., 1869.
	Robert Buik Edward .....	1 Sept., 1872	Ditto .....	340	0	0	19 Mar., 1868.
	Edward Sydney Tribe.....	1 Sept., 1872	Ditto .....	340	0	0	26 April, 1871.
	Andrew Johnston Arndell	1 Jan., 1873	Ditto .....	340	0	0	22 Oct., 1872.
	George Read.....	1 April, 1874	Ditto .....	340	0	0	14 Mar., 1872.*
	Thomas Stephen Joseph Rigg ..	1 April, 1874	Ditto .....	340	0	0	9 Feb., 1874.
	Edward Brooke Seymour...	1 April, 1874	Ditto .....	340	0	0	1 Nov., 1872.
	Reginald Lionel de Courcy Russell.	1 Jan., 1875	Ditto .....	290	0	0	1 Aug., 1873.
	Augustine Joseph Maedermott	10 Mar., 1875	Ditto .....	290	0	0	8 April, 1874.
	Richard Harvey Crakanthorp ..	5 May, 1865	Ditto .....	290	0	0	14 Jan., 1864.
	Charles Augustus Ord .....	1 May, 1875	Ditto .....	290	0	0	1 Nov., 1873.
	George Lynn Little.....	1 May, 1875	Ditto .....	290	0	0	1 May, 1873.
	James M'Neilly .....	14 July, 1875	Ditto .....	290	0	0	14 July, 1875.
	Hamilton Jacob .....	8 July, 1875	Ditto .....	290	0	0	5 May, 1875.
	Septimus Inez Leon .....	1 Jan., 1884	Ditto .....	290	0	0	15 May, 1872.
	John Rose Hutchinson Gibbons.	1 Jan., 1874	Ditto .....	290	0	0	22 April, 1872.
	John Smythe Richardson	1 Nov., 1875	Ditto .....	290	0	0	1 Nov., 1875.
	Andrew Porter .....	1 May, 1867	Ditto .....	265	0	0	4 Mar., 1858.
	Henry Roberts Davies.....	6 Sept., 1876	Ditto .....	265	0	0	24 Feb., 1875.
	John Overmyer .....	10 Dec., 1875	Ditto .....	265	0	0	10 Dec., 1875.
	George M'Gibbon .....	1 July, 1876	Ditto .....	265	0	0	7 Dec., 1875.
	Charles Brady .....	1 July, 1876	Ditto .....	265	0	0	27 May, 1875.
	Francis Butler .....	1 Oct., 1875	Ditto .....	240	0	0	1 Sept., 1875.
	Albert Ney Landers.....	1 July, 1876	Ditto .....	240	0	0	26 Jan., 1876.
	James Arthur Barrett Fry <sup>4</sup>	1 Dec., 1876	Ditto .....	240	0	0	1 Dec., 1876.
	Noel Anderson .....	20 Jan., 1877	Ditto .....	240	0	0	8 Jan., 1875.
	John Francis Doherty.....	6 Feb., 1877	Ditto .....	240	0	0	20 Mar., 1874.
	Frank Quirk.....	13 May, 1877	Ditto .....	240	0	0	1 Aug., 1874.
	Walter Widdulph Ryan...	15 Feb., 1877	Ditto .....	240	0	0	10 Dec., 1875.
	Herbert Cyrus Rowland Doyle..	1 Mar., 1877	Ditto .....	240	0	0	28 Aug., 1876.
	John Robinson <sup>5</sup> .....	26 Mar., 1877	Ditto .....	240	0	0	16 Feb., 1877.
	George Sims .....	1 July, 1877	Ditto .....	240	0	0	4 Dec., 1876.
Shipping Clerk .....	Michael Henry Joseph M'Donnell	1 Jan., 1873	Ditto .....	240	0	0	1 Aug., 1861.
Clerks .....	Charles Alexander Forsythe	1 July, 1877	Ditto .....	240	0	0	1 Dec., 1876.
	James William Kenny .....	1 July, 1877	Ditto .....	200	0	0	14 Feb., 1877.
	John Norbert Mason .....	1 July, 1877	Ditto .....	200	0	0	4 June, 1877.
	Frederick Charles Williams	5 Feb., 1878	Ditto .....	200	0	0	10 Aug., 1874.
	Henry William Robert Holmes	1 April, 1875	Ditto .....	200	0	0	12 Dec., 1871.
	Herbert Swire .....	28 Aug., 1878	Ditto .....	200	0	0	31 Jan., 1877.
	John Primrose Byram .....	26 Aug., 1878	Ditto .....	200	0	0	3 May, 1878.
	James Joseph Bede Flynn .....	1 Jan., 1879	Ditto .....	200	0	0	27 Sept., 1877.
	John Norman Douglas Campbell	27 Feb., 1878	Ditto .....	200	0	0	27 Feb., 1878.
	Alexander M'Neilly.....	21 Sept., 1878	Ditto .....	200	0	0	15 Dec., 1877.
	Samuel Boyce Hilton .....	1 Jan., 1879	Ditto .....	200	0	0	17 June, 1878.
	Joseph Hugh Doherty .....	1 Jan., 1879	Ditto .....	200	0	0	17 June, 1878.
	William Thomas O'Donnell Cosgrove.	1 July, 1879	Ditto .....	200	0	0	16 April, 1878.
	Thomas Johnstone Chariton ..	1 Oct., 1879	Ditto .....	190	0	0	4 Aug., 1879.
	Frederick William Sydney Rush.	1 Dec., 1880	Ditto .....	190	0	0	10 May, 1880.
	George Fredk. Greenwell Robinson.	1 July, 1881	Ditto .....	190	0	0	13 Mar., 1879.
	Henry Moyse .....	1 Dec., 1880	Ditto .....	190	0	0	12 July, 1880.
	Arthur Galbraith.....	1 Dec., 1880	Ditto .....	190	0	0	17 Aug., 1880.
	Walter Henry Manning .....	29 Mar., 1881	Ditto .....	190	0	0	31 Jan., 1881.
	Ferdinand Francis Falconer <sup>6</sup> ..	1 Jan., 1882	Ditto .....	190	0	0	1 Jan., 1878.

<sup>1</sup> Resigned 25th February.<sup>2</sup> Allowed £25 per annum to compensate for loss on stamps.<sup>3</sup> Allowed £25 per annum for overland English Mails.<sup>4</sup> Allowed £50 per annum extra for services as Shorthand Writer.<sup>5</sup> Allowed £10 per annum to compensate for loss of stamps, as Stamp Sales Clerk.<sup>6</sup> Allowed £10 per annum for translating foreign languages. \* Services not continuous. (For other allowances see end.)

NEW SOUTH WALES—1886.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>POSTMASTER-GENERAL—POST OFFICE—continued.</b>					
<i>Head Office—continued.</i>					
<i>Clerks—continued</i> .....	Michael John Brady .....	8 Mar., 1882	Governor and Executive Council	190 0 0	3 Oct., 1878.
	Fredk. Augustine Kelleher <sup>1</sup>	24 Mar., 1882	Ditto .....	172 0 0	19 Jan., 1881.
	Alfred Briggs .....	1 Oct., 1881	Ditto .....	172 0 0	9 Feb., 1881.
	Robert Alexander Shortland.	1 Jan., 1882	Ditto .....	172 0 0	14 April, 1881.
	George Charles Augustus Warre.	1 Jan., 1882	Ditto .....	172 0 0	10 April, 1877.
	William Charles Pinnick...	22 May, 1882	Ditto .....	172 0 0	21 July, 1879.
	Walter James Gallott.....	1 Nov., 1882	Ditto .....	172 0 0	2 Feb., 1881.
	Samuel Baumann.....	15 Jan., 1883	Ditto .....	172 0 0	16 June, 1879.
	Samuel Joseph Parr .....	2 Sept., 1881	Ditto .....	172 0 0	17 Jan., 1881.
	Alfred Charles Bruce Newman.	12 Aug., 1882	Ditto .....	172 0 0	31 May, 1881.
	William Charles West ...	13 Aug., 1882	Ditto .....	172 0 0	17 Nov., 1881.
	Henry Coleman .....	1 May, 1883	Ditto .....	172 0 0	9 Jan., 1882.
	Sydney Blackall Edwards..	1 May, 1883	Ditto .....	172 0 0	1 June, 1882.
	John Harvey Dunkin ...	1 May, 1883	Ditto .....	172 0 0	6 Oct., 1879.
	William Worling.....	1 May, 1883	Ditto .....	172 0 0	14 Oct., 1880.
	Alexander Edwin Blackmore ..	1 Jan., 1886	Ditto .....	170 0 0	1 Mar., 1869.*
	Nicholas Edward Herman Ehrestrüur.	1 Dec., 1886	Ditto .....	170 0 0	1 Oct., 1878.*
	John James Molloy <sup>2</sup> .....	1 May, 1883	Ditto .....	140 0 0	15 Sept., 1879.
	Antonio da Fonseca D'Abreu.	1 June, 1883	Ditto .....	140 0 0	6 Dec., 1882.
	Walter Herbert Humby...	1 May, 1883	Ditto .....	140 0 0	3 Jan., 1882.
	Robert William Horne ...	1 June, 1883	Ditto .....	140 0 0	26 Oct., 1882.
	Sydney Gilchrist .....	15 April, 1884	Ditto .....	140 0 0	9 July, 1883.
	Francis Joseph M'Grath...	1 Sept., 1882	Ditto .....	140 0 0	6 Dec., 1881.
	John Charles William Wheeler.	1 Mar., 1884	Ditto .....	140 0 0	10 Nov., 1882.
	Arthur Tonge Pearson ...	16 June, 1883	Ditto .....	140 0 0	11 Dec., 1882.
	William John Joyner .....	1 Aug., 1884	Ditto .....	140 0 0	7 Jan., 1884.
	Henry John Foskett .....	1 Aug., 1884	Ditto .....	140 0 0	2 Feb., 1884.
	Samuel Bailey Dowsett ...	6 Oct., 1884	Ditto .....	140 0 0	10 April, 1884.
	William Charles Lindsay..	3 Nov., 1884	Ditto .....	140 0 0	14 June, 1883.
	Christopher Molloy.....	3 Dec., 1884	Ditto .....	140 0 0	24 July, 1882.
	Henry Berkeley Templeton	22 Jan., 1886	Ditto .....	120 0 0	22 Jan., 1885.
	John Michael Stafford ...	18 May, 1886	Ditto .....	120 0 0	13 May, 1885.
	Henry Hill Ling .....	20 May, 1886	Ditto .....	120 0 0	17 Feb., 1881.
	Edward Thomas Doherty..	25 May, 1886	Ditto .....	120 0 0	25 May, 1885.
	Albert Joseph Kenny .....	1 June, 1886	Ditto .....	120 0 0	1 June, 1885.
Relieving Officer .....	William Malcolm Weatherall ..	16 May, 1885	Ditto .....	240 0 0	17 Jan., 1879.
				188 0 0	each.
				157 0 0	each.
				150 0 0	each.
Temporary Clerks (16) .....			Postmaster-General .....	5 "	125 0 0
				1 "	104 0 0
				1 "	100 0 0
				3 "	75 0 0
				1 "	50 0 0
Probationary Clerk (1) ..			Ditto .....	1 "	39 0 0
					50 0 0
				1 "	150 0 0
				1 "	140 0 0
Letter Sorters (24) .....			Ditto .....	13 "	130 0 0
				7 "	120 0 0
				1 "	104 0 0
				1 "	90 0 0
Shipping Clerk Assistant (1)			Ditto .....		190 0 0
Telegraph Operator in Inquiry Room (1)			Ditto .....		25 0 0
				10 at	185 0 0
				2 "	180 0 0
				1 "	175 0 0
Mail Guards <sup>3</sup> (36).....			Ditto .....	12 "	160 0 0
				2 "	155 0 0
				1 "	150 0 0
				1 "	140 0 0
				4 "	130 0 0
				3 "	120 0 0
				1 at	200 0 0
				8 "	185 0 0
Stampers and Sorters (38)...			Ditto .....	10 "	160 0 0
				7 "	150 0 0
				2 "	140 0 0
				4 "	130 0 0
				4 "	120 0 0
				1 "	108 0 0
				1 "	104 0 0

<sup>1</sup> Allowed £10 per annum to compensate for loss of stamps, as Stamp Sales Clerk. <sup>2</sup> Allowed £5 per annum to compensate for loss of stamps, as Stamp Sales Clerk. <sup>3</sup> Mail guards allowed £2 10s. per month when travelling. <sup>4</sup> Services not continuous. (For other allowances see end.)



Office	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary	Date of first Appointment under the Colonial Government
				£ s. d.	
<b>POSTMASTER-GENERAL—POST OFFICE—continued</b>					
<i>Head Office—continued.</i>					
Temporary Sorters (11) <sup>1</sup> Overseer of Letter carriers (1)	.. ..	..	Postmaster General ...	0 12 0	per diem each.
			Ditto	178 0 0	
				160 0 0	each
				159 0 0	
				148 0 0	"
				147 0 0	
				138 0 0	"
Letter-carriers (90) . . . . .			Ditto	5 " 135 0 0	"
				20 " 127 0 0	"
				13 " 124 0 0	"
				15 " 114 0 0	"
				11 " 104 0 0	"
				3 " 78 0 0	"
Mail-cart Drivers (5)			Ditto	1 " 120 0 0	"
				2 " 118 0 0	"
				2 " 108 0 0	"
				1 " 160 0 0	"
				1 " 142 0 0	"
				2 " 130 0 0	"
Messengers (9) . . . . .			Ditto	1 " 118 0 0	"
				1 " 91 0 0	"
				1 " 85 0 0	"
				2 " 50 0 0	"
Groom (1) . . . . .			Ditto	104 0 0	"
Assistant Groom . . . . .			Ditto	78 0 0	"
				5 at 78 0 0	"
				6 " 52 0 0	"
Mail Boys (32) . . . . .			Ditto	1 " 50 0 0	"
				17 " 39 0 0	"
				3 " 26 0 0	"
Storekeeper's Assistant (1)			Ditto	160 0 0	"
Storeman (1)			Ditto	130 0 0	"
Care taker (1)			Ditto	118 0 0	"
Assistant Care taker (1)			Ditto	104 0 0	"
Officekeeper (1)			Ditto	61 0 0	"
Gate-keepers (2)			Ditto	1 at 88 0 0	"
				1 " 78 0 0	"
First Class Detective (1)			Ditto	0 12 6	per diem.
Porters (2)			Ditto	104 0 0	each
Assistant Gas Engineer (1)			Ditto	156 0 0	"
Window cleaner (1)			Ditto	78 0 0	"
Office cleaner . . . . .			Ditto	78 0 0	"
Special Constable (1)			Ditto	0 7 0	per diem
Constables (2)	.. . . .	.. . . .	.. . . .	0 7 0	" each
Inspection Branch— Inspector for Missing Letters and Irregularities	Wundham John Davies	1 Jan, 1883	Governor and Executive Council	550 0 0	15 May, 1862.
Inspectors . . . . .	Gabriel de Milhau	1 Jan, 1867	Ditto	490 0 0	1 Oct, 1866.
	Vickers Moyse	1 Jan, 1873	Ditto	490 0 0	1 Jan, 1867.
	George Plaistowe Univen	1 Jan, 1884	Ditto	490 0 0	9 May, 1861.
	Ion Brown Bossley	1 Sept, 1884	Ditto	490 0 0	28 Aug, 1861.*
<i>Branch Offices.</i>					
Balmam— Postmaster ..	Andrew Melville	1 Nov, 1885	Ditto	190 0 0	18 May, 1874.
Assistant ...	Mary Jane Davies <sup>2</sup> ...	27 May, 1882	Postmaster General	25 0 0	8 Mar, 1875
	succeeded by				
	H G. Kulmar	2 Aug, 1886	Ditto	25 0 0	
	Francis Joseph Heagney	14 July, 1885	Ditto	37 10 0	1 Nov, 1884.
Letter Carriers (6) .	..	..	Ditto	1 at 138 0 0	each
				2 " 127 0 0	"
				3 " 104 0 0	"
Mail Boys (2)	..	..	Ditto	1 " 39 0 0	"
				1 " 26 0 0	"
George-street West— Postmaster . . . . .	Edwin Lloyd	1 April, 1879	Governor and Executive Council	240 0 0	1 Feb, 1873.
Assistant . . . . .	Minnie Emmeline Husing	2 Mar, 1885	Postmaster-General	25 0 0	1 April, 1875
Haymarket— Postmaster . . . . .	William Henry Hunt	1 Mar, 1877	Governor and Executive Council	400 0 0	1 Jan, 1868
First Assistant	Robert George Smith	1 Nov, 1885	Postmaster General	180 0 0	1 Jan, 1877.
				to 31 Oct	
				190 0 0	
				from 1 Nov	
Second ditto . . . . .	George James Wilham Holberton	12 Oct, 1885	Ditto	75 0 0	12 Oct, 1885.
				to 3 June	
				100 0 0	
				from 4 June	
Mail Boy (1) King street— Postmaster . . . . .	Charles Edwin Dale <sup>3</sup>	21 Feb, 1881	Governor and Executive Council	310 0 0	1 Aug, 1872.
	succeeded by				
	Charles Bleaden Cuttiss	7 April, 1886	Ditto	310 0 0	21 Jan., 1858
Assistant . . . . .	George Boseley	23 Aug, 1883	Postmaster General	120 0 0	23 Aug, 1883.

<sup>1</sup> Appointed to assist in sorting the morning mails<sup>2</sup> Appointed Postmistress, Hunters Hill (1 or other allowances see end)<sup>3</sup> Appointed to Oxford street

\* Services not continuous.

NEW SOUTH WALES—1886.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>POSTMASTER-GENERAL—POST OFFICE—continued.</b>							
<i>Branch Offices—continued.</i>							
Miller's Point— Postmaster .....	Joseph Edwin Lee <sup>1</sup> ..... succeeded by Charles Lane Tucker .....	18 Feb., 1878 1 Feb., 1886	Governor and Executive Council Ditto .....	240	0	0	1 June, 1868. 8 Dec., 1875.
Newtown— Postmaster .....	Pierce Goold .....	23 Nov., 1880	Ditto .....	250	0	0	1 April, 1841.*
First Assistant .....	Joseph Edwin Lee .....	1 Feb., 1886	Ditto .....	250	0	0	1 June, 1868.
Second ditto .....	Henry George Thornley... Robert Alexander Byron <sup>2</sup> succeeded by John Horsley .....	15 May, 1884 11 Feb., 1882 14 June, 1886	Postmaster-General .....	145	0	0	17 Feb., 1879.
Letter Carriers (6) .....	.....	.....	Ditto .....	25	0	0	12 Feb., 1873.
Receiver-clearer (1) .....	.....	.....	Ditto .....	25	0	0	1 Aug., 1880.
Oxford-street— Postmaster .....	Charles Bleaden Cuttriss <sup>3</sup> succeeded by Charles Edwin Dale..... Nicholas Weekes .....	15 Feb., 1877 7 April, 1886 1 June, 1882	Governor and Executive Council Ditto .....	160	0	0	21 Jan., 1858.
Assistant .....	.....	.....	Postmaster-General .....	320	0	0	1 Aug., 1872.
Paddington— Postmaster .....	Alfred Theodore Gale.....	16 June, 1883	Ditto .....	145	0	0	14 June, 1881.
Park-street— Postmaster .....	George Macnamara White	1 Oct., 1880	Governor and Executive Council	220	0	0	12 June, 1878.
Assistant .....	William Stewart .....	4 Dec., 1883	Ditto .....	310	0	0	1 Sept., 1862.
Redfern— Postmaster .....	James Scowercroft .....	1 July, 1875	Postmaster-General .....	120	0	0	28 June, 1881.
Assistant .....	John Clinch .....	16 Nov., 1883	Governor and Executive Council	260	0	0	7 Sept., 1861.
Letter-carriers (2) .....	.....	.....	Postmaster-General .....	75	0	0	16 Nov., 1883.
Receiver-clearers (2) .....	.....	.....	Ditto .....	90	0	0	from 7 May, from 8 May.
St. Leonards— Postmaster .....	Jabez Hambly .....	20 Dec., 1880	Ditto .....	148	0	0	1 Feb., 1874.
Assistant .....	Walter Scott Hume.....	19 Oct., 1883	Ditto .....	114	0	0	19 Oct., 1883.
Letter-carriers (8) .....	.....	.....	Ditto .....	62	0	0	each.
Receiver-clearers (2) .....	.....	.....	Ditto .....	39	0	0	
The Exchange— Clerk-in-charge .....	Sydney Shaftesbury Smith	1 Nov., 1885	Governor and Executive Council	190	0	0	13 Nov., 1877.
Assistant .....	David M'Neil Honniball...	21 Feb., 1883	Postmaster-General .....	75	0	0	21 Feb., 1883.
William-street— Postmaster .....	Charles John Booty.....	1 Sept., 1884	Governor and Executive Council	85	0	0	to 16 Sept., from 17 Sept.
Assistant .....	Frederick William Chave	1 July, 1884	Postmaster-General .....	350	0	0	8 Aug., 1870.
Country Offices—(Official.)	.....	.....	.....	85	0	0	20 April, 1882.*
Abattoirs— Postmaster .....	Edward Archer Bingham	16 Jan., 1882	Ditto .....	100	0	0	1 July, 1878.
Adaminaby— Postmaster .....	James Waddell .....	10 Oct., 1876	Ditto .....	160	0	0	7 Oct., 1876.
Assistant .....	Mary Rebecca Waddell ...	15 Sept., 1882	Ditto .....	24	0	0	15 Sept., 1882.
Adelong— Postmaster .....	Alfred Bray .....	24 April, 1874	Ditto .....	240	0	0	1 April, 1873.
Assistant .....	Fanny Eleanor Bray .....	1 June, 1881	Ditto .....	52	0	0	1 June, 1881.
Albury— Postmaster .....	Thomas Harvey Stone.....	1 May, 1864	Governor and Executive Council	390	0	0	1 April, 1854.
1st Assistant .....	John George Elliott .....	4 Oct., 1878	Postmaster-General .....	240	0	0	8 May, 1876.
2nd ditto .....	William M'Cabe .....	12 July, 1882	Ditto .....	170	0	0	22 Oct., 1877.
3rd ditto .....	Frederick William Brown succeeded by Thomas Andrew Doherty	3 Dec., 1883 1 Dec., 1886	Ditto .....	135	0	0	6 Dec., 1878.
4th ditto .....	John Andrew Clulow .....	13 June, 1885	Ditto .....	96	0	0	1 April, 1882.
5th ditto .....	John Nicholas Morrisey ...	25 June, 1883	Ditto .....	130	0	0	11 May, 1883.
Letter-carriers (3) .....	.....	.....	Ditto .....	100	0	0	25 June, 1883.
Angledool— Postmaster .....	Henry John Burton .....	1 May, 1885	Governor and Executive Council	147	0	0	28 July, 1881.

<sup>1</sup> Appointed to Newtown. <sup>2</sup> Removed to Ashfield. <sup>3</sup> Appointed to King-street. \* Services not continuous. (For other allowances see end.)

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>POSTMASTER-GENERAL—POST OFFICE—continued.</b>					
<i>Country Offices—continued.</i>					
Arakoon— Postmaster .....	Benjamin Thomas .....	1 June, 1879	Postmaster-General .....	10 0 0	1 June, 1879.
Araluen— Postmaster .....	Charles Norbert Ambrose <sup>1</sup> succeeded by Dugald John McLean .....	24 Feb., 1879 22 Mar., 1886	Ditto .....	200 0 0 220 0 0	4 Dec., 1860.* 1 July, 1875.
Assistant.....	Michael Thomas Madigan <sup>2</sup> succeeded by Ernest Mackesy Clarke ...	1 April, 1884 21 Jan., 1886	Ditto .....	26 0 0 26 0 0	1 April, 1884. 21 Jan., 1886.
Armidale— Postmaster .....	John White Emblin .....	15 Oct., 1862	Governor and Executive Council	340 0 0	15 Oct., 1862.
1st Assistant .....	Mary Charlotte De Vere Emblin.	1 July, 1871	Postmaster-General .....	65 0 0	1 July, 1871.
2nd ditto .....	Antionette White Emblin <sup>3</sup> succeeded by Mary Blanche Emblin.....	1 Oct., 1885 20 Sept., 1886	Ditto .....	55 0 0 55 0 0	1 Oct., 1885. 20 Sept., 1886.
3rd ditto .....	Thomas M'Arthur .....	1 Sept., 1885	Ditto .....	110 0 0	12 April, 1882.
Letter-carrier (1) .....	.....	.....	Ditto .....	127 0 0	.....
Ashfield— Postmistress .....	Rosa Elizabeth Wilhelmina Gibbes. <sup>4</sup> succeeded by Robert Alexander Byron...	28 April, 1882 3 July, 1886	Ditto .....	190 0 0 190 0 0	12 April, 1882. 12 Feb., 1873.
Letter-carriers (3) .....	.....	.....	Ditto .....	124 0 0 114 0 0 46 0 0	.....
Receiver-clearer (1) .....	.....	.....	Ditto .....	26 0 0	.....
Ballina— Postmaster .....	Archibald Hunter .....	1 Jan., 1886	Ditto .....	240 0 0	26 April, 1864.*
Assistant .....	Elizabeth Hunter .....	1 Jan., 1886	Ditto .....	30 0 0	1 May, 1882.
Balranald— Postmaster .....	Henry Betteley Jefferson <sup>5</sup> succeeded by George Lobsley .....	1 Feb., 1880 23 Sept., 1886	Ditto .....	230 0 0 180 0 0	1 Dec., 1874. 25 Mar., 1878.
1st Assistant .....	Edmund James Plummer <sup>6</sup> succeeded by Edward James Kennedy Heazlett.	7 June, 1881 27 May, 1886	Ditto .....	50 0 0 50 0 0	7 June, 1881. 27 April, 1886.
2nd ditto .....	Sophia Ann Jefferson <sup>7</sup> ... succeeded by Ernest George Brightwell McColough.	1 Feb., 1880 27 July, 1886	Ditto .....	25 0 0 25 0 0	1 Feb., 1880. 23 Mar., 1885.
Baradine— Postmaster .....	William John Allen .....	1 Mar., 1886	Ditto .....	110 0 0	27 Dec., 1878.
Barmedman— Postmaster .....	Henry Davidson Edwards <sup>8</sup> succeeded by William John Lobb Kyle..	1 Oct., 1883 1 Aug., 1886	Ditto .....	170 0 0 170 0 0	13 April, 1870.* 15 Sept., 1879.
Barraba— Postmaster .....	Edward William Conolly	2 Mar., 1885	Ditto .....	210 0 0	21 Feb., 1879.
Barranjoey— Postmaster .....	Albert Thomas Black .....	10 Aug., 1871	Ditto .....	11 0 0	25 April, 1867.
Assistant.....	Kate Margaret Black .....	6 April, 1883	Ditto .....	15 0 0	6 April, 1883.
Barrington— Postmaster .....	John Thomas Lambert ...	24 Mar., 1884	Ditto .....	210 0 0	20 Mar., 1884.
Bateman's Bay— Postmaster .....	Arthur Richard Johannis Meynink.	1 Mar., 1885	Ditto .....	170 0 0	19 Sept., 1877.
Assistant.....	— Meynink .....	1 Mar., 1886	Ditto .....	15 0 0	.....
Bathurst— Postmaster .....	William Gilbert Thompson	1 Oct., 1866	Governor and Executive Council	400 0 0	1 Aug., 1863.
1st Assistant .....	John Broderick .....	22 Sept., 1882	Postmaster-General .....	190 0 0	11 Dec., 1877.
2nd ditto .....	William Henry Ashworth	8 Mar., 1882	Ditto .....	140 0 0	21 Dec., 1880.
3rd ditto .....	Henry Bathurst Eagar ...	26 Mar., 1880	Ditto .....	140 0 0	26 Mar., 1880.
4th ditto .....	Arthur Joseph Bastable...	1 Nov., 1885	Ditto .....	110 0 0	5 May, 1879.
Letter-carriers (3) .....	.....	.....	.....	138 0 0 124 0 0 114 0 0	.....
Receiver-clearer (1) .....	.....	.....	Ditto .....	50 0 0	.....
Bega— Postmaster .....	Charles Harrison .....	1 Jan., 1872	Ditto .....	310 0 0	24 July, 1862.*
Assistants .....	John Mooring Lee .....	1 Aug., 1882	Ditto .....	75 0 0	28 June, 1880.
Letter-carrier (1) .....	Charles Patrick Gibb .....	17 Jan., 1886	Ditto .....	25 0 0 75 0 0	1 Oct., 1880.
Bellbrook— Postmaster .....	James Chapman Toosé ...	1 Jan., 1886	Ditto .....	170 0 0	1 July, 1875.
Assistant .....	Jane Toose .....	1 Jan., 1886	Ditto .....	10 0 0	3 Jan., 1882.
Bendemeer— Postmaster .....	James Napier Falconer ...	12 Nov., 1881	Ditto .....	170 0 0	1 Jan., 1869.
Assistant .....	Louisa Falconer .....	16 Jan., 1882	Ditto .....	20 0 0	16 Jan., 1882.
Berrima— Postmistress .....	Clarinda Row .....	1 Jan., 1879	Ditto .....	140 0 0	1 Jan., 1879.

<sup>1</sup> Dismissed, 14 January.<sup>2</sup> Removed to Molonglo.<sup>3</sup> Resigned, 19 September.<sup>4</sup> Appointed to Stanmore Road.<sup>5</sup> Appointed Telegraph Master.

Wagga Wagga.

<sup>6</sup> Appointed Operator, Bathurst.<sup>7</sup> Resigned, 30 June.<sup>8</sup> Appointed Operator, Head Office, Telegraphs.

\* Services not continuous.

(For other allowances see end.)

Office.	Name	Date of Appointment	By whom appointed, and under what Instrument.	Annual Salary £ s. d.	Date of first Appointment under the Co'onal Government.
<b>POSTMASTER-GENERAL—POST OFFICE—continued.</b>					
<i>Country Offices—continued.</i>					
Bingera— Postmaster .....	Lachlan Stuart McKay .	9 July, 1885	Postmaster-General .....	200 0 0	1 Dec., 1875.
Blackwall— Postmaster .....	Joseph Robert Malarkey <sup>1</sup> . succeeded by James Francis Murray	20 May, 1881 6 Aug, 1886	Ditto ... .. Ditto .....	25 0 0 20 0 0	29 April, 1881. 6 Aug., 1886
Blayney— Postmaster .. .. .	Robert Laughton Studdert	15 May, 1884	Ditto .....	210 0 0	21 Feb., 1882.
Assistant .. .. .	Ernest Cooper .....	9 Sept., 1885	Ditto ... ..	25 0 0	1 Oct., 1880.
Letter-carrier ..	.....	.....	Ditto .....	40 0 0	.....
Boat Harbour— Postmistress .....	Emily Redstone .....	1 Oct., 1882	Ditto ... ..	15 0 0	1 Oct., 1882
Bodalla— Postmaster .....	William George Drew ..	1 Nov., 1885	Governor and Executive Council	170 0 0	24 June, 1876.
Assistant... ..	Elizabeth Howe Drew ..	1 Nov., 1885	Postmaster-General ..	15 0 0	1 Nov. 1885.
Boggabri— Postmaster .....	Henry Albert Heyward Lott.	19 Jan., 1883	Ditto .....	200 0 0	18 Jan., 1875.
Assistant... ..	Walter Richmond Guest	1 April, 1885	Ditto ... ..	50 0 0	24 Aug., 1883.
Bombala— Postmaster .....	Martin Edward Burke ...	1 Dec., 1878	Ditto .....	280 0 0	23 Oct., 1862.
Assistant .. .. .	succeeded by Donald M'Leod Graham Thomas Henry Ella ...	3 Sept., 1886 1 April, 1886	Ditto .. .. . Ditto .....	260 0 0 50 0 0	14 April, 1864. 14 Aug., 1874.
Booligal— Postmaster .....	Thomas Harris .....	1 Oct., 1883	Ditto .....	200 0 0	1 Jan., 1874.
Assistant .....	Edward Quince .. .. .	10 Mar., 1884	Ditto .....	50 0 0	15 May, 1881.
Bourke— Postmaster .....	Thomas John Marlow Trader	18 July, 1879	Ditto .....	390 0 0	1 Oct., 1865.
1st Assistant .. ..	Alice Trader <sup>2</sup> .. .. .	1 Jan., 1880	Ditto .. .. .	50 0 0	1 Jan., 1880.
2nd ditto .. .. .	Michael Francis Naghten <sup>3</sup>	17 Nov., 1882	Ditto .. .. .	180 0 0	12 Mar., 1881.
3rd ditto .. .. .	John Whittaker .. .. .	22 Sept., 1885	Ditto .. .. .	120 0 0	10 Aug., 1880.
Letter carrier (1) ..	.....	.....	Ditto .....	114 0 0	.....
Bowna— Postmaster .. .. .	Albert Tindall succeeded by Barbara Armenia Foord	24 June, 1882 15 July, 1886	Ditto .. .. . Ditto .. .. .	120 0 0 100 0 0	12 June, 1882. 8 Dec., 1885
Postmistress .. ..	.....	.....	Ditto .....	.....	.....
Bowral— Postmaster .....	John Downing Sheriff ..	1 Sept., 1882	Ditto .....	200 0 0	1 Jan., 1877.
Assistant .. .. .	Henry Chapman .....	7 April, 1885	Ditto .....	37 10 0	13 Aug., 1883
Letter-carrier .....	.....	.....	Ditto .. .. .	50 0 0 39 0 0 from 3 July	.....
Bowraville— Postmistress .. ..	Christina Byrnes .. ..	10 Nov., 1885	Ditto .. .. .	26 0 0	10 Nov., 1885.
Bradwood— Postmaster .....	Donald M'Leod Graham succeeded by Martin Edward Burke ..	1 Dec., 1880 9 Sept., 1886	Ditto .. .. . Ditto .. .. .	260 0 0 280 0 0	14 April, 1864. 23 Oct., 1862.
Assistant .. .. .	Reginald Augustus Rawns- ley Moss.	12 Sept., 1881	Ditto .. .. .	26 0 0	12 Sept., 1881.
Do. .. .. .	Michael Patrick Ryan Hyndes.	1 Dec., 1884	Ditto .. .. .	26 0 0 to 2 Nov., 39 0 0 from 3 Nov.	1 Feb., 1879.
Letter-carrier (1) ..	.....	.....	Ditto .....	57 0 0	.....
Branxton— Postmaster .....	James Alexander Tulloch	12 Oct. 1881	Ditto .. .. .	150 0 0	1 Jan., 1877.
Assistant .. .. .	John Youme Tulloch	1 July, 1884	Ditto .....	52 0 0	1 July, 1884
Brewarrina— Postmaster .. .. .	Charles James Robins	1 July, 1876	Ditto .. .. .	260 0 0	1 Nov., 1874.
Assistant .. .. .	James Dill Caldwell ..	1 Aug., 1882	Ditto .. .. .	52 0 0	1 Aug., 1882.
Broadwater— Postmaster .....	Eleonard Adam .. .. .	1 April, 1885	Ditto .. .. .	130 0 0	1 Jan., 1883.
Broke— Postmistress .....	Blanche Vere Squire .....	5 Dec., 1885	Governor and Executive Council	110 0 0	20 May, 1878.
Broken Hill— Postmaster .....	William Newton .....	13 Aug, 1876	Ditto .. .. .	180 0 0	3 Aug, 1876.
Assistant .. .. .	William Frank Davidson	1 Nov., 1886	Postmaster-General ..	16 0 0	1 Sept., 1883.
Letter-carrier (1) ..	.....	.....	.....	91 0 0	.....
Broughton's Creek— Postmaster .. .. .	John Wilham Clinch ..	7 April, 1883	Ditto .....	230 0 0	1 June, 1870.
Brown Mountain— Postmaster .....	John Joseph Murphy ..	15 April, 1886	Governor and Executive Council	100 0 0	27 Jan., 1883.
Assistant .. .. .	Edwin Henry Taylor ..	22 May, 1883	Postmaster-General ..	40 0 0	28 July, 1879.
Brunswick— Postmaster .. .. .	John Patrick O'Mcally <sup>4</sup> succeeded by Stanley Charles Francis	11 Sept., 1884 27 Sept., 1886	Ditto .. .. . Ditto .. .. .	130 0 0 48 0 0	16 June, 1883 23 July, 1884.

<sup>1</sup> Dismissed, 27th July.

<sup>2</sup> Services dispensed with, 30 September.

<sup>3</sup> To 11 May. Removed to Lithgow.  
(For allowances see end)

<sup>4</sup> Appointed Operator, Grafton.

\* Services not continuous

Office	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary			Date of first Appointment under the Colonial Government
				£	s.	d.	
<b>POSTMASTER-GENERAL—POST OFFICE—continued.</b>							
<i>Country Offices—continued.</i>							
Brushgrove— Postmaster	David Skeldon	23 Jan, 1885	Postmaster-General	150	0	0	22 Nov., 1878
Assistant	Angus Munro Amos	1 Oct, 1885	Ditto	26	0	0	1 Aug, 1885
Bulahdelah— Postmaster	James Pearse Carter	19 Nov, 1882	Ditto	140	0	0	16 June, 1877.
Assistant	Robert Francis Lee	2 Jan, 1883	Ditto	26	0	0	2 Jan, 1883
Bulli— Postmaster	John Hill Miller <sup>1</sup> succeeded by Frederick John Fowler	25 Aug, 1879 11 Aug, 1886	Ditto Governor and Executive Council	220	0	0	1 Mar, 1879
Bundarra— Postmaster	William Henry Rowlands succeeded by Emily Theresa Eames	16 Oct, 1878 1 Sept, 1886	Ditto ... Ditto	190	0	0	8 May, 1874
Postmistress	Susanna Rowland <sup>2</sup>	1 Aug, 1884	Postmaster-General	240	0	0	5 Oct, 1879
Assistant				25	0	0	1 Aug., 1884.
Bungendore— Postmaster	Jerome Seymour Tranent succeeded by William John Harwood Hayes	1 April, 1883 20 Aug, 1886	Governor and Executive Council Ditto	190	0	0	4 Sept, 1882.
Assistant .. ...	Henry Leahy	1 July, 1885	Postmaster General	36	0	0	1 July, 1885.
Bungwall Flat— Postmistress	Nellie Meba Green	1 Mar, 1878	Ditto	26	0	0	1 Mar, 1878
Burrawang— Postmaster	Edmund Charles Dunne	1 April, 1885	Ditto	140	0	0	20 Sept, 1881.
Assistant	Wallace Brandon ..	7 April, 1885	Ditto	26	0	0	7 April, 1885
				40	0	0	to 17 May, from 18 May
Burrowa— Postmaster . . . . .	David James Elliott	14 April, 1881	Ditto	210	0	0	1 Dec, 1877
Assistants .	Agnes Sophia Magdalen Elliott	19 July, 1882	Ditto	30	0	0	19 July, 1882.
	Charles Edward Nosworthy succeeded by Septimus Lee Hancock	12 Oct, 1885 10 June, 1886	Ditto ... Ditto	26	0	0	12 Oct, 1885.
Burwood— Postmaster	Henry Matthews	1 July, 1875	Ditto	220	0	0	1 June, 1874.
Assistant	Julian Eldershaw Gale <sup>3</sup> succeeded by William Thomas Taylor	24 Aug, 1885 16 Jan, 1886	Ditto Ditto	52	0	0	1 April, 1884.
				145	0	0	3 Aug, 1881.
Letter carriers (4)				96	0	0	
				75	0	0	
				65	0	0	
				63	0	0	
Byrock— Postmaster	Charles Thomas Morris	2 Sept, 1884	Ditto	200	0	0	21 Mar, 1877
Assistant	John Wellesley Connolly	16 May, 1885	Ditto	135	0	0	20 Dec, 1882.
Cambewarra— Postmistress	Jesse Catherine M'Gregor	1 Mar, 1885	Ditto	21	0	0	1 Aug, 1884.
Camden— Postmaster	John Joseph Leonard Moroney	1 June, 1880	Ditto	190	0	0	2 Mar, 1876.
Assistant	Thomas Edgar Gregory	1 Oct, 1882	Ditto	50	0	0	14 Mar, 1882.
Letter-carrier (1)			Ditto	39	0	0	
Campbelltown— Postmaster	Francis Mackel	15 Nov, 1875	Ditto	310	0	0	1 Oct, 1860
Assistant	Mary Mackel	9 Oct, 1877	Ditto	50	0	0	9 Oct, 1877.
Letter carrier (1)	...			114	0	0	
Camperdown— Postmaster	Frederick Burgis	1 Nov, 1882	Ditto	210	0	0	24 Sept, 1874.
Assistant	Henry Weir	4 Nov, 1884	Ditto	20	0	0	4 Nov, 1884
Candelo— Postmaster	William John Harwood Hayes succeeded by George Christopher Walter	29 April, 1881 20 Aug, 1886	Ditto Governor and Executive Council	170	0	0	1 July, 1878.
Assistant	George William M'Curley succeeded by Sidney Ernest Jeffery.	18 Jan, 1886 22 May, 1886	Postmaster-General Ditto .. ..	120	0	0	20 Oct, 1884
				26	0	0	13 Sept, 1882.
				26	0	0	17 July, 1885
Cannonbar— Postmaster	Francis Boland	1 Oct, 1885	Ditto	45	0	0	1 Oct, 1885.
Canowindra— Postmaster	Arthur Henry Costin	6 Sept, 1884	Ditto	190	0	0	1 Feb, 1878
Carcoar— Postmaster	George Uther Hosking	1 Oct, 1872	Ditto	240	0	0	1 Sept, 1863.
Assistant	Fanny Watson Hosking	21 Feb, 1876	Ditto	50	0	0	21 Feb., 1876.
Cargo— Postmaster	William Foster Burgess	13 Jan, 1886	Ditto	110	0	0	14 Mar, 1879.
Assistant	Ellen Moore Burgess	1 April, 1886	Ditto	12	0	0	1 April, 1886.
Casino— Postmaster	Walter Malcolm Scott	1 July, 1872	Ditto	240	0	0	1 June, 1865
Assistant	Rosa Scott	8 April, 1878	Ditto	55	0	0	8 April, 1878
Letter carrier (1)	..		Ditto	52	0	0	
Cassilis— Postmaster	Joseph Thomas Miner	21 July, 1884	Ditto	190	0	0	6 Feb, 1877.
Assistant	Eliza Ann Miner	24 July, 1884	Ditto	25	0	0	4 Mar, 1884.

<sup>1</sup> To 15 July, appointed Operator, Head Office<sup>2</sup> Ceased, duty 31 Aug<sup>3</sup> To 15 January appointed Operator, Quirindi

Office	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government
<b>POSTMASTER-GENERAL—POST OFFICE—continued.</b>					
<i>Country Offices—continued</i>					
Chatsworth Island— Postmaster ...	Henry Hay Attwater	1 Feb, 1884	Postmaster General	160 0 0	18 Dec, 1882
Clarence Town— Postmaster ...	Alfred Clarence Atkinson	7 Dec, 1880	Ditto	200 0 0	31 May, 1877
Assistant ..	Jane Atkinson	1 July, 1882	Ditto ...	26 0 0	1 July, 1882
Clifton— Postmaster .....	James Arthur Mackens	3 Feb, 1883	Ditto	150 0 0	1 Feb, 1883.
Cobar— Postmaster	Daniel Ryan Kenane ...	3 Oct, 1881	Ditto	330 0 0	1 Feb, 1873.
Assistant	George Henry Tunks	6 Nov, 1882	Ditto	170 0 0	26 Jan, 1881
Cobargo— Postmaster .. ...	Alfred Morris	7 Oct, 1882	Ditto	150 0 0	24 Sept, 1878
Cobbora— Postmaster .. ...	William James Lawless	1 Nov, 1882	Ditto	170 0 0	1 July, 1877.
Condobolin— Postmaster .. ...	Alfred William Kelly	15 Oct, 1883	Ditto	230 0 0	6 June, 1876.
Assistant .....	William George Payne	3 May, 1883	Ditto	120 0 0	6 May, 1879.
Coolah— Postmaster ... ..	Alexander Bransgrove Ewing	27 Nov, 1885	Ditto	120 0 0	23 Sept., 1876
Coolaman— Postmaster	Francis Joseph Colls	1 May, 1886	Governor and Executive Council	110 0 0	21 Nov, 1881.
Cooma— Postmaster	John Kirwan ... ..	18 Dec, 1869	Postmaster-General	290 0 0	1 Sept, 1861.
1st Assistant	John Baker	15 Sept, 1876	Ditto ..	190 0 0	15 Sept, 1876.
2nd ditto	James Thomas Baker ...	21 July, 1879	Ditto ...	120 0 0	21 July, 1879.
Coonabarabran— Postmaster	James Edward Ballard	8 Sept, 1881	Ditto ...	240 0 0	1 April, 1867
Assistant ... .	William Joseph Edwards	29 April, 1885	Ditto ...	26 0 0	29 April, 1885
Coonamble— Postmaster	Luke Kingsmill	15 July, 1878	Ditto ...	270 0 0	29 Jan, 1876.
Assistant	John Stevenson	1 June, 1886	Ditto ...	26 0 0	30 April, 1885
	succeeded by William Henry Cochrane	20 Aug, 1886	Ditto	26 0 0	
Cooranbong— Postmaster	George Parfitt Webb <sup>1</sup>	16 Oct, 1878	Ditto .. .	140 0 0	1 Sept, 1878.
	succeeded by Walter Redriff	6 May, 1886	Governor and Executive Council	140 0 0	1 Nov, 1878
Assistant	Clara Dinah Redriff	16 June, 1886	Postmaster General .....	12 0 0	16 June, 1886
Cootamundra— Postmaster ..	Richard Conolly Willans	15 Dec, 1876	Ditto	340 0 0	18 Feb, 1871
1st Assistant	John Strogan Donnan	21 Feb, 1881	Ditto	30 0 0	1 Mar, 1879
2nd ditto	William Layton	20 Aug, 1883	Ditto	100 0 0	1 Dec, 1881
Letter-carrier (1) ...			Ditto	62 0 0	
Copeland North— Postmaster ..	John Robert Higgins	1 Oct, 1885	Governor and Executive Council	110 0 0	16 May, 1879
Assistant	David Strickland	1 Nov, 1885	Postmaster-General	10 0 0	1 Nov, 1885
Copmanhurst— Postmaster	Joseph Lance Shambler	1 Sept, 1879	Ditto	130 0 0	1 Jan, 1879
Coraki— Postmaster	Sydney Lancelot Moffitt	17 Sept, 1879	Ditto ...	190 0 0	5 Feb, 1878.
Assistant	Mary Moffitt	1 July, 1886	Ditto ..	20 0 0	1 July, 1886
Corowa— Postmaster	Jesse Matthew Cooke	1 Dec, 1885	Governor and Executive Council	230 0 0	6 June, 1876
Assistant	Charles Bendix Grimm	12 Nov, 1884	Postmaster-General	26 0 0	12 Nov, 1884
Letter carrier (1)			Ditto	127 0 0	
Cowra— Postmaster	John James Richards	1 April, 1882	Ditto	240 0 0	7 Mar, 1876.
Assistant	Richard Finney	18 July, 1878	Ditto	52 0 0	1 Dec, 1875
Letter carrier (1)			Ditto	50 0 0	
Croki— Postmaster	Thomas William Eames	22 April, 1884	Ditto .	150 0 0	11 Mar, 1881.
	succeeded by John George Wilson	24 Sept, 1886	Ditto	150 0 0	13 Feb, 1882
Crookwell— Postmaster .. ...	John Walter	1 June, 1884	Ditto	210 0 0	1 Jan, 1874
Assistant . . . .	Michael O'Shannassy	18 Dec, 1885	Ditto	20 0 0	18 Dec, 1885
Croydon— Postmistress	Ellen Pritchard	14 Jan, 1886	Ditto	50 0 0	14 Jan, 1886
Cudal— Postmaster	Henry Hurley Torr	15 Sept, 1881	Ditto .. ...	150 0 0	1 Oct, 1877*
Assistant	Ernest Hadley <sup>2</sup> .. ..	1 April, 1885	Ditto ... ..	26 0 0	16 Feb., 1882
	succeeded by Herbert Charles Hadley	26 Aug, 1886	Ditto	26 0 0	26 Aug., 1886.
Cundletown— Postmaster	Joshua Walter Nunn	16 Nov, 1882	Ditto	190 0 0	13 Sept, 1862.
Darlington— Postmistress	Eliza Jane West	5 May, 1884	Ditto	130 0 0	8 Nov, 1880.
Darlington Point— Postmaster	James Langley Bennett	1 Nov, 1882	Ditto ... ..	120 0 0	1 Nov, 1876
Deepwater— Postmaster	John William Spicer Isaacs	24 June, 1882	Ditto	160 0 0	1 June, 1882

<sup>1</sup> Appointed to Minmi<sup>2</sup> Appointed Operator, Orange

\* Services not continuous

(For allowances see end)

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.		Date of first Appointment under the Colonial Government.
				£	s. d.	
<b>POSTMASTER-GENERAL—POST OFFICE—continued.</b>						
<i>Country Offices—continued.</i>						
Delegate— Postmaster .....	Charles Edwin Stuart .....	8 June, 1885	Postmaster-General .....	120	0 0	1 Dec., 1882.
Deniliquin— Postmaster .....	William Owen .....	1 Mar., 1876	Governor and Executive Council	330	0 0	25 Nov., 1872.
1st Assistant .....	Andrew Carroll .....	17 Nov., 1879	Postmaster-General .....	240	0 0	1 June, 1877.
2nd do .....	Robert Morrisson .....	26 June, 1883	Ditto .....	170	0 0	9 April, 1879.*
Letter-carrier (1) .....	.....	.....	.....	104	0 0	.....
Receiver-clearer (1) .....	.....	.....	.....	39	0 0	.....
Denman— Postmistress .....	Annie Kibble .....	6 May, 1885	Governor and Executive Council	110	0 0	6 May, 1885.
Dubbo— Postmaster .....	William Patrick Raper .....	9 Mar., 1876	Postmaster-General .....	370	0 0	1 Sept., 1871.
1st Assistant .....	William Hardcastle .....	6 July, 1881	Ditto .....	170	0 0	5 Sept., 1878.
2nd ditto .....	Thomas Joseph Bagnell .....	1 April, 1885	Ditto .....	110	0 0	2 May, 1883.
3rd ditto .....	Ernest James Tanner .....	27 April, 1885	Ditto .....	60	0 0	6 April, 1885.
Letter-carrier (1) .....	.....	.....	.....	124	0 0	.....
Dungog— Postmaster .....	Thomas Joseph Foley .....	7 June, 1880	Ditto .....	210	0 0	10 Mar., 1875.
Assistant .....	Herbert Joseph Brown <sup>1</sup> .....	1 May, 1882	Ditto .....	52	0 0	1 May, 1882.
.....	succeeded by Robert Newell .....	22 Feb., 1886	Ditto .....	52	0 0	22 Feb., 1886.
Letter-carrier (1) .....	.....	.....	.....	26	0 0	.....
East Maitland— Postmaster .....	Henry Thomas Mandly Williams .....	2 Dec., 1880	Ditto .....	270	0 0	1 Jan., 1874.
Assistant .....	William Smith Arnott .....	3 Dec., 1880	Ditto .....	120	0 0	3 Dec., 1880.
Letter-carriers (2) .....	.....	.....	.....	124	0 0	.....
.....	.....	.....	.....	100	0 0	.....
Eauabalong— Postmaster .....	Frederick Small .....	1 Jan., 1881	Postmaster-General .....	200	0 0	18 Sept., 1880.
Eden— Postmaster .....	Charles George Kebby .....	1 Dec., 1882	Ditto .....	170	0 0	16 July, 1881.
Elgcliff— Postmistress .....	Henrietta Jane North .....	16 July, 1877	Ditto .....	160	0 0	8 Mar., 1875.
Emmaville— Postmaster .....	Frederick Waddups .....	5 Feb., 1879	Ditto .....	240	0 0	1 Jan., 1877.
Enngonia— Postmaster .....	John Johnston .....	1 Oct., 1885	Governor and Executive Council	140	0 0	4 June, 1882.
.....	succeeded by William Dowling .....	7 May, 1886	Ditto .....	140	0 0	14 April, 1884.
Eugowra— Postmaster .....	Joseph Claxton .....	18 Oct., 1883	Postmaster General .....	170	0 0	15 Sept., 1881.
Euston— Postmaster .....	Arthur Murdoch Kennedy .....	12 Mar., 1881	Ditto .....	170	0 0	7 Aug., 1877.
Assistant .....	Joseph Bridekirk .....	1 April, 1885	Ditto .....	25	0 0	1 Sept., 1877.
Fernmount— Postmaster .....	Henry Litchfield .....	18 Mar., 1881	Ditto .....	160	0 0	6 Nov., 1877.
Assistant .....	Sarah Litchfield .....	1 Feb., 1886	Ditto .....	26	0 0	1 Feb., 1886.
Forbes— Postmaster .....	Edward Chapman .....	9 Jan., 1873	Ditto .....	310	0 0	1 Dec., 1880.
Assistant .....	Frederick Money Palmer .....	18 Aug., 1880	Ditto .....	170	0 0	28 April, 1878.
Letter-carrier (1) .....	.....	.....	.....	138	0 0	.....
Forster— Postmaster .....	Pelham Henry Ella Aldrich .....	1 June, 1882	Ditto .....	120	0 0	10 April, 1882.
Frederickton— Postmaster .....	Francis Robert Macleay Scott .....	16 Jan., 1884	Ditto .....	140	0 0	14 Oct., 1883.
Assistant .....	Robert Walter Debenham .....	1 July, 1884	Ditto .....	26	0 0	5 Mar., 1876.
.....	.....	.....	.....	52	0 0	.....
.....	.....	.....	.....	from 4 Nov.	.....	.....
Germanton— Postmaster .....	Hume Jones Chapman .....	1 Jan., 1882	Ditto .....	220	0 0	1 Jan., 1874.
1st Assistant .....	Eliza Day Chapman .....	1 Jan., 1882	Ditto .....	50	0 0	1 Jan., 1882.
Gerringong— Postmaster .....	Alexander Robb .....	14 Jan., 1885	Ditto .....	50	0 0	14 Jan., 1885.
Gilgandra— Postmaster .....	Willie Harry Golding .....	1 Nov., 1882	Ditto .....	200	0 0	12 Feb., 1880.
.....	succeeded by Patrick Thomas Whealy .....	23 Aug., 1886	Ditto .....	180	0 0	1 May, 1877.
Assistant .....	Thomas Kane .....	27 Aug., 1884	Ditto .....	26	0 0	27 Aug., 1884.
.....	succeeded by John William Murphy .....	15 Nov., 1886	Ditto .....	26	0 0	15 Nov., 1886.
Ginninderra— Postmaster .....	Francis Joseph Colls .....	16 Aug., 1882	Ditto .....	100	0 0	21 Nov., 1881.
.....	succeeded by Herbert Sidney Crompton Eckley .....	1 May, 1886	Ditto .....	100	0 0	10 April, 1882.
Gladstone— Postmaster .....	Joseph Peter Holahan .....	1 April, 1885	Ditto .....	10	0 0	1 Mar., 1884.
.....	.....	.....	.....	to 2 Dec.,	.....	.....
.....	.....	.....	.....	36	0 0	.....
.....	.....	.....	.....	from 3 Dec.	.....	.....
Glebe— Postmistress .....	Minnie Louisa Knott .....	21 Sept., 1877	Ditto .....	150	0 0	16 Mar., 1875.
Assistant .....	Jean Knott .....	25 June, 1883	Ditto .....	26	0 0	25 June, 1883.

<sup>1</sup> Appointed to Qurndi.

\* Services not continuous

(For allowances see end)

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>POSTMASTER-GENERAL—POST OFFICE—continued.</b>					
<i>Country Offices—continued.</i>					
Glen Innes—					
Postmaster .....	Robert William Arnott .....	27 Aug., 1881	Postmaster-General .....	340 0 0	3 June, 1876.
1st Assistant .....	William John Lees .....	20 May, 1885	Ditto .....	130 0 0	1 Sept., 1884.
2nd ditto .....	James O'Neill .....	20 May, 1885	Ditto .....	80 0 0	6 Sept., 1882.
3rd ditto .....	Francis Henry Percy .....	25 Nov., 1885	Ditto .....	75 0 0	27 Mar., 1882.
Letter-carrier (1) .....	.....	.....	.....	114 0 0	.....
Receiver-cleaver (1) .....	.....	.....	.....	26 0 0	.....
Gloucester—					
Postmaster .....	Wm. Woodley Cumming..	1 Oct., 1885	Governor and Executive Council	110 0 0	18 June, 1881.
Assistant .....	John Chisholm.....	2 Feb., 1886	Postmaster-General .....	26 0 0	2 Feb., 1886.
Gongolgon—					
Postmaster .....	John Thomas Hackett.....	9 June, 1881	Ditto .....	200 0 0	12 Feb., 1878.
Goodooga—					
Postmaster .....	John Bennett .....	1 Jan., 1878	Ditto .....	220 0 0	27 Nov., 1877.
Assistant .....	Donald Ross.....	1 April, 1885	Ditto .....	26 0 0	1 April, 1885.
Gosford—					
Postmaster .....	John Fellingham Parr.....	1 Nov., 1879	Ditto .....	210 0 0	1 Aug., 1878.
Assistant .....	Eliza Parr.....	27 Sept., 1881	Ditto .....	52 0 0	27 Sept., 1881.
Goulburn—					
Postmaster .....	Samuel Malcolm Morgan Dennis	13 June, 1883	Governor and Executive Council	400 0 0	1 June, 1868.
Assistants .....	William Gurd Ledsam .....	16 Dec., 1881	Postmaster-General .....	235 0 0	14 May, 1875.
	succeeded by				
	Edward Charles Mann .....	19 June, 1886	Ditto .....	190 0 0	1 Feb., 1883.
	Denniston Dewar Moon .....	10 Feb., 1880	Ditto .....	220 0 0	10 Dec., 1877.
	Alfred James Powell .....	2 April, 1883	Ditto .....	135 0 0	1 Sept., 1867.*
				to 30 Nov.,	
				145 0 0	
				from 1 Dec.	
	Frederick William Brown	1 Sept., 1886	Ditto .....	135 0 0	6 Dec., 1878.
	Frederick Cossentine Rule	7 Aug., 1882	Ditto .....	120 0 0	7 Aug., 1882.
	William James Bradford..	22 May, 1882	Ditto .....	100 0 0	22 May, 1882.
	James Sutherland Clifford	17 June, 1884	Ditto .....	52 0 0	17 June, 1884.
Stamper and Sorter (1) .....	.....	.....	Ditto .....	140 0 0	.....
Letter-carriers (4) .....	.....	.....	Ditto .....	124 0 0	each.
				114 0 0	
				104 0 0	
Grafton—					
Postmaster .....	Thomas Quirk .....	5 April, 1873	Ditto .....	370 0 0	18 July, 1868.
Assistant .....	George Frederick Schwing- hammer.	1 Sept., 1885	Ditto .....	110 0 0	31 July, 1882.
Letter-carriers (2) .....	.....	.....	Ditto .....	127 0 0	.....
				104 0 0	
Receiver-cleaver (1) .....	.....	.....	Ditto .....	52 0 0	.....
Granville—					
Postmistress .....	Jane Ellen Higgs .....	21 Mar., 1878	Ditto .....	160 0 0	21 Mar., 1878.
1st Assistant .....	William George Alfred Hilder..	6 Nov., 1882	Ditto .....	100 0 0	1 Nov., 1882.
2nd ditto .....	Charles Nelson Partis.....	1 Mar., 1885	Ditto .....	52 0 0	1 Mar., 1885.
				to 1 July,	
				62 0 0	
				from 2 July.	
				90 0 0	
				60 0 0	
Letter-carriers (2) .....	.....	.....	Ditto .....	1 1 at	.....
				1 1 ,,	.....
Greenwell Point—					
Postmaster .....	Archibald M'Nab M'Lean	1 Aug., 1879	Ditto .....	13 0 0	1 Jan., 1879.
Grenfell—					
Postmaster .....	John Peter Olson.....	1 April, 1871	Ditto .....	270 0 0	16 July, 1863.
Assistant .....	Augusta Caroline Olson .....	1 April, 1875	Ditto .....	50 0 0	1 April, 1875.
Letter-carrier (1) .....	.....	.....	.....	39 0 0	.....
Gulgambone—					
Postmaster .....	Patrick McGuinness .....	16 July, 1885	Ditto .....	50 0 0	— Jan., 1885.
Gulgong—					
Postmaster .....	Hugh Malone .....	28 Sept., 1882	Ditto .....	240 0 0	1 Oct., 1877.
Assistant .....	Gerald Francis McDonough	21 Dec., 1885	Ditto .....	75 0 0	21 Dec., 1885.
Gundagai—					
Postmaster .....	Colville Smith .....	1 Jan., 1870	Ditto .....	270 0 0	6 Nov., 1858.
Assistant .....	Clara Harriet Smith .....	22 May, 1884	Ditto .....	25 0 0	22 May, 1884.
Gunnedah—					
Postmaster .....	James Clarke O'Hara .....	30 Mar., 1881	Ditto .....	290 0 0	23 Feb., 1877.
Assistant .....	Thomas Charles Pugh.....	1 June, 1883	Ditto .....	60 0 0	1 June, 1883.
Gunning—					
Postmaster .....	Francis William Timmis..	15 June, 1882	Ditto .....	190 0 0	17 June, 1880.
Assistant .....	Joseph M'Kay .....	1 Mar., 1883	Ditto .....	50 0 0	1 Mar., 1883.
	succeeded by				
	Harold John Dyce .....	22 June, 1886	Ditto .....	50 0 0	22 Oct., 1883.*
Hamilton—					
Postmistress .....	Jane Peters .....	8 Aug., 1879	Ditto .....	110 0 0	8 Aug., 1879.
Letter-carrier (1) .....	.....	.....	Ditto .....	52 0 0	.....
Harden—					
Postmaster .....	John Campey .....	20 May, 1885	Ditto .....	130 0 0	10 April, 1883.
Harrington—					
Postmistress .....	Elizabeth Laird Muir.....	15 Oct., 1876	Ditto .....	10 0 0	30 Aug., 1876.
Postmaster .....	succeeded by				
	John Muir Coulter .....	8 Sept., 1886	Ditto .....	10 0 0	8 Sept., 1886.

\* Services not continuous. (For allowances see end.)



Office	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary £ s d	Date of first Appointment under the Colonial Government
<b>POSTMASTER-GENERAL—POST OFFICE—continued.</b>					
<i>Country Offices—continued.</i>					
Harwood Island—					
Postmaster	William Faithful Nelson	7 April, 1885	Postmaster General	130 0 0	1 May, 1882.
Assistant	Johanna Nelson	20 June, 1886	Ditto	17 0 0	20 June, 1886
Hay—					
Postmaster	Alexander Burnett	9 Mar, 1876	Ditto	380 0 0	4 April, 1862.
1st Assistant ... ..	John Hore Reid	28 July, 1884	Ditto	170 0 0	13 Dec, 1880.
2nd ditto ... ..	William Francis	5 Jan, 1886	Ditto	100 0 0	13 April, 1882.
Letter-carriers (2) .	...		Ditto	{ 1 at 114 0 0 1 ,, 90 0 0	
Hill End—					
Postmaster .	Charles Chapple	21 Sept, 1877	Ditto ..	220 0 0	1 Mar, 1872.
Assistant	Mary Chapple	20 Mar, 1878	Ditto ... ..	40 0 0	20 Mar, 1878.
Letter-carrier (1)			Ditto	135 0 0	
Hillston—					
Postmaster ...	William Silas Bellamy	23 May, 1879	Ditto . . . .	260 0 0	6 May, 1876.
Assistants	G. T. J. Grace	1 Feb, 1886	Ditto .. ..	25 0 0	1 Feb, 1886.
	Charles Arthur Low	10 Dec, 1884	Ditto	25 0 0	10 Dec, 1884.
Hinton—					
Postmistress	Margaret Lockyer	1 April, 1885	Ditto ...	55 0 0	1 April, 1885.
Homebush—					
Postmaster ... ..	Clifford George Albert Doutty	3 Feb, 1879	Ditto	190 0 0	1 Feb., 1879.
Letter-carrier (2) ...				20 0 0	each.
Howlong—					
Postmaster ...	Edward Walsh	10 May, 1880	Postmaster-General ... ..	160 0 0	1 July, 1878.
Assistant	Alice Walsh	8 June, 1885	Ditto ....	26 0 0	8 June, 1885.
Hunter's Hill—					
Postmistress ... ..	Rachel Lilla Twentyman <sup>1</sup> .	1 Aug, 1876	Ditto ... .	124 0 0	1 July, 1876.
	succeeded by				
	Mary Jane Davies	2 Aug, 1886	Governor and Executive Council	124 0 0	8 Mar., 1875.
Letter-carrier (1)			.....	104 0 0	
Inverell—					
Postmistress	Emily Theresa Eames	5 Oct, 1879	Postmaster-General ...	230 0 0	5 Oct, 1879.
	succeeded by				
Postmaster	William Henry Rowlands.	1 Sept, 1886	Governor and Executive Council	200 0 0	8 May, 1874.
Assistants	Susanna Rowlands	1 Sept, 1886	Postmaster-General	25 0 0	5 Oct., 1879.
	Emily Frances Eames	6 April, 1881	Ditto	100 0 0	6 April, 1881.
	Frank J. M'Lean	1 July, 1885	Ditto	124 0 0	1 April, 1881.
Letter-carrier (1)				114 0 0	
Ivanhoe—					
Postmaster	Albert Webber Rice	15 May, 1883	Ditto .....	200 0 0	18 Nov, 1881.
Jamberoo—					
Postmaster	William Stewart	1 April, 1870	Ditto	44 0 0	1 April, 1870
Jerilderie—					
Postmaster	Arthur Daniel Fowler	22 Sept, 1882	Ditto	240 0 0	10 June, 1878
Assistant ...	James Ewen Rankin	14 Jan, 1878	Ditto	75 0 0	14 Jan, 1878.
	Catherine Anne Fowler	1 Jan, 1885	Ditto	26 0 0	1 Jan, 1885.
Jerry's Plains—					
Postmaster	Edwin Sydney Atkinson	14 July, 1884	Ditto	190 0 0	1 Oct, 1874.
Jindera—					
Postmaster ...	Edward Joseph Collier <sup>2</sup>	1 July, 1884	Ditto	130 0 0	25 Oct, 1882.
Juncie Junction—					
Postmaster	Edward Charles Mann <sup>3</sup> ..	1 Feb, 1883	Ditto	200 0 0	1 Feb, 1883
	succeeded by				
Assistant ..	William Gurd Ledsam	12 June, 1886	Governor and Executive Council	235 0 0	14 May, 1875
Kangaroo Valley—	Abraham Quiseano Hen-	14 Oct, 1884	Postmaster General .	145 0 0	21 Feb, 1879.
Postmistress	riques.				
Katoomba—	Martha Jane Nugent ...	16 July, 1884	Ditto	29 0 0	16 July, 1884.
Kelso—					
Postmaster	Richard John Holmes	19 May, 1885	Ditto .....	120 0 0	21 Oct, 1883.
Assistant	Albert Edgar Marsden	1 Feb, 1883	Ditto .....	120 0 0	1 Feb, 1883
Kempsey—	Clara Maud Marsden	11 July, 1883	Ditto ... ..	30 0 0	11 July, 1883
Postmaster	Christopher Henry Fitz-	5 Sept, 1881	Ditto ... ..	240 0 0	1 June, 1876
Assistant	gerald				
Kiama—	Douglas A. Briggs	20 Oct, 1881	Ditto .....	50 0 0	20 Oct, 1881.
Postmaster	John Francis Tyter	1 July, 1870	Ditto ... ..	310 0 0	19 Oct, 1867.
Assistant ...	Agnes Tyter <sup>4</sup> ...	13 May, 1879	Ditto	52 0 0	13 May, 1879.
Letter-carriers (2) ...				{ 1 at 25 0 0 1 ,, 26 0 0	
Kiandra—					
Postmaster ...	William Dixon Bailey	4 May, 1882	Ditto . . . .	160 0 0	1 May, 1882.
Kogarah—					
Postmaster	Albert Henry Valentine Gosbell	22 Nov, 1886	Governor and Executive Council	100 0 0	1 Aug, 1885
Letter-carrier (1)				39 0 0	
Kurrajong—					
Postmaster ..	George Colclough Kirwan	1 May, 1885	Postmaster-General	130 0 0	1 Sept., 1884.
Kurrajong Heights —					
Postmaster ..	Thomas Walker	1 May 1884	Ditto .	14 0 0	1 May, 1884.
Kyamba—					
Receiving Office-keeper	Robert James Barr	15 May, 1877	Ditto	150 0 0	30 July, 1876

<sup>1</sup> Resigned 30 June<sup>2</sup> Official office closed, 30 September<sup>3</sup> Appointed Assistant, Goulburn  
(For allowances see end)<sup>4</sup> Services dispensed with, 31 December

## NEW SOUTH WALES—1886.

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Office	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary £ s d	Date of first Appointment under the Colonial Government
<b>POSTMASTER-GENERAL—POST OFFICE—continued.</b>					
<i>Country Offices—continued</i>					
Lake Cudgellico— Postmaster	John Woolsey Porter Bennett.	12 July, 1883	Postmaster-General . . .	170 0 0	1 Oct., 1878.
Assistant ..	Annie Bennett	14 Dec., 1883	Ditto ... ..	15 0 0	14 Dec., 1883.
Lambton— Postmaster	Hiram James Rowthorn	25 Feb., 1880	Ditto .....	200 0 0	17 Jan., 1879 *
Assistant . . .	Louisa Mary Rowthorn	26 April, 1886	Ditto .....	30 0 0	26 April, 1886.
Letter-carriers (2)	....	....	....	127 0 0 12/6 per week	
La Perouse— Postmaster	John Alexander Sinclair	31 May, 1884	Postmaster-General .....	170 0 0	13 Sept., 1877.
Laurieton— Postmaster	Alexander Thompson	1 May, 1885	Ditto ..	120 0 0	9 Jan., 1883
Lawrence— Postmaster	Thomas Edwin Avery ..	15 Oct., 1882	Ditto ....	170 0 0	1 Jan., 1878.
Assistant .....	succeeded by Alexander Thomas M'Millan	10 Feb., 1886	Ditto .	170 0 0	26 Sept., 1876.
	Jane Agnes Avery ...	23 May, 1884	Ditto .. .	30 0 0	23 May, 1884
	succeeded by Eva M'Millan ...	19 April 1886	Ditto ... ..	30 0 0	19 April, 1886.
	succeeded by Hugh C. Carolan .	19 July, 1886	Ditto	26 0 0	19 July, 1886
Leichhardt— Postmistress	Ellen Louisa Antomette Cross	3 Jan., 1883	Ditto ...	160 0 0	1 Dec., 1875
Assistant . . . . .	Agnes Pegus	1 Feb., 1885	Ditto ...	52 0 0	1 Feb., 1885.
Letter-carriers (4)	..	..	..	127 0 0 96 0 0 62 0 0 26 0 0	each
Receiver-clearer (1)	..	..	..	26 0 0	
Lismore— Postmaster	John Anschau ...	25 Feb., 1882	Postmaster-General .	260 0 0	18 Mar., 1879.
Assistant	Albert Cottee	28 Nov., 1882	Ditto . . .	78 0 0	28 Nov., 1882
Letter-carrier (1) ...	..	..	..	104 0 0	
Lithgow— Postmaster ...	David Thomas	24 Mar., 1881	Postmaster-General ... ..	260 0 0	8 Oct., 1878.
Assistants . . .	Michael Francis Naghten	12 May, 1886	Ditto	140 0 0	12 Mar., 1881
	Frances Elizabeth Thomas	1 July, 1882	Ditto ...	52 0 0	8 Mar., 1875 *
Letter-carrier (1) ...	..	..	..	52 0 0	
Liverpool— Postmaster ...	Thomas Persehouse Burgis	17 Nov., 1883	Governor and Executive Council	240 0 0	16 Sept., 1872.
Assistants ... .	Maria Burgis . . .	12 Mar., 1884	Postmaster General ...	20 0 0	12 Mar., 1884.
	William Thomas Long	1 Nov., 1884	Ditto ..	25 0 0	19 Oct., 1881
Letter-carrier (1)	..	..	..	114 0 0	
Receiver clearer ...	..	..	..	16 0 0	
Louth— Postmaster	Alfred Devonshire Turner	1 Dec., 1880	Postmaster-General ...	190 0 0	1 April, 1874.
Lower Botany— Postmistress ....	Annie Halloran	7 Mar., 1883	Ditto .. ...	120 0 0	10 May, 1875
Lower Gundaroo— Postmaster	William Ralph Clemenger	1 Aug., 1882	Ditto	120 0 0	17 April, 1882.
Assistant	Eliza Clemenger	22 Dec., 1884	Ditto .	12 0 0	1 Aug., 1882.
Lucknow— Postmaster	Henry William Newman.	1 Jan., 1878	Ditto ... ..	54 0 0	1 Jan., 1878.
Maclean— Postmaster	Theodore Lamy	1 June, 1877	Ditto .....	240 0 0	1 June, 1877
Assistant .....	John Charles Flanders ...	5 Mar., 1885	Ditto	52 0 0	
Major's Creek— Postmaster	George Alexander Sherry	28 Jan., 1884	Ditto ... ..	150 0 0	1 Mar., 1878.
Manilla— Postmaster	Richard Edmond Done	11 Nov., 1878	Ditto ...	170 0 0	20 Dec., 1876.
Assistant	Eliza Mary Done	21 April, 1882	Ditto .....	26 0 0	21 April, 1882.
Manly— Postmistress	Louisa Frederica Stephen	1 Mar., 1876	Ditto	170 0 0	1 Mar., 1876.
Assistant	Michael Joseph Kenny	9 Feb., 1882	Ditto	25 0 0	1 July, 1878.
Letter-carriers (2) .	..	..	..	124 0 0 52 0 0	
Marengo— Postmaster	Montgomery Jennings Sheppard	5 July, 1882	Postmaster-General ...	..	24 Nov., 1880.
Marrickville— Postmaster	George Edward Collett	1 Aug., 1880	Ditto . . . . .	150 0 0	3 June, 1880.
Letter-carriers (3)	..	..	..	124 0 0 75 0 0 50 0 0 52 0 0	
Receiver-clearer (1)	..	..	..	52 0 0	
Marsden's— Postmaster	Henry Alex. Weatherall	15 Dec., 1882	Ditto ... .	160 0 0	17 Nov., 1882.
Marulan— Postmaster . . . .	Charles Moxham <sup>1</sup> ...	5 Dec., 1885	Governor and Executive Council	170 0 0	25 April, 1881.
	succeeded by Harry Alfred Hoare	15 Aug., 1886	Ditto	110 0 0	5 Mar., 1883.
Menindie— Postmaster	James Rowand Holding	2 July, 1880	Postmaster-General	240 0 0	1 June, 1873 *
Merimbula— Postmaster	George John Dennis	11 Dec., 1875	Ditto . . . .	160 0 0	1 Sept., 1875.

<sup>1</sup> Appointed to Bouke

\* Services not continuous

(For allowances see end)

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>POSTMASTER-GENERAL—POST OFFICE—continued.</b>					
<i>Country Offices—continued.</i>					
<b>Merriwa—</b>					
Postmistress .....	Matilda Read .....	6 July, 1883	Postmaster-General .....	110 0 0	6 July, 1883.
Assistants .....	William Arthur Read .....	6 July, 1883	Ditto .....	25 0 0	19 April, 1882.
	Margaret Isabella Read .....	1 Sept., 1885	Ditto .....	13 0 0	1 Sept., 1885.
<b>Millie—</b>					
Postmaster .....	Frank George De Boos .....	23 May, 1883	Ditto .....	140 0 0	21 Oct., 1878.
Assistant .....	Mary De Boos .....	8 Feb., 1886	Ditto .....	26 0 0	8 Feb., 1886.
<b>Milton—</b>					
Postmaster .....	Ronald Seton .....	1 May, 1883	Ditto .....	230 0 0	1 Jan., 1878.
Assistant .....	Frederick Ahrens .....	5 Jan., 1886	Ditto .....	52 0 0	5 Jan., 1886.
<b>Minmi—</b>					
Postmaster .....	Walter Rejriff <sup>1</sup> .....	12 Aug., 1885	Ditto .....	130 0 0	1 Nov., 1878.
	succeeded by				
	George Parfitt Webb .....	6 May, 1886	Ditto .....	130 0 0	1 Sept., 1878.
Assistant .....	David Williams .....	1 June, 1883	Ditto .....	13 0 0	1 June, 1883.
Letter-carrier (1) .....			Ditto .....	78 0 0	
<b>Mitchell—</b>					
Postmaster .....	Lewis Alexander Tomkinson .....	1 Oct., 1885	Ditto .....	160 0 0	3 Feb., 1880.
Letter-carrier (1) .....			Ditto .....	52 0 0	
<b>Mittagong—</b>					
Postmaster .....	Andrew Prott .....	27 Aug., 1882	Ditto .....	210 0 0	1 April, 1883.
<b>Moama—</b>					
Postmaster .....	Charles Robert Hammond .....	24 Jan., 1878	Ditto .....	230 0 0	27 April, 1862.
Assistant .....	Arthur Edwd. Hammond .....	1 April, 1885	Ditto .....	110 0 0	2 April, 1883.
Letter-carrier (1) .....			Ditto .....	26 0 0	
Receiver-clearer (1) .....			Ditto .....	13 0 0	
<b>Mogil Mogil—</b>					
Postmaster .....	William Pugh .....	2 Aug., 1882	Ditto .....	170 0 0	13 June, 1881.
Assistant .....	Isabella Pugh .....	26 April, 1886	Ditto .....	20 0 0	26 April, 1886.
<b>Molong—</b>					
Postmaster .....	Richard Philips Martin .....	28 Jan., 1884	Ditto .....	210 0 0	14 Dec., 1877.
Assistant .....	John Horsley <sup>2</sup> .....	1 Aug., 1880	Ditto .....	75 0 0	1 Aug., 1880.
	succeeded by				
	Andrew Ernest Parker .....	15 June, 1886	Ditto .....	75 0 0	7 Feb., 1884.
Letter-carrier (1) .....			Ditto .....	52 0 0	
<b>Moree—</b>					
Postmaster .....	John Munro .....	21 Jan., 1878	Ditto .....	190 0 0	8 Dec., 1877.
Assistants .....	Bridget May Helonge Munro .....	21 Jan., 1878	Ditto .....	40 0 0	21 Jan., 1878.
	Alfred Leonard Tarran <sup>3</sup> .....	16 May, 1885	Ditto .....	52 0 0	16 May, 1885.
	succeeded by				
	Robert Galloway .....	24 Feb., 1886	Ditto .....	52 0 0	11 Mar., 1884.
2nd Assistant .....	Charles Edward Gall .....	2 Aug., 1886	Ditto .....	52 0 0	2 Aug., 1886.
<b>Morpeth—</b>					
Postmaster .....	Charles Frederick Wakely .....	9 Nov., 1872	Ditto .....	230 0 0	1 June, 1870.
Assistant .....	Frances Sarah Wakely .....	1 Dec., 1878	Ditto .....	52 0 0	1 Dec., 1878.
Letter-carrier (1) .....			Ditto .....	135 0 0	
<b>Moruya—</b>					
Postmaster .....	Frederick John Fowler <sup>4</sup> .....	1 June, 1884	Ditto .....	230 0 0	28 Feb., 1870.
	succeeded by				
	Robert Dixon .....	11 Aug., 1886	Ditto .....	230 0 0	1 Nov., 1878.
Assistant .....	Henry Miles Stapyllton .....	9 Oct., 1884	Ditto .....	62 0 0	15 July, 1881.
<b>Mossgiel—</b>					
Postmaster .....	Arthur Bellamy .....	1 Jan., 1886	Governor and Executive Council	170 0 0	1 Nov., 1879.
Assistant .....	Marion Bellamy .....	1 Jan., 1886	Postmaster-General .....	30 0 0	1 Nov., 1882.
<b>Moss Vale—</b>					
Postmaster .....	John Arthur Parke .....	12 Feb., 1883	Ditto .....	190 0 0	1 Dec., 1875.
Assistant .....	Harold George Lambert .....	6 May, 1885	Ditto .....	110 0 0	6 May, 1885.
	Thomas White .....	13 Oct., 1883	Ditto .....	72 0 0	13 Oct., 1883.
<b>Moulamein—</b>					
Postmaster .....	Robert Richard Graham .....	19 Jan., 1878	Ditto .....	220 0 0	1 Oct., 1874.
<b>Mount Hope—</b>					
Postmaster .....	James Smith Page .....	6 Oct., 1884	Ditto .....	230 0 0	1 Nov., 1878.
<b>Mount M'Donald—</b>					
Postmaster .....	George Alfred Gunning .....	16 Oct., 1882	Ditto .....	190 0 0	1 Dec., 1877.
<b>Mount Victoria—</b>					
Postmaster .....	Charles William Prott .....	10 Nov., 1875	Ditto .....	240 0 0	1 Oct., 1875.
Assistant .....	Sarah Prott .....	10 July, 1882	Ditto .....	25 0 0	10 July, 1882.
<b>Mudgee—</b>					
Postmaster .....	William O'Neill .....	4 Oct., 1878	Governor and Executive Council	360 0 0	17 May, 1875.
Assistant .....	James William John Flanagan .....	2 April, 1883	Postmaster-General .....	170 0 0	12 July, 1881.
	Albert William Sheppard .....	1 Jan., 1886	Ditto .....	52 0 0	19 Mar., 1885.
				to 31 July,	
				75 0 0	
				from 1 Aug.	
Letter-carrier (1) .....			Ditto .....	96 0 0	
<b>Mulwala—</b>					
Postmaster .....	Charles Oscar Smith .....	1 Oct., 1884	Ditto .....	170 0 0	22 July, 1881.
<b>Mundooran—</b>					
Postmaster .....	George Clement Horsley .....	31 Aug., 1884	Ditto .....	120 0 0	31 Aug., 1884.
<b>Mungindi—</b>					
Postmaster .....	James Alexander Gordon .....	1 Feb., 1882	Ditto .....	190 0 0	23 July, 1877.

<sup>1</sup> Appointed to Cooranbong.<sup>2</sup> Appointed to Newtown.<sup>3</sup> Appointed to Narrabri.<sup>4</sup> Appointed to Dull.

(For allowances see end.)

Office.	Name.	Date of Appointment.	By whom appointed and under what instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>POSTMASTER-GENERAL—POST OFFICE—continued.</b>					
<i>Country Offices—continued.</i>					
Murrumburrah—					
Postmaster .....	Robert Dixon <sup>1</sup> .....	1 April, 1883	Postmaster-General .....	220 0 0	1 Nov., 1878.
	succeeded by				
	Frederick Thomas South .....	11 Aug., 1886	Governor and Executive Council	180 0 0	8 Oct., 1883.
Murrurundi—					
Postmaster .....	William Robinson Bowen	4 Oct., 1878	Ditto .....	220 0 0	18 Jan., 1875.
Assistant .....	Henry Stuart .....	9 Mar., 1885	Postmaster-General .....	52 0 0	9 Mar., 1885.
Murwillumbah—					
Postmaster .....	William James Grimo .....	7 May, 1877	Ditto .....	240 0 0	6 April, 1877.
Assistant .....	Charles Henry Champion .....	16 June, 1886	Ditto .....	20 0 0	1 Mar., 1882.
Muswellbrook—					
Postmaster .....	Henry Wheeler .....	1 Mar., 1878	Governor and Executive Council	220 0 0	1 Aug., 1856.*
Assistant .....	Harry Lambert Wheeler .....	9 July, 1880	Postmaster-General .....	110 0 0	9 July, 1880.
Letter-carrier (1) .....	.....	.....	Ditto .....	78 0 0	.....
Nambucca—					
Postmaster .....	Edward Leeson .....	16 June, 1883	Ditto .....	140 0 0	5 Nov., 1877.
Narrabri—					
Postmaster .....	Frederick Wesley Brown	1 Oct., 1885	Governor and Executive Council	260 0 0	1 Dec., 1867.
1st Assistant .....	Thomas Banbury Giles <sup>2</sup> .....	1 Jan., 1883	Ditto .....	160 0 0	8 Mar., 1879.
2nd ditto .....	William Henry Leek .....	25 Jan., 1886	Postmaster-General .....	26 0 0	9 April, 1883.
3rd ditto .....	Eugene Vincent Coleman .....	1 Jan., 1883	Governor and Executive Council	120 0 0	1 Jan., 1883.
Letter-carrier (1) .....	.....	.....	Ditto .....	124 0 0	.....
Narrandera—					
Postmaster .....	John Smith .....	23 April, 1883	Ditto .....	260 0 0	1 Jan., 1875.
Assistants .....	Byron St. Clair Muir .....	1 Jan., 1884	Ditto .....	110 0 0	1 Jan., 1884.
	Alfred Hall .....	9 June, 1885	Ditto .....	25 0 0	6 Oct., 1884.
Letter-carrier (1) .....	.....	.....	Ditto .....	78 0 0	.....
Nelligen—					
Postmaster .....	David Broadfoot .....	25 Oct., 1883	Ditto .....	190 0 0	30 Aug., 1880.
Nelson's Bay—					
Postmaster .....	Emanuel Fleu Dalglish <sup>3</sup> .....	1 Sept., 1883	Ditto .....	120 0 0	6 Sept., 1881.
	succeeded by				
	William Jackson .....	14 June, 1886	Ditto .....	100 0 0	22 Nov., 1883.
Newcastle—					
Postmaster .....	William Henry Thompson	1 Sept., 1862	Ditto .....	400 0 0	20 Dec., 1847.*
1st Assistant .....	Richard Fetherston .....	12 July, 1882	Postmaster-General .....	220 0 0	1 June, 1876.
2nd ditto .....	William Muir .....	12 Feb., 1883	Ditto .....	170 0 0	10 Mar., 1879.
3rd ditto .....	William Edward Puller .....	1 Jan., 1882	Ditto .....	120 0 0	1 Nov., 1878.
4th ditto, &c. ....	John Dudgeon .....	2 April, 1883	Ditto .....	170 0 0	12 Sept., 1878.
5th ditto .....	John Hugh Davies .....	23 Aug., 1886	Ditto .....	88 0 0	1 Jan., 1882.
Letter-carriers (5) ..	.....	.....	Ditto .....	{ 1 at 148 0 0 1 " 138 0 0 1 " 104 0 0 1 " 78 0 0 1 " 65 0 0 1 " 50 0 0	.....
Mail Boys (2) .....	.....	.....	Ditto .....	50 0 0	each.
Nimitybelle—					
Postmaster .....	George William Myers .....	1 July, 1880	Ditto .....	160 0 0	7 Aug., 1877.
Assistant .....	Caroline Myers .....	19 Feb., 1884	Ditto .....	40 0 0	19 Feb., 1884.
Nowra—					
Postmaster .....	George Samuel Roberts .....	1 June, 1879	Ditto .....	190 0 0	20 Aug., 1876.
Assistant .....	Eliza Roberts .....	1 Mar., 1882	Ditto .....	50 0 0	1 Mar., 1882.
Nundle—					
Postmaster .....	Joseph Australia Keating .....	1 Nov., 1885	Ditto .....	110 0 0	9 Aug., 1879.
Nymagee—					
Postmaster .....	Joseph John Baldock Wakely .....	9 July, 1885	Ditto .....	270 0 0	22 Jan., 1873.
Assistant .....	Elizabeth Wakely .....	9 July, 1885	Ditto .....	26 0 0	16 Sept., 1879.
Nyngan—					
Postmaster .....	Ralph Stephen Pemberton Clay	1 Sept., 1883	Ditto .....	310 0 0	1 Jan., 1875.
Assistant .....	Charles Powell .....	16 Jan., 1886	Ditto .....	110 0 0	1 June, 1884.
Oberon—					
Postmaster .....	Josiah Medcalf .....	16 Nov., 1881	Ditto .....	170 0 0	1 Dec., 1877.
Assistant .....	Emilie Medcalf .....	23 Aug., 1886	Ditto .....	25 0 0	23 Aug., 1886.
Obley—					
Postmaster .....	Henry James Tomkins .....	1 Nov., 1883	Ditto .....	170 0 0	14 May, 1881.
Orange—					
Postmaster .....	Charles Cooper .....	15 Oct., 1877	Ditto .....	370 0 0	1 Oct., 1862.
1st Assistant .....	George Dunn .....	12 Mar., 1883	Ditto .....	190 0 0	1 Dec., 1878.
2nd ditto .....	Walter Charles Maguire .....	1 April, 1883	Ditto .....	72 0 0	1 April, 1883.
3rd ditto, &c. ....	Edward Chapman .....	1 Mar., 1885	Ditto .....	120 0 0	10 Nov., 1882.
Letter-carriers (2) ..	.....	.....	Ditto .....	{ 1 at 104 0 0 1 " 52 0 0	.....
Receiver-clearer (1) ..	.....	.....	Ditto .....	0 7 0	per week.
Palmer's Island—					
Postmaster .....	Samuel James Bondfield .....	30 May, 1881	Ditto .....	160 0 0	28 May, 1881.
Assistant .....	Clarence Eillard Gibson .....	15 Jan., 1886	Ditto .....	26 0 0	15 Jan., 1886.
Pambula—					
Postmaster .....	Edward Joseph Cornell .....	1 Jan., 1882	Ditto .....	170 0 0	1 Aug., 1879.
Parke—					
Postmaster .....	Walter Alfred Lorking .....	1 April, 1875	Ditto .....	240 0 0	1 Oct., 1874.
Assistant .....	John Buckley .....	4 May, 1883	Ditto .....	42 0 0	4 May, 1883.

<sup>1</sup> Appointed to Moruya.

<sup>2</sup> Dismissed, 19 May.

<sup>3</sup> Removed to Head Office, Telegraphs.

\* Services not continuous.

(For allowances see end)

Office	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government
<b>POSTMASTER-GENERAL—POST OFFICE—continued.</b>					
<i>Country Offices—continued</i>					
<b>Parramatta—</b>					
Postmaster	Wilham Charles Denshire	21 Feb., 1881	Governor and Executive Council	360 0 0	1 Nov., 1872.
1st Assistant	Rowland George M'Manis	24 June, 1879	Postmaster-General	220 0 0	25 Mar., 1878.
2nd ditto	Patrick Joseph Hagin	6 Nov., 1882	Ditto	110 0 0	6 Nov., 1882.
3rd ditto	William Abel	22 Mar., 1885	Ditto	100 0 0	10 Nov., 1883.
Letter-carriers (4)			Ditto	138 0 0 127 0 0 104 0 0 50 0 0	
Receiver-cleaver (1)			Ditto		
<b>Paterson—</b>					
Postmaster	Ebenezer Doust	11 Mar., 1876	Ditto	190 0 0	7 Mar., 1876.
Assistant	Sydney George Doust	27 Aug., 1881	Ditto	39 0 0	27 Aug., 1881.
<b>Pelican Flat—</b>					
Postmaster	William Joseph Gwynne	1 Dec., 1883	Ditto	130 0 0	1 Sept., 1879.
<b>Penrith—</b>					
Postmaster	Charles Henry Kellett	1 Oct., 1873	Ditto	240 0 0	1 Oct., 1873.
Assistant	Sarah Kellett	6 April, 1882	Ditto	50 0 0	6 April, 1882.
Letter-carrier (1)			Ditto	62 0 0	
<b>Petersham—</b>					
Postmistress	Julia Andrews	23 Jan., 1877	Ditto	230 0 0	1 Feb., 1877.
Assistant	Robert More <sup>1</sup>	20 Jan., 1885	Ditto	20 0 0	20 Jan., 1885.
	succeeded by Francis Arthur Gosbell	19 July, 1886	Ditto	20 0 0	1 June, 1884.
Letter-carriers (5)			Ditto	148 0 0 124 0 0 104 0 0 90 0 0 65 0 0 62 0 0	
Receiver-cleaver (1)			Ditto		
<b>Picton—</b>					
Postmaster	Frederick Edwin Burgess	11 Sept., 1884	Ditto	190 0 0	1 Aug., 1876.
Assistant	Patrick James Glynn	1 Oct., 1884	Ditto	26 0 0	1 Oct., 1884.
Receiver-cleaver (1)			Ditto	10 0 0	
<b>Pilliga—</b>					
Postmaster	Ernest Valentine Blackwell	1 Sept., 1882	Ditto	170 0 0	16 Mar., 1877.
Assistant	Janet Mary Blackwell	8 May, 1883	Ditto	26 0 0	8 May, 1883.
<b>Pooncarie—</b>					
Postmaster	George Lobsey	1 Aug., 1883	Ditto	160 0 0	25 Mar., 1878.
	succeeded by Thomas Barclay	18 Sept., 1886	Ditto	160 0 0	1 Dec., 1881
<b>Port Macquarie—</b>					
Postmaster	Edric Thetis Mulligan	1 Feb., 1883	Ditto	260 0 0	16 Feb., 1870.
Assistants	Eliza Alice Gordon Mulligan	7 May, 1883	Ditto	30 0 0	7 May, 1883.
	William Tell Windeyer	1 Nov., 1884	Ditto	26 0 0	1 Nov., 1884.
	Charles Henry Champion.	10 Jan., 1885	Ditto	20 0 0	1 Mar., 1882.
	succeeded by Selwyn Thomas Pountney	16 June, 1886	Ditto	20 0 0	13 Oct., 1884.
Postmaster	Frederick Lassen	27 Nov., 1882	Ditto	200 0 0	1 Aug., 1874.
Assistant	William James Middleton <sup>2</sup>	1 Sept., 1884	Ditto	15 0 0	1 Sept., 1884.
	succeeded by Percy J. H. Sewell	13 Feb., 1886	Ditto	15 0 0 to 21 Sept., 29 0 0 from 22 Sept.,	1 Nov., 1884.
<b>Queanbryan—</b>					
Postmaster	Michael Hedley Kelly	15 Sept., 1876	Ditto	350 0 0	8 May, 1858.*
Assistant	Lyndon Hedley Kelly	3 Sept., 1879	Ditto	78 0 0	3 Sept., 1879.
Letter-carrier (1)			Ditto	50 0 0	
<b>Qurundi—</b>					
Postmaster	Thomas Dickson	1 May, 1878	Ditto	240 0 0	16 June, 1876.
Assistant	Ernest James Vial <sup>3</sup>	1 Sept., 1885	Ditto	145 0 0	20 Mar., 1882.
	succeeded by Herbert Joseph Brown	13 Feb., 1886	Ditto	100 0 0	1 May, 1882.
Postmistress	Angelina Dargin	1 Mar., 1877	Ditto	160 0 0	8 May, 1875.
Assistant	George Thos Willoughby	1 Sept., 1886	Ditto	104 0 0	18 Jan., 1882.
Letter-carriers (3)			Ditto	100 0 0 52 0 0 39 0 0	
<b>Raymond Terrace—</b>					
Postmaster	William Edward Shaw	1 May, 1860	Ditto	210 0 0	1 May, 1860.
Assistants	Marion Leigh Shaw	1 Jan., 1879	Ditto	52 0 0	1 Jan., 1879.
	Lous Simeon Barnard	1 Sept., 1883	Ditto	13 0 0	1 Sept., 1883.
Letter-carrier (1)			Ditto	13 0 0	
<b>Richmond—</b>					
Postmaster	George Alfred Reid	1 Oct., 1880	Ditto	270 0 0	3 Nov., 1869.
Assistant	Henrietta Frances Reid	14 July, 1884	Ditto	40 0 0	24 Jan., 1879.*
Letter-carrier (1)			Ditto	100 0 0	
<b>Robertson—</b>					
Postmaster	Lous Joseph Coghlan	1 Aug., 1883	Ditto	140 0 0	1 June, 1879.
Assistant	May Coghlan	1 May, 1885	Ditto	10 0 0	1 May, 1885.
<b>Rockley—</b>					
Postmaster	John Ambrose Kelly	5 May, 1880	Ditto	190 0 0	1 June, 1875.
Assistant	Juha Mary Kelly	1 June, 1883	Ditto	25 0 0	1 June, 1883.

<sup>1</sup> Appointed to Mittagong

<sup>2</sup> Removed to Head Office, Telegraph Department.  
(For allowances see end)

<sup>3</sup> Removed to West Maitland

\* Services not continuous.

Office	Name	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>POSTMASTER-GENERAL—POST OFFICE—continued.</b>					
<i>Country Offices—continued.</i>					
Rookwood— Postmaster ...	James Britton Bisset . .	1 Oct., 1884	Postmaster-General . . . . .	130 0 0	29 Nov., 1881.
Rylstone— Postmaster . . . . .	Samuel Radler Millard ...	9 July, 1882	Ditto ... . . . .	170 0 0	1 Oct., 1877.
St. Mary's— Postmistress . . . . .	Mary Russell <sup>1</sup> . . succeeded by Caroline Palmer . . . . .	1 Jan., 1883 14 July, 1886	Ditto . . . . . Ditto . . . . .	140 0 0 100 0 0	1 Jan., 1883. 14 July, 1886.
St. Peter's— Postmistress . . . . .	Louisa Percival <sup>2</sup> . . succeeded by Mary Russell . . . . .	1 Aug., 1882 14 July, 1886	Ditto ... . . . . Ditto ... . . . .	150 0 0 150 0 0	1 Aug., 1882. 1 Jan., 1883
Letter-carrier (1) . . . . .			Ditto . . . . .	104 0 0	
Scone— Postmistress ... . . . .	Lily Ann Isaac	21 July, 1884	Ditto . . . . .	190 0 0	21 July, 1884.
Assistant . . . . .	Jennie Isaac <sup>3</sup> succeeded by Lily Isaac . . . . .	1 April, 1880 16 Aug., 1886	Ditto . . . . . Ditto ... . . . .	70 0 0 50 0 0	1 April, 1880. 16 Aug., 1886.
Shellharbour— Postmaster . . . . .	Joseph Dunster Allen . . .	13 July, 1882	Ditto ... . . . .	40 0 0	21 Oct., 1879.
Silverton— Postmaster . . . . .	Frank Benedict Kenane	4 Aug., 1884	Ditto .. . . .	240 0 0	11 Sept., 1882.
Assistant ... . . . .	Edmond Guillier . . . . .	18 May, 1885	Ditto .. . . .	21 0 0	18 May, 1885.
Singleton— Postmaster . . . . .	Joseph Kelf	1 Sept., 1876	Ditto . . . . .	310 0 0	18 Sept., 1868.
Assistant . . . . .	Walter Baxter . . . . .	24 Jan., 1885	Ditto . . . . .	130 0 0	26 Mar., 1882.
Letter carriers (2) . . . . .			Ditto ... . . . .	120 0 0 114 0 0	
Smith Town— Postmaster . . . . .	William Joseph Holahan	21 April, 1883	Ditto . . . . .	170 0 0	1 July, 1874.
Sofala— Postmaster ... . . . .	John Patrick Hayes	20 June, 1881	Ditto ... . . . .	170 0 0	1 April, 1875.
Assistant . . . . .	Alice Maude Hayes	2 July, 1882	Ditto .. . . .	40 0 0	2 July, 1882.
South Grafton— Postmaster . . . . .	Samuel Hall Phillips . . . . .	1 Sept., 1882	Ditto . . . . .	170 0 0	19 Aug., 1876.
Assistant . . . . .	Eleanor Phillips . . . . .	1 April, 1884	Ditto . . . . .	52 0 0	1 April, 1881.*
South Woodburn— Postmaster . . . . .	Cuthbert Raspinson Bousfield	14 May, 1884	Ditto . . . . .	170 0 0	14 May, 1884.
Assistant . . . . .	Daniel Howell . . . . .	4 Feb., 1884	Ditto . . . . .	76 0 0	4 Feb., 1884.
Stannmore Road— Postmistress ...	Rose Elizabeth Whilhelmina Gibbes	18 Aug., 1886	Governor and Executive Council	160 0 0	12 April, 1882.
Stannifer— Postmaster . . . . .	John Walford Simons <sup>4</sup> succeeded by John Smythe . . . . .	16 Oct., 1881 8 July, 1886	Postmaster-General . . . . . Ditto . . . . .	120 0 0 20 0 0	21 Sept., 1881. 8 July, 1886.
Stroud— Postmaster . . . . .	Leslie Macquarie James Butler	11 June, 1885	Ditto .. . . .	210 0 0	21 Jan., 1881.
Assistant . . . . .	Duncan McRae . . . . .	29 June, 1885	Ditto .. . . .	52 0 0	29 June, 1885.
Surry Hills— Postmistress . . . . .	Elen Jane Ormond Stuckey	5 May, 1884	Ditto ... . . . .	170 0 0	1 Aug., 1882.
Assistant . . . . .	Frederick Teege Jackson	2 Sept., 1885	Ditto . . . . .	26 0 0	14 Oct., 1882.
Sutton Forest— Postmaster . . . . .	James Andrew Knox succeeded by Frank Waller . . . . .	1 April, 1881 12 July, 1886	Ditto . . . . . Ditto . . . . .	150 0 0 140 0 0	1 Dec., 1878. 1 July, 1875.
Tamworth— Postmaster . . . . .	William John Chandler	9 Jan., 1880	Ditto . . . . .	360 0 0	1 Sept., 1872.
1st Assistant . . . . .	Henry Lewis Benjamin . . . . .	22 May, 1885	Ditto . . . . .	145 0 0	22 Aug., 1882.
2nd ditto . . . . .	George Hutchison . . . . .	21 Jan., 1885	Ditto . . . . .	26 0 0	16 July, 1882.
3rd ditto . . . . .	Frederick Madden . . . . .	18 July, 1884	Ditto . . . . .	39 0 0	18 July, 1884.
Letter-carriers (3) . . . . .			Ditto ... . . . .	148 0 0 138 0 0 39 0 0	
Tarago— Postmaster . . . . .	Charles Edward Stoyles	30 Jan., 1884	Ditto . . . . .	160 0 0	10 July, 1876.
Assistant ... . . . .	Laura Clarissa Stoyles . . . . .	8 May, 1886	Ditto . . . . .	25 0 0	8 May, 1886.
Taralga— Postmaster . . . . .	Robert Angus Thomson . . . . .	1 Nov., 1881	Ditto . . . . .	170 0 0	1 Feb., 1878
Assistant . . . . .	William Thomas Thomson	24 Mar., 1882	Ditto . . . . .	19 10 0	24 Mar., 1882.
Tarcutta— Postmaster . . . . .	Alexander L. Henderson	17 Feb., 1886	Ditto . . . . .	48 0 0	
Assistant . . . . .	John Ingram . . . . .	1 Jan., 1885	Ditto . . . . .	36 0 0	1 Jan., 1885.
Taree— Postmaster . . . . .	Alfred George Robins <sup>5</sup>	10 Nov., 1880	Ditto . . . . .	230 0 0	26 April, 1862.
Assistant . . . . .	James M'Grath (Acting) William Jackson <sup>6</sup> . . . . .	20 Sept., 1886 7 Jan., 1884	Ditto . . . . . Ditto . . . . .	175 0 0 51 0 0	1 June, 1875. 7 Jan., 1884.
Tathra— Postmaster . . . . .	George Vickers Dobbie John Van Hermert . . . . .	24 June, 1886 20 Nov., 1882	Ditto . . . . . Ditto . . . . .	51 0 0 10 0 0	22 Oct., 1879.

<sup>1</sup> Removed to St. Peters from 19 September    <sup>2</sup> Resigned, 9 June    <sup>3</sup> Resigned, 15 August    <sup>4</sup> Removed to Walgett (For allowances see end.)    <sup>5</sup> Allowed twelve months leave of absence  
<sup>6</sup> Appointed to Nelson's Bay    \* Services not continuous

Office.	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government
<b>POSTMASTER-GENERAL—POST OFFICE—continued.</b>					
<i>County Offices—continued.</i>					
Tenora—					
Postmaster ...	John Maurice Foley .	16 May, 1885	Governor and Executive Council	210 0 0	8 Dec, 1880
Assistant ...	Henry John Phillips	19 July, 1886	Postmaster General	26 0 0	21 May, 1883
Receiver clearer (1)			Ditto	13 0 0	
Tareena—					
Postmaster ...	Trangott William Charles Young	12 July, 1883	Ditto .	170 0 0	1 April, 1880
Tenterfield—					
Postmaster	Richard Henry Hipsley	8 Dec, 1875	Ditto ... ..	360 0 0	11 Feb, 1858
Assistant	Thomas Arthur Pryke ..	16 May, 1883	Ditto	150 0 0	1 July, 1881
Letter-carrier (1)			Ditto ...	62 0 0	
Terara—					
Postmaster ...	Benjamin Cox	1 July, 1880	Ditto	200 0 0	14 Oct, 1874
Assistant	Clara Louisa Cox	10 Mar, 1882	Ditto . . .	40 0 0	10 Mar, 1882.
Tilpa—					
Postmaster	John Batiste Guilher	20 Mar, 1883	Ditto ...	150 0 0	27 Nov, 1882
Tingha—					
Postmaster	Kenneth Mitchell	18 Feb, 1882	Ditto ...	220 0 0	14 June, 1878
Assistant . . .	Mary Christina Mitchell	1 Mar, 1885	Ditto	40 0 0	1 Mar, 1885
Tinonee—					
Postmaster	James Ward . .	20 April, 1880	Ditto	170 0 0	22 Sept, 1878
Assistant	Lesley Tilney	12 May, 1885	Ditto . . .	20 0 0	12 May, 1885
				to 17 May, 40 0 0 from 18 May	
Tocumwall—					
Postmaster	Peter Augustus Dunne	1 May, 1882	Ditto . . .	210 0 0	1 Jan, 1875
Assistant ...	Adelaide Dunne .	25 Mar, 1884	Ditto	20 0 0	25 Mar, 1884
Trunkay Creek—					
Postmaster	William Thomas Lee	10 Feb, 1883	Ditto	220 0 0	1 Feb, 1860
Assistant .	Elizabeth Lee	10 Feb, 1883	Ditto ..	20 0 0	8 April, 1881.
Tuena—					
Postmaster	Thomas Frederick Bell	6 Sept, 1880	Ditto . . . . .	160 0 0	10 Mar, 1876.
Tumbeumba—					
Postmistress	Hannah Mary Langford	1 Oct, 1872	Ditto . . .	170 0 0	1 Oct, 1872
Assistant .	John Joseph Murphy <sup>1</sup>	16 Mar, 1885	Ditto	75 0 0	16 Mar, 1885.
	Henry Smith succeeded by	22 Feb, 1886	Ditto ..... ..	75 0 0	22 Feb, 1886
Tumbulgum—					
Postmistress	Louisa Tobin . . . . .	16 Oct, 1885	Ditto	19 0 0	16 Oct, 1885
Tumut—					
Postmaster	Perceval Stafford Eldershaw	1 Mar, 1884	Ditto	280 0 0	1 Sept, 1873.
Assistant	Augustus Fraser	1 Jan, 1883	Ditto	25 0 0	1 Mar, 1881
Tweed Heads—					
Postmaster ...	William M'Giegor	1 April, 1885	Ditto ...	10 0 0	1 April, 1885
Ulladulla—					
Postmistress .. ..	Lucy Elizabeth Gambell	1 Jan, 1882	Ditto ..	23 0 0	18 April, 1876
Ulmara—					
Postmaster	Arthur Joseph Flanders	12 Dec, 1877	Ditto ... ..	160 0 0	12 Dec, 1877.
Assistant	Frederick Smythe	25 Nov, 1885	Ditto ... ..	65 0 0	19 June, 1884
Uralla—					
Postmaster ..	George Daniel Woodall	4 July, 1878	Ditto ..	240 0 0	13 Jan, 1875
Assistant	Arthur James Thorpe	26 Sept, 1881	Ditto ...	60 0 0	26 Sept, 1881.
Urana—					
Postmaster .....	Henry Heiman Proctor Lublin	7 April, 1883	Ditto . . .	240 0 0	29 Oct, 1878.
Assistant	Harry Alfred Hoare <sup>2</sup>	1 Mar, 1884	Ditto	78 0 0	5 Mar, 1883
	Janet Lublin ... succeeded by	16 Aug, 1886	Ditto . . . . .	30 0 0	16 Aug, 1886
Wagga Wagga—					
Postmaster	Thomas William Hamilton	2 Sept, 1884	Governor and Executive Council	370 0 0	1 Nov, 1872
1st Assistant	William Keohan	21 Dec, 1883	Postmaster General . . . .	240 0 0	23 Mar, 1875
2nd ditto	Thomas Joseph Lynch	21 Dec, 1883	Ditto	220 0 0	1 Oct, 1876
3rd ditto ...	James Charles Lees	4 Mar, 1885	Ditto . . .	130 0 0	10 Jan, 1881
Letter carriers (3)			Ditto . . . . .	124 0 0 104 0 0 94 0 0	
Walcha—					
Postmaster	David Ridout Thursby	2 July, 1877	Ditto .. .	210 0 0	1 Jan, 1877.
Assistant	William Watts ..	2 Dec, 1885	Ditto	50 0 0	24 April, 1882.
Walgett—					
Postmaster	George Stephen Hay	7 Jan, 1879	Ditto	310 0 0	1 Aug, 1874
Assistants	William Vincent O'Mara	22 Mar, 1885	Ditto	114 0 0	11 April, 1881.
	William John Sturt Montgomery	15 Dec, 1882	Ditto ..... ..	26 0 0	14 Mar, 1878
	George Edward Goodman <sup>3</sup>	16 Sept, 1882	Ditto ... ..	26 0 0	16 Sept, 1882
Wallerawang—					
Postmaster ...	William Mead	1 May, 1883	Ditto ...	200 0 0	1 Sept, 1882
Assistant . . .	Charlotte Ann Mead	1 May, 1883	Ditto	25 0 0	8 May, 1882.
Wallsend—					
Postmaster	Oliver Haydock ...	1 Oct, 1876	Ditto	270 0 0	1 July, 1872
Letter carriers (2)			Ditto .. .	124 0 0	each.
Waratah—					
Postmaster	William Harris	28 Nov, 1878	Ditto . . . . .	140 0 0	1 May, 1875
Letter carrier (1)			Ditto ...	127 0 0	
Receiver clearer (1)			Ditto ...	15 0 0	

<sup>1</sup> Appointed to Co'ombo

<sup>2</sup> Appointed to Mullu

<sup>3</sup> To 26 July ceased duty

(For allowances see end)

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>POSTMASTER-GENERAL—POST OFFICE—continued.</b>							
<i>Country Offices—continued.</i>							
Wardell—							
Postmaster .....	George Carolan .....	2 July, 1884	Postmaster-General .....	150	0	0	26 April, 1879.
Assistant .....	Bridget Carolan .....	5 Feb., 1886	Ditto .....	26	0	0	5 Feb., 1886.
Warialda—							
Postmaster .....	William Owen Newbery...	8 Dec., 1882	Ditto .....	220	0	0	23 April, 1875.
Assistant .....	Alice Newbery .....	8 Dec., 1882	Ditto .....	26	0	0	8 Dec., 1882.
Warren—							
Postmaster .....	George William Selff .....	2 Feb., 1881	Ditto .....	240	0	0	1 Jan., 1877.
Assistant .....	Theresa Ida Selff .....	2 April, 1883	Ditto .....	35	0	0	2 April, 1883.
Waterloo—							
Postmaster .....	Robert James Farquharson	11 June, 1883	Ditto .....	140	0	0	1 June, 1878.
Letter-carriers (2) .....	.....	.....	Ditto .....	148	0	0	
				124	0	0	
Waverley—							
Postmistress .....	Elizabeth Ferris .....	3 July, 1876	Ditto .....	200	0	0	3 July, 1876.
Assistant .....	Alfred John Martin .....	6 Dec., 1883	Ditto .....	37	10	0	3 May, 1882.
				124	0	0	
				114	0	0	
				40	0	0	
Letter-carriers (3) .....	.....	.....	Ditto .....	36	0	0	
Receiver-cleaver (1) .....	.....	.....	Ditto .....				
Wee Waa—							
Postmaster .....	John Thomas Molloy .....	19 Jan., 1883	Ditto .....	150	0	0	1 April, 1882.
Assistant .....	Thomas Andrew Doherty <sup>1</sup> succeeded by Mary Gould Molloy .....	11 July, 1884	Ditto .....	90	0	0	11 July, 1884.
		25 Oct., 1886	Ditto .....	25	0	0	25 Oct., 1886.
Wellington—							
Postmaster .....	Alfred Chrystal .....	26 Jan., 1875	Ditto .....	300	0	0	1 Nov., 1871.
Assistant .....	Charles Kennard .....	9 Dec., 1878	Ditto .....	100	0	0	9 Dec., 1878.
Letter-carrier (1) .....	.....	.....	Ditto .....	78	0	0	
Wentworth—							
Postmaster .....	William Camper .....	1 June, 1867	Ditto .....	370	0	0	7 Dec., 1858.
Assistant .....	John Keelty .....	26 Jan., 1880	Ditto .....	120	0	0	26 Jan., 1880.
Letter-carrier (1) .....	.....	.....	Ditto .....	13	0	0	
West Kempsey—							
Postmaster .....	James Williams .....	1 July, 1870	Ditto .....	230	0	0	1 Jan., 1870.
Assistant .....	Fanny Laws Williams .....	1 Dec., 1882	Ditto .....	40	0	0	1 Dec., 1882.
West Maitland—							
Postmaster .....	William Charles Johnson..	13 June, 1883	Governor and Executive Council	400	0	0	1 Oct., 1857.
1st Assistant .....	James Ramsay .....	6 June, 1883	Postmaster-General .....	190	0	0	1 Nov., 1872.
2nd ditto .....	Ernest James Vial .....	16 Jan., 1886	Ditto .....	145	0	0	20 Mar., 1882.
				138	0	0	
Letter-carriers (4) .....	.....	.....	Ditto .....	124	0	0	each.
				50	0	0	
West Tamworth—							
Postmaster .....	Thomas Lloyd Coughlan...	2 Mar., 1885	Ditto .....	170	0	0	18 Jan., 1880.
Assistant .....	Hannah Coughlan .....	2 Mar., 1885	Ditto .....	15	0	0	2 Mar., 1885.
Letter-carrier (1) .....	.....	.....	Ditto .....	39	0	0	
Whitton—							
Postmaster .....	Henry George Dent .....	1 Nov., 1886	Governor and Executive Council	100	0	0	1 July, 1883.
Wickham—							
Postmaster .....	John Smith Arnott .....	12 Mar., 1884	Postmaster-General .....	170	0	0	1 Aug., 1862.*
Letter-carrier (1) .....	.....	.....	Ditto .....	104	0	0	
Wilcannia—							
Postmaster .....	Albert Henry Davies .....	16 Mar., 1878	Ditto .....	340	0	0	1 Mar., 1870.
1st Assistant .....	John Thomas Fountain .....	1 Oct., 1884	Ditto .....	120	0	0	1 Oct., 1884.
2nd ditto .....	John Joseph Molloy .....	1 Dec., 1882	Ditto .....	26	0	0	7 Aug., 1882.
Letter-carrier (1) .....	.....	.....	Ditto .....	124	0	0	
Windsor—							
Postmaster .....	James Adam Dick .....	13 Sept., 1880	Governor and Executive Council	330	0	0	1 Sept., 1862.*
Assistant .....	Jean Dick .....	1 Sept., 1883	Postmaster-General .....	52	0	0	1 Sept., 1883.
Do. ....	William Alexander .....	9 June, 1885	Ditto .....	12	0	0	29 May, 1879.
Letter-carrier (1) .....	.....	.....	Ditto .....	114	0	0	
Receiver-cleaver (1) .....	.....	.....	Ditto .....	48	0	0	
Wingham—							
Postmaster .....	James William Hodgins...	24 April, 1880	Ditto .....	190	0	0	9 May, 1879.
Assistant .....	Robert Galloway <sup>2</sup> .....	11 Mar., 1884	Ditto .....	26	0	0	11 Mar., 1884.
	succeeded by James Wallace .....	24 Feb., 1886	Ditto .....	26	0	0	24 Feb., 1886.
Wiseman's Ferry—							
Postmistress .....	Jane Marx .....	10 May, 1875	Ditto .....	15	0	0	10 May, 1875.
Wollombi—							
Postmaster .....	John Christopher Joseph Smith	10 July, 1882	Ditto .....	220	0	0	1 Jan., 1870.
Assistant .....	Alfred John Plunkett .....	10 July, 1882	Ditto .....	28	0	0	10 July, 1882.
	succeeded by Thomas William Nicholls	31 July, 1886	Ditto .....	28	0	0	31 July, 1886.
Wollongong—							
Postmaster .....	Phillip Mackel .....	11 Mar., 1870	Ditto .....	340	0	0	1 Jan., 1860.
1st Assistant .....	Josephine Mackel .....	1 Feb., 1880	Ditto .....	45	0	0	1 Feb., 1880.
2nd ditto .....	William Simmons .....	1 Dec., 1883	Ditto .....	26	0	0	1 Aug., 1883.
Letter-carriers (2) .....	.....	.....	Ditto .....	114	0	0	
				20	0	0	

<sup>1</sup> Removed to Goulburn.<sup>2</sup> Removed to Moree.

\* Services not continuous.

(For allowances see end.)



Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>POSTMASTER-GENERAL—POST OFFICE—continued.</b>							
<i>Country Offices—continued.</i>							
Wolumla— Postmaster .....	William Rene Bragg .....	1 Oct., 1885	Postmaster-General .....	120	0	0	1 Oct., 1880.
Woodburn— Postmaster .....	Edward Dean .....	23 Feb., 1882	Ditto .....	170	0	0	1 Mar., 1882.
Assistant <sup>1</sup> .....	George Ireland <sup>1</sup> .....	29 Jan., 1884	Ditto .....	26	0	0	29 Jan., 1884.
	succeeded by N. E. Litchfield .....	4 Aug., 1886	Ditto .....	26	0	0	4 Aug., 1886.
Woollahra— Postmaster .....	Melbourne Sydney Dargin .....	19 July, 1884	Ditto .....	170	0	0	1 Sept., 1874.
Yamba— Postmistress .....	Emma Hannah Annette Pegus .....	1 July, 1877	Ditto .....	150	0	0	1 Jan., 1874.
Yarrahapinni— Postmistress .....	Agnes Wells Jamieson .....	1 July, 1882	Ditto .....	10	0	0	1 July, 1882.
Yass— Postmaster .....	John Richard Colls .....	17 Aug., 1884	Governor and Executive Council	300	0	0	1 Jan., 1872.
Assistant .....	John Hugh Carter .....	17 Aug., 1884	Postmaster-General .....	30	0	0	1 June, 1881.
Letter-carrier (1) .....	.....	.....	Ditto .....	78	0	0	
Young— Postmaster .....	William M'Nab .....	29 Aug., 1873	Ditto .....	310	0	0	16 Dec., 1865.
Assistant .....	Francis Allen Muir .....	1 July, 1884	Ditto .....	124	0	0	5 April, 1882.
Letter-carrier (1) .....	.....	.....	Ditto .....	138	0	0	

<sup>1</sup>Appointed Operator, Armidale. (For allowances see below.)

Letter-carriers, Mail-boys, and Receiver-clearers each allowed one scarlet cloth tunic, one scarlet serge sac, two pairs blue cloth and one pair blue serge trousers, one helmet or one cap. Mail Guards each allowed one scarlet cloth tunic, one scarlet serge sac, two pairs blue cloth and one pair serge trousers. Shipping Officer, Shipping Officer's Assistant, Overseer of Letter-carriers, and Gate-keepers, each allowed one blue cloth and one blue serge sac, two pairs blue cloth and one pair serge trousers. Mounted Letter-carriers are allowed three pairs of strapped Bedford cord trousers and one cap each, in lieu of helmet and cloth and serge trousers.

Overtime allowances are granted to the officials of the Mail Branch of the Head Office, in consideration of giving their attendance whenever called upon, either during day or night, to sort English or Foreign Mails received and despatched.

The Letter-carriers receive forage allowance as follows:—Albury (3), Armidale, Ashfield (2), Balmain (3), Bathurst, Botany, Bowral, Braidwood, Burwood (3), Campbelltown, Concord, Cootamundra, Cowra, Croydon, Deniliquin, Dubbo, East Maitland (2), Five Dock, Forbes, Gladesville, Glen Innes, Goulburn (3), Grafton (2), Granville, Grenfell, Greta, Hamilton, Hill End, Hunter's Hill, Inverell, Kiama (2), Kogarah, Lambton, Leichhardt (2), Lismore, Lithgow, Liverpool, Lower Botany, Macdonald Town, Manly (2), Marrickville (3), Minmi, Mitchell, Morpeth, Mudgee, Muswellbrook, Narrabri, Newcastle (3), Newtown, North Willoughby (2), Orange, Parramatta (4), Penrith, Petersham (3), Randwick, Redfern (2), Richmond, Ryde, St. Leonards (3), St. Peters, Singleton (2), Strathfield (2), Summer Hill, Tenterfield, Wagga Wagga (3), Wallsend (2), Waratah, Waterloo, Waverley (2), Wellington, West Maitland (3), West Tamworth, Wickham, Wilcannia, Windsor, Wollongong, Yass, Young, 2s. per diem each. St. Leonards (4), 2s. 6d. per diem each. Letter-carriers at Tamworth (2), 3s. per diem. Letter-carriers at Casino, Queanbeyan, and South Grafton receive £26 per annum each; Granville, £41 12s. per annum; Redfern and Sydney, £50 per annum.

Receiver-clearers at the following Post Offices receive forage allowance of 2s. per diem:—Grafton, Marrickville, Newcastle (2), Newtown, Parramatta, Petersham, Redfern, St. Leonards; Hunter's Hill, £26 per annum.

Quarters are allowed to all Official Postmasters, except the following, for whom special arrangements are made:—Abattoirs, £26; Coolaman, £26; George-street West, allowed £65 per annum in lieu of quarters; Branxton, £36 8s. 6d.; Hamilton, £26 do.; Harden, £26; Kogarah, £26; Major's Creek, £26; Nyngan, £52 do.; Greenwell Point, £6 10s. do.; Bulli, £16 do.; Clifton, £26 do.; The Exchange, £20 do.; Whitton, £50.

The following also receive rent allowances:—Shipping Clerk, £50 per annum; Shipping Clerk's Assistant, £25 do.; postal assistant, Cowra, £30 do.

The office-keeper, detective, and groom are allowed quarters.

Fuel and light allowance granted to the following Postmasters:—Adelong, Araluen, Ballina, Baradine, Barmedman, Bega, Bendemeer, Booligal, Bourke, Braidwood, Branxton, Brewarrina, Bulahdelah, Camden, Cargo, Casino, Cassilis, Coonabarabran, Coonamble, Corowa, Cowra, Delegate, Eauabalong, Eden, Euston, Goodooga, Grafton, Gulargambone, Hill End, Inverell, Kiandra, Lake Cudgellico, Lawrence, Leichhardt, Marulan, Merimbula, Millie, Mitchell, Mittagong, Molong, Moree, Moulamein, Mount Victoria, Murwillumbah, Narrandera, Nelligen, Nimitybelle, Nowra, Nymagee, Nyngan, Orange, Pilliga, Pooncarie, Queanbeyan, Ryde, Rylstone, South Grafton, South Woodburn, Tarago, Terara, Tuena, Ulmarra, Walgett, Warialda, Wentworth, Wickham, Woodburn, Young,—£2 per annum; Albury, Barraba, Bateman's Bay, Bodalla, Boggabri, Bulli, Cannonbar, Condobolin, Copeland North, Emmaville, Germanton, Gongolgon, Gulgong, Harden, Hay, Hillston, June Junction, Lithgow, Major's Creek, Manilla, Milton, Moruya, Murrumburrah, Narrabri, Obley, Picton, Raymond Terrace, St. Mary's, Temora, Ulladulla, Wagga Wagga, Walcha, Warren, Windsor,—£3 per annum; Waratah, £3 10s. per annum; Blayney, Burrawang, Burrows, Carcoar, Cobbora, Cootamundra, Dubbo, East Maitland, Forbes, Grenfell, Gunnedah, Gunning, Lambton, Lismore, Nambucca, Newcastle, Parkes, Parramatta, Robertson, Silvertown, Tumut, Uralla, Wilcannia,—£4 per annum; Armidale, Balranald, Jerilderie, Merriwa, Penrith, Richmond, Urana, Wallsend, Wellington,—£5 per annum; Bathurst, Cooma, Gloucester, Gundagai, Liverpool, Morpeth, Moss Vale, Murrumbidgee, Port Macquarie, Scone, West Maitland,—£6 per annum; Muswellbrook, £7 per annum; Mudgee, Tamworth, Tenterfield,—£8 per annum; Yass, £9 per annum; Campbelltown, Glen Innes, Wollongong,—£10 per annum; Deniliquin, Goulburn,—£12 per annum.

Allowances for keeping offices clean:—Maclean, £2 per annum; Waratah, £2 12s. per annum; Araluen, Barraba, Blayney, Braidwood, Bundarra, Burrawang, Camperdown, Casino, Condobolin, Coonabarabran, Cooranbong, Coraki, Cowra, Darlington, Edgecliff, Eugowra, George-street West, Glebe, Hunter's Hill, Kempsey, Lawrence, Liverpool, Lower Botany, Manly, Marsden's, Miller's Point, Moss Vale, Murrumburrah, Paddington, Pelican Flats, Picton, Quirindi, Redfern, South Grafton, Stroud, Taree, Temora, The Exchange, Ulmarra, Uralla, Wallsend, Wardell, Wickham, Woodburn,—£3 per annum; Gosford, £3 18s. per annum; Penrith, £4 per annum; Balmain, Carcoar, Cassilis, Clarence Town, King-street, Major's Creek, Milton, Paterson, Pyrmont,—£5 per annum; Bega, Bombala, Brewarrina, Burrows, Campbelltown, Deniliquin, East Maitland, Emmaville, Grenfell, Gundagai, Haymarket, Inverell, Narrabri, Newtown, Nowra, Oxford-street, Park-street, Queanbeyan, Rylstone, Scone, Yass,—£6 per annum; Booligal, Murrumbidgee, Muswellbrook, Richmond, Tumut, William-street,—£6 10s. per annum; Armidale, £9 per annum; Wollongong, £12 per annum; Goulburn, Hay, Kiama, Parramatta, Singleton, Wagga Wagga, West Maitland, Wilcannia,—£13 per annum; Tamworth, £15 12s. per annum; Newcastle, £20 per annum; Bathurst, £26 per annum.

Amount of security given by the Officers, viz.:—Secretary, £2,000; Accountant and Cashier, each £1,000; included in a Bond furnished by certain Guarantee Societies to the Treasury Department.

The whole of the other officials in the Postal Service (Town and Country) are included in a combined bond, issued by four Guarantee Societies—the security ranging from £100 to £400.

Office.	Name.	Date of Appointment.	By whom appointed, and under what instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	

POSTMASTER-GENERAL—continued.

MONEY ORDER OFFICE AND GOVERNMENT SAVINGS BANK.

Superintendent & Controller	Francis William Hill	26 June, 1865	Governor and Executive Council	860 0 0	5 Aug., 1850.
Chief Clerk	Andrew James Doak	1 July, 1875	Ditto	600 0 0	1 Feb., 1864.
Teller	Arthur R. Docker	1 Jan., 1867	Ditto	550 0 0	1 Jan., 1867.
Examiner	William Burnet	17 April, 1867	Ditto	490 0 0	17 April, 1867.
Ledger-keeper	William P. Simpson	1 July, 1866	Ditto	340 0 0	19 Feb., 1866.
Assistant Examiner	William A. Uhr	1 Mar., 1869	Ditto	315 0 0	1 July, 1866.
Ledger-keeper	William D. Bayly	1 Sept., 1871	Ditto	315 0 0	1 Sept., 1871.
Assistant Teller	Edwin B. Lumsdaine	1 Nov., 1872	Ditto	290 0 0	1 May, 1872.
Assistant Examiner	William Wood	1 April, 1874	Ditto	265 0 0	21 April, 1873.
Paid Order Clerk	John Mooney	1 June, 1875	Ditto	265 0 0	18 Mar., 1874.
Assistant Examiner	Henry Reeve	1 July, 1875	Ditto	265 0 0	1 July, 1875.
Ledger-keeper	Frederick J. Bull	1 June, 1875	Ditto	220 0 0	1 June, 1875.
Record Clerk	William H. Wager	1 May, 1878	Ditto	200 0 0	1 Dec., 1876.
Ledger-keeper	Ernest J. Clark	1 May, 1878	Ditto	200 0 0	1 Feb., 1877.
	Percy F. Maybury	1 Aug., 1879	Lieutenant-Governor and Executive Council.	200 0 0	1 July, 1878.
Clerk	George F. White	17 July, 1875	Governor and Executive Council	190 0 0	17 July, 1875.
Ledger-keepers	William T. Whitley	1 Jan., 1882	Ditto	190 0 0	10 May, 1880.
	Augustine T. M'Shane	1 July, 1882	Ditto	190 0 0	1 Sept., 1880.
	William H. Rowley	1 July, 1881	Ditto	190 0 0	13 Oct., 1879.
Clerks	Peardon P. Packham	1 Jan., 1883	Ditto	190 0 0	1 Feb., 1881.
	Thomas Carroll	1 Jan., 1883	Ditto	190 0 0	1 May, 1881.
Ledger-keeper	Joseph Sims	1 Jan., 1884	Ditto	190 0 0	21 Dec., 1882.
Clerk	Chas. S. Gilham	1 Jan., 1883	Ditto	165 0 0	1 Mar., 1882.
Ledger-keepers	Alfred W. Usher	1 Jan., 1884	Ditto	165 0 0	21 May, 1883.
	William B. Scott	1 Jan., 1884	Ditto	165 0 0	7 June, 1883.
	John H. Davies	4 Feb., 1884	Ditto	165 0 0	4 Feb., 1884.
Clerks	Alexander Gibb	1 Aug., 1885	Ditto	165 0 0	1 May, 1884.
	Albert E. Earls	1 Jan., 1884	Ditto	140 0 0	6 Jan., 1882.
	Josiah G. Graham	1 Jan., 1884	Ditto	140 0 0	11 July, 1882.
	William C. Allpress	1 Jan., 1885	Ditto	140 0 0	12 Mar., 1883.
	Alfred G. Day	1 Aug., 1885	Ditto	140 0 0	5 May, 1884.
	Frederick G. Rabone	1 Jan., 1885	Ditto	120 0 0	14 May, 1883.
	Edward H. K. Young	1 Jan., 1885	Ditto	120 0 0	25 May, 1883.
	Frederick Parr	1 Aug., 1885	Ditto	120 0 0	1 April, 1883.
	Peter Clarke	1 Aug., 1885	Ditto	120 0 0	1 May, 1884.
	Frank H. Stonier	1 Jan., 1885	Ditto	95 0 0	1 Jan., 1884.
	Robert T. White	1 Jan., 1885	Ditto	95 0 0	1 Jan., 1884.
	Thomas Warren	1 Aug., 1885	Ditto	95 0 0	1 Aug., 1883.
Storekeeper			Ditto	165 0 0	
Messengers (3)			Postmaster-General	145 0 0	each.
Officekeeper			Ditto	50 0 0	
			Ditto	20 0 0	

ELECTRIC TELEGRAPHS.

Head Office.					
Superintendent	Edward Charles Cracknell	15 Jan., 1861	Governor and Executive Council, by Commission.	960 0 0	1 Jan., 1858.
Assistant Superintendent	Philip B. Walker <sup>2</sup>	1 Jan., 1866	Governor and Executive Council	650 0 0	18 Feb., 1858.
Accountant	Charles Smith Gregory <sup>3</sup>	20 Jan., 1879	Ditto	490 0 0	16 Aug., 1864.
Book-keeper	Amaziah Green <sup>4</sup>	1 Mar., 1879	Ditto	340 0 0	1 Mar., 1879.
Cashier	David Charles Coote <sup>5</sup>	1 Jan., 1878	Ditto	340 0 0	1 June, 1874.
Correspondence Clerk	Thomas Stewart	1 Nov., 1885	Ditto	320 0 0	4 Mar., 1878.
Record Clerk	Fredk. C. Freeman	1 Aug., 1882	Ditto	290 0 0	30 Mar., 1870.
Clerks—Account Branch	Thomas W. Ferris	23 June, 1877	Ditto	290 0 0	23 June, 1877.
	William Sinclair	15 Dec., 1882	Ditto	240 0 0	15 Dec., 1882.
	William A. Leggatt	20 Mar., 1879	Ditto	240 0 0	4 Dec., 1877.
	Thomas Griffiths	16 Feb., 1881	Ditto	240 0 0	12 Feb., 1874.
	Leopold Vermeesch	1 Jan., 1883	Ditto	190 0 0	1 Feb., 1882.
	Patrick Burke	12 Oct., 1883	Ditto	220 0 0	26 Nov., 1879.
	Robert Weir	1 Aug., 1882	Ditto	190 0 0	1 Aug., 1882.
	Joseph W. Rinaldi	1 Dec., 1884	Ditto	190 0 0	1 July, 1877.
	William Battye <sup>6</sup>	1 Aug., 1882	Ditto	160 0 0	1 Aug., 1882.
	Sidney Sawyer	1 Sept., 1882	Ditto	160 0 0	3 July, 1877.
	James E. Reeve	1 Mar., 1884	Ditto	115 0 0	1 Mar., 1884.
Booking Clerks	Harry C. Usher	1 Mar., 1879	Ditto	390 0 0	17 Aug., 1864.
Receiving Clerks	Francis W. Hulme <sup>7</sup>	1 July, 1877	Ditto	340 0 0	1 Nov., 1867.
	John W. Miller <sup>7</sup>	3 Feb., 1875	Ditto	290 0 0	1 May, 1873.
Booking Clerks	Albion C. Croft	1 July, 1879	Ditto	200 0 0	16 April, 1875.
	Robert T. Usher	1 Aug., 1882	Ditto	240 0 0	24 Feb., 1879.
	George Johnson	3 Sept., 1877	Ditto	240 0 0	3 Sept., 1877.
	William C. Cooper	20 Dec., 1884	Ditto	190 0 0	1 Dec., 1881.
	Henry A. Fox	1 Jan., 1883	Ditto	190 0 0	28 July, 1876.
	Ninian Scouller	1 May, 1880	Ditto	190 0 0	1 May, 1880.
	Frederick W. Knight	1 Sept., 1877	Ditto	190 0 0	1 Sept., 1877.
	Jas. Murray	1 Jan., 1886	Ditto	120 0 0	1 Jan., 1886.

<sup>1</sup> Allowed £100 per annum in lieu of equipment. Gives security to the amount of £2,000. <sup>2</sup> Gives security to the amount of £1,000. On leave of absence from 1 January to 31 December, on half pay. <sup>3</sup> Gives security to the amount of £500. <sup>4</sup> Gives security to the amount of £250. <sup>5</sup> Gives security to the amount of £1,000. <sup>6</sup> On sick leave from 22 February to 30 September. <sup>7</sup> Gives security to the amount of £250.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>POSTMASTER-GENERAL—ELECTRIC TELEGRAPHS—continued.</b>					
<i>Head Office—continued.</i>					
<i>Booking Clerks—continued.</i>					
	John P. Morrissey .....	14 April, 1884	Governor and Executive Council	190 0 0	1 June, 1880.
	Charles Smith .....	1 Aug., 1883	Ditto .....	144 0 0	1 Aug., 1883.
	Francis M'Cracken .....	1 Oct., 1883	Ditto .....	140 0 0	16 Nov., 1882.
	William J. Stephen .....	17 April, 1882	Ditto .....	140 0 0	17 April, 1882.
	W. Dawson .....	28 Aug., 1880	Ditto .....	115 0 0	28 Aug., 1880.
	Fredk. T. Hinchy .....	17 Mar., 1884	Ditto .....	115 0 0	1 Mar., 1884.
	John News .....	1 Mar., 1884	Ditto .....	115 0 0	1 Mar., 1884.
	William O'Brien .....	1 Jan., 1885	Ditto .....	115 0 0	1 Jan., 1885.
<i>Operating Branch—</i>					
Manager .....	William Wilson <sup>1</sup> .....	1 Jan., 1873	Ditto .....	440 0 0	1 Nov., 1858.
Assistant Manager .....	Charles H. Casperson <sup>1</sup> .....	10 Dec., 1885	Ditto .....	390 0 0	10 Nov., 1866.
Telegraph Instructor .....	Henry Corbett .....	1 July, 1882	Ditto .....	340 0 0	1 Oct., 1869.
Check Clerk .....	Gregory Board .....	1 July, 1879	Ditto .....	315 0 0	1 April, 1869.
Continental Clerk .....	John Y. Nelson .....	3 April, 1886	Ditto .....	320 0 0	18 July, 1868.
Cable Clerk .....	John J. R. Ferris <sup>2</sup> .....	10 Dec., 1885	Ditto .....	350 0 0	18 Nov., 1861.
	succeeded by				
	John V. Dalgarno .....	17 Mar., 1886	Ditto .....	370 0 0	9 Jan., 1860.
<i>Operators .....</i>					
	John Y. Nelson <sup>3</sup> .....	7 Mar., 1876	Ditto .....	295 0 0	18 July, 1868.
	Edwin J. Young .....	1 June, 1884	Ditto .....	295 0 0	5 Jan., 1872.
	James Curry .....	1 April, 1880	Ditto .....	295 0 0	18 Nov., 1861.
	Charles J. Murphy .....	1 Jan., 1874	Ditto .....	295 0 0	1 Dec., 1870.
	Michael Howard .....	1 Mar., 1875	Ditto .....	295 0 0	1 Mar., 1875.
	Charles W. Likely .....	19 Aug., 1878	Ditto .....	295 0 0	1 Jan., 1874.
	Henry J. Sykes .....	26 Oct., 1876	Ditto .....	295 0 0	1 Mar., 1871.
	Frank P. Brewer .....	1 April, 1874	Ditto .....	295 0 0	1 Feb., 1873.
	Edward W. Bramble .....	1 Sept., 1883	Ditto .....	295 0 0	1 Sept., 1872.
	William A. Blackstone .....	1 Jan., 1885	Ditto .....	260 0 0	1 Sept., 1873.
	Alexander A. Dircks .....	1 July, 1879	Ditto .....	240 0 0	1 April, 1873.
				to 2 April,	
				260 0 0	
				from 3 April.	
	Richard C. Wills .....	11 July, 1877	Ditto .....	240 0 0	9 Dec., 1858.
	Henry Robinson .....	1 June, 1873	Ditto .....	240 0 0	1 Dec., 1869.
	William Powell .....	18 Mar., 1878	Ditto .....	240 0 0	1 Sept., 1875.
	Phillip J. De Gruchy .....	1 Sept., 1875	Ditto .....	240 0 0	1 Sept., 1875.
	William F. Corbett .....	11 May, 1879	Ditto .....	240 0 0	1 June, 1874.
	Frank Bussell .....	6 June, 1876	Ditto .....	240 0 0	1 Sept., 1873.
	William B. Nesbitt .....	20 Jan., 1880	Ditto .....	240 0 0	1 Jan., 1875.
	Frank Whysall .....	1 Dec., 1875	Ditto .....	240 0 0	1 Dec., 1875.
	William Henry Day .....	1 Mar., 1884	Ditto .....	240 0 0	1 July, 1877.
	George Rae .....	1 June, 1875	Ditto .....	240 0 0	1 June, 1875.
	William G. Anderson .....	1 June, 1882	Ditto .....	240 0 0	2 April, 1876.
	William C. Rush .....	26 Oct., 1876	Ditto .....	240 0 0	1 April, 1874.
	Gustav Angles .....	1 Oct., 1874	Ditto .....	240 0 0	1 Sept., 1873.
	Charles Fry .....	1 Oct., 1885	Ditto .....	235 0 0	24 Oct., 1874.
	John B. Doutty .....	1 Aug., 1878	Ditto .....	220 0 0	1 Aug., 1875.
	Charles C. Ross .....	1 Feb., 1879	Ditto .....	220 0 0	18 Mar., 1878.
	Walter E. Tomkinson .....	1 Jan., 1878	Ditto .....	220 0 0	1 Jan., 1872.
	Henry Martin .....	1 Dec., 1882	Ditto .....	220 0 0	1 April, 1872.
	William J. Aubin .....	13 Sept., 1876	Ditto .....	220 0 0	1 Aug., 1875.
	William B. Jenkins .....	10 Mar., 1876	Ditto .....	220 0 0	1 Aug., 1874.
	Joseph B. Coleman .....	1 June, 1882	Ditto .....	220 0 0	1 June, 1875.
	Christopher Shepherd .....	1 Sept., 1875	Ditto .....	220 0 0	1 Sept., 1875.
	Edmund J. Haslingden .....	1 Sept., 1877	Ditto .....	220 0 0	26 April, 1876.
	Frank S. Bowerman .....	1 Oct., 1878	Ditto .....	220 0 0	1 Oct., 1878.
	Dugald J. M'Lean <sup>4</sup> .....	1 June, 1884	Ditto .....	220 0 0	1 July, 1875.
	Charles C. Paul .....	1 Oct., 1885	Ditto .....	213 0 0	14 June, 1876.
	W. H. Golding <sup>5</sup> .....	23 Aug., 1886	Ditto .....	210 0 0	12 Feb., 1880.
	J. H. Miller <sup>6</sup> .....	15 July, 1886	Ditto .....	200 0 0	1 Mar., 1879.
	James E. Phelan .....	1 Oct., 1885	Ditto .....	190 0 0	1 Sept., 1872.
	Frederick J. Barnett .....	22 June, 1881	Ditto .....	175 0 0	1 Dec., 1875.
				to 31 May,	
				190 0 0	
				from June 1.	
	James E. Cooper .....	22 Jan., 1883	Ditto .....	175 0 0	1 Dec., 1875.
				to 31 May,	
				190 0 0	
				from 1 June.	
	Edward J. Bryant .....	1 Dec., 1880	Ditto .....	175 0 0	25 Mar., 1878.
	James A. Cassidy .....	24 June, 1880	Ditto .....	175 0 0	6 May, 1878.
	Marcus Lynch .....	8 Nov., 1880	Ditto .....	175 0 0	1 Dec., 1875.
	George N. Hayward .....	29 Oct., 1878	Ditto .....	175 0 0	29 Oct., 1878.
	James Cornick .....	14 Dec., 1877	Ditto .....	175 0 0	14 Dec., 1877.
	Arthur S. Cooper .....	23 Mar., 1882	Ditto .....	175 0 0	6 June, 1876.
	George Cleland .....	1 July, 1880	Ditto .....	175 0 0	1 Dec., 1875.
	Henry W. North .....	1 May, 1882	Ditto .....	175 0 0	1 Aug., 1879.
	Louis V. Miller .....	28 June, 1881	Ditto .....	175 0 0	1 Aug., 1878.
	James M'Grath .....	1 June, 1882	Ditto .....	175 0 0	1 June, 1875.
	Geo. T. Richards .....	1 July, 1882	Ditto .....	175 0 0	1 July, 1882.
	Jas. T. Glover .....	1 Mar., 1878	Ditto .....	175 0 0	1 Mar., 1878.
	Walter Goodman .....	1 Sept., 1878	Ditto .....	175 0 0	1 Sept., 1878.

<sup>1</sup> Allowed £50 per annum in lieu of quarters.  
Postmaster, Araluen.

<sup>2</sup> To 16 March—resigned.

<sup>3</sup> To 2 April—appointed Continental Clerk.

<sup>4</sup> To 22 March—appointed  
Postmaster, Bulli.

<sup>5</sup> Transferred from Post Office, Gilgandra.

<sup>6</sup> Transferred from Post Office, Bulli.

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>POSTMASTER-GENERAL—ELECTRIC TELEGRAPHS—continued.</b>					
<i>Head Office—continued.</i>					
<i>Operators—continued</i>	William A. Varley	1 June, 1879	Lieutenant-Governor and Executive Council.	175 0 0	1 June, 1879.
	Arthur Bowen	20 Oct., 1879	Governor and Executive Council	175 0 0	20 Oct., 1879.
	George H. Chapman	1 Jan., 1882	Ditto	175 0 0	15 Mar., 1878.
	Philip J. Johnston	1 Jan., 1884	Ditto	175 0 0	1 Jan., 1878.
	George Gresty	6 June, 1876	Ditto	175 0 0	1 Oct., 1874.
	Herbert A. Smith	1 June, 1885	Ditto	175 0 0	22 Nov., 1877.
	James W. McCutcheon	16 Aug., 1886	Ditto	175 0 0	20 Dec., 1878.
	William J. L. Kyle <sup>1</sup>	18 May, 1885	Ditto	170 0 0	11 June, 1878.
	Hy. D. Edwards <sup>2</sup>	1 Aug., 1886	Ditto	170 0 0	1 Jan., 1872.*
	Wm. Wheatley	1 Sept., 1882	Ditto	170 0 0	1 Jan., 1877.
	John C. Brainwood	8 Sept., 1880	Ditto	170 0 0	8 Sept., 1880.
	Charles Chapman	16 Mar., 1883	Ditto	170 0 0	1 May, 1875.
	Sydney E. Hewett	16 April, 1882	Ditto	170 0 0	16 April, 1882.
	Walter J. Job	1 June, 1884	Ditto	170 0 0	13 Feb., 1879.
	William H. Arthur	1 Feb., 1879	Ditto	170 0 0	1 Dec., 1877.
	Alfred E. Ambrose	5 Aug., 1885	Ditto	170 0 0	7 June, 1875.
	Wm. C. Parker	1 Jan., 1886	Ditto	170 0 0	5 Nov., 1879.
	Jno. Goldrick	17 Feb., 1886	Ditto	170 0 0	7 Sept., 1877.
	Patk. J. Howe	9 Aug., 1886	Ditto	170 0 0	1 Dec., 1875.
	Charles R. Sadler	2 Dec., 1885	Ditto	160 0 0	3 June, 1881.
	Jas. R. Nash	11 Jan., 1886	Ditto	160 0 0	10 April, 1879.
	Wm. J. W. Richardson	7 Jan., 1886	Ditto	160 0 0	9 Oct., 1882.
	William J. Donovan	1 Aug., 1878	Ditto	140 0 0	1 Aug., 1878.
	Charles S. Evans	1 July, 1882	Ditto	140 0 0	1 Nov., 1879.
	Christopher J. Cody	1 Mar., 1881	Ditto	140 0 0	1 Mar., 1881.
	Thos. H. Ella	17 Nov., 1882	Ditto	140 0 0	1 Dec., 1877.
	Thomas George Davey	19 April, 1882	Ditto	140 0 0	19 April, 1882.
	Edward J. Delange	17 April, 1882	Ditto	140 0 0	1 Aug., 1880.
	William Walsh	1 April, 1880	Ditto	140 0 0	1 Oct., 1879.
	Edward C. Kraegen	1 April, 1880	Ditto	140 0 0	1 April, 1880.
	Arthur Wilson	1 Dec., 1881	Ditto	140 0 0	1 Jan., 1880.
	Daniel J. Hines	1 Oct., 1884	Ditto	140 0 0	1 May, 1879.
	James Varley	1 Jan., 1882	Ditto	140 0 0	1 Jan., 1882.
	William Palmer	1 Mar., 1884	Ditto	140 0 0	1 Aug., 1881.
	James J. Crennan	1 June, 1884	Ditto	140 0 0	1 Sept., 1881.
	Robert G. Anson	1 Nov., 1883	Ditto	140 0 0	18 Mar., 1880.
	William J. Wareham	1 July, 1882	Ditto	140 0 0	1 July, 1882.
	Harry Joils	16 Dec., 1881	Ditto	140 0 0	16 Dec., 1881.
	Samuel Macrow	19 Oct., 1885	Ditto	140 0 0	23 Sept., 1880.
	Syd. A. Smith <sup>3</sup>	13 July, 1886	Ditto	140 0 0	14 Aug., 1882.
	Stanley L. Hosie	24 July, 1886	Ditto	140 0 0	7 June, 1883.
	Ed. J. Collier <sup>4</sup>	1 Oct., 1886	Ditto	140 0 0	25 Oct., 1882.
	Emanuel F. Dalglish <sup>5</sup>	14 June, 1886	Ditto	130 0 0	6 Sept., 1881.
	Sydney J. Porter	1 Jan., 1880	Ditto	124 0 0	1 Jan., 1880.
	Stephen F. Scott	1 July, 1882	Ditto	124 0 0	1 July, 1882.
	Clarence Rowley	1 Dec., 1882	Ditto	124 0 0	21 Sept., 1882.
	Edward R. Eames	1 Aug., 1883	Ditto	124 0 0	15 Feb., 1881.
	Alfred M'Grath	1 Jan., 1882	Ditto	124 0 0	1 Jan., 1882.
	John P. King	1 Mar., 1884	Ditto	124 0 0	28 Dec., 1881.
	Alfred W. J. Williams	1 Mar., 1884	Ditto	124 0 0	1 Sept., 1878.
	Arthur R. Faulkes	7 July, 1884	Ditto	124 0 0	1 Mar., 1880.
	Michael J. Donovan	12 May, 1884	Ditto	124 0 0	12 May, 1884.
	John J. Fitzgerald	1 Sept., 1883	Ditto	124 0 0	13 Mar., 1882.
	Alexander G. Chapman	26 Oct., 1885	Ditto	124 0 0	10 Dec., 1883.
	Sydney F. Herbert	1 Dec., 1884	Ditto	124 0 0	1 Dec., 1884.
	Arthur E. Watson	1 Oct., 1882	Ditto	124 0 0	1 Mar., 1881.
	Charles N. Cowan	8 July, 1885	Ditto	124 0 0	4 April, 1876.
	Thomas Palmer	15 June, 1885	Ditto	124 0 0	11 Dec., 1882.
	Horace C. Spencer	20 Dec., 1884	Ditto	124 0 0	3 May, 1883.
	Isaac B. Lewis	13 Sept., 1886	Ditto	124 0 0	18 Nov., 1882.
	Fred. Golding	21 Jan., 1886	Ditto	124 0 0	16 Dec., 1880.
	Philip Prott	12 July, 1886	Ditto	124 0 0	13 Feb., 1882.
	Bruce A. Hart	28 July, 1886	Ditto	124 0 0	10 Dec., 1873.
	David J. Williams <sup>6</sup>	1 Mar., 1886	Ditto	124 0 0	1 Jan., 1883.
	George G. Matheson	1 Dec., 1885	Ditto	114 0 0	7 July, 1884.
	Jno. Stevenson	28 July, 1886	Ditto	114 0 0	30 April, 1885.
	Arthur Williams	1 Dec., 1881	Ditto	85 0 0	1 Dec., 1881.
				to 14 Feb., 110 0 0	
				from 15 Feb.	
	David S. Watson	1 May, 1886	Ditto	110 0 0	1 May, 1886.
	Jas. Swann	25 May, 1886	Ditto	110 0 0	25 May, 1886.
	Robt. H. J. Dean	1 Sept., 1886	Ditto	100 0 0	1 Sept., 1886.
	Reburton Powell	1 Aug., 1883	Ditto	85 0 0	1 Aug., 1883.
				to 31 Aug., 100 0 0	
				from 1 Sept.	
	Jas. M'Kirdy	1 Sept., 1886	Ditto	100 0 0	1 Sept., 1886.
	Jno. Earnshaw	1 Sept., 1886	Ditto	100 0 0	1 Sept., 1886.

<sup>1</sup> To 31 July—to Barmedman as Postmaster. Post Office, Jindera.<sup>2</sup> Transferred from Post Office, Barmedman. <sup>3</sup> From Post Office, Nelson's Bay, to September 12—appointed Operator, Kiama street. \* Services not continuous.<sup>3</sup> To 16 November—resigned.<sup>4</sup> Transferred from <sup>6</sup> To September 12—appointed Operator, Oxford-

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>POSTMASTER-GENERAL—ELECTRIC TELEGRAPHS—continued.</b>					
<i>Head Office—continued.</i>					
Operators—continued .....	Alfred W. Lees .....	17 Nov., 1882	Governor and Executive Council	85 0 0 to 31 Aug., 100 0 0 from 1 Sept.	17 Nov., 1882.
	Herbert A. Benjamin .....	9 June, 1884	Ditto .....	85 0 0 to 31 Aug., 100 0 0 from 1 Sept.	23 April, 1883.
	Jno. Stewart.....	1 Sept., 1886	Ditto .....	.....	1 Sept., 1886.
	James Seage.....	16 Nov., 1885	Ditto .....	75 0 0 to 31 Aug., 100 0 0 from 1 Sept.	16 Nov., 1885.
	George Goodman.....	1 July, 1886	Ditto .....	96 0 0	11 Dec., 1882.
	Albert E. Brainwood .....	1 Sept., 1886	Ditto .....	96 0 0	1 Sept., 1886.
	William J. Middleton <sup>1</sup> .....	3 Dec., 1885	Ditto .....	90 0 0	17 Sept., 1883.
	Robt. Rae .....	27 July, 1882	Ditto .....	85 0 0	27 July, 1882.
	Alfred G. Turner <sup>2</sup> .....	9 July, 1883	Ditto .....	85 0 0	9 July, 1883.
	Andrew Newell .....	1 Sept., 1883	Ditto .....	85 0 0	1 Sept., 1883.
	Robert H. Allars .....	1 Jan., 1884	Ditto .....	85 0 0	1 Jan., 1884.
	John C. D. M'Bride .....	20 Dec., 1884	Ditto .....	85 0 0	1 Aug., 1881.
	Jno. J. Britten <sup>7</sup> .....	15 Jan., 1886	Ditto .....	85 0 0	1 Oct., 1884.
	John Chas. McDonald <sup>3</sup> .....	7 July, 1885	Ditto .....	75 0 0	7 July, 1885.
	Clarence W. Tomkinson .....	30 July, 1885	Ditto .....	75 0 0	14 July, 1884.
	James Gould .....	16 Nov., 1885	Ditto .....	75 0 0	16 Nov., 1885.
	Arthur H. A. M'Kinlay .....	16 Nov., 1885	Ditto .....	75 0 0	16 Nov., 1885.
	Edmund Harrison .....	16 Nov., 1885	Ditto .....	75 0 0	16 Nov., 1885.
	Albert E. Bates <sup>4</sup> .....	16 Nov., 1885	Ditto .....	75 0 0	16 Nov., 1885.
	Francis C. Pelham .....	16 Nov., 1885	Ditto .....	75 0 0	16 Nov., 1885.
	James Griffin <sup>5</sup> .....	16 Nov., 1885	Ditto .....	75 0 0	16 Nov., 1885.
	James F. Murray <sup>6</sup> .....	16 Nov., 1885	Ditto .....	75 0 0	16 Nov., 1885.
	Joseph R. Cabel .....	15 Dec., 1885	Ditto .....	75 0 0	15 Dec., 1885.
	J. A. M'Garry .....	1 Feb., 1886	Ditto .....	75 0 0	1 Feb., 1886.
	Thos. B. Hickey .....	24 Aug., 1886	Ditto .....	75 0 0	14 May, 1885.
Instrument Room—					
Instrument Mechanician.....	Gustave A. Kopsch .....	15 Mar., 1861	Ditto .....	490 0 0	15 Mar., 1861.
Instrument Fitters .....	James T. Morrison .....	1 Jan., 1878	Ditto .....	220 0 0	1 Jan., 1878.
	Samuel South .....	26 May, 1875	Ditto .....	220 0 0	26 May, 1875.
	Richard Street .....	1 Nov., 1878	Postmaster-General .....	220 0 0	1 Oct., 1875.*
	Edward D. Thomson .....	1 Nov., 1878	Ditto .....	220 0 0	1 Nov., 1878.
	Charles Stroh .....	14 Aug., 1884	Ditto .....	195 0 0	14 Aug., 1884.
	Richard Baum.....	29 Dec., 1884	Ditto .....	170 0 0	29 Dec., 1884.
Batteryman (1) .....	Joseph Higgerson.....	1 May, 1883	Ditto .....	170 0 0	1 May, 1883.
Battery Room Assistant (1)	Alexander J. Smith.....	1 Aug., 1884	Ditto .....	124 0 0	1 Aug., 1884.
Line Repairer.....	Robert Rutherford .....	8 June, 1868	Governor and Executive Council	295 0 0	8 June, 1868.
Assistant do.....	Charles Biggs .....	1 Jan., 1874	Ditto .....	245 0 0	1 Jan., 1874.
Officekeeper (1) .....	Michael Delaney <sup>8</sup> .....	1 Jan., 1880	Ditto .....	220 0 0	
Storekeeper.....	Fred. V. Hedges .....	20 Dec., 1876	Ditto .....	265 0 0	20 Dec., 1876.
Clerks—Stores .....	Robert Campbell.....	21 Dec., 1876	Ditto .....	200 0 0	21 Dec., 1876.
	John Muir .....	8 April, 1879	Ditto .....	190 0 0	8 April, 1879.
Assistant Storemen (3).....	.....	.....	.....	{ 1 at 0 9 0 " 7 0 " ..	per diem.
Stableman (1) .....	.....	.....	.....	{ 1 at 104 0 0 170 0 0	"
Assistant Stablemen (2) ...	.....	.....	.....	{ 1 at 0 8 0 " 7 0 " ..	per diem.
Messengers' Overseer (1) ...	John King .....	1 Sept., 1877	Postmaster-General .....	220 0 0	1 Jan., 1877.
Assistant do .....	George Selwyn Lisle .....	20 Aug., 1886	Ditto .....	150 0 0 to 19 Sept., 180 0 0 from 20 Sept.	20 Aug., 1886.
	John J. Seage <sup>9</sup> .....	1 Mar., 1884	Ditto .....	145 0 0	16 Oct., 1882.
	William Robinson .....	19 Feb., 1886	Governor and Executive Council	100 0 0	10 July, 1882.
	Edgar S. Hudson.....	1 July, 1886	Ditto .....	75 0 0	7 Jan., 1884.
Charwomen (6) .....	.....	.....	.....	39 0 0 78 0 0 52 0 0 39 0 0 0 10 0 0 11 0	each. " " " " " per week. per diem.
Messengers (128) .....	.....	.....	.....	370 0 0	25 May, 1859.*
Carpenter (1).....	Alexander Tucker .....	6 May, 1875	Governor and Executive Council	370 0 0	
Inspectors of Telegraph Lines and Stations.	William H. Maguire .....	1 May, 1882	Ditto .....	320 0 0	1 Jan., 1860.
Inspectors of Railway Telegraph Lines and Stations.	Samuel J. Watson .....	5 May, 1875	Ditto .....	270 0 0	30 Aug., 1858.
	Michael W. Maloney .....	19 Jan., 1882	Ditto .....	270 0 0	1 June, 1874.
<i>Telephone Branch.</i>					
Manager .....	Thos. Hammand .....	1 Jan., 1885	Ditto .....	370 0 0	11 Dec., 1872.
Overseer .....	Samuel J. Salter .....	10 July, 1882	Postmaster-General .....	260 0 0	9 April, 1873.
Assistant Overseers .....	Herbert Bloore .....	18 July, 1884	Ditto .....	160 0 0	18 July, 1884.
	Bernard Maguire.....	1 Aug., 1884	Ditto .....	160 0 0	10 June, 1876.
	Percy Howe .....	1 Jan., 1885	Governor and Executive Council	114 0 0	22 Mar., 1882.
	Edward A. Langeschwerdt	1 Jan., 1885	Ditto .....	114 0 0	3 July, 1882.

<sup>1</sup> To 22 September—deceased. <sup>2</sup> To July 12—appointed Temporary Clerk. <sup>3</sup> To 1 August—appointed Operator, Granville. <sup>4</sup> To 12 August—resigned. <sup>5</sup> To 31 May—resigned. <sup>6</sup> To 19 June—appointed Operator, Blackwall. <sup>7</sup> To 31 July—dismissed. <sup>8</sup> To 31 December—services dispensed with. <sup>9</sup> Services not continuous.

NOTE.—The allowances to the above Officers will be found stated in a foot-note at the end of the return.

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>POSTMASTER-GENERAL—ELECTRIC TELEGRAPHS—continued.</b>					
<i>Head Office—continued.</i>					
Switchboard Attendants ...	William Robinson <sup>1</sup> .....	10 July, 1882	Governor and Executive Council	75 0 0	10 July, 1882.
	Joseph Beston .....	1 Mar., 1883	Ditto .....	75 0 0	1 Mar., 1883.
	William Clayton .....	1 Mar., 1883	Ditto .....	75 0 0	1 Mar., 1883.
	Alfred Pidcock .....	1 Mar., 1883	Ditto .....	75 0 0	1 Mar., 1883.
	Edgar S. Hudson <sup>2</sup> .....	7 Jan., 1884	Ditto .....	52 0 0	7 Jan., 1884.
	Henry W. M'Donnell .....	26 June, 1884	Ditto .....	52 0 0	26 June, 1884.
	John H. Wright <sup>3</sup> .....	1 Jan., 1885	Ditto .....	52 0 0	1 Jan., 1885.
	Albert H. Belcher .....	1 Jan., 1885	Ditto .....	52 0 0	1 Jan., 1885.
	Jas. A. Marvell .....	1 Jan., 1885	Ditto .....	52 0 0	1 Jan., 1885.
	Thomas H. Mason .....	15 May, 1885	Ditto .....	52 0 0	15 May, 1885.
	Walter A. M'Cowen .....	15 May, 1885	Ditto .....	52 0 0	15 May, 1885.
	A. Neville .....	1 May, 1886	Postmaster-General .....	39 0 0	1 May, 1886.
	H. J. Flynn .....	22 May, 1886	Ditto .....	39 0 0	22 May, 1886.
	Ninian Melville .....	1 Aug., 1886	Ditto .....	39 0 0	1 Aug., 1886.
	(2) .....		..... 2 at	0 10 0	per week.
Batteryman .....	Bernard Cashion .....	1 Jan., 1885	Governor and Executive Council	85 0 0	1 July, 1883.
Line Overseer .....	John A. Easton .....	1 Jan., 1885	Ditto .....	150 0 0	1 Jan., 1885.
Messenger (1) .....	.....	.....	.....	52 0 0	.....
<i>Electric Light Branch.</i>					
Engineers .....	John Metcalfe <sup>4</sup> .....	1 Jan., 1884	Postmaster-General .....	226 0 0	1 Feb., 1880.
	Thomas Murphy .....	1 July, 1884	Ditto .....	213 0 0	1 July, 1884.
	G. E. Letton .....	29 July, 1886	Ditto .....	156 0 0	29 July, 1886.
	Murdoch M'Kenzie .....	17 July, 1883	Ditto .....	187 0 0	17 July, 1883.
	.....	.....	.....	to 27 Oct.,	.....
	.....	.....	.....	213 0 0	.....
	.....	.....	.....	from 28 Oct.	.....
	E. Reffs .....	28 Oct., 1886	Ditto .....	ros. per diem	28 Oct., 1886.
	E. Boden .....	28 Oct., 1886	Ditto .....	ros. per diem	28 Oct., 1886.
	James S. Fitzmaurice .....	20 Sept., 1883	Ditto .....	161 0 0	20 Sept., 1883.
	George Garrick .....	11 Jan., 1884	Ditto .....	161 0 0	11 Jan., 1884.
	William W. Gallie .....	12 Mar., 1884	Ditto .....	ros. per diem	12 Mar., 1884.
	Thomas Hy. Jones .....	21 July, 1885	Ditto .....	ros. per diem	21 July, 1885.
<i>Suburban Offices.</i>					
Arnccliffe Telephone Operator	Jno. T. Pickering .....	8 Jan., 1886	Ditto .....	39 0 0	8 Jan., 1886.
Ashfield Operators .....	Rosa E. W. Gibbes <sup>10</sup> .....	1 May, 1882	Governor and Executive Council	.....	14 Sept., 1877.
	Albert Bailey .....	7 July, 1883	Ditto .....	62 0 0	7 July, 1883.
Balmain Operators .....	Mary J. Davies <sup>5</sup> .....	1 Jan., 1877	Ditto .....	114 0 0	8 Mar., 1875.
	Francis J. Heagney .....	7 July, 1885	Ditto .....	37 10 0	1 Nov., 1884.
	Hy. G. Kulmar .....	2 Aug., 1886	Ditto .....	114 0 0	17 July, 1882.
Messenger (1) .....	.....	.....	.....	39 0 0	.....
Burwood Operators .....	Henry Matthews <sup>†</sup> .....	1 Sept., 1874	Governor and Executive Council	.....	1 Sept., 1874.
	Julian E. Gale <sup>6</sup> .....	24 Aug., 1885	Ditto .....	26 0 0	24 Aug., 1885.
Messengers (3) .....	.....	.....	.....	{ 1 at	.....
	.....	.....	.....	{ 2 "	.....
Camperdown Operator .....	Frederick Burgis <sup>†</sup> .....	1 Nov., 1882	Governor and Executive Council	.....	1 Nov., 1882.
Messenger (2) .....	.....	.....	.....	26 0 0	each.
Croydon Station-mistress .....	Mrs. E. Pritchard <sup>9</sup> .....	14 Jan., 1886	Postmaster-General .....	26 0 0	14 Jan., 1886.
Operators .....	Sydney Ernest Beaver .....	18 July, 1886	Governor and Executive Council	75 0 0	18 Jan., 1882.
	Annie Ludford <sup>7</sup> .....	18 Aug., 1884	Ditto .....	26 0 0	18 Aug., 1884.
Messenger (1) .....	.....	.....	.....	39 0 0	.....
Darlington Station-mistress	E. J. West <sup>†</sup> .....	1 May, 1884	Governor and Executive Council	.....	8 Nov., 1880.
Messenger (1) .....	.....	.....	.....	26 0 0	.....
Edgecliff Operators .....	Henrietta North <sup>†</sup> .....	4 July, 1877	Governor and Executive Council	.....	8 Mar., 1875.
	Freck. O'Brien .....	1 July, 1883	Ditto .....	85 0 0	1 July, 1883.
Messengers (2) .....	.....	.....	.....	39 0 0	each.
Glebe Operators .....	Minnie L. Knott <sup>†</sup> .....	15 Aug., 1877	Governor and Executive Council	.....	16 Mar., 1875.
	Jean Knott .....	1 May, 1886	Ditto .....	26 0 0	25 June, 1883.
Messengers (4) .....	.....	.....	.....	39 0 0	each per annum.
Glebe Island Messenger	.....	.....	.....	26 0 0	.....
Homebush Operator .....	Charles G. A. Doutry <sup>†</sup> .....	1 Feb., 1879	Governor and Executive Council	.....	1 Feb., 1879.
Messengers (2) .....	.....	.....	.....	39 0 0	each.
Hunter's Hill Operator .....	Lilla Twentyman <sup>†</sup> .....	1 July, 1876	Governor and Executive Council	.....	.....
	succeeded by	.....	.....	.....	.....
	Mary J. Davies <sup>†</sup> .....	.....	.....	{ 1 at	.....
Messengers (2) .....	.....	.....	.....	{ 1 "	.....
Hurstville Messenger (1) .....	.....	.....	.....	39 0 0	per week.
La Perouse Operators .....	John A. Sinclair <sup>†</sup> .....	.....	Governor and Executive Council	.....	1 Mar., 1876.
	Patrick Howard <sup>9</sup> .....	1 June, 1884	Ditto .....	114 0 0	1 Jan., 1882.
	Alex. J. Keith .....	13 July, 1886	Ditto .....	110 0 0	20 May, 1885.
Leichhardt Station-mistress	Ellen A. H. Cross <sup>†</sup> .....	1 June, 1884	Ditto .....	.....	1 Dec., 1875.
Operator .....	Agnes Pegus .....	1 May, 1886	Postmaster-General .....	26 0 0	1 May, 1885.
Little Bay Operator .....	John Francis .....	22 July, 1881	Governor and Executive Council	124 0 0	22 July, 1881.
Manly Operators .....	Louise F. Stephen <sup>†</sup> .....	9 May, 1876	Ditto .....	.....	1 Mar., 1876.
	Michael J. Kenny .....	9 Feb., 1882	Ditto .....	114 0 0	1 July, 1878.
	Chas. T. M'Auley .....	1 Oct., 1885	Ditto .....	75 0 0	1 Oct., 1885.
Messengers (2) .....	.....	.....	.....	39 0 0	each.

<sup>1</sup> To 18 February—appointed Assistant Overseer. <sup>2</sup> To 30 June—appointed Assistant Overseer. <sup>3</sup> To 16 May—disrated to Messenger. <sup>4</sup> To 30 June—dismissed. <sup>5</sup> To 1 August—appointed Post and Telegraph Station-mistress, Hunter's Hill. <sup>6</sup> To 31 January—resigned. <sup>7</sup> To 13 January—appointed Post and Telegraph Station-mistress, Summer Hill. <sup>8</sup> To 31 July—dismissed. <sup>9</sup> To 12 July—appointed Operator, Tattersall's. <sup>10</sup> Transferred to Stanmore Road, 3 July. <sup>†</sup> Paid by Postal Department.

NOTE.—The allowances to the above Officers will be found stated in a foot-note at the end of the return.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government
				£ s. d.	
<b>POSTMASTER-GENERAL—ELECTRIC TELEGRAPHS—continued.</b>					
<i>Suburban Offices—continued.</i>					
Marrickville Operators .....	George E. Collett† .....	17 July, 1882	Governor and Executive Council	.....	3 June, 1880.
	John T. Hart .....	12 Feb., 1886	Postmaster-General .....	78 0 0	12 Feb., 1886.
Messengers (2) .....	.....	.....	.....	{ 1 at 39 0 0	
	.....	.....	.....	{ 1 ,, 52 0 0	
Newtown Operators .....	Robert A. Byron <sup>1</sup> .....	1 Dec., 1881	Governor and Executive Council	120 0 0	10 July, 1878.
	Thomas Fitzgerald .....	1 May, 1884	Ditto .....	85 0 0	1 Aug., 1883.
	.....	.....	.....	to 31 Aug., 100 0 0	
	.....	.....	.....	from 1 Sept.	
Messengers (2) .....	John Horsley .....	14 June, 1886	Governor and Executive Council	110 0 0	1 Oct., 1878.
	.....	.....	.....	39 0 0	each.
Paddington Operators .....	John Single .....	10 Mar., 1884	Governor and Executive Council	85 0 0	10 Mar., 1884.
	Albert A. H. Gosbell <sup>2</sup> .....	1 Aug., 1884	Ditto .....	85 0 0	1 Aug., 1884.
	Julian E. Gale .....	21 Sept., 1886	Postmaster-General .....	52 0 0	24 Aug., 1885.
Messengers (3) .....	.....	.....	.....	39 0 0	each.
Petersham Operators .....	Julia Andrews† .....	1 Feb., 1877	Governor and Executive Council	.....	1 Feb., 1877.
	Francis Arthur Gosbell .....	16 July, 1886	Ditto .....	124 0 0	1 June, 1884.
	Robert More <sup>2</sup> .....	20 Jan., 1885	Ditto .....	39 0 0	20 Jan., 1885.
Messengers (4) .....	.....	.....	.....	{ 1 at 52 0 0	
	.....	.....	.....	{ 3 ,, 39 0 0	
Pymont Operators .....	F. Larsen† .....	23 Oct., 1882	Governor and Executive Council	.....	1 Aug., 1874.
	Percy John H. Sewell .....	12 Feb., 1886	Ditto .....	75 0 0	1 Nov., 1884.
Messengers (2) .....	.....	.....	.....	{ 1 at 39 0 0	
	.....	.....	.....	{ 1 ,, 52 0 0	
Randwick Operator .....	Angelina Dargin† .....	1 Feb., 1877	Ditto .....	.....	8 Mar., 1875.
Messengers (2) .....	.....	.....	.....	{ 1 at 52 0 0	
	.....	.....	.....	{ 1 ,, 39 0 0	
Redfern Operators .....	Beatrice M. Green .....	1 June, 1883	Governor and Executive Council	124 0 0	1 Sept., 1877.
	Thomas Dignan .....	16 Nov., 1885	Ditto .....	75 0 0	16 Nov., 1885.
Messengers (2) .....	.....	.....	.....	52 0 0	each.
Rockdale Telephone At- tendant (1).	.....	.....	.....	26 0 0	
Rookwood Station-master..	James B. Bissett† .....	1 Oct., 1884	Governor and Executive Council	.....	29 Nov., 1881.
Ryde Operator .....	Thomas Swan .....	1 Feb., 1881	Ditto .....	124 0 0	1 Feb., 1881.
Messenger (1) .....	.....	.....	.....	39 0 0	
St. Leonards Operators .....	Walter S. Hume .....	19 Oct., 1883	Ditto .....	75 0 0	19 Oct., 1883.
	Joseph Lord .....	7 Nov., 1885	Ditto .....	60 0 0	7 Nov., 1885.
Messengers (3) .....	.....	.....	.....	39 0 0	each.
St. Peter's Operator .....	Louisa Percival <sup>4</sup> .....	15 July, 1882	Governor and Executive Council	26 0 0	15 July, 1882.
Messenger (1) .....	.....	.....	.....	52 0 0	
South Head Operator .....	Alfred T. Plunkett .....	26 July, 1886	Governor and Executive Council	75 0 0	10 Jan., 1882.
Messenger (1) .....	.....	.....	.....	52 0 0	
Stanmore-road Operator .....	Rosa E. W. Gibbes† .....	3 July, 1886	Governor and Executive Council	.....	14 Sept., 1877.
Messengers (2) .....	.....	.....	.....	39 0 0	each.
Waterloo Operator .....	Robert Farquharson† .....	1 June, 1883	Ditto .....	.....	1 June, 1878.
Waverley Operators .....	Lizzie Ferris† .....	5 Sept., 1876	Ditto .....	.....	3 July, 1876.
	Alfred J. Martin .....	6 Dec., 1883	Governor and Executive Council	61 0 0	6 Dec., 1883.
Messengers (2) .....	.....	.....	.....	39 0 0	each.
Woollahra Operators .....	Melbourne S. Dargin† .....	1 July, 1884	Ditto .....	.....	1 Sept., 1874.
	Francis D. White .....	12 Oct., 1885	Ditto .....	75 0 0	12 Oct., 1885.
Messengers (2) .....	.....	.....	.....	{ 1 at 52 0 0	
	.....	.....	.....	{ 1 ,, 39 0 0	
<i>Branch Offices.</i>					
Exchange Operator .....	E. J. Cavanagh .....	1 Aug., 1883	Governor and Executive Council	140 0 0	1 June, 1881.
George-street West Operators.	Minnie E. Husing .....	1 April, 1879	Lieutenant-Governor and Execu- tive Council.	114 0 0	1 April, 1875.
	Frederick G. Hagley .....	1 Oct., 1884	Ditto .....	114 0 0	1 Oct., 1884.
Messengers (2) .....	.....	.....	.....	{ 1 at 39 0 0	
	.....	.....	.....	{ 1 ,, 52 0 0	
Haymarket Operators .....	Edwd. C. Sampson .....	20 Feb., 1882	Governor and Executive Council	124 0 0	1 Nov., 1880.
	Ernest Cupit .....	1 June, 1884	Ditto .....	85 0 0	1 June, 1884.
	.....	.....	.....	to 31 July, 96 0 0	
	.....	.....	.....	from 1 Aug.	
King-street Operators .....	Frederick J. Walker .....	11 Mar., 1878	Ditto .....	140 0 0	11 Mar., 1878.
	Leon A. Hewitt .....	1 Dec., 1885	Ditto .....	85 0 0	1 July, 1883.
Messenger (1) .....	.....	.....	.....	52 0 0	
Miller's Point Operator .....	Blanche Ida Moore .....	1 April, 1879	Ditto .....	124 0 0	1 April, 1879.
Messengers (2) .....	.....	.....	.....	{ 1 at 52 0 0	
	.....	.....	.....	{ 1 ,, 39 0 0	
Oxford Hotel Operator .....	James M. Dillon .....	15 Oct., 1886	Governor and Executive Council	75 0 0	14 April, 1884.
Oxford-street Operators .....	Isaac B. Lewis <sup>6</sup> .....	9 June, 1885	Ditto .....	124 0 0	18 Nov., 1882.
	Sydney W. Hill .....	24 June, 1885	Ditto .....	114 0 0	1 Sept., 1883.
	William M'Conn .....	2 April, 1883	Ditto .....	85 0 0	2 April, 1883.
	David J. Williams .....	13 Sept., 1886	Ditto .....	124 0 0	1 Jan., 1883.
Messengers (4) .....	.....	.....	.....	{ 2 at 39 0 0	
	.....	.....	.....	{ 2 ,, 52 0 0	
Park-street Operators .....	Francis A. Gosbell <sup>7</sup> .....	1 June, 1884	Governor and Executive Council	124 0 0	1 June, 1884.
	William Walters .....	16 July, 1886	Ditto .....	75 0 0	29 Sept., 1831.
Messenger (1) .....	.....	.....	.....	52 0 0	

<sup>1</sup> To 13 June—appointed Postmaster and Station-master, Ashfield.

<sup>2</sup> To 21 November—appointed Postmaster and Station-master, Kogarah.

<sup>3</sup> To 17 May—appointed Operator, Mittagong.

<sup>4</sup> To 31 May—resigned.

<sup>5</sup> To 31 August—Paid by Post Office from 1 Sept.

<sup>6</sup> To 12 September—transferred to Sydney.

<sup>7</sup> To 31 July—transferred to Petersham.

† Paid by Postal Department.

Note.—The allowances to the above officers will be found stated in a foot-note at the end of the return.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>POSTMASTER-GENERAL—ELECTRIC TELEGRAPHS—continued.</b>					
<i>Branch Offices.</i>					
Summer Hill Station-mistress.	Annie J. Ludford†	1 July, 1886	Governor and Executive Council	50 0 0	18 Aug., 1884.
Operator	James Stephens	1 Aug., 1886	Ditto	75 0 0	3 Mar., 1883.
Messengers (2)	.....	.....	.....	39 0 0	each
Surry Hills Station-mistress	Ellen J Stuckey†	1 April, 1884	Governor and Executive Council	.....	1 Aug., 1882.
Operator	F. L. Jackson	16 Jan., 1885	Ditto	52 0 0	16 Jan., 1885.
Messenger (1)	.....	.....	.....	39 0 0	.....
Tattersall's Operators	Sydney Smith <sup>1</sup>	14 Aug., 1882	Governor and Executive Council	130 0 0	14 Aug., 1882.
.....	Patrick Howard	13 July, 1886	Ditto	124 0 0	1 Jan., 1882.
Waterloo Messenger	.....	.....	.....	39 0 0	.....
William-street Operators	Frederick T. South <sup>2</sup>	8 Oct., 1883	Governor and Executive Council	114 0 0	8 Oct., 1883.
.....	G. E. Ashbury	1 Dec., 1885	Ditto	124 0 0	15 Sept., 1880.
Messengers (4)	.....	.....	.....	52 0 0	.....
.....	.....	.....	.....	39 0 0	each.
<i>Country Districts.</i>					
Adaminaby Station-master.	James Waddell†	7 Oct., 1876	Governor and Executive Council	.....	7 Oct., 1876.
Adelong Station-master	Alfred S. Bray†	1 April, 1874	Ditto	.....	1 April, 1873.
Messenger (1)	.....	.....	.....	39 0 0	.....
Albion Park Operator	Mrs. Mary Ann M'Grath	11 Mar., 1886	Postmaster-General	26 0 0	11 Mar., 1886.
Albury Station-master	Wm. J. Parsons <sup>3</sup>	1 June, 1882	Governor and Executive Council	270 0 0	1 Jan., 1872.
Operators	John Goldrick <sup>4</sup>	9 April, 1883	Ditto	160 0 0	7 Sept., 1877.
.....	Stephen S. Bramble	1 Mar., 1883	Ditto	170 0 0	1 Feb., 1879.
.....	Heylin E. Jones	6 Mar., 1881	Ditto	160 0 0	6 Mar., 1881.
.....	John Holman	21 Dec., 1885	Ditto	110 0 0	12 Nov., 1884.
.....	Edward Aloysius Jones	11 June, 1886	Ditto	110 0 0	19 Dec., 1885.
Line Repairer	Wilham J. M'Govern	10 July, 1877	Ditto	150 0 0	10 July, 1877.
Batteryman	George Woods	23 Dec., 1885	Ministerial	75 0 0	23 Dec., 1885.
Messengers (3)	.....	.....	.....	39 0 0	each
Angledool Station-master	Henry Burton†	7 April, 1885	Governor and Executive Council	.....	28 July, 1881.
Anvil Creek Station-master	George J. Warren	1 Dec., 1878	Ditto	85 0 0	1 Dec., 1878.
Messenger (1)	.....	.....	.....	26 0 0	.....
Appin Station-master	George T. Palmer	8 July, 1885	Governor and Executive Council	110 0 0	1 Sept., 1882
Arakoon Station-master	Benjamin Thomas	5 Jan., 1880	Ditto	75 0 0	5 Jan., 1880.
Araluen Station-master	Charles N. Ambrose†	20 Feb., 1879	Ditto	.....	4 Dec., 1860.
.....	succeeded by	.....	.....	.....	.....
.....	Dugald John M'Lean†	22 Mar., 1886	Postmaster-General	.....	1 July, 1875.
Armidale Station-master	Thomas H. Ryan	1 Sept., 1881	Governor and Executive Council	260 0 0	1 Mar., 1871.
Operators	Robt. B. Avery	1 Mar., 1882	Ditto	130 0 0	1 Mar., 1882.
.....	Geo. Ireland	2 Aug., 1886	Ditto	110 0 0	18 Jan., 1884.
.....	Bruce A. Hart <sup>5</sup>	18 Mar., 1885	Ditto	114 0 0	10 Dec., 1883.
.....	Maurice Histon	10 Mar., 1875	Ditto	150 0 0	10 Mar., 1875.
Messengers (2)	.....	.....	.....	52 0 0	.....
.....	.....	.....	.....	39 0 0	.....
Ballina Station-master	Archibald Hunter†	1 Jan., 1875	Governor and Executive Council	.....	26 April, 1864.
Operator	John J. O'Kelly	23 Nov., 1885	Ditto	75 0 0	23 Nov., 1885.
Messenger (1)	.....	.....	.....	52 0 0	.....
Balranald Station-master	Henry B. Jefferson†	12 Feb., 1880	Governor and Executive Council	.....	1 Dec., 1874.
.....	succeeded by	.....	.....	.....	.....
.....	George Lobsey†	23 Sept., 1886	Postmaster-General	.....	25 Mar., 1878.
Operators	Edward J. Plummer <sup>6</sup>	6 June, 1881	Governor and Executive Council	75 0 0	6 June, 1881.
.....	E. J. K. Heazlett	27 May, 1886	Ditto	75 0 0	27 May, 1886.
Messenger (1)	.....	.....	.....	52 0 0	.....
Baradine Station-master	Arthur B. Ewing†	28 July, 1881	Governor and Executive Council	.....	28 July, 1881.
Barmedman Station-master	Henry D. Edwards†	10 Sept., 1883	Ditto	.....	1 Jan., 1872.*
.....	succeeded by	.....	.....	.....	.....
.....	W. J. L. Kyle†	1 Aug., 1886	Ditto	.....	15 Sept., 1879.
Messenger (1)	.....	.....	.....	39 0 0	.....
Barraba Station-master	E. W. Connolly†	10 Dec., 1884	Governor and Executive Council	.....	21 Feb., 1879.
Operator	Alex. Williams	11 Sept., 1886	Ditto	100 0 0	8 Dec., 1884.
Messenger (1)	.....	.....	.....	52 0 0	.....
Barrenjuey Operator	Albert T. Black	1 Oct., 1869	Governor and Executive Council	104 0 0	25 April, 1867.
Barrington Station-master	James T. Lambert†	1 Mar., 1884	Ditto	.....	14 Nov., 1878.
Bateman's Bay Station-master.	Arthur J. Meynink†	17 Mar., 1884	Ditto	.....	19 Sept., 1877.
Bathurst Station-master	Kenneth A. H. Mackenzie	2 Feb., 1876	Ditto	310 0 0	1 Sept., 1862.
Operators	Chas. F. Studdert	21 April, 1884	Ditto	170 0 0	1 May, 1879.
.....	Henry C. Whittaker <sup>7</sup>	16 Aug., 1881	Ditto	130 0 0	10 Aug., 1876.
.....	Jas. M. Hackett	15 May, 1886	Ditto	150 0 0	1 Aug., 1883.
.....	W. T. Keating	10 May, 1886	Ditto	110 0 0	5 Sept., 1885.
.....	Edwd. J. Plummer	27 May, 1886	Ditto	110 0 0	6 June, 1881.
.....	Wm. Thos. Wright	13 July, 1886	Ditto	110 0 0	1 Oct., 1884.
.....	Chas. A. Gale	1 Oct., 1884	Ditto	124 0 0	1 June, 1884.
.....	Willie H. Pye <sup>8</sup>	19 Oct., 1885	Ditto	124 0 0	1 May, 1883
.....	Alex. J. Keith <sup>9</sup>	20 May, 1885	Ditto	75 0 0	20 May, 1885
.....	Phillip Prot <sup>10</sup>	13 Feb., 1882	Ditto	124 0 0	13 Feb., 1882.
Line Repairer	Lous Dominichetti	15 June, 1881	Ditto	150 0 0	15 June, 1881.
Messengers (3)	.....	.....	.....	39 0 0	each.

<sup>1</sup> To 12 July—transferred to Sydney. <sup>2</sup> To 10 August—appointed Postmaster and Stationmaster, Broken Hill. <sup>3</sup> Allowed £50 per annum for extra work. <sup>4</sup> Transferred to Sydney. <sup>5</sup> To 31 July—appointed Operator, Sydney. <sup>6</sup> To 31 May—appointed Operator, Bathurst. <sup>7</sup> To 15 March—resigned. <sup>8</sup> To 6 January—appointed Operator, Forbes. <sup>9</sup> To 12 July—appointed Operator, La Perouse. <sup>10</sup> To 12 July—appointed Operator, Head Office. \* Services not continuous. † Paid by Postal Department. ‡ To 31 August Paid by Post Office from 1 September

NOTE.—The allowances to the above Officers will be found stated in a foot-note at the end of the return.



Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>POSTMASTER-GENERAL—ELECTRIC TELEGRAPHS—continued.</b>					
<i>Country Districts—continued.</i>					
Bega Station-master	Charles T. Harrison†	1 Jan., 1873	Governor and Executive Council	.....	1 Jan., 1873.
Operators	John M. Lee	9 June, 1879	Lieutenant-Governor and Executive Council.	75 0 0	9 June, 1879.
	Charles P. Gibb	18 Jan., 1886	Governor and Executive Council	75 0 0	18 Jan., 1886.
Messenger (1)	.....	.....	.....	39 0 0	.....
Bellbrook (late Nulla Nulla) Station-master.	James C. Toose†	12 June, 1878	Governor and Executive Council	.....	1 July, 1875.
Bellinger Heads Station-master	Thomas Stewart	1 Dec., 1880	Ditto	26 0 0	23 July, 1868.
Belmont Operator	Anne J. Williamson	1 Feb., 1884	Governor and Executive Council	36 0 0	1 Feb., 1884.
Messenger (1)	.....	.....	.....	5s. per week	.....
Bendemeer Station-master.	James N. Falconer†	12 Nov., 1881	Lieutenant-Governor and Executive Council.	.....	1 Jan., 1869.
Berrima Operator	Clarinda Rowe†	1 Oct., 1883	Governor and Executive Council	.....	1 Oct., 1883.
Bingera Station-master	Lachlan S. Mackay†	1 June, 1885	Ditto	.....	1 Dec., 1875.
Operators	Cecil A. Olver <sup>1</sup>	1 July, 1884	Ditto	85 0 0	1 July, 1884.
	John T. Higgins	6 April, 1886	Postmaster-General	85 0 0	1 April, 1883.
Blackwall Station-master.	Joseph Malarkey <sup>2</sup>	29 April, 1881	Governor and Executive Council	52 0 0	29 April, 1881.
Operator	John F. Murray	20 June, 1886	Postmaster-General	75 0 0	16 Nov., 1885.
Blandford Railway Messenger	.....	.....	.....	39 0 0	.....
Blayne Station-master	Robt. L. Studdert†	21 April, 1884	Governor and Executive Council	.....	21 Feb., 1882.
	Ernest Cooper	20 Oct., 1884	Ditto	52 0 0	20 Oct., 1884.
	Emily Redstone	1 April, 1883	Ditto	52 0 0	1 April, 1883.
Boat Harbour Station-mistress.	.....	.....	.....	.....	.....
Bodalla Station-master	Joseph Cox†	15 Feb., 1877	Governor and Executive Council	.....	1 Feb., 1873.
Boggabri Station-master	Henry A. Lott†	1 Jan., 1883	Ditto	.....	18 Jan., 1875.
Operator	Walter R. Guest	1 April, 1885	Ditto	26 0 0	1 April, 1885.
Bolivia Station-master	James G. Wilson†	16 April, 1883	Ditto	.....	13 Feb., 1882.
Bombala Station-master	Martin E. Burke†	23 April, 1867	Ditto	.....	23 Oct., 1862.
	succeeded by	.....	.....	.....	.....
	Donald Graham	3 Sept., 1886	Postmaster-General	.....	14 April, 1864.
Operator	James Higgs	13 Mar., 1882	Ditto	124 0 0	1 July, 1881.
Messenger (1)	.....	.....	.....	39 0 0	.....
Booligal Station-master	Thomas Harris†	1 Oct., 1883	Ditto	.....	1 Jan., 1874.
Operator	Edwd. Quince	10 Mar., 1884	Ditto	75 0 0	1 Sept., 1882.
Botany Station-mistress	Annie Halloran†	5 Mar., 1883	Ditto	.....	10 May, 1875.
Messenger (1)	.....	.....	.....	39 0 0	.....
Bourke Station-master	Thomas Tradert	15 July, 1873	Governor and Executive Council	.....	1 Oct., 1865.
Operators	Charles H. Hooper <sup>3</sup>	13 Nov., 1881	Ditto	175 0 0	19 May, 1879.
	Thos. Barclay <sup>4</sup>	1 Feb., 1884	Ditto	150 0 0	1 Dec., 1881.
	Walter Herbert	1 Oct., 1884	Ditto	150 0 0	17 July, 1882.
	Francis H. Morris <sup>5</sup>	7 Jan., 1884	Ditto	150 0 0	7 Jan., 1884.
	Thomas O'Connor <sup>6</sup>	1 Mar., 1886	Ditto	175 0 0	1 Sept., 1887.
	Leonard H. M'Glynn	8 Nov., 1886	Ditto	100 0 0	10 May, 1882.
	Walter S. Berg	28 Aug., 1886	Ditto	96 0 0	26 Nov., 1883.
	William E. Browning	28 Aug., 1886	Ditto	96 0 0	14 July, 1886.
Line Repairer	John Stewart	1 July, 1883	Ditto	150 0 0	1 July, 1883.
Messenger (1)	.....	.....	.....	52 0 0	.....
Bowna Station-master	Albert Tindall†	12 June, 1882	Governor and Executive Council	.....	12 June, 1882.
Station-mistress	B. A. Ford†	15 July, 1886	Postmaster-General	.....	8 Dec., 1885.
Bowral Station-master	John D. Sheriff†	1 Sept., 1882	Ditto	.....	1 Jan., 1877.
Messenger (1)	.....	.....	.....	39 0 0	.....
Bowraville Station-mistress	Mrs Christina Byrnes	23 Sept., 1884	Governor and Executive Council	26 0 0	23 Sept., 1884.
Braidwood Station-master	Donald Graham†	1 Dec., 1880	Ditto	.....	14 April, 1864.
	succeeded by	.....	.....	.....	.....
	Martin E. Burke†	9 Sept., 1886	Ditto	.....	23 Oct., 1862.
Operator	Michael P. Hyndes	10 July, 1882	Ditto	124 0 0	10 July, 1882.
Messengers (2)	.....	.....	.....	39 0 0	each.
Branxton Station-master	James A. Tulloch†	1 Jan., 1877	Governor and Executive Council	.....	1 Jan., 1877.
Brewarrina Station-master	Charles James Robinst	1 Nov., 1874	Ditto	.....	1 Nov., 1874.
Operators	James D. Caldwell	10 July, 1882	Ditto	130 0 0	10 July, 1882.
	Pasqual A. L. Bernasconi	24 Dec., 1885	Ditto	110 0 0	1 Aug., 1881.
Line Repairer	Charles Chandler	1 July, 1885	Governor and Executive Council	150 0 0	14 Mar., 1879.
Messenger (1)	.....	.....	.....	52 0 0	.....
Broadwater Station-master	Eleonard Adam†	21 Jan., 1885	Governor and Executive Council	.....	1 Jan., 1883.
Broke (late Fordwich) Station-master.	Charles Moxham†	21 April, 1884	Ditto	.....	25 April, 1881.
Broken Hill Operator	William Powell <sup>8</sup>	20 Sept., 1886	Ditto	110 0 0	1 Jan., 1886.
Messengers (2)	.....	.....	.....	26 0 0	each.
Broughton Creek Station-master.	John Clinch†	1 April, 1883	Ditto	.....	1 June, 1870.
Messenger (1)	.....	.....	.....	26 0 0	.....
Brunswick River Heads Station-master.	John P. O'Meally†	21 April, 1884	Governor and Executive Council	.....	16 June, 1883.
	Stanley C. Francis	27 Sept., 1886	Ditto	48 0 0	23 July, 1884.
Brushgrove Station-master	David Skeldon†	1 Jan., 1885	Ditto	.....	22 Nov., 1878.
Bullah Delah Station-master	James P. Carter†	1 Nov., 1882	Ditto	.....	16 June, 1877.
Messenger (1)	.....	.....	.....	26 0 0	.....
Bulli Operators	John H. Miller†	1 Mar., 1879	Governor and Executive Council	.....	1 Mar., 1879.
	succeeded by	.....	.....	.....	.....
	F. J. Fowler†	11 Aug., 1886	Ditto	.....	28 Feb., 1870.
Messenger (1)	Thomas A. Martyn <sup>7</sup>	5 Aug., 1885	Ditto	75 0 0	5 Aug., 1885.
	.....	.....	.....	39 0 0	.....

<sup>1</sup> To 5 April—appointed Operator, Warialda    <sup>2</sup> To 19 June—dismissed    <sup>3</sup> To 28 February—appointed Operator at Deniliquin.    <sup>4</sup> To 17 September—  
Post and Telegraph Station master, Pooncarie.    <sup>5</sup> To 10 August—resigned.    <sup>6</sup> To 7 October—appointed Operator, Wentworth.    <sup>7</sup> To 16 November—  
resigned.    <sup>8</sup> Allowed £30 per annum lodging allowance.    † Paid by Postal Department  
Note.—The allowances to the above Officers will be found stated in a foot-note at the end of the return.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>POSTMASTER-GENERAL—ELECTRIC TELEGRAPHS—continued.</b>					
<i>Country Districts—continued.</i>					
Bundarra Station-master	William H. Rowlands†	1 April, 1875	Governor and Executive Council		1 April, 1875.
Operator	John Hear	22 Oct., 1886	Postmaster-General	75 0 0	22 Oct., 1886.
Bungendore Station-master	Jerome S. Tranent†	4 Sept., 1882	Governor and Executive Council		4 Sept., 1882.
Messenger (1)				26 0 0	
Bungwall Flat Operator	Nellie Meba Green	3 Jan., 1879	Governor and Executive Council	52 0 0	3 Jan., 1879.
Burrawang Station-master	Edward C. Dunne†	2 April, 1885	Ditto		20 Sept., 1881.
Burrowa Station-master	David J. Elliott†	14 April, 1881	Ditto		1 Dec., 1877.
Messenger (1)				39 0 0	
Byrock Station-master	Chas. T. Morris†	1 Sept., 1884	Governor and Executive Council		19 Aug., 1878.
Messenger (1)				39 0 0	
Cambewarra Operator	Jessie M'Gregor	1 Aug., 1884	Ditto	26 0 0	1 Aug., 1884.
Camden Station-master	John J. Moroney†	1 Dec., 1877	Ditto		2 Mar., 1876.
Messenger (1)				39 0 0	
Campbelltown Station-master.	Francis Mackel†	1 Oct., 1875	Governor and Executive Council		1 Oct., 1860.
Operators	Fredk. W. Hawker <sup>1</sup>	5 April, 1884	Ditto	85 0 0	5 April, 1884.
Messenger (1)	Dougald M'Leod	24 July, 1886	Postmaster-General	75 0 0	24 July 1886.
				52 0 0	
Candelo Station-master	William J. H. Hayes†	1 May, 1881	Governor and Executive Council		1 July, 1878.
Operators	George W. M'Curley <sup>2</sup>	18 Jan., 1886	Postmaster-General	52 0 0	13 Sept., 1882.
	Sydney E. Jefferey	15 May, 1886	Ditto	52 0 0	17 July, 1885.
Canonbar Station-master	Francis Boland	1 Oct., 1885	Governor and Executive Council	45 0 0	1 Oct., 1885.
Canowindra Station-master	Arthur H. Costin†	12 Sept., 1884	Ditto		19 Sept., 1880.
Carcoar Station-master	George U. Hosking†	1 May, 1871	Ditto		1 Sept., 1863.
Operator	Edward J. Wood	1 Sept., 1878	Ditto	129 0 0	1 Sept., 1878.
Messenger (1)				39 0 0	
Cargo Station-master	Louis A. Tomkinson†	1 June, 1884	Governor and Executive Council		3 Feb., 1880.
Casino Station-master	Wm. M. Scott†	1 Mar., 1871	Ditto		1 June, 1865.
Operator	James P. Maher	21 April, 1884	Ditto	124 0 0	21 April, 1884.
Messenger (1)				26 0 0	
Cassilis Station-master	Joseph T. Mizer†	21 July, 1884	Governor and Executive Council		20 July, 1877.
Line Repairer	Michael Prout <sup>3</sup>	21 May, 1883	Ditto	150 0 0	1 Jan., 1877.
Messenger (1)				39 0 0	
Chatsworth Station-master	Henry A. Attwater†	10 Dec., 1883	Governor and Executive Council		18 Dec., 1882.
Messenger (1)				39 0 0	
Clarence River Heads (Now Yamba) Operator	Emma H. Pegus†	1 Jan., 1874	Governor and Executive Council		1 Jan., 1874.
Messenger (1)				39 0 0	
Clarence Town Station-master.	Alfred C. Atkinson†	1 April, 1880	Governor and Executive Council		31 May, 1877.
Messenger (1)				39 0 0	
Clifton Station-master	James A. Mackin†	1 Feb., 1883	Governor and Executive Council		1 Feb., 1883.
Messenger (1)				39 0 0	
Cobar Station-master	Daniel R. Kenane†	14 April, 1881	Governor and Executive Council		1 Feb., 1873.
Operator	Jas. W. McCutcheon† <sup>4</sup>	1 Jan., 1882	Ditto		20 Dec., 1878.
	succeeded by				
	R. K. Campbell	16 Aug., 1886	Ditto	110 0 0	16 Aug., 1886.
Messenger (1)				52 0 0	
Cobargo Station-master	Alfred Morris†	21 Sept., 1882	Governor and Executive Council		24 Sept., 1878.
Operator	A. L. Bennett	10 Mar., 1886	Postmaster-General	75 0 0	10 Mar., 1886.
Messenger (1)				26 0 0	
Cobbora Station-master	William J. Lawless†	18 May, 1881	Governor and Executive Council		1 July, 1877.
Colombo Station-master	John J. Murphy <sup>5</sup>	1 Mar., 1886	Postmaster-General	100 0 0	1 Mar., 1886.
Conargo Operator	William J. Stewart	17 May, 1886	Ditto	30 0 0	17 May, 1886.
Condobolin Station-master	Alfred W. Kelly†	1 Oct., 1883	Governor and Executive Council		6 June, 1876.
Messenger (1)				39 0 0	
Coolah Station-master	†				
Cooma Station-master	John C. Kirwan†	1 Dec., 1869	Governor and Executive Council		1 Sept., 1861.
Operator	David Williams <sup>6</sup>	27 April, 1883	Ditto	124 0 0	1 Jan., 1883.
Line Repairer	James Carroll	20 Mar., 1878	Ditto	150 0 0	20 Mar., 1878.
Messenger (1)					
Coonabarabran Station-master.	James E. Ballard†	1 Sept., 1881	Governor and Executive Council		1 April, 1867.
Messenger, (1)				52 0 0	
Coonamble Station-master	Luke Kingsmill†	10 July, 1878	Governor and Executive Council		29 Jan., 1876.
Operators	John Stevenson <sup>7</sup>	30 April, 1885	Ditto	114 0 0	30 April, 1885.
	Herbert J. Hoskins	18 Dec., 1885	Ditto	100 0 0	18 Dec., 1885.
	William H. Datson	12 Oct., 1885	Ditto	75 0 0	12 Oct., 1885.
	William E. Browning <sup>8</sup>	14 July, 1886	Ditto	96 0 0	14 July, 1886.
	William H. Cochrane	20 Aug., 1886	Postmaster-General	26 0 0	20 Aug., 1886.
Messenger (1)				26 0 0	
Cooranbong Station-master†					
Operator	H. R. Campbell	6 Dec., 1886	Postmaster-General	52 0 0	16 Feb., 1886.
Messenger (1)				26 0 0	
Cootamundra Station-master	Richard C. Willans†	1 April, 1875	Governor and Executive Council		18 Feb., 1871.
Operator	John S. Donan	21 Feb., 1881	Ditto	110 0 0	1 Mar., 1879.
Line Repairer	Timothy Devane	14 May, 1883	Ditto	150 0 0	14 May, 1883.
Messenger (1)				52 0 0	
Copeland North, Station-master.	†				
Messenger (1)				26 0 0	

<sup>1</sup> To 31 July—appointed Operator, Deniliquin. <sup>2</sup> To 14 May—appointed Operator, Mount, Victoria. <sup>3</sup> To 28 February—transferred to Dubbo. <sup>4</sup> To 15 August—appointed Operator, Sydney. <sup>5</sup> To 14 April—paid by Postal Department. <sup>6</sup> To 28 February—appointed Operator, Sydney. <sup>7</sup> To 31 July—appointed Operator, Sydney. <sup>8</sup> To 30 June—resigned. <sup>9</sup> To 31 July—appointed Operator, Bourke. † Paid by Postal Department

NOTE—The allowances to the above Officers will be found stated in a foot note at the end of the return.

Office.	Name.	Date of Appointment.	By whom appointed, and under what instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>POSTMASTER-GENERAL—ELECTRIC TELEGRAPHS—continued.</b>					
<i>Country Districts—continued.</i>					
Copmanhurst Station-master.	Joseph Shambler†	1 Jan., 1879	Governor and Executive Council	.....	1 Jan., 1879.
Coraki Station-master	Sydney Moffitt†	22 Sept., 1879	Ditto	.....	5 Feb., 1878.
Messenger (1)	.....	.....	.....	39 0 0	.....
Corowa Station-master	James T. Harrison†	12 Feb., 1880	Governor and Executive Council	.....	1 Nov., 1855.
Messengers (2)	.....	.....	.....	39 0 0 26 0 0	.....
Cowra Station-master	Jas J Richards†	1 April, 1882	Governor and Executive Council	.....	7 Mar., 1876.
Operator	Richard Finney	10 July, 1878	Ditto	114 0 0	1 Dec., 1875.
Messenger (1)	.....	.....	.....	26 0 0	.....
Croki Station-master	Thomas W Earnes†	1 Feb., 1884	Governor and Executive Council	.....	15 Oct., 1883.
Crookhaven Heads, Operator	Thomas Bishop	26 Mar., 1881	Ditto	26 0 0	26 Mar., 1881.
Crookwell Station-master	John Walter†	1 June, 1884	Ditto	.....	1 Jan., 1874.
Messenger (1)	.....	.....	.....	26 0 0	.....
Cudal Station-master	Henry H. Torr†	1 Aug., 1880	Governor and Executive Council	.....	1 Oct., 1877.*
Messenger (1)	.....	.....	.....	26 0 0	.....
Cudgellico Station-master	John W. P. Bennett†	4 June, 1883	Governor and Executive Council	.....	1 Oct., 1878.
Messenger (1)	.....	.....	.....	26 0 0	.....
Cundletown Station-master	Joshua W Nunn†	21 Jan., 1881	Governor and Executive Council	.....	13 Sept., 1862.
Operator	William J. Mathers	3 June, 1885	Ditto	13 0 0	3 June, 1885.
Dandaloo Operator	Emily M. R. Richardson	30 Aug., 1886	Postmaster-General	40 0 0	30 Aug., 1886.
Dapto Station-master	John Bovard	24 Oct., 1883	Governor and Executive Council	26 0 0	24 Oct., 1883.
Deepwater Station-master.	John W. Isaacs†	1 June, 1882	Ditto	.....	1 June, 1882.
Delegate Station-master	Charles E. Stuart†	8 June, 1885	Ditto	.....	8 June, 1885.
Messenger (1)	.....	.....	.....	39 0 0	.....
Deniliquin Station-master.	Robert Buckley	1 Nov., 1875	Governor and Executive Council	310 0 0	1 Mar., 1862.
Operators	Thomas O'Connor <sup>1</sup>	1 Sept., 1877	Ditto	175 0 0	1 Sept., 1877.
.....	Charles H Hooper	1 Mar., 1886	Ditto	175 0 0	19 May, 1879.
.....	Stanley L Hosie <sup>2</sup>	9 Nov., 1884	Ditto	140 0 0	7 June, 1883.
.....	Mary Buckley	1 Dec., 1875	Ditto	124 0 0	1 Dec., 1875.
.....	James T. Allanson	12 Sept., 1886	Ditto	124 0 0	21 Jan., 1884.
.....	William Burgess <sup>3</sup>	13 May, 1880	Ditto	114 0 0	13 May, 1880.
.....	Lancelot W Quick	21 Jan., 1886	Ditto	110 0 0	21 Jan., 1886.
.....	Francis J. McCarthy	13 Sept., 1886	Ditto	110 0 0	12 Feb., 1886.
.....	Sydney Hooper	24 Sept., 1885	Ditto	90 0 0	24 Sept., 1885.
.....	Fred W Hawke <sup>4</sup>	24 July, 1886	Ditto	110 0 0	5 April, 1884.
Line Repairer	William M'Iluck	8 Sept., 1881	Ditto	150 0 0	1 Sept., 1863.*
Messengers (3)	.....	.....	.....	52 0 0 39 0 0	.....
Denman Station-mistress	Miss A. Kibble†	6 May, 1885	Governor and Executive Council	.....	6 May, 1885.
Operator	James D. Kibble	1 June, 1884	Ditto	114 0 0	1 June, 1884.
Dubbo Station-master	William P. Rapert	24 Jan., 1876	Ditto	.....	1 Sept., 1871.
Operators	Edward G. Young	1 Oct., 1877	Ditto	170 0 0	1 Oct., 1877.
.....	George Millard	5 Dec., 1881	Ditto	124 0 0	5 Dec., 1881.
Line repairer	Alexander Stuart <sup>5</sup>	1 Feb., 1884	Postmaster-General	150 0 0	10 Aug., 1880.
.....	.....	.....	.....	.....	.....
.....	Michael Prout	1 Mar., 1886	Ditto	150 0 0	1 Jan., 1877.
Messenger (1)	.....	.....	.....	39 0 0	.....
Dung Station-master	Joseph Foley†	1 June, 1880	Governor and Executive Council	.....	10 Mar., 1875.
Line Repairer	Laurence Nolan	1 Dec., 1881	Ditto	150 0 0	1 Dec., 1881.
East Matland Station-master.	Henry T. M. Williams†	1 Dec., 1880	Ditto	.....	1 Jan., 1874.
Operator	William S. Arnott	5 Jan., 1882	Ditto	52 0 0	5 Jan., 1882.
Messenger (1)	.....	.....	.....	39 0 0	.....
Eden Station-master	Charles G. Kebby†	16 July, 1881	Governor and Executive Council	.....	16 July, 1881.
Operator	Elbott Woods	1 July, 1886	Postmaster General	75 0 0	1 July, 1886.
Line Repairer	Alex. B. Davidson	1 Mar., 1882	Governor and Executive Council	150 0 0	1 Mar., 1882.
Emmaville Station-master (late Vegetable Creek).	Frederick Waddup†	1 April, 1879	Lieutenant-Governor and Executive Council.	.....	1 Jan., 1877.
Operator	Frederick A. Bondfield	5 Dec., 1885	Governor and Executive Council	110 0 0	5 Dec., 1885.
Messenger (1)	.....	.....	.....	39 0 0	.....
Enngoma Station-master <sup>6</sup>	Frederick Small†	18 Sept., 1880	Governor and Executive Council	.....	18 Sept., 1880.
Euabalong Station-master	Herbert J Atkinson <sup>7</sup>	9 Oct., 1884	Ditto	85 0 0	9 Oct., 1884.
Operator	.....	.....	.....	.....	.....
.....	Thomas Kare	15 May, 1886	Postmaster General	75 0 0	15 May, 1886.
Eugovra Station-master	John Claxton†	1 Oct., 1883	Governor and Executive Council	.....	15 Sept., 1881.
Messenger (1)	.....	.....	.....	39 0 0	.....
Euston Station-master	Arthur Kennedy†	12 Mar., 1881	Governor and Executive Council	.....	7 Aug., 1877.
Operator	Joseph Bridekirk	2 April, 1885	Ditto	114 0 0	1 Sept., 1879.
Fernmount Station-master	Henry Litchfield†	6 Nov., 1877	Ditto	.....	6 Nov., 1877.
Messenger (1)	.....	.....	.....	26 0 0	.....
Forbes Station-master	Edward Chapman†	1 Feb., 1873	Governor and Executive Council	.....	1 Dec., 1870.
Operators	William J Richardson	25 June, 1883	Ditto	150 0 0	9 Oct., 1882.
.....	William H. Pfe	7 Jan., 1886	Ditto	124 0 0	1 May, 1883.
.....	Charles F Taylor	19 Oct., 1885	Ditto	110 0 0	19 Oct., 1885
Messenger (1)	.....	.....	.....	39 0 0 52 0 0	.....
Forster Station-master	Pelham H Aldrich†	10 April, 1882	Governor and Executive Council	.....	10 April, 1882.
Frederickton Station-master	Francis Scott†	1 Sept., 1878	Ditto	.....	1 Oct., 1877.

<sup>1</sup> To 28 February—appointed Operator, Bouike    <sup>2</sup> To 31 July—appointed Operator, Sydney    <sup>3</sup> To 6 January—appointed Postmaster and Station-master, Carco  
<sup>4</sup> To 11 September—appointed Operator, Hay    <sup>5</sup> To 28 February—appointed to Orange    <sup>6</sup> Station master, Yetman, successor paid by Postal Department.  
<sup>7</sup> To 14 May—appointed Operator, Nangan    <sup>8</sup> To 6 January appointed Operator, Sydney    \* Services not continuous    † Paid by Postal Department.  
 NOTE.—The allowances to the above officers will be found stated in a foot note at the end of the return

Office	Name	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government
<b>POSTMASTER-GENERAL—ELECTRIC TELEGRAPHS—continued.</b>					
<i>Country Districts—continued.</i>					
Gabo Island Operator	Frederick Abrams <sup>1</sup> ... succeeded by	1 May, 1882	Governor and Executive Council	62 0 0	1 May, 1882.
	C. Emanuel	1 Aug, 1886	Postmaster-General	75 0 0	1 Aug, 1886.
Germanton Station-master	Hume J. Chapman† ...	1 Jan, 1882	Governor and Executive Council	.. . . .	1 Jan, 1874.
Messenger (1)	...	...	...	39 0 0	...
Gerringong Station-master	Alexander Robb	1 Feb, 1885	Governor and Executive Council	26 0 0	1 Feb, 1885.
Gulgandra Station-master	William H. Golding† ...	1 Aug, 1882	Ditto	.. . . .	12 Feb, 1880
Gunninderra Station-master	Francis Colls†	21 Nov, 1881	Ditto	.. . . .	21 Nov, 1881.
Girilambone Station-master	William Webb	4 Aug, 1885	Governor and Executive Council	13 0 0	4 Aug, 1885.
Gladstone Operator	Joseph P. Holahan	1 Mar, 1884	Ditto	36 0 0	1 Mar, 1884.
Glen Innes Station-master	Robert W. Arnott†	1 Sept, 1881	Ditto	.. . . .	3 June, 1876
Operators	John Cobley	9 June, 1882	Ditto	150 0 0	1 Mar, 1874 *
	Francis P. O'Neill <sup>2</sup>	1 Oct, 1884	Ditto	150 0 0	3 Sept, 1883
	Algernon P. Woods	1 Jan, 1885	Ditto	114 0 0	1 Jan, 1885
	James R. Mallam	1 Nov, 1885	Ditto	110 0 0	1 Nov, 1885
	Herbert J. Lancaster	16 Nov, 1885	Ditto	110 0 0	16 Nov, 1885
Line Repairer	Michael J. Cook	29 May, 1886	Postmaster-General	96 0 0	1 April, 1883
	James Byrnes <sup>3</sup> ... succeeded by	21 May, 1883	Governor and Executive Council	125 0 0	21 May, 1883.
	Thos. Troy	16 Oct, 1886	Postmaster-General	150 0 0	16 Oct, 1886
Messengers (2)	...	...	.. { 1 at 1 ,,	52 0 0 39 0 0	...
Gloucester Station-master	William W. Cumming†	1 Oct, 1885	Governor and Executive Council	26 0 0	15 Feb, 1884
Messenger (1)	James T. Hackett†	7 Feb, 1881	Governor and Executive Council	.. . . .	12 Feb, 1878
Gongolgan Station-master	John Bennett†	27 Nov, 1877	Ditto	.. . . .	27 Nov, 1877.
Goodooga Station-master	...	...	...	26 0 0	...
Messenger (1)	John F. Parr†	1 Aug, 1878	Governor and Executive Council	.. . . .	1 Aug, 1878.
Gosford Station-master	John J. Britton†	1 Oct, 1884	Ditto	85 0 0	1 Oct, 1884
Operators	Joseph Smith	15 Jan, 1886	Postmaster General	75 0 0	15 Jan, 1886
Goulburn Station-master	Cecil A. Middleton	20 Aug, 1878	Governor and Executive Council	310 0 0	24 July, 1861.
Operators	John W. Damel	1 Oct, 1884	Ditto	140 0 0	1 Nov, 1882
	James A. Knox	12 July, 1886	Postmaster General	140 0 0	1 Dec, 1878.
	Frank Waller <sup>5</sup> ...	1 Feb, 1884	Governor and Executive Council	140 0 0	1 July, 1875
Line Repairer	Ernest R. Hollis	1 May, 1884	Ditto	124 0 0	3 May, 1883
	Ernest D. Eagan	18 Nov, 1881	Ditto	124 0 0	19 May, 1880
	Augustus F. Cornell	4 July, 1885	Ditto	114 0 0	4 July, 1885
Line Repairer	George D. M'Cutcheon	1 Aug, 1883	Ditto	124 0 0	1 Aug, 1883
	John Dwyer	14 Nov, 1872	Ditto	150 0 0	14 Nov, 1872
Messengers (4)	...	...	.. { 2 at 2 ,,	52 0 0 39 0 0	each.
Grafton Station-master	Thomas Quirk†	1 April, 1873	Governor and Executive Council	.. . . .	18 July, 1868
Operators	Thomas M'Millan <sup>6</sup> ...	1 Mar, 1882	Ditto	160 0 0	26 Sept, 1876
	Arthur J. Walkon	1 Sept, 1884	Ditto	150 0 0	28 Aug, 1881
	Henry E. Williams	15 May, 1885	Ditto	160 0 0	6 Dec, 1880
	Moss Laird	2 Nov, 1886	Ditto	160 0 0	21 Nov, 1881
	Thomas E. Avery <sup>7</sup>	10 Feb, 1886	Ditto	160 0 0	1 Jan, 1878
	John P. O'Meally	27 Sept, 1886	Ditto	140 0 0	16 June, 1883
	Henry Hughes	10 Oct, 1881	Ditto	124 0 0	10 Oct, 1881.
	William Buchanan	16 Nov, 1885	Ditto	110 0 0	16 Nov, 1885
Line Repairer	Stanley C. Francis <sup>8</sup>	1 May, 1885	Ditto	62 0 0	23 July, 1884.
Messengers (2)	Samuel Denton	9 Oct, 1882	Ditto	150 0 0	1 May, 1881
Granville Operators	Henry G. Kulmar <sup>9</sup>	9 Mar, 1885	Governor and Executive Council	39 0 0	each
	John C. M. Donald	2 Aug, 1886	Ditto	114 0 0	17 July, 1882
Messenger (1)	William F. Davidson <sup>10</sup>	1 Oct, 1885	Governor and Executive Council	96 0 0	12 Jan, 1881
Green Cape Operators	George C. Walter <sup>11</sup> ...	11 Jan, 1886	Ditto	52 0 0	...
	Fred. Abrams	1 Aug, 1886	Ditto	104 0 0	1 Oct, 1884
	Archibald M. M'Lean	1 Jan, 1879	Ditto	100 0 0	13 Mar, 1878
Greenwell Point Station-master	...	...	Ditto	100 0 0	1 May, 1882
Grenfell Station-master	John P. Olson†	1 Mar, 1871	Ditto	26 0 0	1 Jan, 1879
Operator	Arthur C. Low	19 Dec, 1885	Ditto	.. . . .	16 July, 1863
Messenger (1)	John Bush	13 Mar, 1884	Governor and Executive Council	110 0 0	1 Dec, 1885
Gresford Operator	Patrick E. M'Guinness	16 July, 1885	Ditto	39 0 0	...
Gulgong Station-master	Hugh Malone†	1 Sept, 1882	Ditto	26 0 0	13 Mar, 1884
Messenger (1)	...	...	...	50 0 0	16 July, 1885
Gundagai Station-master	Colville Smith†	1 Sept, 1860	Governor and Executive Council	39 0 0	1 Oct, 1877
Operator	Chas. T. Brooks	1 Sept, 1884	Ditto	.. . . .	6 Nov, 1858
Line Repairer	Patrick Tierney	1 June, 1882	Ditto	114 0 0	1 Sept, 1884
Messenger (1)	James C. O'Hara†	1 April, 1881	Governor and Executive Council	150 0 0	12 June, 1878.
Gunnedah Station-master	William D. Cowan	10 May, 1886	Ditto	52 0 0	...
Operators	Hugh R. Coulter	2 Dec, 1885	Ditto	110 0 0	23 Feb, 1877
	Herbert Goddard <sup>12</sup>	13 Dec, 1882	Ditto	110 0 0	1 Aug, 1882
Messenger (1)	...	...	Ditto	110 0 0	1 Nov, 1884
	...	...	Ditto	114 0 0	13 Dec, 1882
	...	...	Ditto	52 0 0	...

<sup>1</sup> To 31 July—appointed Operator, Green Cape    <sup>2</sup> To 18 February—deceased    <sup>3</sup> To 31 July—dismissed    <sup>4</sup> To 14 January—appointed Operator, Sydney  
<sup>5</sup> To 11 July—appointed Postmaster and Station master Sutton Forest    <sup>6</sup> To 28 February—appointed Postmaster and Station master, Lawrence    <sup>7</sup> To  
<sup>8</sup> To 30 September—appointed Station master, Brunswick    <sup>9</sup> To 1 August—appointed Operator, Balmain    <sup>10</sup> To 10 January—appointed Operator Wilcannia    <sup>11</sup> To 15 August—appointed Station master and Postmaster, Cundelo    <sup>12</sup> To  
<sup>9</sup> May—appointed Operator, Mitchell    \* Services not continuous    † Paid by Postal Department

NOTE—The allowances to the above Officers will be found stated in a foot note at the end of the return

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>POSTMASTER-GENERAL—ELECTRIC TELEGRAPHS—continued.</b>							
<i>Country Districts—continued.</i>							
Gunning Station-master	F. W. Timmist	17 June, 1880	Governor and Executive Council	...	...	...	17 June, 1880.
Hamilton Operator	Jane Peters†	16 Aug., 1879	Ditto	...	...	...	16 Aug., 1879.
Messenger (1)	...	...	...	39	0	0	...
Harden Station-master	John Campey†	18 May, 1885	Governor and Executive Council	...	...	...	1 Feb., 1884.
Harrington (late Manning Heads) Station-master.	John M. Coulter	18 Sept., 1886	Postmaster-General	26	0	0	18 Sept., 1886.
Harwood Station-master	William F. Nelson†	18 Mar., 1885	Governor and Executive Council	...	...	...	1 May, 1882.
Hay Station-master	Alexander Burnett†	25 April, 1876	Ditto	...	...	...	4 April, 1862.
Operators	James T. Allanson <sup>1</sup>	21 Jan., 1884	Ditto	114	0	0	21 Jan., 1884
	Frederick W. Hawker	12 Sept., 1886	Ditto	110	0	0	5 April, 1884
	Archibald M'Callum	24 Aug., 1886	Ditto	110	0	0	11 Feb., 1884.
	Thomas B. Hickey <sup>2</sup>	14 May, 1885	Ditto	75	0	0	14 May, 1885.
	Bertie Newman	20 April, 1885	Ditto	75	0	0	20 April, 1885.
Line Repairer	Henry Cross	9 Oct., 1882	Postmaster-General	150	0	0	9 Oct., 1882.
Messengers (2)	...	...	...	52	0	0	...
	...	...	...	39	0	0	...
Haydonton Railway Messenger (1).	...	...	...	39	0	0	...
Hexham Messenger (1)	...	...	...	0	5	0	per week.
Hill End Station-master	Charles Chapplet†	1 Oct., 1877	Governor and Executive Council	...	...	...	1 Mar., 1872.
Hillston Station-master	William S. Bellamy†	18 Feb., 1879	Ditto	...	...	...	6 May, 1876.
Operators	F. R. Percy <sup>3</sup>	1 Jan., 1886	Ditto	75	0	0	1 Jan., 1886.
	G. T. J. Grace	22 July, 1886	Ditto	75	0	0	1 Mar., 1883.
Messenger (1)	...	...	...	26	0	0	...
Howlong Station-master	Edward Walsh†	1 July, 1878	Governor and Executive Council	...	...	...	1 July, 1878.
Inverell Station-mistress	Emily Eames†	5 Oct., 1879	Ditto	...	...	...	5 Oct., 1879
Operators	Alexander Bathgate <sup>4</sup>	1 Sept., 1882	Ditto	130	0	0	1 Sept., 1882.
	Lyell Taylor	1 July, 1885	Ditto	114	0	0	1 July, 1885.
	John M'Lachlan	2 Aug., 1886	Ditto	96	0	0	17 Mar., 1885.
Messenger (1)	...	...	...	39	0	0	...
Ivanhoe Station-master	Alfred W. Rice†	20 Dec., 1882	Governor and Executive Council	...	...	...	18 Nov., 1881.
Jamberoo Station-master	William Stewart	21 Oct., 1879	Ditto	26	0	0	21 Oct., 1879
Jerilderie Station-master	Arthur D. Fowler†	4 Sept., 1882	Ditto	...	...	...	10 June, 1878.
Messengers (2)	...	...	...	39	0	0	...
	...	...	...	26	0	0	...
Jerry's Plains Station-master	Edwd. S. Atkinson†	21 July, 1884	Governor and Executive Council	...	...	...	1 Oct., 1874
Messenger (1)	...	...	...	39	0	0	...
Jervis Bay Station-master	John W. Cousins	7 Sept., 1885	Governor and Executive Council	75	0	0	7 Sept., 1885.
Jindera Station-master	Edwd. J. Collier†	14 April, 1884	Ditto	...	...	...	25 Oct., 1882.
Junee Station-master	Jas. B. King <sup>5</sup>	22 Nov., 1884	Ditto	150	0	0	20 Dec., 1882.
	succeeded by Robert Myles Stapleton	1 June, 1886	Ditto	170	0	0	16 Sept., 1875.
Messenger (1)	...	...	...	39	0	0	...
Kangaroo Valley Operator	Martha J. Nugent	19 June, 1884	Governor and Executive Council	26	0	0	19 June, 1884
Katoomba Operator	Richard J. Holmest	19 May, 1885	Ditto	...	...	...	21 Oct., 1883
Messenger (1)	...	...	...	26	0	0	...
Kelso Station-master	Albert E. Marsden†	1 Jan., 1883	Governor and Executive Council	...	...	...	1 Jan., 1883.
Kempsey Station-master	Christopher H. Fitzgerald†	1 Jan., 1882	Ditto	...	...	...	1 June, 1876.
Operator	Douglas A. Briggs	1 April, 1886	Ditto	110	0	0	29 Aug., 1881
Messengers (2)	...	...	...	39	0	0	2 at each.
Kiama Station-master	John F. Tytert	19 Oct., 1867	Governor and Executive Council	...	...	...	19 Oct., 1857.
Operators	Percy J. H. Sewell <sup>6</sup>	1 Nov., 1884	Ditto	62	0	0	1 Nov., 1884.
	Francis J. M'Carthy	12 Feb., 1887	Postmaster-General	62	0	0	12 Feb., 1886.
	Emanuel F. Dalgleish	13 Sept., 1886	Governor and Executive Council	130	0	0	6 Sept., 1881.
Line Repairer	Robert Methven	21 July, 1880	Ditto	150	0	0	21 July, 1880.
Messenger (1)	...	...	...	26	0	0	...
Kiandra Station-master	William D. Bailey†	1 May, 1882	Governor and Executive Council	...	...	...	1 May, 1882.
Kurrajong Heights Operator	Thos. Walker	1 Sept., 1884	Ditto	26	0	0	1 Sept., 1884.
Kyamba Station-master	Robert J. Barr†	15 Feb., 1877	Ditto	...	...	...	30 July, 1876.
Lambton Station-master	Hiram J. Rawthorn†	1 Mar., 1880	Ditto	...	...	...	17 Jan., 1879.*
Laurieton Station-master	Alexander Thompson†	10 Jan., 1885	Ditto	...	...	...	10 Jan., 1885.
Lawrence Station-master	Thomas E. Avery†	1 Jan., 1878	Ditto	...	...	...	1 Jan., 1878.
Messenger (1)	...	...	...	39	0	0	...
Lismore Station-master	John Anschaut	1 Mar., 1882	Governor and Executive Council	...	...	...	18 Mar., 1879.
Operators	William Smythe	1 July, 1882	Ditto	124	0	0	1 July, 1882.
	Donald A. Rayner	19 July, 1886	Postmaster-General	80	0	0	1 May, 1884.
Line Repairer	Thomas Doolan	12 Feb., 1883	Governor and Executive Council	150	0	0	12 Feb., 1883.
Messenger (1)	...	...	...	26	0	0	...
Lithgow Station-master	David Thomas†	24 Mar., 1881	Governor and Executive Council	...	...	...	8 Oct., 1878.
Messenger (1)	...	...	...	39	0	0	...
Liverpool Station-master	Thomas P. Burgst†	1 Oct., 1884	Governor and Executive Council	...	...	...	16 Sept., 1872.
Operator	William Long	12 Dec., 1883	Ditto	85	0	0	12 Dec., 1883.
Messenger (1)	...	...	...	39	0	0	...
Lochinvar Messenger (1)	...	...	...	39	0	0	...
Louth Station-master	Alfred D. Turnert	15 April, 1878	Governor and Executive Council	...	...	...	1 April, 1874.
Operator	Ronald D G Macpherson	1 July, 1883	Ditto	124	0	0	28 April, 1883.
Lower Gundaroo Station-master.	William R. Clemengert†	17 April, 1882	Ditto	...	...	...	17 April, 1882.
Lucknow Station-master	Henry W. Newnan	1 Jan., 1878	Ditto	26	0	0	1 Jan., 1878.
Maclean Station-master	Theodore Lamy†	1 June, 1877	Ditto	...	...	...	1 June, 1877.
Operator	John C. Flanders	5 Mar., 1885	Ditto	52	0	0	5 Mar., 1885.
Messenger (1)	...	...	...	39	0	0	...

<sup>1</sup> To 11 September—appointed Operator, Demilquon.  
appointed Operator, Newcastle

<sup>2</sup> To 31 August—appointed Operator, Sydney

<sup>3</sup> To 21 July—resigned

<sup>5</sup> To 31 May—appointed Operator, Wagga Wagga.

<sup>6</sup> To 11 February—appointed Operator, Pyramont.

<sup>4</sup> To 1 August—

\* Services not

NOTE.—The allowances to the above officers will be found stated in a foot-note at the end of the return.

Office.	Name	Date of Appointment.	By whom appointed, and under what Instrument	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government
<b>POSTMASTER-GENERAL—ELECTRIC TELEGRAPHS—continued.</b>					
<i>Country Districts—continued.</i>					
Major's Creek Station master	George A. Sherry†	1 Jan, 1884	Governor and Executive Council		20 Jan, 1882.
Manilla Station-master	Richard E. Done† ...	1 Aug, 1878	Ditto .....		1 Jan, 1877.
Manning Heads Operator	Elizabeth A. Muir <sup>1</sup>	30 Aug, 1876	Ditto	26 0 0	30 Aug, 1876.
Marengo Station-master	Montgomery J. Sheppard†	24 Nov, 1880	Ditto		24 Nov, 1880
Marsdens Station-master	Henry A. Weatherall†	17 Nov, 1882	Ditto		17 Nov, 1882.
Marulan Messenger (1)				13 0 0	
Menindie Station-master	James R. Holding†	1 July, 1880	Governor and Executive Council		1 June, 1873.*
Operators	Edward G. Stewart <sup>2</sup>	1 Feb, 1883	Ditto	124 0 0	1 Feb, 1883.
	Horace Thurston <sup>2</sup>	1 June, 1886	Ditto	110 0 0	9 Mar, 1882
	George J. Dennis†	1 Sept, 1875	Ditto		1 Sept, 1875.
Merimbula Station-master				39 0 0	
Messenger (1)					
Merriwa Station-mistress	Matilda Read†	6 July, 1883	Governor and Executive Council		6 July, 1883
Operator	William A. Read	6 July, 1883	Ditto	114 0 0	6 July, 1883
Michelago Station-master	Andrew Moxton	21 Sept, 1881	Ditto	124 0 0	1 June, 1878.
Miller's Forest Operator	John H. Cochrane ...	9 Feb, 1885	Ditto	26 0 0	9 Feb, 1885.
Millie Station master	Frank De Boos†	7 April, 1883	Ditto		7 April, 1883
Milton Station-master	Ronald Seton†	1 Feb, 1883	Ditto		1 Jan, 1878.
Line Repairer ...	John M'Grane	21 July, 1880	Ditto	150 0 0	21 Aug, 1875.
Messenger (1)				39 0 0	
Minmi Station-master	Walter Redriff†	11 Aug, 1885	Governor and Executive Council		1 Nov, 1878.
Messenger (1)				26 0 0	
Mittagong Station-master	Andrew Prott†	1 April, 1883	Governor and Executive Council		1 April, 1883
Operator	Robert More	19 July, 1886	Postmaster-General	75 0 0	20 Jan, 1885
Messenger (1) ...				39 0 0	
Mitchell Operator ...	William S. Keating <sup>3</sup>	5 Sept, 1885	Governor and Executive Council	110 0 0	5 Sept, 1885.
	Herbert S. Goddard ...	10 May, 1886	Ditto ... ..	124 0 0	13 Dec., 1882.
Messenger (1)				39 0 0	
Moama Station-master	Charles Hammond†	1 Jan, 1878	Governor and Executive Council		27 April, 1862.
Messenger (1)				13 0 0	
Mogil Mogil Station-master	Wilham Pugh†	1 Aug, 1882	Governor and Executive Council		13 June, 1881.
Molong Station master	Richd P. Martin†	1 Jan., 1884	Ditto		14 Dec., 1877.
Messenger (1)				39 0 0	
Molonglo Station-master	Frederick Golding <sup>4</sup>	16 Dec, 1880	Governor and Executive Council	124 0 0	16 Dec, 1880
	Michael T. Madigan	21 Jan, 1886	Ditto	96 0 0	21 Jan, 1886.
Morangarell Station master	Harry O. West ..	24 Dec, 1885	Postmaster-General	90 0 0	24 Dec, 1885.
Moree Station master	John Munro†	8 Dec, 1877	Governor and Executive Council		8 Dec, 1877.
Operators .....	Alfred L. Tarran <sup>5</sup>	20 May, 1885	Ditto .. ..	52 0 0	20 May, 1885.
	William Morris ...	18 Oct, 1886	Ditto ...	100 0 0	30 June, 1884.
	Robert Galloway	26 Feb., 1886	Ditto	52 0 0	1 Mar., 1884.
				to 30 Nov,	
				100 0 0	
				from 1 Dec	
Messenger (1)				39 0 0	
Morpeth Station-master	Charles F. Wakely†	1 Mar, 1872	Governor and Executive Council		1 June, 1870.
Messenger (1)				39 0 0	
Moruya Station master	Fredk J. Fowler†	1 June, 1884	Governor and Executive Council	120 0 0	28 Feb, 1870.
Operator	Henry M. Stapylton	15 Sept, 1884	Ditto	52 0 0	15 July, 1881.
				to 31 Aug,	
				100 0 0	
				from 1 Sept	
Messenger (1)				39 0 0	
Moruya Heads Operator	Angus Sutherland	1 May, 1884	Governor and Executive Council	52 0 0	1 May, 1884.
Mossiel Station-master ...	Arthur Bellamy .. ...	11 Sept, 1882	Ditto .. ..	160 0 0	1 Nov, 1879.
Moss Vale Station-master	John Parke†	1 Feb, 1883	Ditto		1 Dec, 1875
Messenger (1) ...				39 0 0	
Moulamein Station-master	Robert Graham†	1 Jan, 1878	Governor and Executive Council		1 Oct, 1874.
Mount Hope Station-master	James S. Page†	15 Sept, 1884	Ditto		1 Nov, 1878.
Messenger (1)				39 0 0	
Mount M'Donald Station master	George A. Gunning†	15 Sept, 1882	Governor and Executive Council		1 Dec, 1877.
Mount Victoria Station master	Charles W. Prott†	1 Oct, 1875	Ditto		1 Oct, 1875.
Operators ..	Sydney E. Jeffrey <sup>6</sup>	17 July, 1885	Ditto .. ..	75 0 0	17 July, 1885.
	George Wm M'Curley	15 May, 1886	Postmaster-General	75 0 0	13 Sept, 1882.
Messenger (1)				39 0 0	
Mudgee Station-master	Henry Curry ..	24 April, 1876	Governor and Executive Council	270 0 0	1 May, 1872.
Operators	William Newton <sup>7</sup> .....	7 Feb, 1881	Ditto	140 0 0	7 Feb, 1881.
	James G. Tedder ...	13 Aug., 1886	Postmaster-General	124 0 0	10 Mar, 1884.
	Alexander Greatrix	14 May, 1885	Governor and Executive Council	114 0 0	9 April, 1883.
Line Repairer	William Henshawe Ore	27 Feb, 1877	Ditto	150 0 0	27 Feb., 1877.
Messengers (2)				39 0 0	each
Mulwala Station-master	Charles O. Smith†	22 July, 1881	Governor and Executive Council		22 July, 1881.
Mungindi Station-master ...	James A. Gordon†	7 Nov, 1881	Ditto		23 July, 1877.
Mundooran Station-master	Geo C. Horsley†	1 Sept, 1884	Ditto		1 Jan., 1884.
Murrumburrah Station-master	Robert Dixon†	12 Mar, 1883	Ditto		1 Nov., 1878.
Operator ..	James M. Drum	3 April, 1885	Ditto	78 0 0	3 April, 1885.
Messenger (1) ...				52 0 0	

<sup>1</sup> To 7 September—deceased    <sup>2</sup> Allowed £30 per annum as lodging allowance    <sup>3</sup> To 9 May—appointed Operator, Bathurst    <sup>4</sup> To 28 February—appointed Operator, Sydney    <sup>5</sup> To 28 February—appointed Operator, Narrabri    <sup>6</sup> To 14 May—transferred to Candelo    <sup>7</sup> To 12 August—transferred to Broken Hill as Postmaster and Station master    \* Services not continuous    † Paid by Postal Department

NOTE—The allowances to the above Officers will be found stated in a foot note at the end of the return

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>POSTMASTER-GENERAL—ELECTRIC TELEGRAPHS—continued.</b>					
<i>Country Districts—continued.</i>					
Murrurundi Station-master	Francis O. Byrnes	23 Feb, 1877	Governor and Executive Council	220 0 0	28 Oct., 1862.
Operators	Robert B. Humphreys	22 June, 1881	Ditto	170 0 0	1 Aug, 1879.
	Richard Booth	15 Sept, 1884	Ditto	124 0 0	7 July, 1883.
Line Repairer	John M'Carthy	1 Jan., 1876	Ditto	150 0 0	1 Jan., 1876.
Messenger (1)				39 0 0	
Murwillumbah Station-master	William J. Grime†	6 April, 1877	Governor and Executive Council		6 April, 1877.
Operator	Selwyn T. Pountney <sup>1</sup>	13 Oct, 1884	Ditto	114 0 0	13 Oct., 1884.
	Charles Henry Champion	16 June, 1886	Ditto	114 0 0	1 Mar., 1882.
Muswellbrook Station-master	Alexander Taylor	23 Feb, 1877	Ditto	200 0 0	1 Jan, 1875.
Operator	George Peek	1 Dec, 1885	Ditto	90 0 0	1 Dec., 1885.
Messenger (1)				39 0 0	
Nambuccra Station-master	Edward Leesont	5 Nov., 1877	Governor and Executive Council		5 Nov., 1877.
Nambuccra Heads Station-master.	William J. Whites	5 Sept., 1879	Lieutenant-Governor and Executive Council.	26 0 0	5 Sept., 1879.
Narrabri Station-master					
Operators	Jas. R. Nash <sup>2</sup>	9 Oct., 1882	Governor and Executive Council	130 0 0	10 April, 1879.
	George E. Mitchell	21 Oct, 1883	Ditto	124 0 0	21 May, 1883.
	William Hy. Leck	9 June, 1885	Ditto	124 0 0	9 April, 1883.
	Alfred L. Tarran	1 Mar., 1886	Ditto	110 0 0	20 May, 1885.
Line Repairer	Edwd. M'Carthy	11 Dec., 1882	Lieutenant-Governor and Executive Council.	150 0 0	1 Aug, 1875.
Messenger (1)				39 0 0	
Narrabri Railway Station					
Messenger (1).				39 0 0	
Narrandera Station-master	John Smith†	9 April, 1883	Governor and Executive Council		1 Jan., 1875.
Operator	Alfred Hall	9 June, 1885	Ditto	75 0 0	9 June, 1885.
Messenger (1)				52 0 0	
Nelligen Station-master	David Broadfoot†	1 Oct., 1883	Governor and Executive Council		30 Aug., 1880.
Messenger (1)				39 0 0	
Nelson's Bay Station-master	Emanuel F. Dalgleish†.	1 June, 1882	Governor and Executive Council		6 Sept., 1881.
Newcastle Station-master	Thomas G. Croft	1 Dec., 1880	Ditto	310 0 0	27 April, 1861.*
Operators	Thomas Leonard	10 Sept., 1883	Ditto	170 0 0	19 Mar., 1881.
	Patrick J. Howe <sup>3</sup>	14 Jan, 1884	Ditto	170 0 0	1 Dec., 1875.
	Charles Moxham	13 Aug., 1886	Ditto	170 0 0	25 April, 1881.
	Edwin J. Spry	6 May, 1885	Ditto	150 0 0	1 July, 1882.
	Peter J. Finlayson	5 Dec., 1879	Ditto	140 0 0	5 Dec, 1879.
	Robert Fletcher <sup>4</sup>	7 Jan, 1884	Ditto	130 0 0	1 May, 1882.
	George E. Bragg	12 Nov, 1884	Ditto	130 0 0	9 April, 1883.
	Alex. Bathgate	2 Aug, 1886	Ditto	140 0 0	1 Sept, 1882.
	Albert Tindall	15 July, 1886	Ditto	130 0 0	12 June, 1882.
	Stanley F. A. Blanch	9 Nov., 1885	Ditto	110 0 0	15 May, 1885.
Telephone Attendant (1)				39 0 0	
Messengers (6)				52 0 0 39 0 0 26 0 0	each.
Newton Boyd Station-master	Chas. H. Hatch	4 Sept., 1882	Governor and Executive Council	150 0 0	4 Sept., 1882.
Nimitybelle Station-master	George W. Myers†	14 June, 1880	Ditto		7 Aug., 1877.
Messenger				39 0 0	
North Richmond Station-master	John D. Beckett	1 Aug, 1884	Governor and Executive Council	124 0 0	1 July, 1883.
Nowra Station-master	George S. Roberts†	1 Mar., 1879	Ditto		20 Aug., 1876.
Messenger				39 0 0	
Nundle Station-master	William G. Drew†	21 Jan., 1881	Governor and Executive Council		24 June, 1876.
Nymagee Station-master	Joseph B. Wakely†	1 June, 1885	Ditto		22 Jan, 1873.
Operator	Henry T. Green	15 Jan, 1883	Ditto	140 0 0	15 Jan., 1883.
Messenger (1)				39 0 0	
Nyngan Station-master	Ralph S. P. Clay†	20 Aug, 1883	Governor and Executive Council		1 Jan., 1875.
Messenger (1)				52 0 0	
Nyngan Railway Operator	James Hackett <sup>5</sup>	1 Aug, 1883	Governor and Executive Council	150 0 0	1 Aug., 1883.
	succeeded by				
	Herbert J. Atkinson	15 May, 1886	Ditto	110 0 0	9 Oct., 1884.
Messenger (1)				52 0 0	
Obley Station-master	Henry J. Tomkins†	10 July, 1882	Governor and Executive Council		14 May, 1881.
Oberon Station-master	Josiah Medcalf†	23 Jan, 1881	Ditto		1 Dec, 1877.
Orange Station-master	Charles Cooper†	1 Oct., 1862	Ditto		1 Oct., 1862.
Operators	Robert Cooper	1 Feb., 1878	Ditto	170 0 0	1 Feb., 1878.
	Maurice O'Connor	15 June, 1885	Ditto	104 0 0	15 June, 1885.
	William T. Wright <sup>6</sup>	1 Oct., 1884	Ditto	110 0 0	1 Oct., 1884.
	succeeded by				
	Thomas E. Leak	18 May, 1885	Ditto	75 0 0	18 May, 1885.
				to 11 July. 110 0 0	
				from 12 July.	
Line repairer	Ernest E. Hadley	12 July, 1886	Ditto	96 0 0	16 Feb., 1882.
Messengers (2)	Alex. Stuart	1 Mar., 1886	Ditto	150 0 0	10 Aug., 1880.
				52 0 0	each.
Palmer's Island Station-master.	Samuel J. Bondfield†	28 May, 1881	Governor and Executive Council		28 May, 1881.
Panbula Station-master	Edward J. Cornell†	14 July, 1880	Governor and Executive Council		1 Aug., 1879.
Parkes Station-master	Walter A. Lorking†	15 Feb, 1875	Ditto		1 Oct, 1874.
Operator	John Buckley	1 June, 1883	Ditto	114 0 0	1 June, 1883.
Messenger (1)				39 0 0	

<sup>1</sup> To 15 June—transferred to Port Macquarie    <sup>2</sup> To 10 January—appointed Operator, Sydney.    <sup>3</sup> To 8 August—transferred to Sydney.    <sup>4</sup> To 29 June—dismissed    <sup>5</sup> To 14 May—appointed Operator, Bathurst.    <sup>6</sup> To 12 July—transferred to Bathurst.    \* Services not continuous.    † Paid by Postal Department.

NOTE.—The allowances to the above Officers will be found stated in a foot note at the end of the return.

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>POSTMASTER-GENERAL—ELECTRIC TELEGRAPHS—continued.</b>							
<i>Country Districts—continued.</i>							
Parramatta Operators .....	John S. White.....	23 Oct., 1882	Governor and Executive Council	170	0	0	1 Aug., 1877.
	Wm. H. Marshall .....	9 Oct., 1882	Ditto .....	124	0	0	9 Oct., 1882.
Messengers (4) .....	.....	.....	.....	52	0	0	each.
	.....	.....	.....	39	0	0	.....
Paterson Station-master ...	Ebenezer Doust† .....	7 Mar., 1876	Governor and Executive Council	.....	.....	.....	7 Mar., 1876.
Messenger (1) .....	.....	.....	.....	26	0	0	.....
Pelican Flat Station-master	Willim J. Gwynne† .....	1 Oct., 1883	Governor and Executive Council	.....	.....	.....	1 Oct., 1883.
Operator .....	H. R. Campbell <sup>1</sup> .....	16 Feb., 1886	Ditto .....	52	0	0	16 Feb., 1886.
Penrith Station-master ...	Edwin J. Robbins .....	5 May, 1880	Ditto .....	114	0	0	5 May, 1880.
Picton Station-master .....	Fredk. Burgess† .....	12 Sept., 1884	Ditto .....	.....	.....	.....	1 Aug., 1875.
Operator .....	Patrick Glynn .....	1 Oct., 1884	Ditto .....	52	0	0	1 Oct., 1884.
Pilliga Station-master .....	Ernest V. Blackwell† .....	1 Nov., 1882	Ditto .....	.....	.....	.....	16 Mar., 1877.
Operator .....	Arthur J. Knight .....	4 April, 1885	Ditto .....	114	0	0	4 April, 1885.
Pooncarie Station-master ...	George Lobsey† .....	25 June, 1883	Ditto .....	.....	.....	.....	25 Mar., 1878.
Port Macquarie Station master	Edward T. Mulligan† .....	1 Feb., 1883	Ditto .....	.....	.....	.....	16 Feb., 1870.
Operator .....	Charles H. Champion <sup>2</sup> .....	10 Jan., 1885	Ditto .....	114	0	0	1 Mar., 1882.
	succeeded by	.....	.....	.....	.....	.....	.....
	Selwyn T. Pountney .....	16 June, 1886	Ditto .....	124	0	0	13 Oct., 1884.
Messenger (1) .....	.....	.....	.....	26	0	0	.....
Port Macquarie Heads Operator	Edward St. A. Kingsford.	21 April, 1876	Governor and Executive Council	26	0	0	26 June, 1858.
Queanbeyan Station-master	Michael H. Kelly† .....	20 Aug., 1876	Ditto .....	.....	.....	.....	8 May, 1858.*
Operator .....	Lionel H. Kelly .....	12 Sept., 1879	Ditto .....	52	0	0	12 Sept., 1879.
Messenger (1) .....	.....	.....	.....	39	0	0	.....
Quirindi Station-master ..	Thomas Dickson† .....	9 Aug., 1877	Governor and Executive Council	.....	.....	.....	19 June, 1876.
Messenger (1) .....	.....	.....	.....	39	0	0	.....
Raymond Terrace Station-master	William E. Shaw† .....	16 April, 1868	Governor and Executive Council	.....	.....	.....	16 April, 1868.
Messenger (1) .....	.....	.....	.....	26	0	0	.....
Richmond Station-master.	George A. Reid† .....	1 Nov., 1879	Governor and Executive Council	.....	.....	.....	20 Mar., 1872.
Operator .....	James N. M'Neely .....	30 July, 1885	Ditto .....	52	0	0	30 July, 1885
	.....	.....	.....	75	0	0	.....
	.....	.....	.....	39	0	0	.....
Messenger (1) .....	.....	.....	.....	110	0	0	.....
Riverstone Operator .....	Henry Argyle Kirman .....	1 Feb., 1886	Governor and Executive Council	.....	.....	.....	16 Mar., 1882.
Robertson Station-master ...	Louis J. Coghlan† .....	1 Aug., 1883	Ditto .....	.....	.....	.....	1 June, 1879.
Rockley Station-master ..	John A. Kelly† .....	26 Aug., 1879	Ditto .....	.....	.....	.....	1 June, 1875.
Rylstone Station-master	Samuel R. Millard† .....	10 June, 1882	Ditto .....	.....	.....	.....	1 Oct., 1877.
Messenger (1) .....	.....	.....	.....	52	0	0	.....
Salt Creek Station-master..	Trangott W. C. Young† ..	4 June, 1883	Ditto .....	.....	.....	.....	1 April, 1880.
Scone Station-master .....	William S. Bam .....	2 Dec., 1885	Ditto .....	75	0	0	20 Nov., 1883.
Messenger (1) .....	.....	.....	.....	39	0	0	.....
Seal Rocks Operator .....	David Watson .....	1 Dec., 1878	Governor and Executive Council	52	0	0	1 Dec., 1878.
Shell Harbour Operator ..	John D. Allen .....	21 Oct., 1879	Ditto .....	26	0	0	21 Oct., 1879.
Silverton Operators .....	Daniel M. O'Sullivan <sup>3</sup> .....	27 Nov., 1885	Ditto .....	110	0	0	27 Nov., 1885.
	Samuel J. Phillips <sup>3</sup> .....	1 Jan., 1886	Ditto .....	110	0	0	17 Sept., 1883.
	Joseph M'Kay <sup>3</sup> .....	1 June, 1886	Ditto .....	110	0	0	1 June, 1886.
Messengers (2) .....	.....	.....	.....	39	0	0	each.
Singleton Station-master	Joseph Kelf† .....	6 Sept., 1876	Ditto .....	.....	.....	.....	20 Sept., 1868.
Operators .....	Michael Jones .....	10 Aug., 1881	Ditto .....	124	0	0	10 Aug., 1881.
	John Guilfoyle .....	5 April, 1884	Ditto .....	124	0	0	5 April, 1884.
Messengers (2) .....	.....	.....	.....	39	0	0	each.
Smithtown Station-master.	William J. Holahan† .....	1 Mar., 1883	Governor and Executive Council	.....	.....	.....	1 July, 1874.
Messenger (1) .....	.....	.....	.....	39	0	0	.....
Sofala Station master .....	John Hayes† .....	15 June, 1881	Governor and Executive Council	.....	.....	.....	1 April, 1875.
South Grafton Station-master.	Samuel H. Phillips† .....	1 Sept., 1882	Ditto .....	.....	.....	.....	19 Aug., 1876.
Messenger (1) .....	.....	.....	.....	39	0	0	.....
South Woodburn Station-master.	Chas Bousfield† .....	3 May, 1884	Governor and Executive Council	.....	.....	.....	10 July, 1878.
Stanifer Station-master ..	John Smythe .....	1 July, 1886	Postmaster-General	20	0	0	1 July, 1886.
St. Albans Station-master...	.....	.....	.....	.....	.....	.....	.....
Stewart's Point Operator	Mrs. Fanny J. Kirkwood ..	30 June, 1884	Governor and Executive Council	26	0	0	30 June, 1884.
South Creek St. Mary's, Operator.	Mary Russell† .....	1 Jan., 1883	Ditto .....	.....	.....	.....	1 Jan., 1882.
Messenger (1) .....	.....	.....	.....	26	0	0	.....
Stroud Station master .....	Leshe M. J. Butler† .....	1 June, 1885	Governor and Executive Council	.....	.....	.....	1 Jan., 1883.
Messenger (1) .....	.....	.....	.....	26	0	0	.....
Sutton Forest Station-master.	James T. Knox† .....	15 Feb., 1881	Governor and Executive Council	.....	.....	.....	1 Dec., 1878.
Messenger (1) .....	.....	.....	.....	39	0	0	.....
Springwood Messenger (1)	.....	.....	.....	26	0	0	.....
Tabulam Station-master ..	Moss Laird <sup>4</sup> .....	1 Jan., 1883	Governor and Executive Council	160	0	0	21 Nov., 1881.
	succeeded by	.....	.....	.....	.....	.....	.....
	Thomas E. Avery .....	3 Nov., 1886	Ditto .....	160	0	0	1 Jan., 1878.

<sup>1</sup> To 5 December—transferred to Cooranbong<sup>2</sup> To 15 June—appointed Operator, Murwillumbah<sup>3</sup> Allowed £30 per annum lodging allowance<sup>4</sup> To 2 November—appointed Operator, Grafton

† Paid by Postal Department.

\* Services not continuous

NOTE—The allowances to the above Officers will be found stated in a foot note at the end of the return.



Office	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.	
<b>POSTMASTER-GENERAL—ELECTRIC TELEGRAPHS—continued.</b>						
<i>Country Districts—continued.</i>						
Tacking Point Operator	Emma Robinson	25 April, 1885	Governor and Executive Council	26 0 0	25 April, 1885.	
Tamworth Station-master	William J. Chandler†	9 Jan, 1880	Ditto	.....	1 Sept., 1872.	
Operators	Thos J Roberts ...	10 Dec, 1884	Ditto	140 0 0	1 Oct, 1879.	
	Robt D Bailey	5 April, 1884	Ditto	124 0 0	5 April, 1884.	
	William O Grant ...	1 Mar, 1884	Ditto	124 0 0	1 Mar, 1884.	
	William J. Allen <sup>1</sup>	6 June, 1881	Ditto	114 0 0	6 June, 1881.	
	Arnott Leslie	24 July, 1884	Ditto	85 0 0	24 July, 1884.	
				to 28 Feb, 110 0 0		
				from 1 Mar		
	John T H Thame ...	12 Nov, 1884	Ditto	85 0 0	12 Nov, 1884.	
	John P M'Glynn	14 Dec, 1885	Ditto	75 0 0	14 Dec., 1885.	
	George Hutchison ...	1 Jan, 1885	Ditto	52 0 0	1 Jan., 1885.	
Line Repairer	Livingstone Rae	1 July, 1885	Ditto	150 0 0	9 Jan, 1885.	
Messengers (3)				{ 2 at 52 0 0 1 at 26 0 0	each	
Tarago Station-master	Chas E Stoylest	21 Jan, 1884	Ditto	.....	10 July, 1876.	
Taralga Station-master	Robert Thomson†	1 Mar., 1881	Ditto	.....	1 Feb, 1878.	
Operator	William T. Thomson	24 Mar, 1882	Ditto	26 0 0	24 Mar, 1882.	
Tarcutta Station-master	Alex L. Henderson ...	17 Feb, 1886	Ditto	48 0 0	1 Nov., 1882.	
Tarce Station-master	Alfred G Robins†	11 Oct., 1880	Ditto	.....	26 April, 1862.	
Line Repairer	Walter G. Mason	1 June, 1882	Ditto	150 0 0	9 Nov, 1873.	
Messenger (2)				{ 1 at 50 0 0 1 at 13 0 0		
Tathra Station-master	John Van Hemmert	22 Oct, 1879	Governor and Executive Council	75 0 0	22 Oct, 1879.	
Temora Operators	Henry J Phillips	6 May, 1885	Ditto	75 0 0	6 May, 1885.	
Messenger (1)				39 0 0		
Tenterfield Station-master	Richard H. Hipsley†	1 Nov, 1875	Governor and Executive Council	.....	11 Feb, 1858.	
Operators	James Sampson ...	15 Sept, 1884	Ditto	170 0 0	1 May, 1880.	
	James Keough	24 Oct, 1885	Ditto	110 0 0	16 Oct., 1882.	
Line Repairer	Thomas Hanna	15 Dec, 1876	Ditto	150 0 0	15 Dec, 1876.	
Messenger (1)				39 0 0		
Terrara Station-master	Benjamin Cox†	1 July, 1880	Governor and Executive Council	.....	14 Oct, 1874.	
Messenger (1)				39 0 0		
Tilpa Station-master	John B Guillher†	27 Nov, 1882	Governor and Executive Council	.....	27 Nov., 1882.	
Tingha Station master	Kenneth Mitchell†	1 Feb, 1882	Ditto	.....	14 June, 1878.	
Timonee Station master	James Ward†	22 Sept, 1878	Ditto	.....	22 Sept, 1878.	
Tomakin Operator	Sara Annie Havinden ...	29 Sept, 1884	Ditto	26 0 0	29 Sept, 1884.	
Tomeiong Telephone Operator	Fredk M. Watts	30 Aug, 1886	Postmaster-General	26 0 0	30 Aug., 1886.	
Tocumwall Station-master	Peter A Dunnet	8 Sept, 1881	Governor and Executive Council	.....	1 Jan, 1875.	
Trunkey Station master	William T Lee†	1 Nov, 1882	Ditto	.....	1 Feb, 1860.	
Tuena Station-master	Thomas F Bell†	1 Aug, 1880	Ditto	.....	1 Aug., 1880.	
Tumbarumba Station mistress	H M Langford†	19 April, 1880	Ditto	.....	19 April, 1880.	
Tumbulgum Operator	Louisa Tobin ...	13 Oct, 1884	Ditto	52 0 0	13 Oct, 1884.	
Tumut Station-master	Percy S Eldershaw†	1 Mar, 1884	Ditto	.....	1 Sept, 1873.	
Operator	Gus Frazer	1 Mar, 1881	Ditto	114 0 0	1 Mar, 1881.	
Messenger (1)				52 0 0		
Tweed River Heads Opera tor	W. M'Gregor	1 May, 1885	Governor and Executive Council	52 0 0	17 June, 1870.	
Ulladulla Station mistress.	Lucy M Gambell	18 April, 1876	Ditto	26 0 0	18 April, 1876.	
Ulmarra Station-master	Arthur Flanders†	12 Dec, 1877	Ditto	.....	12 Dec, 1877.	
Messenger (1)				39 0 0		
Uralla Station-master	George D. Woodall†	1 June, 1878	Governor and Executive Council	.....	13 Jan., 1875.	
Operator	Arthur J. Thorpe	23 Sept, 1881	Ditto	75 0 0	23 Sept, 1881.	
Messenger (1)				52 0 0		
Urana Station-master	Henry H P Lublin†	1 April, 1883	Governor and Executive Council	.....	29 Oct., 1878.	
Operator	Harry A. Hoare <sup>2</sup>	1 Mar, 1884	Ditto	52 0 0	5 Mar, 1883.	
Messenger (1)				26 0 0		
Wagga Wagga Station- master.	John V. Dalgarno <sup>3</sup>	1 June, 1882	Governor and Executive Council	310 0 0	9 Jan., 1860.	
	succeeded by					
Operators	Henry B. Jefferson	1 July, 1886	Ditto	260 0 0	1 Dec, 1874.	
	Martin Connelly	21 Jan, 1884	Ditto	150 0 0	15 Feb, 1883.	
	Frank G. Wilson	1 Oct, 1882	Ditto	175 0 0	1 Sept, 1878.	
	Richd M Stapylton <sup>4</sup>	15 Sept, 1884	Ditto	170 0 0	16 Sept, 1875.	
	John B King	1 June, 1886	Ditto	150 0 0	20 Dec., 1882.	
	Jas. H Spence	19 June, 1883	Ditto	140 0 0	1 Nov, 1882.	
	Francis A Turner	22 Nov, 1884	Ditto	124 0 0	1 June, 1883.	
	Leslie G Ogilvie	20 Feb, 1885	Ditto	114 0 0	1 Nov, 1884.	
	Edward West	12 Feb, 1886	Ditto	96 0 0	1 Oct, 1882.	
	Thomas W. Druitt	14 July, 1879	Ditto	150 0 0	14 July, 1879.	
	Line Repairer				39 0 0	each
	Messengers (4)				39 0 0	
Walbundrie Station-master	Charles E Nosworthy	11 June, 1886	Governor and Executive Council	110 0 0	12 Oct, 1885.	
Walcha Station-master	David R Thursby†	1 Jan, 1877	Ditto	.....	1 Jan, 1877.	
Operator	William Watts	3 Nov, 1885	Ditto	25 0 0	3 Nov, 1885.	
Messenger (1)				39 0 0		

<sup>1</sup> To 28 February—appointed to Baradine as Postmaster and Station master. <sup>2</sup> To 12 August—appointed Postmaster and Station master, Marulan  
<sup>3</sup> To 16 March—appointed Cable Clerk, Sydney (Head Office) <sup>4</sup> To 31 May—appointed Station master, June <sup>†</sup> Paid by Postal Department.  
 NOTE—The allowances to the above Officers will be found stated in a foot note at the end of the return

NEW SOUTH WALES—1886.

Office.	Name.	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary £ s. d.	Date of first Appointment under the Colonial Government.
<b>POSTMASTER-GENERAL—ELECTRIC TELEGRAPHS—continued.</b>					
<i>Country Districts—continued.</i>					
Walgett Station-master	George S. Hay†	7 Jan., 1879	Governor and Executive Council	...	1 Aug., 1874.
Operators	William Montgomery	4 Sept., 1882	Ditto	114 0 0	4 Sept., 1882.
	George Goodman <sup>1</sup>	11 Dec., 1882	Ditto	75 0 0	11 Dec., 1882.
	Jno. W. Simons <sup>2</sup>	8 April, 1886	Ditto	130 0 0	21 Sept., 1881.
	Walter Goddard	12 Dec., 1886	Ditto	75 0 0	4 Dec., 1885.
Messenger (1)				39 0 0	
Wallerawang Station-master	William Mead†	1 Sept., 1882	Governor and Executive Council	...	1 Sept., 1882.
Wallsend Station-master	Oliver Haydock†	9 Sept., 1876	Ditto	...	9 Sept., 1876.
Operator	Edwin Hobden	1 Dec., 1883	Ditto	111 0 0	7 Nov., 1882.
Messenger (1)				26 0 0	
Waratah Station-master	William Harris†	24 Nov., 1878	Ditto	...	1 May, 1875.
Messenger				26 0 0	
Wardell Station-master	George Carolan†	16 June, 1884	Governor and Executive Council	...	26 April, 1879.
Warialda Station-master	William O. Newbery†	1 Nov., 1882	Ditto	...	23 April, 1875.
Operator	William E. J. Lee <sup>3</sup>	18 Nov., 1882	Ditto	114 0 0	18 Nov., 1882.
	succeeded by				
Line Repairer	Cecil A. Olver	6 April, 1886	Ditto	110 0 0	1 July, 1884.
Warkworth Station-master	Geo. Williams	9 Oct., 1882	Ditto	130 0 0	1 July, 1877.
	Walter Goddard <sup>4</sup>	4 Dec., 1885	Ditto	52 0 0	4 Dec., 1885.
				to 31 Aug.,	
				75 0 0	
				from 1 Sept.	
Warren Station-master	George W. Self†	7 Feb., 1881	Ditto	...	1 Jan., 1877.
Messenger (1)				39 0 0	
Wee Waa Station-master	John T. Molloy†	13 Dec., 1882	Governor and Executive Council	...	1 April, 1882.
Wellington Station-master	Alexander Chrystal†	1 Jan., 1875	Ditto	...	1 Nov., 1871.
Operator	Charles Kennard	1 Jan., 1885	Ditto	52 0 0	8 Dec., 1878.
Messenger (1)				26 0 0	
Wentworth Station-master	William Campert†	1 June, 1867	Governor and Executive Council	...	7 Dec., 1858.
Junior Operators	Patrick T. Whealy <sup>5</sup>	1 May, 1877	Ditto	175 0 0	1 May, 1877.
	Thomas Keelty	1 Jan., 1886	Ditto	110 0 0	25 Aug., 1885.
	Francis H. Morris	8 Oct., 1886	Ditto	150 0 0	7 Jan., 1884.
Line Repairer	Wilham Allan	24 Aug., 1881	Ditto	150 0 0	24 Aug., 1881.
Messengers (2)				39 0 0	each.
Werris Creek Messenger (1)				26 0 0	
West Kempsey Station-master	John Williams†	1 Jan., 1872	Governor and Executive Council	...	1 Jan., 1872.
Operator	William A. Johnston <sup>6</sup>	14 April, 1884	Ditto	62 0 0	14 April, 1884.
Line Repairer	Geo. Carroll	1 Aug., 1883	Ditto	150 0 0	1 Aug., 1883.
Messenger (1)				39 0 0	
West Maitland Station-master	Percy Clay	1 June, 1884	Governor and Executive Council	310 0 0	1 Mar., 1875.
Operators	George Brighton	14 Jan., 1884	Ditto	170 0 0	1 April, 1877.
	Henry E. Kelly	1 Jan., 1885	Ditto	124 0 0	9 April, 1883.
	Samuel Mansfield	1 June, 1882	Ditto	144 0 0	1 June, 1882.
	William H. Gibson	22 Jan., 1883	Ditto	124 0 0	28 Nov., 1882.
	Ethelbert S. Filmer	23 Mar., 1882	Ditto	124 0 0	23 Mar., 1882.
	Arthur H. Nicholls	1 Nov., 1884	Ditto	124 0 0	1 Feb., 1882.
Maitland Operator	John S. Arnott	15 Sept., 1884	...	85 0 0	15 Sept., 1884.
West Maitland Telephone Operator	George Kelly	10 Dec., 1884	Ditto	52 0 0	10 Dec., 1884.
Line Repairer	John S. Gallies	20 April, 1885	Ditto	57 0 0	
Messengers (3)				52 0 0	
				26 0 0	each.
West Tamworth Station-master	Thos. L. Coughlan†	10 Dec., 1884	Governor and Executive Council	...	18 Jan., 1880.
Messenger (1)				39 0 0	
Wheaney Creek (now Kurrajong) Station-master	George C. Kurwan†	1 Sept., 1884	Governor and Executive Council	...	1 Sept., 1884.
Wickham Station-master	John S. Arnott†	12 Mar., 1884	Ditto	...	12 Mar., 1884.
Messenger (1)				52 0 0	
Wilcanna Station-master	Albert E. Davies†	1 Jan., 1878	Governor and Executive Council	...	1 Mar., 1870.
Operators	John J. Molloy	1 Feb., 1884	Ditto	175 0 0	7 Aug., 1882.
	George C. Walter <sup>7</sup>	15 Sept., 1884	Ditto	150 0 0	13 Mar., 1878.
	William F. Davidson	11 Jan., 1886	Ditto	150 0 0	1 Oct., 1884.
	Percy E. Rowe	1 Oct., 1883	Ditto	140 0 0	16 Sept., 1875.
Messengers (2)				52 0 0	
				39 0 0	
Windsor Station-master	Jas. A. Dick†	1 Jan., 1882	Governor and Executive Council	...	1 Sept., 1862.*
Operator	William Alexander	16 Nov., 1881	Ditto	124 0 0	16 Nov., 1881.
Messenger (1)				26 0 0	
Wingham Station-master	James Hodgins†	9 May, 1879	Lieutenant-Governor and Executive Council	...	9 May, 1879.
Messenger (1)				26 0 0	
Wiseman's Ferry Station-master	John T. Marx†	1 July, 1875	Governor and Executive Council	...	1 July, 1875

<sup>1</sup> To 31 July—transferred to Sydney (Head Office)    <sup>2</sup> To 4 November—resigned    <sup>3</sup> To 28 February—resigned    <sup>4</sup> To 11 December—appointed Operator, Wallgett (office closed)    <sup>5</sup> To 22 August—appointed Postmaster and Station master, Gilgandra    <sup>6</sup> To 17 November—resigned    <sup>7</sup> To 10 June—appointed Postmaster and Station master, Green Cape    † Paid by Postal Department    \* Services not continuous

NOTE.—The allowances to the above Officers will be found stated in a foot-note at the end of the return

Office.	Name.	Date of Appointment.	By whom appointed, and under what instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>POSTMASTER-GENERAL—ELECTRIC TELEGRAPHS—continued.</b>					
<i>Country Districts—continued.</i>					
Wollombi Station-master	John C. J. Smith†	1 July, 1875	Governor and Executive Council		1 Jan., 1870.
Operators	Alfred J. Plunkett <sup>1</sup>	10 July, 1882	Ditto	26 0 0	10 July, 1882.
	Thomas W. Nicholls	31 July, 1886	Postmaster-General	26 0 0	31 July, 1886.
Wollongong Station-master	Philip Mackel†	1 April, 1870	Governor and Executive Council		1 Jan., 1860.
Operator	William Simmons	1 Aug., 1883	Ditto	114 0 0	1 Aug., 1883.
Messenger (1)				39 0 0	
Wolumla Station-master	William R. Bragg†	1 Oct., 1885	Governor and Executive Council		1 Oct., 1880.
Woodburn Station-master	Edward Dean†	1 Mar., 1882	Ditto		1 Mar., 1882.
Messenger (1)				26 0 0	
Wyrallah Operator	Emily Breckenridge	19 Oct., 1886	Postmaster-General	26 0 0	19 Oct., 1886.
Yarrhapinni Station-mistress.	Anne W. Jamieson	1 Aug., 1879	Governor and Executive Council	52 0 0	1 Aug., 1879.
Yass Station-master	John R. Colls†	1 Dec., 1874	Ditto		1 Jan., 1872.
Operators	James H. Carter	1 June, 1881	Ditto	130 0 0	1 June, 1881.
	James J. M'Guckin <sup>2</sup>	1 Oct., 1884	Ditto	114 0 0	8 June, 1880.
	Fred. H. Benson	1 Sept., 1886	Ditto	110 0 0	1 Sept., 1886.
Line Repairer	Frederick A. Leseberg	8 July, 1880	Ditto	150 0 0	8 July, 1880.
Messenger (1)				39 0 0	
Yetman Station-master	Bernard J. Martin	1 Nov., 1885	Governor and Executive Council	190 0 0	1 Aug., 1879.
Young Station-master	William M'Nab†	1 July, 1873	Ditto		16 Dec., 1865.
Operators	Andrew Muir	1 Dec., 1882	Ditto	140 0 0	5 July, 1876.
	James G. Tedder <sup>3</sup>	10 Mar., 1884	Ditto	124 0 0	10 Mar., 1884.
	Duncan Johnson	24 Mar., 1885	Ditto	75 0 0	24 Mar., 1885.
Line Repairer	Henry Klhne	15 Dec., 1875	Ditto	150 0 0	15 Dec., 1875.
Messenger (1)				26 0 0	
Construction Overseers—	J. U. Roberts	1 Jan., 1878	Secretary for Public Works		1 Jan., 1878.
	C. Mooney	8 June, 1877	Ditto		8 June, 1877.
	A. Gray <sup>4</sup>	1 Nov., 1875	Ditto		1 Nov., 1875.*
	John Elder	1 Sept., 1874	Ditto		1 Sept., 1874.*
	Henry Watsford <sup>5</sup>	6 May, 1876	Ditto		6 May, 1876.*
	G. M'Cauley <sup>6</sup>	1 Jan., 1877	Ditto		1 Jan., 1877.*
	William H. Carr <sup>7</sup>	2 Oct., 1880	Ditto		2 Oct., 1880.*
	William Cruden <sup>8</sup>	1 Dec., 1874	Ditto		1 Dec., 1874.*
	H. J. Tooze <sup>9</sup>	22 Oct., 1880	Ditto		22 Oct., 1880.*
	T. S. Piddmg <sup>10</sup>	20 June, 1873	Ditto		20 June, 1873.*
	A. L. Patison <sup>11</sup>	3 Sept., 1873	Postmaster-General		3 Sept., 1873.*
	N. Campbell	18 Mar., 1882	Ditto		18 Mar., 1882.*
	John Cook <sup>12</sup>	16 Jan., 1883	Ditto		27 April, 1880.*
	Squire J. Farnell <sup>13</sup>	1 July, 1883	Ditto		1 July, 1883.*

<sup>1</sup> To July 25—appointed Operator, South Head <sup>2</sup> To 16 August—dismissed <sup>3</sup> To 12 August—to Mudgee as Operator. <sup>4</sup> To 31 May—dismissed.  
<sup>5</sup> From 15 April to 13 May—not employed <sup>6</sup> From 1 January to 18 January, April 1 to 13 April, 14 November to 20 December—not employed. <sup>7</sup> From 15 April to 20 May—not employed <sup>8</sup> From 1 January to 19 February, and June 1 to June 16—not employed <sup>9</sup> From 1 January to 14 January, and 21 December to 31 December—not employed <sup>10</sup> To 30 April—resigned <sup>11</sup> From 1 March to 13 May—not employed. <sup>12</sup> To 24 July—deceased. <sup>13</sup> To 13 January—deceased. † Paid by Postal Department. \* Services not continuous

Note—Station masters—Each allowed quarters, and 12s per diem when travelling on duty Allowed 95 lbs of wood or 32 lbs of coal per diem, from 1 June to 30 September in each year No specified allowance for light Those at Balranald, Barringun, Bellbrook, Louth, Menindie, Moulamein, Newton Boyd, Pooncarrie, Urana, Wilcanna, Wiseman's Ferry, Wollombi, and Yetman, receive 4s. per diem for forage, and those at Cowra, Gundagai, and Tamworth, allowed £35 per annum, Bombala, Braidwood, Cooma, Mudgee, and Orange, £25 per annum each, Bodalla, Gloucester, Goulburn, Grafton, Lismore, Lithgow, and Richmond, each £26 per annum, Euston, Kyamba, and Newcastle (2), each £40 per annum, Bathurst, £50, Broughton Creek, £7 16s, Cobar, £52; Dubbo, £35, Mactean, £12, Murrumburrah, £20, Tareena (late Salt Creek), £101 4s Line Repairers—Each allowed 12s per diem when travelling on duty. Those at Armidale, Bathurst, Bouike, Biewarrina, Cooma, Cootamundra, Deniliquin, Dubbo, Glen Innes, Grafton, Gundagai, Lismore, Murrumbidgee, Narrabri, Orange, Tamworth, Taree, Tenterfield, Wagga Wagga, Wentworth, and West Kempsey, receive each 4s per diem for forage Those at Eden and Hay, £50, the one at Warialda, £40; and the one at Dungog, £26 per annum for forage Construction Overseers—All Overseers allowed 4s. 6d per diem for forage.

N B—All Officers, Line Repairers, and Messengers, give security to the amount of £100.

## PART XII.

**Secretary for Mines,**

AND THE

DEPARTMENTS UNDER HIS SUPERVISION AND CONTROL.

## SUMMARY.

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SECRETARY FOR MINES.

Office.	Name.	Date of Appointment	By whom appointed, and under what Instrument	Annual Salary			Date of first Appointment under the Colonial Government
				£	s.	d.	
<b>MINES.</b>							
Secretary for Mines	R. M. Vaughn	22 Dec, 1885	Governor, by Commission	1,500	0	0	22 Dec., 1885.
	succeeded by James Fletcher	26 Feb., 1886	Ditto	1,500	0	0	26 Feb., 1886
	succeeded by C. K. Mackellar	24 Dec, 1886	Ditto	1,500	0	0	30 Nov., 1872.
Under Secretary	Harrie Wood <sup>1</sup>	1 Sept, 1874	Governor and Executive Council	960	0	0	1 Sept, 1874.
Chief Clerk	Gerard Edgar Herung	1 Sept, 1874	Ditto	650	0	0	1 April, 1854.*
Registrar	Thomas Crawford Binny <sup>1</sup>	1 Sept, 1874	Ditto	440	0	0	1 Oct, 1872.
Accountant	Edward J R. Farr <sup>2</sup>	25 Oct, 1875	Ditto	415	0	0	21 Dec, 1862.
Clerks	Chas Orlando Helm, M A. <sup>4</sup>	1 Sept, 1874	Ditto	340	0	0	1 Feb, 1873.†
	Henry C. Taylor <sup>7</sup>	1 Sept, 1874	Ditto	290	0	0	19 April, 1872.
	Anthony P. G Benest <sup>9</sup>	1 Dec, 1885	Ditto	315	0	0	1 Aug, 1881.
	Edgar H Ray <sup>1</sup>	1 Sept, 1874	Ditto	265	0	0	1 Oct, 1873.
	Edwin C Primrose	21 Mar., 1877	Ditto	240	0	0	1 Mar, 1875.
	Stephen T Burcher	21 Mar, 1877	Ditto	220	0	0	9 Sept., 1875.
	R Barden <sup>5</sup>	1 Mar, 1886	Ditto	245	0	0	1 July, 1877
	William R. Collis	25 Aug, 1879	Ditto	220	0	0	1 April, 1877.
	R. W. H. Stone	1 Sept, 1883	Ditto	190	0	0	1 Sept, 1883.
	C H. Morgan	1 Sept, 1884	Ditto	165	0	0	14 April, 1884.
	J. A. E. Nash	19 Dec., 1884	Ditto	145	0	0	14 Nov., 1879.
	E N. Lack	1 Dec., 1884	Ditto	190	0	0	23 Aug., 1882.
	W. J. Chissell	1 Dec., 1884	Ditto	190	0	0	15 Sept., 1884.†
Probationer	William E. O'Brien	7 Dec, 1885	Secretary for Mines	50	0	0	24 Aug., 1885
				to 24 Feb,			
				75	0	0	
				from 25 Feb			
	E. A. H. Stephen	1 Jan, 1886	Ditto	50	0	0	1 Jan., 1886.
				to 30 June,			
				75	0	0	
				from 1 July.			
	A. H. Ferris	7 June, 1886	Ditto	50	0	0	— Aug., 1885.
				to 30 Sept,			
				75	0	0	
				from 1 Oct.			
Temporary Clerks	F. Little	11 Oct, 1883	Ditto	10s. per diem			11 Oct., 1883.
	G. S. O'Halloran	4 May, 1885	Ditto	10s. "			4 May, 1885.
	J. F. Wilhams	6 Mar, 1885	Ditto	10s. "			6 Mar., 1885.
	H. R. Ormiston	18 Jan., 1883	Ditto	75	0	0	18 Jan., 1883.
Messengers (6) <sup>6</sup>				1, 140	0	0	
				1, 120	0	0	
				4, 110	0	0	each.
Housekeeper				90	0	0	
Office-cleaners (3)				30	0	0	each.
Night Watchman				125	0	0	
Chief Mining Surveyor	E. F. Pittman <sup>3</sup>	29 July, 1883	Governor and Executive Council	650	0	0	— Mar., 1877.
Chief Draftsman	Walter Scott Campbell	19 Oct, 1874	Ditto	600	0	0	3 July, 1862.
Draftsmen	Peter Drummond	19 Oct, 1874	Ditto	415	0	0	1 April, 1861.
	Arthur T. Jaques	19 Oct., 1874	Ditto	350	0	0	1 Nov., 1864.
	Edward J King	24 April, 1875	Ditto	315	0	0	10 Dec., 1864.
	John H. Mayes	1 Oct, 1875	Ditto	315	0	0	15 Nov, 1874.
	Edwin P. Bishop	16 Aug., 1877	Ditto	290	0	0	4 Dec, 1875.
	Henry A. James	16 Nov., 1877	Ditto	290	0	0	1 Dec, 1875.
	H. H. Onslow	1 Feb., 1879	Ditto	265	0	0	1 April, 1877.
	Edward P. Mayes	1 Dec, 1884	Ditto	265	0	0	3 May, 1879.
	George H. Greville	1 Dec, 1884	Ditto	265	0	0	3 May, 1879.
	Sydney A. Lee	1 Dec, 1884	Ditto	240	0	0	21 Sept., 1876.
	H. R. Whittell	1 Dec, 1884	Ditto	240	0	0	18 Aug, 1879.
	J. T. Smiles	1 Dec, 1884	Ditto	240	0	0	5 Nov., 1883.
	E R. Connor	1 Dec, 1884	Ditto	240	0	0	29 May, 1884.
	William Martin	1 Dec, 1884	Ditto	240	0	0	6 May, 1884.
Cadets	M. M'Donald	1 Nov, 1884	Ditto	50	0	0	1 Nov., 1884.
	W. Gray	11 Feb, 1885	Secretary for Mines	50	0	0	11 Feb, 1885.
Temporary Draftsmen	J. Rowley	26 Feb, 1885	Ditto	200	0	0	14 June, 1883.
	C. B. S. Russell	20 Feb, 1885	Ditto	200	0	0	8 Oct., 1884.
	G. Oom	19 May, 1885	Ditto	200	0	0	19 Feb, 1883.
Plan-mounter	S. Bowles	13 Sept., 1885	Governor and Executive Council	200	0	0	23 Aug, 1880.
Inspector of Mines	William Henry John Slee	7 Aug, 1876	Ditto	340	0	0	7 Aug, 1876.
Geological Surveyor (in charge)	Charles S. Wilkinson <sup>5</sup>	16 July, 1874	Ditto	850	0	0	16 Aug, 1870.
Geological Surveyor	T. W. E. David <sup>3</sup>	27 Nov, 1882	Ditto	550	0	0	27 Nov., 1882.
	W. Anderson <sup>3</sup>	20 Sept, 1886	Ditto	300	0	0	20 Sept, 1886.
Curator	J. E. Carne	1 Mar, 1881	Ditto	265	0	0	3 Mar., 1879.
Clerk and Draftsman	H. T. Wilkinson <sup>5</sup>	1 Jan., 1879	Ditto	265	0	0	16 Nov., 1874

<sup>1</sup> Gives security to the amount of £500. <sup>2</sup> Gives security to the amount of £1,000. <sup>3</sup> Allowed £230 per annum for equipment. <sup>4</sup> To 25 January—Deceased. <sup>5</sup> Allowed £100, Visiting Magistrate, Lord Howe's Island. <sup>6</sup> One messenger allowed £30 as office cleaner. <sup>7</sup> Transferred to Rabbit Branch. <sup>8</sup> To 19 October—deceased. <sup>9</sup> To 14 April, 1886—resigned. \* Services not continuous. † Allowed £50, shorthand writer

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>SECRETARY FOR MINES—MINES—continued.</b>					
Assistant	G. A. Stonier	1 Feb., 1886	Governor and Executive Council	150 0 0	1 Feb., 1886.
Clerk	A. H. Tayler	1 Dec., 1884	Ditto	165 0 0	7 Jan., 1883.
Collector	Charles Cullen	29 July, 1874	Secretary for Mines	9s. per diem	29 July, 1874.
	D. Grant	24 May, 1886	Ditto	5s. "	24 May, 1886.
	J. Rourke	16 June, 1886	Ditto	5s. "	16 June, 1886.
	C. Hilderbrandt, junr.	5 Feb., 1886	Ditto	2s. 6d. "	5 Feb., 1886.
Caves—					
Caretaker, Jenolan	J. Wilson			175 0 0	
Assistant	F. J. Wilson			50 0 0	
Caretaker, Wombeyan	C. W. Chalker			50 0 0	
Examiner of Coal Fields	John Mackenzie <sup>1</sup>	22 Mar., 1872	Administrator of Government and Executive Council.	650 0 0	18 Feb., 1863.
Inspectors of Collieries	Jno. Dixon	15 June, 1882	Governor and Executive Council	340 0 0	
	Jas. Rowan	1 May, 1883	Ditto	290 0 0	1 May, 1883.
Minor Roads—					
Clerks	R. H. Ormiston	1 Oct., 1878	Ditto	340 0 0	18 Jan., 1871.
	W. H. Tunks	1 Oct., 1878	Ditto	315 0 0	29 Aug., 1872.
	C. S. Bransby	1 Dec., 1884	Ditto	240 0 0	1 April, 1880.
Temporary Clerk	F. S. R. Hunt	15 Oct., 1883	Secretary for Mines	75 0 0	15 Oct., 1883.
Temporary Mining Surveyors	Henry B. Sullivan <sup>2</sup>	9 April, 1879	Lieutenant-Governor and Executive Council.	300 0 0	3 Dec., 1877.
	E. Sawtell <sup>2</sup>	1 Feb., 1884	Ditto	300 0 0	25 Oct., 1867.
	J. H. McEwen <sup>3</sup>	1 April, 1884	Secretary for Mines	300 0 0	2 Jan., 1880.
	T. W. Raymond <sup>3</sup>	10 July, 1884	Ditto	300 0 0	10 July, 1884.
	J. Thomas <sup>3</sup>	25 Sept., 1885	Ditto	300 0 0	
	R. H. Cabbage <sup>2 4</sup>	16 Feb., 1885	Ditto	300 0 0	
	E. G. Sewell <sup>2 4*</sup>	10 Feb., 1885	Ditto	300 0 0	
	W. E. Harnett <sup>2 4</sup>	1 April, 1885	Ditto	300 0 0	
	A. W. J. Foster <sup>2 4</sup>	13 June, 1885	Ditto	300 0 0	
	E. H. Dawson <sup>2</sup>	18 Oct., 1885	Ditto	300 0 0	
	W. H. Lee <sup>2</sup>	23 June, 1885	Ditto	300 0 0	
Temporary Surveyors under the Watering Places Act.	J. T. Gray <sup>2</sup>	16 Nov., 1885	Governor and Executive Council	300 0 0	16 Nov., 1885.
	J. E. Walker <sup>2 4</sup>	27 Nov., 1885	Ditto	300 0 0	
	J. Barling <sup>2</sup>	26 Nov., 1885	Ditto	300 0 0	
<sup>1</sup> Allowed quarters. <sup>2</sup> Allowed £200 per annum for travelling and equipment. <sup>3</sup> Allowed £400 per annum for travelling and equipment. <sup>4</sup> Resigned.					
<b>MINING SURVEYORS—</b>					
Albury	W. Cowley*		Governor and Executive Council		
"	J. H. Wood*		Ditto		
Armidale	J. G. Martyn*		Ditto		
"	F. W. Irby		Ditto		
"	H. Hogarth		Ditto		
Bega	R. G. Glasson*		Ditto		
Bowral	V. B. Riley		Ditto		
Bombala	M. O. Hungerford*		Ditto		
Braidwood	E. R. Allworth*		Ditto		
Bathurst	J. R. Blacket*		Ditto		
Bolivia	H. B. Sullivan*		Ditto		
Bourke	J. Granter*		Ditto		
"	E. Barling*		Ditto		
Casino	R. Barling*		Ditto		
Coonabarabran	W. R. Davidson*		Ditto		
Cooma	J. C. Martin		Ditto		
Cobar	J. E. Robberds*		Ditto		
Cootamundra	V. F. Tozer*		Ditto		
Curlew	E. W. Turner*		Ditto		
Dubbo	H. A. D. O'Connor*		Ditto		
"	E. H. Barton*		Ditto		
"	T. H. Smith*		Ditto		
Double Bay	W. M. Thompson*		Ditto		
Euabalong	W. N. Scott*		Ditto		
Fernmount	H. A. Evans		Ditto		
Forbes	G. H. Sheaffe*		Ditto		
"	A. Maitland		Ditto		
Goulburn	E. Twynam*		Ditto		
"	F. Isaac*		Ditto		
"	J. C. Dalglish*		Ditto		
Grafton	P. R. Donaldson*		Ditto		
"	C. F. N. North*		Ditto		
"	H. Fisher*		Ditto		
Glen Innes	R. Ronald*		Ditto		
"	A. W. Chapman		Ditto		
"	J. Campbell		Ditto		
Gundagai	A. W. Love*		Ditto		
Grenfell	R. W. Meldrum*		Ditto		
Gresford	H. O'S. White		Ditto		
Gundy	H. F. K. Mann		Ditto		
Hay	R. M'Donald*		Ditto		
Hartley	W. Mylecharane*		Ditto		
Hillston	D. B. Sellars*		Ditto		
"	J. T. Gray*		Ditto		
Inverell	F. G. Finley*		Ditto		
"	C. C. Loxton*		Ditto		
N.B.—All Surveyors marked thus * are specially licensed under the provisions of the Real Property Act.					

Office.	Name	Date of Appointment.	By whom appointed, and under what Instrument	Annual Salary.			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>SECRETARY FOR MINES—MINES—continued.</b>							
<b>MINING SURVEYORS—continued.</b>							
Inverell.....	H. Folkard*.....	.....	Governor and Executive Council				
".....	G. Arthur*.....	.....	Ditto.....				
".....	F. L. Burdett*.....	.....	Ditto.....				
Ilford.....	J. Dawson*.....	.....	Ditto.....				
Kempsey.....	.....	.....	.....				
Maitland East.....	J. W. Allworth*.....	.....	Ditto.....				
".....	M. J. Callaghan*.....	.....	Ditto.....				
Manly.....	E. A. Harris*.....	.....	Ditto.....				
Marrickville.....	H. C. Manning*.....	.....	Ditto.....				
Moonbi.....	J. H. M'Ewen*.....	.....	Ditto.....				
Moree.....	C. J. M'Master*.....	.....	Ditto.....				
".....	C. W. Laing.....	.....	Ditto.....				
Moruya.....	C. A. Harper*.....	.....	Ditto.....				
Mudgee.....	T. W. Connolly*.....	.....	Ditto.....				
Musclebrook.....	J. L. Tritton*.....	.....	Ditto.....				
Newcastle (Pelican Flat)	E. Sawtelle*.....	.....	Ditto.....				
Nyngan.....	E. W. B. King*.....	.....	Ditto.....				
Orange.....	W. Anderson*.....	.....	Ditto.....				
".....	A. Lisle.....	.....	Ditto.....				
Petersham.....	W. H. Nash*.....	.....	Ditto.....				
Queanbeyan.....	T. C. M'Cord.....	.....	Ditto.....				
".....	W. J. Farrer.....	.....	Ditto.....				
".....	J. H. Lucas*.....	.....	Ditto.....				
Rylstone.....	J. Thomas*.....	.....	Ditto.....				
Sydney.....	J. Heady*.....	.....	Ditto.....				
".....	J. A. Palmer.....	.....	Ditto.....				
".....	W. A. B. Greaves.....	.....	Ditto.....				
".....	S. E. Perdriau*.....	.....	Ditto.....				
".....	S. F. Arnheim*.....	.....	Ditto.....				
Stanmore.....	D. M. Maitland*.....	.....	Ditto.....				
Silvertown.....	T. H. H. Goodwin*.....	.....	Ditto.....				
".....	E. H. Dawson*.....	.....	Ditto.....				
".....	W. H. Lee*.....	.....	Ditto.....				
Scone.....	W. H. Christie*.....	.....	Ditto.....				
Stroud.....	J. J. Tucker*.....	.....	Ditto.....				
Tamworth.....	G. Loder*.....	.....	Ditto.....				
".....	F. T. Lardner.....	.....	Ditto.....				
".....	A. Dewhurst*.....	.....	Ditto.....				
".....	J. Manners.....	.....	Ditto.....				
Tenterfield.....	W. Drummond*.....	.....	Ditto.....				
Trunkey.....	J. Ryan.....	.....	Ditto.....				
Tumbarumba.....	T. H. Raymond*.....	.....	Ditto.....				
Tumut.....	R. G. Pratt.....	.....	Ditto.....				
".....	M. Barlow*.....	.....	Ditto.....				
Wagga Wagga.....	C. F. Bolton*.....	.....	Ditto.....				
".....	G. W. Commins*.....	.....	Ditto.....				
Warialda.....	O. Trickett*.....	.....	Ditto.....				
".....	F. Russell*.....	.....	Ditto.....				
Walcha.....	H. C. Holmes*.....	.....	Ditto.....				
Wardell.....	F. V. Hunter*.....	.....	Ditto.....				
Warmatta.....	W. Creed*.....	.....	Ditto.....				
Wellington.....	H. A. Torry*.....	.....	Ditto.....				
Wilcannia.....	W. Orr*.....	.....	Ditto.....				
Wingham.....	J. M. Conroy*.....	.....	Ditto.....				
Yass.....	H. M. Nash*.....	.....	Ditto.....				
Yerong Creek.....	W. A. Lipscombe*.....	.....	Ditto.....				
Young.....	H. C. Hosie*.....	.....	Ditto.....				
".....	C. Worth* (on leave).....	.....	Ditto.....				
N.B.—All Surveyors marked thus * are specially licensed under the provisions of the Real Property Act.							
<b>WARDENS—</b>							
Colony of New South Wales or any Mining District or portion thereof.	Harrie Wood.....	19 Sept., 1884	Governor and Executive Council	Nil.			
Districts—							
Albury.....	H. M. Keightley.....	1 Sept., 1883	Ditto.....	} Nil.	}		
Araluen and Braidwood	J. Aldcorn.....	.....	Ditto.....				
Armidale.....	C. E. Smith.....	1 Jan., 1885	Ditto.....	} 75 0 0	}	1 Aug., 1871.	
Bathurst and Trunkey.	Thomas A. Smith.....	14 Dec., 1875	Ditto.....				
Berrima.....	F. R. Wilshire.....	.....	Ditto.....	} Nil.	}	5 Sept., 1876.	
Bingera.....	W. C. Lanson.....	1 Jan., 1885	Ditto.....				
Bombala.....	J. Giles.....	.....	Ditto.....	} Nil.	}	1 Jan., 1878.	
Bullahdelah and Stroud	C. H. Fawcett.....	1 July, 1883	Ditto.....				
Carcoar.....	N. Connolly.....	.....	.....	} Nil.	}		
Casino.....	James Bray.....	1 July, 1883	Ditto.....				
Cobar.....	G. C. Thompson.....	.....	Ditto.....	} Nil.	}		
Copeland.....	C. De Boos.....	.....	Ditto.....				
Corowa.....	R. Hare.....	.....	Ditto.....	} Nil.	}		
Dubbo.....	W. S. Caswell.....	.....	Ditto.....				
Forbes.....	E. A. Sharpe.....	.....	Ditto.....	} Nil.	}		
Glen Innes.....	G. Martin.....	21 May, 1877	Ditto.....				
Grafton.....	A. L. M'Dougall.....	.....	Ditto.....	} Nil.	}	3 Mar., 1868.	1 Sept., 1875.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.		
				£ s. d.			
<b>SECRETARY FOR MINES—MINES—continued.</b>							
<b>WARDENS—continued.</b>							
<b>Districts—continued.</b>							
Gulgong .....	P. Snape .....	.....	Governor and Executive Council	Nil	1 Sept., 1875.		
Gundagai .....	W. Love .....	1 April, 1885	Ditto .....				
Hill End .....	W. A. Steel .....	.....	Ditto .....				
Hillston .....	N. C. O'Neill .....	.....	Ditto .....				
Inverell .....	W. W. Fraser .....	29 Nov., 1877	Ditto .....				
Kempsey .....	J. Ducat .....	.....	Ditto .....				
Moruya .....	G. Maunsell .....	1 Oct., 1883	Ditto .....				
Mount Browne (Milparinka) .....	C. M'King .....	.....	Ditto .....				
Murwillumbah .....	Joshua Bray .....	15 Oct., 1885	Ditto .....				
Nowra .....	W. Lovegrove .....	29 Sept., 1880	Ditto .....				
Nundle .....	E. Jones .....	.....	Ditto .....	100 0 0	1 Jan., 1857.		
Orange .....	J. T. Lane .....	21 Sept., 1875	Ditto .....				
Queanbeyan .....	J. C. Woore .....	1 Aug., 1883	Ditto .....				
Scene .....	W. F. Parker .....	1 July, 1883	Ditto .....				
Silverton .....	W. Brown .....	.....	Ditto .....				
Tamworth .....	D. W. Irving .....	29 Jan., 1875	Ditto .....				
Temora .....	J. Baker .....	.....	Ditto .....				
Tenterfield .....	James B. Graham .....	29 Jan., 1875	Ditto .....				
Tumbarumba .....	J. F. Makinson .....	1 Sept., 1883	Ditto .....				
Tumut .....	F. W. Vyner .....	16 April, 1875	Ditto .....				
Wellington .....	R. Hare .....	1 Jan., 1885	Ditto .....	Nil.	1 Jan., 1867.		
Wilcannia .....	G. H. Gower .....	1 Feb., 1883	Ditto .....				
Yass .....	A. M. Fisher .....	.....	Ditto .....				
Young .....	S. Robinson .....	1 Oct., 1875	Ditto .....				
Officer at Sydney to issue Miners' Rights, Business and Mineral Licenses.	William Newcombe .....	30 June, 1874	Ditto .....				
							4 Jan., 1860.
							24 June, 1861.
							1 Mar., 1859.
							15 April, 1872.
							1 Feb., 1849.
<b>WARDENS' CLERKS—</b>							
<b>Districts—</b>							
Adelong .....	J. James .....	.....	Governor and Executive Council	Also 5s. per cent. Commission on the sale of Miners' Rights and Licenses.			
Albury .....	C. A. Conley .....	.....	Ditto .....				
Araluen .....	E. F. Carlile .....	.....	Ditto .....				
Armidale .....	C. L. C. Badham .....	.....	Ditto .....				
Barraba .....	K. T. Garland .....	.....	Ditto .....				
Barnedman .....	T. Love .....	.....	Ditto .....				
Bathurst .....	H. H. Hutchinson .....	.....	Ditto .....				
Bendemeer .....	Constable H. B. H. Stumbles .....	.....	Ditto .....				
Berrima .....	F. Galbraith .....	.....	Ditto .....				
Bingera .....	T. Connolly .....	.....	Ditto .....				
Bombala .....	W. A. Dovers .....	.....	Ditto .....				
Braidwood .....	C. E. Oslear .....	.....	Ditto .....				
Carcoar .....	W. B. Warner .....	.....	Ditto .....				
Cobar .....	F. S. Osborne .....	.....	Ditto .....				
Copeland .....	H. De Boos .....	.....	Ditto .....				
Cowra .....	W. G. B. Smith .....	.....	Ditto .....				
Cootamundra .....	C. H. B. Primrose .....	.....	Ditto .....				
Dalmorton .....	W. F. Poole .....	.....	Ditto .....				
Dubbo .....	L. M'Guinn .....	.....	Ditto .....				
Dungog .....	C. G. Smith .....	.....	Ditto .....				
Eden .....	J. W. Lees .....	.....	Ditto .....				
Emmaville .....	M. Sheahan .....	.....	Ditto .....				
Eurobodalla .....	Constable H. Lea .....	.....	Ditto .....				
Fairfield .....	J. P. Curran .....	.....	Ditto .....				
Forbes .....	E. A. T. Pery .....	.....	Ditto .....				
Glen Innes .....	Vere De H. Besnard .....	.....	Ditto .....				
Grafton .....	W. Clarke .....	.....	Ditto .....				
Grenfell .....	W. H. Hazelton .....	.....	Ditto .....				
Gulgong .....	H. De Boos .....	.....	Ditto .....				
Gundagai .....	C. W. Weekes .....	.....	Ditto .....				
Gunning .....	J. F. Kenyon .....	.....	Ditto .....				
Goulburn .....	O. A. Willans .....	.....	Ditto .....				
Hargraves .....	T. O'Brien .....	.....	Ditto .....				
Hill End .....	James Watts .....	.....	Ditto .....				
Hillston .....	M. Hogan .....	.....	Ditto .....				
Inverell .....	J. H. Thompson .....	.....	Ditto .....				
Ironbarks .....	J. S. Hayes .....	.....	Ditto .....				
Kempsey .....	J. Ducat .....	.....	Ditto .....				
Kiandra .....	W. D. Bailey .....	.....	Ditto .....				
Lionsville .....	R. Wilkinson .....	.....	Ditto .....				
Lismore .....	C. Coghlan .....	.....	Ditto .....				
Lithgow .....	H. Lumsdaine .....	.....	Ditto .....				
Little River .....	P. J. Galway .....	.....	Ditto .....				
Murwillumbah .....	Joshua Bray .....	.....	Ditto .....				
Milparinka .....	E. C. King .....	.....	Ditto .....				
Mount Macdonald .....	G. A. Gunning .....	.....	Ditto .....				
Moruya .....	H. W. Barton .....	.....	Ditto .....				
Mitchell .....	Constable T. G. Wright .....	.....	Ditto .....				
Mudgee .....	R. H. Acheron .....	.....	Ditto .....				



Office	Nam	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£	
<b>SECRETARY FOR MINES—MINES—continued.</b>					
<b>WARDENS' CLERKS—continued—</b>					
<b>Districts—continued.</b>					
Nana Creek .....	G. Geddes .....	.....	Governor and Executive Council	30	} Also 5s. per cent. Commission on the sale of Miners' Rights and Licenses.
Nerriga .....	P. J. Galway .....	.....	Ditto .....	10	
Nimitybelle .....	G. W. Myers .....	.....	Ditto .....	15	
Nowra .....	W. Lovegrove .....	.....	Ditto .....	Nil.	
Nundle .....	Wm. Hawley .....	.....	Ditto .....	20	
Oberon .....	Senior-constable O'Connor	.....	Ditto .....	10	
Orange .....	F. B. Hales .....	.....	Ditto .....	Nil.	
Parkes .....	W. C. Weston .....	.....	Ditto .....	Nil.	
Penrith .....	J. K. Cleeve .....	.....	Ditto .....	Nil.	
Rockley .....	T. C. Cromie .....	.....	Ditto .....	20	
Rylstone .....	W. W. Armstrong .....	.....	Ditto .....	Nil.	
Scone .....	H. J. Leary .....	.....	Ditto .....	Nil.	
Silverton .....	John Saunders .....	.....	Ditto .....	100	
Sofala .....	M. Fagan .....	.....	Ditto .....	20	
Temora .....	J. Davoren .....	.....	Ditto .....	Nil.	
Tenterfield .....	J. H. Tompson .....	.....	Ditto .....	Nil.	
Tingha .....	W. Norton .....	.....	Ditto .....	Nil.	
Tomingley .....	Constable J. Farquharson..	.....	Ditto .....	20	
Trunkey .....	W. T. Lee .....	.....	Ditto .....	15	
Tuena .....	W. Mathews .....	.....	Ditto .....	20	
Tumberumba .....	H. M. Langford .....	.....	Ditto .....	20	
Tamut .....	C. L. Lloyd .....	.....	Ditto .....	Nil.	
Uralla .....	H. Roman .....	.....	Ditto .....	Nil.	
Wagonga .....	A. M. Smith .....	.....	Ditto .....	30	
Walcha .....	T. H. Smith .....	.....	Ditto .....	Nil.	
Wellington .....	W. Carson .....	.....	Ditto .....	Nil.	
Wilson's Downfall .....	Constable Draper .....	.....	Ditto .....	10	
Wilcannia .....	.....	.....	Ditto .....	Nil.	
Yarrara .....	J. K. Armstrong .....	.....	Governor and Executive Council	10	
Young .....	W. C. Rodgerson .....	.....	Ditto .....	Nil.	
Yass .....	G. Addison .....	.....	Ditto .....	Nil.	
<b>MINING REGISTRARS—</b>					
<b>Districts—</b>					
Adelong .....	J. James .....	.....	Governor and Executive Council		} Allowed Commission on sale of Miners' Rights and Licenses.
Albury .....	C. A. Conley .....	.....	Ditto .....		
Araluen .....	E. F. Carlile .....	.....	Ditto .....		
Armidale .....	C. L. C. Badham .....	.....	Ditto .....		
Ballina .....	H. Bassman .....	.....	Ditto .....		
Barmedman .....	T. Love .....	.....	Ditto .....		
Bathurst .....	H. H. Hutchinson .....	.....	Ditto .....		
Barraba .....	K. T. Garland .....	.....	Ditto .....		
Bendemeer .....	Constable L. H. Stumbles	.....	Ditto .....		
Berrima .....	F. Galbraith .....	.....	Ditto .....		
Bingera .....	T. Connolly .....	.....	Ditto .....		
Bombala .....	W. A. Dovers .....	.....	Ditto .....		
Braidwood .....	C. E. Oslear .....	.....	Ditto .....		
Burrowa .....	J. R. Macdonald .....	.....	Ditto .....		
Condobolin .....	T. A. Slack .....	.....	Ditto .....		
Carcoar .....	W. B. Warner .....	.....	Ditto .....		
Cobar .....	T. C. K. M'Kell .....	.....	Ditto .....		
Copeland .....	C. De Boos .....	.....	Ditto .....		
Cooma .....	D. E. Troughton .....	.....	Ditto .....		
Cootamundra .....	C. H. B. Primrose .....	.....	Ditto .....		
Cowra .....	W. G. B. Smith .....	.....	Ditto .....		
Dalmorton .....	W. F. Poole .....	.....	Ditto .....		
Dungog .....	C. G. Smith .....	.....	Ditto .....		
Dubbo .....	L. M'Guinn .....	.....	Ditto .....		
Eden .....	J. W. Lees .....	.....	Ditto .....		
Emmaville .....	M. Sheahan .....	.....	Ditto .....		
Eurobodalla .....	Constable H. Lea .....	.....	Ditto .....		
Fairfield .....	J. P. Curran .....	.....	Ditto .....		
Forbes .....	E. A. T. Pery .....	.....	Ditto .....		
Glen Innes .....	Vere De H. Benard .....	.....	Ditto .....		
Grafton .....	W. Clarke .....	.....	Ditto .....		
Grenfell .....	W. H. Hazelton .....	.....	Ditto .....		
Gulgong .....	H. De Boos .....	.....	Ditto .....		
Gundaroo .....	Constable F. P. S. Ewen ..	.....	Ditto .....		
Gunnedah .....	W. B. Connelly .....	.....	Ditto .....		
Gunning .....	J. F. Kenyon .....	.....	Ditto .....		
Gundagai .....	C. W. Weekes .....	.....	Ditto .....		
Goulburn .....	O. A. Willans .....	.....	Ditto .....		
Hargraves .....	T. O'Brien .....	.....	Ditto .....		
Hay .....	W. Chisholm .....	.....	Ditto .....		
Hillston .....	M. Hogan .....	.....	Ditto .....		
Hill End .....	Jas. Watts .....	.....	Ditto .....		
Inverell .....	J. H. Thompson .....	.....	Ditto .....		

Office.	Name.	Date of Appointment.	By whom appointed, and under what instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
<b>SECRETARY FOR MINES—MINES—continued.</b>					
<b>MINING REGISTRARS—continued.</b>					
<b>Districts—continued.</b>					
Ironbarks .....	J. S. Hayes .....	.....	Governor and Executive Council		
Kempsey .....	J. Ducat .....	.....	Ditto .....		
Kiandra .....	W. D. Bailey .....	.....	Ditto .....		
Lithgow .....	H. Lumsdaine .....	.....	Ditto .....		
Lionsville .....	R. Wilkinson .....	.....	Ditto .....		
Lismore.....	C. Coghlan .....	.....	Ditto .....		
Little River .....	P. J. Galway .....	.....	Ditto .....		
Mitchell .....	Constable T. G. Wright .....	.....	Ditto .....		
Milparinka .....	E. C. King .....	.....	Ditto .....		
Moruya .....	W. Barton .....	.....	Ditto .....		
Mount Hope.....	.....	.....	.....		
Mount M'Donald.....	R. A. Gunning.....	.....	Governor and Executive Council		
Mudgee.....	R. H. Achison.....	.....	Ditto .....		
Murwillumbah .....	Joshua Bray.....	.....	Ditto .....		
Nana Creek .....	G. Geddes .....	.....	Ditto .....		
Nimitybelle .....	G. W. Myers .....	.....	Ditto .....		
Nowra .....	W. Lovegrove .....	.....	Ditto .....		
Nundle .....	W. Hawley .....	.....	Ditto .....		
Nerriga .....	P. J. Galway .....	.....	Ditto .....		
Oberon .....	John O'Connor .....	.....	Ditto .....		
Orange .....	T. B. Hales .....	.....	Ditto .....		
Parkes .....	W. C. Weston .....	.....	Ditto .....		
Purnamoota .....	A. F. Lloyd .....	.....	Ditto .....		
Rockley.....	T. C. Cromie .....	.....	Ditto .....		
Scone .....	H. J. Leary .....	.....	Ditto .....		
Silverton .....	J. Saunders .....	.....	Ditto .....		
Sofala .....	M. Fagan .....	.....	Ditto .....		
Taree .....	J. A. Creagh .....	.....	Ditto .....		
Tenterfield .....	F. Bume .....	.....	Ditto .....		
Tomingly .....	Constable J. Farquharson .....	.....	Ditto .....		
Trunkey .....	W. T. Lee.....	.....	Ditto .....		
Tuena .....	W. Mathews .....	.....	Ditto .....		
Tumbarumba .....	H. M. Langford .....	.....	Ditto .....		
Tumut .....	C. L. Lloyd .....	.....	Ditto .....		
Uralla .....	H. Roman .....	.....	Ditto .....		
Urana .....	R. B. Hayes .....	.....	Ditto .....		
Wagonga .....	A. M. Smith.....	.....	Ditto .....		
Waicha .....	T. H. Smith.....	.....	Ditto .....		
Wellington .....	W. Carson .....	.....	Ditto .....		
Wilcannia.....	.....	.....	.....		
Wilson's Downfall .....	Constable J. G. Draper .....	.....	Governor and Executive Council		
Yarrara .....	J. K. Armstrong .....	.....	Ditto .....		
Young .....	W. C. Rodgeron.....	.....	Ditto .....		
Yass .....	G. Addison .....	.....	Ditto .....		
<b>OFFICERS APPOINTED TO ISSUE MINERS' RIGHTS AND LICENSES—</b>					
<b>Districts—</b>					
Adelong .....	J. James .....	.....	Governor and Executive Council		
Albury .....	C. A. Conley.....	.....	Ditto .....		
Araluen.....	E. F. Carlile.....	.....	Ditto .....		
Armidale .....	C. L. C. Badham .....	.....	Ditto .....		
Barraba.....	K. T. Garland .....	.....	Ditto .....		
Barmedman .....	Thos. Love .....	.....	Ditto .....		
Bathurst .....	H. H. Hutchinson .....	.....	Ditto .....		
Bega .....	J. T. Locke .....	.....	Ditto .....		
Bendemeer .....	Constable L. H. Stumbles .....	.....	Ditto .....		
Berrima.....	F. Galbraith.....	.....	Ditto .....		
Bingera .....	T. Connolly .....	.....	Ditto .....		
Bombala .....	W. A. Dovers .....	.....	Ditto .....		
Bourke.....	T. W. Ward .....	.....	Ditto .....		
Braidwood .....	C. E. Oslear .....	.....	Ditto .....		
Brewarrina .....	J. Dawson .....	.....	Ditto .....		
Bulladelah .....	C. Quale .....	.....	Ditto .....		
Burrowa .....	J. E. Macdonald .....	.....	Ditto .....		
Carcoar .....	W. B. Warner.....	.....	Ditto .....		
Cobar.....	F. S. Osborne .....	.....	Ditto .....		
Cooma .....	D. E. Troughton .....	.....	Ditto .....		
Cootamundra .....	C. H. B. Primrose .....	.....	Ditto .....		
Coonabarabran .....	J. W. Edwards.....	.....	Ditto .....		
Copeland .....	C. De Boos .....	.....	Ditto .....		
Corowa .....	F. Battye .....	.....	Ditto .....		
Cowra .....	W. G. B. Smith .....	.....	Ditto .....		
Dalmorton .....	W. F. Poole.....	.....	Ditto .....		
Dubbo .....	L. M'Guinn .....	.....	Ditto .....		
Dungog .....	C. G. Smith .....	.....	Ditto .....		
Eden .....	J. W. Lees .....	.....	Ditto .....		
Emmaville .....	M. Sheahan .....	.....	Ditto .....		
Eurobodalla .....	Constable H. Lea .....	.....	Ditto .....		
Fairfield .....	J. P. Curran.....	.....	Ditto .....		

Allowed Commission on sale of Miners' Rights and Licenses.

Allowed Commission on the sale of Miners' Rights and Licenses, and collection of Revenue on account of Leases.

Office	Name	Date of Appointment.	By whom appointed, and under what Instrument	Annual Salary.	Date of first Appointment under the Colonial Government
<b>SECRETARY FOR MINES—MINES—continued.</b>					
<b>OFFICERS APPOINTED TO ISSUE MINERS' RIGHTS AND LICENSES—continued.</b>					
<i>Districts—continued.</i>					
Forbes .....	E A. T. Pery .. .	.....	Governor and Executive Council		
Glen Innes .....	.....	.....	Ditto .. .		
Grafton .....	W. Clarke .. .	.....	Ditto .. .		
Grenfell .....	W H Hazelton .. .	.....	Ditto .. .		
Gulgong .....	H De Boos .. .	.....	Ditto .. .		
Gunning .....	J F. Kenyon .. .	.....	Ditto .. .		
Gundagai .....	C W Weekes .. .	.....	Ditto .. .		
Gundaroo .....	Constable F S. P. Ewen	.....	Ditto .. .		
Gunnedah .....	W. B. Connell .. .	.....	Ditto .. .		
Goulburn .....	O A. Willans .. .	.....	Ditto .. .		
Hargraves .....	T O'Brien .. .	.....	Ditto .. .		
Hartley .....	H Lumsdaine .. .	.....	Ditto .. .		
Hay .....	G F Scott .. .	.....	Ditto .. .		
Hillston .....	M Hogan .. .	.....	Ditto .. .		
Hill End .....	Jas. Watts .. .	.....	Ditto .. .		
Inverell .....	J H Thompson .. .	.....	Ditto .. .		
Ironbarks .....	J S Hayes .. .	.....	Ditto .. .		
Kempsey .....	J Ducat .. .	.....	Ditto .. .		
Kiandra .....	W D Bailey .. .	.....	Ditto .. .		
Leonsville .....	R Wilkinson .. .	.....	Ditto .. .		
Lasmore .....	C Coghlan .. .	.....	Ditto .. .		
Little River .....	P J Galway .. .	.....	Ditto .. .		
Lithgow .....	H Lumsdaine .. .	.....	Ditto .. .		
Major's Creek .....	J Heazlett .. .	.....	Ditto .. .		
Marulan .....	.....	.....	Ditto .. .		
Milpannka .....	E C King .. .	.....	Ditto .. .		
Mitchell .....	Constable T. G. Wright	.....	Ditto .. .		
Moruya .....	W Barton .. .	.....	Ditto .. .		
Mount M'Donald .....	G A Gunning .. .	.....	Ditto .. .		
Mount Hope .....	.....	.....	Ditto .. .		
Mudgee .....	R H Acheson .. .	.....	Ditto .. .		
Murrurundi .....	J. R. Evans .. .	.....	Ditto .. .		
Murrumburrah .....	C. Cutchiffe .. .	.....	Ditto .. .		
Muttama .....	A Armstrong .. .	.....	Ditto .. .		
Nana Creek .....	G Geddes .. .	.....	Ditto .. .		
Narrandera .....	G F. Scott .. .	.....	Ditto .. .		
Neeriga .....	P J Galway .. .	.....	Ditto .. .		
Nimitybelle .....	G W. Myers .. .	.....	Ditto .. .		
Nowra .....	W Lovegrove .. .	.....	Ditto .. .		
Nundle .....	W Hawley .. .	.....	Ditto .. .		
Nymagee .....	Constable E. C. Day	.....	Ditto .. .		
Oberon .....	Semor-constable O'Connor	.....	Ditto .. .		
Orange .....	F B Hales .. .	.....	Ditto .. .		
Parkes .....	W C Weston .. .	.....	Ditto .. .		
Paterson .....	W. Le Brun Brown	.....	Ditto .. .		
Penrith .....	J K Cleeve .. .	.....	Ditto .. .		
Purnamoota .....	A. F. Lloyd .. .	.....	Ditto .. .		
Raymond Terrace .....	C R Middleton .. .	.....	Ditto .. .		
Reedy Flat .....	Constable Dixon .. .	.....	Ditto .. .		
Rockley .....	T C Cromie .. .	.....	Ditto .. .		
Rylstone .....	W. W. Armstrong .. .	.....	Ditto .. .		
Scone .....	H J Leary .. .	.....	Ditto .. .		
Silverton .....	T Saunders .. .	.....	Ditto .. .		
Singleton .....	W Dudding .. .	.....	Ditto .. .		
Sofala .....	M Fagan .. .	.....	Ditto .. .		
Stroud .....	T Laman .. .	.....	Ditto .. .		
Sydney .....	W Newcombe .. .	.....	Ditto .. .		
Tamworth .....	D W Irving .. .	.....	Ditto .. .		
Tarcutta .....	Constable Anderson .. .	.....	Ditto .. .		
Temora .....	J. Davoren .. .	.....	Ditto .. .		
Tenterfield .....	J H Thompson .. .	.....	Ditto .. .		
Tingha .....	W. Noiton .. .	.....	Ditto .. .		
Tuena .....	S. C. W. Mathews .. .	.....	Ditto .. .		
Timbercumbra .....	H M Langford .. .	.....	Ditto .. .		
Tumut .....	C J Lloyd .. .	.....	Ditto .. .		
Trunkey .....	W. T. Lee .. .	.....	Ditto .. .		
Tomungley .....	Constable Murphy .. .	.....	Ditto .. .		
Uralla .....	H. Roman .. .	.....	Ditto .. .		
Urana .....	R. B. Hayes .. .	.....	Ditto .. .		
Walcha .....	L. H. Smith .. .	.....	Ditto .. .		
Wagonga .....	A. M. Smith .. .	.....	Ditto .. .		
Wellington .....	W Carson .. .	.....	Ditto .. .		
Wilcannia .....	G H Gower .. .	.....	Ditto .. .		
Wilson's Downfall .....	Constable J. G. Draper	.....	Ditto .. .		
Wingham .....	J. A. Creagh .. .	.....	Ditto .. .		
Wollongong .....	D R Jamieson .. .	.....	Ditto .. .		
Yarrara .....	J K Armstrong .. .	.....	Ditto .. .		
Young .....	W. C. Rodgerston .. .	.....	Ditto .. .		
Yass .....	G. Addison .. .	.....	Ditto .. .		

Allowed Commission on the sale of Miners' Rights and Licenses, and collection of Revenue on account of Leases.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>SECRETARY FOR MINES—MINES—continued.</b>					
<b>BAILIFFS OF WARDENS' COURTS—</b>					
<b>Districts—continued.</b>					
Adelong .....	J. C. Wagner .....	.....	Governor and Executive Council	20 0 0	
Albury .....	W. Sims .....	.....	Ditto .....	10 0 0	
Araluen .....	G. Taylor .....	.....	Ditto .....	20 0 0	
Armidale .....	P. Dean .....	.....	Ditto .....	20 0 0	
Barmedman .....	B. M'Keon .....	.....	Ditto .....	10 0 0	
Bathurst .....	J. H. Berney .....	.....	Ditto .....	10 0 0	
Bombala .....	J. M. Gleeson .....	.....	Ditto .....	10 0 0	
Braidwood .....	G. F. Taylor .....	.....	Ditto .....	10 0 0	
Carcoar .....	C. Higgs .....	.....	Ditto .....	15 0 0	
Copeland .....	Senior constable Gamble .....	.....	Ditto .....	25 0 0	
Cowra .....	J. Murr .....	.....	Ditto .....	15 0 0	
Dubbo .....	W. H. Parker .....	.....	Ditto .....	10 0 0	
Dungog .....	G. Muddle .....	.....	Ditto .....	15 0 0	
Emmaville .....	J. P. Stuart .....	.....	Ditto .....	20 0 0	
Forbes .....	G. E. Job .....	.....	Ditto .....	20 0 0	
Glen Innes .....	P. Kinsella .....	.....	Ditto .....	10 0 0	
Grafton .....	F. Doberer .....	.....	Ditto .....	10 0 0	
Grenfell .....	W. H. Hazelton .....	.....	Ditto .....	20 0 0	
Gulgong .....	J. B. Clarke .....	.....	Ditto .....	20 0 0	
Gundagai .....	F. Morano .....	.....	Ditto .....	15 0 0	
Gunning .....	R. Sherriff .....	.....	Ditto .....	10 0 0	
Hargraves .....	T. O'Brien .....	.....	Ditto .....	10 0 0	
Hill End .....	T. Purcell .....	.....	Ditto .....	25 0 0	
Inverell .....	C. Egan .....	.....	Ditto .....	10 0 0	
Kiandra .....	J. Love .....	.....	Ditto .....	10 0 0	
Little River .....	Constable J. Scott .....	.....	Ditto .....	10 0 0	
Mudgee .....	H. E. Wells .....	.....	Ditto .....	10 0 0	
Moruya .....	H. W. Barton .....	.....	Ditto .....	15 0 0	
Mount M'Donald .....	R. Eastley .....	.....	Ditto .....	10 0 0	
Nowra .....	C. Murray .....	.....	Ditto .....	10 0 0	
Orange .....	G. G. Mackay .....	.....	Ditto .....	15 0 0	
Parke .....	C. Cawley .....	.....	Ditto .....	20 0 0	
Queanbeyan .....	J. H. Hinksman .....	.....	Ditto .....	20 0 0	
Rockley .....	R. Aldred .....	.....	Ditto .....	10 0 0	
Silverton .....	J. Collins .....	.....	Ditto .....	15 0 0	
Sofala .....	J. F. M'Williams .....	.....	Ditto .....	20 0 0	
Temora .....	James Davoren .....	.....	Ditto .....	30 0 0	
Tenterfield .....	William Laird .....	.....	Ditto .....	20 0 0	
Tingha .....	Jas Rank .....	.....	Ditto .....	20 0 0	
Trunkey .....	W. H. Madew .....	.....	Ditto .....	10 0 0	
Tumbarumba .....	W. Loveridge .....	.....	Ditto .....	15 0 0	
Tuena .....	W. H. Madew .....	.....	Ditto .....	10 0 0	
Tumut .....	J. Carr .....	.....	Ditto .....	10 0 0	
Wagonga .....	J. Shottin .....	.....	Ditto .....	20 0 0	
Wellington .....	P. Madden .....	.....	Ditto .....	10 0 0	
Wilcannia .....	Arthur Pratt .....	.....	Ditto .....	10 0 0	
<b>CONSERVATION OF FORESTS.</b>					
<b>Head Office—</b>					
Chief Clerk .....	William Francis Piper .....	1 Mar., 1882	Governor and Executive Council	340 0 0	1 May, 1863.*
Clerks .....	Arthur A. Daniel .....	1 April, 1882	Ditto .....	240 0 0	4 Feb., 1875.
	M. Meredith .....	1 Mar., 1882	Ditto .....	240 0 0	1 Mar., 1882.
	J. S. Cheesbrough .....	1 Aug., 1883	Ditto .....	240 0 0	1 Aug., 1883.
	Charles H. Bennett .....	1 Mar., 1882	Ditto .....	190 0 0	5 Aug., 1879.
	William C. Hinwood .....	1 June, 1883	Ditto .....	190 0 0	1 April, 1882.
	John R. Bell .....	1 Dec., 1884	Ditto .....	170 0 0	10 Mar., 1881.
	H. D. Wood .....	9 Aug., 1883	Ditto .....	140 0 0	9 Aug., 1883.
	T. F. C. Binny .....	9 Aug., 1883	Ditto .....	140 0 0	9 Aug., 1883.
Temporary Clerk .....	J. Quinlan .....	1 Jan., 1886	Minister for Mines	25 0 0	1 Jan., 1886.
Inspector of Forests .....	John Duff .....	1 Dec., 1882	Governor and Executive Council	390 0 0	1 Sept., 1866.
<b>Forest Rangers—</b>					
Armidale .....	R. L. Siddins .....	1 Mar., 1882	Ditto .....	210 0 0	1 Mar., 1882.
Boat Harbour .....	Walter Mecham .....	1 July, 1883	Ditto .....	215 0 0	1 July, 1883.
Bowral .....	H. O. Rotton .....	1 July, 1882	Ditto .....	210 0 0	1 July, 1882.
Booral .....	P. Cullen <sup>1</sup> .....	1 Mar., 1883	Ditto .....	205 0 0	— July, 1878.*
Candelo .....	Tyrone White <sup>2</sup> .....	1 July, 1883	Ditto .....	205 0 0	18 Sept., 1882.
	succeeded by				
Casino .....	W. Macdonald <sup>3</sup> .....	7 Aug., 1886	Ditto .....	200 0 0	— Oct., 1876.*
Condobolin .....	Thomas H. Green .....	1 Jan., 1879	Ditto .....	210 0 0	1 Jan., 1876.
Cowra .....	Thomas Kidston .....	1 July, 1883	Ditto .....	215 0 0	1 July, 1883.
Penrith .....	Robert Stevenson .....	1 Jan., 1879	Ditto .....	215 0 0	14 Mar., 1877.
Deniliquin .....	Israel Noake .....	1 April, 1879	Ditto .....	210 0 0	11 Oct., 1875.
Dubbo .....	Osborne Wilshire <sup>4</sup> .....	1 Jan., 1879	Ditto .....	210 0 0	12 Oct., 1877.
Gosford .....	John Martin <sup>5</sup> .....	1 Mar., 1882	Ditto .....	215 0 0	1 Mar., 1882.
Grafton .....	Enoch Cobercroft <sup>6</sup> .....	1 July, 1883	Ditto .....	205 0 0	1 July, 1883.
Gunnedah .....	F. P. Huxham .....	1 Mar., 1882	Ditto .....	215 0 0	1 Mar., 1882.
Glen Innes .....	H. W. Powell .....	1 Mar., 1885	Ditto .....	210 0 0	1 Mar., 1885.
Lismore .....	E. J. Deverell .....	1 Mar., 1882	Ditto .....	210 0 0	1 Mar., 1882.
	H. S. Shadforth <sup>7</sup> .....	1 July, 1883	Ditto .....	205 0 0	1 July, 1883.
<sup>1</sup> Transferred to Mudgee <sup>2</sup> To 6 Aug., 1836, transferred to Lismore. <sup>3</sup> See Kempsey. <sup>4</sup> £75 per annum as Assistant Inspector of Fisheries. <sup>5</sup> Transferred to Gosford. <sup>6</sup> Transferred to Singleton <sup>7</sup> Transferred to Candelo, then to Urana.    * Services not continuous.					

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government
				£ s. d.	
<b>SECRETARY FOR MINES—CONSERVATION OF FORESTS—continued.</b>					
<i>Forest Rangers—continued.</i>					
Moama	Joseph Guilfoyle	1 Dec., 1883	Governor and Executive Council	210 0 0	1 June, 1876.
Moama	John A. Manton <sup>1</sup>	22 Sept., 1875	Ditto	265 0 0	22 Sept., 1875.
Mudgee	G. R. Brown <sup>2</sup>	1 Mar., 1882	Ditto	210 0 0	— May, 1859.*
Musclebrook	Edward Higgins <sup>3</sup>	9 Sept., 1879	Ditto	205 0 0	9 Sept., 1879.
	succeeded by			to 1 March.	
	A. Rudder <sup>4</sup>	1 April, 1886	Ditto	205 0 0	20 Aug., 1884.
Narrabri	T. H. B. M'Gee	1 July, 1884	Ditto	210 0 0	1 July, 1884.
Narrandera	James G. Condell	1 Jan., 1879	Ditto	210 0 0	17 Oct., 1859.*
Port Macquarie	T. W. Wilson <sup>5</sup>	1 Oct., 1879	Ditto	210 0 0	1 Sept., 1875.*
Queanbeyan	T. M. Evans	1 Mar., 1882	Ditto	210 0 0	1 Mar., 1882.
Silverton	R. O'Connell	1 Dec., 1884	Minister for Mines	15 0 0	28 Aug., 1878.
Tocumwall	Samuel Payten	1 Jan., 1879	Governor and Executive Council	210 0 0	21 Sept., 1876.
Ulladulla	John S. Allan	1 Oct., 1879	Ditto	210 0 0	20 Mar., 1879.
Wagga Wagga North	William Allen	1 May, 1880	Ditto	210 0 0	1 Mar., 1876.
Wagga Wagga South, Albury, and Tumut.	J. S. Taylor	1 Mar., 1882	Ditto	215 0 0	1 Mar., 1882.
<i>Assistant Forest Rangers—</i>					
Adelong	J. Ward	1 July, 1883	Ditto	160 0 0	19 Mar., 1877.
Coonamble	George King	16 Nov., 1883	Ditto	160 0 0	16 Nov., 1883.
Cooranbong	F. E. Brunker	1 July, 1883	Ditto	155 0 0	1 July, 1883.
Forbes	R. J. Cork	1 July, 1883	Ditto	180 0 0	14 May, 1877.
Inverell	W. Byron	1 Jan., 1884	Ditto	155 0 0	9 June, 1873.*
Grafton	F. M. C. Forstor	1 Mar., 1882	Ditto	155 0 0	7 April, 1876.*
Grenfell	J. G. Postlethwaite	1 July, 1884	Ditto	160 0 0	1 July, 1884.
Kempsey	W. MacDonald <sup>6</sup>	1 July, 1883	Ditto	160 0 0	— Oct., 1876.*
	succeeded by			to 6 August.	
	W. Coulter <sup>7</sup>	7 Aug., 1886	Ditto	150 0 0	7 Aug., 1886.
Koondrook	W. Cousins <sup>8</sup>	1 July, 1883	Ditto	160 0 0	1 July, 1883.
Urana	T. Musgrave <sup>9</sup>	1 July, 1883	Ditto	155 0 0	15 Oct., 1869.
(Unattached)	A. Rudder <sup>10</sup>	20 Aug., 1884	Minister for Mines	150 0 0	20 Aug., 1884.
				to 31 March.	
<i>Acting Forest Rangers—</i>					
Lord Howe Island	C. Stevens	1 April, 1882	Secretary for Mines	30 0 0	1 April, 1882.
	J. Robbins	1 April, 1882	Ditto	30 0 0	1 April, 1882.
<i>Caretaker of Forest Reserves—</i>					
Oberon	Jeremiah Wilson	27 Aug., 1877	Ditto	[10s. per diem when employed in ranging Forests.]	27 Aug., 1877.
Engine-driver, Steam-launch "Neptune," Murray River (Moama.)	J. Russell	20 Mar., 1878	Ditto	£10 per month	20 Mar., 1878.
Boy Assistant	C. Clark	20 Mar., 1878	Ditto	5s. per diem	20 Mar., 1878.

<sup>1</sup> Allowed £20 office rent. <sup>2</sup> Transferred to Port Macquarie. <sup>3</sup> Afterwards changed to Singleton. Transferred to Department of Lands, 31st March, 1886. <sup>4</sup> Promoted. To be stationed at Booral. <sup>5</sup> Transferred to Lismore. <sup>6</sup> Promoted. Remains at Kempsey. <sup>7</sup> To be stationed at Dubbo. <sup>8</sup> Allowed £50 per annum as Collector of Customs. <sup>9</sup> Transferred to Candelo. <sup>10</sup> Promoted. \* Services not continuous.

**SHEEP DIRECTORS.**

District.	Names of Directors.	How Appointed.	When gazetted.	Annual salary.	Date of first Appointment under the Colonial Government.
Albury	William Kiddle, Esq., Walbundrie..... C. H. Douglas, Esq., Walla Walla..... Wm. Turner, Esq., Stoney Park, Jindera..... Alexander Macvean, Esq., Howlong..... John Grieve, Esq., Bungowannah..... Edwin C. Blomfield, Esq., Borolong, Armidale.....	Elected by the Sheep-owners of the District...	23 Feb., 1886	Nil.	
Armidale	John Rogerson, Esq., Gostwyck, Uralla..... George R. Gill, Esq., Emu Creek, Walcha..... Richard Hargrave, Esq., junr., Hillgrove..... George P. Morse, Esq., Abington, Bundara.....	Ditto	2 Mar., 1886		
Balranald	G. C. Jaffrey, Esq., Cha Sing..... T. Cumming, Esq., Ker Kerie..... J. H. Morphett, Esq., Yanga..... W. J. Mein, Esq., Moolpa..... Alexander Lawrence, Esq., Canally.....	Ditto	5 Mar., 1886		
Bathurst	J. N. Gilmour, Bathampton..... J. M'Kinnon, Limekilns..... Wilson M'Cauley, Newstead, Tarana..... F. Treweeke, Clifton Grove, Orange.....	Ditto	2 Mar., 1886		
Berrina	H. E. Kater, Esq., Sutton Forest..... David Morrice, Esq., Ealing Forest, Cross Roads..... T. P. Galbraith, Esq., Berrima..... W. J. Cordcaux, Esq., Bendooley, Berrima..... M. Butler, Esq., Woodlands.....	Secretary for Mines, on the nomination of the Chief Inspector of Stock.....	5 Mar., 1886		
		Elected by the Sheep-owners of the District...	2 Mar., 1886		

District.	Names of Directors	How appointed.	When gazetted.	Annual Salary.	Date of first Appointment under the Colonial Government.
<b>SECRETARY FOR MINES—SHEEP DIRECTORS—continued.</b>					
Bombala .....	Alexander C. S. Fraser, Esq., Baco, Nimitybelle .....	Secretary for Mines, on the nomination of the Chief Inspector of Stock .....	25 Feb., 1886		
	Ronald Campbell, Esq., J.P., Bombala Station .....				
	John Cruickshank, Esq., J.P., Gunningrah	Elected by the Sheepowners on the nomination of the Chief Inspector of Stock	23 Feb., 1886		
Booligal .....	Henry Tollemache Edwards, Esq., J.P., Bibenluc .....				
	Hyam Moses Joseph, Esq., J.P., Mahratta	Ditto .....	19 Mar., 1886		
	John Armstrong, Esq., Gunbar .....				
	Austin Loughnan, Esq., Hunthawang ..	Ditto .....	11 May, 1886		
	Henry Turner, Esq., Cowl Cowl .....				
	Evan Evans, Esq., Roto .....	Secretary for Mines, on the nomination of the Chief Inspector of Stock .....	19 Mar., 1886		
	David Tully, Esq., Merungle .....				
	John M'Caughey, Esq., Tocale .....	Ditto .....	11 Mar., 1884		
	M. Tully, Esq., Warraweena .....				
	M. R. Dwyer, Esq., Mulga No. 1 .....	Ditto .....	2 Mar., 1886		
	D. W. F. Hatten, Esq., Yanda .....				
	C. Brandis, Esq., Breemery* .....	Elected by the Sheep-owners of the District...	26 Feb., 1886		
	succeeded by Malcolm Robertson, Esq., Jandra .....				
	W. F. Gordon, Esq., Manor .....	Secretary for Mines, on the nomination of the Chief Inspector of Stock .....	19 Mar., 1886		
Braidwood .....	J. Wallace, Esq., Nithsdale .....				
	Rowland Hassall, Esq., Braidwood .....	Ditto .....	11 Mar., 1884		
	P. Roberts, Esq., Virginia Water .....				
	H. F. Maddrell, Esq., Braidwood .....	Ditto .....	2 Mar., 1886		
	T. L. L. Learmonth, Esq., Eeneweena .....				
	E. H. Kater, Esq., Mumblebone .....	Elected by the Sheep-owners of the District...	26 Feb., 1886		
Cannonba .....	Wm. Allison, Esq., Bon Cowl .....				
	E. S. Antill, Esq., senr., Gunningbar .....	Secretary for Mines, on the nomination of the Chief Inspector of Stock .....	12 Mar., 1886		
	John Reid, Esq., Tabratong .....				
	Henry Glasson, Esq., Stanfield .....	Ditto .....	19 Mar., 1886		
	Jas. Hall, Esq., Cook's Vale, Peelwood ..				
	S. G. Alford, Esq., Milton, Cowra .....	Secretary for Mines, on the nomination of the Chief Inspector of Stock .....	12 Mar., 1886		
Carcoar .....	Ivie J. Sloan, Esq., North Logan, Cowra				
	B. Stimpson, Esq., Carcoar .....	Ditto .....	19 Mar., 1886		
	Charles Edwards, Esq., Runnymede .....				
	J. B. M'Dougall, Esq., Casino .....	Elected by the Sheep-owners of the District...	2 Mar., 1886		
Casino .....	W. C. Bundock, Esq., J.P., Wyangerie ..				
	H. Barnes, sen., Esq., J.P., Dryabba .....	Secretary for Mines, on the nomination of the Chief Inspector of Stock .....	25 Feb., 1886		
	J. C. Irving, Esq., Tomki .....				
	J. C. Wallace, Esq., Priory Plains, Cobar	Ditto .....	16 Mar., 1886		
	P. Oakden, Esq., Lerida .....				
	M. C. Langtree, Esq., Florida .....	Elected by the Sheep-owners of the District...	19 Feb., 1886		
Cobar .....	P. Leslie, Esq., Amphitheatre .....				
	J. S. Barrow, Esq., Meryula .....	Secretary for Mines, on the nomination of the Chief Inspector of Stock .....	2 Mar., 1886		
	D. S. McLeod, Esq., Bygaloree .....				
	J. L. Rowe, Esq., Borambil .....	Ditto .....	12 Mar., 1886		
Condobolin .....	R. Hope, Esq., Moonbi .....				
	N. A. Gatenby, Esq., Burra Burra .....	Elected by the Sheep-owners of the District...	19 Feb., 1886		
	Wm. H. Clements, Esq., Palesthane .....				
	John Henderson, Esq., Quantambone ..	Secretary for Mines, on the nomination of the Chief Inspector of Stock .....	2 Mar., 1886		
	Thomas J. Sherwin, Esq., Nullawa .....				
	John Turner Macrae, Esq., Brenda .....	Ditto .....	12 Mar., 1886		
Brewarrina .....	Colin M'Kenzie, Esq., Weilmoringle .....				
	William Dickson, Esq., Yarrowin .....	Elected by the Sheep-owners of the District...	19 Feb., 1886		
	Timothy Thomas Gannon, Esq., J.P., Moruya .....				
	Francis M'Mahon, Esq., J.P., Ulladulla.	Ditto .....	12 Mar., 1886		
Broulee .....	Philip Coman, Esq., Eurobodalla .....				
	James Warden, Esq., Ulladulla .....	Elected by the Sheep-owners of the District...	19 Feb., 1886		
	John M'Keon, Esq., J.P., Moruya .....				
	David Ryrie, Esq., Coolringdon .....	Secretary for Mines, on the nomination of the Chief Inspector of Stock .....	2 Mar., 1886		
	Sam. A. Pratt, Esq., Tuyuna .....				
	Wm. Cosgrove, Esq., Riversdale .....	Ditto .....	12 Mar., 1886		
Cooma .....	A. W. M'Keahnie, Esq., Rosedale .....				
	Arthur W. Brooks, Esq., Gezezerick ..	Elected by the Sheep-owners of the District...	19 Feb., 1886		
	S. Hole, Esq., Bomera, Coolah .....				
	H. H. Kelly, Esq., Garawilla, Coona-	Secretary for Mines, on the nomination of the Chief Inspector of Stock .....	2 Mar., 1886		
	barabran .....				
	John M'Master, Esq., Weetalabah .....	Ditto .....	23 Mar., 1886		
Coonabarabran .....	John Hogg, Esq., Coolah .....				
	C. Featherstonhaugh, Esq., Gorianawah,	Ditto .....	12 Mar., 1886		
	Baradine .....				
	Edward Flood, Esq., jun., Carrabear ..	Elected by the Sheep-owners of the District...	19 Feb., 1886		
	G. E. Tracquir, Esq., Quambatho .....				
	W. A. Tobin, Esq., Wingadee .....	Ditto .....	12 Mar., 1886		
Coonamble .....	Sydney M. Tourle, Esq., Bundy .....				
	Henry Ryder, Esq., Calga .....				

\* Resigned.

Districts.	Names of Directors.	How appointed.	When gazetted.	Annual Salary.	Date of first Appointment under the Colonial Government.
<b>SECRETARY FOR MINES—SHEEP DIRECTORS—continued.</b>					
Corowa .....	A. Anderson, Esq., Brocklesby, Corowa... John G. Gray, Esq., Kentucky, Corowa... John Hy. Sargood, Esq., Nouraine, Jerilderie .....	Elected by the Sheep-owners of the District... }	5 Mar., 1886		
	A. Sloane, Esq., Mulwala .....				
	James Sproule, Esq., Momolong, Corowa	Secretary for Mines, on the nomination of the Chief Inspector of Stock .....	5 Mar., 1886		
Deniliquin.....	P. Tracey, Esq., Willow Dale .....	Elected by the Sheep-owners of the District... }	26 Feb., 1886		
	C. W. Brown, Esq., Branxton .....				
	J. W. M'Laurin, Esq., Morocco .....				
	James Dickson, Esq., Caroonboon.....				
Dubbo .....	R. W. Franks, Esq., Boabula..... F. E. Body, Esq., Bundemar .....	Ditto .....	2 Mar., 1886		
	R. T. B. Gaden, Esq., Apsley .....				
	C. M'Kinnon, Esq., Dribong .....				
	J. Penzer, Esq., Yarrandale .....				
	J. D. M'Kay, Esq., Bulganderamine..... Peter Horsman Wood, Esq., J.P., Yarranung, Bega .....	Ditto .....	19 Feb., 1886		
Eden .....	Frederick T. Stennett, Esq., Dry River, Bega.....				
	William Allan, Esq., Elingrove.....				
	Henry Otton, Esq., Ottonville, Bega..... Henry Ritchie, Esq., Avoca .....	Ditto .....	19 Feb., 1886		
Forbes .....	J. Clarke, Esq., Wowingragong .....				
	H. C. Clements, Esq., Eugowra .....				
	E. V. Bowler, Esq., Boyd .....				
	J. G. Lackey, Esq., Nelangaloo .....	Secretary for Mines, on the nomination of the Chief Inspector of Stock ... }	25 Feb., 1886		
	J. Govan, Esq., Weelong .....				
	D. M'Rae, Esq., Furrucabad .....				
	G. A. Cruickshank, Esq., Byron .....				
Glen Innes .....	James Campbell, Esq., Pindai .....	Elected by the Sheep-owners of the District... }	23 Feb., 1886		
	Cecil Bloxsome, Esq., Ranger's Valley... John Fletcher, Esq., Barran .....				
Goulburn... ..	William Jobson, Esq., Goulburn .....	Ditto .....	26 Feb., 1886		Nil.
	F. D. Badgery, Esq., Lake Bathurst ..				
	Henry Maurice, Esq., Marulan .....				
	T. Marsden, Esq., J.P., Goulburn .....				
	Thomas Ayling, Esq., Wardsworth .....	Secretary for Mines, on the nomination of the Chief Inspector of Stock .....	19 Mar., 1886		
	T. H. Smith, Esq., J.P., Gordon Brook				
	W. Small, Esq., J.P., Swan Creek .....				
Grafton .....	*J. H. Munro, Esq., Grafton .....				
	S. Buchan, Esq., Nymbodia .....	Elected by the Sheep-owners of the District... }	19 Feb., 1886		
	J. Zuill, Esq., J.P., Blake's Creek, Lawrence .....				
	P. J. O'Donnell, Esq., Mingay, Coolac...				
	A. Rankin, Esq., Bombowlee.....				
Gundagai .....	C. J. F. M'Donald, Esq., Wantabadgery	Ditto .....	26 Feb., 1886		
	J. Beveridge, Esq., Tenandra Park .....				
	James Crowe, Esq., Gobarralong .....				
	C. G. Stewart, Esq., Wooloondool.....				
Hay .....	R. M. Ayre, Esq., Benduck .....	Ditto .....	12 Mar., 1886		
	Geo. Melrose, Esq., Mangladel .....				
	D. Grant, Esq., Illiilawa .....				
	John Dill, Esq., Toogimbie .....				
	W. Wood, Esq., Benambra .....	Ditto ... ..	12 Mar., 1886		
Hume .....	R. M'icking, Esq., J.P., Manus .....				
	J. Ross, Esq., Kinross .....				
	James Bruce, Esq., Germanton.....				
	J. M'Laurin, Esq., Yarra Yarra .....	Ditto .....	12 Mar., 1886		
Ivanhoe.....	W. Bedford, Esq., Kajuligah.....				
	R. C. Webb, Esq., Kilfera.....				
	R. H. M. Morrison, Esq., Moolah, Mossiel				
	H. E. Brougham, Esq., Ticehurst..... T. Waugh, Esq., Clare.....	Secretary for Mines, on the nomination of the Chief Inspector of Stock .....	19 Mar., 1886		
	G. Hindmarsh, Esq., Gerringong .....				
Kiama .....	G. Sommerville, Esq., Kiama .....				
	R. Miller, Esq., Gerringong .....				
	T. Armstrong, Esq., Albion Park .....	Secretary for Mines, on the nomination of the Chief Inspector of Stock .....	23 Mar., 1886		
	W. Moles, Esq., Tullimbah, Albion Park				
	S. Clift, Esq., East Maitland .....				
	Geo. A. Eckford, Esq., Maitland .....				
Maitland .....	J. F. Doyle, Esq.....	Ditto .....	12 Mar., 1886		
	E. V. C. Mayne, Esq., Branxton .....				
	J. B. Christian, Esq. ....				
	David H. Power, Esq., Cuthro .....				
Menindie .....	K. E. Brodribb, Esq., Poolamacca .....	Ditto .....	12 Mar., 1886		
	G. M'Culloch, Esq., Mount Gipps .....				
	J. S. Armstrong, Esq., Burta .....				
	H. T. Phillips, Esq., Kinchegea .....				

\* Resigned—5 December, 1886.

Districts.	Names of Directors.	How appointed.	When gazetted.	Annual Salary.	Date of first Appointment under the Colonial Government.
<b>SECRETARY FOR MINES—SHEEP DIRECTORS—continued.</b>					
Merriwa .....	J. B. Bettington, Esq., Brindley Park, Merriwa .....	Elected by the Sheep-owners of the District...}	19 Feb., 1886		
	Richard J. Brandon, Esq., Collaroy .....				
	A. I. Traill, Esq., Llangollan, Cassilis .....				
	Alfred W. Blaxland, Esq., Cullengral .....				
Molong .....	A. Busby, Esq., Cassilis .....	Secretary for Mines, on the nomination of the Chief Inspector of Stock.....}	25 Feb., 1886		
	H. S. M. Betts, Esq., Vale Head, Molong .....				
	H. C. Wall, Esq., Davy's Plains .....				
	L. N. Smith, Esq., Boree, Cabonne .....				
Moree .....	G. Bruce, Esq., Loombah, Molong .....	Ditto .....	23 Mar., 1886		
	D. M'Callum, Esq., Brymedura, Molong .....				
	G. W. Paine, Esq., Moree .....				
	W. T. Keene, Esq., Gurley .....				
Mudgee .....	A. G. F. Munro, Esq., Weebolobollo .....	Elected by the Sheep-owners of the District...}	2 Mar., 1886		
	P. C. Watt, Esq., Moree .....				
	J. E. Cory, Esq., Terry-hie-hie .....				
	S. A. Blackman, Esq., Coceyal, Home Rule .....				
Murrurundi .....	R. Rouse, Esq., jun., Birigambil, Gulgong .....	Ditto .....	19 Feb., 1886		
	V. J. Dowling, Esq., Lue, Dungaree .....				
	Herbert A. Cox, Esq., Burrundulla .....				
	Alexander H. Cox, Esq., Oakfield, Mudgee .....				
Narrabri .....	W. A. Wilson, Esq., Murrurundi .....	Ditto .....	2 Mar., 1886		
	W. E. Abbott, Esq., Wingen .....				
	F. R. White, Esq., Blandford .....				
	Donald Macintyre, Esq., Scone .....				
Narrandera .....	H. L. White, Esq., Scone .....	Secretary for Mines, on the nomination of the Chief Inspector of Stock.....}	5 Mar., 1886		
	William C. Antwiss, Esq., Edgeroi .....				
	J. B. Brodie, Esq., Boolcarrol .....				
	F. J. Parks, Esq., Boggabri .....				
Picton .....	J. Mosely, Esq., Tippereenah .....	Elected by the Sheep-owners of the District...}	20 July, 1886		
	W. F. Buchanan, Esq., Killarney* .....				
	Andrew Buchanan, Esq., Killarney .....				
	G. Hobden, Esq., Gogeldrie .....				
Pilliga .....	R. Mitchell, Esq., jun., Bundidgarie .....	Secretary for Mines, on the nomination of the Chief Inspector of Stock.....}	12 Mar., 1886	Nil.	
	John Holloway, Esq., Mumbledool .....				
	John H. Spiller, Esq., Tubbo .....				
	A. A. Devlin, Esq., Uarah .....				
Port Macquarie .....	J. M. Antill, Esq., J.P., Jarvisfield .....	Elected by the Sheep-owners of the District...}	5 Mar., 1886		
	F. A. Downes, Esq., J.P., Brownlow Hills .....				
	W. R. Antill, Esq., J.P., Abbotsford .....				
	John Lakeman, Esq., Camden .....				
Port Stephens .....	G. Bradbury, Esq., J.P., Lingham Holme, Picton .....	Ditto .....	12 Mar., 1886		
	W. M. Loder, Esq., Cuttabri, Wee Waa .....				
	C. A. Long, Esq., Drilldool, Wee Waa .....				
	J. C. Campbell, Esq., Bullerawa, Wee Waa .....				
Queanbeyan .....	D. Taylor, Esq., Keelendi .....	Secretary for Mines, on the nomination of Chief Inspector of Stock .....	12 Mar., 1886		
	B. B. Campbell, Esq., Cubbo, Wee Waa .....				
	John C. M'Intyre, Esq., J.P., Port Macquarie .....				
	J. B. M'Ivor, Esq., Willi Willi .....				
Singleton .....	W. D. Scott, Esq., Moparrabah, Kempsey .....	Elected by the Sheep-owners of the District. }	5 Mar., 1886		
	J. S. Ducat, Esq., Moonaba .....				
	G. J. Wilson, Esq., Eugowra, Rowland Plains .....				
	A. T. Laurie, Esq., J.P., Rawden Vale .....				
Murrurundi .....	A. Laurie, Esq., J.P., Taree .....	Secretary for Mines, on the nomination of the Chief Inspector of Stock .....	12 Mar., 1886		
	J. Higgins, Esq., Berrico .....				
	J. Williams, Esq., Kantbi .....				
	J. D. Andrews, Esq., Woodside .....				
Narrabri .....	George Osborne, Esq., Foxlow, Molonglo .....	Elected by the Sheep-owners .....	2 Mar., 1886		
	Edward K. Grace, Esq., Gungahleen, Gurinderra .....				
	F. Campbell, Esq., Yurralumla, Queanbeyan .....				
	J. M. Atkinson, Esq., Currandooley .....				
Mudgee .....	A. J. Cunningham, Esq., Tuggranong .....	Secretary for Mines, on the nomination of the Chief Inspector of Stock.....}	5 Mar., 1886		
	G. Loder, Esq., Abbey Green, Singleton .....				
	John C. S. M'Douall, Esq., New Freugh, Whittingham .....				
	E. White, Esq., Martindale, Denman .....				
Murrurundi .....	R. A. Hill, Esq., Ravensworth .....	Ditto .....			
	J. Alford, Esq., Maryville, Jerry's Plains .....				

\* Resigned.



Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
SECRETARY FOR MINES—SHEEP DIRECTORS— <i>continued.</i>					
Sydney .....	E. Vickery, Esq., Pitt-street ..... John De V. Lamb, Esq., Gresham-street E. B. Woodhouse, Esq., Mount Gillead, Campbelltown ..... D. M'Master, Esq., Darling Point ..... R. G. Higgins, Esq., Potts's Point .....		Secretary for Mines, on the nomination of the Chief Inspector of Stock .....	16 Mar., 1886	
Tamworth .....	James G. Dight, Esq., Carrol ..... Thomas Dove, Esq., Colley Creek, Willow Tree..... G. B. G. King, Esq., Goonoo Goonoo ... J. F. Croaker, Esq., Wallhallow, Quirindi A. Rodgers, Esq., Attunga.....		Elected by the Sheep- owners of the District ...	5 Mar., 1886	
Tenterfield .....	William J. Cadell, Esq., Deepwater ..... William Henry Walker, Esq., Tenterfield A. R. Fraser, Esq., Mole River..... A. Greenup, Esq., Maryland ..... E. A. P. Gordon, Esq., Strathbogie .....		Ditto .....	23 Feb., 1886	
Urana .....	R. B. Anderson, Esq., Brookong, Urana S. H. Carse, Esq., Yanko Station, Jeril- derie ..... J. Cochran, Esq., Widgerwa ..... Wm. Faed, Esq., Butherawa* ..... D. McLarty, Esq., Bundure, Jerilderie...		Ditto .....	5 Mar., 1886	
Wagga Wagga...	Richard Cox, Esq., Marra ..... J. Robertson, Esq., Mimosa ..... J. King, Esq., Rock ..... A. Mackay, Esq., Pomingalarno ..... J. Hawkins, Esq., Ennayareenya .....		Secretary for Mines, on the nomination of the Chief Inspector of Stock.	5 Mar., 1886	
Walgett .....	F. Y. Wolseley, Esq., Euroka ..... John K. Fleming, Esq., Ulah, Walgett Hugh Miller, Esq., Goangra ..... R. W. Chase, Esq., Llanilloo..... T. Higgins, Esq., Warran Downs .....		Ditto .....	30 Mar., 1886	Nil.
Warialda .....	J. R. Black, Esq., Wallangra..... Austin Mack, Esq., Myall Creek, Bingera G. H. Gordon, Esq., Gragin ..... H. M'Donald, Esq., Myall Creek, Bingera J. W. Scott, Esq., Bogamildi.....		Elected by the Sheep- owners of the District ...	19 Feb., 1886	
Wentworth .....	Wm. Crozier, Esq., J.P., Moorna ..... Charles H. Wreford, Esq., J.P., Moorana R. Tully, Esq., J.P., Lake Victoria ..... A. T. Brooke, Esq., J.P., Tapio..... D. H. Cudmore, Esq., J.P., Avoca .....		Ditto .....	23 Feb., 1886	
Wilcannia .....	James M. Tully, Esq., Nelyambo ..... William Weatherley, Esq., Billilla ..... Alex. Munroe, Esq., Mount Murchison A. I. Johnson, Esq., Murtie ..... Richard Dawes, Esq., Mena Murtie* ... succeeded by John T. Coates, Esq., Culpaulin .....		Ditto .....	2 Mar., 1886	
Windsor .....	Wm. Lamrock, Esq., J.P., Grosevale ... J. D. Single, Esq., Castlereagh ..... A. Town, Esq., Richmond..... W. H. Bowman, Esq., Kurrajong Heights J. K. Lethbridge, Esq., Tregear, St. Mary's.		Secretary for Mines, on the nomination of the Chief Inspector of Stock .....	23 Feb., 1886	
Yass .....	Argyle M'Callum, Esq., Good Hope..... J. M'Bean, Esq., Black Range, Yass ... R. P. Johnson, Esq., Nanima, Yass ..... J. T. Jones, Esq., Taemas ..... John H. K. Hume, Esq., Collingwood...		Ditto .....	30 Mar., 1886	
Young .....	G. H. Green, Esq., Jandra, Young ..... R. H. Roberts, Esq., Currawang, Mur- rumburrah ..... A. Mackay, Esq., Wallendbeen*..... Wm. Wilson, Esq., Cunningham Plains F. W. Hume, Esq., Tarengo, Burrowa...		Ditto .....	5 Mar., 1886	

\* Resigned.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.			Date of first Appointment under the Colonial Government.
				£	s.	d.	
<b>SECRETARY FOR MINES—continued.</b>							
<b>SHEEP INSPECTORS.</b>							
Chief Inspector of Sheep...	Alexander Bruce <sup>1</sup> .....	27 Jan., 1864	Governor and Executive Council	650	0	0	24 Dec., 1861.
Clerks .....	George J. Robinson <sup>2</sup> .....	21 Sept., 1883	Ditto .....	290	0	0	1 May, 1857.
	A. C. Thomson <sup>3</sup> .....	14 June, 1886	Ditto .....	265	0	0	— Aug., 1868.
	P. J. Byrne .....	16 Dec., 1884	Ditto .....	190	0	0	13 Oct., 1883.
Temporary Clerks .....	P. J. Coghlan .....	1 Sept., 1884	Secretary for Mines .....	ros. per diem			23 May, 1883.
	J. B. Bamford .....	9 July, 1884	Ditto .....	ros. ,,			9 July, 1884.
	R. W. George <sup>4</sup> .....	9 Feb., 1885	Ditto .....	ros. ,,			9 Feb., 1885.
	E. A. Bailey <sup>5</sup> .....	15 Feb., 1886	Ditto .....	ros. ,,			11 June, 1879.
Inspectors for the Districts of—							
Albury .....	George E. Mackay .....	7 Mar., 1884	Governor and Executive Council, on nomination of Sheep Directors	360	0	0	21 Mar., 1882.
Armidale .....	C. J. Vynner, M.R.C.V.S. ....	23 Dec., 1885	Ditto .....	260	0	0	6 June, 1884.
Balranald .....	John McLeod, J.P. <sup>6</sup> .....	18 April, 1867	Ditto .....	360	0	0	3 June, 1862.
	succeeded by						
..... (Acting)	Richard J. Gilman <sup>7</sup> .....	27 July, 1886	Secretary for Mines .....	280	0	0	1 Nov., 1884.†
Bathurst .....	George S. Smith .....	27 Feb., 1885	Governor and Executive Council, on nomination of Sheep Directors	260	0	0	16 June, 1884.
Bembala .....	Robert W. Dawson .....	20 Nov., 1885	Ditto .....	260	0	0	26 June, 1884.
Bcurke .....	James Mallon .....	2 May, 1883	Ditto .....	260	0	0	2 May, 1883.
Braidwood .....	H. L. Mater .....	12 Jan., 1883	Ditto .....	260	0	0	12 Jan., 1883.
Carcoar .....	P. L. Smith .....	21 April, 1885	Ditto .....	260	0	0	7 April, 1884.
Cobar .....	James Cotton* .....	20 Mar., 1882	Ditto .....	360	0	0	20 Mar., 1882.
Condobolin .....	Richard D. Jones .....	31 Aug., 1880	Ditto .....	360	0	0	31 Aug., 1880.
Cooma .....	Charles Hudson .....	14 July, 1882	Ditto .....	260	0	0	14 July, 1882.
Coonabarabran .....	Arthur Mackie .....	14 July, 1880	Ditto .....	260	0	0	14 July, 1880.
Coonamble .....	Thos. W. Medley .....	27 May, 1885	Ditto .....	260	0	0	2 Mar., 1885.
Corowa .....	Robert Lowes, J.P. ....	1 Dec., 1876	Ditto .....	360	0	0	1 Dec., 1876.
Deniliquin .....	Alexander M'Collough, J.P. ....	1 Nov., 1874	Ditto .....	360	0	0	1 Nov., 1874.
Dubbo .....	Robert G. Dulhunty .....	14 Jan., 1879	Ditto .....	260	0	0	14 Jan., 1879.
Eden, Port of .....	G. P. Keon* .....	17 Feb., 1882	Ditto .....	25	0	0	28 Dec., 1845.
Forbes .....	William C. Finch <sup>8</sup> .....	25 May, 1880	Ditto .....	260	0	0	25 May, 1880.
	succeeded by						
	W. G. Dowling .....	6 May, 1886	Ditto .....	260	0	0	12 Mar., 1886.
Glen Innes .....	Matthew J. St. Clair .....	14 Dec., 1880	Ditto .....	260	0	0	14 Dec., 1880.
Goulburn .....	Frederick M. Charteris .....	7 May, 1867	Ditto .....	260	0	0	7 June, 1864.
Grafton .....	Thomas Bawden .....	11 Dec., 1880	Ditto .....	100	0	0	1 May, 1866.†
Gundagai .....	David Lowe McKenzie .....	20 Feb., 1880	Ditto .....	260	0	0	20 Feb., 1880.
Hay .....	John Austin Keighran .....	1 Nov., 1874	Ditto .....	360	0	0	1 Nov., 1874.
Hume .....	Gordon Bruce .....	22 Mar., 1867	Ditto .....	360	0	0	17 July, 1866.
Ivanhoe .....	James Yeo .....	26 May, 1885	Ditto .....	260	0	0	11 Mar., 1885.
Maitland .....	Samuel Durham, M.R.C.V.S. ....	26 Feb., 1885	Ditto .....	260	0	0	12 May, 1884.
Menindie .....	A. M. Giles* <sup>9</sup> .....	1 Oct., 1884	Secretary for Mines .....	305	0	0	8 June, 1883.
	succeeded by						
	John Fraser <sup>10</sup> .....	1 Jan., 1886	Governor and Executive Council, on nomination of Sheep Directors	305	0	0	1 Jan., 1886.
	succeeded by						
	J. C. W. Crommelin .....	15 Nov., 1886	Secretary for Mines .....	300	0	0	9 July, 1872.
Merriwa .....	John Roper .....	6 April, 1868	Governor and Executive Council, on nomination of Sheep Directors	260	0	0	5 Jan., 1847.†
Moama .....	William Joachim <sup>11</sup> .....	4 Feb., 1884	Ditto .....	160	0	0	4 Feb., 1884.
Molong .....	E. G. Finch .....	1 May, 1885	Governor and Executive Council, on nomination of Sheep Directors	260	0	0	1 May, 1885.
Mudgee .....	Henry Single .....	8 Sept., 1874	Ditto .....	260	0	0	8 Sept., 1874.
Murrurundi .....	John Wall Brodie .....	26 Feb., 1884	Ditto .....	160	0	0	1 Jan., 1883.
Moree .....	Joseph Wilks .....	16 Oct., 1886	Secretary for Mines .....	200	0	0	16 Oct., 1886.
Naranderra .....	W. J. Elworthy* .....	1 Oct., 1883	Governor and Executive Council, on nomination of Sheep Directors	310	0	0	1 Oct., 1883.
Narrabri .....	A. W. P. Copeman .....	25 Aug., 1876	Ditto .....	360	0	0	25 Aug., 1876.
Port Macquarie .....	John Ducat .....	8 June, 1869	Ditto .....	160	0	0	8 June, 1869.
Singleton .....	Edward Alford <sup>12</sup> .....	9 April, 1867	Ditto .....	260	0	0	22 Sept., 1865.
Sydney .....	Edward Stanley, F.R.C.V.S.* .....	24 Dec., 1885	Ditto .....	260	0	0	23 Dec., 1884.
Assistant .....	J. C. W. Crommelin <sup>13</sup> * .....	4 Dec., 1885	Secretary for Mines .....	200	0	0	9 July, 1872.
	succeeded by						
	A. Welman .....	2 Dec., 1886	Ditto .....	13/6 per diem			2 Dec., 1886.
Tamworth .....	Wm. D. Dowe .....	30 April, 1875	Governor and Executive Council, on nomination of Sheep Directors	260	0	0	30 April, 1875.
Urana .....	P. R. Brett .....	10 Feb., 1882	Ditto .....	260	0	0	10 Feb., 1882.
Wagga Wagga .....	C. J. Brentnall <sup>14</sup> * .....	30 July, 1867	Ditto .....	260	0	0	9 Sept., 1864.
	succeeded by						
(Acting)	J. A. Samaik .....	25 Aug., 1886	Secretary for Mines .....	280	0	0	25 Aug., 1886.
Walgett .....	J. R. Doyle .....	29 Oct., 1880	Governor and Executive Council, on nomination of Sheep Directors	310	0	0	29 Oct., 1880.

<sup>1</sup> Allowed £50 per annum for forage. Gives security to the amount of £500. <sup>2</sup> Gives security to the amount of £100. <sup>3</sup> This salary was originally voted under Public Watering Places—since transferred to Prevention of Scab in Sheep. <sup>4</sup> Transferred to Public Watering Places, 27 October, 1886. <sup>5</sup> Transferred from Rabbit Branch. <sup>6</sup> On six months leave of absence from 1 August, 1886. <sup>7</sup> Vice McLeod on leave. <sup>8</sup> To 20 February, 1886—dismissed. <sup>9</sup> To 15 January, 1886—services discontinued. <sup>10</sup> Dismissed, 15 November, 1886. <sup>11</sup> To 22 December, 1886—deceased. <sup>12</sup> See Imported Stock. <sup>13</sup> Transferred to Menindie. <sup>14</sup> On 3 months' leave from 25 August, 1886; deceased, 2 November, 1886. \* All Inspectors except those marked thus\* receive £25 per annum as Deputy Registrars of Brands. † Services not continuous.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary. £ s. d.	Date of first Appointment under the Colonial Government.
<b>SECRETARY FOR MINES—SHEEP INSPECTORS—continued.</b>					
<i>Inspectors—continued.</i>					
Warialda .....	F. W. Ridley .....	18 April, 1867	Governor and Executive Council on nomination of Sheep Directors	310 0 0	15 Mar., 1864.
Wentworth .....	D. A. Morgan .....	1 Nov., 1883	Ditto .....	360 0 0	1 Nov., 1883.
Wilcannia.....	Mark J. C. Tully.....	11 April, 1885	Ditto .....	260 0 0	11 April 1885.
Windsor .....	George A. Cleeve.....	14 Feb., 1868	Ditto .....	260 0 0	14 Feb., 1868.
Yass .....	James F. Turner .....	17 May, 1880	Ditto .....	260 0 0	17 May, 1880.
Young .....	Charles C. Wildash.....	28 April, 1867	Ditto .....	260 0 0	16 Aug., 1864.
Quarantine-keeper, Canterbury.	Leonard Morris .....	1 Oct., 1883	Secretary for Mines .....	110 0 0	1 Oct., 1883.
NOTE.—Inspectors with salaries of £150 and under allowed £2 2s. per annum for stationery; all other Inspectors allowed £5 per annum. All Inspectors give security for £100 each.					
*All Inspectors except those marked thus* receive £25 per annum as Registrar of Brands.					
<b>CATTLE INSPECTORS.<sup>1</sup></b>					
Districts—					
Eden .....	G. P. Keon .....	17 Feb., 1882	Governor and Executive Council	} Nil.	{ 28 Dec., 1845. 12 May, 1884.
Newcastle.....	Samuel Durham, M.R.C.V.S.	1 July, 1884	Ditto .....		
<sup>1</sup> Also Sheep Inspectors.					
<b>BRANDS.</b>					
Registrar of Brands .....	Alexander Bruce .....	1 July, 1874	Under Act 37 Vic. No. 17 .....		24 Dec., 1861.
Deputy Registrar of Brands and Clerk-in-charge.	Edward C. Weller .....	21 Sept., 1883	Governor and Executive Council	340 0 0	5 May, 1870.
Clerk .....	William E. Patchett .....	1 Dec., 1883	Ditto .....	240 0 0	1 Sept., 1871.
Temporary Clerk .....	S. A. Myring <sup>1</sup> .....	24 Sept., 1884	Secretary for Mines .....	190 0 0	28 April, 1884.
<sup>1</sup> Transferred to Public Watering Places Branch, 27 October, 1886.					
<b>PUBLIC WATERING PLACES AND RESERVES.</b>					
Chief Inspector .....	Harry A. Gilliat <sup>1</sup> .....	1 Jan., 1885	Governor and Executive Council	440 0 0	6 Oct., 1879.
Inspector .....	James W. Boulton <sup>2</sup> .....	14 Feb., 1886	Secretary for Mines .....	250 0 0	14 Feb., 1886.
Clerk .....	George A. Daniel <sup>3</sup> .....	20 June, 1884	Governor and Executive Council	245 0 0	6 April, 1881.
	succeeded by				
	A. O. Thomson <sup>4</sup> .....	6 July, 1886	Ditto .....	245 0 0	— Aug., 1868.
	succeeded by				
	Sydney A. Myring <sup>5</sup> .....	1 Dec., 1884	Ditto .....	190 0 0	28 April, 1884.
Temporary Clerks .....	Robert W. George <sup>6</sup> .....	27 Oct., 1886	Secretary for Mines .....	10s. per diem.	9 Feb., 1885.
	George M. Horne <sup>6</sup> .....	17 Jan., 1886	Ditto .....	50 0 0	17 Jan., 1886.
	succeeded by				
	Thomas H. Sapsford .....	22 Dec., 1886	Ditto .....	50 0 0	22 Dec., 1886.
Caretakers (70) .....	.....	.....	.....	from 3s. to 12s. per day.	
<sup>1</sup> Allowed 30s. per diem when travelling on duty, and £52 per annum for chainman's wages. <sup>2</sup> Allowed £200 per annum for travelling expenses. <sup>3</sup> Exchanged with A. C. Thomson, Land Board Office, Dubbo. <sup>4</sup> Transferred to Stock Branch, 27 October, 1886. <sup>5</sup> Transferred from Stock Branch, 27 October, 1886. <sup>6</sup> Resigned, 18 December, 1886.					
<b>IMPORTED STOCK.</b>					
Government Veterinarian...	Edwd. Stanley, F.R.C.V.S. <sup>1</sup>	24 Dec., 1885	Governor and Executive Council	120 0 0	23 Dec., 1884.
Quarantine-keepers—					
Shark Island .....	John A. Falkner <sup>2</sup> .....	10 Sept., 1884	Secretary for Mines .....	110 0 0	10 Sept., 1884.
	succeeded by				
	John Houseman .....	1 Mar., 1886	Ditto .....	110 0 0	1 Mar., 1886.
Bradley's Head .....	Alfred H. Everingham .....	21 Oct., 1884	Ditto .....	110 0 0	21 Oct., 1884.
<sup>1</sup> Also Inspector of Sheep. <sup>2</sup> To 28 February, 1886.					
<b>MANAGEMENT OF POUNDS AND COMMONS.</b>					
Clerk .....	Cecil W. Dargin .....	1 Sept., 1884	Governor and Executive Council	190 0 0	24 April, 1882.
<b>DIAMOND DRILL BRANCH.</b>					
Superintendent of Drills ...	W. H. J. Slee .....	15 Sept., 1885	Governor and Executive Council	150 0 0	7 Aug., 1876.
Clerk-in-charge .....	John S. M'Neil .....	1 Dec., 1884	Ditto .....	170 0 0	7 Feb., 1884.
Clerk .....	Robert Dalrymple .....	1 Dec., 1884	Ditto .....	220 0 0	21 June, 1882.
Draftsman .....	Walter S. Leigh .....	1 Dec., 1884	Ditto .....	220 0 0	4 June, 1883.
Temporary Clerk .....	David M'Culloch.....	28 Aug., 1884	Secretary for Mines .....	10/- per diem	28 Aug., 1884.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>SECRETARY FOR MINES—continued.</b>					
<b>RABBIT BRANCH.</b>					
<b>EXTERMINATION OF RABBITS.</b>					
Officer-in-charge.....	T. H. Myring <sup>1</sup> .....	1 Dec., 1884	Governor and Executive Council	350 0 0	5 Sept., 1883.
	succeeded by				
	H. C. Taylor .....	1 April, 1886	Ditto .....	290 0 0	19 April, 1872.
Superintending Inspectors...	J. Strachan .....	1 Aug., 1885	Ditto .....	400 0 0	1 May, 1883.
	H. E. Vindin .....	1 Aug., 1885	Ditto .....	360 0 0	24 Mar., 1884.
Inspectors at—					
Albury .....	J. Crichton .....	1 Jan., 1886	Ditto .....	255 0 0	1 Jan., 1886.
Balarben, via Mossgiel ...	G. Lucas .....	18 Dec., 1884	Ditto .....	310 0 0	4 Sept., 1884.
Balranald .....	D. M'K. Cameron .....	1 May, 1883	Ditto .....	310 0 0	1 May, 1883.
" .....	E. Cotching .....	8 Jan., 1885	Ditto .....	305 0 0	8 Jan., 1885.
Booligal .....	A. R. West .....	1 May, 1883	Ditto .....	310 0 0	1 May, 1883.
Bourke .....	M. T. Day <sup>2</sup> .....	15 July, 1884	Ditto .....	310 0 0	15 July, 1884.
Carathool .....	R. H. Clarence.....	1 May, 1883	Ditto .....	310 0 0	1 May, 1883.
Cobar .....	R. Lindsay .....	25 Aug., 1885	Ditto .....	205 0 0	10 July, 1884.
Corowa .....	J. T. Lee .....	4 Sept., 1884	Ditto .....	310 0 0	1 June, 1882.*
Cuthero Station, via Wentworth.	J. M'Maugh .....	14 Nov., 1883	Ditto .....	310 0 0	14 Nov., 1883.
Deniliquin .....	E. S. Russom <sup>3</sup> .....	1 May, 1883	Ditto .....	310 0 0	1 May, 1883.
	succeeded by				
	T. B. Carne <sup>4</sup> .....	12 May, 1886	Ditto .....	310 0 0	24 Sept., 1877.
Hatfield .....	W. H. Birt <sup>5</sup> .....	1 May, 1883	Ditto .....	310 0 0	1 May, 1883.
Hay .....	W. Fraser .....	1 May, 1883	Ditto .....	310 0 0	1 May, 1883.
Hillston .....	J. Phillips.....	1 May, 1883	Ditto .....	310 0 0	1 May, 1883.
Ivanhoe .....	K. H. Bennett <sup>6</sup> .....	19 Dec., 1883	Ditto .....	310 0 0	19 Dec., 1883.
Jerilderie .....	F. N. Alldritt <sup>7</sup> .....	1 May, 1883	Ditto .....	310 0 0	1 May, 1883.
Lake Cudgellico.....	L. Hyland.....	29 Jan., 1884	Ditto .....	310 0 0	29 Jan., 1884.
Liverpool .....	J. R. Gorman <sup>8</sup> .....	1 Mar., 1886	Ditto .....	255 0 0	18 May, 1885.
Louth .....	W. Fraser <sup>9</sup> .....	15 April, 1885	Ditto .....	305 0 0	8 June, 1883.
Menindie .....	H. P. Richardson <sup>10</sup> .....	22 Mar., 1884	Ditto .....	310 0 0	1 May, 1883.
" .....	T. H. Elwin <sup>11</sup> .....	1 Nov., 1885	Ditto .....	205 0 0	1 July, 1885.
Moama .....	C. Lyne .....	1 May, 1883	Ditto .....	310 0 0	1 May, 1883.
Mossgiel .....	G. Day .....	4 Oct., 1884	Ditto .....	310 0 0	4 Oct., 1884.
Mount Hope .....	T. Downing .....	1 May, 1883	Ditto .....	310 0 0	1 May, 1883.
Narrandera .....	S. W. Daniel .....	3 Feb., 1885	Ditto .....	310 0 0	—, 1872.*
" .....	A. S. Podmore .....	13 Dec., 1884	Ditto .....	310 0 0	19 May, 1884.
Oxley .....	J. Hansen <sup>12</sup> .....	28 Mar., 1884	Ditto .....	310 0 0	21 May, 1880.
	succeeded by				
	H. Ross <sup>13</sup> .....	1 July, 1886	Ditto .....	305 0 0	1 May, 1883.
Silverton .....	J. Bertram .....	1 Mar., 1886	Ditto .....	305 0 0	18 June, 1885.
Tareena, via Wentworth..	G. S. M. Grant <sup>14</sup> .....	1 May, 1883	Ditto .....	310 0 0	1 May, 1883.
Tilpa .....	J. J. Croker .....	13 July, 1883	Ditto .....	310 0 0	13 July, 1883.
Wagga Wagga .....	J. S. Campbell .....	10 April, 1885	Ditto .....	305 0 0	10 April, 1885.
Wentworth.....	R. W. Gaden .....	23 Nov., 1883	Ditto .....	310 0 0	23 Nov., 1883.
" .....	J. B. Battley .....	1 May, 1883	Ditto .....	310 0 0	1 May, 1883.
Wilcannia .....	G. H. Wallace <sup>15</sup> .....	1 Nov., 1884	Ditto .....	310 0 0	1 Nov., 1884.
" .....	A. J. Clarke .....	1 Aug., 1885	Ditto .....	205 0 0	8 April, 1884.
Yandarlo, via Wilcannia..	C. C. Holding .....	18 July, 1885	Ditto .....	205 0 0	—, 1872.*
" .....	A. R. Torrens <sup>16</sup> .....	30 Mar., 1885	Ditto .....	305 0 0	30 Mar., 1885.
Tongo Station, via Wilcannia.	W. J. Treasure <sup>17</sup> .....	14 July, 1884	Ditto .....	310 0 0	14 July, 1884.
Clerks .....	W. H. Tomlins .....	1 Dec., 1884	Ditto .....	265 0 0	22 Feb., 1884.
	Fred. R. Isler .....	1 Dec., 1884	Ditto .....	265 0 0	1 Jan., 1882.
	S. Chancellor .....	26 Sept., 1885	Ditto .....	240 0 0	27 Dec., 1883.
	W. R. Stanley .....	26 Sept., 1885	Ditto .....	240 0 0	4 Mar., 1881.*
	J. M. Walker .....	26 Sept., 1885	Ditto .....	220 0 0	1 Sept., 1884.
	W. W. Sparrow <sup>18</sup> .....	1 Dec., 1885	Ditto .....	150 0 0	27 Nov., 1883.
	T. Argent <sup>19</sup> .....	1 Dec., 1884	Ditto .....	150 0 0	
Temporary Clerks .....	J. Barry .....	21 Jan., 1884	Secretary for Mines .....	10/- per diem	21 Jan., 1884.
	E. A. Bailey <sup>20</sup> .....	9 June, 1884	Ditto .....	10/- "	11 June, 1879.*
	A. Sedgwick .....	15 Sept., 1884	Ditto .....	100 0 0	1 Nov., 1883.
	C. Hanson.....	7 Oct., 1884	Ditto .....	50 0 0	7 Oct., 1884.
	J. R. Gorman <sup>21</sup> .....	18 May, 1885	Ditto .....	10/- per diem	18 May, 1885.
	H. Ballantyne <sup>22</sup> .....	16 July, 1885	Ditto .....	10/- "	16 July, 1885.
	J. Tuck <sup>23</sup> .....	23 Dec., 1884	Ditto .....	10/- "	23 Dec., 1884.
	T. N. Williams .....	19 July, 1886	Ditto .....	10/- "	19 July, 1886.

<sup>1</sup> To 31 March—resigned. <sup>2</sup> Transferred from Hatfield. <sup>3</sup> Exchanged with T. B. Carne. <sup>4</sup> Late Inspector of Conditional Purchases. <sup>5</sup> Transferred from Euston. <sup>6</sup> Transferred from Mossgiel. <sup>7</sup> Transferred from Conargo. <sup>8</sup> Promoted from Temporary Staff. <sup>9</sup> Transferred from Wilcannia. <sup>10</sup> Transferred from Pooncarie. <sup>11</sup> Transferred from Burtundy Station, via Wentworth. <sup>12</sup> To 5 June—deceased. <sup>13</sup> Services dispensed with on 31 May, on abolition of office at Swan Hill. Re-appointed 1 July, 1886, vice Hansen. <sup>14</sup> Transferred from Boundary Run, Salt Creek. <sup>15</sup> Transferred from Menindie. <sup>16</sup> Transferred from Burta Station, via Silverton. <sup>17</sup> Transferred from Victoria Lake, Boola Bulka, Hay. <sup>18</sup> To 20 March—resigned. <sup>19</sup> To 10 May—deceased. <sup>20</sup> To 15 February—transferred to Stock Branch. <sup>21</sup> To 1 March—appointed Rabbit Inspector. <sup>22</sup> To 10 July—resigned. <sup>23</sup> Transferred from Diamond Drills Branch, 26 May, 1886. \* Services not continuous.

NOTE.—Inspectors are allowed £3 per annum for stationery. All the Inspectors give security for £100 each.

**SURVEYOR OF PUBLIC PARKS.**

Surveyor of Public Parks...	William Marshall Cooper	1 May, 1883	Governor and Executive Council	550 0 0	20 June, 1877.
Probationer .....	John Phelan.....	1 June, 1886	Secretary for Mines .....	50 0 0	1 June, 1886.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>TRUSTEES OF PUBLIC PARKS.</b>					
<b>HYDE, COOK, AND PHILLIP PARKS.</b>					
Area—Hyde Park, about 40a.; Cook Park, about 34a.; Phillip Park, about 44a.					
Trustees .....	Sir Alfred Stephen, G.C.M.G., C.B., M.L.C. Hon. James Norton, M.L.C. Charles Moore <sup>1</sup> ..... Edward Pierson Ramsay <sup>2</sup> Hon. Chas. Moore, M.L.C. Alexander Dean .....	8 Oct., 1878	Governor and Executive Council	Nil.	3 May, 1878.
	Michael Chapman .....	18 Oct., 1878	Ditto .....	Nil.	
Secretary .....	William Henry Catlett .....	13 July, 1883	Ditto .....	Nil.	
			Trustees .....	50 0 0	
<b>CAMPERDOWN PARK.</b>					
Area, 14a. or. 30p.					
Trustees .....	Robert Fowler .....	31 July, 1885	Governor and Executive Council	Nil.	23 May, 1882.
	Robert Thompson .....				
	George Hudson Sparkes John Cahill .....	12 Jan., 1886	Ditto .....	Nil.	
	James Bennett.....				
	W. M. Cooper <sup>3</sup> .....				
	Alfred Bignall .....	18 May, 1886	Ditto .....	Nil.	
<b>ASHFIELD PARK.</b>					
Area, 16a.					
Trustees .....	John Pope, J.P. ....	23 Feb., 1886	Governor and Executive Council	Nil.	18 Dec., 1885.
	John Mills, J.P. ....				
	Frederick Clissold, J.P. ...				
	John Story Jamison, J.P.				
	Samuel Hodgson Smyth, J.P.				
	Edward Ridge, J.P. ...				
	W. W. Richardson .....				
	Mark J. Hammond, M.P. W. M. Cooper <sup>3</sup> .....				
<b>MARRICKVILLE PARK.</b>					
Area, 10a.					
Trustees .....	Samuel Cook .....	9 June, 1885	Governor and Executive Council	Nil.	
	William G. Judd.....				
	Joseph Graham, J.P. ...				
	Charles Boots .....				
	Alexander Rea.....	6 July, 1886	Ditto .....	Nil.	
	W. M. Cooper <sup>3</sup> .....				
<b>COOK PARK, BOTANY</b>					
Area, about 105a.					
Trustees .....	Samuel Cook .....	18 May, 1886	Governor and Executive Council	Nil.	20 Oct., 1885.
	William Neill, J.P. ....				
	John Bowmer .....				
	James Henry .....				
	William George Judd, M.P. ...				
	Edward Jules Wehlow				
	William Marshall Cooper <sup>3</sup> ..				
<b>BAMORAL PARK, HUNTER'S BEACH.</b>					
Area, 8a. 2r. 10p.					
Trustees .....	Alfred George Lee .....	18 May, 1886	Governor and Executive Council	Nil.	3 May, 1880.
	George Matcham Pitt...				
	Richard Harnett .....				
	William Dind, senior ...				
	Isaac Ellis Ives, M.P. ...				
	The Honorable Robert Palmer Abbott, M.L.C.				
	Joseph Palmer Abbott, M.P.				
	Thomas Kingsmill Abbott ..				
	The Honorable James Patrick Garvan, M.P.				
	Andrew Armstrong.....				
	William Marshall Cooper <sup>3</sup> ..				
<b>GRANVILLE PARK.</b>					
Area, 19a. 1r. 37p.					
Trustees .....	Municipal Council of Granville	19 Feb., 1886	Governor and Executive Council	Nil.	19 Feb., 1886.
		4 Aug., 1886			

<sup>1</sup> Director of Botanic Gardens.<sup>2</sup> Curator of Australian Museum.<sup>3</sup> Surveyor of Public Parks.

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of Dedication of Park.				
<b>SECRETARY FOR MINES—TRUSTEES OF PUBLIC PARKS—continued.</b>									
<b>BIRCHGROVE PARK, BALMAIN.</b>									
Area, 8a.									
Trustees .....	Albert Elkington .....	21 Nov., 1882	Governor and Executive Council	Nil.					
	Quarton L. Deloitte.....								
	George Clubb .....								
	Edward H. Buchanan...								
	Charles Phillips .....								
	Jacob Garrard, M.P. ....	7 Dec., 1883	.....						
	M. A. H. Fitzhardinge.....								
<b>GLADSTONE PARK, BALMAIN.</b>									
Area, 5a.									
Trustees .....	John Broomfield, J.P. ....	15 Sept., 1885	Governor and Executive Council	Nil.	22 Sept., 1882.				
	James Aberdein Jones...								
	Alexander Gow .....								
	John Stedman .....								
	William M. Burns, J.P. ....								
	W. A. Hutchison, M.P. ....	12 Jan., 1886	Ditto .....	Nil.					
	Jacob Garrard, M.P. ....								
	W. M. Cooper* .....								
<b>LEICHHARDT PARK.</b>									
Area, 24a. 2r.									
Trustees .....	William Inglis .....	15 Sept., 1885	Governor and Executive Council	Nil.	23 May, 1882.				
	John T. Fraser, J.P. ...								
	James Campbell .....								
	Robert Fowler .....								
	Charles Hearn .....								
	Samuel G. Davison .....	12 Jan., 1886	Ditto .....	Nil.					
	John F. Whiting .....								
	W. M. Cooper* .....								
<b>ROSE BAY PARK.</b>									
Area, 6a. 2r. 18p.									
Trustees .....	C. K. Mackellar, M.B.,	15 Sept., 1885	Governor and Executive Council	Nil.	18 Nov., 1884.				
	C.M.								
	Sir John Hay, K.C.M.G.								
	John B. Donkin .....								
	Francis E. Joseph .....								
	Joshua F. Josephson ...	12 Jan., 1886	Ditto .....	Nil.					
	W. M. Cooper* .....								
<b>REDFERN PARK.</b>									
Area, 12a. or. 25p.									
Trustees .....	Borough Council of Red-	11 Dec., 1885	Governor and Executive Council	Nil.	10 Nov., 1885.				
	fern.	12 Jan., 1886	Ditto .....	Nil.					
	W. M. Cooper* .....								
<b>RUSHCUTTER BAY PARK.</b>									
Resumed, 9a. 1r. 13p.; reclaimed, 18a.									
Trustees .....	Sir J. G. L. Innes .....	11 Dec., 1885	Governor and Executive Council	Nil.	1878.				
	Robert Butcher, M.P. ....								
	Richard Holdsworth ...								
	Edward Bennett .....								
	Thomas Rowe .....								
	John Gilchrist .....								
	The Hon. G. A. Lloyd,								
	M.P.								
	The Hon. J. H. Want,								
	M.P.								
	Thomas S. Clibborn.....	12 Jan., 1886	Ditto .....	Nil.					
	John Williams.....								
	W. M. Cooper* .....	3 Sept., 1886	Ditto .....	Nil.					
	John M. Purves, M.P. ....								
Honorary Secretary .....	Victor Cohen .....								
<b>WENTWORTH PARK.</b>									
Resumed, 4a. 3r. 31p.; reclaimed, 27a.									
Trustees .....	The Hon. Geoffrey Eagar	11 Dec., 1885	Governor and Executive Council	Nil.	1873.				
	Francis Abigail, M.P. ....								
	Charles Moore .....								
	George Merriman .....								
	Michael Chapman .....								
	John H. Seamer .....								
	John Harris .....								
	George Munro .....								
	Angus Cameron .....								
	W. M. Cooper* .....								
	Thomas J. Dunn, J.P. ....								
	William Bull, sen. ....								
Secretary.....	Chas. J. Newall .....						Trustees .....		

\* Surveyor of Public Parks.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of Dedication of Park.
<b>SECRETARY FOR MINES—TRUSTEES OF PUBLIC PARKS—continued.</b>					
<b>MACDONALDTOWN PARK.</b> Area, 22a. 3r. 8p.					
Trustees .....	John Goddard .....	31 July, 1885	Governor and Executive Council	Nil.	} 20 Oct., 1882.
	Charles W. Bloomfield .....				
	Frederick Fallick .....				
	Peter James .....				
	Henry Knight .....				
Additional Trustees .....	William Scott .....	3 Nov., 1885	Ditto .....	Nil.	
	Charles Jesson .....				
	Cornelius Hannan .....				
	Francis Russell .....				
	Thomas Evans .....				
	George C. Watson .....	12 Jan., 1886	Ditto .....	Nil.	
	John Turner .....				
	W. M. Cooper† .....				
<b>NATIONAL PARK.</b> Area, about 35,000a.					
Trustees .....	Sir J. Robertson .....	26 April, 1879	Governor and Executive Council	Nil.	} Original— 26 Apr., 1879. Extended— 3 Aug., 1880 Addition— 24 Apr., 1883.
	Andrew Hardie McCulloch .....				
	Walter Bradley .....				
	Joseph Graham .....				
	Charles Moore .....				
	Angus Cameron .....				
	G. F. Want .....				
	Robert Wisdom .....	12 Dec., 1879	Trustees .....	Nil.	
	Edwin B. Woodhouse .....				
	James Squire Farnell .....	4 Feb., 1881	Ditto .....	£75	
	John Williams .....	1 Aug., 1882			
Secretary .....	James Patrick Garvan .....	14 Nov., 1884		£75	
Assistant Secretary .....	William Freeman .....				
	Michael Maloney .....				
<b>SCARBOROUGH PARK.</b> Area, 97a.					
Trustees .....	Samuel Cook .....	14 July, 1879	Governor and Executive Council	Nil.	} 23 May, 1879.
	Morris Alexander Black .....				
	Wm. Neill .....				
	John Bowmer .....	27 Oct., 1882	Ditto .....	Nil.	
	Edward Jules Wehlow .....				
	James Henry .....				
<b>FIVE DOCK PARK.</b> Area, 21a. 2r. 27p.					
Trustees .....	Municipal Council .....	2 Feb., 1886	Governor and Executive Council	Nil.	8 Dec., 1885.
<b>BURWOOD PARK.</b> Area, 15a.					
Trustees .....	Borough Council .....	23 Oct., 1885	Governor and Executive Council	Nil.	} 4 Oct., 1882.
	W. M. Cooper† .....	12 Jan., 1886	Ditto .....	Nil.	
<b>CANTERBURY PARK.</b> Area, 20a.					
Trustees .....	Thos. Austin Davis .....	11 July, 1884	Governor and Executive Council	Nil.	} 15 Dec., 1885.
	Jno. Campbell Sharp .....				
	Frederick Clissold .....				
	Jas. Slocombe .....				
	M. H. Lachlan .....	22 May, 1886	Ditto .....	Nil.	
	W. M. Cooper† .....				
<b>WYNYARD SQUARE.</b>					
Trustees .....	Mayor of Sydney .....		Governor and Executive Council	Nil.	
	J. G. Waller .....				
	H. E. A. Wright .....				
	L. W. Levy .....				
	Wm. Day .....	10 Oct., 1876			
	Charles Moore* .....	17 Oct., 1876			
	John Davis .....	1879			
	Benjamin Palmer .....	13 July, 1883			
	John Taylor .....	24 June, 1884	Trustees .....	£20	
Secretary .....	Chas. J. Newall .....				

\* Director of Botanic Gardens.

† Surveyor of Public Parks.

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of Dedication of Park.
<b>SECRETARY FOR MINES—TRUSTEES OF PUBLIC PARKS—continued.</b>					
<b>VICTORIA (UNIVERSITY) PARK.</b>					
Area, 23a. 3r. 16p.					
Trustees .....	Joshua Frey Josephson ... James Larkin ..... J. F. Smith ..... Henry Hargreaves ..... Charles Moore <sup>1</sup> .....	15 July, 1870 ..... ..... 8 June, 1877 .....	} Governor and Executive Council	Nil.	21 Oct., 1884.
	Angus Cameron ..... Joseph Mitchell ..... Frederick Jamison Gibbes The Hon. Edmund Barton, M.P.	27 July, 1880 3 Nov., 1882 22 July, 1883 22 Sept., 1885			
Secretary.....	John McLachlan .....	.....	Trustees .....	£25	
<b>MANLY PARK.</b>					
Area, 2a. 2r. 36p.—6a. 2r. 27p.—8a. 3r. 6p.					
Trustees .....	George Matcham Pitt... Robert Matcham Pitt... John B. Smithers ..... John Woods..... Chas. H. Hayes .....	18 June, 1880 ..... ..... 14 Mar., 1884	} Governor and Executive Council	Nil.	14 Nov., 1879.
<b>WAVERLEY PARK.</b>					
Area, 27a. 2r. 10p.					
Trustees .....	Borough Council.....	18 June, 1880	} Governor and Executive Council	Nil.	
<b>BONDI PARK.</b>					
Area, 25a. 2r. 16p.					
Trustees .....	Borough Council of Waverley... W. M. Cooper <sup>2</sup> .....	14 Aug., 1885 12 Jan., 1886	} Governor and Executive Council	Nil.	9 June, 1882.
<b>COOGEE BAY PARK.</b>					
Area, 8a. 3r. 16p.—2a. 1r. 28p.					
Trustees .....	Hon. Chas. Moore, M.L.C. J. Thompson ..... Geo. Wall..... John Lee .....	— June, 1866 ..... 29 May, 1877 3 Jan., 1883	} Governor and Executive Council	Nil.	1 June, 1866.
<b>COOGEE BAY PARK.</b>					
Area, 4a.—4a. 3r.—4a. 2r.					
Trustees .....	Hon. Chas. Moore, M.L.C. J. Thompson ..... Geo. Wall .....	— June, 1866 ..... 29 May, 1877	} Governor and Executive Council	Nil.	1 June, 1866.
<b>COOGEE BAY PARK.</b>					
Area, 1a. 3r. 19p.—2a. 0r. 39p.					
Trustees .....	Borough Council of Randwick.	.....	} Governor and Executive Council	Nil.	23 May, 1879.
<b>RANDWICK PARK.</b>					
Area, 25a.					
Trustees .....	Borough Council of Randwick.	17 June, 1884	} Governor and Executive Council	Nil.	29 April, 1884.
<b>FLAGSTAFF HILL PARK.</b>					
Area, 6a. 1r.					
Trustees .....	Chas. Moore <sup>1</sup> ..... Henry Chamberlaine Russell, B.A., F.R.A.S. <sup>3</sup> Geo. Merriman.....	21 Dec., 1875 ..... 13 July, 1883	} Governor and Executive Council	Nil.	29 Apr., 1884.
<b>BELMORE PARK.</b>					
Area, 10a.					
.....	.....	.....	.....	.....	19 May, 1868.
<b>PRINCE ALFRED PARK.</b>					
Area, 18a. 3r.					
.....	.....	.....	.....	.....	22 Dec., 1865.

<sup>1</sup> Director of Botanic Gardens.<sup>2</sup> Surveyor of Public Parks.<sup>3</sup> Government Astronomer.





## PART XIII.

## Miscellaneous.

## SUMMARY.

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## ECCLESIASTICAL ESTABLISHMENT.

RETURN of the ECCLESIASTICAL ESTABLISHMENT, for the Year 1886.

Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>CHURCH OF ENGLAND—DIOCESE OF SYDNEY.</b>					
Dean of Sydney .....	Very Rev. William Macquarie Cowper, M.A. }	12 July, 1858	Governor and Executive Council	300 0 0	} 12 July, 1858.
Parish of St. Phillip (City) .....		1 Aug., 1858	Ditto .....	160 0 0	
Parish of St. James (City) .....	Rev. Robert Allwood, B.A.	1 Jan., 1840	Governor .....	200 0 0	8 Dec., 1839.
Parish of Alexandria (Surry Hills, City) .....	„ Hulton S. King .....	1 Jan., 1857	Governor and Executive Council	200 0 0	
Parish of Petersham (Cook's River) .....	„ George King .....	15 Feb., 1863	Ditto .....	200 0 0	15 July, 1849.
Ditto (Ashfield) .....	„ William Lumsdaine .....	1 Oct., 1860	Ditto .....	150 0 0	1 Oct., 1860.
DISTRICT OF PARRAMATTA.					
Parish of St. John .....	Rev. Robert L. King, B.A.	1 July, 1855	Ditto .....	200 0 0	1 July, 1855.
Parish of Prospect .....	„ Thomas Donkin, B.D.	1 Aug., 1855	Ditto .....	200 0 0	1 Jan., 1854.
DISTRICT OF LIVERPOOL.					
Parish of St. Luke .....	Rev. Charles F. D. Priddle	1 July, 1855	Ditto .....	200 0 0	1 Feb., 1855.
Parish of Minto .....	„ George N. Woodd, B.A.	1 July, 1855	Ditto .....	200 0 0	5 Nov., 1837.
DISTRICT OF CAMPBELLTOWN.					
Parish of St. Peter .....	Rev. Edward Smith, B.A.	1 April, 1857	Ditto .....	200 0 0	1 July, 1838.
DISTRICTS—					
Pictou .....	„ James Carter .....	1 Jan., 1860	Ditto .....	80 17 6	
Wollongong .....	„ Thomas C. Ewing .....	1 Sept., 1857	Ditto .....	200 0 0	1 July, 1846.
Berrima (Sutton Forest) .....	„ Thomas Horton .....	1 July, 1858	Ditto .....	200 0 0	1 Sept., 1852.
Yass .....	„ Thomas Kemmis .....	12 Oct., 1859	Ditto .....	200 0 0	12 Oct., 1859.
<b>CHURCH OF ENGLAND—DIOCESE OF NEWCASTLE.</b>					
DISTRICTS—					
Paterson .....	Rev. F. W. Addams .....	1 Oct., 1846	Governor .....	200 0 0	12 Jan., 1846.
Morpeth, Hinton, and Middlethorpe .....	„ C. Walsh .....	1 Aug., 1860	Governor and Executive Council	200 0 0	1 Aug., 1860.
East Maitland .....	„ L. Tyrrell .....	1 Dec., 1862	Ditto .....	200 0 0	
Raymond Terrace .....	„ J. R. Blomfield .....	1 May, 1852	Ditto .....	200 0 0	16 Mar., 1851.
Lochinvar and Branxton .....	„ F. D. Bode .....	1 Dec., 1862	Ditto .....	100 0 0	
Muswellbrook .....	„ W. E. White .....	1 Mar., 1860	Ditto .....	200 0 0	
Scone .....	„ C. Child, B.A. .....	1 Feb., 1853	Governor .....	200 0 0	1 Jan., 1850.
Murrurundi .....	„ J. J. Nash, M.A. .....	1 June, 1859	Governor and Executive Council	100 0 0	1 June, 1859.
Dungog .....	„ S. Simm .....	1 Dec., 1862	Ditto .....	100 0 0	
Manning River .....	„ W. C. Hawkins .....	1 Jan., 1861	Ditto .....	100 0 0	
Clarence River .....	„ A. E. Selwyn .....	1 Jan., 1853	Governor .....	100 0 0	1 Jan., 1853.
<b>CHURCH OF ENGLAND—DIOCESE OF GOULBURN.</b>					
Lord Bishop of Goulburn ..	Right Rev. Mesac Thomas	1 Jan., 1882	Her Majesty by Letters Patent under the Great Seal of the United Kingdom.	100 0 0	25 Mar., 1863.
DISTRICTS—					
Bungonia .....	Rev. Edmond B. Proctor, M.A.	1 Sept., 1856	Governor and Executive Council	200 0 0	1 July, 1852.
Canberra (Queanbeyan) .....	„ Pierce G. Smith, M.A.	26 May, 1855	Governor .....	150 0 0	26 May, 1855.
Queanbeyan .....	„ Alberto D. Soares .....	1 April, 1857	Governor and Executive Council	200 0 0	1 April, 1857.
Cooma .....	„ Thomas Druitt .....	1 Dec., 1856	Ditto .....	100 0 0	1 Jan., 1854.
Collector (Yass) .....	„ Daniel P. M. Hulbert, M.A.	1 April, 1857	Ditto .....	150 0 0	1 April, 1857.
<b>CHURCH OF ENGLAND—DIOCESE OF BATHURST.</b>					
DISTRICT—					
Carcoar .....	Rev. John A. Burke, M.A.	1 Aug., 1858	Governor and Executive Council	200 0 0	1 Aug., 1858.

## NEW SOUTH WALES—1886.

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Office.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.
				£ s. d.	
<b>ECCLESIASTICAL ESTABLISHMENT—CHURCH OF ENGLAND—continued.</b>					
<b>CHURCH OF ENGLAND—DIOCESE OF GRAFTON AND ARMIDALE.</b>					
DISTRICT— Armidaie .....	Rev. Septimus Hungerford	1 April, 1854	Governor.....	100 0 0	— 1853.
<b>ROMAN CATHOLIC CHURCH.</b>					
Vicar-General.....	Very Reverend Samuel J. A. Sheehy.	1 Feb., 1862	Governor and Executive Council	300 0 0	1 May, 1850.
<b>DISTRICT OF SYDNEY.</b>					
Parish of Alexandria (Surry Hills, City).	Rev. John Sheridan.....	1 Oct., 1857	Ditto .....	200 0 0	1 May, 1850.
Parish of Hunter's Hill, District of Parramatta.	„ Claudius Maria Joly ..	1 April, 1859	Ditto .....	150 0 0	
Parish of St. Luke, District of Liverpool.	„ Peter Young .....	1 July, 1860	Ditto .....	200 0 0	1 July, 1843.
<b>DISTRICTS—</b>					
Wollongong .....	Rev. D. M. O'Connell.....	16 May, 1873	Ditto .....	200 0 0	1 Sept., 1848.
Windsor .....	„ Patrick Hallinan, D.D.	1 May, 1852	Governor.....	200 0 0	1 Jan., 1846.
Camden.....	„ J. J. Rigney .....	1 Nov., 1861	Governor and Executive Council	150 0 0	16 July, 1838.
Kiama .....	„ Michael Flanagan ..	1 July, 1860	Ditto .....	150 0 0	
Ditto (Millendary).....	„ Patrick Birch .....	16 July, 1859	Ditto .....	150 0 0	
Shoalhaven .....	„ David John D'Arcy..	1 Mar., 1863	Ditto .....	150 0 0	
Berrima.....	„ William Lanigan ..	1 Jan., 1862	Ditto .....	150 0 0	
Braidwood (Araluen).....	„ Edward O'Brien .....	15 July, 1852	Governor.....	150 0 0	15 July, 1852.
Yass .....	„ James Hanley .....	1 July, 1861	Ditto .....	200 0 0	1 Dec., 1843.
Mudgee.....	„ Callagan M'Carthy ..	1 Sept., 1852	Ditto .....	150 0 0	1 Mar., 1850.
Hartley .....	„ James Phelan .....	16 Mar., 1858	Governor and Executive Council	150 0 0	1 Nov., 1853.
Orange .....	„ Miles Edmund Athy..	1 Sept., 1862	Ditto .....	150 0 0	
East Maitland .....	„ John Kenny <sup>1</sup> .....	16 May, 1863	Ditto .....	200 0 0	1 Oct., 1844.
<sup>1</sup> Deceased, 16 September.					
<b>PRESBYTERIAN CHURCH.</b>					
SYDNEY— Pitt-street.....	Rev. Jas. Fullerton, LL.D. <sup>1</sup>	3 Dec., 1838	Governor.....	200 0 0	3 Dec., 1837.
<b>DISTRICTS—</b>					
Muswellbrook .....	„ Duncan Ross .....	1 Oct., 1860	Governor and Executive Council	102 0 0	
Paterson .....	„ Thomas Stirton .....	3 Feb., 1856	Ditto .....	150 0 0	1 Mar., 1854.
Port Macquarie .....	„ Edward Holland .....	16 Aug., 1853	Governor.....	150 0 0	16 Aug., 1853.
Singleton .....	„ James S. White .....	10 May, 1847	Ditto .....	150 0 0	10 May, 1847.
Windsor .....	„ David Moore .....	1 Mar., 1863	Governor and Executive Council	150 0 0	
<sup>1</sup> Deceased, July.					
<b>WESLEYAN METHODIST CHURCH.</b>					
<b>DISTRICTS—</b>					
Maitland .....	Rev. Joseph Oram .....	1 April, 1862	Governor and Executive Council	150 0 0	1 April, 1854.
Goulburn .....	„ W. Curnow <sup>1</sup> .....	1 Jan., 1862	Ditto .....	150 0 0	
Bathurst .....	„ W. Kelynack .....	1 Jan., 1860	Ditto .....	150 0 0	
Orange .....	„ W. Clarke.....	1 Jan., 1862	Ditto .....	150 0 0	
Penrith .....	„ J. W. Dowson .....	1 Jan., 1862	Ditto .....	150 0 0	
Manning River.....	„ J. Somerville .....	1 Jan., 1862	Ditto .....	150 0 0	
Camden.....	„ G. Martin.....	1 Jan., 1862	Ditto .....	150 0 0	
<sup>1</sup> To 1 February—resigned.					



NEW SOUTH WALES—1886.

Office.	Name.	Annual Salary.	Fees from Students.	Total.	Remarks
		£ s. d.	£ s. d.	£ s. d.	
<b>EDUCATION—UNIVERSITY OF SYDNEY—continued.</b>					
Auditor .....	Hon. G. Eagar.....	50 0 0	.....	50 0 0	
Accountant .....	P. J. Clark .....	150 0 0	.....	150 0 0	
Clerk and Curator .....	Henry W. Willgoss .....	210 0 0	.....	210 0 0	
Assistant Librarian .....	Ralph Hardy .....	156 0 0	.....	156 0 0	
Examiners .....	J. J. M. Beatty, M.A., LL.D. ....	.....	*30 0 0	30 0 0	Deceased.
	Rev. J. C. Corlette, D.D. ....	.....	*20 0 0	20 0 0	
	Professor Manson .....	.....	*75 0 0	75 0 0	
	W. A. Dixon, F.C.S. ....	.....	*15 15 0	15 15 0	
	Professor Kernott .....	.....	*10 10 0	10 10 0	
	J. J. Fletcher, M.A., B.Sc.....	.....	*10 10 0	10 10 0	
	W. Hamlet .....	.....	*10 10 0	10 10 0	
	B. R. Wise, B.A.....	.....	*21 0 0	21 0 0	
	J. Clumes Ross, B.St.....	.....	*10 10 0	10 10 0	
	R. M. Sly, LL.D. ....	.....	*10 10 0	10 10 0	
Ex-Bedell .....	Joseph Burrows .....	50 0 0	.....	50 0 0	
Bedell .....	Samuel Craddock.....	125 0 0	.....	125 0 0	
Messengers .....	John Beech .....	109 4 0	.....	109 4 0	
	James Deane .....	109 4 0	.....	109 4 0	
	John Hufton .....	130 0 0	.....	130 0 0	
Gardener .....	Henry Goodhew .....	125 0 0	.....	125 0 0	
Under-gardeners .....	John Bickley .....	109 4 0	.....	109 4 0	
	John Barbour .....	109 4 0	.....	109 4 0	
Chemical Laboratory Assistant.....	Edward Hufton .....	150 0 0	.....	150 0 0	
Chemical Laboratory Boy .....	Henry Blanchard.....	39 0 0	.....	39 0 0	
Anatomical Laboratory Assistant...	Alfred Shewan.....	175 0 0	.....	175 0 0	
Medical School Boy .....	Louis Schaafer.....	29 12 0	.....	29 12 0	
Boy in Natural History Department	Sydney Hanks .....	54 12 0	.....	54 12 0	
<b>EXAMINERS AT PUBLIC EXAMINATIONS.</b>					
	R. G. Goggs, M.A., F. Newham, M.A. ....	.....	57 5 0	.....	
	H. S. Hawkins, M.A.....	.....	89 13 0	.....	
	Rev. J. C. Corlette, D.D. ....	.....	52 17 0	.....	
	E. L. Montefiore .....	.....	10 8 0	.....	
	Hector R. Maglean .....	.....	5 5 0	.....	
	Rev. A. Rivers, M.A. ....	.....	5 5 0	.....	
	W. P. Cullen, M.A., LL.B. ....	.....	152 17 11	.....	
	J. J. Fletcher, B.Sc. ....	.....	2 2 0	.....	
	C. J. Cooper.....	.....	33 14 0	.....	
	G. E. Rich, M.A.....	.....	35 3 0	.....	

In addition to the above, the following Officers are unsalaried, viz. :—  
 Esquire Bedell, John Kinloch, M.A.  
 Examiners in Law—Mr. Justice Windeyer (Dean); Mr. Justice Faucett; M. H. Stephen, Q.C.  
 Examiners in Medicine—Geo. Bennett, M.D.; J. C. Cox, M.D.; C. K. Mackellar, M.B.; H. N. MacLaurin, M.D.; F. Norton Manning, M.D.;  
 Chas. McKay, M.D.; F. H. Quaife, M.D.; Arthur Renwick, M.D.; Sir Alfred Roberts, M.R.C.S.

\* Examination Fees.

ST. PAUL'S COLLEGE.

RETURN of ST. PAUL'S COLLEGE, for the Year 1886.

Office.	Name.	Salary per annum.	Fees from Students.	Total.
		£ s. d.	£ s. d.	£ s. d.
Warden .....	Rev. Canon Wm. H. Sharp, M.A. <sup>1</sup> .....	500 0 0	174 6 8	674 6 8
Vice-warden.....	Rev. C. J. Cooper, M.A., LL.B. <sup>2</sup> .....	75 0 0	.....	75 0 0
Bursar .....	J. R. Street, Esq. ....	.....	.....	.....
Accountant .....	J. C. Taylor, Esq. ....	20 0 0	.....	20 0 0
	Total .....	595 0 0	174 6 8	769 6 8

<sup>1</sup> Allowed a residence.

<sup>2</sup> Allowed rooms in College.

## BLUE BOOK OF

EDUCATION—continued.

## ST. JOHN'S COLLEGE.

RETURN of ST. JOHN'S COLLEGE, for the Year 1886.

Office	Name	Date of Appointment	By whom appointed and under what Instrument	Annual Salary.	Allowances.	Fees from Students.	Total.
Rector .....	Very Rev. D. F. Barry, O.S.B. ...	18 Feb., 1884	Fellows of St John's College under Act of Incorporation.	£ s. d. 500 0 0	£ s. d. 150 0 0	£ s. d. 600 0 0	£ s. d. 1,250 0 0
Lecturers .....	Rev. W. Kelly, S.J. .... Charles Coghlan, LL.D. .... Rev. E. J. Butler, M.A. ...	..... ..... .....	..... ..... .....	100 0 0 100 0 0 100 0 0	..... ..... .....	..... ..... .....	100 0 0 100 0 0 100 0 0
Total .....				800 0 0	150 0 0	600 0 0	1,550 0 0

## ST ANDREW'S COLLEGE.

RETURN of ST. ANDREW'S COLLEGE, for the Year 1886.

Office	Name.	Salary per annum	Additional Salary allowed by the Council	Total
Principal .....	Rev. John Kinross, B.A., D.D. <sup>1</sup> .....	£ s. d. 500 0 0	£ s. d. 100 0 0	£ s. d. 600 0 0
Treasurer .....	James Anderson .....	.....	25 0 0	25 0 0
Tutor .....	G. H. Halliday <sup>1</sup> .....	.....	60 0 0	60 0 0
Total .....		500 0 0	185 0 0	685 0 0

<sup>1</sup>Allowed a residence

## SYDNEY GRAMMAR SCHOOL.

RETURN of the SYDNEY GRAMMAR SCHOOL, for the Year ending 31st December, 1886.

Office	Name.	Salaries	Allowances	Fees from Pupils	Total	Remarks
Head Master .....	Albert Byethesea Weigall ...	£ s. d. 500 0 0	£ s. d. 150 0 0	£ s. d. 957 10 0	£ s. d. 1,607 10 0	
Mathematical Master ...	William Newbery .....	600 0 0	.. ..	.. ..	600 0 0	
Second Classical Master	Charles Edward Hewlett . . .	420 16 8	.. ..	.. ..	420 16 8	
Second Mathematical Master ..	Herbert James Carter . . .	350 0 0	.. ..	.. ..	350 0 0	
Assistant Masters .....	Arthur Key Farrar .....	400 0 0	.. ..	.. ..	400 0 0	
	Lewis Whitfeld .....	200 0 0	10 0 0	.. ..	210 0 0	Resigned.
	Charles Dashwood Goldie .....	250 0 0	.. ..	.. ..	250 0 0	
	Leonard Hemery London . . .	350 0 0	.. ..	.. ..	350 0 0	
	Arthur Giles .....	320 16 8	.. ..	.. ..	320 16 8	
	Alfred de Lisle Hammond ...	100 0 0	.. ..	.. ..	100 0 0	
	Wm. Hunt W. Nicholls .....	300 0 0	6 5 0	.. ..	306 5 0	
	Arthur Hill Griffith . . .	200 0 0	.. ..	.. ..	200 0 0	
	David M'Burney .....	241 13 4	37 10 0	.. ..	279 3 4	
	Charles de Kantzow .....	166 13 4	.. ..	.. ..	166 13 4	
	John Mackintosh .....	225 0 0	.. ..	.. ..	225 0 0	
	William H. B. Wells.....	125 0 0	.. ..	.. ..	125 0 0	
	Arthur Frederick Thomas Ansley	16 13 4	.. ..	.. ..	16 13 4	Resigned.
	H. L. Read .....	62 10 0	.. ..	.. ..	62 10 0	Temporarily employed.
	H. John Boulton .....	24 0 0	.. ..	.. ..	24 0 0	do
	E. Edmundson .....	22 0 0	.. ..	.. ..	22 0 0	do
	— Adams .....	11 0 0	.. ..	.. ..	11 0 0	do
Supernumerary Master .	Edwin Whitfeld .....	300 0 0	.. ..	.. ..	300 0 0	
Master of Modern Languages	Rudolf Max .....	227 10 0	.. ..	.. ..	227 10 0	
Writing Master .....	Carl Johan Nelson .....	46 17 6	.. ..	.. ..	46 17 6	Deceased.
Drawing Master .....	Josiah Thomas Crook .....	100 0 0	.. ..	.. ..	100 0 0	
Janitor and Drill Sergeant	Michael Hagney .....	41 13 4	52 18 4	.. ..	94 11 8	Resigned.
	Frank Morris .....	121 10 0	.. ..	.. ..	121 10 0	Residence allowed.
Secretary and Accountant to Trustees.	William Henry Catlett .....	100 0 0	70 4 0	.. ..	170 4 0	
Total .....		£ 5,823 14 2	326 17 4	957 10 0	7,108 1 6	

PENSIONS.

RETURN of PENSIONS payable out of the Revenues of the Colony, &c., during the Year 1886.

Name.	Amount of Pension.	Authority under which the Pension was granted.	Date from which the Pension commenced.	Service for which the Pension was granted.
	£ s. d.			
<b>SCHEDULE B.—Pensions paid from the Consolidated Revenue Fund. (46 Vic. No. 19.)</b>				
Sir Alfred Stephen, G.C.M.G., C.B.	1,820 0 0	18 and 19 Vict., cap. 54	10 Nov., 1873	Late Chief Justice.
Francis L. S. Merewether	900 0 0	18 and 19 Vic., cap. 54	6 June, 1856	„ Auditor-General.
James Larmer <sup>1</sup>	167 0 0	Governor-General and Executive Council.	1 April, 1853	„ Surveyor.
James Warner	70 0 0	Ditto	1 June, 1853	„ Assistant Surveyor.
Thomas Bevan	9 2 6	Secretary of State	1 July, 1850	„ Trooper, Mounted Police.
Edward Wilson	14 18 3	Governor and Executive Council.	1 July, 1850	„ „ Penrith Police.
James Bean <sup>2</sup>	29 7 3	Ditto	4 July, 1860	„ Messenger, Survey Department.
Thomas Reilly	32 13 4	Ditto	17 Dec., 1859	„ Sergeant to the Governor-General's Orderlies.
William W. Darke	153 0 11	Ditto	1 Jan., 1860	„ Assistant Surveyor.
H. R. Labatt	53 12 7	Ditto	1 Dec., 1871	„ Engineer, Department of Harbours and River Navigation.
Mrs. Shanks	50 0 0	Ditto	— 1871	Widow of Pilot Shanks.
Lady Forbes <sup>3</sup>	200 0 0	Ditto	9 Nov., 1841	Widow of Sir Francis Forbes, formerly Chief Justice.
Mrs. Anne Petrie	100 0 0	Ditto	1 Jan., 1853	Daughter of Captain Flinders, R.N.
David Moores	48 12 2	Ditto	1 Aug., 1864	Late Foreman, Colonial Stores.
John Hayes <sup>2</sup>	44 8 0	Ditto	1 Aug., 1864	„ Storeman, Colonial Stores.
Eliza B. Daly	109 0 0	„	8 May, 1883	„
Mrs. Maria Bate Wise	200 0 0	Governor and Executive Council.	28 Sept., 1865	Widow of Justice Wise.
Mrs. Margaret Edwards	50 0 0	Ditto	22 June, 1867	Widow of Pilot Edwards.
Mrs. Julia Robinson	150 0 0	Ditto	29 July, 1867	„ Robinson.
Mrs. Jane Reeder	75 0 0	Ditto	29 July, 1867	„ Reeder.
Mrs. Hannah Pope	1/3 <sup>4</sup> diem	Ditto	10 May, 1867	Late Housekeeper, Colonial Secretary's Office.
Ellen Del Prado	39 11 8	Ditto	1 Jan., 1871	„ Audit Office.
John S. Adam	228 11 5	Ditto	14 Mar., 1876	„ Chief Draftsman, Survey Office.
Mrs. Petersen	30 0 0	Ditto	1 July, 1875	Widow of Mr. Petersen.
Mrs. Wickham <sup>4</sup>	84 0 0	Ditto	1 Jan., 1877	Late Postmistress, Parramatta.
E. H. Hargraves	250 0 0	Ditto	1 Jan., 1877	For Public Services.
Henry Halloran, C.M.G.	800 0 0	Ditto	21 Jan., 1878	Late Under Secretary, Colonial Secretary's Office.
William Wilton <sup>5</sup>	27 10 0	Ditto	1 April, 1878	„ Visiting Surgeon, Gaol, Maitland.
R. T. Hall	166 0 0	Ditto	1 Nov., 1879	„ Examiner of Accounts, Audit Office.
T. C. Battley	118 12 0	Ditto	1 Jan., 1880	„ Clerk of Petty Sessions, Gosford.
L. J. Brennand	171 8 0	Ditto	1 April, 1880	„ Superintendent of Stores.
Charles P. M. Lockhart	214 0 0	Ditto	1 Jan., 1881	„
H. Broderick	196 0 0	Ditto	1 June, 1881	„
James H. Palmer	321 8 6	Ditto	1 Aug., 1884	Late Shorthand-writer, Legislative Assembly.
Annie Elliott	75 0 0	Ditto	1 Jan., 1886	Widow of Alex. Elliott, Warder, Sydney Gaol.
<sup>1</sup> Deceased, 5 June, 1886. <sup>2</sup> Deceased, June, 1886. <sup>3</sup> Deceased, March, 1886. <sup>4</sup> In receipt of a pension granted under the Civil Service Superannuation Repeal Act. <sup>5</sup> Deceased, April, 1886.				
<b>Pensions granted under the "Superannuation Repeal Act of 1873." (36 VICTORIA No. 29.)</b>				
Robert Allen Hunt	310 0 0	Governor and Executive Council.	1 July, 1864	Late Superintendent of the Money Order Office.
John Goulesbury Lennon	180 0 0	Ditto	20 Dec., 1864	„ Principal Clerk, Revenue Branch, Treasury.
E. C. Brewer	64 3 0	Ditto	12 May, 1865	„ Sheriff's Bailiff.
J. R. Humbley	123 15 0	Ditto	16 June, 1865	„ Clerk, Audit Office.
George Brett <sup>1</sup>	55 8 0	Ditto	1 May, 1865	„ Tide Waiter, Customs.
Thomas Jones	75 0 0	Ditto	1 June, 1866	„ Sheriff's Bailiff, Bathurst.
John Wells <sup>2</sup>	373 6 8	Ditto	1 Mar., 1866	„ Under Secretary for Finance and Trade.
William C. Still	280 0 0	Ditto	21 Mar., 1866	„ Landing Surveyor, Customs.
Lewis Gordon	266 13 4	Ditto	1 Aug., 1866	„ District Surveyor.
William Thompson	75 0 0	Ditto	1 Oct., 1866	„ Official Postmaster, Bathurst.
John Chippendall	99 3 4	Ditto	13 May, 1867	„ Gaoler, Bathurst.
E. H. Statham	62 6 8	Ditto	1 Mar., 1867	„ Storekeeper and Manager, Lunatic Asylum, Parramatta.
John Wallace	70 0 0	Ditto	14 June, 1867	„ Gaoler at Maitland.
Stephen Cole	217 10 0	Ditto	11 June, 1868	„ Commissioner of Crown Lands.
Samuel Elyard	206 13 4	Ditto	18 Aug., 1868	„ Clerk, Colonial Secretary's Office.
James Prout	30 0 0	Ditto	20 Sept., 1868	„ Second Assistant Bailiff, Sydney.
Charles E. Newcombe	292 10 0	Ditto	1 June, 1869	„ Police Magistrate, Queanbeyan.
William King	81 5 0	Ditto	1 July, 1869	„ Landing Waiter, Customs.
J. Wickham <sup>3</sup>	84 0 0	Ditto	1 Jan., 1870	„ Postmistress, Parramatta.
John Kelleher	82 0 0	Ditto	1 Jan., 1870	„ Foreman of Works, Dry Dock.
Gother K. Mann	536 13 4	Ditto	1 April, 1870	„ Engineer-in-Chief, &c., Cockatoo Island.
Thomas Cronin <sup>4</sup>	133 6 8	Ditto	1 May, 1870	„ Master of Dredge, "Hercules."
F. Underwood	186 13 4	Ditto	16 June, 1870	„ Clerk, Lands Department.
Allan Williams	113 6 8	Ditto	1 June, 1870	„ Accountant, Survey Department.
H. Fitzgerald	82 0 0	Ditto	1 Jan., 1870	„ Foreman of Works, Dry Dock.
T. J. Jaques	326 13 4	Ditto	15 Dec., 1870	„ Registrar-General.
W. C. Mayne	540 0 0	Ditto	23 May, 1871	„ Auditor-General.
William Thomas	113 6 8	Ditto	1 Mar., 1871	„ Clerk, Lands Department.
Harry Mackenzie	90 13 4	Ditto	1 May, 1873	„ Clerk, Audit Office.
William Muir	145 13 4	Ditto	1 May, 1873	„ Inspector, Public Revenue Collectors' Accounts.
<sup>1</sup> Deceased, December, 1886. <sup>2</sup> Deceased, 11 November. <sup>3</sup> In receipt of a Pension under Supplement to Schedule B. <sup>4</sup> Deceased, 7 June, 1886.				



Name	Amount of Pension	Authority under which the Pension was granted	Date from which the Pension commenced	Service for which the Pension was granted
	£ s d			
<b>PENSIONS—GRANTED UNDER THE "SUPERANNUATION REPEAL ACT OF 1873"—continued.</b>				
W Hampden Platt	116 11 0	Governor and Executive Council	1 May, 1873	Late First Clerk, Pay Branch, Treasury.
Thomas Adams	155 0 0	Ditto	1 Feb, 1874	" Overseer, Government Printing Office.
George A Gordon	225 0 0	Ditto	1 Jan, 1875	" Police Magistrate, Deniliquin
Martha Betts	60 2 8	Ditto	16 Mar, 1875	" Matron, Protestant Orphan School
Jasper Creagh	49 11 8	Ditto	1 Feb, 1875	" Clerk of Petty Sessions, Wingham
Alexander C. Maxwell	250 0 0	Ditto	1 May, 1881	" Registrar of the District Court, Sydney.
C Rolleston	450 0 0	Ditto	17 July, 1883	" Auditor-General
<b>Paid from the Customs Superannuation Fund.</b>				
John L Deane	100 0 0	The Lords of the Treasury	1 July, 1853	Late 1st Landing Waiter, Customs, Sydney
Charles L Neville	110 0 0	Ditto	1 July, 1853	" 2nd Landing Waiter, do do
<b>Paid by the Commissariat from Imperial Funds, "Convict Service."</b>				
John McLean	191 0 0	The Lords of the Treasury	1 Jan, 1856	Late Principal Superintendent of Convicts
Daniel Geary	18 5 0	Ditto	1 April, 1851	As a Constable, Office of Principal Superintendent of Convicts
<b>Paid from the Police Reward and Police Superannuation Funds.</b>				
John Agnew	5/3 $\text{p diem}$	Governor and Executive Council	1 May, 1882	1st Class Constable
James Arthur	5/3 "	Ditto	21 Dec, 1882	" "
John Buckley	4/9 "	Ditto	30 April, 1869	Senior Sergeant
Edward Broomfield	3/9 "	Ditto	16 Feb, 1876	Senior Constable
John Benton	5/7 "	Ditto	30 April, 1881	"
Richard Barrett	3/9 "	Ditto	18 Feb, 1882	"
Henry Bassmann	6/- "	Ditto	29 Sept, 1884	"
A W Berckelman	6/- "	Ditto	1 Oct, 1886	"
Michael Cassidy	4/6 "	Ditto	1 Feb, 1859	Sergeant, Gold Police, Western District
Patrick Cam	3/- "	Ditto	8 Oct, 1869	Constable, Eastern District
Thomas Coonan	4/4 "	Ditto	16 Sept, 1878	Ordinary Constable
Cæsar Cowle	4/4 "	Ditto	8 Oct, 1880	"
John Colleton	4/8 "	Ditto	1 July, 1882	1st Class Constable
Peter Conway	7/6 "	Ditto	1 July, 1882	Sub Inspector
Thomas Carow	7/- "	Ditto	4 Oct, 1882	1st Class Constable
Denis Collins	4/10 "	Ditto	22 April, 1883	Ordinary Constable
W S Dangar	3/- "	Ditto	16 Dec, 1863	Constable, Kempsey
John Davis	50 0 0	Ditto	Aug, 1862	Chief Constable, Molong
<b>per annum</b>				
Lawrence Dwyer	4/1 $\text{p diem}$	Ditto	28 May, 1872	Sergeant, Sydney
George Dearden	4/10 "	Ditto	4 Feb, 1880	Ordinary Constable
John Dawson	5/10 "	Ditto	4 Oct, 1882	Sergeant, Sydney
Martin Dorney	5/7 "	Ditto	21 May, 1884	1st Class Constable, Sydney
James Dillon	5/ "	Ditto	26 Aug, 1885	"
George Egan	3/ "	Ditto	19 Feb, 1874	Ordinary Constable
Jeremiah Fiewin	2/- "	Ditto	13 May, 1868	Senior Sergeant, Eastern District
James Farant	3/- "	Ditto	30 June, 1863	Constable, Mudgee
James Fegan	4/4 "	Ditto	30 May, 1878	Ordinary Constable
Henry Finlay	3/9 "	Ditto	4 Feb, 1880	Senior Constable
John Fairy	4/8 "	Ditto	8 Oct, 1880	1st Class Constable
Gariett Fitzgerald	5/3 "	Ditto	26 Aug, 1885	Ordinary Constable
John Flaherty	6/- "	Ditto	1 Oct, 1886	Senior Constable
Edward Giles	7/8 "	Ditto	— June, 1859	Sergeant Major, Sofala, Gold Police
James Garland	300 0 0	Ditto	18 Feb, 1882	Superintendent, Tamworth
<b>per annum</b>				
John Goddard	7/- $\text{p diem}$	Ditto	4 Oct, 1882	1st Class Constable
Thomas Goldreich	9/3 "	Ditto	4 Jan, 1886	Sergeant
Thomas Graham	5/- "	Ditto	16 April, 1886	1st Class Constable
Thomas Gibbons <sup>1</sup>	5/10 "	Ditto	18 Feb, 1882	Sergeant
James Hoban	3/9 "	Ditto	3 Sept, 1886	1st Class Constable
S H Horne <sup>2</sup>	116 0 0	Ditto	27 Mar, 1862	Chief Constable, Singleton.
Thomas Hildebrand	123 0 0	Ditto	28 Feb, 1862	" Wollongong
Robert Handcock	94 0 0	Ditto	28 Feb, 1862	Constable, Sydney
<b>per annum</b>				
John Henery ..	5/3 $\text{p diem}$	Ditto	7 Nov, 1878	1st Class Constable
John Harmer	10/6 "	Ditto	11 Dec, 1883	Senior Sergeant, Goulburn
David Hawkins	5/3 "	Ditto	6 Aug, 1884	" Sydney
Thomas Heagney	5/3 "	Ditto	6 Aug, 1884	Ordinary Constable
Adam Haggarty	9/3 "	Ditto	6 April, 1886	Sergeant, Water Police
S D Johnston	187 10 0	Ditto	28 April, 1882	Sub Inspector, Sydney
<b>per annum</b>				
James Johnston	5/7 $\text{p diem}$	Ditto	16 April, 1886	1st Class Constable
Roger Kennedy	3/4 "	Ditto	— Aug, 1862	Senior Constable, Mantland
Edward Kedwell	3/- "	Ditto	— Aug, 1862	Constable, Mutland
Abraham Kershaw	6/4 "	Ditto	30 June, 1863	Senior Sergeant, Goulburn
William Kershaw	5/6 "	Ditto	22 May, 1860	Sergeant, Bathurst
James Keegan	168 15 0	Ditto	24 Feb, 1883	Sub Inspector, Braidwood
<b>per annum</b>				
Robert Kennedy	5/- $\text{p diem}$	Ditto	1 Dec, 1881	Senior Constable

<sup>1</sup> Deceased, 10 July<sup>2</sup> Deceased, 11 May

## NEW SOUTH WALES—1886.

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Name.	Amount of Pension.	Authority under which the Pension was granted.	Date from which the Pension commenced.	Service for which the Pension was granted.
	£ s. d.			
<b>PENSIONS—PAID FROM THE POLICE REWARD AND POLICE SUPERANNUATION FUNDS—continued.</b>				
Thomas Kerrigan .....	275 0 0 per annum.	Governor and Executive Council.	15 Nov., 1883	Sub-Inspector, Kempsey.
John Kearney .....	4/7 $\Psi$ diem.	Ditto .....	6 Oct., 1886	Sergeant.
Charles Lane .....	3/4 "	Ditto .....	— Aug., 1862	Senior Constable, Newcastle.
George Lamont .....	3/4 "	Ditto .....	20 May, 1870	Senior Constable.
James Levick <sup>1</sup> .....	3/3 "	Ditto .....	16 Feb., 1876	Ordinary Constable.
Thomas Leonard .....	3/3 "	Ditto .....	19 Feb., 1877	"
J. F. Lane .....	6/8 "	Ditto .....	9 Oct., 1877	Senior Sergeant.
Richard Lee .....	7/10 "	Ditto .....	2 May, 1884	"
William Lawler .....	7/10 "	Ditto .....	6 Oct., 1885	"
John Lawler .....	5/7 "	Ditto .....	23 Nov., 1886	1st Class Constable.
John Micklegun .....	5/4 "	Ditto .....	— Aug., 1862	District Constable, Carcoar.
James M'Kay .....	5/- "	Ditto .....	20 Aug., 1875	Senior Constable.
Robert Mayne .....	4/4 "	Ditto .....	13 Mar., 1876	Ordinary Constable.
Thomas Moss <sup>2</sup> .....	3/- "	Ditto .....	21 Aug., 1868	Constable, Eastern District.
John Moloney .....	5/7 $\Psi$ diem	Ditto .....	11 Dec., 1883	1st Class Constable.
Henry Margetts .....	5/7 "	Ditto .....	12 Jan., 1884	"
Alexander Miller .....	9/3 "	Ditto .....	26 Aug., 1885	Sergeant.
John Mard .....	6/- "	Ditto .....	4 Jan., 1886	Senior Constable.
James M'Hale <sup>2</sup> .....	3/4 "	Ditto .....	8 July, 1869	"
William M'Namara .....	4/4 "	Ditto .....	2 June, 1879	Ordinary Constable.
Allan M'Diarmid .....	7/6 "	Ditto .....	20 May, 1881	Senior Sergeant.
Patrick McDonagh .....	5/- "	Ditto .....	4 Jan., 1886	1st Class Constable.
Michael McGlynn .....	6/- "	Ditto .....	3 Sept., 1886	Senior Constable.
James Nolan .....	4/- "	Ditto .....	15 Sept., 1873	Constable.
Thomas Naghten .....	5/7 "	Ditto .....	11 May, 1885	1st Class Constable.
James Potter .....	3/3 "	Ditto .....	12 Dec., 1874	Senior Constable.
George Payne <sup>2</sup> .....	3/6 "	Ditto .....	7 May, 1881	1st Class Constable.
Henry W. Parkinson .....	5/7 "	Ditto .....	6 Aug., 1884	"
Joseph Parker .....	10/6 "	Ditto .....	10 Dec., 1884	Senior Sergeant, Gold Escort Conductor.
Francis Rooney .....	4/1 "	Ditto .....	6 Nov., 1868	Sergeant.
Michael Reilly .....	3/10 "	Ditto .....	2 Aug., 1859	Ordinary Constable, Carcoar.
James Roberts .....	3/- "	Ditto .....	21 Aug., 1868	Constable, Depôt.
Oliver Rae <sup>2</sup> .....	2/- "	Ditto .....	13 May, 1868	"
Octavius Smith .....	3/- "	Ditto .....	30 June, 1863	Constable, Port Macquarie.
James Skelton .....	70 0 0 per annum.	Ditto .....	25 Feb., 1863	Chief Constable, Dalby, Queensland.
James Smith .....	3/- $\Psi$ diem	Ditto .....	— July, 1857	Ordinary Constable, Sydney.
John Sheaves .....	3/- "	Ditto .....	2 Mar., 1871	Constable, Eastern District.
James Sheridan .....	6/8 "	Ditto .....	4 Feb., 1880	Sergeant, Eastern District.
Henry M. Stapylton .....	6/11 "	Ditto .....	6 Aug., 1884	Sergeant, Moruya.
William Sutton .....	9/3 "	Ditto .....	26 Aug., 1885	Sergeant, Sydney.
Donald Sutherland .....	7/- "	Ditto .....	26 Aug., 1885	Ordinary Constable, Berrima.
Patrick Smith .....	7/6 "	Ditto .....	14 July, 1886	1st Class Constable.
Alexander Sanderson .....	5/4 "	Ditto .....	23 Nov., 1886	Senior Constable.
Henry Turner .....	3/- "	Ditto .....	6 Nov., 1868	Constable, Depôt.
James Thompson <sup>2</sup> .....	3/- "	Ditto .....	19 Feb., 1874	Senior Constable, Depôt.
Michael Tierney .....	3/- "	Ditto .....	21 May, 1876	Ordinary Constable.
Henry Tubman .....	5/10 "	Ditto .....	28 April, 1882	Sergeant, Sydney.
Charles Thorpe .....	325 0 0 per annum.	Ditto .....	3 Sept., 1886	Inspector, Newcastle.
Daniel Ussher .....	6/11 $\Psi$ diem	Ditto .....	16 April, 1886	Sergeant, Taree.
Frederick Williams .....	146 0 0 per annum.	Ditto .....	28 Feb., 1862	Ordinary Constable, Windsor.
R. Walker <sup>2</sup> .....	3/6 $\Psi$ diem	Ditto .....	6 Dec., 1876	1st Class Constable.
R. W. Walters .....	6/8 "	Ditto .....	8 Mar., 1878	Sub-Inspector.
Charles Walmsley .....	3/9 "	Ditto .....	2 June, 1879	Senior Constable.
Thomas H. Webb .....	7/- "	Ditto .....	10 Dec., 1884	Acting Sub-Inspector.
William Walsh .....	5/4 "	Ditto .....	3 Sept., 1886	Senior Constable.
Max Zglinicki .....	5/7 "	Ditto .....	4 Oct., 1882	"
August Zoellner .....	7/10 "	Ditto .....	8 July, 1885	Senior Sergeant.
Catherine Bannon .....	2/- "	Ditto .....	9 April, 1875	Widow of Constable William Bannon.
Edward M. Bowen .....	52 0 0 per annum.	Ditto .....	24 Nov., 1879	Son of late Senior Constable E. M. W. Bowen.
Louisa Codrington .....	1/- per diem	Ditto .....	— June, 1858	Widow of Constable Robert D. Codrington.
Annie Foy .....	30 0 0	Ditto .....	30 June, 1863	Widow of Senior Constable John Foy, Tabulam.
Julia Ledgerwood .....	40 0 0	Ditto .....	22 May, 1860	Widow of District Constable Wm. Ledgerwood, Newcastle.
Elizabeth Murphy .....	50 0 0	Ditto .....	— May, 1858	Widow of Chief Constable Peter C. Murphy, Port Macquarie.
Elizabeth Nelson .....	15 0 0	Ditto .....	15 June, 1865	Widow of Samuel Nelson, Constable, Goulburn.
Margaret Woods .....	62 10 0	Ditto .....	— May, 1855	Widow of Chief Constable, Maitland.
M. A. Wallings .....	150 0 0 per annum.	Ditto .....	21 Sept., 1878	Widow of Senior Sergeant Thomas Wallings.
M. A. Drum .....	5/- $\Psi$ diem	Ditto .....	13 Jan., 1882	Widow of Senior Constable Francis Drum.
S. J. Govers .....	50 0 0	Ditto .....	8 Jan., 1884	Widow of Constable James Govers.
Eliza Leplaw .....	40 0 0	Ditto .....	28 June, 1884	Widow of Senior Constable John Leplaw.
Georgina Mitchell .....	75 0 0	Ditto .....	14 Mar., 1885	Widow of late Constable John Mitchell.
Isabella Hird .....	75 0 0	Ditto .....	14 Aug., 1885	Widow of Constable William Hird.
Ann Dundas .....	40 0 0	Ditto .....	16 April, 1886	Widow of Senior Constable Arthur Dundas.
Kate Daly <sup>3</sup> .....	4/7 $\Psi$ diem per annum.	Ditto .....	1 June, 1885	Widow of Sergeant Edward Daly.

<sup>1</sup> Deceased, 6 November.<sup>2</sup> In England; paid through Agent-General.<sup>3</sup> Pension ceased, 30/5/86.

Name.	Amount of Pension.			Age.	Date from which the Pension commenced	Service for which the Pension was granted.
	£	s.	d.			
PENSIONS— <i>continued.</i>						
Return of Pensions granted under "Civil Service Act, 1884." (48 VICTORIA No. 24)						
William Crane	369	16	6	58	28 May, 1885	Stipendiary Magistrate, Sydney.
Macnamara Russell	111	0	11	49	10 " "	Chief Draftsman, Engineer in-Chief, Railways.
James Proctor	90	15	0	59	1 Aug, "	Inspector, Locomotive Branch, Railways.
John M'George	70	3	0	38	11 Feb, "	Superintendent, Temporary Hospital for the Insane, Cooma.
Gabriel H. L. Carroll	86	12	0	53	7 Nov, "	Inspector of Telegraph Lines and Stations.
Thomas Newport	55	2	0	61	1 " "	Driver, Railways.
Matthew Duligg	31	6	0	60	1 Aug, "	Public School Teacher, Nelanglo.
William Sixsmith	69	10	0	69	1 Dec, "	Engine driver, Railways.
J. E. Cumming	77	8	0	61	30 Sept, "	Public School Teacher, Jerry's Plains.
Jerman T. Harrison	81	15	0	47	1 Dec, "	Post and Telegraph Master, Corowa.
Jane Stevenson	59	1	0	60	30 Nov, "	Public School Teacher, Camperdown.
George Palmer	24	13	0	75	30 " "	" " Wyong Creek.
Colin C. Pentland	20	10	0	73	30 " "	" " Daisy Dale.
Robert MacDougal	34	13	0	62	30 " "	" " Bumbury.
George Spanswick	72	7	0	56	18 June, "	" " Appin.
Josiah West	20	6	0	76	31 Dec, "	Messenger, Railways.
Joseph Bell	46	13	0	52	31 Mar, "	Public School Teacher, Dural.
Eliza Styles	123	0	0	52	30 Nov, "	" " Mudgee.
Peter D. M'Cormick	76	19	0	52	30 " "	" " Crown-street, Sydney.
Patrick Rohan	46	12	0	48	30 " "	" " Spaniard's Hill.
Michael O'Grady	51	2	0	54	31 " "	" " Saucy Creek.
Thomas Crothers	22	13	0	79	1 Jan, 1886	Railway Station-master, Harley.
Alexander Johnson	173	17	0	60	1 " "	1st Class Draftsman, Surveyor-General's Department.
Denis Dempsey	71	5	0	57	14 Feb, "	Locker, Customs.
Samuel Small	36	9	0	59	31 Mar, "	Store Labourer, Ordnance
James Kelly	44	4	0	54	1 " "	Warder, Darlinghurst Gaol.
James Curnane	45	10	0	60	1 " "	" " Parramatta "
Charles Parsons	47	8	0	55	1 " "	" " Matland "
Thomas O'Brien	34	3	0	71	1 " "	" " Bathurst "
Anthony Darby	38	11	0	60	1 " "	" " Darlinghurst "
Edward Walker	37	0	0	65	28 Feb, "	Public School Teacher, Upper Myall River.
William Wilkins	63	8	0	64	29 Mar, "	Messenger, Customs.
William Hanna	32	14	0	52	1 April, "	Warder, Albury Gaol.
Pierce Goold	85	7	0	70	31 Jan, "	Postmaster, Newtown.
Henry Tessier	49	9	0	52	28 Feb, "	Boatman, Macleay River.
Arthur J. Burnell	108	10	0	36	25 Jan, "	Chief Draftsman, Forbes, Surveyor-General's Department.
George Pool Hayes	17	12	0	65	30 April, "	Public School Teacher, Morebinger, Howlong.
Edward R. Hinder	104	10	0	56	31 Mar, "	" " Enfield.
Jeremiah Ledsam	11	19	0	81	30 June, "	Gatekeeper, Railways.
Samuel King Miller	100	7	0	55	31 May, "	Public School Teacher, Burrawang.
Robert Donaldson	106	16	0	47	1 April, "	Road Superintendent, Roads and Bridges Department.
John Stack	166	11	9	55	1 June, "	1st Class Draftsman, Surveyor-General's Department.
Robert D. Ward	40	10	0	66	16 April, "	Surgeon and Dispenser, Hyde Park Asylum.
John MacKinlay	64	10	0	66	9 Aug, "	Head Bailiff, District Court, Sydney.
George Poole	62	8	0	57	31 May, "	Boatsman, Marine Board.
John Dunkin	60	3	0	53	31 Aug, "	Letter carrier, General Post Office.
Thomas Harland	42	3	0	71	30 Sept, "	Mate, Dredge, "Vulcan"
Francis E. Suter	35	10	0	69	30 " "	Cook and Steward, Dredge, "Vulcan."
George Jameson	166	18	0	58	31 May, "	District Engineer, Railways.
Richard Hawkins	92	4	0	61	31 Aug, "	Public School Teacher, Prospect
William Langton	109	7	6	60	30 Sept, "	" " Riverstone.
Thomas Field	33	1	0	63	1 Oct, "	Messenger, Lands
Thomas Richards	480	2	0	55	1 Nov, "	Government Printer and Registrar of Copyright.
Edward Gosnell	36	12	0	72	30 Sept, "	Carriage lighter, Railways.
Miles Egan	327	2	0	59	30 " "	Superintendent of the Vaccine Institution, Police Surgeon, &c.
W. W. Board	74	13	0	63	31 Oct, "	Public School Teacher, Druitt Town.
Peter Ferguson	70	8	0	59	25 Aug, "	Engine Driver, Railways
Lucin Tydd	75	4	0	51	30 Sept, "	Public School Teacher, Hurtsville.





## RETURNING OFFICERS.

RETURN of RETURNING OFFICERS for the year 1886, and Dates of Appointment.

Electoral District.	Name.	Date when appointed.	Electoral District.	Name.	Date when appointed.
Albury .....	Valentine Flood Nagle .....	23 Nov., 1882.	East Macquarie ...	Charles James West .....	28 Sept., 1880.
Argyle .....	Andrew Gibson Finlay .....	} 28 Sept., 1880.	West Macquarie ...	Alfred George Thompson .....	10 Nov., 1880.
Balmain .....	Thomas Stephenson Rountree .....		East Maitland .....	Samuel Clift .....	18 Sept., 1882.
	succeeded by Alfred Hancock .....	28 Oct., 1886.	West Maitland... }	James Ephraim Wolfe .....	28 Sept., 1880.
Balranald .....	John Clark Bowden .....	28 Sept., 1880.		succeeded by Alex. Wilkinson .....	1 Oct., 1886.
Bathurst .....	John Belmore Dalhanty .....	28 Oct., 1884.	Molong .....	Patrick Frederick Augustus Kinna..	10 Oct., 1885.
The Bogan .....	George Henry Taylor.....	28 Sept., 1880.	Monaro .....	Charles Solomon.....	21 Nov., 1882.
Boorowa .....	Frederick William Hume .....	27 Jan., 1885.	Morpeth .....	James Brand Ritchie Robertson	28 Sept., 1880.
Bourke .....	John Thomas Campbell Ranken .....	28 Sept., 1880.	Mudgee .....	Henry Crossing .....	26 Aug., 1882.
	succeeded by John Thomas Readford.....	11 June, 1886.	The Murray .....	Alexander Landale.....	14 Mar., 1884.
Braidwood .....	John William Bunn .....	} 28 Sept., 1880.	The Murrumbidgee	James Robert Garland .....	21 Jan., 1884.
Camden.....	John Macquarie Antill .....		The Namoi .....	John Matthew M'Donald .....	} 28 Sept., 1880.
Canterbury .....	Frederick Joseph Underwood..		The Nepean .....	John King Lethbridge .....	
Carcoar .....	James Oliver Dodd .....		Newcastle .....	Francis James Shaw .....	
The Clarence .....	Thomas Small .....	New England .....	George Allingham .....		
Central Cumberland	Alban Gee .....	7 Oct., 1885.	Newtown .....	William Bailey .....	} 22 Feb., 1886.
Durham.....	James William Boydell.....	1 June, 1885.	Northumberland ...	Charles Boscawen Ranclaud ...	
Eden .....	Solomon Solomon .....	} 28 Sept., 1880.		succeeded by Robert Turton .....	
Forbes .....	John Fullarton Armstrong ...		Orange .....	George Towson .....	} 28 Sept., 1880.
The Glebe.....	William Cary .....	17 Aug., 1883.	Paddington .....	John Macpherson .....	
Glen Innes .....	James Martin .....	28 Sept., 1880.	Parramatta .....	John Gollidge.....	} 6 Dec., 1886.
Gloucester .....	John Richardson .....	5 Nov., 1880.		succeeded by Wm. G. Bladon .....	
Goulburn .....	John Davidson .....	7 Sept., 1883.	Patrick's Plains ...	John Crichton Stuart M'Douall	} 28 Sept., 1880.
Grafton.....	Alfred Lardner .....	28 Sept., 1880.	Queanbeyan .....	Thomas Parr .....	
Grenfell .....	William Howarth, senior .....	22 Oct., 1880.	Redfern.....	George Renwick.....	
Gundagai .....	Michael Norton .....	24 Mar., 1884.	The Richmond.....	James Stocks .....	
Gunnedah.....	James George Dight .....	} 28 Sept., 1880.	Shoalhaven .....	Zaccheus Glanville Bice .....	
The Gwydir .....	George Hollinworth Gordon...		St. Leonards.....	Benjamin Jenkins .....	13 May, 1885.
Hartley .....	Richard Fryer .....	19 Sept., 1885.	East Sydney .....	William Day .....	28 Sept., 1880.
	succeeded by Edward Burns .....	29 Dec., 1886.	South Sydney .....	Robert Fowler.....	7 Oct., 1880.
The Hastings and Manning.	John Lowry Ruthven .....	} 28 Sept., 1880.	West Sydney .....	William Henry Simpson .....	29 Sept., 1885.
The Hawkesbury ...	James Bligh Johnston .....		Tamworth.....	Alexander Johnston .....	4 Dec., 1882.
The Hume .....	Alexander Anderson .....		Tenterfield .....	Henry Francis Robinson .....	11 Nov., 1884.
The Hunter .....	John Lee .....			succeeded by David Moses .....	2 Mar., 1886.
The Upper Hunter	John James Dodd .....	11 July, 1883.	Tumut .....	Rowland Mansfield Shelley ...	} 28 Sept., 1880.
Illawarra .....	Charles Frederick Smith .....	Wellington .....	Robert Rygate .....		
Inverell.....	James Harvey Hindmarsh.....	} 28 Sept., 1880.	Wentworth .....	William James Holding .....	14 Mar., 1884.
Kiama .....	James Colley .....		Wollombi .....	George Chapman .....	31 Dec., 1883.
The Macleay.....	Frederick Goulburn Panton ...		Yass Plains .....	Edward Arthur Iceton .....	29 May, 1885.
			Young .....	John Theophilus Heeley .....	28 Sept., 1880.

## AGREEMENTS VALIDATING OFFICERS.

RETURN of AGREEMENTS VALIDATING OFFICERS, for the Year 1886.

Offce.	Name.	Date of Appointment.	By whom appointed, and under what Instrument.	Annual Salary.	Date of first Appointment under the Colonial Government.			
<b>GERMANY.</b>								
Berlin .....	.....	.....	Governor and Executive Council, by Commission. (Under Act 39 Victoria No. 29.)	A fee of 5s. is allowed for certifying agreement in the case of each person.				
Bremen .....	Heinrich Loffler .....	6 May, 1876						
Hamburg, near Frankfort-on-the-Maine.	William Kirchner .....	19 Jan., 1884						
<b>NEW ZEALAND.</b>								
Auckland .....	David B. Cruickshank.....	25 May, 1876						
Christchurch .....	.....	.....						
Dunedin .....	.....	.....						
<b>QUEENSLAND.</b>								
Cooktown .....	John Walsh .....	6 May, 1876						
<b>SOUTH AUSTRALIA.</b>								
Adelaide .....	William Russell Hunt.....	2 Aug., 1876						
	John Kemp Penney .....	12 Sept., 1879						
<b>SWITZERLAND.</b>								
Geneva .....	Louis Chapalay .....	29 Sept., 1876						
<b>TASMANIA.</b>								
Hobart .....	Luke Richard Castray ...	29 Jan., 1877						
<b>ITALY.</b>								
Genoa .....	Montagu Yeats Brown ...	10 April, 1883						
Naples .....	Henry Grant .....	10 April, 1883						
<b>UNITED KINGDOM.</b>								
England—								
Liverpool .....	William Gracie.....	15 Sept., 1876						
London .....	Andrew Abercrombie Jopp	6 May, 1876						
Do. ....	Harry Howe Speed-Andrews.	6 May, 1876						
Ireland—								
Belfast.....	Henry Atkinson .....	25 May, 1876						
Cork.....	John George M'Carthy ...	25 May, 1876						
Scotland—								
Aberdeen.....	Charles Duncan .....	9 June, 1876						
Glasgow .....	Alexander Stuart.....	6 May, 1876						
	James P. K. S. Gibson ...	7 May, 1883						
<b>UNITED STATES OF AMERICA.</b>								
Boston.....	William Henry Wilkinson	25 May, 1876						
New York .....	Roderick William Cameron	6 May, 1876						
San Francisco .....	J. C. Merrill.....	6 May, 1876						
<b>VICTORIA.</b>								
Melbourne .....	William Wilmot Couche...	31 May, 1876						

## GUARDIANS OF MINORS.

RETURN of Gentlemen appointed, under the 11th section of the Act of Council 19th Victoria No. 30, as GUARDIANS OF MINORS, to give consent in cases of Marriage in the Colony.

Town—District.	Town—District.	Town—District.	Town—District.
ARMIDALE (New England)— Charles E. Smith, P.M. John Moore.	DUBBO (The Bogan)— John Rylie. John Egan. Joseph F. Makinson. O. P. Clayton. T. L. Richardson—Cannonbar. William Stewart Caswell.	MOAMA (The Murray)— George Redman.	SINGLETON (Patrick's Plains)— Geo. Thos. Loder. J. C. S. McDonall.
BALBRANALD (Balranald)— Edward Liscombe Rowling.	DUNGOG (Durham)— George M'Kay.	MOLONG (Molong)— William Cousins.	SOPALA (East Macquarie)— Henry Hinton.
BATHURST (Bathurst)— Benjamin Lee, junr., P.M.	EDEN (Eden)— Henry Wren—Bega. George Plunkett Keon.	MUDGEE (Mudgee)— W. D. Meares, P.M.	SYDNEY— Edmund Fosbery, Inspector- General of Police. John Milbourne Marsh, P.M., Water Police Office. James Sheen Dowling, D.C.J. Edward Grant Ward, Registrar-General. Charles Cowper, Sheriff.
BEGA (Eden)— John Davis, P.M. Robert Ritchie. Charles T. Stiles.	FORBES (Forbes)— E. A. L. Sharpe. W. Brooke. Chas. St. Baker.	MURRURUNDI (Upper Hunter)— Phillip W. Wright. G. R. Evans.	TAMWORTH (Tamworth)— David W. Irving. P. G. King. D. F. Evans—Gunnedah.
BERRIMA (Camden)— Charles Lindsay Nicholson.	GLEN INNES (Glen Innes)— Geo. Martin.	MUSWELLBROOK (Upper Hunter)— John Hudson Keys.	TENTERFIELD (Tenterfield)— James B. Graham.
BOAT HARBOUR (Macleay)— Frederick T. Matthews.	GOULBURN (Goulburn)— Charles S. Alexander, P.M.	NARRANDERA (The Murrumbidgee)— Lester Stuart Donaldson, P.M.	TUMUT (Tumut)— Frederick W. Vyner.
BOMBALA (Monaro)— Hyam M. Joseph.	GRAFTON (Grafton)— Edward Michael Ryan. Thomas Bawden.	NEWCASTLE (Newcastle)— Charles B. Ranclaud. James Mair.	ULLADULLA (Shoalhaven)— Percy Hale Sheaffe.
BOURKE (Bourke)— Alexander Ogilvie Grant. Robert Maurice Hughes. John G. Macrae. Vincent Brown, Acting P.M.	GUNDAGAI (Gundagai)— Henry Gordon, P.M.	NOWRA (Shoalhaven)— Zaccheus Glanville Bice. John Glanville.	WAGGA WAGGA (Murrumbidgee)— Henry Bayliss.
BRAIDWOOD (Braidwood)— Robert Maddrell.	GUNNEDAH (Gunnedah)— Patrick Brougham.	ORANGE (Orange)— John Tom Lane.	WALCHA (New England)— George H. Erratt.
BREWARRINA (Bourke)— James H. Tompson. Patrick D. M'Eligott.	GUNNING (Yass Plains)— Henry Saxby.	PARRAMATTA— Neil Stewart. Henry Byrnes.	WALGETT (The Namoi)— Charles N. Vaughan.
BRISBANE WATER (Wollombi)— Edward Reeve, P.M.	HARTLEY (Hartley)— Andrew Brown.	PARKES (Forbes)— Thomas Tom. W. C. Weston.	WARIAALDA (The Gwydir)— Alfred Augustus Adams. F. Wyndham. W. V. M. Cooke, P.M.
BROULEE (Eden)— John M'Keon.	HAY (Balranald)— Joseph Ede Pearce, P.M.	PENRITH (The Nepean)— John King Lethbridge. J. K. Cleeve.	WELLINGROVE (Glen Innes)— George Martin—Glen Innes.
BURROWA— Charles Sanderson—Grenfell. David Pyne do Robert M. Vaughn do Wm. J. E. Wotton.	KEMPSEY (The Macleay)— Robert A. H. Kemp. William M'Lean.	PICTON (Camden)— John Macquarie Antill.	WELLINGTON (Wellington)— R. T. B. Gaden.
CAMDEN (Camden)— Ebenezzer Simpson.	KIAMA (Kiama)— H. Connell, P.M. Jas. Colley.	QUEANBEYAN (Queanbeyan)— J. J. Wright.	WENTWORTH (Wentworth)— M. S. Love. C. M. King—Milparinka.
CARCOAR (Carcoar)— William Montague Rothery. N. Connolly.	LIVERPOOL (Central Cumberland)— Nathaniel George Bull.	RAYMOND TERRACE (Gloucester)— Chas. R. Middleton.	WINDSOR (The Hawkesbury)— Robert Dick.
CASINO (The Richmond)— Wellington C. Bundock. James Bray, P.M.	MAITLAND (Maitland)— Peter Green. John Lee.	RICHMOND (Hawkesbury)— Roland H. Ducker. William Lamrock. Joseph E. Onus.	WOLLONGONG (Illawarra)— Alfred Allatson Turner.
COOMA (Monaro)— Robert Dawson. John Elihu Body.	MENINDIE (Wentworth)— G. H. Gower, P.M.	RYLSTONE (Mudgee)— William Wield Armstrong.	YASS (Yass Plains)— Isidore Maurice Blake. Allan Campbell.
COONABARABRAN (The Namoi)— Frederick W. Edwards.	MERRIWA (Upper Hunter)— J. B. Bettington.	SCONE (Upper Hunter)— William Fox Parker. F. A. Parbury.	YOUNG (Young)— Saml. Robinson.
COONAMBLE (The Bogan)— Robert Raymond Bailey, P.M. Peter Aloysius Polin.			
CUNDELTOWN (The Manning)— Henry J. Cornish.			
DENILIQUIN (The Murray)— R. R. Morisset.			





ERRATA.

IN Tables E and F, 1, 2, and 3, pages 25 to 40, *read* 31st December, 1885,  
for 31 December, 1886.

1887.

NEW SOUTH WALES.

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# VITAL STATISTICS.

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THIRTIETH ANNUAL REPORT

FROM

THE REGISTRAR-GENERAL, ON VITAL STATISTICS.

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Printed in accordance with Resolutions of both Houses of Parliament.

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SYDNEY: CHARLES POTTER, GOVERNMENT PRINTER.

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1887.

[1s. 9d.]

1—A

[1,373 copies—Approximate Cost of Printing (labour and material), £125 10s. 2d.]



1885.

## VITAL STATISTICS.

THE REGISTRAR-GENERAL TO THE HONORABLE THE COLONIAL SECRETARY,

TRANSMITTING ABSTRACTS OF

### MARRIAGES, BIRTHS, AND DEATHS,

FOR THE YEAR 1885:

(A.)

TABLE showing the MARRIAGES, BIRTHS, and DEATHS registered in the Colony of New South Wales, during each Quarter of the year 1885.

Quarter ended—	Marriages.	Births.			Deaths.		
		Males.	Females.	Total.	Males.	Females.	Total.
<b>Sydney—</b>							
31 March .....	496	472	499	971	419	302	721
30 June .....	559	467	476	943	322	282	604
30 September .....	517	531	514	1,045	357	280	637
31 December.....	543	461	466	927	353	321	674
Total .....	2,115	1,931	1,955	3,886	1,451	1,185	2,636
<b>Suburbs—</b>							
31 March .....	389	1,006	967	1,973	508	458	966
30 June .....	356	1,076	1,012	2,088	468	427	895
30 September .....	358	1,161	1,108	2,269	477	376	853
31 December.....	361	1,073	977	2,050	597	546	1,143
Total .....	1,464	4,316	4,064	8,380	2,050	1,807	3,857
<b>Country Districts—</b>							
31 March .....	980	2,710	2,524	5,234	1,354	883	2,237
30 June .....	1,046	2,863	2,614	5,477	1,354	897	2,251
30 September .....	1,023	3,246	3,096	6,342	1,321	775	2,096
31 December.....	990	2,873	2,851	5,724	1,370	835	2,205
Total .....	4,039	11,692	11,085	22,777	5,399	3,390	8,789
<b>New South Wales—</b>							
31 March .....	1,865	4,188	3,990	8,178	2,281	1,643	3,924
30 June .....	1,961	4,406	4,102	8,508	2,144	1,606	3,750
30 September .....	1,898	4,938	4,718	9,656	2,155	1,431	3,586
31 December.....	1,894	4,407	4,294	8,701	2,320	1,702	4,022
Total .....	7,618	17,939	17,104	35,043	8,900	6,382	15,282

(B.)

TABLE showing the number of MARRIAGES registered in the Colony of New South Wales during each Quarter of the years 1876 to 1885.

	Estimated Population at the middle of the year.	31 March.	30 June.	30 Sept.	31 Dec.	Total.	Ratio per 1,000 living.	
Sydney .....	1876.....	93,269	321	349	296	298	1,264	13'55
	1877.....	97,235	339	344	350	310	1,343	13'81
	1878.....	102,056	358	386	350	324	1,418	13'89
	1879.....	107,603	341	350	342	384	1,417	13'17
	1880.....	113,455	416	398	381	408	1,603	14'13
	1881.....	104,966*	437	471	470	449	1,827	17'41
	1882.....	109,694	493	513	477	470	1,953	17'80
	1883.....	115,642	499	537	481	522	2,039	17'63
	1884.....	123,197	518	498	487	496	1,999	16'22
	1885.....	130,413	496	559	517	543	2,115	16'22
		4,218	4,405	4,151	4,204	16,978		
Suburbs .....	1876.....	73,872	113	101	117	132	463	6'26
	1877.....	77,014	114	157	125	160	556	7'21
	1878.....	80,833	158	149	172	153	632	7'81
	1879.....	85,226	214	187	183	165	749	8'78
	1880.....	89,861	181	162	206	181	730	8'12
	1881.....	122,687*	203	216	204	225	848	6'91
	1882.....	128,214	259	293	275	282	1,109	8'65
	1883.....	135,166	319	356	292	276	1,243	9'19
	1884.....	143,997	357	368	343	357	1,425	9'89
	1885.....	152,432	389	356	358	361	1,464	9'60
		2,307	2,345	2,275	2,292	9,219		
Country Districts .....	1876.....	450,025	832	713	687	671	2,903	6'45
	1877.....	469,163	791	773	777	754	3,095	6'58
	1878.....	492,427	812	828	815	812	3,267	6'63
	1879.....	519,190	812	813	847	753	3,225	6'21
	1880.....	547,426	851	822	746	820	3,239	5'92
	1881.....	535,353*	881	945	888	895	3,609	6'74
	1882.....	559,469	957	987	965	977	3,886	6'94
	1883.....	589,806	1,081	989	1,054	999	4,123	6'99
	1884.....	628,339	1,090	997	1,011	960	4,058	6'45
	1885.....	665,141	980	1,046	1,023	990	4,039	6'07
		9,087	8,913	8,813	8,631	35,444		
New South Wales .....	1876.....	617,166	1,266	1,163	1,100	1,101	4,630	7'51
	1877.....	643,412	1,244	1,274	1,252	1,224	4,994	7'76
	1878.....	675,316	1,328	1,363	1,337	1,289	5,317	7'87
	1879.....	712,019	1,367	1,350	1,372	1,302	5,391	7'57
	1880.....	750,742	1,448	1,382	1,333	1,409	5,572	7'42
	1881.....	763,006*	1,521	1,632	1,562	1,569	6,284	8'23
	1882.....	797,377	1,709	1,793	1,717	1,729	6,948	8'71
	1883.....	840,614	1,899	1,882	1,827	1,797	7,405	8'80
	1884.....	895,533	1,965	1,863	1,841	1,813	7,482	8'35
	1885.....	947,986	1,865	1,961	1,898	1,894	7,618	8'03
		15,612	15,663	15,239	15,127	61,641		

\* This population is calculated on the basis of the Census taken 3rd April, 1881.

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(C)

Denomination	1876.	1877.	1878.	1879	1880	1881	1882.	1883.	1884.	1885.
Church of England	1,759	1,869	2,098	2,182	2,252	2,487	2,768	2,949	2,893	2,990
Roman Catholic	921	990	1,009	982	1,021	1,171	1,315	1,414	1,448	1,258
Presbyterian	761	854	821	722	768	872	955	950	1,009	1,155
Wesleyan	487	509	556	605	618	651	704	712	759	739
Primitive Methodist ...	101	110	94	111	101	140	134	157	165	193
Congregationalist ...	232	243	291	331	364	433	516	565	484	532
Baptist	39	70	89	90	93	85	79	101	117	137
Christian Israelite							...			...
Unitarian ...	...	...	1	1			...	5	3	4
Hebrew	14	20	20	22	17	27	22	24	27	27
Protestant Episcopal	16	3	7	2	2					...
Catholic and Apostolic	...		...			2				...
German Evangelical	19	20	11	13	9	13	14	10	18	26
Christians ..	4	3	11	7	9	3	2	1	5	2
Welsh Church				1	.....				.....	
Independent	...		..		...		2	12	5	31
Free Christian Church .	2		..			2	3	8		.....
Friends		...						1	1	
Salvation Army								3	3	3
Bible Christians .					...	..		2	4	6
Anglo Israelite								2		
Free Church of England								3	4	5
Registrar's Office ...	275	303	309	322	318	392	434	486	537	510
	4,630	4,994	5,317	5,391	5,572	6,284	6,948	7,405	7,482	7,618

MARRIAGE Table of Increase and Decrease.

Denomination	1884	1885	1884 per cent	1885 per cent	Increase	Decrease
Church of England	2,893	2,990	38.66	39.25	0.59	.....
Roman Catholic	1,448	1,258	19.36	16.51	..	2.85
Presbyterian	1,009	1,155	13.49	15.16	1.67	.....
Wesleyan	759	739	10.50	9.70	..	0.45
Primitive Methodist	165	193	2.20	2.53	0.33	.....
Congregationalist	484	532	6.48	6.98	0.50	
Baptist	117	137	1.57	1.79	0.22	..
Hebrew	27	27	0.37	0.35		0.02
German Evangelic	18	26	0.24	0.34	0.10	..
Christians	5	2	0.06	0.03	.....	0.03
Independent (unconnected)	5	31	0.06	0.42	0.36	..
Friends	1		0.01	...	..	0.01
Salvation Army	3	3	0.04	0.04		..
Bible Christians	4	6	0.05	0.09	0.04	..
Free Church of England	4	5	0.05	0.07	0.02	.....
Unitarian	3	4	0.04	0.05	0.01	.....
Registrars' Offices	537	510	7.17	6.69		0.48
	7,482	7,618	100.00	100.00	3.84	3.84

TABLE of Bachelors, Spinsters, &amp;c.

	No of Marriages	Bachelors	Spinsters	Widowers	Widows	Divorced Men	Divorced Women
Sydney	2,115	1,914	1,880	196	233	5	2
Suburbs	1,464	1,327	1,360	135	103	2	1
County Districts	4,039	3,748	3,693	289	343	2	3
	7,618	6,989	6,933	620	679	9	6

TABLE of MINORS.

	No. of Marriages.	Minors.		
		Males.	Females.	Total.
Sydney .....	2,115	57	354	4,011
Suburbs .....	1,464	36	327	363
Country Districts .....	4,039	114	1,268	1,382
	7,618	207	1,949	2,156

TABLE of Minors and Marks.

	Males.	Females.	Total.
Sydney.....	2	12	14
Suburbs .....	1	9	10
Country Districts .....	8	63	71
	11	84	95

(D.)

TABLE showing the number of BIRTHS registered in the Colony of New South Wales during each Quarter of the years 1876 to 1885.

	Estimated Population at the middle of the year.	31 March.	30 June.	30 Sept.	31 Dec.	Total.	Ratio per 1,000 living.	
Sydney .....	1876 .....	93,269	838	865	873	734	3,310	35'48
	1877.....	97,235	818	796	856	889	3,399	34'95
	1878.....	102,056	846	851	956	831	3,484	34'13
	1879.....	107,603	857	943	1,007	907	3,714	34'51
	1880.....	113,455	870	985	960	920	3,735	32'92
	1881.....	104,966	938	920	946	937	3,741	35'64
	1882.....	109,694	955	961	959	879	3,754	34'22
	1883.....	115,642	943	929	926	958	3,756	32'48
	1884.....	123,197	1,075	1,052	1,061	941	4,129	33'51
	1885.....	130,413	971	943	1,045	927	3,886	29'79
			9,111	9,245	9,629	8,923	36,908	
	Suburbs .....	1876.....	73,872	721	772	832	733	3,058
1877.....		77,014	719	821	868	838	3,246	42'15
1878.....		80,833	854	900	1,014	906	3,674	45'45
1879.....		85,226	955	1,009	1,130	1,053	4,147	48'66
1880.....		89,861	1,026	1,197	1,182	1,214	4,619	51'40
1881.....		122,687	1,178	1,250	1,387	1,356	5,171	42'15
1882.....		128,214	1,383	1,458	1,532	1,503	5,876	45'83
1883.....		135,166	1,518	1,647	1,650	1,719	6,534	48'34
1884.....		143,997	1,806	1,969	2,098	1,870	7,743	53'77
1885.....		152,432	1,973	2,088	2,269	2,050	8,380	54'97
			12,133	13,111	13,962	13,242	52,448	
Country Districts .....		1876.....	450,025	4,091	4,048	4,505	4,286	16,930
	1877.....	469,163	4,083	4,220	4,657	4,246	17,206	36'67
	1878.....	492,427	4,262	4,414	5,006	4,488	18,170	36'89
	1879.....	519,119	4,419	4,639	5,127	4,887	19,072	36'73
	1880.....	547,426	4,694	4,934	5,088	5,092	19,808	36'18
	1881.....	535,353	4,860	4,813	5,181	5,227	20,081	37'51
	1882.....	559,469	4,857	4,854	5,336	5,025	20,072	35'87
	1883.....	589,806	4,917	5,179	5,424	5,471	20,991	35'58
	1884.....	628,339	5,260	5,422	6,001	5,391	22,074	35'13
	1885.....	665,141	5,234	5,477	6,342	5,724	22,777	34'43
			46,677	48,000	52,667	49,837	197,181	
	New South Wales .....	1876.....	617,166	5,650	5,685	6,210	5,753	23,298
1877.....		643,412	5,620	5,837	6,421	5,973	23,851	37'05
1878.....		675,316	5,962	6,165	6,976	6,225	25,328	37'50
1879.....		712,019	6,231	6,591	7,264	6,847	26,933	37'82
1880.....		750,742	6,590	7,116	7,230	7,226	28,162	37'51
1881.....		763,006	6,976	6,983	7,514	7,520	28,993	37'99
1882.....		797,377	7,195	7,273	7,827	7,407	29,702	37'25
1883.....		840,614	7,378	7,755	8,000	8,148	31,281	37'21
1884.....		895,533	8,141	8,443	9,160	8,202	33,946	37'90
1885.....		947,986	8,178	8,508	9,656	8,701	35,043	36'96
			67,921	70,356	76,258	72,002	286,537	



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(E.)

TABLE showing the number of CHILDREN born out of WEDLOCK in the Colony of New South Wales, from 1st January, 1876, to 31st December, 1885.

Year.	Sydney.			Suburban.			Country Districts.			Total.		
	Males	Females.	Total.	Males.	Females	Total.	Males.	Females.	Total	Males.	Females.	Total.
1876 ..	170	136	306	43	45	83	309	247	556	522	428	950
1877 ...	161	144	305	34	43	77	315	292	607	510	479	989
1878 ...	165	152	317	54	54	108	317	279	596	536	485	1,021
1879 ...	195	194	389	65	52	117	345	364	709	605	610	1,215
1880 ...	204	207	411	69	81	150	351	314	665	624	602	1,226
1881 ...	203	222	425	84	83	167	353	318	671	640	623	1,263
1882 ...	220	220	440	75	86	161	340	320	660	635	626	1,261
1883 ...	240	199	439	118	119	237	342	300	642	700	618	1,318
1884 ...	272	255	527	132	127	259	340	369	709	744	751	1,495
1885 ..	266	263	529	171	145	316	383	384	767	820	792	1,612
	2,096	1,992	4,088	845	835	1,680	3,325	3,187	6,512	6,336	6,014	12,350

(F.)

TABLE showing the number of TRIPLETS and TWINS born in the Colony of New South Wales, from 1st January, 1876, to 31st December, 1885.

Year.	Triplets.				Twins.			
	No. of Cases.	Males.	Females.	Total.	No. of Cases.	Males	Females.	Total.
1876 .....	1	1	1	2*	195	188	193	381*†
1877 .....	..	..	.....	.....	209	222	193	415§
1878 ...	2	3	1	4†	196	195	197	392
1879 .....	2	1	5	6	203	206	198	404†
1880 .....	... ..	...	.....	.....	224	230	218	448
1881 .....	4	8	4	12	224	219	227	446
1882 .....	... ..	.....	.....	.....	213	217	208	425*
1883 .....	2	3	3	6	287	277	297	574
1884 .....	4	6	6	12	288	277	295	572¶
1885 .....	2	5	1	6	306	305	307	612
	17	27	21	48	2,345	2,336	2,333	4,669

\*One still-born. † Two still-born. ‡ Nine still-born. § Three still-born. || Two still born. ¶ Four still-born

5  
(G.)

TABLE showing the number of DEATHS registered in the Colony of New South Wales, during each Quarter of the Years 1876 to 1885.

		Estimated Population at the middle of each year.	31 March.	30 June.	30 Sept.	31 Dec.	Total.	Ratio per 1,000 living.
Sydney.....	1876	93,269	758	699	565	469	2,491	26.70
	1877	97,235	525	519	419	537	2,000	20.57
	1878	102,056	644	584	540	553	2,321	22.74
	1879	107,603	624	530	468	644	2,266	21.05
	1880	113,455	590	540	680	930	2,740	24.24
	1881	104,966	600	520	530	596	2,246	21.39
	1882	109,694	684	614	604	623	2,525	23.02
	1883	115,642	558	524	593	648	2,233	19.30
	1884	123,197	634	579	574	748	2,535	20.57
	1885	130,413	721	604	637	674	2,636	20.21
			6,338	5,713	5,520	6,422	23,993	
Suburbs .....	1876	73,872	516	505	332	332	1,685	22.81
	1877	77,014	331	375	258	357	1,321	17.15
	1878	80,833	414	481	349	407	1,651	20.42
	1879	85,226	405	428	346	469	1,648	19.33
	1880	89,861	498	460	465	757	2,180	24.26
	1881	122,687	637	502	428	539	2,106	17.16
	1882	128,214	667	604	526	700	2,497	19.47
	1883	135,166	617	690	574	834	2,715	20.08
	1884	143,997	839	798	703	1,051	3,391	23.54
	1885	152,432	966	895	853	1,143	3,857	25.30
			5,890	5,738	4,834	6,589	23,051	
Country Districts .....	1876	450,025	1,738	1,954	1,739	1,586	7,017	15.59
	1877	469,163	1,987	1,765	1,450	1,346	6,548	13.95
	1878	492,427	1,895	1,953	1,447	1,496	6,791	13.77
	1879	519,190	1,828	1,605	1,418	1,435	6,286	12.10
	1880	547,426	1,589	1,621	1,426	1,675	6,311	11.51
	1881	535,353	1,932	1,803	1,650	1,799	7,184	13.42
	1882	559,469	2,134	2,072	1,781	1,807	7,794	13.93
	1883	589,806	1,950	1,867	1,713	1,771	7,301	12.38
	1884	628,339	2,226	2,225	1,849	1,994	8,294	13.19
	1885	665,141	2,237	2,251	2,096	2,205	8,789	13.21
			19,516	19,116	16,569	17,114	72,315	
New South Wales .....	1876	617,166	3,012	3,158	2,636	2,387	11,193	18.13
	1877	643,412	2,843	2,659	2,127	2,240	9,869	15.34
	1878	675,316	2,953	3,018	2,336	2,456	10,763	15.94
	1879	712,019	2,857	2,563	2,232	2,548	10,200	14.32
	1880	750,742	2,677	2,621	2,571	3,362	11,231	14.96
	1881	763,006	3,169	2,825	2,608	2,934	11,536	15.12
	1882	797,377	3,485	3,290	2,911	3,130	12,816	16.07
	1883	840,614	3,125	3,081	2,790	3,253	12,249	14.57
	1884	895,533	3,699	3,602	3,126	3,793	14,220	15.88
	1885	947,986	3,924	3,750	3,586	4,022	15,282	16.12
			31,744	30,567	26,923	30,125	119,359	

(H.) INFANTILE MORTALITY.

Year	Total Deaths of the year.	Total Deaths under 5 years.	Percentage of total Deaths under 5 years to Deaths of the year	Sydney.			Suburbs.			Country Districts		
				Total Deaths of year.	Deaths under 5 years	Percentage of Deaths under 5 years to total Deaths.	Total Deaths of year.	Deaths under 5 years.	Percentage of Deaths under 5 years to total Deaths	Total Deaths of year.	Deaths under 5 years.	Percentage of Deaths under 5 years to total Deaths
1876....	11,193	4,670	41 72	2,491	1,024	41 10	1,685	917	54 42	7,017	2,729	38 89
1877.....	9,869	4,293	43 40	2,000	815	40 75	1,321	723	54 73	6,548	2,755	42 07
1878.....	10,763	4,884	45 37	2,321	1,022	44 00	1,651	920	55 72	6,791	2,942	43 32
1879.....	10,200	4,369	42 83	2,266	899	39 67	1,648	902	54 73	6,286	2,568	40 85
1880 .	11,231	4,910	43 71	2,740	1,293	47 19	2,180	1,276	58 53	6,311	2,341	37 09
1881	11,536	4,889	42 38	2,246	848	37 75	2,106	1,147	54 46	7,184	2,894	40 28
1882 ..	12,816	5,452	42 54	2,525	990	39 21	2,497	1,355	54 26	7,794	3,107	39 86
1883.....	12,249	5,304	43 30	2,233	940	42 09	2,715	1,455	53 59	7,301	2,909	39 84
1884 ..	14,220	6,228	43 79	2,535	1,053	41 53	3,891	1,838	54 20	8,294	3,337	40 23
1885	15,282	6,611	43 26	2,636	1,042	39 53	3,857	2,091	54 21	8,789	3,478	39 57
	119,359	51,610		23,993	9,926		23,051	12,624		72,315	29,060	
Mean of 10 years .	11,935	5,161		2,399	992		2,305	1,262		7,231	2,906	

TABLE showing the Deaths at all ages, from 1 to 100 years, in Sydney, Suburbs, and the Country Districts, for the year ended 31st December, 1885.

	Under 1 year.	1 to 2 years.	2 to 3 years	3 to 4 years	4 to 5 years	5 to 10 years	10 to 15 years	15 to 20 years	20 to 25 years	25 to 30 years	30 to 35 years.	35 to 40 years	40 to 45 years	45 to 50 years	50 to 55 years	55 to 60 years	60 to 65 years	65 to 70 years	70 to 75 years	75 to 80 years	80 to 85 years	85 to 90 years	90 to 95 years	95 to 100 years	100 years and upwards.	Age not specified	Grand Total.
Males—																											
Sydney	390	78	28	19	16	29	14	27	71	104	81	88	90	75	85	68	57	38	37	22	11	2	1	1	19	1,451	
Suburbs	808	197	41	30	27	65	24	38	70	87	83	76	72	71	63	53	65	59	45	39	19	13	1	1	3	2,050	
Country districts	1269	349	107	95	65	178	96	129	183	220	205	197	204	254	220	242	278	266	270	164	77	21	7	4	43	5,399	
Total	2467	624	176	144	108	272	134	194	324	411	369	361	366	400	404	341	364	375	348	331	194	92	23	8	5	65	8,900
Females—																											
Sydney	390	74	20	19	9	25	16	27	50	64	43	50	61	60	56	44	31	37	38	28	28	8	2	1	1	3	1,185
Suburbs	704	193	42	27	22	53	33	37	68	85	60	76	54	48	53	43	52	47	39	26	22	10	7	1	1	1,807	
Country Districts	1037	300	93	90	73	164	93	110	164	159	124	116	112	96	73	81	91	109	102	95	60	25	7	3	13	3,390	
Total	2129	567	157	136	104	242	142	174	282	308	227	242	227	204	182	173	174	193	179	149	110	43	16	5	1	16	6,382

TABLE showing the Births and Deaths of Males and Females registered in each Ward of the City of Sydney, from the 1st January to the 31st December, 1885, distinguishing the Deaths as under 5 years of age.

Wards	Population Census, 1881	Births.			Deaths						Total Deaths
		Males.	Females	Total	Under 5 years			Above 5 years			
					Males	Females.	Total	Males	Females	Total.	
1. Gippo . . . . .	10,983	194	175	369	46	48	94	63	62	125	219
2. Bourke . . . . .	5,300	30	40	70	8	12	20	306	207	513	533†
3. Brisbane ...	7,219	77	70	147	21	16	37	32	18	50	87
4. Macquarie	8,683	109	108	217	32	18	50	29	31	60	110
5. Cook ...	25,537	563	530	1,093	132	155	287	156	149	305	592
6. Fitzroy.....	15,880	258	285	543	80	69	149	171	94	265	414‡
7. Phillip ...	11,075	314	335	649	94	85	179	48	46	94	273§
8. Denison ...	15,780	386	412	798	118	109	227	115	66	181	408
Totals ...	*99,857	1,931	1,955	3,886	531	512	1,043	920	673	1,593	2,636

\* Exclusive of the Islands of Port Jackson and shipping † 342 of these deaths occurred in the Sydney Hospital, and 93 in the Hyde Park Asylum ‡ St Vincent's Hospital, 71 deaths, Sydney Gaol, 23, and Lunatic Reception House, Darlinghurst, 4. § Benevolent Asylum, 66

	Population Census, 1881.	Births	Deaths under 5 years.	Deaths
1. Sydney ...	103,379	3,886	1,042	2,636
2. Balmain ...	16,929	962	202	350
Leichhardt ...		337	86	159
3. Glebe . . . . .	10,856	808	204	323
4. Newtown . . . . .	15,745	1,140	296	737
5. Redfern . . . . .	23,638	788	243	390
Waterloo ...		742	203	411
6. Paddington	22,220	645	163	295
Randwick ..		106	21	40
Waverley ..		246	54	96
Woollahra . . . . .	22,434	217	45	90
7. Canterbury		453	77	156
Ashfield . . . . .		312	98	146
Petersham . . . . .	11,010	900	222	383
St. Peters . . . . .		75	13	26
8. St. Leonards ...	11,010	576	161	214
Manly .....		83	30	41



11

(K.)

	1876. Per- centage.	1877. Per- centage.	1878. Per- centage.	1879. Per- centage.	1880. Per- centage.	1881. Per- centage.	1882. Per- centage.	1883. Per- centage.	1884. Per- centage.	1885. Per- centage.
<b>CLASS I.—ZYMOTIC DISEASES.</b>										
Order 1.—Miasmatic Diseases—Small-pox, Scarlatina, Measles, Diphtheria, Dysentery, Fevers, &c. ....	26'36	19'85	22'66	18'37	17'09	16'08	17'52	16'83	17'60	17'41
2.—Enthetic Diseases—Syphilis, Gonorrhoea, &c. ....	0'44	0'26	0'21	0'31	0'36	0'26	0'34	0'25	0'29	0'40
3.—Dietic Diseases—Privation, Scurvy, Delirium Tremens, &c. ....	2'31	2'57	2'28	1'53	1'55	1'99	2'13	1'46	1'47	1'49
4.—Parasitic Diseases—Thrush, Worms, &c. ....	0'42	0'59	0'46	0'42	0'39	0'42	0'42	0'42	0'47	0'58
	29'53	23'27	25'61	20'63	19'39	18'75	20'41	18'96	19'83	19'88
<b>CLASS II.—CONSTITUTIONAL.</b>										
Order 1.—Diathetic Diseases—Gout, Dropsy, Cancer, &c. ....	3'58	3'78	3'39	3'38	3'79	3'83	3'68	3'58	3'54	3'57
2.—Tubercular Diseases—Scrofula, Phthisis, Hydrocephalus, &c. ....	7'83	8'67	8'41	9'99	9'26	9'98	9'04	10'04	9'53	9'85
	11'41	12'45	11'80	13'37	13'05	13'81	12'72	13'62	13'07	13'42
<b>CLASS III.—LOCAL.</b>										
Order 1.—Nervous—Apoplexy, Paralysis, Insanity, Convulsions, Cephalitis, Brain Disease, &c. ....	11'55	12'62	13'26	13'53	13'34	13'36	12'82	13'01	12'68	12'70
2.—Circulation—Pericarditis, Aneurism, Heart Disease, &c. ....	4'79	4'84	4'99	5'92	5'34	4'96	4'79	5'23	4'81	4'92
3.—Respiratory—Bronchitis, Pneumonia, Asthma, Pleurisy, &c. ....	10'09	10'87	10'03	10'23	13'79	13'14	13'66	12'47	12'12	12'25
4.—Digestive—Gastritis, Enteritis, Peritonitis, Hernia, &c. ....	6'36	7'27	7'07	7'35	6'54	7'17	6'73	7'23	8'60	8'49
5.—Urinary—Nephritis, Ischuria, Diabetes, &c. ....	1'80	1'92	1'73	2'32	1'87	2'06	1'86	1'75	1'96	1'99
6.—Generation—Ovarian Dropsy, Uterus Diseases, &c. ....	0'24	0'08	0'07	0'11	0'12	0'16	0'14	0'09	0'13	0'10
7.—Joints—Arthritis, Ostitis, Periostitis, &c. ....	0'18	0'11	0'10	0'16	0'19	0'13	0'12	0'11	0'16	0'16
8.—Integumentary—Phlegmon, Ulcer, Skin Diseases, &c. ....	0'20	0'16	0'12	0'19	0'18	0'13	0'31	0'19	0'25	0'16
	35'21	37'87	37'37	39'81	41'37	41'11	40'43	40'08	40'71	40'77
<b>CLASS IV.—DEVELOPMENTAL.</b>										
Order 1.—Children—Cyanosis, Spina-Bifida, Teething, &c. ....	4'23	6'28	5'63	4'89	4'40	4'25	4'07	5'00	4'72	4'65
2.—Adults—Paramenia, Childbirth, &c. ....	1'26	1'03	0'80	0'72	0'97	0'89	0'73	0'85	0'84	0'67
3.—Old People—Old Age, &c. ....	5'45	5'08	5'90	6'46	6'24	6'55	6'88	7'09	6'16	6'15
4.—Nutrition—Atrophy, Debility ....	4'98	5'51	5'03	5'60	6'00	6'25	6'05	6'79	6'85	6'94
	15'92	17'90	17'36	17'67	17'61	17'94	18'73	19'73	18'57	18'41
<b>CLASS V.—VIOLENCE.</b>										
Order 1.—Accident or Negligence—Fractures, Contusions, Burns, Drowning, Suffocation, Wounds, &c. ....	6'34	6'72	6'83	7'41	6'87	6'69	6'32	6'24	6'13	6'26
2.—Wounds in Battle—Gunshot Wounds	..	..	..	..	..	..	..	..	..	..
3.—Homicide—Murder and Manslaughter..	0'24	0'21	0'21	0'16	0'28	0'19	0'16	0'14	0'13	0'20
4.—Suicide—Poison, Drowning, Hanging, &c.	0'42	0'61	0'23	0'45	0'60	0'71	0'44	0'44	0'57	0'62
5.—Execution—Hanging ....	0'03	0'01	0'01	0'01	0'03	0'02	0'03	0'01	0'02	0'02
Unclassified—Violent Deaths .....	..	..	..	..	0'13	0'23	0'13	0'12	0'11	0'14
	7'03	7'55	7'28	8'03	7'91	7'84	7'08	6'95	6'96	7'24
Unspecified.....	0'90	0'96	0'58	0'49	0'67	0'55	0'63	0'66	0'86	0'26

(L.)

Period.	Births.		Deaths.		Mean Temperature.	Mean Height of Barometer.	Rain.	
	Sydney.	Suburbs.	Sydney.	Suburbs.			Depth.	Days.
January .....	300	642	247	358	72'4	'992	3'92	19
February .....	332	612	231	296	72'7	29'952	1'61	9
March .....	339	721	243	312	69'2	'026	1'90	15
April .....	314	692	211	294	64'6	'251	1'40	12
May .....	301	699	205	310	60'0	'207	0'21	5
June.....	328	696	188	290	54'4	'131	16'30	16
July .....	365	795	216	268	52'9	'232	7'45	20
August.....	340	761	206	312	57'0	'115	0'04	6
September .....	340	714	215	273	61'7	'166	0'67	8
October .....	328	700	229	348	64'9	30'198	1'41	10
November .....	286	680	235	390	66'7	'082	1'01	10
December .....	313	668	210	406	70'8	30'080	3'99	15
Mean of 12 Months....	324	698	220	321	63'9	7'703	3'33	12

## APPENDIX.

## A.

TABLE showing the number of MARRIAGES, BIRTHS, and DEATHS, registered in the Colony of New South Wales, during the year ended 31st December, 1885.

District.	Marriages.	Births.			Deaths.		
		Males.	Females.	Total.	Males.	Females.	Total.
Sydney.....	2,115	1,931	1,955	3,886	1,451	1,185	2,636
Suburban.....	1,464	4,316	4,064	8,380	2,050	1,807	3,857
Metropolitan .....	3,579	6,247	6,019	12,266	3,501	2,992	6,493
Country .....	4,039	11,692	11,085	22,777	5,399	3,390	8,789
Total .....	7,618	17,939	17,104	35,043	8,900	6,382	15,282

## B.

TABLE showing the number of MARRIAGES, BIRTHS, and DEATHS, registered in each District of the Colony of New South Wales, during the year ended 31st December, 1885.

District.	Popula- tion, Census, 1881.	Mar- riages.	Total.		Births.				Deaths.		Excess of Births over Deaths.
			Births.	Deaths.	Including Illegitimate Births.		Illegitimate Births.		M.	F.	
					M.	F.	M.	F.			
I.—NORTH-EASTERN.											
1. Richmond River .....	9,266	{ 13	160	32	82	78	...	...	21	11	128
Lismore.....			447	88	209	238	5	2	56	32	359
2. Tweed River.....	7,744	{ 11	67	16	29	38	...	1	9	7	51
3. Grafton.....			329	112	179	150	6	4	66	46	217
Maclean .....	7,123	{ 40	205	54	113	92	2	3	31	23	151
Ulmara .....			121	18	51	70	...	1	7	11	103
4. Kempsey .....	9,309	{ 34	273	75	144	129	4	3	49	26	198
Bellinger River .....			53	16	21	32	1	1	12	4	37
Nambucca River .....	5,945	{ 7	56	10	29	27	1	2	4	6	46
5. Port Macquarie .....			108	21	48	60	...	3	15	6	87
6. Taree.....	5,643	{ 65	356	88	192	164	...	3	54	34	268
Copeland .....			22	7	13	9	1	2	4	3	15
7. Stroud .....	4,103	{ 23	120	24	63	57	...	2	14	10	96
8. Dungog .....			114	18	58	56	1	2	8	10	96
9. Clarence Town.....	5,703	{ 9	49	16	29	20	3	1	8	8	33
10. Paterson .....			91	22	46	45	3	1	11	11	69
11. Raymond Terrace .....	4,944	{ 25	90	19	42	48	...	1	11	8	71
12. Maitland (East) .....			113	47	50	63	2	4	28	19	66
Maitland (West).....	7,021	{ 72	293	153	150	143	4	9	87	66	140
Upper Hunter .....			8	3	6	2	...	...	2	1	5
Minmi .....	4,944	{ 19	105	51	50	55	1	...	27	24	54
Greta.....			118	38	58	60	3	3	23	15	80
13. Morpeth .....	7,021	{ 19	158	46	82	76	2	2	25	21	112
14. Patrick's Plains .....			247	96	122	125	7	3	51	45	151
15. Muswellbrook .....	11,321	{ 17	89	29	41	48	2	2	13	16	60
Denman .....			30	6	13	17	2	2	3	3	24
16. Scone.....	7,021	{ 12	134	38	71	63	3	3	25	13	96
17. Murrurundi .....			77	26	46	31	2	...	15	11	51
Total .....	.....	703	4,033	1,169	2,037	1,996	55	60	679	490	2,864
Lord Howe Island .....	.....	...	2	1	2	...	...	...	1	...	1
II.—NORTH MIDLAND.											
1. Tenterfield .....	4,855	{ 38	241	79	122	119	2	2	45	34	162
2. Glen Innes .....			273	99	132	141	3	5	54	45	174
Emmaville .....	7,186	{ 7	108	38	52	56	2	1	25	13	70
3. Inverell.....			307	104	159	148	8	9	59	45	203
4. Armidale .....	15,222	{ 81	382	145	198	184	9	5	80	65	237
Walcha .....			108	27	44	64	2	1	14	13	81
Uralla .....	7,186	{ 14	103	38	52	51	3	...	15	23	65
Bundarra .....			49	22	23	26	1	1	12	10	27
Total .....	.....	269	1,571	552	782	789	30	24	304	248	1,019

B—continued.

District.	Popula- tion, Census, 1881.	Mar- riages.	Total.		Births.				Deaths.		Excess of Births over Deaths.
			Births.	Deaths.	Including Illegitimate Births.		Illegitimate Births.		M.	F.	
					M.	F.	M.	F.			
III.—NORTH-WESTERN.											
1. Tamworth.....	13,238	72	311	141	165	146	6	5	77	64	170
Manilla.....		5	74	24	33	41	...	4	16	8	50
Gunnedah.....		33	230	68	116	114	6	2	36	32	162
Quirindi.....		5	82	45	45	37	1	1	28	17	37
Barraba.....		1	11	2	4	7	...	1	...	2	9
2. Nundle.....	5,490	3	54	10	21	33	...	1	4	6	44
3. Warialda.....		11	105	43	50	55	2	4	29	14	62
Moree.....	.....	12	69	40	35	34	1	...	27	13	29
Bingara.....		11	81	25	43	38	...	1	16	9	56
4. Cassilis.....	13,004	4	58	14	29	29	1	2	6	8	44
Merriwa.....		4	26	9	13	13	...	1	8	1	15
5. Dubbo.....	2,219	76	530	147	243	287	7	10	93	54	383
Nyngan.....		8	51	28	26	25	1	...	15	13	23
6. Coonabarabran.....	6,877	13	72	27	36	36	2	2	18	9	45
Coonamble.....		19	127	54	73	54	7	6	37	17	73
7. Molong.....	7,759	29	275	87	139	136	3	8	44	43	188
8. Forbes.....		35	165	63	79	86	3	5	36	27	102
Condoblin.....	3,490	3	54	14	34	20	3	...	12	2	40
Parkes.....		13	90	31	54	36	3	1	21	10	61
Nymagee.....	.....	12	76	28	41	35	3	2	21	7	48
9. Walgett.....		11	76	19	38	38	3	2	14	5	57
10. Narrabri.....	33	190	66	89	101	5	5	43	23	124	
Total.....	.....	413	2,807	985	1,406	1,401	57	63	601	384	1,822
IV.—METROPOLITAN.											
1. City of Sydney.....	103,379	2,115	3,886	2,636	1,931	1,955	266	263	1,451	1,185	1,250
2. Balmain.....	16,929	131	962	350	509	453	7	9	173	177	612
Leichhardt.....		38	337	159	167	170	1	4	94	65	178
3. Glebe.....	10,856	164	808	323	439	369	42	27	171	152	485
4. Newtown.....	15,745	212	1,140	737	564	576	51	24	393	344	403
5. Redfern.....	23,638	101	788	390	384	404	16	26	194	196	398
6. Waterloo.....		121	742	411	376	366	14	13	223	188	331
7. Paddington.....	20,220	117	645	295	319	326	9	13	155	140	350
Randwick.....		11	96	40	46	50	...	1	23	17	56
Waverley.....	.....	51	246	96	117	129	2	1	48	48	150
Woolahra.....		97	217	90	119	98	3	2	59	31	127
8. Canterbury.....	22,434	66	453	156	252	201	3	7	89	67	297
Petersham.....		158	900	383	459	441	12	11	191	192	517
Ashfield.....	11,010	63	312	146	162	150	2	2	85	61	166
St. Peters.....		14	75	26	42	33	1	...	13	13	49
9. St. Leonards.....	.....	106	576	214	314	262	7	5	114	100	362
Manly.....		14	83	41	47	36	1	...	25	16	42
Total.....	.....	3,579	12,266	6,493	6,247	6,019	437	408	3,501	2,992	5,773
V.—EAST MIDLAND.											
1. Newcastle.....	15,596	276	864	425	459	405	10	7	228	197	439
Lambton.....	14,773	76	475	185	257	218	7	9	102	83	290
Wallsend.....		82	311	110	163	148	5	5	53	57	201
2. Wollombi.....	5,334	4	36	11	19	17	...	...	7	4	25
Milfield.....		7	48	6	24	24	1	1	4	2	42
Wiseman's Ferry.....	.....	...	8	3	4	4	...	...	3	...	5
3. M'Donald River.....		3	24	5	16	8	...	...	2	3	19
4. Brisbane Water.....	8,699	19	167	53	85	82	1	3	35	18	114
5. Windsor.....		29	218	111	115	103	6	5	61	50	107
6. Richmond.....	6,031	24	106	46	61	45	3	1	29	17	60
7. Penrith.....		37	310	110	164	146	4	3	60	50	200
8. Parramatta.....	8,432	96	295	439	151	144	8	4	363	76	.....
Central Cumberland.....		34	477	176	235	242	4	9	95	81	301
9. Ryde.....	15,256	40	227	128	108	119	1	1	82	46	99
10. Liverpool.....	15,723	11	187	351	88	99	1	3	336	15	.....
11. Campbelltown.....		18	99	35	44	55	2	...	16	19	64
12. Camden.....	.....	24	107	55	61	46	...	...	29	26	52
13. Picton.....		13	98	37	50	48	2	...	19	18	61
Total.....	.....	793	4,057	2,286	2,104	1,953	55	51	1,524	762	2,079

B—continued.

District.	Popula- tion, Census, 1881.	Mar- riages.	Total.		Births.				Deaths.		Excess of Births over Deaths.
			Births.	Deaths.	Including Illegitimate Births.		Illegitimate Births.		M.	F.	
					M.	F.	M.	F.			
<b>VI.—WEST MIDLAND.</b>											
1. Carcoar .....	10,482	43	393	132	205	188	8	7	82	50	261
2. Cowra .....			16	151	43	77	74	6	1	29	14
3. Lithgow .....	8,673	40	384	115	208	176	2	2	61	54	269
4. Bathurst .....			114	341	179	184	157	9	7	107	72
East Macquarie .....	12,828	31	260	104	140	120	3	2	64	40	156
West Macquarie .....			10	178	42	88	90	3	...	24	18
5. Sofala .....	9,472	7	50	25	20	30	...	...	12	13	25
6. Orange .....			92	443	194	244	199	13	12	131	63
7. Wellington .....	6,034	33	203	66	102	101	3	3	35	31	137
8. Tambaroora .....			1	17	8	7	10	...	...	7	1
Hill End .....	17,977	6	31	13	20	11	...	1	11	2	18
9. Mudgee .....			52	345	105	161	184	9	5	60	45
Gulgong .....	17,977	26	100	72	47	53	2	5	41	31	28
10. Rylstone .....			4	97	27	48	49	1	2	19	8
Total .....	.....	475	2,293	1,125	1,551	1,442	59	47	683	442	1,868
<b>VII.—SOUTH-WESTERN.</b>											
1. Wollongong .....	7,209	61	257	84	144	113	3	8	51	33	173
Woonona .....			20	165	43	88	77	2	6	20	23
2. Kiama .....	5,785	44	190	62	102	88	...	...	33	29	128
3. Berrima .....			46	238	69	135	103	4	2	35	34
Robertson .....	8,393	9	76	19	40	36	...	2	10	9	57
4. Shoalhaven .....			44	260	98	128	132	2	1	56	42
5. Milton .....	11,484	17	67	19	41	26	1	1	10	9	48
6. Broulee (Moruya) .....			27	143	40	76	67	...	2	25	15
7. Eden .....	11,484	14	65	22	37	28	...	...	12	10	43
8. Bega .....			55	247	54	138	109	5	6	23	31
Total .....	.....	337	1,708	510	929	779	17	28	275	235	1,198
<b>VIII.—SOUTH MIDLAND.</b>											
1. Braidwood .....	6,948	28	194	69	84	110	2	...	47	22	125
2. Cooma .....			43	275	78	138	137	2	5	49	29
3. Bombala .....	10,751	25	151	68	69	82	1	1	43	25	83
4. Goulburn .....			116	363	155	173	190	7	5	85	70
Argyle .....	17,204	26	302	103	167	135	7	7	46	57	199
Crookwell .....			22	84	22	33	51	1	5	11	11
5. Albury .....	5,715	76	227	111	108	119	5	3	69	42	116
Hume .....			32	300	81	152	148	6	6	46	35
6. Gundagai .....	9,281	17	176	78	84	92	4	4	48	30	98
Adelong .....			15	110	26	61	49	4	1	19	7
Cootamundra .....	6,531	31	142	39	74	68	7	3	22	17	103
7. Tumut .....			23	126	43	74	52	5	1	26	17
8. Yass .....	7,893	32	177	67	83	94	5	5	30	37	110
Gunning .....			15	94	25	47	47	1	4	10	15
9. Queanbeyan .....	5,459	41	302	125	165	137	3	10	67	58	177
10. Burrowa .....			31	130	50	61	69	1	2	28	22
Grenfell .....	4,306	19	129	34	72	57	3	3	15	19	95
Barmedman .....			5,546	...	15	3	7	8	...	...	2
Temora .....	5,546	8	67	20	33	34	1	2	10	10	47
11. Young .....			58	289	142	150	139	6	5	95	47
Murrumburrah .....	11,850	16	102	37	56	46	1	2	19	18	65
Total .....			.....	674	3,755	1,376	1,891	1,864	72	74	787
<b>IX.—SOUTH-WESTERN.</b>											
1. Deniliquin .....	8,908	29	113	56	58	55	6	2	37	19	57
Jerilderie .....			5	33	12	17	16	...	1	10	2
2. Moama .....	8,908	9	61	24	28	33	...	...	12	12	37
3. Moulamein .....			1	14	6	8	6	...	...	3	3
4. Balranald .....	8,135	8	75	34	32	43	...	3	25	9	41
5. Bourke .....			45	177	95	98	79	9	12	70	25
Brewarrina .....	8,125	8	37	23	21	16	1	1	20	3	14
Barrington .....			...	11	5	4	7	1	...	4	1
Cobar .....	8,125	26	111	32	64	47	2	1	21	11	79
6. Hay .....			* .....	42	190	79	106	84	3	1	51
Hillston .....	* .....	23	147	35	82	65	2	...	26	9	112
7. Wentworth .....			23	102	46	57	45	1	1	32	14
Silverton .....	6,194	16	41	63	20	21	1	...	44	19	.....
8. Wilcannia .....			25	79	64	45	34	4	...	54	10
Milparinka .....	6,194	4	18	14	8	10	1	...	14	...	4
Menindie .....			2	28	7	13	15	...	1	6	1
9. Wagga .....	18,347	68	339	74	179	160	6	8	45	29	265
Loftus .....			11	101	33	58	43	2	...	17	16
Narrandera .....	18,347	28	131	63	66	65	2	2	40	23	68
Urana .....			2	43	20	26	17	...	1	14	6
Total .....	.....	375	1,851	785	990	861	41	34	545	240	1,088
<b>GRAND TOTAL</b> .....	.....	<b>7,618</b>	<b>35,043</b>	<b>15,282</b>	<b>17,939</b>	<b>17,104</b>	<b>823</b>	<b>789</b>	<b>8,900</b>	<b>6,382</b>	<b>20,091</b>

The deaths in Parramatta, Liverpool, and Silverton exceed the births by 330, which will reduce the excess of births over deaths to 19,761.

\* Included in Balranald.



15

C.

## MARRIAGES—1885.

Denominations.	Sydney.			Suburbs.			Country.			Total.						
	Marriages.	Marks.		Marriages.	Marks.		Marriages.	Marks.		Marriages.	Marks.					
		M.	F.		Total	M.		F.	Total		M.	F.	Total			
Church of England.....	913	22	37	59	478	9	12	21	1,599	100	87	187	2,990	131	136	267
Roman Catholic .....	336	15	20	35	165	4	12	16	757	42	59	101	1,258	61	91	152
Presbyterian.....	266	11	13	24	197	1	3	4	692	34	51	85	1,155	46	67	113
Wesleyan .....	71	3	3	6	161	1	5	6	507	24	21	45	739	28	29	57
Methodist.....	18	...	1	1	46	1	5	6	129	4	5	9	193	5	11	16
Congregational.....	319	10	9	19	184	5	1	6	29	1	...	1	532	16	10	26
Baptist .....	41	2	2	4	39	1	1	2	57	2	1	3	137	5	4	9
Hebrew.....	24	2	2	4	2	...	...	...	1	...	...	...	27	2	2	4
German Evangelical .....	14	...	...	...	2	...	...	...	10	...	...	...	26	...	...	...
Christians.....	...	...	...	...	1	...	...	...	1	...	...	...	2	...	...	...
Unitarians.....	1	...	...	...	3	...	...	...	...	...	...	...	4	...	...	...
Friends .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Salvation Army .....	...	...	...	...	3	...	...	...	...	...	...	...	3	...	...	...
Independent (unconnected) .....	...	...	...	...	...	...	...	...	31	...	1	1	31	...	1	1
Free Church of England.....	...	...	...	...	...	...	...	...	5	...	1	1	5	...	1	1
Bible Christians .....	...	...	...	...	5	...	...	...	1	1	...	1	6	...	1	1
Registrar's Office.....	112	1	6	7	178	6	13	19	220	26	24	50	510	33	43	76
	2,115	66	93	159	1,464	28	52	80	4,039	234	250	484	7,618	328	395	723

D 1.

DEATHS from all causes, of MALES, at different ages, registered in NEW SOUTH WALES, from 1st January to 31st December, 1885.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified	Total.
<b>CLASS I.—ORDER 1.</b>																						
1. Small-pox .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
1a. Chicken-pox .....	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
2. Measles .....	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
3. Scarletina .....	8	11	16	7	9	5	2	2	...	1	...	...	1	...	...	...	...	...	...	...	...	61
3a. Diphtheria .....	13	20	17	24	17	43	8	...	1	1	...	1	...	1	...	...	...	...	...	...	...	146
4. Quinsy .....	2	3	...	1	1	4	...	...	...	...	...	3	2	...	...	...	...	...	...	1	...	17
5. Croup .....	23	36	33	26	21	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	162
6. Whooping-cough ...	26	15	4	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	49
7. Typhoid (and Infantile Fever.) .....	8	4	5	4	2	20	9	33	42	46	22	22	17	6	1	4	6	6	...	...	1	258
8. Erysipelas ... ..	5	...	...	...	...	...	...	...	...	1	4	1	2	1	...	3	...	...	1	1	...	19
9. Metria .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10. Carbuncle .....	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	2
11. Influenza .....	15	3	2	2	...	3	...	...	1	...	1	1	...	1	3	1	2	2	5	3	1	44
12. Dysentery .....	32	10	2	1	1	1	1	...	...	1	1	3	1	5	4	2	3	7	3	...	...	78
13. Diarrhoea .....	289	67	8	8	1	1	1	...	4	2	...	3	3	7	4	6	4	6	16	...	...	430
14. Cholera .....	28	5	1	...	1	2	...	...	...	1	1	1	2	...	1	1	1	...	...	...	...	45
15. Ague .....	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	1
16. Remittent Fever ..	1	1	1	...	...	...	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	6
17. Rheumatism ..	...	...	...	...	...	4	2	3	2	3	1	5	2	2	3	4	3	5	2	1	...	42
18. Pyæmia .....	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	3
19. Parotitis.....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
	451	178	89	75	54	107	23	41	50	56	32	39	32	13	20	21	22	18	22	24	2	1,369
<b>ORDER 2.</b>																						
1. Syphilis .....	18	1	...	...	...	...	...	...	...	2	2	3	...	1	...	...	...	...	...	...	...	27
2. Stricture of the Urethra	...	...	...	...	...	...	...	...	...	...	...	1	1	1	2	...	...	2	3	...	...	10
3. Hydrophobia.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Glanders .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	18	1	...	...	...	...	...	...	...	2	2	3	1	2	1	2	...	2	3	...	...	37
<b>ORDER 3.</b>																						
1. Privation .....	...	...	...	1	...	...	...	...	...	1	3	4	2	3	2	4	2	2	3	2	4	33
2. Want of Breast Milk...	47	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	47
3. Purpura and Scurvy...	3	1	...	...	...	...	1	1	...	...	...	...	...	...	1	...	...	...	...	1	...	8
4. Alcoholism— a. Del. Tremens .....	...	...	...	...	...	...	...	...	1	2	...	2	3	1	1	...	1	...	...	...	...	10
b. Intemperance ...	...	...	...	...	...	...	...	...	1	3	7	5	7	11	7	7	4	3	1	1	...	57
5. Rickets .....	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2
	51	1	...	1	...	...	1	2	6	10	12	12	15	10	12	7	5	4	4	4	4	157
<b>ORDER 4.</b>																						
1. Thrush .....	30	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	31
2. Worms, &c. ....	1	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
2a Hydatid .....	...	...	...	...	...	4	...	1	1	1	...	2	...	...	...	...	...	...	2	...	...	11
	31	1	...	1	...	5	...	1	1	1	...	2	...	...	...	...	...	...	2	...	...	45
Total, Class I .....	551	181	89	77	54	107	28	42	53	65	45	54	47	30	31	35	29	23	28	33	6	1,608
<b>CLASS II.—ORDER 1.</b>																						
1. Gout .....	...	...	...	...	...	...	...	...	1	...	...	1	...	...	1	2	3	1	...	...	...	9
2. Dropsy .....	7	6	1	1	1	4	6	2	5	1	8	2	4	4	6	6	8	10	12	11	...	105
3. Cancer .....	1	1	...	...	...	...	...	...	1	1	3	4	6	20	20	21	17	12	22	18	2	148
3a. Tumour .....	1	...	...	...	3	...	...	1	...	1	2	2	2	5	1	3	1	...	...	1	...	23
3b. Polypus .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Noma .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Mortification .....	1	...	...	...	...	...	1	3	1	1	...	1	1	3	3	2	...	...	...	1	...	18
	10	7	1	1	1	7	6	3	10	3	13	9	13	27	35	33	33	24	34	31	2	303
<b>ORDER 2.</b>																						
1. Scrofula .....	4	...	...	1	1	1	1	...	...	...	1	1	1	...	...	...	...	...	1	...	...	12
2. Tabes Mesenterica ..	99	46	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	147
3. Phthisis ..	17	7	5	1	2	5	1	19	78	106	87	66	65	65	46	25	12	9	5	3	5	629
3a. Hæmoptysis ..	...	...	...	...	...	...	...	...	...	3	...	1	4	...	2	...	...	...	2	...	...	12
4. Hydrocephalus ..	22	17	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	40
4a. Abscess .....	4	1	...	...	...	2	1	2	1	3	3	4	4	3	1	...	2	...	...	...	...	31
	146	71	6	3	3	9	3	21	79	112	90	72	74	69	49	25	14	9	5	6	5	871
Total, Class II .....	156	78	7	4	4	16	9	24	89	115	103	81	87	96	84	58	47	33	39	37	7	1,174

D 1—continued.

CAUSES OF DEATH	Under 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years	5 to 10 years	10 to 15 years	15 to 20 years	20 to 25 years	25 to 30 years	30 to 35 years	35 to 40 years	40 to 45 years	45 to 50 years	50 to 55 years	55 to 60 years	60 to 65 years	65 to 70 years	70 to 75 years	75 years and upwards	Ages not specified	Total.
<b>CLASS III.—ORDER 1.</b>																						
1. Cephalitis .....	63	39	7	7	5	19	10	5	4	5	5	3	1	2	4	3	1	1	1	1	1	185
2. Apoplexy .....	...	...	...	...	...	...	...	2	4	2	7	17	15	12	21	24	16	19	16	20	...	175
3. Paralysis .....	1	...	2	...	...	2	...	2	4	4	4	10	8	13	19	19	16	23	17	23	...	167
4. Insanity .....	...	...	...	...	...	...	...	...	...	1	1	2	2	4	1	3	1	1	1	4	...	21
5. Chorea .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Epilepsy .....	...	...	3	3	3	9	2	3	4	4	4	3	6	2	2	4	8	3	1	1	1	61
7. Convulsions .....	380	41	6	...	1	...	...	2	3	4	...	3	6	2	2	2	3	3	...	1	1	428
8. Brain Disease, &c. ....	...	...	1	...	...	2	...	1	4	4	2	6	3	13	9	9	7	9	7	3	...	80
	444	80	16	10	9	32	12	12	19	20	23	41	35	46	56	60	51	55	43	51	2	1,117
<b>ORDER 2.</b>																						
1. Pericarditis .....	...	...	...	...	5	2	...	2	2	...	3	1	1	2	3	...	1	...	...	...	...	22
2. Aneurism .....	...	...	...	...	...	...	...	1	2	3	5	2	9	4	3	1	2	...	2	...	...	34
3. Heart Disease, &c. ....	6	3	2	2	...	9	8	11	12	21	19	28	31	43	44	33	31	57	27	25	5	427
	6	3	2	2	...	14	10	11	15	25	22	36	34	53	50	39	32	60	27	37	5	483
<b>ORDER 3.</b>																						
1. Laryngitis .....	6	2	4	2	3	7	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	26
2. Bronchitis .....	144	46	9	12	9	8	3	1	...	2	9	3	5	6	22	19	18	30	28	31	1	406
3. Pleurisy .....	1	...	2	1	...	...	3	4	3	6	3	10	4	4	1	5	2	3	2	...	...	54
4. Pneumonia .....	73	29	12	3	7	18	9	19	34	37	32	28	31	26	23	31	14	15	19	18	4	482
4a. Congestion of the Lungs, pulmonary ..	27	7	2	1	1	5	...	...	5	4	3	5	3	7	6	4	7	4	3	...	...	94
5. Asthma .....	1	2	...	...	...	...	...	...	...	...	1	3	3	2	3	4	8	5	2	...	...	34
6. Lung Disease, &c. ....	2	...	...	...	1	...	...	...	3	2	...	1	4	3	2	3	2	1	1	...	...	27
	254	86	29	18	21	39	13	23	40	50	53	38	55	46	62	62	48	64	60	57	5	1,123
<b>ORDER 4.</b>																						
1. Gastritis .....	69	15	3	...	...	1	...	...	1	...	...	3	1	1	1	...	1	2	1	2	...	101
2. Enteritis .....	98	20	4	5	3	6	12	11	26	22	18	7	6	16	3	4	6	6	4	2	1	280
3. Peritonitis .....	7	1	1	1	1	4	5	7	8	2	3	1	5	7	1	1	2	2	1	...	...	56
4. Ascites .....	...	...	...	...	...	...	...	...	1	...	1	...	...	...	1	1	1	1	1	...	...	8
5. Ulceration of Intestines ..	...	...	...	...	...	...	...	...	1	...	1	1	1	...	1	...	...	...	...	...	...	5
6. Hernia .....	2	...	1	...	...	...	...	...	...	2	1	1	2	1	1	1	1	1	1	...	...	12
7. Ileus .....	6	...	1	1	...	1	1	1	1	1	...	3	...	2	3	2	2	4	1	...	...	29
8. Intussusception .....	5	...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8
9. Stricture of Intestines ..	1	...	...	...	...	...	...	...	...	...	...	1	1	1	1	...	...	1	...	...	...	6
10. Fistula .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	2
11. Stomach Disease, &c .....	5	1	...	1	...	1	...	...	1	1	...	...	2	1	4	...	2	1	1	...	...	21
12. Pancreas Disease, &c .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
13. Hepatitis .....	1	...	...	...	1	...	1	...	2	1	3	4	4	5	6	4	3	...	...	...	...	35
14. Jaundice... ..	16	...	1	...	...	...	...	...	...	...	1	1	1	2	1	4	2	1	2	...	...	31
15. Liver Disease, &c. ....	2	...	...	...	...	2	...	5	7	4	8	9	12	15	9	14	7	4	...	...	...	98
16. Spleen Disease, &c .....	...	...	...	...	...	...	...	1	...	...	2	...	...	...	...	...	...	...	...	...	...	3
	212	37	11	7	4	12	21	22	40	35	33	23	28	45	30	36	28	34	23	12	3	696
<b>ORDER 5.</b>																						
1. Nephritis .....	3	1	1	...	1	1	1	...	...	1	3	2	1	4	4	3	2	1	1	...	...	31
2. Ischuria .....	1	...	...	...	...	1	...	...	...	...	1	...	1	...	...	1	...	...	...	...	...	5
3. Nephria .....	1	1	...	...	2	2	3	5	2	5	4	5	6	7	4	3	5	2	...	...	...	57
4. Diabetes .....	1	...	...	...	1	1	1	1	1	1	2	1	2	2	1	2	1	1	...	...	...	16
5. Stone .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2	2	1	1	1	...	5
6. Cystitis .....	1	...	...	...	...	...	...	...	...	...	...	...	2	1	3	4	8	2	10	...	...	31
7. Kidney Disease, &c. ....	2	2	1	2	1	1	1	1	1	3	3	2	2	7	3	4	5	6	8	...	...	55
	9	4	2	2	1	5	3	5	5	7	7	14	9	13	18	19	18	21	16	22	...	200
<b>ORDER 6.</b>																						
1. Ovarian Dropsy .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Uterus Disease &c. ....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>ORDER 7.</b>																						
1. Arthritis .....	...	...	...	1	...	1	2	...	3	...	...	...	1	...	...	...	...	...	...	...	...	7
1a. Ostitis Periostitis, &c. ..	1	...	...	1	2	...	1	...	1	...	3	1	1	...	...	...	...	...	...	...	...	3
2. Joint Disease, &c. ....	...	...	...	1	2	...	1	...	1	...	3	1	...	...	...	...	...	...	1	...	...	10
	1	...	...	2	3	...	2	2	1	...	6	1	1	...	...	...	...	...	1	...	...	20
<b>ORDER 8.</b>																						
1. Phlegmon .....	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
2. Ulcer .....	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	...	...	1	...	...	...	4
3. Skin Disease, &c. ....	5	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	7
	5	...	...	...	...	...	...	...	1	1	...	...	...	1	1	...	...	1	...	1	...	11
<b>Total, Class III. ....</b>	<b>931</b>	<b>210</b>	<b>60</b>	<b>39</b>	<b>37</b>	<b>105</b>	<b>59</b>	<b>75</b>	<b>121</b>	<b>139</b>	<b>139</b>	<b>158</b>	<b>162</b>	<b>204</b>	<b>217</b>	<b>217</b>	<b>177</b>	<b>234</b>	<b>170</b>	<b>180</b>	<b>16</b>	<b>3,650</b>

D 1—continued.

CAUSES OF DEATH	Under 1 year	1 to 2 years	2 to 3 years.	3 to 4 years	4 to 5 years	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years	25 to 30 years.	30 to 35 years	35 to 40 years.	40 to 45 years.	45 to 50 years	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years	75 years and upwards.	Ages not specified	Total.
<b>CLASS IV.—ORDER 1.</b>																						
1. Premature Birth .....	178	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	178
2. Cyanosis .....	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10
3. Spina Bifida .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
4. Other Malformations .....	29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	29
5. Teething .....	103	62	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	165
	321	62	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	383
<b>ORDER 2.</b>																						
1. Paramenia .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Childbirth (see Metria)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>ORDER 3.</b>																						
1. Old Age .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	72	51	102	388	...	617
<b>ORDER 4.</b>																						
1. Atrophy and Debility	489	64	1	...	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	556
<b>Total Class IV. ....</b>	810	126	1	..	1	1	..	..	..	..	..	..	..	..	..	4	72	51	102	388	..	1,556
<b>CLASS V.—ORDER 1.—</b>																						
<b>ACCIDENT OR NEGLIGENCE</b>																						
1. Fractures & Contusions	4	5	1	10	1	14	18	26	31	46	34	29	38	34	33	17	17	20	8	5	9	400
2. Wounds { <i>a</i> Gunshot. <i>b</i> Cuts, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12
3. Burns and Scalds .....	1	3	10	3	3	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20
3 <i>a</i> . Sunstroke .....	1	1	...	2	3	2	2	2	1	3	2	4	1	2	1	2	...	...	...	...	...	39
4. Poison .....	3	1	1	2	1	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	28
4 <i>a</i> . Bite of Snake or Insect	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
5. Drowning .....	2	14	6	6	4	18	15	14	15	17	26	12	9	5	17	1	4	4	1	3	4	197
6. Suffocation .....	6	3	1	1	...	1	...	...	...	...	...	3	1	...	...	3	...	...	...	...	...	26
7. Otherwise .....	...	1	...	...	...	...	...	...	...	...	...	2	...	...	1	...	...	...	...	...	...	6
	16	29	19	24	12	43	38	49	53	71	68	58	54	50	59	21	28	26	9	13	15	755
<b>ORDER 2.—VIOLENT DEATHS IN BATTLE.</b>																						
1. Gunshot Wounds	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Sword and Bayonet Wounds	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Otherwise .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>ORDER 3.—HOMICIDE.</b>																						
Murder .....	3	...	...	...	...	...	1	1	1	1	1	1	1	1	1	1	...	...	...	...	...	10
Manslaughter .....	...	...	...	...	...	...	1	1	6	3	3	1	1	1	1	1	...	...	...	...	...	15
	3	...	...	...	...	...	2	1	7	1	4	1	1	2	1	1	...	...	...	...	...	25
<b>ORDER 4.—SUICIDE.</b>																						
1. Wounds { Gunshot Cut, Stab, &c	...	...	...	...	...	...	...	...	3	2	2	2	3	2	3	1	...	...	...	...	1	19
2. Poison .....	...	...	...	...	...	...	...	...	4	4	1	...	2	2	2	...	2	...	...	...	...	18
3. Drowning .....	...	...	...	...	...	...	...	...	2	3	2	2	2	1	1	1	...	...	...	1	...	13
4. Hanging .....	...	...	...	...	...	...	...	...	4	2	2	...	5	5	2	2	1	1	1	1	1	1
5. Otherwise .....	...	...	...	...	...	...	...	...	...	...	...	2	...	1	...	...	1	...	...	...	...	26
	...	...	...	...	...	...	...	7	10	11	3	12	12	9	4	5	4	...	2	2	...	4
<b>ORDER 5.—EXECUTION.</b>																						
1. Hanging .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	1	...	...	...	...	3
Violent Deaths (not classed)	...	...	...	...	...	...	2	...	3	1	1	1	3	1	1	3	1	...	...	...	1	18
Open Verdicts .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Total Class V. ....</b>	19	29	19	24	12	43	38	53	61	92	81	66	68	66	71	27	38	32	9	15	19	882
Causes not specified or ill-defined	...	...	...	...	...	...	...	...	...	1	2	2	4	1	...	1	2	...	...	...	17	30
<b>GRAND TOTAL .....</b>	2,467	624	176	144	108	272	134	194	324	411	369	361	366	400	404	341	364	375	348	653	65	8,900

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D 2.

DEATHS from all causes, of FEMALES, at different ages, registered in NEW SOUTH WALES, from 1st January to 31st December, 1885.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified	Total.
<b>CLASS I.—ORDER 1.</b>																						
1. Small-pox .....	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
1a. Chicken-pox .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7
2. Measles .....	1	2	1	2	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	66
3. Scarlatina .....	4	9	14	11	7	12	4	1	1	1	2	..	..	..	..	..	..	..	..	..	..	152
3a. Diphtheria .....	7	18	17	24	21	43	13	7	1	..	..	..	1	..	..	..	..	..	..	..	..	11
4. Quinsy .....	2	2	1	1	1	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	122
5. Croup .....	15	18	19	21	25	22	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	65
6. Whooping-cough ..	36	19	4	2	..	3	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	245
7. Typhoid (and Infantile Fever) .....	10	5	4	2	5	18	30	40	41	26	19	14	8	7	5	6	..	2	2	1	..	13
8. Erysipelas .....	1	..	1	..	..	2	..	1	..	..	..	1	..	1	2	..	1	1	1	1	..	26
9. Metria .....	..	..	..	..	..	..	..	1	5	7	8	4	..	1	..	..	..	..	..	..	..	1
10. Carbuncle .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	50
11. Influenza .....	28	1	1	3	1	..	1	..	1	1	..	..	..	1	1	1	3	3	1	3	..	55
12. Dysentery .....	20	9	4	..	..	..	1	1	1	1	..	2	1	2	3	1	3	1	3	3	..	375
13. Diarrhoea .....	258	63	6	2	..	2	1	2	2	2	1	1	5	3	5	5	2	6	4	4	1	61
14. Cholera .....	29	11	4	2	..	3	1	..	2	..	1	..	1	1	1	..	1	2	1	1	..	9
15. Ague .....	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
16. Remittent Fever ..	3	..	..	..	..	4	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	9
17. Rheumatism .....	..	..	..	1	2	4	..	..	2	..	3	1	3	1	..	2	..	..	..	2	..	21
18. Pyæmia .....	..	1	..	..	1	1	..	1	2	1	1	1	2	..	..	..	..	..	..	..	..	10
19. Parotitis .....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
	414	158	76	72	61	118	58	53	55	43	33	26	19	19	18	14	12	15	12	15	1	1,292
<b>ORDER 2.</b>																						
1. Syphilis .....	18	1	..	..	..	..	..	..	1	1	..	..	..	1	1	1	..	1	..	..	..	25
2. Stricture of the Urethra ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Hydrophobia .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Glanders .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	18	1	..	..	..	..	..	..	1	1	..	..	..	1	1	1	..	1	..	..	..	25
<b>ORDER 3.</b>																						
1. Privation .....	1	..	1	..	..	..	..	..	1	2	..	..	..	..	..	1	..	..	..	..	..	6
2. Want of Breast Milk...	32	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	32
3. Purpura and Scurvy...	2	5	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8
4. Alcoholism— a. Del. Tremens b. Intemperance...	..	..	..	..	..	..	..	..	1	2	5	2	7	2	3	1	2	1	..	..	..	26
5. Rickets .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	35	5	1	..	..	1	..	1	3	7	2	7	2	3	1	3	1	..	..	..	..	72
<b>ORDER 4.</b>																						
1. Thrush .....	29	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	30
2. Worms, &c. ....	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
2a. Hydatid .....	..	..	..	1	..	..	1	1	4	2	1	1	1	..	..	..	..	..	..	..	..	12
	29	2	..	2	..	..	1	1	4	2	1	1	1	..	..	..	..	..	..	..	..	44
Total, Class I.....	496	166	77	72	63	119	58	54	57	51	43	29	27	23	22	16	15	17	12	15	1	1,433
<b>CLASS II.—ORDER 1.</b>																						
1. Gout .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
2. Dropsy .....	5	3	..	..	2	..	..	1	3	6	4	5	4	10	6	4	7	4	7	..	..	71
3. Cancer .....	..	..	1	1	..	..	..	..	5	8	6	14	19	12	18	8	12	5	8	2	..	119
3a. Tumour .....	2	1	..	..	..	1	..	1	1	2	2	4	4	4	5	2	..	2	1	..	..	32
3b. Polypus .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
4. Noma .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Mortification .....	2	..	..	..	1	..	..	3	4	2	1	..	1	1	1	..	..	1	1	1	..	19
	9	4	..	1	1	3	1	..	5	13	18	14	23	28	28	30	14	19	12	17	3	243
<b>ORDER 2.</b>																						
1. Scrofula .....	1	..	..	..	..	1	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	5
2. Tabes Mesenterica .....	90	32	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	124
3. Phthisis .....	13	5	3	1	7	12	33	69	89	54	39	50	28	20	13	6	4	..	1	2	..	449
3a. Hæmoptysis .....	1	..	..	..	..	..	1	..	..	..	1	..	..	1	1	..	..	..	..	..	..	5
4. Hydrocephalus .....	17	14	2	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	35
4a. Abscess.....	3	..	1	..	..	2	2	..	1	1	1	1	3	1	..	..	..	..	..	..	..	16
	125	51	6	1	1	10	15	37	69	91	55	41	51	31	22	15	6	4	..	1	2	634
Total, Class II .....	134	55	6	2	2	13	16	37	74	104	73	55	74	59	50	45	20	23	12	18	5	877

D 2—continued.

CAUSES OF DEATH.	Under 1 year	1 to 2 years.	2 to 3 years	3 to 4 years	4 to 5 years	5 to 10 years	10 to 15 years	15 to 20 years	20 to 25 years	25 to 30 years	30 to 35 years	35 to 40 years	40 to 45 years	45 to 50 years	50 to 55 years	55 to 60 years	60 to 65 years	65 to 70 years	70 to 75 years.	75 years and upwards	Ages not specified	Total
<b>CLASS III—ORDER 1.</b>																						
1. Cephalitis ...	60	31	10	9	4	13	5	2	3	2	2	5	2	..	1	3	1	..	1	1	..	155
2. Apoplexy ...	..	..	..	..	..	..	1	1	1	5	3	2	8	12	8	11	11	7	9	6	..	85
3. Paralysis ...	..	1	..	1	..	..	1	2	..	1	1	4	2	7	8	4	4	7	11	..	..	58
4. Insanity .....	..	..	..	..	..	..	..	..	..	1	..	..	1	1	2	..	..	..	..	..	..	6
5. Chorea .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6. Epilepsy ...	..	..	..	4	5	7	6	7	8	9	7	5	5	3	2	2	..	1	1	1	..	74
7. Convulsions ...	314	70	4	3	1	2	..	..	8	9	7	5	5	3	2	2	..	1	1	1	..	394
8. Brain Disease, &c.....	2	..	..	..	2	2	1	..	1	1	4	5	7	7	4	..	2	8	1	4	..	51
	376	102	14	17	12	24	14	12	13	19	17	21	25	30	25	20	19	23	17	23	..	823
<b>ORDER 2.</b>																						
1. Pericarditis .....	..	..	..	..	..	2	1	1	..	1	..	..	..	..	2	..	1	1	..	1	..	10
2. Aneurism .....	..	..	..	..	..	1	..	..	..	2	2	..	1	1	1	..	..	..	1	1	..	9
3. Heart Disease, &c	6	3	3	3	..	6	10	14	12	8	12	21	18	19	19	18	22	27	16	12	1	250
	6	3	3	3	..	9	11	15	12	9	14	23	18	20	22	18	23	28	17	14	1	269
<b>ORDER 3.</b>																						
1. Laryngitis .....	1	1	2	3	1	3	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	14
2. Bronchitis .....	118	34	14	7	4	8	2	1	..	2	3	5	5	5	6	13	16	..	19	16	..	295
3. Pleurisy ...	1	2	..	1	1	2	2	4	8	4	7	3	3	..	..	4	1	1	1	1	..	43
4. Pneumonia ...	54	30	13	10	5	12	6	13	30	19	14	20	16	12	8	11	1	8	9	7	2	300
4a. Congestion of the Lungs, pulmonary.	15	9	3	3	1	6	2	2	2	2	2	4	2	..	1	2	6	2	2	1	..	67
5. Asthma ...	..	1	..	..	..	..	1	..	..	1	2	1	2	..	3	4	1	..	2	..	..	21
6. Lung Disease, &c. ...	..	..	..	..	1	..	2	1	..	1	1	..	..	1	1	1	1	..	1	..	..	9
	159	77	32	23	13	31	13	19	37	31	25	37	30	22	16	33	29	31	28	31	2	749
<b>ORDER 4.</b>																						
1. Gastritis .....	63	12	2	2	..	..	..	3	..	1	3	1	..	..	1	3	3	4	1	..	..	104
2. Enteritis .....	73	22	9	4	5	15	7	10	25	20	11	7	2	2	2	4	1	4	3	2	..	228
3. Peritonitis ..	6	1	..	1	3	5	2	15	17	9	5	3	2	3	3	1	1	..	2	..	..	76
4. Ascites .....	..	..	..	..	..	..	..	1	..	1	..	..	..	..	4	1	1	2	1	..	..	11
5. Ulceration of Intestines	1	..	..	..	..	..	..	..	..	..	1	1	1	1	1	1	1	1	1	1	..	5
6. Hernia .....	..	..	..	..	..	..	..	..	..	1	1	2	..	..	1	1	2	1	1	1	..	10
7. Ileus .....	4	..	..	1	..	1	..	1	1	1	3	..	..	1	1	1	1	1	1	1	..	17
8. Intussusception ..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	2
9. Structures of Intestines	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	2
10. Fistula .....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
11. Stomach Disease, &c.	..	..	..	..	..	1	1	..	..	..	..	..	2	..	..	1	1	1	1	1	..	8
12. Pancreas Disease, &c...	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
13. Hepatitis ...	4	..	..	..	..	..	1	1	..	..	5	1	2	7	4	3	2	1	2	1	..	31
14. Jaundice ...	14	..	..	..	..	..	..	2	2	..	..	..	1	2	3	1	1	1	1	3	..	28
15. Liver Disease, &c. ...	..	..	..	..	1	..	..	2	6	2	6	9	11	11	8	5	6	4	3	..	..	74
16. Spleen Disease, &c.	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
	170	35	11	8	5	20	14	16	48	46	26	32	20	19	32	23	20	22	12	17	1	602
<b>ORDER 5.</b>																						
1. Nephritis .....	1	4	..	1	..	3	..	2	2	..	..	1	..	..	1	..	1	..	..	1	..	16
2. Ischuria .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
3. Nephria .....	..	1	1	..	..	2	1	3	7	3	7	5	7	7	3	3	2	4	1	..	..	57
4. Diabetes ..	..	..	..	..	1	..	..	..	..	..	..	..	2	..	..	1	1	..	..	..	..	5
5. Stone .....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
6. Cystitis .....	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	3
7. Kidney Disease, &c. ...	1	3	1	..	1	..	..	1	2	3	..	1	1	1	2	3	2	..	1	..	..	22
	3	8	2	1	..	5	2	1	5	11	5	10	6	11	8	6	7	6	4	4	..	105
<b>ORDER 6.</b>																						
1. Ovarian Dropsy ...	..	..	..	..	..	..	..	..	..	2	..	5	1	1	1	..	1	1	..	..	..	5
2. Uterus Disease, &c. ...	..	..	..	..	..	..	..	..	2	..	..	5	3	2	1	..	1	1	1	..	..	11
	..	..	..	..	..	..	..	..	2	..	..	5	3	2	1	..	1	1	1	..	..	16
<b>ORDER 7.</b>																						
1. Arthritis ..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..	..	..	..	..	4
1a. Ostitis Perostitis ...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Joint Disease, &c....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	1	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..	..	..	..	..	4
<b>ORDER 8.</b>																						
1. Phlegmon ...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Ulcer .....	1	..	..	..	..	..	..	..	..	..	1	1	..	..	..	2	..	..	..	..	..	5
3. Skin Disease, &c.	6	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8
	7	1	1	..	..	..	..	..	..	..	1	1	..	..	..	2	..	..	..	..	..	13
<b>TOTAL CLASS III .</b>	752	226	63	52	30	89	54	63	115	119	87	122	103	104	104	106	102	111	79	89	4	2,581



D 3.

DEATHS from all causes, of BOTH SEXES, at different ages, registered in NEW SOUTH WALES, from the 1st January to the 31st December, 1885.

CAUSES OF DEATH.	Under 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years	5 to 10 years	10 to 15 years	15 to 20 years	20 to 25 years	25 to 30 years	30 to 35 years	35 to 40 years	40 to 45 years	45 to 50 years	50 to 55 years	55 to 60 years	60 to 65 years	65 to 70 years	70 to 75 years	75 years and upwards	Ages not specified	Total.
<b>CLASS I—ORDER 1.</b>																						
1. Small-pox				1	1																	2
1a. Chicken-pox																						1
2. Measles	1	4	1	2		1							1									10
3. Scarletina	12	20	30	18	16	17	6	3	1	2	2											127
3a. Diphtheria	20	38	34	48	38	86	21	7	2	1			1	1								298
4. Quinsy	4	5	1	2	2	8							3	2								23
5. Croup	38	54	52	47	46	45	2															284
6. Whooping-cough	62	34	8	4		4		2														114
7. Typhoid (and Infantile Fever)	18	9	9	6	7	38	39	73	83	72	41	36	25	13	6	10	6	8	2	1	1	503
8. Erysipelas	6		1			2		1		1	4	2	2	2	3	1	1	1	2	2		32
9. Metra								1	5	7	8	4		1								26
10. Carbuncle								1							1	1						3
11. Influenza	43	4	3	5	1	3	1	2	1	1	1	1	2	4	2	5	3	6	6	1		94
12. Dysentery	52	19	6	1	1	1	1	1	1	1	1	3	4	3	8	5	5	4	10	6		133
13. Diarrhoea	547	130	14	10	1	3	2	2	6	4	1	4	8	3	12	9	8	10	10	20	1	805
14. Cholera	57	16	5	2	1	5	1	2	2	1	2	1	3	1	2	1	2	2	1	1		106
15. Ague				1						1												2
16. Remittent Fever	4	1	1			4	1			2	2											15
17. Rheumatism					1	6	6	3	2	5	1	8	3	5	4	5	5	2	3			63
18. Pyæmia	1	1				1	1	1	2	1		2	2				1					13
19. Parotitis						1								1								2
	865	336	165	147	115	225	81	94	105	99	65	65	51	32	38	35	34	33	34	39	3	2,661
<b>ORDER 2.</b>																						
1. Syphilis	36	2								3	3	3		2	1	1		1				52
2. Stricture of the Urethra													1	1	1	2			2	3		10
3. Hydrophobia																						
4. Glanders																						
	36	2								3	3	3	1	3	2	3		1	2	3		62
<b>ORDER 3.</b>																						
1. Privation	1		1	1						2	5	4	2	3	2	4	3	2	3	2	4	39
2. Want of Breast Milk	79																					79
3. Purpura and Scurvy	5	6				1		1	1							1				1		16
4. Alcoholism— a. Del. Tremens b. Intemperance										2	2	2	3	1	1	1						10
5. Rickets	1								2	5	12	7	14	13	10	8	6	4	1	1		83
	86	6	1	1		1	1	3	9	17	14	19	17	13	13	10	6	4	4	4		229
<b>ORDER 4.</b>																						
1. Thrush	59	2																				61
2. Worms, &c.	1	1		1	1		1															5
2a. Hydatid				1		4	1	2	5	3	1	3	1							2		23
	60	3		1	2	5	1	2	5	3	1	3	1							2		89
<b>Total, Class I</b>	<b>1,047</b>	<b>347</b>	<b>166</b>	<b>149</b>	<b>117</b>	<b>226</b>	<b>86</b>	<b>96</b>	<b>110</b>	<b>116</b>	<b>88</b>	<b>83</b>	<b>74</b>	<b>53</b>	<b>53</b>	<b>51</b>	<b>44</b>	<b>40</b>	<b>40</b>	<b>48</b>	<b>7</b>	<b>3,041</b>
<b>CLASS II—ORDER 1</b>																						
1. Gout									1			1			2	2	3	1				10
2. Dropsy	12	9	1	1	1	6	6	2	6	4	14	6	9	8	16	12	12	17	16	18		176
3. Cancer	1	1		1	1					6	11	10	20	39	32	39	25	24	27	26	4	267
3a. Tumour	3	1							2	1	3	4	6	6	9	6	5	1	2	2		55
3b. Polypus												1										1
4. Noma																						
5. Mortification	3					1		1	6	5	3	1	1	2	4	4	2		1	2	1	37
	19	11	1	2	2	10	7	3	15	16	31	23	36	55	63	63	47	43	46	48	5	546
<b>ORDER 2.</b>																						
1. Scrofula	5			1	1	1	2	1		1		1	1	1		1				1		17
2. Tabes Mesenterica	189	78	1	1		2																271
3. Phthisis	30	12	8	1	3	12	13	52	147	195	141	105	115	93	66	38	18	13	5	4	7	1,078
3a. Hæmoptysis	1							1		3		2	4		3	1				2		17
4. Hydrocephalus	39	31	2	1		2																75
4a. Abscess	7	1	1			2	3	4	1	4	4	5	5	6	2		2					47
	271	122	12	4	4	19	18	58	148	203	145	113	125	100	71	40	20	13	5	7	7	1,505
<b>Total, Class II</b>	<b>290</b>	<b>133</b>	<b>13</b>	<b>6</b>	<b>6</b>	<b>29</b>	<b>25</b>	<b>61</b>	<b>163</b>	<b>219</b>	<b>176</b>	<b>136</b>	<b>161</b>	<b>155</b>	<b>134</b>	<b>103</b>	<b>67</b>	<b>56</b>	<b>51</b>	<b>55</b>	<b>12</b>	<b>2,051</b>



D 2—continued.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total
<b>CLASS III.—ORDER 1.</b>																						
1. Cephalitis .....	123	70	17	16	9	32	15	7	7	7	7	8	3	2	5	6	2	2	2	1	1	340
2. Apoplexy .....	...	...	...	...	...	...	1	3	5	7	10	19	23	24	29	35	27	26	25	26	...	260
3. Paralysis .....	1	1	2	1	...	2	1	4	4	5	5	14	10	20	27	23	20	30	21	34	...	225
4. Insanity .....	...	...	...	...	...	...	...	...	2	1	2	3	5	3	3	1	3	1	2	4	...	27
5. Chorea .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	135
6. Epilepsy .....	...	...	...	7	8	16	8	9	11	13	11	8	11	5	4	6	9	4	2	2	1	135
7. Convulsions .....	694	111	10	3	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	822
8. Brain Disease, &c. ...	2	...	1	...	2	4	1	1	5	5	6	11	10	20	13	9	9	17	8	7	...	131
	820	182	30	27	21	56	26	24	32	39	40	62	60	76	81	80	70	78	60	74	2	1,940
<b>ORDER 2.</b>																						
1. Pericarditis .....	...	...	...	...	...	7	3	1	2	3	...	3	1	4	3	1	2	...	...	1	...	32
2. Aneurism .....	...	6	...	...	...	1	...	...	1	2	5	7	2	10	5	3	1	2	1	3	...	43
3. Heart Disease, &c....	12	6	5	5	...	15	18	25	24	29	31	49	49	62	63	51	53	84	43	47	6	677
	12	6	5	5	...	23	21	26	27	34	36	59	52	73	72	57	55	88	44	51	6	752
<b>ORDER 3.</b>																						
1. Laryngitis .....	7	3	6	5	4	10	2	...	...	...	...	1	...	...	1	...	...	...	1	...	...	40
2. Bronchitis .....	262	80	23	19	13	16	5	2	...	4	12	6	10	11	28	32	34	49	44	50	1	701
3. Pleurisy .....	2	2	2	2	2	...	5	8	11	10	10	13	7	4	5	6	2	3	3	...	...	97
4. Pneumonia .....	127	59	25	13	12	30	15	32	64	56	46	48	47	38	31	42	15	23	28	25	6	782
4a. Congestion of the Lungs, pulmonary.	42	16	5	4	2	11	2	2	2	7	6	7	7	3	8	8	10	9	6	4	...	161
5. Asthma .....	1	3	...	...	...	...	1	...	...	1	3	7	5	2	6	8	9	5	4	...	...	55
6. Lung Disease, &c. ...	2	...	...	1	1	2	...	3	3	3	3	...	1	4	4	2	4	3	1	2	...	36
	443	163	61	41	34	70	26	42	77	81	78	75	85	68	78	95	77	95	88	88	7	1,872
<b>ORDER 4.</b>																						
1. Gastritis .....	137	27	5	2	...	1	...	3	1	1	3	4	1	2	4	3	5	3	1	2	...	205
2. Enteritis .....	171	42	13	9	8	21	19	21	51	42	29	14	8	18	5	8	7	10	7	4	1	508
3. Peritonitis .....	13	2	1	1	1	7	10	9	23	19	12	6	8	9	3	2	1	2	1	2	...	132
4. Ascites .....	...	...	...	...	...	...	1	1	...	...	1	...	...	5	2	3	3	2	1	1	...	19
5. Ulceration of Intestines	1	...	...	...	...	...	...	1	...	1	2	1	...	2	2	1	2	1	1	1	...	10
6. Hernia .....	2	...	1	...	...	...	...	...	3	2	2	2	2	1	2	2	2	1	2	2	...	22
7. Ileus .....	10	...	1	2	...	1	1	2	1	2	1	6	2	4	...	3	3	5	2	...	...	46
8. Intussusception .....	5	...	...	...	...	1	...	2	...	...	1	...	...	1	...	...	...	...	...	...	...	10
9. Stricture of Intestines	1	...	...	...	...	...	...	1	...	...	...	1	1	1	2	...	...	...	1	...	...	8
10. Fistula .....	...	...	...	...	...	...	...	1	1	...	...	...	1	...	1	...	...	...	...	...	...	3
11. Stomach Disease, &c	5	1	...	1	...	1	1	1	1	1	1	2	2	2	1	5	1	3	1	2	...	29
12. Pancreas Disease, &c	...	...	...	...	...	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2
13. Hepatitis .....	5	...	...	...	...	1	2	1	2	1	8	5	6	12	10	7	5	1	2	1	...	69
14. Jaundice .....	30	...	1	...	...	...	...	2	2	1	...	1	...	2	4	4	5	3	2	5	...	59
15. Liver Disease, &c. ...	2	...	...	...	...	1	...	2	11	9	10	17	20	23	23	14	20	11	7	...	...	172
16. Spleen Disease, &c.	...	...	...	...	...	...	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	4
	382	72	22	15	9	32	35	38	88	81	59	55	48	64	62	64	48	56	35	29	4	1,298
<b>ORDER 5.</b>																						
1. Nephritis .....	4	5	1	1	1	4	1	1	2	2	1	3	3	1	4	5	3	3	1	1	...	47
2. Ischuria .....	1	...	...	...	...	...	1	1	...	...	...	1	1	...	...	...	1	...	1	...	...	6
3. Nephria .....	1	2	1	...	...	2	2	3	6	12	5	12	9	12	13	10	7	5	9	3	...	114
4. Diabetes .....	1	...	...	...	1	1	1	1	1	1	2	1	4	...	2	2	3	1	...	...	...	21
5. Stone .....	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2	...	1	1	1	...	6
6. Cystitis .....	1	...	...	...	...	...	...	...	1	...	...	...	3	1	3	4	8	2	11	...	...	34
7. Kidney Disease, &c. ...	3	5	2	2	...	2	1	1	1	2	5	6	2	3	5	7	7	6	9	...	...	77
	12	12	4	3	1	10	5	6	10	18	12	24	15	24	26	25	25	27	20	26	...	305
<b>ORDER 6.</b>																						
1. Ovarian Dropsy .....	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	1	1	...	...	...	5
2. Uterus Disease, &c. ...	...	...	...	...	...	...	...	...	2	...	5	1	1	1	...	1	...	...	...	...	...	11
	...	...	...	...	...	...	...	...	2	...	5	3	2	1	...	1	1	1	...	...	...	16
<b>ORDER 7.</b>																						
1. Arthritis .....	1	...	...	1	...	...	1	2	1	...	3	...	...	1	1	...	...	...	...	...	...	11
1a. Ostitis Periostitis, &c.	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	3
2. Joint Disease, &c. ...	...	...	...	1	2	...	1	...	1	...	3	1	...	...	...	...	...	...	1	...	...	10
	2	...	...	2	3	...	2	2	2	...	6	1	1	...	1	1	...	...	1	...	...	24
<b>ORDER 8.</b>																						
1. Phlegmon .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Ulcer .....	1	...	...	...	...	...	...	...	...	1	1	1	...	1	1	2	...	...	...	...	...	9
3. Skin Disease, &c	11	1	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	15
	12	1	1	...	...	...	...	...	1	1	1	1	...	1	1	2	...	...	...	...	1	24
<b>Total, Class III</b> ...	1,683	436	123	91	67	194	113	138	236	258	226	287	265	308	321	323	279	345	249	269	20	6,231

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS IV.—ORDER 1.</b>																						
1. Premature Birth ...	321																					321
2. Cyanosis ...	16																					16
3. Spina Bifida ...	9																					9
4. Other Malformations	41																					41
5. Teething ...	236	118																				324
	593	118																				711
<b>ORDER 2.</b>																						
1. Paramenia ...									1													1
2. Childbirth (see Metria)								8	21	23	18	16	14	1								101
								8	22	23	18	16	14	1								102
<b>ORDER 3.</b>																						
1. Old Age ...																4	101	82	168	583	1	930
<b>ORDER 4.</b>																						
1. Atrophy and Debility.	943	112	2		1	1																1,059
<b>Total Class IV ...</b>	1,536	230	2		1	1		8	22	23	18	16	14	1		4	101	82	168	583	1	2,811
<b>CLASS V.—ORDER 1.—</b>																						
<b>ACCIDENT OR NEGLIGENCE</b>																						
1. Fractures & Contusions	5	6	2	10	2	16	22	28	35	47	35	32	40	39	36	19	22	23	12	8	9	448
2. Wounds { a Gunshot.						1	1	2	1	2		2		2	2							13
{ b Cuts ...	1	1				1	2	2	1	1	3	2	3	2	2	1						23
3. Burns and Scalds ...	4	13	18	8	10	15	3	5	2	4	6	5	7	1					4	2	4	121
3a. Sunstroke ...		1	1	3	3	2	3	2	1	4	2	5	1	1	3							34
4. Poison ...	4	3	1	3	1	3	1	1	3	1	1	3	3	5	3							41
4a. Bite of Snake or Insect						2			1													3
5. Drowning ...	2	17	6	8	5	22	17	18	16	20	26	13	9	6	17	1	4	7	1	3	4	222
6. Suffocation ...	17	3	1	1		1	1	1	2	1	3	3	1	2			3	1	1			42
7. Otherwise ...		1		1		1	2				3				1		1					10
	33	45	29	34	21	63	51	59	65	78	72	70	61	65	64	23	36	36	19	18	15	957
<b>ORDER 2.—VIOLENT DEATHS IN BATTLE.</b>																						
1. Gunshot Wounds																						
2. Sword and Bayonet Wounds																						
3. Otherwise																						
<b>ORDER 3.—HOMICIDE.</b>																						
Murder	4						1	1	1	1	1	1	1	1	2					2	1	16
Manslaughter								1	1	6		3	1	1	1	1					1	15
	4						1	2	1	7	1	4	1	1	2	2	1			2	2	31
<b>ORDER 4.—SUICIDE.</b>																						
1. Wounds { Gunshot								1	3	2	2	2	3	2	3	1					1	20
{ Cut, Stab, &c									4	4	4	1		2	2		3	2				18
2. Poison									1	3	4		2	2	1	2	1	1		1		18
3. Drowning								1	1				1	1	1							4
4. Hanging									4	3	2	1	6	5	3	3	1	1	1	1	1	31
5. Otherwise												2	1					1				4
								2	9	12	12	4	14	12	10	6	5	5		2	2	95
<b>ORDER 5.—EXECUTION.</b>																						
1. Hanging										1							1	1				3
Violent Deaths (not classed)																						
Open Verdicts	2							2		3	1	1	1	3	1	1	3	1			1	20
<b>Total Class V ...</b>	39	45	29	34	21	63	52	65	75	101	86	79	77	81	77	32	46	43	19	22	20	1,106
Sudden Deaths (cause unascertained)																						
Causes not specified or ill-defined	1					1				2	2	2	2	6	1	1	1	2			21	42
<b>TOTAL ...</b>	4,596	1,191	333	280	212	514	276	388	606	719	596	603	593	604	586	514	538	568	527	977	81	15,282

E 1.

DEATHS from all causes, of MALES, at different ages, registered in SYDNEY, from 1st January to 31st December, 1886.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS I.—ORDER 1.</b>																						
1. Small-pox .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1a. Chicken-pox .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Measles .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Scarlatina .....	1	1	4	2	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11
3a. Diphtheria .....	1	2	4	4	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14
4. Quinsy .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
5. Croup .....	1	4	...	2	2	2	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	11
6. Whooping-cough .....	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
7. Typhoid (and infantile Fever) .....	1	...	2	...	...	3	1	4	9	14	5	3	6	...	...	2	1	3	...	...	...	54
8. Erysipelas .....	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	2
9. Metria .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10. Carbuncle .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11. Influenza .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12. Dysentery .....	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9
13. Diarrhoea .....	55	13	1	1	...	...	...	...	1	1	...	...	...	1	1	...	...	1	1	...	1	77
14. Cholera .....	3	...	...	...	1	1	...	...	...	1	...	1	1	...	4	...	...	...	...	...	...	8
15. Ague .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16. Remittent Fever .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17. Rheumatism .....	...	...	...	...	...	...	...	1	...	...	1	1	1	1	1	2	3	...	...	...	...	11
18. Pyæmia .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19. Parotitis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
	68	21	11	9	6	9	1	5	10	16	6	7	8	3	6	5	4	4	2	1	...	202
<b>ORDER 2.</b>																						
1. Syphilis .....	11	...	...	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...	14
2. Stricture of the Urethra .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	11	...	...	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...	14
<b>ORDER 3.</b>																						
1. Privation .....	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
2. Want of Breast Milk .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Purpura and Scurvy .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	2
4. Alcoholism— a. Del. Tremens .....	...	...	...	...	...	...	...	...	...	...	...	...	2	...	1	...	...	...	...	...	...	3
b. Intemperance .....	...	...	...	...	...	...	...	...	1	4	...	2	...	2	2	1	1	...	1	...	...	14
5. Rickets .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	1	...	...	...	...	...	...	...	1	5	...	4	...	3	3	1	1	...	1	...	...	20
<b>ORDER 4.</b>																						
1. Thrush .....	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
2. Worms, &c. .....	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
2a. Hydatid .....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	2	...	1	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	5
<b>Total, Class I.....</b>	<b>82</b>	<b>21</b>	<b>11</b>	<b>10</b>	<b>6</b>	<b>9</b>	<b>2</b>	<b>5</b>	<b>11</b>	<b>18</b>	<b>12</b>	<b>8</b>	<b>12</b>	<b>3</b>	<b>9</b>	<b>8</b>	<b>5</b>	<b>5</b>	<b>2</b>	<b>2</b>	...	<b>241</b>
<b>CLASS II.—ORDER 1.</b>																						
1. Gout .....	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	2	1	...	...	...	...	5
2. Dropsy .....	...	1	...	...	...	...	...	1	1	...	2	1	2	1	1	1	1	1	1	1	...	14
3. Cancer .....	...	...	...	...	...	...	...	...	...	1	1	2	5	2	4	4	1	1	...	...	...	21
3a. Tumour .....	...	...	...	...	...	1	...	...	...	...	1	1	...	...	1	...	...	...	...	...	...	4
3b. Polypus .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Noma .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Mortification .....	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	1	...	...	...	...	...	3
	...	1	...	...	...	1	...	1	2	1	3	3	6	6	3	8	7	2	2	1	...	47
<b>ORDER 2.</b>																						
1. Scrofula .....	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
2. Tabes Mesenterica .....	16	4	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22
3. Phthisis .....	3	...	1	...	1	...	1	5	26	29	19	20	24	17	12	3	2	1	2	...	3	169
3a. Hæmoptysis .....	...	...	...	...	...	...	...	...	2	...	...	...	1	...	1	...	...	...	...	...	...	4
4. Hydrocephalus .....	1	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
4a. Abscess .....	...	...	...	...	...	1	...	...	1	1	1	1	1	...	1	...	...	...	...	...	...	6
	20	6	2	1	2	1	2	5	26	32	20	21	26	17	14	3	2	1	2	...	3	206
<b>Total, Class II .....</b>	<b>20</b>	<b>7</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>6</b>	<b>28</b>	<b>33</b>	<b>23</b>	<b>24</b>	<b>32</b>	<b>23</b>	<b>17</b>	<b>11</b>	<b>9</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>253</b>

E 1—continued.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS III.—ORDER 1.</b>																						
1. Cephalitis .....	13	11	2	...	3	5	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	36
2. Apoplexy .....	...	...	...	...	...	...	...	1	1	2	3	6	5	3	8	7	4	7	3	3	...	53
3. Paralysis .....	...	...	1	...	...	...	...	1	...	...	1	1	2	1	2	1	1	1	...	...	...	16
4. Insanity .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
5. Chorea .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Epilepsy .....	...	...	...	...	...	1	...	...	...	...	1	...	2	...	1	1	1	...	...	...	...	8
7. Convulsions .....	58	2	5	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	66
8. Brain Disease, &c.....	...	...	...	...	...	...	...	1	1	...	1	...	3	1	2	1	3	2	...	...	...	15
	71	13	8	...	4	6	...	2	2	3	5	9	9	7	14	12	7	11	5	6	1	195
<b>ORDER 2.</b>																						
1. Pericarditis .....	...	...	...	...	...	...	...	1	2	...	2	1	...	...	1	...	...	...	...	...	...	6
2. Aneurism .....	...	...	...	...	...	...	...	1	1	...	1	1	...	...	...	...	...	...	...	...	...	4
3. Heart Disease, &c. ...	1	...	...	...	1	1	...	3	6	3	4	3	7	12	7	4	2	3	3	...	...	60
	1	...	...	...	1	1	...	4	9	3	7	4	7	13	8	4	2	3	3	...	...	70
<b>ORDER 3.</b>																						
1. Laryngitis .....	1	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	3
2. Bronchitis .....	28	3	2	4	2	2	...	...	1	1	1	1	2	3	2	5	3	4	1	...	...	65
3. Pleurisy .....	...	...	...	...	...	...	...	1	1	1	...	2	...	1	...	...	1	1	...	...	...	8
4. Pneumonia.....	15	5	2	...	...	3	...	6	9	5	9	9	4	6	4	1	...	4	2	1	...	85
4a. Congestion of the Lungs, pulmonary ...	2	...	...	...	...	...	...	...	2	1	1	...	1	1	...	...	2	2	...	...	...	12
5. Asthma .....	1	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...	1	...	...	...	5
6. Lung Disease, &c.....	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	2
	47	9	4	4	2	5	...	7	13	9	11	13	8	12	7	6	7	12	3	1	...	180
<b>ORDER 4.</b>																						
1. Gastritis.....	19	4	1	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	26
2. Enteritis .....	10	2	...	1	...	1	2	2	2	1	...	...	...	...	2	2	...	1	...	...	...	26
3. Peritonitis .....	...	1	...	...	...	1	2	...	3	...	1	1	1	2	...	...	1	...	...	...	...	12
4. Ascites .....	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	...	...	...	...	...	1
5. Ulceration of Intestines	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	2
6. Hernia .....	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
7. Ileus .....	2	...	...	1	...	...	...	...	...	...	1	...	...	1	...	1	...	2	...	...	...	8
8. Intussusception.....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
9. Stricture of Intestines	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	2
10. Fistula .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
11. Stomach Disease, &c...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
12. Pancreas Disease, &c...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13. Hepatitis .....	...	...	...	...	...	...	...	...	...	...	1	1	2	1	...	...	...	...	...	...	...	5
14. Jaundice.....	4	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	5
15. Liver Disease, &c.....	...	...	...	...	...	...	...	...	...	3	1	1	2	3	2	2	3	...	...	...	...	17
16. Spleen Disease, &c. ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	37	7	1	2	...	2	4	2	5	1	4	7	5	6	6	6	7	3	3	...	...	108
<b>ORDER 5.</b>																						
1. Nephritis .....	1	...	...	...	...	...	...	...	...	1	2	...	...	2	1	...	1	...	1	...	...	9
2. Ischuria .....	1	...	...	...	...	...	...	...	...	...	...	2	2	1	2	...	...	...	1	...	...	11
3. Nephria .....	...	...	...	...	...	1	1	1	1	...	1	...	2	1	...	...	1	...	...	...	...	2
4. Diabetes .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
5. Stone .....	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	1	1	1	...	5
6. Cystitis .....	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2	2	...	...	...	...	...	7
7. Kidney Disease, &c....	...	...	...	...	...	...	...	...	...	2	...	...	...	...	2	2	...	...	...	1	...	...
	2	...	...	...	...	...	1	1	1	1	4	4	2	2	4	4	2	3	2	3	...	35
<b>ORDER 7.</b>																						
1. Arthritis .....	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
1a. Ostitis Periostitis, &c.	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
2. Joint Disease, &c.....	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	3
<b>ORDER 8.</b>																						
1. Phlegmon .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Ulcer .....	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
3. Skin Disease, &c. ....	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2
	1	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	3
<b>Total, Class III.....</b>	<b>159</b>	<b>29</b>	<b>13</b>	<b>6</b>	<b>6</b>	<b>15</b>	<b>5</b>	<b>5</b>	<b>19</b>	<b>28</b>	<b>26</b>	<b>40</b>	<b>33</b>	<b>30</b>	<b>49</b>	<b>37</b>	<b>26</b>	<b>26</b>	<b>25</b>	<b>15</b>	<b>2</b>	<b>594</b>

E 1—continued.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS IV.—ORDER 1.</b>																						
1. Premature Birth .....	25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25
2. Cyanosis .....	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
3. Spina Bifida .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
4. Other Malformations..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
5. Teething .....	16	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	24
	46	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	54
<b>ORDER 3.</b>																						
1. Old Age .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	5	...	5	19	...	33
<b>ORDER 4.</b>																						
1. Atrophy and Debility.	82	12	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	97
<b>Total Class IV. ....</b>	<b>128</b>	<b>20</b>	<b>1</b>	<b>...</b>	<b>1</b>	<b>1</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>4</b>	<b>5</b>	<b>...</b>	<b>5</b>	<b>19</b>	<b>...</b>	<b>184</b>
<b>CLASS V.—ORDER 1.—</b>																						
<b>ACCIDENT OR NEGLIGENCE.</b>																						
1. Fractures & Contusions	...	...	...	1	...	1	3	5	6	13	10	6	9	7	4	4	5	1	1	...	2	78
2. Wounds { a Gunshot.	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	3
b Cuts.....	...	...	...	1	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	3
3. Burns and Scalds .....	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	3
3a. Sunstroke .....	...	...	...	1	...	...	1	...	...	...	...	...	1	...	...	1	...	...	...	...	...	4
4. Poison .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
4a. Bite of Snake or Insect	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
5. Drowning .....	...	...	1	...	...	2	2	4	1	5	2	...	...	3	...	1	...	...	...	...	1	22
6. Suffocation.....	...	...	...	...	...	...	...	...	...	...	1	5	2	...	1	...	...	...	...	...	...	2
7. Otherwise .....	...	1	...	...	...	...	...	...	...	...	2	...	...	...	1	...	...	...	...	...	...	4
	...	1	1	2	1	2	5	8	10	15	16	11	10	10	7	6	7	1	1	...	3	117
<b>ORDER 2.—VIOLENT DEATHS IN BATTLE.</b>																						
1. Gunshot Wounds .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Sword and Bayonet Wounds .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Otherwise .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>ORDER 3.—HOMICIDE.</b>																						
1. Murder .....	1	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	3
2. Manslaughter .....	...	...	...	...	...	...	...	1	1	...	3	...	1	...	...	...	...	...	...	...	...	6
	1	...	...	...	...	...	1	1	1	...	3	...	1	...	1	...	...	...	...	...	...	9
<b>ORDER 4.—SUICIDE.</b>																						
1. Wounds { Gunshot ...	...	...	...	...	...	...	...	1	...	...	1	1	1	1	...	...	...	...	...	...	...	5
Cut, Stab, &c.	...	...	...	...	...	...	...	3	1	...	1	...	1	...	...	...	1	...	...	...	...	6
2. Poison .....	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	2
3. Drowning .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Hanging .....	...	...	...	...	...	...	...	1	1	...	...	1	2	1	...	1	...	...	...	...	...	7
5. Otherwise .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	2	5	2	1	2	4	2	...	1	1	...	...	...	...	20
<b>ORDER 5.—EXECUTION.</b>																						
1. Hanging .....	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	2
<b>Violent Deaths, not classed, (Open verdicts—Found drowned, &amp;c.).....</b>																						
	...	...	...	...	...	...	2	...	3	1	1	1	3	1	1	3	1	...	...	1	...	18
<b>Total Class V. ....</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>11</b>	<b>13</b>	<b>25</b>	<b>19</b>	<b>16</b>	<b>13</b>	<b>18</b>	<b>10</b>	<b>8</b>	<b>12</b>	<b>3</b>	<b>1</b>	<b>...</b>	<b>4</b>	<b>166</b>
<b>Causes not specified or ill-defined.....</b>																						
	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	1	...	...	10	...	13
<b>GRAND TOTAL .....</b>	<b>390</b>	<b>78</b>	<b>28</b>	<b>19</b>	<b>16</b>	<b>29</b>	<b>14</b>	<b>27</b>	<b>71</b>	<b>104</b>	<b>81</b>	<b>88</b>	<b>90</b>	<b>75</b>	<b>85</b>	<b>68</b>	<b>57</b>	<b>38</b>	<b>37</b>	<b>37</b>	<b>19</b>	<b>1,451</b>

E 2.

DEATHS from all causes, of FEMALES, at different ages, registered in SYDNEY, from 1st January to 31st December, 1886.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS I.—ORDER 1.</b>																						
1. Small-pox .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1a. Chicken-pox .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Measles .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Scarlatina .....	1	1	1	2	...	3	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	9
3a. Diphtheria .....	1	2	1	4	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9
4. Quinsy .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Croup .....	1	...	1	2	3	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12
6. Whooping-cough .....	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
7. Typhoid (and Infantile Fever) .....	...	...	1	...	...	...	7	6	12	5	2	2	1	1	1	1	...	...	...	...	...	39
8. Erysipelas .....	...	...	...	...	...	...	...	1	...	2	1	...	...	1	2	...	...	1	1	...	...	5
9. Metria .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
10. Carbuncle .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11. Influenza .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12. Dysentery .....	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	1	2	...	9
13. Diarrhoea .....	60	13	2	1	...	...	1	...	1	...	...	1	1	3	5	2	1	2	2	...	...	95
14. Cholera .....	5	2	1	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	11
15. Ague .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16. Remittent Fever .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17. Rheumatism .....	...	...	...	...	...	1	...	...	1	...	1	...	1	1	1	...	...	...	...	1	...	6
18. Pyæmia .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19. Parotitis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	73	19	7	9	3	10	8	8	13	9	3	3	2	4	7	6	4	3	4	6	...	201
<b>ORDER 2.</b>																						
1. Syphilis .....	10	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	...	...	...	13
2. Stricture of the Urethra ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	10	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	...	...	...	13
<b>ORDER 3.</b>																						
1. Privation .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	2
2. Want of Breast Milk...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Purpura and Scurvy...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
4. Alcoholism— a. Del. Tremens... b. Intemperance...	...	...	...	...	...	...	...	1	2	1	1	7	1	2	...	...	...	...	...	...	...	15
5. Rickets .....	1	1	...	...	...	...	...	1	2	1	1	7	1	2	...	1	...	...	...	...	...	18
<b>ORDER 4.</b>																						
1. Thrush .....	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
2. Worms, &c. ....	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
2a. Hydatid .....	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
	2	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	4
Total, Class I.....	86	20	7	9	4	10	8	8	14	11	4	4	9	7	10	6	5	4	4	6	...	236
<b>CLASS II.—ORDER 1.</b>																						
1. Gout .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Dropsy .....	...	1	...	...	...	...	...	1	1	...	...	...	...	3	3	2	2	...	1	...	...	14
3. Cancer .....	...	...	...	...	...	...	...	...	1	1	...	6	7	1	6	2	3	2	...	1	...	30
3a. Tumour .....	...	...	...	...	...	1	...	...	...	1	1	2	1	...	2	...	...	...	...	...	...	8
3b. Polypus .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Noma .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Mortification .....	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	1	1	...	...	4
	...	1	...	...	...	1	...	2	3	2	1	8	8	4	11	4	5	3	3	...	...	56
<b>ORDER 2.</b>																						
1. Scrofula .....	1	...	...	...	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	4
2. Tabes Mesenterica .....	15	2	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	19
3. Phthisis .....	1	2	...	...	...	1	7	7	23	18	13	16	9	9	3	4	...	...	...	...	...	113
3a. Hæmoptysis .....	...	...	...	...	...	1	...	1	...	...	1	...	...	1	1	...	...	...	...	...	...	4
4. Hydrocephalus .....	2	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
4a. Abscess.....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	20	6	...	1	...	2	2	8	7	24	18	14	16	9	10	5	4	...	...	...	...	146
Total, Class II .....	20	7	...	1	...	2	3	8	9	27	20	15	24	17	14	8	5	3	3	...	...	202

E 2—continued.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS III.—ORDER 1.</b>																						
1. Cephalitis .....	15	5	2	1	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	27
2. Apoplexy .....	...	...	...	...	...	...	...	2	1	2	2	1	3	7	4	3	1	1	3	1	...	29
3. Paralysis .....	...	...	...	...	...	...	...	...	...	...	...	4	...	2	2	...	...	...	2	4	...	18
4. Insanity .....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
5. Chorea .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Epilepsy .....	...	...	...	...	...	...	...	...	2	3	3	...	...	...	1	...	...	...	...	...	...	11
7. Convulsions .....	37	13	4	3	1	2	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	60
8. Brain Disease, &c.....	...	...	...	...	1	...	...	...	...	...	2	...	2	1	1	...	...	1	...	2	...	10
	52	18	6	4	3	5	...	2	3	5	7	5	6	11	8	5	1	3	5	7	...	156
<b>ORDER 2.</b>																						
1. Pericarditis .....	...	...	...	...	...	1	...	...	...	1	...	...	...	...	2	...	...	1	...	...	...	5
2. Aneurism .....	...	...	...	...	...	...	...	1	2	3	1	...	1	...	...	...	...	5	1	1	...	3
3. Heart Disease, &c.....	...	1	...	1	...	1	2	3	1	...	1	2	5	2	3	4	2	5	6	1	...	40
	...	1	...	1	...	2	2	3	1	1	1	3	5	2	5	4	2	6	7	2	...	48
<b>ORDER 3.</b>																						
1. Laryngitis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Bronchitis .....	33	3	1	...	...	1	...	...	...	...	1	...	...	1	2	4	2	5	5	2	...	60
3. Pleurisy .....	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
4. Pneumonia .....	4	4	1	2	1	1	1	3	6	4	1	6	2	4	3	2	...	2	1	...	...	48
4a. Congestion of the Lungs, pulmonary...	1	2	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	6
5. Asthma .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	1	...	...	4
6. Lung Disease, &c.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
	38	9	2	2	1	3	1	4	6	4	2	6	4	5	5	7	4	8	7	3	...	121
<b>ORDER 4.</b>																						
1. Gastritis .....	18	3	1	1	...	...	...	1	...	...	1	...	...	1	...	1	2	...	...	...	...	29
2. Enteritis .....	12	3	1	...	...	1	...	1	...	1	...	...	...	...	...	...	1	...	...	...	...	20
3. Peritonitis .....	3	...	...	...	...	1	...	4	6	1	...	2	2	1	...	...	...	...	1	...	...	21
4. Ascites .....	...	...	...	...	...	...	...	...	...	1	...	...	...	3	...	1	...	...	...	...	...	5
5. Ulceration of Intestines	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Hernia .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	1	...	3
7. Ileus .....	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2
8. Intussusception.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9. Strictures of Intestines	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
10. Fistula .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11. Stomach Disease, &c...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12. Pancreas Disease, &c...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13. Hepatitis .....	...	...	...	...	...	...	...	...	...	1	1	1	1	1	2	...	...	...	...	1	...	7
14. Jaundice .....	4	...	...	...	...	...	...	...	1	...	...	1	1	2	2	...	...	...	...	...	...	10
15. Liver Disease, &c.....	...	...	...	...	...	...	...	...	1	...	2	2	4	1	...	...	...	...	...	1	...	11
16. Spleen Disease, &c. ...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	37	6	2	1	...	2	1	...	8	8	3	5	5	8	9	4	4	3	...	4	...	110
<b>ORDER 5.</b>																						
1. Nephritis .....	...	2	...	...	...	...	...	...	1	...	...	1	...	...	...	...	1	...	...	...	...	5
2. Ischuria .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
3. Nephria .....	...	...	...	...	...	...	...	...	1	...	4	2	2	1	...	1	...	...	...	...	...	11
4. Diabetes .....	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	2
5. Stone .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Cystitis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7. Kidney Disease, &c....	...	1	...	...	...	...	...	...	...	...	1	...	1	1	1	...	...	...	...	...	...	5
	...	3	...	...	...	...	...	...	...	2	...	5	3	4	2	1	2	1	...	1	...	24
<b>ORDER 6.</b>																						
1. Ovarian Dropsy .....	...	...	...	...	...	...	...	...	...	1	...	1	1	...	...	...	...	...	...	...	...	3
2. Uterus Disease, &c. ...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	3
	...	...	...	...	...	...	...	...	1	...	1	1	...	...	...	...	...	...	...	...	...	3
<b>ORDER 7.</b>																						
1. Arthritis .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
1a. Ostitis Periostitis, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Joint Disease, &c.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
<b>ORDER 8.</b>																						
1. Phlegmon .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Ulcer .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	2
3. Skin Disease, &c. ....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	2
<b>Total, Class III .....</b>	<b>128</b>	<b>37</b>	<b>10</b>	<b>8</b>	<b>4</b>	<b>12</b>	<b>4</b>	<b>9</b>	<b>18</b>	<b>21</b>	<b>13</b>	<b>26</b>	<b>24</b>	<b>30</b>	<b>29</b>	<b>21</b>	<b>14</b>	<b>21</b>	<b>19</b>	<b>17</b>	<b>...</b>	<b>465</b>

E 2—continued.

CAUSES OF DEATH.	Under 1 year	1 to 2 years.	2 to 3 years.	3 to 4 years	4 to 5 years	5 to 10 years	10 to 15 years.	15 to 20 years.	20 to 25 years	25 to 30 years	30 to 35 years	35 to 40 years.	40 to 45 years.	45 to 50 years	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified	Total.
<b>CLASS IV.—ORDER 1.</b>																						
1. Premature Birth .....	42	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	42
2. Cyanosis .....	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
3. Spina Bifida .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
4. Other Malformations .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
5. Teething .....	14	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	19
	60	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	65
<b>ORDER 2.</b>																						
1. Paramenia .....	...	...	...	...	...	...	...	2	6	2	3	...	...	...	...	...	...	...	...	...	...	13
2. Childbirth (see Metria) .....	...	...	...	...	...	...	...	2	6	2	3	...	...	...	...	...	...	...	...	...	...	13
<b>ORDER 3.</b>																						
1. Old Age .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	5	9	40	...	58
<b>ORDER 4.</b>																						
1. Atrophy and Debility .....	87	5	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	93
Total, Class IV. ...	147	10	1	...	...	...	...	2	6	2	3	...	...	...	...	...	4	5	9	40	...	229
<b>CLASS V.—ORDER 1.</b>																						
<b>ACCIDENT OR NEGLIGENCE.</b>																						
1. Fractures & Contusions .....	1	...	...	...	1	...	...	...	1	1	1	3	1	2	1	...	...	...	2	2	...	16
2. Wounds { a Gunshot b Cuts .....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
3. Burns and Scalds .....	1	...	2	...	...	...	...	2	...	1	1	3	1	1	...	...	...	...	1	...	...	13
3a. Sunstroke .....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
4. Poison .....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
4a. Bite of Snake or Insect .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Drowning .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	2
6. Suffocation .....	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
7. Otherwise .....	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	3
	5	...	2	1	1	...	1	...	3	2	2	5	4	4	2	...	...	2	3	2	...	39
<b>ORDER 2.—VIOLENT DEATHS IN BATTLE.</b>																						
1. Gunshot Wounds .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Sword and Bayonet Wounds .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Otherwise .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>ORDER 3.—HOMICIDE.</b>																						
1. Murder .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
2. Manslaughter .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
<b>ORDER 4.—SUICIDE.</b>																						
1. Wounds { Gunshot ... Cut, Stab, &c .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Poison .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Drowning .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Hanging .....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
5. Otherwise .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
<b>ORDER 5.—EXECUTION.</b>																						
1. Hanging .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Violent Deaths, not classed (Open verdicts—Found drowned, &amp;c.).....</b>																						
	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Total, Class V ...	8	...	2	1	1	...	1	...	3	2	2	5	4	4	3	...	...	2	3	2	...	43
Causes not specified or ill-defined .....	1	...	...	...	1	...	...	...	1	1	...	...	2	...	1	...	...	...	...	...	3	10
<b>GRAND TOTAL .....</b>	390	74	20	19	9	25	16	27	50	64	43	50	61	60	56	44	31	37	38	68	3	1,185



E 3.

DEATHS from all causes, of BOTH SEXES, at different ages, registered in SYDNEY, from the 1st January to the 31st December, 1886.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS I—ORDER 1.</b>																						
1. Small-pox .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1a. Chicken-pox .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Measles .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Scarlatina .....	2	2	5	4	2	4	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	20
3a. Diphtheria .....	2	4	5	8	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	23
4. Quinsy .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
5. Croup .....	2	4	1	4	5	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	23
6. Whooping-cough .....	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
7. Typhoid (and Infantile Fever) .....	1	...	3	...	...	3	8	10	21	19	7	5	7	1	1	3	1	3	...	...	...	93
8. Erysipelas .....	...	...	...	...	...	...	...	...	...	...	1	...	...	1	2	1	...	1	1	...	...	7
9. Metria .....	...	...	...	...	...	...	1	...	2	1	...	...	...	...	...	...	...	...	...	...	...	4
10. Carbuncle .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11. Influenza .....	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12. Dysentery .....	8	...	...	...	...	...	...	...	...	...	1	...	...	1	1	...	2	1	2	2	...	18
13. Diarrhœa .....	115	26	3	2	...	...	1	1	2	...	...	1	1	1	7	5	2	1	2	3	...	172
14. Cholera .....	8	2	1	...	1	2	...	...	1	...	1	1	1	...	...	...	...	1	...	1	...	19
15. Ague .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16. Remittent Fever .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17. Rheumatism .....	...	...	...	...	...	1	1	...	1	1	2	1	2	2	2	3	...	...	...	1	...	17
18. Pyæmia .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19. Parotitis .....	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
	141	40	18	18	9	19	9	13	23	25	9	10	10	7	13	11	8	7	6	7	...	403
<b>ORDER 2.</b>																						
1. Syphilis .....	21	...	...	...	...	...	...	...	1	1	1	...	1	1	...	...	1	...	...	...	...	27
2. Stricture of the Urethra .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	21	...	...	...	...	...	...	...	1	1	1	...	1	1	...	...	1	...	...	...	...	27
<b>ORDER 3.</b>																						
1. Privation .....	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	3
2. Want of Breast Milk .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Purpura and Scurvy .....	1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	3
4. Alcoholism— a. Del. Tremens .....	...	...	...	...	...	...	...	...	...	...	...	2	...	1	...	...	...	...	...	...	...	3
b. Intemperance .....	...	...	...	...	...	...	...	1	3	5	1	9	1	4	2	1	1	...	1	...	...	29
5. Rickets .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	2	1	...	...	...	...	...	1	3	6	1	11	1	5	3	2	1	...	1	...	...	38
<b>ORDER 4.</b>																						
1. Thrush .....	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
2. Worms, &c. .....	...	...	...	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
2a. Hydatid .....	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	2
	4	...	...	1	1	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	9
<b>Total, Class I .....</b>	<b>168</b>	<b>41</b>	<b>18</b>	<b>19</b>	<b>10</b>	<b>19</b>	<b>10</b>	<b>13</b>	<b>25</b>	<b>29</b>	<b>16</b>	<b>12</b>	<b>21</b>	<b>10</b>	<b>19</b>	<b>14</b>	<b>10</b>	<b>9</b>	<b>6</b>	<b>8</b>	<b>...</b>	<b>477</b>
<b>CLASS II—ORDER 1.</b>																						
1. Gout .....	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	2	1	...	...	...	...	5
2. Dropsy .....	...	2	...	...	...	...	1	2	1	2	1	2	1	3	4	3	3	1	...	...	...	28
3. Cancer .....	...	...	...	...	...	...	...	...	1	2	1	8	12	3	10	6	4	3	1	...	...	51
3a. Tumour .....	...	...	...	...	1	1	...	...	1	2	3	1	...	3	...	...	...	...	...	...	...	12
3b. Polypus .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Noma .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Mortification .....	...	...	...	...	...	...	1	2	...	...	...	1	...	...	...	1	...	1	1	...	...	7
	...	2	...	...	...	1	1	1	4	4	5	4	14	14	7	19	11	7	5	4	...	103
<b>ORDER 2.</b>																						
1. Scrofula .....	1	...	...	1	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	5
2. Tabes Mesenterica .....	31	6	1	1	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	41
3. Phthisis .....	4	2	1	...	1	...	2	12	33	52	37	33	40	26	21	6	6	1	2	...	3	282
3a. Hæmoptysis .....	...	...	...	...	...	...	1	...	2	...	1	1	...	2	1	...	...	...	...	...	...	8
4. Hydrocephalus .....	3	4	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9
4a. Abscess .....	1	...	...	...	...	1	...	...	1	1	1	1	...	1	...	...	...	...	...	...	...	7
	40	12	2	2	2	3	4	13	33	56	38	35	42	26	24	8	6	1	2	...	3	352
<b>Total, Class II .....</b>	<b>40</b>	<b>14</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>14</b>	<b>37</b>	<b>60</b>	<b>43</b>	<b>39</b>	<b>56</b>	<b>40</b>	<b>31</b>	<b>27</b>	<b>17</b>	<b>8</b>	<b>7</b>	<b>4</b>	<b>3</b>	<b>455</b>

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS III.—ORDER 1.</b>																						
1. Cephalitis .....	28	16	4	1	4	8	...	1	...	...	...	1	...	...	1	...	...	...	...	...	...	63
2. Apoplexy .....	...	...	...	...	...	...	...	1	2	4	5	7	8	10	12	10	5	8	6	4	...	82
3. Paralysis .....	...	...	1	...	...	...	...	3	...	...	1	5	2	3	4	1	1	2	7	...	...	34
4. Insanity .....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	2
5. Chorea .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Epilepsy .....	...	...	...	...	...	1	...	...	2	3	4	...	3	...	2	1	1	1	...	...	1	19
7. Convulsions .....	95	15	9	3	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	126
8. Brain Disease, &c. ....	...	...	...	...	1	...	...	...	1	1	2	1	2	4	2	2	1	4	2	2	...	25
	123	31	14	4	7	11	...	4	5	8	12	14	15	18	22	17	8	14	10	13	1	351
<b>ORDER 2.</b>																						
1. Pericarditis .....	...	...	...	...	...	1	...	...	1	3	...	2	...	...	2	1	...	1	...	...	...	11
2. Aneurism .....	...	...	...	...	...	...	...	...	1	1	...	2	1	...	1	...	...	...	1	1	...	7
3. Heart Disease, &c. ....	1	1	...	1	...	2	3	3	4	6	4	6	8	9	15	11	6	7	9	4	...	100
	1	1	...	1	...	3	3	3	5	10	4	10	9	9	18	12	6	8	10	5	...	118
<b>ORDER 3.</b>																						
1. Laryngitis .....	1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	3
2. Bronchitis .....	61	6	3	4	2	3	...	...	...	1	2	1	1	3	5	6	7	8	9	3	...	125
3. Pleurisy .....	...	...	...	...	...	...	...	...	1	1	1	...	4	...	1	...	...	1	1	...	...	10
4. Pneumonia .....	19	9	3	2	1	4	1	3	12	13	6	15	11	8	9	6	1	2	5	2	1	133
4a. Congestion of the Lungs, pulmonary....	3	2	...	...	...	1	...	1	...	2	1	1	...	1	1	...	2	3	...	...	...	18
5. Asthma .....	1	...	...	...	...	...	...	...	...	...	...	1	1	...	2	1	1	1	1	...	...	9
6. Lung Disease, &c. ....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1	...	...	...	3
	85	18	6	6	3	8	1	4	13	17	11	17	17	13	17	14	10	15	19	6	1	301
<b>ORDER 4.</b>																						
1. Gastritis .....	37	7	2	1	...	...	...	...	1	...	...	1	...	...	2	1	1	2	...	...	...	55
2. Enteritis .....	22	5	1	1	...	1	3	2	3	1	1	...	...	...	...	2	2	1	1	...	...	46
3. Peritonitis .....	3	1	...	...	...	2	2	...	7	6	2	1	3	4	1	...	...	...	...	1	...	33
4. Ascites .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	3	...	2	...	...	...	...	6
5. Ulceration of Intestines	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	2
6. Hernia .....	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	...	...	...	1	...	4
7. Ileus .....	2	...	...	1	...	1	...	...	...	...	...	2	...	...	1	...	1	...	2	...	...	10
8. Intussusception .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
9. Stricture of Intestines..	...	...	...	...	...	...	...	1	...	...	...	...	1	...	1	...	...	...	...	...	...	3
10. Fistula .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
11. Stomach Disease, &c....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
12. Pancreas Disease, &c....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13. Hepatitis .....	...	...	...	...	...	...	...	...	...	...	...	2	2	3	2	...	...	...	...	1	...	12
14. Jaundice .....	8	...	...	...	...	...	...	...	1	...	1	...	1	2	2	...	...	...	...	...	...	15
15. Liver Disease, &c. ....	...	...	...	...	...	...	...	...	1	3	3	3	6	4	2	2	3	...	1	...	...	28
16. Spleen Disease, &c. ....	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	74	13	3	3	...	4	5	2	13	9	7	12	10	14	15	10	11	6	3	4	...	218
<b>ORDER 5.</b>																						
1. Nephritis .....	1	2	...	...	...	...	...	...	1	1	2	1	...	2	1	...	2	...	1	...	...	14
2. Ischuria .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	2
3. Nephria .....	...	...	...	...	...	...	1	1	2	...	6	4	3	3	...	1	...	1	...	...	...	22
4. Diabetes .....	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	1	1	...	...	...	...	4
5. Stone .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Cystitis .....	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	1	1	1	...	5
7. Kidney Disease, &c. ....	...	1	...	...	...	...	...	...	...	2	1	...	1	1	3	2	...	...	1	...	...	12
	2	3	...	...	...	...	1	1	3	4	9	5	6	6	5	4	4	2	4	...	...	59
<b>ORDER 6.</b>																						
1. Ovarian Dropsy .....	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	3
2. Uterus Disease, &c. ....	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	3
	...	...	...	...	...	...	...	...	1	...	1	1	...	...	...	...	...	...	...	...	...	3
<b>ORDER 7.</b>																						
1. Arthritis .....	1	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	3
1a. Ostitis Periostitis, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Joint Disease, &c. ....	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	1	...	...	...	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	4
<b>ORDER 8.</b>																						
1. Phlegmon .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Ulcer .....	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	1	...	...	...	...	...	3
3. Skin Disease, &c. ....	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2
	1	...	...	...	...	...	...	...	1	1	1	...	...	...	...	1	...	...	...	...	...	5
<b>Total, Class III .....</b>	<b>287</b>	<b>66</b>	<b>23</b>	<b>14</b>	<b>10</b>	<b>27</b>	<b>9</b>	<b>14</b>	<b>37</b>	<b>49</b>	<b>39</b>	<b>66</b>	<b>57</b>	<b>60</b>	<b>78</b>	<b>58</b>	<b>40</b>	<b>47</b>	<b>44</b>	<b>32</b>	<b>2</b>	<b>1,059</b>

## E 3—continued.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS IV.—ORDER 1.</b>																						
1. Premature Birth .....	67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	67
2. Cyanosis .....	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
3. Spina Bifida .....	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
4. Other Malformations .....	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
5. Teething .....	30	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	43
	106	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	119
<b>ORDER 2.</b>																						
1. Paramenia .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Childbirth ( <i>see</i> Metria) .....	...	...	...	...	...	...	...	2	6	2	3	...	...	...	...	...	...	...	...	...	...	13
	...	...	...	...	...	...	...	2	6	2	3	...	...	...	...	...	...	...	...	...	...	13
<b>ORDER 3.</b>																						
1. Old Age .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	9	5	14	59	...	91
<b>ORDER 4.</b>																						
1. Atrophy and Debility. ....	169	17	2	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	190
<b>Total Class IV .....</b>	<b>275</b>	<b>30</b>	<b>2</b>	...	<b>1</b>	<b>1</b>	...	<b>2</b>	<b>6</b>	<b>2</b>	<b>3</b>	...	...	...	<b>4</b>	<b>9</b>	<b>5</b>	<b>14</b>	<b>59</b>	...	<b>413</b>	
<b>CLASS V.—ORDER 1.—</b>																						
<b>ACCIDENT OR NEGLIGENCE.</b>																						
1. Fractures & Contusions .....	1	...	...	1	1	1	3	5	7	14	11	9	10	9	5	4	5	1	3	2	2	94
2. Wounds { <i>a</i> Gunshot, .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<i>b</i> Cuts .....	...	...	...	...	...	...	1	...	...	...	1	...	...	1	...	1	...	...	...	...	...	4
3. Burns and Scalds .....	1	...	2	1	...	...	...	...	2	1	1	1	4	1	1	...	...	...	1	...	...	16
3 <i>a</i> . Sunstroke .....	...	...	...	...	1	...	...	1	...	...	...	...	...	1	...	1	...	...	...	...	...	4
4. Poison .....	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	2
4 <i>a</i> . Bite of Snake or Insect .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Drowning .....	...	...	1	...	...	...	2	2	4	2	5	2	...	...	3	...	1	1	...	...	1	24
6. Suffocation .....	3	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	5
7. Otherwise .....	...	1	...	1	...	...	...	...	...	...	...	3	...	...	...	1	...	1	...	...	...	7
	5	1	3	3	2	2	6	8	13	17	18	16	14	14	9	6	7	3	4	2	3	156
<b>ORDER 2.—VIOLENT DEATHS IN BATTLE.</b>																						
1. Gunshot Wounds .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Sword and Bayonet Wounds .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Otherwise .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>ORDER 3.—HOMICIDE.</b>																						
Murder .....	2	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	4
Manslaughter .....	...	...	...	...	...	...	...	1	1	...	3	...	1	...	...	...	...	...	...	...	...	6
	2	...	...	...	...	...	...	1	1	1	...	3	...	1	...	1	...	...	...	...	...	10
<b>ORDER 4.—SUICIDE.</b>																						
1. Wounds { Gunshot .....	...	...	...	...	...	...	...	1	...	...	1	1	1	1	...	...	...	...	...	...	...	5
Cut, Stab, & .....	...	...	...	...	...	...	...	...	3	1	...	...	...	1	...	...	...	...	...	...	...	6
2. Poison .....	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	2
3. Drowning .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Hanging .....	...	...	...	...	...	...	...	1	1	...	...	1	2	2	...	1	...	...	...	...	...	8
5. Otherwise .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	2	5	2	1	2	4	3	...	1	1	...	...	...	...	21
<b>ORDER 5.—EXECUTION.</b>																						
1. Hanging .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	2
Violent Deaths, not classed (Open Verdicts Found Drowned, &c....)	2	...	...	...	...	...	2	...	3	1	1	1	3	1	1	3	1	...	...	1	...	20
<b>Total Class V.....</b>	<b>9</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>6</b>	<b>11</b>	<b>16</b>	<b>27</b>	<b>21</b>	<b>21</b>	<b>17</b>	<b>22</b>	<b>13</b>	<b>8</b>	<b>12</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>4</b>	<b>209</b>
Causes not specified or ill-defined .....	1	...	...	...	1	...	...	...	1	2	...	...	...	3	...	1	...	1	...	...	13	23
<b>GRAND TOTALS.....</b>	<b>780</b>	<b>152</b>	<b>48</b>	<b>38</b>	<b>25</b>	<b>54</b>	<b>30</b>	<b>54</b>	<b>121</b>	<b>168</b>	<b>124</b>	<b>138</b>	<b>151</b>	<b>135</b>	<b>141</b>	<b>112</b>	<b>88</b>	<b>75</b>	<b>75</b>	<b>105</b>	<b>22</b>	<b>2,636</b>

F 1.

DEATHS from all causes, of MALES, at different ages, registered in SUBURBS, from 1st January to 31st December, 1886.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified	Total.
<b>CLASS I.—ORDER 1.</b>																						
1. Small-pox	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
1a. Chicken-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Measles	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	19
3. Scarletina	3	4	5	3	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	17
3a. Diphtheria	2	2	..	5	3	4	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	3
4. Quinsy	..	1	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	29
5. Croup	1	5	10	3	4	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6
6. Whooping-cough	2	2	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Typhus (and Infantile Fever)	1	1	1	1	1	7	2	7	6	8	8	2	2	1	1	..	3	1	..	..	..	53
8. Erysipelas	1	..	..	..	..	..	..	..	1	1	..	1	..	..	1	..	..	..	..	..	..	5
9. Metria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Carbuncle	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	2
11. Influenza	4	2	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	8
12. Dysentery	10	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	13
13. Diarrhoea	116	28	3	4	..	1	..	..	..	..	..	..	..	..	1	1	1	1	..	2	..	158
14. Cholera	8	4	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	14
15. Ague	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16. Remittent Fever	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
17. Rheumatism	..	..	..	..	..	..	1	..	..	1	..	1	..	..	..	1	..	1	..	..	..	5
18. Pyæmia	1	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	2
	149	53	22	18	12	20	3	8	6	10	10	7	3	1	2	3	5	3	..	2	..	337
<b>ORDER 2.</b>																						
1. Syphilis	5	1	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	8
2. Stricture of the Urethra	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	5	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	8
<b>ORDER 3.</b>																						
1. Privation	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
2. Want of Breast Milk	19	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	19
3. Purpura and Scurvy	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
4. Alcoholism— a. Del. Tremens b. Intemperance	..	..	..	..	..	..	..	..	..	2	..	3	1	..	..	..	..	..	..	..	..	6
5. Rickets	..	..	..	..	..	..	..	..	..	..	..	1	2	3	..	1	1	..	..	..	..	8
	20	1	..	..	..	..	..	..	2	..	5	3	3	..	1	1	..	..	..	..	..	36
<b>ORDER 4.</b>																						
1. Thrush	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
2. Worms, &c.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2a. Hydatid	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
	5	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7
<b>Total, Class I</b>	<b>179</b>	<b>55</b>	<b>22</b>	<b>18</b>	<b>12</b>	<b>20</b>	<b>5</b>	<b>8</b>	<b>6</b>	<b>13</b>	<b>10</b>	<b>13</b>	<b>6</b>	<b>4</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>3</b>	<b>..</b>	<b>2</b>	<b>..</b>	<b>388</b>
<b>CLASS II.—ORDER 1.</b>																						
1. Gout	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	2
2. Dropsy	2	1	..	..	1	2	1	..	2	..	1	1	..	..	2	..	2	1	1	..	..	19
3. Cancer	..	1	..	..	..	..	..	..	1	1	1	..	..	..	..	..	3	1	2	..	..	21
3a. Tumour	..	..	..	..	..	1	..	..	..	..	1	1	1	1	..	..	3	3	..	..	..	5
3b. Polypus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Noma	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Mortification	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	1	..	4
	2	2	..	1	3	1	..	..	3	1	3	2	2	4	6	5	8	2	3	3	..	51
<b>ORDER 2.</b>																						
1. Scrofula	3	..	..	1	..	1	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	8
2. Tabes Mesenterica	34	18	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	52
3. Phthisis	8	3	2	1	1	1	..	6	18	30	22	15	12	16	9	5	2	2	1	..	..	154
3a. Hæmoptysis	..	..	..	..	..	..	..	..	..	1	..	..	2	..	..	..	..	..	..	..	..	3
4. Hydrocephalus	10	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	17
4a. Abscess	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	3
	55	28	2	2	1	2	1	6	18	31	23	16	15	16	9	5	3	2	1	1	..	237
<b>Total, Class II</b>	<b>57</b>	<b>30</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>2</b>	<b>6</b>	<b>21</b>	<b>32</b>	<b>26</b>	<b>18</b>	<b>17</b>	<b>20</b>	<b>15</b>	<b>10</b>	<b>11</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>..</b>	<b>288</b>

F 1—continued.

CAUSES OF DEATH.	Under 1 year	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years	75 years and upwards.	Ages not specified	Total.
<b>CLASS III.—ORDER 1.</b>																						
1. Cephalitis .....	23	13	1	2	1	8	2	1	3	1	2	1	1	1	...	...	..	...	...	...	...	60
2. Apoplexy .....	..	..	..	..	..	..	..	1	1	..	..	3	1	1	4	7	2	6	6	6	..	38
3. Paralysis .....	..	..	..	..	..	..	..	1	2	..	..	2	1	2	4	2	4	2	1	1	..	28
4. Insanity .....	..	..	..	..	..	..	..	..	..	1	1	2	2	2	..	1	2	..	..	1	..	12
5. Chorea .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6. Epilepsy .....	..	..	..	1	2	4	..	..	1	1	1	3	..	2	..	..	1	1	..	..	..	17
7. Convulsions .....	102	12	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	114
8. Brain Disease, &c.....	..	..	1	..	..	2	..	..	1	1	..	1	..	..	2	1	1	1	1	..	..	12
	125	25	2	3	3	14	2	3	8	4	5	14	5	8	10	11	10	10	8	11	..	281
<b>ORDER 2.</b>																						
1. Pericarditis .....	..	..	..	..	..	2	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	4
2. Aneurism .....	..	..	..	..	..	..	..	..	1	1	2	..	2	1	..	1	..	..	..	..	..	8
3. Heart Disease, &c. ....	1	2	1	..	..	2	2	3	2	4	3	6	11	7	6	5	4	12	4	7	1	83
	1	2	1	..	..	4	2	3	2	5	4	8	12	9	7	5	5	13	4	7	1	95
<b>ORDER 3.</b>																						
1. Laryngitis ..	2	..	..	..	1	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8
2. Bronchitis .....	38	12	..	..	1	1	1	..	..	1	..	..	..	..	2	3	1	4	2	6	..	73
3. Pleurisy .....	..	2	2	..	1	..	..	..	1	..	..	2	2	4	2	1	4	..	..	..	..	20
4. Pneumonia ..	18	7	2	1	2	5	1	4	4	2	6	6	4	6	4	5	2	1	4	1	1	86
4a. Congestion of the Lungs, pulmonary	10	4	1	..	..	..	..	..	1	1	1	1	2	..	2	2	1	..	..	..	..	27
5. Asthma .....	..	2	..	..	..	..	..	..	..	..	..	..	1	1	..	1	1	2	..	..	..	8
6. Lung Disease, &c. . .	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
	68	25	7	1	4	10	3	4	5	3	9	9	10	11	10	11	10	7	8	7	1	223
<b>ORDER 4.</b>																						
1. Gastritis .....	39	5	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	47
2. Enteritis .....	39	4	1	..	..	1	3	3	15	10	11	3	2	7	1	..	2	2	..	..	..	104
3. Peritonitis .....	2	..	1	..	..	..	..	2	2	2	1	..	..	2	..	..	..	..	..	..	..	12
4. Ascites .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2
5. Ulceration of Intestines	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	2
6. Hernia .....	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
7. Ileus .....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2
8. Intussusception . .	3	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	4
9. Stricture of Intestines	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
10. Fistula .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11. Stomach Disease, &c	1	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	1	..	5
12. Pancreas Disease, &c	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	1	..	..	..	7
13. Hepatitis .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
14. Jaundice... ..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	5
15. Liver Disease, &c. ....	..	..	..	..	..	..	1	1	2	..	..	4	2	2	3	1	5	3	..	..	..	24
16. Spleen Disease, &c. . .	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	2
	89	9	3	..	..	1	3	6	19	15	14	5	7	13	6	8	5	10	3	3	..	219
<b>ORDER 5.</b>																						
1. Nephritis .....	..	1	..	..	1	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	4
2. Ischuria .....	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..
3. Nephria .....	..	..	..	..	..	1	1	1	2	2	2	..	2	2	2	2	1	..	..	1	..	18
4. Diabetes .....	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	..	1	..	..	4
5. Stone .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
6. Cystitis .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	1	1	2	..	6
7. Kidney Disease, &c. . .	1	1	1	1	..	1	..	1	1	1	..	..	1	1	3	..	1	2	1	..	..	17
	1	2	1	1	..	2	..	2	3	4	2	2	3	3	6	4	4	4	3	3	..	50
<b>ORDER 7.</b>																						
1. Arthritis .....	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
1a. Ostitis Periostitis, &c.	1	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
2. Joint Disease, &c. . .	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
	1	..	..	2	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
<b>ORDER 8.</b>																						
1. Phlegmon .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Ulcer .....	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
3. Skin Disease, &c. . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
<b>Total, Class III</b>	<b>285</b>	<b>63</b>	<b>14</b>	<b>5</b>	<b>9</b>	<b>32</b>	<b>10</b>	<b>19</b>	<b>37</b>	<b>31</b>	<b>34</b>	<b>38</b>	<b>37</b>	<b>44</b>	<b>40</b>	<b>39</b>	<b>34</b>	<b>44</b>	<b>26</b>	<b>31</b>	<b>2</b>	<b>874</b>

F 1—continued.

CAUSES OF DEATH.	Under 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years	45 to 50 years	50 to 55 years.	55 to 60 years.	60 to 65 years	65 to 70 years.	70 to 75 years	75 years and upwards	Ages not specified	Total.
<b>CLASS IV.—ORDER 1.</b>																						
1. Premature Birth .....	53	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	53
2. Cyanosis .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Spina Bifida .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Other Malformations .....	13	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	13
5. Teething .....	28	23	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	51
	94	23	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	117
<b>ORDER 3.</b>																						
1. Old Age .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	7	15	36	..	69
<b>ORDER 4.</b>																						
1. Atrophy and Debility .....	188	23	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	211
<b>Total Class IV. ....</b>	<b>282</b>	<b>46</b>															<b>11</b>	<b>7</b>	<b>15</b>	<b>36</b>		<b>397</b>
<b>CLASS V.—ORDER 1.—</b> <b>ACCIDENT OR NEGLIGENCE</b>																						
1. Fractures & Contusions	1	2	1	1	..	3	3	..	4	6	5	3	6	2	1	..	3	1	..	..	..	42
2. Wounds { a Gunshot b Cuts...	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
3. Burns and Scalds	..	1	1	..	2	1	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	3
3a Sunstroke .....	..	..	..	1	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
4 Poison .....	..	..	..	1	..	1	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	4
4a. Bite of Snake or Insect	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
5. Drowning .....	..	..	1	2	2	2	2	3	1	3	5	..	..	..	3	..	..	..	..	..	..	24
6 Suffocation .....	2	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	4
7. Otherwise .....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
	3	3	3	5	4	8	7	5	5	9	10	7	8	3	5	..	3	1	..	..	..	89
<b>ORDER 2.—VIOLENT DEATHS IN BATTLE.</b>																						
1. Gunshot Wounds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Sword and Bayonet Wounds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Otherwise .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>ORDER 3.—HOMICIDE.</b>																						
1. Murder .....	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	3
2. Manslaughter .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	3
<b>ORDER 4.—SUICIDE.</b>																						
1. Wounds { Gunshot... Cut, Stab, &c	..	..	..	..	..	..	..	..	1	2	1	..	..	..	1	..	..	..	..	..	..	5
2. Poison .....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
3. Drowning .....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
4. Hanging .....	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	3
5. Otherwise .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	..	..	..	..	..	..	..	1	2	2	..	4	..	1	..	..	..	..	..	..	..	10
<b>ORDER 5.—EXECUTION.</b>																						
1. Hanging .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Violent Deaths, not classed, (Open verdicts—Found drowned, &c.).....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>Total Class V. ....</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>4</b>	<b>8</b>	<b>7</b>	<b>5</b>	<b>6</b>	<b>11</b>	<b>13</b>	<b>7</b>	<b>12</b>	<b>3</b>	<b>6</b>	..	<b>3</b>	<b>1</b>	..	..	..	<b>102</b>
Causes not specified or ill- defined.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
<b>GRAND TOTAL .....</b>	<b>808</b>	<b>197</b>	<b>41</b>	<b>30</b>	<b>27</b>	<b>65</b>	<b>24</b>	<b>38</b>	<b>70</b>	<b>87</b>	<b>83</b>	<b>76</b>	<b>72</b>	<b>71</b>	<b>63</b>	<b>53</b>	<b>65</b>	<b>59</b>	<b>45</b>	<b>73</b>	<b>3</b>	<b>2,050</b>

F 2.

DEATHS from all causes, of FEMALES, at different ages, registered in SUBURBS, from 1st January to 31st December, 1886.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS I.—ORDER 1.</b>																						
1. Small-pox .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1a. Chicken-pox .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Measles .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
3. Scarlatina .....	1	3	6	5	5	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	23
3a. Diphtheria .....	3	4	3	3	3	8	2	...	...	...	...	1	...	...	...	...	...	...	...	...	...	26
4. Quinsy .....	...	1	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
5. Croup .....	3	4	5	1	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	19
6. Whooping-cough .....	8	4	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	14
7. Typhoid (and Infantile Fever) .....	2	1	2	...	2	6	8	10	12	10	5	9	3	...	3	3	...	...	...	1	...	77
8. Erysipelas .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9. Metria .....	...	...	...	...	...	...	...	3	2	1	...	...	...	...	...	...	...	...	...	...	...	6
10. Carbuncle .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
11. Influenza .....	8	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	12
12. Dysentery .....	6	3	1	...	...	...	...	...	...	1	...	2	1	...	1	...	1	...	1	...	...	17
13. Diarrhoea .....	111	27	3	...	...	2	1	...	1	...	...	3	2	2	...	...	...	1	...	1	...	151
14. Cholera .....	15	5	3	1	...	2	...	...	...	1	...	1	...	1	...	1	1	1	...	...	...	32
15. Ague .....	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
16. Remittent Fever .....	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
17. Rheumatism .....	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	1	...	...	...	...	3
18. Pyæmia .....	...	...	...	...	...	...	...	1	1	1	...	1	...	...	...	...	...	...	...	...	...	4
19. Parotitis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	157	52	24	14	13	25	10	12	16	14	9	11	9	2	7	4	3	3	2	4	...	391
<b>ORDER 2.</b>																						
1. Syphilis .....	5	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	6
2. Stricture of the Urethra .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	5	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	6
<b>ORDER 3.</b>																						
1. Privation .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Want of Breast Milk .....	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11
3. Purpura and Scurvy .....	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
4. Alcoholism— a. Del. Tremens .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
b. Intemperance .....	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	2
5. Rickets .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	13	3	...	...	...	...	...	...	...	...	1	...	...	1	1	...	...	...	...	...	...	19
<b>ORDER 4.</b>																						
1. Thrush .....	9	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10
2. Worms, &c. .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2a. Hydatid .....	...	...	...	...	...	...	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	3
	9	1	...	...	...	...	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	13
Total, Class I .....	184	56	24	14	13	25	10	13	17	14	11	12	9	2	8	5	3	3	2	4	...	429
<b>CLASS II.—ORDER 1.</b>																						
1. Gout .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
2. Dropsy .....	4	...	...	...	...	...	...	...	...	...	1	1	...	1	1	1	...	1	1	...	...	11
3. Cancer .....	...	...	...	1	1	...	...	...	...	...	2	3	4	2	2	6	1	2	2	2	...	28
3a. Tumour .....	...	...	...	...	...	...	...	1	1	...	1	1	2	2	1	...	...	1	1	...	...	11
3b. Polypus .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Noma .....	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Mortification .....	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	5
	4	...	...	1	1	...	...	...	2	3	3	6	5	4	7	8	2	2	4	4	...	56
<b>ORDER 2.</b>																						
1. Scrofula .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Tabes Mesenterica .....	27	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	37
3. Phthisis .....	6	1	...	...	...	5	6	8	23	27	19	11	14	5	7	7	1	3	...	...	...	143
3a. Hæmoptysis .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
4. Hydrocephalus .....	8	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10
4a. Abscess .....	1	...	...	...	...	2	2	...	...	...	1	...	...	2	...	...	...	...	...	...	...	8
	43	13	...	...	...	5	8	10	23	27	20	11	14	7	7	7	1	3	...	...	...	199
Total, Class II .....	47	13	...	1	1	5	8	10	25	30	23	17	19	11	14	15	3	5	4	4	...	255

F 2—continued.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS III.—ORDER 1.</b>																						
1. Cephalitis .....	19	9	4	4	2	4	...	...	...	...	...	1	...	...	1	1	...	...	1	...	...	46
2. Apoplexy .....	...	...	...	...	...	...	...	...	...	...	...	...	...	4	2	2	5	3	4	3	...	23
3. Paralysis .....	...	...	...	1	...	...	...	...	...	1	1	...	1	2	...	2	2	...	...	2	...	14
4. Insanity .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
5. Chorea .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Epilepsy .....	...	...	...	...	2	2	2	...	1	1	1	2	1	2	...	1	1	...	1	1	...	18
7. Convulsions .....	77	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	98
8. Brain Disease, &c.....	1	...	...	...	...	...	...	...	...	...	1	4	1	1	...	...	...	2	...	...	...	10
	97	30	4	5	4	6	2	...	1	2	3	7	3	9	5	4	8	7	7	6	...	210
<b>ORDER 2.</b>																						
1. Pericarditis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Aneurism .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	2
3. Heart Disease, &c.....	2	...	1	1	...	2	2	4	4	4	2	8	4	7	5	7	9	10	5	4	...	81
	2	...	1	1	...	2	2	4	4	4	2	9	4	7	6	7	9	10	5	4	...	83
<b>ORDER 3.</b>																						
1. Laryngitis .....	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	3
2. Bronchitis .....	27	8	3	...	...	...	...	...	...	...	1	1	2	...	4	1	5	5	4	7	...	68
3. Pleurisy .....	1	1	...	...	...	...	...	...	1	...	2	3	...	...	1	1	...	...	...	...	...	10
4. Pneumonia .....	15	11	4	1	...	2	...	1	2	4	4	3	4	...	1	4	4	3	3	...	...	66
4a. Congestion of the Lungs, pulmonary...	7	4	1	1	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	15
5. Asthma .....	...	1	...	...	...	...	...	...	...	...	...	...	1	1	...	1	1	...	...	...	...	5
6. Lung Disease, &c.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
	51	25	9	2	...	2	1	1	3	4	7	7	7	1	6	7	11	9	8	7	...	168
<b>ORDER 4.</b>																						
1. Gastritis .....	35	6	...	...	...	...	...	...	...	...	1	...	1	...	...	1	1	...	...	...	...	46
2. Enteritis .....	31	10	1	1	2	8	2	6	9	11	6	5	...	2	...	...	1	1	...	...	...	96
3. Peritonitis .....	...	...	...	...	...	...	2	1	2	7	5	1	...	...	...	...	1	...	...	...	...	19
4. Ascites .....	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	...	...	...	3
5. Ulceration of Intestines	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
6. Hernia .....	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
7. Ileus .....	2	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	1	...	5
8. Intussusception.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9. Stricture of Intestines	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10. Fistula .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11. Stomach Disease, &c..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
12. Pancreas Disease, &c...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13. Hepatitis .....	2	...	...	...	...	...	...	...	...	...	2	...	1	4	1	3	...	...	...	...	...	13
14. Jaundice .....	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	4
15. Liver Disease, &c.....	...	...	...	...	...	...	...	1	2	...	2	4	4	4	3	2	2	1	...	...	...	25
16. Spleen Disease, &c. ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	73	16	1	1	2	8	4	8	12	20	12	12	7	7	8	5	10	7	1	1	...	215
<b>ORDER 5.</b>																						
1. Nephritis .....	1	1	...	1	...	1	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	6
2. Ischuria .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Nephria .....	...	1	...	...	...	2	...	1	4	1	1	2	4	4	2	...	...	2	...	...	...	24
4. Diabetes .....	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
5. Stone .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Cystitis .....	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	1	...	3
7. Kidney Disease, &c....	1	1	...	...	...	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	5
	2	3	...	1	...	2	2	...	2	5	1	2	2	6	4	3	1	...	2	1	...	39
<b>ORDER 6.</b>																						
1. Ovarian Dropsy .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
2. Uterus Disease, &c. ...	...	...	...	...	...	...	...	...	...	...	3	...	1	1	...	1	...	...	...	...	...	6
	...	...	...	...	...	...	...	...	...	...	3	...	1	1	...	1	1	...	...	...	...	7
<b>ORDER 7.</b>																						
1. Arthritis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	2
1a. Ostitis Periostitis, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Joint Disease, &c.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	2
<b>ORDER 8.</b>																						
1. Phlegmon .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Ulcer .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Skin Disease, &c. ....	5	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
	5	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
Total, Class III .....	230	74	16	10	6	20	11	13	22	35	25	40	23	31	30	27	41	34	23	19	...	730





F 3.

DEATHS from all causes, of BOTH SEXES, at different ages, registered in SUBURBS, from the 1st January to the 31st December, 1886.

CAUSES OF DEATH.	Under 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years	5 to 10 years	10 to 15 years	15 to 20 years	20 to 25 years	25 to 30 years	30 to 35 years	35 to 40 years	40 to 45 years	45 to 50 years	50 to 55 years	55 to 60 years	60 to 65 years	65 to 70 years	70 to 75 years	75 years and upwards	Ages not specified	Total.
<b>CLASS I—ORDER 1.</b>																						
1. Small-pox					1																	1
1a. Chicken-pox																						2
2. Measles		1		1																		42
3. Scarlatina	4	7	11	8	8	3					1											43
3a. Diphtheria	5	6	3		6	12	2					1										6
4. Quinsy		2	1	1		1						1										48
5. Croup	4	9	15	4	7	9																20
6. Whooping-cough	10	6	1	2				1														
7. Typhoid (and Infantile Fever)	3	2	3	1	3	13	10	17	18	18	13	11	5	1	4	3	3	1		1		130
8. Erysipelas	1									1	1		1			1						5
9. Metria									3	2	1											6
10. Carbuncle								1								1	1					3
11. Influenza	12	2		1		1						1						1			2	20
12. Dysentery	16	5	2									1			1		1	1	1	1		30
13. Diarrhoea	227	55	6	4		3		1		1				2	3	1	1	1	1	2		309
14. Cholera	23	9	4								2		1		1		1	1	1			46
15. Ague				1																		1
16. Remittent Fever		1				1																2
17. Rheumatism							1			1		2	1			1	1	1				8
18. Pyæmia	1								1	1	1	1	1									6
19. Parotitis																						
	306	105	46	32	25	45	13	20	22	24	19	18	12	3	9	7	8	6	2	6		728
<b>ORDER 2.</b>																						
1. Syphilis	10	1								1	1	1										14
2. Stricture of the Urethra																						
	10	1								1	1	1										14
<b>ORDER 3.</b>																						
1. Privation												1										1
2. Want of Breast Milk	30																					30
3. Purpura and Scurvy	3	4																				7
4. Alcoholism—																						
a. Del. Tremens										2	3	1			1	1	1					7
b. Intemperance											2	2	3									10
5. Rickets																						
	33	4								2		6	3	3	1	2	1					55
<b>ORDER 4.</b>																						
1. Thrush	14	1																				15
2. Worms, &c.																						5
2a. Hydatid							2	1	1		1											
	14	1				2	1	1			1											20
<b>Total, Class I</b>	<b>363</b>	<b>111</b>	<b>46</b>	<b>32</b>	<b>25</b>	<b>45</b>	<b>15</b>	<b>21</b>	<b>23</b>	<b>27</b>	<b>21</b>	<b>25</b>	<b>15</b>	<b>6</b>	<b>10</b>	<b>9</b>	<b>9</b>	<b>6</b>	<b>2</b>	<b>6</b>		<b>817</b>
<b>CLASS II—ORDER 1.</b>																						
1. Gout															1		2					3
2. Dropsy	6	1			1	2	1		2		2	2			3	3	3	1	2			30
3. Cancer		1		1	1					1	3	3	5	5	5	9	4	3	4	4		49
3a. Tumour						1			1	1		2	2	3	3	1			1	1		16
3b. Polypus																						
4. Noma																						
5. Mortification									2	2	1	1			1		1			1		9
	6	2		1	2	3	1		5	4	6	8	7	8	13	13	10	4	7	7		107
<b>ORDER 2.</b>																						
1. Scrofula	3			1		1	1					1								1		8
2. Tabes Mesenterica	61	28																				89
3. Phthisis	14	4	2	1	1	6	6	14	41	57	41	26	26	21	16	12	3	5	1			297
3a. Hæmoptysis	1									1			2									4
4. Hydrocephalus	18	9																				27
4a. Abscess	1							2	2		2		1	2			1					11
	98	41	2	2	1	7	9	16	41	58	43	27	29	23	16	12	4	5	1	1		436
<b>Total, Class II</b>	<b>104</b>	<b>43</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>10</b>	<b>10</b>	<b>16</b>	<b>46</b>	<b>62</b>	<b>49</b>	<b>35</b>	<b>36</b>	<b>31</b>	<b>29</b>	<b>25</b>	<b>14</b>	<b>9</b>	<b>8</b>	<b>8</b>		<b>543</b>

F 3—continued.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS III.—ORDER 1.</b>																						
1. Cephalitis .....	42	22	5	6	3	12	2	1	3	1	2	2	1	1	1	1	...	...	1	...	...	106
2. Apoplexy .....	...	...	...	1	...	...	...	1	1	...	3	1	1	5	6	9	7	9	10	9	...	61
3. Paralysis .....	...	...	...	...	...	...	...	1	2	...	2	2	2	4	6	2	4	1	6	...	...	42
4. Insanity .....	...	...	...	...	...	...	...	...	1	1	1	2	2	2	...	1	2	...	1	1	...	13
5. Chorea .....	...	...	...	1	4	6	2	...	2	2	2	5	1	4	...	...	...	...	...	...	...	...
6. Epilepsy .....	...	...	...	...	...	...	...	2	2	2	2	5	1	4	...	1	2	1	1	1	...	35
7. Convulsions .....	179	33	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	212
8. Brain Disease, &c. ....	1	...	1	...	...	2	...	...	1	1	1	5	1	1	2	1	1	3	1	...	...	22
	222	55	6	8	7	20	4	3	9	6	8	21	8	17	15	15	18	17	15	17	...	491
<b>ORDER 2.</b>																						
1. Pericarditis .....	...	...	...	...	...	2	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	4
2. Aneurism .....	...	...	...	...	...	...	...	...	1	1	3	...	2	2	...	1	...	...	...	...	...	10
3. Heart Disease, &c. ....	3	2	2	1	...	4	4	7	6	8	5	14	15	14	11	12	13	22	9	11	1	164
	3	2	2	1	...	6	4	7	6	9	6	17	16	16	13	12	14	23	9	11	1	178
<b>ORDER 3.</b>																						
1. Laryngitis .....	3	...	1	...	1	4	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	11
2. Bronchitis .....	65	20	5	...	1	1	1	...	...	2	1	2	...	6	4	6	9	6	13	...	...	141
3. Pleurisy .....	1	1	2	...	1	...	...	2	...	3	5	2	4	2	2	5	...	...	...	...	...	30
4. Pneumonia .....	33	18	6	2	2	7	1	5	6	6	10	9	8	6	5	9	6	4	7	1	1	152
4a. Congestion of the Lungs, pulmonary....	17	8	2	1	...	1	...	...	1	1	1	2	...	2	2	2	2	...	...	...	...	42
5. Asthma .....	...	3	...	...	...	...	...	...	...	...	...	2	2	...	1	2	1	2	...	...	...	13
6. Lung Disease, &c. ....	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	2
	119	50	16	3	4	12	4	5	8	7	16	16	17	12	16	18	21	16	16	14	1	391
<b>ORDER 4.</b>																						
1. Gastritis .....	74	11	...	...	...	...	...	...	1	1	...	2	...	...	1	1	2	...	...	...	...	93
2. Enteritis .....	70	14	2	1	2	9	5	9	24	21	17	8	2	9	1	...	3	3	...	...	...	200
3. Peritonitis .....	2	...	1	...	...	...	2	3	4	9	6	1	...	2	...	...	1	...	...	...	...	31
4. Ascites .....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	3	...	1	...	5
5. Ulceration of Intestines	...	...	...	...	...	...	...	...	...	1	1	...	...	...	1	...	...	...	...	...	...	3
6. Hernia .....	1	...	1	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	4
7. Ileus .....	3	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	2	...	...	7
8. Intussusception .....	3	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	4
9. Stricture of Intestines..	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
10. Fistula .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11. Stomach Disease, &c. ....	1	...	...	...	...	...	...	...	...	1	...	...	1	...	1	1	...	...	1	...	...	6
12. Pancreas Disease, &c. ....	...	...	...	...	...	...	...	...	...	...	...	2	...	1	7	4	4	...	...	...	...	...
13. Hepatitis .....	2	...	...	...	...	...	...	...	...	...	2	...	1	7	4	4	...	...	...	...	...	20
14. Jaundice .....	6	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	9
15. Liver Disease, &c. ....	...	...	...	...	...	1	2	4	...	2	8	6	6	6	6	3	7	4	...	...	...	49
16. Spleen Disease, &c. ....	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	2
	162	25	4	1	2	9	7	14	31	35	26	17	14	20	14	13	15	17	4	4	...	434
<b>ORDER 5.</b>																						
1. Nephritis .....	1	2	...	1	...	2	...	...	1	...	...	...	2	...	...	1	...	...	...	...	...	10
2. Ischuria .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Nephria .....	...	1	...	...	...	...	2	1	2	6	3	3	2	6	6	4	2	1	2	1	...	42
4. Diabetes .....	...	...	...	...	...	...	...	1	1	...	...	...	...	1	...	1	...	1	...	...	...	5
5. Stone .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
6. Cystitis .....	...	...	...	...	...	...	...	...	1	...	...	...	...	1	1	1	...	1	1	3	...	9
7. Kidney Disease, &c. ....	2	2	1	1	...	2	...	1	1	1	...	1	1	1	3	...	2	2	1	...	...	22
	3	5	1	2	...	4	2	2	5	9	3	4	5	9	10	7	5	4	5	4	...	89
<b>ORDER 6.</b>																						
1. Ovarian Dropsy .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
2. Uterus Disease, &c. ....	...	...	...	...	...	...	...	...	...	...	3	...	1	1	...	1	...	...	...	...	...	6
	...	...	...	...	...	...	...	...	...	...	3	...	1	1	...	1	1	...	...	...	...	7
<b>ORDER 7.</b>																						
1. Arthritis .....	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	3
1a. Ostitis Periostitis, &c.	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
2. Joint Disease, &c. ....	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
	1	...	...	2	1	...	1	...	...	...	...	...	...	...	1	1	...	...	...	...	...	7
<b>ORDER 8.</b>																						
1. Phlegmon .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Ulcer .....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
3. Skin Disease, &c. ....	5	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
	5	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	7
<b>Total, Class III .....</b>	<b>515</b>	<b>137</b>	<b>30</b>	<b>15</b>	<b>15</b>	<b>52</b>	<b>21</b>	<b>32</b>	<b>59</b>	<b>66</b>	<b>59</b>	<b>78</b>	<b>60</b>	<b>75</b>	<b>70</b>	<b>66</b>	<b>75</b>	<b>78</b>	<b>49</b>	<b>50</b>	<b>2</b>	<b>1,604</b>

F 3—continued.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS IV.—ORDER 1.</b>																						
1. Premature Birth .....	96	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	96
2. Cyanosis.....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
3. Spina Bifida .....	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
4. Other Malformations .....	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18
5. Teething .....	53	41	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	94
	170	41	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	211
<b>ORDER 2.</b>																						
1. Paresis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Childbirth ( <i>see</i> Metria) .....	...	...	...	...	...	...	...	1	3	5	1	3	1	...	...	...	...	...	...	...	...	14
	...	...	...	...	...	...	...	1	3	5	1	3	1	...	...	...	...	...	...	...	...	14
<b>ORDER 3.</b>																						
1. Old Age .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16	11	25	75	...	127
<b>ORDER 4.</b>																						
1. Atrophy and Debility .....	349	50	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	399
<b>Total Class IV .....</b>	<b>519</b>	<b>91</b>	...	...	...	...	...	<b>1</b>	<b>3</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>1</b>	...	...	...	<b>16</b>	<b>11</b>	<b>25</b>	<b>75</b>	...	<b>751</b>
<b>CLASS V.—ORDER 1.—</b>																						
<b>ACCIDENT OR NEGLIGENCE.</b>																						
1. Fractures & Contusions .....	1	2	1	1	...	3	5	...	4	6	5	3	7	3	2	...	3	1	...	...	...	47
2. Wounds { <i>a</i> Gunshot .....	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
{ <i>b</i> Cuts .....	...	...	...	...	...	...	...	...	...	...	...	2	...	...	1	...	...	...	...	...	...	3
3. Burns and Scalds .....	...	4	3	...	4	3	...	...	...	...	2	...	2	...	...	...	...	...	...	...	...	18
3 <i>a</i> . Sunstroke .....	...	...	...	2	...	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
4. Poison .....	1	1	...	1	...	1	...	...	1	...	...	2	1	1	...	...	...	1	...	...	...	10
4 <i>a</i> . Bite of Snake or Insect .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Drowning .....	...	1	1	3	2	3	3	3	1	4	5	...	...	...	3	...	...	...	...	...	...	29
6. Suffocation .....	7	...	...	...	...	...	...	1	...	...	...	...	1	1	...	...	...	...	...	...	...	10
7. Otherwise .....	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	9	8	5	7	6	11	11	5	6	10	10	10	9	7	6	...	3	2	...	...	...	125
<b>ORDER 2.—VIOLENT DEATHS IN BATTLE.</b>																						
1. Gunshot Wounds .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Sword and Bayonet Wounds .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Otherwise .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>ORDER 3.—HOMICIDE.</b>																						
Murder .....	2	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	3
Manslaughter .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	2	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	3
<b>ORDER 4.—SUICIDE.</b>																						
1. Wounds { Gunshot .....	...	...	...	...	...	...	...	...	1	2	1	...	...	...	1	...	...	...	...	...	...	5
{ Cut, Stab, &c. ....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
2. Poison .....	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
3. Drowning .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Hanging .....	...	...	...	...	...	...	...	...	...	...	...	1	4	...	...	1	...	...	...	...	...	6
5. Otherwise .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	1	2	2	1	5	...	1	1	...	...	...	...	...	...	13
<b>ORDER 5.—EXECUTION.</b>																						
1. Hanging .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Violent Deaths, not classed (Open Verdicts Found Drowned, &c.) .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Total Class V.....</b>	<b>11</b>	<b>8</b>	<b>5</b>	<b>7</b>	<b>6</b>	<b>11</b>	<b>11</b>	<b>5</b>	<b>7</b>	<b>12</b>	<b>13</b>	<b>11</b>	<b>14</b>	<b>7</b>	<b>7</b>	<b>1</b>	<b>3</b>	<b>2</b>	...	...	...	<b>141</b>
Causes not specified or ill-defined .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
<b>GRAND TOTALS.....</b>	<b>1512</b>	<b>390</b>	<b>83</b>	<b>57</b>	<b>49</b>	<b>118</b>	<b>57</b>	<b>75</b>	<b>138</b>	<b>172</b>	<b>143</b>	<b>152</b>	<b>126</b>	<b>119</b>	<b>116</b>	<b>101</b>	<b>117</b>	<b>106</b>	<b>84</b>	<b>139</b>	<b>3</b>	<b>3,857</b>

G 1.

DEATHS from all causes, of MALES, at different ages, registered in COUNTRY DISTRICTS, from 1st January to 31st December, 1885.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS I.—ORDER 1.</b>																						
1. Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
1a. Chicken-pox	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
2. Measles	...	6	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	2
3. Scarlatina	4	1	7	2	4	3	2	2	...	1	...	...	...	...	...	...	...	...	...	...	...	31
3a. Diphtheria	10	16	13	15	13	37	8	...	1	1	...	...	...	1	...	...	...	...	...	...	...	115
4. Quinsy	1	2	...	...	1	4	...	...	...	...	...	2	2	...	...	...	...	...	...	...	...	12
5. Croup	21	27	23	21	15	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	122
6. Whooping-cough	23	12	3	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	41
7. Typhoid (and Infantile Fever)	6	3	2	3	1	10	6	22	27	24	9	17	9	5	...	2	2	2	...	...	1	151
8. Erysipelas	4	...	...	...	...	...	...	...	...	3	...	1	1	...	1	...	...	...	1	1	...	12
9. Metria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10. Carbuncle	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11. Influenza	11	1	2	2	2	2	...	1	...	1	...	...	...	1	3	1	2	...	5	3	1	36
12. Dysentery	18	8	1	1	1	1	...	1	...	1	...	3	3	...	4	4	2	2	6	3	...	56
13. Diarrhoea	118	26	4	3	1	...	1	...	3	1	...	3	3	...	2	3	5	3	6	13	...	195
14. Cholera	17	1	...	...	...	1	...	...	...	...	...	...	1	...	1	1	1	...	...	...	...	23
15. Ague	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
16. Remittent Fever	1	...	1	...	...	...	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	5
17. Rheumatism	...	...	...	...	...	4	1	2	2	2	...	3	1	1	2	1	...	4	2	1	...	26
18. Pyæmia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
	234	104	56	48	36	78	19	28	34	30	16	25	21	9	12	13	13	11	20	21	2	830
<b>ORDER 2.</b>																						
1. Syphilis	2	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...	...	...	...	...	...	5
2. Stricture of the Urethra	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	2	...	...	2	3	...	10
	2	...	...	...	...	...	...	...	...	...	1	1	1	2	1	2	...	...	2	3	...	15
<b>ORDER 3.</b>																						
1. Privation	...	...	...	1	...	...	...	...	...	1	2	3	2	3	2	4	2	2	3	2	4	31
2. Want of Breast Milk	28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	28
3. Purpura and Scurvy	1	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	1	...	4
4. Alcoholism—	...	...	...	...	...	...	...	...	...	...	2	...	1	...	...	1	...	...	...	...	...	4
a. Del. Tremens	...	...	...	...	...	...	...	...	1	2	3	2	3	8	5	4	2	2	1	...	...	33
b. Intemperance	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Rickets	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	30	...	...	1	...	...	1	2	3	5	7	5	12	7	8	5	4	4	3	4	...	101
<b>ORDER 4.</b>																						
1. Thrush	23	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	24
2. Worms, &c.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
2a. Hydatid	...	...	...	...	...	2	...	...	1	1	...	2	...	...	...	...	...	...	...	2	...	8
	24	1	...	...	...	2	...	...	1	1	...	2	...	...	...	...	...	...	...	2	...	33
Total, Class I	290	105	56	49	36	78	21	29	36	34	23	33	29	23	20	23	18	15	26	29	6	979
<b>CLASS II.—ORDER 1.</b>																						
1. Gout	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	2
2. Dropsy	5	4	1	1	...	2	5	1	2	1	5	...	2	3	4	3	5	8	10	10	...	72
3. Cancer	1	...	...	...	...	...	...	...	...	1	3	3	12	15	14	10	10	19	16	2	...	106
3a. Tumour	1	...	...	...	1	...	...	1	...	1	...	...	1	4	...	3	1	...	1	...	...	14
3b. Polypus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Noma	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Mortification	1	...	...	...	...	...	1	2	...	...	...	...	...	1	3	3	...	...	...	...	...	11
	8	4	1	1	...	3	5	2	5	1	7	4	5	17	26	20	18	20	29	27	2	205
<b>ORDER 2.</b>																						
1. Scrofula	1	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	3
2. Tabes Mesenterica	49	24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	73
3. Phthisis	6	4	2	...	4	...	8	34	47	46	31	29	32	25	17	8	6	2	3	2	...	306
3a. Hæmoptysis	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...	...	...	...	2	...	5
4. Hydrocephalus	11	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	19
4a. Abscess	4	1	...	...	2	...	2	1	2	1	3	2	3	...	...	1	...	...	...	...	...	22
	71	37	2	...	6	...	10	35	49	47	35	33	36	26	17	9	6	2	5	2	...	428
Total, Class II	79	41	3	1	...	9	5	12	40	50	54	39	38	53	52	37	27	26	31	32	4	633

G 1—continued.

CAUSES OF DEATH	Under 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years	5 to 10 years	10 to 15 years	15 to 20 years	20 to 25 years	25 to 30 years	30 to 35 years	35 to 40 years	40 to 45 years	45 to 50 years	50 to 55 years.	55 to 60 years	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards	Ages not specified	Total
<b>CLASS III —ORDER 1</b>																						
1 Cephalitis . . . . .	27	15	4	5	1	6	8	4	1	4	3	1	1	3	3	1	1	1	7	1	1	89
2 Apoplexy . . . . .						2		..	2	4	4	8	9	8	9	10	10	6	16	11	..	84
3 Paralysis .. . . .	1		1			2			2		2	5	5	10	13	15	11	20	16	16	..	123
4 Insanity . . . . .	..		.											2			1	1	1	3		8
5 Chorea .. . . .	..																					
6 Epilepsy . . . . .				2	1	4	2	2	2	3	2		4		1	3	6	2	1	1		36
7 Convulsions . . . . .	220	27	1																			248
8 Brain Disease, &c. ...								1	2	2	2	4	3	10	6	6	5	5	4	3		53
	248	42	6	7	2	12	10	7	9	13	13	18	21	31	32	37	34	34	30	34	1	641
<b>ORDER 2.</b>																						
1 Pericarditis . . . . .	.					3	2	..	1			1		1	2	2						12
2 Aneurism ... . .						6	5	8	7	11	13	18	17	29	26	21	23	43	20	2		22
3. Heart Disease, &c	4	1	1	2																	4	284
	4	1	1	2		9	7	8	9	11	15	21	18	37	30	26	23	45	20	27	4	318
<b>ORDER 3.</b>																						
1 Laryngitis ... . .	3	1	4	2	2	3						..						..	..			15
2 Bronchitis . . . . .	78	31	5	8	7	5	2	1		1	7	2	4	4	17	14	12	23	22	24	1	268
3 Pleurisy . . . . .	1							3	2	2	4	1	6		1		1	1	2	2		26
4 Pneumonia . . . . .	40	17	8	2	5	10	8	15	24	26	21	13	18	16	13	22	11	14	11	15	2	311
4a Congestion of the Lungs, pulmonary	15	3	1	1	1	5				2	2	1	3	2	4	4	2	4	2	3		55
5 Asthma . . . . .			..					..	2	3	1	1	1	1	2	2	3	7	2	2		21
6 Lung Disease, &c	2				1		..	..	2	3	1		1	4	3	2	3	1	1	1		24
	139	52	18	13	15	24	10	19	28	34	35	18	32	27	40	44	32	50	40	47	3	720
<b>ORDER 4</b>																						
1 Gastritis . . . . .	11	6	2			1						2	1	1					2	1	2	28
2 Enteritis . . . . .	49	14	3	4	3	4	7	6	9	11	7	4	4	9	2	2	2	4	3	2	1	150
3 Peritonitis . . . . .	5				1	3	3	5	3		1		4	3	1	1	1	2	1	1		32
4 Ascites . . . . .	..		..				1				..											5
5 Ulceration of Intestines	1	..	..						1		..			2	1	1		1	1	..		1
6 Hernia . . . . .	3		1	..		..	1	1	1	1	2	..		2	1	1		1	2	..		9
7 Ileus . . . . .	1		1				1	1	1			2	..	2	2		1	2	2			19
8 Intussusception . . . . .	1					1	1	1	1												..	3
9 Stricture of Intestines	1													1					1			3
10 Fi-stula . . . . .										1					1				1			1
11. Stomach Disease, &c	3	1		1		1			1					1	1	3		2	1			15
12 Pancreas Disease, &c						..	..	1		1									..	..		1
13 Hepatitis . . . . .	1					1		1		2	1	2	3	2	1	3	3	3				23
14. Jaundice . . . . .	9		1			..	..	1					1	2	1	3	1	1	1	2		21
15 Liver Disease, &c ..	2					..	..	1		3	4	3	3	5	7	10	6	6	4	4	..	58
16 Spleen Disease, &c		..				..	..	..	..													
	86	21	7	5	4	9	14	14	16	19	15	11	16	26	18	22	16	21	17	9	3	369
<b>ORDER 5</b>																						
1. Nephritis ... . .	2		1	..	1		1	1				1		1	2	3	3	1	1			18
2. Ischuria . . . . .							1	1				1	..	1	1			1	1	..		4
3 Nephria . . . . .	1	1				2			1	2		2	2	2	5	2	2	4	1		..	28
4 Diabetes ... . .	1		..			1						2	1	2	1	1	1	1	1			10
5 Stone . . . . .						1										1	1	1	1	1		4
6 Cystitis . . . . .	1							..						1	1	4	6	6	7	7		20
7 Kidney Disease, &c.	1	1		1		..	1	..	..	1	3	1	1	1	4	1	1	3	5	7		31
	6	2	1	1	1	3	3	2	1	2	1	8	4	8	8	11	12	14	11	16	..	115
<b>ORDER 7</b>																						
1 Arthritis . . . . .	..							1	2			1							..			4
1a Ostitis Periostitis, &c	..					1				1		3	1	1						1		1
2 Joint Disease, &c						1		1	2	1		4	1	1						1		12
<b>ORDER 8</b>																						
1 Phlegm on ... . .								..												..		2
2 Ulcer . . . . .								..								1			1	..		5
3 Skin Disease, &c	4																				1	
	4														1				1			7
<b>Total, Class III</b>	<b>487</b>	<b>118</b>	<b>33</b>	<b>28</b>	<b>22</b>	<b>58</b>	<b>41</b>	<b>51</b>	<b>65</b>	<b>80</b>	<b>79</b>	<b>80</b>	<b>92</b>	<b>130</b>	<b>128</b>	<b>141</b>	<b>117</b>	<b>164</b>	<b>119</b>	<b>134</b>	<b>12</b>	<b>2,182</b>

G 1—continued.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS IV.—ORDER 1.</b>																						
1. Premature Birth .....	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	100
2. Cyanosis .....	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7
3. Spina Bifida .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Other Malformations..	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15
5. Teething .....	59	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	90
	181	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	212
<b>ORDER 3.</b>																						
1. Old Age.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	56	44	82	333	...	515
<b>ORDER 4.</b>																						
1. Atrophy and Debility.	219	29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	248
<b>Total Class IV. ....</b>	<b>400</b>	<b>60</b>	...	...	...	...	...	...	...	...	...	...	...	...	...	...	56	44	82	333	...	975
<b>CLASS V.—ORDER 1.—</b>																						
<b>ACCIDENT OR NEGLIGENCE.</b>																						
1. Fractures & Contusions	3	3	...	8	1	10	12	21	21	27	19	20	23	25	28	13	9	18	7	5	7	230
2. Wounds { a Gunshot.	...	...	...	...	...	1	...	2	1	2	...	1	...	2	2	...	...	...	...	...	...	11
b Cuts....	...	1	...	...	...	...	1	2	1	1	...	1	2	2	1	1	1	...	...	...	...	14
3. Burns and Scalds .....	1	2	9	2	1	3	...	...	...	2	1	1	1	1	...	1	2	...	...	4	1	31
3a. Sunstroke .....	...	1	...	1	2	1	...	1	1	3	2	4	1	...	2	...	1	...	...	...	...	20
4. Poison .....	3	1	1	1	1	1	...	1	...	1	1	...	2	3	...	...	...	...	...	1	1	19
4a. Bite of Snake or Insect	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2
5. Drowning .....	2	14	4	4	2	16	11	9	10	13	16	10	9	5	11	1	3	4	1	3	3	151
6. Suffocation.....	4	3	1	1	...	...	1	...	2	1	2	2	...	...	...	3	...	...	...	...	...	20
7. Otherwise .....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	13	25	15	17	7	33	26	36	38	47	42	40	36	37	47	15	18	24	8	13	12	540
<b>ORDER 2.—VIOLENT DEATHS IN BATTLE.</b>																						
1. Gunshot Wounds.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Sword and Bayonet Wounds .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Otherwise .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>ORDER 3.—HOMICIDE.</b>																						
1. Murder.....	...	...	...	...	...	...	...	...	1	...	1	1	...	1	...	...	...	...	...	...	...	4
2. Manslaughter.....	...	...	...	...	...	...	1	...	5	...	...	...	...	1	...	1	...	...	...	...	1	9
	...	...	...	...	...	...	1	...	6	...	1	1	...	2	...	1	...	...	...	...	1	13
<b>ORDER 4.—SUICIDE.</b>																						
1. Wounds { Gunshot....	...	...	...	...	...	...	...	1	...	1	1	2	1	1	1	1	...	...	...	...	1	9
Cut, Stab, &c	...	...	...	...	...	...	...	...	1	2	1	...	1	2	...	3	1	...	...	...	...	11
2. Poison .....	...	...	...	...	...	...	...	...	1	2	...	1	2	1	1	1	...	...	...	1	...	10
3. Drowning .....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
4. Hanging.....	...	...	...	...	...	...	3	1	2	...	1	3	1	2	...	1	...	...	1	1	1	16
5. Otherwise .....	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	4
	...	...	...	...	...	...	4	3	7	2	6	8	6	4	4	4	3	...	2	2	...	51
<b>ORDER 5.—EXECUTION.</b>																						
1. Hanging.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
Violent Deaths, not classed, (Open verdicts—Found drowned, &c.) .....																						
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Total Class V. ....</b>	<b>13</b>	<b>25</b>	<b>15</b>	<b>17</b>	<b>7</b>	<b>33</b>	<b>26</b>	<b>37</b>	<b>42</b>	<b>56</b>	<b>49</b>	<b>43</b>	<b>43</b>	<b>45</b>	<b>55</b>	<b>19</b>	<b>23</b>	<b>28</b>	<b>8</b>	<b>15</b>	<b>15</b>	<b>614</b>
Causes not specified or ill-defined .....																						
	...	...	...	...	...	...	...	...	...	2	2	3	1	...	1	1	...	...	...	6	...	16
<b>GRAND TOTAL .....</b>	<b>1,269</b>	<b>349</b>	<b>107</b>	<b>95</b>	<b>65</b>	<b>178</b>	<b>96</b>	<b>129</b>	<b>183</b>	<b>220</b>	<b>205</b>	<b>197</b>	<b>204</b>	<b>254</b>	<b>256</b>	<b>220</b>	<b>242</b>	<b>278</b>	<b>266</b>	<b>543</b>	<b>43</b>	<b>5,390</b>

G 2.

DEATHS from all causes, of FEMALES, at different ages, registered in COUNTRY DISTRICTS, from 1st January to 31st December, 1885.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS I.—ORDER 1.</b>																						
1. Small-pox .....				1																		1
1a. Chicken-pox .....																						6
2. Measles .....	1	2	1	1		1																34
3. Scarlatina .....	2	5	7	4	2	7	4	1		1	1											117
3a. Diphtheria .....	3	12	13	17	18	34	11	7	1				1									8
4. Quinsy .....	2	1		1	1	1																91
5. Croup .....	11	14	13	18	19	13	2															49
6. Whooping-cough ..	27	14	4	1		3																
7 Typhoid (and Infantile Fever) .....	8	4	1	2	3	12	15	24	17	11	12	3	4	6	1	2		2	2			129
8. Erysipelas .....	1		1			2		1				1								1		8
9. Metria .....									2	3	6	4		1								16
10. Carbuncle .....																						
11. Influenza .....	20	1	1	2	1		1		1	1				1	1	1	3	2	1	1		38
12. Dysentery .....	10	6	3				1		1	1		1	1		2	1			2			29
13. Diarrhoea .....	87	23	1	1			1		2		1	1	1	2				5	1	2	1	129
14. Cholera .....	9	4		1			1		2					1								18
15. Ague .....																						
16. Remittent Fever ..	3					3				1	1											8
17. Rheumatism .....					1	2	3			1		1		2						1		12
18. Pyæmia .....		1				1	1			1		1	1									6
19. Parotitis .....						1																1
	184	87	45	49	45	83	40	33	26	20	21	12	8	13	4	4	5	9	6	5	1	700
<b>ORDER 2.</b>																						
1. Syphilis .....	3	1								1						1						6
2. Stricture of the Urethra																						
	3	1								1						1						6
<b>ORDER 3.</b>																						
1. Privation .....			1							1	2											4
2. Want of Breast Milk...	21																					21
3. Purpura and Scurvy...		1				1																2
4. Alcoholism— a. Del. Tremens b. Intemperance...											4			1				2	1			8
5. Rickets .....																						
	21	1	1			1				1	6			1			2	1				35
<b>ORDER 4.</b>																						
1. Thrush .....	18																					18
2. Worms, &c. ....		1																				1
2a. Hydatid .....					1					4	1	1	1									8
	18	1			1					4	1	1	1									27
<b>Total, Class I.....</b>	<b>226</b>	<b>90</b>	<b>46</b>	<b>49</b>	<b>46</b>	<b>84</b>	<b>40</b>	<b>33</b>	<b>26</b>	<b>26</b>	<b>28</b>	<b>13</b>	<b>9</b>	<b>14</b>	<b>4</b>	<b>5</b>	<b>7</b>	<b>10</b>	<b>6</b>	<b>5</b>	<b>1</b>	<b>768</b>
<b>CLASS II.—ORDER 1.</b>																						
1. Gout .....																						
2. Dropsy .....	1	2				2				2	5	3	5	4	6	2	1	5	3	5		46
3. Cancer .....										4	5	3	4	10	9	6	5	7	1	5	2	61
3a. Tumour .....	2	1									1		1	1	2	2	2					13
3b. Polypus .....											1											1
4. Noma .....																						
5. Mortification .....	2					1			1	1	2			1		1						10
	5	3				3			1	7	13	7	10	16	17	11	8	12	5	10	3	131
<b>ORDER 2.</b>																						
1. Scrofula .....							1															1
2. Tabes Mesenterica ..	48	20																				68
3. Phthisis .....	6	2	3		1	2	5	18	39	39	17	15	20	14	4	3	1	1			1	193
3a. Hæmoptysis .....																						
4. Hydrocephalus .....	7	10	2			1																20
4a. Abscess .....	1		1							1		1	1	1								7
	62	32	6		1	3	5	19	39	40	17	16	21	15	5	3	1	1				289
<b>Total, Class II .....</b>	<b>67</b>	<b>35</b>	<b>6</b>		<b>1</b>	<b>6</b>	<b>5</b>	<b>19</b>	<b>40</b>	<b>47</b>	<b>30</b>	<b>23</b>	<b>31</b>	<b>31</b>	<b>22</b>	<b>11</b>	<b>9</b>	<b>13</b>	<b>5</b>	<b>11</b>	<b>5</b>	<b>420</b>



G 2—continued.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS III.—ORDER 1.</b>																						
1. Cephalitis .....	26	17	4	4	1	6	5	2	3	2	2	4	2	...	...	2	1	...	...	1	...	82
2. Apoplexy .....	...	...	...	...	...	...	1	1	...	3	1	1	5	1	2	6	5	3	2	...	...	33
3. Paralysis .....	...	1	...	...	...	...	...	...	...	...	...	...	1	3	4	2	2	5	2	...	...	26
4. Insanity .....	...	...	...	...	...	...	...	...	...	1	...	...	1	...	2	...	...	...	...	...	...	4
5. Chorea .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Epilepsy .....	...	...	...	4	3	5	4	7	5	5	3	3	3	1	1	1	...	...	...	...	...	45
7. Convulsions .....	200	36	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	236
8. Brain Disease, &c.....	1	...	...	...	1	2	1	...	1	1	1	1	4	5	3	...	2	5	1	2	...	31
	227	54	4	8	5	13	12	10	9	12	7	9	16	10	12	11	10	13	5	10	...	457
<b>ORDER 2.</b>																						
1. Pericarditis .....	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	1	...	...	1	...	5
2. Aneurism .....	...	...	...	...	...	1	...	...	...	...	2	...	...	1	...	...	...	...	...	...	...	4
3. Heart Disease, &c.....	4	2	2	1	...	3	6	7	7	4	9	11	9	10	11	7	11	12	5	7	1	129
	4	2	2	1	...	5	7	8	7	4	11	11	9	11	11	7	12	12	5	8	1	138
<b>ORDER 3.</b>																						
1. Laryngitis .....	...	1	1	3	1	3	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	11
2. Bronchitis .....	58	23	10	7	4	7	2	1	...	2	1	2	3	4	...	8	9	9	7	10	...	167
3. Pleurisy .....	...	1	...	...	1	2	...	2	3	8	2	4	1	3	...	3	...	...	...	1	...	31
4. Pneumonia .....	35	15	8	7	4	9	5	9	22	11	9	11	10	8	4	5	2	3	5	7	2	191
4a. Congestion of the Lungs, pulmonary...	7	3	2	2	1	5	1	1	2	2	2	4	2	...	1	2	1	1	1	1	...	41
5. Asthma .....	...	...	...	...	...	...	1	...	1	...	1	2	3	1	...	1	2	...	...	1	...	12
6. Lung Disease, &c.....	...	...	...	...	1	...	2	...	1	...	...	...	...	...	...	...	...	1	...	1	...	7
	100	43	21	19	12	26	11	14	28	23	16	24	19	16	5	19	14	14	13	21	2	460
<b>ORDER 4.</b>																						
1. Gastritis .....	15	3	1	1	...	...	...	...	2	...	...	2	...	...	...	2	1	1	1	...	...	29
2. Enteritis .....	30	9	7	3	3	7	4	4	15	9	4	2	2	...	2	4	...	2	3	2	...	112
3. Peritonitis .....	3	1	...	1	...	2	3	1	9	4	3	4	1	...	2	1	...	...	1	...	...	36
4. Ascites .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	...	...	3
5. Ulceration of Intestines	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	...	...	4
6. Hernia .....	...	...	...	...	...	...	...	...	...	1	1	1	...	...	1	...	1	...	1	...	...	5
7. Ileus .....	2	...	...	1	...	...	1	...	1	1	1	1	...	...	1	...	1	1	...	...	...	10
8. Intussusception.....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	2
9. Stricture of Intestines	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
10. Fistula .....	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
11. Stomach Disease, &c..	...	...	...	...	...	1	1	...	...	...	...	2	...	...	1	...	1	...	1	...	...	7
12. Pancreas Disease, &c...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
13. Hepatitis .....	2	...	...	...	...	1	1	1	...	...	2	...	...	...	2	1	...	2	1	1	1	14
14. Jaundice .....	7	...	...	...	...	...	...	...	1	...	1	...	...	...	1	1	...	1	3	...	...	14
15. Liver Disease, &c....	...	...	...	...	1	...	...	1	3	2	2	3	3	6	5	3	4	3	2	...	...	38
16. Spleen Disease, &c....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	60	13	8	6	3	10	9	8	28	18	11	15	8	4	15	19	6	12	11	12	1	277
<b>ORDER 5.</b>																						
1. Nephritis .....	...	1	...	...	...	2	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	5
2. Ischuria .....	...	...	...	...	...	...	...	1	2	2	2	2	1	1	2	1	2	2	2	1	...	22
3. Nephria .....	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2
4. Diabetes .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
5. Stone .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
6. Cystitis .....	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7. Kidney Disease, &c....	...	1	1	...	...	...	...	...	1	2	1	...	...	...	1	2	2	...	1	...	...	12
	1	2	2	...	...	3	...	1	3	4	4	3	1	1	2	2	4	5	2	2	...	42
<b>ORDER 6.</b>																						
1. Ovarian Dropsy .....	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	1	...	...	4
2. Uterus Disease, &c....	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	2
	...	...	...	...	...	...	...	...	1	...	1	2	1	...	...	...	...	1	...	...	...	6
<b>ORDER 7.</b>																						
1. Arthritis .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
1a. Ostitis Periostitis, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Joint Disease, &c.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
<b>ORDER 8.</b>																						
1. Phlegmon .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Ulcer .....	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	3
3. Skin Disease, &c.....	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
	2	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	5
<b>Total, Class III .....</b>	<b>394</b>	<b>115</b>	<b>37</b>	<b>34</b>	<b>20</b>	<b>57</b>	<b>39</b>	<b>41</b>	<b>75</b>	<b>63</b>	<b>49</b>	<b>63</b>	<b>56</b>	<b>43</b>	<b>45</b>	<b>58</b>	<b>47</b>	<b>56</b>	<b>37</b>	<b>53</b>	<b>4</b>	<b>1386</b>

G 2—continued.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS IV.—ORDER 1.</b>																						
1. Premature Birth .....	58	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	58
2. Cyanosis .....	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
3. Spina Bifida .....	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
4. Other Malformations .....	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
5. Teething .....	64	33	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	97
	136	33	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	169
<b>ORDER 2.</b>																						
1. Paramenia .....	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
2. Childbirth (see Metria) .....	...	...	...	...	...	...	...	5	12	16	14	13	13	1	...	...	...	...	...	...	...	74
	...	...	...	...	...	...	...	5	13	16	14	13	13	1	...	...	...	...	...	...	...	75
<b>ORDER 3.</b>																						
1. Old Age .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20	22	47	116	1	206
<b>ORDER 4.</b>																						
1. Atrophy and Debility .....	206	16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	222
<b>Total, Class IV.....</b>	<b>342</b>	<b>49</b>	...	...	...	...	...	<b>5</b>	<b>13</b>	<b>16</b>	<b>14</b>	<b>13</b>	<b>13</b>	<b>1</b>	...	...	<b>20</b>	<b>22</b>	<b>47</b>	<b>116</b>	<b>1</b>	<b>672</b>
<b>CLASS V.—ORDER 1.</b>																						
<b>ACCIDENT OR NEGLIGENCE.</b>																						
1. Fractures & Contusions .....	...	1	1	...	...	2	2	3	...	...	...	...	...	2	1	2	5	3	2	1	...	27
2. Wounds { a Gunshot .....	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
{ b Cuts .....	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
3. Burns and Scalds .....	2	7	4	5	5	9	3	3	3	1	1	2	...	3	...	3	...	3	2	...	...	56
3a. Sunstroke .....	...	1	1	...	...	...	...	...	1	1	1	...	...	...	1	...	...	...	...	...	...	4
4. Poison .....	...	1	...	1	...	...	...	1	1	1	...	2	1	...	...	...	...	1	1	...	...	10
4a. Bite of Snake or Insect .....	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
5. Drowning .....	...	2	...	1	1	3	1	4	1	1	...	1	...	1	...	...	...	2	...	...	...	18
6. Suffocation .....	3	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	1	1	...	...	7
7. Otherwise .....	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	6	11	6	7	6	17	8	10	8	4	2	4	2	7	2	2	8	7	7	3	...	127
<b>ORDER 2.—VIOLENT DEATHS IN BATTLE.</b>																						
1. Gunshot Wounds .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Sword and Bayonet Wounds .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Otherwise .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>ORDER 3.—HOMICIDE.</b>																						
1. Murder .....	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	2	1	5
2. Manslaughter .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	2	1	5
<b>ORDER 4.—SUICIDE.</b>																						
1. Wounds { Gunshot .....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
{ Cut, Stab, &c .....	...	...	...	...	...	...	...	1	1	1	...	...	...	...	1	...	1	...	...	...	...	5
2. Poison .....	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	3
3. Drowning .....	...	...	...	...	...	...	...	1	1	...	...	1	...	...	...	...	...	...	...	...	...	1
4. Hanging .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Otherwise .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	2	2	2	1	...	1	...	...	1	...	1	...	...	...	...	10
<b>ORDER 5.—EXECUTION.</b>																						
1. Hanging .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Violent Deaths, not classed (Open verdicts)</b>																						
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Total, Class V.....</b>	<b>6</b>	<b>11</b>	<b>6</b>	<b>7</b>	<b>6</b>	<b>17</b>	<b>9</b>	<b>12</b>	<b>10</b>	<b>6</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>7</b>	<b>2</b>	<b>4</b>	<b>8</b>	<b>8</b>	<b>7</b>	<b>5</b>	<b>1</b>	<b>142</b>
Causes not specified or ill-defined .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	2
Sudden Deaths (cause unascertained) .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>GRAND TOTAL .....</b>	<b>1,035</b>	<b>300</b>	<b>95</b>	<b>90</b>	<b>73</b>	<b>164</b>	<b>93</b>	<b>110</b>	<b>164</b>	<b>159</b>	<b>124</b>	<b>116</b>	<b>112</b>	<b>96</b>	<b>73</b>	<b>81</b>	<b>91</b>	<b>109</b>	<b>102</b>	<b>190</b>	<b>13</b>	<b>3,390</b>

G 3.

DEATHS from all causes, of BOTH SEXES, at different ages, registered in COUNTRY DISTRICTS, from the 1st January to the 31st December, 1885.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS I—ORDER 1.</b>																						
1. Small-pox .....	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
1a. Chicken-pox .....	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
2. Measles .....	1	3	1	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	8
3. Scarlatina .....	6	11	14	6	6	10	6	3	...	2	1	...	...	...	...	...	...	...	...	...	...	65
3a. Diphtheria .....	13	28	26	32	31	71	19	7	2	1	...	...	1	1	...	...	...	...	...	...	...	232
4. Quinsy .....	3	3	...	1	2	7	...	...	...	...	...	2	2	...	...	...	...	...	...	...	...	20
5. Croup .....	32	41	36	39	34	29	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	213
6. Whooping-cough .....	50	26	7	2	...	4	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	90
7. Typhoid (and Infantile Fever) .....	14	7	3	5	4	22	21	46	44	35	21	20	13	11	1	4	2	4	2	...	1	280
8. Erysipelas .....	5	...	1	...	...	2	...	1	...	...	3	1	1	1	1	1	1	...	1	2	...	20
9. Metria .....	...	...	...	...	...	...	...	2	3	6	4	...	...	1	...	...	...	...	...	...	...	16
10. Carbuncle .....	...	...	...	...	...	...	...	...	2	1	1	...	...	2	4	2	5	2	6	4	1	74
11. Influenza .....	31	2	3	4	1	2	1	...	2	1	1	1	4	...	6	5	2	2	8	3	...	85
12. Dysentery .....	28	14	4	1	1	1	1	1	1	1	1	1	4	...	6	5	2	2	8	3	...	85
13. Diarrhoea .....	205	49	5	4	1	...	2	...	5	1	1	4	4	2	2	3	5	8	7	15	1	324
14. Cholera .....	26	5	...	1	...	1	1	...	2	...	...	1	1	1	1	1	1	...	...	...	...	41
15. Ague .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
16. Remittent Fever .....	4	...	1	...	...	3	1	...	2	3	2	...	...	...	...	...	...	...	...	...	...	13
17. Rheumatism .....	...	1	...	...	1	6	4	2	2	3	...	4	1	3	2	1	1	4	2	2	...	38
18. Pyæmia .....	...	1	...	...	1	1	...	...	1	...	1	1	...	...	...	1	...	...	...	...	...	7
19. Parotitis .....	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	418	191	101	97	81	161	59	61	60	50	37	37	29	22	16	17	18	20	26	26	3	1,530
<b>ORDER 2.</b>																						
1. Syphilis .....	5	1	...	...	...	...	...	...	1	1	1	...	1	1	1	1	...	...	...	...	...	11
2. Stricture of the Urethra .....	...	...	...	...	...	...	...	...	...	...	...	1	1	1	2	...	...	2	3	...	...	10
	5	1	...	...	...	...	...	...	1	1	1	1	2	1	3	...	...	2	3	...	...	21
<b>ORDER 3.</b>																						
1. Privation .....	...	...	1	1	...	...	...	...	2	4	3	2	3	2	4	2	2	3	2	4	...	35
2. Want of Breast Milk .....	49	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	49
3. Purpura and Scurvy .....	1	1	...	...	1	...	1	1	...	...	...	...	...	...	...	...	...	...	1	...	...	6
4. Alcoholism— a. Del. Tremens .....	...	...	...	...	...	...	...	...	...	2	...	2	...	1	...	1	...	...	...	...	...	4
b. Intemperance .....	...	...	...	...	...	...	...	1	2	7	2	3	9	5	4	4	3	1	...	...	...	41
5. Rickets .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	51	1	1	1	...	1	...	1	2	4	11	7	5	13	7	8	7	5	4	3	4	136
<b>ORDER 4.</b>																						
1. Thrush .....	41	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	42
2. Worms, &c. .....	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
2a. Hydatid .....	...	...	...	1	...	2	...	...	5	2	1	3	...	...	...	...	...	...	...	2	...	16
	42	2	...	...	1	2	...	...	5	2	1	3	...	...	...	...	...	...	...	2	...	60
<b>Total, Class I .....</b>	<b>516</b>	<b>195</b>	<b>102</b>	<b>98</b>	<b>82</b>	<b>162</b>	<b>61</b>	<b>62</b>	<b>62</b>	<b>60</b>	<b>51</b>	<b>46</b>	<b>38</b>	<b>37</b>	<b>24</b>	<b>28</b>	<b>25</b>	<b>25</b>	<b>32</b>	<b>34</b>	<b>7</b>	<b>1,747</b>
<b>CLASS II—ORDER 1.</b>																						
1. Gout .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	2
2. Dropsy .....	6	6	1	1	...	4	5	1	2	3	10	3	7	7	10	5	6	13	13	15	...	118
3. Cancer .....	1	...	...	...	...	...	...	...	4	6	6	7	22	24	20	15	17	20	21	4	...	167
3a. Tumour .....	3	1	...	...	1	...	...	1	...	2	...	1	2	6	2	5	1	1	1	...	...	27
3b. Polypus .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
4. Noma .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Mortification .....	3	...	...	...	...	1	...	1	3	1	2	...	...	2	3	4	...	...	...	...	1	21
	13	7	1	1	...	6	5	2	6	8	20	11	15	33	43	31	26	32	34	37	5	336
<b>ORDER 2.</b>																						
1. Scrofula .....	1	...	...	...	...	...	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...	4
2. Tabes Mesenterica .....	97	44	...	...	...	...	...	...	...	...	63	46	49	46	29	20	9	7	2	4	4	141
3. Phthisis .....	12	6	5	...	1	6	5	26	73	86	63	46	49	46	29	20	9	7	2	4	4	499
3a. Hæmoptysis .....	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...	...	...	2	...	5
4. Hydrocephalus .....	18	18	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	39
4a. Abscess .....	5	1	1	...	...	2	...	2	1	3	1	4	3	4	1	...	1	...	...	...	...	29
	133	69	8	...	1	9	5	29	74	89	64	51	54	51	31	20	10	7	2	6	4	717
<b>Total, Class II .....</b>	<b>146</b>	<b>76</b>	<b>9</b>	<b>1</b>	<b>1</b>	<b>15</b>	<b>10</b>	<b>31</b>	<b>80</b>	<b>97</b>	<b>84</b>	<b>62</b>	<b>69</b>	<b>84</b>	<b>74</b>	<b>51</b>	<b>36</b>	<b>39</b>	<b>36</b>	<b>43</b>	<b>9</b>	<b>1,053</b>

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS III.—ORDER 1.</b>																						
1. Cephalitis .....	53	32	8	9	2	12	13	6	4	6	5	5	2	1	3	5	2	...	1	1	1	171
2. Apoplexy .....	...	...	...	...	...	...	1	1	2	3	5	9	14	9	11	16	15	9	9	13	...	117
3. Paralysis .....	1	1	1	...	...	2	1	...	2	4	2	5	6	13	17	13	25	18	21	...	149	
4. Insanity .....	...	...	...	...	...	...	...	...	...	1	...	...	1	2	...	...	...	...	3	...	...	12
5. Chorea .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Epilepsy .....	...	...	...	6	4	9	6	9	7	8	5	3	7	1	2	4	6	2	1	1	...	81
7. Convulsions .....	420	63	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	434
8. Brain Disease, &c.....	1	...	...	...	1	2	1	1	3	3	3	5	7	15	9	6	7	10	5	5	...	84
	475	96	10	15	7	25	22	17	18	25	20	27	37	41	44	48	44	47	35	44	1	1,098
<b>ORDER 2.</b>																						
1. Pericarditis .....	...	...	...	...	4	...	1	1	...	...	...	1	...	1	2	2	1	...	...	1	...	14
2. Aneurism .....	...	...	...	...	1	3	...	1	...	4	2	1	8	2	2	3	...	2	...	2	...	29
3. Heart Disease, &c.....	8	3	3	3	...	9	11	15	14	15	22	29	26	39	37	28	34	55	25	32	5	413
	8	3	3	3	...	14	14	16	16	15	26	32	27	48	41	33	35	57	25	35	5	456
<b>ORDER 3.</b>																						
1. Laryngitis .....	3	2	5	5	3	6	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	26
2. Bronchitis .....	136	54	15	15	11	12	4	2	...	3	8	4	7	8	17	22	21	32	29	34	1	435
3. Pleurisy .....	1	1	...	...	1	2	...	5	5	10	6	5	7	3	1	3	1	1	2	3	...	57
4. Pneumonia .....	75	32	16	9	9	19	13	24	46	37	30	24	28	24	17	27	13	17	16	22	4	502
4a. Congestion of the Lungs, pulmonary ...	22	6	3	3	2	10	1	1	2	4	4	5	5	2	5	6	3	5	3	4	...	96
5. Asthma .....	...	...	...	...	...	...	1	...	...	1	3	4	2	2	3	5	7	2	3	...	...	33
6. Lung Disease, &c.....	2	...	...	...	1	1	2	...	3	3	2	...	...	4	3	2	3	2	1	2	...	31
	239	95	39	32	27	50	21	33	56	57	51	42	51	43	45	63	46	64	53	68	5	1,180
<b>ORDER 4.</b>																						
1. Gastritis .....	26	9	3	1	...	...	1	...	2	...	...	2	2	1	...	2	1	1	3	1	2	57
2. Enteritis .....	79	23	10	7	6	11	11	10	24	20	11	6	6	9	4	6	2	6	6	4	1	262
3. Peritonitis .....	8	1	...	1	1	5	5	6	12	4	4	4	5	3	2	2	...	2	1	1	...	68
4. Ascites .....	...	...	...	...	...	...	1	...	...	...	...	...	...	2	2	1	...	2	...	...	...	8
5. Ulceration of Intestines	1	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1	...	...	...	1	...	5
6. Hernia .....	1	...	...	...	...	...	...	...	...	3	1	...	2	1	2	...	2	1	1	...	...	14
7. Ileus .....	5	...	1	1	...	...	1	2	1	2	1	3	...	2	3	...	1	3	3	...	...	29
8. Intussusception.....	1	...	...	...	...	...	1	...	1	...	...	1	...	...	1	...	...	...	...	...	...	5
9. Stricture of Intestines	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	1	...	...	4
10. Fistula .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
11. Stomach Disease, &c...	3	1	...	1	...	1	1	1	1	...	...	...	2	2	1	4	...	3	1	1	...	23
12. Pancreas Disease, &c...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2
13. Hepatitis .....	3	...	...	...	1	...	2	1	2	1	4	3	2	3	4	3	5	1	1	1	1	37
14. Jaundice .....	16	...	1	...	...	...	...	...	1	...	...	...	1	2	2	4	1	2	5	...	...	35
15. Liver Disease, &c.....	2	...	...	...	1	...	1	1	6	6	5	6	8	13	15	9	10	7	6	...	...	96
16. Spleen Disease, &c. ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	146	34	15	11	7	19	23	22	44	37	26	26	24	30	33	41	22	33	28	21	4	646
<b>ORDER 5.</b>																						
1. Nephritis .....	2	1	1	...	1	2	1	1	1	...	...	1	...	1	2	3	3	1	1	...	...	23
2. Ischuria .....	...	...	...	...	...	...	1	...	1	...	...	1	...	1	...	...	...	1	...	...	...	4
3. Nephria .....	1	1	1	...	...	2	...	1	3	4	2	3	3	3	4	6	4	4	6	2	...	50
4. Diabetes .....	1	...	...	...	1	1	...	...	...	...	2	1	2	...	1	2	...	...	...	...	...	12
5. Stone .....	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	1	1	1	...	...	5
6. Cystitis .....	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	4	6	...	7	...	20
7. Kidney Disease, &c. ...	1	2	1	1	...	1	...	...	1	3	4	1	1	4	2	3	5	5	5	8	...	43
	7	4	3	1	1	6	3	3	4	6	5	11	5	9	10	13	16	19	13	18	...	157
<b>ORDER 6.</b>																						
1. Ovarian Dropsy.....	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	1	...	...	4
2. Uterus Disease, &c. ...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	2
	...	...	...	...	...	...	...	...	1	...	1	2	1	...	...	...	...	...	1	...	...	6
<b>ORDER 7.</b>																						
1. Arthritis.....	...	...	...	...	...	...	1	2	1	...	1	...	...	...	...	...	...	...	...	...	...	5
1a. Ostitis Periostitis, &c.	...	...	...	...	...	...	...	...	1	...	...	3	1	...	...	...	...	...	...	1	...	1
2. Joint Disease, &c.....	...	...	...	...	1	...	1	2	2	...	4	1	1	...	...	...	...	...	1	...	...	7
	...	...	...	...	1	...	1	2	2	...	4	1	1	...	...	...	...	...	1	...	...	13
<b>ORDER 8.</b>																						
1. Phlegmon .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Ulcer .....	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	...	1	...	...	5
3. Skin Disease, &c. ....	5	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	7
	6	1	...	...	...	...	...	...	...	...	...	1	...	...	1	1	...	1	...	1	...	12
<b>Total, Class III.....</b>	<b>881</b>	<b>233</b>	<b>70</b>	<b>62</b>	<b>42</b>	<b>115</b>	<b>83</b>	<b>92</b>	<b>140</b>	<b>143</b>	<b>128</b>	<b>143</b>	<b>148</b>	<b>173</b>	<b>173</b>	<b>199</b>	<b>164</b>	<b>220</b>	<b>156</b>	<b>187</b>	<b>16</b>	<b>3,568</b>

G 3—continued.

CAUSES OF DEATH.	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 years and upwards.	Ages not specified.	Total.
<b>CLASS IV.—ORDER I.</b>																						
1. Premature Birth .....	158	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	158
2. Cyanosis.....	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10
3. Spina Bifida .....	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
4. Other Malformations..	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	21
5. Teething .....	123	64	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	187
	317	64	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	381
<b>ORDER 2.</b>																						
1. Paramenia .....	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
2. Child Birth (see Metria	...	...	...	...	...	...	5	12	16	14	13	13	1	...	...	...	...	...	...	...	...	74
	...	...	...	...	...	...	5	13	16	14	13	13	1	...	...	...	...	...	...	...	...	75
<b>ORDER 3.</b>																						
1. Old Age.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	76	66	129	449	1	721
<b>ORDER 4.</b>																						
1. Atrophy and Debility..	425	45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	470
Total Class IV. ....	742	109	...	...	...	...	5	13	16	14	13	13	1	...	...	76	66	129	449	1	1,647	
<b>CLASS V.—ORDER 1.—</b>																						
<b>ACCIDENT OR NEGLIGENCE.</b>																						
1. Fractures & Contusions	3	4	1	8	1	12	14	23	24	27	19	20	23	27	29	15	14	21	9	6	7	307
2. Wounds { a Gunshot	...	...	...	...	1	1	2	1	2	...	1	...	2	2	2	...	...	...	...	...	...	12
{ b Cuts ...	1	1	...	...	1	1	2	1	1	...	1	2	2	1	1	1	...	...	...	...	...	16
3. Burns.....	3	9	13	7	6	12	3	3	3	1	3	3	1	4	...	4	2	3	6	1	87	
3a. Sunstroke.....	1	1	1	1	2	1	...	1	1	4	2	5	1	...	3	...	1	...	...	...	24	
4. Poison.....	3	2	1	2	1	1	1	2	1	1	1	2	3	3	...	...	1	1	1	1	29	
4a. Bite of Snake or Insect	...	...	...	...	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	3	
5. Drowning.....	2	16	4	5	3	19	12	13	11	14	16	11	9	6	11	1	3	6	1	3	3	169
6. Suffocation.....	7	3	1	1	...	1	...	2	1	3	2	...	...	...	...	3	1	1	...	...	27	
7. Otherwise .....	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
	19	36	21	24	13	50	34	46	46	51	44	44	38	44	49	17	26	31	15	16	12	676
<b>ORDER 2.—</b>																						
<b>VIOLENT DEATHS IN BATTLE.</b>																						
1. Gunshot Wounds.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Sword and Bayonet Wounds .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Otherwise .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>ORDER 3.—HOMICIDE.</b>																						
Murder .....	...	...	...	...	...	1	...	...	1	...	1	1	...	1	1	...	...	...	...	2	1	9
Manslaughter.....	...	...	...	...	...	1	...	5	...	...	...	...	...	1	...	1	...	...	...	...	1	9
	...	...	...	...	...	1	1	...	6	...	1	1	...	2	1	1	...	...	...	2	2	18
<b>ORDER 4.—SUICIDE.</b>																						
1. Wounds { Gunshot	...	...	...	...	...	...	1	1	...	1	1	2	1	1	1	1	...	...	...	...	1	10
{ Cut Stab &c.	...	...	...	...	...	...	...	1	2	3	...	1	2	1	2	...	3	1	...	...	...	11
2. Poison .....	...	...	...	...	...	...	...	1	2	3	...	1	2	1	2	1	1	...	1	...	...	15
3. Drowning.....	...	...	...	...	...	1	1	...	...	...	1	...	1	...	...	...	...	...	...	...	...	4
4. Hanging.....	...	...	...	...	...	...	3	2	2	...	1	3	1	2	...	1	...	1	1	1	1	17
5. Otherwise .....	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	1	...	...	...	...	4
	...	...	...	...	...	2	6	5	8	2	7	8	6	5	4	4	...	2	2	...	...	61
<b>ORDER 5.—EXECUTION.</b>																						
1. Hanging.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
<b>Violent Deaths not classed (open verdicts) .....</b>																						
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Class V.....	19	36	21	24	13	50	35	49	52	62	52	47	46	52	57	23	31	36	15	20	16	756
<b>Sudden Deaths (cause unascertained) .....</b>																						
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Causes not specified or ill-defined .....</b>																						
	...	...	...	...	...	...	...	1	...	2	2	3	1	...	1	1	...	...	...	7	...	18
<b>GRAND TOTAL .....</b>	<b>2,304</b>	<b>649</b>	<b>202</b>	<b>185</b>	<b>138</b>	<b>342</b>	<b>189</b>	<b>239</b>	<b>347</b>	<b>379</b>	<b>329</b>	<b>313</b>	<b>316</b>	<b>350</b>	<b>329</b>	<b>301</b>	<b>333</b>	<b>387</b>	<b>308</b>	<b>733</b>	<b>56</b>	<b>8,789</b>

H.

SUMMARY of DEATHS of BOTH SEXES registered in the Colony of New South Wales during each month of the Year 1885, classified under the heads of the several causes of Death.

CAUSES OF DEATH.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Total.		Grand Total.	Percentage of total Deaths of the Year.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.			
Order	CLASS I.—ZYMOTIC DISEASES.																												
1. Miasmatic Diseases—(Scarlatina, Diphtheria, Dysentery, Fevers, &c.)	153	141	140	125	159	113	135	139	137	143	103	113	84	71	57	57	57	55	83	93	136	120	125	122	1369	1292	2,661	17.41	
2. Enthetic Diseases—(Syphilis, Gonorrhoea, &c.)	3	2	4	...	2	3	1	2	2	4	7	...	3	5	2	1	5	8	2	3	1	1	1	1	37	25	62	0.40	
3. Dietic Diseases—(Privation, Scurvy, Delirium Tremens, &c.)	15	7	9	4	17	4	11	6	14	11	11	8	7	3	9	6	13	5	15	8	18	7	18	3	157	72	229	1.49	
4. Parasitic Diseases—(Thrush, Worms, &c.)	3	5	6	5	8	3	7	2	2	4	1	...	1	2	1	6	4	3	5	4	3	4	4	6	45	44	89	0.58	
Total	174	155	159	134	186	123	154	149	155	162	122	121	92	79	72	71	75	68	111	107	160	132	148	132	1608	1433			
Order	CLASS II.—CONSTITUTIONAL DISEASES.																												
1. Diathetic Diseases—(Gout, Dropsy, Cancer, &c.)	25	21	23	18	28	16	26	18	33	23	25	12	19	35	35	21	33	24	17	18	20	15	19	22	303	243	546	3.57	
2. Tubercular Diseases—(Scrofula, Phthisis, Hydrocephalus, &c.)	76	57	81	62	70	48	67	53	82	52	54	49	62	30	70	56	73	46	75	53	81	63	80	65	871	634	1,505	9.85	
Total	101	78	104	80	98	64	93	71	115	75	79	61	81	65	105	77	106	70	92	71	101	78	99	87	1174	877			
Order	CLASS III.—LOCAL DISEASES.																												
1. Diseases of the Nervous System—(Apoplexy, Paralysis, Insanity, Cephalitis)	109	90	75	68	96	73	88	50	75	72	87	69	84	67	89	68	105	64	109	68	103	55	97	79	1117	823	1,940	12.70	
2. Diseases of the Organs of Circulation—(Pericarditis, Aneurism, Heart Disease)	42	20	25	17	40	19	34	22	35	25	41	27	55	26	48	27	44	25	37	21	41	23	41	17	483	269	752	4.92	
3. Diseases of the Respiratory System—(Bronchitis, Pneumonia, Asthma, Pleurisy, &c.)	63	41	47	35	51	51	63	51	77	66	97	69	108	60	148	85	170	116	124	68	98	59	77	48	1123	749	1,872	12.25	
4. Diseases of the Digestive Organs—(Gastritis, Enteritis, Peritonitis, Hernia, &c.)	60	64	60	47	69	55	58	49	63	66	58	38	39	36	47	33	51	38	56	59	64	48	71	69	696	602	1,298	8.49	
5. Diseases of the Urinary Organs—(Nephritis, Ischuria, Diabetes, &c.)	12	6	15	3	19	5	19	12	20	12	10	10	14	14	28	14	24	6	18	7	9	10	12	6	200	105	305	1.99	
6. Diseases of the Organs of Generation—(Ovarian Dropsy, Uterus Disease, &c.)	...	1	...	2	...	1	...	1	...	...	...	...	...	3	...	3	...	...	...	1	...	1	...	3	...	16	16	16	0.10
7. Diseases of the Joints—(Arthritis, Ostitis, Periostitis, &c.)	4	1	1	...	1	...	2	1	3	1	...	...	1	...	1	...	2	...	...	1	2	...	3	...	20	4	24	0.16	
8. Diseases of Integumentary System—(Phlegmon, Ulcer, Skin Disease, &c.)	...	...	...	1	1	1	2	1	1	1	5	1	1	2	...	1	...	1	...	...	...	...	1	4	11	13	24	0.16	
Total	290	223	223	173	277	205	266	187	274	243	298	214	302	208	361	231	396	250	344	225	317	196	302	226	3650	2581			
Order	CLASS IV.—DEVELOPMENTAL DISEASES.																												
1. Diseases of Children—(Cyanosis, Teething, &c.)	29	29	47	32	37	45	32	31	30	24	20	18	22	27	31	14	27	10	24	28	37	28	47	42	383	328	711	4.65	
2. Diseases of Adults—(Paramenia, Childbirth, &c.)	...	8	...	5	...	8	...	10	...	8	...	10	...	10	...	8	...	10	...	6	10	...	9	...	102	102	102	0.67	
3. Diseases of Old People—(Old age, &c.)	36	25	37	27	47	23	50	19	62	17	66	36	70	28	63	35	54	33	36	30	45	28	51	21	617	322	939	6.15	
4. Diseases of Nutrition—(Atrophy, Debility, &c.)	76	62	49	44	57	45	49	39	28	37	41	23	35	30	32	25	21	25	35	52	77	54	56	67	556	503	1,059	6.94	
Total	141	124	133	108	141	121	131	99	120	86	127	87	127	95	126	82	102	78	95	116	159	120	154	139	1556	1255			
Order	CLASS V.—VIOLENCE.																												
1. Accident or Negligence—(Fractures, Contusions, Burns, Drowning, Suffocation, Wounds, &c.)	73	16	77	15	66	19	66	14	54	16	48	12	64	13	57	21	55	16	61	17	63	17	71	26	755	202	957	6.26	
2. Violent Deaths not classed	1	...	...	...	6	...	2	...	...	...	3	...	...	1	2	1	...	...	3	...	...	...	1	...	18	2	20	0.14	
3. Homicide—(Murder and Manslaughter)	3	1	2	...	2	...	5	1	3	...	2	...	1	...	2	...	4	1	...	1	...	1	1	1	25	6	31	0.20	
4. Suicide—(Poison, Drowning, Hanging, &c.)	5	1	4	...	10	1	3	1	7	2	8	1	2	2	12	1	6	...	7	2	12	2	5	1	81	14	95	0.62	
5. Execution—(Hanging)	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	3	...	3	0.02	
Total	82	18	83	15	84	20	76	16	65	18	61	13	68	16	73	23	65	17	71	20	75	20	79	28	882	224			
Unspecified	1	...	3	...	2	1	1	...	2	1	7	...	2	...	3	1	2	...	5	2	2	2	2	3	30	12	42	0.28	
Totals from all Causes	789	598	705	510	788	534	721	522	731	585	694	496	672	463	740	485	746	483	718	541	814	548	784	615	8900	6382	15,282	100.00	

I.

TABLE showing the DEATHS which have occurred from the Causes stated, in each of the several WARDS of the CITY of SYDNEY, from 1st January to 31st December, 1885, distinguishing those under Five years of age.

CAUSES OF DEATH.	Gipps.		Bourke.		Brisbane.		Macquarie.		Cook.		Fitzroy.		Phillip.		Denison.		Total Deaths from each Cause in Sydney.										
	Under.	Over.	Under.	Over.	Under.	Over.	Under.	Over.	Under.	Over.	Under.	Over.	Under.	Over.	Under.	Over.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.	1876.	
<b>CLASS I.—ORDER 1.</b>																											
1. Small-pox .....																											
1a. Chicken-pox .....																											
2. Measles .....																											
3. Scarletina .....	1				2				5		3	1	1	2	3	2	20	21	2	3	8	16	13	3	4	206	
3a. Diphtheria .....	1				1			2	5	2	3		3		5	1	23	11	13	8	9	8	12	17	20	17	
4. Quinsey .....							1					1					2	1	3	2	3	1		1	3	3	
5. Croup .....	6	2	1	2					1	4		3	1			2	1	23	23	34	20	16	20	40	34	17	
6. Whooping-cough .....											3					1	4	33	3	13	16	48	3	92	15	1	
7. Typhoid (and Infantile Fever) .....																											
8. Erysipelas .....		1		4		1										1	7	6	5	7	5	7	6	4	11	19	
9. Metria .....		1									1		1			1	4	4		2	7	6	3	2	2	11	
10. Carbuncle .....																											
11. Influenza .....																											
12. Dysentery .....				5	1		1		4	1		2	2	2			18	12	8	14	11	23	29	35	12	15	
13. Diarrhoea .....	10		2	17	6	1	5	1	46	5	15	1	25	1	37		172	144	117	184	141	173	158	147	157	133	
14. Cholera .....	1			1			1		2	3		1	4		4	2	19	14	19	16	13	19	24	18	16	18	
15. Ague .....																											
16. Remittent Fever .....																											
17. Rheumatism .....		1		3		1		3		4		1		1		3	17	9	8	5	10	10	16	13	12	11	
18. Pyæmia .....												1				1	7	4	2	3	5	2	2	2	2	5	
19. Parotitis .....																						1		1		1	
	19	6	3	64	10	4	10	6	69	31	25	35	35	9	55	22	403	389	305	392	312	539	394	475	337	572	
<b>ORDER 2.</b>																											
1. Syphilis .....		1		3					2		2	2	14		3		27	21	13	17	5	10	8	9	9	11	
3. Stricture of the Urethra .....																		4		1		10	5	1	3	6	
		1		3					2		2	2	14		3		27	25	13	18	5	20	13	10	12	17	
<b>ORDER 3.</b>																											
1. Privation .....	1			2													3	1	2							1	
2. Want of Breast Milk .....																		9	20	25	18	6	13	24	31	38	
3. Purpura and Scurvy .....				1													3	2	2	2	2		2		4	2	
4. Alcoholism— a. Del. Tremens .....						1						1				1	3	14	5	21	14	14	16	8	2	7	
b. Intemperence .....		2		6		1		2		2		6		5		5	29	20	30	39	46	23	23	31	37	35	
5. Rickets .....																				1	1			1			
	1	2		9		2		2		2		7		5	2	6	38	46	59	88	81	43	54	64	74	83	
<b>ORDER 4.</b>																											
1. Thrush .....									2				1		1		4	7	8	6	1	6	4	6	3		
2. Worms, &c. ....					1				1				1				3		2	2		5			1	1	
2a. Hydatid .....		1										1					2	2			2		3	6	4	3	
		1			1				2	1		1	2		1		9	9	10	8	3	11	7	12	8	4	
Total, Class I .....	20	10	3	76	11	6	10	8	73	34	27	45	51	14	61	28	477	469	387	506	401	613	468	561	431	676	
<b>CLASS II.—ORDER 1.</b>																											
1. Gout .....								1		3		1					5	5	1	2	1	2	7	4	4	3	
2. Dropsy .....		1		10				1		8		3	1	1	1	2	28	41	27	31	29	38	29	28	47	50	
3. Cancer .....		1		18		1		5		9		9		2		6	51	41	49	55	44	52	47	41	33	48	
3a. Tumour .....		1		4				1		3		1		1		1	12	9	5	11	10	8	5	11	9	4	
3b. Polypus .....																				1		1					
4. Noma .....																						1					
5. Mortification .....				1						2		2				2	7	5	3	3	2	2		4	3	3	
		3		33		1		8		25		16	1	4	1	11	103	101	85	103	86	104	88	90	96	110	
<b>ORDER 2.</b>																											
1. Scrofula .....				2			1						1	1			5	5	6	4	2	3	4	8	10	7	
2. Tabes Mesenterica .....	5						2		15		9	1	2		6	1	41	55	49	40	41	51	59	61	41	60	
3. Phthisis .....	1	21		67		7		6	1	75	5	45		21	1	32	282	231	227	281	234	212	237	176	166	202	
3a. Hemoptysis .....				4						1			1		1		8	5	2	7	4	10	5	3	6	3	
4. Hydrocephalus .....	3	1											3		2		9	18	14	7	9	15	9	11	7	19	
5. Abscess .....		2		4									1				7	5	5	10	3	6	7	4	2	1	
	9	24		77		7	3	6	16	76	14	47	7	23	9	34	352	319	303	349	293	297	321	263	232	292	
Total, Class II .....	9	27		110		8	3	14	16	101	14	63	8	27	10	45	455	420	388	452	379	401	409	353	328	402	

I—continued.

CAUSES OF DEATH.	Gipps.		Bourke		Brisbane		Macquarie		Cook.		Fitzroy.		Phillip		Denison		Total Deaths from each Cause in Sydney.										
	Under.	Over.	Under.	Over.	Under.	Over.	Under.	Over.	Under.	Over.	Under.	Over.	Under.	Over.	Under.	Over.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.	1876.	
<b>CLASS III.—ORDER 1.</b>																											
1. Cephalitis .....	5	2	...	1	2	...	5	21	3	8	3	7	...	5	1	63	59	41	48	48	53	53	52	50	44	44	
2. Apoplexy .....	...	8	...	18	...	3	...	4	...	19	...	12	...	5	...	13	82	53	52	57	74	47	54	57	61	45	
3. Paralysis .....	...	4	...	5	...	1	...	...	...	8	...	7	...	5	...	3	34	25	24	25	30	35	34	20	40	37	
4. Insanity .....	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	2	1	...	4	...	2	...	2	2	3	
5. Chorea .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	
6. Epilepsy .....	...	3	...	7	...	...	...	...	...	4	...	2	...	1	...	2	19	24	13	20	27	17	13	17	12	15	
7. Convulsions .....	12	...	2	...	5	...	6	35	...	19	1	16	1	29	...	126	155	134	110	114	157	118	116	79	112		
8. Brain Disease, &c.....	...	2	...	7	...	2	...	1	...	4	...	6	1	2	...	25	32	38	31	37	45	46	46	34	36		
	17	19	2	38	7	6	11	5	56	39	27	32	24	14	35	19	351	349	302	295	331	357	318	310	278	293	
<b>ORDER 2.</b>																											
1. Pericarditis .....	...	2	...	4	...	1	...	1	...	1	...	2	...	...	...	11	11	5	5	6	4	6	5	5	4	4	
2. Aneurism .....	...	2	...	1	...	...	...	2	...	2	...	...	...	...	2	7	10	9	9	9	8	8	10	10	7	7	
3. Heart Disease, &c. ....	1	8	1	22	...	7	...	2	23	1	16	...	5	...	14	100	94	130	129	89	128	121	102	84	115		
	1	12	1	27	...	8	...	3	26	1	18	...	5	...	16	118	115	144	143	104	140	135	117	99	126		
<b>ORDER 3.</b>																											
1. Laryngitis .....	...	1	...	...	...	...	...	1	...	...	...	...	...	1	...	3	3	4	8	3	4	7	11	6	6	6	
2. Bronchitis .....	6	2	1	7	3	3	6	5	23	12	9	4	12	8	16	8	125	141	112	133	120	148	93	94	85	108	
3. Pleurisy .....	...	1	...	3	...	1	...	1	...	1	...	...	2	...	1	10	7	2	14	7	11	8	10	8	14		
4. Pneumonia .....	3	4	4	52	...	2	5	8	10	10	19	2	3	5	6	133	95	86	115	88	110	64	71	74	82		
4a. Congestion of the Lungs, pulmonary	...	1	...	...	...	2	...	3	1	5	...	1	2	3	1*	31	24	32	28	81	25	31	22	19	19		
5. Asthma .....	...	1	...	1	...	...	...	3	3	2	...	1	1	...	1	9	18	4	8	7	10	4	5	1	3		
6. Lung Disease, &c. ....	...	...	...	1	...	...	...	1	...	1	...	...	...	...	...	3	6	7	10	3	10	11	4	10	11		
	9	10	5	64	3	4	10	11	32	30	20	31	14	15	25	18	301	301	239	320	256	374	212	226	206	243	
<b>ORDER 4.</b>																											
1. Gastritis .....	8	1	2	1	2	1	2	...	13	1	9	2	4	1	7	1	55	22	31	49	27	22	30	22	26	22	
2. Enteritis .....	1	1	...	1	3	...	...	...	10	3	4	5	4	1	7	4	46	70	55	30	47	58	56	39	22	29	
3. Peritonitis .....	...	3	...	4	...	2	...	1	2	7	...	5	1	2	1	5	33	14	20	16	13	17	16	7	12	13	
4. Ascites .....	...	1	...	...	...	...	...	1	4	...	...	...	...	...	...	6	7	5	5	7	6	6	8	3	4		
5. Ulceration of Intestines	...	...	...	...	...	...	...	...	...	3	...	1	...	...	...	2	2	2	1	3	...	3	1	4	2		
6. Hernia .....	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	4	3	3	9	5	10	4	5	...	3		
7. Ileus .....	...	...	...	1	...	...	...	2	3	1	2	...	...	...	1	10	5	2	4	9	7	10	5	6	1		
8. Intussusception .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	3	2	1	...	1	3	2		
9. Stricture of Intestines	...	...	...	...	...	...	...	...	1	...	1	...	...	...	1	3	...	...	...	3	2	1	...	3	2		
10. Fistula .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	2	1	...	...	...	...	...	...	...		
11. Stomach Disease, &c....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	4	4	9	5	8	3	11	5	15		
12. Pancreas Disease, &c....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
13. Hepatitis .....	...	3	...	...	...	...	...	...	3	3	...	...	...	...	3	12	11	10	11	12	15	22	31	27	31		
14. Jaundice .....	...	1	4	1	...	2	...	2	...	1	1	...	1	2	15	10	4	12	6	8	7	3	5	7	7		
15. Liver Disease, &c.....	...	4	...	9	...	1	...	3	...	10	...	1	...	...	28	31	30	39	18	24	45	23	28	28	32		
16. Spleen Disease .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...		
	11	14	3	20	6	3	4	3	29	31	14	31	10	5	16	18	218	182	172	188	157	178	204	179	147	162	
<b>ORDER 5.</b>																											
1. Nephritis .....	2	...	...	5	...	1	...	1	...	1	...	2	...	1	1	14	6	3	9	3	9	4	3	11	12		
2. Ischuria .....	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	2	2	...	...	1	2	...	1	...	...		
3. Nephria .....	...	1	...	4	...	1	...	2	...	7	...	3	...	1	...	3	22	33	35	44	44	46	40	39	30	44	
4. Diabetes .....	...	1	...	...	...	...	...	...	...	...	1	...	...	2	4	4	3	4	3	4	3	4	3	1	3	1	
5. Stone .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	2	1	...	1	
6. Cystitis .....	...	...	...	1	...	...	...	2	...	2	...	...	1	...	1	5	5	1	3	4	8	6	7	5	3		
7. Kidney Disease, &c. ....	...	...	...	3	...	1	1	...	3	...	4	...	...	...	12	20	10	11	18	15	11	18	10	11	11		
	2	2	...	14	...	2	1	4	...	13	...	10	...	2	2	7	59	70	53	72	74	85	66	70	59	72	
<b>ORDER 6.</b>																											
1. Ovarian Dropsy.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3	...	4	...	...	1	1	...	1	1	
2. Uterus Disease, &c. ....	...	1	...	1	...	...	...	...	...	...	...	1	...	...	...	3	4	1	5	1	3	3	5	...	6		
	...	1	...	1	...	...	...	...	...	...	1	...	...	...	...	3	7	1	9	1	3	4	6	...	7		
<b>ORDER 7.</b>																											
1. Arthritis.....	...	...	...	2	...	...	...	...	...	...	...	1	...	...	...	3	1	2	3	1	2	1	1	2	2	3	
1a. Ostitis Periostitis, &c.	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	1	...	...		
2. Joint Disease, &c. ....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	3	2	2	3	...	2	...	2		
	...	...	...	3	...	...	...	...	...	...	1	...	...	...	...	4	3	4	6	4	4	4	2	4	4	5	
<b>ORDER 8.</b>																											
1. Phlegmon .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	
2. Ulcer .....	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	3	2	2	4	2	2	3	1	2	3		
3. Skin Disease, (Eczema, Leprosy, &c.) .....	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	2	3	4	5	1	...	7	3	...	...		
	...	...	...	4	...	...	...	...	...	1	...	...	...	...	...	5	5	6	9	3	3	10	4	2	4		
<b>Total, Class III .....</b>	<b>40</b>	<b>58</b>	<b>11</b>	<b>171</b>	<b>16</b>	<b>23</b>	<b>26</b>	<b>26</b>	<b>117</b>	<b>139</b>	<b>63</b>	<b>123</b>	<b>49</b>	<b>41</b>	<b>78</b>	<b>78</b>	<b>1059</b>	<b>1032</b>	<b>921</b>	<b>1012</b>	<b>930</b>	<b>1144</b>	<b>953</b>	<b>914</b>	<b>795</b>	<b>912</b>	



I—continued.

CAUSES OF DEATH.	Gipps.		Bourke.		Brisbane.		Macquarie.		Cook.		Fitzroy.		Phillip.		Demson.		Total Deaths from each Cause in Sydney.											
	Under.	Over.	Under.	Over.	Under.	Over.	Under.	Over.	Under.	Over.	Under.	Over.	Under.	Over.	Under.	Over.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.	1876.	1875.		
<b>CLASS IV—ORDER 1.</b>																												
1. Premature Birth ..	6	.	...	1	3	18	..	13	..	12	14	..	67	56	55	54	42	52	42	57	48	60						
2. Cyanosis .....	...	...	...	1	...	1	...	1	...	1	1	...	5	5	8	11	7	10	3	9	6	5						
3. Spina Bifida ..	...	...	...	...	...	...	...	...	...	1	...	...	2	3	1	...	1	...	...	3	2	3						
4. Other Malformations ..	1	..	...	...	...	...	...	...	...	...	...	...	2	9	6	11	5	10	3	8	6	5						
5. Teething ..	2	..	2	4	...	1	13	...	3	...	5	...	43	18	29	32	19	38	23	30	51	35						
	9	..	2	6	4	32	18	18	30	119	91	99	108	74	110	71	107	113	108									
<b>ORDER 2.</b>																												
1. Paramenia ..	..	2	...	2	2	..	3	...	..	3	..	1	13	10	9	8	17	20	8	13	18	17						
2. Childbirth (see Metria)	..	2	...	2	2	..	3	...	..	3	..	1	13	13	9	9	17	22	9	13	18	19						
	..	2	...	2	2	..	3	...	..	3	..	1	13	13	9	9	17	22	9	13	18	19						
<b>ORDER 3</b>																												
1. Old Age ..	...	8	..	37	2	3	14	...	8	5	...	14	91	105	77	62	63	68	76	78	56	69						
<b>ORDER 4</b>																												
1. Atrophy and Debility..	14	..	2	1	4	7	44	26	50	42	190	194	161	147	144	173	129	123	114	130								
Total, Class IV.	23	10	4	40	10	4	11	3	76	17	44	8	68	8	72	15	413	403	346	326	298	373	285	321	301	326		
<b>CLASS 5.—ORDER 1.</b>																												
<b>ACCIDENT OR NEGLIGENCE</b>																												
1. Fractures & Contusions	..	5	67	1	1	1	7	1	7	1	2	1	94	64	57	68	90	66	44	51	40	35						
2. Wounds { a Gunshot..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
b Cuts ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
3. Burns and Scalds	..	1	10	..	..	..	..	..	..	..	..	..	16	9	3	11	9	8	11	16	6	22						
3a. Sunstroke ..	...	...	1	..	..	..	..	..	..	..	..	..	4	2	1	3	7	2	2	3	4	1						
4. Poison ..	...	...	...	...	...	...	...	...	...	...	...	...	2	2	2	1	1	2	2	3	1	...						
4a. Bite of Snake or Insect	...	...	...	...	...	...	...	...	...	...	...	...	1	2	2	1	1	2	2	3	1	...						
5. Drowning ..	..	6	8	3	..	2	1	..	..	1	3	24	19	15	17	12	8	15	4	15	12							
6. Suffocation ..	..	...	1	..	1	1	..	..	2	...	..	5	5	6	5	9	10	4	11	8	6							
7. Otherwise (Blood poisoning, bite of dog, shock, &c)	..	..	3	..	..	1	1	1	1	...	7	5	2	3	4	8	3	2	..	1								
	...	12	1	92	4	2	4	12	1	12	3	2	5	6	156	108	87	111	137	109	84	98	75	81				
<b>ORDER 2.</b>																												
<b>VIOLENT DEATHS IN BATTLE.</b>																												
1. Gunshot Wounds	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
2. Sword and Bayonet Wounds	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
3. Otherwise	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
<b>ORDER 3—HOMICIDE.</b>																												
1. Murder .....	...	1	1	1	..	..	..	..	..	..	..	..	4	4	7	8	5	9	4	6	6	2						
2. Manslaughter ..	..	..	3	...	..	2	...	..	1	..	..	..	6	4	8	4	4	3	5	4	1	8						
	..	1	1	4	..	2	..	1	..	1	..	1	10	8	15	12	9	12	9	10	7	10						
<b>ORDER 4.—SUICIDE</b>																												
1. Wounds { Gunshot ..	..	..	3	..	..	..	..	..	1	1	..	..	5	1	7	1	3	2	1	..	4	1						
Cut, Stab, &c.	..	..	5	1	..	..	..	..	..	..	..	..	6	5	2	2	..	2	4	4	1	5						
2. Poison ..	..	1	..	..	..	1	..	..	..	..	..	..	2	7	2	4	3	5	3	2	3	4						
3. Drowning ..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	2	2	2	..	..	..	..	..	..	..	..			
4. Hanging ..	..	..	2	2	1	..	2	1	...	..	..	..	8	4	2	2	2	..	1	..	1	..	..	..	..			
5. Otherwise (Falls from high places, &c)	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	3	2	..	..	..	..	..	..	..			
	..	1	10	..	3	2	..	1	3	1	..	..	21	18	16	11	13	11	9	7	10	14						
<b>ORDER 5.—EXECUTION.</b>																												
1. Hanging ..	..	..	..	..	..	..	..	..	2	..	..	..	2	1	..	1	2	..	..	..	..	..	..	..	..	1		
<b>Violent Deaths (not classed)</b>																												
Open Verdicts—Found drowned, &c.	1	1	..	6	1	..	1	5	..	..	5	20	16	15	16	27	15	20	19	15	14							
Total, Class V.	1	15	2	112	..	8	6	5	13	1	23	3	3	6	11	209	151	133	150	187	149	122	134	107	120			
Causes not specified, or ill-defined	1	5	..	4	1	3	..	1	3	1	..	4	23	60	58	49	51	60	29	38	38	55						
<b>GRAND TOTAL.</b>	94	125	20	518	37	50	50	60	287	305	149	265	179	94	227	181	2636	2535	2233	2525	2246	2740	2266	2321	2000	2491		

## J.

BIRTHS and DEATHS occurring at Sea, in the Colony of New South Wales, from 1st January to 31st December, 1885.

	Births.			Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
Sydney .....	3	2	5	54	8	62

## K.

RETURN OF REGISTRATION DISTRICTS, with the Names of the Persons holding the office of District Registrar, during the year 1885.

District.	Name of Registrar.	Date of Appointment.	District.	Name of Registrar.	Date of Appointment
Sydney .....	The Registrar-General .....	15 Dec., 1870	Crookwell .. ..	Walter S. Gunn, C.P.S., Assis- tant D.R.	1 April, 1881
Balmain .. ..	William Parker .....	1 April, 1881	Denliquin .. ..	W. H. Hooper .. ..	1 " " "
Leichhardt .....	J. S. Hellier, Assistant D.R.	1 July, 1882	Denman .. ..	H. H. Connell, C.P.S., Assistant D.R.	1 Oct., 1884
Canterbury .....	M. B. Young .....	1 April, 1881	Dubbo .. ..	Luke M'Guinn, Assistant D.R.	1 April, 1884
Ashfield .....	George Watson, Assistant D.R.	1 May, 1884	Dungong .. ..	C. G. Smith, C.P.S. ....	1 April, 1881
Petersham .....	Alfred Newman, Assistant D.R.	1 June, 1881	Eden .. ..	J. W. Lees, C.P.S., Assistant D.R.	1 July, 1883
St. Peters .....	V. Pampillonia .. ..	10 Oct., 1885	Emmaville .....	W. E. Henry, C.P.S., Assistant D.R.	29 April, 1882
Glebe .....	F. W. Artlett, Acting D.R. ....	8 May, 1884	Forbes .....	Edmund A. T. Pery, C.P.S. ....	13 Dec., 1884
Newtown .....	Charles Alfred Newman .....	1 April, 1881	Glen Innes .. ..	P. Le Jeune, C.P.S. ....	1 Jan., 1882
Paddington .....	Henry Gale .....	1 " " "	Grafton .. ..	Wm. Clarke, C.P.S. ....	1 April, 1881
Randwick .....	William Bethune, Assist. D.R.	1 " " "	Grenfell .....	Wm. H. Hazelton, C.L.A. ....	1 Oct., 1882
Waverley .....	R. T. Orr, " .....	1 Feb., 1882	Greta .. ..	Thomas Jones .....	1 April, 1881
Woollahra .....	H. A. Gelson .. ..	15 Aug., 1884	Gulgong .. ..	W. Le Brun Brown, C.P.S., Assistant D.R.	23 May, 1884
Redfern .....	Christopher Warburton .. ..	1 April, 1881	Gundagai .....	C. W. Weekes, C.P.S. ....	1 Nov., 1882
Waterloo .....	James Skinner, Assistant D.R.	12 Mar., 1884	Gunnedah .....	W. C. Lawson .. ..	31 Dec., 1881
St. Leonards .....	Robert Dalzell Ward, M.R.C.S.	1 April, 1881	Gunning .. ..	J. F. Kenyon, C.P.S., Assistant D.R.	1 April, " "
Manly .....	Æ. M. Stephen, Assistant D.R.	1 " " "	Hay .....	G. F. Scott, C.P.S. ....	21 July, 1883
Adelong .....	John James .....	1 " " "	Hill End .....	H. S. Hawkins, C.P.S., Assistant D.R.	17 May, 1884
Albury .....	Charles A. Conley, Acting D.R.	1 Feb., 1882	Hillston .. ..	Michael Hogan .. ..	1 Aug., " "
Hume .....	L. W. A. Macarthur, C.P.S. ....	1 July, 1883	Hunter .....	G. H. Smthers, C.P.S. ....	5 Mar., 1882
Argyle .....	L. S. Gordon, C.L.A. ....	1 Oct., 1882	Inverell .....	W. C. Cardew, C.P.S. ....	1 April, 1881
Goulburn .....	N. Lockhart, C.L.A., Assistant D.R.	22 Feb., 1883	Jerilderie .. ..	A. D. Fowler, Assistant D.R. ....	1 Dec., 1882
Armidale .....	William Forbes, " .....	1 Oct., " "	Kempsey .. ..	C. A. Grubb, C.L.A. ....	5 July, 1883
Balranald .....	Patrick J. Carland, Acting C.P.S., Acting Assistant D.R.	6 Nov., 1884	Kiama .. ..	Henry Connell, C.P.S. ....	1 April, 1881
Barmedman .....	C. Grant .....	1 April, " "	Lambton .....	W. T. Dent .. ..	1 " " "
Barrington .....	K. T. Garland .. ..	1 Oct., 1885	Lismore .....	C. Coghlan, C.P.S., Assistant D.R.	17 " " 1884
Bathurst .....	H. C. Robison, C.L.A. ....	29 Dec., 1882	Lithgow .....	W. P. Macdermott .. ..	1 " " 1881
East Macquarie .....	T. O. K. M'Kell, C.P.S., Assis- tant D.R.	11 Mar., " "	Liverpool .....	William Long, Assistant D.R.	1 " " " "
West Macquarie .....	F. R. Wilshire, C.P.S. ....	1 April, 1881	Lord Howe Island	W. G. Stevens, Schoolmaster	1 May, 1882
Barraba .....	P. Brougham, C.P.S., Assistant D.R.	1 Jan., 1882	Macleay .. ..	J. W. Madgwick .. ..	1 Dec., 1881
Bega .....	O. A. Willans, C.L.A., Assistant D.R.	1 May, 1884	Maitland East .. ..	G. H. Smthers, C.P.S. ....	5 Mar., 1882
Bellinger River .....	W. Chisholm, C.P.S. ....	19 Mar., 1883	Maitland West .. ..	Thomas Hughes .. ..	1 Jan., 1883
Berrima .....	C. E. Oslar, C.P.S. ....	25 July, " "	Manilla .....	D. E. Veness, Assistant D.R.	1 July, " "
Bingara .....	Edward D. Mullen .....	22 Dec., 1884	St. Albans .....	T. J. Thompson, " ..	1 April, 1881
Bombala .....	A. T. Kingsmill, C.P.S., Assis- tant D.R.	1 April, 1881	Memndie .....	J. W. Day, Acting D.R. ....	28 June, 1884
Bourke .....	Joseph Reynolds, Assist. D.R.	1 Feb., 1883	Merriwa .. ..	A. M'Raë, C.P.S., Assist. D.R.	1 Oct., 1883
Braidwood .....	W. E. Wotton .....	1 Sept., " "	Millfield .. ..	Edwin Hinchcliffe .. ..	1 July, " "
Brewarrina .....	J. B. Martin, C.P.S. ....	1 April, 1881	Milparinka .. ..	C. M'A. King, C.P.S., Assistant D.R.	1 April, 1882
Brisbane Water .....	Henry A. Smith, C.P.S., Assis- tant D.R.	13 Nov., 1882	Milton .. ..	John T. Hobbes, Assistant D.R.	11 Jan., 1884
Bundarra .....	W. B. Warner .. ..	1 April, 1881	Minni .. ..	John E. Fenwick, " ..	1 May, 1882
Burrowa .....	M. M. Campbell, C.P.S. ....	1 " " "	Moama .. ..	L. S. Donaldson, C.P.S., Assis- tant D.R.	1 April, 1881
Camden .....	Charles J. Lloyd, C.P.S. ....	15 Nov., 1884	Molong .. ..	Henry J. Jeffreys, C.L.A. ....	1 Oct., 1882
Campelltown .. ..	George Wickham, C.P.S. ....	1 April, 1881	Moree .....	J. Teas, Assistant D.R. ....	1 April, 1881
Carcoar .....	James Lyall .....	1 June, " "	Morpeth .....	James Keating .. ..	1 " " "
Casino .....	F. S. Osborn, C.P.S., Assistant D.R.	16 Aug., 1883	Moruya .. ..	W. H. Thomas, C.P.S., Assistant D.R.	1 " " "
Cassilis .....	John Kenny, C.P.S. ....	7 July, " "	Moulamein .. ..	Thomas Linton, Assistant D.R.	28 " " "
Central Cumberland	Alfred Salwey, C.L.A. ....	29 Sept., 1882	Mudgee .. ..	F. S. Isaacs, C.P.S. ....	1 " " "
Parramatta .. ..	F. W. Edwards, C.P.S. ....	1 April, 1881	Murrumburrah .. ..	C. Cutliffe, C.P.S., Assistant D.R.	1 " " "
Clarence Town .....	Robert R. Bailey, C.P.S., Assis- tant D.R.	1 " " "	Murrurundi .. ..	G. R. Evans, C.P.S. ....	1 " " "
Cobar .....	C. H. B. Primrose, Assis. D.R.	1 " " "	Muswellbrook .. ..	T. Foley, C.P.S. ....	1 " " "
Condobolin .....	Charles de Boos, C.P.S., Assis- tant D.R.	2 Jan., 1883	Nambucca River	Edward Leeson, Assistant D.R.	1 July, 1884
Cooma .....	W. B. Simpson, C.P.S., Assis- tant D.R.	1 April, 1881	Narrabri .....	Henry J. Bolding, P.M. & C.P.S.	24 Dec., " "
Coonabarabran .....			Narrandera .....	J. S. King, C.P.S., Assistant D.R.	1 April, 1881
Coonamble .....			Nyngan .....	A. Anderson .....	12 Mar., 1885
Cootamundra .....			Newcastle .....	John Burrows .....	1 April, 1881

## K—continued.

District	Name of Registrar.	Date of Appointment	District	Name of Registrar.	Date of Appointment.
Nundle .....	S. Kermode .....	1 April, 1881	Tamworth .....	J. M'Donald, C.P.S. ..	1 April, 1881
Nymagee .....	Samuel H. Smith, Assist. D.R.	1 " 1883	Taree .....	J. A. M'Creagh, C.P.S.	1 " "
Orange .....	W. T. Evans, C.P.S. ....	1 " 1881	Temora .....	R. Zouch, C.P.S. ....	1 " "
Parke .....	W. C. Weston, C.P.S., Assistant D.R.	1 " "	Tenterfield .....	James H. Tompson, C.P.S. ..	23 Aug., 1883
Paterson .....	W. C. Rodgeron, C.P.S., Assistant D.R.	1 " 1883	Tumut .....	William H. Hilton .....	13 Nov., 1884
Patrick's Plains ..	F. J. Robinson .....	1 " 1881	Tweed River .....	Joshua Bray, C.P.S., Assistant D.R.	1 April, 1881
Penrith .....	J. K. Cleeve, C.P.S. ....	1 " "	Ulmorra .....	John M'Gregor, Assistant D.R.	1 " "
Picton .....	W. R. Antill, Assistant D.R.	1 " "	Uralla .....	J. M. Sheahan, C.P.S., Assistant D.R.	20 " 1883
Port Macquarie ..	R. Maunsell, P.M., Assistant D.R.	1 " "	Urana .....	H. H. Lublin, Assistant D.R....	8 Dec., 1882
Queanbeyan ...	C. H. Emery .....	22 May, 1883	Wagga Wagga ..	E. H. Tompson, C.P.S.	1 April, 1881
Raymond Terrace	Chas. R. Middleton, C.P.S., Assistant D.R.	1 Jan., 1882	Walcha .....	Edward Marriott, C.P.S., Assistant D.R.	1 " 1883
Richmond ..	R. H. Ducker, Assistant D.R.	1 April, 1881	Walgett ..	James Miller, Assistant D.R.	1 " 1881
Robertson .....	David Moffit,	1 " "	Wallsend ...	Thomas Alnwick,	1 " "
Ryde .....	G. M. Pope, C.P.S., Assistant D.R.	1 " "	Warialda ...	T. H. Wilkinson, C.P.S. ....	27 May, 1882
Rylstone .....	W. W. Armstrong, C.P.S., Assistant D.R.	1 " "	Wellington ..	W. Carson, C.P.S. ....	1 " 1884
Scone ..	H. J. Leary .....	1 July, 1883	Wentworth ....	Arthur N. Barnett, C.P.S. ...	1 Nov., "
Shoalhaven ..	W. Lovegrove, C.P.S. ....	1 April, 1881	Wilcannia ....	W. H. Brown, C.P.S. ....	4 Dec., 1882
Silverton .....	Wyman Brown, C.P.S., Assistant D.R.	22 Aug., 1884	Windsor .....	W. H. H. Becke, C.P.S. ....	1 April, 1881
Sofala .....	John P. Hayes, Assistant D.R.	19 June, 1881	Wollombi ....	Henry Gordon, C.P.S., Assistant D.R.	1 Oct., 1883
Stroud .....	T. Laman, C.P.S. ....	1 April, "	Wiseman's Ferry	J. T. Marx .....	23 May, 1885
Tambaroora .....	J. S. Willard, Assistant D.R.	1 " "	Wollongong .....	Alfred A. Turner, C.P.S. ...	1 April, 1881
			Woonona ...	Edward Ramsay, Assist. D.R.	1 " "
			Yass .....	A. Money Fisher, C.P.S. ...	22 Feb., 1882
			Young .....	T. E. Blomfield, C.P.S. ....	19 Nov., "



# STATISTICAL REGISTER

OF

New South Wales,

FOR THE YEAR

1886,

COMPILED FROM OFFICIAL RETURNS IN THE GOVERNMENT STATISTICIAN'S OFFICE.

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Presented to Parliament by Command.

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SYDNEY :

BY AUTHORITY: CHARLES POTTER, GOVERNMENT PRINTER, PHILLIP-STREET.

• 1887.



## ERRATA.

Folding sheet. Railways, 1886. Lines open for traffic, *for* "1890" *read* "1971." The figures include tramways and private lines. The capital expended and other particulars refer to Government lines only.

Page 133. Gas fittings, 1886, *for* "42,365 pkgs., £5,783," *read* "16,405 pkgs., £46,357."

Page 160. New Zealand, *for* "35,410" *read* "135,410." Total tonnage.

Page 186. Number of Works. Tobacco and Cigars, *for* "13" *read* "17." Others not included above *for* "16" *read* "12."

Page 282. Number of miles open for traffic, *for* "460" *read* "509."

"552" "598."

"633" "688."

"709" "734."

"787" "849."

"956" "995."

The quantities for the following articles in the Decennial Table of Imports and Exports, page 132 to page 153, are in cwts. viz., 1885, Imports—Iron Castings. 1886, Exports—Bark, Copra, Flour, Iron, (galvanized), Iron (old), Nickel Ore, Potatoes, Rice, Salt, Rock Salt, Soda Crystals, Raw Sugar, Sandalwood, Tin.

The following are in lb.—1886, Imports—Preserved Meats. 1886, Exports—Butter, Bacon and Hams, Fruit (dried), Pearl Shell.

# STATISTICAL REGISTER.

1886

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Date	Description	Debit	Credit	Balance	Remarks
1912	Jan 1				Balance forward
	Jan 5	100.00		100.00	Payment
	Jan 10		50.00	150.00	Receipt
	Jan 15	200.00		350.00	Payment
	Jan 20		75.00	425.00	Receipt
	Jan 25	150.00		575.00	Payment
	Jan 30		100.00	675.00	Receipt
	Feb 5	300.00		975.00	Payment
	Feb 10		125.00	1100.00	Receipt
	Feb 15	250.00		1350.00	Payment
	Feb 20		175.00	1525.00	Receipt
	Feb 25	400.00		1925.00	Payment
	Feb 28		200.00	2125.00	Receipt
	Mar 5	500.00		2625.00	Payment
	Mar 10		250.00	2875.00	Receipt
	Mar 15	350.00		3225.00	Payment
	Mar 20		300.00	3525.00	Receipt
	Mar 25	450.00		3975.00	Payment
	Mar 30		350.00	4325.00	Receipt
	Apr 5	550.00		4875.00	Payment
	Apr 10		400.00	5275.00	Receipt
	Apr 15	650.00		5925.00	Payment
	Apr 20		450.00	6375.00	Receipt
	Apr 25	750.00		7125.00	Payment
	Apr 30		500.00	7625.00	Receipt
	May 5	850.00		8475.00	Payment
	May 10		550.00	9025.00	Receipt
	May 15	950.00		9975.00	Payment
	May 20		600.00	10575.00	Receipt
	May 25	1050.00		11625.00	Payment
	May 30		650.00	12275.00	Receipt
	Jun 5	1150.00		13425.00	Payment
	Jun 10		700.00	14125.00	Receipt
	Jun 15	1250.00		15375.00	Payment
	Jun 20		750.00	16125.00	Receipt
	Jun 25	1350.00		17475.00	Payment
	Jun 30		800.00	18275.00	Receipt
	Jul 5	1450.00		19725.00	Payment
	Jul 10		850.00	20575.00	Receipt
	Jul 15	1550.00		22125.00	Payment
	Jul 20		900.00	23025.00	Receipt
	Jul 25	1650.00		24675.00	Payment
	Jul 30		950.00	25625.00	Receipt
	Aug 5	1750.00		27375.00	Payment
	Aug 10		1000.00	28375.00	Receipt
	Aug 15	1850.00		30225.00	Payment
	Aug 20		1050.00	31275.00	Receipt
	Aug 25	1950.00		33225.00	Payment
	Aug 30		1100.00	34325.00	Receipt
	Sep 5	2050.00		36375.00	Payment
	Sep 10		1150.00	37525.00	Receipt
	Sep 15	2150.00		39675.00	Payment
	Sep 20		1200.00	40875.00	Receipt
	Sep 25	2250.00		43125.00	Payment
	Sep 30		1250.00	44375.00	Receipt
	Oct 5	2350.00		46725.00	Payment
	Oct 10		1300.00	48025.00	Receipt
	Oct 15	2450.00		50475.00	Payment
	Oct 20		1350.00	51825.00	Receipt
	Oct 25	2550.00		54375.00	Payment
	Oct 30		1400.00	55775.00	Receipt
	Nov 5	2650.00		58425.00	Payment
	Nov 10		1450.00	59875.00	Receipt
	Nov 15	2750.00		62625.00	Payment
	Nov 20		1500.00	64125.00	Receipt
	Nov 25	2850.00		66975.00	Payment
	Nov 30		1550.00	68525.00	Receipt
	Dec 5	2950.00		71475.00	Payment
	Dec 10		1600.00	73075.00	Receipt
	Dec 15	3050.00		76125.00	Payment
	Dec 20		1650.00	77775.00	Receipt
	Dec 25	3150.00		81425.00	Payment
	Dec 30		1700.00	83125.00	Receipt
	Jan 1, 1913			83125.00	Balance forward

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STATISTICAL VIEW of the Progress of the Colony of New South Wales from the separation of Queensland in 1859 to the year 1886.

YEAR.	a POPULATION AT END OF YEAR.			BIRTHS.	DEATHS.	MARRIAGES.	ARRIVALS BY SEA.	DEPARTURES BY SEA.	SCHOOLS.		RAILWAYS.			TELEGRAPHS.		POST OFFICE.				MANUFACTORIES AND WORKS.	HANDS EMPLOYED IN MANUFACTORIES, &c.	NUMBER OF ACRES UNDER CROP.	LIVE STOCK.				COAL RAISED.		GOLD COINED AT MINT.	WOOL EXPORTED.		LAND SOLD.			SHIPPING.				b VALUE OF TOTAL IMPORTS.	c VALUE OF TOTAL EXPORTS.	PUBLIC DEBT.	PUBLIC REVENUE.	PUBLIC EXPENDITURE.	COIN IN CIRCULATION.	DEPOSITS IN BANKS.	YEAR.
	PERSONS.	MALES.	FEMALES.						NUMBER OF SCHOOLS.	NUMBER OF SCHOLARS.	MILES OPEN FOR TRAFFIC.	NET EAVINGS.	CAPITAL EXPENDED ON LINES OPEN.	MILES OF WIRE.	NUMBER OF TELEGRAMS.	NO. OF OFFICERS.	NO. OF LETTERS.	NO. OF NEWSPAPERS.	NO. OF PACKETS.				HORSES.	HORNSD CATTLE.	SHEEP.	PIGS.	QUANTITY.	VALUE.		QUANTITY.	VALUE.	CONDITIONALLY.	UNCONDITIONALLY.	AMOUNT ACTUALLY RECEIVED.	INWARDS.		OUTWARDS.									
																																			Number of Vessels.	Tonnage.	Number of Vessels.	Tonnage.								
1860	348,546	199,426	149,120	14,233	6,562	2,945	23,031	6,847	798	34,767	70	11,841	1,422,672	.....	.....	287	4,230,761	3,668,783	83,736	567	.....	230,798	251,497	2,408,586	6,119,163	180,662	tons. 368,862	£ 226,493	£ 1,846,552	12,809,362	1,123,699	.....	100,216	£ 155,316	1,424	427,835	1,438	431,484	7,519,285	5,072,020	3,830,230	1,308,925	1,321,724	£ 2,946,613	£ 5,721,690	1860
1861	357,978	201,574	156,404	14,681	5,343	3,222	13,421	13,200	849	37,874	73	13,817	1,536,032	1,616	74,204	340	4,369,463	3,384,245	105,338	601	.....	297,575	233,220	2,271,923	5,615,054	146,091	342,067	218,820	1,817,437	12,745,891	1,396,426	.....	189,936	222,594	1,327	366,236	1,391	379,460	6,391,555	5,594,839	4,017,630	1,421,831	1,540,005	£ 2,947,719	£ 5,637,368	1861
1862	366,721	204,199	162,522	15,434	6,524	3,326	15,386	15,079	925	42,211	97	35,146	1,907,807	2,539	104,690	368	5,092,545	3,460,936	170,782	645	.....	302,138	273,389	2,620,383	6,145,651	125,541	476,522	305,234	2,775,692	13,482,139	1,283,818	357,281	88,086	216,988	1,493	454,837	1,568	467,356	9,334,645	7,102,562	5,802,980	1,557,639	1,608,810	2,963,116	£ 6,260,371	1862
1863	377,712	207,560	170,152	15,679	6,653	3,314	15,205	13,796	976	46,810	124	27,073	2,466,950	2,683	124,638	397	5,662,839	4,551,739	276,814	910	.....	307,035	262,554	2,032,522	7,790,969	135,899	443,889	236,230	1,876,962	14,791,849	1,262,274	259,370	96,079	192,113	1,494	479,827	1,603	511,373	8,319,576	6,936,839	5,802,980	1,534,187	2,064,299	2,783,284	£ 6,399,407	1863
1864	390,864	213,365	177,499	16,881	6,445	3,480	20,667	17,448	1,022	48,427	143	43,938	2,631,790	2,847	130,500	419	5,963,562	4,600,077	287,510	960	.....	318,854	284,567	1,924,119	8,271,520	164,154	549,012	270,171	2,880,668	25,827,917	2,294,615	165,617	68,198	112,719	1,849	607,168	1,842	647,057	10,135,708	9,037,832	6,073,180	1,661,805	1,862,245	3,023,761	£ 6,330,196	1864
1865	409,147	223,254	185,893	17,283	6,596	3,578	26,266	18,154	1,069	53,453	143	43,938	2,746,373	2,989	138,785	435	6,328,353	4,689,858	249,904	1,017	.....	378,254	282,587	1,961,905	8,132,511	146,901	585,525	274,303	2,359,562	29,858,791	2,288,560	151,540	110,307	213,241	1,912	635,888	2,120	690,294	10,635,507	9,563,818	5,749,630	1,899,468	1,760,516	3,009,523	£ 6,571,972	1865
1866	428,813	235,116	193,697	16,950	7,361	3,462	25,528	15,093	1,155	59,594	143	62,305	2,786,094	3,346	143,523	455	6,678,371	4,513,185	219,939	1,119	.....	451,225	278,437	1,771,809	11,562,155	137,915	774,238	324,049	2,955,732	36,980,685	2,830,348	353,652	117,889	261,590	2,099	730,354	2,259	784,381	9,403,192	9,913,839	6,418,030	2,012,079	2,123,114	3,198,207	£ 6,752,115	1866
1867	444,709	243,131	201,578	18,317	8,631	3,426	19,972	13,450	1,180	63,183	175	71,748	3,282,320	3,567	130,447	477	6,748,356	3,897,905	189,297	1,146	.....	418,164	280,201	1,728,427	13,909,574	173,168	770,012	342,655	2,492,853	21,708,902	1,711,322	232,176	138,906	264,660	1,868	646,970	2,104	726,721	7,624,812	7,077,759	6,917,630	2,012,042	2,249,521	3,552,399	£ 6,833,081	1867
1868	463,188	254,003	209,185	18,485	7,225	3,736	26,364	18,679	1,254	66,835	225	80,158	4,060,950	4,385	132,872	487	6,555,890	3,580,332	116,987	1,446	.....	434,756	280,818	1,761,411	15,080,625	176,901	954,231	417,809	2,345,728	25,721,632	1,879,751	239,517	151,829	265,250	2,073	724,193	2,218	776,449	9,240,414	7,192,904	8,561,830	2,107,157	2,646,303	4,114,549	£ 7,425,354	1868
1869	481,448	263,899	217,549	19,243	6,691	3,799	19,756	13,717	1,304	71,523	279	88,613	4,681,329	5,053	145,370	521	7,143,634	3,593,553	158,034	1,556	.....	432,324	280,304	1,795,904	14,989,923	175,924	919,774	346,146	1,319,388	51,269,672	3,162,522	397,329	164,890	319,613	2,022	741,369	2,236	833,248	8,392,753	9,933,442	9,546,030	2,202,970	2,649,329	3,208,296	£ 7,570,499	1869
1870	498,659	272,543	226,116	19,648	6,558	3,848	18,621	14,206	1,381	74,503	329	101,139	5,566,092	5,247	173,812	562	7,083,500	3,814,700	157,700	1,692	.....	426,976	337,597	2,195,096	16,308,585	243,066	868,564	316,836	1,243,298	47,440,610	2,741,141	329,318	94,374	250,843	1,858	689,820	2,066	771,942	7,757,281	7,999,038	9,681,130	2,102,697	2,638,264	3,313,186	£ 7,044,464	1870
1871	517,758	282,846	234,912	20,143	6,407	3,953	19,820	12,974	1,450	77,889	350	158,257	5,887,258	5,579	218,530	570	7,509,500	3,992,100	158,300	1,813	.....	417,801	304,100	2,014,888	16,278,697	213,193	898,784	316,340	2,870,419	65,611,953	4,748,160	338,682	88,638	261,401	1,891	706,019	2,123	794,460	10,933,508	11,259,909	10,614,330	2,238,900	3,006,576	4,417,180	£ 7,989,801	1871
1872	535,219	292,015	243,204	20,250	7,468	3,925	24,107	16,881	1,464	106,691	384	217,071	6,388,727	6,114	336,065	622	8,654,000	4,841,200	170,500	1,919	.....	451,634	328,408	2,287,660	17,560,048	218,904	1,012,426	396,198	2,091,728	50,233,453	3,342,900	719,587	166,834	432,373	2,011	774,490	2,091	813,550	9,567,843	10,476,654	10,778,230	2,802,011	2,986,186	4,768,700	£ 10,382,513	1872
1873	553,833	301,399	252,434	21,444	7,611	4,384	24,022	16,770	1,508	110,287	397	246,201	6,739,918	6,521	365,360	654	9,662,600	4,961,700	209,600	1,959	.....	436,825	334,462	2,794,327	18,990,595	240,680	1,192,862	665,747	1,528,963	31,606,846	2,201,910	1,391,719	390,688	845,410	2,161	874,804	2,212	887,674	10,959,864	12,618,755	10,842,415	3,330,913	2,333,166	4,161,869	£ 11,649,955	1873
1874	574,943	312,843	262,100	22,178	8,652	4,343	29,756	19,279	1,547	119,133	401	278,872	6,844,546	7,449	570,326	681	11,120,100	5,794,200	270,300	1,994	.....	464,957	346,691	2,856,699	22,797,416	219,958	1,304,567	790,225	2,036,612	75,156,924	5,010,125	1,586,282	702,758	1,111,041	2,217	1,016,369	2,168	974,525	11,645,420	12,393,518	10,516,371	3,514,314	4,426,010	4,562,669	£ 13,468,973	1874
1875	594,297	323,080	271,217	22,528	10,771	4,605	30,967	20,350	1,586	124,756	437	318,474	7,245,379	8,012	719,745	752	13,717,900	6,262,600	357,000	2,424	.....	451,139	357,696	3,134,086	25,353,924	199,950	1,329,729	819,430	2,128,517	87,534,280	5,651,643	1,766,678	1,135,274	1,760,570	2,376	1,109,086	2,294	1,059,101	13,735,133	13,797,397	11,470,637	4,126,303	5,117,903	4,705,024	£ 15,303,764	1875
1876	614,181	333,515	280,666	23,298	11,193	4,630	32,942	21,923	1,629	131,620	554	353,819	7,990,601	8,472	858,301	782	14,466,900	6,917,200	413,900	2,517	.....	513,840	366,703	3,131,013	25,269,755	173,604	1,319,918	803,300	1,651,293	100,736,330	5,565,173	1,984,212	2,062,138	2,513,404	2,313	1,074,425	2,265	1,053,300	13,800,505	13,061,412	11,759,519	5,037,661	6,030,410	4,924,049	£ 16,563,438	1876
1877	643,707	350,323	293,378	23,851	9,869	4,994	38,628	20,174	1,695	138,267	643	396,935	8,883,177	9,761	1,001,884	810	16,509,000	8,385,000	398,000	2,602	2,932	546,556	328,150	2,746,385	21,521,662	191,677	1,444,271	858,998	1,596,657	102,150,246	5,256,038	1,689,816	2,230,883	2,967,857	2,361	1,136,206	2,301	1,101,775	14,852,778	13,457,900	11,724,419	5,751,878	4,501,210	4,829,876	£ 18,147,754	1877
1878	671,888	365,625	306,263	25,328	10,763	5,317	39,879	22,913	1,744	148,788	733	366,001	9,784,645	11,760	1,132,287	847	18,159,900	9,469,200	536,800	2,723	28,991	613,642	336,468	2,771,583	25,479,484	220,320																				





## PART I.

## POPULATION, IMMIGRATION, AND VITAL STATISTICS.

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52	"    over 5 years,    "    "    "    ... ..	18
53	"    under 5 years,    "    "    "    ... ..	18
54	"    under 5 years, in City, from    "    "    ... ..	18
55	"    under 5 years, in Suburbs,    "    "    ... ..	19
56	"    under 5 years, in Country,    "    "    ... ..	19
57	Suicides—Number and mode of Death of, 1876-86 ... ..	20
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## STATISTICS, 1886—POPULATION, &amp;c.

3

## POPULATION.

No. 1.—APPARENT INCREASE and DECREASE of the POPULATION of the Colony, from the Census of 3rd April, 1881, to the 31st December, 1886.

Year.	Births.		Arrivals by Sea.		Deaths.		Departures by Sea.		Apparent increase from Births and Immigration.		Apparent decrease from Deaths and Emigration.		Apparent Net Increase.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1881 ..... (from 3 April)	11,275	10,742	24,526	9,493	4,953	3,414	12,719	5,153	35,801	20,235	17,672	8,567	18,129 (nine months)	11,668	29,797 only.
1882 .....	15,087	14,615	32,687	14,602	7,596	5,220	20,114	7,858	47,774	29,217	27,710	13,078	20,064	16,139	36,203
1883 .....	16,014	15,267	46,543	20,663	7,116	5,133	24,286	10,110	62,557	35,930	31,402	15,243	31,155	20,687	51,842
1884 .....	17,417	16,529	49,972	22,514	8,325	5,895	28,304	11,950	67,389	39,043	36,629	17,845	30,760	21,198	51,958
1885 .....	17,939	17,104	54,843	23,295	8,900	6,382	26,976	11,479	72,782	40,399	35,876	17,861	36,906	22,538	59,444
1886 .....	18,700	17,584	50,234	20,154	8,501	6,086	30,994	10,902	68,934	37,738	39,495	16,988	29,439	20,750	50,189
Apparent net Increase since Census .....												166,453	112,980	279,433	
Population for Census of 1881.....												411,149	340,319	751,468	
Apparent Total Population on 31st December, 1886.....												577,602	453,299	1,030,901	

NOTE.—There are no means of ascertaining the overland migration between New South Wales and the neighbouring Colonies.

No. 2.—ESTIMATED POPULATION of the COLONY, on the 31st December in each year, 1861–1886.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1861 .....	201,574	156,404	357,978	1874 .....	312,843	262,100	574,943
1862 .....	204,199	162,522	366,721	1875 .....	323,080	271,217	594,297
1863 .....	207,560	170,152	377,712	1876 .....	333,515	280,666	614,181
1864 .....	213,365	177,499	390,864	1877 .....	350,329	293,378	643,707
1865 .....	223,254	185,893	409,147	1878 .....	365,625	306,263	671,888
1866 .....	235,116	193,607	428,813	1879 .....	386,926	322,533	709,459
1867 .....	243,131	201,578	444,709	1880 .....	405,277	336,616	741,893
1868 .....	254,003	209,185	463,188	1881 .....	426,944	351,746	778,690
1869 .....	263,899	217,549	481,448	1882 .....	443,314	367,519	810,833
1870 .....	272,543	226,116	498,659	1883 .....	470,009	387,735	857,744
1871 .....	282,846	234,912	517,758	1884 .....	495,571	408,377	903,948
1872 .....	292,015	234,204	535,219	1885 .....	527,533	430,381	957,914
1873 .....	301,399	252,434	553,833	1886 .....	551,343	450,623	1,001,966

Unrecorded arrivals and departures are allowed for in this estimate—hence the difference between it and the estimate of population given above.

No. 3.—ESTIMATED POPULATION of the COLONY, CITY, SUBURBS, and COUNTRY DISTRICTS, on 31st December in each year, 1870–1886.

Year.	Colony.			City.			Suburbs.			Country.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1870 .....	272,543	226,116	498,659	37,349	38,144	75,493	28,497	30,588	59,085	206,697	157,384	364,081
1871 .....	282,846	234,912	517,758	38,631	39,049	77,680	30,662	32,279	62,941	213,553	163,584	377,137
1872 .....	292,015	243,204	535,219	39,668	39,787	79,455	32,440	33,870	66,310	219,907	169,547	389,454
1873 .....	301,399	252,434	553,833	40,774	40,708	81,482	34,207	35,757	69,964	226,418	175,969	402,387
1874 .....	312,843	262,100	574,943	42,123	41,508	83,631	36,583	37,964	74,547	234,137	182,628	416,765
1875 .....	323,080	271,217	594,297	43,191	42,076	85,267	38,756	40,052	78,808	241,133	189,089	430,222
1876 .....	333,515	280,666	614,181	44,440	42,821	87,261	40,939	42,314	83,253	248,136	195,531	443,667
1877 .....	350,329	293,378	643,707	46,832	44,176	91,008	45,019	46,298	91,317	258,478	202,904	461,382
1878 .....	365,625	306,263	671,888	48,809	45,419	94,228	48,358	50,360	98,718	268,458	210,484	478,942
1879 .....	386,926	322,533	709,459	51,748	47,076	98,824	53,547	55,901	109,448	281,631	219,556	501,187
1880 .....	405,277	336,616	741,893	53,910	48,251	102,161	57,932	60,078	118,010	293,435	228,287	521,722
1881 .....	426,944	351,746	778,690	56,793	49,785	106,578	63,746	64,968	128,714	306,405	236,993	543,398
1882 .....	443,314	367,519	810,833	58,828	51,284	110,112	67,629	70,490	138,119	316,857	245,745	562,602
1883 .....	470,009	387,735	857,744	62,603	53,244	115,847	74,530	78,420	152,950	332,876	256,071	588,947
1884 .....	495,571	408,377	903,948	66,152	55,289	121,441	81,194	86,566	167,760	348,225	266,522	614,747
1885 .....	527,533	430,381	957,914	70,498	57,361	127,859	90,291	95,502	185,793	366,744	277,518	644,262
1886 .....	551,343	450,623	1,001,966	73,277	59,569	132,846	98,321	101,542	199,863	379,745	289,512	669,257

No. 4.—ESTIMATED INCREASE of POPULATION, Male and Female, for each year, 1871–1886.

Year.	Increase of Male Population.	Increase of Female Population.	Total Increase.	Year.	Increase of Male Population.	Increase of Female Population.	Total Increase.
1871 .....	10,303	8,796	19,099	1879 .....	21,301	16,270	37,571
1872 .....	9,169	8,292	17,461	1880 .....	18,351	14,083	32,434
1873 .....	9,384	9,230	18,614	1881 .....	21,667	15,130	36,797
1874 .....	11,444	9,666	21,110	1882 .....	16,370	15,773	32,143
1875 .....	10,237	9,117	19,354	1883 .....	26,695	20,216	46,911
1876 .....	10,435	9,449	19,884	1884 .....	25,562	20,642	46,204
1877 .....	16,814	12,712	29,526	1885 .....	31,952	22,004	53,956
1878 .....	15,296	12,885	28,181	1886 .....	23,810	20,242	44,052

IMMIGRATION.

No. 5.—NUMBER OF IMMIGRANTS who arrived in the Colony SEAWARD, distinguishing those at the Public Expense—1876-1886.

Year.	Immigrants at the Public Expense from the United Kingdom (under the Assisted Immigration Regulations).							Immigrants at their own Expense from all Countries.									Total Number of Immigrants arrived.						Total Males.	Total Females.	General Total.			
	Adults.			Children.			Total.	Adults.			Children.			Chinese.	Total.	Adults			Children			Chinese						
	Male.	Female.	Total.	Male	Female	Total		Male.	Female.	Total	Male	Female	Total			Male	Female.	Total	Male	Female.	Total					Male	Female	Total
1876 .....	642	429	1,071	208	184	392	1,463	20,614	6,345	26,959	2,156	1,668	3,824	696	31,479	21,256	6,774	28,030	2,364	1,852	4,216	696	24,316	8,626	32,942			
1877 .....	2,892	1,627	4,519	743	756	1,499	*6018	20,746	7,020	27,766	2,152	1,808	3,960	884	32,610	23,638	8,647	32,285	2,895	2,564	5,459	884	27,417	11,211	38,628			
1878 .....	2,091	1,754	3,845	699	646	1,345	†5190	20,769	7,427	28,196	2,173	1,835	4,008	2,485	34,689	22,860	9,181	32,041	2,872	2,481	5,353	2,485	28,217	11,662	39,879			
1879 .....	1,906	2,141	4,047	840	844	1,684	5,731	23,832	8,528	32,360	2,297	2,134	4,431	1,979	38,770	25,738	10,669	36,407	3,137	2,978	6,115	1,979	30,854	13,647	44,501			
1880 .....	1,150	1,195	2,345	414	375	789	3,134	25,744	9,304	35,048	2,518	2,228	4,746	2,942	42,736	26,894	10,499	37,393	2,932	2,603	5,535	2,942	32,768	13,102	45,870			
1881 .....	929	1,029	1,958	327	292	619	2,577	25,783	9,741	35,524	2,689	2,468	5,157	4,465	45,146	26,712	10,770	37,482	3,016	2,760	5,776	4,465	34,193	13,530	47,723			
1882 .....	1,209	991	2,200	509	524	1,033	3,233	27,207	10,542	37,749	2,755	2,545	5,300	1,007	44,056	28,416	11,533	39,949	3,264	3,069	6,333	1,007	32,687	14,602	47,289			
1883 .....	3,370	2,718	6,088	1,154	1,127	2,281	3,369	36,576	13,412	49,988	3,507	3,406	6,913	1,936	58,837	39,946	16,130	56,076	4,661	4,533	9,194	1,936	46,543	20,663	67,206			
1884 .....	2,785	2,606	5,391	1,095	1,082	2,177	7,568	40,214	15,244	55,458	3,687	3,582	7,269	2,191	64,918	42,999	17,850	60,849	4,782	4,604	9,446	2,191	49,972	22,514	72,486			
1885 .....	1,871	2,211	4,082	736	736	1,472	5,554	45,047	16,618	61,665	4,260	3,730	7,990	2,929	72,584	46,918	18,829	65,747	4,996	4,466	9,462	2,929	54,843	23,295	78,138			
1886 .....	1,044	1,905	2,949	572	560	1,132	4,081	41,758	14,763	56,521	3,768	2,926	6,694	3,092	66,307	42,802	16,668	59,470	4,340	3,486	7,826	3,092	50,234	20,154	70,388			

\* Includes 761 assisted Immigrants who arrived from New York.  
 † Do. 173 do. do. do.

NOTE.—No account is kept of the number of persons who arrive overland from the adjacent Colonies.

EMIGRATION.

No. 6.—NUMBER OF EMIGRANTS who departed from the Colony SEAWARD—1876-1886.

Year.	Adults.			Children.			Chinese.	Total Males.	Total Females.	General Total.
	Males.	Females	Total.	Males.	Females	Total.				
1876 .....	14,089	4,945	19,034	1,162	787	1,949	940	16,191	5,732	21,923
1877 .....	12,908	5,150	18,058	980	646	1,626	490	14,378	5,796	20,174
1878 .....	13,691	5,393	19,084	1,409	860	2,269	1,560	16,660	6,253	22,913
1879 .....	12,853	5,415	18,268	1,215	655	1,870	557	14,625	6,070	20,695
1880 .....	16,270	7,054	23,324	1,612	747	2,359	876	18,758	7,801	26,559
1881 .....	15,101	6,704	21,805	1,424	667	2,091	929	17,454	7,371	24,825
1882 .....	17,683	7,080	24,763	1,547	778	2,325	884	20,114	7,858	27,972
1883 .....	21,039	8,845	29,884	1,845	1,265	3,110	1,402	24,286	10,110	34,396
1884 .....	25,093	10,390	35,483	2,173	1,560	3,733	1,038	28,304	11,950	40,254
1885 .....	23,385	10,136	33,521	1,865	1,343	3,208	1,726	26,976	11,479	38,455
1886 .....	27,441	9,805	37,246	1,670	1,097	2,767	1,883	30,994	10,902	41,896

NOTE.—No account is kept of the number of persons departing overland to the adjacent Colonies.

STATISTICS, 1886—POPULATION, &c.

IMMIGRATION AND EMIGRATION—continued.

No. 7.—NUMBER of IMMIGRANTS who arrived in the Colony of New South Wales at the Public Expense, 1860-1886.

Year.	Adults.			Children.			Total.	Birthplaces.				Religion.		
	Males.	Females.	Total.	Males.	Females.	Total.		England and Wales.	Scotland.	Ireland.	Other Countries.	Protestants.	Roman Catholics.	Other Religions.
1860	1,351	1,235	2,586	245	258	503	3,089	966	311	1,780	32	1,525	1,564	.....
1861	794	595	1,389	101	99	200	1,589	259	88	1,240	2	513	1,076	.....
1862	1,172	1,047	2,219	214	198	412	2,631	557	165	1,898	11	962	1,664	5
1863	1,966	1,872	3,838	391	404	795	4,633	1,028	295	3,275	35	1,879	2,754	.....
1864	1,701	1,672	3,373	289	315	604	3,977	732	275	2,951	19	1,616	2,354	7
1865	1,073	1,214	2,287	213	217	430	2,717	495	155	2,041	26	974	1,732	11
1866	501	543	1,044	92	68	160	1,204	190	64	937	13	369	830	5
1867	385	435	820	66	58	124	944	123	57	759	5	302	642	.....
1868	183	215	398	41	31	72	470	99	41	324	6	187	282	1
1869	.....	.....	47	.....	.....	.....	47	.....	.....	.....	.....	.....	.....	.....
1870	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1871	28	299	327	15	15	30	357	259	10	75	13	281	76	.....
1872	25	271	296	16	14	30	326	240	70	7	9	261	65	.....
1873	13	119	132	3	5	8	140	104	2	34	.....	108	32	.....
1874	427	411	838	109	133	242	1,080	533	108	433	6	721	359	.....
1875	395	324	719	135	119	254	973	494	163	306	10	675	298	.....
1876	642	429	1,071	208	184	392	1,463	841	188	407	27	1,086	375	2
1877	2,892	1,627	4,519	743	756	1,499	6,018	3,689	418	1,446	465	4,554	1,403	61
1878	2,091	1,754	3,845	699	646	1,345	5,190	2,864	304	1,840	182	3,417	1,716	57
1879	1,906	2,141	4,047	840	844	1,684	5,731	2,808	700	2,125	98	3,697	2,013	21
1880	1,150	1,195	2,345	414	375	789	3,134	1,205	213	1,648	68	1,649	1,470	15
1881	929	1,029	1,958	327	292	619	2,577	906	211	1,389	71	1,235	1,292	50
1882	1,209	991	2,200	509	524	1,033	3,233	2,017	408	764	44	2,587	626	20
1883	3,370	2,718	6,088	1,154	1,127	2,281	8,369	5,382	937	1,903	147	6,442	1,758	169
1884	2,785	2,606	5,391	1,095	1,082	2,177	7,568	4,626	1,314	1,503	125	6,016	1,315	237
1885	1,871	2,211	4,082	736	736	1,472	5,554	3,249	969	1,207	129	4,370	1,077	107
1886	1,044	1,995	2,949	572	560	1,132	4,081	2,237	580	1,180	84	3,043	975	63
Total ...	29,903	28,858	58,808	9,227	9,060	18,287	77,095	35,903	8,046	31,472	1,627	48,469	27,748	831

No. 8.—IMMIGRATION and EMIGRATION of CHINESE.

Year.	Arrivals.	Departures.	Year.	Arrivals.	Departures.
1871...	426	441	1879...	1,979	557
1872...	229	597	1880...	2,942	876
1873...	406	400	1881...	4,465	929
1874...	863	933	1882...	1,007	884
1875...	625	1,209	1883...	1,936	1,402
1876...	606	940	1884...	2,191	1,038
1877...	884	490	1885...	2,929	1,726
1878...	2,485	1,560	1886...	3,092	1,883

MARRIAGES.

No. 9.—NUMBER of MARRIAGES registered in the Colony, 1876-85.

Denomination.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Church of England ...	No. 1,759	No. 1,869	No. 2,098	No. 2,182	No. 2,252	No. 2,487	No. 2,768	No. 2,949	No. 2,893	No. 2,990	No. 2,987
Roman Catholic ...	921	990	1,009	982	1,021	1,171	1,315	1,414	1,448	1,258	1,323
Presbyterian ...	761	854	821	722	768	872	955	950	1,009	1,155	1,147
Wesleyan Methodist ...	487	509	556	605	618	651	704	712	759	739	832
Primitive Methodist ...	101	110	94	111	101	146	134	157	165	193	207
Congregationalist ...	232	243	291	331	364	433	516	565	484	532	554
Baptist ...	39	70	89	90	93	85	79	101	117	137	120
Unitarian ...	.....	.....	1	1	.....	.....	.....	5	3	4	7
Hebrew ...	14	20	20	22	17	27	22	24	27	27	18
Protestant Episcopal ...	16	3	7	2	2	.....	.....	.....	.....	.....	.....
Free Church of England	.....	.....	.....	.....	.....	.....	.....	3	4	5	3
German Evangelical ...	19	20	11	13	9	13	14	10	18	26	17
Christians ...	4	3	11	7	9	3	5	1	5	2	31
Holy Catholic and Apostolic Church	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
Independent (unconnected)	.....	.....	.....	.....	.....	.....	.....	12	5	31	21
Welsh Church ...	.....	.....	.....	1	.....	.....	2	.....	.....	.....	.....
Free Christian Church	2	.....	.....	.....	.....	2	.....	8	.....	.....	.....
Friends ...	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Salvation Army	.....	.....	.....	.....	.....	.....	.....	3	3	3	11
Bible Christians ...	.....	.....	.....	.....	.....	.....	.....	2	4	6	.....
Anglo-Israelites	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Registrars' Offices	275	303	309	322	318	392	434	486	537	510	533
Totals ...	4,630	4,994	5,317	5,391	5,572	6,284	6,948	7,405	7,482	7,618	7,811

STATISTICS, 1886—POPULATION, &c.

MARRIAGES—continued.

No. 10.—MARRIAGES and MARRIAGE RATE from 1871 to 1886.

Year.			Marriages Registered.	Marriages per 1,000 of Mean Population.	Year.			Marriages Registered.	Marriages per 1,000 of Mean Population.
1871	...	...	3,953	7'77	1879	...	...	5,391	7'80
1872	...	...	3,925	7'45	1880	...	...	5,572	7'67
1873	...	...	4,384	8'05	1881	...	...	6,284	8'26
1874	...	...	4,343	7'69	1882	...	...	6,948	8'74
1875	...	...	4,505	7'87	1883	...	...	7,405	8'87
1876	...	...	4,630	7'66	1884	...	...	7,482	8'49
1877	...	...	4,994	7'94	1885	...	...	7,618	8'18
1878	...	...	5,317	8'08	1886	...	...	7,811	7'99
					Mean	...	...	.....	8'03

No. 11.—PERCENTAGE of MARRIAGES solemnized by Clergy and at Registrars' Offices.

Year.	Total Marriages.	Marriages by Registrars.	Percentage of Marriages by Registrars.	Percentage of Marriages by Clergy.	Year.	Total Marriages.	Marriages by Registrars.	Percentage of Marriages by Registrars.	Percentage of Marriages by Clergy.
1870	3,848	215	5'58	94'42	1879	5,391	322	5'97	94'03
1871	3,953	219	5'54	94'46	1880	5,572	318	5'71	94'29
1872	3,925	191	4'87	95'13	1881	6,284	392	6'24	93'76
1873	4,384	179	4'08	95'92	1882	6,948	434	6'25	93'75
1874	4,343	208	4'79	95'21	1883	7,405	486	6'56	93'44
1875	4,605	250	5'44	94'56	1884	7,482	537	7'18	92'82
1876	4,630	275	5'94	94'06	1885	7,618	510	6'70	93'30
1877	4,994	303	6'07	93'93	1886	7,811	533	6'82	93'18
1878	5,317	309	5'81	94'19	Average for 17 years	.....	.....	5'86	94'14

No. 12.—NUMBER of PERSONS signing Marriage Register with Marks, 1871-86.

Year.	City.			Suburbs.			Country.			Colony.					
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.			
1871	...	...	...	123	216	339	22	25	47	428	527	955	573	768	1,341
1872	...	...	...	83	159	242	18	29	47	363	417	780	464	605	1,069
1873	...	...	...	106	164	270	22	31	53	439	490	929	567	685	1,252
1874	...	...	...	79	146	225	21	25	46	358	410	768	458	581	1,039
1875	...	...	...	106	157	263	9	19	28	385	453	838	500	629	1,129
1876	...	...	...	72	121	193	12	21	33	359	385	744	443	527	970
1877	...	...	...	77	146	223	29	36	65	316	371	687	422	553	975
1878	...	...	...	84	119	203	26	32	58	300	302	602	410	453	863
1879	...	...	...	83	99	182	34	31	65	253	318	571	370	448	818
1880	...	...	...	83	128	211	27	31	58	228	246	474	338	405	743
1881	...	...	...	57	141	198	32	40	72	258	344	602	347	525	872
1882	...	...	...	101	140	241	31	46	77	222	242	464	354	428	782
1883	...	...	...	81	122	203	45	54	99	293	308	601	419	484	903
1884	...	...	...	59	84	143	41	49	90	250	300	550	350	433	783
1885	...	...	...	66	93	159	28	52	80	234	250	484	328	395	723
1886	...	...	...	56	101	157	27	34	61	211	193	404	294	328	622

No. 13.—PERCENTAGE of PERSONS MARRIED signing Register with Marks to total Signatures.—Period 1871-86.

Year.	City.	Suburbs.	Country.	Colony.	Year.	City.	Suburbs.	Country.	Colony.
1871	13'12	10'98	18'92	16'96	1879	6'42	4'34	8'85	7'58
1872	11'49	8'23	15'09	13'62	1880	6'58	3'97	7'31	6'66
1873	10'73	8'38	16'53	14'26	1881	5'41	4'24	8'34	6'94
1874	10'12	7'93	15'85	11'96	1882	6'17	3'47	6'00	5'63
1875	10'67	3'28	14'21	12'26	1883	5'00	4'00	7'28	6'10
1876	7'63	3'56	16'71	10'47	1884	3'60	3'12	6'77	5'23
1877	8'30	5'85	11'10	9'76	1885	3'76	2'03	5'99	4'74
1878	7'16	4'59	9'21	8'10	1886	3'63	1'90	5'00	3'98
					Mean	7'49	4'99	11'01	9'02

No. 14.—NUMBER of DECREES for Dissolution of Marriage, and number of Divorced Persons who Remarried, 1875-86.

Year.	Decrees for Dissolution of Marriage.	Number of Divorced Persons who were Married during year.		Year.	Decrees for Dissolution of Marriage.	Number of Divorced Persons who were Married during year.	
		Males.	Females.			Males.	Females.
1875	9	1	.....	1882	19	2	2
1876	19	2	1	1883	14	11	5
1877	19	1	3	1884	27	6	6
1878	11	2	3	1885	23	9	6
1879	10	4	2	1886	32	8	8
1880	22	.....	1				
1881	15	1	5	Total	220	47	42

## STATISTICS, 1886—POPULATION, &amp;c.

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## BIRTHS.

No. 15.—BIRTHS and DEATHS of both Sexes registered in the Colony during each Quarter of the Year 1886.

Quarter ended—	Births.			Quarter ended—	Deaths.		
	Males.	Females.	Total.		Males.	Females.	Total.
31 March ...	4,337	4,114	8,451	31 March ...	2,149	1,569	3,718
30 June ...	4,609	4,367	8,976	30 June ...	2,167	1,553	3,720
30 September ...	4,932	4,660	9,592	30 September ...	1,934	1,386	3,320
31 December ...	4,822	4,443	9,265	31 December ...	2,251	1,578	3,829
Total ...	18,700	17,584	36,284	Total ...	8,501	6,086	14,587

No. 16.—BIRTHS and BIRTH-RATE during each year from 1871 to 1886.

Year.	Males.	Females.	Total.	Birth-rate per Thousand of Mean Population.	Year.	Males.	Females.	Total.	Birth-rate per Thousand of Mean Population.
1871 .....	10,326	9,817	20,143	39'63	1880 ...	14,424	13,738	28,162	38'80
1872 .....	10,276	9,974	20,250	38'46	1881 ...	14,891	14,102	28,993	38'13
1873 .....	10,952	10,492	21,444	37'99	1882 ...	15,087	14,615	29,702	37'37
1874 .....	11,323	10,855	22,178	39'29	1883 ...	16,014	15,207	31,281	37'49
1875 .....	11,380	11,148	22,528	38'53	1884 ...	17,417	16,529	33,946	38'53
1876 .....	11,791	11,507	23,298	38'55	1885 ...	17,939	17,104	35,043	37'64
1877 .....	12,292	11,559	23,851	37'92	1886 ...	18,700	17,584	36,284	37'03
1878 .....	13,082	12,246	25,328	38'50	Mean Birth-rate for 16 years.....				38'30
1879 .....	13,840	13,093	26,933	38'99					

No. 17.—BIRTHS during each quarter of the Years 1877-86.

Year.	Quarter ended 31st March.	Quarter ended 30th June.	Quarter ended 30th September.	Quarter ended 31st December.	Year.	Quarter ended 31st March.	Quarter ended 30th June.	Quarter ended 30th September.	Quarter ended 31st December.
1877.....	5,620	5,837	6,421	5,973	1882 ...	7,195	7,273	7,827	7,407
1878.....	5,962	6,165	6,976	6,225	1883 ...	7,378	7,755	8,000	8,148
1879.....	6,231	6,591	7,264	6,847	1884 ...	8,141	8,443	9,160	8,202
1880.....	6,590	7,116	7,230	7,226	1885 ...	8,178	8,508	9,656	8,701
1881.....	6,976	6,983	7,514	7,520	1886 ...	8,451	8,976	9,592	9,265

No. 18.—PROPORTION of MALE to FEMALE Births—1871-86.

Year.	Male Births to every 100 Female Births.	Year.	Male Births to every 100 Female Births.
1871 ... ..	105'18	1879 ... ..	105'71
1872 ... ..	103'03	1880 ... ..	105'00
1873 ... ..	104'38	1881 ... ..	105'59
1874 ... ..	104'31	1882 ... ..	103'23
1875 ... ..	102'08	1883 ... ..	104'89
1876 ... ..	102'47	1884 ... ..	105'37
1877 ... ..	106'34	1885 ... ..	104'88
1878 ... ..	106'83	1886 ... ..	106'35

No. 19.—YEARLY BIRTH-RATE of the Colony, City and Suburbs of Sydney, and Country Districts, for the period 1871-86.

Year.	Births per Thousand of the Population.			
	Colony.	City of Sydney.	Suburbs.	Country.
1871 ... ..	39'63	38'91	42'62	39'29
1872 ... ..	38'46	36'63	37'69	38'96
1873 ... ..	37'99	38'09	40'55	39'44
1874 ... ..	39'29	37'81	38'57	39'72
1875 ... ..	38'53	37'44	37'92	38'86
1876 ... ..	38'55	38'37	37'73	38'74
1877 ... ..	37'92	38'13	37'18	38'02
1878 ... ..	38'50	37'61	38'66	38'64
1879 ... ..	38'99	38'47	39'84	38'91
1880 ... ..	38'80	37'16	40'61	38'72
1881 ... ..	38'13	35'84	41'91	37'70
1882 ... ..	37'37	34'64	44'04	36'29
1883 ... ..	37'49	33'24	44'89	36'45
1884 ... ..	38'53	34'80	48'28	36'67
1885 ... ..	37'64	31'17	47'40	36'18
1886 ... ..	37'03	29'41	48'22	35'25
Mean ... ..	38'30	36'11	41'63	37'99



## STATISTICS, 1886—POPULATION, &amp;c.

## BIRTHS—continued.

No. 20.—BIRTHS in the Colony, City, Suburbs of Sydney, and Country Districts, 1870-86.

Year.	City.			Suburbs.			Country.			Colony.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1870	1,505	1,404	2,909	1,310	1,236	2,546	7,194	6,999	14,193	10,009	9,639	19,648
1871	1,535	1,445	2,980	1,342	1,259	2,601	7,449	7,113	14,562	10,326	9,817	20,143
1872	1,487	1,392	2,879	1,226	1,210	2,436	7,563	7,372	14,935	10,276	9,974	20,250
1873	1,556	1,509	3,065	1,453	1,310	2,763	7,943	7,673	15,616	10,952	10,492	21,444
1874	1,628	1,493	3,121	1,452	1,335	2,787	8,243	8,027	16,270	11,323	10,855	22,178
1875	1,595	1,567	3,162	1,481	1,427	2,908	8,304	8,154	16,458	11,380	11,148	22,528
1876	1,694	1,616	3,310	1,518	1,540	3,058	8,579	8,351	16,930	11,791	11,507	23,298
1877	1,732	1,667	3,399	1,662	1,584	3,246	8,898	8,308	17,206	12,292	11,559	23,851
1878	1,764	1,720	3,484	1,848	1,826	3,674	9,470	8,700	18,170	13,082	12,246	25,328
1879	1,889	1,825	3,714	2,122	2,025	4,147	9,829	9,243	19,072	13,840	13,093	26,933
1880	1,855	1,880	3,735	2,317	2,302	4,619	10,252	9,556	19,808	14,424	23,738	28,162
1881	1,895	1,846	3,741	2,702	2,460	5,171	10,294	9,787	20,081	14,891	14,102	28,993
1882	1,877	1,877	3,754	2,970	2,906	5,876	10,240	9,832	20,072	15,087	14,615	29,702
1883	1,974	1,782	3,756	3,273	3,261	6,534	10,767	10,224	20,991	16,014	15,267	31,281
1884	2,119	2,010	4,129	3,945	3,798	7,743	11,353	10,721	22,074	27,417	16,529	33,946
1885	1,931	1,955	3,886	4,316	4,064	8,380	21,692	11,085	22,777	17,939	17,104	35,043
1886	1,988	1,846	3,834	4,817	4,481	9,298	11,895	11,257	23,152	18,700	17,584	36,284

No. 21.—EXCESS of BIRTHS over DEATHS in Colony, City, Suburbs, and Country, 1871-86.

Year.	Colony.			City.			Suburbs.			Country.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1871	6,444	7,288	13,736	664	733	1,397	861	857	1,718	4,919	5,702	10,621
1872	5,834	6,948	12,782	485	584	1,069	727	794	1,521	4,622	5,570	10,192
1873	6,353	7,480	13,833	546	719	1,265	915	851	1,766	4,892	5,910	10,802
1874	6,301	7,225	13,526	525	519	1,044	827	761	1,588	4,949	5,945	10,894
1875	5,135	6,622	11,757	209	280	489	651	610	1,261	4,275	5,732	10,007
1876	5,283	6,822	12,105	376	443	819	667	706	1,373	4,240	5,673	9,913
1877	6,415	7,567	13,982	638	761	1,399	987	938	1,925	4,790	5,868	10,658
1878	6,798	7,767	14,565	511	652	1,163	991	1,032	2,023	5,296	6,083	11,379
1879	7,758	8,975	16,733	633	815	1,448	1,276	1,223	2,499	5,849	6,937	12,786
1880	7,786	9,145	16,931	390	605	995	1,185	1,254	2,439	6,211	7,286	13,497
1881	8,138	9,319	17,457	632	863	1,495	1,616	1,449	3,065	5,890	7,007	12,897
1882	7,491	9,395	16,886	466	763	1,229	1,632	1,747	3,379	5,393	6,885	12,278
1883	8,898	10,134	19,032	728	795	1,523	1,857	1,962	3,819	6,313	7,377	13,690
1884	9,092	10,634	19,726	705	889	1,594	2,130	2,222	4,352	6,257	7,523	13,780
1885	9,039	10,722	19,761	480	770	1,250	2,266	2,257	4,523	6,293	7,695	13,988
1886	10,199	11,498	21,697	712	888	1,610	2,654	2,586	5,240	6,823	8,024	14,847

No. 22.—NUMBER of ILLEGITIMATE BIRTHS in the Colony, City, Suburbs, and Country Districts, 1871-1886.

Year.	City.			Suburbs.			Country.			Colony.			Year.
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	
1871	105	101	206	30	31	61	259	256	515	394	388	782	1871
1872	94	88	182	34	32	66	287	281	568	415	401	816	1872
1873	98	101	199	42	44	86	293	311	604	433	456	889	1873
1874	117	124	241	40	48	88	305	301	606	462	473	935	1874
1875	132	128	260	41	44	85	321	281	602	494	453	947	1875
1876	170	136	306	43	45	88	309	247	556	522	428	950	1876
1877	161	144	305	34	43	77	315	292	607	510	479	989	1877
1878	165	152	317	54	54	108	317	279	596	536	485	1,021	1878
1879	195	194	389	65	52	117	345	364	709	605	610	1,215	1879
1880	204	207	411	69	81	150	351	314	665	624	602	1,226	1880
1881	203	222	425	84	83	167	353	318	671	640	623	1,263	1881
1882	220	220	440	75	86	161	340	320	660	635	620	1,255	1882
1883	243	199	439	118	119	237	342	300	642	700	618	1,318	1883
1884	272	255	527	132	127	259	340	369	709	744	751	1,495	1884
1885	266	263	529	171	145	316	383	384	767	820	792	1,612	1885
*1886	278	255	533	188	184	372	372	410	782	838	849	1,687	1886

\* Percentage of total Births: City, 13.90; Suburbs, 4.00; Country, 3.38; Colony, 4.65.

## STATISTICS, 1886—POPULATION, &amp;c.

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## BIRTHS—continued.

No. 23.—ILLEGITIMATE BIRTHS—Percentage of TOTAL BIRTHS in the Colony, City, Suburbs, and Country Districts 1871-85.

Year.	City.	Suburbs.	Country.	Colony.
1871	6'91	2'34	3'53	3'88
1872	6'32	2'70	3'80	4'02
1873	6'49	3'11	3'86	4'14
1874	7'72	3'15	3'72	4'21
1875	8'22	2'92	3'65	4'20
1876	9'24	2'87	3'28	4'07
1877	8'97	2'37	3'52	4'14
1878	9'09	2'93	3'28	4'03
1879	10'47	2'82	3'72	4'51
1880	11'00	3'25	3'36	4'35
1881	11'36	3'23	3'34	4'35
1882	11'72	2'74	3'28	4'24
1883	11'68	3'62	3'05	4'21
1884	12'76	3'34	3'21	4'40
1885	13'61	3'77	3'37	4'60

NOTE.—The Benevolent Asylum, Pitt-street, is in the City.

## DEATHS.

No. 24.—DEATHS and DEATH-RATE of the Colony, 1871-86.

Year.	Males.	Females.	Total.	Death Rate per 1,000 of mean Population.		
				Males.	Females.	Total.
1871	3,882	2,525	6,407	13'98	10'95	12'61
1872	4,442	3,026	7,468	15'45	12'66	14'18
1873	4,599	3,012	7,611	15'50	12'15	13'98
1874	5,022	3,630	8,652	16'35	14'11	15'33
1875	6,245	4,526	10,771	19'64	16'97	18'42
1876	6,508	4,685	11,193	19'82	16'98	18'52
1877	5,877	3,992	9,869	17'19	13'90	15'60
1878	6,284	4,479	10,763	17'55	14'94	16'36
1879	6,082	4,118	10,200	16'16	13'10	14'76
1880	6,638	4,593	11,231	16'76	13'94	15'47
1881	6,753	4,783	11,536	16'23	13'90	15'17
1882	7,596	5,220	12,816	17'45	14'51	16'12
1883	7,116	5,133	12,249	15'58	13'59	14'68
1884	8,325	5,895	14,220	17'24	14'81	16'14
1885	8,900	6,382	15,282	17'40	15'22	16'41
1886	8,501	6,086	14,587	15'76	13'81	14'89

No. 25.—DEATHS during each Quarter of the Year, 1877-86.

Year.	31st March.	30th June.	30th September.	31st December.
1877	2,843	2,659	2,127	2,240
1878	2,953	3,018	2,336	2,456
1879	2,857	2,563	2,232	2,548
1880	2,677	2,621	2,571	3,362
1881	3,169	2,825	1,608	2,934
1882	3,485	3,290	2,911	3,130
1883	3,125	3,081	2,790	3,253
1884	3,699	3,602	3,126	3,793
1885	3,924	3,750	3,586	4,022
1886	3,718	3,720	3,320	3,829

STATISTICS, 1886—POPULATION, &c.

DEATHS—continued.

No. 26.—YEARLY DEATH-RATE of the Colony, City and Suburbs of Sydney, and Country Districts, for the period 1871-86.

Year.	Deaths per Thousand of the Population.			
	Colony.	City of Sydney.	Suburbs.	Country.
1871 ...	12'60	20'67	14'46	10'63
1872 ...	14'18	23'03	14'15	12'37
1873 ...	13'97	22'37	14'03	12'15
1874 ...	15'32	25'16	16'59	13'12
1875 ...	18'42	31'65	21'47	15'23
1876 ...	18'52	28'87	20'79	16'05
1877 ...	15'69	22'43	15'13	14'47
1878 ...	16'36	25'05	17'37	14'44
1879 ...	14'76	23'47	15'83	12'82
1880 ...	15'47	27'26	19'16	12'32
1881 ...	15'17	21'50	17'07	13'48
1882 ...	16'12	23'30	18'71	14'09
1883 ...	14'68	19'76	18'65	12'68
1884 ...	16'14	21'36	21'14	13'78
1885 ...	16'41	21'14	21'81	13'96
1886 ...	14'89	17'06	21'04	12'64
Mean...	15'55	23'37	18'00	13'39

No. 27.—TOTAL DEATHS in SYDNEY and SUBURBAN REGISTRY DISTRICTS for the period 1871-86.

Year.	Sydney.	Balmain.	Glebe.	New-town.	Redfern.	Paddington.			Concord.	St. George.	St. Leonards.						
1871	1,583	93	87	96	250	152			41	98	66						
1872	1,810	104	89	133	145	176			47	45	55						
1873	1,800	118	108	145	165	160			46	62	60						
1874	2,077	147	141	166	179	151	192	18	52	64	89						
1875	2,673	210	159	293	220	194	259	31	85	118	78						
1876	2,491	203	169	211	240	206	269	23	6	111	125	122					
1877	2,000	153	144	205	180	164	155	13	25	103	101	76	Manly. 2				
1878	2,321	216	163	257	217	186	198	1	23	29	120	124	107	10			
1879	2,266	189	170	250	249	197	181	20	16	29	122	116	93	16			
1880	2,740	264	241	312	280	232	280	36	16	50	159	166	119	25			
1881	2,246	294	197	287	270	210	210	44	17	37	Canterbury. 235	Petersham. 138	138	29			
1882	2,525	298	30	259	372	285	231	233	48	19	54	213	260	168	27		
1883	2,233	275	81	260	424	275	291	245	77	29	61	239	288	147	23		
1884	2,535	316	115	309	642	355	360	268	96	21	73	186	335	104	175	36	
1885	2,636	350	159	323	737	390	411	295	90	40	96	156	26	383	146	214	41
1886	2,224	396	215	244	730	360	474	234	93	55	79	184	156	400	191	204	43

No. 28.—DEATHS of CHILDREN under 5 years of age in SYDNEY and the SUBURBAN Registry Districts for the period 1871-85.

Year.	Sydney.	Balmain.	Glebe.	New-town.	Redfern.	Paddington.			Concord.	St. George.	St. Leonards.						
1871	743	54	46	51	166	83			18	39	30						
1872	815	64	48	63	95	89			21	24	18						
1873	719	68	53	76	91	71			23	23	29						
1874	929	95	81	96	102	102	98	6	21	31	40						
1875	1,264	129	101	155	134	142	140	10	38	46	28						
1876	1,024	128	90	113	130	114	147	3	3	61	67	61					
1877	814	81	81	117	108	95	82	1	13	60	46	38	Manly. 1				
1878	1,022	139	82	132	128	125	110	.....	10	14	71	51	54	4			
1879	899	104	94	139	146	112	98	12	8	13	68	59	40	9			
1880	1,293	166	135	182	172	150	159	17	9	32	93	89	64	8			
1881	848	185	114	168	155	115	102	15	4	24	Canterbury. 130	Petersham. 72	57	6			
1882	990	161	19	153	209	174	145	116	21	6	19	114	130	75	13		
1883	940	157	42	144	171	153	185	127	34	9	40	147	168	68	10		
1884	1,053	206	69	166	268	214	191	155	52	12	39	103	St. Peters 200	Ashfield. 68	82	13	
1885	1,042	202	86	204	296	243	203	163	45	21	54	77	13	222	98	161	30

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DEATHS—continued.

No. 29.—DEATHS of persons over 5 years of age in SYDNEY and SUBURBAN Registry Districts for the period 1871-85.

Year.	Sydney.	Balmain.	Glebe.	New-town.	Redfern.	Paddington.			Concord.	St. George.	St. Leonards.
1871	840	39	41	45	84	69			23	59	36
1872	995	40	41	70	50	87			26	21	37
1873	1,081	50	55	69	74	89			23	39	31
1874	1,148	52	60	70	77	94			31	33	49
1875	1,409	81	58	138	86	119			47	72	50
1876	1,467	75	79	98	110	122			50	58	61
1877	1,186	72	63	88	72	73			43	55	38
1878	1,299	77	81	125	89	88			49	73	53
1879	1,367	85	76	111	103	83			54	57	53
1880	1,447	98	106	130	108	121			66	77	55
1881	1,398	109	83	119	115	108			105	66	81
1882	1,535	137	11	106	163	117			99	130	93
1883	1,293	118	39	116	253	118			92	120	79
1884	1,482	110	46	143	374	113			83	135	93
1885	1,594	148	73	119	441	132			79	161	53

NOTE.—Sydney Hospital and St. Vincent's are in Sydney, Little Bay Hospital in Waterloo, and Prince Alfred Hospital in Newtown.

No. 30.—DEATHS in the Colony, City, Suburbs, and Country Districts, 1870-86.

Year.	Colony.			City.			Suburbs.			Country.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1870	4,009	2,549	6,558	846	646	1,492	449	341	790	2,714	1,562	4,276
1871	3,882	2,525	6,407	871	712	1,583	481	402	883	2,530	1,411	3,941
1872	4,444	3,026	7,468	1,002	808	1,810	499	416	915	2,941	1,802	4,743
1873	4,599	3,012	7,611	1,010	790	1,800	538	459	997	3,051	1,763	4,814
1874	5,022	3,630	8,652	1,103	974	2,077	625	574	1,199	3,294	2,082	5,376
1875	6,245	4,526	10,701	1,386	1,287	2,673	830	817	1,647	4,029	2,422	6,451
1876	6,508	4,685	11,193	1,318	1,173	2,491	851	834	1,685	4,339	2,678	7,017
1877	5,877	3,992	9,869	1,094	906	2,000	675	646	1,321	4,108	2,440	6,548
1878	6,284	4,479	10,763	1,253	1,068	2,321	857	794	1,651	4,174	2,617	6,791
1879	6,082	4,118	10,200	1,256	1,010	2,266	846	892	1,648	3,980	2,306	6,286
1880	6,638	4,593	11,231	1,465	1,275	2,740	1,132	1,048	2,180	4,041	2,270	6,311
1881	6,753	4,783	11,536	1,263	983	2,246	1,086	1,020	2,106	4,404	2,780	7,184
1882	7,596	5,220	12,816	1,411	1,114	2,525	1,338	1,159	2,497	4,847	2,947	7,794
1883	7,116	5,133	12,249	1,246	987	2,233	1,416	1,299	2,715	4,454	2,847	7,301
1884	8,325	5,895	12,220	1,414	1,121	2,535	1,815	1,576	3,391	5,096	3,198	8,294
1885	8,900	6,382	15,282	1,451	1,185	2,636	2,050	1,807	3,857	5,399	3,390	8,789
1886	8,501	6,086	14,587	1,266	958	2,224	2,163	1,895	4,058	5,072	3,233	8,335

No. 31.—DEATHS of PERSONS over 5 Years of Age in the Colony, City, Suburbs, and Country Districts, 1871-85.

Year.	Colony.			City.			Suburbs.			Country.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1871	2400	1302	3702	482	358	840	222	174	396	1696	770	2466
1872	2721	1544	4265	549	446	995	219	193	412	1953	905	2858
1873	2999	1688	4687	606	475	1081	266	221	487	2127	992	3119
1874	3114	1770	4884	631	517	1148	278	249	527	2205	1004	3209
1875	3611	2202	5813	754	655	1409	361	373	734	2496	1174	3670
1876	4021	2501	6522	789	878	1467	379	389	768	2854	1434	4288
1877	3548	2028	5576	648	537	1185	310	288	598	2590	1203	3793
1878	3745	2134	5879	723	576	1299	391	340	731	2631	1218	3849
1879	3740	2091	5831	764	603	1367	381	365	746	2595	1123	3718
1880	3960	2361	6321	804	643	1447	448	456	904	2718	1252	3970
1881	4173	2474	6647	808	590	1398	495	464	959	2870	1420	4290
1882	4682	2682	7364	888	707	1595	618	524	1142	3176	1511	4687
1883	4298	2647	6945	730	563	1293	678	582	1260	3890	1502	4392
1884	4965	3027	7992	861	621	1482	836	717	1553	3268	1699	4967
1885	5381	3286	8667	920	673	1593	947	819	1766	3514	1797	5311

DEATHS—continued.

No. 32.—DEATHS of CHILDREN under 5 Years of Age, in the Colony, City, Suburbs, and Country Districts, 1871–85.

Year.	Colony.			City.			Suburbs.			Country.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1871 ... ..	1482	1223	2705	389	354	743	259	228	487	834	641	1475
1872 ... ..	1721	1482	3203	453	362	815	280	223	503	988	897	1885
1873 ... ..	1600	1324	2924	404	315	719	272	238	510	924	771	1695
1874 ... ..	1908	1860	3768	472	457	929	347	325	672	1089	1078	2167
1875 ... ..	2634	2324	4958	632	632	1264	409	444	913	1533	1248	2781
1876 ... ..	2487	2184	4671	529	495	1024	472	445	917	1485	1244	2729
1877 ... ..	2329	1964	4293	446	369	815	365	358	723	1518	1237	2755
1878 ... ..	2539	2345	4884	530	492	1022	466	454	920	1543	1399	2942
1879 ... ..	2342	2027	4369	492	407	899	465	437	902	1385	1183	2568
1880 ... ..	2678	2232	4910	661	632	1293	684	592	1276	1323	1018	2341
1881 ... ..	2580	2309	4889	455	393	848	591	556	1147	1534	1360	2894
1882 ... ..	2914	2538	5452	523	407	990	720	635	1355	1671	1436	3107
1883 ... ..	2818	2486	5304	516	424	940	738	717	1455	1564	1345	2909
1884 ... ..	3360	2868	6228	553	500	1053	979	859	1838	1828	1499	3337
1885 ... ..	3519	3093	6612	531	512	1043	1103	988	2091	1885	1593	3478

No. 33.—DEATH-RATE per 1,000 of the mean Population of Persons over 5 Years of Age, in the Colony, City Suburbs, and Country Districts, 1871–1885.

Year.	Colony.			City.			Suburbs.			Country.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
	Per 1,000 of mean Population.			Per 1,000 of mean Population.			Per 1,000 of mean Population.			Per 1,000 of mean Population.		
1871 ... ..	10.18	6.83	8.70	14.86	10.91	12.87	9.12	6.57	7.79	9.47	5.91	7.97
1872 ... ..	11.15	7.86	9.68	16.44	13.34	14.89	8.39	6.93	7.64	10.58	6.83	9.31
1873 ... ..	11.89	8.28	10.28	17.65	13.91	15.79	9.60	7.52	8.53	11.18	7.07	9.44
1874 ... ..	11.91	8.34	10.31	17.79	14.79	16.30	9.40	7.94	8.65	11.22	6.89	9.38
1875 ... ..	13.29	9.97	11.81	20.53	18.31	19.43	11.34	11.13	11.23	12.29	7.75	10.35
1876 ... ..	14.09	10.92	12.78	20.80	18.56	19.70	10.97	11.06	11.02	13.62	9.15	11.71
1877 ... ..	12.17	8.50	10.47	16.36	14.33	15.38	8.27	7.56	7.91	11.91	7.40	9.98
1878 ... ..	11.53	8.51	10.51	17.39	14.91	16.20	9.69	7.82	8.85	11.61	7.18	9.71
1879 ... ..	11.51	7.92	9.90	17.46	15.14	16.35	8.63	7.84	8.22	10.95	6.32	8.97
1880 ... ..	11.58	8.53	10.21	17.44	15.69	16.61	9.27	8.98	9.12	10.98	6.59	9.07
1881 ... ..	11.61	8.56	10.25	16.65	13.99	15.42	9.40	8.50	8.94	11.12	7.38	9.52
1882 ... ..	12.45	8.87	10.86	17.47	16.27	16.38	10.93	8.90	9.90	11.83	7.56	10.00
1883 ... ..	10.88	8.34	9.75	13.62	12.50	13.11	11.14	8.96	10.02	13.86	7.24	9.00
1884 ... ..	11.86	9.03	10.60	15.09	13.24	14.26	12.60	10.00	11.25	11.07	7.84	9.68
1885 ... ..	12.10	9.28	10.85	15.12	13.77	14.51	13.01	10.45	11.68	11.30	7.92	9.87
Mean ... ..	11.88	8.65	10.40	16.98	14.64	15.81	10.11	8.68	9.38	11.53	7.27	9.89

No. 34.—DEATH-RATE per 1,000 of the Mean Population of Children under 5 Years of Age in the Colony, City, Suburbs, and Country Districts, 1871–85.

Year.	Colony.			City.			Suburbs.			Country.		
	Per 1,000 of mean Population.			Per 1,000 of mean Population.			Per 1,000 of mean Population.			Per 1,000 of mean Population.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1871 ... ..	35.31	29.75	32.56	70.01	60.90	65.35	49.33	45.72	47.57	26.77	21.15	24.00
1872 ... ..	39.62	34.66	37.16	78.45	60.41	69.26	51.25	42.47	46.95	30.68	28.46	29.58
1873 ... ..	35.90	30.01	32.97	68.46	51.65	59.91	48.20	43.77	46.02	27.98	23.67	25.84
1874 ... ..	41.68	41.06	41.37	78.75	74.33	76.51	59.49	58.85	59.18	32.08	32.06	32.07
1875 ... ..	56.70	50.54	53.64	106.37	104.91	105.64	80.02	80.71	80.35	44.53	36.22	40.37
1876 ... ..	52.96	46.37	49.66	89.66	83.51	86.55	80.98	80.40	80.71	42.15	34.90	38.52
1877 ... ..	48.49	40.39	44.41	73.70	61.13	67.42	60.63	62.54	61.56	42.21	33.55	37.83
1878 ... ..	51.26	47.53	49.39	81.56	79.57	82.08	73.06	74.79	73.91	41.83	37.72	39.77
1879 ... ..	45.40	40.05	42.75	75.36	63.22	69.34	67.98	66.27	67.13	36.24	31.48	33.88
1880 ... ..	49.42	42.16	45.83	98.21	94.38	95.30	92.13	81.73	86.99	33.05	29.94	31.62
1881 ... ..	45.36	41.84	43.63	66.42	57.18	61.79	72.17	69.79	71.00	36.67	33.70	35.21
1882 ... ..	49.09	44.06	46.61	74.75	65.84	70.27	78.51	71.30	74.93	38.69	34.55	36.66
1883 ... ..	45.62	41.26	43.46	72.20	58.53	65.32	71.94	75.14	73.48	35.25	30.94	33.12
1884 ... ..	52.19	45.58	48.92	75.28	67.73	71.49	84.96	80.22	82.22	40.16	33.52	36.98
1885 ... ..	52.51	47.22	49.90	70.99	68.65	69.82	85.08	77.84	81.50	40.48	35.13	37.84
Mean ... ..	46.77	41.50	44.15	78.90	70.13	74.40	70.38	67.43	68.90	36.58	31.80	34.22

## STATISTICS, 1886—POPULATION, &amp;c.

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## DEATHS—continued.

No. 35.—DEATHS of Children under 1 Year of Age, in the Colony, City, Suburbs, and Country Districts, 1871-85.

Year.	Colony.	City.	Suburbs.	Country.
1871	1,812	467	318	1,027
1872	2,116	507	339	1,270
1873	1,985	487	341	1,157
1874	2,428	588	403	1,437
1875	2,695	613	461	1,621
1876	2,629	561	521	1,547
1877	2,785	562	476	1,747
1878	3,126	650	591	1,885
1879	2,886	612	594	1,680
1880	3,200	785	821	1,594
1881	3,341	608	836	1,897
1882	3,897	737	1,028	2,132
1883	3,590	668	1,012	1,910
1884	4,285	769	1,272	2,244
1885	4,596	780	1,512	2,304

No. 36.—DEATHS of Children under 1 Year of Age per 1,000 Births, in the Colony, City, Suburbs, and Country Districts—Period, 1871-85.

Year.	Colony.	City.	Suburbs.	Country.
1871	89.9	156.7	122.2	70.5
1872	104.4	176.1	139.1	85.0
1873	92.5	153.8	123.4	74.0
1874	109.4	183.4	144.6	88.3
1875	119.6	193.8	158.5	98.4
1876	112.8	169.4	170.3	91.3
1877	116.7	165.3	146.6	101.5
1878	123.4	186.5	160.8	103.7
1879	107.1	164.7	143.2	88.0
1880	113.6	210.1	177.7	80.4
1881	115.2	162.5	161.6	94.4
1882	131.2	195.3	174.9	106.2
1883	114.7	177.8	154.8	90.9
1884	126.2	186.2	164.2	101.6
1885	131.1	200.7	180.4	101.1
Mean	113.8	179.5	154.8	91.7

No. 37.—PERCENTAGE of DEATHS of Persons under 5 Years, and over that age, in the Colony, City, Suburbs, and Country Districts, 1871-85.

Year.	Colony.		City of Sydney.		Suburbs.		Country.	
	Under 5 years.	Over 5 years.	Under 5 years.	Over 5 years.	Under 5 years.	Over 5 years.	Under 5 years.	Over 5 years.
1871	42.21	57.79	46.93	53.07	55.15	44.85	37.42	62.58
1872	42.91	57.09	45.02	54.98	54.97	45.03	39.74	60.26
1873	38.42	61.58	39.94	60.06	51.15	48.85	35.62	64.38
1874	43.55	56.45	44.72	55.28	56.04	43.96	40.31	59.69
1875	46.03	53.97	47.29	52.71	55.43	44.57	43.10	56.90
1876	41.72	58.28	41.10	58.90	54.42	45.58	38.89	61.11
1877	43.49	56.51	40.75	59.25	54.73	45.27	42.07	57.93
1878	45.37	54.63	44.00	56.00	55.72	44.28	43.32	56.68
1879	42.83	57.17	39.67	60.33	54.73	45.27	40.85	59.15
1880	43.71	56.29	47.19	52.81	58.53	41.47	37.09	62.91
1881	42.38	57.62	37.75	62.25	54.46	45.54	40.28	59.72
1882	42.54	57.46	39.21	60.79	54.26	45.74	39.86	60.14
1883	43.30	56.70	42.09	57.91	53.59	46.41	39.84	60.16
1884	43.79	56.21	41.53	58.47	54.20	45.80	40.23	59.77
1885	43.26	56.74	39.53	60.47	54.21	45.79	39.57	60.43

## STATISTICS, 1886—POPULATION, &amp;c.

DEATHS—*continued.*

No. 38.—DEATHS from various PREVALENT DISEASES, &amp;c., in the Colony, period 1875-85.

Deaths from	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Phthisis ...	610	612	585	643	736	787	866	917	941	1,003	1,078
Diarrhœa ...	596	459	586	633	496	483	611	826	670	763	805
Atrophy and Debility ...	600	557	544	541	571	674	721	776	832	975	1,059
Accidents ...	648	696	648	716	737	772	772	810	763	872	957
Typhoid ...	298	401	375	441	265	240	266	450	397	516	503
Pneumonia ...	413	430	398	360	364	527	612	696	617	627	782
Bronchitis ...	434	461	423	433	440	595	575	681	620	748	701
Dysentery ...	214	152	162	227	193	174	153	162	100	150	133
Diphtheria ...	165	204	205	253	284	163	132	175	235	165	298
Scarlatina ...	302	1,097	94	23	31	50	35	39	46	229	127
Convulsions ...	540	579	502	637	625	687	690	741	690	815	822
Measles ...	752	35	2	1	3	270	88	10	47	45	10
Croup ...	127	163	220	252	207	126	125	173	229	160	284
Enteritis ...	218	205	223	246	237	230	314	352	293	528	508
Teething ...	240	238	355	317	251	191	229	312	247	277	324
Apoplexy ...	214	159	171	187	162	171	191	199	235	230	260
Cancer ...	181	166	167	191	171	239	216	215	215	233	267

No. 39.—DEATHS of Children under 5 years of age from various PREVALENT DISEASES, &amp;c., in the Colony, 1875-85.

Deaths from	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Phthisis ..	23	10	19	12	26	27	36	37	50	60	55
Diarrhœa ...	486	370	473	520	418	416	526	716	569	652	702
Atrophy and Debility ..	598	553	544	541	571	674	721	776	832	975	1,058
Accidents ...	100	150	115	132	144	153	157	141	137	145	162
Typhoid ..	80	86	74	104	38	48	43	68	52	52	49
Pneumonia ...	190	152	146	130	139	216	211	208	210	209	236
Bronchitis ...	260	253	254	260	262	379	356	414	364	468	397
Dysentery ...	115	80	96	103	115	103	84	73	55	84	79
Diphtheria ...	101	113	118	149	176	95	73	106	140	93	178
Scarlatina ...	214	675	52	14	21	28	27	23	35	151	96
Convulsions ...	530	574	499	633	621	685	688	737	687	810	820
Measles ...	572	26	1	1	1	232	69	7	39	31	8
Croup ...	105	146	177	211	184	107	112	143	189	129	237
Enteritis ...	122	99	122	142	159	139	189	209	179	282	243
Teething ...	240	238	355	317	251	191	229	312	247	277	324

No. 40.—DEATHS of Persons over 5 years of age from various PREVALENT DISEASES, &amp;c., in the Colony, 1875-85.

Deaths from	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Phthisis ...	587	602	566	631	710	760	830	880	891	943	1,023
Diarrhœa ...	110	89	113	113	78	67	85	110	101	111	103
Accidents ...	548	546	533	584	593	619	615	669	626	727	795
Typhoid... ..	218	315	301	337	227	192	223	382	345	464	454
Pneumonia ...	223	278	252	230	225	311	401	488	407	418	546
Bronchitis ...	174	208	169	173	178	216	219	267	256	280	305
Dysentery ...	99	72	66	124	78	71	69	89	45	66	54
Diphtheria ...	64	91	87	104	108	68	59	69	95	72	120
Scarlatina ...	88	422	42	9	10	22	8	16	11	78	31
Measles ...	180	9	1	...	2	38	19	3	8	14	2
Enteritis ...	96	106	101	104	78	91	125	143	114	246	265
Apoplexy ...	213	159	171	179	161	169	191	197	210	229	260
Cancer ...	180	165	167	191	171	236	215	215	212	232	263

No. 41.—DEATHS from various PREVALENT DISEASES, &amp;c., in the City, period 1875-85.

Deaths from	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Phthisis ..	201	202	166	176	237	212	234	281	227	231	282
Diarrhœa ...	208	133	157	147	158	173	141	184	117	144	172
Atrophy and Debility ..	162	130	114	123	129	173	144	147	161	194	190
Accidents ...	79	81	75	98	84	109	137	111	87	108	156
Typhoid ..	75	77	61	103	77	54	58	96	77	100	93
Pneumonia ...	106	82	74	71	64	110	88	115	86	95	133
Bronchitis ...	106	108	85	94	93	148	120	133	112	141	125
Dysentery ...	29	15	12	35	29	23	11	14	8	12	18
Diphtheria ...	36	17	20	17	12	8	9	8	13	11	23
Scarlatina ...	105	206	4	3	13	16	8	3	2	21	20
Convulsions ...	106	112	79	116	118	157	114	110	134	155	126
Measles ...	162	1	...	...	1	144	6	1	10	1	23
Croup ...	27	34	17	34	20	16	20	34	34	23	...
Enteritis ...	38	29	22	59	50	58	47	30	55	70	46
Teething ...	41	35	51	30	23	38	19	32	29	18	44
Apoplexy ...	67	45	61	57	54	47	74	57	52	53	82
Cancer ...	44	48	33	41	47	52	44	55	49	41	51

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## DEATHS—continued.

No. 42.—DEATHS of CHILDREN under 5 years of age from various PREVALENT DISEASES, &amp;c., in the CITY, 1875-85.

Deaths from	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Phthisis ...	8	8	3	2	2	3	2	8	6	9	8
Diarrhœa ...	164	93	120	105	129	146	112	156	95	118	146
Atrophy and Debility	162	128	114	123	129	173	144	147	161	194	189
Accidents ...	14	17	14	26	17	21	22	13	13	14	14
Typhoid ...	15	10	13	22	8	10	7	11	6	8	4
Pneumonia ...	53	29	24	22	24	55	29	22	28	30	34
Bronchitis ...	57	49	34	58	51	80	66	85	62	78	76
Dysentery ...	5	5	3	8	11	11	5	4	1	5	8
Diphtheria ...	30	13	15	11	10	7	7	6	10	8	20
Scarlatina ...	76	136	3	2	8	13	7	2	2	15	15
Convulsions ...	101	110	76	112	114	155	112	106	131	150	124
Measles ...	144	...	.....	...	1	127	4	1	9	1	.....
Croup ...	19	32	15	29	31	15	13	18	27	17	16
Enteritis ...	22	17	13	36	39	46	34	11	33	43	29
Teething ...	41	35	51	30	23	38	19	32	29	18	43

No. 43.—DEATHS of Persons over 5 years of age from various PREVALENT DISEASES, &amp;c., in the CITY, 1875-85.

Deaths from	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Phthisis ...	193	194	163	174	235	209	232	273	221	222	274
Diarrhœa ...	44	40	37	42	29	27	29	28	22	26	26
Accidents ...	65	64	61	72	67	88	115	98	74	94	142
Typhoid ...	60	67	48	81	69	44	51	85	71	92	89
Pneumonia ...	53	53	50	49	40	55	59	93	58	65	99
Bronchitis ...	49	59	51	36	42	68	54	48	50	63	49
Dysentery ...	24	10	9	27	18	12	6	10	7	7	10
Diphtheria ...	6	4	5	6	2	1	2	2	3	3	3
Scarlatina ...	29	70	1	1	5	3	1	1	...	6	5
Measles ...	18	1	...	...	.....	17	2	...	1	...	.....
Enteritis ...	16	12	9	23	17	12	13	19	22	27	17
Apoplexy ...	67	45	61	57	54	47	74	57	51	53	82
Cancer ...	44	48	33	41	47	52	44	55	48	41	51

No. 44.—DEATHS, from various PREVALENT DISEASES, &amp;c., in the SUBURBS of Sydney, period 1875-85.

Deaths from	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Phthisis ...	105	102	104	131	147	175	180	211	255	292	297
Diarrhœa ...	144	107	114	142	147	135	156	257	246	280	309
Atrophy and Debility	148	163	102	138	153	236	228	242	312	345	399
Accidents ...	29	42	32	53	44	40	64	75	90	100	125
Typhoid ...	41	51	39	67	38	35	35	71	93	109	130
Pneumonia ...	63	48	45	56	41	107	86	114	107	132	152
Bronchitis ...	70	81	51	70	88	141	107	151	129	176	141
Dysentery ...	14	12	13	28	28	27	16	21	10	27	30
Diphtheria ...	12	22	31	27	27	30	10	13	38	42	43
Scarlatina ...	115	247	4	1	7	6	1	2	8	38	42
Convulsions ...	82	84	67	90	89	132	139	137	134	180	212
Measles ...	101	...	...	.....	...	70	8	2	13	6	2
Croup ...	24	32	41	49	29	26	10	21	45	16	48
Enteritis ...	32	23	37	59	75	62	79	104	87	193	200
Teething ...	51	34	44	37	47	49	50	63	44	64	94
Apoplexy ...	32	26	28	28	18	31	35	37	68	50	61
Cancer ...	19	21	16	21	23	33	35	35	39	52	49

No. 45.—DEATHS of CHILDREN under 5 years of age from various PREVALENT DISEASES, &amp;c., in the SUBURBS, 1875-85.

Deaths from	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Phthisis ..	4	1	6	6	9	11	15	15	25	25	22
Diarrhœa ..	118	95	100	122	130	125	145	231	220	254	292
Atrophy and Debility	148	163	102	138	153	236	228	242	312	345	399
Accidents ...	5	14	10	15	17	13	13	23	18	32	35
Typhoid ...	10	10	6	15	4	6	6	5	10	15	12
Pneumonia ...	38	24	23	27	22	71	47	48	56	67	61
Bronchitis ...	53	53	35	44	58	99	64	93	88	126	90
Dysentery ...	10	9	8	13	19	16	11	15	7	22	23
Diphtheria ...	12	15	20	18	20	23	6	9	23	24	28
Scarlatina ...	82	154	2	1	4	2	...	1	7	30	38
Convulsions ...	77	81	67	90	89	132	139	137	134	180	212
Measles ...	73	.....	...	...	...	59	7	2	10	6	2
Croup ...	20	27	34	42	25	23	10	17	40	14	39
Enteritis ...	23	10	26	46	55	40	49	79	69	17	89
Teething ...	51	34	44	37	47	49	50	63	44	64	94



DEATHS—*continued.*

No. 46.—DEATHS of Persons over 5 years of age from various PREVALENT DISEASES, &amp;c., in the SUBURBS—1875-85.

Deaths from	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Phthisis ... ..	101	101	98	125	438	164	165	196	230	267	275
Diarrhœa ... ..	26	12	14	20	27	10	11	26	26	26	17
Accidents ... ..	24	28	22	38	27	27	51	52	72	68	90
Typhoid ... ..	31	41	33	52	34	29	29	66	83	94	118
Pneumonia ... ..	25	24	22	29	19	36	39	66	51	65	91
Bronchitis ... ..	17	28	16	26	30	42	43	58	41	50	51
Dysentery ... ..	4	3	5	15	9	11	5	6	3	5	7
Diphtheria ... ..	...	7	11	9	7	7	4	4	15	18	15
Scarlatina ... ..	33	93	2	...	3	4	...	1	1	8	4
Measles... ..	28	...	...	...	...	11	1	...	3	...	...
Enteritis ... ..	9	13	11	13	20	22	30	25	18	176	111
Apoplexy ... ..	31	26	28	28	17	30	35	37	59	50	61
Cancer ... ..	18	20	16	21	23	31	34	35	39	52	46

No. 47.—DEATHS from various PREVALENT DISEASES, &amp;c., in the COUNTRY—period 1875-85.

Deaths from	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Phthisis ... ..	304	308	315	336	52	400	452	425	459	480	499
Diarrhœa ... ..	244	219	315	344	181	175	314	385	307	345	324
Atrophy and Debility ... ..	288	262	328	280	289	265	349	387	359	436	470
Accidents ... ..	540	573	541	565	609	623	571	624	586	664	676
Typhoid ... ..	182	273	275	271	150	151	173	283	227	307	280
Pneumonia ... ..	244	300	279	233	259	310	438	467	424	400	502
Bronchitis ... ..	258	272	287	269	259	306	348	397	379	431	435
Dysentery ... ..	171	125	137	164	136	124	126	127	82	111	85
Diphtheria ... ..	117	165	154	209	245	125	113	154	184	112	232
Scarlatina ... ..	82	644	86	19	11	28	27	34	36	170	65
Convulsions ... ..	352	383	356	431	418	398	437	494	422	480	484
Measles... ..	489	34	2	1	2	56	74	7	24	38	8
Croup ... ..	66	87	128	140	128	69	89	108	122	98	213
Enteritis ... ..	148	153	164	128	106	110	188	218	151	265	262
Teething ... ..	148	169	260	250	181	104	160	217	174	195	187
Apoplexy ... ..	115	88	82	94	90	92	82	103	100	126	117
Cancer ... ..	118	97	118	129	101	153	137	125	125	139	167

No. 48.—DEATHS of CHILDREN under 5 years of age from various PREVALENT DISEASES, &amp;c., in the COUNTRY—1875-85.

Deaths from	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Phthisis ... ..	11	1	10	4	15	13	19	14	19	26	24
Diarrhœa ... ..	204	182	253	293	159	145	269	329	254	280	264
Atrophy and Debility... ..	288	262	328	280	289	265	349	387	359	436	470
Accidents ... ..	81	119	91	91	110	119	122	105	106	99	113
Typhoid ... ..	55	66	55	67	26	32	30	52	36	29	33
Pneumonia ... ..	99	99	99	81	93	90	135	138	126	112	141
Bronchitis ... ..	150	151	185	158	153	200	226	236	214	264	231
Dysentery ... ..	100	66	85	82	85	76	68	54	47	57	48
Diphtheria ... ..	59	85	83	120	146	65	60	91	107	61	130
Scarlatina ... ..	56	385	47	11	9	13	20	20	26	106	43
Convulsions ... ..	352	383	356	431	418	398	437	494	422	480	484
Measles... ..	355	26	1	1	...	46	58	4	20	24	6
Croup ... ..	66	87	128	140	128	69	89	108	122	98	182
Enteritis ... ..	77	72	83	60	65	53	106	119	77	222	125
Teething ... ..	148	169	260	250	181	104	160	217	174	195	187

No. 49.—DEATHS of Persons over 5 years of age from various PREVALENT DISEASES, &amp;c., in the COUNTRY—1875-85.

Deaths from	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Phthisis ... ..	293	307	305	332	37	387	433	411	440	454	475
Diarrhœa ... ..	40	37	62	51	22	30	45	56	53	65	60
Accidents ... ..	459	454	450	474	499	504	449	519	480	565	563
Typhoid ... ..	127	207	220	204	124	119	143	231	191	278	247
Pneumonia ... ..	145	201	180	152	166	220	303	329	298	288	361
Bronchitis ... ..	108	121	102	111	106	106	122	161	165	167	204
Dysentery ... ..	71	59	52	82	51	48	58	73	35	54	37
Diphtheria ... ..	58	80	71	89	99	60	53	63	77	51	102
Scarlatina ... ..	26	259	39	8	2	15	7	14	10	64	22
Measles... ..	134	8	1	...	2	10	16	3	4	14	2
Enteritis ... ..	71	81	81	68	41	57	82	99	74	43	137
Apoplexy ... ..	115	88	82	94	90	92	82	103	100	126	117
Cancer ... ..	118	97	118	129	101	153	137	125	125	139	166

DEATHS—continued.

No. 50.—DEATHS from various PREVALENT DISEASES, &c , per 1,000 of Total Deaths—1875 to 1885.

Cause of Death	1875			1876			1877			1878			1879			1880			1881			1882			1883			1884			1885				
	Under 5 years	Over 5 years	Total Deaths	Under 5 years	Over 5 years	Total Deaths	Under 5 years	Over 5 years	Total Deaths	Under 5 years	Over 5 years	Total Deaths	Under 5 years	Over 5 years	Total Deaths	Under 5 years	Over 5 years	Total Deaths	Under 5 years	Over 5 years	Total Deaths	Under 5 years	Over 5 years	Total Deaths	Under 5 years	Over 5 years	Total Deaths	Under 5 years	Over 5 years	Total Deaths					
Phthisis	4 63	100 97	56 63	2 14	92 29	54 67	4 42	101 50	59 27	2 45	107 32	59 74	5 95	121 75	72 15	5 49	120 23	70 07	7 36	124 86	75 06	6 78	119 49	71 55	9 42	128 28	76 82	9 63	117 98	70 53	8 81	117 99	73 90		
Diarrhoea	98 02	18 92	55 33	79 20	13 64	41 00	110 17	20 26	59 37	106 47	19 22	53 81	95 67	13 37	48 62	84 72	10 59	43 00	107 58	12 78	52 96	131 32	14 94	64 45	107 27	14 54	54 69	104 68	13 88	53 65	106 14	11 88	55 18		
Atrophy and Debility	120 61	65 70	118 88	49 85	126 71	55 12	110 76	59 37	106 47	19 22	53 81	95 67	13 37	48 62	84 72	10 59	43 00	107 58	12 78	52 96	131 32	14 94	64 45	107 27	14 54	54 69	104 68	13 88	53 65	106 14	11 88	55 18			
Accidents	20 16	94 26	60 16	32 11	83 71	62 18	26 78	95 58	65 66	27 43	99 33	66 52	32 95	101 69	72 25	31 15	97 92	68 73	32 11	92 52	66 92	25 86	90 84	63 20	25 82	90 13	62 29	23 28	90 96	61 32	24 49	91 69	65 60		
Typhoid	16 13	37 50	27 66	18 41	48 29	35 82	17 23	53 93	37 99	21 29	57 32	40 97	8 69	38 92	25 92	9 77	30 37	21 36	8 79	33 54	23 05	12 47	51 87	35 11	9 80	49 67	32 41	8 34	58 05	36 28	7 40	52 36	34 48		
Pneumonia	38 32	38 36	33 34	32 54	42 62	38 41	34 00	45 19	40 32	26 62	39 12	33 44	31 31	38 58	35 68	43 09	49 20	46 92	43 15	60 32	53 05	33 14	66 12	54 30	39 59	58 59	50 37	33 55	52 30	24 09	35 68	62 97	53 60		
Bronchitis	52 43	29 93	40 29	54 16	31 89	41 18	59 16	30 30	42 86	53 23	29 42	40 23	59 96	30 52	43 13	77 18	34 17	52 97	72 31	32 94	49 54	75 93	36 25	53 13	68 62	36 85	50 61	75 14	35 03	52 90	60 02	35 17	48 05		
Dysentery	23 19	17 02	19 86	17 12	11 03	13 57	22 36	11 83	16 41	21 08	21 09	21 09	26 32	13 37	18 92	20 97	11 23	15 49	17 13	10 38	13 26	13 38	12 08	12 64	10 36	6 47	8 16	13 48	8 25	10 54	11 94	6 22	9 11		
Diphtheria	20 37	11 00	15 31	24 13	13 95	18 22	27 48	15 60	20 77	30 50	17 68	23 50	40 25	18 52	27 84	19 34	10 75	14 51	14 93	8 87	11 44	19 44	9 36	13 65	26 39	13 67	19 13	14 93	9 00	11 60	26 91	13 84	20 42		
Scarlatina	43 16	15 13	28 03	144 50	64 70	98 00	12 11	7 53	9 52	2 86	1 53	2 13	4 80	1 71	3 03	5 70	3 48	4 45	5 52	1 20	3 03	4 21	2 17	3 04	6 59	1 58	3 75	24 24	9 75	16 10	14 51	3 57	8 70		
Convulsions	106 89	50 13	122 88	51 72	116 23	50 86	129 60	50 18	142 13	59 18	142 13	61 27	139 50	61 16	140 72	59 81	135 17	57 81	129 52	57 81	129 52	57 81	129 52	57 81	129 52	57 81	129 52	57 81	129 52	57 81	129 52	57 81	129 52	56 35	
Measles	115 36	30 96	69 81	5 13	1 37	3 12	0 23	0 17	0 20	0 20	0 09	0 22	0 34	0 29	47 24	6 01	24 04	14 11	2 85	7 62	1 28	0 40	0 78	7 35	1 15	3 83	4 97	1 75	3 16	1 20	0 23	0 68			
Croup	21 17	11 79	31 25	14 56	41 22	22 29	43 20	23 41	42 11	20 29	21 79	20 29	21 79	20 29	21 79	20 29	21 79	20 29	21 79	20 29	21 79	20 29	21 79	20 29	21 79	20 29	21 79	20 29	21 79	20 29	21 79	20 29	21 79	19 46	
Enteritis	24 60	16 51	20 23	21 19	16 25	18 31	28 41	18 11	22 59	29 07	17 68	22 85	36 39	13 37	23 23	25 30	14 30	20 47	38 65	18 80	27 21	38 33	19 41	27 46	33 74	16 41	23 92	45 37	30 77	37 13	36 74	30 56	34 82		
Teething	48 40	22 28	50 95	21 26	82 69	35 97	64 90	29 45	57 44	29 45	57 44	29 45	57 44	29 45	57 44	29 45	57 44	29 45	57 44	29 45	57 44	29 45	57 44	29 45	57 44	29 45	57 44	29 45	57 44	29 45	57 44	29 45	57 44	22 21	
Apoplexy	36 04	19 87	24 37	14 20	30 66	17 32	30 66	17 32	30 66	17 32	30 66	17 32	30 66	17 32	30 66	17 32	30 66	17 32	30 66	17 32	30 66	17 32	30 66	17 32	30 66	17 32	30 66	17 32	30 66	17 32	30 66	17 32	30 66	17 32	22 21
Cancer	30 96	16 80	25 29	14 83	29 94	16 92	32 48	17 74	27 60	15 88	29 82	16 76	26 73	15 22	20 87	16 55	26 75	15 52	29 19	16 77	30 52	17 55	80 23	19 18	29 02	16 38	28 65	16 37	30 33	18 30	18 30	18 30	18 30		

No. 51.—DEATHS from various PREVALENT DISEASES, &c., per 10,000 of Population—1875 to 1885

Cause of Death	Per 10,000 of the Mean Population										
	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885
Phthisis	10 43	10 12	9 29	9 77	10 64	10 83	11 38	11 53	11 27	11 38	11 57
Diarrhoea	10 19	7 59	9 31	9 62	7 17	6 65	7 98	10 38	8 02	8 65	8 65
Atrophy and Debility	10 24	9 23	8 64	8 22	8 26	9 28	9 47	9 75	9 97	11 06	11 38
Accidents	11 08	11 51	10 30	10 88	10 66	10 63	10 15	10 18	9 14	9 89	10 28
Typhoid	5 09	6 63	5 96	6 70	3 83	3 30	3 49	5 64	4 75	5 5	5 40
Pneumonia	7 06	7 11	6 32	5 47	5 26	7 25	8 04	8 75	7 30	3 88	8 40
Bronchitis	7 42	7 62	6 72	6 58	6 36	8 19	7 56	8 56	7 42	8 48	7 53
Dysentery	3 65	2 51	2 57	3 45	2 79	2 39	2 01	2 03	1 19	1 70	1 43
Diphtheria	2 82	3 37	3 25	3 84	4 10	2 24	1 73	2 20	2 81	1 87	3 20
Scarlatina	3 16	18 14	1 69	3 4	44	68	45	49	55	2 59	1 36
Convulsions	9 23	9 57	7 93	9 68	9 04	9 46	9 07	9 31	8 26	9 24	8 83
Measles	12 85	5 7	0 3	0 1	0 4	3 71	1 15	1 2	5 6	5 1	1 1
Croup	2 17	2 69	3 49	3 82	2 99	1 73	1 64	2 17	2 74	1 81	3 05
Enteritis	3 72	3 39	3 54	3 73	3 42	3 16	4 12	4 42	3 51	5 99	5 46
Teething	4 10	3 93	5 64	4 81	3 63	2 62	3 01	3 92	2 95	3 11	3 48
Apoplexy	3 66	2 62	2 71	2 84	2 34	2 35	2 51	2 50	2 81	2 64	2 79
Cancer	3 09	2 74	2 65	2 90	2 47	3 29	2 83	2 70	2 57	2 64	2 87

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DEATHS—*continued.*

## No. 52.—DEATH RATE of Persons over 5 Years of Age from various PREVALENT DISEASES, &amp;c., in the Colony—1875-85.

Cause of Death.	Per 10,000 of the mean Population over 5 years of Age.										
	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Phthisis .....	11'92	11'79	10'63	11'28	12'06	12'28	12'80	12'98	12'50	12'51	12'87
Diarrhoea .....	2'23	1'74	2'12	2'02	1'32	1'08	1'31	1'62	1'41	1'47	1'29
Accidents .....	11'13	10'70	10'01	10'44	10'07	10'00	9'48	9'86	8'78	9'64	10'00
Typhoid.....	4'42	6'17	5'65	6'02	3'85	3'10	3'44	5'63	4'84	6'15	5'71
Pneumonia .....	4'53	5'44	4'73	4'11	3'82	5'02	6'18	7'19	5'71	5'54	6'87
Bronchitis .....	3'53	4'07	3'17	3'09	3'02	3'49	3'37	3'93	3'59	3'71	3'83
Dysentery .....	2'01	1'41	1'23	2'21	1'32	1'14	1'06	1'31	'63	'87	'67
Diphtheria .....	1'30	1'78	1'63	1'86	1'83	1'09	'91	1'01	1'33	'98	1'51
Scarlatina .....	1'78	8'27	'78	'16	'16	'35	'12	'23	'15	1'03	'39
Measles .....	3'65	'17	'01	.....	'03	'61	'29	'04	'11	'18	'02
Enteritis .....	1'95	2'07	1'89	1'86	1'32	1'47	1'92	2'10	1'60	3'26	3'33
Apoplexy .....	4'32	3'11	3'21	3'20	2'73	2'73	2'94	2'90	2'94	3'03	3'27
Cancer .....	3'65	3'23	3'13	3'41	2'90	3'81	3'31	3'17	2'97	3'07	3'31

## No. 53.—DEATH Rate of Children under 5 Years of Age from various PREVALENT DISEASES, &amp;c., in the Colony—1875-85.

Cause of Death.	Per 10,000 of mean Population under 5 Years of Age.										
	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Phthisis .....	2'48	1'06	1'96	1'21	2'54	2'52	3'21	3'16	4'09	4'71	4'15
Diarrhoea .....	52'58	39'33	48'93	52'59	40'90	38'83	46'94	61'21	46'63	51'21	52'98
Atrophy and Debility .....	64'69	58'79	56'28	54'71	55'87	62'92	64'34	66'34	78'18	76'58	79'84
Accidents .....	10'81	15'94	11'89	13'35	14'09	14'28	14'01	12'05	21'22	11'39	12'22
Typhoid.....	8'65	9'14	7'65	10'51	3'71	4'48	3'83	5'81	4'26	4'08	3'69
Pneumonia .....	20'55	16'16	15'10	13'14	13'60	20'16	18'83	17'78	17'21	16'41	17'81
Bronchitis .....	28'13	26'89	26'27	26'29	25'63	35'38	31'77	35'39	29'83	36'76	29'96
Dysentery .....	12'44	8'50	9'93	10'41	11'25	9'61	7'49	6'24	4'50	6'59	5'96
Diphtheria .....	10'92	12'01	12'20	15'07	17'22	8'86	6'51	9'06	11'47	7'30	13'43
Scarlatina .....	23'15	71'76	5'38	1'41	2'05	2'61	2'40	1'96	2'86	11'86	7'24
Convulsions .....	57'34	61'02	51'62	64'02	60'76	63'95	61'40	63'01	56'30	63'62	61'88
Measles .....	61'88	2'76	'10	'10	'09	21'65	6'15	'59	3'19	2'43	'60
Croup.....	11'36	15'52	18'31	21'34	18'00	9'98	9'99	12'22	15'48	10'13	17'88
Enteritis .....	13'19	10'52	12'62	14'36	15'55	12'97	16'86	17'86	14'67	22'15	18'33
Teething .....	25'96	25'30	36'72	32'06	24'56	17'83	20'43	26'67	20'24	21'75	24'45

## No. 54.—DEATH RATE of Children under 5 Years of Age from various PREVALENT DISEASES, &amp;c., in the City—1875-85.

Cause of Death.	Per 10,000 of the mean Population under 5 Years of Age.										
	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Phthisis.....	6'68	6'76	2'48	1'60	1'54	2'23	1'45	5'67	4'16	6'11	5'35
Diarrhoea .....	137'06	78'63	99'27	84'33	99'49	108'74	81'61	110'72	66'01	80'12	97'74
Atrophy and Debility .....	135'39	108'22	94'31	98'79	99'49	128'85	104'93	104'34	111'88	131'72	126'53
Accidents .....	11'70	14'37	11'58	20'88	13'11	15'64	16'03	9'22	9'03	9'50	9'35
Typhoid.....	12'53	8'45	10'75	17'67	6'17	7'44	5'10	7'80	4'16	5'43	2'67
Pneumonia .....	44'29	24'22	19'85	17'67	18'21	40'96	21'13	15'61	19'45	20'37	22'76
Bronchitis .....	47'63	41'43	28'12	46'58	39'33	59'58	48'09	60'33	43'08	52'96	50'88
Dysentery .....	4'17	4'22	2'48	6'42	8'48	8'19	3'64	2'83	0'69	3'39	5'35
Diphtheria.....	25'07	10'99	12'40	8'83	7'71	5'21	5'10	4'25	6'94	5'43	13'38
Scarlatina .....	63'51	114'99	2'48	1'60	6'17	9'68	5'10	1'41	1'38	10'18	10'04
Convulsions .....	84'41	93'00	62'87	89'95	87'92	115'44	81'61	75'23	91'03	101'85	83'01
Measles .....	120'35	.....	.....	.....	0'77	94'59	2'91	0'70	6'25	0'67	.....
Croup.....	15'87	27'05	12'40	23'29	23'91	11'17	9'47	12'77	18'76	11'54	10'71
Enteritis .....	18'38	14'37	10'75	28'91	30'08	34'26	24'77	7'80	22'93	29'19	19'41
Teething .....	34'26	29'59	42'19	24'09	17'73	28'40	13'84	22'71	20'15	12'22	28'78

STATISTICS, 1886—POPULATION, &c.

DEATHS—continued.

No. 55.—DEATH RATE of CHILDREN under 5 Years of Age from various PREVALENT DISEASES, &c., in the SUBURBS—1875-1885.

Cause of Death.	Per 10,000 of mean population under 5 years of age.										
	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Phthisis ...	3'52	'88	5'10	4'82	6'69	7'49	9'28	8'29	12'62	11'18	8'57
Diarrhœa ...	103'85	83'61	85'14	98'00	96'76	85'22	89'76	127'74	111'11	113'62	113'81
Atrophy and Debility...	130'25	143'45	86'85	110'86	113'88	160'90	141'14	134'33	157'57	154'33	155'51
Accidents ...	4'40	12'32	8'51	12'05	12'65	8'86	8'04	12'71	9'09	14'31	13'64
Typhoid...	8'80	8'80	5'10	12'05	2'97	4'09	3'71	2'76	5'05	6'71	4'67
Pneumonia ...	33'44	21'12	19'58	21'69	16'37	48'40	29'09	26'54	28'28	29'97	23'77
Bronchitis ...	46'64	46'64	29'80	35'34	43'17	67'49	39'61	51'42	44'44	56'36	35'07
Dysentery ...	8'80	7'92	6'81	10'44	14'14	10'90	6'80	8'29	3'53	9'84	8'96
Diphtheria ...	10'56	13'20	17'02	14'46	14'88	15'68	3'71	4'97	11'61	10'73	10'91
Scarlatina ...	72'16	135'53	1'70	'80	2'97	1'36	'00	'55	3'53	13'42	14'81
Convulsions ...	67'77	71'28	57'04	72'30	66'24	89'99	86'04	75'76	67'67	80'52	82'63
Measles ...	64'24	'00	'00	'00	'00	40'22	4'33	1'10	5'05	2'68	'77
Croup ...	17'60	23'76	28'95	33'74	18'60	15'68	6'19	9'40	20'20	6'26	15'20
Enteritis ...	20'24	8'80	22'13	38'56	49'94	27'27	30'33	43'68	34'84	7'60	34'68
Teething ...	44'88	29'92	37'46	29'72	34'98	33'40	30'95	34'83	22'82	28'63	36'63

No. 56.—DEATH RATE of CHILDREN under 5 Years of Age from various PREVALENT DISEASES, &c., in COUNTRY DISTRICTS—1875-1885.

Cause of Death.	Per 10,000 of mean population under 5 years.										
	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Phthisis...	1'59	'14	1'37	'54	1'97	1'75	2'31	1'65	2'16	2'88	2'61
Diarrhœa ...	29'52	25'68	34'74	39'61	22'29	19'58	32'73	38'82	28'92	31'03	28'72
Atrophy and Debility...	41'67	36'96	45'17	37'85	38'13	35'79	42'46	45'66	40'87	48'32	51'13
Accidents ...	11'72	16'79	12'49	12'30	14'51	16'07	14'84	12'39	12'06	10'97	12'29
Typhoid...	7'95	'931	7'55	9'65	3'43	4'32	3'65	6'13	4'09	3'21	3'59
Pneumonia ...	14'32	13'96	13'59	10'95	12'27	12'15	16'42	16'28	14'34	12'41	15'34
Bronchitis ...	21'70	21'30	25'40	21'36	20'18	27'01	27'50	27'85	24'36	29'26	25'13
Dysentery ...	14'47	9'31	11'67	11'08	11'21	10'26	8'27	6'37	5'35	6'31	5'22
Diphtheria ...	8'53	11'92	11'39	16'22	19'26	8'78	7'30	10'73	12'18	6'76	14'14
Scarlatina ...	8'10	54'32	6'45	1'48	1'18	1'75	2'43	2'36	2'96	11'74	4'67
Convulsions ...	50'94	54'04	48'88	58'26	55'15	53'76	53'17	58'29	48'04	53'20	52'66
Measles ...	51'37	3'66	'13	'13	.....	6'21	7'05	'47	2'27	2'66	'65
Croup ...	9'55	12'27	17'57	18'92	16'88	9'32	10'83	12'74	13'89	10'86	19'80
Enteritis ...	11'14	10'15	11'39	8'11	8'57	7'15	12'89	14'04	8'76	24'60	13'60
Teething ...	21'41	23'84	35'70	33'79	23'88	14'04	19'47	25'60	19'81	21'61	20'34

No. 57.—NUMBER and MODE of DEATH OF SUICIDES—1876-86.

Year.	Drowning.		Hanging.		Shooting.		Cutting Throat.		Poison.		Wounds on Body.		Other Modes.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1876 ...	8	3	7	...	4	...	15	2	17	5	...	...	...	...	51	10
1877 ...	9	3	9	2	6	...	11	...	11	5	6	1	3	...	55	11
1878 ...	8	2	8	...	2	...	10	...	9	4	3	...	1	1	41	7
1879 ...	8	1	13	1	9	...	12	1	10	4	1	...	2	...	55	7
1880 ...	3	4	16	5	8	...	7	3	11	5	2	...	2	...	50	17
1881 ...	10	2	24	3	13	...	10	1	8	4	...	...	3	...	68	10
1882 ...	5	4	16	2	7	...	11	...	11	2	2	...	...	...	52	8
1883 ...	5	4	15	2	6	...	10	1	10	4	2	...	...	...	48	11
1884 ...	12	1	13	2	6	...	10	1	10	4	3	...	1	...	55	8
1885 ...	14	...	12	...	5	...	6	...	9	7	2	...	4	...	52	7
1886 ...	9	1	10	1	6	...	5	...	6	1	2	...	4	1	42	4

No. 58.—ADMISSIONS, DISCHARGES, DEATHS, &c., of PATIENTS in the

	Remaining on 31 December, 1885.			Admitted during 1886.			Total number of Patients under care.			Patients Discharged,								
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	Recovered, discharged by certificate.			Recovered, discharged from Police Court.			Discharged relieved.		
										M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
On remand under section I, Lunacy Act Amendment Act	5	2	7	252	85	337	257	87	344	...	...	...	166	55	221	...	...	...
Under lunacy certificate	1	...	1	239	101	340	240	101	341	10	5	15	...	...	...	...	...	...
Total	6	2	8	491	185	677	497	188	685	10	5	15	166	55	221	...	...	...

No. 59.—ADMISSIONS, READMISSIONS, DISCHARGES, DEATHS, &c., as well as the NATIONALITY

	Remaining on 31 December, 1885.			Admissions in the Year 1886.						Transferred from other Hospitals or Licensed House.	Total number of Patients under care.			Patients Discharged,							
	M.	F.	Total.	Admitted for the first time.			Readmitted.				M.	F.	Total.	Discharged recovered.			Discharged relieved.				
				M.	F.	Total.	M.	F.	Total.					M.	F.	Total.	M.	F.	Total.		
Hospital for the Insane, Callan Park	330	128	458	166	116	282	4	...	4	1	74	75	501	318	819	72	34	106	7	6	13
" Gladesville	478	299	777	95	35	130	14	7	21	4	3	7	591	344	935	67	49	116	1	3	4
" Parramatta { Free	606	357	963	50	21	71	...	...	...	17	3	20	673	381	1054	29	12	41	2	...	2
" Parramatta { Criminal	48	7	55	21	1	22	...	...	...	...	...	...	69	8	77	6	...	6	...	...	...
" Newcastle	127	113	240	7	10	17	...	1	1	5	3	8	139	127	266	...	...	...	4	...	4
Licensed House for the Insane, Cook's River Road	10	140	150	6	13	19	...	...	...	...	5	5	16	158	174	...	4	4	2	1	3
Total	1599	1044	2643	345	196	541	18	8	26	27	88	115	1989	1336	3325	174	99	273	16	10	26

	Native Countries														
	British Colonies.									Great					
	New South Wales.			Other British Colonies.			Total.			England.			Scotland.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
Hospital for the Insane, Callan Park	119	87	205	14	14	28	133	101	234	149	75	224	33	19	52
" Gladesville	140	96	236	17	14	31	157	110	267	158	87	245	39	13	52
" Parramatta { Free	134	87	221	13	9	22	147	96	243	172	78	250	32	20	52
" Parramatta { Criminal	17	1	18	1	1	2	18	2	20	11	1	12	2	...	2
" Newcastle	104	103	207	11	5	16	115	108	223	16	9	25	1	3	4
Licensed House for the Insane, Cook's River Road	8	40	48	1	3	4	9	43	52	1	35	36	1	6	7
Total	522	414	956	57	46	103	579	460	1039	507	285	792	108	61	169

	Ages of														
	1 to 5 years.			5 to 10 years.			10 to 15 years.			15 to 20 years.			20 to 30 years.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
Hospital for the Insane, Callan Park	...	...	...	...	...	...	...	...	...	13	10	23	91	67	158
" Gladesville	...	...	...	...	...	...	...	1	1	6	6	12	99	67	166
" Parramatta { Free	...	...	...	1	...	1	...	...	...	3	2	5	46	32	78
" Parramatta { Criminal	...	...	...	...	...	...	...	...	...	...	...	...	11	...	11
" Newcastle	1	1	2	13	5	18	22	18	40	23	27	50	42	32	74
Licensed House for the Insane, Cook's River Road	...	...	...	...	...	...	1	...	1	...	5	5	5	6	11
Total	1	1	2	14	5	19	23	19	42	45	50	95	294	204	498

STATISTICS, 1886—POPULATION, &c.

ACY.

RECEPTION-HOUSE for the Insane at DARLINGHURST, during the Year 1886.

Transferred, Died, &c.															Remaining on 31 December, 1886.			Average number under care.		
Sent to Police Court and returned to Reception House under certificate.			Transferred to Hospitals or Licensed Houses.			Escaped and not recaptured within 28 days.			Died.			Total number discharged, died, &c.			M.	F.	Total.	M.	F.	Total.
M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
85	30	115	...	...	...	...	...	...	2	2	4	253	87	340	4	...	4	6	2	8
...	...	...	226	95	321	...	...	...	2	...	2	238	100	338	2	1	3	4	2	6
85	30	115	226	95	321	...	...	...	4	2	6	491	187	678	6	1	7	10	4	14

and Ages, of the PATIENTS in the HOSPITALS FOR THE INSANE, &c., during the Year 1886.

Transferred, Died, and Escaped.												Remaining on 31 December, 1886.			Average numbers resident during the Year 1886.			Percentage of Recoveries on Admissions and Readmissions during the Year 1886.			Percentage of Patients relieved on Admissions and Readmissions during the Year 1886.			Percentage of Deaths on average numbers resident during the Year 1886.		
Transferred to other Hospitals or Licensed Houses.			Died.			Escaped and not recaptured within 28 days.			Total number discharged, died, and escaped.			M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
8	7	15	35	19	54	2	...	2	124	66	190	377	252	629	350	221	571	42'35	29'31	37'06	4'11	5'17	4'54	10'00	8'59	9'45
1	5	6	48	16	64	2	...	2	119	73	192	472	271	743	465	266	731	61'46	116'66	76'82	'91	'71	2'64	10'32	6'01	8'75
4	3	7	27	19	46	2	...	2	64	34	98	609	347	956	608	350	958	58'00	57'14	57'74	4'00	...	2'81	4'44	5'42	4'80
14	...	14	...	...	...	1	...	1	21	...	21	48	8	56	46	7	53	28'57	...	27'27	...	...	...	...	...	...
...	1	1	10	9	19	...	...	...	14	10	24	125	117	242	125	114	239	...	...	...	57'14	...	22'22	8'00	7'89	7'95
...	72	72	1	3	4	...	...	...	3	18	83	13	78	91	10	77	87	...	30'76	21'05	33'33	7'69	15'78	10'00	3'89	4'59
27	88	115	121	66	187	7	...	7	345	263	608	1644	1073	2717	1604	1035	2639	47'93	48'53	48'14	4'40	4'90	4'58	7'54	6'37	7'08

of the Patients.

Britain.						France.			Germany.			China.			Other Countries.			Total other Countries.			Total.					
Ireland.		Total.				M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
115	110	225	297	204	501	5	1	6	20	2	22	10	...	10	36	10	46	71	13	84	501	318	819			
143	124	267	340	224	564	4	3	7	25	3	28	22	...	22	43	4	47	94	10	104	591	344	935			
193	165	358	397	263	660	4	1	5	18	6	24	41	...	41	66	15	81	129	22	151	673	381	1054			
27	5	32	40	6	46	...	...	...	1	...	1	7	...	7	3	...	3	11	...	11	69	8	77			
4	6	10	21	18	39	...	...	...	...	...	...	...	...	...	3	1	4	3	1	4	139	127	266			
2	66	68	4	107	111	...	1	1	1	3	4	...	...	...	2	4	6	3	8	11	16	158	174			
484	476	960	1099	822	1921	13	6	19	65	14	79	80	...	80	153	34	187	311	54	365	1989	1336	3325			

the Patients.

30 to 40 years.			40 to 50 years.			50 to 60 years.			60 to 70 years.			70 to 80 years.			80 years and upwards.			Total.		
M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
161	76	237	133	89	222	75	39	114	24	23	47	4	13	17	...	1	1	501	318	819
161	72	233	146	95	241	103	56	159	51	38	89	20	4	24	5	5	10	591	344	935
126	77	203	194	91	285	179	90	269	73	55	128	42	30	72	9	4	13	673	381	1054
20	3	23	8	4	12	20	1	21	8	...	8	2	...	2	...	...	...	69	8	77
19	24	43	4	17	21	6	...	6	5	2	7	3	1	4	1	...	1	139	127	266
3	37	40	3	64	67	2	18	20	2	21	23	...	6	6	...	1	1	16	158	174
490	289	779	488	360	848	385	204	589	163	139	302	71	54	125	15	11	26	1989	1336	3325



## STATISTICS, 1886—POPULATION, &amp;c.

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## LUNACY—continued.

No. 64.—NUMBER of PATIENTS remaining in HOSPITAL for the CRIMINAL INSANE at PARRAMATTA and CRIMES for which they are detained—1883-1886.

Crime.	1883.			1884.			1885.			1886.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
Murder ... ..	18	2	20	18	3	21	21	3	24	20	3	23
Attempt to murder...	2	...	2	3	...	3	2	...	2	2	...	2
Manslaughter ... ..	1	...	1	1	...	1	1	...	1	2	...	2
Rape... ..	3	...	3	2	...	2	2	...	2	2	...	2
Indecent assault ... ..	1	...	1	1	...	1	2	...	2	2	...	2
Unnatural offence ... ..	1	...	1	1	...	1	1	...	1	1	...	1
Cutting and wounding, shooting with intent, &c...	10	2	12	12	2	14	8	2	10	8	3	11
Burglary and house-breaking ... ..	1	...	1	3	...	3	3	...	3	4	...	4
Sheep and horse stealing ... ..	2	...	2	3	...	3	2	...	2	2	...	2
Larceny and petty thefts ... ..	2	...	2	2	...	2	1	...	1	1	...	1
Arson and malicious burning ... ..	3	1	4	3	1	4	1	1	2	1	1	2
Attempting suicide... ..	...	1	1	...	1	1	1	1	2	1	1	2
Garotting ... ..	1	...	1	...	...	...	...	...	...	...	...	...
Vagrancy ... ..	2	...	2	1	...	1	3	...	3	2	...	2
Embezzlement ... ..	1	...	1	...	...	...	...	...	...	...	...	...
Uttering and forging ... ..	1	...	1	...	...	...	...	...	...	...	...	...
Obtaining money under false pretences ... ..	1	...	1	...	...	...	...	...	...	...	...	...
Total number ... ..	50	6	56	50	7	57	48	7	55	48	8	56

No. 65.—PERCENTAGE of DEATHS of INSANE PERSONS to average number resident in Hospitals, 1876-86.

Year.	Percentage of Deaths of Insane.			Year	Percentage of Deaths of Insane.		
	Males.	Females.	Total.		Males.	Females.	Total.
1876 ... ..	7'76	5'85	7'03	1882 ... ..	6'76	5'61	6'32
1877 ... ..	8'90	4'25	7'19	1883 ... ..	9'71	4'98	6'64
1878 ... ..	8'57	5'23	7'32	1884 ... ..	8'18	6'22	7'43
1879 ... ..	7'63	4'28	6'85	1885 ... ..	7'61	4'97	6'59
1880 ... ..	7'75	5'93	7'04	1886 ... ..	7'54	6'31	7'08
1881 ... ..	6'52	4'21	5'63	Mean ... ..	7'90	5'27	6'83

## VACCINATION.

No. 66.—VACCINATION in the Country during the years 1876 to 1886.

	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Under 1 year ...	679	1,774	802	1,243	832	4,389	366	154	1,109	326	229
1-5 ... ..	1,631	5,843	1,342	2,223	1,823	18,476	614	272	2,732	699	403
5-10 ... ..	966	4,326	894	1,515	2,044	20,993	601	169	2,594	650	372
10 and upwards...	.....	.....	.....	.....	.....	7,623	288	5	134	201	187
Total... ..	3,276	11,943	3,038	4,981	4,699	51,481	1,869	600	6,569	1,876	1,191

No. 67.—VACCINATION in the City and Suburbs from 1876 to 1886

	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Under 1 year ...	329	1,101	162	224	143	1,060	130	114	143	63	116
1-5 ... ..	703	2,960	275	331	227	3,386	164	130	341	96	190
5-10 ... ..	237	1,247	95	102	90	2,952	80	52	146	86	146
10 and upwards...	.....	.....	.....	.....	.....	1,340	6	.....	.....	.....	.....
Total... ..	1,269	5,308	532	657	460	8,738	380	296	630	245	452





## PART II.

## CRIME AND CIVIL JUSTICE.

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## APPREHENSIONS.

No. 1.—NUMBER and AGES of PERSONS APPREHENDED for various Classes of Offences during the Year 1886, and the manner in which the Cases were dealt with.

Offences.	Total Apprehensions.	Ages.							How disposed of.		
		Under 15.	15-20.	20-30.	30-40.	40-50.	50-60.	Over 60.	Dismissed.	Summarily Convicted.	Committed.
Against the person ... ..	3,043	14	268	1,360	729	448	163	61	747	1,919	377
Against property, with violence ... ..	261	10	41	113	55	25	13	4	88	13	160
Against property, without violence ... ..	4,974	283	702	1,966	1,061	564	240	158	1,445	2,819	710
Forgery and offences against the currency ... ..	158	6	20	57	39	17	7	12	20	1	137
Against good order, including drunkenness ... ..	38,557	484	1,778	10,524	10,307	8,614	4,450	2,400	4,169	34,352	36
Not included in the preceding ... ..	1,861	5	76	624	572	366	152	66	756	1,076	29
	48,854	802	2,885	14,644	12,763	10,034	5,025	2,701	7,225	40,180	1,449

NOTE.—The number of persons tried during the year was 1,613; of these, 1,594 were committed for trial in 1886. The number committed after arrest was 1,449, as shown above.

No. 2.—BIRTHPLACES and RELIGIONS of PERSONS APPREHENDED by the NEW SOUTH WALES POLICE—1886.

Offences.	Total Apprehensions.	Birthplaces.										Religions.											
		New South Wales.	Other Australian Colonies.	England.	Ireland.	Scotland.	Other British Possessions.	France.	Germany.	China.	Other Foreign Countries.	Church of England.	Presbyterians.	Wesleyans.	Independents.	Baptists.	Other Protestants.	Roman Catholics.	Jews.	Pagans.	Other Persuasions.	No Religion.	Unknown.
Against the person ... ..	3,043	1,189	197	624	538	170	64	23	54	43	141	1,161	228	51	1	12	61	1,356	20	48	11	89	5
Against property, with violence ... ..	261	102	36	76	13	12	6	2	2	1	11	123	22	6	...	1	1	94	3	4	...	6	1
Against property, without violence ... ..	4,974	2,071	445	1,013	730	233	84	32	84	55	227	2,113	339	99	2	13	70	2,128	45	66	16	76	7
Forgery and offences against the currency ... ..	158	71	17	34	14	4	...	2	4	1	11	85	3	3	...	1	2	55	3	5	...	1	...
Against good order ... ..	38,557	9,842	1,761	9,066	11,744	3,234	539	200	456	182	1,533	13,809	3,624	644	36	73	638	18,195	73	174	120	1,099	72
Not included above ... ..	1,861	473	94	530	400	124	34	13	45	34	114	820	169	40	2	5	47	682	4	31	14	35	12
Total ... ..	48,854	13,748	2,550	11,343	13,439	3,777	727	272	646	316	2,037	18,111	4,385	843	41	105	819	22,510	148	328	161	1,306	97







<b>FORGERY AND OFFENCES AGAINST THE CURRENCY.</b>																							
Forgery or uttering forged instruments	69	3	3	....	1	2	45	3	4	....	1	....	31	57	17	26	10	4	....	2	4	....	11
Coining, uttering, having, or putting off counterfeit coin	16	....	....	....	....	....	10	....	1	....	....	....	27	14	....	8	4	....	....	....	....	1	....
	85	3	3	....	1	2	55	3	5	....	1	....	158	71	17	34	14	4	....	2	4	1	11
<b>OFFENCES AGAINST GOOD ORDER.</b>																							
Furious or negligent driving or riding	21	3	....	....	....	1	23	....	....	....	3	....	51	25	4	12	4	3	1	....	1	....	1
Drunkenness	7,255	2,151	307	14	36	395	9,525	15	29	40	595	32	20,394	3,793	691	5,253	7,180	2,013	277	111	242	15	814
Drunkenness, habitual	21	10	1	....	2	....	77	....	1	....	1	....	113	27	2	16	49	13	4	....	....	....	2
Drunkenness, with disorderly conduct	1,944	495	92	3	13	105	2,892	8	22	32	180	17	5,803	1,612	254	1,254	1,781	423	93	26	80	13	267
Riotous or indecent behaviour	699	154	38	4	3	24	943	12	9	1	47	2	1,936	923	153	332	307	96	26	10	22	7	60
Using obscene, threatening, or abusive language	2,043	483	100	8	7	73	2,754	3	12	40	160	12	5,695	1,706	335	1,281	1,538	429	38	22	56	9	231
Indecently exposing the person	265	73	11	....	1	14	265	1	1	3	15	....	649	121	34	174	192	69	13	6	13	1	26
Being an idle and disorderly person	163	20	11	....	1	1	352	2	2	1	20	....	578	290	63	69	113	20	6	5	2	2	8
Keeping a common brothel or disorderly house	4	....	....	....	....	....	2	....	....	....	....	....	6	2	1	2	1	....	....	....	....	....	....
Breach of Sunday Observance laws	7	....	....	....	....	....	1	....	....	....	....	....	8	3	2	3	....	....	....	....	....	....	....
Cruelty to animals	51	5	3	....	1	....	64	2	4	....	4	3	137	80	6	17	10	4	1	1	....	....	....
Gambling	58	4	5	....	1	6	58	12	61	1	23	....	229	61	19	36	8	3	1	2	2	....	....
Wife and child desertion	215	38	8	....	1	3	153	4	1	2	11	3	439	183	41	118	45	21	7	3	1	1	19
Vagrancy, and persons taken charge of for protection	625	119	28	2	4	5	703	2	12	....	25	1	1,526	417	71	388	486	96	19	9	19	19	52
Industrial Schools Act	154	14	7	1	2	4	129	1	....	....	3	....	315	260	32	11	3	3	1	2	1	....	....
Deserting from lawful service	106	19	17	1	....	2	73	2	13	....	3	....	237	125	17	27	26	11	1	....	8	11	11
Illegally pawning	11	17	....	....	....	....	1	....	....	....	....	....	29	....	1	9	2	17	....	....	....	....	....
Other offences against Police Acts	162	19	16	3	1	5	180	8	7	....	9	2	412	214	35	59	49	13	1	3	9	11	18
	18,309	3,624	644	36	73	638	18,195	73	174	120	1,099	72	38,557	9,842	1,761	9,066	11,744	3,234	539	200	456	182	1,533
<b>OFFENCES NOT INCLUDED IN THE PRECEDING.</b>																							
Lunacy	397	90	22	2	2	24	342	1	18	6	10	11	925	209	59	274	217	62	14	6	27	23	34
Disobeying summons	126	20	4	....	1	3	119	1	3	2	6	....	285	127	8	56	62	15	2	1	4	1	9
Breach of Tramway By-laws	9	1	....	....	....	1	6	....	1	....	1	....	19	7	....	5	3	1	....	....	....	2	1
"    Licensing Act	48	9	2	....	1	3	43	1	4	1	6	1	119	31	5	32	32	4	4	....	3	4	4
"    Merchant Shipping Act	38	8	4	....	....	11	19	....	....	....	1	....	81	15	2	24	12	9	1	2	2	....	14
Perjury	4	....	....	....	....	....	3	....	....	....	....	....	4	4	1	1	....	....	....	....	....	....	1
Refusing to pay fare	27	9	1	....	....	1	22	1	....	....	....	....	61	11	3	24	8	9	....	....	....	....	5
Breach of Railway Act	34	7	4	....	....	....	36	....	....	1	3	....	87	19	6	24	27	4	....	1	3	1	2
Disobeying lawful commands	32	4	....	....	1	2	22	....	....	....	2	....	63	7	....	32	11	3	1	....	1	....	8
Absent without leave from ship	29	5	....	....	....	....	17	....	1	....	2	....	54	....	....	20	10	10	5	1	....	....	8
Wilful disobedience on board ship	18	8	2	....	....	....	12	....	....	3	3	....	46	....	....	11	3	1	4	....	3	....	24
Breach of Passenger Act	5	2	....	....	....	....	2	....	....	....	1	....	10	2	....	7	1	....	....	....	....	....	....
"    Printers Act	1	....	....	....	....	....	1	....	....	....	....	....	2	....	1	1	....	....	....	....	....	....	....
"    Public Instruction Act	4	....	1	....	....	....	4	....	....	....	....	....	9	5	....	2	2	....	....	....	....	....	....
"    Impounding Act	1	....	....	....	....	....	1	....	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....
"    Dog Act	1	....	....	....	....	....	1	....	....	....	....	....	2	1	....	....	....	....	....	....	....	....	....
"    Enclosed Land Act	3	....	....	....	....	....	....	....	....	....	....	....	3	1	....	2	....	....	....	....	....	....	....
"    Land Regulation Act	....	....	....	....	....	....	1	....	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....
"    Master and Servants Act	2	....	....	....	....	....	....	....	....	....	....	....	2	1	1	....	....	....	....	....	....	....	....
"    Municipalities Act	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
"    Hawkers Act	3	....	....	....	....	....	2	....	4	1	....	....	10	1	....	3	1	....	1	....	....	2	2
"    Nuisance Act	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
Escaping from lawful custody	5	1	....	....	....	....	2	....	....	....	....	....	8	2	....	....	....	....	....	....	....	....	....
Attempting to steal	2	1	....	....	....	....	6	....	....	....	....	....	9	3	1	1	3	1	....	....	....	....	....
Disturbing a congregation	3	....	....	....	....	....	4	....	....	....	....	....	7	4	1	2	....	....	....	....	....	....	....
Misappropriating a valuable security	1	....	....	....	....	....	1	....	....	....	....	....	1	....	....	1	....	....	....	....	....	....	....
Polluting water	8	....	....	....	....	....	3	....	....	....	....	....	11	3	....	3	2	1	....	....	....	....	1
Abduction	5	....	....	....	....	....	6	....	....	....	....	....	11	8	3	....	....	....	....	....	....	....	....
Surrender by bail	2	1	....	....	....	....	2	....	....	....	....	....	5	2	1	....	1	1	....	....	....	....	....
Depositing nightsoil in a public place	....	1	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....
Conspiracy	4	....	....	....	....	....	....	....	....	....	....	....	4	3	....	1	....	....	....	....	....	....	....
Personating at election	1	1	....	....	....	....	....	....	....	....	....	....	2	....	....	1	1	....	....	....	....	....	....
Attempting to procure abortion	2	....	....	....	....	....	....	....	....	....	....	....	2	1	....	1	....	....	....	....	....	....	....
Defamatory libel	....	....	....	....	....	....	1	....	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....
Fraudulent insolvency	1	....	....	....	....	....	1	....	....	....	....	....	2	1	....	....	....	....	....	....	....	....	1
Contempt of Court	....	....	....	....	....	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
Dog-stealing	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....	....	....	....	....	....	....
Absconding from bail	1	....	....	....	....	....	1	....	....	....	....	....	2	1	....	1	....	....	....	....	....	....	....
Fugitive offender	....	....	....	....	....	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
Breach of Public Worship Act	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
Naval deserter	....	....	....	....	....	....	2	....	....	....	....	....	2	....	....	....	1	....	....	....	....	....	....
	820	169	40	2	5	47	682	4	31	14	35	12	1,861	473	94	530	400	124	34	13	45	34	114
<b>RECAPITULATION.</b>																							
Offences against the person	1,161	228	51	1	12	61	1,356	20</															



STATISTICS, 1886—CRIME AND CIVIL JUSTICE.

APPREHENSIONS—continued.

No. 5.—DEGREE of EDUCATION of PERSONS ARRESTED, 1876-85.

Year.	Neither read nor write.	Read only.	Read and write.	Superior Education.	Total Arrests.
1876	3,841	1,320	21,832	.....	26,993
1877	3,842	1,269	23,238	.....	28,349
1878	4,017	1,529	25,172	.....	30,718
1879	3,493	1,230	27,984	153	32,860
1880	4,065	1,197	30,350	162	35,774
1881	4,034	1,123	36,083	162	41,402
1882	4,059	964	34,553	182	39,758
1883	3,859	1,058	38,071	189	43,177
1884	3,871	1,096	41,030	202	46,199
1885	3,925	937	43,185	214	48,261
1886	4,142	916	43,588	208	48,854

No. 6.—PERCENTAGE of EACH DEGREE of EDUCATION to Total Arrests, 1876-85.

Year.	Neither read nor write.	Read only.	Read and write, and Superior Education.	Year.	Neither read nor write.	Read only.	Read and write, and Superior Education.
1876	14'22	4'89	80'89	1882	10'20	2'42	87'38
1877	13'55	4'47	81'98	1883	8'93	2'45	88'62
1878	13'07	4'97	81'96	1884	8'37	2'37	89'26
1879	10'62	3'74	85'64	1885	8'13	1'94	89'93
1880	11'36	3'34	85'30	1886	8'49	1'87	89'64
1881	9'74	2'71	87'55				

No. 7.—EDUCATION, AGES, and BIRTHPLACES of PERSONS ARRESTED for DRUNKENNESS, 1879-86.

Year.	Total Arrests.	Education.				Ages.							Birthplaces.									
		Neither read nor write.	Read only.	Read and write.	Superior Education.	Under 15 years.	15 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	Over 60 years.	New South Wales.	Other Australian Colonies.	England.	Ireland.	Scotland.	Other British Possessions.	France.	Germany.	China.	Other Foreign Countries.
1879	17,715	1,593	563	15,500	59	12	632	4,417	5,432	3,996	1,959	1,267	3,481	395	4,614	6,503	1,606	233	141	214	50	478
1880	18,777	1,796	491	16,431	59	10	547	4,931	5,770	4,111	2,153	1,255	3,733	357	4,983	6,866	1,615	178	126	230	22	567
1881	22,560	1,763	418	20,324	53	18	538	5,870	6,616	5,384	2,630	1,504	4,523	551	5,958	8,259	1,860	275	203	303	56	572
1882	21,393	1,831	422	19,074	66	9	464	5,182	6,152	5,242	2,700	1,644	4,397	590	5,473	7,324	2,077	109	142	308	35	878
1883	23,178	1,698	492	20,909	79	17	533	5,958	6,802	5,441	2,876	1,551	4,954	630	5,748	8,224	1,968	266	197	301	39	801
1884	24,438	1,639	507	22,202	90	21	557	6,236	6,983	6,046	3,068	1,587	5,841	829	5,897	8,285	2,286	303	146	230	29	859
1885	26,291	1,822	459	23,914	96	13	554	6,820	7,722	6,474	2,991	1,717	5,479	1,033	6,734	8,866	2,457	304	132	329	40	857
1886	26,310	1,844	424	23,961	81	5	548	6,551	7,698	6,582	3,344	1,582	5,432	947	6,528	9,010	2,449	374	137	322	28	1,083

No. 8.—ARRESTS for DRUNKENNESS: CONVICTIONS and DISCHARGES, 1876-86.

Year.	Arrests.	Convictions.	Discharges.	Percentage of Convictions to Total Arrests.	Percentage of Discharges to Total Arrests.	Percentage of Convictions to whole Population.
1876...	16,171	12,517	3,654	77'4	22'6	2'07
1877...	16,696	13,479	3,217	80'7	19'3	2'14
1878...	17,224	14,039	2,385	84'9	15'1	2'22
1879...	17,715	15,394	2,321	86'8	13'2	2'22
1880...	18,777	15,996	2,781	85'1	14'9	2'20
1881...	22,560	20,748	1,812	91'9	8'1	2'72
1882...	21,393	18,593	2,800	86'9	13'1	2'34
1883...	23,178	20,991	2,187	90'5	9'5	2'52
1884...	24,438	21,957	2,481	89'8	10'2	2'49
1885...	26,291	23,782	2,509	90'4	9'6	2'55
1886...	26,310	23,758	2,552	90'3	9'7	2'43

No. 9.—NUMBER of PERSONS ARRESTED for DRUNKENNESS for the period 1876-86, with PERCENTAGE to TOTAL POPULATION.

Year.	Total Arrests.	Males.	Females.	Percentage of Total Arrests to whole Population.	Percentage of Males arrested to Total Male Population.	Percentage of Females arrested to Total Female Population.
1876	16,171	12,546	3,625	2'67	3'82	1'31
1877	16,696	12,726	3,970	2'65	3'72	1'38
1878	17,224	13,166	4,108	2'61	3'67	1'37
1879	17,715	13,574	4,141	2'56	3'61	1'31
1880	18,777	14,801	3,976	2'58	3'72	1'21
1881	22,560	18,200	4,360	2'96	4'36	1'26
1882	21,393	17,574	3,819	2'69	4'03	1'06
1883	23,178	19,244	3,934	2'77	4'21	1'04
1884	24,438	20,261	4,177	2'77	4'19	1'04
1885	26,291	21,944	4,347	2'82	4'29	1'03
1886	26,310	21,879	4,431	2'69	4'06	1'01

## STATISTICS, 1886—CRIME AND CIVIL JUSTICE.

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APPREHENSIONS—*continued.*

No. 10.—NUMBER of PERSONS ARRESTED for HABITUAL DRUNKENNESS, with PERCENTAGE of ARRESTS to total Arrests for Drunkenness, 1879-86.

Year.	No.	Percentage of Arrests to total Arrests for Drunkenness.	Year.	No.	Percentage of Arrests to total Arrests for Drunkenness.
1879	136	0·76	1883	100	0·43
1880	107	0·56	1884	108	0·44
1881	101	0·54	1885	116	0·44
1882	141	0·65	1886	113	0·43

## DISPOSAL OF CASES BROUGHT BEFORE COURTS.

No. 11.—NUMBER of PERSONS brought before the Magistrates' Courts, and manner in which they were disposed of.

Offences.	Total number of Persons brought before the Magistrates' Courts.	Number of Persons.			
		Discharged for want of prosecution, or for want of evidence.	Whose cases were dismissed on the merits.	Summarily convicted.	Committed for trial.
Against the person .....	10,135	3,071	1,429	5,187	448
Against property .....	7,535	1,743	1,139	3,676	977
Other cases .....	63,833	6,809	3,450	53,405	169
(Not including cases brought up for lunacy.)					
Total number of persons summoned or apprehended ... ..	81,503	11,623	6,018	62,268	1,594

NOTE.—Includes cases heard *ex parte*, but not civil cases.

No. 12.—NUMBER of SUMMARY CONVICTIONS and KIND of PUNISHMENTS inflicted for various Offences by the Benches of Magistrates in 1886.

Punishment.	Total Number of Punishments.	For Offences against the Person.	For Offences against Property.	For other Offences.
Fine .....	35,280	3,155	1,219	30,906
Imprisonment, in lieu of fine or surety .....	20,702	1,067	450	19,185
Peremptory imprisonment .....	4,254	545	1,850	1,859
Whipping .....	1	1	.....	.....
Imprisonment with whipping .....	3	2	.....	1
Bound over with or without sureties .....	417	249	36	132
Other punishments .....	1,611	168	121	1,322
Total .....	62,268	5,187	3,676	53,405

NOTE.—Includes summons cases.

No. 13.—OFFENCES, APPREHENSIONS, CONVICTIONS, and ACQUITTALS, for the period 1876-86.

	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	
The number of offences reported to the Police .....	19,111	21,604	24,649	23,479	26,127	28,806	29,125	31,162	35,548	34,210	37,568	
The number of persons apprehended by the Police, or summoned before the Magistrates .....	45,105	47,739	53,325	53,870	57,784	66,600	65,936	72,231	75,680	77,092	81,503	
The number of summary convictions ...	1. For offences against the person .....	3,931	4,567	5,014	4,885	5,151	5,239	5,350	6,257	5,810	5,159	5,187
	2. For offences against property .....	2,694	2,788	3,087	3,217	3,286	3,453	4,014	3,395	3,594	3,649	3,676
	3. For other offences ...	23,779	25,648	29,823	30,726	33,768	42,438	40,762	45,811	48,502	50,537	53,405
The number of convictions in the Superior courts .....	1. For offences against the person .....	184	228	188	210	204	164	188	239	289	206	284
	2. For offences against property .....	430	448	555	651	772	669	589	608	599	525	637
	3. For other offences ...	208	153	216	229	172	225	288	161	40	54	36
*The number of persons acquitted .....	1. In the inferior Courts	5,575	5,431	5,178	5,688	5,223	5,569	5,514	5,840	6,219	6,004	6,018
	2. In the superior Courts	377	369	549	418	404	400	521	450	482	447	433

\* Not including persons discharged for want of evidence or want of prosecution

DISPOSAL OF CASES BROUGHT BEFORE COURTS—*continued.*

No. 14.—NUMBER of CASES at each of the COURTS of QUARTER SESSIONS during the Year 1886.

	Felonies.				Misdemeanours.				Total.			
	Committals.	Trials.	Convictions.	Acquittals.	Committals.	Trials.	Convictions.	Acquittals.	Committals.	Trials.	Convictions.	Acquittals.
<b>Metropolitan and Hunter District—</b>												
Sydney ... ..	525	426	292	134	100	92	81	11	625	518	373	145
Campbelltown ... ..	5	3	1	2	2	2	2	...	7	5	3	2
Maitland ... ..	48	47	29	18	13	9	8	1	61	56	37	19
Muswellbrook ... ..	4	3	...	3	1	1	...	1	5	4	...	4
Parramatta ... ..	26	26	18	8	5	5	4	1	31	31	22	9
Singleton ... ..	4	3	1	2	1	1	...	1	5	4	1	3
Windsor ... ..	6	6	3	3	3	3	3	...	9	9	6	3
<b>Total ... ..</b>	<b>618</b>	<b>514</b>	<b>344</b>	<b>170</b>	<b>125</b>	<b>113</b>	<b>98</b>	<b>15</b>	<b>743</b>	<b>627</b>	<b>442</b>	<b>185</b>
<b>Southern District—</b>												
Bega ... ..	3	2	2	...	6	5	5	...	9	7	7	...
Bombala ... ..	9	9	3	6	...	...	...	...	9	9	3	6
Braidwood ... ..	6	4	4	...	...	...	...	...	6	4	4	...
Cooma ... ..	29	28	15	13	1	1	1	...	30	29	16	13
Goulburn ... ..	28	24	16	8	16	16	10	6	44	40	26	14
Queanbeyan ... ..	13	11	3	8	2	1	1	...	15	12	4	8
Wollongong ... ..	18	15	6	9	3	2	2	...	21	17	8	9
Yass ... ..	12	9	5	4	2	2	2	...	14	11	7	4
<b>Total ... ..</b>	<b>118</b>	<b>102</b>	<b>54</b>	<b>48</b>	<b>30</b>	<b>27</b>	<b>21</b>	<b>6</b>	<b>148</b>	<b>129</b>	<b>75</b>	<b>54</b>
<b>Northern District—</b>												
Armidale ... ..	6	6	3	3	2	2	2	...	8	8	5	3
Bingera ... ..	3	3	1	2	1	1	1	...	4	4	2	2
Casino ... ..	2	1	1	...	...	...	...	...	2	1	1	...
Glen Innes ... ..	8	5	4	1	1	1	1	...	9	6	5	1
Grafton ... ..	6	5	3	2	2	2	1	1	8	7	4	3
Inverell ... ..	24	17	10	7	4	4	4	...	28	21	14	7
Kempsey ... ..	7	7	4	3	...	...	...	...	7	7	4	3
Lismore ... ..	12	11	7	4	2	2	2	...	14	13	9	4
Moree ... ..	3	3	2	1	3	2	1	1	6	5	3	2
Port Macquarie ... ..	3	2	1	1	1	1	1	...	4	3	2	1
Tamworth ... ..	9	8	5	3	8	8	8	...	17	16	13	3
Taree ... ..	1	1	...	1	...	...	...	...	1	1	...	1
Tenterfield ... ..	2	2	2	...	1	1	1	...	3	3	3	...
Warialda ... ..	4	4	4	...	...	...	...	...	4	4	4	...
<b>Total ... ..</b>	<b>90</b>	<b>75</b>	<b>47</b>	<b>28</b>	<b>25</b>	<b>24</b>	<b>22</b>	<b>2</b>	<b>115</b>	<b>99</b>	<b>69</b>	<b>30</b>
<b>Western District—</b>												
Bathurst ... ..	23	22	15	7	11	7	7	...	34	29	22	7
Cowra ... ..	3	3	2	1	...	...	...	...	3	3	2	1
Dubbo ... ..	40	35	27	8	...	...	...	...	40	35	27	8
Forbes ... ..	8	8	5	3	1	1	1	...	9	9	6	3
Mudgee ... ..	8	3	3	...	1	1	1	...	9	4	4	...
Orange ... ..	33	26	20	6	3	3	3	...	36	29	23	6
Wellington ... ..	13	10	9	1	1	1	1	...	14	11	10	1
<b>Total ... ..</b>	<b>128</b>	<b>107</b>	<b>81</b>	<b>26</b>	<b>17</b>	<b>13</b>	<b>13</b>	<b>...</b>	<b>145</b>	<b>120</b>	<b>94</b>	<b>26</b>
<b>South-Western District—</b>												
Albury ... ..	11	10	8	2	6	6	4	2	17	16	12	4
Cootamundra ... ..	11	10	9	1	...	...	...	...	11	10	9	1
Deniliquin ... ..	6	5	3	2	4	4	3	1	10	9	6	3
Grenfell ... ..	1	1	1	...	...	...	...	...	1	1	1	...
Gundagai ... ..	7	7	4	3	1	1	1	...	8	8	5	3
Hay ... ..	21	18	12	6	2	2	1	1	23	20	13	7
Wagga Wagga ... ..	26	24	18	6	2	2	2	...	28	26	20	6
Young ... ..	8	8	5	3	3	3	3	...	11	11	8	3
<b>Total ... ..</b>	<b>91</b>	<b>83</b>	<b>60</b>	<b>23</b>	<b>18</b>	<b>18</b>	<b>14</b>	<b>4</b>	<b>109</b>	<b>101</b>	<b>74</b>	<b>27</b>
<b>North-Western District—</b>												
Bourke ... ..	20	16	12	4	4	4	4	...	24	20	16	4
Coonabarabran ... ..	7	4	3	1	...	...	...	...	7	4	3	1
Coonamble ... ..	5	5	4	1	...	...	...	...	5	5	4	1
Gunnedah ... ..	7	7	6	1	1	1	...	1	8	8	6	2
Hillston ... ..	1	...	...	...	...	...	...	...	1	...	...	...
Murrurundi ... ..	1	1	...	1	1	1	...	...	2	1	...	1
Narrabri ... ..	5	4	2	2	1	1	1	...	6	5	3	2
Walgett ... ..	15	13	11	2	1	1	1	...	16	14	12	2
Wentworth ... ..	3	2	1	1	1	1	...	1	4	3	1	2
Wilcannia ... ..	32	28	16	12	8	7	1	6	40	35	17	18
<b>Total ... ..</b>	<b>96</b>	<b>80</b>	<b>55</b>	<b>25</b>	<b>17</b>	<b>15</b>	<b>7</b>	<b>8</b>	<b>113</b>	<b>95</b>	<b>62</b>	<b>33</b>
<b>GRAND TOTAL ... ..</b>	<b>1,141</b>	<b>961</b>	<b>641</b>	<b>320</b>	<b>232</b>	<b>210</b>	<b>175</b>	<b>35</b>	<b>1,373</b>	<b>1,171</b>	<b>816</b>	<b>355</b>



DISPOSAL OF CASES BROUGHT BEFORE COURTS—continued.

No. 16.—NUMBER and DESCRIPTION of OFFENCES for which persons were tried at the COURTS of QUARTER SESSIONS during the Year 1886.

OFFENCES.	Metropolitan and Hunter.			Southern District.			Northern District.			Western District.			South-Western District.			North-Western District.			Total.		
	Committals.	Trials.	Convictions.	Committals.	Trials.	Convictions.	Committals.	Trials.	Convictions.	Committals.	Trials.	Convictions.	Committals.	Trials.	Convictions.	Committals.	Trials.	Convictions.	Committals.	Trials.	Convictions.
	Acquittals.			Acquittals.			Acquittals.			Acquittals.			Acquittals.			Acquittals.			Acquittals.		
FELONIES.																					
Robbery	4	4	4																4	4	4
Robbery with violence	35	33	11	22															40	38	14
Robbery in company				2															4	2	2
Robbery being armed								1	1										1	1	1
Garotting	2	1	1																2	1	1
Larceny	165	134	92	42	22	22	11	11	20	16	13	3	17	17	11	6	9	9	5	253	214
Stealing from the person	36	31	14	17	5	4			4	4	4	1	1	1	1	1	1	1	2	62	56
Stealing in a dwelling-house	26	25	22	3	1	1	1	1	3	3	3	3	3	3	3	3	3	3	2	41	40
Receiving stolen property	8	8	8	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	1	19	19
Embezzlement	21	15	10	5	3	3	1	2	3	2	2	2	2	2	2	2	2	2	2	39	29
Obtaining property by false pretences	25	21	14	7	8	6	6	6	5	4	4	4	21	18	14	4	12	11	9	2	78
Forgery	53	41	34	7	7	6	6	1	9	6	6	12	19	14	12	2	17	15	12	3	115
Arson	3	3	2	1	3	2	2	1	5	3	3	2	1	1	1	1	1	1	1	13	10
Burglary	4	3	3	2	2	2	2	1	3	1	1	1	3	1	1	1	1	1	4	13	10
Housebreaking	56	40	37	3	5	4	4	2	3	2	2	2	6	6	2	4	10	9	4	80	61
Entering a dwelling at night with intent to commit felony therein	2	2	2		1															3	2
Being found at night with housebreaking implements in possession	4	3	3																	4	3
Horse stealing	14	13	4	9	11	10	4	4	14	11	9	2	9	6	6	5	5	5	15	14	13
Cattle-stealing	4	3	3	1	13	8	4	4	2	2	2	2	1	1	1	1	1	1	1	68	59
Sheep-stealing	1	1	1	1	13	6	7	3	3	3	3	3	10	7	5	2	4	3	3	20	15
Wounding with intent to do grievous bodily harm	8	7	5	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	11	10
Maliciously inflicting grievous bodily harm	27	21	15	6	5	3	1	2	1	1	1	1	4	3	3	5	4	3	1	44	34
Maliciously wounding cattle	2	1	1	3	3	3	3	2	2	2	2	1	1	1	1	1	1	1	1	11	10
Shooting with intent to do grievous bodily harm	10	8	8	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	1	12	10
Bigamy	4	2	1	1	3	2							2	2	2	2	2	2	1	9	6
Perjury	4	2	1	1	3	2							2	2	2	2	2	2	1	9	6
Making a false statement for insertion in Register of Births, Deaths, or Marriages	4	4	3	1									1	1	1	1	1	1	1	6	5
Sodomy	4	4	3	1					1	1	1	1	1	1	1	1	1	1	2	5	4
Bestiality	8	8	5	3					1	1	1	1	1	1	1	1	1	1	2	10	8
Assault with intent to rob	16	15	5	10	2	2	1	1				1	1	1	1	1	1	1	1	19	18
Assault with intent to commit rape	12	10	4	6	1	1	1	1	2	2	2	2							15	13	
Assault, indecent, on a girl under 14 years of age									1	1	1	1							2	2	
Assault with intent carnally to know a girl under 10 years of age					2	1	1	1	1	1	1	1							2	2	
Indecent assault on a male person					1	1	1	1											1	1	
Assault on wife, occasioning actual bodily harm	4	3	1	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	8	7	
Assault, occasioning actual bodily harm	4	4	4										1	1	1	1	1	1	5	5	
Manslaughter	47	44	33	11					4	4	2	2	3	2	1	1	1	1	1	57	52
Maliciously wounding	47	44	33	11					4	4	2	2	3	2	1	1	1	1	1	57	52
Shooting at with intent to murder					1	1	1	1	1	1	1	1							2	2	
Attempting to murder									1	1	1	1							1	1	
Attempt to discharge loaded firearms with intent, &c.													1	1	1	1	1	1	1	1	
Conspiracy to defraud	1												1	1	1	1	1	1	1	1	
Fraudulently appropriating property												1	1	1	1	1	1	1	1	1	
Malicious injury to property	5	3	3									2	2	2	2	2	2	2	1	8	
Attempt to commit arson	1	1	1																1	1	
Attempt to set fire to a vessel	1	1	1																1	1	
Maliciously setting fire to a fence												2	2	2	2	2	2	2	3	3	
Maliciously setting fire to grass													2	2	2	2	2	2	2	2	
Maliciously destroying property in process of manufacture									1	1	1	1							1	1	
Falsely personating with intent to obtain property									1	1	1								1	1	
Sending a letter threatening to destroy property									1	1	1								1	1	
Having in possession, without lawful excuse, instruments for making spurious coin																			1	1	
Wounding with intent to prevent lawful detainer	1	1	1																1	1	
TOTAL FELONIES	618	514	344	170	118	102	54	48	90	75	47	28	128	107	81	26	91	83	60	23	96
MISDEMEANOURS.																					
Assault	20	20	18	2	8	7	7	3	3	3	3	2	2	2	2	2	2	2	2	36	34
Assault on constable	1	1	1						1	1	1	1	4	3	3	2	2	2	1	1	2
Assault, indecent	4	4	3	1	2	1	1						1	1	1	1	1	1	2	2	
Attempting to commit felony	11	9	6	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	
Attempting to commit suicide	29	23	27	1	3	3	3	1	6	6	5	1	2	1	1	6	6	6	1	49	
Abduction	3	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8	
Concealing birth	4	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	
Escape	1	1	1		3	3	3	3	3	3	3	3	1	1	1	1	1	1	1	8	
Illegally pawning	18	18	18																	18	
Keeping a bawdy house	5	5	5																5	4	
Personating at an election	1	1	1																1	1	
Riot	1	1	1		5	5	5	5	5	5	5	5	3	3	3	3	3	3	3	6	
Unlawfully using cattle					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10	
Uttering counterfeit coin	15	12	9	3	2	2	2	2	2	2	2	2	1	1	1	1	1	1	21	17	
Indecent exposure					1	1	1	1	1	1	1	1							2	2	
Wife desertion																			1	1	
Disobeying an order of Court													3	3	3	3	3	3	1	1	
Label									1	1	1	1	1	1	1	1	1	1	1	4	
Fraudulent insolvency	1	1	1		1	1	1	1					1	1	1	1	1	1	1	1	
Attempt to obtain property by false pretences	1	1	1																1	1	
Fraudulently retaining property					1	1	1	1											1	1	
Illegally maintaining a lottery	3	3	3																3	3	
Disturbing a congregation	7	4	1	3															7	4	
TOTAL NUMBER OF MISDEMEANOURS	125	113	93	15	30	27	21	6	26	24	22	2	17</								

## STATISTICS, 1886—CRIME AND CIVIL JUSTICE.

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## DISPOSAL OF CASES BROUGHT BEFORE COURTS—continued.

## No. 17.—RESULTS OF INDICTMENTS in the SUPREME and CIRCUIT COURTS and COURTS OF QUARTER SESSIONS.

How the Cases tried in the Superior Courts ended.	Total.	Murder other than Wife and Child Murder.	The Returns below include the Indictments for Attempts and Conspiracies to Commit the several Offences.												
			Manslaughter.	Attempt at Murder.	Wife Murder.	Child Murder.	Concealment of Birth.	Abortion.	Rape.	Unnatural Crimes.	Other Offences against the Person.	Malicious injuries to Property.	Robbery with violence.	Other Offences against Property.	Miscellaneous Offences.
<b>Supreme and Circuit Courts—</b>															
Judgment for the Crown ... ..	141	4	11	3	1	2	1	...	*12	5	27	3	...	63	9
Judgment for the prisoner ... ..	78	3	9	2	...	4	2	...	8	1	8	3	1	30	7
Cases failing for want of prosecution ... ..	17	...	...	...	...	...	...	2	3	...	2	...	...	8	2
Prisoner found insane ... ..	4	3	...	...	...	1	...	...	...	...	...	...	...	...	...
<b>Courts of Quarter Sessions—</b>															
Judgment for the Crown ... ..	816	...	...	...	...	5	...	...	**9	7	183	12	14	559	27
Judgment for the prisoner ... ..	355	...	5	...	...	1	...	...	**10	5	60	12	24	221	17
Cases failing for want of prosecution ... ..	195	...	...	...	...	...	...	...	1	31	5	2	141	15	
Prisoner found insane ... ..	7	...	...	...	...	...	...	...	...	2	1	...	4	...	
<b>SUMMARY :—</b>															
Judgment for the Crown ... ..	957	4	11	3	1	2	6	...	*21	12	210	15	14	622	36
Judgment for the prisoner ... ..	433	3	14	2	...	4	3	...	18	6	68	15	25	251	24
Cases failing for want of prosecution ... ..	212	...	...	...	...	...	...	2	3	1	33	5	2	149	17
Prisoner found insane ... ..	11	3	...	...	...	1	...	...	...	...	2	1	...	4	...
<b>GENERAL TOTAL</b> ... ..	<b>1,613</b>	<b>10</b>	<b>25</b>	<b>5</b>	<b>1</b>	<b>7</b>	<b>9</b>	<b>2</b>	<b>42</b>	<b>19</b>	<b>313</b>	<b>36</b>	<b>41</b>	<b>1,026</b>	<b>77</b>

\* Nine convicted together. \*\* Attempts at.  
NOTE.—Where two or more persons have been committed for the same offence, they have been entered as separate cases.

## No. 18.—NUMBER OF CONVICTIONS in the SUPREME and CIRCUIT COURTS and COURTS OF QUARTER SESSIONS, for the period 1876-86.

Year.	Felonies.			Misdemeanours.			Total Number of Convictions.
	Supreme and Circuit Courts.	Courts of Quarter Sessions.	Total.	Supreme and Circuit Courts.	Courts of Quarter Sessions.	Total.	
1876	163	439	602	58	150	208	810
1877	133	418	551	51	215	266	817
1878	188	465	653	88	245	333	986
1879	176	572	748	66	276	342	1,090
1880	142	674	816	58	278	336	1,152
1881	116	618	734	66	266	332	1,066
1882	127	587	714	44	307	351	1,065
1883	91	611	702	47	263	310	1,012
1884	105	598	703	50	174	224	927
1885	103	524	627	47	111	158	785
1886	110	641	751	31	175	206	957

## No. 19.—NUMBER OF PERSONS INDICTED in the SUPREME and CIRCUIT COURTS for some of the most prominent Offences during each of the Years 1876-86.

Offence.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Murder other than wife and child murder ... ..	17	9	17	12	19	8	8	10	15	18	10
Manslaughter ... ..	19	14	13	14	9	26	13	7	20	12	20
Attempt at murder ... ..	7	6	9	13	5	*4	10	5	14	10	5
Wife murder ... ..	...	...	...	...	...	...	...	...	...	...	1
Child murder ... ..	...	1	...	1	...	1	...	...	3	...	7
Concealment of birth ... ..	2	5	4	1	4	3	2	2	...	1	3
Abortion ... ..	...	...	1	...	...	...	...	...	...	5	2
Rape ... ..	17	15	22	17	16	16	20	6	13	6	23
Unnatural crimes ... ..	4	8	17	16	10	10	9	...	7	8	6
Other offences against the person ... ..	36	44	68	39	46	19	20	16	46	59	37
Malicious injuries to property ... ..	...	11	7	4	5	13	14	6	18	6	6
Robbery with violence ... ..	10	18	7	11	16	2	6	2	7	2	1
Other offences against property ... ..	...	8	19	6	20	5	2	5	123	98	101
Miscellaneous offences ... ..	247	166	250	201	114	137	150	99	19	26	18
<b>Total</b> ... ..	<b>359</b>	<b>305</b>	<b>434</b>	<b>335</b>	<b>264</b>	<b>244</b>	<b>254</b>	<b>158</b>	<b>285</b>	<b>251</b>	<b>240</b>

\* Two charged with attempt to commit suicide.  
NOTE.—The Criminal Law Amendment Act came into force on 1st July, 1882.

DISPOSAL OF CASES BROUGHT BEFORE COURTS—continued.

No. 20.—NUMBER OF PERSONS INDICTED, for some of most prominent Offences at Courts of Quarter Sessions during each of the Years 1876-86.

Nature of Offence.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Robbery with violence ... ..	26	17	47	19	27	41	36	40	28	24	40
Stealing from the person ... ..	68	115	128	101	139	104	108	115	67	69	62
Stealing in a dwelling ... ..	22	28	31	50	65	55	60	44	35	48	41
Larceny ... ..	275	251	290	306	375	285	296	358	256	225	253
Forgery and uttering ... ..	57	53	58	104	75	73	91	67	87	83	115
Embezzlement ... ..	22	20	34	29	32	35	56	41	34	17	39
Horse-stealing ... ..	92	90	89	133	143	127	124	110	104	89	68
Cattle-stealing ... ..	40	18	38	29	28	28	29	32	16	38	20
Perjury ... ..	9	12	14	9	18	11	26	16	12	3	9
Obtaining money, &c., by false pretences...	79	87	99	116	102	100	118	66	121	84	78
Assault ... ..	13	30	25	39	47	38	48	47	59	27	36
Attempt to commit suicide... ..	30	30	38	39	30	16	34	52	56	45	49
Wounding, unlawfully, maliciously, &c. ...	52	92	58	66	64	41	72	43	47	34	57

NOTE.—The Criminal Law Amendment Act came into force on 1st July, 1882.

No. 21.—ARRESTS, SUMMARY CONVICTIONS, ACQUITTALS, and COMMITTALS; also, CONVICTIONS and ACQUITTALS IN SUPERIOR COURTS, and ultimate DISPOSAL of all PERSONS ARRESTED, 1876-86.

Year.	Arrests.	Summary Convictions and Acquittals in Inferior Courts.*		Committals.*	Convicted and Acquitted in the Superior Courts.		Ultimate Disposal of all Persons Arrested.	
	Total number of Arrests.	Summary Convictions.	Acquitted or Discharged.	Committed for Trial.	Convicted after Commitment.	Acquitted after Commitment (including those Discharged).	Ultimately Convicted.	Ultimately Acquitted.
1876	26,993	19,465	6,263	1,265	810	455	20,275	6,718
1877	28,349	20,721	6,256	1,372	817	555	21,538	6,811
1878	30,718	23,216	5,818	1,684	986	698	24,202	6,516
1879	32,860	25,506	5,759	1,595	1,090	505	26,896	6,264
1880	35,774	27,523	6,569	1,682	1,152	530	28,675	7,099
1881	41,402	33,063	6,748	1,591	1,066	525	34,129	7,273
1882	39,758	31,384	6,789	1,585	1,065	520	32,449	7,309
1883	43,177	35,437	6,154	1,586	1,012	574	36,449	6,728
1884	46,199	37,415	7,205	1,579	928	651	38,343	7,856
1885	48,261	40,002	6,792	1,467	785	682	40,787	7,474
1886	48,854	40,180	7,225	1,449	†957	492	†41,137	7,717

\* Persons summoned not included. † Includes convictions of persons not committed by Magistrates.

No. 22.—PERCENTAGE OF ARRESTS and CONVICTIONS to the whole Population; and of those SUMMARILY dealt with, to TOTAL ARRESTS; also, of those CONVICTED and ACQUITTED after COMMITMENT, to TOTAL COMMITTALS, 1876-86.

Year.	Arrests.	Summarily Convicted.	Summarily Acquitted or Discharged.	Committals.	Convicted in the Superior Courts.	Acquitted in the Superior Courts.	Ultimately Convicted.	Ultimately Acquitted.
	Percentage of Arrests to the whole Population.	Percentage of Summary Convictions to Total Arrests.	Percentage of those Acquitted or Discharged to Total Arrests.	Percentage to Total Arrests.	Percentage to Total Committals.	Percentage to Total Committals.	Percentage to the whole Population.	Percentage to the Total Arrests.
1876	4'46	72'12	23'20	4'68	64'03	35'97	3'35	24'88
1877	4'50	73'09	22'07	4'83	59'54	40'46	3'42	24'02
1878	4'66	75'58	18'94	5'48	58'55	41'45	3'67	21'21
1879	4'75	77'63	17'52	4'85	68'34	31'66	3'85	19'06
1880	4'92	76'94	18'36	4'70	68'49	31'51	3'80	19'84
1881	5'44	79'86	16'29	3'85	67'00	33'00	4'48	17'56
1882	5'00	78'94	17'07	3'99	67'19	32'81	4'08	18'38
1883	5'17	82'08	14'26	3'66	63'81	36'19	4'36	15'58
1884	5'24	80'99	15'59	3'42	58'77	41'23	4'35	17'00
1885	5'18	82'89	14'07	3'04	53'52	46'48	4'38	17'55
1886	4'99	82'24	14'79	2'97	66'04	33'96	4'21	15'79

DISPOSAL OF CASES BROUGHT BEFORE COURTS—*continued.*

No. 23.—NUMBER OF CRIMINALS EXECUTED during the Year 1886.

Where Executed	Religion.	Age.	Offence.	Where Born.	Number
Grafton ... ..	Church of England ..	37	Murder .. . . .	England ... ..	1
Sydney ... ..	Church of England	26	Murder . . . . .	England ... ..	1

No. 24.—NUMBER OF CRIMINALS EXECUTED in each Year, from 1876 to 1886.

Year.	Number	Year	Number
1876 ... ..	4	1882 ... ..	3
1877 ... ..	2	1883 ... ..	1
1878 .. ...	1	1884 . ...	2
1879 ... ..	1	1885 .. ...	3
1880 ... ..	4	1886 ... ..	2
1881 ... ..	2		

GAOLS AND PRISONERS.

No. 25.—PRISON ACCOMMODATION provided in the VARIOUS GAOLS of the COLONY.

Gaol, where situated.	Prisoners the Gaol is capable of containing in separate cells.	Prisoners the Gaol is capable of containing where more than one prisoner sleeps in each cell	Gaol, where situated	Prisoners the Gaol is capable of containing in separate cells	Prisoners the Gaol is capable of containing where more than one prisoner sleeps in each cell.
GAOLS.			POLICE GAOLS— <i>continued.</i>		
Darlinghurst	346	754	Coonabarabran	5	20
Albury .. ..	24	72	Coonamble	5	20
Armidale .. .	24	68	Cootamundra	2	30
Bathurst .. .	38	123	Forbes ... ..	4	12
Berrima .. ...	75	120	Glen Innes	5	20
Deniliquin ...	16	80	Grenfell .. ...	4	12
Dubbo .. . . .	8	35	Gundagai .. .	6	20
Goulburn .. .	182	546	Gunnedah ... ..	4	16
Grafton ... ..	14	42	Hillston .. . .	4	10
Hay ... .. .	12	58	Inverell .. . .	6	18
Maitland ... ..	110	182	Kempsey West	2	4
Mudgee .. . .	24	72	Moree .. . . .	2	7
Parramatta ...	223	514	Murrurundi ...	4	12
Tamworth ... .	12	64	Muswellbrook	4	10
Trial Bay ... .	64	64	Narrabri	6	36
Wagga Wagga ..	11	33	Orange	8	34
Wollongong ...	11	33	Port Macquarie	10	30
Yass .. . . .	16	48	Queanbeyan ...	6	20
Young .. . . .	12	42	Singleton	4	20
POLICE GAOLS.			Taree .. . . .	4	12
Bega .. . . .	4	7	Tenterfield	6	18
Bingera ... ..	4	20	Walgett ... ..	6	30
Bourke .. . .	12	36	Warialda .. . .	4	20
Braidwood .. .	12	36	Wellington ... .	5	20
Campbelltown ..	5	10	Wentworth ... .	12	42
Casino .. . . .	5	21	Wilcanna ... ..	5	21
Cooma .. . . .	5	15	Windsor .. . .	12	36
			GENERAL TOTAL		
				1,414	3,645



## STATISTICS, 1886—CRIME AND CIVIL JUSTICE.

## GAOLS AND PRISONERS—continued.

No. 26.—NUMBER of PRISONERS RECEIVED into the VARIOUS GAOLS during the Year 1886.

Gaol, where situated.	Prisoners received						Prisoners received under sentence.						Total Number.		Greatest number received at any one time.	
	As Debtors.		For Trial, &c.		In transitu.		Labour.		Imprisonment.		Solitary Confinement.					
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
Darlinghurst ...	41	1	1,402	354	122	2	1,114	433	5,939	3,016	...	...	8,618	3,806	66	23
Albury ...	1	...	39	4	...	...	44	7	85	14	...	...	169	25	8	...
Armidale ...	1	...	26	4	...	...	31	2	35	15	1	...	94	22	7	...
Bathurst ...	1	...	90	8	16	5	287	81	99	20	...	...	493	114	20	2
Berrima ...	2	...	1	...	...	...	112	...	22	1	...	...	137	1	9	...
Deniliquin ...	...	...	11	...	3	...	42	2	41	7	...	...	97	9	2	...
Dubbo ...	...	...	40	3	24	7	58	12	73	12	...	...	195	34	6	...
Goulburn ...	...	...	17	1	55	26	295	111	115	95	...	...	482	233	28	1
Grafton ...	1	...	60	10	4	1	35	4	101	13	...	...	201	28	5	2
Hay ...	...	...	16	...	7	...	63	5	102	24	...	...	188	29	11	2
Maitland ...	...	...	148	31	21	2	238	54	405	89	...	...	812	176	15	...
Mudgee ...	...	...	25	2	15	2	31	9	29	4	...	...	100	17	...	8
Parramatta ...	...	...	93	3	...	12	343	...	345	20	...	...	781	35	26	...
Tamworth ...	...	...	34	3	5	...	51	7	59	12	...	...	149	22	12	...
Trial Bay ...	...	...	...	...	...	...	61	...	...	...	...	...	61	...	23	...
Wagga Wagga ...	1	...	30	1	5	...	39	4	150	28	...	...	225	33	8	...
Wollongong ...	2	...	44	6	6	...	91	5	150	18	...	...	293	29	18	...
Yass ...	1	...	40	9	...	...	45	10	46	12	...	...	132	31	12	6
Young ...	...	...	13	2	4	...	57	22	65	24	...	...	139	48	10	...
<b>Total Gaols</b> ..	<b>51</b>	<b>1</b>	<b>2,129</b>	<b>441</b>	<b>287</b>	<b>58</b>	<b>3,037</b>	<b>768</b>	<b>7,861</b>	<b>3,424</b>	<b>1</b>	<b>13,366</b>	<b>4,692</b>	<b>286</b>	<b>45</b>	
Bega ...	1	...	9	...	5	...	9	1	35	...	...	...	59	1	2	...
Bingera ...	...	...	2	...	3	...	3	...	23	1	...	...	31	1	2	...
Bourke ...	...	...	13	...	7	2	35	9	119	27	...	...	174	38	3	1
Braidwood ...	...	...	6	...	4	...	41	1	30	1	...	...	81	2	14	...
Campbelltown ...	...	...	2	3	3	...	...	...	104	3	...	...	109	6	3	2
Casino ...	2	...	6	...	7	...	43	2	1	1	...	...	59	3	4	1
Cooma ...	1	...	22	...	13	2	27	...	48	4	1	...	112	6	4	2
Coonabarabran ...	...	...	7	...	...	...	7	...	14	1	...	...	28	1	2	...
Coonamble ...	...	...	11	...	1	...	52	...	13	3	...	...	77	3	...	...
Cootamundra ...	...	...	1	...	...	...	6	...	1	...	...	...	8	...	1	...
Forbes ...	1	...	9	...	8	3	9	5	66	14	...	...	93	22	2	1
Glen Innes ...	...	...	7	...	8	1	28	2	72	9	...	...	115	12	1	5
Grenfell ...	...	...	1	...	8	...	7	...	10	1	...	...	26	1	...	...
Gundagai ...	...	...	3	...	5	...	13	...	14	2	...	...	35	2	2	...
Gunnedah ...	1	...	12	...	...	...	26	3	32	4	...	...	71	7	4	...
Hillston ...	...	...	1	...	3	...	6	1	13	...	...	...	23	1	...	...
Inverell ...	...	...	16	...	3	...	18	1	22	3	...	...	59	4	3	...
Kempsey West ...	...	...	2	...	13	...	11	...	2	...	...	...	28	...	2	...
Moree ...	...	...	13	4	...	...	16	2	1	...	...	...	30	6	2	2
Murrumbidgee ...	...	...	...	...	1	...	1	...	32	1	...	...	34	1	3	1
Muswellbrook ...	...	...	5	...	18	1	9	...	13	2	...	...	45	3	3	...
Narrabri ...	...	...	4	...	14	2	29	4	10	1	...	...	57	7	3	...
Orange ...	...	...	43	3	44	4	17	3	73	7	...	...	177	17	9	...
Port Macquarie ...	...	...	4	...	1	1	30	2	3	...	...	...	38	3	6	...
Queanbeyan ...	...	...	25	1	22	...	15	...	34	1	...	...	96	2	8	2
Singleton ...	...	...	5	...	...	...	9	4	18	8	...	...	32	12	5	...
Taree ...	...	...	2	...	...	...	9	1	16	...	...	...	27	1	2	1
Tenterfield ...	1	...	3	2	15	5	23	8	36	6	...	...	78	21	1	4
Walgett ...	...	...	5	...	1	...	11	...	20	...	...	...	37	...	3	...
Warialda ...	...	...	4	...	2	...	5	...	...	...	...	...	11	...	10	...
Wellington ...	...	...	9	2	6	...	17	...	52	10	...	...	84	12	5	...
Wentworth ...	...	...	...	...	18	...	14	...	34	...	...	...	66	...	10	...
Wilcannia ...	2	...	27	3	2	...	98	16	28	3	1	...	158	22	7	1
Windsor ...	1	...	7	...	...	...	42	1	77	11	2	...	129	12	7	...
<b>Total of Police Gaols</b>	<b>10</b>	<b>...</b>	<b>286</b>	<b>18</b>	<b>235</b>	<b>21</b>	<b>686</b>	<b>66</b>	<b>1,066</b>	<b>124</b>	<b>4</b>	<b>2,287</b>	<b>229</b>	<b>133</b>	<b>23</b>	
<b>Total of Gaols</b> ..	<b>51</b>	<b>1</b>	<b>2,129</b>	<b>441</b>	<b>287</b>	<b>58</b>	<b>3,037</b>	<b>768</b>	<b>7,861</b>	<b>3,424</b>	<b>1</b>	<b>13,366</b>	<b>4,692</b>	<b>286</b>	<b>45</b>	
<b>GENERAL TOTAL</b> ..	<b>61</b>	<b>1</b>	<b>2,415</b>	<b>459</b>	<b>522</b>	<b>79</b>	<b>3,723</b>	<b>834</b>	<b>8,927</b>	<b>3,548</b>	<b>5</b>	<b>15,653</b>	<b>4,921</b>	<b>419</b>	<b>68</b>	

No. 27.—AGES of all PERSONS SENTENCED to LABOUR, IMPRISONMENT, or SOLITARY CONFINEMENT during the Year 1886.

Ages	Sentenced to Labour.			Sentenced to Imprisonment			Sentenced to Solitary Confinement			Total Persons Sentenced.		
	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total
Under 10 years ...	...	...	...	9	11	20	...	...	...	9	11	20
10 to 20 ...	358	87	445	468	196	664	2	...	2	828	283	1,111
20 to 30 ...	1,441	278	1,719	2,613	894	3,507	3	...	3	4,057	1,172	5,229
30 to 40 ...	896	203	1,099	2,373	1,065	3,438	...	...	...	3,269	1,268	4,537
40 to 50 ...	480	151	631	1,726	844	2,570	...	...	...	2,206	995	3,201
50 and upwards ..	548	115	663	1,738	538	2,276	...	...	...	2,286	653	2,939
<b>Totals</b> ..	<b>3,723</b>	<b>834</b>	<b>4,557</b>	<b>8,927</b>	<b>3,548</b>	<b>12,475</b>	<b>5</b>	<b>...</b>	<b>5</b>	<b>12,655</b>	<b>4,382</b>	<b>17,037</b>

STATISTICS, 1886—CRIME AND CIVIL JUSTICE.

GAOLS AND PRISONERS—continued.

No. 28.—NUMBER and AGES of PERSONS with PREVIOUS CONVICTIONS COMMITTED to GAOL during the Year 1886.

Ages.	Committed once before.			Committed twice before.			Committed three or more times before.			Total with previous convictions.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
Under 10 years ... ..	...	...	...	...	1	1	...	...	...	...	1	1
10 to 20 years ... ..	159	47	206	50	17	67	35	30	65	244	94	338
20 to 30 years ... ..	553	148	701	221	76	297	229	142	371	1,003	366	1,369
30 to 40 years ... ..	389	76	465	147	60	207	232	145	377	768	281	1,049
40 to 50 years ... ..	243	57	300	88	40	128	190	133	323	521	230	751
50 years and upwards ... ..	238	40	278	111	17	128	230	99	329	579	156	735
Total ... ..	1,582	368	1,950	617	211	828	916	549	1,465	3,115	1,128	4,243

No. 29.—NUMBER and AGES of PERSONS with PREVIOUS CONVICTIONS COMMITTED to GAOL during each Year for the period 1876-86.

Year.	Under 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	Over 50 years.	Ages not ascertained.	Total.
1876.....	6	146	591	549	393	527	306	2,518
1877.....	9	152	736	668	459	406	470	2,900
1878.....	7	164	824	665	449	453	554	3,116
1879.....	.....	168	843	699	448	425	508	3,091
1880.....	2	114	639	609	476	479	455	2,774
1881.....	.....	117	729	702	566	538	407	3,059
1882.....	.....	136	719	650	584	538	349	2,976
1883.....	.....	184	749	673	595	556	392	3,149
1884.....	.....	249	975	766	608	627	451	3,676
1885.....	.....	247	946	858	602	669	386	3,708
1886.....	1	338	1,369	1,049	751	735	*	4,243

\* The figures for 1886 include prisoners in all Gaols. For years previous to 1886 the ages of prisoners previously convicted were not ascertained in the Police Gaols.

No. 30.—PERSONS COMMITTED to GAOL, and the NUMBER with PREVIOUS CONVICTIONS recorded against them during each Year for the period 1876-86.

Year.	Total Offenders.			Committed for the first offence.			Committed for second offence.			Committed for third offence.			Committed more than three times.			Total number Committed for more than one offence.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1876	6,862	3,330	10,192	5,055	2,619	7,674	652	110	762	364	86	450	791	515	1,306	1,807	711	2,518
1877	7,047	3,831	10,878	5,007	2,971	7,978	667	207	874	381	87	468	993	566	1,559	2,040	860	2,900
1878	7,641	4,106	11,747	5,483	3,148	8,631	869	263	1,132	417	101	518	872	594	1,466	2,158	958	3,116
1879	9,151	4,087	13,238	7,093	3,054	10,147	807	269	1,076	426	120	546	825	644	1,469	2,058	1,033	3,091
1880	9,544	4,035	13,579	7,597	3,208	10,805	940	220	1,160	400	117	517	607	490	1,097	1,947	827	2,774
1881	11,266	4,532	15,798	9,115	3,624	12,739	1,061	269	1,330	413	133	546	677	506	1,183	2,151	908	3,059
1882	10,326	3,918	14,244	8,224	3,044	11,268	998	268	1,266	448	146	594	646	462	1,108	2,092	876	2,968
1883	11,309	4,096	15,405	9,014	3,242	12,256	1,088	220	1,308	479	188	667	728	446	1,174	2,295	854	3,149
1884	12,836	4,161	16,997	10,096	3,225	13,321	1,295	286	1,581	606	174	780	839	476	1,315	2,740	936	3,676
1885	13,045	4,324	17,369	10,335	3,326	13,661	1,306	276	1,582	542	163	705	862	559	1,421	2,710	998	3,708
1886	12,655	4,382	17,037	9,540	3,254	12,794	1,582	368	1,950	617	211	828	916	549	1,465	3,115	1,128	4,243

GAOLS AND PRISONERS—*continued.*

**No. 31.**—NUMBER OF DISTINCT PERSONS received into the various Gaols CONVICTED of DRUNKENNESS and VAGRANCY and OTHER OFFENCES during the year 1886.

## AGES.

Age.	Convicted of Drunkenness and Vagrancy.			Convicted of Other Offences.			Total.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Under 10 years ... ..	9	13	22	8	7	15	17	20	*37
10 to 20 " ... ..	237	123	360	515	75	590	752	198	950
20 to 30 " ... ..	1,430	450	1,880	1,919	199	2,118	3,349	649	3,998
30 to 40 " ... ..	1,315	420	1,735	1,204	124	1,328	2,519	544	3,063
40 to 50 " ... ..	935	317	1,252	742	85	827	1,677	402	2,079
50 and upwards ... ..	1,065	236	1,301	574	73	647	1,639	309	1,948
Total ... ..	4,991	1,559	6,550	4,962	563	5,525	9,953	2,122	12,075

\* Actually only 20—9 males and 11 females, but appears as above through transfer from one gaol to another.

**No. 32.**—NUMBER OF DISTINCT PERSONS received into the various Gaols CONVICTED of DRUNKENNESS and VAGRANCY and OTHER OFFENCES during 1886.

## DEGREE OF EDUCATION.

Degree of Education.	Convicted of Drunkenness and Vagrancy.			Convicted of Other Offences.			Total.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Read and write ... ..	4,351	1,328	5,679	4,331	460	4,791	8,682	1,788	10,470
Read only ... ..	108	57	165	130	23	153	238	80	318
Cannot read ... ..	532	174	706	501	80	581	1,033	254	1,287
Total ... ..	4,991	1,559	6,550	4,962	563	5,525	9,953	2,122	12,075

**No. 33.**—NUMBER OF DISTINCT PERSONS received into the various Gaols CONVICTED of DRUNKENNESS and VAGRANCY and OTHER OFFENCES in 1886.

## BIRTHPLACES.

Birthplaces.	Convicted of Drunkenness and Vagrancy.			Convicted of Other Offences.			Total.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Australian Colonies ... ..	1,501	695	2,196	2,063	314	2,377	3,564	1,009	4,573
England and Wales ... ..	1,388	207	1,595	1,298	74	1,372	2,686	281	2,967
Ireland ... ..	1,249	546	1,795	763	140	903	2,012	686	2,698
Scotland ... ..	433	69	502	258	22	280	691	91	782
Other British Possessions ... ..	74	6	80	97	3	100	171	9	180
China ... ..	18	.....	18	73	.....	73	91	.....	91
Other Countries ... ..	328	36	364	410	10	420	738	46	784
Total ... ..	4,991	1,559	6,550	4,962	563	5,525	9,953	2,122	12,075

**No. 34.**—NUMBER OF DISTINCT PERSONS received into Gaols CONVICTED of DRUNKENNESS, VAGRANCY, and OTHER OFFENCES, during 1886.

## RELIGIONS.

Religions.	Convicted of Drunkenness and Vagrancy.			Convicted of Other Offences.			Total.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Church of England ... ..	1,988	517	2,505	2,243	188	2,431	4,231	705	4,936
Presbyterians ... ..	446	64	510	332	24	356	778	88	866
Wesleyans ... ..	78	10	88	108	3	111	186	13	199
Independents ... ..	4	1	5	4	.....	4	8	1	9
Baptists ... ..	16	1	17	11	.....	11	27	1	28
Other Protestants ... ..	27	2	29	44	2	46	71	4	75
Roman Catholics ... ..	2,356	959	3,315	2,043	342	2,385	4,399	1,301	5,700
Jews ... ..	12	2	14	46	2	48	58	4	62
Pagans ... ..	16	.....	16	54	.....	54	70	.....	70
Other Persuasions ... ..	28	1	29	37	.....	37	65	1	66
No Religion ... ..	20	2	22	38	2	40	58	4	62
Religion unknown ... ..	.....	.....	.....	2	.....	2	2	.....	2
Total ... ..	4,991	1,559	6,550	4,962	563	5,525	9,953	2,122	12,075

NOTE.—Prisoners *in transitu* are included in the four preceding tables. The totals are therefore slightly in excess of the truth. The actual number of distinct persons sent to gaol being 11,474.

STATISTICS, 1886—CRIME AND CIVIL JUSTICE.

GAOLS AND PRISONERS—continued.

No. 35.—NUMBER of PRISONERS in CONFINEMENT on the 31st December, 1886.

Gaol—where situated.	Number in Confinement on 31 December, 1886.																									
	Total.		Felony						Petty Larceny.						Assaults						Other Offences.					
			Tried.		Untried		Total		Tried		Untried		Total		Tried		Untried		Total		Tried		Untried		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
Darlinghurst .....	497	221	139	10	28	4	167	14	68	15	2	70	15	37	5	1	38	5	221	184	1	3	222	187		
Albury .....	25	3	7	3			7	3	5			5		4			4		9				9			
Armidale .....	20		4				4		8			8		2			2		6				6			
Bathurst .....	111	30	28	2	1		29	2	27	1		28		8	1		8	1	46	25		2	46	27		
Berrima .....	100		99				99		1			1														
Denhiquin .....	15		8		3		11		1			1							3				3			
Dubbo .....	36	5	12	2	4		16	2	10			10		1			1		7	3	2		9	3		
Goulburn .....	292	34	258	14			258	14	10	2		10	2	6	3		6	3	18	15			18	15		
Grafton .....	19	1	9		3		12		2			2							5	1			5	1		
Hay .....	39	4	19				19		1	1		12	1	5			5		3	3			3	3		
Maitland .....	134	21	55	4	4		59	4	28	5	1	29	5	14	1		14	1	32	11			32	11		
Mudgee .....	20	3	14				14		2			2							3	3	1		4	3		
Parramatta .....	414		271		1		272		41			41		24			24		76		1		77			
Tamworth .....	24	7	13	2			13	2	3	1		3	1	2			3		5	3		1	5	4		
Trial Bay .....	59		59				59																			
Wagga Wagga .....	26	6	4	1	3	1	7	2	2			2					1		16	4			16	4		
Wollongong .....	28	1	3				3		5	3		8		3			3		14	1			14	1		
Yass .....	17	6	6				6		3	1		3	1	2			2		6	5			6	5		
Young .....	31	8	13	1			13	1	8	3		8	3	1			1		9	4			9	4		
<b>Total of Gaols .....</b>	<b>1,907</b>	<b>350</b>	<b>1,021</b>	<b>39</b>	<b>47</b>	<b>5</b>	<b>1,068</b>	<b>44</b>	<b>235</b>	<b>28</b>	<b>8</b>	<b>243</b>	<b>28</b>	<b>109</b>	<b>10</b>	<b>3</b>	<b>112</b>	<b>10</b>	<b>479</b>	<b>262</b>	<b>5</b>	<b>6</b>	<b>484</b>	<b>268</b>		
Bega .....	7		4				4		1			1							2				2			
Bingera .....	3								1			1								2			2			
Bourke .....	10	2	1				1		3	2	1	4	2	1			2		3				3			
Braidwood .....	20	1	2		2		4		7			7		2			2		7	1			7	1		
Campbelltown .....	3																		1				1			
Casino .....	15	2			1		1		6			6		1	1		1	1	7	1			7	1		
Cooma .....	7	1	1		1		2		3			3		1			1		1	1			1	1		
Coonabarabran .....	3		2				2												1				1			
Coonamble .....	2	1	1				1												1	1			1	1		
Cootamundra .....	3		1				1		1			1							1				1			
Forbes .....	8	4			2		2		2			2				3		3	1	3		1	1	4		
Glen Innes .....	7	1			1		1		4	1		4	1						1				1	2		
Grenfell .....	2									1		1							1				1			
Gundagai .....	6								4	1		5							1				1			
Gunnedah .....	4	1			1		1		3	1		3	1						1				1			
Hillston .....	2								1			1		1			1									
Inverell .....	3		1				1										1		1				1			
Kempsey West .....	2				1		1							1			1									
Moree .....	1	1			1		1													1				1		
Murrurundi .....																										
Muswellbrook .....																										
Narrabri .....	8	1	3	1			3	1	4			4							1				1			
Orange .....	19	2			2		2		5	1		6							7	2	4		11	2		
Port Macquarie .....	10	2	4				4		1			1		1			1		4	2			4	2		
Queanbeyan .....	2	1							1			1							1				1	1		
Singleton .....		2																		2				2		
Taree .....	1																				1			1		
Tenterfield .....	6	7	1		1		2		1	1		2							2	7			2	7		
Walgett .....	9		9				9																			
Warialda .....	3		2		1		3																			
Wellington .....	7		3				3		2			2		1			1		1				1			
Wentworth .....	6								3			3							3				3			
Wilcannia .....	21	2	8		3		11		6			6		2			2		2	2			2	2		
Windsor .....	12	1	6		2		8		2			2							2	1			2	1		
<b>Total Police Gaols.</b>	<b>212</b>	<b>32</b>	<b>49</b>	<b>1</b>	<b>19</b>	<b>..</b>	<b>68</b>	<b>1</b>	<b>61</b>	<b>4</b>	<b>5</b>	<b>66</b>	<b>4</b>	<b>12</b>	<b>1</b>	<b>5</b>	<b>17</b>	<b>1</b>	<b>52</b>	<b>24</b>	<b>9</b>	<b>2</b>	<b>61</b>	<b>26</b>		
<b>Total Gaols ..</b>	<b>1,907</b>	<b>350</b>	<b>1,021</b>	<b>39</b>	<b>47</b>	<b>5</b>	<b>1,068</b>	<b>44</b>	<b>235</b>	<b>28</b>	<b>8</b>	<b>243</b>	<b>28</b>	<b>109</b>	<b>10</b>	<b>3</b>	<b>112</b>	<b>10</b>	<b>479</b>	<b>262</b>	<b>5</b>	<b>6</b>	<b>484</b>	<b>268</b>		
<b>General Total ..</b>	<b>2,119</b>	<b>382</b>	<b>1,070</b>	<b>40</b>	<b>66</b>	<b>5</b>	<b>1,136</b>	<b>45</b>	<b>296</b>	<b>32</b>	<b>13</b>	<b>309</b>	<b>32</b>	<b>121</b>	<b>11</b>	<b>8</b>	<b>129</b>	<b>11</b>	<b>531</b>	<b>286</b>	<b>14</b>	<b>8</b>	<b>545</b>	<b>294</b>		

## STATISTICS, 1886—CRIME AND CIVIL JUSTICE.

GAOLS AND PRISONERS—*continued.*

No. 36.—NUMBER of PERSONS in CONFINEMENT on 31st December in each year, from 1876 to 1886.

Year.	Total Persons in Confinement.	Male.	Female.	Number Tried and Sentenced for—								Number awaiting Trial for—							
				Felony.		Petty Larceny.		Assaults.		Other Offences.		Felony.		Petty Larceny.		Assaults.		Other Offences.	
				M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1876	1,490	1,267	223	708	34	160	21	78	4	208	144	75	11	17	1	1	2	20	6
1877	1,521	1,293	228	798	57	81	16	32	3	226	133	100	11	25	5	5	...	26	3
1878	1,781	1,512	269	855	51	127	22	50	4	286	174	119	8	39	3	6	...	30	7
1879	1,951	1,641	310	911	42	176	29	70	21	308	199	111	14	24	...	12	...	29	5
1880	2,121	1,759	362	950	34	189	31	106	8	365	276	99	8	11	...	6	...	33	5
1881	2,075	1,753	322	825	18	201	15	78	5	508	271	83	3	18	2	6	1	35	7
1882	1,935	1,646	289	844	25	168	18	89	3	396	228	97	9	14	1	11	...	27	5
1883	2,168	1,826	342	802	47	263	26	138	15	481	242	82	6	17	1	10	1	33	4
1884	2,464	2,115	349	949	33	295	29	140	6	582	269	68	3	24	1	12	1	45	7
1885	2,559	2,222	337	1,047	33	307	47	162	10	568	238	85	4	8	...	14	...	31	5
1886	2,500	2,119	382	1,070	40	296	32	121	11	531	286	66	5	13	...	8	...	14	8

No. 37.—DEBTORS in CONFINEMENT in each year, from 1876 to 1886.

Year.	Number of Debtors in Confinement.		Total
	Male.	Female.	
1876	31	1	32
1877	42	...	42
1878	49	2	51
1879	46	2	48
1880	46	1	47
1881	52	...	52
1882	44	1	45
1883	27	1	28
1884	61	3	64
1885	50	2	52
1886	61	1	62

No. 38.—NUMBER of PRISONERS PUNISHED for BREACHES of GAOL DISCIPLINE during the year 1886, also DEATHS in GAOL, together with ages of prisoners.

Ages of Prisoners.	Gaol Punishments during the year.						Deaths.		
	Solitary Confinement.		Other Punishments.		Total.		M.	F.	Total.
	M.	F.	M.	F.	M.	F.			
10 to 20 years ...	273	29	64	2	337	31	...	...	...
20 to 30 " ...	586	105	157	38	743	143	6	1	7
30 to 40 " ...	221	35	70	10	291	45	8	4	12
40 to 50 " ...	85	21	21	2	106	23	8	1	9
50 years and upward...	62	4	17	...	79	4	16	4	20
	1,227	194	329	52	1,556	246	38	10	48

No. 39.—PUNISHMENTS INFLICTED ON PRISONERS in Gaols, from 1876 to 1886.

Year.	Number of Prisoners received under Sentence.		Solitary Confinement.		Other Punishments.		Total Punishments.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
1876	6,862	3,330	392	106	346	107	738	213
1877	7,047	3,831	468	33	301	94	769	127
1878	7,641	4,106	640	128	167	25	807	153
1879	9,151	4,087	909	152	246	38	1,155	190
1880	9,544	4,035	997	213	194	69	1,191	282
1881	11,266	4,532	1,058	167	317	15	1,375	182
1882	10,326	3,918	1,036	97	300	19	1,336	116
1883	11,309	4,096	1,091	158	239	29	1,330	187
1884	12,836	4,161	1,295	178	399	37	1,694	215
1885	13,045	4,324	1,249	186	360	39	1,609	225
1886	12,650	4,382	1,226	194	337	52	1,563	246



STATISTICS, 1886—CRIME AND CIVIL JUSTICE.

CIVIL JUSTICE.

No. 42.—BUSINESS OF THE SUPREME AND CIRCUIT COURTS, and the DIVORCE AND MATRIMONIAL CAUSES COURT, for the Year 1876-86.

Year.	SUPREME AND CIRCUIT COURTS.						DIVORCE AND MATRIMONIAL CAUSES COURT.								
	Civil Jurisdiction.			Equity.			Testamentary.			Appellate Jurisdiction.					
	No. of Writs issued.	No. of Causes entered for Trial.	Total Amount for which Judgments signed.	States-people of Districts.	No. of Claims.	No. of Petitions.	No. of Decrees and Orders.	No. of Probates and Administrations with answers.	Amount sworn to.	No. of Letters of Administration.	Amount sworn to.	No. of Cases from Trial Court.	No. of Cases from District Court.		
1876	2,530	293	£ 106,257 12 6	32	Nil	21	152	511	£ 1,677,972	0	415	£ 223,189	0	1	6
1877	2,887	286	127,204 14 10½	37	Nil	48	102	530	1,330,599	0	471	291,391	0	1	5
1878	3,280	319	278,126 10 5	50	Nil	72	115	573	1,735,064	0	514	281,367	0	3	5
1879	3,806	292	436,355 17 6	48	Nil	65	153	579	2,116,906	2	472	269,991	11	3	8
1880	3,312	350	202,253 15 2½	59	Nil	55	166	607	1,323,822	18	506	210,816	0	5	9
1881	2,845	331	.....	55	37	33	93	671	2,011,305	0	526	307,818	0	3	15
1882	3,161	414	169,520 12 0	51	106	50	96	810	3,586,554	0	589	581,528	0	3	18
1883	3,830	377	.....	81	153	41	210	862	3,528,602	0	613	588,029	0	2	15
1884	4,547	513	370,647 13 0	77	166	60	289	933	3,642,709	0	648	605,543	0	3	14
1885	4,079	481	399,951 15 6	83	162	78	295	961	3,721,805	0	659	601,542	0	3	27
1886	5,649	526	410,274 14 5	81	184	78	294	1,026	4,726,918	0	706	768,628	0	7	45

  

Year.	Actions at Law.				Suits and Proceedings in Equity.				Admiralty, Insolvency, and Ecclesiastical.				Orders made in Chambers and in Banco of all kinds.						
	No. of Writs of Ejectment.	No. of Days occupied in Jury Trials on Circuit.	No. of Days occupied in Jury Trials in Sydney.	No. of Days' Sittings in Banco.	No. of Bills and Answers filed.	No. of Petitions and Motions.	No. of Orders and Decrees made, of all kinds.	No. of Appeals to the full Court.	Hearings.	Appeals.	Admiralty.	Insolvency.		Ecclesiastical.					
1876	68	...	81	81	65	77	152	12	105	18	24	6	5	12	4	8	109	191	
1877	61	...	90	76	57	88	102	2	46	5	7	8	10	11	3	12	123	234	
1878	103	...	82	79	84	111	115	7	66	7	3	6	7	8	10	14	214	252	
1879	72	...	75	85	78	125	153	11	61	11	11	9	60	22	10	16	210	235	
1880	108	...	78	82	125	125	166	8	68	17	7	9	107	8	11	16	279	312	
1881	...	...	88	77	114	120	93	10	...	10	10	0	415	7	16	1	302	423	
1882	...	...	128	78	...	76	...	20	96	16	...	...	...	...	...	...	...	...	...
1883	78	...	84	77	...	50	259	17	100	19	...	...	240	...	...	...	38	...	...
1884	101	...	105	84	...	176	331	23	103	17	...	...	324	...	...	...	42	...	...
1885	52	...	128	91	...	198	360	27	135	20	...	...	334	...	...	...	30	...	...
1886	101	...	**126	88	...	255	377	19	102	12	...	...	446	...	...	...	40	...	...

\* Cannot be ascertained. † Includes statements of claim filed under the new Equity Act. ‡ Includes 49 days special sittings, one Court.

\* Cannot be ascertained.

STATISTICS, 1886—CRIME AND CIVIL JUSTICE.

CIVIL JUSTICE—continued.

No. 43.—NUMBER of CIVIL CASES tried in the SUPREME and CIRCUIT COURTS during the Year 1886.

District where tried.	Juries of Four.		Juries of Twelve.		Total.	
	Defended.	Undefended or Settled.	Common.	Special.		
Supreme Court, Sydney ... ..	209	217	.....	7	433	
Circuit Courts ...	Albury ... ..	1	.....	.....	1	
	Armidale ... ..	1	.....	.....	1	
	Bathurst ... ..	2	4	.....	.....	6
	Deniliquin ... ..	1	.....	.....	.....	1
	Dubbo ... ..	12	6	.....	.....	18
	Goulburn ... ..	6	6	.....	.....	12
	Grafton ... ..	1	3	.....	.....	4
	Maitland ... ..	9	7	.....	.....	16
	Mudgee ... ..	.....	1	.....	.....	1
	Tamworth ... ..	3	1	.....	.....	4
	Wagga Wagga ... ..	3	1	.....	.....	4
	Yass ... ..	.....	.....	.....	.....	.....
Young ... ..	.....	1	.....	.....	1	
Hay ... ..	.....	1	.....	.....	1	
TOTAL, CIRCUIT COURTS ... ..	39	31	.....	.....	70	
GENERAL TOTAL ... ..	248	248	.....	7	503	

No. 44.—NUMBER of CIVIL CASES tried in the SUPREME and CIRCUIT COURTS, 1876-86.

Year.	Before Special Juries of Twelve.	Before Juries of Four.		Total.	Year.	Before Special Juries of Twelve.	Before Juries of Four.		Total.
		Defended Cases.	Undefended or Settled Cases.				Defended Cases.	Undefended or Settled Cases.	
1876	.....	208	85	293	1882	11	239	164	414
1877	4	184	98	286	1883	3	222	152	377
1878	3	196	120	319	1884	1	270	222	493
1879	1	178	113	292	1885	8	247	239	494
1880	3	199	148	350	1886	7	248	248	503
1881	1	172	158	331					

No. 45.—AMOUNT of FEES collected in the Departments of the Prothonotary and the Master in Equity, during the Years 1877-86.

Year.	Curator of Intestate Estates—Commission and Fees on Estates of persons dying Intestate.	Divorce.	Prothonotary—Miscellaneous.	Master in Equity.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1877	428 14 1	89 14 7	3,193 10 7	465 17 11	4,177 17 2
1878	448 5 9	74 7 3	3,727 16 6	573 5 7	4,823 15 1
1879	380 9 1	83 19 4	3,864 8 9	696 13 3	5,025 10 5
1880	816 8 5	145 15 5	3,970 15 8	737 6 5	5,670 5 11
1881	1,227 7 8	136 13 11	4,008 11 2	712 3 4	6,084 16 1
1882	1,154 7 2	100 1 10	5,603 19 3	1,036 15 3	7,895 3 6
1883	2,014 14 2	215 18 5	5,793 12 7	1,030 19 0	9,055 4 2
1884	1,422 4 7	210 1 11	6,141 3 9	1,592 3 2	9,365 13 5
1885	1,339 2 0	221 18 2	6,852 5 0	1,618 18 10	10,032 4 0
1886	1,357 5 7	310 7 7	6,464 11 6	1,727 16 4	9,860 1 0

No. 46.—NUMBER of INTESTATE ESTATES dealt with by the Curator during the Years 1877-86.

Year.	Intestate Estates dealt with by the Curator.		Amount received by the Curator.		Amount paid by the Curator.	
	Number.		On fresh Estates.	On Estates remaining from previous years.	On fresh Estates.	On Estates remaining from previous years.
	Fresh Estates.	Estates remaining from previous years.				
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
1877	228	.....	13,188 15 3	.....	5,679 8 4	.....
1878	205	.....	16,658 17 1	.....	4,568 15 9	.....
1879	195	.....	11,421 17 6	.....	10,098 16 1	.....
1880	212	.....	23,748 8 11	33,926 18 10	3,016 9 7	.....
1881	300	.....	27,702 5 9	31,352 12 6	3,783 10 10	.....
1882	280	.....	22,748 13 6	.....	3,407 1 6	14,330 8 0
1883	283	.....	34,923 5 7	.....	6,703 13 0	13,852 9 0
1884	320	.....	29,201 8 7	.....	5,618 1 7	23,676 13 4
1885	351	.....	23,955 6 10	.....	3,990 4 4	18,184 11 1
1886	271	.....	13,411 2 1	12,493 4 11	3,618 15 6	18,076 14 5



CIVIL JUSTICE—continued.

No. 47.—NUMBER of SUITS commenced in the several DISTRICT COURTS in the Colony, during the Twelve Months preceding the 1st day of March, 1886, and other particulars.

District.	The Number of Suits.		Settled.		The Number of Cases.			Result of the Trials.		The Costs of the Suits.	The Number and Result of Appeals.			The Number of Cases left in Arrear.	The Number of	
	Commenced.	Total Amount sued for.	Without hearing.	By Arbitration.	Tried.	By Jury.	Without Jury.	For Plaintiff.	For Defendant.		Appeals.	Judgments or Orders affirmed.	Reversed.		Motions for New Trials.	New Trials granted.
<b>METROPOLITAN AND HUNTER DISTRICT.</b>																
Campbelltown	77	£ 1,856 11 8	30	..	47	1	46	42	5	84 18 8	..	..	..	..	..	..
Maitland	162	4,367 13 3	90	..	70	..	70	62	8	199 4 6	..	..	..	2	..	..
Muswellbrook	10	209 0 0	2	..	5	..	5	4	1	18 5 0	..	..	..	..	..	..
Newcastle	303	5,864 7 0	161	..	142	..	139	128	14	429 19 5	1	1	..	6	..	..
Parramatta	181	3,592 13 7	135	..	40	..	40	37	3	391 9 10	..	..	..	..	..	..
Penrith	90	2,533 17 9	37	..	53	..	53	46	7	44 19 6	..	..	..	..	..	..
Scone	5	25 6 8	5	..	..	..	..	..	..	3 14 0	..	..	..	..	..	..
Singleton	39	939 8 7	30	..	9	..	9	7	2	27 16 10	..	..	..	..	..	7
Sydney	5,345	119,353 16 11	1,008	..	2,255	18	2,237	2,045	210	8,104 19 8	11	..	..	2,082	20	..
Windsor	82	2,060 2 6	33	..	48	..	48	43	5	60 14 0	..	..	..	1	..	..
	6,294	140,802 17 11	1,531	..	2,669	22	2,647	2,414	255	9,366 1 5	12	1	..	2,094	20	7
<b>SOUTHERN DISTRICT.</b>																
Bega	63	2,520 13 0	25	2	36	1	35	30	6	130 3 6	..	..	..	..	..	..
Bombala	68	2,538 13 8	9	1	57	3	54	53	4	254 17 7	..	..	..	1	..	..
Braidwood	39	1,353 7 7	4	..	35	2	33	31	4	43 18 6	..	..	..	..	1	..
Cooma	226	5,936 18 6	82	..	130	8	122	113	17	679 3 6	..	..	..	14	..	..
Eden	9	371 5 9	3	1	5	..	5	2	3	5 15 0	..	..	..	..	..	..
Goulburn	213	5,380 19 11	54	1	157	3	154	139	18	448 11 0	..	..	..	1	..	..
Gunning	28	1,627 14 3	16	1	11	2	9	10	1	19 7 0	..	..	..	..	..	..
Kiama	52	2,071 16 3	22	..	30	1	29	22	8	201 0 5	..	..	..	..	..	..
Milton	5	79 9 11	4	..	1	..	1	..	1	2 11 0	..	..	..	..	..	..
Moruya	13	365 5 5	9	..	4	2	2	4	..	40 2 6	1	1	..	..	1	..
Moss Vale	67	1,990 3 7	13	..	53	4	49	45	8	69 7 5	..	..	..	1	..	..
Nowra	48	2,596 4 4	22	..	26	2	24	19	7	58 0 6	..	..	..	..	..	..
Queanbeyan	45	2,842 6 4	16	1	28	5	23	23	5	199 15 1	..	..	..	..	1	1
Wollongong	276	5,492 14 2	142	5	123	..	123	99	24	769 9 0	1	..	..	6	..	..
Yass	133	3,485 8 2	60	..	73	6	67	70	3	57 9 0	..	..	..	..	..	..
	1,285	38,653 0 10	481	12	769	39	730	660	1 9	2,979 11 0	2	1	..	23	3	1
<b>SOUTH-WESTERN DISTRICT.</b>																
Albury	89	3,132 8 0	44	..	45	3	42	40	5	57 6 0	..	..	..	..	..	..
Burrowa	32	792 14 10	14	..	18	..	18	15	3	24 14 0	..	..	..	..	..	..
Cootamundra	52	2,164 16 6	19	..	33	1	32	29	4	255 15 0	..	..	..	..	..	..
Corowa	10	497 15 0	7	..	3	..	3	..	3	9 0 0	..	..	..	..	..	..
Deniliquin	40	1,829 8 1	16	..	24	..	24	22	2	52 7 4	..	..	..	..	..	..
Grenfell	12	714 15 5	3	..	8	..	8	6	2	48 13 10	..	..	..	1	..	..
Gundagai	78	1,220 4 10	49	..	29	..	29	26	3	62 17 0	..	..	..	..	..	..
Hay	57	3,259 18 9	33	1	20	1	19	19	1	274 17 0	..	..	..	3	..	..
Narrandera	26	993 10 7	7	..	18	1	17	12	6	123 5 0	..	..	..	1	..	..
Temora	11	420 15 8	2	..	9	2	7	7	2	49 13 10	1	..	..	..	..	..
Tumut	19	561 3 10	6	..	13	..	13	10	3	35 3 6	..	..	..	..	..	..
Wagga Wagga	140	3,272 1 5	103	..	37	4	33	30	7	236 7 7	..	..	..	..	..	..
Young	39	1,646 4 6	16	..	18	1	17	12	6	146 2 0	..	..	..	5	..	..
	605	20,505 17 5	319	1	275	13	262	228	47	1,376 2 0	1	..	..	10	..	..
<b>WESTERN DISTRICT.</b>																
Bathurst	90	2,270 1 2	38	..	52	4	48	47	5	225 17 4	..	..	..	..	..	..
Carcoar	32	1,347 6 7	28	..	4	..	4	3	1	74 8 10	..	..	..	..	..	..
Cowra	28	1,223 11 5	15	..	13	3	10	11	2	152 15 4	..	..	..	..	..	..
Dubbo	109	3,129 16 0	29	..	80	2	78	65	15	147 3 2	..	..	..	..	..	..
Forbes	61	1,940 3 11	27	..	32	1	31	25	7	204 18 5	..	..	..	2	..	..
Lithgow	28	879 11 1	15	..	13	1	12	12	1	64 19 2	..	..	..	..	..	..
Merrilwa	7	249 18 0	3	2	2	..	2	2	..	23 2 6	..	..	..	..	..	..
Molong	15	868 18 9	7	..	7	2	5	5	2	20 9 0	..	..	..	1	..	..
Mudgee	80	2,177 16 3	11	..	60	..	60	50	10	46 4 0	..	..	..	9	..	..
Orange	81	3,014 4 9	41	..	38	..	38	33	5	196 8 1	..	..	..	2	..	..
Warren	41	1,766 4 5	22	..	19	3	16	18	1	103 6 5	..	..	..	..	..	..
Wellington	27	672 8 10	14	..	13	..	13	11	2	29 6 0	..	..	..	..	..	..
	599	19,540 1 2	250	2	333	16	317	282	51	1,288 18 3	..	..	..	14	..	..
<b>NORTHERN DISTRICT.</b>																
Armidale	147	2,202 15 6	92	..	55	..	55	48	7	40 14 0	..	..	..	..	..	..
Bingera	7	351 8 5	2	..	5	..	5	4	1	3 19 6	..	..	..	..	..	..
Casino	61	1,523 8 6	33	..	28	..	28	24	4	64 7 3	..	..	..	..	..	..
Emmaville	33	451 15 6	16	..	16	..	16	15	1	26 14 11	..	..	..	1	..	..
Glen Innes	57	1,723 16 6	22	..	35	1	34	27	8	203 0 4	..	..	..	..	..	..
Grafton	202	4,413 12 8	76	..	123	..	123	117	6	442 17 8	..	..	..	3	..	..
Inverell	55	1,431 12 4	24	..	25	..	25	24	1	24 12 6	..	..	..	6	..	..
Kempsey	91	4,725 0 0	38	..	40	1	39	25	15	60 18 6	..	..	..	13	1	..
Lismore	213	7,983 9 1	87	1	118	2	116	109	9	635 11 7	..	..	..	7	1	..
Maclean	92	3,281 13 10	49	..	41	..	41	35	6	234 1 9	..	..	..	2	..	..
Moree	49	3,346 16 10	26	..	20	..	20	18	2	74 8 6	..	..	..	3	..	..
Port Macquarie	8	257 8 0	2	..	5	..	5	2	3	9 2 6	..	..	..	1	..	..
Tamworth	70	1,281 5 4	38	..	29	..	29	26	3	164 7 2	..	..	..	3	..	..
Taree	59	2,194 13 4	29	..	30	..	30	21	9	216 3 5	..	..	..	..	..	..
Tenterfield	23	556 9 0	7	..	13	..	13	7	6	49 14 0	..	..	..	3	..	..
Warialda *	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	1,167	35,730 4 10	541	1	583	4	579	502	81	2,250 13 7	..	..	..	42	2	..
<b>NORTH-WESTERN DISTRICT.</b>																
Balranald	14	581 19 2	2	..	12	1	11	12	..	8 16 0	..	..	..	..	1	..
Bourke	174	6,623 4 4	77	..	88	1	87	57	31	827 13 3	1	..	1	9	1	..
Cobar	50	2,362 6 5	25	..	23	..	23	20	3	32 0 0	..	..	..	2	..	..
Coonabarabran	13	408 15 3	5	1	7	..	7	7	..	10 18 0	..	..	..	..	..	..
Coonamble	28	883 7 8	14	..	14	..	14	12	2	38 2 10	..	..	..	..	..	..
Gunnedah	6	504 14 9	3	..	3	..	3	1	2	4 10 0	..	..	..	..	..	..
Hillston	35	2,290 13 5	8	..	23	1	22	22	1	218 2 2	..	..	..	4	..	..
Menindie	27	2,052 14 0	13	..	14	..	14	8	6	177 18 8	1	..	1	..	..	..
Murrurundi	18	857 16 5	7	..	11	1	10	7								



## IMPORTS AND EXPORTS.

No. 1.—TOTAL VALUE of the IMPORTS and EXPORTS of the Colony of New South Wales, from and to each Country, in the Year 1886.

Countries and Ports.	Total Imports therefrom.	Exports thereto.			Excess of Imports.	Excess of Exports.
		Produce or Manufacture of the Colony.	Other Produce or Manufacture.	Total.		
	£	£	£	£	£	£
United Kingdom ... ..	10,445,980	5,399,201	627,753	6,026,954	4,419,026	.....
<b>BRITISH COLONIES OR POSSESSIONS.</b>						
Victoria ... ..	2,789,700	3,393,665	393,678	3,697,343	.....	907,643
Queensland ... ..	2,568,438	698,497	909,365	1,667,862	900,576	.....
South Australia ... ..	828,174	1,461,045	124,785	1,585,830	.....	757,656
Tasmania ... ..	606,740	49,199	61,577	110,776	495,964	.....
New Zealand ... ..	949,567	353,862	73,778	427,640	521,927	.....
Western Australia ... ..	3,386	27,058	27,630	54,688	.....	51,302
Aden... ..	.....	.....	89	89	.....	89
Burmah ... ..	.....	4,645	8	4,653	.....	4,653
Burrard's Inlet ... ..	.....	120	.....	120	.....	120
British Columbia ... ..	9,874	.....	.....	.....	9,874	.....
Cape Town ... ..	.....	174	.....	174	.....	174
Ceylon ... ..	9,226	3,546	5	3,551	5,675	.....
Fiji ... ..	176,661	38,194	73,707	111,901	64,760	.....
Hong Kong ... ..	280,449	228,074	58,967	287,041	.....	6,592
India... ..	100,905	67,744	21,555	89,299	11,606	.....
Mauritius ... ..	25,268	15,138	458	15,596	9,672	.....
New Guinea... ..	68	392	84	476	.....	408
Singapore ... ..	19,056	4,589	264	4,853	14,203	.....
Total British Colonies, &c....	8,367,512	6,255,942	1,805,950	8,061,892	305,620	.....
<b>FOREIGN STATES.</b>						
Austria ... ..	250	2,640	2,915	5,555	.....	5,305
Belgium ... ..	173,831	421,407	3,531	424,938	.....	251,107
Borneo ... ..	710	.....	.....	.....	710	.....
Chili ... ..	.....	27,167	38	27,205	.....	27,205
China ... ..	195,930	14,529	1,933	16,462	179,468	.....
Egypt ... ..	9,652	.....	.....	.....	9,652	.....
France ... ..	216,193	98,811	50,698	149,509	66,684	.....
Germany ... ..	361,612	50,784	3,687	54,471	307,141	.....
Holland ... ..	.....	8,001	.....	8,001	.....	8,001
Indo-China ... ..	.....	2,296	.....	2,296	.....	2,296
Italy ... ..	7,198	2,978	731	3,709	3,489	.....
Japan ... ..	9,811	.....	400	400	9,411	.....
Java ... ..	3,230	20,100	2,116	22,216	.....	18,986
Kaiser Wilhelm Land ... ..	.....	208	437	645	.....	645
Macao ... ..	7,584	.....	.....	.....	7,584	.....
Mexico ... ..	.....	5,184	.....	5,184	.....	5,184
New Caledonia ... ..	64,952	19,719	91,613	111,332	.....	46,380
Norway ... ..	48,501	.....	.....	.....	48,501	.....
Panama ... ..	.....	2,025	.....	2,025	.....	2,025
Peru ... ..	.....	6,090	.....	6,090	.....	6,090
Padang ... ..	.....	2,212	.....	2,212	.....	2,212
Philippine Islands ... ..	.....	19,559	64	19,623	.....	19,623
Réunion ... ..	.....	.....	36	36	.....	36
Russian Territory ... ..	.....	1,073	11,571	12,644	.....	12,644
Sandwich Islands ... ..	81	13,565	4,022	17,587	.....	17,506
Spain... ..	.....	3,750	.....	3,750	.....	3,750
South Sea Islands ... ..	36,491	6,711	43,550	50,261	.....	13,770
Sweden ... ..	4,200	.....	.....	.....	4,200	.....
Turkey and Greece... ..	1,057	.....	.....	.....	1,057	.....
United States of America ... ..	1,018,773	500,208	20,968	521,216	497,557	.....
Total Foreign States... ..	2,160,056	1,229,057	238,310	1,467,367	692,689	.....
<b>GENERAL TOTAL... ..</b>	<b>20,973,548</b>	<b>12,884,200</b>	<b>2,672,013</b>	<b>15,556,213</b>	<b>5,417,335</b>	<b>.....</b>

## STATISTICS, 1886—TRADE AND COMMERCE.

51.

## IMPORTS.

No. 2.—GENERAL IMPORTS into the Colony of New South Wales during the Year 1886.

Articles.	Countries whence Imported.	Importations.		*Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
Acid (Acetic) ...	Great Britain ...	3,020 gallons	£ 514	3,680 gallons.	£ s. d. 460 0 4	2/6 per gallon. 7 April, 1886.
	Victoria ...	188 "	51			
	South Australia ...	47 "	19			
	Belgium ...	110 "	50			
	Germany ...	1,976 "	456			
		5,341 gallons	1,090			
Acid (Tartaric) ...	Great Britain ...	85,559 lb.	7,539	34,320 lb.	143 4 6	1d. per lb. 7 April, 1886.
	Victoria ...	1,285 "	109			
	South Australia ...	476 "	57			
	Germany ...	1,621 "	147			
		88,941 lb.	7,852			
Acids (all others)...	Great Britain ...	1,547 pkg.	6,032	.....	Ad valorem ...	5 per cent. 7 April, 1886.
	Victoria ...	239 "	431			
	South Australia ...	35 "	88			
	Germany ...	13 "	94			
	France ...	6 "	23			
	United States ...	300 "	250			
		2,140 pkg.	6,918			
Aerated Waters ...	Great Britain ...	22,111 doz.	4,069	27,360 dozens.	684 14 7	6d. per dozen. 7 April, 1886.
	Victoria ...	68,506 "	8,833			
	South Australia ...	1,644 "	374			
	Queensland ...	350 "	52			
	New Zealand ...	11 "	25			
	United States ...	194 "	59			
	France ...	3 "	2			
	Germany ...	620 "	155			
	Belgium ...	252 "	56			
			93,691 doz.			
Agricultural Imple- ments ...	Great Britain ...	2,085 pkg.	15,495	.....	Ad valorem ...	5 per cent. 7 April, 1886.
	Victoria ...	2,813 "	26,005			
	South Australia ...	170 "	4,438			
	Queensland ...	205 "	1,064			
	Tasmania ...	20 "	129			
	New Zealand ...	383 "	2,409			
	United States ...	704 "	4,515			
	Germany ...	14 "	202			
	Hong Kong ...	2 "	3			
		6,396 pkg.	54,260			
Anchors ...	Great Britain ...	762 No.	692	.....	.....	Free.
	Victoria ...	4 "	29			
	Queensland ...	10 "	7			
		776 No.	728			
Alum ...	Great Britain ...	528 cwt.	198	240 cwt.	11 8 0	1/- per cwt. from 7 April to Aug., 1886; afterwards 5 per cent. ad valorem.
	Victoria ...	5 "	4			
	South Australia ...	6 "	5			
	Germany ...	5 "	3			
		544 cwt.	210			
Apparel (Wearing)	Great Britain ...	29,570 pkg.	1,135,520	.....	Ad valorem ...	5 per cent. 7 April, 1886.
	Victoria ...	3,887 "	86,128			
	South Australia ...	848 "	16,072			
	Queensland ...	250 "	2,533			
	Tasmania ...	18 "	408			
	New Zealand ...	155 "	1,677			
	Western Australia ...	7 "	418			
	Fiji ...	11 "	86			
	Hong Kong ...	144 "	2,294			
	India ...	7 "	134			
	United States ...	44 "	955			
	New Caledonia ...	17 "	176			
	South Sea Islands ...	2 "	11			
	China... ..	7 "	81			
	Germany ...	133 "	5,323			
	France ...	466 "	18,670			
Belgium ...	3 "	33				
		35,569 pkg.	1,270,519			

\* The quantities in this column are those upon which specific duties were paid.

## IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.		
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.	
Arms, Ammunition, and Explosives.	Guns ...	Great Britain ...	371 cases	£ 14,811	.....	£ s. d.	
		Victoria ...	108 "	1,324			
		South Australia ...	68 "	579			
		Queensland ...	6 "	119			
		New Zealand ...	3 "	140			
		France ...	6 "	191			
		United States ...	65 "	1,455			
		South Sea Islands ...	2 "	42			
		Belgium ...	16 "	504			
		Germany ...	18 "	704			
	India ...	1 "	4				
			664 cases	19,873		<i>Ad valorem ...</i>	5 per cent. 7 April, 1886.
	Gun-caps ...	Great Britain ...	37 pkg.	1,066	.....	<i>Ad valorem ...</i>	5 per cent. 7 April, 1886.
		Victoria ...	2 "	17			
		South Australia ...	56 "	258			
		United States ...	2 "	13			
		Germany ...	3 "	73			
			100 pkg.	1,427			
	Cartridges ...	Great Britain ...	1,898 pkg.	10,735	.....	<i>Ad valorem ...</i>	5 per cent. 7 April, 1886.
		Victoria ...	44 "	206			
		South Australia ...	101 "	447			
		Queensland ...	2 "	8			
United States ...		181 "	825				
Germany ...		223 "	529				
Fiji ...		1 "	2				
Belgium ...	1 "	30					
		2,451 pkg.	12,782				
Shot... ..	Great Britain ...	5,443 cwt.	5,766	.....	<i>Ad valorem ...</i>	5 per cent. 7 April, 1886.	
	Victoria ...	236 "	337				
	South Australia ...	155 "	234				
	Queensland ...	2 "	4				
		150 "	125				
		5,986 cwt.	6,466	6,888 cwt.	1,721 18 5	5s. per cwt. 17 Mar., 1871.	
Swords... ..	Great Britain ...	4 cases	65	.....	<i>Ad valorem ...</i>	5 per cent. 7 April, 1886.	
Gun-cotton ...	Great Britain ...	245 pkg.	1,157	.....	<i>Ad valorem ...</i>	5 per cent. 7 April, 1886.	
Dynamite and Lithofracteur	Great Britain ...	154,000 lb.	10,500	.....	<i>Ad valorem ...</i>	5 per cent. 7 April, 1886.	
	Victoria ...	38,350 "	2,993				
	Queensland ...	12,500 "	950				
	South Australia ...	6,900 "	513				
	United States ...	5,000 "	375				
	Germany ...	44,950 "	2,947				
		261,700 lb.	18,188	41,520 lb.	173 10 10	1d. per lb. 7 April, 1886.	
Other Fire-arms ...	Great Britain ...	50 pkg.	2,379	.....	<i>Ad valorem ...</i>	5 per cent. 7 April, 1886.	
	United States ...	27 "	425				
	Italy ...	3 "	200				
	Belgium ...	4 "	189				
	Germany ...	3 "	112				
		87 pkg.	3,305				
Powder (blasting) ...	Great Britain ...	2,452,855 lb.	56,731	.....	<i>Ad valorem ...</i>	5 per cent. 7 April, 1886.	
	Victoria ...	5,328 "	205				
	Queensland ...	5,000 "	333				
	South Australia ...	71,900 "	3,624				
	Germany ...	96,300 "	4,823				
		2,631,383 lb.	65,716	2,411,989 lb.	10,049 19 1	1d. per lb. 17 Mar., 1871.	
Powder (sporting)..	Great Britain ...	76,587 lb.	7,565	.....	<i>Ad valorem ...</i>	5 per cent. 7 April, 1886.	
	Victoria ...	4,745 "	527				
	South Australia ...	3,151 "	846				
	United States ...	626 "	98				
		85,109 lb.	9,036	114,800 lb.	1,434 19 9	3d. per lb. 17 Mar., 1871.	
Fuze ...	Great Britain ...	677 casks	5,007	.....	<i>Ad valorem ...</i>	5 per cent. 7 April, 1886.	
	Victoria ...	8 "	49				
	South Australia ...	83 "	541				
	Germany ...	15 "	132				
	United States ...	1 "	41				
		784 casks	5,770				

## STATISTICS, 1886—TRADE AND COMMERCE.

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## IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.					
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.				
Arrowroot...	Great Britain ...	28 cwt.	£ 64	851 cwt. 2 <sup>1</sup> / <sub>4</sub> qr. 24 lb.	£ s. d. 397 8 10	rd. per lb. 7 April, 1886.				
	Victoria ...	56 "	132							
	South Australia ...	6 "	31							
	Queensland ...	1,122 "	3,010							
	New Zealand ...	10 "	27							
	Fiji ...	20 "	39							
	Hong Kong ...	24 "	25							
	South Sea Islands ...	106 "	222							
Mauritius ...	3 "	4								
France ...	5 "	9								
		1,380 cwt.	2,563							
Asphalt ...	Great Britain ...	251 tons	1,313	39,020 doz., at 1s.	6,054 cwt.	3s. 4d. per cwt. from 7 April to Aug., 1885. Afterwards free.				
	Germany ...	45 "	227							
		296 tons	1,540							
Bags and Sacks ...	Great Britain ...	7,190 doz.	1,885	6,054 cwt.	.....	3s. 4d. per cwt. from 7 April to Aug., 1885. Afterwards free.				
	Victoria ...	37,676 "	10,106							
	South Australia ...	214 "	65							
	Queensland ...	20 "	3							
	India ...	39,434 "	5,843							
Ceylon ...	1,000 "	410								
		76,534 doz.	18,312							
Bags, Calico ...	Great Britain ...	352 cwt.	1,539	246 cwt.	40 18 7	3s. 4d. per cwt. 7 April, 1886.				
	Victoria ...	9 "	30							
		361 cwt.	1,569							
Bags, Paper (Plain)	Great Britain ...	3,444 cwt.	3,764	174 cwt.	29 8 1	3s. 4d. per cwt. 7 April, 1886.				
	Victoria ...	267 "	368							
	South Australia ...	35 "	55							
	United States ...	280 "	801							
Belgium ...	9 "	30								
		4,035 cwt.	5,018							
Bags, Gunny ...	Victoria ...	11,062 doz.	1,637	1,302 cwt.	.....	3s. 4d. per cwt. 7 April, 1886.				
	South Australia ...	5,368 "	803							
	Queensland ...	126 "	26							
	India ...	12,880 "	2,463							
		29,436 doz.	4,929	2,040 doz., at 3s. 4d.		3s. 4d. per cwt. from 7 April to Aug., 1886. Afterwards free.				
					226 13 11					
Bacon and Hams...	Great Britain ...	655,440 lb.	23,857	1,524,120 lb.	12,701 3 9	2d. per lb. 17 Mar., 1871.				
	Victoria ...	110,929 "	4,256							
	South Australia ...	71,279 "	3,271							
	Queensland ...	23,683 "	684							
	New Zealand ...	596,363 "	21,207							
	Tasmania ...	1,314 "	34							
	United States ...	19,856 "	866							
	Western Australia ...	265 "	4							
	Hong Kong ...	692 "	36							
	Fiji ...	2,241 "	70							
	France ...	2,517 "	108							
			1,484,579 lb.				54,393			
	Barley, Pearl and Prepared ...	Great Britain ...	20,860 lb.				272	113,760 lb.	473 15 3	rd. per lb. 7 April, 1886.
Victoria ...		16,369 "	230							
Queensland ...		161 "	1							
South Australia ...		10,912 "	145							
New Zealand ...		60,920 "	575							
Tasmania ...		2,040 "	16							
		111,262 lb.	1,239							
Baking Powder, &c., &c....	Great Britain ...	8,074 lb.	470	97,200 lb.	406 5 9	rd. per lb. 7 April, 1886.				
	Victoria ...	67,233 "	3,064							
	South Australia ...	18,347 "	1,274							
	Hong Kong ...	5,509 "	57							
		99,163 lb.	4,865							
Bark ...	Victoria ...	277 tons	2,522	.....	.....	Free.				
	South Australia ...	111 "	1,270							
	Queensland ...	43 "	230							
	New Zealand ...	12 "	96							
	Tasmania ...	3,781 "	29,550							
	Fiji ...	1 "	5							
		4,225 tons	33,673							

IMPORTS—*continued.*

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.		
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.	
Baskets and Basket-ware ... ..	Great Britain ... ..	729 pkg.	£ 2,599		£ s. d.		
	Victoria ... ..	295 "	491				
	South Australia ... ..	90 "	160				
	Queensland ... ..	46 "	21				
	Tasmania ... ..	3,480 "	962				
	Hong Kong ... ..	2,212 "	505				
	Singapore ... ..	1,190 "	209				
	United States ... ..	43 "	153				
	China... ..	16 "	33				
	Germany ... ..	330 "	1,380				
Belgium ... ..	19 "	214					
		8,450 pkg.	6,727	.....	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.	
Bêche-de-mer ... ..	Victoria ... ..	1 tons	60				
	New Zealand ... ..	3 "	138				
	Tasmania ... ..	1 "	90				
	Fiji ... ..	32 "	1,580				
	South Sea Islands ... ..	31 "	1,517				
	New Caledonia ... ..	48 "	2,329				
		116 tons	5,714	.....	.....	Free.	
Beer in Wood ... ..	Great Britain ... ..	646,351 gallons	65,045				
	Victoria ... ..	40,594 "	3,457				
	South Australia ... ..	23,414 "	2,478				
	Queensland ... ..	10,443 "	1,056				
	Tasmania ... ..	1,823 "	213				
	New Zealand ... ..	7,973 "	782				
	United States ... ..	668 "	147				
	Belgium ... ..	450 "	270				
		731,716 gallons	73,448	697,400 gallons.	17,435 2 7	6d. per gallon. 17 Mar., 1871.	
Beer in Bottle ... ..	Great Britain ... ..	1,180,199 gallons	255,203				
	Victoria ... ..	38,039 "	8,260				
	South Australia ... ..	30,254 "	9,372				
	Queensland ... ..	2,570 "	545				
	Tasmania ... ..	187 "	31				
	New Zealand ... ..	547 "	50				
	United States ... ..	243,809 "	56,131				
	France ... ..	641 "	106				
	Belgium ... ..	6,115 "	1,147				
	Germany ... ..	81,399 "	15,161				
		1,598,760 gallons	346,006	1,377,653 "	51,661 12 3	9d. per gallon. 17 Mar., 1871.	
Biscuits ... ..	Great Britain ... ..	27,385 lb.	812				
	Victoria ... ..	231,431 "	6,133				
	South Australia ... ..	27,721 "	832				
	Queensland ... ..	3,977 "	57	109,680 lb. @ 1d.			
	United States ... ..	888 "	30				
	New Zealand ... ..	1,098 "	27	188,280 ,, " 2d.			
	Hong Kong ... ..	232 "	4				
	Germany ... ..	30 "	3				
			292,762 lb.	7,898	.....	2,026 10 6	2d. per lb. 7 April, 1886.
	Blacking ... ..	Great Britain ... ..	1,959 pkg.	5,020			
Victoria ... ..		521 "	818				
South Australia ... ..		54 "	58				
Queensland ... ..		12 "	5				
New Zealand ... ..		10 "	11				
United States ... ..		1,690 "	3,085				
		4,246 pkg.	8,997	.....	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.	
Blue ... ..	Great Britain ... ..	260,978 lb.	6,510				
	Victoria ... ..	33,500 "	896				
	South Australia ... ..	3,679 "	141				
	Queensland ... ..	72 "	3				
	Germany ... ..	2,240 "	60				
		300,469 lb.	7,610	344,400 lb.	1,434 14 3	1d. per lb. 17 Mar., 1871.	
Boats ... ..	Great Britain ... ..	1 No.	919				
	Victoria ... ..	12 "	323				
	United States ... ..	1 "	5				
	Queensland ... ..	1 "	8				
	South Australia ... ..	1 "	17				
	Hong Kong ... ..	1 "	151				
	Fiji ... ..	1 "	6				
		18 No.	1,429	.....	.....	.....	

## STATISTICS, 1886—TRADE AND COMMERCE.

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## IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.			
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.		
Bi-carbonate Soda.	Great Britain ...	2,229 cwt.	1,038	209,280 lb.	£ 872 3 3	1d. per lb. 7 April, 1886.		
	Victoria ...	56 "	63					
	Queensland ...	22 "	16					
	South Australia ...	26 "	98					
		2,333 cwt.	1,215					
Bolts, Nuts, Rivets, Screws, &c.	Great Britain ...	17,258 cwt.	20,034	16,280 cwt.	1,628 9 4	2s. per cwt. 7 April, 1886.		
	Victoria ...	373 "	565					
	Queensland ...	3 "	3					
	South Australia ...	299 "	567					
	United States ...	555 "	1,267					
	Belgium ...	6 "	9					
		18,594 cwt.	22,445					
Boots and Shoes	Great Britain ...	35,057 pkg.	498,196	.....	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.		
	Victoria ...	2,432 "	28,662					
	South Australia ...	1,013 "	14,483					
	Queensland ...	168 "	1,889					
	Tasmania ...	10 "	131					
	New Zealand ...	40 "	517					
	Western Australia ...	1 "	20					
	Hong Kong ...	77 "	546					
	United States ...	51 "	758					
	France ...	1,359 "	17,540					
	Germany ...	1,288 "	18,936					
	Belgium ...	21 "	551					
	New Caledonia ...	1 "	15					
	China ...	11 "	59					
Fiji ...	11 "	10						
		41,540 pkg.	582,313					
Beeswax	Victoria ...	492 lb.	29	.....	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.		
	Queensland ...	112 "	5					
	Tasmania ...	150 "	7					
		754 "	41					
Bricks	Building	Great Britain ...	20,000 No.	69	.....	<i>Ad valorem</i> ...		
		Victoria ...	29,476 "	85				
		South Australia ...	320 "	5				
	United States ...	18,000 "	27					
			67,796 No.	186				
	Fire	Great Britain ...	948,130 No.	3,218			.....	<i>Ad valorem</i> ...
Victoria ...		5,474 "	65					
South Australia ...		19,888 "	217					
		773,492 No.	3,500					
Brushware	Great Britain ...	1,479 pkg.	29,073	.....	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.		
	Victoria ...	490 "	1,264					
	South Australia ...	422 "	852					
	Queensland ...	2 "	27					
	New Zealand ...	1 "	26					
	Belgium ...	11 "	183					
	Hong Kong ...	7 "	76					
	United States ...	576 "	4,367					
	France ...	79 "	940					
	Germany ...	171 "	913					
	Italy ...	184 "	1,433					
		3,422 pkg.	39,154					
Butter	Great Britain ...	84 cwt.	408	18,261 cwt. 2 qrs.	8,522 9 11	1d. per lb. 7 April, 1886.		
	Victoria ...	6,457 "	35,331					
	South Australia ...	490 "	3,561					
	Queensland ...	132 "	752					
	Tasmania ...	950 "	5,881					
	New Zealand ...	19,373 "	110,046					
	Western Australia ...	5 "	12					
	Fiji ...	9 "	83					
	United States ...	25 "	139					
	France ...	67 "	550					
	Germany ...	8 "	60					
	Italy ...	321 "	2,633					
	India ...	20 "	80					
			27,941 cwt.				159,536	



IMPORTS—*continued.*

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
Candles ...	Great Britain ...	1,847,996 lb.	£ 47,981	844,560 lb. at 1d. 1,871,200 lb. at 1½d.	£ s. d.	
	Victoria ...	174,376 "	4,678			
	South Australia ...	90,849 "	3,004			
	Queensland ...	27,512 "	781			
	New Zealand ...	25 "	1			
	Western Australia ...	100 "	3			
	Hong Kong ...	1,283 "	69			
	China... ..	93 "	4			
	France ...	230 "	36			
	Belgium ...	928,075 "	22,527			
Germany ...	96,413 "	2,985				
New Caledonia ...	2,400 "	70				
		3,169,352 lb.	82,139		15,213 9 11	1½d. per lb. 7 April, 1886.
Cakes ...	Great Britain ...	6,423 lb.	296			
	Victoria ...	115,956 "	5,475			
	Hong Kong ...	6,544 "	149			
	China... ..	1,198 "	22			
		130,121 lb.	5,942		(See Confectionery.)	
Canvas ...	Great Britain ...	2,831 pkg.	12,547	2,232 cwt.	372 8 0	Sailmakers' canvas free; other kinds of canvas 5 per cent. <i>ad valorem</i> . From 7 April to August, 1886, duty 3s. 4d. per cwt.
	Victoria ...	287 "	1,449			
	South Australia ...	19 "	147			
	New Zealand ...	5 "	140			
	Germany ...	32 "	150			
		3,174 pkg.	14,433			
Chaff and Hay ...	Victoria ...	37,531 tons	183,389			Free.
	South Australia ...	3,396 "	22,800			
	Tasmania ...	2,142 "	10,746			
	New Zealand... ..	477 "	2,405			
	Queensland ...	57 "	302			
	New Caledonia ...	34 "	186			
		43,637 tons	219,828			
Chicory, Raw... ..	Victoria ...	43,220 lb.	321		(See below.)	
Chicory, Prepared..	Great Britain ...	163,429 lb.	1,469	137,840 lb. at 3d. 92,960 " at 6d.		
	Victoria ...	632 "	26			
	South Australia ...	13,135 "	217			
	Belgium ...	11,224 "	90			
	Germany ...	5,600 "	49			
		194,020 lb.	1,851		4,172 2 0	6d. per lb. 7 April, 1886.
Carriages ...	Great Britain ...	59 pkg.	4,091			
	Victoria ...	91 "	2,943			
	South Australia ...	32 "	870			
	Queensland ...	7 "	208			
	Tasmania ...	2 "	98			
	New Zealand... ..	2 "	50			
	United States ...	953 "	22,786			
	New Caledonia ...	1 "	30			
			1,147 pkg.			
Carts and Waggon's	Great Britain ...	483 No.	10,906			
	Victoria ...	25 "	930			
	South Australia ...	13 "	203			
	United States ...	189 "	2,427			
	New Zealand ...	17 "	425			
	Fiji ... ..	1 "	14			
		728 No.	14,905		<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.
Carriage-makers' Materials ...	Great Britain ...	1,691 pkg.	7,476			
	Victoria ...	806 "	1,755			
	South Australia ...	694 "	256			
	United States ...	5,355 "	24,280			
		8,546 pkg.	33,767		<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.
Cement ...	Great Britain ...	263,198 casks	173,568	337,180 casks.	33,717 18 6	2s. per barrel. 17 Mar., 1871.
	Victoria ...	2,274 "	1,559			
	South Australia ...	366 "	600			
	Queensland ...	10 "	5			
	France ...	3 "	2			
	Belgium ...	26,343 "	14,635			
	Germany ...	60,088 "	39,197			
			352,282 casks			

## STATISTICS, 1886—TRADE AND COMMERCE.

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## IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
Chain Cables ...	Great Britain ...	208 tons	£ 1,819	.....	£ s. d.	.....
	Victoria ...	6 "	165			
Cocoa raw... ..	Great Britain ...	214 tons	1,984	1,280 lb.	(See below) ...	Free. Over ½ inch in diameter.
	Victoria ...	220 lb.	18			
		90 "	5			
Cocoa and Chocolate (prepared.)	Great Britain ...	396,597 lb.	27,599	121,360 lb. at 3d. 270,000 " 6d.	8,283 13 8	3d. per lb. 17 Mar., 1871.
	Victoria ...	16,801 "	1,238			
	South Australia ...	8,086 "	565			
	Queensland ...	115 "	19			
	France ...	182 "	15			
	New Caledonia ...	15 "	1			
	Germany ...	1,904 "	85			
	Belgium ...	1,250 "	195			
Cheese ... ..		424,950 lb.	29,717	1,203,520 lb.	10,046 4 7	6d. per lb. 7 April, 1886.
	Great Britain ...	99,055 lb.	3,797			
	Victoria ...	198,073 "	6,304			
	South Australia ...	37,857 "	1,755			
	Queensland ...	1,823 "	66			
	Tasmania ...	32 "	1			
	New Zealand ...	859,824 "	30,350			
	Western Australia ...	106 "	2			
	Germany ...	11,007 "	395			
	New Caledonia ...	170 "	6			
	France ...	10,270 "	480			
Chinese Goods ...	Belgium ...	7,105 "	235	.....	Ad valorem ...	5 per cent. 7 April, 1886.
	United States ...	4,012 "	117			
	Victoria ...	105 pkg.	132			
	South Australia ...	3 "	8			
	China ...	53 "	51			
Chromite Ore ...	New Caledonia ...	1,127 pkg.	1,565	.....	.....	Free.
Cobalt Ore ...	New Caledonia ...	1,693 tons	4,909	.....	.....	Free.
Coal and Coke ...	Victoria ...	839 tons	6,067	.....	Ad valorem ...	5 per cent. 7 April, 1886.
	Great Britain ...	345 tons	933			
	South Australia ...	37 "	37			
Cocoanuts... ..	Queensland ...	5,284 "	21,554	.....	.....	Free.
	Victoria ...	20 "	25			
	Queensland ...	5,686 tons	22,549			
	New Zealand ...	9,500 No.	46			
	Fiji ...	61,060 "	305			
	South Sea Islands ...	288,332 "	1,392			
Coffee (prepared)...	New Caledonia ...	25,000 "	158	.....	.....	Free.
	India ...	5,300 "	19			
		300 "	2			
		389,492 No.	1,922			
Coffee (raw) ...	Great Britain ...	228 cwt.	998	489 cwt. 2 qr.	(See below) ...	6d. per lb. 7 April, 1886.
	Victoria ...	913 "	4,105			
	South Australia ...	236 "	1,552			
	New Caledonia ...	1 "	9			
		1,378 cwt.	6,664			
Coffee (raw) ...	Great Britain ...	222 cwt.	675	5,443 cwt.	9,016 0 6	3d. per lb. 9 Mar., 1871.
	Victoria ...	99 "	457			
	South Australia ...	67 "	204			
	Queensland ...	5 "	22			
	New Zealand... ..	311 "	910			
	South Sea Islands ...	40 "	126			
	New Caledonia ...	19 "	64			
	Egypt ...	23 "	80			
	China... ..	267 "	790			
	Ceylon ...	1,371 "	4,752			
	United States ...	875 "	3,440			
	India ...	323 "	935			
	Mauritius ...	381 "	912			
Hong Kong ...	320 "	690				
	4,323 cwt.	14,057				

IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.			
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.		
Coin..	Gold ...	Great Britain ...	8 boxes	£ 40,000	.....	£ s. d. -		
		Victoria ...	67 "	303,200				
		South Australia ...	9 "	27,200				
		Queensland ...	1 "	722				
		New Caledonia ...	1 "	214				
			86 boxes	371,336	.....	Free.		
	Silver ...	Great Britain ...	120 boxes	34,000	.....	.....		
		Victoria ...	7 "	1,110				
		South Australia ...	3 "	350				
		Queensland ...	7 "	1,690				
		Hong Kong ...	5 "	301	.....	Free.		
Copper and Bronze.	Great Britain ...	142 boxes	37,451	.....	.....			
	Victoria ...	150 boxes	1,500					
	South Australia ...	22 "	250					
			1 "			3	.....	Free.
			173 boxes			1,753	.....	Free.
Confectionery ...	Great Britain ...	416,424 lb.	16,961	183,040 lb. @ 1½d. 725,280 lb. @ 2d.	.....			
	Victoria ...	221,113 "	5,578					
	South Australia ...	31,751 "	1,122					
	Queensland ...	771 "	60					
	Hong Kong ...	7,624 "	164					
	United States ...	14,610 "	739					
	France ...	2,955 "	183					
	Germany ...	22 "	2					
	Belgium ...	1,263 "	145					
	New Zealand ...	800 "	24					
		697,333 lb.	24,978	.....	7,188 3 6 2d. per lb. 7 April, 1886.			
Colours (dry), Kalmosine and other washes ...	Great Britain ...	1,702 pkg.	1,782	.....	.....			
	Victoria ...	59 "	54					
	Queensland ...	1 "	13					
	South Australia ...	1 "	6					
	United States ...	414 "	1,110					
	Hong Kong ...	150 "	106					
	China ...	13 "	88					
	France ...	5 "	5					
	Belgium ...	93 "	51					
	Germany ...	1 "	54					
		2,439 pkg.	3,269	.....	Ad valorem ... 5 per cent. 7 April, 1886.			
Cream of Tartar ...	Great Britain ...	203,786 lb.	12,275	.....	.....			
	Victoria ...	2,432 "	195					
	South Australia ...	986 "	80					
	Italy ...	10,691 "	200					
	France ...	29,374 "	1,916					
		247,269 lb.	15,166	212,640 lb.	886 10 1 rd. per lb. 7 April, 1886.			
Cordials .....	Great Britain ...	3,162 dz. qrts.	1,737	.....	.....			
	Victoria ...	1,128 "	657					
	Queensland ...	31 "	17					
	South Australia ...	2,784 "	1,023					
	France ...	9 "	11					
	United States ...	8 "	28					
	Germany ...	3 "	4					
		7,125 doz.	3,477	9,146 doz.	343 6 3 1/6 per doz. qts. 9d. " pints. 7 April, 1886.			
Cotton Waste ...	Great Britain ...	704 bales	5,438	.....	.....			
	Victoria ...	163 "	273					
	South Australia ...	18 "	30					
	United States ...	20 "	31					
	India ...	5 "	150					
		910 bales	5,922	.....	Free.			
Charcoal ...	Victoria ...	61 tons	323	.....	Ad valorem ... 5 per cent. 7 April, 1886.			
Copper Ore ...	South Australia ...	15,015 tons	148,324	.....	.....			
	New Caledonia ...	559 "	4,115					
	New Zealand ...	3 "	32					
		15,577 tons	152,471			.....	Free.	

## STATISTICS, 1886—TRADE AND COMMERCE.

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## IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
Copper (Sheets) ...	Great Britain ...	27 pkg.	£ 525		£ s. d.	
	Belgium ...	3 "	43			
		30 pkg.	568	.....	Ad valorem ...	5 per cent. 7 April, 1886.
Copper (Refined) ...	Fiji ...	5 cwt.	17	.....	.....	Free.
Copra ...	Queensland ...	37 tons	482			
	Fiji ...	754 "	7,588			
	South Sea Islands ...	2,414 "	27,225			
	New Caledonia ...	1,192 "	13,111			
	New Zealand ...	166 "	1,916			
		4,563 tons	50,322	.....	.....	Free.
Cordage and Rope..	Great Britain ...	10,601 cwt.	30,321			
	Victoria ...	2,205 "	6,394			
	South Australia ...	564 "	1,861			
	Queensland ...	35 "	106			
	New Zealand ...	232 "	430			
	Hong Kong ...	543 "	1,120			
	India ...	883 "	1,054			
	United States ...	25 "	108			
	Fiji ...	76 "	72			
	Germany ...	5 "	25			
	Belgium ...	9 "	33			
	China ...	1,263 "	2,892			
		2 "	13	12,550 cwt.	1,257 2 2	2s. per cwt. 17 Mar., 1886.
		16,413 cwt.	44,429			
Corks and Bungs...	Great Britain ...	952 bales	7,478			
	Victoria ...	297 "	1,386			
	South Australia ...	36 "	106			
	United States ...	23 "	143			
	France ...	49 "	139			
		3 "	30			
		1,360 bales	9,282	.....	Ad valorem ...	5 per cent. 17 April, 1886.
Cotton (Raw)...	Great Britain ...	2 pkg.	3			
	Victoria ...	177 "	269			
	Queensland ...	120 "	60			
	Fiji ...	22 "	422			
	South Sea Islands ...	29 "	400			
		62 "	158			
		412 pkg.	1,312	.....	.....	Free.
Cutlery ...	Great Britain ...	1,209 pkg.	49,820			
	Victoria ...	97 "	1,854			
	South Australia ...	350 "	1,372			
	Queensland ...	23 "	445			
	South Sea Islands ...	1 "	2			
	New Zealand ...	4 "	157			
	Fiji ...	2 "	23			
	United States ...	60 "	543			
	France ...	5 "	113			
		39 "	1,356			
		30 "	503			
		1,820 pkg.	56,188	.....	Ad valorem ...	5 per cent. 7 April, 1886.
Dates ...	Great Britain ...	381,774 lb.	4,412			
	Victoria ...	39,476 "	660			
	South Australia ...	4,237 "	96			
	Hong Kong ...	5,262 "	110			
	Singapore ...	3,400 "	50			
	India ...	116,988 "	1,475			
	Ceylon ...	83,341 "	1,144			
	China ...	140 "	8			
		1,180 "	14			
		635,798 lb.	7,969	604,320 lb.	2,517 19 2	1d. per lb. 17 Mar., 1871.
Doors—Wood (not otherwise charged) ...	Great Britain ...	2 No.	2			
	Victoria ...	1,326 "	998			
	South Australia ...	515 "	483			
	Queensland ...	5 "	2	12,920 No. @ 1s.		
	New Zealand ...	2,715 "	2,424	27,200 No. @ 2s.		
		35,804 "	18,523			
		40,427 No.	22,432	.....	3,366 4 0	2s. each. 7 April, 1886.

## STATISTICS, 1886—TRADE AND COMMERCE.

## IMPORTS—continued.

Articles	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
Drapery ...	Great Britain ...	59,729 pkg.	£ 2,435,325			
	Victoria ...	13,323 "	309,722			
	South Australia ...	1,529 "	37,806			
	Queensland ...	359 "	7,157			
	Tasmania ...	43 "	1,369			
	New Zealand ...	217 "	8,642			
	Fiji ...	12 "	205			
	Hong Kong ...	249 "	5,125			
	India ...	54 "	2,293			
	China ...	55 "	427			
	United States ...	163 "	2,394			
	France ...	883 "	58,294			
	Belgium ...	57 "	2,054			
	Germany ...	694 "	13,599			
	South Sea Islands ...	1 "	39			
	New Caledonia ...	53 "	208			
	Western Australia ...	54 "	2,290			
Singapore ...	2 "	27				
Mauritius ...	1 "	63				
Japan ...	1 "	72				
		77,479 pkg.	2,887,111	.....	Ad valorem ...	5 per cent. 7 April, 1886.
Drugs and Apothecaries Ware.	Great Britain ...	25,241 pkg.	153,932			
	Victoria ...	5,895 "	19,038			
	South Australia ...	1,256 "	5,696			
	Queensland ...	176 "	897			
	Tasmania ...	3 "	7			
	New Zealand ...	234 "	403			
	Hong Kong ...	1,343 "	2,327			
	United States ...	3,797 "	16,453			
	France ...	328 "	1,008			
	Germany ...	449 "	2,242			
	New Caledonia ...	1 "	5			
China ...	97 "	253				
Belgium ...	431 "	334				
Western Australia ...	1 "	20				
India ...	686 "	558				
		39,938 pkg.	203,173	.....	Ad valorem ...	5 per cent. 7 April, 1886.
Dyes and Dye Stuffs	Great Britain ...	495 pkg.	1,460			
	Victoria ...	113 "	400			
	United States ...	204 "	2,139			
	Hong Kong ...	15 "	100			
	India ...	131 "	416			
Germany ...	13 "	60				
		971 pkg.	4,575	.....	Ad valorem ...	5 per cent. 7 April, 1886.
Effervescing Powders	Great Britain ...	11,691 lb.	1,138			
	Victoria ...	555 "	45			
	South Australia ...	571 "	48			
	United States ...	32 "	16			
		12,849 lb.	1,247	16,800 lbs.	70 8 0	1d. per lb. 7 April, 1886.
Earthenware and China	Great Britain ...	21,620 pkg.	103,136			
	Victoria ...	4,561 "	7,625			
	South Australia ...	516 "	2,238			
	Queensland ...	297 "	342			
	Tasmania ...	6 "	38			
	Hong Kong ...	501 "	2,021			
	China ...	20 "	69			
	United States ...	286 "	418			
	Germany ...	1,009 "	6,570			
	Belgium ...	168 "	878			
	France ...	52 "	360			
	New Zealand ...	19 "	377			
	India ...	2 "	12			
		29,057 pkg.	124,084	.....	Ad valorem ...	5 per cent. 7 April, 1886.
Eggs	Victoria ...	36,424 doz.	2,499			
	Queensland ...	130 "	8			
	South Australia ...	36,276 "	2,044			
	New Zealand ...	4,353 "	196			
	Tasmania ...	30 "	2			
	New Caledonia ...	60 "	2			
	Hong Kong ...	10,775 "	287			
	China ...	2,112 "	58			
	Japan ...	2,650 "	73			
		92,810 doz.	5,169	.....	Ad valorem ...	5 per cent. 7 April, 1886.

STATISTICS, 1886—TRADE AND COMMERCE.

IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
Essences (flavouring) ... ..	Great Britain ...	2,276 gallons.	£ 4,739	325 gallons. 673 "	£ s. d. 64 15 9 404 14 3	Under 25 per cent. spirit, 4s. per gallon; over 25 per cent. spirit, 12s. per gallon; 7 April, 1886.
	Victoria ...	243 "	689			
	South Australia ...	44 "	159			
	United States ...	55 "	125			
	Germany ...	189 "	325			
Greece ...	3 "	4				
		2,810 gallons.	6,041		469 10 0	
Farinaceous Foods and Milk Foods	Great Britain ...	62,874 lb.	3,107	60,240 lb.	251 13 5	1d. per lb. 7 April, 1886.
	Victoria ...	996 "	84			
	South Australia ...	230 "	12			
	New Zealand ...	257 "	7			
	United States ...	540 "	24			
		64,947 lb.	3,234			
Fancy Goods ... ..	Great Britain ...	2,520 pkg.	47,287			
	Victoria ...	193 "	4,064			
	Queensland ...	32 "	405			
	Western Australia ...	7 "	182			
	New Zealand ...	3 "	3			
	Tasmania ...	2 "	26			
	South Sea Islands ...	5 "	6			
	Ceylon ...	1 "	61			
	United States ...	72 "	457			
	Hong Kong ...	483 "	3,282			
	China ...	6 "	18			
	India ...	4 "	27			
	Germany ...	213 "	3,081			
	New Guinea... ..	16 "	18			
	Japan ...	74 "	357			
France ...	100 "	879				
Belgium ...	4 "	103				
		3,685 pkg.	60,256		Ad valorem ...	5 per cent. 7 April, 1886.
Felt ... ..	Great Britain ...	574 pkg.	1,730			
	Victoria ...	22 "	150			
	South Australia ...	2 "	2			
		598 pkg.	1,882		Ad valorem ...	5 per cent. 7 April, 1886.
Fibre ... ..	Great Britain ...	715 pkg.	697			
	Victoria ...	284 "	228			
	Queensland ...	125 "	178			
	New Zealand ...	80 "	40			
	Fiji ...	775 "	309			
	Ceylon ...	6,028 "	550			
	India ...	5,869 "	296			
	New Caledonia ...	113 "	115			
	Mauritius ...	9,003 "	384			
		22,992 pkg.	2,797			Free.
Fireworks ... ..	Great Britain ...	136 pkg.	849			
	Victoria ...	5 "	22			
	Queensland ...	1 "	10			
	Hong Kong ...	1,765 "	2,202			
	China... ..	52 "	56			
		1,959 pkg.	3,139		Ad valorem ...	5 per cent. 7 April, 1886.
Fish (Preserved) ...	Great Britain ...	1,959,484 lb.	50,786	3,798,960 lbs.	15,829 3 1	1d. per lb. 17 Mar., 1871.
	Victoria ...	107,199 "	4,697			
	South Australia ...	70,173 "	2,637			
	Queensland ...	10,411 "	240			
	Tasmania ...	54 "	5			
	New Zealand ...	31,245 "	632			
	Hong Kong ...	71,709 "	2,787			
	China ...	7,765 "	228			
	United States ...	2,083,593 "	40,488			
	New Caledonia ...	108 "	2			
	France ...	9,309 "	358			
	Germany ...	317 "	38			
Norway ...	439 "	29				
India ...	1,035 "	64				
		4,413,441 lb.	102,991			
Fireclay ... ..	Great Britain ...	287 tons	354			
	South Australia ...	10 "	37			
		297 tons	391		Ad valorem ...	5 per cent. 7 April, 1886.
Firewood ... ..	Victoria ...	375 loads	132		Ad valorem ...	5 per cent. 7 April, 1886.
Fish Paste... ..	Great Britain ...	17,649 lb.	1,542			
	Hongkong ...	180 "	4			
		17,829 "	1,546		(See Fish—Preserved.)	

## IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
Flax and Hemp ...	Great Britain ...	113 pkg.	£ 245		£ s. d.	
	South Australia ...	18 "	69			
	Hong Kong ...	2,939 "	10,952			
	China ...	240 "	1,200			
	United States ...	60 "	158			
	India ...	17 "	42			
	France ...	46 "	150			
		3,433 pkg.	12,816	.....	.....	Free.
Flour ...	Great Britain ...	8 tons	70			
	Victoria ...	36,564 "	384,037			
	South Australia ...	15,668 "	172,299			
	Queensland ...	77 "	927			
	New Zealand ...	6,671 "	66,658			
	United States ...	2,504 "	25,381			
		61,492 tons	649,372	.....	.....	Free.
Floor-cloths ...	Great Britain ...	3,870 pkg.	40,826			
	Victoria ...	217 "	1,666			
	South Australia ...	94 "	402			
	Queensland ...	1 "	6			
	United States ...	17 "	203			
		4,199 pkg.	43,103	.....	Ad valorem ....	5 per cent. 7 April, 1886.
Bottled...	Great Britain ...	5,082 doz.	1,742			
	Victoria ...	194 "	107			
	South Australia ...	159 "	115			
	United States ...	1,295 "	724			
	France ...	240 "	100			
	Germany ...	65 "	50			
		7,035 doz.	2,838	5,460 doz.	545 14 5	2s. per doz. qts. 1s. " pts. 17 Mar., 1871.
Fruit ...	Great Britain ...	1,490 tons	53,514			
	Victoria ...	648 "	21,326			
	South Australia ...	104 "	5,327			
	Queensland ...	44 "	1,689			
	Hong Kong ...	14 "	794			
	United States ...	37 "	1,783			
	Egypt ...	198 "	9,564			
	France ...	100 "	4,050			
	Fiji ...	1 "	30			
	Turkey ...	20 "	1,053			
	Germany ...	43 "	1,162			
	New Zealand ...	6 "	242			
	Ceylon ...	2 "	59			
	Belgium ...	1 "	22			
	Western Australia ...	1 "	14			
		2,707½ tons	100,629	2,724 tons 1 cwt.	50,919 6 6	2d. per lb. 17 Mar., 1871.
Green ...	Victoria ...	72,451 pkg.	27,265			
	South Australia ...	4,780 "	2,485			
	Queensland ...	71,591 "	20,332			
	Tasmania ...	238,972 "	93,722			
	New Zealand ...	8,827 "	1,765			
	Fiji ...	173,010 "	28,234			
	United States ...	6,555 "	2,610			
	New Caledonia ...	672 "	278			
	Hong Kong ...	101 "	37			
	South Sea Islands ...	4,472 "	462			
	Italy ...	130 "	117			
	India ...	60 "	9			
		581,621 pkg.	177,316	.....	.....	Free.
Fungus ...	New Zealand... ..	1,820 pkg.	9,135			
	Hong Kong ...	68 "	138			
	South Sea Islands ...	238 "	357			
	New Caledonia ...	223 "	210			
	China... ..	4 "	15			
		2,353 bales	9,855	.....	.....	Free.
Furniture ...	Great Britain ...	13,841 pkg.	176,426			
	Victoria ...	3,752 "	17,757			
	South Australia ...	569 "	3,899			
	Queensland ...	127 "	496			
	Tasmania ...	53 "	621			
	New Zealand... ..	62 "	468			
	Hong Kong ...	1,728 "	1,860			
	United States ...	11,856 "	25,726			
	China... ..	109 "	108			
	Carried forward...	32,097 pkg.	227,361			

## STATISTICS, 1886—TRADE AND COMMERCE.

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## IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Valuc.		Gross Amount received.	Rate, and when imposed.
Brought forward	...	32,097 pkg.	£ 227,361		£ s. d.	
Furniture—contd.	Germany ...	5,773 "	43,399			
	New Caledonia ...	38 "	325			
	Belgium ...	686 "	4,382			
	Singapore ...	1 "	5			
	Fiji ...	150 "	1,510			
	India ...	45 "	159			
	Japan ...	94 "	51			
	France ...	119 "	998			
		39,003 pkg.	278,190	.....	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.
Fruit Salts	Great Britain .....	28,170 lb.	5,382			
	Victoria ...	1,033 "	197			
	Queensland ...	432 "	90			
	South Australia ...	857 "	206			
		30,492 lb.	5,875	22,320 lb.	186 3 2	2d. per lb. 7 April, 1886.
Gelatine and Isinglass	Great Britain ...	35,791 lb.	4,990			
	Victoria ...	3,814 "	633			
	South Australia ...	631 "	47			
	Hongkong ...	126 "	3			
	France ...	220 "	17			
	Belgium ...	1,583 "	79			
	Germany ...	200 "	14			
		42,365 lb.	5,783	16,320 lb.	68 13 7	1d. per lb. 7 April, 1886.
Gas-fittings	Great Britain ...	16,158 pkg.	45,332			
	Victoria ...	58 "	633			
	United States ...	18 "	85			
	Queensland ...	2 "	16			
	South Australia ...	1 "	6			
	New Caledonia ...	11 "	99			
	Belgium ...	150 "	95			
	Germany ...	7 "	91			
		16,405 pkg.	46,357	.....	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.
Ginger (Dried and Green)...	Great Britain ...	98,192 lb.	1,909			
	Victoria ...	12,724 "	377			
	South Australia ...	3,005 "	153			
	Queensland ...	257 "	8			
	Hong Kong ...	119,757 "	2,785			
	China ...	15,654 "	479			
	India ...	21,224 "	478			
		270,813 lb.	6,189	322,800 lb.	1,345 8 1	1d. per lb. 17 Mar., 1871.
Glass	Great Britain ...	285 pkg.	3,892			
	South Australia ...	57 "	147			
	Victoria ...	26 "	296			
	Germany ...	11 "	121			
	Belgium ...	20 "	309			
	United States ...	22 "	269			
		421 pkg.	5,034	.....	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.
Plate	Great Britain ...	642 pkg.	11,317			
	Victoria ...	48 "	1,729			
	South Australia ...	1 "	4			
	Belgium ...	115 "	3,849			
	Germany ...	1 "	40			
		807 pkg.	16,939	.....	.....	.....
Window	Great Britain ...	8,242 pkg.	11,198			
	Victoria ...	367 "	604			
	South Australia ...	180 "	299			
	Belgium ...	8,146 "	7,853			
	Germany ...	8 "	183			
	France ...	2 "	24			
		16,945 pkg.	20,161	.....	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.
Glassware	Great Britain ...	13,322 pkg.	46,540			
	Victoria ...	1,731 "	3,494			
	South Australia ...	537 "	1,604			
	Queensland ...	66 "	232			
	New Zealand ...	14 "	174			
	United States ...	1,477 "	3,962			
	Germany ...	2,270 "	5,600			
	France ...	23 "	408			
	Belgium ...	3,558 "	9,538			
	New Caledonia ...	2 "	6			
	Hong Kong ...	3 "	12			
	Fiji ...	1 "	3			
	Italy ...	1 "	44			
		23,005 pkg.	71,617	.....	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.



IMPORTS—*continued.*

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
Glue ...	Great Britain ...	392 pkg.	£ 2,318	86,640 lb.	£ s. d. 36 17 7	rd. per lb. 7 April, 1886.
	Victoria ...	26 "	81			
	South Australia ...	23 "	76			
	United States ...	25 "	159			
	France ...	3 "	59			
		469 pkg.	2,693			
Gold ...	Victoria ...	29 oz.	112	.....	.....	Free.
	Queensland ...	331,620 "	1,265,972			
	New Zealand ...	46,025 "	186,164			
	South Australia ...	2,746 "	10,447			
		380,420 oz.	1,462,695			
Gold-leaf ...	Great Britain ...	63 pkg.	3,337	.....	Ad valorem ...	5 per cent. 7 April, 1886.
	Victoria ...	1 "	10			
	Germany ...	1 "	200			
	Belgium ...	1 "	204			
	South Australia ...	2 "	4			
		68 pkg.	3,755			
Glucose—Solid ...	Great Britain ...	8 tons	112	69 tons.	34 1 5	5s. per cwt. 9 March, 1871.
	Victoria ...	1 "	15			
	United States ...	10 "	115			
	Germany ...	50 "	610			
		69 tons	852			
Glucose—Liquid ...	Great Britain ...	28 tons	615	15 tons.	48 15 0	3s. 4d. per cwt. 9 March, 1871.
	Germany ...	63 "	866			
		91 tons	1,481			
Groats—Patent ...	Great Britain ...	47,041 lb.	1,502	41,520 lb.	173 8 9	rd. per lb. 7 April, 1886.
	Victoria ...	3,218 "	65			
	Queensland ...	30 "	1			
	South Australia ...	164 "	5			
		50,453 lb.	1,573			
Grease ...	Great Britain ...	59 tons	614	.....	Ad valorem ...	5 per cent. ad valorem. 7 April, 1886.
	Victoria ...	13 "	157			
	United States ...	52 "	829			
	South Australia ...	5 "	93			
		129 tons	1,693			
Grindery ...	Great Britain ...	1,247 pkg.	26,837	.....	Ad valorem ...	5 per cent. 7 April, 1886.
	Victoria ...	93 "	957			
	United States ...	1,126 "	1,465			
	Queensland ...	1 "	16			
	South Australia ...	27 "	41			
	France ...	53 "	1,522			
	Germany ...	2 "	155			
	New Zealand ...	5 "	22			
		2,554 pkg.	31,015			
Barley ...	Victoria ...	23,787 bushels	3,741	.....	.....	Free.
	South Australia ...	31 "	8			
	New Zealand ...	30,548 "	4,402			
	Tasmania ...	5,975 "	848			
	India ...	1,656 "	331			
		61,097 bushels	9,330			
Grain and Pulse	Victoria ...	5,244 bushels	421	.....	.....	Free.
	New Zealand ...	2,354 "	561			
Beans ...	United States ...	13,790 "	662	.....	.....	Free.
	New Caledonia ...	2,292 "	529			
	South Australia ...	7 "	7			
	Hong Kong ...	93 "	13			
	Italy ...	40 "	37			
		23,820 bushels	2,230			
Bran ...	Victoria ...	359,280 bushels	20,163	.....	.....	Free.
	South Australia ...	41,140 "	3,097			
	Queensland ...	2,005 "	102			
	Tasmania ...	55,124 "	3,272			
	New Zealand ...	571,264 "	29,611			
	United States ...	34,383 "	1,827			
		1,063,196 bushels	58,072			

## STATISTICS, 1886—TRADE AND COMMERCE.

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## IMPORTS—continued.

Articles.	Countries whence imported.	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
Grain and Pulse—continued.	Maize ...	Victoria ...	4,236 bushels	£ 854	.....	£ s. d.
		South Australia ...	2,270 "	308		
	Queensland ...	625 "	135			
	New Zealand ...	14,260 "	2,509			
	Fiji ...	1,495 "	288			
	New Caledonia ...	63,030 "	9,966			
	United States ...	8,757 "	1,506			
		94,673 bushels	15,566	Free.		
	Oats ...	Victoria ...	108,230 bushels	14,201		
		South Australia ...	11,085 "	4,088		
	Tasmania ...	116,805 "	15,127			
	New Zealand ...	924,953 "	109,780			
	Queensland ...	24 "	3			
	New Caledonia ...	290 "	30			
	1,162,287 bushels	143,229	Free.			
Pease (Split and Dried.)	Great Britain ...	742 kegs	969			
	Victoria ...	1,575 "	1,141			
	South Australia ...	144 "	274			
	Queensland ...	14 "	32			
	Tasmania ...	2,418 "	2,221			
	New Zealand ...	3,785 "	2,422			
	India ...	315 "	340			
	United States ...	14 "	14			
	Italy ...	10 "	31			
	9,017 kegs	7,444	Free.			
Pollard ...	Victoria ...	120,397 bushels	6,747			
	South Australia ...	5,069 "	328			
	Tasmania ...	7,652 "	443			
	New Zealand ...	70,686 "	3,777			
	New Caledonia ...	8 "	8			
	203,812 bushels	11,303	Free.			
Sharps ...	Victoria ...	746 bushels	42			
	Tasmania ...	35,072 "	1,883			
	New Zealand ...	64,126 "	3,375			
	99,944 bushels	5,300	Free.			
Wheat ...	Victoria ...	285,721 bushels	57,729			
	South Australia ...	3,223 "	853			
	Queensland ...	1,964 "	491			
	Tasmania ...	2,054 "	457			
	New Zealand ...	437,486 "	86,608			
	United States ...	356,005 "	70,835			
	India ...	18,626 "	3,314			
	1,105,079 bushels	220,287	Free.			
Gum ...	Great Britain ...	84 pkg.	980			
	Victoria ...	32 "	701			
	New Zealand ...	39 "	199			
	India ...	10 "	49			
	Queensland ...	9 "	16			
	South Australia ...	2 "	7			
	United States ...	20 "	97			
	New Caledonia ...	1 "	5			
	France ...	2 "	123			
	199 pkg.	2,177	Ad valorem ... 5 per cent. 7 April, 1886.			
Hardware ...	Great Britain ...	135,551 pkg.	469,471			
	Victoria ...	12,051 "	39,248			
	South Australia ...	5,082 "	14,470			
	Queensland ...	164 "	1,147			
	Tasmania ...	9 "	62			
	New Zealand ...	238 "	587			
	Fiji ...	8 "	39			
	Hong Kong ...	139 "	499			
	United States ...	22,048 "	79,427			
	South Sea Islands ...	2 "	4			
	New Caledonia ...	174 "	646			
	France ...	138 "	1,249			
	Germany ...	1,014 "	6,095			
	Belgium ...	1,094 "	4,279			
	Western Australia ...	7 "	26			
	177,719 pkg.	617,249	Ad valorem ... 5 per cent. 7 April, 1886.			

## IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.		
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.	
Hoofs and Bones ...	Victoria ...	146 cwt.	£ 37		£ s. d.		
	Queensland ...	5,052 "	1,652				
	New Zealand ...	107 "	39				
	South Australia ...	5 "	1				
	New Caledonia ...	616 "	224				
		5,926 cwt.	1,953	.....	.....	Free.	
Horns ...	Victoria ...	5,850 No.	48				
	Queensland ...	138,443 "	1,668				
	Tasmania ...	11,185 "	148				
	New Zealand ...	8,000 "	65				
	New Caledonia ...	11,600 "	118				
	South Australia ...	4,400 "	42				
		179,478 No.	2,089	.....	.....	Free.	
Hops ...	Great Britain ...	355,546 lb.	18,029				
	Victoria ...	102,515 "	3,721				
	South Australia ...	25,511 "	1,299				
	Tasmania ...	144,660 "	6,642				
	New Zealand ...	177,423 "	6,070				
	United States ...	80,493 "	1,873				
	Germany ...	28,800 "	1,365				
	Belgium ...	7,963 "	204	292,720 lbs. @ 3d.	3,659 3 7	3d. lb. 1 Jan. to 6 April, afterwards	
	Italy ...	2,789 "	130	482,360 lbs. @ 6d.	12,059 0 0	6d. per lb. 7 April, 1886.	
			925,700 lb.	39,333	775,080 lbs.	15,718 3 7	
Hair ...	Great Britain ...	16,469 lb.	844				
	Victoria ...	14,503 "	311				
	Queensland ...	5,475 "	271				
	New Zealand ...	1,831 "	77				
	Tasmania ...	1,120 "	12				
United States ...	11,353 "	625					
		50,751 lb.	2,140	.....	Ad Valorem ...	5 per cent. 7 April, 1886.	
Honey ...	Great Britain ...	144 "	3				
	Victoria ...	8,673 "	195				
	Queensland ...	960 "	12				
	South Australia ...	19,642 "	605				
	New Zealand ...	9,679 "	182				
	Tasmania ...	952 "	12				
United States ...	39,429 "	569					
		79,479 "	1,578	70,560 lb.	293 17 1	1d. per lb. 7 April, 1886.	
India-rubber Goods	Great Britain ...	760 pkg.	11,333				
	Victoria ...	70 "	391				
	South Australia ...	47 "	199				
	United States ...	78 "	1,286				
	Germany ...	115 "	2,541				
	Belgium ...	13 "	447				
	New Zealand ...	2 "	45				
	France ...	1 "	17				
	Queensland ...	24 "	102				
	Tasmania ...	1 "	19				
	New Caledonia ...	1 "	11				
			1,112 pkg.	16,391	.....	Ad Valorem ...	5 per cent. 7 April, 1886.
	Instruments. { Optical ...	Great Britain ...	77 cases	3,999			
Victoria ...		74 "	717				
France ...		9 "	267				
Queensland ...		3 "	182				
South Australia ...		15 "	24				
Belgium ...		1 "	153				
		179 pkg.	5,342	.....	Ad Valorem ...	5 per cent. 7 April, 1886.	
Scientific ...	Great Britain ...	267 pkg.	6,858				
	Victoria ...	75 "	1,362				
	South Australia ...	24 "	114				
	Queensland ...	8 "	67				
	United States ...	13 "	303				
	France ...	5 "	211				
	Germany ...	9 "	187				
	Belgium ...	21 "	478				
Fiji ...	1 "	25					
		423 pkg.	9,605	.....	Ad Valorem ...	5 per cent. 7 April, 1886.	

STATISTICS, 1886—TRADE AND COMMERCE.

IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.		
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.	
Instruments— <i>contd.</i>	Surgical ...	Great Britain ...	79 pkg.	£ 3,130	.....	£ s. d.	
		Victoria ...	15 "	96			
		Queensland ...	2 "	11			
		France ...	2 "	66			
		United States ...	11 "	326			
		Germany ...	20 "	310			
	South Australia ...	15 "	66				
			144 pkg.	4,005		<i>Ad valorem</i> ..	5 per cent. 7 April, 1886.
	Castings ...	Great Britain ...	808 tons	8,270	.....		
		Victoria ...	50 "	996			
		South Australia ...	58 "	758			
		United States ...	21 "	962			
			937 tons	10,986		<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.
	Galvanized	Great Britain ...	14,928 tons	225,587	.....		
		Victoria ...	636 "	11,204			
		South Australia ...	385 "	9,255			
		Queensland ...	11 "	226			
		Belgium ...	923 "	13,655			
			16,883 tons	259,927	17,243 tons.	34,487 19 0	40s. per ton. 7 April, 1886.
	Galvanized Manu- factures.	Great Britain ...	1,230 tons	20,201	.....		
		Victoria ...	96 "	2,832			
		South Australia ...	36 "	1,962			
		Queensland ...	1 "	5			
United States ...		5 "	94				
Belgium ...		1 "	49				
France ...	1 "	27					
		1,370 tons	25,170	1,317 tons.	3,950 10 6	60s. per ton. 7 April, 1886.	
Old	Great Britain ...	1,173 tons	4,000	.....			
	South Australia ...	10 "	20				
	Queensland ...	128 "	293				
	Tasmania ...	37 "	80				
	New Zealand ...	214 "	450				
	South Sea Islands ...	9 "	22				
		1,571 tons	4,865		.....	Free.	
Pipes	Great Britain ...	22,410 tons	129,845	.....			
	Victoria ...	90 "	688				
	South Australia ...	38 "	722				
	Belgium ...	1½ "	18				
		22,539½ tons	131,273		<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.	
Tanks	Great Britain ...	2,506 No.	6,625	.....			
	Victoria ...	178 "	595				
	South Australia ...	389 "	1,220				
	Queensland ...	212 "	691				
	New Zealand ...	28 "	86				
	United States ...	7 "	34				
	Fiji ...	5 "	15				
	France ...	1 "	3				
	Germany ...	1 "	3				
		3,327 No.	9,272	3,072 No.	769 5 0	5s. each from 7 April to August, 1886. Afterwards <i>ad valorem</i> .	
Wire, Plain	Great Britain ...	5,488 tons	50,528	.....			
	Victoria ...	1,141 "	10,323				
	South Australia ...	565 "	7,120				
	Queensland ...	64 "	796				
	United States ...	8 "	147				
	Belgium ...	2,411 "	21,070				
	Germany ...	1,237 "	11,455				
		10,914 tons	101,439	10,456 tons.	10,455 10 8	20s. per ton. 7 April, 1886.	
Wire, Galvanized	Great Britain ...	428 tons	7,568	.....			
	Victoria ...	48 "	688				
	United States ...	24 "	452				
	Belgium ...	63 "	818				
	South Australia ...	3 "	57				
	Germany ...	25 "	600				
	Queensland ...	½ "	15				
France ...	27 "	675					
		618½ tons	10,873		(See Galvanized Iron )		
Pig ...	Great Britain ...	3,026 tons	7,053		.....	Free.	

## IMPORTS—continued.

Articles	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.		
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.	
Iron—continued.	Bars, Rod, Plate, Sheet, &c.	Great Britain ...	12,528 tons	£ 92,280	6,954 tons.	£ s. d. 3,477 5 6	10/- per ton. 7 April, 1886.
		Victoria ...	100 "	950			
		South Australia ...	139 "	2,412			
		Belgium ...	34 "	240			
		Germany ...	242 "	1,329			
	Wire Netting	Great Britain ...	13,043 tons	97,211	3½ tons.	10 7 10	3/- per cwt. 7 April, 1886.
	Iron Chains ...	Victoria ...	2 tons	42	177 tons.	177 6 1	1/- per cwt. 7 April, 1886.
	Iron and Steel. All other Wrought.	Great Britain ...	19,801 tons	143,377	.....	.....	.....
		Victoria ...	212 "	2,331			
		South Australia ...	256 "	1,920			
Queensland ...		49 "	294				
United States ...		17 "	67				
Ivory Nuts ...	Norway ...	182 "	555	.....	.....	.....	
	Belgium ...	2,449 "	20,067				
	Germany ...	126 "	1,101				
	Fiji ...	9 "	32				
	France ...	153 "	405				
Ivory Nuts ...	S. S. Islands...	23,254 tons	170,149	.....	Ad valorem ...	5 per cent. 7 April, 1886.	
	.....	276 tons	2,065	.....	.....	Free.	
Jams and Jellies ...	Great Britain ...	909,436 lb.	19,703	4,032,480 lb.	16,802 3 11	1d. per lb. 17 Mar., 1871.	
	Victoria ...	510,914 "	8,979				
	South Australia ...	511,612 "	10,041				
	Queensland ...	19,125 "	407				
	Tasmania ...	1,915,795 "	33,760				
	New Zealand ...	4,910 "	107				
	United States ...	6,100 "	96				
	Hong Kong ...	96 "	2				
	India ...	72 "	6				
	Jewellery ...	.....	3,878,060 lb.				73,101
Great Britain ...		809 pkg.	144,455	.....	Ad valorem ...	5 per cent. 7 April, 1886.	
Victoria ...		86 "	19,365				
South Australia ...		32 "	2,502				
Queensland ...		17 "	2,602				
New Zealand ...		4 "	158				
United States ...		39 "	4,686				
France ...		5 "	205				
Hong Kong ...		3 "	72				
India ...		1 "	6				
Ceylon ...		2 "	125				
Italy ...		2 "	344				
Fiji ...		1 "	69				
Austria ...	4 "	250					
Germany ...	9 "	234					
Kapok ...	.....	1,014 pkg.	175,073	.....	.....	.....	
	Victoria ...	1,970 pkg.	5,020*	.....	.....	Free.	
	Queensland ...	22 "	64				
	Hong Kong ...	255 "	543				
	India ...	375 "	1,188				
	Java ...	1,517 "	3,220				
Belgium ...	128 "	500					
Lampware...	.....	4,267 pkg.	10,535	.....	.....	.....	
	Great Britain ...	2,264 pkg.	21,129	.....	Ad valorem ...	5 per cent. 7 April, 1886.	
	Victoria ...	102 "	1,826				
	South Australia ...	193 "	1,058				
	Queensland ...	1 "	8				
	Hong Kong ...	9 "	67				
	United States ...	1,433 "	7,362				
	France ...	2 "	69				
	Germany ...	425 "	1,371				
	New Zealand ...	13 "	92				
Belgium ...	44 "	154					
Lard ...	.....	4,486 pkg.	33,136	.....	.....	.....	
	Great Britain ...	10,532 lb.	229	30,960 lb.	129 6 3	1d. per lb. 7 April, 1886.	
	Victoria ...	8,928 "	278				
	New Zealand ...	22,108 "	569				
	United States ...	2,200 "	39				
.....	43,768 lb.	1,115					

STATISTICS, 1886—TRADE AND COMMERCE.

IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.		
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.	
Leather ...	Great Britain ...	381 pkg.	£ 18,998		£ s. d.		
	Victoria ...	740 "	15,202				
	South Australia ...	163 "	1,257				
	Queensland ...	70 "	628				
	Tasmania ...	109 "	2,735				
	New Zealand ...	25 "	1,044				
	United States ...	848 "	26,050				
	France ...	40 "	1,778				
New Caledonia ...	2 "	18					
		2,378 pkg.	67,710	.....	Ad valorem ...	5 per cent. 7 April, 1886.	
Lead ...	Great Britain ...	43,121 cwt.	33,059		30,160 cwt.	3,017 13 0	
	Victoria ...	1,300 "	1,214				
	South Australia ...	248 "	221				
	Queensland ...	798 "	440				
	France ...	360 "	280				
	Belgium ...	853 "	568				
	New Zealand ...	203 "	150				
		46,883 cwt.	35,932	182½ tons.	365 5 5	2s. per cwt. 7 April, 1886. 2s. per cwt. 7 April, 1886.	
Lime-juice...	Great Britain ...	1,269 gallons	193		.....	Ad valorem ...	
	Victoria ...	564 "	165				
	South Australia ...	1,270 "	102				
	New Zealand ...	14,500 "	1,166				
	New Caledonia ...	29 "	6				
		17,632 gallons	1,631		5 per cent. 7 April, 1886.		
Lithographic Material.	Great Britain ...	161 pkg.	543		.....	Ad valorem ...	
	Victoria ...	1 "	8				
	Germany ...	35 "	53				
		197 pkg.	604		5 per cent. 7 April, 1886.		
Liquorice and Liquorice Paste.	Great Britain ...	49,290 lb.	1,699		.....	(See Confectionery.)	
	Victoria ...	19,570 "	483				
	United States ...	3,664 "	132				
	Italy ...	1,304 "	45				
			73,828 lb.	2,359			
Live Stock	Cattle	Victoria ...	10,345 No.	58,809		.....	Free.
		South Australia ...	1,209 "	4,356			
		Queensland ...	68,321 "	356,465			
		New Zealand ...	771 "	13,634			
		West Australia ...	31 "	300			
			80,677 No.	433,564			
	Dogs	Great Britain ...	2 No.	25		.....	Free.
		Victoria ...	89 "	331			
		Tasmania ...	3 "	25			
		Queensland ...	10 "	35			
South Australia ...		7 "	26				
New Zealand ...		14 "	130				
United States ...		4 "	10				
		129 No.	582				
Goats	Queensland ...	1 No.	2		.....	Free.	
	New Zealand ...	5 "	25				
		6 No.	27				
Horses	Great Britain ...	14 No.	2,710		.....	Free.	
	Victoria ...	1,828 "	62,391				
	South Australia ...	38 "	1,000				
	Queensland ...	181 "	2,718				
	Tasmania ...	2 "	70				
	New Zealand ...	1,236 "	35,661				
	United States ...	11 "	640				
		3,310 No.	105,190				
Sheep..	Victoria ...	204,326 No.	104,546		.....	Free.	
	South Australia ...	51,755 "	27,184				
	Queensland ...	30,716 "	13,136				
	Tasmania ...	1,428 "	15,590				
			288,225 No.	160,456			

## IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.		
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.	
Live Stock	Pigs ...	Victoria ...	924 No.	£ 1,292	£ s. d.		
		South Australia ...	149 "	168			
		New Zealand ...	78 "	283			
			1,151 No.	1,743	.....	.....	Free.
	Poultry	Great Britain ...	14 coops	92	.....	.....	Free.
		Victoria ...	171 "	381			
		South Australia ...	22 "	36			
		Queensland ...	1 "	2			
		Tasmania ...	23 "	50			
		New Zealand ...	10 "	32			
United States ...		2 "	14				
		243 coops	607	.....	.....	Free.	
Machinery...	Great Britain ...	25,810 pkg.	239,130	.....	.....		
	Victoria ...	2,657 "	30,537				
	South Australia ...	2,299 "	15,396				
	Queensland ...	111 "	1,572				
	Tasmania ...	31 "	119				
	New Zealand ...	109 "	1,186				
	United States ...	2,714 "	32,744				
	France ...	17 "	500				
	Belgium ...	321 "	2,096				
	Germany ...	154 "	2,961				
	New Caledonia ...	1 "	20				
	Fiji ...	13 "	142				
	South Sea Islands ...	1 "	83				
	India ...	12 "	165				
		34,250 pkg.	326,651	.....	Ad valorem ...	5 per cent. 7 April, 1886.	
Maizona ...	Great Britain ...	71,202 lb.	1,501	225,200 lb.	929 18 9	rd. per lb. 17 Mar., 1871.	
	Victoria ...	22,349 "	616				
	South Australia ...	14,220 "	440				
	Queensland ...	126 "	6				
	United States ...	139,620 "	1,504				
		247,517 lb.	4,067				
Malt ...	Great Britain ...	389,083 bushels	128,016	127,600 bhs. at 6d.	.....	6d. per bushel from 1 January to 6 April, 1886; afterwards 9d. per bushel, 7 April, 1886.	
	Victoria ...	8,452 "	2,937				
	South Australia ...	6,808 "	2,663				
	Queensland ...	68 "	23				
	Tasmania ...	3,540 "	1,028				
	New Zealand ...	52,295 "	15,139				
	Germany ...	159 "	60				
		460,405 bushels	149,866	305,564 "	9d.		
Marble ...	Great Britain ...	5,488 pkg.	11,607	.....	.....	Ad valorem ...	
	Victoria ...	324 "	1,491				
	South Australia ...	78 "	319				
	United States ...	125 "	293				
	France ...	588 "	2,582				
	Belgium ...	425 "	2,085				
	Germany ...	4 "	87				
	New Zealand ...	3 "	19				
	Italy ...	50 "	220				
		7,085 pkg.	18,703	.....	.....	5 per cent. 7 April, 1886.	
Matches ...	Great Britain ...	32,748 pkg.	58,559	.....	.....	Ad valorem ...	
	Victoria ...	1,186 "	2,715				
	South Australia ...	386 "	1,717				
	Queensland ...	77 "	190				
	Belgium ...	150 "	491				
	Germany ...	758 "	2,358				
	Hong Kong ...	45 "	89				
	United States ...	200 "	50				
	Italy ...	20 "	57				
			35,570 pkg.				66,226
Mats and Matting...	Great Britain ...	194 pkg.	1,871	.....	.....	Ad valorem ...	
	Victoria ...	1,218 "	1,696				
	South Australia ...	34 "	122				
	New Zealand ...	7 "	204				
	Hong Kong ...	6,144 "	6,896				
	United States ...	144 "	222				
	China ...	664 "	803				
	Mauritius ...	1,867 "	1,118				
	Fiji ...	3 "	4				
	India ...	2 "	23				
	Belgium ...	4 "	50				
		10,281 pkg.	13,009	.....	.....	5 per cent. 7 April, 1886.	

## STATISTICS, 1886—TRADE AND COMMERCE.

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## IMPORTS—continued.

Article	Countries whence imported.	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
Military and Naval Stores ...	Great Britain ...	10,475 pkg.	£ 139,800		£ s. d.	
	Queensland ...	3 "	15			
	New Zealand ...	1,306 "	1,228			
	Hong Kong ...	3 "	50			
	India ...	360 "	1,400			
		12,147 pkg.	142,493	.....	.....	Free.
Mustard ...	Great Britain ...	499,400 lb.	19,818			
	Victoria ...	12,291 "	670			
	South Australia ...	6,664 "	470			
	Queensland ...	1,003 "	45			
	France ...	312 "	17			
		519,670 lb.	21,020	355,680 lb.	1,482 1 6	1d. per lb. 17 Mar., 1871.
Meat (Preserved)	Great Britain ...	545,797 lb.	7,843			
	Victoria ...	17,138 "	903			
	South Australia ...	18,512 "	735			
	Queensland ...	31,008 "	635			
	New Zealand ...	461,504 "	11,643			
	United States ...	125,198 "	9,866			
	Tasmania ...	4,680 "	117			
	Hong Kong ...	28,400 "	710			
	China... ..	1,071 "	25			
	Italy ...	3,120 "	78			
	France ...	2,196 "	257			
Germany ...	4,700 "	117				
		1,243,324 "	32,929	427,680 lb.	1,782 1 9	1d. per lb. 7 April, 1886.
Meat (Fresh)	New Zealand ...	80 cwt.	110	.....	.....	Free.
Meat (Extract)	Great Britain ...	2,624 lb.	1,020			
	South Australia ...	61 "	12			
	United States ...	114 "	50			
		2,799 lb.	1,082	2,760 lb.	22 17 5	2d. per lb. 7 April, 1886.
Guano ...	Queensland ...	2 tons	16			
	Tasmania ...	5 "	30			
		7 tons	46	.....	.....	Free.
Manures { Bone dust ...	Queensland ...	18 tons	136			
	South Australia ...	33 "	162			
		51 tons	298	.....	.....	Free.
All others {	Great Britain ...	50 tons	852			
	Victoria ...	31 "	141			
	Hong Kong ...	2 "	12			
		83 tons	1,005	.....	.....	Free.
Milk, Condensed ...	Great Britain ...	2,750,299 lb.	55,824			
	Victoria ...	56,878 "	1,306			
	Queensland ...	48 "	1			
	South Australia ...	41,163 "	1,266			
	Italy ...	4,800 "	100			
	France ...	28,952 "	580			
	Belgium ...	15,600 "	370			
	Germany ...	55,160 "	1,152			
		2,952,900 lb.	60,599	2,578,800 lb.	10,745 4 2	1d. per lb. 7 April, 1886.
Molasses ...	Great Britain ...	351 tons	7,624			
	Victoria ...	60 "	1,621			
	Queensland ...	60 "	919			
	South Australia ...	6 "	196			
	United States ...	48 "	1,166			
	India ...	2 "	73			
	Fiji ...	878 "	5,400			
	Germany ...	27 "	357			
	Belgium ...	2 "	50			
			1,434 tons	17,406	568 tons.	1,894 0 0



## STATISTICS, 1886—TRADE AND COMMERCE.

## IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.		
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.	
Musical Instruments	Great Britain ...	1,700 pkg.	£ 49,716		£ s. d.		
	Victoria ...	536 "	13,347				
	South Australia ...	158 "	1,618				
	Queensland ...	44 "	902				
	Tasmania ...	3 "	61				
	New Zealand ...	8 "	184				
	United States ...	441 "	6,113				
	France ...	7 "	158				
	Belgium ...	27 "	718				
	Germany ...	1,569 "	38,585				
New Caledonia ...	6 "	117					
Hong Kong ...	8 "	67					
		4,507 pkg.	111,586	.....	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.	
Nails	Great Britain ...	27,863 cwt.	22,845				
	Victoria ...	1,259 "	1,524				
	South Australia ...	680 "	987				
	Queensland ...	274 "	448				
	New Zealand ...	118 "	163				
	United States ...	1,691 "	3,352				
	France ...	28 "	68				
	Germany ...	19,559 "	11,076				
		4,286 "	3,073				
		55,758 cwt.	43,536	56,200 cwt.	5,620 7 1	2s. per cwt. 17 Mar., 1871.	
Naphtha and Gasoline	Great Britain ...	1,560 gallons	171				
	Victoria ...	669 "	89				
	United States ...	5,193 "	512	400 gallons			
		414 "	134	2,480 "			
		7,836 gallons	936	2,880 gallons	10 0 0 62 11 2	6d. per gallon. 7 April, 1886.	
Nickel Ore	New Caledonia	874 tons	7,586	.....	.....	Free.	
Nuts, Edible (except Coconuts)	Great Britain ...	110,426 lb.	3,643				
	Victoria ...	11,736 "	457				
	South Australia ...	10,132 "	332				
	Queensland ...	3,174 "	82				
	Tasmania ...	1,440 "	36				
	Hong Kong ...	27,396 "	814				
	China ...	2,640 "	42				
	United States ...	47,856 "	1,061				
	France ...	9,713 "	351				
	Fiji ...	56,498 "	763				
	Italy ...	1,074 "	30				
	New Zealand ...	10,185 "	140				
	Sandwich Islands ...	1,988 "	26				
		294,258 lb.	7,777	298,560 lb.	1,244 8 5	1d. per lb. 17 Mar., 1871.	
Oars	Great Britain ...	620 No.	222				
	Victoria ...	9 "	40				
	South Australia ...	30 "	18				
	United States ...	4,056 "	907				
		4,715 No.	1,187	.....	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.	
Oatmeal	Great Britain ...	222 cwt.	218				
	Victoria ...	16,778 "	14,025				
	South Australia ...	297 "	345				
	Queensland ...	43 "	36	22,504 cwt. @ 2/6	2,813 0 0	2/6 per cwt. from 7 April to Aug., 1886.	
	Tasmania ...	3,679 "	3,194				
	New Zealand ...	12,242 "	9,101	5,290 " @ 2/-	529 0 0	Afterwards 2/- per cwt., 7 April, 1886.	
		33,261 cwt.	26,919	27,794 cwt.	3,342 0 0		
Oakum	Great Britain ...	2,126 pkg.	1,518				
	Victoria ...	23 "	19				
	South Australia ...	16 "	7				
		2,165 pkg.	1,544	.....	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.	
Oils ...	Black	Great Britain ...	53 tuns	1,349			
		United States ...	92 "	2,284			
		New Caledonia ...	5½ "	135			
			150½ tuns	3,768	.....	.....	Free.
	Castor	Great Britain ...	14,814 gallons	3,217			
Victoria ...		4,710 "	797				
South Australia ...		1,832 "	174				
India ...		291,624 "	32,749				
Queensland ...		218 "	33				
		1,330 "	310				
		314,528 gallons	37,280	.....	(See Oil—all other.)		

## STATISTICS, 1886—TRADE AND COMMERCE.

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## IMPORTS—continued.

Articles.	Countries whence Imported,	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
China ...	Victoria ...	396 gallons	£ 48		£ s. d.	
	Queensland ...	485 "	170			
Cocoanut ...	Hong Kong ...	82,298 "	11,483			
	Singapore ...	900 "	150			
	China ...	755 "	82			
		84,834 gallons	11,933	.....	(See Oil—all other.)	
Colza ...	Great Britain ...	½ tuns	9			
	Victoria ...	1 "	47			
	New Zealand ...	7½ "	237			
	New Caledonia ...	13½ "	342			
	Mauritius ...	1 "	30			
	23½ tuns	665	.....	.....	Free.	
Kerosene ...	Great Britain ...	35,044 gallons	5,040	.....	(See Oil—all other.)	
	Victoria ...	94,615 gallons	5,659			
	South Australia ...	29,057 "	2,408			
	Queensland ...	10,429 "	589			
	Tasmania ...	21,760 "	822			
	United States ...	949,910 "	42,153			
	1,105,771 gallons	51,631	904,760 gallons	22,619 14 0	6d. per gallon. 17 Mar., 1871.	
Linseed ...	Great Britain ...	314,844 gallons	38,786			
	Victoria ...	9,795 "	1,545			
	South Australia ...	3,471 "	656			
	Queensland ...	4 "	1			
	United States ...	160 "	21			
	328,274 gallons	41,009	.....	(See Oil—all other.)		
Olive ...	Great Britain ...	18,634 gallons	6,349			
	Victoria ...	496 "	294			
	France ...	14,960 "	8,041			
	South Australia ...	550 "	192			
	Queensland ...	14 "	7			
	United States ...	1,480 "	182			
	36,134 gallons.	15,065	.....	(See Oil—all other.)		
Palm ...	Great Britain ...	16,287 gallons	1,808	.....	(See Oil—all other.)	
Essential Oil, without Spirit	Great Britain ...	100 pkg.	2,374			
	Victoria ...	14 "	87			
	France ...	11 "	191			
	United States ...	1 "	25			
	Hong Kong ...	3 "	48			
	India ...	2 "	2			
	Germany ...	27 "	411			
		158 pkg.	3,138	.....	Ad valorem ...	5 per cent. 7 April, 1886.
Sperm ...	Great Britain ...	4 tuns	124			
	New Zealand ...	22 "	660			
	United States ...	9 "	308			
		35 tuns	1,092	.....	.....	Free.
All other...	Great Britain ...	68,350 gallons	9,580			
	Victoria ...	7,167 "	1,195			
	South Australia ...	345 "	79			
	Queensland ...	174 "	27			
	Tasmania ...	381 "	32			
	Hong Kong ...	8,271 "	1,167			
	China ...	300 "	40			
	United States ...	42,250 "	5,403			
	France ...	166 "	49			
	New Caledonia ...	57 "	12			
	India ...	3,662 "	580			
	Germany ...	422 "	51			
		131,545 gallons	18,215	993,160 gallons	24,829 8 10	6d. per gallon. 17 Mar., 1871.
Oil (in Bottles) ...	Great Britain ...	12,156 doz. qts.	8,301			
	Victoria ...	2,004 "	1,756			
	South Australia ...	410 "	363			
	United States ...	1,465 "	1,917			
	France ...	2,579 "	2,181			
	Belgium ...	38 "	39			
	18,652 "	14,557	20,800 doz. quarts	520 6 8	1s. 6d. per doz. quarts; 6d. per doz. pints; 6d. per doz. half-pints. 7 April, 1886.	

## STATISTICS, 1886—TRADE AND COMMERCE.

## IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
Onions ...	Victoria ...	2,813 tons	£ 16,663		£ s. d.	
	South Australia ...	71 "	998			
	Tasmania ...	12 "	68			
	United States ...	17 "	124			
		2,913 tons	17,853	.....	.....	Free.
Oilmen's Stores ...	Great Britain ...	2,356 pkg.	6,506			
	Victoria ...	639 "	1,615			
	South Australia ...	261 "	459			
	Queensland ...	6 "	20			
	United States ...	485 "	511			
	France ...	2 "	80			
	Germany ...	19 "	301			
		3,768 pkg.	9,492	.....	Ad valorem ...	5 per cent. 7 April, 1886.
Opium ...	Great Britain ...	33 lb.	33			
	Victoria ...	1,102 "	2,352			
	Queensland ...	8 "	24			
	Hong Kong ...	30,530 "	62,824			
	China... ..	2,394 "	6,433			
	South Australia ...	2 "	4			
	New Caledonia ...	2 "	5			
	Macao ...	3,297 "	7,584			
		37,368 lb.	79,259	22,148 lb.	22,148 8 8	20s. per lb. 20 Feb., 1884.
Oysters (fresh) ...	Queensland ...	876 bags	829			
	New Zealand ...	73 "	47			
	South Australia ...	4 "	11			
	New Caledonia ...	152 "	174			
		1,105 bags	1,061	.....	.....	Free.
Paints and Colors in Oil ...	Great Britain ...	47,588 cwt.	62,526			
	Victoria ...	1,809 "	2,792			
	South Australia ...	510 "	835			
	Queensland ...	58 "	123			
	United States ...	436 "	1,064			
	Belgium ...	691 "	694			
	Germany ...	339 "	1,367			
	Hong Kong ...	6 "	94			
	France ...	39 "	70	25,770 cwt. at 2s.		
	Tasmania ...	10 "	9	27,500 " at 2s.		
		51,486 cwt.	69,574	53,270 cwt.	6,702 9 7	2s. per cwt. to 6 April, 1886, afterwards 3s. per cwt. 7 April, 1886.
Painters' Materials	Great Britain ...	1,779 pkg.	3,449			
	Victoria ...	111 "	468			
	South Australia ...	8 "	13			
	United States ...	78 "	752			
	New Zealand ...	1 "	2			
	Germany ...	3 "	50			
	India ...	10 "	38			
	Belgium ...	6 "	114			
		1,996 pkg.	4,886	.....	Ad valorem ...	5 per cent. 7 April, 1886.
Paper-hangings ...	Great Britain ...	2,126 pkg.	21,558			
	Victoria ...	167 "	1,069			
	South Australia ...	42 "	187			
	Queensland ...	1 "	9			
	United States ...	16 "	361			
	Belgium ...	13 "	67			
	France ...	2 "	37			
		2,367 pkg.	23,288	.....	Ad valorem ...	5 per cent. 7 April, 1886.
Pearl-shell ...	Queensland ...	275 tons	33,829			
	Fiji ...	5 "	265			
	South Sea Islands ...	19 "	1,602			
	New Zealand ...	1 "	80			
	Hong Kong ...	1 "	100			
	India ...	6 "	680			
		307 tons	36,556	.....	.....	Free.

## STATISTICS, 1886—TRADE AND COMMERCE.

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## IMPORTS—continued.

Articles.	Countries whence imported.	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
Pepper and Spices.	Great Britain ...	95,252 lb.	£ 4,514		£ s. d.	
	Victoria ...	36,208 "	2,105			
	South Australia ...	11,429 "	757			
	Queensland ...	1,063 "	99			
	Ceylon ...	1,115 "	70			
	Hong Kong ...	36,075 "	1,456			
	India ...	20,073 "	1,065			
	Singapore ...	107,166 "	4,771			
	China ...	36,791 "	1,751			
	France ...	169 "	30	124,560 lb.		
	New Zealand... ..	3,732 "	63	209,880 "		
		349,973 lb.	16,681	334,440 lb.	1,038 12 9	2d. $\Psi$ lb. 17 Mar., 1871.
Phormium Tenax...	New Zealand... ..	1,745 bales	4,948	.....	.....	Free.
Brown	Great Britain ...	26,716 cwt.	24,732			
	Victoria ...	1,525 "	2,611			
	Queensland ...	86 "	52			
	South Australia ...	236 "	443			
	Tasmania ...	11 "	28			
	United States ...	456 "	457			
	Hong Kong ...	46 "	65			
	China... ..	2 "	3			
	Belgium ...	178 "	152			
	Germany ...	2,912 "	2,217			
			32,168 cwt.	30,760	29,190 cwt.	4,865 8 11
Circulars, Advertising Matter, &c.	Great Britain ...	94,274 lb.	4,533			
	Victoria ...	43,250 "	2,473			
	Queensland ...	245 "	15			
	South Australia ...	620 "	100			
	New Zealand ...	2,044 "	47			
	United States ...	56,984 "	1,319			
	Hong Kong ...	930 "	29			
France ...	184 "	12				
		198,531 lb.	8,528	763,680 lb.	3,182 0 8	1d. $\Psi$ lb. 7 April, 1886.
Writing and Fancy	Great Britain ...	1,706,687 lb.	62,155			
	Victoria ...	45,698 "	2,682			
	Queensland ...	1,396 "	63			
	South Australia ...	7,703 "	842			
	New Zealand ...	696 "	55			
	United States ...	4,505 "	668			
	Hong Kong ...	2,127 "	58			
	France ...	1,971 "	136			
	Belgium ...	1,313 "	60			
	Germany ...	210 "	32			
		1,772,306 lb.	66,751	827,760 lb.	3,449 0 0	1d. $\Psi$ lb. 17 Mar., 1871.
Printing, News, &c...	Great Britain ...	15,695 pkg.	122,987			
	Victoria ...	410 "	3,819			
	Queensland ...	2 "	14			
	South Australia ...	11 "	85			
	United States ...	3,070 "	10,899			
	France ...	9 "	74			
	Belgium ...	10 "	80			
Germany ...	807 "	4,576				
		20,014 pkg.	142,534	.....	Ad valorem ...	5 per cent. 7 April, 1886.
Books, Periodicals, &c.	Great Britain ...	5,917 pkg.	135,522			
	Victoria ...	1,897 "	32,764			
	South Australia ...	147 "	1,326			
	Queensland ...	42 "	617			
	Tasmania ...	4 "	30			
	New Zealand... ..	25 "	369			
	Fiji ...	3 "	32			
	Hong Kong ...	48 "	186			
	China... ..	3 "	20			
	United States ...	198 "	6,184			
	France ...	11 "	72			
	Belgium ...	2 "	35			
	Germany ...	10 "	169			
	New Caledonia ...	2 "	10			
South Sea Islands ...	27 "	60.				
		8,336 pkg.	177,396	.....	.....	Free.

Paper, Books, Stationery. (See also "Stationery (Sundries).")

IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.		
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.	
Photographic Materials ...	Great Britain ...	607 pkg.	£ 10,790	.....	£ s. d.		
	Victoria ...	282 "	2,036				
	South Australia ...	3 "	11				
	Queensland ...	8 "	84				
	United States ...	86 "	694				
	Germany ...	119 "	1,423				
	France ...	1 "	44				
	New Zealand ...	16 "	181				
	New Caledonia ...	1 "	9				
	Italy ...	2 "	50				
Belgium ...	5 "	114					
		1,130 pkg.	15,436			<i>Ad valorem</i> ...	5 per cent. 7 April, 1886
Pickles and Sauces	Great Britain ...	172,709 doz.	55,859	204,840 doz.	5,121 5 9	1/ per doz. qts. 6d per doz. pts. 7 April, 1871.	
	Victoria ...	6,981 "	2,590				
	South Australia ...	10,211 "	4,109				
	Queensland ...	1,457 "	642				
	New Zealand ...	790 "	208				
	Hong Kong ...	3,321 "	1,636				
	China... ..	261 "	104				
	India ...	284 "	182				
	France ...	387 "	164				
	Belgium ...	300 "	50				
Germany ...	81 "	17					
		196,782 doz.	65,561				
Pictures & Paintings	Great Britain ...	695 pkg.	11,778	.....	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.	
	Victoria ...	388 "	6,100				
	South Australia ...	30 "	492				
	Queensland ...	16 "	94				
	Tasmania ...	2 "	59				
	New Zealand ...	41 "	818				
	Hong Kong ...	14 "	80				
	China... ..	2 "	5				
	United States ...	150 "	3,542				
	France ...	12 "	193				
	Germany ...	35 "	415				
	Italy ...	1 "	27				
	Fiji ...	1 "	7				
India... ..	1 "	7					
Belgium ...	3 "	140					
		1,391 pkg.	23,757				
Pipes (Tobacco) ...	Great Britain ...	2,911 pkg.	33,425	.....	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.	
	Victoria ...	129 "	2,322				
	South Australia ...	284 "	1,403				
	Germany ...	38 "	551				
	Queensland ...	11 "	262				
	New Caledonia ...	1 "	6				
	Hong Kong ...	8 "	19				
	France ...	22 "	1,439				
	New Zealand ...	1 "	32				
	South Sea Islands ...	16 "	9				
Belgium ...	7 "	161					
		3,428 pkg.	39,629				
Playing Cards ...	Great Britain ...	2,605 doz. pkt.	738	3,193 doz. pkt.	47 14 1	3/ per doz. pkt. 7 April, 1886.	
	Victoria ...	244 "	148				
	Queensland ...	94 "	59				
	South Australia ...	147 "	123				
	New Zealand ...	61 "	28				
	United States ...	684 "	141				
	France ...	504 "	142				
	Belgium ...	1,223 "	397				
Germany ...	662 "	159					
		6,224 doz. pkt.	1,935				
Putty ...	Great Britain ...	2,060 cwt.	990	2,520 cwt.	252 19 5	2/ per cwt. 7 April, 1886.	
	Victoria ...	19 "	20				
	South Australia ...	17 "	19				
		2,096 cwt.	1,029				
Plaster and Plaster of Paris ...	Great Britain ...	502 barrels	389	8,640 barrels	863 14 0	2/ per barrel. 7 April, 1886.	
	Victoria ...	137 "	76				
	South Australia ...	3 "	4				
	United States ...	10,409 "	5,061				
		11,051 barrels	5,530				

## STATISTICS, 1886—TRADE AND COMMERCE.

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## IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
Passengers' Baggage	Great Britain ...	350 pkg.	£ 2,546	.....	£ s. d.	
	Victoria ...	885 "	3,222			
	Queensland ...	177 "	747			
	South Australia ...	913 "	1,220			
	New Zealand ...	107 "	462			
	Tasmania ...	63 "	405			
	South Sea Islands ...	1 "	35			
	United States ...	21 "	160			
	China ...	19 "	95			
	Fiji ...	5 "	33			
France ...	3 "	25				
Belgium ...	1 "	15				
Germany ...	15 "	148				
		2,560 pkg.	9,113			
Pitch, Tar, and Resin	Great Britain ...	6,100 barrels	3,851	.....		Free, if under £50 in value. 5 per cent. <i>ad valorem</i> over £50 in value.
	Victoria ...	480 "	572			
	South Australia ...	248 "	338			
	Queensland ...	1 "	1			
	United States ...	7,067 "	3,622			
Belgium ...	49 "	60				
		13,945 barrels	8,444	8,980 barrels.	898 10 2	2/- per barrel. 7 April, 1886.
Plants	Great Britain ...	153 pkg.	1,638	.....		
	Victoria ...	2,346 "	5,111			
	South Australia ...	51 "	95			
	Queensland ...	96 "	134			
	Tasmania ...	436 "	253			
	New Zealand ...	1,364 "	1,998			
	Fiji ...	14 "	14			
	Hong Kong ...	52 "	102			
	Singapore ...	2 "	3			
	United States ...	2 "	9			
	New Caledonia ...	10 "	21			
	South Sea Islands ...	1 "	1			
	France ...	6 "	76			
Italy ...	1 "	5				
Japan ...	18 "	10				
		4,552 pkg.	9,470			Free.
Potatoes	Victoria ...	40,197 tons	166,986	.....		
	South Australia ...	724 "	6,039			
	Queensland ...	85 "	320			
	Tasmania ...	14,736 "	61,344			
	New Zealand ...	7,281 "	25,874			
		62,923 tons	260,563			Free.
Preserves	Great Britain ...	545,596 lb.	10,632	.....		
	Victoria ...	53,150 "	1,169			
	South Australia ...	66,253 "	1,788			
	Queensland ...	45,375 "	1,116			
	India ...	4,375 "	200			
	Hong Kong ...	79,253 "	2,289			
	China ...	3,210 "	114			
	United States ...	483,696 "	9,675			
	Singapore ...	6,576 "	148			
	Fiji ...	5,216 "	121			
	France ...	2,784 "	98			
Germany ...	144 "	13				
Italy ...	3,016 "	51				
		1,298,644 lb.	27,414	791,520 lb.	3,298 6 4	1d. per lb. 17 Mar., 1871.
Printing Materials	Great Britain ...	1,316 pkg.	14,674	.....		
	Victoria ...	539 "	3,970			
	South Australia ...	1 "	1			
	Queensland ...	4 "	20			
	United States ...	194 "	2,759			
	Belgium ...	10 "	20			
	France ...	4 "	36			
Germany ...	235 "	1,077				
		20,302 pkg.	22,557			<i>Ad valorem</i> ... 5 per cent. 7 April, 1886.
Provisions. } Salt Beef	Great Britain ...	93 cwt.	83	.....		
	South Australia ...	169 "	245			
	Queensland ...	10 "	10			
	New Zealand ...	5,698 "	5,958			
	United States ...	3 "	8			
		5,973 cwt.	6,304			<i>Ad valorem</i> ... 5 per cent. 7 April, 1886.

## IMPORTS—continued.

Articles.	Countries whence imported.	Importations.		Entered for Home Consumption.	Duty.			
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.		
Provisions—continued.	Chinese ... {	Hong Kong ...	177 pkg.	£ 254	.....	£ s. d.		
		China ...	21 "	28				
	Pork (Salt) ... {	Great Britain ...	198 "	282		<i>Ad valorem</i> ...		5 per cent. 7 April, 1886.
		Victoria ...	195 cwt.	275		<i>Ad valorem</i> ...		5 per cent. 7 April, 1886.
		South Australia ...	Nil.	Nil.				
		New Zealand ...	26 "	52				
		United States ...	172 "	405				
		86 "	79					
	Preserved ... {	Great Britain ...	479 cwt.	811		<i>Ad valorem</i> ...		5 per cent. 7 April, 1886.
		Queensland ...	19,512 pkg.	19,923				
		Hong Kong ...	5 "	22				
		China ...	640 "	1,016				
		France ...	70 "	117				
		Germany ...	500 "	48				
		United States ...	450 "	480				
	62 "	119						
Vegetables (Preserved)	Great Britain ...	21,239 pkg.	21,725	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.			
	Victoria ...	832 pkg.	1,587					
	South Australia ...	20 "	121					
	Queensland ...	276 "	1,311					
	Hong Kong ...	16 "	44					
	China ...	1,116 "	1,046					
	United States ...	42 "	20					
	France ...	440 "	329					
	Germany ...	175 "	222					
	New Caledonia ...	6 "	30					
	1 "	15						
Vegetables (Green)	Victoria ...	2,924 pkg.	4,725	150,960 lb.	629 18 7	1d. per lb. 7 April, 1886.		
	South Australia ...	28,552 pkg.	18,612					
	Queensland ...	587 "	390					
	Tasmania ...	207 "	170					
	New Zealand ...	4,703 "	1,348					
	Hong Kong ...	1,828 "	492					
	China ...	905 "	376					
	India ...	127 "	67					
	87 "	15						
Game ... {	Great Britain ...	36,996 pkg.	21,470	.....	Free.			
	Victoria ...	16 pkg.	85					
	Queensland ...	1,470 "	1,151					
	1 "	5	.....	Free.				
Quicksilver ... {	Great Britain ...	1,487 pkg.			1,241	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.	
	Victoria ...	112 bottles			708			
	South Australia ...	25 "	184					
	29 "	197	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.				
Railway Plant and Furniture.	Great Britain ...	166 bottles			1,089	.....	Free.	
	Bridgework ...	Great Britain ...			1,421 pkg.			16,495
	Buffers ...	Great Britain ...	3,500 No.	9,404				
	Crank Axles ...	Great Britain ...	13 pkg.	1,116				
	Crossings ...	Great Britain ...	681 No.	8,412				
	Fastenings ...	Great Britain ...	4,408 pkg.	11,727				
	Door Handles... ..	Great Britain ...	4 pkg.	156				
	Fish Plates ...	Great Britain ...	4,553 pkg.	4,816				
	Steel Sheets ...	Great Britain ...	23 tons.	267				
	Laths ... ..	Great Britain ...	10 No.	1,238				
	Locomotive Boilers ... {	Great Britain ...	14 No.	2,663	.....			Free.
		United States ...	3 "	2,414				
Turnstiles ...	Great Britain ...	17 No.	5,077	.....	Free.			
	United States ...	8 No.	1,889					

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## IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.			
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.		
Railway Plant and Furniture—continued.	Railway Chairs {	Great Britain ...	15,769 No.	£ 1,825	£ s. d.	Free.		
	South Australia ...	1,956 „	330	2,155				
	Springs ...	Great Britain ...	4,908 pkg.	7,662			Free.	
	Switches ...	Great Britain ...	732 No.	1,663			Free.	
	Rails ...	Great Britain ...	70,853 No.	95,936			Free.	
	Carpets ...	Great Britain ...	8 pkg.	288			Free.	
	Leather ...	Great Britain ...	4 pkg.	269			Free.	
	Retorts ...	Great Britain ...	76 pkg.	208			Free.	
	Tyres ...	Great Britain ...	2,014 No.	12,289			Free.	
	Interlocking Apparatus }	Great Britain ...	88 pkg.	1,138			Free.	
	Smiths' Hearths	Great Britain ...	18 pkg.	257			Free.	
	Machinery {	Great Britain ...	7,026 pkg.	30,483			Free.	
	United States ...	6 „	1,023	31,506				
	Floor-cloth ...	Great Britain ...	66 pkg.	1,212				Free.
	Lampware ...	Great Britain ...	63 pkg.	496				Free.
	Lubricators ...	Great Britain ...	2 pkg.	108				Free.
	Fire Bricks ...	Great Britain ...	20,205 No.	112				Free.
	Wheels and Axles }	Great Britain ...	3,824 No.	49,216				Free.
	Turntables ...	Great Britain ...	24 No.	2,040				Free.
	Boiler Plates ...	Great Britain ...	145 tons	3,930				Free.
	Cylinders ...	Great Britain ...	81 No.	4,995				Free.
	Girders ...	Great Britain ...	48 No.	480				Free.
	Steam Hammers	Great Britain ...	5 No.	475				Free.
Drilling Machines }	Great Britain ...	2 No.	82	Free.				
Sundries ...	Great Britain ...	165 pkg.	2,088	Free.				
Rice	Great Britain ...	9 tons	150	5,844 tons.	17,532 16 1	3s. per cwt. 17 Mar., 1871.		
	Victoria ...	436 „	6,062					
	South Australia ...	61 „	1,395					
	Queensland ...	49 „	980					
	Hong Kong ...	2,880 „	42,395					
	India ...	569 „	7,397					
	Singapore ...	951 „	10,671					
	China ...	1,181 „	15,701					
	Japan ...	504 „	6,980					
			6,640 „				91,641	
Rice Flour, or Ground Rice...	Great Britain ...	944 lbs.	13	18,720 lbs.	78 0 10	1d. per lb. 7 April, 1886.		
	Victoria ...	1,575 „	19					
	South Australia ...	93 „	1					
	Hong Kong ...	9,485 „	89					
	China ...	1,180 „	16					
		13,277 lbs.	138					
Saddlery & Harness	Great Britain ...	1,233 pkg.	39,825	Ad valorem ...	5 per cent. 7 April, 1886.			
	Victoria ...	80 „	7,714					
	South Australia ...	236 „	2,296					
	Queensland ...	19 „	260					
	Tasmania ...	1 „	5					
	New Zealand ...	8 „	171					
	United States ...	266 „	4,769					
	New Caledonia ...	1 „	2					
	France ...	18 „	544					
Germany ...	3 „	48						
		2,665 pkg.	55,634					



IMPORTS—*continued.*

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
Saddlers' Ware	Great Britain	2,296 pkg.	£ 42,092		£ s. d.	
	Victoria	126 "	1,394			
	Queensland	15 "	28			
	South Australia	73 "	474			
	United States	220 "	1,977			
	France	13 "	292			
	Germany	4 "	75			
	New Caledonia	1 "	9			
	Italy	7 "	66			
	Belgium	6 "	28			
		2,761 pkg.	46,435		<i>Ad valorem</i>	5 per cent. 7 April, 1886.
Sago	Great Britain	511 lb.	3			
	Victoria	9,819 "	118			
	South Australia	8,637 "	138			
	Queensland	241 "	7			
	New Zealand	1,792 "	15			
	China	11,994 "	46			
		32,994 lb.	327	33,120 lb.	139 0 11	1d. per lb. 17 Mar., 1871.
Salt (in Bags)	Great Britain	13,894 tons	25,145			
	Victoria	608 "	1,894			
	South Australia	353 "	1,470			
	Queensland	33 "	243			
	United States	40 "	118			
	France	133 "	400			
	Germany	178 "	222			
		15,239 tons	29,492	15,094 tons.	15,094 6 6	20s. per ton. 17 Mar., 1871.
Salt (Rock)	Great Britain	1,062 tons	2,379			
	Victoria	375 "	864			
	Germany	807 "	2,153			
	New Zealand	36 "	108			
		2,280 tons	5,504		(See Salt in bags.)	20s. per ton. 17 Mar., 1871.
Saltpetre	Great Britain	31 tons	805			
	Victoria	13 "	19			
	Queensland	23 "	35			
	South Australia	6 "	13			
		73 tons	872	2 tons.	3 12 1	20s. per ton. 17 Mar., 1871.
Sarsaparilla	Great Britain	467 gallons	179	2,330 gallons	466 0 0	4s. per gall. under 25 % of proof spirit;
	Victoria	234 "	141			
	South Australia	289 "	223			
	New Zealand	4 "	8	39 "	23 5 11	12s. per gall. over 25 % of proof spirit.
	United States	1,573 "	1,340			
			2,567 gallons	1,891		489 5 11
Sashes	Victoria	2,002 No.	580			
	South Australia	257 "	206			
	Queensland	2 "	2			
	New Zealand	56 "	22	820 No. @ 1s.		1s. ca., 17 Mar. 1871.
	United States	560 "	60	1,960 " @ 2s.		2s. ca., 7 Apr., 1886.
			2,877 No.	870	2,780 No.	237 5 0
Sewing-machines	Great Britain	5,303 pkg.	12,756			
	Victoria	750 "	3,746			
	South Australia	166 "	810			
	Queensland	216 "	1,616			
	Germany	3,178 "	17,347			
	New Zealand	7 "	34			
	United States	1,684 "	6,599			
	Tasmania	5 "	28			
	Fiji	1 "	5			
	France	54 "	327			
	Belgium	62 "	431			
			11,426 pkg.	43,699		<i>Ad valorem</i>
Ship Chandlery	Great Britain	1,364 pkg.	10,192			
	Victoria	39 "	484			
	United States	74 "	779			
	Germany	11 "	220			
	Queensland	86 "	246			
	South Australia	75 "	674			
	Hong Kong	24 "	15			
	Fiji	9 "	15			
	Belgium	2 "	146			
		1,684 pkg.	12,771		<i>Ad valorem</i>	5 per cent. 7 April, 1886.

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## IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
Shutters (Wood) ...	Victoria ...	4 No.	£ 4	100 No. @ 1s. 20 No. @ 2s.	£ s. d. 7 7 0	1s. each. 17 Mar., 1871. 2s. each. 7 April, 1886.
				120 No.		
Soap (Toilet and Fancy) ...	Great Britain ...	135,824 lb.	6,342	215 040 lb.	897 2 4	1d. per lb. 7 April, 1886.
	Victoria ...	24,465 "	636			
	Queensland ...	166 "	39			
	South Australia ...	4,860 "	228			
	United States ...	21,596 "	1,865			
	France ...	349 "	31			
	Germany ...	3,954 "	187			
Belgium ...	138 "	11				
Soap (other kinds) ...		191,352 lb.	9,339	5,920 cwt.	591 12 5	2s. per cwt. 7 April, 1886.
	Great Britain ...	1,969 cwt.	3,538			
	Victoria ...	7,533 "	7,325			
	South Australia ...	2,154 "	2,405			
	Queensland ...	25 "	32			
	New Zealand ...	140 "	176			
	United States ...	22 "	142			
France ...	382 "	435				
Germany ...	7 "	34				
Straw ...	Victoria ...	228 tons	637	1,883½ tons	5,739	Free.
	Tasmania ...	1,648 "	5,079			
	New Zealand ...	7½ "	23			
Sausage Skins ...	Victoria ...	169 pkg.	648	1,655 pkg.	3,135	Ad valorem ... 5 per cent. 7 April, 1886.
	New Zealand ...	7 "	97			
	United States ...	1,479 "	2,390			
Soda (Crystals) ...	Great Britain ...	1,447 tons	4,390	1,549 tons	5,057	1,492 tons 1,492 9 5
	Victoria ...	26 "	217			
	South Australia ...	16 "	152			
	Belgium ...	32 "	137			
	Germany ...	4 "	31			
	United States ...	24 "	130			
Soda (Caustic) ...	Great Britain ...	1,079 pkg.	3,132	1,099 pkg.	3,229	Ad valorem ... 5 per cent. 7 April, 1886.
	Victoria ...	20 "	97			
Sandalwood ...	New Caledonia ...	60 tons	798			Free.
Safes (Iron) and Iron Doors ...	Great Britain ...	3,396 cwt.	7,558	3,716 cwt.	8,843	3,713 cwt. 556 15 4
	Victoria ...	197 "	1,027			
	Queensland ...	4 "	4			
	South Australia ...	68 "	160			
	United States ...	3 "	10			
	France ...	15 "	25			
	Germany ...	9 "	13			
	Italy ...	4 "	35			
	Singapore ...	20 "	11			
Seeds ...	Great Britain ...	95 pkg.	1,231	1,869 pkg.	4,709	Free.
	Victoria ...	757 "	1,761			
	Queensland ...	4 "	8			
	South Australia ...	38 "	78			
	New Zealand ...	503 "	679			
	Tasmania ...	330 "	459			
	New Caledonia ...	7 "	19			
	United States ...	118 "	437			
	Hong Kong ...	16 "	22			
	Belgium ...	1 "	15			
Sulphur ...	Great Britain ...	737 tons	3,756	800 tons	4,395	Ad valorem ... 5 per cent. 7 April, 1886.
	Victoria ...	2 "	49			
	Italy ...	1 "	10			
	France ...	53 "	492			
	Belgium ...	7 "	88			

IMPORTS—*continued.*

Articles.	Countries whence imported.	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
Specimens of Natural History	Great Britain ...	46 pkg.	£ 237		£ s. d.	
	Victoria ...	29 "	128			
	South Australia ...	4 "	22			
	Queensland ...	66 "	291			
	Tasmania ...	6 "	29			
	New Zealand... ..	7 "	43			
	Fiji ...	1 "	2			
	United States ...	11 "	180			
	South Sea Islands ...	33 "	143			
	New Caledonia ...	9 "	27			
	Germany ...	7 "	110			
Hong Kong ...	2 "	30				
Java ...	2 "	10				
France ...	6 "	110				
		229 pkg.	1,362	.....	<i>Ad valorem</i> ....	5 per cent. 7 April, 1886.
Shooks and Staves...	Great Britain ...	247 pkg.	159			
	Victoria ...	1,562 "	824			
	Queensland ...	135 "	45			
	Tasmania ...	1,265 "	445			
	United States ...	600 "	200			
	Germany ...	50 "	30			
South Australia ...	90 "	13				
		3,949 pkg.	1,716	.....	.....	Free.
Silver Plate and Plated Ware ...	Great Britain ...	1,219 pkg.	66,967			
	Victoria ...	147 "	3,846			
	South Australia ...	124 "	745			
	Queensland ...	19 "	421			
	New Zealand ...	22 "	844			
	United States ...	614 "	8,608			
	France ...	5 "	481			
	Germany ...	32 "	1,195			
	Tasmania ...	1 "	13			
China... ..	1 "	10				
Belgium ...	6 "	169				
		2,190 pkg.	83,299	.....	<i>Ad valorem</i> ....	5 per cent. 7 April, 1886.
Silver Ore...	Queensland ...	1,566 pkg.	1,486			
	South Australia ...	13 "	520			
	Tasmania ...	3 "	36			
	New Caledonia ...	48 "	192			
		1,630 pkg.	2,234	.....	.....	Free.
Silver (ingots)	Queensland ...	8,920 oz.	1,384	.....	.....	Free.
Horned Cattle	Victoria ...	223 No.	165			
	Queensland ...	94,608 "	89,838			
	South Australia ...	296 "	296			
	New Zealand ...	5,505 "	5,129			
	Fiji ...	24 "	24			
	New Caledonia ...	7,306 "	6,625			
		107,962 No.	102,077	.....	.....	Free.
Horse ...	Queensland ...	162 No.	113	.....	.....	Free.
Kangaroo	Victoria ...	29 pkg.	425			
	Queensland ...	590 "	6,598			
	Tasmania ...	18 "	583			
	South Australia ...	28 "	903			
		665 pkg.	8,509	.....	.....	Free.
Sheep	Victoria ...	155 pkg.	941			
	South Australia ...	110 "	288			
	Queensland ...	2,590 "	16,667			
	New Zealand ...	13 "	122			
	Fiji ...	4 "	8			
	New Caledonia ...	58 "	350			
Tasmania ...	6 "	25				
		2,936 pkg.	18,401	.....	.....	Free.
Calf ...	Queensland ...	111 pkg.	246			
	New Caledonia ...	13 "	15			
		124 pkg.	261	.....	.....	Free.

## STATISTICS, 1886—TRADE AND COMMERCE.

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## IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty				
		Quantities.	Value.		Gross amount Received.	Rate, and when imposed.			
Skins— contd.	AH other	Victoria ...	42 pkg.	478					
		South Australia ...	3 "	18					
		Tasmania ...	4 "	86					
		Hong Kong ...	2 "	20					
			51 pkg.	602			Free.		
States.	Roofing	Great Britain ...	2,561,115 No.	20,278					
		Victoria ...	68,461 "	218					
		South Australia ...	238 "	1					
		United States ...	1,423,587 "	7,577					
			4,053,401 No.	28,074		<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.		
States.	Slabs	Great Britain ...	1,815 No.	1,493					
		Victoria ...	260 "	175					
		South Australia ...	735 "	247					
			2,810 No.	1,915		<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.		
Spirits.	Brandy	Great Britain ...	251,551 gallons.	138,287					
		Victoria ...	31,451 "	14,476					
		South Australia ...	15,218 "	9,885					
		Queensland ...	1,185 "	942					
		New Zealand ...	79 "	40					
		France ...	80,984 "	36,686					
		Germany ...	125 "	82					
		New Caledonia ...	96 "	40					
		Belgium ...	1,426 "	350					
		United States ...	829 "	250					
		China ...	94 "	50					
				383,038 gallons.	201,088	316,878 gallons.	190,126 13 0	12s. per gallon. 11 Dec., 1879.	
		Spirits.	Rum	Great Britain ...	229,631 gallons.	43,505			
				Victoria ...	3,204 "	929			
South Australia ...	2,431 "			1,217					
Queensland ...	14,835 "			2,098					
France ...	194 "			195					
Fiji ...	13 "			3					
United States ...	107 "			119					
Germany ...	4,650 "			720					
		255,065 gallons.	48,786	316,866 gallons.	190,119 15 5	12s. per gallon. 11 Dec., 1879.			
Spirits.	Geneva	Great Britain ...	94,154 gallons.	18,043					
		Victoria ...	4,409 "	1,420					
		South Australia ...	2,281 "	1,362					
		Queensland ...	217 "	120					
		Belgium ...	40,660 "	5,838					
		Germany ...	44,875 "	22,203					
		Tasmania ...	132 "	20					
		New Caledonia ...	97 "	25					
		France ...	910 "	108					
				187,735 gallons.	49,139	157,688 gallons.	94,612 17 3	12s. per gallon. 11 Dec., 1879.	
Spirits.	Gin	Great Britain ...	13,487 gallons.	4,404					
		Victoria ...	405 "	155					
		South Australia ...	883 "	529					
		Queensland ...	690 "	313					
		Belgium ...	1,571 "	328					
		Germany ...	440 "	118					
		United States ...	178 "	30					
				17,654 gallons.	5,877	17,026 gallons.	10,216 6 6	12s. per gallon. 11 Dec., 1879.	
Spirits.	Whiskey	Great Britain ...	322,279 gallons.	116,842					
		Victoria ...	30,618 "	13,095					
		South Australia ...	20,603 "	12,501					
		Queensland ...	3,985 "	1,701					
		Tasmania ...	202 "	50					
		New Zealand ...	2,347 "	332					
		United States ...	457 "	211					
		380,491 gallons.	144,732	304,866 gallons.	182,920 5 3	12s. per gallon. 11 Dec., 1879.			

IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
Liqueurs	Great Britain ...	913 gallons	£ 1,095	12,453 gallons	7,472 14 5	12s. per gallon over 25% of proof spirits.
	Victoria ...	114 "	134			
	South Australia ...	811 "	595			
	Queensland ...	12 "	6			
	Hong Kong ...	7,361 "	2,673			
	United States ...	74 "	104			
	China... ..	823 "	189			
	New Caledonia ...	90 "	56			
	France ...	720 "	471			
	Belgium ...	34 "	22			
Germany ...	444 "	226				
		11,396 gallons	5,571	14,688 gallons	7,919 14 5	
Bitters	Great Britain ...	357 gallons	341	276 gallons	166 11 6	12s. per gallon over 25% of proof spirits.
	Victoria ...	8,257 "	5,672			
	South Australia ...	1,082 "	722			
	New Zealand ...	64 "	37			
	United States ...	369 "	468			
	Germany ...	640 "	290			
Queensland ...	32 "	70	5,685 "	1,137 6 9		
		10,801 gallons	7,600	5,961 gallons	1,303 18 3	
Perfumed	Great Britain ...	4,728 gallons	14,718	1,766 gall. at 12/-	.....	11 Dec., 1879, and 7 April, 1886.
	Victoria ...	283 "	625			
	South Australia ...	73 "	272			
	Queensland ...	17 "	66			
	United States ...	555 "	508			
	France ...	95 "	251			
	Germany ...	86 "	106			
Tasmania ...	1 "	3	4,244 "	15/-		
Belgium ...	15 "	26				
		5,853 gallons	16,575	6,010 gallons	4,243 1 4	
Methylated	Great Britain ...	9,322 gallons	1,213	24,070 gallons	2,407 1 6	2s. per gallon, 9 Mar., 1871.
	Victoria ...	228 "	42			
	South Australia ...	54 "	26			
	Germany ...	13,839 "	1,741			
United States ...	460 "	68				
		23,903 gallons	3,090	535 gallons	107 0 0	
All other	Great Britain ...	11,128 gallons	3,282	27,850 "	16,710 7 9	12s. per gallon over 25% of proof spirits.
	Victoria ...	2,224 "	1,037			
	South Australia ...	229 "	478			
	Queensland ...	452 "	1,109			
	United States ...	2,047 "	1,107			
	France ...	406 "	424			
	Germany ...	9,875 "	2,619			
	Hong Kong ...	3 "	2			
	Belgium ...	170 "	50			
	China... ..	46 "	7			
		26,580 gallons	10,115	28,385 gallons	16,817 7 9	
Starch	Great Britain ...	1,013,388 lb.	12,780	1,541,520 lb.	6,423 14 4	1d. per lb. 17 Mar., 1871.
	Victoria ...	23,248 "	362			
	South Australia ...	11,846 "	246			
	Queensland ...	4,704 "	78			
	United States ...	62,049 "	1,190			
	France ...	22,176 "	315			
	Germany ...	695,892 "	7,822			
	Belgium ...	180,930 "	1,933			
		2,014,233 lb.	24,726			
Stationery (Sun- dr as).	Great Britain ...	9,461 pkg.	128,602	.....	Ad valorem. ...	5 per cent. 7 April, 1886.
	Victoria ...	1,247 "	14,944			
	South Australia ...	383 "	1,232			
	Queensland ...	92 "	1,103			
	New Zealand ...	239 "	1,419			
	Fiji ...	14 "	18			
	Hong Kong ...	152 "	214			
	China ...	13 "	12			
	United States ...	1,132 "	3,462			
	France ...	23 "	445			
	Germany ...	300 "	1,054			
	Belgium ...	12 "	328			
New Caledonia ...	660 "	705				
		13,728 pkg.	153,088			

STATISTICS, 1886—TRADE AND COMMERCE.

IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.	
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.
Stearine ... ..	Great Britain ... ..	4,414 lb.	£ 130	4,320 lb.	£ s. d. 18 7 10	rd. per lb. 7 April, 1886.
	Victoria ... ..	125 "	6			
		4,539 lb.	136			
Statuary and Works of Art ... ..	Great Britain ... ..	468 pkg.	3,858	.....	Ad valorem ...	5 per cent. 7 April, 1886.
	Victoria ... ..	8 "	50			
	United States ... ..	3 "	60			
	France ... ..	94 "	718			
	Germany ... ..	7 "	170			
		580 pkg.	4,856			
Sundries (general)	Great Britain ... ..	18,302 pkg.	50,922	.....	Ad valorem ...	5 per cent. 7 April, 1886.
	Victoria ... ..	15,101 "	30,798			
	South Australia ... ..	2,713 "	6,174			
	Queensland ... ..	1,572 "	1,906			
	Tasmania ... ..	480 "	613			
	New Zealand ... ..	1,560 "	1,896			
	Fiji ... ..	242 "	159			
	Hong Kong ... ..	557 "	1,252			
	Ceylon ... ..	161 "	80			
	India ... ..	1,374 "	995			
	China ... ..	52 "	290			
	Singapore ... ..	458 "	217			
	United States ... ..	6,644 "	9,445			
	South Sea Islands ... ..	228 "	613			
	Mauritius ... ..	2 "	21			
	New Caledonia ... ..	24 "	43			
	France ... ..	180 "	1,706			
	Belgium ... ..	1,226 "	2,050			
	Germany ... ..	259 "	991			
	West Australia ... ..	275 "	87			
Italy ... ..	3 "	120				
Borneo ... ..	100 "	40				
		51,513 pkg.	110,418			
Ballast ... ..	Victoria ... ..	2,643 tons	4,038	.....	.....	Free.
Building ... ..	Great Britain ... ..	179 No.	552	.....	.....	Free.
	Victoria ... ..	9,258 "	7,665			
	South Australia ... ..	139 "	77			
	New Zealand ... ..	7 "	20			
	Tasmania ... ..	3 "	20			
		9,586 No.	8,334			
Flag ... ..	Great Britain ... ..	1,696 No.	1,120	.....	.....	Free.
	Victoria ... ..	75,784 "	4,285			
	South Australia ... ..	3,894 "	139			
		81,374 No.	5,544			
Stones. Grind ... ..	Great Britain ... ..	2,881 No.	339	.....	.....	Free.
	Victoria ... ..	138 "	62			
	South Australia ... ..	81 "	57			
	United States ... ..	144 "	24			
		3,244 No.	482			
Kerbing and Guttering ... ..	Victoria ... ..	9,424 No.	2,865	.....	.....	Free.
Mill ... ..	Victoria ... ..	2 No.	10	.....	.....	Free.
Pitchers ... ..	Victoria ... ..	3,038 tons	5,566	.....	.....	Free.
Tomb ... ..	Great Britain ... ..	149 pkg.	711	.....	Ad valorem ...	5 per cent. 7 April, 1886.
	South Australia ... ..	42 "	209			
	United States ... ..	26 "	58			
	Germany ... ..	2 "	11			
			219 pkg.			
Sugar—Raw ... ..	Great Britain ... ..	240 tons	5,208	15,599 tons	77,998 0 0	5s. per cwt. 9 Mar., 1871.
	Victoria ... ..	1,801 "	36,118			
	South Australia ... ..	561 "	14,445			
	Queensland ... ..	14,620 "	241,772			
	New Zealand ... ..	177 "	3,252			
	Fiji ... ..	10,056 "	126,670			
	Hong Kong ... ..	1,261 "	25,360			
	United States ... ..	151 "	3,236			
	Mauritius ... ..	1,106 "	22,736			
	France ... ..	3 "	70			
	Germany ... ..	2 "	25			
	Belgium ... ..	3 "	100			
		29,981 tons.	478,992			

## IMPORTS—continued.

Articles.	Countries whence imported.	Importations.		Entered for Home Consumption.	Duty.					
		Quantities.	Value.		Gross amount received.	Rate and when imposed				
Sugar— <i>contd.</i> } Refined	Great Britain ...	66 tons	£ 1,547	252 tons.	£ s. d. 1,648 19 6	6s. 8d. per cwt. 9 Mar., 1871.				
	Victoria ...	63 "	1,626							
	South Australia ...	20 "	683							
	Queensland ...	26 "	625							
	United States ...	1 "	20							
	Belgium ...	15 "	430							
	Germany ...	27 "	715							
		218 tons	5,646							
Tallow ...	Victoria ...	8,426 cwt.	7,827	.....	.....	Free.				
	South Australia ...	248 "	352							
	Queensland ...	19,883 "	21,328							
	Tasmania ...	36 "	39							
	New Zealand ...	8,656 "	8,421							
	New Caledonia ...	557 "	546							
		37,806 cwt.	38,513							
Tapioca ...	Great Britain ...	617 lb.	7	575,280 lb.	2,397 5 7	1d. per lb. 7 April, 1886.				
	Victoria ...	70,675 "	577							
	South Australia ...	6,171 "	104							
	Hong Kong ...	96,600 "	709							
	Singapore ...	382,100 "	2,696							
	China ...	188,040 "	2,235							
	India ...	87,935 "	1,050							
		832,138 lb.	7,378							
Tea... ..	Great Britain ...	32,294 lb.	1,855	8,478,320 lb.	105,979 2 0	3d. per lb. 9 Mar., 1871.				
	Victoria ...	1,693,861 "	93,463							
	South Australia ...	130,229 "	8,712							
	Queensland ...	11,375 "	769							
	Tasmania ...	46 "	3							
	Hong Kong ...	829,692 "	40,209							
	India ...	130,835 "	6,463							
	Ceylon ...	25,412 "	1,263							
	China ...	4,252,794 "	158,785							
	New Caledonia ...	500 "	25							
		7,107,038 lb.	311,547							
Telegraphic Materials ...	Great Britain ...	4,738 pkg.	10,413	.....	<i>Ad valorem</i> ...	5 per cent. 7 April, 1886.				
	Victoria ...	37 "	383							
	South Australia ...	1,008 "	1,008							
	Germany ...	20 "	90							
	Queensland ...	1 "	8							
	New Zealand ...	10 "	600							
	United States ...	13 "	1,027							
	France ...	34 "	98							
	Belgium ...	84 "	989							
		5,945 pkg.	14,616							
Timber } Dressed	Great Britain ...	6,404,526 feet	62,952	9,538,000 ft., per 100, 2s.; 12,312,600 ft., per 100, 3s.	28,006 19 10	2s. per 100 ft. from 1 Jan. to 6 April, 1886. 17 Mar., 1871, afterwards 3s. per 100 feet, 7 April, 1886.				
	Victoria ...	869,540 "	10,694							
	South Australia ...	346,493 "	6,186							
	Queensland ...	204 "	10							
	France ...	5,288 "	575							
	New Zealand ...	5,376,615 "	39,789							
	British Columbia ...	113,577 "	800							
	United States ...	4,479,598 "	37,470							
	Norway ...	5,762,179 "	41,535							
	Germany ...	171,072 "	1,300							
	New Caledonia ...	32,083 "	242							
			23,561,175 feet				201,553	21,850,600 ft.		
	Un-dressed	Great Britain ...	1,519,040 feet				11,645	12,870,000 feet, per 100, 1s.; 25,701,300 feet, per 100, 1s. 6d.	25,761 8 9	1s. per 100 ft. from 1 Jan. to 6 April, 1886. 17 Mar., 1871; afterwards 1s. 6d. per 100 ft., 7 April, 1886.
		Victoria ...	772,366 "				7,399			
South Australia ...		662,426 "	10,914							
Queensland ...		122,297 "	850							
Tasmania ...		64,639 "	443							
New Zealand ...		8,465,653 "	44,077							
Hong Kong ...		5,338 "	71							
British Columbia ...		1,808,416 "	8,000							
United States ...		25,761,156 "	137,279							
Norway ...		1,039,042 "	6,204							
Germany ...		53,696 "	455							
Western Australia ...		30,000 "	5							
Sweden ...		513,004 "	4,200							
Belgium ...		1,300 "	5							
New Caledonia ...	127,545 "	640								
New Guinea ...	4,000 "	50								
Borneo ...	93,700 "	670								
		41,043,618 feet	232,907	38,571,300 feet.						

## STATISTICS, 1886—TRADE AND COMMERCE.

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## IMPORTS—continued.

Articles.	Countries whence imported.	Importations.		Entered for Home Consumption.	Duty.						
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.					
Timber—continued.	Shingles ...	Victoria ...	2,200 No.	4	270,000 No.	£ s. d. 135 6 8	1s. per 1,000. 7 April, 1886.				
		Victoria ...	52,504 No.	437							
	Palings ...	South Australia ...	2,800 "	206							
		Tasmania ...	321,886 "	2,045							
			377,190 No.	2,688				1s. per 100. 7 April, 1886.			
	Laths ...	Great Britain ...	3,955 bundles	450		103,846 bds.	194 14 3	9d. per 1,000. 7 April, 1886.			
		Victoria ...	1,342 "	100							
		South Australia ...	660 "	5							
		British Columbia ...	10,168 "	1,074							
		United States ...	90,139 "	9,377							
Queensland ...		228 "	30								
New Zealand ...		1,200 "	100								
Norway ...	1,711 "	178									
		109,403 bundles	11,314	= 5,173,000 No.							
Tin	Ingots ...	Victoria ...	1 tons	138	.....	.....	Free.				
		Queensland ...	151 "	14,891							
		Tasmania ...	3,094 "	297,736							
			3,246 tons	312,765							
	Ore ...	Queensland ...	2,697 tons	129,689							
		South Australia ...	1 "	60							
			2,698 tons	129,749						Free.	
	Plates ...	Great Britain ...	20,291 boxes	19,179				.....	Ad valorem ...	5 per cent. 7 April, 1886.	
		Victoria ...	330 "	411							
		Queensland ...	934 "	564							
South Australia ...		4 "	6								
Tasmania ...		190 "	313								
		21,749 boxes	20,473								
Tinware ...	Manufactured	Great Britain ...	844 pkg.	5,568	.....	Ad valorem ...	5 per cent. 7 April, 1886.				
		Victoria ...	12,991 "	3,948							
		South Australia ...	301 "	1,176							
		Queensland ...	3 "	9							
		Tasmania ...	5,404 "	1,391							
		United States ...	1,293 "	1,316							
		Germany ...	4 "	37							
		New Zealand ...	7 "	33							
				20,847 pkg.				13,478			
		Tobacco.	Leaf...	Great Britain ...				563,371 lb.	43,206	378,680 lb.	56,801 14 10
Victoria ...	78,108 "			6,572							
Queensland ...	660 "			59							
Tasmania ...	1,568 "			100							
New Zealand ...	275 "			17							
Hong Kong ...	13,068 "			1,035							
China ...	791 "			87							
United States ...	678,933 "			38,165							
Germany ...	405 "			68							
Fiji ...	190 "			8							
France ...	200 "	27									
South Australia ...	46,467 "	5,774									
		1,384,036 lb.	95,118								
		97,493 lb.	3,393	8,840 lb.	1,326 4 6	3s. per lb.					
Victoria ...	8,139 "	582									
United States ...	398,590 "	28,206									
Germany ...	627 "	45									
Ceylon ...	2,240 "	80									
Queensland ...	827 "	62									
		507,916 lb.	32,368	560,560 "	28,075 14 0	1s. " 20 Feb., 1884.					
Cigars ...	Manufactured	Great Britain ...	43,595 lb.	16,425	223,520 lb.	67,058 0 0	6s. per lb. 20 Feb., 1884.				
		Victoria ...	23,905 "	7,112							
		South Australia ...	4,683 "	1,196							
		Queensland ...	2,540 "	779							
		Fiji ...	194 "	59							
		India ...	689 "	184							
		Hong Kong ...	126,258 "	20,052							
		Singapore ...	15 "	8							
		China ...	7,703 "	1,463							
		United States ...	1,313 "	848							
New Caledonia ...	504 "	160									
France ...	28,515 "	8,210									
Belgium ...	8,016 "	2,235									
Germany ...	61,654 "	15,795									
New Zealand ...	1,050 "	426									
		310,694 lb.	74,952								



## IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.		
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.	
Tobacco.	Cigarettes ...	Great Britain ...	41,346 lb.	£ 14,037	39,136 lb.	£ s. d. 11,741 2 3	6s. per lb. 20 Feb., 1884.
		Victoria ...	1,443 "	839			
		Queensland ...	813 "	379			
		Egypt ...	15 "	8			
		United States ...	4,536 "	2,030			
		New Zealand ...	125 "	48			
		Germany ...	946 "	530			
		South Australia ...	418 "	268			
		France ...	281 "	126			
				49,923 lb.			
Snuff	Great Britain ...	289 lb.	53	(See Manufactured Tobacco.)			
	South Australia ...	6 "	4				
	United States ...	480 "	90				
	Victoria ...	153 "	46				
		928 lb.	193				
Tortoiseshell	Queensland ...	291 lb.	119			Free.	
	Fiji ...	1,163 "	601				
	South Sea Islands ...	2,381 "	1,247				
	New Caledonia ...	112 "	25				
	New Zealand ...	46 "	20				
		3,993 lb.	2,012				
Toys	Great Britain ...	2,517 pkg.	37,070				
	Victoria ...	1,019 "	9,132				
	South Australia ...	471 "	3,632				
	Queensland ...	74 "	885				
	Tasmania ...	11 "	553				
	New Zealand ...	11 "	300				
	India ...	2 "	8				
	Hong Kong ...	1,415 "	7,730				
	China ...	34 "	225				
	United States ...	320 "	1,996				
	France ...	54 "	1,392				
	Belgium ...	44 "	638				
	Germany ...	1,150 "	10,832				
	Fiji ...	6 "	34				
Japan ...	432 "	2,268					
		7,560 pkg.	76,695				
Turpentine	Great Britain ...	13,391 gallons	2,014	58,240 gallons.	2,912 2 0	18. per gall. 17 Mar., 1871.	
	Victoria ...	1,716 "	297				
	South Australia ...	585 "	116				
	Queensland ...	85 "	18				
	United States ...	53,587 "	6,921				
		69,364 gallons	9,366				
Turnery	Great Britain ...	1,133 pkg.	6,093				
	Victoria ...	3,897 "	2,843				
	South Australia ...	865 "	1,334				
	Queensland ...	33 "	72				
	New Zealand ...	329 "	368				
	Hong Kong ...	507 "	263				
	China ...	229 "	51				
	United States ...	16,191 "	11,751				
	Germany ...	381 "	6,512				
	New Caledonia ...	6 "	17				
	France ...	1 "	3				
	Singapore ...	209 "	90				
	Belgium ...	705 "	202				
		24,486 pkg.	29,599				
Upholstery	Great Britain ...	3,081 pkg.	67,949			5 per cent. 7 April, 1886.	
	Victoria ...	1,566 "	4,363				
	South Australia ...	313 "	978				
	Queensland ...	7 "	28				
	Tasmania ...	4 "	5				
	New Zealand ...	21 "	355				
	Hong Kong ...	621 "	1,353				
	United States ...	73 "	525				
	Germany ...	27 "	376				
	Ceylon ...	108 "	632				
	New Caledonia ...	3 "	17				
	France ...	92 "	1,650				
	Belgium ...	1 "	120				
		5,919 pkg.	78,351				
						5 per cent. 7 April, 1886.	

STATISTICS, 1886—TRADE AND COMMERCE.

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IMPORTS—continued.

Articles.	Countries whence Imported.	Importations.		Entered for Home Consumption.	Duty.					
		Quantities.	Value.		Gross Amount received.	Rate, and when imposed.				
Varnish ...	Great Britain ...	33,448 gallons	£ 16,309	33,710 gallons.	£ s. d. 3,371 15 0	2s. per gall. 17 Mar., 1871.				
	Victoria ...	1,395 "	911							
	South Australia ...	303 "	213							
	Queensland ...	240 "	172							
	United States ...	2,176 "	805							
	Germany ...	17 "	22							
		37,489 gallons	18,432							
Vermicelli and Macaroni...	Great Britain ...	1,213 pkg.	1,426	71,040 lb.	296 14 11	1d. per lb. 7 April, 1886.				
	Victoria ...	42 "	89							
	South Australia ...	51 "	64							
	Hong Kong ...	135 "	170							
	China ...	57 "	20							
	France ...	202 "	757							
	Germany ...	6 "	31							
	Queensland ...	6 "	71							
	Italy ...	5 "	18							
Belgium ...	1 "	25								
		1,708 pkg.	2,671							
Vinegar ...	Great Britain ...	81,610 gallons	9,022	106,720 gallons.	2,668 1 1	6d. per gall. 17 Mar., 1871.				
	Victoria ...	9,404 "	1,042							
	South Australia ...	5,654 "	817							
	Queensland ...	58 "	8							
	United States ...	986 "	67							
	Germany ...	300 "	15							
	Western Australia ...	30 "	3							
		98,042 gallons	10,974							
Watches and Clocks	Great Britain ...	973 pkg.	81,202	.....	Ad Valorem...	5 per cent. 7 April, 1886.				
	Victoria ...	171 "	4,114							
	South Australia ...	98 "	983							
	Queensland ...	4 "	88							
	New Zealand ...	26 "	333							
	Belgium ...	1 "	42							
	United States ...	1,727 "	39,502							
	France ...	67 "	7,019							
	Germany ...	18 "	361							
	South Sea Islands ...	1 "	15							
	Italy ...	5 "	617							
	Honolulu ...	1 "	55							
			3,092 pkg.				134,331			
Whiting and Chalk	Great Britain ...	12,105 pkg.	3,198	.....	.....	Free.				
	Victoria ...	801 "	335							
	South Australia ...	157 "	121							
	Germany ...	135 "	40							
	Belgium ...	135 "	35							
		13,333 pkg.	3,729							
Whalebone ...	Great Britain ...	3 cwt.	34	.....	.....	Free.				
	South Sea Islands ...	6 "	25							
		9 cwt.	59							
Wax.	Japan ...	Hong Kong ...	5,154 lb.	10,560 lb.	44 13 6	1d. per lb. 7 April, 1886.				
		China... ..	5,175 "				55			
			10,329 lb.				158			
	Mineral ...	Great Britain ...	224 lb.				8	.....	Included above	1d. per lb. 7 April, 1886.
		Belgium .. ..	14,010 "				467			
			14,234 lb.				475			
	Paraffine .....	Great Britain ...	40 l .				3			1d. per lb. 7 April, 1886.
Weighing Machines	Great Britain ...	347 pkg.	1,405	.....	Ad Valorem....	5 per cent. 7 April, 1885.				
	Victoria ...	21 "	93							
	South Australia ...	65 "	277							
	United States ...	303 "	2,644							
	New Zealand ...	1 "	2							
	France ...	1 "	17							
		798 pkg.	4,438							

IMPORTS—*continued.*

Articles	Countries whence Imported.	Imports.		Entered for Home Consumption.	Duty.				
		Quantities.	Value.		Gross Amount received.	Rate and when imposed.			
Wine—Sparkling...	Great Britain ...	13,777 gallons.	£ 24,067	21,038 gallons.	£ s. d. 10,518 12 10	ros. per gall. 11 Dec., 1879.			
	Victoria ...	1,521 "	2,758						
	South Australia ...	904 "	1,889						
	Queensland ...	315 "	609						
	United States ...	4 "	5						
	France ...	7,593 "	14,641						
	Belgium ...	875 "	1,580						
	Germany ...	57 "	55						
	New Caledonia ...	20 "	40						
			25,066 gallons.				45,644		
Wine—Still ...	Great Britain ...	130,793 gallons.	49,573	152,956 gallons.	38,239 8 3	5s. per gallon. 11 Dec., 1879.			
	Victoria ...	8,793 "	4,246						
	South Australia ...	10,037 "	5,023						
	Queensland ...	1,108 "	508						
	New Zealand ...	153 "	55						
	Hong Kong ...	126 "	29						
	Belgium ...	48 "	40						
	New Caledonia ...	425 "	179						
	France ...	7,592 "	4,087						
	Germany ...	681 "	211						
Fiji ...	198 "	83							
United States ...	2 "	2							
		159,956 gallons.	64,036						
Wool {	Victoria ...	7,860 lb.	408	...	...	Free.			
	Queensland ...	2,189,112 "	101,929						
	South Australia ...	1,680 "	12						
	Tasmania ...	44 "	2						
	Washed ...		2,198,696 lb.				102,351		
	Victoria ...	8,366 lb.	361				...	...	Free.
	Queensland ...	5,526,598 "	174,785						
	Tasmania ...	2,446 "	90						
	Fiji ...	1,370 "	23						
	New Caledonia ...	41,650 "	1,431						
South Australia ...	6,600 "	90							
New Zealand ...	14,995 "	555							
Greasy ...		5,602,025 lb.	177,335						
Woolpacks ...	Great Britain ...	1,158 cwt.	1,752	162,240 No. 33,576 cwt.	7,624 11 7	3d. per pack from 1 Jan. to 26 April, 1886. 3s. 4d. per cwt. from April 7, 1886.			
	Victoria ...	9,387 "	9,646						
	South Australia ...	4,667 "	5,749						
	Queensland ...	371 "	647						
	India ...	26,793 "	25,833						
	New Zealand ...	963 "	1,262						
		43,339 cwt.	44,889						
Yellow Metal {	Great Britain ...	1,668 pkg.	12,487	...	...	Free.			
	Victoria ...	6 "	64						
	Queensland ...	8 "	3						
	New Zealand ...	43 "	112						
	New Caledonia ...	23 "	140						
Sheets ...		1,748 pkg.	12,806						
Nails ...	Great Britain ...	417 pkg.	1,741	...	...	Free.			
Zinc {	Great Britain ...	1,373 cwt.	1,328	83 cwt. 67 cwt.	166 9 0 202 8 9	2/- per cwt. from 7 April to August, 1886; afterwards free. 3/- per cwt. 7 April, 1886.			
	Victoria ...	33 "	49						
	South Australia ...	63 "	98						
	Queensland ...	116 "	67						
	Belgium ...	944 "	992						
	Germany ...	106 "	102						
	France ...	1 "	3						
	Plain sheet		2,636 cwt.				2,639		
	Perforated or manufactured.	Great Britain ...	313 cwt.				631		
		Victoria ...	3,514 "				994		
	South Australia ...	17 "	43						
	Belgium ...	314 "	694						
		4,158	2,362						
	TOTAL IMPORTS IN 1886	...	£ 20,973,548						

STATISTICS, 1886—TRADE AND COMMERCE.

EXPORTS.

No. 3.—GENERAL EXPORTS from the Colony of New South Wales during the Year ended 31st December, 1886, as supplied by the Customs Department.

Articles.	Countries to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.
					£	£	£
Acids	Acetic	Victoria .. .. .	89 gall.	89 gall.	.. . . .	20	20
		Tasmania .. . . .	4 "	4 "	.. . . .	2	2
		Queensland .. . . .	1,126 "	1,126 "	.. . . .	290	290
		New Caledonia .. . . .	35 "	35 "	.. . . .	7	7
		.. . . .	1,254 gall.	1,254 gall.	.. . . .	319	319
	Tartaric	Tasmania .. . . .	144 lb.	144 lb.	.. . . .	10	10
		Queensland .. . . .	1,345 "	1,345 "	.. . . .	95	95
		New Caledonia .. . . .	588 "	588 "	.. . . .	42	42
		.. . . .	2,077 lb.	2,077 lb.	.. . . .	147	147
	All other	Victoria .. . . .	6 pkg.	6 pkg.	.. . . .	21	21
South Australia .. . . .		19 pkg.	24 "	.. . . .	15	42	
New Zealand .. . . .		2 "	5 "	.. . . .	15	15	
Queensland .. . . .		2,866 "	2,893 "	4 377	49	4,426	
South Sea Islands .. . . .		1 "	2 "	.. . . .	2	4	
New Caledonia .. . . .		14 "	37 "	.. . . .	84	105	
Fiji .. . . .		15 "	19 "	.. . . .	44	67	
Western Australia .. . . .	1 "	1 "	.. . . .	2	2		
	.. . . .	2,915 pkg.	3,016 pkg.	4,450	232	4,682	
Aerated Waters	Great Britain .. . . .	9 pkg.	9 pkg.	.. . . .	17	17	
	Victoria .. . . .	85 pkg.	311 "	257	245	502	
	South Australia .. . . .	2 "	2 "	.. . . .	4	4	
	New Zealand .. . . .	116 pkg.	163 "	112	36	148	
	Queensland .. . . .	288 "	1,165 "	260	1,794	2,054	
	South Sea Islands .. . . .	30 "	56 "	41	35	76	
	New Caledonia .. . . .	6 "	22 "	6	11	17	
Fiji .. . . .	14 "	41 "	14	30	44		
	.. . . .	539 pkg.	2,057 pkg.	690	2,172	2,862	
Do	Victoria .. . . .	14 doz.	20 doz.	5	10	15	
	New Zealand .. . . .	854 "	28 "	142	8	150	
	Queensland .. . . .	2,914 "	376 "	480	105	585	
	New Caledonia .. . . .	10 "	24 "	3	6	9	
	Fiji .. . . .	60 "	30 "	17	6	23	
	Western Australia .. . . .	422 "	2 "	60	1	61	
	Hongkong .. . . .	.. . . .	10 "	.. . . .	5	5	
	.. . . .	4,274 doz.	4,764 doz.	707	141	848	
Agricultural Implements	Great Britain .. . . .	20 pkg.	20 pkg.	.. . . .	146	146	
	Victoria .. . . .	17 pkg.	100 "	338	1,831	2,169	
	South Australia .. . . .	8 "	6 "	14	29	92	
	Tasmania .. . . .	16 "	42 "	58	105	339	
	New Zealand .. . . .	.. . . .	23 "	.. . . .	126	126	
	Queensland .. . . .	52 pkg.	563 "	615	24	2,430	
	New Caledonia .. . . .	.. . . .	54 "	.. . . .	132	132	
	Fiji .. . . .	1 pkg.	49 "	50	5	252	
	United States .. . . .	.. . . .	1 "	.. . . .	19	19	
	.. . . .	94 pkg.	858 pkg.	718	5,338	6,056	
Alkalis	Soda, Bicarbonate	Victoria .. . . .	5,264 lb.	5,264 lb.	.. . . .	23	23
		South Australia .. . . .	336 "	336 "	.. . . .	5	5
		Queensland .. . . .	13,566 "	13,566 "	.. . . .	110	110
		New Caledonia .. . . .	2,240 "	2,240 "	.. . . .	22	22
		Fiji .. . . .	224 "	224 "	.. . . .	2	2
	Western Australia .. . . .	224 "	224 "	.. . . .	2	2	
		.. . . .	21,854 lb.	21,854 lb.	.. . . .	164	164
	Soda Crystals...	Victoria .. . . .	43 cwt.	43 cwt.	.. . . .	18	18
		New Zealand .. . . .	750 "	750 "	.. . . .	203	203
		Queensland .. . . .	168 "	168 "	.. . . .	52	52
New Caledonia .. . . .		608 "	608 "	.. . . .	173	173	
Fiji .. . . .		30 "	30 "	.. . . .	9	9	
	.. . . .	1,599 cwt.	1,599 cwt.	.. . . .	455	455	
Alum	Queensland	56 lb	.. . . .	.. . . .	2	2	

EXPORTS—continued.

Articles	Countries to which Exported.	Quantities			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture	Total.	Produce and Manufacture of the Colony	British, Foreign, and other Colonial Produce and Manufacture	Total.
Anchors	South Australia	18 No.	18 No.	£ 80	£ 80	£ 80	
	Tasmania	9 "	9 "	6	6	6	
	Queensland	127 "	127 "	223	223	223	
	South Sea Islands	27 "	27 "	48	48	48	
	New Caledonia	41 "	41 "	95	95	95	
	Fiji	6 "	6 "	13	13	13	
	Western Australia	67 "	67 "	125	125	125	
		295 No.	295 No.	590	590	590	
Antimony.	Auriferous	Great Britain	644 cwt.	644 cwt.	805	805	805
		Victoria	12 cwt.	12 "	7	7	7
		Germany	460 cwt.	460 "	465	465	465
		Belgium	8 "	8 "	10	10	10
	Metal		1,112 cwt.	1,124 cwt.	1,280	7	1,287
		New Zealand	2 cwt.	2 cwt.	10	10	10
		Queensland	2½ "	2½ "	13	13	13
	Ore		4½ cwt.	4½ cwt.	23	23	23
		Great Britain	4,351 cwt.	4,351 cwt.	2,101	2,101	2,101
	Apparel	Great Britain	91 pkg.	91 pkg.	1,322	1,322	1,322
Victoria		1,530 "	1,530 "	7,017	7,017	7,017	
South Australia		4 pkg.	31 "	140	440	580	
Tasmania		24 "	24 "	381	381	381	
New Zealand		43 "	43 "	515	515	515	
Queensland		104 pkg.	779 "	1,422	22,693	24,115	
South Sea Islands		26 "	26 "	256	256	256	
New Caledonia		45 "	45 "	628	628	628	
Fiji		22 "	22 "	378	378	378	
Western Australia		16 "	16 "	615	615	615	
Hong Kong		31 "	34 "	162	162	162	
Honolulu		2 "	2 "	28	28	28	
France		1 "	1 "	30	30	30	
Java		1 "	1 "	25	25	25	
United States		16 "	16 "	1,146	1,146	1,146	
India		1 "	1 "	25	25	25	
Germany		2 "	2 "	50	50	50	
		108 pkg.	2,664 pkg.	1,562	35,696	37,258	
Arms, Ammunition, and Explosives.	Cartridges	Victoria	1 pkg.	1 pkg.	1	1	1
		South Australia	3 "	3 "	24	24	24
		Queensland	146 "	146 "	780	780	780
		South Sea Islands	34 "	34 "	180	180	180
		New Caledonia	35 "	35 "	136	136	136
		Fiji	13 "	13 "	71	71	71
		Western Australia	6 "	6 "	26	26	26
			238 pkg.	238 pkg.	1,218	1,218	1,218
	Gun Caps	Victoria	4 pkg.	4 pkg.	44	44	44
		South Australia	2 "	2 "	8	8	8
New Zealand		10 "	10 "	100	100	100	
Queensland		60 "	60 "	514	514	514	
South Sea Islands		4 "	4 "	39	39	39	
New Caledonia		20 "	20 "	100	100	100	
Fiji	5 "	5 "	5	5	5		
		105 pkg.	105 pkg.	810	810	810	
Fuze	Victoria	41 pkg.	41 pkg.	361	361	361	
	South Australia	6 "	6 "	52	52	52	
	Queensland	111 "	111 "	927	927	927	
	New Caledonia	7 "	7 "	50	50	50	
	Fiji	1 "	1 "	9	9	9	
		166 pkg.	166 pkg.	1,399	1,399	1,399	
Guns	Great Britain	16 pkg.	16 pkg.	405	405	405	
	Victoria	32 "	32 "	816	816	816	
	South Australia	12 "	12 "	108	108	108	
	Tasmania	3 "	3 "	68	68	68	
	Queensland	67 "	67 "	1,026	1,026	1,026	
	South Sea Islands	33 "	33 "	572	572	572	
	New Caledonia	34 "	34 "	737	737	737	
	Fiji	6 "	6 "	55	55	55	
	Germany	65 "	65 "	500	500	500	
	Belgium	2 "	2 "	100	100	100	
Singapore	4 "	4 "	47	47	47		
		274 pkg.	274 pkg.	4,434	4,434	4,434	

STATISTICS, 1886—TRADE AND COMMERCE.

EXPORTS—continued.

Articles	Countries to which Exported	Quantities			Value		
		Produce and Manufacture of the Colony	British, Foreign, and other Colonial Produce and Manufacture	Total	Produce and Manufacture of the Colony	British, Foreign, and other Colonial Produce and Manufacture	Total
					£	£	£
Aims, Ammunition, and Explosives—continued.	Shot	Victoria	100 cwt	100 cwt.	.	120	120
		South Australia	12 "	12 "	.	15	15
		Queensland	312 "	312 "	..	423	423
		South Sea Islands	168 "	168 "	.	209	209
		New Caledonia	61 "	61 "	.	82	82
		Fiji	26 "	26 "	.	35	35
	Western Australia	8 "	8 "	.	12	12	
			687 cwt	687 cwt		896	896
	Dyna- mite & Litho- fracteur	Victoria	10,000 lb	10,000 lb		750	750
		Queensland	9,350 "	9,350 "		641	641
		New Caledonia	8,760 "	8,760 "		572	572
			28,110 lb.	28,110 lb		1,963	1,963
	Powder (Blasting)	Victoria	317,475 lb	317,475 lb		7,528	7,528
		Tasmania	2,500 "	2,500 "	....	62	62
		Queensland	34,432 "	34,432 "		835	835
New Caledonia		9,750 "	9,750 "		266	266	
Fiji		1,600 "	1,600 "		40	40	
		365,757 lb	365,757 lb		8,731	8,731	
Powder (Spotting)	Queensland	5,590 lb	5,590 lb		769	769	
	South Sea Islands	2,814 "	2,814 "	.	259	259	
	New Caledonia	2,880 "	2,880 "		235	235	
	Fiji	288 "	288 "		36	36	
	Western Australia	78 "	78 "		10	10	
	New Guinea (British)	96 "	96 "		9	9	
		11,746 lb	11,746 lb		1,318	1,318	
Arrowroot	Great Britain	3,224 lb	3,224 lb	.	80	80	
	Victoria	934 "	934 "		21	21	
	South Australia	3,920 "	3,920 "	..	92	92	
	Queensland	184 "	184 "	...	6	6	
	New Caledonia	80 "	80 "	...	2	2	
	Fiji	168 "	168 "		3	3	
	Western Australia	224 "	224 "		4	4	
		8,734 lb	8,734 lb		208	208	
Asbestos	Victoria	22 pkg	22 pkg	..	72	72	
	Queensland	6 "	6 "	..	11	11	
		28 pkg	28 pkg		83	83	
Bags and Sacks	Victoria	21,836 doz	21,836 doz.		5,388	5,388	
	South Australia	20 <sup>1</sup> / <sub>2</sub> "	20 <sup>1</sup> / <sub>2</sub> "		5	5	
	Tasmania	4,895 <sup>1</sup> / <sub>2</sub> "	4,895 <sup>1</sup> / <sub>2</sub> "		1,189	1,189	
	Queensland	15,060 "	15,060 "	.....	3,900	3,900	
	South Sea Islands	666 <sup>1</sup> / <sub>2</sub> "	666 <sup>1</sup> / <sub>2</sub> "		167	167	
	New Caledonia	6,329 "	6,329 "		1,605	1,605	
	Fiji	13,287 <sup>1</sup> / <sub>2</sub> "	13,287 <sup>1</sup> / <sub>2</sub> "		3,352	3,352	
Western Australia	646 "	646 "	...	163	163		
		62,739 <sup>1</sup> / <sub>2</sub> doz	62,739 <sup>1</sup> / <sub>2</sub> doz		15,769	15,769	
Bags (Gunny) & Ore	Victoria	10,012 doz.	10,012 doz		1,723	1,723	
	Tasmania	75 "	75 "	.....	15	15	
	New Zealand	1,668 <sup>1</sup> / <sub>2</sub> "	1,668 <sup>1</sup> / <sub>2</sub> "		145	145	
	Queensland	1,966 "	1,966 "		271	271	
	New Caledonia	4,681 "	4,681 "		751	751	
	Fiji	3,749 "	3,749 "	..	461	461	
	India	75 "	75 "		15	15	
		22,226 <sup>1</sup> / <sub>2</sub> doz	22,226 <sup>1</sup> / <sub>2</sub> doz		3,381	3,381	
Baking Powder, Self- raising flour, Yeast, &c	South Australia	128 lb	128 lb.	..	8	8	
	Queensland	575 lb	2,072 "	38	105	143	
	New Caledonia	56 "	116 "	3	4	7	
	Fiji	40 "	40 "	2		2	
	Western Australia	163 "	864 "	10	45	55	
		839 lb.	3,220 lb	53	162	215	
Bark	Great Britain	4,240 cwt	3,608 cwt	7,848 cwt.	1,779	1,580	3,359
	Victoria	22,607 "	1,580 "	24,187 "	7,763	632	8,400
	Tasmania	4,356 "		4,356 "	1,623	...	1,623
	New Zealand	682 "	175 cwt	857 "	267	61	328
	Queensland	1,560 "	15,233 "	16,793 "	451	5,445	5,896
	China	53 "		53 "	15	...	15
		33,498 cwt.	20,596 cwt	54,094 cwt.	11,903	7,718	19,621

EXPORTS—continued.

Articles	Countries to which Exported	Quantities			Value			
		Produce and Manufacture of the Colony	British, Foreign, and other Colonial Produce and Manufacture	Total	Produce and Manufacture of the Colony	British, Foreign, and other Colonial Produce and Manufacture	Total	
Barley (Prepared Pearl, &c)	Victoria	...	50 lb.	50 lb.	£	1	1	
	Queensland	...	4,144 "	4,144 "	..	45	45	
	South Sea Islands	...	50 "	50 "	..	1	1	
	New Caledonia	...	1,512 "	1,512 "	..	15	15	
	Fiji	...	92 "	92 "	..	1	1	
		...	5,854 lb	5,854 lb.	...	63	63	
Baskets & Basketware	Victoria	333 pkg.	...	333 pkg	65	..	65	
	South Australia	...	116 pkg	116 "	..	19	19	
	Queensland	304 pkg.	332 "	636 "	261	213	474	
	South Sea Islands	32 "	.... "	32 "	18	..	18	
	New Caledonia	1 "	...	1 "	2	..	2	
Fiji	29 "	...	29 "	13	..	13		
		692 pkg	448 pkg	1,147 pkg	359	232	591	
Beche de-mer	Queensland	...	155 cwt.	155 cwt.	..	753	753	
	Hong Kong	...	1,537 "	1,537 "	..	4,042	4,042	
		...	1,692 cwt	1,692 cwt	...	4,795	4,795	
Beer	In bottle	Great Britain	12 gall.	5,138 gall.	5,138 gall	2	1,336	1,338
		Victoria	...	19,469 "	19,469 "	..	4,139	4,139
		South Australia	.....	6,817 "	6,817 "	..	1,448	1,448
		Tasmania	...	836 "	836 "	..	213	213
		New Zealand	...	1,731 "	1,731 "	..	403	403
		Queensland	...	64,239 "	64,239 "	..	14,237	14,237
		South Sea Islands	...	5,479 "	5,479 "	..	1,203	1,203
		New Caledonia	...	20,390 "	20,390 "	..	4,167	4,167
		Fiji	...	5,123 "	5,123 "	..	1,090	1,090
		Western Australia	90 gall	5,428 "	5,518 "	10	1,284	1,294
	United States	...	1,619 "	1,619 "	..	399	399	
	Hong Kong	...	1,169 "	1,169 "	..	292	292	
	Honolulu	...	302 "	302 "	..	78	78	
	Manilla	...	86 "	86 "	..	18	18	
	Franco	...	209 "	209 "	..	51	51	
	Germany	...	187 "	187 "	..	48	48	
			102 gall.	138,210 gall	138,312 gall.	12	30,406	30,418
	In wood	Victoria	956 gall	20,788 gall	21,744 gall	102	2,162	2,264
		South Australia	...	500 "	500 "	..	60	60
		Tasmania	.....	36 "	36 "	..	5	5
New Zealand		...	900 "	900 "	..	90	90	
Queensland		82 gall	4,145 "	4,227 "	10	446	456	
New Caledonia		1,506 "	..	1,506 "	114	..	114	
Fiji Islands		7,477 "	..	7,477 "	576	.....	576	
Western Australia		...	50 gall.	50 "	..	5	5	
Honolulu		500 gall	..	500 "	38	..	38	
			10,521 gall	26,419 gall.	36,940 gall.	840	2,768	3,608
Beeswax	Great Britain	47,203 lb	..	47,203 lb.	2,194	..	2,194	
	Hong Kong	318 "	..	318 "	13	..	13	
		47,521 lb	..	47,521 lb	2,207	..	2,207	
Biscuits	Victoria	...	12,977 lb	12,977 lb.	..	202	202	
	South Australia	720 lb	718 "	1,438 "	20	15	35	
	Queensland	17,089 "	4,367 "	21,456 "	183	118	301	
	South Sea Islands	81,635 "	1,680 "	83,315 "	885	38	923	
	New Caledonia	49,381 "	2,570 "	51,951 "	601	37	638	
	Fiji	4,028 "	673 "	4,701 "	51	16	67	
	Western Australia	8,903 "	1,970 "	10,873 "	115	35	150	
	United States	400 "	4,480 "	4,880 "	5	28	33	
	New Guinea (British)	784 "	..	784 "	20	..	20	
	Kaiser Wilhelm's Land	2,000 "	..	2,000 "	25	..	25	
		164,940 lb.	29,435 lb	194,375 lb	1,905	489	2,394	
Bismuth.	Great Britain	418 cwt.	.....	418 cwt	3,870	.....	3,870	
	Great Britain	...	84 gall.	84 gall.	..	40	40	
Bitlers	Victoria	...	36 "	36 "	..	39	39	
	South Australia	...	41½ "	41½ "	..	39	39	
	Tasmania	...	6¼ "	6¼ "	..	14	14	
	New Zealand	...	2 "	2 "	..	3	3	
	Queensland	1,873 gall.	1,128¼ "	3,001¼ "	1,367	1,203	2,570	
	Fiji	...	20 "	20 "	..	21	21	
	Western Australia	...	1½ "	1½ "	..	1	1	
	Honolulu	...	74 "	74 "	..	100	100	
	South Sea Islands	...	8 "	8 "	..	5	5	
			1,873 gall	1,402 gall.	3,275 gall	1,367	1,456	2,823

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## EXPORTS—continued.

Articles.	Countries to which Exported	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture	Total	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture	Total.
Blacking ...	Victoria ...	...	183 pkg.	183 pkg.	£	£	£
	South Australia	...	6 "	6 "	...	370	370
	Tasmania	...	35 "	35 "	...	23	23
	New Zealand	...	10 "	10 "	...	87	87
	Queensland	...	206 "	206 "	...	100	100
	New Caledonia	...	7 "	7 "	...	613	613
	Fiji...	...	2 "	2 "	...	36	36
			449 pkg.	449 pkg.		1,234	1,234
Blue ...	Victoria	...	6,110 lb	6,110 lb.	...	168	168
	South Australia	...	72 "	72 "	...	2	2
	New Zealand	...	72 "	72 "	...	2	2
	Queensland	...	6,308 "	6,308 "	...	173	173
	South Sea Islands	...	72 "	72 "	...	2	2
	New Caledonia	...	2,632 "	2,632 "	...	63	63
	Fiji...	...	412 "	412 "	...	9	9
Western Australia.	...	126 "	126 "	...	4	4	
			15,804 lb.	15,804 lb.	...	423	423
Boats ..	Victoria	1 No.	.....	1 No.	10	.....	10
	South Australia	2 "	.....	2 "	300	.....	300
	Tasmania	2 "	.....	2 "	67	.....	67
	Queensland	12 "	1 No.	13	322	200	522
	South Sea Islands	1 "	2 "	3 "	12	70	82
	Fiji...	1 "	.....	1 "	256	.....	256
	Western Australia...	2 "	.....	2 "	40	.....	40
India ...	1 "	.....	1 "	20	.....	20	
		22 No.	3 No.	25 No.	1,027	270	1,297
Boots and Shoes	Great Britain	...	40 pkg.	40 pkg	...	801	801
	Victoria ...	10 pkg.	488 "	498 "	164	6,462	6,626
	South Australia	170 "	377 "	547 "	7,409	5,721	13,130
	Tasmania	75 "	488 "	503 "	1,037	5,357	6,394
	New Zealand	21 "	166 "	187 "	443	1,720	2,163
	Queensland	515 "	4,117 "	4,632 "	11,776	56,519	68,295
	South Sea Islands	3 "	21 "	24 "	24	257	281
	New Caledonia	88 "	126 "	214 "	1,689	1,578	3,267
	Fiji...	29 "	157 "	186 "	420	1,470	1,890
	Western Australia	10 "	44 "	54 "	202	774	976
	Italy	1 "	1 "	1 "	...	8	8
	Reunion	1 "	1 "	1 "	...	6	6
			921 pkg.	6,026 pkg.	6,947 pkg.	23,164	80,673
Bricks	Victoria ...	35,000 No.	...	35,000 No.	73	...	73
	Queensland	35,500 "	...	35,500 "	95	...	95
	South Sea Islands	22,968 "	...	22,968 "	77	...	77
	Fiji...	53,300 "	...	53,300 "	160	...	160
			146,768 No.	...	146,768 No.	405	...
Fire	Victoria	171 No.	.....	171 No.	17	.....	17
	Queensland	37,500 "	.....	37,500 "	188	.....	188
	South Sea Islands	...	100 No.	100 "	...	1	1
	New Caledonia	...	3,083 "	3,088 "	...	30	30
	Fiji ..	...	700 "	700 "	...	6	6
		37,671 No.	3,883 No.	41,554 No.	205	37	242
Brushware ..	Victoria ...	...	221 pkg.	221 pkg	...	1,604	1,604
	South Australia	1 pkg.	10 "	11 "	4	245	249
	Tasmania	...	30 "	30 "	...	293	293
	New Zealand	1 pkg	3 "	4 "	5	65	70
	Queensland	2,073 "	523 "	2,596 "	1,720	1,658	3,378
	South Sea Islands..	...	5 "	5 "	...	6	6
	New Caledonia ..	8 pkg.	37 "	45 "	16	154	170
	Fiji..	...	40 "	40 "	...	71	71
Western Australia.	...	1 "	1 "	...	8	8	
		2,083 pkg.	870 pkg.	2,953 pkg.	1,745	4,104	5,849
Building Materials ...	Victoria	284 pkg.	38 pkg.	322 pkg.	44	86	130
	South Australia	21 "	9 "	30 "	37	21	58
	New Zealand	...	5 "	5 "	...	60	60
	Queensland	230 pkg.	250 "	480 "	510	627	1,137
	South Sea Islands	57 "	50 "	107 "	59	59	118
	New Caledonia	...	22 "	22 "	...	28	28
	Fiji ..	368 pkg.	17 "	385 "	394	18	412
	Western Australia	8 "	19 "	27 "	9	27	36
	Honolulu ...	...	20 "	20 "	...	24	24
		968 pkg.	430 pkg.	1,398 pkg.	1,053	950	2,003



EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value		
		Produce and Manufacture of the Colony	British, Foreign, and other Colonial Produce and Manufacture	Total	Produce and Manufacture of the Colony	British, Foreign, and other Colonial Produce and Manufacture	Total.
Butter	Great Britain	.....	1,955 lb.	1,955 lb.	£	£	£
	Victoria	9,006 lb.	25,563 "	34,569 "	401	1,339	1,740
	South Australia	8,928 "	68,958 "	77,886 "	417	3,040	3,457
	Tasmania	.....	2,240 "	2,240 "	.	112	112
	New Zealand	.....	6,207 "	6,207 "	.	276	276
	Queensland	34,234 lb.	100,425 "	134,659 "	1,684	5,583	7,267
	South Sea Islands	1,210 "	810 "	2,020 "	75	57	132
	New Caledonia	2,754 "	6,334 "	9,088 "	157	499	656
	Fiji	153 "	8,852 "	9,005 "	10	576	586
	Western Australia	1,438 "	6,466 "	7,904 "	98	334	432
	Honolulu	.....	300 "	300 "	.....	15	15
	Hong Kong	.....	160 "	160 "	.....	10	10
	New Guinea (British)	324 lb	.....	324 "	20	.....	20
United States	.....	562 lb.	562 "	.....	28	28	
Burmah	.....	150 "	150 "	.....	8	8	
		58,047 lb	228,982 lb	287,029 lb	2,862	11,991	14,853
Candlenut	Great Britain	.....	183 cwt.	183 cwt.	.....	128	128
	France	.....	8 "	8 "	.....	4	4
	.....	.....	191 cwt.	191 cwt.	.....	132	132
Candles	Great Britain	.....	349 lb.	349 lb.	.....	10	10
	Victoria	.....	42,101 "	42,101 "	.....	1,030	1,030
	South Australia	.....	18,492 "	18,492 "	.....	423	423
	New Zealand	.....	50,025 "	50,025 "	.....	1,099	1,099
	Queensland	.....	173,962 "	173,962 "	.....	4,548	4,548
	South Sea Islands	.....	2,375 "	2,375 "	.....	71	71
	New Caledonia	.....	32,000 "	32,000 "	.....	836	836
	Fiji	.....	1,900 "	1,900 "	.....	57	57
	Western Australia	.....	5,350 "	5,350 "	.....	165	165
	United States	.....	450 "	450 "	.....	15	15
New Guinea (British)	.....	75 "	75 "	.....	3	3	
Belgium	.....	650 "	650 "	.....	17	17	
		.....	327,729 lb.	327,729 lb.	.....	8,274	8,274
Canvas	Victoria	.....	37 pkg.	37 pkg.	.....	1,073	1,073
	South Australia	.....	3 "	3 "	.....	17	17
	Tasmania	.....	17 "	17 "	.....	520	520
	New Zealand	.....	14 "	14 "	.....	421	421
	Queensland	.....	92 "	92 "	.....	1,494	1,494
	South Sea Islands	.....	7 "	7 "	.....	107	107
	New Caledonia	.....	4 "	4 "	.....	49	49
	Fiji	.....	30 "	30 "	.....	565	565
	Western Australia	.....	5 "	5 "	.....	107	107
	Hong Kong	.....	2 "	2 "	.....	36	36
United States	.....	1 "	1 "	.....	30	30	
		.....	212 pkg.	212 pkg.	.....	4,419	4,419
Carriages	Victoria	20 No.	11 No	31 No.	683	512	1,195
	South Australia	.....	3 "	3 "	.....	142	142
	Tasmania	1 No.	.....	1 "	40	40	40
	New Zealand	1 "	2 No.	3 "	50	80	130
	Queensland	31 "	21 "	52 "	1,524	1,172	2,696
	New Caledonia	4 "	2 "	6 "	195	208	403
	Fiji	2 "	1 "	3 "	90	50	140
	Western Australia	5 "	1 "	6 "	170	55	225
Belgium	.....	2 "	2 "	.....	300	300	
		64 No.	43 No.	107 No.	2,752	2,519	5,271
Carrage Makers' Materials	Great Britain	.....	30 pkg.	30 pkg.	.....	10	10
	Victoria	68,019 pkg.	296 "	68,315 "	893	635	1,528
	South Australia	181 "	131 "	312 "	39	86	125
	Tasmania	.....	90 "	90 "	.....	234	234
	New Zealand	76,724 pkg.	11 "	76,735 "	1,663	61	1,724
	Queensland	1,467 "	3,553 "	5,020 "	286	5,001	5,287
	South Sea Islands	8 "	11 "	19 "	10	13	23
	New Caledonia	4 "	58 "	62 "	27	55	82
	Fiji	211 "	471 "	682 "	78	540	618
Western Australia	12 "	15 "	27 "	34	136	170	
		146,626 pkg.	4,666 pkg.	151,292 pkg.	3,030	6,771	9,801
Carts and Waggons	Victoria	1 No.	12 No.	13 No	10	80	90
	South Australia	2 "	.....	2 "	66	66	66
	Queensland	29 "	4 No	33 "	542	75	617
	South Sea Islands	4 "	.....	4 "	44	44	44
	New Caledonia	3 "	.....	3 "	54	54	54
	Fiji Islands	3 "	.....	3 "	59	59	59
Western Australia	88 "	2 No	90 "	1,051	79	1,130	
		130 No.	18 No.	148 No.	1,826	234	2,060

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EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.
Cement	Victoria		14,602 barrels	4,602 barrels	£	£ 8,769	£ 8,769
	South Australia		352 "	352 "		232	232
	Tasmania		13 "	13 "		9	9
	New Zealand		1,354 "	1,354 "		890	890
	Queensland		9,432 "	9,432 "		6,584	6,584
	South Sea Islands		70 "	70 "		47	47
	New Caledonia		1,097 "	1,097 "		713	713
	Fiji		1,046 "	1,046 "		700	700
	Hongkong		38 "	38 "		27	27
	Belgium		6 "	6 "		4	4
			28,010 barrels	28,010 barrels		17,975	17,975
Chain Cable	South Australia		113 cwt.	113 cwt.		127	127
	Queensland		178 "	178 "		184	184
	South Sea Islands		12 "	12 "		14	14
	New Caledonia		81 "	81 "		84	84
	Fiji		20 "	20 "		23	23
	Western Australia		127 "	127 "		153	153
			531 cwt.	531 cwt.		585	585
Charcoal	Victoria	251 tons		251 tons	1,005		1,005
Cheese	Great Britain		2,854 lb.	2,854 lb.		106	106
	Victoria	1,414 lb.	5,249 "	6,663 "	49	199	248
	South Australia	130 "	4,664 "	4,794 "	5	190	195
	New Zealand	150 "	4,742 "	4,892 "	5	161	166
	Queensland	3,857 "	43,980 "	47,837 "	155	1,848	2,003
	South Sea Islands		695 "	695 "		29	29
	New Caledonia	5,915 lb.	9,510 "	14,735 "	184	388	572
	Fiji		484 "	484 "		20	20
	Western Australia	624 lb.	1,960 "	2,584 "	19	94	113
	Kaiser Wilhelm's Land		277 "	277 "		7	7
		11,370 lb.	74,445 lb.	85,815 lb.	417	3,042	3,459
Chicory (raw)	Victoria		896 lb.	896 lb.		10	10
Chicory (prepared)	New Zealand		1,120 lb.	1,120 lb.		15	15
	Fiji		100 "	100 "		2	2
			1,220 lb.	1,220 lb.		17	17
Chinese Goods	Victoria		5 pkg.	5 pkg.		13	13
	Tasmania		4 "	4 "		18	18
	Queensland		159 "	159 "		315	315
	New Caledonia		21 "	21 "		42	42
	Fiji		6 "	6 "		13	13
	Hongkong		7 "	7 "		26	26
			202 pkg.	202 pkg.		427	427
Chinese Provisions	Queensland		27 pkg.	27 pkg.		43	43
Chocolate and Cocoa (Prepared)	Great Britain		104 lb.	104 lb.		6	6
	Victoria		16,887 "	16,887 "		1,202	1,202
	South Australia		778 "	778 "		68	68
	Tasmania		56 "	56 "		4	4
	New Zealand		218 "	218 "		15	15
	Queensland		14,418 "	14,418 "		1,257	1,257
	South Sea Islands		976 "	976 "		72	72
	New Caledonia		644 "	644 "		50	50
	Fiji		262 "	262 "		36	36
Western Australia		1,196 "	1,196 "		86	86	
			35,539 lb.	35,539 lb.		2,796	2,796
Chromite Ore	Great Britain		1,605½ tons	1,605½ tons		4,679	4,679
	Belgium		134½ "	134½ "		350	350
			1,740 tons	1,740 tons		5,029	5,029
Coal	Victoria	640,655 tons			336,979		
	South Australia	140,623 "			73,063		
	Tasmania	47,501 "			26,033		
	New Zealand	165,217 "			90,187		
	Queensland	22,053 "			12,151		
	South Sea Islands	815 "			499		
	New Caledonia	9,537 "			5,201		
Carried forward		1,026,501 "			544,113		

EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.			
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	
					£	£	£	
Coal—continued	Brought forward	1,026,501 tons			544,113			
	Fiji	21,929 "			12,254			
	Hong Kong	100,586 "			56,148			
	China	23,743 "			14,395			
	Chili	41,794 "			23,787			
	Honolulu	23,765 "			12,816			
	Western Australia	11,726 "			6,411			
	Java	33,294 "			18,606			
	Manilla	36,617 "			19,509			
	Peru	5,866 "			3,335			
	Mauritius	6,334 "			3,602			
	Singapore	5,934 "			3,234			
	Ceylon	5,868 "			3,540			
	Burmah	8,155 "			4,645			
	Guam	1,795 "			991			
	Mexico	9,287 "			5,184			
	Bankok	1,885 "			1,030			
	Burrard's Inlet	200 "			120			
	Panama	3,555 "			2,025			
	New Guinea (Brts)	600 "			330			
	Maccassar	390 "			275			
	Padang	3,863 "			2,212			
Petropaulovski	1,750 "			998				
Cape Town	318 "			174				
United States	305,824 "			176,991				
India	54,386 "			30,277				
		1,735,865 tons		1,735,865 tons	947,002		947,002	
Coke	Victoria	924 tons		924 tons	1,649		1,649	
	South Australia	1,763 "		1,763 "	4,557		4,557	
	Tasmania	5 "		5 "	8		8	
	New Zealand	25 "		25 "	53		53	
	Queensland	215 "		215 "	637		637	
		2,932 tons		2,932 tons	6,904		6,904	
Cobalt	Metal	Great Britain	161½ cwt.	161½ cwt.		1,416	1,416	
		Ore	Great Britain	13,371 cwt.	13,371 cwt.		3,742	3,742
	Germany		1,070 "	1,070 "		485	485	
			14,441 cwt.	14,441 cwt.		4,227	4,227	
Cocoa (Raw)		New Caledonia	1,130 lb.	1,301 lb.		30	30	
	Raw	Victoria	20,909 lb.	20,909 lb.		926	926	
South Australia		4,397 "	4,397 "		183	183		
New Zealand		56,278 "	56,278 "		1,872	1,872		
Queensland		5,942 "	5,942 "		223	223		
South Sea Islands		886 "	886 "		30	30		
New Caledonia		1,984 "	1,984 "		57	57		
Honolulu		112 "	112 "		3	3		
United States		200 "	200 "		8	8		
			90,708 lb.	90,708 lb.		3,302	3,302	
Coffee	Prepared	Great Britain		2,132 lb.	2,132 lb.		100	100
		Victoria		8,212 "	8,212 "		423	423
		South Australia		859 "	859 "		45	45
		Tasmania		1,539 "	1,539 "		84	84
		New Zealand		151 "	151 "		7	7
		Queensland		4,422 "	4,422 "		225	225
		South Sea Islands		1,794 "	1,794 "		93	93
		New Caledonia		318 "	318 "		17	17
		Fiji		2,894 "	2,894 "		148	148
		Western Australia		2,402 "	2,402 "		124	124
		Hong Kong		967 "	967 "		48	48
		China		380 "	380 "		19	19
		Mauritius		160 "	160 "		8	8
		Kaiser Wilhelm's Land		147 "	147 "		9	9
Germany		235 "	235 "		12	12		
United States		2,354 "	2,354 "		112	112		
			28,966 lb.	28,966 "		1,474	1,474	

## STATISTICS, 1886—TRADE AND COMMERCE.

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## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.
Gold	Great Britain	105 boxes	.....	105 boxes	£ 474,866	.....	£ 474,866
	Victoria	9 "	1 box	10 "	45,000	600	45,600
	South Australia	10 "	.....	10 "	39,000	.....	39,000
	New Zealand	43 "	.....	43 "	215,000	.....	215,000
	Queensland	81 "	.....	81 "	397,000	.....	397,000
	South Sea Islands	1 "	1 box	2 "	150	200	350
	Fiji	3 "	.....	3 "	15,000	.....	15,000
	Western Australia	1 "	.....	1 "	25	.....	25
	France	.....	2 boxes	2 "	.....	875	875
	Hong Kong	166 boxes	.....	166 "	169,943	.....	169,943
United States	53 "	3 boxes	56 "	228,400	737	229,137	
Coin		472 boxes	7 boxes	479 boxes	1,584,324	2,412	1,586,736
	Silver	Victoria	.....	7 boxes	7 boxes	.....	812
South Australia		.....	5 "	5 "	.....	3,500	3,500
New Zealand		.....	2 "	2 "	.....	100	100
Queensland		.....	2 "	2 "	.....	350	350
France		.....	3 "	3 "	.....	665	665
Copper		.....	19 boxes	19 boxes	.....	5,427	5,427
	Queensland	.....	14 boxes	14 boxes	.....	177	177
Confectionery	Victoria	1,936 lb.	16,935 lb.	18,871 lb.	31	824	855
	South Australia	.....	376 "	376 "	.....	19	19
	Tasmania	.....	3,304 "	3,304 "	.....	146	146
	Queensland	2,369 lb.	23,139 "	25,508 "	85	956	1,041
	South Sea Islands	680 "	1,456 "	2,136 "	31	43	74
	New Caledonia	3,021 "	599 "	3,620 "	91	28	119
	Fiji	1,205 "	172 "	1,377 "	51	12	63
	Western Australia	50 "	160 "	210 "	2	12	14
		9,261 lb.	46,141 lb.	55,402 lb.	291	2,040	2,331
Ore	Great Britain	20 cwt.	6,780 cwt.	6,800 cwt.	10	1,921	1,931
	Victoria	180 "	100 "	280 "	90	40	130
	South Australia	920 "	.....	920 "	1,012	.....	1,012
		1,120 cwt.	6,880 cwt.	8,000 cwt.	1,112	1,961	3,073
Copper	Great Britain	62,022 cwt.	40,066 cwt.	102,088 cwt.	129,699	84,810	214,509
	Victoria	2,120 "	.....	2,120 "	4,568	.....	4,568
	South Australia	145 "	.....	145 "	308	.....	308
	New Zealand	607 "	.....	607 "	1,366	.....	1,366
	Queensland	384 "	103 cwt.	487 "	838	218	1,056
	India	14,000 "	9,846 "	23,846 "	29,450	20,819	50,269
	France	100 "	.....	100 "	200	.....	200
		79,378 cwt.	50,015 cwt.	129,393 cwt.	166,429	105,847	272,276
Regulus	Great Britain	38 cwt.	.....	38 cwt.	124	124	124
Sheet	South Australia	.....	1 pkg.	1 pkg.	.....	22	22
	New Zealand	.....	1 "	1 "	.....	16	16
	Queensland	.....	39 "	39 "	.....	299	299
	New Caledonia	.....	1 "	1 "	.....	4	4
	Fiji	.....	6 "	6 "	.....	44	44
		.....	48 pkg.	48 pkg.	.....	385	385
Copra	Great Britain	.....	18,162 cwt.	18,162 cwt.	.....	10,710	10,710
	South Sea Islands	.....	440 "	440 "	.....	265	265
	France	.....	63,845 "	63,845 "	.....	41,590	41,590
	Petropaulovski	.....	9,440 "	9,440 "	.....	5,670	5,670
	St. Petersburg	.....	11,240 "	11,240 "	.....	5,901	5,901
		.....	103,127 cwt.	103,127 cwt.	.....	64,136	64,136
Cordage and Rope	Great Britain	.....	790 cwt.	790 cwt.	.....	1,692	1,692
	Victoria	.....	391 "	391 "	.....	1,143	1,143
	South Australia	160 cwt.	80 "	240 "	396	241	637
	Tasmania	103 "	35 "	138 "	281	124	405
	New Zealand	1,034 "	130 "	1,164 "	2,469	340	2,809
	Queensland	570 "	1,231 "	1,801 "	1,226	3,295	4,521
	South Sea Islands	32 "	142 "	174 "	75	305	380
	New Caledonia	60 "	257 "	317 "	139	716	855
	Fiji	146 "	191 "	337 "	379	569	948
	Western Australia	24 "	151 "	175 "	59	402	461
	Hong Kong	.....	128 "	128 "	.....	324	324
	Honolulu	.....	8 "	8 "	.....	16	16
	United States	.....	69 "	69 "	.....	156	156
	Kaiser Wilhelm's Land	.....	3 "	3 "	.....	7	7
Mauritius	.....	9 "	9 "	.....	23	23	
		2,129 cwt.	3,615 cwt.	5,744 cwt.	5,024	9,353	14,377

## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities			Value.		
		Produce and Manufacture of the Colony	British, Foreign, and other Colonial Produce and Manufacture	Total.	Produce and Manufacture of the Colony	British, Foreign, and other Colonial Produce and Manufacture	Total.
Cordials (not containing spirit).	Great Britain ...	.. ..	37 dozen	37 dozen	£ ..	£ 13	£ 13
	Victoria ...	.. ..	26 "	26 "	..	6	16
	South Australia ..	17 dozen	12 "	29 "	12	8	20
	Tasmania ..	.. ..	2 "	2 "	..	1	1
	New Zealand ..	.. ..	142 "	142 "	.. ..	111	111
	Queensland ..	188 dozen	763 "	951 "	118	263	381
	South Sea Islands ..	.. ..	44 "	44 "	..	16	16
	New Caledonia ..	.. ..	110 "	110 "	..	61	61
	Fiji ..	.. ..	9 "	9 "	..	4	4
	Western Australia ..	.. ..	29 "	29 "	.. ..	24	24
		205 dozen	1,174 dozen	1,379 dozen	130	517	647
Corks and Bungs ...	Great Britain ..	.. ..	1 pkg.	1 pkg	..	50	50
	Victoria ..	.. ..	34 "	34 "	..	431	431
	South Australia ..	.. ..	10 "	10 "	..	53	53
	Tasmania ..	.. ..	1 "	1 "	..	7	7
	New Zealand ..	.. ..	5 "	5 "	..	44	224
	Queensland ..	.. ..	91 "	91 "	..	766	766
	South Sea Islands ..	.. ..	2 "	2 "	..	3	3
	New Caledonia ..	.. ..	4 "	4 "	..	20	20
	Fiji ..	.. ..	10 "	10 "	..	46	46
	Western Australia ..	.. ..	1 "	1 "	..	7	7
			159 pkg.	159 pkg.		1,427	1,427
Cotton (Raw) ...	Great Britain ..	.. ..	16 pkg	16 pkg.	.. ..	317	317
	Germany ..	.. ..	29 "	29 "	.. ..	200	200
	.. ..	.. ..	45 pkg.	45 pkg.	..	517	517
Cream of Tartar ...	South Australia ...	.. ..	168 lb.	168 lb.	..	10	10
	Tasmania ..	.. ..	560 "	560 "	..	35	35
	Queensland ..	.. ..	2,170 "	2,170 "	..	135	135
	Western Australia ..	.. ..	336 "	336 "	..	20	20
	.. ..	.. ..	3,234 lb.	3,234 "	.. ..	200	200
Cutlery ...	Great Britain ..	.. ..	2 pkg	2 pkg.	..	110	110
	Victoria ...	.. ..	29 "	29 "	..	701	701
	South Australia ..	.. ..	6 "	6 "	..	111	111
	Tasmania ..	.. ..	3 "	3 "	..	10	10
	New Zealand ..	.. ..	11 "	11 "	..	287	287
	Queensland ..	.. ..	180 "	180 "	..	2,287	2,287
	South Sea Islands ..	.. ..	14 "	14 "	..	260	260
	New Caledonia ..	.. ..	3 "	3 "	..	47	47
	Fiji ..	.. ..	21 "	21 "	..	308	308
	Western Australia ..	.. ..	1 "	1 "	..	3	3
			270 pkg	270 pkg.	..	4,124	4,124
Dates ...	Great Britain ..	.. ..	219 lb.	219 lb.	..	4	4
	Victoria ..	.. ..	15,601 "	15,601 "	..	190	190
	South Australia ...	.. ..	3,039 "	3,039 "	..	50	50
	New Zealand ..	.. ..	5,450 "	5,450 "	..	93	93
	Queensland ..	.. ..	6,815 "	6,815 "	..	140	140
	New Caledonia ..	.. ..	156 "	156 "	..	4	4
	Fiji ..	.. ..	300 "	300 "	..	6	6
	Hongkong ...	.. ..	4,592 "	4,592 "	..	80	80
			36,172 lb.	36,172 lb.	..	567	567
Doors (Wood) ...	Victoria ..	.. ..	661 No.	661 No.	..	359	359
	Tasmania ..	.. ..	62 "	62 "	..	31	31
	Queensland ..	.. ..	38 "	38 "	..	62	62
	Fiji ..	2 No.	2 "	2 "	3	3	3
	Western Australia ..	23 "	235 No.	258 "	21	168	189
		25 No	996 No.	1,021 No.	24	620	644
Drain pipes ...	Victoria ..	.. ..	20 No.	20 No.	10	..	10
	Queensland ..	.. ..	440 "	440 "	143	..	143
	.. ..	.. ..	460 No.	460 No.	153	..	153

## STATISTICS, 1886—TRADE AND COMMERCE.

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## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.
Drapery	Great Britain		102 pkg.	102 pkg.	£	£	£
	Victoria		1,570 "	1,570 "		6,360	6,360
	South Australia		156 "	156 "		48,615	48,615
	Tasmania		438 "	438 "		3,702	3,702
	New Zealand		346 "	346 "		18,220	18,220
	Queensland	16 pkg.	6,439 "	6,455 "	314	9,571	9,571
	South Sea Islands		589 "	589 "		182,707	183,021
	New Caledonia		790 "	790 "		10,586	10,586
	Fiji		769 "	769 "		18,726	18,726
	Western Australia		82 "	82 "		19,423	19,423
	Honolulu		7 "	7 "		2,571	2,571
	Hong Kong		1 "	1 "		275	275
	Reunion		1 "	1 "		18	18
	Germany		14 "	14 "		30	30
United States		2 "	2 "		2,400	2,400	
			1 "	1 "		115	115
			1 "	1 "		25	25
		16 pkg.	11,307 pkg.	11,323 pkg.	314	323,344	323,658
Drugs and Apothecaries' Ware	Great Britain	1 pkg.	114 pkg.	115 pkg.	30	602	632
	Victoria	108 "	901 "	1,009 "	522	3,367	3,889
	South Australia	40 "	364 "	404 "	200	1,173	1,373
	Tasmania		574 "	574 "		2,377	2,377
	New Zealand	41 pkg.	469 "	510 "	223	2,568	2,791
	Queensland	115 "	2,200 "	2,315 "	654	8,350	9,004
	South Sea Islands		61 "	61 "		277	277
	New Caledonia		192 "	192 "		920	920
	Fiji		302 "	302 "		1,573	1,573
	Western Australia		35 "	35 "		290	290
	United States		3 "	3 "		30	30
Honolulu		6 "	6 "		114	114	
		305 pkg.	5,221 pkg.	5,526 pkg.	1,629	21,641	23,270
Earthenware and China	Great Britain		42 pkg.	42 pkg.		675	675
	Victoria		335 "	335 "		2,152	2,152
	South Australia		60 "	60 "		361	361
	Tasmania		8 "	8 "		43	43
	New Zealand		12 "	12 "		108	108
	Queensland	2 pkg.	1,544 "	1,546 "	14	13,935	13,949
	South Sea Islands		47 "	47 "		255	245
	New Caledonia		48 "	48 "		313	313
	Fiji		84 "	84 "		606	606
	Western Australia		3 "	3 "		12	12
	Hong Kong		2 "	2 "		24	24
Honolulu		1 "	1 "		4	4	
United States		2 "	2 "		12	12	
		2 pkg.	2,188 pkg.	2,190 pkg.	14	18,500	18,514
Effervescing Powder and Powders	Tasmania		27 lb.	27 lb.		4	4
	Queensland		67 "	67 "		10	10
	New Caledonia		30 "	30 "		4	4
			124 lb.	124 lb.		18	18
Eggs	Victoria	4 pkg.		4 pkg.	17		17
	New Zealand	2 "		2 "	5		5
	Queensland	9 "		9 "	18		18
		15 pkg.		15 pkg.	40		40
Essences	Victoria		5 $\frac{3}{4}$ gall.	5 $\frac{3}{4}$ gall.		9	9
	Queensland		18 $\frac{1}{4}$ "	18 $\frac{1}{4}$ "		52	52
			24 gall.	24 gall.		61	61
Exhibits	Great Britain	1,040 pkg.		1,040 pkg.	18,325		18,325
Farinaceous and Milk Foods	Victoria		2,972 lb.	2,972 lb.		180	180
	South Australia		224 "	224 "		13	13
	Tasmania		2,232 "	2,232 "		92	92
	Queensland		2,186 "	2,186 "		119	119
	New Caledonia		468 "	468 "		27	27
	Western Australia		112 "	112 "		8	8
			8,194 lb.	8,194 lb.		439	439
Felt	Victoria		10 pkg.	10 pkg.		37	37
	South Australia		1 "	1 "		2	2
	Queensland		97 "	97 "		229	229
	New Caledonia		2 "	2 "		7	7
	France	21 pkg.		21 "	130		130
		21 pkg.	110 pkg.	131 pkg.	130	275	405

## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.
Fibre ...	Victoria ...	.....	8 pkg.	8 pkg.	£	£	£
	Queensland ...	.....	5,261 "	5,261 "	.....	33	33
			5,269 pkg.	5,269 pkg.	.....	1,062	1,062
						1,095	1,095
Fireclay ...	Victoria ...	.....	21 cwt.	21 cwt.	.....	6	6
	Queensland ...	223 cwt.	36 "	259 "	34	14	48
	Fiji ...	30 "	110 "	140 "	9	32	41
		253 cwt.	167 cwt.	420 cwt.	43	52	95
Firewood ...	Victoria ...	4,297 tons	.....	4,297 tons	1,104	.....	1,104
Fireworks ...	Tasmania ...	.....	6 pkg.	6 pkg.	.....	87	87
	Queensland ...	2 pkgs.	17 "	19 "	9	70	79
	South Sea Islands...	.....	13 "	13 "	.....	24	24
	Fiji ...	.....	1 "	1 "	.....	3	3
		2 pkg.	37 pkg.	39 pkg.	9	184	193
Fish (Fresh)	Victoria ...	702 pkg.	.....	702 pkg.	757	.....	757
	New Zealand ...	3 "	.....	3 "	3	.....	3
	New Caledonia ...	12 "	.....	12 "	15	.....	15
			717 pkg.	.....	717 pkg.	775	.....
Fish (Preserved)	Great Britain ...	.....	3,263 lb.	3,263 lb.	.....	91	91
	Victoria ...	5,003 lb.	577,155 "	582,158 "	68	13,388	13,456
	South Australia ...	.....	63,940 "	63,940 "	.....	1,772	1,772
	Tasmania ...	.....	33,753 "	33,753 "	.....	1,026	1,026
	New Zealand ...	2,348 lb.	17,607 "	19,995 "	34	398	432
	Queensland ...	891 "	258,875 "	259,766 "	17	7,191	7,208
	South Sea Islands...	.....	24,674 "	24,674 "	.....	793	793
	New Caledonia ...	.....	54,131 "	54,131 "	.....	1,336	1,336
	Fiji ...	.....	28,736 "	28,736 "	.....	967	967
	Hong Kong ...	.....	20,354 "	20,354 "	.....	399	399
	New Guinea (British)..	.....	100 "	100 "	.....	2	2
	United States ...	.....	20,914 "	20,914 "	.....	487	487
	Western Australia..	.....	19,748 "	19,748 "	.....	673	673
	Mauritius ...	.....	3,360 "	3,360 "	.....	42	42
Belgium ...	.....	125 "	125 "	.....	8	8	
Kaiser Wilhelm's Land	.....	96 "	96 "	.....	3	3	
		8,242 lb.	1,126,831 lb.	1,135,073 lb.	119	28,576	28,695
Flax and Hemp	Victoria ...	.....	88 pkg.	88 pkg.	.....	289	289
	South Australia ...	.....	16 "	16 "	.....	27	27
	Queensland ...	.....	268 "	268 "	.....	1,184	1,184
			372 pkg.	372 pkg.	.....	1,500	1,500
Floor-cloth and Oil-cloth	Victoria ...	.....	21 pkg.	21 pkg.	.....	158	158
	South Australia ...	.....	1 "	1 "	.....	10	10
	Tasmania ...	.....	2 "	2 "	.....	7	7
	Queensland ...	.....	52 "	52 "	.....	484	484
	South Sea Islands...	.....	1 "	1 "	.....	4	4
	New Caledonia ...	.....	6 "	6 "	.....	87	87
	Fiji ...	.....	3 "	3 "	.....	31	31
			86 pkg.	86 pkg.	.....	781	781
Flour...	Victoria ...	32,980 cwt.	.....	32,980 cwt.	17,043	.....	17,043
	South Australia ...	.....	3,600 cwt.	3,600 "	.....	2,119	2,119
	New Zealand ...	.....	280 "	280 "	.....	162	162
	Queensland ...	3,200 cwt.	96,538 "	99,738 "	1,618	52,395	53,923
	South Sea Islands...	587 "	744 "	1,331 "	310	423	733
	New Caledonia ...	162 "	9,354 "	9,516 "	92	5,320	5,412
	Fiji... ..	182 "	2,941 "	3,123 "	107	1,642	1,749
	Western Australia	1,176 "	1,832 "	3,008 "	665	1,031	1,696
	Kaiser Wilhelm's Land	20 "	.....	20 "	11	.....	11
		38,307 cwt.	115,289 cwt.	153,596 cwt.	19,846	63,002	82,848
Fruit (Bottled)	Great Britain ...	.....	43 doz.	43 doz.	.....	34	34
	Victoria ...	.....	12 "	12 "	.....	10	10
	South Australia ...	.....	6 "	6 "	.....	6	6
	Tasmania ...	.....	20 "	20 "	.....	12	12
	New Zealand ...	.....	26 "	26 "	.....	20	20
	Queensland ...	.....	246 "	246 "	.....	138	138
	South Sea Islands...	.....	22 "	22 "	.....	13	13
	New Caledonia ...	.....	4 "	4 "	.....	2	2
	Fiji ...	.....	22 "	22 "	.....	15	15
	Western Australia..	.....	12 "	12 "	.....	10	10
			413 doz.	413 doz.	.....	260	260

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## EXPORTS—continued.

Articles.	Countries. to which Exported.	Quantities.			Value.			
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	
Fruit— contd...	Boiled or in Pulp ...	Queensland ...	26,388 lb.	.....	26,388 lb.	£ 202	£ .....	£ 202
		Great Britain ...	.....	3,053 lb.	3,053 lb.	.....	72	72
	Dried and Candied	Victoria ...	.....	116,361 "	116,361 "	.....	2,308	2,308
		South Australia ...	.....	95,325 "	95,325 "	.....	1,400	1,400
		Tasmania ...	.....	22,150 "	22,150 "	.....	371	371
		New Zealand ...	.....	1,428 "	1,428 "	.....	48	48
		Queensland ...	.....	409,856 "	409,856 "	.....	7,826	7,826
		South Sea Islands...	.....	18,861 "	18,861 "	.....	288	288
		New Caledonia ...	.....	11,925 "	11,925 "	.....	225	225
		Fiji ...	.....	5,342 "	5,342 "	.....	97	97
		Western Australia..	.....	10,715 "	10,715 "	.....	218	218
		Hong Kong ...	.....	2,367 "	2,367 "	.....	52	52
		United States ...	.....	5,367 "	5,367 "	.....	125	125
		Mauritius ...	.....	150 "	150 "	.....	4	4
		Cocoanuts	.....	.....	702,900 lb.	702,900 lb.	.....	13,034
Victoria ...	.....		49,820 No.	49,820 No.	.....	289	289	
South Australia ...	.....		31,440 "	31,440 "	.....	140	140	
Tasmania ...	.....		13,168 "	13,168 "	.....	76	76	
New Zealand ...	.....		8,640 "	8,640 "	.....	42	42	
Queensland ...	.....	34,356 "	34,356 "	.....	181	181		
Nuts (Edible)	.....	.....	137,424 No.	137,424 No.	.....	728	728	
	Great Britain ...	.....	492 lb.	492 lb.	.....	14	14	
	Victoria ...	.....	3,955 "	3,955 "	.....	88	88	
	Tasmania ...	.....	6,048 "	6,048 "	.....	76	76	
	Queensland ...	.....	3,667 "	3,667 "	.....	104	104	
	New Caledonia ...	.....	3,113 "	3,113 "	.....	101	101	
Western Australia..	.....	380 "	380 "	.....	7	7		
United States ...	.....	8,929 "	8,929 "	.....	131	131		
Green	.....	.....	26,584 lb.	26,584 lb.	.....	521	521	
	Great Britain ...	1,472 pkg.	.....	1,472 pkg.	478	.....	478	
	Victoria ...	184,636 "	4,473 pkg.	189,109 "	55,681	2,009	57,690	
	South Australia ...	241 "	39 "	280 "	105	28	133	
	Tasmania ...	10,862 "	201 "	11,063 "	4,693	86	4,779	
	New Zealand ...	44,044 "	653 "	44,697 "	14,304	253	14,557	
	Queensland ...	90,848 "	36,532 "	127,380 "	36,514	14,055	50,569	
	South Sea Islands...	10 "	.....	10 "	7	.....	7	
	New Caledonia ...	507 "	178 "	685 "	265	104	369	
	Fiji ...	188 "	9 "	197 "	96	4	100	
Western Australia..	131 "	.....	131 "	26	.....	26		
Fruit Salts ...	.....	332,939 pkg.	42,085 pkg.	375,024 pkg.	112,169	16,539	128,708	
	Great Britain ...	.....	36 lb.	36 lb.	.....	7	7	
	South Australia ...	.....	68 "	68 "	.....	13	13	
	Tasmania ...	.....	144 "	144 "	.....	24	24	
	New Zealand ...	.....	72 "	72 "	.....	14	14	
	Queensland ...	.....	145 "	145 "	.....	28	28	
	South Sea Islands...	.....	40 "	40 "	.....	8	8	
	New Caledonia ...	.....	76 "	76 "	.....	15	15	
	Fiji ...	.....	76 "	76 "	.....	15	15	
	Westren Australia..	.....	64 "	64 "	.....	12	12	
Honolulu ...	.....	160 "	160 "	.....	28	28		
Fungus ...	.....	.....	881 lb.	881 lb.	.....	164	164	
	Victoria ...	.....	1 pkg.	1 pkg.	.....	9	9	
	Queensland ...	.....	4 "	4 "	.....	3	3	
Furniture ...	Hong Kong ...	.....	1,700 "	1,700 "	.....	6,694	6,694	
	.....	.....	1,705 pkg.	1,705 pkg.	.....	6,706	6,706	
	Great Britain ...	.....	33 pkg.	33 pkg.	.....	1,193	1,193	
	Victoria ...	106 pkg.	855 "	961 "	202	3,725	3,927	
	South Australia ...	45 "	21 "	66 "	500	65	565	
	Tasmania ...	1 "	77 "	78 "	5	501	506	
	New Zealand ...	.....	132 "	132 "	.....	1,291	1,291	
	Queensland ...	239 pkg.	3,182 "	3,421 "	1,270	20,158	21,428	
	South Sea Islands...	47 "	44 "	91 "	60	186	246	
	New Caledonia ...	.....	80 "	80 "	.....	474	474	
Fiji ...	.....	66 "	66 "	.....	315	315		
Western Australia..	.....	60 "	60 "	.....	295	295		
Hong Kong ...	.....	28 "	28 "	.....	176	176		
France ...	.....	9 "	9 "	.....	81	81		
Germany ...	.....	1 "	1 "	.....	15	15		
		438 pkg.	4,588 pkg.	5,026 pkg.	2,037	28,475	30,512	



EXPORTS—continued.

Articles.	Countries to which Exported	Quantities			Value.			
		Produce and Manufacture of the Colony	British, Foreign, and other Colonial Produce and Manufacture	Total	Produce and Manufacture of the Colony	British, Foreign, and other Colonial Produce and Manufacture	Total.	
Gasfittings ...	Great Britain ..	.....	229 pkg.	229 pkg.	£ .....	£ 4,716	£ 4,716	
	Victoria ..	.....	100 "	100 "	.....	2,626	2,626	
	Tasmania ..	.....	5 "	5 "	.....	50	50	
	New Zealand ..	.....	1 "	1 "	.....	33	33	
	Queensland ..	.....	22 "	22 "	.....	210	210	
	New Caledonia ..	.....	14 "	14 "	.....	138	138	
			371 pkg.	371 pkg.	.....	7,773	7,773	
Gasoline ...	Victoria ..	.....	16 gal.	16 gal.	2	..	2	
	Queensland ..	.....	48 "	345 gal.	6	42	48	
	Fiji ..	.....	240 "	240 "	..	30	30	
			64 gal.	585 gal.	649 gal.	8	72	80
Gelatine and Isinglass	South Australia ..	.....	509 lb.	509 lb.	.....	28	28	
	Tasmania ..	.....	192 "	192 "	.....	9	9	
	Queensland ..	.....	9 "	9 "	.....	2	2	
	New Caledonia ..	.....	112 "	112 "	.....	5	5	
	Fiji ..	.....	20 "	20 "	.....	1	1	
			842 lb.	842 lb.	.....	45	45	
Ginger ..	Victoria ..	.....	1,047 lb.	1,047 lb.	.....	47	47	
	South Australia ..	.....	184 "	184 "	.....	7	7	
	Queensland ..	.....	3,683 "	3,683 "	.....	139	139	
	New Caledonia ..	.....	95 "	95 "	.....	2	2	
	Fiji ..	.....	278 "	278 "	.....	10	10	
	Western Australia...	.....	24 "	24 "	.....	1	1	
			5,311 lb.	5,311 lb.	.....	206	206	
Looking ...	Victoria ..	.....	4 pkg.	4 pkg.	.....	33	33	
	New Zealand ..	.....	3 "	3 "	.....	45	45	
	Queensland ..	.....	6 "	6 "	.....	94	94	
	New Caledonia ..	.....	2 "	2 "	.....	14	14	
	Fiji ..	.....	2 "	2 "	.....	24	24	
			17 pkg.	17 pkg.	.....	210	210	
Glass Plate ...	Victoria ..	.....	23 pkg.	23 pkg.	.....	384	384	
	Tasmania ..	.....	2 "	2 "	.....	36	36	
	New Zealand ..	.....	5 "	5 "	.....	57	57	
	Queensland ..	.....	39 "	39 "	.....	621	621	
	New Caledonia ..	.....	8 "	8 "	.....	86	86	
Fiji ..	.....	1 "	1 "	.....	10	10		
			78 pkg.	78 pkg.	.....	1,194	1,194	
Window ...	Victoria ..	.....	27 pkg.	27 pkg.	.....	58	58	
	New Zealand ..	.....	7 "	7 "	.....	90	90	
	Queensland ..	.....	278 "	278 "	.....	620	620	
	South Sea Islands ..	.....	12 "	12 "	.....	11	11	
	New Caledonia ..	.....	19 "	19 "	.....	29	29	
	Fiji ..	.....	70 "	70 "	.....	106	106	
Western Australia...	.....	7 "	7 "	.....	7	7		
			420 pkg.	420 pkg.	.....	921	921	
Glassware ...	Great Britain ..	.....	7 pkg.	7 pkg.	.....	519	519	
	Victoria ..	.....	343 "	343 "	.....	1,844	1,844	
	South Australia ..	.....	12 "	12 "	.....	76	76	
	Tasmania ..	.....	18 "	18 "	.....	62	62	
	New Zealand ..	.....	75 "	75 "	.....	116	116	
	Queensland ..	.....	36 pkg.	916 "	952 "	122	5,625	5,747
	South Sea Islands ..	.....	30 "	30 "	.....	133	133	
	New Caledonia ..	.....	44 "	44 "	.....	290	290	
	Fiji ..	.....	44 "	44 "	.....	283	283	
	Western Australia...	.....	18 "	18 "	.....	57	57	
	Hong Kong ..	.....	6 "	6 "	.....	53	53	
	Honolulu ..	.....	6 "	6 "	.....	13	13	
	India ..	.....	1 "	1 "	.....	7	7	
	Italy ..	.....	1 "	1 "	.....	15	15	
		36 pkg.	1,521 pkg.	1,557 pkg.	122	9,093	9,215	
Glucoso { Liquid and Syrup... }	Victoria ..	.....	42 cwt.	42 cwt.	.....	35	35	
	Queensland ..	.....	96 "	96 "	.....	89	89	
			138 cwt.	138 cwt.	.....	124	124	
Solid ...	Queensland ..	.....	25 cwt.	25 cwt.	.....	25	25	

## STATISTICS, 1886—TRADE AND COMMERCE.

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## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.
Glue and Size	Great Britain- ...	100,828 lb.	.....	100,828 lb.	£ 1,875	.....	£ 1,875
	Queensland ...	6,640 "	943 lb.	7,583 "	134	30	164
	New Caledonia ...	224 "	.....	224 "	5	.....	5
	Victoria ...	.....	200 lb.	200 lb.	.....	7	7
		107,692 lb.	1,143 lb.	108,835 lb.	2,014	37	2,051
Glue (Pieces)	Great Britain- ...	8,153 cwt.	.....	8,153 cwt.	3,297	.....	3,297
Gold	Bars and Dust	oz dwt. gr.	oz. dwt. gr.	oz. dwt. gr.			
		Great Britain ...	5,766 11 0	.....	5,766 11 0	21,618	.....
	Victoria ...	850 0 0	502 4 0	1,352 4 0	3,300	2,020	5,320
	Quartz	Great Britain ...	6,616 11 0	502 4 0	7,118 15 0	24,918	2,020
	Victoria ...	640 pkg.	1 pkg.	641 pkg.	5,682	160	5,842
	Victoria ...	594 "	.....	594 "	572	.....	572
	Germany ...	382 "	23 pkg.	405 "	4,440	700	5,140
		1,616 pkg.	24 pkg.	1,640 pkg.	10,694	860	11,554
Barley	Victoria ...	475 bushels	90 bushels	565 bushels	95	10	105
	Queensland ...	414 "	2,283 "	2,697 "	54	382	436
	New Caledonia ...	63 "	2,345 "	2,408 "	10	308	318
			952 bushels	4,718 bushels	5,670 bushels	159	700
Bran and Pollard	Victoria ...	44,714 bushels	4,460 bushels	49,174 bushels	2,244	241	2,485
	South Australia ...	584 "	734 "	1,318 "	34	41	75
	Queensland ...	20,136 "	70,717 "	90,853 "	1,081	3,954	5,035
	South Sea Islands...	40 "	.....	40 "	2	.....	2
	New Caledonia ...	11,104 "	12,529 bushels	23,633 "	644	671	1,315
	Fiji ...	.....	338 "	338 "	.....	19	19
	Western Australia	.....	30 "	30 "	.....	2	2
		76,578 bushels	88,808 bushels	165,386 bushels	4,005	4,928	8,933
Maize	Victoria ...	78,535 bushels	1,925 bushels	80,460 bushels	14,102	300	14,402
	South Australia ...	4,517 "	.....	4,517 "	811	.....	811
	Tasmania ...	668 "	.....	668 "	116	.....	116
	New Zealand ...	76 "	.....	76 "	15	.....	15
	Queensland ...	107,332 "	3,844 bushels	111,176 "	20,136	670	20,800
	South Sea Islands	39 "	.....	39 "	7	.....	7
	Western Australia	60 "	.....	60 "	10	.....	10
		191,227 bushels	5,769 bushels	196,996 bushels	35,197	970	36,167
Oats	Victoria ...	3,889 bushels	.....	3,889 bushels	651	.....	651
	South Australia ...	.....	539 bushels	539 "	.....	79	79
	New Zealand ...	.....	8 "	8 "	.....	1	1
	Queensland ...	2,819 bushels	64,358 "	67,177 "	385	8,518	8,903
	New Caledonia ...	57 "	73 "	130 "	7	9	16
	Western Australia	849 "	276 "	1,125 "	105	32	137
	Singapore ...	.....	480 "	480 "	.....	65	65
		7,614 bushels	65,734 bushels	65,734 bushels	1,148	8,704	9,852
Pease (Dried and Split)	Victoria ...	.....	148 pkg.	148 pkg.	.....	134	134
	South Australia ...	.....	26 "	26 "	.....	24	24
	Tasmania ...	.....	6 "	6 "	.....	7	7
	Queensland ...	.....	777 "	777 "	.....	832	832
	South Sea Islands...	.....	25 "	25 "	.....	26	26
	New Caledonia ...	.....	34 "	34 "	.....	38	38
	Fiji ...	.....	1,141 "	1,141 "	.....	642	642
Western Australia	.....	7 "	7 "	.....	8	8	
		.....	2,164 pkg.	2,164 pkg.	.....	1,711	1,711
Wheat	Victoria ...	90,870 bushels	17 bushels	90,887 bushels	17,159	5	17,164
	Tasmania ...	.....	24,454 "	24,454 "	.....	5,312	5,312
	New Zealand ...	200 bushels	.....	200 "	45	.....	45
	Queensland ...	614 "	3,919 bushels	4,533 "	133	784	917
	New Caledonia ...	8 "	.....	8 "	2	.....	2
	Fiji ...	37 "	187 bushels	224 "	8	45	53
			91,729 bushels	28,577 bushels	120,306 bushels	17,347	6,146
Grindery	Great Britain ...	.....	2 pkg.	2 pkg.	.....	30	30
	Victoria ...	.....	46 "	46 "	.....	477	477
	South Australia ...	.....	3 "	3 "	.....	20	20
	Tasmania ...	.....	2 "	2 "	.....	10	10
	New Zealand ...	18 pkg.	3 "	21 "	450	32	482
	Queensland ...	5 "	438 "	443 "	44	5,875	5,919
	New Caledonia ...	2 "	7 "	9 "	12	35	47
Fiji ...	.....	2 "	2 "	.....	10	10	
		25 pkg.	503 pkg.	528 pkg.	506	6,489	6,995

## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.
Groats (Patent) ...	South Australia ...	.....	72 lb.	72 lb.	£	£ 2	£ 2
	Queensland ...	.....	4,664 "	4,664 "	.....	131	131
	South Sea Islands... ..	.....	72 "	72 "	.....	2	2
	Fiji ... ..	.....	24 "	24 "	.....	1	1
			4,832 lb.	4,832 lb.	.....	136	136
Gum ... ..	Victoria ... ..	.....	14 pkg.	14 pkg.	.....	153	153
	New Zealand ... ..	.....	8 "	8 "	.....	76	76
	United States ... ..	.....	3 "	3 "	.....	17	17
				25 pkg.	25 pkg.	.....	246
Hair ... ..	Great Britain ... ..	26,387 lb.	.....	26,387 lb.	1,590	.....	1,590
	Victoria ... ..	17,272 "	4,480 lb.	21,752 "	767	150	917
	Tasmania ... ..	300 "	.....	300 "	4	.....	4
	New Zealand ... ..	.....	547 lb.	547 "	.....	29	29
	Queensland ... ..	2,155 lb.	252 "	2,407 "	36	12	48
	New Caledonia ... ..	336 "	.....	336 "	17	.....	17
	United States ... ..	176 "	.....	176 "	7	.....	7
		46,626 lb.	5,279 lb.	51,905 lb.	2,421	191	2,612
Hardware ... ..	Great Britain ... ..	1 pkg.	104 pkg.	105 pkg.	3	1,190	1,193
	Victoria ... ..	14 "	664 "	678 "	35	2,794	2,829
	South Australia ... ..	13 "	317 lb.	330 "	16	2,590	2,606
	Tasmania ... ..	.....	133 "	133 "	.....	887	887
	New Zealand ... ..	.....	149 "	149 "	.....	1,155	1,155
	Queensland ... ..	1,130 pkg.	11,512 "	12,642 "	1,946	58,226	60,172
	South Sea Islands... ..	19 "	880 "	899 "	38	3,822	3,860
	New Caledonia ... ..	55 "	777 "	832 "	78	4,568	4,646
	Fiji... ..	85 "	1,052 "	1,137 "	86	4,978	5,064
	Western Australia ... ..	23 "	246 "	269 "	23	1,766	1,789
	Germany ... ..	.....	4 "	4 "	.....	30	30
	France ... ..	.....	1 "	1 "	.....	5	5
	Belgium ... ..	.....	2 "	2 "	.....	12	12
	New Guinea (British)... ..	.....	4 "	4 "	.....	16	16
United States ... ..	.....	1 "	1 "	.....	12	12	
Mauritius ... ..	.....	1 "	1 "	.....	7	7	
		1,340 pkg.	15,847 pkg.	17,187 pkg.	2,225	82,058	84,283
Hay and Chaff ... ..	Victoria ... ..	12,495 cwt.	20 cwt.	12,515 cwt.	2,437	9	2,446
	South Australia ... ..	611 "	327 "	938 "	186	96	282
	Queensland ... ..	13,383 "	29,233 "	42,616 "	3,214	7,947	11,161
	New Caledonia ... ..	5,229 "	296 cwt.	5,525 "	1,282	75	1,357
	Western Australia ... ..	231 "	149 "	380 "	52	47	99
	Singapore ... ..	30 "	.....	30 "	10	.....	10
		31,979 cwt.	30,025 cwt.	62,004 cwt.	7,181	8,174	15,355
Honey ... ..	Great Britain ... ..	1,272 lb.	.....	1,272 lb.	32	.....	32
	Victoria ... ..	156 "	500 lb.	656 "	3	12	15
	South Australia ... ..	.....	288 "	288 "	.....	7	7
	New Zealand ... ..	.....	2,045 "	2,045 "	.....	51	51
	Queensland ... ..	200 lb.	16,278 "	16,478 "	4	415	419
	Fiji ... ..	.....	238 "	238 "	.....	4	4
		1,628 lb.	19,349 lb.	20,977 lb.	39	489	528
Hoofs and Bones ... ..	Great Britain ... ..	9,829 cwt.	.....	9,829 cwt.	3,730	.....	3,730
	Victoria ... ..	1,670 "	.....	1,670 "	269	.....	269
	Tasmania ... ..	5,170 "	.....	5,170 "	1,032	.....	1,032
	New Zealand ... ..	871 "	.....	871 "	176	.....	176
	United States ... ..	64 "	.....	64 "	11	.....	11
	France ... ..	368 "	.....	368 "	80	.....	80
		17,972 cwt.	.....	17,972 cwt.	5,298	.....	5,298
Hops . . . . .	Great Britain ... ..	.....	2,480 lb.	2,480 lb.	.....	72	72
	Victoria ... ..	.....	2,492 "	2,492 "	.....	120	120
	South Australia ... ..	.....	8,132 "	8,132 "	.....	357	357
	Tasmania ... ..	.....	1,644 "	1,644 "	.....	82	82
	New Zealand ... ..	.....	100 "	100 "	.....	4	4
	Queensland ... ..	.....	55,486 "	55,486 "	.....	2,124	2,124
	South Sea Islands... ..	.....	180 "	180 "	.....	10	10
	New Caledonia ... ..	.....	380 "	380 "	.....	20	20
	Fiji ... ..	.....	502 "	502 "	.....	25	25
	Western Australia... ..	.....	330 "	330 "	.....	9	9
Germany ... ..	.....	30 "	30 "	.....	2	2	
			71,756 lb.	71,756 lb.	.....	2,825	2,825

## STATISTICS, 1886—TRADE AND COMMERCE.

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## EXPORTS—continued.

Article .	Countries to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.
Horns ...	Great Britain ...	567,470 No.	.....	567,470 No.	£ 6,086	.....	£ 6,086
	Victoria ...	1,058 "	.....	1,058 "	7	.....	7
	South Australia ...	200 "	.....	200 "	2	.....	2
	Germany ...	300 "	.....	300 "	2	.....	2
		569,028 No.	.....	569,028 No.	6,097	.....	6,097
Houses (Wooden) ...	Western Australia..	1 No.	.....	1 No.	44	.....	44
	Kaiser Wilhelm's Land	.....	2 No.	2 "	.....	330	330
		1 No.	2 No.	3 No.	44	330	374
India-rubber Goods...	Victoria ...	.....	5 pkg.	5 pkg.	.....	37	37
	South Australia ...	.....	1 "	1 "	.....	15	15
	Queensland ...	.....	50 "	50 "	.....	665	665
	New Caledonia ...	.....	4 "	4 "	.....	46	46
	Fiji... ..	.....	2 "	2 "	.....	37	37
	Belgium ...	.....	2 "	2 "	.....	40	40
		.....	64 pkg.	64 pkg.	.....	840	840
Instruments.	Great Britain ...	.....	5 pkg.	5 pkg.	.....	202	202
	Victoria ...	.....	15 "	15 "	.....	365	365
	South Australia ...	.....	5 "	5 "	.....	221	221
	Tasmania ...	.....	5 "	5 "	.....	105	105
	New Zealand ...	.....	8 "	8 "	.....	51	51
	Queensland ...	.....	104 "	104 "	.....	1,170	1,170
	South Sea Islands...	.....	2 "	2 "	.....	9	9
	New Caledonia ...	.....	2 "	2 "	.....	62	62
	Fiji... ..	.....	7 "	7 "	.....	88	88
	Western Australia..	.....	5 "	5 "	.....	90	90
	Germany ...	.....	4 "	4 "	.....	50	50
			.....	162 pkg.	162 pkg.	.....	2,413
Surgical ...	Victoria ...	.....	2 pkg.	2 pkg.	.....	22	22
	Queensland ...	.....	22 "	22 "	.....	215	215
			.....	24 pkg.	24 pkg.	.....	237
Oxide of ...	Victoria ...	12,258 cwt.	.....	12,258 cwt.	2,019	.....	2,019
	South Australia ...	620 "	.....	620 "	100	.....	100
	Tasmania ...	1,180 "	.....	1,180 "	195	.....	195
	New Zealand ...	950 "	.....	950 "	160	.....	160
	Queensland ...	660 "	.....	660 "	115	.....	115
		15,668 cwt.	.....	15,668 cwt.	2,589	.....	2,589
Pig ...	Victoria ...	.....	19,074 cwt.	19,074 cwt.	.....	3,026	3,026
	South Australia ...	.....	3,600 "	3,600 "	.....	540	540
	Tasmania ...	.....	200 "	200 "	.....	35	35
	New Zealand ...	.....	168 "	168 "	.....	28	28
	Queensland ...	.....	2,369 "	2,369 "	.....	412	412
		.....	20 "	20 "	.....	3	3
		.....	25,431 cwt.	25,431 cwt.	.....	4,044	4,044
Iron and Steel.	Victoria ...	.....	100 cwt.	100 cwt.	.....	20	20
	Queensland ...	.....	200 "	200 "	.....	35	35
	Hong Kong ...	.....	6,700 "	6,700 "	.....	1,261	1,261
			.....	7,000 cwt.	7,000 cwt.	.....	1,316
Pipes ...	South Australia ...	.....	240 No.	240 No.	.....	128	128
	Tasmania ...	.....	104 "	104 "	.....	74	74
	Queensland ...	.....	3,987 "	3,987 "	.....	1,890	1,890
	New Caledonia ...	.....	398 "	398 "	.....	135	135
	Fiji ...	.....	1,315 "	1,315 "	.....	758	758
	Western Australia..	.....	334 "	334 "	.....	66	66
		.....	6,378 No.	6,378 No.	.....	3,051	3,051
Other Castings..	Great Britain ...	46 cwt.	.....	46 cwt.	25	.....	25
	Victoria ...	9 "	.....	9 "	8	.....	8
	Queensland ...	716 "	126 cwt.	842 "	520	105	625
		771 cwt.	126 cwt.	897 cwt.	553	105	658

EXPORTS—continued.

Articles	Countries to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.
Bar, Rod, Plate, Sheet, &c.	Great Britain .....		5 cwt.	5 cwt.	£	£	£
	Victoria ... ..	43 cwt.	4,693 "	4,736 "	22	2,221	2,243
	South Australia .....		781 "	781 "		435	435
	Tasmania ... ..		606 "	606 "		436	436
	New Zealand ... ..		1,328 "	1,328 "		717	717
	Queensland ... ..	1,840 cwt.	20,472 "	22,312 "	901	10,536	11,437
	South Sea Islands .....		54 "	54 "		43	43
	New Caledonia ... ..	31 cwt.	1,611 "	1,642 "	18	858	876
	Fiji... ..	20 "	883 "	903 "	10	569	579
	Western Australia .....		162 "	162 "		102	102
		1,934 cwt.	30,595 cwt.	32,529 cwt.	951	15,929	16,880
Bolts, Nuts, &c.	Victoria ... ..		823 cwt.	823 cwt.		661	661
	South Australia .....		14 "	14 "		23	23
	New Zealand ... ..		49 "	49 "		48	48
	Queensland ... ..		687 "	687 "		811	811
	South Sea Islands .....		7 "	7 "		14	14
	New Caledonia ... ..		80 "	80 "		122	122
	Fiji... ..		83 "	83 "		120	120
	Western Australia .....		15 "	15 "		24	24
Honolulu ... ..		21 "	21 "		35	35	
			1,781 No.	1,784 No.		1,858	1,858
Chains...	South Australia ... ..		10 cwt.	10 cwt.		4	4
	Queensland ... ..		155 "	155 "		83	83
			165 cwt.	165 cwt.		87	87
Tanks ...	Great Britain ... ..		3 No.	3 No.		12	12
	Victoria ... ..		48 "	48 "		180	180
	South Australia .....		37 "	37 "		131	131
	Tasmania ... ..		2 "	2 "		7	7
	Queensland ... ..		76 "	76 "		287	287
	South Sea Islands... ..		24 "	24 "		92	92
	New Caledonia ... ..		19 "	19 "		68	68
	Fiji... ..		18 "	18 "		60	60
	Western Australia... ..		14 "	14 "		53	53
India ... ..		10 "	10 "		35	35	
			251 No.	251 No.		925	925
Safes and Doors	Victoria ... ..		10 cwt.	10 cwt.		15	15
	Tasmania ... ..		30½ "	30½ "		116	116
	New Zealand ... ..		20 "	20 "		16	16
	Queensland ... ..		433½ "	433½ "		1,438	1,438
	New Caledonia ... ..		13 "	13 "		36	36
	Fiji... ..		6½ "	6½ "		22	22
			513 cwt.	513 cwt.		1,643	1,643
Wire ...	Victoria ... ..		7,816 cwt.	7,816 cwt.		5,136	5,136
	South Australia .....		1,268 "	1,268 "		704	704
	Tasmania ... ..		207 "	207 "		125	125
	New Zealand ... ..		203 "	203 "		113	113
	Queensland ... ..		10,471 "	10,471 "		5,980	5,980
	South Sea Islands... ..		10 "	10 "		7	7
	New Caledonia ... ..		463 "	463 "		265	265
	Western Australia... ..		600 "	600 "		322	322
			21,038 cwt.	21,038 cwt.	12,652	12,652	12,652
Galvanized Sheets, Bars...	Victoria ... ..		16,681 cwt.	16,681 cwt.		15,060	15,060
	South Australia .....		832 "	832 "		788	788
	Tasmania ... ..		2,149 "	2,149 "		1,789	1,789
	New Zealand ... ..		474 "	474 "		332	332
	Queensland ... ..		18,475 "	18,475 "		17,273	17,273
	South Sea Islands... ..		693 "	693 "		670	670
	New Caledonia ... ..		4,262 "	4,262 "		3,706	3,706
	Fiji... ..		1,015 "	1,015 "		956	956
	Western Australia... ..		1,411 "	1,411 "		1,345	1,345
	Honolulu ... ..		2,561 "	2,561 "		2,279	2,279
			48,553 cwt.	48,553 cwt.		44,198	44,198
Galvanized Manufactures	Tasmania ... ..		1 cwt.	1 cwt.		3	3
	New Zealand ... ..		22 "	22 "		33	33
	Queensland ... ..		406 "	406 "		730	730
	South Sea Islands... ..		9 "	9 "		20	20
	New Caledonia ... ..		43 "	43 "		67	67
	Fiji... ..		29 "	29 "		45	45
	Western Australia... ..		2 "	2 "		4	4
	Honolulu ... ..		13 "	13 "		18	18
			525 cwt.	525 cwt.		920	920

Iron and Steel—continued.

STATISTICS, 1886—TRADE AND COMMERCE.

EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.
Iron and Steel— <i>continued.</i> Galvanized Wire.	Victoria ... ..	.....	60 cwt.	60 cwt.	£	£ 70	£ 70
	Tasmania ... ..	.....	20 "	20 "	.....	24	24
	Queensland ... ..	.....	1,440 "	1,440 "	.....	1,699	1,699
	South Sea Islands ... ..	.....	10 "	10 "	.....	12	12
	New Caledonia ... ..	.....	20 "	20 "	.....	24	24
	Western Australia ... ..	.....	50 "	50 "	.....	56	56
	Fiji... ..	.....	45 "	45 "	.....	50	50
			1,645 cwt.	1,645 cwt.	.....	1,935	1,935
Ivory Nuts ... ..	Great Britain ... ..	.....	3,520 cwt.	3,520 cwt.	.....	1,405	1,405
	Germany ... ..	.....	233 "	233 "	.....	92	92
				3,753 cwt.	3,753 cwt.	.....	1,497
Jams and Jellies ... ..	Great Britain ... ..	.....	5,305 lb.	5,305 lb.	.....	112	112
	Victoria ... ..	.....	15,374 "	15,374 "	.....	308	308
	South Australia ... ..	.....	1,808 "	1,808 "	.....	35	35
	Tasmania ... ..	.....	762 "	762 "	.....	15	15
	New Zealand ... ..	7,920 lb.	658 "	8,578 "	121	14	135
	Queensland ... ..	13,081 "	70,065 "	83,146 "	181	1,588	1,769
	South Sea Islands... ..	.....	6,747 "	6,747 "	.....	143	143
	New Caledonia ... ..	2,260 lb.	8,814 "	11,074 "	43	173	216
	Fiji ... ..	.....	11,392 "	11,392 "	.....	267	267
	Western Australia... ..	606 lb.	12,813 "	13,419 "	10	275	285
	United States ... ..	.....	4,642 "	4,642 "	.....	110	110
	Hong Kong ... ..	.....	1,664 "	1,664 "	.....	37	37
		23,867 lb.	140,044 lb.	163,911 lb.	355	3,077	3,432
Jewellery ... ..	Great Britain ... ..	.....	33 "	33 pkg.	.....	3,225	3,225
	Victoria ... ..	.....	36 "	36 "	.....	11,079	11,079
	South Australia ... ..	.....	3 "	3 "	.....	247	247
	Tasmania ... ..	.....	6 "	6 "	.....	500	500
	New Zealand ... ..	.....	8 "	8 "	.....	419	419
	Queensland ... ..	1 pkg.	104 "	105 "	15	5,424	5,439
	Fiji... ..	.....	1 "	1 "	.....	30	30
	Hong Kong ... ..	.....	1 "	1 "	.....	20	20
	Mauritius ... ..	.....	1 "	1 "	.....	200	200
	United States ... ..	.....	1 "	1 "	.....	100	100
		1 pkg.	194 pkg.	195 pkg.	15	21,244	21,259
Kerosene Shale ... ..	Great Britain ... ..	3,788 tons	.....	3,788 tons	9,625	.....	9,625
	Victoria ... ..	4,282 "	.....	4,282 "	12,942	.....	12,942
	Tasmania ... ..	736 "	.....	736 "	2,296	.....	2,296
	New Zealand ... ..	293 "	.....	293 "	966	.....	966
	Queensland ... ..	212 "	.....	212 "	681	.....	681
	United States ... ..	3,501 "	.....	3,501 "	11,253	.....	11,253
	Rotterdam... ..	3,096 "	.....	3,096 "	8,001	.....	8,001
	Chili ... ..	390 "	.....	390 "	1,270	.....	1,270
	Java ... ..	194 "	.....	194 "	550	.....	550
	Italy ... ..	1,094 "	.....	1,094 "	2,900	.....	2,900
	France ... ..	1,340 "	.....	1,340 "	3,632	.....	3,632
	Peru ... ..	852 "	.....	852 "	2,755	.....	2,755
	Barcelona ... ..	1,308 "	.....	1,308 "	3,750	.....	3,750
		21,086 tons	.....	21,086 tons	60,621	.....	60,621
Lampware ... ..	Great Britain ... ..	.....	3 pkg.	3 pkg.	.....	45	45
	Victoria ... ..	.....	82 "	82 "	.....	692	692
	South Australia ... ..	.....	39 "	39 "	.....	588	588
	Tasmania ... ..	.....	6 "	6 "	.....	47	47
	New Zealand ... ..	.....	54 "	54 "	.....	662	662
	Queensland ... ..	2 pkg.	345 "	347 "	6	2,523	2,529
	South Sea Islands... ..	.....	20 "	20 "	.....	72	72
	New Caledonia ... ..	.....	13 "	13 "	.....	49	49
	Fiji... ..	.....	18 "	18 "	.....	120	120
	Western Australia... ..	.....	2 "	2 "	.....	6	6
United States ... ..	.....	1 "	1 "	.....	5	5	
		2 pkg.	583 pkg.	585 pkg.	6	4,809	4,815
Lard ... ..	South Australia ... ..	.....	719 lb.	719 lb.	.....	30	30
	Tasmania ... ..	.....	100 "	100 "	.....	4	4
	New Zealand ... ..	240 lb.	392 "	632 "	8	10	18
	Queensland ... ..	784 "	.....	784 "	20	.....	20
	South Sea Islands... ..	336 "	112 lb.	448 "	8	3	11
	New Caledonia ... ..	5,614 "	377 "	5,991 "	146	13	159
	Fiji... ..	140 "	.....	104 "	3	.....	3
		7,114 "	1,700 lb.	8,814 lb.	185	60	245

## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.
Lead.	Old .....	Victoria ...	500 cwt.	500 cwt.	£	£	£
		Hong Kong ...	1,949 "	1,949 "	.....	328	328
	Fig ...	Victoria ...	2,449 cwt.	2,449 cwt.	.....	1,506	1,506
		Tasmania ...	4,691 cwt.	4,691 cwt.	.....	3,389	3,389
		Queensland ...	20 "	20 "	.....	16	16
		New Caledonia ...	83 "	83 "	.....	61	61
	Sheet, Roll, or Pipe ...	Victoria ...	62 "	62 "	.....	43	43
		Tasmania ...	4,856 cwt.	4,856 cwt.	.....	3,509	3,509
		Queensland ...	74 cwt.	74 cwt.	.....	41	41
		South Sea Islands ...	32 "	32 "	.....	27	27
New Zealand ...		20 "	20 "	.....	15	15	
Fiji ...		2,381 "	2,381 "	.....	2,018	2,018	
Leather ...	Victoria ...	10 "	10 "	.....	8	8	
	South Australia ...	122 "	122 "	.....	106	106	
	Queensland ...	77 "	77 "	.....	60	60	
	Tasmania ...	2,716 cwt.	2,716 cwt.	.....	2,275	2,275	
	New Zealand ...	4,453 pkg.	2 pkg.	4,455 pkg.	93,194	112	93,306
	Queensland ...	168 "	27 "	195 "	2,153	1,102	3,255
	South Australia ...	67 "	2 "	69 "	586	25	611
	Tasmania ...	8 "	5 "	13 "	159	84	243
	New Zealand ...	35 "	26 "	61 "	1,172	684	1,856
	Queensland ...	83 "	237 "	320 "	1,232	9,508	10,740
	South Sea Islands ...	68 "	7 "	75 "	860	38	898
	New Caledonia ...	26 "	1 "	27 "	324	8	332
	Western Australia ...	9 "	.....	9 "	140	.....	140
Mauritius ...	19 "	.....	19 "	251	.....	251	
France ...	23 "	.....	23 "	300	.....	300	
Java ...	16 "	.....	16 "	559	.....	559	
Lime-juice ...	Victoria ...	4,975 pkg.	307 pkg.	5,282 pkg.	100,930	11,561	112,491
	South Australia ...	90 gallons	90 gallons	.....	7	7	
	New Zealand ...	1,276 "	1,276 "	.....	113	113	
	Queensland ...	268 "	268 "	.....	29	29	
	Western Australia ...	5,146 "	5,146 "	.....	520	520	
	Hong Kong ...	123 "	123 "	.....	17	17	
Live Stock.	Victoria ...	20 "	20 "	.....	3	3	
	South Australia ...	6,923 gallons	6,923 gallons	.....	689	689	
	New Zealand ...	47,650 No.	4 No.	47,654 No.	264,649	300	264,949
	Queensland ...	2,897 "	7,545 "	10,442 "	21,852	61,545	83,397
	South Sea Islands ...	268 "	.....	268 "	2,555	.....	2,555
	Western Australia ...	508 "	990 No.	1,498 "	7,062	6,110	13,772
	Chili ...	6 "	.....	6 "	35	.....	35
	Hong Kong ...	15 "	.....	15 "	157	.....	157
	Victoria ...	2 "	.....	2 "	70	.....	70
	South Australia ...	13 "	.....	13 "	150	.....	150
	Queensland ...	51,359 No.	8,539 No.	59,898 No.	297,130	67,955	365,085
	South Australia ...	3,088 No.	2 No.	3,090 No.	91,929	45	91,974
	New Zealand ...	66 "	27 "	93 "	1,628	214	1,842
Queensland ...	10 "	1 "	11 "	690	1,500	2,190	
South Sea Islands ...	520 "	.....	520 "	10,728	.....	10,728	
Western Australia ...	7 "	.....	7 "	260	.....	260	
Chili ...	34 "	.....	34 "	870	.....	870	
United States ...	2 "	.....	2 "	80	.....	80	
India ...	349 "	.....	349 "	4,785	.....	4,785	
Honolulu ...	1 "	.....	1 "	250	.....	250	
Singapore ...	33 "	.....	33 "	1,220	.....	1,220	
Java ...	1 "	.....	1 "	30	.....	30	
Western Australia ...	805 "	.....	805 "	13,661	.....	13,661	
Sheep ...	Victoria ...	4,916 No.	30 No.	4,946 No.	126,131	1,759	127,890
	South Australia ...	930,476 No.	.....	930,476 No.	339,450	.....	339,450
	Tasmania ...	146,466 "	10,490 No.	156,956 "	69,094	4,995	74,089
	New Zealand ...	2,210 "	.....	2,210 "	1,278	.....	1,278
	Queensland ...	1,601 "	.....	1,601 "	1,100	.....	1,100
	South Sea Islands ...	164,433 "	2 No.	164,435 "	100,634	200	100,834
	Western Australia ...	52 "	.....	52 "	28	.....	28
	Chili ...	912 "	.....	912 "	527	.....	527
	Victoria ...	252 "	.....	252 "	250	.....	250
	Chili ...	12 "	.....	12 "	60	.....	60
		1,246,414 No.	10,492 No.	1,256,906 No.	512,421	5,195	517,616

## STATISTICS, 1886—TRADE AND COMMERCE.

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## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.			
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	
Live Stock—contd.	Pigs ... ..	Victoria ... ..	572 No.	.....	572 No.	£ 856	£ 856	
		New Zealand ... ..	.....	4 No.	4 "	.....	6	
		Queensland ... ..	62 No.	.....	62 "	200	.....	200
		New Caledonia ... ..	1 "	.....	1 "	2	.....	2
		Western Australia... ..	4 "	.....	4 "	5	.....	5
	Fiji... ..	8 "	.....	8 "	18	.....	18	
	Mules ... ..	.....	647 No.	4 No.	651 No.	1,081	6	1,087
		Queensland ... ..	15 No.	.....	15 No.	225	.....	225
		Fiji... ..	6 "	.....	6 "	64	.....	64
	Dogs ... ..	.....	21 No.	.....	21 No.	289	.....	289
		Victoria ... ..	6 No.	3 No.	9 No.	30	160	190
		Queensland ... ..	28 "	.....	28 "	104	.....	104
		Western Australia... ..	2 "	.....	2 "	10	.....	10
	Poultry ... ..	United States ... ..	.....	1 No.	1 "	.....	5	5
		.....	36 No.	4 No.	40 No.	144	165	309
Victoria ... ..		75 coops	.....	75 coops	256	.....	256	
South Australia ... ..		2 "	.....	2 "	8	.....	8	
Queensland ... ..		31 "	.....	31 "	113	.....	113	
Birds ... ..	South Sea Islands... ..	2 "	.....	2 "	5	.....	5	
	New Caledonia ... ..	3 "	.....	3 "	6	.....	6	
	Fiji ... ..	1 "	.....	1 "	3	.....	3	
	Western Australia... ..	2 "	.....	2 "	10	.....	10	
	.....	116 coops	.....	116 coops	401	.....	401	
Macaroni and Vermicelli ... ..	Victoria ... ..	85 pkg.	.....	85 pkg.	249	.....	249	
	Victoria ... ..	.....	875 lb.	875 lb.	.....	25	25	
	Queensland ... ..	.....	5,171 "	5,171 "	.....	151	151	
Machinery ... ..	.....	.....	6,046 lb.	6,046 "	.....	176	176	
	Great Britain ... ..	.....	16 pkg.	16 pkg.	.....	462	462	
	Victoria ... ..	91 pkg.	707 "	798 "	531	12,097	12,628	
	South Australia ... ..	56 "	170 "	226 "	399	3,414	3,813	
	Tasmania ... ..	13 "	64 "	77 "	164	1,744	1,908	
	New Zealand ... ..	4 "	128 "	132 "	37	2,487	2,524	
	Queensland ... ..	371 "	2,722 "	3,093 "	3,507	28,590	32,097	
	South Sea Islands... ..	.....	18 "	18 "	.....	81	81	
	New Caledonia ... ..	4 pkg.	102 "	106 "	52	1,921	1,973	
	Fiji... ..	14 "	330 "	344 "	174	2,543	2,717	
	United States ... ..	.....	2 "	2 "	.....	94	94	
	Western Australia... ..	.....	13 "	13 "	.....	188	188	
Germany ... ..	.....	2 "	2 "	.....	60	60		
Honolulu ... ..	.....	1 "	1 "	.....	10	10		
Machines—Weighing	.....	553 pkg.	4,275 pkg.	4,828 pkg.	4,864	53,691	58,555	
	South Australia ... ..	.....	8 pkg.	8 pkg.	.....	59	59	
	New Zealand ... ..	.....	4 "	4 "	.....	10	10	
	Queensland ... ..	.....	86 "	86 "	.....	400	400	
	South Sea Islands... ..	.....	6 "	6 "	.....	22	22	
	Fiji... ..	.....	23 "	23 "	.....	187	187	
	Western Australia... ..	.....	6 "	6 "	.....	33	33	
Maizena and Corn Flour ... ..	.....	.....	133 pkg.	133 pkg.	.....	711	711	
	Victoria ... ..	4,000 lb.	40,890 lb.	44,890 lb.	75	1,175	1,250	
	South Australia ... ..	.....	440 "	440 "	.....	12	12	
	Tasmania ... ..	7,000 lb.	280 "	7,280 "	146	7	153	
	New Zealand ... ..	9,200 "	.....	9,200 "	160	.....	160	
	Queensland ... ..	43,540 "	13,650 lb.	57,190 "	890	353	1,243	
	South Sea Islands... ..	.....	360 "	360 "	.....	9	9	
	New Caledonia ... ..	.....	232 "	232 "	.....	5	5	
	Fiji... ..	440 lb.	624 "	1,064 "	11	16	27	
	Western Australia... ..	240 "	1,000 "	1,240 "	6	22	28	
Malt ... ..	.....	64,420 lb.	57,476 lb.	121,896 "	1,288	1,599	2,887	
	Victoria ... ..	.....	1,038 bshls.	1,038 bushels	.....	296	296	
	South Australia ... ..	.....	1,580 "	1,580 "	.....	485	485	
	New Zealand ... ..	.....	411 "	411 "	.....	105	105	
	Queensland ... ..	.....	10,945 "	10,945 "	.....	3,479	3,479	
New Caledonia ... ..	.....	260 "	260 "	.....	78	78		
.....	.....	14,234 bshls.	14,234 bushels	.....	4,443	4,443		



## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.			
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	
Manures.	Bone-dust ...	Victoria ...	200 cwt.	.....	200 cwt.	£ 60	£ 60	
		Tasmania ...	985 "	.....	985 "	332	332	
		New Zealand ...	31,860 "	1,420 cwt.	33,280 "	9,384	9,781	
		Mauritius ...	4,060 "	.....	4,060 "	1,230	1,230	
			37,105 cwt.	1,420 cwt.	38,525 cwt.	11,006	397	11,403
	Guano ...	Victoria ...	.....	2 cwt.	2 cwt.	.....	1	1
		Queensland ...	.....	174 "	174 "	.....	105	105
				.....	176 cwt.	176 cwt.	.....	106
	Other kinds ...	Tasmania ...	40 cwt.	130 cwt.	170 cwt.	20	53	73
		New Zealand ...	20 "	.....	20 "	6	6	6
Queensland ...		40 "	.....	40 "	18	18	18	
Fiji ...		4,508 "	.....	4,508 "	1,093	1,093	1,093	
Mauritius ...		17,211 "	.....	17,211 "	8,725	8,725	8,725	
		21,819 cwt.	130 cwt.	21,949 cwt.	9,862	53	9,915	
Marble ...	Victoria ...	.....	42 pkg.	42 pkg.	.....	1,039	1,039	
	South Australia ...	.....	21 "	21 "	.....	50	50	
	Tasmania ...	.....	16 "	16 "	.....	46	46	
	New Zealand ...	.....	27 "	27 "	.....	188	188	
	Queensland ...	.....	82 "	82 "	.....	547	547	
		.....	188 pkg.	188 pkg.	.....	1,870	1,870	
Matches ...	Victoria ...	.....	250 pkg.	250 pkg.	.....	774	774	
	South Australia ...	.....	58 "	58 "	.....	211	211	
	Tasmania ...	.....	10 "	10 "	.....	20	20	
	New Zealand ...	.....	637 "	637 "	.....	1,779	1,779	
	Queensland ...	.....	538 "	538 "	.....	2,464	2,464	
	South Sea Islands...	.....	74 "	74 "	.....	267	267	
	New Caledonia ...	.....	330 "	330 "	.....	1,432	1,432	
	Fiji ...	.....	162 "	162 "	.....	570	570	
	Western Australia...	.....	41 "	41 "	.....	166	166	
	Honolulu ...	.....	1 "	1 "	.....	2	2	
		.....	2,101 pkg.	2,101 pkg.	.....	7,685	7,685	
Mats and Matting ...	Victoria ...	.....	3 pkg.	3 pkg.	.....	3	3	
	South Australia ...	.....	1 pkg.	1 "	3	6	9	
	Tasmania ...	.....	1 "	2 pkg.	3	5	22	
	New Zealand ...	.....	3 "	4 "	17	286	475	
	Queensland ...	92 "	199 "	291 "	189	35	47	
	South Sea Islands...	.....	22 "	22 "	.....	8	20	
	New Caledonia ...	.....	8 "	8 "	.....	1	3	
	Fiji ...	.....	9 "	9 "	.....	.....	.....	
	Western Australia...	.....	1 "	1 "	.....	.....	.....	
			97 pkg.	245 pkg.	342 pkg.	212	405	617
Meat.	Frozen ...	Great Britain ...	4,852 cwt.	.....	4,852 cwt.	4,671	4,671	
				.....	.....	.....	.....	.....
	* Extract of and Preserved ...	Great Britain ...	6,106 pkg.	996 pkg.	7,102 pkg.	11,480	1,700	13,180
		South Australia ...	24 "	.....	24 "	42	.....	42
		Queensland ...	33 "	78 pkg.	111 "	65	131	196
		South Sea Islands...	385 "	.....	385 "	667	.....	667
		New Caledonia ...	34 "	584 pkg.	618 "	81	753	834
		Fiji ...	61 "	.....	61 "	146	.....	146
		Western Australia...	27 "	.....	27 "	74	.....	74
		Singapore ...	23 "	40 pkg.	63 "	70	.....	118
		Java ...	.....	661 "	661 "	.....	2,000	2,000
		New Guinea (British)...	1 pkg.	.....	1 "	2	.....	2
			6,694 pkg.	2,359 pkg.	9,053 pkg.	12,627	4,632	17,259
	† Extract of ...	Great Britain ...	29,357 lb.	.....	29,357 lb.	5,336	.....	5,336
		Victoria ...	448 "	12 lb.	460 "	76	3	79
Queensland ...		.....	18 "	18 "	.....	10	10	
South Sea Islands...		15 lb.	.....	15 "	3	.....	3	
Fiji ...		4 "	18 lb.	22 "	1	4	5	
		29,824 lb.	48 lb.	29,872 lb.	5,416	17	5,433	

\* From 1st January to 6th April.

† From 7th April to 31st December.

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## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.				
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.		
* Preserved	Great Britain ...	3,043,658 lb.	9,360 lb.	3,053,018 lb.	£ 56,026	£ 244	£ 56,270		
	Victoria ...	10,696 "	17,337 "	28,033 "	250	552	802		
	South Australia ...	1,368 "	3,648 "	5,016 "	36	91	127		
	Tasmania ...	80 "	870 "	950 "	2	40	42		
	New Zealand ...	160 "	756 "	916 "	4	20	24		
	Queensland ...	15,389 "	35,030 "	50,419 "	388	909	1,297		
	South Sea Islands...	26,883 "	3,741 "	30,624 "	570	100	670		
	New Caledonia ...	7,220 "	7,244 "	14,464 "	200	160	360		
	Fiji ...	8,488 "	2,394 "	10,882 "	217	74	291		
	Western Australia	3,444 "	10,242 "	13,686 "	90	251	341		
	Honolulu ...	.....	779 "	779 "	.....	26	26		
	France ...	.....	648 "	648 "	.....	16	16		
	Hong Kong ...	69,456 lb.	39,733 "	109,189 "	1,460	785	2,245		
	Italy ...	192 "	.....	192 "	4	.....	4		
	Java ...	16,870 "	96 lb.	16,966 "	337	2	339		
	Kaiser Wilhelm's Land	3,024 "	.....	3,024 "	76	.....	76		
	Ceylon ...	192 "	.....	192 "	6	.....	6		
	China ...	.....	1,044 lb.	1,044 "	.....	22	22		
	India ...	1,152 lb.	.....	1,152 "	23	.....	23		
	United States ...	1,296 "	5,548 lb.	6,844 "	24	114	138		
			3,209,58 lb.	138,470 lb.	3,348,038 lb.	59,713	3,406	63,119	
	Meat—contd.	Salt Beef ...	Great Britain ...	16 cwt.	66 cwt.	82 cwt.	18	77	95
			South Australia ...	94 "	3 "	97 "	109	3	112
			Tasmania ...	.....	3 "	3 "	.....	4	4
			Queensland ...	869 cwt.	274 "	1,143 "	1,029	311	1,340
			South Sea Islands...	687 "	114 "	801 "	840	145	985
			New Caledonia ...	72 "	30 "	102 "	90	34	124
Fiji ...			6 "	65 "	71 "	7	68	75	
Mauritius ...			102 "	69 "	171 "	150	85	235	
Hong Kong ...			.....	24 "	24 "	.....	29	29	
Western Australia...			325 cwt.	278 "	603 "	368	311	679	
France ...			.....	6 "	6 "	.....	7	7	
China ...			.....	8 "	8 "	.....	9	9	
United States ...			.....	51 "	51 "	.....	60	60	
Italy ...			10 cwt.	25 "	35 "	15	30	45	
Java ...			.....	8 "	8 "	.....	8	8	
India ...	30 cwt.	13 "	43 "	40	15	55			
		2,211 cwt.	1,037 cwt.	3,248 cwt.	2,666	1,196	3,862		
Salt Pork ...	South Australia ...	.....	2 cwt.	2 cwt.	.....	4	4		
	Queensland ...	1½ cwt.	.....	1½ "	5	.....	5		
	South Sea Islands...	16 "	1½ cwt.	17½ "	40	5	45		
	New Caledonia ...	30 "	.....	30 "	78	.....	78		
	Hong Kong ...	24 "	7½ cwt.	31½ "	60	16	76		
	Manilla ...	.....	5½ "	5½ "	.....	10	10		
	Western Australia...	8½ cwt.	10 "	18½ "	19	27	46		
		80½ cwt.	26½ cwt.	107 cwt.	202	62	264		
Bacon and Ham ...	Great Britain ...	252 lb.	27,720 lb.	27,972 lb.	8	1,355	1,363		
	Victoria ...	866 "	25,796 "	26,662 "	29	1,245	1,274		
	South Australia ...	760 "	10,627 "	11,387 "	30	440	470		
	Tasmania ...	.....	1,631 "	1,631 "	.....	78	78		
	New Zealand ...	.....	4,963 "	4,963 "	.....	215	215		
	Queensland ...	736 lb.	72,539 "	3,275 "	29	3,316	3,345		
	South Sea Islands...	.....	4,375 "	74,375 "	.....	211	211		
	New Caledonia ...	1,573 lb.	5,111 "	6,684 "	63	246	309		
	Fiji ...	.....	1,034 "	1,034 "	.....	54	54		
	United States ...	.....	2,166 "	2,166 "	.....	104	104		
	Hong Kong ...	.....	3,020 "	3,020 "	.....	141	141		
Western Australia...	2,802 lb.	3,353 "	6,155 "	85	160	245			
		6,989 lb.	162,335 lb.	169,324 lb.	244	7,565	7,809		
Metal (Old) ...	Hong Kong ...	.....	2,652 cwt.	2,652 cwt.	.....	3,461	3,461		
Milk (Condensed and Preserved)	Great Britain ...	.....	38,736 "	38,736 lb.	.....	1,026	1,026		
	Victoria ...	.....	49,376 "	49,376 "	.....	1,145	1,145		
	South Australia ...	.....	13,752 "	13,752 "	.....	350	350		
	Tasmania ...	.....	7,632 "	7,632 "	.....	188	188		
	New Zealand ...	.....	2,496 "	2,496 "	.....	54	54		
	Queensland ...	.....	216,880 "	216,880 "	.....	5,310	5,310		
	South Sea Islands...	.....	3,792 "	3,792 "	.....	92	92		
	New Caledonia ...	.....	16,900 "	16,900 "	.....	431	431		
	Fiji ...	.....	9,840 "	9,840 "	.....	242	242		
	Western Australia...	.....	9,340 "	9,340 "	.....	236	236		
	Hong Kong ...	.....	1,176 "	1,176 "	.....	28	28		
United States ...	.....	2,232 "	2,232 "	.....	58	58			
Germany ...	.....	672 "	672 "	.....	16	16			
		.....	372,824 lb.	372,824 lb.	.....	9,176	9,176		

\* From 1st April to 7th December.

## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture	Total.
Minerals (not classified)	Great Britain	940 cwt.	.....	940 cwt.	£ 920	.....	£ 920
Mohair ... ..	Great Britain	1,637 lb.	.. .. .	1,637 lb.	80	.....	80
Molasses ... ..	Great Britain	12,487 cwt.	91 cwt.	12,578 lb.	5,871	82	5,953
	Victoria	14,106 cwt.	350 cwt.	14,456 cwt.	5,277	245	5,522
	South Australia	7 "	.. .. .	7 "	5	.....	5
	Tasmania	72 "	1 cwt.	73 "	44	2	46
	New Zealand	.....	2 "	2 "	.....	3	3
	Queensland	2,031 cwt.	405 "	2,436 "	1,058	393	1,451
	South Sea Islands	20 "	7 "	27 "	12	8	20
	New Caledonia	154 "	.....	154 "	65	.....	65
Fiji	7 "	.....	7 "	4	.....	4	
Western Australia	2 "	.....	2 "	2	.....	2	
		28,886 cwt.	856 cwt.	29,742 cwt.	12,338	733	13,071
Molybdenum ... ..	Great Britain	444½ cwt.	.. .. .	444½ cwt.	4,407	.....	4,407
Musical Instruments	Great Britain	.....	10 pkg.	10 pkg.	.....	360	360
	Victoria	.....	133 "	133 "	.....	2,429	2,429
	South Australia	.....	8 "	8 "	.....	307	307
	Tasmania	.....	10 "	10 "	.....	239	239
	New Zealand	.....	65 "	65 "	.....	1,689	1,689
	Queensland	.....	518 "	518 "	.....	11,823	11,823
	South Sea Islands	.....	2 "	2 "	.....	69	69
	New Caledonia	.....	1 "	1 "	.....	30	30
	Fiji	.....	11 "	11 "	.....	245	245
	Western Australia	.....	1 "	1 "	.....	50	50
	Hong Kong	.....	1 "	1 "	.....	28	28
Singapore	.....	1 "	1 "	.....	20	20	
		.....	761 pkg.	761 pkg.	.....	17,289	17,289
Mustard ... ..	Victoria	.....	3,081 lb.	3,081 lb.	.....	170	170
	South Australia	.....	576 "	576 "	.....	29	29
	Tasmania	.....	324 "	324 "	.....	20	20
	New Zealand	.....	96 "	96 "	.....	4	4
	Queensland	.....	23,137 "	23,137 "	.....	1,372	1,372
	South Sea Islands	.....	72 "	72 "	.....	4	4
	New Caledonia	.....	3,187 "	3,187 "	.....	173	173
	Fiji	.....	496 "	496 "	.....	30	30
Western Australia	.....	1,174 "	1,174 "	.....	52	52	
		.....	32,143 lb.	32,143 lb.	.....	1,854	1,854
Nails ... ..	Great Britain	.....	45 cwt.	45 cwt.	.....	115	115
	Victoria	.....	1,071 "	1,071 "	.....	845	845
	South Australia	.....	43 "	43 "	.....	53	53
	Tasmania	.....	34 "	34 "	.....	69	69
	New Zealand	.....	70 "	70 "	.....	152	152
	Queensland	.....	4,531 "	4,531 "	.....	4,872	4,872
	South Sea Islands	.....	117 "	117 "	.....	125	125
	New Caledonia	.....	563 "	563 "	.....	556	556
	Fiji	.....	254 "	254 "	.....	254	254
Western Australia	.....	86 "	86 "	.....	82	82	
New Guinea (British)	.....	6 "	6 "	.....	8	8	
		.....	6,820 cwt.	6,820 cwt.	.....	7,131	7,131
Naphtha ... ..	Victoria	.....	244 gallons	244 gallons	.....	50	50
	Queensland	152 gallons	70 "	222 "	21	14	35
	Fiji	.....	160 "	160 "	.....	24	24
		152 gallons	474 gallons	626 gallons	21	88	109
Nickel Ore ... ..	Great Britain	.....	12,560 cwt.	12,560 cwt.	.....	7,862	7,862
	Germany	.....	600 "	600 "	.....	300	300
		.....	13,160 cwt.	13,160 cwt.	.....	8,162	8,162
Oakum ... ..	South Australia	.....	8 pkg.	8 pkg.	.....	11	11
	Tasmania	.....	50 "	50 "	.....	44	44
	Queensland	.....	163 "	163 "	.....	185	185
	South Sea Islands	.....	7 "	7 "	.....	9	9
	New Caledonia	.....	45 "	45 "	.....	38	38
	Fiji	.....	31 "	31 "	.....	27	27
Western Australia	.....	14 "	14 "	.....	11	11	
		.....	318 pkg.	318 pkg.	.....	325	325

STATISTICS, 1886—TRADE AND COMMERCE.

EXPORTS—continued.

Articles.	Countries to which Exported	Quantities			Value		
		Produce and Manufacture of the Colony	British, Foreign, and other Colonial Produce and Manufacture	Total	Produce and Manufacture of the Colony	British, Foreign, and other Colonial Produce and Manufacture	Total.
Oars ...	South Australia	42 No.	42 No.	£ 18	£ 18	£ 18	
	Tasmania	12 No.	40 "	10	35	45	
	New Zealand	10 "	108 "	7	42	49	
	Queensland	40 "	778 "	18	311	329	
	South Sea Islands.	...	141 "	...	61	61	
	New Caledonia	48 No.	343 "	18	131	149	
	Fiji	...	748 "	...	323	323	
	Western Australia.	...	86 "	...	47	47	
		110 No.	2,246 No.	53	968	1,021	
Oatmeal ...	Great Britain	13 cwt.	13 cwt.	£ 13	£ 13	£ 13	
	Victoria	60 "	60 "	61	61	61	
	South Australia	256 "	256 "	214	214	214	
	New Zealand	2 "	2 "	2	2	2	
	Queensland	1,326 "	1,326 "	1,248	1,248	1,248	
	South Sea Islands	13 "	13 "	13	13	13	
	New Caledonia	6 "	6 "	6	6	6	
	Fiji	61 "	61 "	63	63	63	
Western Australia	33 "	33 "	34	34	34		
Hong Kong	28 "	28 "	26	26	26		
		1,798 cwt.	1,798 cwt.	1,680	1,680	1,680	
Black	Victoria	17 tuns	17 tuns	410	410	410	
	Tasmania	1 "	1 "	32	32	32	
	New Zealand	1 1/2 "	1 1/2 "	20	20	20	
	Queensland	15 1/2 "	15 1/2 "	543	543	543	
		34 tun	34 tuns	1,005	1,005	1,005	
Castor	Great Britain	192 gallons	192 gallons	29	29	29	
	Victoria	50,839 "	50,839 "	6,822	6,822	6,822	
	South Australia	944 "	944 "	149	149	149	
	Tasmania	1,782 "	1,782 "	249	249	249	
	New Zealand	4,549 "	4,549 "	593	593	593	
	Queensland	28,919 "	28,919 "	4,494	4,494	4,494	
	South Sea Islands	227 "	227 "	34	34	34	
	New Caledonia	3,347 "	3,347 "	502	502	502	
	Fiji	3,216 "	3,216 "	500	500	500	
	Hong Kong	3,950 "	3,950 "	521	521	521	
	France	664 "	664 "	100	100	100	
	United States	665 "	665 "	103	103	103	
	India	52 "	52 "	7	7	7	
Western Australia	689 "	689 "	102	102	102		
		100,035 gallons	100,035 gallons	14,205	14,205	14,205	
Oil ...	Great Britain	190 gallons	190 gallons	31	31	31	
	Victoria	5,010 "	5,010 "	746	746	746	
	South Australia	570 "	570 "	89	89	89	
	Tasmania	2,080 "	2,080 "	261	261	261	
	New Zealand	360 "	360 "	57	57	57	
	Queensland	10,810 "	10,810 "	1,714	1,714	1,714	
	South Sea Islands.	140 "	140 "	23	23	23	
	New Caledonia	2,970 "	2,970 "	471	471	471	
	Fiji	970 "	970 "	150	150	150	
	France	590 "	590 "	89	89	89	
	United States	740 "	740 "	111	111	111	
	Western Australia	350 "	350 "	54	54	54	
			24,780 gallons	24,780 gallons	3,796	3,796	3,796
Cocoa-nut ...	Victoria	1 1/4 tuns	1 1/4 tuns	10	10	10	
	Queensland	1 "	1 "	35	35	35	
	Fiji	4 "	4 "	121	121	121	
	France	4 "	4 "	120	120	120	
		9 1/4 tuns	9 1/4 tuns	286	286	286	
Kerosene ...	Great Britain	1,672 gallons	1,672 gallons	93	93	93	
	Victoria	18,992 "	18,992 "	1,094	1,094	1,094	
	South Australia	3,304 "	3,304 "	178	178	178	
	Tasmania	8,610 "	8,616 "	393	393	393	
	New Zealand	376 "	376 "	21	21	21	
	Queensland	200 gallons 47,806 "	48,006 "	2,502	2,514	2,514	
	South Sea Islands.	11,160 "	11,160 "	549	549	549	
	New Caledonia	37,728 "	37,728 "	1,946	1,946	1,946	
	Fiji	55,732 "	55,732 "	2,572	2,572	2,572	
	New Guinea (British)	32 "	32 "	2	2	2	
	Hong Kong	2,352 "	2,352 "	136	136	136	
	Western Australia	1,984 "	1,984 "	119	119	119	
	United States	1,440 "	1,440 "	82	82	82	
	200 gallons	191,194 gallons	191,394 gallons	12	9,687	9,699	

## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.			
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	
Oil— contd.	Salad and Olive	Great Britain ...	11 gallons	11 gallons	£ 6	£ 6	£ 6	
		Victoria ...	510 "	510 "	265	265	265	
		South Australia ...	287 "	287 "	141	141	141	
		South Sea Islands...	903 "	903 "	179	179	179	
		New Caledonia ...	63 "	63 "	17	17	17	
		Fiji ...	119 "	119 "	30	30	30	
		United States ...	29 "	29 "	14	14	14	
		Western Australia..	29 "	29 "	14	14	14	
		Queensland ...	982 "	982 "	383	383	383	
				2,933 gallons	2,933 gallons	1,049	1,049	1,049
Oil— contd.	All other kinds	Great Britain ...	272 gallons	405 gallons	677 gallons	40	69	109
		Victoria ...	19,530 "	14,205 "	33,735 "	923	2,479	3,402
		South Australia ...	527 "	527 "	109	109	109	
		Tasmania ...	77 gallons	1,506 "	1,583 "	9	172	181
		New Zealand ...	158 "	913 "	1,071 "	21	183	204
		Queensland ...	19,079 "	26,767 "	45,846 "	1,621	4,732	6,353
		South Sea Islands...	1,610 "	1,610 "	284	284	284	
		New Caledonia ...	49 gallons	3,075 "	3,124 "	7	537	544
		Fiji ...	96 "	3,504 "	3,600 "	9	603	612
		Honolulu ...	15 "	15 "	3	3	3	
		Hong Kong ...	1,445 "	1,445 "	238	238	238	
		United States ...	1,340 "	1,340 "	237	237	237	
		Western Australia..	333 "	333 "	62	62	62	
		Kaiser Wilhelm's Land	163 "	163 "	44	44	44	
		China ...	131 "	131 "	22	22	22	
		39,261 gallons	55,999 gallons	95,260 gallons	2,630	9,774	12,404	
Oils in bottles	Castor	Victoria ...	329 doz.	329 doz.	66	66	66	
		Tasmania ...	310 "	310 "	73	73	73	
		Queensland ...	543 "	543 "	151	151	151	
		New Caledonia ...	30 "	30 "	8	8	8	
		Fiji ...	5 "	5 "	4	4	4	
		Western Australia..	12 "	12 "	3	3	3	
				1,229 doz.	1,229 doz.	305	305	305
		Victoria ...	162 doz.	162 doz.	83	83	83	
		South Australia ...	1,568 "	1,568 "	383	383	383	
		Tasmania ...	60 "	60 "	12	12	12	
New Zealand ...	210 "	210 "	60	60	60			
Queensland ...	786 "	786 "	247	247	247			
South Sea Islands...	6 "	6 "	3	3	3			
Western Australia..	24 "	24 "	5	5	5			
		2,816 doz.	2,816 doz.	793	793	793		
Oils in bottles	All other	Victoria ...	260 doz.	260 doz.	55	55	55	
		South Australia ...	300 "	300 "	290	290	290	
		Tasmania ...	72 "	72 "	36	36	36	
		Queensland ...	18 "	18 "	24	24	24	
		Fiji ...	18 "	18 "	4	4	4	
				668 doz.	668 doz.	409	409	409
		Oilcake ...	Java ...	80 pkg.	80 pkg.	60	60	60
		Oilmen's Stores (various)	Great Britain ...	4 pkg.	4 pkg.	58	58	58
			Victoria ...	120 "	120 "	313	313	313
			South Australia ...	58 "	58 "	184	184	184
Tasmania ...	8 pkg.		9 "	11	5	16		
New Zealand ...	23 "		4 "	27	24	71		
Queensland ...	93 "		711 "	804	231	2,003		
South Sea Islands...	140 "		140 "	350	350	350		
New Caledonia ...	166 "		166 "	342	342	342		
Fiji ...	10 pkg.		138 "	148	32	351		
Western Australia..	14 "		280 "	294	30	877		
		148 pkg.	1,622 pkg.	1,770 pkg.	351	4,507	4,858	
Onions	South Australia ...	12 cwt.	151 cwt.	163 cwt.	5	58	63	
	New Zealand ...	929 "	929 "	328	328	328		
	Queensland ...	330 cwt.	4,832 "	5,162 "	142	1,547	1,689	
	South Sea Islands...	30 "	18 "	48	13	7	20	
	New Caledonia ...	776 "	1,424 "	2,200 "	274	523	797	
	Fiji ...	80 "	80 "	38	38	38		
	United States ...	296 "	296 "	90	90	90		
	Honolulu ...	20 "	20 "	7	7	7		
	Western Australia..	19 "	19 "	7	7	7		
			1,148 cwt.	7,769 cwt.	8,917 cwt.	434	2,605	3,039

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## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.
Opium ... ..	South Australia ... ..	.....	48 lb.	48 lb.	£	£	£
	Tasmania ... ..	.....	31 "	31 "	.....	120	120
	New Zealand ... ..	.....	192 "	192 "	.....	61	61
	Queensland ... ..	.....	2,058 "	2,058 "	.....	470	470
	South Sea Islands... ..	.....	62 "	62 "	.....	4,685	4,685
	New Caledonia ... ..	.....	110 "	110 "	.....	150	150
United States ... ..	.....	4,920 "	4,920 "	.....	304	304	
			7,421 lb.	7,421 lb.	.....	9,600	9,600
Oysters (Fresh) ... ..	Victoria ... ..	3,801 bags	82 bags	3,883 bags	6,564	112	6,676
	Tasmania ... ..	142 "	.....	142 "	251	.....	251
		3,943 bags	82 bags	4,025 bags	6,815	112	6,927
Painters' Materials ... ..	Queensland ... ..	1 pkg.	37 pkg.	38 pkg.	15	99	114
	New Caledonia ... ..	.....	5 "	5 "	.....	7	7
		1 pkg.	42 pkg.	43 pkg.	15	106	121
Paints and Colours in Oil ... ..	Great Britain ... ..	.....	17 cwt.	17 cwt.	.....	27	27
	Victoria ... ..	58 cwt.	526 "	584 "	127	772	899
	South Australia ... ..	.....	51 "	51 "	.....	90	90
	Tasmania ... ..	.....	19 "	19 "	.....	23	23
	New Zealand ... ..	13 cwt.	192 "	205 "	26	243	269
	Queensland ... ..	870 "	3,150 "	4,000 "	1,585	4,311	5,896
	South Sea Islands... ..	.....	222 "	222 "	.....	353	353
	New Caledonia ... ..	5 cwt.	286 "	291 "	10	524	534
	Fiji... ..	.....	299 "	299 "	.....	570	570
	Western Australia ... ..	.....	33 "	33 "	.....	61	61
	United States ... ..	.....	95 "	95 "	.....	160	160
	Hong Kong ... ..	.....	268 "	268 "	.....	509	509
	China ... ..	.....	14 "	14 "	.....	26	26
	Singapore ... ..	.....	32 "	32 "	.....	56	56
		946 cwt.	5,184 cwt.	6,130 cwt.	1,748	7,725	9,473
Books and Periodicals, and other Literature ... ..	Great Britain ... ..	49 pkg.	39 pkg.	88 pkg.	1,606	783	2,389
	Victoria ... ..	79 "	409 "	488 "	1,783	10,415	12,198
	South Australia ... ..	16 "	50 "	66 "	738	1,444	2,182
	Tasmania ... ..	13 "	28 "	41 "	148	644	792
	New Zealand ... ..	34 "	281 "	315 "	209	6,454	6,663
	Queensland ... ..	99 "	1,003 "	1,102 "	1,446	17,988	19,434
	South Sea Islands... ..	.....	70 "	70 "	.....	609	609
	New Caledonia ... ..	1 pkg.	12 "	13 "	2	118	120
	Fiji ... ..	4 "	37 "	41 "	24	396	420
	Western Australia ... ..	7 "	3 "	10 "	87	23	110
	United States ... ..	9 "	1 "	10 "	54	8	62
	Ceylon ... ..	.....	1 "	1 "	.....	5	5
	Honolulu ... ..	.....	1 "	1 "	.....	2	2
	Mauritius ... ..	.....	2 "	2 "	.....	12	12
India ... ..	1 pkg.	.....	1 "	15	.....	15	
Germany ... ..	.....	1 "	1 "	.....	601	60	
		312 pkg.	1,938 pkg.	2,250 pkg.	6,112	38,961	45,073
Bags—Plain ... ..	South Australia ... ..	9½ cwt.	10 cwt.	19½ cwt.	12	12	24
	Tasmania ... ..	59 "	45 "	104 "	80	72	152
	New Zealand ... ..	10 "	41½ "	51½ "	15	55	70
	Queensland ... ..	75 "	137¾ "	212¾ "	76	141	217
	New Caledonia ... ..	51 "	53¾ "	104¾ "	64	54	118
	Fiji ... ..	29 "	5 "	34 "	40	6	46
		233½ cwt.	292½ cwt.	526 cwt.	287	340	627
Brown and Wrapping ... ..	Great Britain ... ..	.....	20 cwt.	20 cwt.	.....	24	24
	Victoria ... ..	.....	408 "	408 "	.....	484	484
	South Australia ... ..	.....	71 "	71 "	.....	59	59
	Tasmania ... ..	87 cwt.	50 "	137 "	119	103	222
	Queensland ... ..	251 "	1,341 "	1,592 "	307	1,781	2,088
	South Sea Islands... ..	.....	14 "	14 "	.....	21	21
	New Caledonia ... ..	166 cwt.	206 "	372 "	219	294	513
	Fiji... ..	18 "	24 "	42 "	21	31	52
Western Australia ... ..	.....	15 "	15 "	.....	18	18	
United States ... ..	.....	18 "	18 "	.....	40	40	
		522 cwt.	2,167 cwt.	2,689 cwt.	666	2,855	3,521
Circulars, advertising matter, &c. ... ..	South Australia ... ..	.....	432 lb.	432 lb.	.....	15	15
	New Zealand ... ..	.....	159 "	159 "	.....	10	10
	Queensland ... ..	.....	241 "	241 "	.....	13	13
			.....	832 lb.	832 lb.	.....	38

Paper, Books, and Stationery. [See also Stationery "Sundries."]

## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.			
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	
Stationery—contd.	Printing, News, &c. ...	Victoria ...	50 pkg.	50 pkg.	£	£	£	
		South Australia ...	4 "	4 "	717	45	717	
		Tasmania ...	6 "	6 "	45	48	45	
		New Zealand ...	37 "	37 "	48	419	48	
		Queensland ...	21 pkg.	183 "	84	1,674	419	
		New Caledonia ...	24 "	24 "	227	227	1,758	
		Fiji ...	10 "	10 "	99	99	99	
			21 pkg.	314 pkg.	335 pkg.	84	3,229	3,313
	Writing, Note, Envelopes, Fancy, &c. ...	Victoria ...	3,932 lb.	3,932 lb.	204	204	204	
		Tasmania ...	1,829 "	1,829 "	108	108	108	
New Zealand ...		2,722 "	2,722 "	117	117	117		
Queensland ...		41,803 "	41,803 "	1,736	1,736	1,736		
		Fiji ...	217 "	217 "	24	24	24	
			50,503 lb.	50,503 lb.	2,189	2,189	2,189	
Paper-hangings ...	Great Britain ...	4 pkg.	4 pkg.	100	100	100		
	Victoria ...	14 "	14 "	38	38	38		
	South Australia ...	2 "	2 "	12	12	12		
	Tasmania ...	2 "	2 "	13	13	13		
	New Zealand ...	1 "	1 "	2	2	2		
	Queensland ...	10 "	10 "	42	42	42		
	New Caledonia ...	1 "	1 "	10	10	10		
	United States ...	1 "	1 "	5	5	5		
		35 pkg.	35 pkg.	222	222	222		
Pearl-shell ...	Great Britain ...	411,548 lb.	411,548 lb.	22,074	22,074	22,074		
	South Sea Islands ...	252 "	252 "	17	17	17		
	France ...	104,640 "	104,640 "	5,873	5,873	5,873		
	Germany ...	3,024 "	3,024 "	145	145	145		
	United States ...	11,892 "	11,892 "	740	740	740		
	Trieste ...	48,774 "	48,774 "	2,765	2,765	2,765		
			580,130 lb.	580,130 lb.	31,614	31,614	31,614	
Pepper and Spices ...	Victoria ...	1,117 lb.	1,117 lb.	50	50	50		
	South Australia ...	633 "	633 "	114	114	114		
	Tasmania ...	42 "	42 "	3	3	3		
	New Zealand ...	3,894 "	3,894 "	168	168	168		
	Queensland ...	3,169 "	3,169 "	200	200	200		
	South Sea Islands ...	110 "	110 "	6	6	6		
	New Caledonia ...	11,276 "	11,276 "	377	377	377		
	Fiji ...	5,312 "	5,312 "	205	205	205		
	Western Australia ...	249 "	249 "	16	16	16		
			25,802 lb.	25,802 lb.	1,139	1,139	1,139	
Phormium Tenax ...	Victoria ...	2 pkg.	2 pkg.	5	5	5		
	Queensland ...	122 "	122 "	348	348	348		
		124 pkg.	124 pkg.	353	353	353		
Photographic Material	Great Britain ...	1 pkg.	1 pkg.	120	120	120		
	Victoria ...	168 "	168 "	2,120	2,120	2,120		
	South Australia ...	4 "	4 "	31	31	31		
	Tasmania ...	1 "	1 "	10	10	10		
	New Zealand ...	38 "	38 "	346	346	346		
	Queensland ...	209 "	209 "	1,810	1,810	1,810		
	South Sea Islands ...	6 "	6 "	75	75	75		
	New Caledonia ...	15 "	15 "	101	101	101		
	Fiji ...	29 "	29 "	153	153	153		
	Western Australia ...	1 "	1 "	18	18	18		
		Aden ...	9 "	9 "	89	89	89	
		481 pkg.	481 pkg.	4,873	4,873	4,873		
Pickles and Sauces ...	Great Britain ...	80 doz.	80 doz.	33	33	33		
	Victoria ...	751 "	751 "	264	264	264		
	South Australia ...	404 "	404 "	205	205	205		
	Tasmania ...	727 "	727 "	227	227	227		
	New Zealand ...	306 "	306 "	190	190	190		
	Queensland ...	7,265 "	7,265 "	3,127	3,127	3,127		
	South Sea Islands ...	329 "	329 "	146	146	146		
	New Caledonia ...	339 "	339 "	133	133	133		
	Fiji ...	448 "	448 "	198	198	198		
	Western Australia ...	490 "	490 "	214	214	214		
		11,139 doz.	11,139 doz.	4,737	4,737	4,737		

EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.
					£	£	£
Pictures, Paintings and Photographs .....	Great Britain ...	4 pkg.	35 pkg.	39 pkg.	65	2,275	2,340
	Victoria ...	3 "	44 "	47 "	26	2,414	2,440
	South Australia ...	2 "	10 "	12 "	23	910	933
	Tasmania ...	2 "	14 "	16 "	26	239	265
	New Zealand ...	4 "	6 "	10 "	140	89	229
	Queensland ...	3 "	106 "	109 "	27	1,136	1,163
	South Sea Islands...	2 "	2 "	2 "	.....	26	26
	New Caledonia ...	.....	1 "	1 "	.....	12	12
	Fiji ...	.....	5 "	5 "	.....	53	53
	Hong Kong ...	.....	1 "	1 "	.....	13	13
	Western Australia .....	.....	1 "	1 "	.....	10	10
	United States ...	12 pkg.	3 "	15 "	65	39	104
	France ...	.....	1 "	1 "	.....	80	80
	India ...	1 pkg.	1 "	2 "	.....	50	53
Singapore ...	.....	1 "	1 "	.....	20	20	
		31 pkg.	231 pkg.	262 pkg.	375	7,366	7,741
Pipes (Tobacco) ...	Great Britain ...	.....	1 pkg.	1 pkg.	.....	25	25
	Victoria ...	.....	66 "	66 "	.....	778	778
	South Australia ...	.....	2 "	2 "	.....	8	8
	Tasmania ...	.....	1 "	1 "	.....	37	37
	New Zealand ...	.....	2 "	2 "	.....	83	83
	Queensland ...	.....	238 "	238 "	.....	1,521	1,521
	South Sea Islands .....	.....	360 "	360 "	.....	275	275
	New Caledonia ...	.....	190 "	190 "	.....	103	103
Fiji ...	.....	130 "	130 "	.....	102	102	
Western Australia..	.....	13 "	13 "	.....	57	57	
		.....	1,003 pkg.	1,003 pkg.	.....	2,989	2,989
Pitch, Tar, and Resin	Victoria ...	.....	92 pkg.	92 pkg.	.....	73	73
	South Australia ...	5 pkg.	217 "	222 "	3	223	226
	New Zealand ...	.....	28 "	28 "	.....	55	55
	Queensland ...	441 pkg.	752 "	1,193 "	312	708	1,020
	South Sea Islands .....	21 "	9 "	30 "	12	11	23
	New Caledonia ...	80 "	106 "	186 "	49	81	130
	Fiji ...	84 "	33 "	117 "	92	46	138
Western Australia..	.....	5 "	5 "	.....	7	7	
		631 pkg.	1,242 pkg.	1,873 pkg.	468	1,204	1,672
Plants and Seeds ...	Great Britain ...	167 pkg.	3 pkg.	170 pkg.	798	320	1,118
	Victoria ...	571 "	108 "	679 "	1,174	447	1,621
	South Australia ...	89 "	2 "	91 "	339	15	354
	Tasmania ...	93 "	10 "	103 "	353	108	461
	New Zealand ...	145 "	10 "	155 "	559	87	646
	Queensland ...	1,520 "	158 "	1,678 "	5,474	508	5,982
	South Sea Islands...	2 "	.....	2 "	5	.....	5
	New Caledonia ...	35 "	11 pkg.	46 "	101	66	167
	Fiji ...	20 "	4 "	24 "	72	34	106
	Western Australia..	2 "	1 "	3 "	7	3	10
	Honolulu ...	10 "	.....	10 "	28	.....	28
	France ...	50 "	.....	50 "	389	.....	389
	United States ...	10 "	532 pkg.	542 "	47	1,311	1,358
	India ...	10 "	.....	10 "	61	.....	61
Italy ...	3 "	.....	3 "	51	.....	51	
Germany ...	.....	1 pkg.	1 "	.....	2	2	
		2,727 pkg.	840 pkg.	3,567 pkg.	9,458	2,901	12,359
Plaster and Plaster of Paris ...	Victoria ...	.....	1 brl.	1 brl.	.....	1	1
	New Zealand ...	.....	50 "	50 "	.....	50	50
	Queensland ...	.....	309 "	309 "	.....	244	244
	New Caledonia ...	.....	26 "	26 "	.....	16	16
		.....	386 brl.	386 brl.	.....	311	311
Playing Cards ...	Queensland ...	.....	120 doz. pks.	120 doz. pks.	.....	9	9
Potatoes ...	Victoria ...	180 cwt.	200 cwt.	380 cwt.	44	30	74
	South Australia ...	140 "	771 "	911 "	34	216	250
	Tasmania ...	.....	20 "	20 "	.....	5	5
	Queensland ...	5,420 cwt.	103,889 "	109,309 "	1,498	23,992	25,490
	South Sea Islands...	122 "	43 "	165 "	32	13	45
	New Caledonia ...	2,626 "	10,936 "	13,562 "	634	2,698	3,332
	Fiji ...	.....	612 "	612 "	.....	143	143
Western Australia..	100 cwt.	344 "	444 "	14	86	100	
		8,588 cwt.	116,815 cwt.	125,403 cwt.	2,256	27,183	29,439



## EXPORTS—continued.

Articles.	Countries. to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.
Preserves ...	Great Britain ...		3,891 lb.	3,891 lb.	£	£	£
	Victoria ...		38,901 "	38,901 "		112	112
	South Australia ...		6,328 "	6,328 "		956	956
	Tasmania ...		1,922 "	1,922 "		159	159
	New Zealand ...		934 "	934 "		52	52
	Queensland ...		127,242 "	127,242 "		41	41
	South Sea Islands...		3,888 "	3,888 "		3,644	3,644
	New Caledonia ...		1,506 "	1,506 "		117	117
	Fiji ...		4,804 "	4,804 "		44	44
	United States ...		2,400 "	2,400 "		133	133
	Hong Kong ...		367 "	367 "		70	70
	India ...		1,152 "	1,152 "		8	8
	Western Australia		3,512 "	3,512 "		34	34
France ...		692 "	692 "		91	91	
Kaiser Wilhelm's Land		816 "	816 "		17	17	
			198,355 lb.	198,355 lb.		5,499	5,499
Printers' Material ...	Great Britain ...		7 pkg.	7 pkg.		158	158
	Victoria ...	13 pkg.	121 "	134 "	42	783	825
	South Australia ...		14 "	14 "		229	229
	Tasmania ...		4 "	4 "		35	35
	New Zealand ...		221 "	221 "		2,240	2,240
	Queensland ...		494 "	494 "		3,457	3,457
	New Caledonia ...		1 "	1 "		4	4
Fiji ...		34 "	34 "		305	305	
		13 pkg.	896 pkg.	909 pkg.	42	7,211	7,253
Putty... ...	Victoria ...		60 cwt.	60 cwt.		55	55
	Queensland ...	68 cwt.	11 "	79 "	96	13	109
	Fiji ...		2 "	2 "		2	2
	Western Australia		7 "	7 "		8	8
		68 cwt.	80 cwt.	148 cwt.	96	78	174
Quicksilver ...	Queensland ...		69 bottles	69 bottles		524	524
Rails (Iron and Steel)	Tasmania ...		794 No.	794 No.		352	352
	Queensland ...		3,266 "	3,266 "		961	961
			4,060 No.	4,060 No.		1,313	1,313
Rice ...	Great Britain ...		51 cwt.	51 cwt.		51	51
	Victoria ...		1,417 "	1,417 "		964	964
	South Australia ...		297 "	297 "		224	224
	Tasmania ...		315 "	315 "		188	188
	New Zealand ...		512 "	512 "		330	330
	Queensland ...		3,834 "	3,834 "		2,535	2,535
	South Sea Islands...		3,272 "	3,272 "		2,053	2,053
	New Caledonia ...		7,774 "	7,774 "		4,431	4,431
	Fiji ...		12,830 "	12,830 "		7,298	7,298
	Hong Kong ...		214 "	214 "		138	138
	United States ...		96 "	96 "		84	84
Western Australia		523 "	523 "		349	349	
New Guinea (British)		22 "	22 "		17	17	
			31,157 cwt.	31,157 cwt.		18,662	18,662
Rice Flour ...	Queensland ...		200 lb.	200 lb.		6	6
Saddlery and Harness	Great Britain ...	3 pkg.	10 pkg.	13 pkg.	30	283	313
	Victoria ...	2 "	53 "	55 "	26	497	523
	South Australia ...	8 "	13 "	21 "	161	152	313
	Tasmania ...	3 "	3 "	6 "	45	32	77
	New Zealand ...	3 "	1 "	4 "	37	5	42
	Queensland ...	264 "	455 "	719 "	3,596	5,758	9,354
	South Sea Islands...	6 "	1 "	7 "	77	7	84
	New Caledonia ...	33 "	9 "	42 "	398	91	489
	Fiji ...	28 "	7 "	35 "	251	88	339
	Western Australia...	28 "	15 "	43 "	375	116	491
	Honolulu ...	4 "		4 "	256		256
	United States ...		3 pkg.	3 "		30	30
	Java ...	1 "		1 "	8		8
		383 pkg.	570 pkg.	953 pkg.	5,260	7,059	12,319
Sago ...	Victoria ...		290 lb.	290 lb.		5	4
	South Australia ...		148 "	148 "		2	2
	New Zealand ...		855 "	855 "		14	14
	Queensland ...		3,897 "	3,897 "		39	39
	New Caledonia ...		56 "	56 "		1	1
	Fiji ...		1,239 "	1,239 "		15	15
Western Australia..		203 "	203 "		2	2	
			6,688 lb.	6,688 lb.		78	78

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## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.
Salt ... ..	Great Britain .....		2,675 cwt.	2,675 cwt.	£	£	£
	South Australia ...		347 "	347 "		405	405
	Tasmania ...		586 "	586 "		63	63
	New Zealand .....		12 "	12 "		59	59
	Queensland .....		7,496 "	7,496 "		3	3
	South Sea Islands...		252 "	252 "		1,094	1,094
	New Caledonia ...		5,909 "	3,909 "		59	59
	Fiji ...		660 "	660 "		827	827
	Western Australia .....		293 "	293 "		138	138
				18,230 cwt.	18,230 cwt.		2,705
Salt (Rock) ... ..	Victoria ...		840 cwt.	840 cwt.		107	107
	Tasmania ...		65 "	65 "		10	10
	Queensland .....		80 "	80 "		13	13
	New Caledonia ...		13 "	13 "		2	2
	Fiji ...		70 "	70 "		11	11
	Western Australia .....		20 "	20 "		3	3
			1,088 cwt.	1,088 cwt.		146	146
Salt-petre ... ..	Great Britain ...		845 cwt.	845 cwt.		845	845
	South Australia ...		6 "	6 "		8	8
	Queensland .....		4 "	4 "		6	6
	New Caledonia ...		12 "	12 "		16	16
	Fiji ...		2 "	2 "		3	3
			869 cwt.	869 cwt.		878	878
Sandalwood ... ..	Hong Kong ...		1,797 cwt.	1,797 cwt.		1,163	1,163
Sarsaparilla ... ..	South Australia ...		83 gallons	83 gallons		72	72
	Tasmania ...		28 "	28 "		29	29
	Queensland .....		193 "	193 "		159	159
	South Sea Islands...		22 "	22 "		24	24
	New Caledonia ...		12 $\frac{3}{4}$ "	12 $\frac{3}{4}$ "		14	14
	Fiji ...		6 $\frac{1}{4}$ "	6 $\frac{1}{4}$ "		7	7
			345 gallons	345 gallons		305	305
Sashes ... ..	Victoria ...	277 No.	.....	277 No.	67	.....	67
	Queensland ...	1 "	50 No.	51 "	2	39	41
	South Sea Islands...	10 "	.....	10 "	7	.....	7
	Western Australia .....	312 "	8 No.	320 "	147	4	151
			600 No.	58 No.	658 No.	223	43
Sewing Machines ... ..	Great Britain ...		316 pkg.	316 pkg.		735	735
	Victoria ...		212 "	212 "		822	822
	South Australia ...		71 "	71 "		102	102
	Tasmania ...		4 "	4 "		17	17
	New Zealand .....		152 "	152 "		965	965
	Queensland .....		788 "	788 "		3,288	3,288
	South Sea Islands...		69 "	69 "		304	304
	New Caledonia ...		11 "	11 "		38	38
	Fiji ...		45 "	45 "		270	270
	Western Australia .....		15 "	15 "		70	70
Germany ...		3 "	3 "		30	30	
			1,686 pkg.	1,686 pkg.		6,641	6,641
Ship Chandlery ... ..	Victoria ...		2 pkg.	2 pkg.		23	23
	South Australia ...		2 "	2 "		16	16
	Tasmania ...		5 "	5 "		23	23
	Queensland .....		155 "	155 "		1,026	1,026
	South Sea Islands...		5 "	5 "		17	17
	New Caledonia ...		3 "	3 "		14	14
	Fiji ...		12 "	12 "		23	23
			184 pkg.	184 pkg.		1,142	1,142
Shooks and Staves ... ..	Victoria ...	226 pkg.	1,264 pkg.	1,490 pkg.	113	726	839
	South Australia ...	59 "	37 "	96 "	20	13	33
	Tasmania ...	409 "	159 "	568 "	200	65	265
	New Zealand .....		47 "	47 "		42	42
	Queensland .....	1,004 pkg.	583 "	1,587 "	633	321	954
	South Sea Islands...	11 "	.....	11 "	6	.....	6
	New Caledonia ...		50 pkg.	50 "		15	15
	Fiji ...	888 pkg.	.....	888 "	582	.....	582
	Petropaulovski ...	150 "	.....	150 "	75	.....	75
Germany ...	14 "	.....	14 "	5	.....	5	
		2,761 pkg.	2,140 pkg.	4,901 pkg.	1,634	1,182	2,816

EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value			
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	
Shutters ... ..	Western Australia..	16 No.	.....	16 No.	£ 8	.....	£ 8	
Silver.	Ingots ... ..	Great Britain ...	590,197 8 oz. dwt.	7,667 3 oz. dwt.	597,864 11 oz. dwt.	112,672	1,550	114,222
		Victoria ...	14,738 2	10,475 0	25,213 3	2,910	1,870	4,780
		South Australia ...	410,256 0	.....	410,256 0	81,910	.....	81,910
		Queensland ...	50 0	.....	50 0	12	.....	12
	India ...	192 0	.....	192 0	40	.....	40	
			1,015,433 10	18,142 3	1,033,575 13	197,544	3,420	200,964
	Lead ... ..	Great Britain ...	2,290 cwt.	985 cwt.	3,275 cwt.	3,629	2,700	6,329
		South Australia ...	58,691 "	.....	58,691 "	222,921	.....	222,921
			60,981 cwt.	985 cwt.	61,966 cwt.	226,550	2,700	229,250
	Ore ... ..	Great Britain ...	547 cwt.	.....	547 cwt.	252	.....	252
Victoria ...		63 "	.....	63 "	215	.....	215	
South Australia ...		34,223 "	.....	34,223 "	67,233	.....	67,233	
United States ...		38 "	.....	38 "	35	.....	35	
Germany ...	190 "	.....	190 "	200	.....	200		
		35,061 cwt.	.....	35,061 cwt.	67,935	.....	67,935	
Silver-plate & Plated-ware ... ..	Great Britain ...	.....	37 pkg.	37 pkg.	.....	3,439	3,439	
	Victoria ...	.....	145 "	145 "	.....	6,453	6,453	
	South Australia ...	.....	17 "	17 "	.....	277	277	
	Tasmania ...	.....	7 "	7 "	.....	70	70	
	New Zealand ...	.....	19 "	19 "	.....	196	196	
	Queensland ...	2 pkg.	146 "	148 "	114	3,462	3,576	
	New Caledonia ...	.....	2 "	2 "	.....	13	13	
	Fiji ...	.....	4 "	4 "	.....	67	67	
	Western Australia..	.....	2 "	2 "	.....	33	33	
	India ...	.....	15 "	15 "	.....	532	532	
United States ...	.....	1 "	1 "	.....	16	16		
Trieste ...	.....	1 "	1 "	.....	150	150		
		2 pkg.	396 pkg.	398 pkg.	114	14,708	14,822	
Horned Cattle	Great Britain ...	107,203 No.	.....	107,203 No.	93,287	.....	93,287	
	Victoria ...	58,694 "	.....	58,694 "	50,960	.....	50,960	
	South Australia ...	1,694 "	.....	1,694 "	872	.....	872	
	Tasmania ...	5,199 "	.....	5,199 "	4,695	.....	4,695	
	Queensland ...	1,349 "	.....	1,349 "	675	.....	675	
	United States ...	6,050 "	.....	6,050 "	5,875	.....	5,875	
	France ...	270 "	.....	270 "	171	.....	171	
	Germany ...	100 "	.....	100 "	80	.....	80	
		180,559 No.	.....	180,559 No.	156,615	.....	156,615	
Horses... ..	Great Britain ...	16 No.	.....	16 No.	4	.....	4	
Kangaroo	Great Britain ...	748 pkg.	.....	748 pkg.	34,822	.....	34,822	
	Victoria ...	546 "	.....	546 "	3,821	.....	3,821	
	South Australia ...	132 "	.....	132 "	859	.....	859	
	Tasmania ...	3 "	.....	3 "	21	.....	21	
	United States ...	576 "	.....	576 "	22,177	.....	22,177	
	France ...	10 "	.....	10 "	651	.....	651	
Germany ...	1 "	.....	1 "	15	.....	15		
		2,016 pkg.	.....	2,016 pkg.	62,366	.....	62,366	
Sheep ... ..	Great Britain ...	3,920 pkg.	.....	3,920 pkg.	40,234	.....	40,234	
	Victoria ...	3,170 "	.....	3,170 "	7,933	.....	7,933	
	South Australia ...	633 "	.....	633 "	2,924	.....	2,924	
	Queensland ...	107 "	.....	107 "	542	.....	542	
	France ...	2,035 "	.....	2,035 "	15,348	.....	15,348	
	United States ...	25 "	.....	25 "	247	.....	247	
	Hong Kong ...	1 "	.....	1 "	5	.....	5	
		9,891 pkg.	.....	9,891 pkg.	67,233	.....	67,233	
All other	Great Britain ...	288 pkg.	.....	288 pkg.	12,427	.....	12,427	
	Victoria ...	1,489 "	.....	1,489 "	4,063	.....	4,063	
	South Australia ...	57 "	.....	57 "	111	.....	111	
	Tasmania ...	11 "	.....	11 "	24	.....	24	
	New Zealand ...	4 "	.....	4 "	14	.....	14	
	France ...	21 "	.....	21 "	130	.....	130	
	United States ...	329 "	.....	329 "	877	.....	877	
	India ...	1 "	.....	1 "	11	.....	11	
	Java ...	2 "	.....	2 "	10	.....	10	
			2,202 pkg.	.....	2,202 pkg.	17,667	.....	17,667

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## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.			
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	
Slates {	Roofing ...	Queensland ...	.....	10,000 No.	10,000 No.	£	£ 36	£ 36
	Slabs ...	Queensland ...	.....	4 No.	4 No.	.....	18	18
Toilet, fancy, and scented.	Victoria ...	.....	1,314 lb.	1,314 lb.	.....	141	141	
	South Australia ...	.....	420 "	420 "	.....	48	48	
	Tasmania ...	.....	131 "	131 "	.....	16	16	
	New Zealand ...	.....	120 "	120 "	.....	15	15	
	Queensland ...	.....	3,066 lb.	2,764 "	5,830 "	105	172	277
	New Caledonia ...	.....	30 "	30 "	.....	4	4	
	Fiji ...	.....	36 "	36 "	.....	2	2	
	United States ...	.....	1,309 "	1,309 "	.....	70	70	
	Honolulu ...	.....	112 "	112 "	.....	11	11	
				3,066 lb.	6,236 lb.	9,302 lb.	105	479
Soap..	Victoria ...	.....	85 cwt.	85 cwt.	.....	77	77	
	South Australia ...	.....	27 cwt.	25 "	52 "	30	50	80
	Mew Zealand ...	.....	10 "	10 "	.....	12	12	
	Queensland ...	.....	163 cwt.	205 "	368 "	164	228	392
	South Sea Islands...	.....	695 "	.....	695 "	630	.....	630
	New Caledonia ...	.....	2,285 "	.....	2,285 "	1,974	.....	1,974
	Fiji ...	.....	74 "	7 cwt.	81 "	86	8	94
	Western Australia..	.....	51 "	.....	51 "	51	.....	51
	Mauritius ...	.....	1,150 "	.....	1,150 "	1,176	.....	1,176
				4,445 cwt.	332 cwt.	4,777 cwt.	4,111	375
Stock ...	Great Britain ...	.....	768 cwt.	.....	768 cwt.	619	.....	619
	Belgium ...	.....	151 "	.....	151 "	91	.....	91
				919 cwt.	.....	919 cwt.	710	.....
Specimens of Natural History ..	Great Britain ...	.....	36 pkg.	10 pkg.	46 pkg.	535	229	764
	Victoria ...	.....	2 "	16 "	18 "	8	65	73
	South Australia ...	.....	1 "	.....	1 "	7	.....	7
	Tasmania ...	.....	1 "	.....	1 "	3	.....	3
	New Zealand ...	.....	1 "	.....	1 "	3	.....	3
	Queensland ...	.....	1 "	.....	1 "	5	.....	5
	France ...	.....	.....	1 pkg.	1 "	.....	20	20
	India ...	.....	.....	1 pkg.	1 "	.....	5	5
	Manila ...	.....	.....	1 pkg.	1 "	.....	10	10
	Germany ...	.....	.....	1 "	1 "	.....	10	10
			43 pkg.	29 pkg.	72 pkg.	566	334	900
Spirits.	Brandy ...	Great Britain ...	.....	42 gallons	42 gallons	.....	35	35
		Victoria ...	.....	6,298 "	6,298 "	.....	3,253	3,253
		South Australia ...	.....	893 "	893 "	.....	444	444
		Tasmania ...	.....	1,259 "	1,259 "	.....	502	502
		New Zealand ...	.....	712 "	712 "	.....	426	426
		Queensland ...	.....	38,123 "	38,123 "	.....	20,114	20,114
		South Sea Islands..	.....	365 "	365 "	.....	192	192
		New Caledonia ...	.....	486 "	486 "	.....	199	199
		Fiji ...	.....	396 "	396 "	.....	297	297
		United States ...	.....	181 "	181 "	.....	144	144
		Honolulu ...	.....	374 "	374 "	.....	247	247
		France ...	.....	96 "	96 "	.....	76	76
		Italy ...	.....	14 "	14 "	.....	14	14
		Hong Kong	.....	52 "	52 "	.....	34	34
		New Guinea, British	.....	2 "	2 "	.....	1	1
Western Australia..	.....	1,192 "	1,192 "	.....	645	645		
			50,485 gallons	50,485 gallons	.....	26,623	26,623	
Geneva and Schnapps ...	Great Britain ...	.....	102 gallons	102 gallons	.....	28	28	
	Victoria ...	.....	1,801 "	1,801 "	.....	765	765	
	South Australia ...	.....	231 "	231 "	.....	45	45	
	Tasmania ...	.....	1,114 "	1,114 "	.....	535	535	
	New Zealand ...	.....	119 "	119 "	.....	26	26	
	Queensland ...	.....	7,546 "	7,546 "	.....	3,071	3,071	
	South Sea Islands...	.....	1,389 "	1,389 "	.....	335	335	
	New Caledonia ...	.....	2,493 "	2,493 "	.....	507	507	
	Fiji ...	.....	251 "	251 "	.....	55	55	
	Western Australia..	.....	1,126 "	1,126 "	.....	272	272	
United States ...	.....	221 "	221 "	.....	55	55		
Honolulu ...	.....	484 "	484 "	.....	118	118		
			16,877 gallons	16,877 gallons	.....	5,758	5,758	

## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.
Gin ...	Victoria ...		14 gallons	14 gallons	£ 7	£ 7	
	South Australia ...		216 "	216 "	70	70	
	New Zealand ...		18 "	18 "	7	7	
	Queensland ...		324 "	324 "	137	137	
	South Sea Islands...		21 "	21 "	6	6	
	Fiji ...		10 "	10 "	4	4	
	New Caledonia...		25 "	25 "	11	11	
	Western Australia...		108 "	108 "	64	64	
	Honolulu ...		80 "	80 "	27	27	
				816 gallons	816 gallons	333	333
Liqueurs ...	Great Britain ...		4 gallons	4 gallons	2	2	
	Victoria ...		243 "	243 "	192	192	
	Tasmania ...		6 "	6 "	7	7	
	New Zealand ...		45 "	45 "	38	38	
	Queensland ...		174 "	174 "	161	161	
	South Sea Islands...		8 "	8 "	12	12	
	New Caledonia ...		60 "	60 "	53	53	
	Fiji ...		3 "	3 "	3	3	
	Italy ...		234 "	234 "	169	169	
			777 gallons	777 gallons	637	637	
Methylated ...	South Australia ...		58 gallons	58 gallons	13	13	
	Tasmania ...		30 "	30 "	6	6	
	New Zealand ...		311 "	311 "	63	63	
	Queensland ...		5 "	5 "	1	1	
	Fiji ...		152 "	152 "	30	30	
			556 gallons	556 gallons	113	113	
Spirits—contd. Perfumed & Perfumed Waters	Great Britain ...		5 gallons	5 gallons	9	9	
	Victoria ...		$\frac{1}{2}$ "	$\frac{1}{2}$ "	4	4	
	South Australia ...		3 "	3 "	6	6	
	Tasmania ...		20 $\frac{1}{2}$ "	20 $\frac{1}{2}$ "	39	39	
	Queensland ...		147 $\frac{1}{2}$ "	147 $\frac{1}{2}$ "	311	311	
	South Sea Islands...		40 $\frac{1}{2}$ "	40 $\frac{1}{2}$ "	100	100	
	Fiji ...		45 $\frac{1}{2}$ "	45 $\frac{1}{2}$ "	150	150	
	Western Australia..		1 $\frac{1}{4}$ "	1 $\frac{1}{4}$ "	15	15	
	Hong Kong ...		2 "	2 "	4	4	
	Honolulu ...		6 "	6 "	11	11	
			272 gallons	272 gallons	649	649	
Rum ...	Great Britain ...		299 gallons	299 gallons	57	57	
	Victoria ...		2,756 "	2,756 "	547	547	
	South Australia ...		815 "	815 "	191	191	
	Tasmania ...		399 "	399 "	56	56	
	New Zealand ...		822 "	822 "	154	154	
	Queensland ...		8,704 "	8,704 "	1,936	1,936	
	South Sea Islands...		282 "	282 "	50	50	
	New Caledonia ...		259 "	259 "	42	42	
	Fiji ...		149 "	149 "	33	33	
	Western Australia..		642 "	642 "	153	153	
	United States ...		194 "	194 "	41	41	
	Honolulu ...		157 "	157 "	45	45	
	Mauritius ...		69 "	69 "	14	14	
	Italy ...		261 "	261 "	30	30	
			15,808 gallons	15,808 gallons	3,349	3,349	
Whiskey ...	Great Britain ...		1,709 gallons	1,709 gallons	433	433	
	Victoria ...		11,504 "	11,504 "	4,083	4,083	
	South Australia ...		2,571 "	2,571 "	985	985	
	Tasmania ...		2,311 "	2,311 "	1,073	1,073	
	New Zealand ...		3,003 "	3,003 "	934	934	
	Queensland ...		18,950 "	18,950 "	7,538	7,538	
	South Sea Islands...		263 "	263 "	98	98	
	New Caledonia ...		204 "	204 "	108	108	
	Fiji ...		827 "	827 "	360	360	
	Western Australia..		2,108 "	2,108 "	840	840	
	Honolulu ...		281 "	281 "	79	79	
	Hong Kong ...		372 "	372 "	181	181	
	Singapore ...		18 "	18 "	8	8	
	Manilla ...		55 "	55 "	26	26	
United States ...		466 "	466 "	239	239		
			44,642 gallons	44,642 gallons	16,985	16,985	

STATISTICS, 1886—TRADE AND COMMERCE.

EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.			
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	
					£	£	£	
Spirits—contd.	All other	Victoria ...	252 gallons	252 gallons	.....	317	317	
		South Australia ...	54 "	54 "	.....	117	117	
		Tasmania ...	32 "	32 "	.....	63	63	
		New Zealand ...	378 "	378 "	.....	158	158	
		Queensland ...	971 "	971 "	.....	543	543	
		South Sea Islands...	6 "	6 "	.....	16	16	
		New Caledonia ...	5 "	5 "	.....	11	11	
		Fiji ...	42 "	42 "	.....	32	32	
		Western Australia..	12 "	12 "	.....	4	4	
				1,752 gallons	1,752 gallons	.....	1,261	1,261
Distilled in the Colony (Rum)	Great Britain ...	77,015 gallons	.....	77,015 gallons	8,580	.....	8,580	
	Victoria ...	9,246 "	.....	9,246 "	1,009	.....	1,009	
	South Australia ...	421 "	.....	421 "	47	.....	47	
	New Zealand ...	281 "	.....	281 "	34	.....	34	
	New Caledonia ...	14,317 "	.....	14,317 "	1,635	.....	1,635	
	Fiji ...	29 "	.....	29 "	3	.....	3	
		101,309 gallons	.....	101,309 gallons	11,308	.....	11,308	
Starch and Starch Powders ...	Victoria ...	.....	32,393 lb.	32,393 lb.	.....	348	348	
	South Australia ...	.....	224 "	224 "	.....	4	4	
	Tasmania ...	.....	4,480 "	4,480 "	.....	72	72	
	New Zealand ...	400 lb.	.....	400 "	.....	5	5	
	Queensland ...	.....	20,059 lb.	20,059 "	.....	280	280	
	South Sea Islands...	.....	112 "	112 "	.....	2	2	
	New Caledonia ...	.....	13,888 "	13,888 "	.....	222	222	
	Fiji ...	.....	1,792 "	1,792 "	.....	26	26	
	Western Australia	.....	112 "	112 "	.....	2	2	
			400 lb.	73,060 lb.	73,460 lb.	5	956	961
Stationery—Sundries.	Great Britain ...	.....	7 pkg.	7 pkg.	.....	260	260	
	Victoria ...	.....	157 "	157 "	.....	1,711	1,711	
	South Australia ...	1 pkg.	23 "	24 "	24	302	326	
	Tasmania ...	.....	97 "	97 "	.....	1,019	1,019	
	New Zealand ...	.....	232 "	232 "	.....	2,582	2,582	
	Queensland ...	32 pkg.	1,409 "	1,441 "	208	15,941	16,149	
	South Sea Islands...	.....	21 "	21 "	.....	155	155	
	New Caledonia ...	1 pkg.	29 "	30 "	56	304	360	
	Fiji ...	18 "	123 "	141 "	89	1,170	1,259	
	Western Australia..	1 "	8 "	9 "	25	28	53	
Honolulu ...	.....	1 "	1 "	.....	13	13		
China ...	.....	7 "	7 "	.....	20	20		
		53 pkg.	2,114 pkg.	2,167 pkg.	402	23,505	23,907	
Statuary and Monuments	Victoria ...	.....	30 pkg.	30 pkg.	.....	197	197	
	South Australia ...	.....	6 "	6 "	.....	64	64	
	Tasmania ...	.....	2 "	2 "	.....	119	119	
	Queensland ...	5 pkg.	39 "	44 "	61	245	306	
	South Sea Islands..	2 "	.....	2 "	16	.....	16	
	New Caledonia ...	2 "	1 pkg.	3 "	34	22	56	
Fiji ...	5 "	.....	5 "	22	.....	22		
		14 pkg.	78 pkg.	92 pkg.	133	647	780	
Building	Victoria ...	1,100 No.	.....	1,100 No.	1,462	.....	1,462	
	South Australia ...	136 "	.....	136 "	16	.....	16	
	Queensland ...	275 "	.....	275 "	223	.....	223	
	India ...	5 "	.....	5 "	20	.....	20	
	Western Australia..	91 "	.....	91 "	127	.....	127	
		1,607 No.	.....	1,607 No.	1,848	.....	1,848	
Stones.	Cubes and Paving	Queensland	.....	6,000 No.	6,000 No.	.....	150	150
		Victoria ...	.....	24 No.	24 No.	.....	4	4
Grind ...	South Australia ...	.....	4 "	4 "	.....	2	2	
	Queensland	.....	436 "	436 "	.....	156	156	
	South Sea Islands...	.....	74 "	74 "	.....	14	14	
	New Caledonia ...	.....	45 "	45 "	.....	12	12	
	Western Australia..	.....	4 "	4 "	.....	4	4	
			.....	587 No.	587 No.	.....	192	192

EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.			
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	
					£	£	£	
Sugar...	Raw ...	Great Britain ...	274 cwt.	274 cwt.	.....	267	267	
		Victoria ...	56,665 "	56,665 "	.....	54,506	54,506	
		South Australia ...	1,761 "	1,761 "	.....	1,514	1,514	
		Tasmania ...	5,349 "	5,349 "	.....	5,159	5,159	
		New Zealand ...	3,516 "	3,516 "	.....	3,171	3,171	
		Queensland ...	2,701 "	2,701 "	.....	2,677	2,677	
		South Sea Islands ...	757 "	757 "	.....	711	711	
		New Caledonia ...	2,346 "	2,346 "	.....	2,173	2,173	
		Fiji ...	86 "	86 "	.....	84	84	
		Western Australia ...	1,503 "	1,503 "	.....	1,479	1,479	
		Hong Kong ...	39,251 "	39,251 "	.....	35,015	35,015	
		China ...	1,805 "	1,805 "	.....	1,806	1,806	
		United States ...	334 "	334 "	.....	303	303	
		New Guinea (British) ...	7 "	7 "	.....	7	7	
Kaiser Wilhelm's Land ...	5 "	5 "	.....	5	5			
		.....	116,360 cwt.	116,360 cwt.	.....	108,877	108,877	
Sugar...	Refined ...	Great Britain ...	21 cwt.	21 cwt.	.....	29	29	
		Victoria ...	50 "	50 "	.....	75	75	
		Tasmania ...	45 "	45 "	.....	79	79	
		New Zealand ...	27 "	27 "	.....	41	41	
		South Sea Islands ...	14 "	14 "	.....	29	29	
		New Caledonia ...	304 "	304 "	.....	482	482	
		Fiji ...	6 "	6 "	.....	10	10	
		.....	467 cwt.	467 cwt.	.....	745	745	
Sulphur ...	...	South Australia ...	105 cwt.	105 cwt.	.....	66	66	
		Queensland ...	91 "	91 "	.....	39	39	
		South Sea Islands ...	4 "	4 "	.....	3	3	
		Fiji ...	195 "	195 "	.....	130	130	
				.....	395 cwt.	395 cwt.	.....	238
Sundries ...	...	Great Britain ...	1,369 pkg.	836 pkg.	2,205 pkg.	5,361	9,663	15,024
		Victoria ...	2,694 "	2,623 "	5,317 "	3,875	9,564	13,439
		South Australia ...	236 "	171 "	407 "	680	1,049	1,729
		Tasmania ...	105 "	429 "	534 "	174	704	878
		New Zealand ...	157 "	218 "	375 "	239	1,290	1,529
		Queensland ...	1,217 "	3,902 "	5,119 "	2,304	7,457	9,761
		South Sea Islands ...	2 "	223 "	223 "	7	645	652
		New Caledonia ...	313 "	154 "	467 "	296	523	819
		Fiji ...	177 "	812 "	989 "	358	1,340	1,698
		Western Australia ...	76 "	136 "	212 "	186	821	1,007
		Hong Kong ...	.....	1,332 "	1,332 "	.....	790	790
		France ...	.....	15 "	15 "	.....	15	15
		Germany ...	.....	9 "	9 "	.....	365	365
		Mauritius ...	.....	.....	10 "	.....	4	4
Belgium ...	.....	.....	5 pkg.	.....	300	300		
United States ...	.....	.....	53 "	.....	179	392		
		6,392 pkg.	10,916 pkg.	17,308 pkg.	13,663	34,739	48,402	
Tallow ...	...	Great Britain ...	117,704 cwt.	2,212 cwt.	119,916 cwt.	128,334	2,160	130,494
		Victoria ...	4,152 "	.....	4,152 "	3,847	.....	3,847
		South Australia ...	423 "	.....	423 "	375	.....	375
		Queensland ...	243 "	.....	243 "	364	.....	364
		New Caledonia ...	20 "	.....	20 "	22	.....	22
		Fiji ...	55 "	.....	55 "	56	.....	56
		France ...	7,843 "	.....	7,843 "	7,480	.....	7,480
		Singapore ...	20 "	.....	20 "	22	.....	22
		Hong Kong ...	225 "	.....	225 "	295	.....	295
		Manilla ...	41 "	.....	41 "	50	.....	50
		Chili ...	1,943 "	.....	1,943 "	1,980	.....	1,980
Belgium ...	2,340 "	.....	2,340 "	2,340	.....	2,340		
India ...	36 "	.....	36 "	33	.....	33		
		135,045 cwt.	2,212 cwt.	137,257 cwt.	145,198	2,160	147,358	
Tapioca and Semolina	...	Victoria ...	.....	14,741 lb.	14,741 lb.	.....	131	131
		South Australia ...	.....	556 "	556 "	.....	6	6
		New Zealand ...	.....	16,420 "	16,420 "	.....	136	136
		Queensland ...	.....	2,142 "	2,142 "	.....	21	21
		New Caledonia ...	.....	403 "	403 "	.....	5	5
		Fiji ...	.....	984 "	984 "	.....	9	9
Western Australia ...	.....	204 "	204 "	.....	2	2		
		.....	35,450 lb.	35,450 lb.	.....	310	310	

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## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.
Tea ... ..	Great Britain ... ..		14,388 lb.	14,388 lb.	£	760	760
	Victoria ... ..		167,943 "	167,943 "		8,527	8,527
	South Australia ... ..		40,134 "	40,134 "		1,982	1,982
	Tasmania ... ..		3,453 "	3,453 "		213	213
	New Zealand ... ..		95,119 "	95,119 "		5,788	5,788
	Queensland ... ..		253,466 "	253,466 "		15,357	15,357
	South Sea Islands... ..		5,707 "	5,707 "		362	362
	New Caledonia ... ..		15,409 "	15,409 "		945	945
	Fiji ... ..		13,834 "	13,834 "		819	819
	Western Australia ... ..		13,927 "	13,927 "		900	900
	United States ... ..		3,360 "	3,360 "		207	207
	Hong Kong ... ..		312 "	312 "		23	23
	New Guinea (British) ... ..		22 "	22 "		2	2
Kaiser Wilhelm's Land ... ..		100 "	100 "		7	7	
			627,174 lb.	627,174 lb.		35,892	35,892
Telegraphic, Telephonic, and Electrical Material ... ..	Victoria ... ..		73 pkg.	23 pkg.		597	597
	South Australia ... ..		55 "	55 "		143	143
	New Zealand ... ..		3 "	3 "		19	19
	Queensland ... ..		253 "	553 "		600	600
				334 pkg.	334 pkg.		1,359
Timber. { Rough ... ..	Great Britain ... ..	3,468 feet	4,000 feet	7,468 feet	36	80	116
	Victoria ... ..	10,553,955 "	1,131,537 "	11,685,492 "	39,617	8,638	48,255
	South Australia ... ..	25,733 "	1,830 "	27,563 "	330	20	350
	Tasmania ... ..	43,095 "	163,747 "	206,842 "	563	853	1,416
	New Zealand ... ..	1,018,143 "	..... "	1,018,143 "	7,674	.....	7,674
	Queensland ... ..	1,014,946 "	70,697 feet	1,085,643 "	4,397	602	4,999
	South Sea Islands... ..	62,347 "	17,877 "	80,224 "	615	102	717
	New Caledonia ... ..	13,165 "	9,190 "	22,355 "	100	82	182
	Fiji ... ..	354,268 "	2,897 "	357,165 "	2,749	24	2,773
	Western Australia ... ..	130,520 "	4,288 "	134,808 "	1,197	49	1,246
	United States ... ..	11,256 "	..... "	11,256 "	180	.....	180
	Honolulu ... ..	13,260 "	..... "	13,260 "	177	.....	177
	Singapore ... ..	3,000 "	..... "	3,000 "	33	.....	33
	Kaiser Wilhelm's Land ... ..	8,648 "	..... "	8,648 "	96	.....	96
			13,255,804 feet	1,406,063 feet	14,661,867 feet	57,764	10,450
Dressed ... ..	Victoria ... ..	92,584 feet	75,020 feet	167,604 feet	918	535	1,453
	New Zealand ... ..	260 "	4,994 "	5,254 "	4	43	47
	Queensland ... ..	18,565 "	5,328 "	23,893 "	223	83	306
	South Sea Islands... ..	18,501 "	10,105 "	28,606 "	157	86	243
	New Caledonia ... ..	..... "	11,500 "	11,500 "	.....	95	95
	Fiji ... ..	2,500 feet	..... "	2,500 "	27	.....	27
	Western Australia... ..	1,563 "	54,158 feet	55,721 "	16	514	530
		133,973 feet	161,105 feet	295,078 feet	1,345	1,356	2,701
Laths ... ..	Victoria ... ..	1,075 No.	2,342,165 No.	2,343,240 No.	3	2,816	2,819
	New Caledonia ... ..	.....	6,400 "	6,400 "	.....	16	16
		1,075 No.	2,348,565 No.	2,349,640 No.	3	2,832	2,835
Palings ... ..	Queensland ... ..	4,000 No.	.....	4,000 No.	30	.....	30
	South Sea Islands... ..	500 "	.....	500 "	4	.....	4
	New Caledonia ... ..	.....	2,695 No.	2,695 No.	.....	17	17
		4,500 No.	2,695 No.	7,195 No.	34	17	51
Posts, Rails, and Spars ... ..	Victoria ... ..	843 No.	.....	843 No.	1,686	.....	1,686
	South Australia ... ..	.....	4 No.	4 "	.....	12	12
	New Zealand ... ..	346 No.	.....	346 "	689	.....	689
	Queensland ... ..	.....	17 No.	17 "	.....	122	122
	South Sea Islands... ..	302 No.	.....	302 "	90	.....	90
Fiji ... ..	1,569 "	.....	1,569 "	364	.....	364	
		3,060 No.	21 No.	3,081 No.	2,829	134	2,963
Tin (Ingots) ... ..	Great Britain ... ..	81,767 cwt.	51,254 cwt.	133,021 cwt.	396,762	247,688	644,450
	South Australia ... ..	155 "	40 "	195 "	741	193	934
	Tasmania ... ..	30 "	.....	30 "	140	.....	140
	New Zealand ... ..	323 "	171 cwt.	494 "	1,564	857	2,421
	Queensland ... ..	177 "	104 "	281 "	869	524	1,393
	New Caledonia ... ..	12 "	.....	12 "	58	.....	58
	United States ... ..	10,354 "	.....	10,354 "	49,169	.....	49,169
		92,818 cwt.	51,569 cwt.	144,387 cwt.	449,303	249,262	698,565



EXPORTS—continued.

Articles	Countries to which Exported.	Quantities			Value.			
		Produce and Manufacture of the Colony	British, Foreign, and other Colonial Produce and Manufacture	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture	Total.	
Tin—contd.	Ore ...	Victoria ...	157 cwt.	1,559 cwt.	1,716 cwt.	£ 201	£ 3,144	£ 3,345
		South Australia ...	41 "	..... "	41 "	69	..	69
	Queensland	6,340 "	..... "	6,340 "	18,080	..	18,080	
			6,538 cwt.	1,559 cwt.	8,097 cwt.	18,350	3,144	21,494
	Plates . . .	Victoria	.....	2,965 pkg.	2,965 pkg.	..	2,733	2,733
		South Australia ..	.....	100 "	100 "	..	81	81
		Tasmania ..	.....	620 "	620 "	..	546	546
		New Zealand	.....	588 "	588 "	..	590	590
		Queensland	.....	1,462 "	1,462 "	..	1,345	1,345
		New Caledonia	.....	6 "	6 "	..	7	7
Fiji	.....	7 "	7 "	..	7	7		
			5,748 pkg.	5,748 pkg.	..	5,309	5,309	
Tinware ...	Victoria	.....	8 pkg	8 pkg.	..	6	6	
	Queensland	.....	59 "	563 "	339	303	642	
	South Sea Islands ..	3 "	..	3 "	..	..	16	
	New Caledonia	2 "	..	2 "	..	..	33	
	Fiji	16 "	2 pkg.	18 "	97	15	112	
	Western Australia	10 "	..	10 "	78	..	78	
			69 pkg.	604 pkg.	563	324	887	
Un-manufactured	Great Britain	.....	325 lb.	325 lb.	.....	17	17	
	Victoria	.....	11,232 "	11,232 "	.....	563	563	
	New Zealand	.....	871 "	871 "	.....	70	70	
	Queensland	.....	96 "	96 "	.....	3	3	
	South Sea Islands ..	.....	41 "	41 "	.....	3	3	
	United States	.....	13,201 "	13,201 "	.....	662	662	
Java	.....	374 "	374 "	.....	21	21		
			26,140 lb.	26,140 lb.	.....	1,339	1,339	
Manufactured ...	Great Britain	.....	3,216 lb.	3,216 lb.	.....	236	236	
	Victoria	.....	51,857 "	51,857 "	.....	3,960	3,960	
	South Australia	.....	8,756 "	8,756 "	.....	700	700	
	Tasmania	.....	2,107 "	2,107 "	.....	203	203	
	New Zealand	.....	13,661 "	13,661 "	.....	1,317	1,317	
	Queensland	390 lb.	219,604 "	219,994 "	30	17,419	17,449	
	South Sea Islands	.....	124,727 "	124,727 "	.....	8,636	8,636	
	New Caledonia	.....	83,277 "	83,277 "	.....	5,449	5,449	
	Fiji	.....	10,849 "	10,849 "	.....	855	855	
	Western Australia	186 lb.	12,601 "	12,787 "	19	987	1,006	
	Honolulu	.....	324 "	324 "	.....	25	25	
	Mauritius	.....	100 "	100 "	.....	7	7	
	Hong Kong	.....	1,286 "	1,286 "	.....	96	96	
	China	.....	100 "	100 "	.....	9	9	
	New Guinea (British)	.....	299 "	299 "	.....	17	17	
United States	.....	3,625 "	3,625 "	.....	272	272		
		576 lb	536,389 lb.	536,965 lb.	49	40,188	40,237	
Tobacco	Cigarettes ...	Great Britain	.....	17 lb.	17 lb.	.....	5	5
		Victoria	.....	317 "	317 "	.....	108	108
		South Australia	.....	69 "	69 "	.....	27	27
		Tasmania	.....	196 "	196 "	.....	74	74
		New Zealand	.....	396 "	396 "	.....	128	128
		Queensland	.....	3,239 "	3,239 "	.....	1,216	1,216
		New Caledonia	.....	47 "	47 "	.....	20	20
		Fiji	.....	44 "	44 "	.....	23	23
		Western Australia..	.....	59 "	59 "	.....	20	20
		France	.....	44 "	44 "	.....	12	12
		Mauritius	.....	97 "	97 "	.....	36	36
					4,525 lb.	4,525 lb.	.....	1,669
Cigars ...	Great Britain	.....	1,321 lb.	3,321 lb.	.....	495	495	
	Victoria	.....	25,142 "	25,142 "	.....	5,819	5,819	
	South Australia	.....	2,584 "	2,584 "	.....	412	412	
	Tasmania	.....	718 "	718 "	.....	147	147	
	New Zealand	.....	6,774 "	6,774 "	.....	1,367	1,367	
	Queensland	.....	19,339 "	19,339 "	.....	5,834	5,834	
	South Sea Islands	.....	1,061 "	1,061 "	.....	399	399	
	New Caledonia	.....	2,448 "	2,448 "	.....	783	783	
	Fiji	.....	1,202 "	1,202 "	.....	471	471	
	Western Australia.	.....	333 "	333 "	.....	112	112	
	France	.....	1,053 "	1,053 "	.....	165	165	
	Germany	.....	1,700 "	1,700 "	.....	270	270	
Hong Kong	.....	315 "	315 "	.....	74	74		
United States	.....	1,156 "	1,156 "	.....	331	331		
Chili	.....	117 "	117 "	.....	38	38		
			65,263 lb.	65,263 lb.	..	16,717	16,717	

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## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.		
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.
Tortoise-shell	Great Britain		2,603 lb.	2,603 lb.	£	£	£
	United States		634 "	634 "		1,523	1,523
	Japan		510 "	510 "		415	415
	Hong Kong		120 "	120 "		360	360
	France		304 "	304 "		60	60
	Germany		156 "	156 "		163	163
			4,327 lb.	4,327 lb.		2,601	2,601
Toys and Fancy Goods	Great Britain		113 pkg.	113 pkg.		2,566	2,566
	Victoria	18 pkg.	447 "	465 "	92	5,040	5,132
	South Australia		28 "	28 "		501	501
	Tasmania	5 pkg.	25 "	30 "	28	358	386
	New Zealand	14 "	42 "	56 "	84	727	811
	Queensland	38 "	1,307 "	1,345 "	300	22,440	22,740
	South Sea Islands		92 "	92 "		851	851
	New Caledonia		81 "	81 "		1,542	1,542
	Fiji		103 "	103 "		1,963	1,963
	Western Australia		27 "	27 "		862	862
	Honolulu		1 "	1 "		65	65
	Hong Kong		4 "	4 "		90	90
	Mauritius		2 "	2 "		20	20
	Japan		4 "	4 "		40	40
	United States		10 "	10 "		321	321
India		1 "	1 "		7	7	
Germany		2 "	2 "		50	50	
		75 pkg.	2,289 pkg.	2,364 pkg.	504	37,443	37,947
Turnery	Victoria		2,046 pkg.	2,046 pkg.		376	376
	South Australia	38 pkg.	10 "	48 "	27	33	60
	Tasmania		71 "	71 "		196	196
	New Zealand		31 "	31 "		51	51
	Queensland	976 pkg.	1,919 "	2,895 "	704	3,883	4,537
	South Sea Islands	244 "	179 "	423 "	256	334	590
	New Caledonia	67 "	48 "	115 "	134	110	244
	Western Australia	500 "		500 "	314		344
	Fiji	12 "	65 pkg.	77 "	13	176	189
		1,837 pkg.	4,369 pkg.	6,206 pkg.	1,478	5,159	6,637
Turpentine	Great Britain		12 gallons	12 gallons		3	3
	Victoria		5,452 "	5,452 "		798	798
	South Australia		68 "	68 "		13	13
	New Zealand		44 "	44 "		9	9
	Queensland		1,304 "	1,304 "		246	246
	New Caledonia		714 "	714 "		127	127
	Fiji		132 "	132 "		25	25
	Western Australia		16 "	16 "		4	4
United States		75 "	75 "		14	14	
			7,817 gallons	7,817 gallons		1,239	1,239
Upholstery	Great Britain		7 pkg.	7 pkg.		47	47
	Victoria		212 "	212 "		1,194	1,194
	South Australia	2 pkg.	9 "	11 "	7	29	36
	Tasmania	11 "	48 "	59 "	8	225	233
	New Zealand		79 "	79 "		314	314
	Queensland	920 pkg.	871 "	1,791 "	1,195	2,527	3,722
	South Sea Islands	1 "		1 "		2	2
	New Caledonia	12 "	10 pkg.	22 "	74	43	117
	Fiji	9 "	1 "	10 "	45	4	49
	Western Australia		3 "	3 "		4	4
Hong Kong		1 "	1 "		4	4	
		955 pkg.	1,241 pkg.	2,196 pkg.	1,331	4,391	5,722
Varnish	Victoria		116 gallons	116 gallons		143	143
	South Australia		25 "	25 "		13	13
	New Zealand		170 "	170 "		99	99
	Queensland	162 gallons	922 "	1,084 "	74	543	617
	South Sea Islands		7 "	7 "		3	3
	New Caledonia		26 "	26 "		16	16
	Fiji		31 "	31 "		16	16
	Western Australia		30 "	30 "		12	12
Hong Kong		37 "	37 "		28	28	
United States		31 "	31 "		24	24	
		162 gallons	1,395 gallons	1,557 gallons	74	897	971

EXPORTS—*continued.*

Articles.	Countries to which Exported.	Quantities.			Value.			
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	
Vegetables	Green	Victoria ...	888 pkg.	10 pkg.	898 pkg.	£ 500	£ 13	£ 513
		Queensland ...	70 "	40 "	110 "	64	34	98
		South Sea Islands...	11 "	4 "	15 "	7	7	14
		New Caledonia ...	55 "	77 "	132 "	33	93	126
		Western Australia..	9 "	.....	9 "	15	.....	15
			1,033 pkg.	131 pkg.	1,164 pkg.	619	147	766
	Preserved	Great Britain ...	.....	641 pkg.	641 pkg.	.....	19	19
		Victoria ...	.....	820 "	820 "	.....	54	54
		South Australia ...	.....	5,181 "	5,181 "	.....	127	127
		New Zealand ...	.....	25 "	25 "	.....	37	37
		Queensland ...	.....	26,586 "	26,586 "	.....	666	666
		South Sea Islands...	.....	966 "	966 "	.....	38	38
		New Caledonia ...	.....	568 "	568 "	.....	18	18
		Fiji ...	.....	629 "	629 "	.....	16	16
	Western Australia..	.....	10,164 "	10,164 "	.....	257	257	
		.....	45,580 pkg.	45,580 pkg.	.....	1,232	1,232	
Vinegar	Great Britain ...	.....	30 gallons	30 gallons	.....	5	5	
	Victoria ...	.....	1,934 "	1,934 "	.....	257	257	
	South Australia ...	.....	447 "	447 "	.....	34	34	
	Tasmania ...	.....	24 "	24 "	.....	2	2	
	New Zealand ...	.....	52 "	52 "	.....	8	8	
	Queensland ...	.....	499 gallons	3,031 "	3,530 "	34	312	346
	South Sea Islands...	.....	129 "	129 "	.....	22	22	
	New Caledonia ...	.....	288 "	288 "	.....	30	30	
	Fiji ...	.....	30 gallons	444 "	474 "	2	88	90
	Western Australia..	.....	125 "	143 "	268 "	8	21	29
Kaiser Wilhem's Land	.....	.....	48 "	48 "	.....	4	4	
		654 gallons	6,570 gallons	7,224 gallons	44	783	827	
Watches and Clocks...	Great Britain ...	.....	4 pkg.	4 pkg.	.....	307	207	
	Victoria ...	.....	193 "	193 "	.....	5,377	5,377	
	South Australia ...	.....	38 "	38 "	.....	963	963	
	Tasmania ...	.....	27 "	27 "	.....	276	276	
	New Zealand ...	.....	19 "	19 "	.....	484	484	
	Queensland ...	.....	401 "	401 "	.....	8,315	8,315	
	South Sea Islands...	.....	12 "	12 "	.....	61	61	
	New Caledonia ...	.....	1 "	1 "	.....	3	3	
	Fiji ...	.....	2 "	2 "	.....	13	13	
	Western Australia..	.....	11 "	11 "	.....	558	558	
	France ...	.....	2 "	2 "	.....	610	610	
	Hong Kong ...	.....	3 "	3 "	.....	117	117	
	India ...	.....	1 "	1 "	.....	24	24	
	United States ...	.....	1 "	1 "	.....	50	50	
Italy ...	.....	1 "	1 "	.....	18	18		
		.....	716 pkg.	716 pkg.	.....	17,176	17,176	
Whalebone	Great Britain ...	.....	40 cwt.	40 cwt.	.....	100	100	
	Victoria ...	.....	17 pkg.	17 pkg.	.....	12	12	
Whiting and Chalk ...	South Australia ...	.....	12 "	12 "	.....	10	10	
	Queensland ...	.....	44 "	44 "	.....	35	35	
	South Sea Islands...	.....	3 "	3 "	.....	2	2	
	New Caledonia ...	.....	28 "	28 "	.....	17	17	
	Fiji ...	.....	30 "	30 "	.....	18	18	
	Western Australia..	.....	2 "	2 "	.....	2	2	
		.....	136 pkg.	136 pkg.	.....	96	96	
Wines—Sparkling	Great Britain ...	.....	365 gallons	365 gallons	.....	655	655	
	Victoria ...	.....	710 "	710 "	.....	1,377	1,377	
	South Australia ...	.....	41 "	41 "	.....	71	71	
	Tasmania ...	.....	18 "	18 "	.....	26	26	
	New Zealand ...	.....	195 "	195 "	.....	371	371	
	Queensland ...	.....	1,468 "	1,468 "	.....	2,741	2,741	
	South Sea Islands...	.....	90 "	90 "	.....	137	137	
	New Caledonia ...	.....	156 "	156 "	.....	249	249	
	Fiji ...	.....	24 "	24 "	.....	44	44	
	Western Australia..	.....	140 "	140 "	.....	223	223	
	Hong Kong ...	.....	66 "	66 "	.....	122	122	
	Honolulu ...	.....	118 "	118 "	.....	281	281	
	United States ...	.....	178 "	178 "	.....	389	389	
Italy ...	.....	46 "	46 "	.....	56	56		
		.....	3,615 gallons	3,615 gallons	.....	6,742	6,742	

## STATISTICS, 1886—TRADE AND COMMERCE.

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## EXPORTS—continued.

Articles.	Countries to which Exported.	Quantities.			Value.			
		Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	Produce and Manufacture of the Colony.	British, Foreign, and other Colonial Produce and Manufacture.	Total.	
Wines, Other kinds ...	Great Britain ...	17,270 gall.	2,717 gall.	19,987 gall.	£ 4,197	£ 529	£ 4,726	
	Victoria ...	897 "	4,739 "	5,636 "	269	2,102	2,371	
	South Australia ...	.....	316 "	316 "	.....	168	168	
	Tasmania ...	107 gall.	390 "	497 "	53	110	163	
	New Zealand ...	2,737 "	678 "	3,415 "	1,649	229	1,878	
	Queensland ...	1,352 "	11,476 "	12,828 "	731	5,604	6,335	
	South Sea Islands ...	541 "	293 "	834 "	125	152	277	
	New Caledonia ...	242 "	972 "	1,214 "	71	430	501	
	Fiji ...	191 "	734 "	925 "	54	352	406	
	Western Australia ...	312 "	168 "	480 "	176	82	258	
	United States ...	.....	401 "	401 "	.....	311	311	
	France ...	2 gall.	34 "	36 "	2	34	36	
	Hong Kong ...	.....	152 "	152 "	.....	122	122	
	Honolulu ...	.....	28 "	28 "	.....	20	20	
	China ...	267 gall.	.....	267 "	119	.....	119	
	Germany ...	14 "	.....	14 "	9	.....	9	
	India ...	227 "	.....	227 "	98	.....	98	
	Italy ...	8 "	640 gall.	648 "	8	391	399	
New Guinea (British) ...	50 "	.....	50 "	20	.....	20		
		24,217 gall.	23,738 gall.	47,955 gall.	7,581	10,636	18,217	
Wool ...	Great Britain ...	66,458,861 lb.	3,004,384 lb.	69,463,245 lb.	2,276,295	98,061	2,374,356	
	Victoria ...	36,355,305 "	.....	36,355,305 "	1,397,951	.....	1,397,951	
	South Australia ...	13,571,065 "	.....	13,571,065 "	431,373	.....	431,373	
	Queensland ...	168,889 "	.....	168,889 "	6,037	.....	6,037	
	Belgium ...	13,304,755 "	.....	13,304,755 "	387,232	.....	387,232	
	Trieste ...	67,127 "	.....	67,127 "	2,640	.....	2,640	
	France ...	1,066,445 "	.....	1,066,445 "	35,393	.....	35,393	
	Germany ...	1,449,794 "	.....	1,449,794 "	44,127	.....	44,127	
	India ...	75,613 "	.....	75,613 "	2,863	.....	2,863	
		132,517,854 lb.	3,004,384 lb.	135,522,238 lb.	4,583,911	98,061	4,681,972	
	Washed ...	Great Britain ...	25,494,698 lb.	1,660,587 lb.	27,155,285 lb.	1,407,286	75,319	1,482,605
	Victoria ...	8,161,191 "	.....	8,161,191 "	533,327	.....	533,327	
South Australia ...	6,234,898 "	.....	6,234,898 "	426,567	.....	426,567		
Queensland ...	85,432 "	.....	85,432 "	4,853	.....	4,853		
Belgium ...	690,275 "	.....	690,275 "	31,734	.....	31,734		
Germany ...	27,262 "	.....	27,262 "	1,441	.....	1,441		
France ...	702,315 "	.....	702,315 "	34,905	.....	34,905		
United States ...	71,715 "	.....	71,715 "	4,572	.....	4,572		
	41,467,786 lb.	1,660,587 lb.	43,128,373 lb.	2,444,685	75,319	2,520,004		
Woolpacks ...	Victoria ...	.....	674 cwt.	674 cwt.	.....	813	813	
Tasmania ...	.....	261½ "	261½ "	.....	225	225		
New Zealand ...	.....	10½ "	10½ "	.....	18	18		
Queensland ...	.....	1,422 "	1,422 "	.....	1,417	1,417		
South Sea Islands ...	.....	10½ "	10½ "	.....	10	10		
New Caledonia ...	.....	14 "	14 "	.....	13	13		
Western Australia ...	.....	4½ "	4½ "	.....	4	4		
			2,397 cwt.	2,397 cwt.	.....	2,500	2,500	
Yellow Metal	Victoria ...	.....	28 pkg.	28 pkg.	.....	412	412	
	South Australia ...	.....	5 "	5 "	.....	55	55	
	New Zealand ...	.....	56 "	56 "	.....	655	655	
	Queensland ...	.....	128 "	128 "	.....	1,505	1,505	
	South Sea Islands ...	.....	3 "	3 "	.....	15	15	
	New Caledonia ...	.....	9 "	9 "	.....	130	130	
	Fiji ...	.....	19 "	19 "	.....	162	162	
				248 pkg.	248 pkg.	.....	2,934	2,934
	Nails ...	South Australia ...	.....	1 pkg.	1 pkg.	.....	4	4
	Queensland ...	.....	27 "	27 "	.....	167	167	
			28 pkg.	28 pkg.	.....	171	171	
Zinc ...	South Australia ...	.....	5 cwt.	5 cwt.	.....	6	6	
	New Zealand ...	.....	2 "	2 "	.....	2	2	
	Queensland ...	.....	249 "	249 "	.....	277	277	
	South Sea Islands ...	.....	5 "	5 "	.....	6	6	
	New Caledonia ...	.....	136 "	136 "	.....	159	159	
	Fiji ...	.....	7 "	7 "	.....	8	8	
				404 cwt.	404 cwt.	.....	458	458
	Plain, Sheet	Queensland ...	.....	5 cwt.	5 cwt.	.....	4	4
	Perforated and Manufactured.	Great Britain ...	.....	2,901 cwt.	2,901 cwt.	1,533	.....	1,533
	Spelter ...	New Zealand ...	.....	40 cwt.	40 "	.....	39	39
Queensland ...	.....	20 "	20 "	.....	23	23		
		2,901 cwt.	60 cwt.	2,961 cwt.	1,533	62	1,595	
TOTAL EXPORTS FOR 1886 ...					£ 12,884,200	2,672,013	15,556,213	

IMPORTS.

No. 4.—DECENNIAL RETURN of Principal and other articles imported into the Colony.

Articles	Quantity and Value.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Acids ... ..	Cases	1769	2156	2601	1511	2157	2316	1720	2850	2709	.....
	£	8185	10634	11093	8460	14670	15415	12851	17994	16732	15860
Agricultural Implements ... ..	Packages	4109	4872	5112	2948	5065	7700	13582	9630	7304	6360
	£	32411	43144	45435	32061	45438	73277	120075	86434	63014	54260
Acrated Waters ... ..	Cases	9033	6727	9344	6417	13570	16907	11069	18552	19094	.....
	£	6529	7253	8430	5195	9997	13433	13864	20102	20098	13625
Anchors... ..	No.	183	873	837	450	948	1000	1002	949	616	776
	£	425	1111	1130	520	930	1299	1398	1895	803	728
Antimony Ore ... ..	Cwt.	2360	2260	320	765	.....	.....	25	.....	.....	.....
	£	543	1105	308	329	.....	.....	16	.....	.....	.....
Apparel and Slops ... ..	Packages	10411	18793	15039	10807	15053	16074	15793	30012	29541	35569
	£	398036	643287	460272	272608	319584	357105	338417	838591	948316	1270519
Arrowroot ... ..	Cwt.	1519	1841	1479	2341	1970	2176	2329	2349	2300	1380
	£	3155	3452	2673	4242	3350	4240	4661	5062	4220	2563
Arms and Ammunition—											
Guns ... ..	Cases	644	908	1396	1045	952	1084	1620	1320	700	664
	£	16530	22005	24263	16431	18099	29263	34941	32937	21862	19873
Powder (Blasting), Dynamite, &c. ... ..	lb.	627576	1211719	477158	1542922	1489022	2288101	2195340	2770397	2931167	2631383
	£	48097	34731	16371	39966	44757	67856	83259	80995	79161	65716
Powder (Sporting) ... ..	lb.	51628	220487	91607	146649	215057	233987	141970	219743	182537	85109
	£	5458	11515	7854	11177	17016	19313	13513	22845	15792	9036
Cartridges... ..	Cases	1137	2353	673	559	848	847	913	1264	653	2451
	£	6637	7838	4616	4788	5877	8654	8291	10236	6841	12782
Shot ... ..	Cwt.	4499	7778	5837	5299	8064	9199	6536	8417	10672	5986
	£	5389	9874	6778	6709	9108	10776	8063	8640	9965	6466
Swords ... ..	Packages	2	6	2	18	1	4	5	4	18	4
	£	67	151	10	139	11	24	51	48	573	65
Caps ... ..	Packages	69	60	80	119	140	412	346	325	152	100
	£	1234	1134	1856	2902	2638	6513	6243	5713	2469	1427
Bags and Sacks ... ..	Doz.	.....	57936	72888	35248	87265	119968	109924	60854	115534	76534
	£	13330	23596	27201	16676	37545	54297	45966	19637	32705	18312
Bags (Gunny) ... ..	Doz.	.....	2789	9538	12579	11579	14536	22678	46036	131469	29436
	£	1019	927	2519	3482	3090	3736	6930	8672	24864	4929
Bark ... ..	Tons	13061	4491	2892	5733	6371	4157	4471	5055	4471	4225
	£	25904	30961	18009	38696	42204	35180	39895	42826	37173	33673
Baskets and Basketware ... ..	Packages	1312	2588	8398	19742	57297	27375	16281	19124	20352	8450
	£	2412	3785	3308	4264	5752	8212	8515	8593	11170	6727
Bêche de mer ... ..	Tons	636	284	151	111	124	76	43	27	97	116
	£	12315	19181	8491	5023	6362	3977	3080	1984	4603	5714
Beer—											
In wood ... ..	Galls.	893085	453730	631225	585655	510384	397275	518330	574926	654646	731716
	£	109381	55640	79491	68433	62447	44508	57731	60268	69992	73448
In bottle ... ..	Galls.	549542	619784	762031	678172	562958	926075	1072783	1139925	1444911	1598760
	£	122196	146571	166174	113481	123034	195440	232875	262697	319690	346006
Biscuits ... ..	lb.	519428	562536	389338	434271	447780	431972	444926	435397	412193	292762
	£	14839	14916	10935	12715	11296	11044	12150	11592	12064	7808
Blacking ... ..	Packages	1787	1353	3194	2244	3721	4573	3913	6152	3843	4246
	£	4695	3618	7094	5826	9503	12827	11191	13358	8755	8997
Blue ... ..	lb.	184887	249964	391138	314408	320899	406879	271854	351939	449531	300469
	£	5984	6798	11113	8963	8804	11180	7636	9414	11966	7610
Boats ... ..	No.	33	33	60	34	35	47	46	44	49	18
	£	1127	737	1857	847	2941	2083	2811	2028	1843	1429
Bran ... ..	Bushels	257270	246406	115544	393183	304176	524826	426128	1062965	923828	1063196
	£	16619	17121	5780	20918	15681	37405	24552	56204	47792	58072
Bricks—											
Fire ... ..	No.	314089	647952	311953	264625	421701	685546	758143	687388	1173767	773492
	£	1776	2728	2917	1736	2761	3619	3613	3675	7374	3500
Building ... ..	No.	101750	47071	144600	336150	138822	118375	295753	18200	55154	67796
	£	299	201	235	930	553	232	1038	91	102	186
Brushware ... ..	Packages	2124	2527	3053	2574	3286	2993	3122	3767	4355	3422
	£	22802	25045	24745	22370	33895	36141	42859	44580	49985	39154
Butter ... ..	Cwt.	6373	4035	938	2037	5894	14768	16192	24928	32366	27941
	£	39809	21379	3919	7063	30741	90422	88860	147148	188195	159536
Candles ... ..	lb.	3194512	1788882	2296316	1303982	2877471	3024256	2201839	5078982	5160591	3169352
	£	112952	72624	74820	37678	80031	79806	69902	169865	156753	82139
Carriages ... ..	No.	980	533	362	205	238	503	831	714	693	1141
	£	31474	26971	23406	15678	14545	25339	42137	39591	33112	31076
Carriage and Cart Makers' Materials ... ..	Packages	9919	3580	6573	2500	4205	4774	5233	3233	6327	8546
	£	39686	13280	21964	7945	15275	18832	25768	17062	29794	33767
Carts, Drays, and Waggons ... ..	No.	483	286	193	160	118	285	324	265	175	728
	£	18868	5373	5961	7086	4007	6835	9659	7398	4194	14905
Cement ... ..	Casks	43565	39642	66274	49196	142874	156144	136896	267352	275654	352282
	£	33320	28236	57548	41855	118083	124389	115258	216353	213118	229566
Chain Cable ... ..	Tons	338	485	113	1453	200	246	170	224	268	214
	£	2508	4345	1804	2105	2987	3726	2700	3732	3941	1984
Cheese ... ..	lb.	711240	541919	246139	115678	171544	331944	161753	725177	769148	1229334
	£	29519	20112	8240	4462	5687	12428	8042	22688	29163	43508
Chicory ... ..	lb.	466201	313010	277272	450993	319839	168931	267326	359623	348825	194020
	£	5461	3807	4027	6211	4264	2097	2831	4359	3695	1851
Chocolate and Cocoa... ..	lb.	292803	268526	274815	206093	349807	375430	374231	447035	523656	424950
	£	18436	15961	16402	13723	23745	21732	25132	29171	30458	29717

NOTE.—Where they could not be given intelligibly, quantities have been omitted. Articles, the quantities and values of which are omitted, have either not been imported or have been included by Customs officers under other heads.

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## IMPORTS—DECENNIAL RETURN—continued.

Articles.	Quantity and Value.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Chinese Goods ... ..	Packages	.....	128	213	113	126	316	400	186	162	1127
	£	.....	325	397	139	214	491	638	401	250	1565
Chromite Ore... ..	Tons	.....	.....	90	278	1384	3466	1805	1138	885	1698
	£	.....	.....	845	1080	6580	17490	9130	2715	2115	4909
Coal and Coke ... ..	Tons	.....	.....	.....	.....	.....	.....	.....	.....	887	5686
	£	.....	.....	.....	.....	.....	.....	.....	.....	11780	22549
Cobalt Ore ... ..	Tons	.....	146	5	179	6	326	115	58	1030	839
	£	.....	1,555	100	1194	80	4611	2230	330	5632	6067
Cobalt—Metal ... ..	Tons	.....	.....	.....	.....	.....	.....	.....	27	.....	.....
	£	.....	.....	.....	.....	.....	.....	.....	1470	.....	.....
Cocoanuts ... ..	No.	167870	345239	317652	249124	439477	490923	305733	622799	505997	389492
	£	1270	1881	1388	1139	1596	2243	1492	2821	2733	1922
Coffee ... ..	Tons	324	239	195	292½	352½	314½	304½	396½	448½	.....
	£	37106	27462	21317	33386	28396	30047	26980	34624	36362	.....
Confectionery ... ..	lb.	421352	233067	295745	316690	351586	448260	447718	742778	834444	697333
	£	16089	12428	11042	13292	12916	16399	17487	28462	29828	24978
Coin—											
Gold ... ..	Boxes	38	27	86	11	19	41	58	74	99	86
	£	106291	118533	195356	28240	5945	148852	434069	308592	367784	371336
Silver... ..	Boxes	168	38	469	189	93	174	143	128	166	142
	£	67622	8739	133165	65477	31164	63027	55916	49823	65443	37451
Copper ... ..	Boxes	265	50	60	1	61	201	151	152	300	173
	£	1505	1000	1000	5	574	2001	1502	1509	3000	1753
Copper Ore ... ..	Tons	26669	24875	17641	17426	21177	26607	18188	23196	1965½	15577
	£	221505	186645	134438	142083	177663	194929	174090	239245	198988	152471
Copper (refined) ... ..	Tons	1708	425	461	289½	31	1	3	.....	.....	4
	£	116206	24213	33813	20944	1540	72	135	.....	.....	17
Corks and Bungs ... ..	Bales	1549	1518	1461	1107	1504	1995	2030	2183	2251	1360
	£	12086	12583	10954	9569	11529	20123	18409	17961	18436	9282
Copra ... ..	Tons	5908	4216	3741	5052	3879	3924	3761	3945	3599	4563
	£	39366	51527	56389	68553	42659	47731	53202	52520	44181	50322
Cordage and Rope ... ..	Cwt.	17487	15904	12607	10416	14181	16146	17366	18843	18949	16443
	£	32670	45960	35679	31811	45354	53787	56235	62365	56611	44429
Cotton (raw) ... ..	Bales	1121	259	600	862	1032	1318	1045	401	689	412
	£	13713	3691	11157	15593	24896	16990	13151	3886	2681	1312
Cutlery ... ..	Cases	880	940	774	761	1067	1242	1395	1501	1626	1820
	£	37232	39080	32904	29703	43339	57603	61023	53509	60012	56188
Drapery, general (including Woollens) ... ..	Packages	52617	65349	60708	66740	91029	103493	102866	86067	90147	77479
	£	2504149	2717028	2515048	2602451	3410676	4087172	3875390	3217159	3408903	2887111
Drugs and Medicines ... ..	Packages	.....	23856	20363	24106	39094	39040	40294	62036	81962	39938
	£	154443	122259	115734	124707	190856	200445	220470	277570	333183	203173
Earthenware and China ... ..	Packages	9921	12816	11914	14643	19467	20594	27500	26601	28087	29057
	£	68167	77757	88106	80524	94543	132488	135917	163526	179591	124084
Felt ... ..	Bales	426	281	465	425	1427	1470	1027	531	816	598
	£	1931	1139	1416	1702	2402	2353	4243	1985	2622	1882
Fireworks ... ..	Packages	1385	1173	895	1772	2524	2898	1883	2114	1200	1959
	£	2154	1652	2030	3369	3686	5517	3797	3723	2649	3139
Floorcloth and Oilcloth ... ..	Packages	1317	1034	810	1055	1413	1492	1877	3594	2348	4199
	£	12511	14842	10871	14305	19294	21593	24750	45075	28674	43103
Fuse ... ..	Casks	270	231	376	429	915	889	721	1149	1175	784
	£	2651	1851	3284	4498	8910	8461	6219	9468	8988	5770
Flax and Hemp ... ..	Bales	1562	4344	5520	2520	5184	5970	6498	5571	7280	3433
	£	6382	15661	10446	11072	22491	30221	38019	21564	31737	12816
Fibre ... ..	Bales	8512	6572	4229	10483	4958	4621	9635	13205	8379	22992
	£	2428	3249	3513	8173	5164	3823	4455	6020	6612	2797
Fish— (Salt, Dried, and Preserved)	lb.	4207394	4063890	3427626	2145503	4243765	4921696	6083168	6253642	4692580	4413441
	£	161970	133334	92992	71172	143974	157159	181660	184442	117909	102991
Flour and Bread ... ..	Tons	21378	33174	28165	37150	33047	48986	40048	49518	53420	61492
	£	339149	411007	311907	392029	388451	643551	478484	519656	524315	649372
Fruits—											
Dates... ..	Tons.	107	213	182	83	19½	130	241	296½	316½	284
	£	3308	6111	5570	3975	621	4015	6487	8725	6482	7969
Dried... ..	Tons	2640	2201	1874	1916½	3616	2813½	3006	35944	2961½	2708½
	£	98454	74063	53798	67802	137256	116187	112262	124492	92780	100629
Bottled ... ..	Doz.	10134	5436	9937	3860	4932	9899	6760	5798	6475	7035
	£	4816	2997	5327	2035	2252	4965	2966	2609	3000	2838
Green ... ..	Cases	93283	132695	142376	174541	174080	225184	385393	445380	565182	581621
	£	51705	55810	55878	65461	71048	88767	115644	154580	178505	177316
Furniture ... ..	Packages	13801	24620	15328	10414	23229	34290	27742	27511	30401	39003
	£	105435	144303	108178	78700	145452	224470	247526	220810	231437	278190
Fungus ... ..	Packages	12509	2755	2212	3311	3046	2795	1711	2955	1748	2353
	£	6468	5896	4806	11128	14937	11114	6802	9990	7725	9855
Gasfittings ... ..	Packages	1579	4907	2348	1447	3525	1527	999	1351	1893	42365
	£	17308	14704	20318	12430	23499	21416	21361	22524	33771	5783
Ginger (Dried) ... ..	lb.	.....	127232	120590	94142	84300	178231	104055	137290	223303	270813
	£	.....	3911	3137	2691	2556	4594	3024	4217	5760	6189
Glass—											
Window ... ..	Boxes	9094	9426	13500	10910	19306	24626	16401	25847	24858	16945
	£	16650	13659	17056	16000	27345	35421	26961	45581	40547	20161
Looking ... ..	Cases	394	553	488	544	886	627	532	1078	571	421
	£	6351	9655	7700	7367	11826	10719	7946	19058	9250	5934

## IMPORTS—DECENNIAL RETURN—continued.

Articles.	Quantity and Value.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
<i>Glass—continued.</i>											
Plate ... ..	Cases	261	279	237	270	267	631	538	635	860	807
	£	5249	8233	8656	9437	8680	19255	15021	21407	17631	16939
Glassware ... ..	Packages	11565	12105	17045	9278	15903	19426	16901	24169	27584	23906
	£	54358	51407	60682	48143	70734	77294	65699	81927	99169	71617
Glue ... ..	Packages	113	160	149	136	257	268	252	467	327	469
	£	1359	740	751	960	1141	1640	1416	3472	2973	2693
<i>Gold—</i>											
Dust ... ..	Ozs.	314564	273999	271790	283118	313539	253984	201115	349486	293083	380420
	£	1098592	1064877	1067015	1120994	1198518	978902	754304	1309862	1106963	1462695
Leaf ... ..	Cases	26	50	31	31	28	46	39	50	64	68
	£	1042	1788	1076	1566	1368	2734	2893	2852	3044	3755
<i>Grain and Pulse—</i>											
Wheat ... ..	Bushels	823526	780604	442849	422473	260118	698518	247099	469785	545423	1105079
	£	271218	213835	109245	94345	58642	192523	60680	86466	95547	220287
Barley ... ..	Bushels	20840	35104	132564	62248	26749	49198	62914	128618	44170	61097
	£	3127	7210	26376	13684	5601	10612	11817	18985	7444	9530
Oats ... ..	Bushels	215193	110736	168363	239039	339020	853983	621955	1710982	1541666	1162287
	£	43835	22921	28140	29142	47223	150906	89140	241850	187199	143229
Maize ... ..	Bushels	49747	33862	78337	15966	20629	41093	114927	110061	116600	94673
	lb.	12443	7920	13078	2493	3841	10694	24184	24950	22023	15566
Maize Flour, or Maizena ...	£	157859	117832	90131	132790	149796	189835	177930	194877	271027	247519
	Tons	3836	3025	2205	2984	3731	4370	4337	4938	5932	4067
Rice ... ..	£	3576	6080	4710	4619	6801½	6480½	5052½	8083	6835½	6640
	£	69465	90036	77306	80826	117707	101434	78188	126158	92166	91641
Beans ... ..	Bushels	.....	1490	1181	5487	1775	3914	2398	10423	16430	23820
	£	181	334	182	336	295	970	564	2065	3417	2230
Pease (Dried and Split) ...	Packages	1589	1855	1982	1163	1498	1527	3805	2415	4929	9017
	£	1511	2491	1740	1195	1200	1556	3349	1979	3801	7444
Pollard ... ..	Bushels	7362	38102	17993	55151	24839	9280	19253	152275	161559	203812
	£	527	3137	1133	2865	1369	64698	1631	9712	8158	11303
Sharps ... ..	Bushels	640	2880	11409	12820	12442	24982	18872	99664	86908	99944
	£	48	215	893	886	839	1861	1609	5767	4316	5300
Grundery ... ..	Packages	1275	1034	1300	1880	1962	2946	3332	3454	2874	2554
	£	25124	21227	25846	28017	32765	36263	37527	39215	42365	31015
Guano ... ..	Tons	13	100	554	219½	344	124½	1	21	163	7
	£	70	572	2727	1680	2928	1693	5	109	1806	46
Gum ... ..	Packages	176	372	340	1267	835	823	440	446	677	199
	£	1999	2871	3141	6097	5279	6060	5703	6801	8516	2177
Grease ... ..	Tons	41	105	39	72	87	216½	135	154	295½	129
	£	593	1043	856	1293	1579	3947	2581	2874	5325	1693
Hardware ... ..	Packages	64982	93488	81728	62011	96948	134068	125195	126874	145561	177719
	£	357634	462198	475399	372761	542969	737840	793622	716892	649132	617249
Hay and Chaff ... ..	Tons	8531	4628	3791	14578	14792	24599	22911	36926	21444	43637
	£	45054	23364	18088	58700	67021	153789	123101	181408	102047	219828
Hoofs and Bones ... ..	Cwt.	2112	1765	546	1656	1132	987	4709	4298	12093	5926
	£	989	1051	399	1055	749	656	1869	2515	5565	1953
Horns ... ..	No.	28311	43810	55972	10319	56090	96513	161210	214218	233994	179478
	£	496	442	667	1157	576	1114	1689	2269	2991	2080
Hops ... ..	lb.	575364	698686	474906	559364	803290	868999	868855	709973	801174	925700
	£	37535	36012	26136	45879	51993	76897	123110	80739	41943	39333
<i>Instruments—</i>											
Musical ... ..	Cases	3459	2858	2181	2067	3691	5167	4900	6055	5871	4507
	£	111425	117430	77627	72764	118242	163849	167947	179294	164853	111586
Surgical ... ..	Cases	112	125	119	135	161	209	161	196	164	144
	£	3780	3933	3441	4404	4397	5668	5497	6522	5871	4005
Scientific ... ..	Cases	645	272	338	269	303	334	491	505	590	423
	£	17138	8629	11960	7012	10217	12118	20779	14937	16270	9605
Optical ... ..	Cases	27	61	180	61	91	96	97	119	169	179
	£	1209	2676	6499	2975	4485	3447	3757	5613	7179	5342
India-rubber Goods ... ..	Packages	368	537	337	672	762	540	757	914	1017	1112
	£	8287	12453	5983	8022	10925	12200	17556	19540	21167	16391
Iron and Steel ... ..	Tons	30999	23953	18522	16619	21162	30758½	30677	34260½	46490	23254
	£	304530	192004	151498	141717	201430	262015	285784	327445	379347	170149
<i>Iron—</i>											
Castings ... ..	Tons	1678	2574	2346	1438	2705	3602½	3191	3025	52984	937
	£	19086	30380	27392	20860	40450	50309	49426	50612	74152	10986
Tanks ... ..	No.	649	1368	1219	1348	1178	1921	2929	1788	1245	3327
	£	2527	4778	4193	4035	4175	7734	11096	6123	4241	9272
Pipes ... ..	Tons	2577	2378	4139	2870	4279	9164	7693	9860	30118½	22539½
	£	22601	20176	31457	25260	37467	72263	60068	70931	197112	131273
Galvanized Manufactures ...	Cwt.	8308	9600	7240	7000	12965	16020	10180	11160	15370	1370
	£	35861	19207	14393	13994	22560	28857	19095	18957	24621	25170
Galvanized ... ..	Tons	7725	8649	7477	10661½	13937	16608½	17925	19387½	21474½	16883
	£	227934	214235	164128	245279	276266	355272	365713	379804	381984	259927
Old ... ..	Tons	1389	1165	1294	867	1376	1191	759	895	1787	1571
	£	5054	4368	3354	2867	5180	3972	2730	2501	5229	4865
Wire (Galvanized) ... ..	Tons	259	701	355	437	678½	318½	318	289½	462	618½
	£	7410	17636	5801	8024	12889	5865	7077	6375	7296	10873
Jewellery ... ..	Packages	1466	672	491	500	690	921	879	858	917	1014
	£	158017	120658	123839	76129	121376	166220	183724	178623	169130	175073
Jams and Jellies ... ..	lb.	2654422	2738561	2597385	2499585	3156769	4664455	4310945	4121944	3795774	3878060
	£	77686	80777	69243	65949	85531	130176	106647	101702	85321	73101

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## IMPORTS—DECENNIAL RETURN—continued.

Articles.	Quantity and Value.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Lampware ... ..	Packages £	2234 18300	2531 17782	1884 15210	1482 10311	2857 16769	2924 23554	4076 23948	4540 24271	5383 37851	4486 33136
Lead—											
Rolls ... ..	Cwt. £	15455 25403	21651 23680	24541 23350	15091 20564	36032 33360	40838 37477	52168 43849	57772 42890	76872 51400	46883 35932
Piping ... ..	Cwt. £	1555 2131	991 1243	2071 2450	1238 1408	1794 1917	1972 2090	2568 2355	3164 3106	2333 2255	.....
Leather—											
Unmanufactured ... ..	Packages £	2027 47874	1866 45438	1519 45664	1779 43070	2194 66798	2558 78197	2611 72754	2298 74543	2654 78451	2378 67710
Boots and Shoes ... ..	Packages £	20744 312847	21213 296767	28128 408368	28002 375181	33449 439409	48733 635796	37342 571402	45522 581820	49274 649857	41140 582313
Chamois ... ..	Packages £	6 316	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lime-juice ... ..	Galls. £	22608 2118	19544 2823	17880 2331	26144 2724	22743 2360	29013 3655	20599 2912	30844 2908	17379 2126	17632 1631
Lithographic Materials ... ..	Packages £	..... .....	97 424	269 649	152 1103	73 440	60 410	161 2063	178 1583	504 2092	197 604
Live Stock—											
Horses ... ..	No. £	1563 28951	792 29922	1522 28326	1034 26862	1885 40071	2023 63099	3067 84589	4453 114260	6708 168495	3310 105190
Goats... ..	No. £	8 146	7 34	30 150	52 104	8 69	2 20	1 2	2 20	4 8	6 27
Cattle ... ..	No. £	3563 15419	5453 57279	7203 48684	3253 14535	9602 63539	5530 49979	3460 39319	36186 315110	36602 195602	80677 433564
Sheep... ..	No. £	330062 162627	495868 254143	160123 97016	81742 105352	198329 196411	207538 190180	205558 302249	404371 378336	1134439 788337	288225 160456
Dogs ... ..	No. £	24 850	21 188	82 661	56 606	212 873	94 860	520 963	150 810	123 732	129 582
Poultry ... ..	Coops £	144 317	175 347	88 216	89 263	122 283	109 440	153 486	201 826	725 801	243 607
Pigs ... ..	No. £	28 80	103 423	865 921	266 480	272 263	973 946	291 335	756 1121	970 1590	1151 1743
Matches ... ..	Packages £	12515 43391	14251 48760	14600 38754	16208 46111	19726 54611	21975 54755	21944 49731	19199 37831	22443 41611	35570 66226
Machinery ... ..	Packages £	20572 266097	14742 191352	22141 228860	13398 164223	28473 279472	29090 388761	43714 509760	34259 577437	37146 485271	34250 326651
Machines for weighing ... ..	Cases £	1248 4649	724 3879	905 3598	624 2560	1536 3847	2092 6670	1903 6864	1108 3773	1806 5254	798 4438
Sewing ... ..	Cases £	3704 30752	4669 38354	5503 41258	8736 51745	14742 87120	17337 96135	20472 76732	17328 64259	8678 42979	11426 43699
Malt ... ..	Bushels £	235324 100818	227270 102057	282475 124686	262795 110592	262795 99094	368129 132752	327632 123024	484188 150478	411189 145920	460405 149866
Marble ... ..	Cases £	856 6334	1216 9171	1486 6570	1455 6287	2254 12950	3202 23549	4619 22809	4659 23246	5387 24869	7085 18703
Mats, Matting, and Rugs ... ..	Bales £	3395 7900	17907 20776	7953 12838	11194 11172	24829 26471	19327 21588	7416 13301	13714 20574	14604 17857	10281 13009
Manganese ... ..	Tons £	278 1390	60 250	16 80	.....	10 100	.....	.....	5 60	15 75	.....
Metal—											
Old ... ..	Cwt. £	2980 831	7460 3099	2080 2509	4120 3786	680 865	1000 1442	1320 1886	410 676	185 2338	.....
Military and Naval Stores ... ..	Packages £	2660 5459	10421 40394	4529 15866	14290 32158	11969 31030	14660 61610	6939 39253	27698 47938	20895 71926	12147 142493
Mustard ... ..	lb. £	302005 14202	285729 14020	333195 16887	244908 13119	436167 22471	399806 21825	337832 18121	295434 16619	357183 20071	519670 21020
Nails ... ..	Cwt. £	42440 53800	38929 45347	33889 36552	36712 37068	67276 37068	70974 68433	31077 68433	48880 36763	83230 46460	55758 43536
Nickel—ingot ... ..	Tons £	..... .....	..... .....	..... .....	121 24200	623 114100	797½ 154800	309 62850	16 3200	222 22975	..... 874
Nickel Ore ... ..	Tons £	643 26005	527 19970	62 3000	92 18200	193 4330	55½ 1345	95 1430	451 35762	228 3440	..... 7586
Nuts ... ..	lb. £	249128 5914	327778 5296	160487 4134	143972 4509	330594 8578	322589 7992	395149 9094	277800 8908	221979 8031	294258 7777
Oakum ... ..	Bales £	2186 1886	2092 1719	1085 854	1130 930	2616 2194	1469 1265	1577 1415	3677 3033	1342 1128	2165 1544
Oars ... ..	No. £	2265 945	9176 2482	6628 1378	3161 1147	8220 1559	5457 1372	14391 3329	4303 1483	10944 2488	4715 1187
Oatmeal ... ..	Cwt. £	13873 16990	16185 21640	17128 21178	18878 17950	24362 20646	27447 28821	32261 29321	41872 36184	43328 40888	33261 26919
Pearl Barley ... ..	Kegs £	591 610	1134 1307	2362 2641	1630 1697	1524 1571	1379 1453	1485 1532	2116 1734	1428 1454	913 1239
Oil—											
Black ... ..	Tuns £	142 5130	158 4928	208 6152	142 4384	299½ 9758	145½ 4476	96 3401	397½ 12669	148 4059	150½ 3768
Castor ... ..	Galls. £	122287 29304	207930 49751	192649 38949	151068 32124	249132 44377	265028 40118	282256 45900	434556 67390	265676 36832	314528 37280
Linseed ... ..	Galls. £	139283 21742	157496 24995	107242 16849	148352 23868	203928 32512	191123 29430	217441 30214	286289 39527	254380 33727	328274 41009
Sperm ... ..	Tuns £	52 4028	7 269	6 322	1½ 123	5 221	7 329	10½ 799	3½ 157	2½ 105	35 1092
Cocoonut ... ..	Tuns £	76 3022	37 1210	30 866	19½ 806	19½ 782	67½ 2174	46 1453	40½ 1581	78 2452	23½ 665



## IMPORTS—DECENNIAL RETURN—continued.

Articles.	Quantity and Value.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
<i>Oil—continued.</i>											
Olive ...	Galls.	7337	14124	7255	7448	6592	6767	14885	9582	18482	36134
	£	1997	3665	1733	2003	1809	1942	4614	3121	6682	15065
Colza ...	Galls.	17290	12432	22983	25798	24632	33078	20459	37910	46347	35044
	£	3995	3082	3854	4130	3807	5144	3677	6650	8942	5040
China...	Galls.	26761	64390	28988	60865	63563	37449	82459	125450	58182	84834
	£	5803	11089	5139	10645	10022	5301	13827	22215	8557	11933
Palm ...	Galls.	11339	12656	16161	14435	20413	8073	5200	15282	8567	16287
	£	2163	2293	2558	2273	3333	1361	838	2878	1308	1808
Naphtha ...	Galls.	140	905	1185	482	1735	1110	1395	1352	1060	7836
	£	37	198	260	98	419	252	249	377	184	936
Kerosene ...	Galls.	464944	673528	482669	485228	493527	629992	592207	676704	1289227	1105771
	£	45716	47963	35001	32094	30737	39516	33725	38280	69377	51631
Salad ...	Galls.	24034	23146	24187	31256	31127	24346	22067	32132	26111	.....
	£	13334	11384	11674	16493	15209	12072	10546	16777	12027	.....
All other ...	Galls.	135323	29416	51085	122775	132380	114914	135878	173181	154514	131545
	£	23432	8486	9887	18098	23816	20067	21973	25393	25195	18215
Oilmen's Stores	Packages	9330	3920	4102	3305	4179	10077	8011	10291	10652	3768
	£	20855	10410	10608	9099	14758	26668	23255	25559	27932	9492
Oil Cake ...	Casks	14	3	26	44	143	1	268	485	362	.....
	£	9	5	15	46	67	3	239	652	341	.....
Oysters (Fresh)	Bags	4048	2802	4082	2753	3047	7783	6209	8777	9148	1105
	£	3728	2143	3442	2348	2815	8651	5169	6705	5395	1061
Opium...	lb.	22426	19098	24234	37589	26652	33144	37203	24414	21093	37368
	£	52784	46691	56954	82791	58185	69174	79928	54963	47027	79259
Paint ...	Cwt.	26660	34881	29274	27957	43664	54374	38691	64008	59496	51486
	£	43196	60048	48471	50389	65074	84782	62690	93731	83328	69574
Painters' Materials	Packages	1149	1214	1490	1791	2736	3739	3242	4108	3240	1996
	£	2887	3161	3285	2731	3477	4108	4757	6113	5551	4886
Paper-hangings	Bales	1464	1446	1298	1653	2338	3146	1774	2297	2358	2367
	£	12592	13282	11810	14659	19338	25276	14789	17061	16913	23288
Pearl Shell ...	Tons	1200	565	444	398	406	420	364	339	147	307
	£	33194	75054	54784	47942	49226	53333	46908	41219	17957	36556
Pepper and Spices	lb.	553586	305647	155834	314197	418601	412059	293061	523764	385120	349973
	£	9900	13939	7557	14883	22815	18247	13869	23515	19791	16681
Pickles and Sauces	Doz.	111722	89630	114136	108920	183112	171747	140650	224572	179842	196782
	£	45118	37085	45059	42325	68959	67115	53468	72197	59708	65561
Pictures and Paintings	Cases	927	1229	1795	897	1780	227	2227	1664	1605	1391
	£	19982	20284	37584	12516	43270	53869	41887	43835	45926	23757
Pitch, Tar, and Resin	Barrels	5654	9188	5304	8848	9427	15039	8067	9719	13487	13945
	£	6269	8773	5355	10430	10677	14050	7760	10749	11605	8444
Phormium ...	Bales	3417	2488	2187	2315	2784	3833	2462	2139	2755	1745
	£	6926	4778	4393	5918	6730	9781	7621	5913	8223	4948
Pipes (Tobacco)	Packages	5309	3947	3957	5773	6345	4811	2484	1832	3259	3428
	£	26037	28784	25862	20720	30747	25718	29287	33128	27464	39629
Plants and Seeds	Packages	8118	3339	3294	3536	3714	4805	6122	8453	6851	4552
	£	21483	12416	11867	9320	10735	14059	14204	17714	18151	9470
Plate (Silver) and Plated Ware	Packages	700	1163	1331	983	1579	2025	2056	2115	1951	2190
	£	30236	45555	63220	44306	73712	96530	93575	85619	90067	83299
Potatoes	Tons	41900	26018	16997	33207	30913	45738	42908	61625	59848	62923
	£	141829	127274	81948	102506	110660	213578	170000	241422	222273	260563
Preserves	lb.	658120	371672	429471	300175	614145	1120095	882975	1127891	1281901	1298644
	£	35343	11231	12034	10252	19487	35636	26547	34251	36313	27414
Printing Materials	Cases	2755	2277	2678	2188	3017	2498	3325	3155	4407	2303
	£	33803	26789	34726	21580	25009	30376	41866	38579	43865	22557
Photographic Materials	Cases	118	261	457	620	768	937	910	973	1158	1130
	£	2212	4664	5074	6852	9374	10999	11090	13548	17129	15436
<i>Provisions—</i>											
Beef ...	Cwt.	425	1166	613	700	899	1669	2502	5956	6283	5973
	£	845	1768	788	743	1321	2483	4703	9133	7888	6304
Pork ...	Cwt.	772	1080	776	543	188	937	918	432	893	475
	£	1975	2249	1289	972	363	2561	2491	735	1490	811
Bacon and Hams	Cwt.	4472	4072	4262	2637	2641	5247	7208	10000	14503	13255
	£	22447	20520	20109	13677	13757	27490	36773	50460	71158	54395
Game	Packages	.....	268	295	471	816	700	1010	1083	641	1487
	£	.....	689	363	568	906	891	1206	1529	781	1241
Chinese	Packages	623	1624	548	787	1515	576	1568	1790	1770	196
	£	716	1045	780	1025	1911	2120	2054	2133	2113	282
Preserved	Packages	6218	9394	11206	14432	27929	33995	62190	81538	75277	21239
	£	11287	13550	15925	20996	37357	44384	81350	104870	89978	21725
Preserved Meats	Cases	22030	3892	4687	29648	8033	29427	64985	27346	113797	1243324
	£	43750	6772	9788	52261	14094	49793	101202	43817	180863	32925
Vegetables (Preserved)	Packages	2253	3367	5435	1942	2788	5449	4952	5834	5061	2924
	£	3354	4791	8574	2701	3245	9422	9257	7960	7783	4725
Vegetables (Green) ... (Including Onions.)	Packages	.....	24390	28816	47880	37517	73953	67647	103177	96828	.....
	£	14446	17987	16438	19636	20825	31469	34322	64055	53152	39323
Pulu ...	Bales	1508	1874	1361	374	660	.....	.....	.....	.....	.....
	£	3375	5066	3327	793	1605	.....	.....	.....	.....	.....
Quicksilver	Bottles	1097	584	893	963	1173	1231	850	410	738	166
	£	10043	5116	7423	7406	9260	9461	6989	2970	5158	1089
Rattans and Canes	Bundles	3890	21157	.....	.....	.....	.....	.....	.....	.....	.....
	£	1113	4572	.....	.....	.....	.....	.....	.....	.....	.....
<i>Railway Plant—</i>											
Buffers	No.	.....	.....	.....	.....	.....	1644	1053	3848	3430	3500
	£	.....	.....	.....	.....	.....	1666	1053	4472	4614	9404

## STATISTICS, 1886—TRADE AND COMMERCE.

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## IMPORTS—DECENNIAL RETURN—continued.

Articles.	Quantity and Value.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Railway Plant—continued.											
Bridge work...	.....	.....	.....	.....	.....	.....	.....	.....	.....	2063	1421
	.....	.....	.....	.....	.....	.....	.....	.....	.....	17320	16495
Fish-plates ...	Boxes	.....	4706	1236	5682	7125	7699	582	8789	5323	4553
	£	.....	5825	1455	8492	9722	13735	848	12796	4983	4816
Locomotive Engines	No.	.....	20	12	33	22	25	28	43	80	.....
	£	.....	53000	15207	72195	52620	62523	77810	110539	176520	.....
Railway Chairs	No.	.....	.....	.....	.....	3738	.....	20190	.....	17231	17725
	£	.....	.....	.....	.....	151	.....	811	1089	644	2155
Carriages	No.	.....	.....	14	.....	.....	.....	2	.....	.....	.....
	£	.....	.....	14713	.....	.....	.....	7392	.....	.....	.....
Waggons	No.	.....	.....	36	50	.....	125	73	17	526	.....
	£	.....	.....	2760	4000	.....	4400	4460	2000	34730	.....
Rails ...	No.	.....	67776	46960	80426	153132	148369	50357	147986	126302	70853
	£	.....	87919	68562	119614	200160	217031	66339	190845	151258	95936
Locomotive Boiler	No.	.....	.....	.....	.....	1	.....	.....	.....	12	17
	£	.....	.....	.....	.....	810	.....	.....	.....	6123	5077
Springs	No.	.....	1625	.....	.....	.....	.....	.....	.....	.....	.....
	£	.....	.....	.....	294	79	1959	4514	4188	7038	4908
Switches	Cases	.....	1096	.....	2233	1195	8417	9834	7149	7078	7662
	£	.....	225	100	701	180	300	841	192	488	732
Fastenings	No.	.....	3516	1474	9160	999	3273	4729	3934	8756	1663
	£	.....	.....	1446	3242	5792	2736	1736	4934	3350	4408
Turntables	Cases	.....	.....	3835	8218	14244	6343	4291	12763	8508	11727
	£	.....	.....	5	.....	.....	19	3	.....	.....	24
Pipes (Cast iron)	No.	.....	.....	1384	.....	.....	4020	1185	.....	.....	2040
	£	.....	.....	.....	.....	.....	.....	19160	.....	.....	.....
Wheels and Axles	No. of pairs	.....	1717	1362	833	651	1453	3444	1298	4267	3824
	£	.....	31974	20946	14246	10090	23043	57099	17617	67219	49216
Crank Axles	Cases	.....	.....	.....	6	10	12	.....	6	854	.....
	£	.....	.....	.....	750	1322	1508	.....	750	6200	.....
Crossings	No.	.....	.....	.....	443	.....	655	100	40	1470	681
	£	.....	.....	.....	6688	.....	9915	1417	661	1497	8412
Tyres ... *	No.	.....	.....	.....	112	712	1216	1316	836	2493	2014
	£	.....	.....	.....	532	5510	5729	8593	7977	13508	12289
Signalling Apparatus	Packages	.....	.....	.....	.....	.....	.....	.....	260	657	.....
	£	.....	.....	.....	.....	.....	.....	.....	3657	7720	.....
Saddlery and Harness	Packages	2427	2639	2770	2798	3252	3768	4500	3544	3181	2665
	£	69147	53289	56122	53997	62113	82631	93286	76123	61862	55634
Saddlers' Ware	Packages	.....	866	678	802	885	1165	1439	1425	1114	2761
	£	.....	21651	18427	14661	22086	28580	33686	36006	25384	46435
Sago ...	lb.	227513	96170	53743	62647	31784	35002	71507	80133	16987	32994
	£	2769	2133	760	806	538	508	703	704	234	327
Salt (In Bags)...	Tons	16124	10228	8460	16148	18549	15048	10221½	13577	18978	15239
	£	34975	28035	24642	46837	49803	41632	30344	31994	50408	29492
Salt (Rock)	Tons	2459	1310	1733	3404½	5758	2289	1142	2019	4168	2280
	£	5035	2899	5429	8889	11763	5077	2323	5110	8941	5504
Saltpetre	Cwt.	.....	575	368	1866	1278	983	465	889	2346	1460
	£	.....	842	504	2298	1786	1322	612	1221	2698	872
Ship Chandlery	Packages	2526	1191	422	295	392	856	756	787	950	1684
	£	39468	19243	6602	6288	7298	7589	16190	10085	11086	12771
Silver Ore	Packages	.....	.....	337	449	1697	34	1316	299	2596	1630
	£	.....	.....	2835	5680	3013	44	2297	180	4381	2234
Shooks and Staves	Bundles	8316	10834	17536	16220	18456	25261	23132	17905	13787	3949
	£	3169	3798	6500	6297	7133	8955	8180	6333	4797	1716
Sarsaparilla	Galls.	9280	6952	6294	4857	4050	5492	4280	4569	3690	2567
	£	7313	5114	4329	4204	3725	5066	3730	4084	3104	1891
Silver ...	Ozs.	.....	.....	2175	14268	6002	400	4444	.....	.....	8920
	£	.....	.....	433	3332	1365	68	1000	.....	.....	1384
Skins—											
Horned Cattle	No.	72104	55202	63545	85561	104970	99675	130153	114091	143867	107962
	£	72126	59902	58339	78214	100730	96066	128203	114054	141358	102077
Sheep...	Bundles	3492	3195	2745	1439	1490	1521	3204	2713	2905	2936
	£	36934	28798	23699	12113	11981	12682	29929	25209	22737	18401
Horse...	No.	516	254	90	75	286	119	33	11	34	162
	£	231	96	57	36	80	43	11	3	29	113
Kangaroo	Bundles	152	65	124	112	82	63	55	234	408	665
	£	1198	484	1381	946	760	405	370	2028	3222	8509
Calf ...	Bundles	24	.....	.....	.....	.....	.....	.....	.....	.....	124
	£	46	.....	.....	.....	.....	.....	.....	.....	.....	261
Slates—											
Roofing	No.	2499165	2040174	1017081	2117984	2751845	4583201	1893773	3087328	5784214	4053401
	£	27229	23072	11801	24841	29482	46116	19501	32203	56195	28074
Roofing Slabs	No.	280	52614	796	768	678	1013	3272	6556	5317	2810
	£	398	1833	778	614	869	786	2550	2862	2919	1915
Soap	Cwt.	7935	13023	10067	12101	11229	12867	12699	13687	15513	12232
	£	14306	17684	14345	15983	16547	20208	22133	22802	24356	14087
Soda (Crystals)	Tons	1291	881	1351	1298	2047	1189	1126½	1848	1930	1549
	£	8299	5314	6658	6904	10320	5529	6272	8938	7831	5057
Specimens of Natural History	Packages	80	183	329	206	508	284	241	920	483	229
	£	576	1180	6841	797	2779	3908	2285	4027	3001	1362
Starch ...	lb.	1085064	906563	967703	1336457	1422128	806423	939721	1468042	1615158	2014233
	£	9445	15450	17054	23267	21549	12475	15139	20315	21169	24726

IMPORTS—DECENNIAL RETURN—*continued.*

Articles:	Quantity and Value.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
<b>Spirits—</b>											
Brandy ... ..	Galls. £	579116	502007	515212	508162	546735	474938	444134	472058	512595	383038
	£	299622	252343	270215	243617	266081	248485	247737	264146	262661	201088
Rum ... ..	Galls. £	318110	251044	245466	253092	267139	302550	293875	336372	263332	255065
	£	61754	49160	46510	45282	53511	70225	62356	71216	54215	48786
Geneva ... ..	Galls. £	301860	176422	267559	226883	220318	239877	204353	220080	192617	187735
	£	66686	44096	63948	51657	48644	59260	59280	59502	57319	49139
Gin ... ..	Galls. £	13702	10774	15143	9114	14708	15169	14502	49426	19425	17654
	£	5210	4227	5491	3911	4565	5605	5791	21336	6403	5877
Whiskey ... ..	Galls. £	122572	156667	202717	193980	358735	357857	293285	314883	378466	380491
	£	48276	65872	82395	73779	140950	140169	121209	145461	141355	144732
Liqueurs ... ..	Galls. £	7363	7432	6944	5827	7454	11151	11783	13655	11064	11396
	£	5616	5700	4813	3939	4988	7809	8086	8763	6897	5571
Perfumed ... ..	Galls. £	3337	5635	5398	6262	7819	6992	7033	13629	6257	5853
	£	6320	12811	12162	11330	15720	16761	16607	18575	15353	16575
Methylated ... ..	Galls. £	876	1739	8522	8505	8849	17585	16216	18904	16555	23903
	£	360	785	1515	1614	1928	3863	3476	3181	2533	3090
All other ... ..	Galls. £	28193	31922	24701	23262	37005	22185	16260	29316	36879	26580
	£	8743	11158	10610	13881	14157	8406	7729	14008	12000	10115
<b>Stationery—</b>											
Paper (Printing) ... ..	Bales £	3888	6119	9838	9922	12215	13130	10055	15089	21571	20014
	£	49021	64626	116591	107955	25342	143367	118169	157785	186785	142534
Books and Periodicals ... ..	Packages	8146	7801	7499	7400	6750	7759	7917	9336	9636	8336
	£	163359	180155	174847	143484	159516	189079	186585	218640	217106	177396
Paper (Brown and Wrapping) ... ..	Cwt. £	11831	14049	17275	13948	34424	15736	13745	26180	33264	32168
	£	37794	22697	24190	19649	38499	23129	21164	39243	41610	30760
Sundries ... ..	Packages	4506	5951	7341	8289	12924	19291	13265	14289	13488	13728
	£	67595	62949	95640	99077	166987	181893	171890	183546	167724	153088
Paper (writing and fancy) ... ..	lb. £	418445	323517	238113	205749	286218	314582	258063	218863	443184	177206
	£	27897	15883	11715	9912	12991	14241	12243	11239	18948	66751
Stearine ... ..	lb. £	.....	.....	.....	.....	.....	.....	.....	140882	16169	4539
	£	.....	.....	.....	.....	.....	.....	.....	3453	447	136
<b>Stones—</b>											
Mill ... ..	No. £	.....	64	186	18	29	27	48	16	2	2
	£	.....	618	800	262	324	301	566	31	32	10
Building ... ..	Blocks	1630	1669	3120	2678	2127	1912	2880	3739	4695	9586
	£	1725	2146	4336	2179	2778	2882	4617	7319	7849	8334
Grinding ... ..	No. £	2811	2976	4288	3758	5844	6703	6246	5228	4960	3244
	£	1072	924	876	642	1007	1336	1216	948	775	482
Stone-ballast ... ..	Tons	410	744	1511	1825	6130	672	188	2409	5627	2643
	£	323	320	636	1102	3710	291	25	2415	5526	4038
Stone-flags ... ..	No. £	905	1218	5405	10804	13119	14288	14573	9156	5926	81374
	£	426	1704	6233	7239	6616	7202	6463	4779	3075	5544
Paving ... ..	Tons	.....	.....	3624	4577	4197	13119	8390	9412	6875	3938
	£	.....	.....	4864	4629	3591	15210	10843	11730	10118	5566
Kerbing and Guttering ... ..	No. £	.....	.....	.....	.....	.....	.....	.....	23768	8421	9424
	£	.....	.....	.....	.....	.....	.....	.....	7335	3039	2865
Sulphur ... ..	Cwt. £	3347	5990	4287	5901	9422	12549	12652	9864	.....	16000
	£	2450	2016	1358	3074	3884	4528	4149	3242	.....	4395
<b>Sugar—</b>											
Raw ... ..	Tons £	22841	27458	35108	19765	27164	32491½	27527	33579½	27361½	29981
	£	570818	697234	834916	539953	655722	838256	743374	843385	500084	478992
Refined ... ..	Tons £	317	215	233	157	295	1424	98	458	365½	218
	£	12277	7457	8422	5435	11948	5285	3715	14523	10077	5046
Molasses ... ..	Tons £	64	57	197	602	835	786½	769½	1188½	1801½	1434
	£	918	1360	4909	17195	21938	22427	21006	29490	27599	17406
Sundries ... ..	Packages	43523	35899	40583	48946	97674	117266	73649	76335	102959	51513
	£	147062	91457	159623	167338	204833	275405	260585	227266	293447	110418
Tallow ... ..	Cwt. £	27855	24680	45447	92330	79059	61655	95475	37584	65457	37806
	£	57236	50581	81537	148068	134334	105155	145939	56056	96771	38513
Tapioca ... ..	lb. £	.....	329312	215219	658328	717397	853964	1071879	1005502	1152132	832138
	£	.....	4430	2963	9122	7619	7391	8582	7880	8962	7378
Telegraph Materials ... ..	Packages	321	1828	4535	380	12363	1025	6421	17644	411	5945
	£	3794	15744	15045	2288	22681	8860	9777	30194	10727	14616
Tea ... ..	lb. £	6088326	5370406	7680000	7469541	8276930	7588709	5733911	8437981	8641670	7107038
	£	414313	362883	480464	479680	545508	464860	345238	543554	458039	311547
<b>Timber—</b>											
Dressed ... ..	Feet	*	4891272	5981923	5565006	6847336	14739853	16456700	1644111	19464845	23561175
	£	.....	65478	61295	61620	71041	183862	176379	159478	176413	201553
Undressed ... ..	Feet	10974901	12747926	20933969	14529055	17140040	30392919	31674757	33164714	46180779	41043618
	£	103147	106144	146049	106301	131200	231197	213724	221302	281939	232907
Shingles ... ..	No. £	421250	632500	499825	1130335	177650	751975	834400	562377	153529	2200
	£	356	806	735	1335	280	2323	1679	609	162	4
Laths ... ..	Bundles	.....	10599	12207	4808	4081	13674	41861	33234	63563	109403
	£	.....	969	1456	656	719	1505	5416	3546	7397	11314
Shutters ... ..	No. £	.....	180	1414	205	92	171	317	163	30	4
	£	.....	88	572	395	85	109	628	2335	52	4
Doors ... ..	No. £	.....	22046	23952	27027	38765	48250	52582	41746	81146	40427
	£	.....	14522	15703	15187	22719	29397	32742	25410	45689	22432
Palings ... ..	No. £	709852	932538	750419	837317	760522	843402	1079432	940301	433657	377190
	£	4928	6079	4771	6025	4700	5949	6108	6467	2094	2688

\* Included with Undressed Timber.

## STATISTICS, 1886—TRADE AND COMMERCE.

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## IMPORTS—DECENNIAL RETURN—continued.

Articles.	Quantity and Value.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
<i>Timber—continued.</i>											
Sandalwood ...	Tons	1	80	.....	.....	.....	.....	.....	.....	.....	60
	£	16	800	.....	.....	.....	.....	.....	.....	.....	798
Pieces and Spars ...	No.	140	.....	.....	21283	29490	12697	13306	1790	6300	.....
	£	1064	.....	.....	135	861	260	241	81	218	.....
All other ...	Feet	1474064	151062	31322	.....	.....	.....	.....	.....	.....	.....
	£	18412	1578	485	.....	.....	.....	.....	.....	.....	.....
Sashes ...	No.	*35346	5499	5333	3671	5939	8925	11633	6682	10479	2877
	£	*18660	2094	1964	1263	2253	3296	5515	2451	3761	870
Tin Ore ...	Tons	7277	4334	2753	2664½	3174	4073½	4666	4045	2240	2698
	£	279629	178352	103719	106776	119240	214975	250167	195148	98921	129749
Tinware ...	Packages	1460	1616	2540	4721	6644	13919	11427	27527	12427	20847
	£	9404	10637	13252	13404	19270	17702	14211	24219	21266	13478
Tin-plates ...	Boxes	16705	15143	17370	24721	55706	38685	29129	34161	56536	21749
	£	25745	18660	22242	33884	66479	46229	37396	34921	55322	20473
Tin Ingots ...	Tons	179	773	710	3150½	3341	3437½	4114	3538½	3740	3246
	£	9813	39608	44354	242812	292905	339072	383164	287062	314517	312765
<i>Tobacco—</i>											
Manufactured ...	lb.	653751	1030063	755049	525539	613868	928152	949448	765447	955059	1384036
	£	47331	81088	51594	34629	45909	64791	59965	59669	69117	95118
Unmanufactured ...	lb.	1610989	2448104	202589	477610	1035243	1222594	856066	871416	516951	507916
	£	73292	92645	7617	17368	37350	45849	35108	35744	24308	32368
Cigars ...	lb.	114253	184149	122859	107105	250960	220623	336267	298531	317995	310604
	£	38950	52501	33408	31450	67365	60514	89005	66052	76359	74952
Cigarettes ...	lb.	.....	.....	.....	.....	.....	.....	.....	16411	40593	49923
	£	.....	.....	.....	.....	.....	.....	.....	6256	14738	18265
Snuff ...	lb.	42	502	1227	903	299	744	774	758	770	928
	£	33	74	132	221	64	100	174	74	120	193
Sheep-wash ...	lb.	191	.....	.....	2244	80	301	.....	.....	.....	.....
	£	4	.....	.....	120	3	3	.....	.....	.....	.....
Tortoise-shell ...	lb.	2961	3100	3792	3293	4053	2640	2559	2983	3772	3993
	£	2334	2355	2182	1446	2356	1360	1568	1756	2355	2012
Toys and Fancy Goods ...	Packages	6400	7096	5312	5725	7161	8237	9609	9338	11111	7560
	£	112171	128763	119768	97682	126462	157912	209602	195035	186859	76695
Turnery and Woodware ...	Packages	11462	14063	10402	10398	27389	21318	19107	18773	19600	24486
	£	24587	23088	22238	16765	30492	36734	29823	24466	30584	29599
Turpentine ...	Galls.	35606	28605	34412	30071	38291	67387	56680	76635	59236	69364
	£	5991	4341	4556	4983	6801	13208	9735	10099	8550	9366
Varnish ...	Galls.	15941	19737	21635	19515	19758	29392	27921	38886	37347	37489
	£	9174	11976	13710	12270	10100	16909	15858	23215	22179	18432
Upholstery ...	Packages	2336	2099	2286	2302	5572	6404	6442	8478	9785	5919
	£	37358	24464	14975	12035	24029	26829	20992	84304	94824	78351
Vinegar ...	Galls.	96434	101790	86033	128073	132936	196734	121547	153502	116210	98042
	£	9941	11880	11022	11501	11783	20118	13646	15870	13124	10974
Vermicelli and Macaroni ...	Packages	2235	1256	1079	542	1089	1162	819	861	1275	1708
	£	3570	2423	2073	1408	3088	3282	2270	2188	3727	2671
Watches and Clocks ...	Packages	2751	2440	2704	1863	2903	4496	4281	3433	3938	3992
	£	43427	56244	65976	62205	66860	89343	120903	129019	114869	134331
Whiting and Chalk ...	Casks	2946	3977	10421	7920	8276	6509	5606	14729	7356	13333
	£	3981	1872	3804	4201	4855	3008	2749	6426	3030	3729
Whalebone ...	cwt.	37	.....	.....	.....	.....	.....	.....	.....	.....	9
	£	700	.....	.....	.....	.....	.....	.....	.....	.....	59
Wine (Sparkling) ...	Galls.	19618	18928	17127	10442	19092	10803	30179	27226	28344	25066
	£	29934	29012	26561	17792	28972	18080	49215	47286	50910	45644
Wine (Still) ...	Galls.	282087	246763	184520	167061	199636	235499	237478	181015	214158	159956
	£	98162	83072	69110	56881	73859	85141	97058	77993	86002	64036
Wire (plain) ...	Tons	12285	10728	6701	8189	15994½	20663	10672	7986	14025	10914
	£	216028	149823	91277	116431	210662	286371	135699	94484	144494	101439
<i>Wool—</i>											
Washed and Scoured ...	lb.	†.....	1827996	1498671	2216716	807834	812850	1474444	1855974	2612392	2198696
	£	.....	134971	100918	145310	53454	48899	93672	116018	145207	102351
Greasy ...	lb.	4646262	3621586	4955699	8729220	7288307	7503264	15291002	9548265	10186567	5602025
	£	368049	150422	211578	374298	302172	340907	571977	370938	397934	177335
Woolpacks and Bagging ...	Dozen	.....	39918	37302	34084	42782½	41010½	48	43741	.....	.....
	Bales	4616	.....	.....	.....	.....	.....	.....	.....	.....	.....
	£	38557	51819	56691	62287	68560	74439	78367	61102	47654	.....
<i>Yellow—</i>											
Metal (Sheets) ...	Cases	830	902	965	1321	1149	1262	1588	1477	1952	1748
	£	13367	16706	13579	20595	18451	20488	25976	23983	28057	12806
Nails ...	Packages	144	550	353	515	1009	1267	1914	682	1156	417
	£	854	3088	1958	2208	4305	3940	5418	3185	5713	1741
Zinc ...	cwt.	1395	5133	3180	2408	5952	5541	2444	4235	6864	.....
	£	2588	5632	3689	3336	7481	6770	2916	4732	8361	.....

\* Doors included.

† Included with Greasy Wool.

EXPORTS.

No. 5.—DECENNIAL RETURN showing the Quantities and Values of Principal and other Articles EXPORTED, distinguishing the Produce and Manufactures of the Colony from British, Foreign, and other Colonial Produce and Manufactures.

Articles.	Quantity and Value.	1877.		1878.		1879.		1880.		1881.		1882.		1883.		1884.		1885.		1886.	
		Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.
Acetic Acid ...	Gallons.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1190	.....	656	.....	1254
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	448	.....	183	.....	319
Acids ...	Pkg.	917	117	913	150	702	169	665	19	559	194	1095	253	988	295	1404	423	1702	212	.....	.....
	£	1204	530	1111	662	839	889	978	1130	878	619	1719	951	1548	840	2258	1424	2660	728	4450	579
Aerated Waters and other Summer Beverages	Cases.	2178	721	1969	802	1584	1028	1168	1057	1495	1103	1129	2048	1120	1749	789	3100	1254	3477	.....	.....
	£	1838	596	2021	904	1935	1041	1643	1048	1963	1316	1622	2945	1675	2831	1192	4969	1649	5950	1526	2830
Agricultural Implements ...	Pkg.	11	291	26	224	11	532	13	519	78	979	90	1467	42	1831	134	1357	185	982	94	858
	£	71	2650	149	1439	63	3581	78	4253	522	5609	447	7974	243	14613	1130	9403	751	6068	718	5338
Anchors ...	No.	.....	246	.....	251	.....	324	.....	329	.....	527	.....	336	.....	316	.....	368	.....	271	.....	295
	£	.....	674	.....	509	.....	747	.....	461	.....	882	.....	714	.....	484	.....	774	.....	584	.....	590
Antimony Ore ...	Cwt.	1119	200	468	40	1389	610	1746	.....	6053	.....	20914	636	7142	75	8406	.....	5755	.....	4351	.....
	£	581	100	249	26	746	344	1132	.....	5028	.....	15563	512	4876	60	5947	.....	4056	.....	2101	.....
Antimony Metal ...	Cwt.	273	.....	821	.....	147	.....	253	.....	47314	.....	464	.....	369	.....	266	.....	100	.....	.....	4
	£	553	.....	1715	.....	300	.....	520	.....	12318	.....	1169	.....	679	.....	511	.....	240	.....	.....	23
Apparel and Slops..	Pkg.	25	1608	50	2124	21	1573	16	2169	139	1655	379	2360	200	1802	160	995	210	1375	108	2556
	£	384	41520	670	64046	203	42116	117	19350	5402	14362	11548	21041	5685	30792	4708	30792	4247	38374	1562	35696
Arms and Ammunition—																					
Guns (Small Arms)	Cases.	.....	415	.....	450	.....	471	.....	524	.....	474	.....	545	.....	411	.....	582	.....	175	.....	274
	£	.....	7324	.....	7446	.....	6469	.....	8274	.....	6172	.....	7335	.....	5427	.....	5542	.....	2710	.....	4434
Cartridges	Cases.	.....	256	.....	367	.....	174	.....	218	.....	350	.....	352	.....	368	.....	356	.....	292	.....	238
	£	.....	1375	.....	1290	.....	1005	.....	1181	.....	2222	.....	2025	.....	2773	.....	2270	.....	1852	.....	1218
Lithofracteur, Dynamite, &c. ...	lb.	.....	14280	.....	29360	.....	31754	.....	37160	.....	54182	.....	71546	.....	113628	.....	98124	.....	62226	.....	28110
	£	.....	1979	.....	3700	.....	3385	.....	3550	.....	4076	.....	5691	.....	9962	.....	7477	.....	3889	.....	1963
Percussion Caps...	Pkg.	.....	69	.....	117	.....	119	.....	156	.....	178	.....	296	.....	168	.....	117	.....	135	.....	105
	£	.....	411	.....	658	.....	722	.....	995	.....	1619	.....	3238	.....	1849	.....	1187	.....	906	.....	810
Shot ...	Cwt.	.....	749	.....	572	.....	772½	.....	946	.....	823¼	.....	841	.....	846	.....	955	.....	633	.....	687
	£	.....	1405	.....	1044	.....	1374	.....	1684	.....	1417	.....	1421	.....	1438	.....	1486	.....	910	.....	896
Gunpowder ...	lb.	.....	22078	.....	35753	.....	36006	.....	36152	.....	51303	.....	58524	.....	47278	.....	24938	.....	16376	.....	11746
	£	.....	1987	.....	2348	.....	2967	.....	3179	.....	4620	.....	5260	.....	4099	.....	2601	.....	1871	.....	1318
Powder (Blasting)	lb.	.....	321561	.....	14298	.....	432869	.....	143368	.....	88972	.....	114176	.....	93015	.....	154873	.....	183100	.....	365757
	£	.....	7990	.....	3866	.....	9485	.....	3442	.....	2248	.....	3343	.....	2231	.....	3720	.....	4530	.....	8731
Arrowroot...	Cwt.	1	287	124	325	42	172	29	239	80	189	35	308	33	159	.....	179	.....	.....	.....	78
	£	3	635	182	501	65	354	41	371	123	331	54	539	63	275	.....	366	.....	793	.....	208
Asbestos ...	Cwt.	.....	.....	.....	.....	.....	.....	.....	248	.....	.....	.....	150	.....	.....	.....	.....	120	.....	.....	28 pkg.
	£	.....	.....	.....	.....	.....	.....	.....	323	.....	.....	.....	75	.....	.....	.....	.....	90	.....	.....	831
Bags and Sacks ...	Dozens	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23939	.....	25062	.....	6279
	Bales	110	1184	5	683	6	432	28	709	25	598	17	1282	3	1278	.....	.....	.....	.....	.....	.....
	£	1353	12079	119	6636	60	4667	389	6391	201	6761	162	12688	67	12900	.....	9703	.....	7507	.....	15769



EXPORTS—DECENNIAL RETURN—continued.

Articles.	Quantity and Value.	1877.		1878.		1879.		1880.		1881.		1882.		1883.		1884.		1885.		1886.	
		Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.
Carts, Drays, and Waggon	No.	354	.....	381	8	212	2	130	.....	116	.....	253	62	392	13	303	22	113	3	130	18
	£	4783	.....	4755	225	2555	20	1814	.....	2670	.....	4549	1017	7928	531	5658	600	1868	68	1826	234
Cement	Casks	.....	3397	.....	407	.....	718½	.....	2795	.....	2215	.....	5254	.....	3772	.....	5817	.....	5535	.....	28010
	£	.....	2969	.....	339	.....	677	.....	2517	.....	2025	.....	4443	.....	3201	.....	4866	.....	4362	.....	17975
Chain Cables	Tons	.....	216	.....	559	.....	814	.....	772	.....	1497	.....	1073	.....	523	.....	914	.....	349	.....	531
	£	.....	14	.....	32	.....	40	.....	41	.....	86	.....	57	.....	30	.....	50	.....	17	.....	585
Charcoal	Tons	.....	.....	406	.....	84	.....	6	.....	514	.....	200	.....	451	.....	563	.....	154	.....	251	
	£	.....	.....	1344	.....	294	.....	24	.....	1971	.....	565	.....	1745	.....	2078	.....	680	.....	1005	
Cheese	lb.	39568	38113	52546	29245	122698	18440	155578	18251	123372	22461	103880	59498	234359	25383	123828	123509	45144	78441	11370	74445
	£	1428	1929	1744	1289	3648	686	4308	774	3669	912	3944	2272	10871	1049	4067	4032	1500	2486	417	3042
Chicory	lb.	.....	38180	2197	32556	.....	43510	.....	4032	.....	15456	.....	12432	.....	448	.....	1568	.....	942	.....	2116
	£	.....	495	5	413	.....	551	.....	54	.....	219	.....	164	.....	6	.....	22	.....	13	.....	27
Chinese Goods	Pkgs.	.....	1224	.....	665	.....	539	.....	396	.....	286	.....	124	.....	177	.....	575	.....	303	.....	202
	£	.....	5375	.....	2892	.....	1974	.....	1282	.....	524	.....	239	.....	295	.....	1381	.....	822	.....	427
Chocolate and Cocoa	lb.	.....	23902	.....	21974	.....	23117	.....	43454	.....	21950	.....	29609	.....	33471	.....	40922	.....	32995	.....	36669
	£	.....	1407	.....	1384	.....	1636	.....	3161	.....	2056	.....	2766	.....	2838	.....	3961	.....	2160	.....	2826
Coal	Tons	915727	.....	1006420	.....	998049	.....	753356	.....	1029844	.....	1261545	.....	1512445	.....	1690763	.....	1756356	.....	1735865	.....
	£	648977	.....	708406	.....	694707	.....	425299	.....	417530	.....	647033	.....	829662	.....	931045	.....	966663	.....	947002	.....
Cocoa-nuts	No.	.....	65724	.....	153367	.....	53968	.....	95540	.....	149528	.....	230098	.....	86568	.....	260856	.....	146736	.....	137424
	£	.....	716	.....	1454	.....	509	.....	929	.....	1187	.....	1359	.....	590	.....	1633	.....	835	.....	728
Cobalt (Metal)	Tons	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	4	.....	12	.....	161½
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2000	.....	320	.....	1340	.....	1416
Cobalt	Tons	.....	51	.....	55	.....	79½	.....	123	.....	5½	.....	176½	.....	157½	.....	118½	.....	562½	.....	14441
	£	.....	1010	.....	824	.....	757	.....	1215	.....	28	.....	1665	.....	1575	.....	719	.....	2944	.....	4227
Coffee (Raw and Ground)	Tons	727	6307	.....	7631	.....	7937	.....	7750	.....	7894	.....	8016	.....	7124	.....	12569	.....	10888	.....	119674
	£	757	6555	.....	8206	.....	8148	.....	8428	.....	7808	.....	7079	.....	6206	.....	10393	.....	8423	.....	4776
Coin—Gold	Boxes	415	3	400	.....	196	.....	247	.....	1	424	.....	388	.....	432	.....	317	.....	9	472	7
	£	1814491	2004	1653911	.....	690040	5263	829515	1000	1632928	530	1530147	15000	1559678	5229	858293	275	1371684	12850	1584324	2412
Silver	Boxes	.....	112	.....	69	.....	352	.....	81	.....	38	.....	127	.....	37	.....	50	.....	22	.....	19
	£	.....	26430	.....	18136	.....	88544	.....	24583	.....	9709	.....	38269	.....	12013	.....	14938	.....	5225	.....	5427
Copper	Boxes	.....	4	.....	1	.....	.....	.....	1	.....	17	.....	31	.....	21	.....	40	.....	14	.....	14
	£	.....	165	.....	5	.....	.....	.....	10	.....	275	.....	485	.....	205	.....	414	.....	180	.....	177
Coke	Tons	1344	.....	751	.....	911	.....	1333	.....	3435	.....	3601	.....	4923	.....	4394	.....	1602	.....	2932	.....
	£	2207	.....	1313	.....	1736	.....	2313	.....	6075	.....	5491	.....	7682	.....	6477	.....	2578	.....	6904	.....
Confectionery	lb.	13265	23603	12355	22174	14077	22317	19062	27043	11056	27143	11555	25935	19709	11782	27047	5621	36354	9261	46141	.....
	£	531	1059	545	919	629	944	798	1113	392	1083	409	1004	278	1009	408	1191	214	1502	291	2040
Copper—Refined	Cwt.	83056	41785	99604	19856	82135	36667	105250	18965	107220	28032½	97303	16007	177457	21420	145726	63142	114905	46866	79378	50015
	£	307181	157926	337409	67675	256437	116973	359260	67646	350087	92025	321887	52747	574497	70006	415601	184323	264905	104695	106429	105847
Sheet	Pkgs.	.....	24	.....	23	.....	45	.....	49	.....	84	.....	72	.....	60	.....	36	.....	35	.....	48
	£	.....	186	.....	191	.....	319	.....	458	.....	670	.....	912	.....	577	.....	353	.....	381	.....	385
Ore	Tons	.....	.....	36	.....	374	.....	17	.....	1	.....	.....	.....	.....	.....	1	103	.....	1	.....	1120
	£	.....	.....	850	.....	7055	.....	4549	.....	642	.....	25	.....	.....	.....	8	1030	.....	15	.....	1112
Copra	Tons	.....	3181	.....	3331	.....	3108	.....	5067	.....	4020	.....	3800	.....	4255	.....	4097	.....	3346	.....	103127
	£	.....	47949	.....	51417	.....	48787	.....	71749	.....	43140	.....	40863	.....	61055	.....	55934	.....	43116	.....	64136
Corks and Bung...	Bales	.....	56	.....	102	.....	100	.....	128	.....	262	.....	292	.....	270	.....	263	.....	340	.....	159
	£	.....	359	.....	517	.....	699	.....	909	.....	2168	.....	1541	.....	2541	.....	1471	.....	3041	.....	1427
Cordage and Rope, and Twine and Thread	Cwt.	1328	1584	1851	1670	1656½	1885½	1623	1472	1508¾	1952	1650	2943	1234	2417	1973	3884	1768	2994	2129	3615
	£	2671	4035	4288	4451	3852	4738	3775	4409	3531	4557	3736	7320	3005	6787	4892	10662	4221	8901	5024	9353
Cotton—Raw	Bales	.....	841	.....	215	.....	518	.....	902	.....	1046	.....	1301	.....	1008	.....	209	.....	95	.....	45
	£	.....	15179	.....	5068	.....	9982	.....	19975	.....	27751	.....	15	.....	21234	.....	5471	.....	1104	.....	517

Cutlery ... ..	Cases	.....	93	.....	139	.....	180	.....	168	.....	218	.....	176	.....	234	.....	216	.....	296	.....	270
	£	.....	2175	.....	3019	.....	3991	.....	4011	.....	3761	.....	3819	.....	5569	.....	4380	.....	4814	.....	4124
Drain-pipes ... ..	No.	210	.....	.....	599	.....	.....	10	.....	.....	.....	.....	.....	33613	.....	480	187	200	.....	460	.....
	£	32	.....	.....	304	.....	.....	2	.....	.....	.....	.....	.....	459	.....	57	47	104	.....	153	.....
Drapery (General)	Pkgs.	21	9132	13	10209	20	11134	6	13605	24	14460	35	15632	31	14360	25	14954	13	14220	16	11307
	£	606	268391	380	337353	490	357895	66	400885	461	425094	1416	449636	973	419969	634	436557	244	414834	314	323344
Drugs & Medicines and Apothecaries' Ware ... ..	Tons	6	84	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Pkgs.	523	1390	281	2316	310	2644	423	4076	285	3067	347	4052	589	4674	438	7670	651	8958	305	5221
	£	2027	14031	1327	19284	1114	22937	1531	26619	1957	20663	1922	23356	2298	26656	1857	31103	3307	36562	1629	21641
Earthenware and China ... ..	Pkgs.	.....	1657	.....	1850	29	1334	.....	1462	14	2103	19	1998	136	2323	56	2677	1	2950	2	2188
	£	.....	21113	.....	19830	16	15879	.....	17959	60	22052	34	22123	50	20313	10	28855	10	26956	14	18500
Eggs ... ..	Pkgs.	204	.....	106	.....	137	.....	106	.....	41	.....	81	.....	46	.....	41	.....	55	2	15	.....
	£	926	.....	473	.....	595	.....	304	.....	786	.....	289	.....	153	15	102	.....	177	20	40	.....
Exhibits ... ..	Pkgs.	145	.....	556	.....	.....	.....	.....	.....	.....	.....	.....	.....	611	2	4	.....	1018	8	1040	.....
	£	454	.....	7475	.....	.....	.....	.....	.....	.....	.....	.....	.....	10295	75	70	.....	9168	36	18325	.....
Felt ... ..	Bales	.....	24	.....	31	.....	10	.....	27	19	29	55	81	30	140	29	72	2	82	21	110
	£	.....	185	.....	129	.....	38	.....	139	37	133	172	319	103	562	196	401	15	371	130	275
Fibre ... ..	Bales	.....	6188	.....	1956	.....	1929	.....	4476	.....	3458	.....	1282	.....	4274	.....	4589	.....	4489	.....	5269
	£	.....	1590	.....	1014	.....	1032	.....	1156	.....	995	.....	1038	.....	1842	.....	1778	.....	1710	.....	1095
Fire-clay ... ..	Tons	9	5	14	2	14	4	4½	10¼	8¼	10	28½	69	25	1½	21	52	8½	13	12½	8
	£	27	25	47	6	46	16	14	33	24	70	82	297	80	11	69	361	26	55	43	42
Firewood ... ..	Tons	.....	.....	.....	.....	.....	.....	.....	.....	1611	.....	5414	.....	8853	.....	10224	.....	5122	.....	4297	.....
	£	.....	.....	.....	.....	.....	.....	.....	.....	517	.....	1732	.....	2033	.....	2719	.....	1316	.....	1104	.....
Fireworks ... ..	Pkgs.	.....	156	.....	90	.....	153	.....	125	.....	40	.....	69	.....	112	.....	230	2	35	2	37
	£	.....	361	.....	210	.....	280	.....	230	.....	217	.....	119	.....	457	.....	427	52	221	9	184
Flax and Hemp ... ..	Bales	.....	.....	.....	935	.....	1771	.....	632	.....	1353	.....	2160	.....	2197	.....	1686	.....	2124	.....	372
	£	.....	.....	.....	2160	.....	3929	.....	2136	.....	4904	.....	6774	.....	10057	.....	6842	.....	6336	.....	1500
Fish (Salt, Fresh, Dried, and Pre- served) ... ..	lb.	40691	933937	20249	582905	47222	1197674	39644	858072	35929	1054494	9114	849622	46854	1196713	30397	1333732	8229	1338493	8242	1126831
	Pkgs.	.....	.....	59	.....	39	.....	573	.....	846	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	£	567	34998	383	19926	513	32762	884	25799	1381	33363	112	25935	567	35984	369	36635	107	32324	119	28576
Fish (Fresh) ... ..	Pkgs.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Flour ... ..	Tons	1173	4345	1043	3503	865	2166	794	4279	1255	16419	2224	14445	2300	13048	2121	13883	1393	7745	38307	115289
	£	18713	72669	13661	47443	10766	28042	9080	48442	17220	197531	30659	199946	26521	167023	22054	154426	13720	75784	19846	63002
Flour (Corn) ... ..	lb.	20624	33330	44906	21088	48576	18962	69189	19646	136292	24830	119932	22150	113354	19364	146832	25501	74320	29548	64420	57476
	£	472	835	1091	519	1134	449	1350	477	2646	596	2426	551	2163	537	3244	651	1726	793	1288	1599
Floor and Oil Cloth	Pkgs.	.....	31	.....	48	.....	48	.....	92	.....	83	.....	87	.....	78	.....	101	.....	76	.....	86
	£	.....	232	.....	418	.....	295	.....	739	.....	783	.....	561	.....	927	.....	831	.....	568	.....	781
Fruit— Bottled ... ..	Cases	.....	858	.....	598	.....	814	.....	753	.....	579	.....	709	.....	.....	.....	.....	.....	.....	.....	.....
	Dozs.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	£	.....	1062	.....	815	.....	1134	.....	1060	.....	788	.....	954	.....	1077	.....	1279	.....	925	.....	413
Dates ... ..	lb.	.....	6809	.....	23958	.....	15532	.....	37602	.....	2105	.....	55293	.....	36260	.....	47901	.....	33238	.....	36172
	£	.....	147	.....	435	.....	260	.....	616	.....	55	.....	1132	.....	598	.....	863	.....	511	.....	567
Dried ... ..	Cwt.	.....	5631	.....	4495	.....	5768	.....	4845	.....	5396	.....	6016	.....	6637	.....	4793	.....	6600	.....	702900
	£	.....	15534	.....	10976	.....	12258	.....	10914	.....	14131	.....	14768	.....	16493	.....	12645	.....	12107	.....	13034
Green ... ..	Cases	194061	14394	174253	8886	223920	237041	6296	309247	11195	214773	14287	377925	20779	245859	11881	290250	39324	332939	.....	42085
	£	64486	7358	71189	4808	86667	2416	90381	3167	106185	5515	88198	7553	117224	8037	98339	114501	15929	112169	.....	16539
Fungus ... ..	Pkgs.	.....	1900	.....	2292	.....	1630	.....	3808	.....	3160	.....	1791	.....	1138	.....	2431	.....	1144	.....	1705
	£	.....	5970	.....	4912	.....	4993	.....	13204	.....	15827	.....	8731	.....	4769	.....	6931	.....	6340	.....	6706
Furniture ... ..	Pkgs.	407	2578	265	2773	234	1784	283	2806	435	2763	792	4377	590	3807	967	5599	1289	5945	438	4588
	£	2738	16290	1608	20054	1587	13549	1951	17716	4317	20120	6306	35342	3033	30631	3792	41490	3820	42029	2037	28475
Fuse ... ..	Cases	.....	89	.....	77	.....	94	.....	121	.....	228	.....	230	.....	144	.....	160	.....	229	.....	166
	£	.....	884	.....	727	.....	879	.....	1294	.....	2384	.....	2406	.....	1433	.....	1499	.....	2058	.....	1399





Gum ... ..	Packages	20	.....	.....	13	25	2	26	983	6	400	548	289	3118	74	142	50	2	59	.....	25
	£	48	.....	.....	35	55	7	120	2182	5	1641	1204	947	7837	279	189	306	10	415	.....	246
Hay and Chaff ... ..	Tons	1299	79	1742	256	582	25	573	5	1095	363	698	346	1859	448	3317	5278	4820	2037	31979	30025
	£	6604	846	7725	1314	2291	157	2544	33	4299	1705	3992	2298	7793	2250	16341	17480	21009	9919	7181	8174
Hardware ... ..	Packages	999	17990	560	14542	742	14590	1110	15762	1655	22020	2082	24727	2111	27913	1899	27275	1467	20684	1340	15847
	£	2057	77092	979	64723	1442	65063	1905	85686	3052	96070	3679	122821	3304	139196	3220	132882	3000	117338	2225	82058
Honey ... ..	lb.	2144	200	5956	1852	12199	9645	12040	14818	7689	16664	2008	23384	863	18855	4162	29363	2167	21871	1628	19349
	£	77	7	166	55	259	262	223	369	151	450	39	620	26	525	88	801	50	634	39	469
Hoofs and Bones... ..	Cwt.	9426	20	8032	.....	7364	.....	12925	621	10802	860	12424	403	14732	1874	15305	.....	15204	2095	17972	.....
	£	4746	7	3120	.....	3084	.....	5418	292	4017	366	4450	142	5066	857	5683	.....	5329	869	5298	.....
Hops ... ..	lb.	99151	.....	127006	.....	72870	.....	50744	.....	69624	.....	161807	.....	111749	.....	213837	.....	114264	.....	71756	.....
	£	6022	.....	5986	.....	2960	.....	3579	.....	4498	.....	14559	.....	16277	.....	14391	.....	5705	.....	2825	.....
Horns ... ..	No.	243592	.....	354823	.....	349743	.....	491471	.....	39217	359872	32800	510349	14000	644766	86953	628237	454435	201400	569028	.....
	£	3742	.....	5869	.....	5089	.....	6393	.....	420	4027	492	6016	210	8801	1580	6788	.....	4903	2282	6097
Hair ... ..	lb.	86478	2444	51629	994	41050	3397	56660	1270	73859	9154	55942	2629	67184	6058	39145	3450	37423	3902	46626	5279
	£	4809	168	2525	61	1726	162	2676	87	3916	339	2771	132	2889	244	2087	187	2014	216	2421	191
Houses (Wooden).. ..	No.	3	.....	2	.....	1	.....	1	.....	2	.....	.....	.....	4	1	.....	.....	2	.....	1	2
	£	421	.....	307	.....	200	.....	120	.....	220	.....	.....	.....	277	125	.....	.....	190	.....	44	330
India-rubber Goods	Packages	.....	37	.....	19	.....	49	.....	29	.....	40	.....	39	.....	83	.....	107	.....	88	.....	64
	£	.....	1027	.....	578	.....	468	.....	827	.....	559	.....	662	.....	1697	.....	1011	.....	1321	.....	840
Instruments—																					
Musical ... ..	Cases	.....	359	.....	603	.....	385	.....	312	.....	438	.....	689	.....	687	.....	877	.....	1169	.....	761
	£	.....	13716	.....	20472	.....	13668	.....	10752	.....	1524	.....	22452	.....	23314	.....	26352	.....	32293	.....	17289
Scientific ... ..	Cases	.....	212	.....	86	.....	91	.....	116	.....	158	.....	171	.....	198	.....	197	.....	197	.....	162
	£	.....	3446	.....	1757	.....	1962	.....	2330	.....	2889	.....	4137	.....	4101	.....	4189	.....	4165	.....	2413
Instruments (Sur-	Cases.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24
gical) ... ..	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	237
Iron and Steel	No.	.....	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(includes Rails).	Cwt.	1562	20131	427	22218	920	26424	6246	38252	2149	51478	2809	80362	4632	186910	.....	.....	.....	.....	.....	.....
	£	862	12495	258	12116	378	14198	2494	20636	1077	27426	1378	45052	2525	77445	.....	.....	.....	.....	.....	.....
Galvanized	Tons	.....	580	.....	567	.....	475	.....	1000	.....	985	.....	1451	.....	1910	.....	2261	.....	1901	.....	48553
	£	.....	17360	.....	15949	.....	12568	.....	26357	.....	24496	.....	34544	.....	46250	.....	48174	.....	38002	.....	44198
Galvanized Manu-	Cwt.	.....	226	.....	415	.....	469	.....	5414	44	844	73	2323	.....	1699	.....	1126	.....	8296	.....	525
factures	£	.....	329	.....	700	.....	991	.....	1775	.....	157	.....	3927	.....	3281	.....	1866	.....	15048	.....	920
Old	Tons	.....	135	.....	75	.....	55	.....	337	.....	547	.....	142	.....	110	.....	218	.....	318	.....	7000
	£	.....	740	.....	287	.....	323	.....	1623	.....	1982	.....	695	.....	805	.....	996	.....	1578	.....	1316
Pipes	No.	.....	1277	.....	2249	.....	2226	.....	4214	.....	4405	.....	10900	.....	10891	22	14567	.....	7548	.....	6378
	£	.....	953	.....	1423	.....	1377	.....	2089	.....	1994	.....	6306	.....	6581	38	10432	.....	4112	.....	3951
Tanks	No.	.....	293	.....	554	.....	393	.....	147	1	111	1	395	.....	578	.....	343	.....	186	.....	251
	£	.....	772	.....	2003	.....	1020	.....	476	7	447	3	1473	.....	2118	.....	1227	.....	675	.....	925
Iron (Oxide of) ... ..	Cwt.	.....	.....	.....	1440	.....	320	.....	4024	.....	3689	.....	5275	.....	5415	.....	8999	.....	15668	.....	.....
	£	.....	.....	.....	180	.....	41	.....	421	.....	634	.....	796	.....	778	.....	1569	.....	2589	.....	.....
Iron and Steel	Cwt.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(excluding Rails).	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ivory Nuts	Cwt.	.....	.....	.....	231	.....	.....	.....	.....	.....	.....	.....	.....	.....	85	.....	.....	.....	.....	.....	3753
	£	.....	.....	.....	82	.....	.....	.....	.....	.....	.....	.....	.....	.....	35	.....	.....	.....	.....	.....	1497
Jams and Jellies ... ..	lb.	84	244716	1116	227805	3280	179875	18640	183633	7920	176950	14695	276404	34204	221551	4040	244905	5208	240680	23867	140044
	£	3	8181	31	7186	69	5576	366	5385	196	5516	366	8130	690	6197	97	6801	103	6188	355	3977
Jewellery ... ..	Pkgs.	.....	125	.....	230	1	198	.....	196	.....	252	.....	248	3	484	.....	322	1	264	1	194
	£	.....	16834	.....	35055	200	45873	.....	44659	.....	37541	.....	38821	131	40521	.....	4289	15	36962	15	21244
Lampware... ..	Pkgs.	.....	241	.....	207	.....	244	1	256	.....	245	29	291	107	566	105	428	5	663	2	583
	£	.....	1523	.....	1524	.....	1560	20	2386	.....	1692	108	2388	340	4021	234	2868	20	5193	6	4809
Lard	Cwt.	.....	284	.....	403	.....	681	.....	704	.....	11	351	543	204	189	207	108	174	85	1700	.....
	£	.....	1068	.....	1221	.....	1830	.....	1741	.....	30	1159	1231	741	705	718	305	616	272	185	60
Lead	Cwt.	.....	257	.....	1619	.....	2036	23	2154	.....	29224	.....	5670	.....	4948	.....	6991	.....	3872	.....	7572
	£	.....	345	.....	1703	.....	1980	24	2145	.....	2505	.....	5283	.....	4397	.....	5262	.....	3051	.....	5784

EXPORTS—DECENNIAL RETURN—continued.

Articles.	Quantity and Value.	1877.		1878.		1879.		1880.		1881.		1882.		1883.		1884.		1885.		1886.	
		Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.
Lead Ore ...	Cwt. £	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	607	.....	.....	.....	.....	.....	.....	.....
Leather—Unmanufactured...	Pkgs. £	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	450	.....	.....	.....	.....	.....	.....	.....
Boots and Shoes...	Pkgs. £	4378	212	4186	125	3202	96	4930	173	6068	217	6416	273	5057	286	5930	185	4972	410	4975	307
		91466	7848	90133	4953	62870	4773	102437	6548	134895	10803	142473	12498	98224	13236	124548	6223	103026	13709	100930	11561
		2083	2369	1875	3273	2106	3983	2205	4777	2192	5890	2383	8947	2270	7231	2761	9441	2054	7937	921	6026
		58258	32934	46763	44192	47759	55447	48097	69026	45150	81039	48578	125149	52610	102160	55378	129996	45710	108941	23164	80673
Lime-juice ...	Galls. £	.....	5011	.....	6003	.....	5634	.....	14650	.....	8141	.....	6474	.....	6530	.....	6165	.....	6160	.....	6923
		.....	580	.....	841	.....	802	.....	1605	.....	1037	.....	765	.....	861	.....	834	.....	798	.....	689
Live Stock—Horned Cattle ...	No. £	62875	5114	51155	3871	58050	1	86127	630	55540	.....	52137	948	41388	872	40074	5412	52999	9853	51359	8539
		427294	35841	395220	26452	405051	50	450344	4410	256929	.....	282044	7282	236597	8765	209254	35024	293129	74476	297130	67955
Dogs ...	No. £	43	.....	22	1	19	3	13	2	14	.....	21	6	15	2	12	2	15	.....	36	4
		278	.....	96	5	121	25	34	25	88	.....	127	17	63	5	44	20	83	.....	144	165
Goats ...	No. £	4	.....	.....	.....	90	27	103	55	5	1	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
		14	.....	.....	.....	280	130	58	308	5	20	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Horses ...	No. £	5147	157	3679	42	2236	.....	3952	98	3498	3	2917	131	2757	41	4972	70	4709	69	4916	30
		84339	1778	66441	420	33449	.....	61191	1470	56868	1200	65018	3992	61773	3220	128998	2110	142421	1940	126131	1759
Pigs ...	No. £	1213	.....	903	.....	5952	.....	11212	.....	5647	2	3176	.....	1167	.....	1610	.....	764	3	647	4
		1997	.....	1258	.....	10526	.....	14705	.....	8410	300	6763	.....	2693	.....	3530	.....	1414	3	1081	6
Poultry ...	Coops £	98	.....	42	.....	38	.....	54	.....	68	.....	35	.....	35	.....	86	.....	266	.....	116	.....
		320	.....	151	.....	159	.....	279	.....	243	.....	130	.....	150	.....	370	.....	651	.....	401	.....
Mules ...	No. £	.....	.....	.....	.....	.....	.....	2	.....	20	.....	3	.....	22	.....	11	.....	.....	.....	21	.....
		.....	.....	.....	.....	.....	.....	14	.....	235	.....	50	.....	376	.....	140	.....	.....	.....	289	.....
Sheep ...	No. £	751412	304	578457	30	978537	7	1147552	.....	1068362	16	856190	42	1005984	243	1942204	3307	1237155	20744	1246414	10492
		380489	2032	272060	250	466582	1660	452756	.....	452867	1100	389851	538	484194	6485	850522	7375	534760	9606	512421	5195
Birds ...	Pkgs. £	2	.....	7	.....	19	.....	12	.....	49	.....	204	1	212	.....	76	.....	132	.....	85	.....
		11	.....	16	.....	82	.....	61	.....	182	.....	727	5	449	.....	278	.....	514	.....	249	.....
Machinery...	Pkgs. £	370	1471	425	1266	204	1746	110	2218	181	7672	907	6785	184	8500	304	6790	879	5342	553	4275
		2299	14328	5413	22223	2085	17967	791	27229	1812	60530	3924	74916	1805	96105	7713	116871	8009	76650	4864	53691
Machines—Sewing ...	Cases. £	.....	521	.....	726	.....	406	.....	1534	.....	2781	.....	3311	.....	3091	.....	2068	.....	3251	.....	1686
		.....	4806	.....	7883	.....	3789	.....	11429	.....	23711	.....	21218	.....	15152	.....	9590	.....	15116	.....	6641
Weighing ...	Cases. £	.....	71	.....	17	.....	102	.....	218	.....	189	.....	181	.....	173	.....	152	.....	167	.....	133
		.....	478	.....	140	.....	418	.....	1952	.....	1659	.....	1077	.....	1042	.....	1450	.....	926	.....	711
Malt ...	Bushels £	.....	1003	.....	5462	.....	7647	.....	9217	.....	12947	.....	15398	.....	14706	.....	18597	.....	14733	.....	14234
		.....	437	.....	2380	.....	2854	.....	3213	.....	4374	.....	5943	.....	5082	.....	6941	.....	4912	.....	4443
Manganese ...	Tons £	.....	250	.....	542	.....	30	.....	10	.....	1	24	10	3	.....	4	.....	427	5	.....	.....
		.....	1000	.....	2377	.....	150	.....	20	.....	4	9	40	10	.....	40	.....	3690	50	.....	.....
Marble ...	Cases. £	.....	22	10	12	.....	28	.....	305	.....	278	.....	193	.....	401	.....	292	.....	171	.....	188
		.....	200	101	219	.....	364	.....	1168	.....	1130	.....	878	.....	918	.....	992	.....	873	.....	1870
Matches ...	Pkgs. £	.....	2756	.....	2314	.....	2577	.....	2660	.....	2455	.....	2506	.....	3211	.....	2569	.....	1879	.....	2101
		.....	14457	.....	12294	.....	12326	.....	12341	.....	11896	.....	10515	.....	13600	.....	11889	.....	9504	.....	7685
Mats and Matting..	Bales £	26	987	20	1894	12	1277	10	433	3	1115	15	1389	26	585	34	1050	41	947	97	245
		67	1504	52	2928	59	2094	36	1148	24	1820	57	2144	107	828	125	1557	170	1758	212	405
Metal (old) ...	Cwt. £	.....	1845	.....	3429	.....	3647	.....	3970	.....	3514	.....	3359	.....	4085	.....	4306	.....	5688	.....	2652
		.....	5115	.....	6100	.....	6398	.....	7850	.....	7157	.....	7087	.....	9773	.....	9330	.....	10259	.....	3461
Military and Naval Stores ...	Pkgs. £	.....	342	.....	265	.....	281	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		.....	831	.....	1321	.....	997	.....	43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Minerals (not classified) ...	Tons £	231	.....	77	.....	500	.....	21	8	154	2	94	.....	31	.....	.....	.....	.....	10	cwt. 940	.....
		7725	.....	1082	.....	525	.....	795	100	1020	170	970	.....	160	.....	.....	.....	.....	1140	920	.....

Manure ...	Cwt.	8701	.....	4830	360	18700	.....	6180	.....	4343	.....	8716	.....	19562	.....	21807	.....	24447	.....	21819	130	
	£	2525	.....	1591	105	5841	.....	3974	.....	2181	.....	5943	.....	10473	.....	13811	.....	10043	.....	9862	53	
Mohair ...	lb.	1224	.....	360	.....	1984	.....	2355	.....	5286	800	3794	.....	3380	740	3371	1120	1706	2128	1637	.....	
	£	110	.....	40	.....	230	.....	140	.....	292	40	246	.....	182	70	182	7 56	84	100	80	.....	
Molasses & Treacle	Cwt.	13728	280	15927	236	27933	1026	25381	257½	15272	236½	18980	91	23806	184	15439	478	6022	213	28886	856	
	£	7396	140	10617	198	15132	591	12976	267	8898	292	10653	120	11912	248	7383	489	2668	313	12338	733	
Molybdenum	Cwt.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mustard ...	lb.	.....	30260	.....	25170	.....	30225	.....	37134	.....	28813	.....	40161	.....	70133	.....	19232	.....	18213	.....	32143	
	£	.....	1510	.....	1112	.....	1574	.....	2092	.....	1689	.....	2222	.....	3664	.....	1164	.....	1065	.....	1854	
Nails ...	Cwt.	.....	2592	.....	3894	.....	4270	.....	6829½	.....	8763	.....	6576	.....	9175	.....	8849	.....	7823	.....	6820	
	£	.....	3185	.....	4627	.....	4963	.....	6647	.....	10003	.....	7305	.....	9894	.....	9731	.....	8221	.....	7131	
Nickel Ore	Tons	.....	819	.....	398	.....	75	.....	156	.....	85	.....	85	.....	144	.....	46	.....	158	.....	13160	
	£	.....	33753	.....	14128	.....	880	.....	.....	.....	3110	.....	1458	.....	2500	.....	70	.....	2230	.....	8162	
Nickel Metal	Tons	.....	.....	.....	.....	.....	91	.....	190	.....	647	.....	787	.....	347	.....	438	.....	228	.....	.....	
	£	.....	.....	.....	.....	.....	9150	.....	38150	.....	128720	.....	157360	.....	69400	.....	45400	.....	22000	.....	.....	
Nuts (of all kinds, except Cocoa-nuts)	lb.	.....	27246	.....	106491	.....	52500	.....	21143	.....	35734	.....	29369	.....	50959	.....	41336	.....	18189	.....	26584	
	£	.....	898	.....	2516	.....	1092	.....	621	.....	881	.....	907	.....	1481	.....	1305	.....	512	.....	521	
Oakum ...	Bales.	.....	165	.....	177	.....	175	.....	341	.....	277	.....	366	.....	265	.....	236	.....	184	.....	318	
	£	.....	130	.....	168	.....	168	.....	336	.....	338	.....	423	.....	287	.....	232	.....	172	.....	325	
Oars ...	No.	16	1851	76	2051	26	2751	21	2950	201	2237	103	2959	104	4662	246	3710	84	1673	110	2246	
	£	9	820	26	924	13	1140	8	1073	81	916	73	1290	45	1667	152	1492	44	752	53	968	
Oatmeal and Groats	Cwt.	.....	1550	.....	1656	134	2150	174	2668	69	3041	16	3940	.....	4668	.....	3382	20	3692	.....	1798	
	£	.....	1773	.....	2138	117	2897	147	2727	66	3025	15	4082	.....	4546	.....	3223	15	3413	.....	1680	
Oil—	Tuns	.....	52	.....	8	.....	67	.....	8½	.....	8½	.....	26½	.....	43	.....	36½	.....	26	.....	34	
Black ...	£	.....	1934	.....	266	.....	2043	.....	286	.....	304	.....	929	.....	1484	.....	1183	.....	911	.....	1005	
Cocoa-nut	Tuns	.....	37	.....	52	.....	30½	.....	1½	.....	4½	.....	13½	.....	10	.....	12½	.....	18	.....	94	
	£	.....	1499	.....	1563	.....	1026	.....	56	.....	147	.....	436	.....	314	.....	470	.....	567	.....	286	
Sperm	Tuns	.....	28	.....	.....	.....	1	.....	.....	.....	.....	.....	6	.....	1½	.....	.....	.....	11½	.....	.....	
	£	.....	2380	.....	.....	.....	80½	.....	.....	.....	.....	.....	400	.....	90	.....	.....	.....	550	.....	.....	
Kerosene ...	Gallons	35040	142540	17936	119096	440	115776	464	139720	780	108423	80	73590	440	109526	200	139543	576	194814	200	191194	
	£	2656	15367	1348	9608	36	9186	38	10643	57	8325	7	5742	32	8184	15	8783	36	12713	12	9687	
Castor	Gallons	.....	11597	.....	13404	.....	25806	.....	20566	.....	37270½	.....	37710	.....	53463	.....	81222	.....	81731	.....	.....	
	£	.....	2762	.....	2970	.....	5399	.....	4291	.....	7042	.....	7212	.....	9841	.....	12640	.....	12794	.....	14510	
Salad	Gallons	.....	1083	.....	1147	.....	1328	.....	1556½	.....	1805	.....	1841	.....	4765	.....	3222	.....	4633	.....	.....	
	£	.....	602	.....	608	.....	683	.....	882	.....	923	.....	832	.....	1702	.....	1379	.....	1730	.....	1842	
Naphtha and Gasoline	Gallons	3506	.....	3602	.....	1070	.....	1511	244	3212	2956	.....	119	.....	.....	.....	.....	.....	.....	.....	.....	
	£	273	.....	325	.....	141	.....	198	56	288	476	.....	22	.....	.....	.....	.....	.....	.....	.....	.....	
All other...	Gallons	755	28227	2695	34114	5663	21742	4770	23541½	6595	29782	13848	33794	3654	32415	10013	63697	11961	48881	.....	.....	
	£	186	6118	498	6994	447	4281	496	4623	782	6092	1552	6700	399	6426	641	11958	651	8967	2630	10183	
China	Gallons	.....	.....	.....	.....	.....	13820	.....	13616	.....	22430	.....	19113	.....	22804	.....	43291	.....	27670	.....	24780	
	£	.....	.....	.....	.....	.....	2769	.....	2691	.....	4311	.....	3683	.....	4294	.....	7706	.....	4457	.....	3796	
Naphtha...	Gallons	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	75	.....	70	.....	405	152	474	
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	.....	15	.....	112	21	88	
Oilmen's Stores	Pkgs.	358	3859	279	3088	283	2787	299	3163	510	3295	569	3910	924	8525	422	13675	242	11177	148	1622	
	£	809	10835	584	7822	750	6609	668	7253	786	6746	1016	8374	1879	16598	1010	21718	415	17157	351	4507	
Oil-cake	Pkgs.	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	£	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Onions	Cwt.	4390	5683	4162	3055	3261	4189	5074	6770	3659	7955	4262	9250	4239	13930	2956	10842	2178	12771	1148	7769	
	£	2479	2698	3143	2333	1713	2131	1570	1061	1755	3972	1296	2376	1353	4091	1348	5060	586	3181	434	2605	
Opium	lb.	.....	2842	.....	3134	.....	6190	.....	6675	.....	6084	.....	.....	.....	5711	.....	5831	.....	3621	.....	7421	
	£	.....	6674	.....	8147	.....	15112	.....	15858	.....	13773	.....	13168	.....	12749	.....	13466	.....	8013	.....	15390	
Ore (Chrome)	Tons	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Oysters	Bags	16585	8	14457	.....	13119	85	11043	114	8787	1474	8755	1666	7003	1808	3254	519	3998	583	3943	82	
	£	15126	9	12566	.....	11219	80	9355	77	8136	1458	10368	1896	7323	1858	4625	585	5458	584	6815	112	

## EXPORTS—DECENNIAL RETURN—continued.

Articles.	Quantity and Value.	1877.		1878.		1879.		1880.		1881.		1882.		1883.		1884.		1885.		1886.	
		Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.
Paint ... ..	Cwt. ....	1362	37	1593	.....	1657	.....	2750½	5	3223½	.....	5781	.....	4754	260	6635	1073	4727	946	5184	
	£ ....	2524	102	2724	.....	2990	.....	4685	10	5268	.....	9546	.....	8401	744	9835	2316	7512	1748	7725	
Painters' Materials	Pkgs. ....	.....	100	.....	4	20	.....	39	.....	.....	.....	4	.....	151	.....	79	2	158	1	42	
	£ ....	.....	50	.....	18	91	.....	126	.....	.....	.....	35	.....	656	.....	355	3	699	15	106	
Paper-hangings ...	Bales ....	54	.....	68	.....	21	.....	32	.....	36	.....	156	.....	139	.....	43	.....	43	.....	35	
	£ ....	385	.....	425	.....	117	.....	255	.....	163	.....	686	.....	925	.....	434	.....	272	.....	222	
Printing Materials	Pkgs. ....	407	6	771	3	781	29	723	396	1057	27	996	15	1019	13	912	16	946	13	896	
	£ ....	4951	69	9211	21	8353	329	8312	302	7159	206	10041	71	10784	59	8183	123	7998	42	7211	
Pepper and Spices	lb. ....	65956	.....	21725	.....	24646	.....	40450	.....	33950	.....	62334	.....	57070	.....	61076	.....	32228	.....	25802	
	£ ....	2630	.....	895	.....	1027	.....	2044	.....	1789	.....	2,849	.....	2315	.....	2844	.....	1653	.....	1139	
Pearl-shell ...	Tons ....	309	.....	482	.....	454	.....	387	.....	413	.....	403	.....	404	.....	316	.....	151	.....	580130	
	£ ....	38931	.....	64627	.....	58521	.....	51809	.....	53541	.....	54299	.....	51345	.....	40221	.....	20556	.....	31614	
Peanut ... ..	Cwt. ....	174	.....	151	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	£ ....	156	.....	141	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Paraffine Wax ...	Cwt. ....	355	.....	212	.....	318	.....	720	.....	660	.....	500	.....	435	34	390	22	.....	.....	.....	
	£ ....	300	.....	170	.....	281	.....	850	.....	900	.....	600	.....	675	82	520	77	.....	.....	.....	
Photographic Materials	Pkgs. ....	53	.....	64	.....	61	.....	305	.....	505	.....	288	.....	494	.....	515	.....	607	.....	481	
	£ ....	440	.....	540	.....	453	.....	1701	.....	2771	.....	2583	.....	4138	.....	4721	.....	5751	.....	4873	
Phormium Tenax...	Bales ....	664	.....	407	.....	287	.....	487	.....	402	.....	327	.....	204	.....	394	.....	231	.....	124	
	£ ....	1289	.....	795	.....	484	.....	1085	.....	1033	.....	706	.....	531	.....	979	.....	503	.....	353	
Pickles and Sauces	Cases ....	3871	.....	3799	.....	3977	.....	3933	.....	3995	.....	4160	.....	.....	.....	.....	.....	.....	.....	.....	
	£ ....	6626	.....	6481	.....	7020	.....	7054	.....	7208	.....	7243	.....	.....	.....	.....	.....	.....	.....	.....	
Pictures and Paintings	Dozens	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9547	.....	13141	.....	14879	.....	11139	
	£ ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4529	.....	6304	.....	6085	.....	4737	
Pipes (Tobacco) ...	Cases	22	99	15	144	16	146	28	195	52	222	29	491	49	357	27	51	364	31	231	
	£ ....	350	1467	233	2345	74	3050	468	4203	1300	5554	647	11920	693	7662	441	12173	912	7994	375	
Pitch, Tar, & Resin	Pkgs. ....	1561	.....	830	.....	823	.....	1100	.....	1393	.....	1548	.....	1355	.....	1161	.....	1213	.....	1003	
	£ ....	1725	.....	1505	.....	1866	.....	1530	.....	2555	.....	2258	.....	2018	.....	2775	.....	3342	.....	2989	
Plants and Seeds ...	Barrels	391	576	890	364	1136	1174	800	866	684	1090	419	930	591	922	1676	2425	877	631	1242	
	£ ....	249	822	643	414	751	1561	425	1285	423	1079	416	746	433	1061	905	1657	1502	1009	468	
Plate—	Pkgs. ....	3062	1293	3477	480	2709	1182	2628	672	2680	1294	2933	374	2442	508	2886	1644	2711	1290	2727	
	£ ....	8924	3833	9802	2424	8045	3458	7590	1372	8454	1287	1 041	2443	8853	991	10572	3185	9043	3893	2901	
Silver and Plated Ware ...	Pkgs. ....	82	.....	92	.....	128	.....	166	.....	3	163	2	227	5	338	8	310	1	356	2	
	£ ....	2688	.....	3645	.....	6069	.....	8857	.....	61	7141	36	10644	119	17960	167	15456	20	17026	114	
Potatoes ... ..	Tons ....	1172	2565	1624	3228	1214	2539	1214	2990	1119	3597	1382	4840	1313	4963	1094	6345	567	6528	8588	
	£ ....	6600	13085	11409	18144	7326	14199	5200	11250	4980	14034	7302	22598	5696	17739	5446	28022	2566	25103	2256	
Preserves ... ..	lb. ....	2406	97821	11712	95735	16540	67820	6583	73539	.....	68657	.....	96608	.....	144619½	480	164005	.....	171877	.....	
	£ ....	70	4654	210	4340	354	2816	98	2999	.....	2094	.....	3526	.....	4853	10	5668	.....	5298	.....	
Provisions—	Cwt. ....	7410	.....	8129	.....	10730	108	8525	300	7760	.....	4756	119	5998	1029	4927	443	3596	1469	2211	
	£ ....	9802	.....	10591	.....	11846	110	8223	250	8247	.....	6055	146	7683	1522	6700	581	4876	1903	2666	

Chinese ...	Pkgs.	.....	266	.....	252	.....	172	.....	235	.....	163	.....	158	.....	139	.....	170	.....	75	.....	27
	£	.....	373	.....	364	.....	205	.....	265	.....	154	.....	162	.....	202	.....	235	.....	99	.....	43
Bacon and Hams	Cwt.	790	607	683	721	1417	1003	2228	998	2003	1037	672	397	433	491	331	725	156	996	6989	162335
	£	3230	3697	2822	4022	4771	5547	6539	5453	6157	3366	2747	2248	1876	2676	1497	3887	682	5249	244	7565
Pork ...	Cwt.	313	.....	550	.....	688	.....	276	.....	525 <sup>3</sup>	114	128	35	125	80	287	33	345	83	80 <sup>1</sup>	26 <sup>1</sup>
	£	721	.....	1246	.....	1506	.....	493	.....	917	244	285	90	311	200	751	74	1124	205	202	62
Preserved Meats and Extracts ...	Pkgs.	64499	20426	21524	876	64076	1651	78626	26288	91961	4904	81487	36929	136413	62473	95483	19881	100069	95331	.....	.....
	£	126382	40546	42581	1863	134010	2603	171162	42722	176721	7358	143601	63431	221912	93683	161477	29719	166561	145050	70756	8055
Meat (Fresh and Frozen) ...	Cwt.	.....	.....	.....	.....	598	.....	.....	.....	9980	.....	13782	.....	34911	.....	13309	.....	6271	.....	485 <sup>2</sup>	.....
	£	.....	.....	.....	.....	1061	.....	.....	.....	8554	.....	22910	.....	43100	.....	12321	.....	6064	.....	4671	.....
Marrow ...	Pkgs.	72	.....	415	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	£	226	.....	1569	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vegetables (Pre- served) ...	Pkgs.	.....	996	.....	898	.....	1044	.....	866	.....	1356	18	1239	.....	1094	.....	1807	.....	1229	.....	.....
	£	.....	1778	.....	1587	.....	1881	.....	1550	.....	2407	20	1933	.....	1707	.....	2600	.....	2093	.....	1232
Vegetables (Green)	Pkgs.	245	.....	438	34	325	89	577	87	724	278	679	205	602	283	491	44	1409	100	1033	131
	£	224	.....	643	70	414	128	601	120	715	259	679	243	702	226	546	62	884	100	619	147
Pulu ...	Bales	.....	205	.....	147	.....	197	.....	376	.....	90	.....	5	.....	.....	.....	1	.....	2	.....	.....
	£	.....	496	.....	426	.....	604	.....	616	.....	293	.....	20	.....	.....	.....	2	.....	13	.....	.....
Pyrites (Gold) ...	Cwt.	332	.....	194	.....	1543	.....	2513	.....	1211	.....	604	.....	1479	830	839	173	661	.....	.....	.....
	£	1980	.....	478	.....	4103	.....	5945	.....	3918	.....	1065	.....	1970	430	2817	247	3225	.....	.....	.....
Quicksilver	Bottles	.....	767	.....	539	.....	1000	.....	584	.....	670	.....	789	.....	553	.....	620	.....	370	.....	69
	£	.....	7260	.....	4436	.....	7468	.....	4314	.....	5033	.....	5923	.....	4327	.....	4501	.....	2818	.....	524
Rails (Iron & Steel)	No.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Regulus (Copper)...	Cwt.	7207	.....	4004	.....	727	.....	2298	.....	2636	.....	1861	.....	1690	.....	363	.....	.....	.....	.....	.....
	£	17045	.....	6899	.....	915	.....	4157	.....	4950	.....	2840	.....	2704	.....	570	.....	.....	.....	.....	.....
Saddlery and Har- ness ...	Pkgs.	687	184	805	242	622	154	725	250	642	316	739	579	825	633	557	655	351	639	383	570
	£	13830	3279	20260	4073	15849	2317	14066	4703	12202	5497	14879	7316	14752	9946	7613	10689	5580	8853	5260	7059
Sago ...	lb.	.....	21931	.....	32562	.....	29483	.....	17426	.....	16084	.....	8869	.....	17937	.....	88641	.....	14369	.....	6688
	£	.....	357	.....	453	.....	461	.....	264	.....	231	.....	135	.....	183	.....	1343	.....	158	.....	78
Silver Lead	Cwt.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Silver, Lead Ore (Galena) ...	Cwt.	400	.....	102	.....	373	.....	531	1218	1054	1255	239	348	2117	238	93361	200	41916	1540	35061	.....
	£	310	.....	535	.....	535	.....	866	2900	1625	2151	360	670	1625	325	123174	200	81976	3415	67935	.....
Salt ...	Tons	.....	2153	.....	536	.....	586	.....	832	.....	583	.....	413	.....	703	.....	1142	.....	1434	.....	18230
	£	.....	6751	.....	1835	.....	2320	.....	3690	.....	2504	.....	1865	.....	2841	.....	4458	.....	5156	.....	2705
Salt (Rock)	Tons	.....	135	.....	99	.....	6	.....	21	.....	107	.....	15	.....	30	.....	46	.....	37	.....	1088
	£	.....	409	.....	315	.....	28	.....	93	.....	385	.....	47	.....	103	.....	169	.....	125	.....	146
Saltpetre ...	Cwt.	.....	27	.....	55	.....	29	.....	94	.....	50	.....	149	.....	41	.....	27	.....	69	.....	869
	£	.....	45	.....	65	.....	42	.....	147	.....	86	.....	221	.....	65	.....	42	.....	109	.....	878
Sarsaparilla	Gallons	13	2138	.....	1483	24	1443	46	860 <sup>3</sup>	90	1280 <sup>3</sup>	4	925	.....	756	.....	1024	.....	757	.....	345
	£	11	2265	.....	1328	19	1270	24	719	61	1216	2	871	.....	680	.....	878	.....	698	.....	305
Shale (Kerosene)...	Tons	4667	.....	12202	.....	11436	.....	10880	.....	17846	.....	35978	.....	22657	.....	12804	.....	14456	.....	21086	.....
	£	14163	.....	34063	.....	29275	.....	24189	.....	38231	.....	79715	.....	47345	.....	29970	.....	40606	.....	60621	.....
Ship Chandlery ...	Pkgs.	.....	455	.....	282	.....	238	.....	260	.....	423	10	455	.....	363	.....	249	.....	255	.....	184
	£	.....	3806	.....	2246	.....	2021	.....	1665	.....	2531	155	3142	.....	2278	.....	1651	.....	1940	.....	1142
Shooks and Staves (and Casks) ...	No.	1244	739	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Bundles	2121	205	1538	1489	1484	1274	2458	861	3294	1992	2099	828	7039	1419	4321	3356	4241	2828	2761	2140
	£	1575	600	759	1110	1014	1161	1697	660	2044	1236	1691	680	5194	115618	3306	2790	2454	1684	1634	1182
Silver ...	Oz.	31409	.....	60564	.....	83164	.....	91419	13608	5725414	52050	386184	9106	77066	29507	936604	144204	7941734	13034	10154334	18142
	£	6673	.....	13291	.....	18071	.....	21878	2893	13026	11617	9024	2000	16488	6508	19780	3200	159187	2800	197544	3420

## EXPORTS—DECENNIAL RETURN—continued.

Articles.	Quantity and Value.	1877.		1878.		1879.		1880.		1881.		1882.		1883.		1884.		1885.		1886.	
		Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.
Skins—																					
Horned Cattle ...	No. £	104783 97315	5586 5600	75724 62665	905 898	140917 121679	1025 867	179887 160888	8946 8626	191283 177645	10531 10370	249976 222726	4422 4255	246856 226710	25687 25754	205262 187024	5168 5140	188408 176562	24787 24673	180559 156615	..... .....
Horse ...	No. £	2629 1044	..... .....	103 26	..... .....	12 5	..... .....	811 299	..... .....	347 105	..... .....	238 76	..... .....	81 20	..... .....	184 79	..... .....	150 40	..... .....	16 4	..... .....
Sheep ...	Bundles £	9326 34100	44 660	3124 24080	127 1102	2306 15676	69 869	2146 15194	119 1364	3657 18304	45 445	9733 34245	1 15	6010 36153	125 1643	7841 61050	260 3500	7594 52716	113 1010	9891 67233	..... .....
Kangaroo ...	Bundles £	1570 1761	5 61	396 914	11 160	352 901	..... .....	657 2786	..... .....	892 4273	..... .....	456 3569	..... .....	194 2457	..... .....	3575 24230	..... .....	1442 30601	..... .....	2016 62366	..... .....
All other ...	Bundles £	546 429	6 140	28 196	..... .....	34 183	61 180	1665 3933	..... .....	1083 7694	23 176	611 3240	11 200	1403 30263	4 55	1667 18353	1 35	1775 13170	1 10	2202 17667	..... .....
Slates (Roofing) ...	No. £	..... .....	14515 206	..... .....	10000 131	..... .....	3500 49	..... .....	3500 45	..... .....	16000 160	..... .....	148800 1430	..... .....	25600 320	..... .....	14700 175	..... .....	15500 184	..... .....	10000 36
Slate Slabs ...	Pkg. £	..... .....	..... .....	..... .....	..... .....	..... .....	6 50	..... .....	1 17	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	6 10	..... .....	4 18
Soap ...	Cwt. £	4738 5610	4 14	6408 7231	16 22	4735 5264	27 34	7124 8033	574 84	9127 9574	211 292	7550 7344	185 245	7929 8414	389 569	5009 5640	629 732	5408 5174	346 488	4475 4206	388 834
" Stock ...	Cwt. £	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	5643 7400	..... .....	3888 4300	..... .....	1138 1032	..... .....	919 710	..... .....
Soda (Crystals) ...	Tons £	..... .....	50 412	..... .....	52 402	..... .....	82 636	..... .....	138 1152	..... .....	80 689	..... .....	68 537	..... .....	40 305	..... .....	242 1838	..... .....	141 989	..... .....	1599 455
Specimens of Natural History...	Pkg. £	55 335	18 223	117 554	11 101	151 1159	21 186	79 708	47 324	90 892	24 223	22 318	16 273	25 482	8 148	63 592	25 269	65 765	2 10	43 566	29 334
Spirits—																					
Brandy ...	Gallons £	..... .....	117863 68940	..... .....	111134 62038	..... .....	96435 55231	..... .....	89509 53452	..... .....	86209 52197	..... .....	91760 50528	..... .....	84518 50155	..... .....	81771 43081	..... .....	79240 43488	..... .....	50485 26623
Rum ...	Gallons £	..... .....	13638 3381	..... .....	12546 3022	..... .....	13069 2432	..... .....	17951 3392	..... .....	19512 3883	..... .....	21211 4996	..... .....	27168 6902	..... .....	31826 6909	..... .....	21937 5008	..... .....	15808 3349
Geneva and Schmapps ...	Gallons £	..... .....	49985 15105	..... .....	41486 12700	..... .....	33687 10864	..... .....	31131 9035	..... .....	27635 8154	..... .....	29151 9468	..... .....	30275 9727	..... .....	20541 6745	..... .....	17057 5330	..... .....	16877 5758
Gin ...	Gallons £	..... .....	1535 559	..... .....	925 333	..... .....	1803 659	..... .....	1897 687	..... .....	1479 587	..... .....	1243 470	..... .....	1605 569	..... .....	1052 433	..... .....	592 207	..... .....	816 333
Liqueurs ...	Gallons £	..... .....	2930 2284	..... .....	878 825	..... .....	1041 1055	..... .....	1364 1176	..... .....	15464 1455	..... .....	1476 1580	..... .....	1197 1394	..... .....	970 911	..... .....	1323 1385	..... .....	777 637
Methylated ...	Gallons £	..... .....	92 20	..... .....	408 70	..... .....	..... .....	..... .....	234 55	..... .....	1095 251	..... .....	1802 459	..... .....	619 152	..... .....	592 121	..... .....	1202 246	..... .....	556 113
Perfumed ...	Gallons £	..... .....	334 655	..... .....	166 433	..... .....	3094 460	..... .....	250 489	..... .....	211 544	..... .....	491 894	..... .....	192 461	..... .....	537 930	..... .....	469 991	..... .....	272 649
Whiskey ...	Gallons £	..... .....	14876 6079	..... .....	15288 6536	..... .....	21686 9839	..... .....	33147 15546	..... .....	44602 19973	..... .....	51480 22125	..... .....	52994 21463	..... .....	39490 16404	..... .....	46820 18904	..... .....	44642 16985
Distilled in the Colony...	Gallons £	109421 13329	..... .....	87171 9842	..... .....	113939 12829	..... .....	113265 12665	..... .....	59250 6662	..... .....	88005 10236	..... .....	48802 5565	..... .....	106916 11954	..... .....	89237 9843	..... .....	101309 11308	..... .....
All other...	Gallons £	..... .....	1413 925	..... .....	1184 599	..... .....	573 483	..... .....	2008 1044	..... .....	32424 1359	..... .....	3014 1292	..... .....	2683 1292	..... .....	3336 1296	..... .....	3144 1328	..... .....	1752 1261

Starch ... ..	lb. ....	58238	.....	142504	1600	108784	1680	140108	1256	76852	1176	130546	3606	41888	.....	115870	.....	84257	400	73060		
	£ .....	1089	.....	2483	20	1871	24	2389	20	1363	21	2127	42	747	.....	2030	.....	1396	5	956		
Stationery—																						
Paper (Printing)...	Bales	293	364	458	611	384	623	197	700	412	623	282	629	503	654	86	571	25	444	21	314	
	£	4003	4049	6472	7414	4488	7620	2433	8987	4486	7366	3129	7203	4722	7999	848	6998	246	5860	84	3229	
Paper (Brown and Wrapping) ...	Cwt.	962½	1901½	635½	1694½	370	1816	524	2061½	864	2573½	606	2196	827	1460	1489	1588	1333	2430	522	2167	
	£	1373	3459	900	3016	520	3571	675	3894	1124	4857	916	3683	1225	2815	2363	3106	1900	4474	666	2855	
Paper (Writing and Fancy) ...	lb.	.....	3065	.....	1102	.....	4694½	.....	6601	.....	6286	.....	8378	.....	2328	.....	418	.....	3600	.....	50503	
	£	.....	144	.....	43	.....	191	.....	250	.....	272	.....	301	.....	121	.....	36	.....	178	.....	2189	
Stationery, Books, and Periodicals	Pkgs.	71	1874	88	2295	157	2470	177	2222	212	2324	190	2326	144	2461	250	2835	270	2211	312	1938	
	£	688	38309	705	48749	2062	44834	1341	35861	2214	33397	2718	44188	1361	51791	5266	62627	3076	56318	6112	38961	
Stationery (Sundries) ...	Pkgs.	25	1267	13	1627	4	1541	10	1823	37	2672	32	3031	112	3044	84	2963	72	2370	53	2114	
	£	212	18227	90	24880	36	24310	55	27417	297	34621	402	40156	1367	46635	494	40810	592	30803	402	23505	
Stones—																						
Building ... ..	Blocks	1237	.....	2748	.....	4201	.....	5665	.....	4918	.....	1843	.....	1611	.....	1475	.....	2808	.....	1607	.....	
	£	1343	.....	3211	.....	4256	.....	12552	.....	8224	.....	2017	.....	2707	.....	2279	.....	3786	.....	1848	.....	
Grind ... ..	No.	.....	612	.....	426	.....	536	.....	810	.....	945	.....	1039	.....	870	.....	1109	.....	685	.....	587	
	£	.....	297	.....	261	.....	319	.....	509	.....	515	.....	499	.....	456	.....	394	.....	266	.....	192	
Tomb ... ..	Pkgs.	51	.....	58	.....	68	.....	57	.....	12	.....	16	.....	34	.....	56	.....	37	.....	14	.....	
	£	324	.....	501	.....	947	.....	401	.....	162	.....	133	.....	275	.....	578	.....	1013	.....	133	.....	
Mill ... ..	No.	.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	£	.....	.....	.....	2	.....	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sugar—																						
Raw ... ..	Tons	1	402½	.....	5002	.....	1522	2	1977	5	682½	16	814	4	774	5	1279	.....	1846	.....	116360	
	£	34	14006	.....	15608	.....	42309	60	57565	204	20317	552	24133	66	21836	106	32437	.....	36667	.....	108877	
Refined ... ..	Tons	4006½	63½	4204½	23½	5263	17½	5260	4½	3647½	7½	2372	66	1995	19	1205	33	885	857	2509	.....	467
	£	137234	3235	135138	1185	169819	819	171218	195	116556	388	74504	2754	60569	860	36840	885	857	2509	.....	745	
Sundries ... ..	Pkgs.	2062	5745	3402	5694	5301	9543	5148	5339	4892	8895	4920	7039	6089	6428	3018	17375	5339	12671	6392	10916	
	£	9450	40204	19284	25940	15708	23600	14195	28488	12821	28535	9110	29777	15587	20808	11605	42253	13433	38692	13663	34739	
Sulphur Ore	Cwt.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Tallow ... ..	Cwt.	90169	10221	60035	1291	148849	6979	252826½	32076	195318	31758	150377	11891	220362	31681	132041	4316	153069	41198	135045	2212	
	£	147790	16771	96076	1942	215854	11098	350587	46329	267177	45282	236271	20789	358914	56611	197707	6555	195821	52170	145198	2160	
Tapioca ... ..	lb.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Tea ... ..	lb.	.....	717819	.....	881307	.....	1073888	.....	1104781	.....	606897	.....	771164	.....	1066714	.....	700195	.....	863004	.....	627174	
	£	.....	56156	.....	69389	.....	76246	.....	80916	.....	44946	.....	54567	.....	67456	.....	48399	.....	52885	.....	35892	
Telegraphic Materials..	Pkgs.	.....	.....	.....	131	.....	97	.....	132	.....	103	.....	266	.....	97	.....	222	.....	212	.....	334	
	£	.....	.....	.....	540	.....	322	.....	675	.....	439	.....	1142	.....	702	.....	1005	.....	813	.....	1359	
Tiles (Roofing) ...	No.	269	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	£	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Timber—																						
Dressed ... ..	Feet	3102029	164345	4096802	408181	4880437	47765	2015180	145020	4125896	302196	132894	25535	218517	185090	320093	176254	203930	590022	133973	161105	
	£	25664	1511	35033	4107	32002	515	19223	1355	23569	2854	2565	408	1960	2278	5231	2089	2507	4333	1345	1356	
*Undressed ... ..	Feet	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5701868	554670	8611237	318003	14239211	199669	9777797	347997	13255804	1406003	
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38165	5479	57775	2821	87759	1684	48305	2391	57764	10450	
Spokes and Felloes	No.	156621	800	740431	202	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	£	2189	14	4877	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Posts and Rails ...	No.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

\* Prior to 1882 included, with Dressed Timber.



EXPORTS—DECENNIAL RETURN—continued.

Articles.	Quantity and Value.	1877.		1878.		1879.		1880.		1881.		1882.		1883.		1884.		1885.		1886.	
		Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.	Produce of the Colony.	Other Produce.
<i>Timber—contd.</i>																					
Sleepers, Girders, Spars, Poles, &c.	No.	403	.....	30	.....	1866	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	£	1172	.....	84	.....	1790	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Treenails	No.	23000	.....	14656	.....	18490	.....	5000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	£	97	.....	68	.....	105	.....	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Palings	No.	19000	52675	18533	16030	6700	70350	5600	55380	4200	12200	3350	32360	9070	16922	7000	50930	25925	10699	4500	2695
	£	144	359	142	121	48	438	47	420	32	89	27	243	69	141	59	314	197	79	34	17
Doors	No.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22	471	94	1340	25	996
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25	407	59	833	24	620
Sashes	No.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	75	410	277	187	600	58
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	72	215	62	99	223	43
Doors, Sashes, and Shutters	No.	13	741	18	96	86	174	73	88	114	122	357	337	110	1424	.....	.....	.....	.....	16	.....
	£	13	470	15	73	62	139	48	84	97	85	326	262	91	973	.....	.....	.....	.....	8	.....
Laths	Bdls.	.....	.....	.....	876	1857	718	150	.....	.....	660	.....	2194	.....	17678	772	8155	62	7436	No. 1075	2348565
	£	.....	.....	.....	173	180	66	13	.....	.....	42	.....	422	.....	2869	75	1545	5	956	3	2832
Sandalwood	Tons	.....	54	.....	.....	.....	.....	.....	81	.....	2	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
	£	.....	1118	.....	.....	.....	6	.....	1254	.....	46	.....	13	.....	13	.....	35	.....	.....	.....	1797
Shingles...	No.	40700	.....	61350	.....	26000	.....	17000	.....	99600	.....	62600	28800	129000	20000	9000	14400	.....	.....	.....	.....
	£	58	.....	108	.....	38	.....	28	.....	133	.....	116	75	240	42	5	.....	.....	.....	.....	.....
<i>Tin—</i>																					
Ingots	Tons	7230	467	6085	568	5107	416	5476	2913	7590	2899	8059	2632	8680	2781	6316	3018	4658	3590	92818	51569
	£	477952	29838	362072	35389	343075	30906	440615	232131	686511	256849	800571	260769	802867	257651	500726	241809	390458	306556	449303	249262
Slag	Tons	.....	.....	405	.....	500	.....	105	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	£	.....	.....	1335	.....	1100	.....	100	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ore	Tons	824	.....	1124	1	814	.....	682	7	609	2	611	22	475	349	.....	.....	535	.....	6538	1559
	£	30558	.....	33750	27	29274	.....	30722	267	37492	88	32890	1230	21685	15	14861	.....	25168	16	18350	3144
Tinware	Pkgs.	37	30	57	32	33	19	52	33	55	74	128	131	97	158	82	87	157	102	535	69
	£	237	.....	292	145	138	121	219	231	340	558	762	697	844	853	516	796	599	554	563	324
Tinplate	Boxes	.....	3382	.....	271	.....	1470	.....	4581	.....	7565	.....	13206	.....	8749	.....	4618	.....	6021	.....	5748
	£	.....	6968	.....	455	.....	2185	.....	7213	.....	9789	.....	15761	.....	10249	.....	4880	.....	6775	.....	5309
<i>Tobacco—</i>																					
Manufactured	lb.	274	444264	185	475037	1004	508058	467	481427	934	453718	216	442997	.....	497883	179	543593	.....	586966	576	536389
	£	20	30342	17	34374	79	36376	32	33942	59	31775	32	34938	.....	38466	26	38578	.....	44606	49	40188
Leaf	lb.	.....	64281	.....	17920	.....	67360	1949	31249	196	165057	.....	100671	.....	18652	392	22725	.....	154548	.....	26140
	£	.....	2879	.....	841	.....	2713	32	1559	4	7746	.....	4793	.....	936	10	1743	.....	7528	.....	1339
Cigars	lb.	.....	35501	.....	36761	.....	24966	.....	29608	15	264774	.....	47130	.....	45740	27	46299	.....	60748	.....	65263
	£	.....	15322	.....	13034	.....	8481	.....	9152	7	9313	.....	14137	.....	13749	12	13789	.....	19366	.....	16717
Cigarettes	lb.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6078	.....	8544	.....	4525
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1973	.....	2879	.....	1669
Sheepwash	lb.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2244	.....	.....	.....	.....	.....	.....
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	112	.....	.....	.....	.....	.....	.....
Snuff	lb.	.....	392	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	£	.....	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tortoise-shell	lb.	.....	3494	.....	3326	.....	5695	.....	4124	.....	3768	.....	1654	.....	3280	.....	2917	.....	3736	.....	4327
	£	.....	2268	.....	2111	.....	2276	.....	2296	.....	1938	.....	1147	.....	2012	.....	1951	.....	2250	.....	2601

Toys, Fancy Goods, and Perfumery...	Pkgs. £	.....	2524	.....	2925	10	2478	8	2322	31	2884	51	3178	86	3454	44	3360	69	3245	75	2289
	£	.....	58340	.....	59987	27	52026	149	67067	284	63450	1323	74896	1178	84324	883	77345	736	71517	504	37443
Turpentine ...	Gallons	.....	1981	.....	2037	.....	3553	.....	4208	.....	6918	.....	5988	.....	3186	.....	3843	.....	8750	.....	7817
	£	.....	474	.....	440	.....	559	.....	724	.....	1306	.....	1205	.....	700	.....	791	.....	1311	.....	1239
Turnery and Wood-ware ...	Pkgs. £	1451	1281	762	1188	761	1138	502	1119	429	2560	506	3203	503	4807	773	3202	2097	3045	1837	4369
	£	3425	2444	1447	2282	776	2540	898	1915	1076	2826	735	3819	1022	4596	1402	4929	1209	5303	1478	5159
Upholstery ...	Pkgs. £	105	41	39	42	82	67	50	55	269	302	114	474	144	355	113	475	271	729	955	1241
	£	374	505	191	254	1670	533	320	312	722	1858	488	2546	714	2442	603	2917	900	3362	1331	4391
Varnish ...	Gallons	.....	331	.....	519	44	681	.....	1319	5	1024	.....	1263	.....	1119	.....	2497	.....	2148	162	1395
	£	.....	211	.....	235	24	339	.....	557	3	620	.....	1016	.....	776	.....	1466	.....	1242	74	897
Vermicelli and Macaroni *	Pkgs. £	.....	74	.....	79	.....	315	.....	572	.....	203	.....	609	.....	99	.....	42	.....	81	.....	6046 lb.
	£	.....	212	.....	292	.....	509	.....	824	.....	444	.....	614	.....	272	.....	134	.....	271	.....	176
Vinegar ...	Gallons	688	12048	2615	11214	524	10236	406	12536	395	8380	2189	6170	743	6564	466	6270	128	10277	654	6570
	£	38	1410	128	1234	29	1286	23	1626	28	1207	170	865	43	987	45	921	13	1060	44	783
Whalebone ...	Cwt. £	.....	16	.....	18	.....	3½	.....	52½	.....	.....	.....	19	.....	70	.....	10	.....	25½	.....	40
	£	.....	218	.....	270	.....	5	.....	206	.....	.....	.....	30	.....	1695	.....	30	.....	315	.....	100
Watches and Clocks	Pkgs. £	.....	455	.....	436	.....	416	.....	429	.....	452	.....	472	.....	646	.....	780	.....	698	.....	716
	£	.....	4276	.....	3530	.....	3545	.....	6115	.....	6401	.....	7209	.....	11977	.....	24628	.....	17919	.....	17176
Wax (Japan) ...	lb. £	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	276462	.....	.....	.....	.....	.....	.....
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5782	.....	.....	.....	.....	.....	.....
Whiting and Chalk	Casks	.....	107	.....	99	.....	547	.....	262	.....	164	.....	263	.....	173	.....	236	.....	121	.....	136
	£	.....	71	.....	79	.....	351	.....	195	.....	119	.....	183	.....	166	.....	184	.....	100	.....	96
Wine ...	Gallons	10591	47080	9969	41938	17519	26995	27584	40590	22377	42630	22425	50659	.....	.....	.....	.....	.....	.....	.....	.....
	£	4502	23076	4910	23236	6965	14630	7359	23852	7233	25535	7166	31686	.....	.....	.....	.....	.....	.....	.....	.....
Wine—Still ...	Gallons	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22425	44169	43288	33109	29157	24824	28499	24362	24217	23738
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7166	20590	14430	15518	10816	12530	8156	11629	7581	10636
Sparkling ...	Gallons	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6490	.....	4934	.....	3777	.....	4744	.....	3615
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11096	.....	8680	.....	6533	.....	8820	.....	6742
Wire (Black) ...	Tons	.....	654	.....	508	.....	597½	.....	1291	.....	2095	.....	2543½	.....	1653½	.....	2293½	.....	1547½	.....	1057
	£	.....	11088	.....	8127	.....	8765	.....	21541	.....	33210	.....	37881	.....	25176	.....	29086	.....	20281	.....	12652
Wire (Galvanized)	Cwt. £	.....	882	.....	1520	.....	888	.....	343	.....	1280½	.....	2788	.....	1236	.....	1517	.....	1369	.....	1645
	£	.....	1175	.....	2247	.....	1243	.....	446	.....	1532	.....	3101	.....	1271	.....	1937	.....	1708	.....	1935
Woolpacks and Bagging...	Bales	.....	605	.....	89	.....	156	.....	192	.....	403	.....	524	.....	.....	.....	.....	.....	.....	.....	.....
	£	.....	5010	.....	746	.....	1173	.....	1519	.....	3734	.....	4130	.....	.....	.....	.....	.....	.....	.....	.....
Woolpacks ...	No. £	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	27324	.....	17400	.....	46684	.....	2397cwt
	£	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3812	.....	2045	.....	4564	.....	2500
Wool (Washed and Scoured)	lb. £	28574793	3297850	42467319	2030623	36546765	2166473	38420884	2927572	31626937	2117079	35426762	1481702	40742148	2360721	39876626	2817249	36605455	2358938	41467786	1660587
	£	2095676	259378	2851367	140208	2642228	146377	2764006	195400	2234052	151441	2541584	99909	3081060	146640	3056751	178384	2327639	138352	2444685	75319
(Greasy) ...	lb. £	73575453	2449045	69365698	2142290	87163685	3246650	116459948	4686918	107974569	5465102	110794420	5648460	147419562	9116454	134109677	6212966	131546204	7862828	132517854	3004384
	£	3160362	111186	2871949	96682	3848970	131719	5276619	201509	4915735	229564	4891507	240644	6517701	390843	5896349	251015	4919003	293253	4583911	98061
Yellow Metal (Sheets)...	Cases	.....	63	.....	93	.....	181	.....	310	.....	190	.....	312	.....	327	.....	448	.....	380	.....	248
	£	.....	923	.....	1373	.....	2547	.....	4544	.....	2182	.....	4238	.....	5225	.....	7034	.....	4933	.....	2934
Yellow Metal (Nails) ...	Pkgs. £	.....	34	.....	15	.....	67	.....	46	.....	50	.....	42	.....	52	.....	104	.....	45	.....	28
	£	.....	278	.....	80	.....	303	.....	272	.....	226	.....	184	.....	362	.....	558	.....	209	.....	171
Zinc ...	Cwt. £	.....	260	.....	260	.....	429	.....	422	.....	427	.....	1386	.....	400	.....	637	.....	406	.....	409
	£	.....	444	.....	437	.....	656	.....	626	.....	581	.....	1652	.....	471	.....	757	.....	511	.....	462
(Spelter) ...	Tons	5	20	9	1	7½	15	17	8	.....	.....	72	.....	1247	40	660	281	2031	264	2901	60
	£	100	260	117	30	84	220	343	134	.....	.....	1032	.....	762	24	500	276	755	110	1533	62

\* Includes Tapioca up to 1882

IMPORTS AND EXPORTS—continued.

No. 6.—VALUE of IMPORTS per head.

Year.	Imports for Home Consumption.	Total Imports per Head.	Year.	Imports for Home Consumption.	Total Imports per Head.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
1871	17 10 6	21 10 3	1879	17 3 1	21 0 0
1872	13 12 2	18 3 5	1880	15 12 2	19 10 7
1873	15 12 10	20 2 7	1881	18 19 9	23 2 8
1874	17 15 9	21 12 8	1882	22 2 0	27 0 3
1875	19 14 10	23 9 11	1883	21 5 11	25 15 11
1876	19 0 11	22 16 9	1884	22 2 11	26 5 11
1877	19 15 5	23 12 4	1885	21 13 1	25 10 0
1878	19 10 11	22 19 3	1886	18 13 4	21 7 10

No. 7.—VALUE of EXPORTS of NEW SOUTH WALES, and other PRODUCE per head.

Year.	New South Wales Produce Exported.	Other Produce Exported.	Year.	New South Wales Produce Exported.	Other Produce Exported.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
1871	18 3 4	3 19 9	1879	15 13 4	3 6 11
1872	15 6 9	4 11 3	1881	17 13 10	3 18 5
1873	18 13 9	4 9 9	1881	17 6 1	4 2 11
1874	18 2 5	3 16 11	1882	17 16 7	4 8 3
1875	19 16 11	3 15 1	1883	19 15 9	4 10 0
1876	17 16 6	3 15 10	1884	16 18 10	4 3 0
1877	17 11 0	3 16 11	1885	14 2 11	3 16 11
1878	16 11 0	3 8 4	1886	13 3 1	2 14 6

No. 8.—VALUE per head of mean population of PRINCIPAL ARTICLES IMPORTED for HOME CONSUMPTION during the years 1876-86.

Articles.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	Articles.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
Agricultural Implements	0 6	0 11	1 3	1 3	0 9	1 1	1 8	2 6	1 9	1 3	1 0	Agricultural Implements
Apparel, wearing	16 1	11 4	17 7	12 3	7 0	8 0	8 5	7 4	18 4	19 7	25 2	Apparel, wearing.
Beer	5 7	6 0	5 4	6 5	4 3	4 0	5 3	6 3	6 9	7 7	7 11	Beer.
Butter	1 5	1 0	1 7	0 7	0 2	0 9	2 1	1 11	3 1	2 2	3 0	Butter.
Candles	1 8	3 2	2 0	1 10	0 8	1 10	3 0	1 6	3 8	3 2	1 6	Candles.
Drapery	59 1	71 4	72 4	62 6	60 8	78 6	91 6	82 10	63 2	64 4	52 4	Drapery.
Earthenware and Glassware.	3 4	2 8	3 0	3 8	2 8	3 4	4 3	4 0	4 8	5 2	3 5	Earthenware and Glassware.
Fish—salt, dried, & preserved	2 0	4 0	6 6	1 9	1 3	2 11	2 7	3 6	3 4	1 10	1 6	Fish—salt, dried, & preserved.
Flour	8 8	8 6	11 1	8 3	9 6	5 0	11 2	7 6	8 4	9 8	12 0	Flour.
Fruit	3 5	4 2	3 6	2 7	3 4	5 0	4 8	4 11	5 11	5 3	5 4	Fruit.
Furniture	2 5	2 10	3 9	2 9	1 8	3 4	4 9	5 2	4 1	4 1	5 1	Furniture.
Grain and Pulse	8 9	9 8	7 7	4 7	4 3	3 4	9 9	4 9	9 1	7 5	8 11	Grain and Pulse.
Hardware	8 8	8 1	11 6	11 11	7 11	11 9	15 6	15 8	13 3	11 5	10 11	Hardware.
Hay and Chaff	1 4	3 0	0 4	0 7	1 7	1 9	3 9	2 11	3 9	2 0	4 4	Hay and Chaff.
Iron and Steel	8 2	18 10	18 7	13 2	13 11	13 8	22 10	18 7	18 11	24 0	15 6	Iron and Steel.
Boots and Shoes	7 6	8 11	7 8	10 3	8 5	9 5	12 11	11 3	10 3	11 7	10 3	Boots and Shoes.
Liquors—spirituous	9 0	12 10	10 11	12 0	10 0	12 2	11 8	10 7	12 0	10 4	8 9	Liquors—spirituous.
Machinery	4 0	8 0	5 2	5 10	3 9	5 9	7 11	9 11	10 6	8 9	5 7	Machinery.
Potatoes	3 8	4 0	3 3	2 0	2 6	2 6	4 9	3 8	4 10	4 3	4 9	Potatoes.
Saddlery and Harness	2 0	2 1	1 6	1 7	1 4	1 6	1 11	2 0	1 6	1 2	1 0	Saddlery and Harness.
Stationery, Paper, Books, &c.	9 8	15 4	11 0	9 11	8 4	11 1	11 6	9 7	11 3	11 6	10 2	Stationery, Paper, Books, &c.
Sugar	17 8	18 0	21 0	23 4	13 11	17 7	21 2	17 10	19 5	10 9	7 6	Sugar.
Tea	8 2	11 1	8 11	11 9	11 0	13 2	10 4	6 8	11 3	8 8	5 8	Tea.
Tobacco	1 8	3 6	5 5	1 4	1 1	2 8	3 0	3 2	2 6	2 4	3 3	Tobacco.
Toys and Fancy Goods	4 0	1 9	2 1	2 0	0 10	1 6	2 11	3 0	2 8	2 6	0 9	Toys and Fancy Goods.
Wine	2 3	3 4	2 9	2 4	0 11	2 0	1 10	2 11	2 5	2 6	1 11	Wine.

No. 9.—VALUE per head of the mean population of the PRINCIPAL ARTICLES of HOME PRODUCE and MANUFACTURE EXPORTED during the years 1876-86.

Articles.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	Articles.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
Coal	20 8	20 0	21 6	20 1	11 9	11 0	16 3	19 10	21 2	20 9	19 4	Coal.
Coin*	52 1	57 8	50 3	20 0	22 10	42 11	38 6	37 4	19 6	29 6	32 4	Coin.*
Copper	7 3	9 9	10 6	7 5	10 0	9 4	8 2	13 10	9 5	5 8	3 5	Copper.
Flour	0 2	0 7	0 5	0 4	0 3	0 5	0 9	0 7	0 6	0 4	0 5	Flour.
Fruit	1 5	2 1	2 2	2 6	2 6	2 10	2 2	2 9	2 3	2 5	2 3	Fruit.
Gold	0 5	0 5	1 5	0 2	0 3	7 5	3 10	3 1	1 9	1 8	0 9	Gold.
Grain and Pulse	3 0	4 7	4 8	3 10	3 0	3 4	1 7	1 5	1 6	1 9	1 1	Grain and Pulse.
Leather	3 1	2 11	2 9	1 10	2 10	3 7	3 7	2 4	2 10	2 3	2 1	Leather.
Do Boots and Shoes	1 11	1 10	1 5	1 5	1 4	1 2	1 2	1 3	1 3	1 0	0 6	Do Boots and Shoes.
Livestock	37 9	28 5	22 4	26 6	27 0	20 5	18 8	18 10	27 2	20 11	19 2	Livestock.
Provisions	3 3	4 6	1 10	4 5	5 2	5 4	4 5	6 7	4 2	3 10	1 7	Provisions.
Silver and Silver Ore.	0 6	0 3	0 5	0 6	0 7	0 4	0 2	0 5	3 3	5 9	8 8	Silver and Silver Ore.
Skins	2 8	4 3	2 8	4 0	5 1	5 6	6 7	7 1	6 7	5 10	6 2	Skins.
Sugar	5 7	4 4	4 1	4 11	4 9	3 1	1 10	1 5	0 10	.....	.....	Sugar.
Tallow	3 11	4 8	2 11	6 3	9 8	7 0	5 11	8 7	4 6	4 2	3 0	Tallow.
Timber	0 10	0 10	1 1	1 0	0 6	0 7	1 0	1 7	2 4	1 2	1 3	Timber.
Tin	12 6	16 2	12 1	10 10	13 0	19 1	20 11	19 9	11 10	8 11	9 6	Tin.
Wool	93 0	167 2	174 0	188 0	221 7	188 1	187 0	230 1	203 3	155 8	143 5	Wool.

\* Coined at Mint, but mostly from gold the produce of other Colonies.

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## IMPORTS AND EXPORTS—continued.

No. 10.—VALUE OF ARTICLES EXPORTED, the Produce or Manufacture of New South Wales and of other Countries—1877-86.

Year.	Articles the Produce or Manufacture of New South Wales.		Articles the Produce or Manufacture of other Countries.		Total.		General Total.
	Seaward.	Overland.	Seaward.	Overland.	Seaward.	Overland.	
1877	£ 7,629,476	£ 3,407,363	£ 2,353,563	£ 67,498	£ 9,983,039	£ 3,474,861	£ 13,457,900
1878	7,099,099	3,785,938	2,189,658	59,710	9,288,757	3,845,648	13,134,405
1879	6,704,733	4,116,023	2,278,151	33,024	8,982,884	4,149,047	13,131,931
1880	8,116,784	4,720,662	2,797,476	47,880	10,914,260	4,768,542	15,682,802
1881	9,191,890	3,961,905	3,093,454	60,556	12,285,344	4,022,461	16,307,805
1882	9,251,459	4,917,394	3,430,251	78,251	12,681,710	4,993,645	17,677,355
1883	12,293,427	4,212,695	3,661,223	94,928	15,954,650	4,307,623	20,262,273
1884	10,224,777	4,606,743	3,521,743	134,027	13,746,520	4,830,770	18,577,290
1885	9,926,114	3,240,129	3,418,920	164,944	13,345,034	3,405,073	16,750,107
1886	8,929,506	3,954,694	2,536,633	125,380	11,466,139	4,090,974	15,556,213

No. 11.—VALUE OF IMPORTS into the Colony from various British Colonies and Possessions and the United Kingdom—1877-86.

Year.	From Great Britain.	From British Colonies or Possessions.									Total Great Britain and British Colonies.
		Victoria.	South Australia.	Tasmania.	New Zealand.	Queensland.	Hong Kong.	Fiji.	India.	Other British Possessions.	
1877	£ 6,471,780	£ 1,171,278	£ 557,454	£ 374,393	£ 223,482	£ 2,218,334	£ 180,070	£ 32,483	£ .....	£ 520,826	£ 13,621,916
1878	6,658,628	1,360,171	253,838	286,343	245,907	1,803,843	211,439	23,738	267	331,834	13,694,884
1879	6,749,519	1,357,715	387,205	285,083	285,083	1,893,976	207,450	33,248	409	407,515	13,032,949
1880	6,536,661	1,300,382	431,882	188,064	285,083	1,893,976	207,450	33,248	409	407,515	13,032,949
1881	8,986,838	1,203,659	457,012	481,529	471,911	1,907,157	202,689	52,223	27,871	298,094	15,797,631
1882	11,155,917	1,223,499	447,033	383,106	460,735	1,993,260	228,526	54,135	653	256,020	13,021,783
1883	10,624,081	1,266,330	404,322	404,322	404,322	2,301,715	229,093	128,253	108,154	239,081	19,383,052
1884	11,423,047	1,732,908	641,209	575,501	881,530	2,489,498	456,313	175,016	128,185	252,494	20,942,254
1885	11,885,597	1,555,139	504,083	582,177	899,623	2,243,849	340,187	192,540	117,208	168,764	21,299,715
1886	10,445,980	1,915,020	386,140	606,740	949,567	2,185,563	280,449	176,661	100,905	66,878	18,813,492

No. 12.—VALUE OF IMPORTS from the Principal Foreign Countries, 1877-86.

Year.	France.	New Caledonia.	Belgium.	Germany.	China.	South Sea Islands.	United States of America.	Other Foreign States.	Total imports from Foreign States.
1877	£ 19,737	£ 151,684	£ 28,213	£ .....	£ 316,441	£ 25,855	£ 481,565	£ 207,367	£ 1,230,862
1878	38,127	140,873	16,737	.....	245,263	58,127	622,261	288,373	1,409,761
1879	52,046	159,599	.....	32,436	359,725	43,373	546,630	286,068	1,470,877
1880	37,859	122,299	.....	47,169	358,129	42,789	387,056	158,979	1,154,280
1881	64,118	188,745	21,579	124,910	466,830	44,498	587,865	290,836	1,789,381
1882	98,176	273,370	39,951	180,951	358,783	49,185	886,171	314,147	2,200,734
1883	211,722	152,096	31,162	213,709	259,108	39,347	922,574	310,071	2,139,789
1884	218,755	107,509	74,904	337,881	357,208	41,537	954,665	126,203	2,218,662
1885	345,231	82,181	195,318	372,557	303,595	36,929	1,008,572	93,363	2,437,746
1886	216,193	64,952	173,831	361,612	195,930	36,491	1,018,773	92,274	2,160,056

No. 13.—VALUE OF IMPORTS into New South Wales from Great Britain, British Colonies and Possessions, and Foreign States—1877-86.

Year.	Great Britain.	Australasian Colonies.	Other British Possessions.	Foreign States.	Total.
1877	£ 6,471,780	£ 6,416,757	£ 733,379	£ 1,230,862	£ 14,852,778
1878	6,658,628	6,468,978	567,278	1,409,761	15,104,645
1879	6,749,519	5,634,808	648,622	1,470,877	14,503,826
1880	6,536,661	5,945,788	539,334	1,154,280	14,176,063
1881	8,986,838	6,229,916	580,877	1,789,381	17,587,012
1882	11,155,917	7,289,823	821,425	2,200,734	21,467,899
1883	10,624,081	8,054,390	704,581	2,139,789	21,522,841
1884	11,423,047	8,507,199	1,012,008	2,218,662	23,160,916
1885	11,885,597	8,595,429	818,689	2,437,746	23,737,461
1886	10,445,980	7,742,619	624,893	2,160,056	20,973,548

IMPORTS AND EXPORTS—continued.

No. 14.—VALUE OF EXPORTS from the Colony, distinguishing the Countries to which Exported—1877-86.

Year.	To Great Britain.	To British Colonies or Possessions.								Total Great Britain and British Colonies.	
		Victoria.	South Australia.	Tasmania.	New Zealand.	Queensland.	Hong Kong.	Fiji.	India.		Other British Possessions
	£	£	£	£	£	£	£	£	£	£	£
1877	Seaward 6,018,926	1,028,184	142,411	57,168	489,856	1,435,707	162,403	100,727	33,866	55,462	12,999,571
	Overland .....	2,869,945	210,414	.....	.....	394,502	.....	.....	.....	.....	
1878	Seaward 5,516,437	1,032,795	98,888	75,453	588,419	1,160,892	153,860	102,693	29,716	45,907	12,650,708
	Overland .....	2,661,639	954,754	.....	.....	229,255	.....	.....	.....	.....	
1879	Seaward 5,148,609	783,107	137,440	82,842	639,051	1,326,657	114,105	94,299	56,171	41,776	12,573,104
	Overland .....	3,394,764	636,171	.....	.....	118,112	.....	.....	.....	.....	
1880	Seaward 7,525,637	754,557	131,675	81,484	525,174	1,116,611	137,577	120,518	19,611	28,928	15,210,314
	Overland .....	3,824,310	698,581	.....	.....	245,651	.....	.....	.....	.....	
1881	Seaward 7,561,114	823,030	156,760	83,949	427,295	1,465,132	179,859	125,454	142,953	21,853	15,008,960
	Overland .....	3,229,664	298,004	.....	.....	494,793	.....	.....	.....	.....	
1882	Seaward 7,309,691	913,611	163,767	85,673	454,853	1,806,374	178,114	170,658	345,312	46,783	16,470,481
	Overland .....	2,867,810	921,427	.....	.....	1,206,408	.....	.....	.....	.....	
1883	Seaward 9,884,207	1,214,791	186,531	120,662	358,627	1,744,824	208,705	248,380	310,608	85,415	18,670,373
	Overland .....	2,955,808	782,552	.....	.....	599,263	.....	.....	.....	.....	
1884	Seaward 7,683,880	1,052,108	214,925	117,872	506,714	1,962,145	259,207	211,023	293,952	89,054	17,221,650
	Overland .....	3,118,389	1,287,441	.....	.....	424,940	.....	.....	.....	.....	
1885	Seaward 7,293,133	1,000,352	193,347	108,758	369,055	1,837,243	246,032	128,643	122,066	90,350	14,794,052
	Overland .....	2,450,444	617,606	.....	.....	337,023	.....	.....	.....	.....	
1886	Seaward 6,026,954	1,159,794	189,427	110,776	427,640	1,511,740	287,041	111,901	89,299	84,200	14,088,846
	Overland .....	2,537,549	1,396,403	.....	.....	156,122	.....	.....	.....	.....	

No. 15.—VALUE of EXPORTS to the Principal Foreign Countries, 1877-86.

Year.	France.	New Caledonia.	Belgium.	Germany.	China.	South Sea Islands.	United States of America.	Other Foreign States.	Total Exports to Foreign States.
	£	£	£	£	£	£	£	£	£
1877	11,982	165,838	.....	.....	42,490	48,059	108,273	81,687	458,329
1878	9,934	151,516	.....	6,390	26,054	52,166	128,805	108,832	483,697
1879	13,619	158,193	.....	4,775	33,210	44,521	211,206	93,303	558,827
1880	144	181,703	.....	.....	14,844	52,657	172,648	50,492	472,488
1881	1,715	184,181	4,658	11,993	19,758	59,001	866,962	150,577	1,298,845
1882	9,744	228,280	21,659	11,661	28,958	53,718	676,598	176,256	1,206,874
1883	24,786	212,528	160,390	7,947	21,351	84,328	872,983	207,587	1,591,900
1884	183,890	210,552	326,488	43,979	21,741	80,611	366,732	121,647	1,355,640
1885	142,104	153,094	399,549	29,511	21,114	68,854	985,531	156,298	1,956,055
1886	149,509	111,332	424,938	54,471	16,462	50,261	521,216	139,178	1,467,367

No. 16.—EXPORTS from New South Wales to Great Britain, British Colonies and Possessions, and Foreign States—1877-86.

Year.	Great Britain.	Australasian Colonies.	Other British Possessions.	Foreign States.	Total.
	£	£	£	£	£
1877	6,018,926	6,628,822	351,823	458,329	13,457,900
1878	5,516,437	6,802,373	331,808	483,697	13,134,405
1879	5,148,609	7,120,840	303,655	558,827	13,131,931
1880	7,525,637	7,381,172	303,505	472,488	15,682,802
1881	7,561,114	6,981,456	466,390	1,298,845	16,307,805
1882	7,309,691	8,425,903	734,887	1,206,874	17,677,355
1883	9,884,207	7,943,332	842,834	1,591,900	20,262,273
1884	7,683,880	8,708,323	829,447	1,355,640	18,577,290
1885	7,293,133	6,936,139	564,780	1,956,055	16,750,107
1886	6,026,954	7,544,139	517,753	1,467,367	15,556,213

No. 17.—NUMBER and VALUE of LIVE STOCK Imported into the Colony, 1876-86.

Year.	Horses.		Horned Cattle.		Sheep.		Pigs.		Other Stock.		Total.	
	No.	£	No.	£	No.	£	No.	£	No.	£	No.	£
1876	668	29,759	5,920	46,984	55,827	57,469	6	25	5	38	62,426	134,275
1877	1,563	28,951	3,563	15,419	330,062	162,627	28	80	8	146	335,224	207,223
1878	792	29,922	5,453	57,279	495,868	254,143	103	423	7	34	502,223	341,801
1879	1,522	28,326	7,203	48,684	160,123	97,016	865	921	30	150	169,743	175,097
1880	1,034	26,862	3,253	14,535	81,742	105,352	266	480	52	104	86,347	147,333
1881	1,885	40,071	9,602	63,539	198,329	196,411	272	263	8	69	210,096	300,353
1882	2,023	63,099	5,530	49,979	207,538	190,180	973	946	2	20	216,066	304,224
1883	3,067	84,649	3,460	39,319	205,558	302,249	291	335	1	2	212,377	426,554
1884	4,453	114,260	36,186	315,110	404,371	378,336	756	1,121	16	164	445,782	808,991
1885	6,708	168,495	36,602	195,602	1,134,439	788,337	970	1,590	4	8	1,178,723	1,154,032
1886	3,310	105,190	80,677	433,564	288,225	160,456	1,151	1,743	135	609	373,498	701,562

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## IMPORTS AND EXPORTS—continued.

No. 18.—NUMBER and VALUE of LIVE STOCK Exported—the produce of the Colony—1876-1886.

Year.	Horses.		Horned Cattle.		Sheep.		Pigs.		Other Stock.		Total.	
	No.	£	No.	£	No.	£	No.	£	No.	£	No.	£
1876	5,807	70,543	69,889	538,196	1,084,176	526,254	3,695	6,082	7	102	1,163,574	1,141,177
1877	5,147	84,339	62,875	427,294	751,412	380,489	1,213	1,997	...	...	820,647	894,119
1878	3,679	66,441	51,155	395,220	578,457	272,060	903	1,258	...	...	634,194	734,979
1879	2,236	33,449	58,050	405,051	978,537	466,582	5,952	10,526	90	280	1,044,865	915,888
1880	3,952	61,191	86,127	450,344	1,147,552	452,756	11,212	14,705	105	72	1,248,948	979,068
1881	3,498	56,868	55,540	256,929	1,068,362	452,867	5,647	8,410	25	240	1,133,072	775,314
1882	2,917	65,018	52,137	282,044	856,190	389,851	3,176	6,763	13	54	914,433	743,730
1883	2,798	64,993	42,260	245,362	1,006,227	490,679	1,167	2,653	22	376	1,052,474	804,103
1884	4,972	128,998	40,074	209,252	1,942,204	850,522	1,610	3,530	11	140	1,988,871	1,192,444
1885	4,709	142,421	52,999	293,129	1,237,155	534,760	764	1,414	...	...	1,295,627	971,724
1886	4,916	126,131	51,359	297,130	1,247,514	512,421	647	1,081	21	289	1,303,357	937,052

No. 19.—QUANTITY AND VALUE OF WOOL Exported—the produce of the Colony—1877-86.

Year.	Seaward.		Overland.		Total.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lb.	£	lb.	£	lb.	£
1877	Washed... 22,655,077	1,686,434	5,919,716	409,242	102,150,246	5,256,038
	Greasy ... 32,081,037	1,428,034	41,494,416	1,732,328		
1878	Washed... 21,083,426	1,471,408	21,383,893	1,379,959	111,833,017	5,723,316
	Greasy ... 34,084,358	1,482,253	34,381,340	1,389,696		
1879	Washed... 23,202,686	1,578,944	13,344,079	1,063,284	123,710,450	6,491,198
	Greasy ... 44,409,933	1,823,781	42,753,752	2,025,189		
1880	Washed... 22,776,347	1,557,890	15,644,537	1,206,116	154,871,832	8,040,625
	Greasy ... 67,705,821	2,952,217	48,745,127	2,324,402		
1881	Washed... 22,257,341	1,526,074	9,369,596	707,978	139,601,506	7,149,787
	Greasy ... 64,401,172	2,800,628	43,573,397	2,115,107		
1882	Washed... 22,878,417	1,583,090	12,548,345	958,494	146,221,182	7,433,091
	Greasy ... 63,396,005	2,745,333	47,398,415	2,146,174		
1883	Washed... 29,964,411	2,180,763	10,777,737	900,297	188,161,710	9,598,761
	Greasy ... 104,050,751	4,490,831	43,368,811	2,026,870		
1884	Washed... 28,786,434	2,050,960	11,090,192	1,005,791	173,986,303	8,953,100
	Greasy ... 91,605,801	3,904,019	42,503,876	1,992,330		
1885	Washed... 30,761,463	1,941,956	5,843,992	385,683	168,151,659	7,246,642
	Greasy ... 92,705,041	3,352,076	38,841,163	1,566,927		
1886	Washed... 27,576,597	1,516,222	13,891,189	928,463	173,985,640	7,028,596
	Greasy ... 87,316,233	2,921,834	45,201,621	1,662,077		

No. 20.—WOOL Exported—not the produce of the Colony—1877-86.

Year.	Weight.	Value.	Year.	Weight.	Value.
	lb.	£		lb.	£
1877	5,746,895	370,564	1882	7,130,162	340,613
1878	4,172,913	236,890	1883	8,878,422	537,483
1879	5,413,123	278,096	1884	9,030,215	429,399
1880	7,614,490	396,909	1885	10,221,766	431,605
1881	7,582,181	381,005	1886	4,664,971	173,380

NOTE.—A large amount of Wool—the produce of other Colonies—is exported as New South Wales Wool.

No. 21.—QUANTITY AND VALUE OF TALLOW Exported—the produce of the Colony—1877-86.

Year.	Seaward.		Overland.		Total.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	cwt.	£	cwt.	£	cwt.	£
1877	87,158½	143,084	3,010½	4,706	90,169	147,790
1878	53,043	86,949	6,992	9,127	60,035	96,076
1879	142,390	207,170	6,459	8,684	148,849	215,854
1880	245,900	340,844	6,926½	9,743	252,826½	359,587
1881	184,083	252,808	11,235	14,369	195,318	267,177
1882	145,256	229,922	5,121	6,349	150,377	236,271
1883	215,581	351,915	4,781	6,999	220,362	358,914
1884	127,026	190,822	5,015	6,885	132,041	197,707
1885	148,718	190,593	4,351	5,228	153,069	195,821
1886	130,227	140,612	4,818	4,586	135,045	145,198

IMPORTS AND EXPORTS—continued

No. 22.—CLASSIFICATION of the IMPORTS and EXPORTS of the Colony for the ten years, 1877-86.

Year	Food and Beverages, including Bread stuffs	Wines, Fermented and Spirituous Liquors	Live Stock	Animal and Vegetable Products, including Wool	Clothing and Textile Fabrics	Minerals and Metals, raw or partly worked up, not including Coal, Com, and Bullion	Coal	Specie and Precious Metals	Articles of Education, Art, and Amusement	Manufactured Articles, not else where included	Articles Unclassified by Customs	Total
<b>TOTAL IMPORTS.</b>												
1877 .	£ 2,684,531	£ 862,260	£ 208,400	£ 990,190	£ 2,998,710	£ 999,925	£ 1,274,010	£ 886,065	£ 3,565,417	£ 137,086	£ 14,606,594	£ 14,606,594
1878 .	2,651,807	700,447	342,336	1,037,366	3,360,315	682,107	1,193,149	902,444	3,807,445	91,457	14,768,873	14,768,873
1879 .	2,532,002	838,995	126,479	1,061,346	2,515,320	516,008	1,396,909	999,117	4,052,988	159,623	14,198,847	14,198,847
1880 .	2,394,791	705,597	148,202	1,434,520	2,915,059	761,549	1,218,048	695,421	3,509,550	167,338	13,950,075	13,950,075
1881 .	2,838,387	838,876	301,509	1,272,281	3,732,662	981,794	1,237,566	1,140,116	4,861,302	204,833	17,409,326	17,409,326
1882 .	3,656,424	903,812	305,524	1,621,222	4,444,277	996,591	1,192,850	1,359,326	6,525,699	275,405	21,281,130	21,281,130
1883 .	3,141,388	969,150	427,943	1,822,267	4,210,429	1,209,087	1,246,791	1,429,560	6,242,957	260,585	20,960,157	20,960,157
1884 .	3,861,455	1,054,402	810,627	1,883,870	4,051,731	1,158,574	1,669,786	1,542,984	6,566,290	227,266	22,826,985	22,826,985
1885 .	3,422,547	1,085,330	1,155,565	1,763,149	4,359,841	1,130,085	11,780	1,543,190	1,515,688	7,084,544	293,477	23,365,196
1886 .	3,308,673	1,015,998	702,169	2,074,785	4,190,766	1,007,600	94,522	1,675,967	1,309,152	5,483,498	110,418	20,973,548
Total for 10 years } £	30,492,005	8,974,867	4,528,754	14,960,996	37,779,110	9,443,320	106,302	1,364,832	11,779,873	5,169,690	19,274,888	18,434,073
<b>NET IMPORTS (HOME CONSUMPTION)</b>												
1877 .	2,285,675	700,221	168,749	431,648	2,693,234	756,164	1,203,168	715,773	3,131,465	99,436	12,185,533	12,185,533
1878 .	2,387,474	622,699	315,209	609,866	2,953,344	536,068	1,082,430	680,759	3,266,139	65,517	12,519,505	12,519,505
1879 .	2,238,466	718,798	124,819	565,447	2,107,938	329,133	1,286,609	782,993	3,597,446	136,023	11,887,672	11,887,672
1880 .	2,011,382	568,424	141,989	757,428	2,487,986	415,599	1,181,962	463,891	2,937,208	138,850	11,104,719	11,104,719
1881 .	2,407,632	692,382	298,889	635,871	3,286,870	494,853	1,215,435	910,611	4,176,545	176,298	14,255,316	14,255,316
1882 .	3,121,984	733,005	293,695	1,045,799	3,965,700	458,853	1,136,906	1,036,969	5,698,089	245,628	17,772,628	17,772,628
1883 .	2,576,065	823,368	409,468	1,042,030	3,752,404	702,678	1,222,844	1,114,090	5,321,282	239,777	17,204,006	17,204,006
1884 .	3,368,290	932,470	766,098	1,181,176	3,576,552	640,554	1,650,959	1,211,518	5,658,585	185,013	19,171,215	19,171,215
1885 .	2,875,425	954,726	1,069,540	1,063,457	3,901,687	647,997	11,780	1,521,243	1,214,680	6,266,012	254,785	19,781,332
1886 .	2,895,496	908,255	627,089	1,661,217	3,827,307	581,922	94,522	1,662,371	1,146,627	4,821,050	75,679	18,301,535
Total for 10 years } £	26,167,889	7,654,348	4,215,545	8,993,939	32,553,022	5,559,751	106,302	1,316,392	9,277,911	4,487,382	16,170,066	15,418,346
<b>EXPORTS OF BRITISH AND FOREIGN PRODUCE OR MANUFACTURE.</b>												
1877 .	389,856	162,039	39,651	558,542	305,476	243,761	...	70,842	170,292	433,952	37,650	2,421,061
1878 .	264,333	137,748	27,127	427,500	406,971	146,039	...	110,719	221,685	481,306	25,940	2,249,368
1879 .	293,536	120,197	1,660	495,899	407,382	186,875	....	110,360	216,124	455,542	23,600	2,311,175
1880 .	383,409	137,173	6,213	677,092	427,073	345,950	...	36,086	231,530	572,342	28,488	2,845,356
1881 .	430,755	146,494	2,620	636,410	445,792	527,011	...	22,131	229,505	684,757	28,535	3,154,010
1882 .	534,440	170,807	11,829	575,423	478,577	501,738	...	55,944	322,357	827,610	29,777	3,508,502
1883 .	565,323	145,782	18,475	780,237	458,025	506,409	...	23,947	315,470	921,675	20,808	3,756,151
1884 .	493,165	121,932	44,529	702,694	475,179	518,020	..	18,827	331,466	907,705	42,253	3,655,770
1885 .	547,122	130,604	86,025	699,692	458,154	482,088	.	21,947	301,008	818,532	38,692	3,583,864
1886 .	413,177	107,743	75,080	413,568	363,459	425,678	.	13,596	162,525	662,448	34,739	2,672,013
Total for 10 years } £	4,324,116	1,380,519	313,209	5,967,057	4,266,088	3,833,569		484,399	2,501,962	6,765,869	310,482	30,157,270
<b>EXPORTS OF HOME PRODUCE OR MANUFACTURE.</b>												
1877 .	436,118	21,329	894,742	5,725,826	384	836,315	651,184	1,833,381	6,961	292,462	6,056	10,704,758
1878 .	355,634	17,909	735,242	6,114,914	1,050	783,382	709,719	1,714,574	9,073	255,730	19,284	10,716,511
1879...	517,168	22,255	510,798	7,013,620	693	414,239	696,443	714,874	8,605	861,241	15,708	10,775,644
1880 .	563,101	14,907	979,088	8,713,597	183	879,907	427,612	852,654	6,158	228,380	14,195	12,679,782
1881 .	525,062	15,803	775,827	7,781,403	5,900	1,148,335	423,605	1,928,049	10,960	267,668	12,821	12,895,493
1882 .	442,993	19,451	744,714	8,052,844	12,964	1,256,361	652,524	1,691,625	12,158	313,715	9,110	13,208,459
1883 .	561,101	21,830	786,295	10,452,533	6,761	1,466,325	837,344	1,706,005	10,867	265,059	15,747	16,129,867
1884 ..	401,349	25,364	1,193,136	9,583,529	5,538	1,107,749	937,522	953,911	11,113	364,920	11,605	14,595,736
1885 .	341,163	19,197	972,972	7,889,386	4,506	853,603	969,241	1,610,311	8,390	275,619	13,433	12,957,881
1886 .	249,950	21,180	937,846	7,764,691	1,876	944,428	953,906	1,818,200	7,608	170,852	13,603	12,884,200
Total for 10 years } £	4,393,639	199,225	8,530,660	79,092,403	39,855	9,690,704	725,900	14,823,584	31,622	3,295,646	91,893	12,754,833

NOTE.—It has been found possible to include only part of the Queensland overland trade in the above statement The portion not included consists mainly of live stock.

# SHIPPING.

**No. 23.—NUMBER, TONNAGE, and CREWS of VESSELS ENTERED at PORTS in the Colony, from each Country, in the Year 1886.**

Countries whence arrived.	Description of Vessels.	British.									Foreign.									Total.								
		With Cargoes.			In Ballast.			Total.			With Cargoes.			In Ballast.			Total.			With Cargoes.			In Ballast.			Total.		
		Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.
South Australia	Sailing ...	50	24192	597	18	15742	316	68	39934	913	9	5834	113	6	3467	70	15	9301	183	59	30026	710	24	19209	386	83	49235	1096
	Steam ...	190	71986	3036	7	8882	383	197	80868	3419	...	...	...	...	...	...	...	...	...	190	71986	3036	7	8882	383	197	80868	3419
	Total ...	240	96178	3633	25	24624	699	265	120802	4332	...	...	...	...	...	...	...	...	...	249	102012	3746	31	28091	769	280	130103	4515
Western Australia	Sailing ...	2	486	20	7	2693	65	9	3179	85	...	...	...	...	...	...	...	...	...	2	486	30	7	2693	65	9	3179	85
	Steam ...	3	2214	97	1	1797	48	4	4011	145	...	...	...	...	...	...	...	...	...	3	2214	97	1	1797	48	4	4011	145
	Total ...	5	2700	117	8	4490	113	13	7190	230	...	...	...	...	...	...	...	...	...	5	2700	117	8	4490	113	13	7190	230
Argentine Republic...	Sailing ...	...	...	...	...	...	...	...	...	...	...	...	...	1	1100	14	1	1100	14	...	...	...	1	1100	14	1	1100	14
Great Britain	Sailing ...	148	194945	3810	...	...	...	148	194945	3810	...	...	...	...	...	...	...	...	...	148	194945	3810	...	...	...	148	194945	3810
	Steam ...	90	200118	9361	...	...	...	90	200118	9361	...	...	...	...	...	...	...	...	...	90	200118	9361	...	...	...	90	200118	9361
	Total ...	238	395063	13171	...	...	...	238	395063	13171	...	...	...	...	...	...	...	...	...	238	395063	13171	...	...	...	238	395063	13171
Belgium	Sailing ...	9	10760	179	...	...	...	9	10760	179	...	...	...	...	...	...	...	...	...	9	10760	179	...	...	...	9	10760	179
Brazil	Sailing ...	...	...	...	1	1999	27	1	1999	27	...	...	...	...	...	...	...	...	...	...	...	...	1	1999	27	1	1999	27
China	Sailing ...	1	921	27	...	...	...	1	921	27	...	...	...	...	...	...	...	...	...	1	921	27	...	...	...	1	921	27
	Steam ...	4	4849	220	...	...	...	4	4849	220	...	...	...	...	...	...	...	...	...	4	4849	220	...	...	...	4	4849	220
	Total ...	5	5770	247	...	...	...	5	5770	247	...	...	...	...	...	...	...	...	...	5	5770	247	...	...	...	5	5770	247
Cape Colony	Sailing ...	1	759	17	...	...	...	1	759	17	...	...	...	...	...	...	...	...	...	1	759	17	...	...	...	1	759	17
France	Sailing ...	...	...	...	...	...	...	...	...	...	2	1506	30	...	...	...	2	1506	30	...	...	...	2	1506	30	...	...	...
	Steam ...	...	...	...	...	...	...	...	...	...	14	37485	2602	1	1778	41	15	39263	2643	14	37485	2602	1	1778	41	15	39263	2643
	Total ...	...	...	...	...	...	...	...	...	...	16	38991	2632	...	...	...	17	40769	2673	16	38991	2632	...	...	...	17	40769	2673
Fiji	Sailing ...	6	3529	71	4	2557	53	10	6086	124	...	...	...	1	260	7	1	260	7	6	3529	71	5	2817	60	11	6346	131
	Steam ...	30	21554	975	...	...	...	30	21554	975	...	...	...	...	...	...	...	...	...	30	21554	975	...	...	...	30	21554	975
	Total ...	36	25083	1046	...	...	...	40	27640	1099	...	...	...	...	...	...	...	...	...	36	25083	1046	...	...	...	41	27900	1106
Germany	Sailing ...	11	12453	226	...	...	...	11	12453	226	17	10286	223	...	...	...	17	10286	223	28	22739	449	...	...	...	28	22739	449
	Steam ...	1	1184	33	...	...	...	1	1184	33	11	17778	666	...	...	...	11	17778	666	12	18962	699	...	...	...	12	18962	699
	Total ...	12	13637	259	...	...	...	12	13637	259	28	28064	889	...	...	...	28	28064	889	40	41701	1148	...	...	...	40	41701	1148
Hong Kong	Steam ...	40	51406	2165	...	...	...	40	51406	2165	...	...	...	...	...	...	...	...	...	40	51406	2165	...	...	...	40	51406	2165
India	Sailing ...	1	902	18	...	...	...	1	902	18	...	...	...	...	...	...	...	...	...	1	902	18	...	...	...	1	902	18
	Steam ...	11	15124	736	...	...	...	11	15124	736	...	...	...	...	...	...	...	...	...	11	15124	736	...	...	...	11	15124	736
	.....	12	16026	754	...	...	...	12	16026	754	...	...	...	...	...	...	...	...	...	12	16026	754	...	...	...	12	16026	754



SHIPPING—continued.

No. 23 (continued).—NUMBER, TONNAGE, and CREWS of VESSELS ENTERED at PORTS in the Colony, from each Country, in the Year 1886—continued.

Countries whence arrived.	Description of Vessels.	British.									Foreign.									Total.								
		With Cargoes.			In Ballast.			Total.			With Cargoes.			In Ballast.			Total.			With Cargoes.			In Ballast.			Total.		
		Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessel.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.
Mauritius ...	Sailing ...	3	1031	34	...	...	...	3	1031	34	2	719	25	...	...	...	2	719	25	5	1750	59	...	...	...	5	1750	59
Mexico ...	Sailing ...	...	...	...	...	...	...	...	...	...	...	...	1	1397	21	1	1397	21	...	...	...	1	1397	21	1	1397	21	
New Zealand ...	Sailing ...	123	37337	1094	37	14166	353	160	51503	1447	9	2870	68	2	812	14	11	3682	82	132	30207	1162	39	14978	370	171	55185	1532
	Steam ...	68	80225	3743	...	...	...	68	80225	3743	...	...	...	...	...	...	...	...	68	80225	3743	...	...	...	68	80225	3743	
	Total ...	191	117562	4837	37	14166	353	228	131728	5190	9	2870	68	2	812	14	11	3682	82	200	110432	4905	39	14978	370	239	35410	5275
New Caledonia ...	Sailing ...	2	654	19	6	1890	55	8	2544	74	1	229	7	2	603	29	3	832	36	3	883	26	8	2493	84	11	3376	110
	Steam ...	...	...	...	...	...	...	...	...	...	23	37329	3031	...	...	...	23	37329	3031	23	37329	3031	...	...	...	23	37329	3031
	Total ...	2	654	19	6	1890	55	8	2544	74	24	37558	3038	2	603	29	26	38161	3067	26	38212	3057	8	2493	84	34	40705	3141
New Guinea ...	Sailing ...	1	186	15	1	393	11	2	579	26	...	...	...	...	...	...	...	...	1	186	15	1	393	11	2	579	26	
Norway ...	" ...	3	3354	60	...	...	...	3	3354	60	8	5351	108	...	...	...	8	5351	108	11	8705	168	...	...	...	11	8705	168
Queensland ...	Sailing ...	36	10617	327	70	27577	682	106	38194	1009	1	1246	19	13	6073	129	14	7319	148	37	11863	346	83	33650	811	120	45513	1157
	Steam ...	391	258695	12920	31	13894	724	422	272589	13644	...	...	...	...	...	...	...	...	391	258695	12920	31	13894	724	422	272589	13644	
	Total ...	427	269312	13247	101	41471	1406	528	310783	14653	1	1246	19	13	6073	129	14	7319	148	428	270558	13266	114	47544	1535	542	318102	14801
South Sea Islands...	Sailing ...	22	4566	190	...	...	...	22	4566	190	6	708	62	1	658	12	7	1366	74	28	5274	252	1	658	12	29	5932	264
	Steam ...	...	...	...	...	...	...	...	...	...	4	4316	181	...	...	...	4	4316	181	4	4316	181	...	...	...	4	4316	181
	Total ...	22	4566	190	...	...	...	22	4566	190	10	5024	243	1	658	12	11	5682	255	32	9590	433	1	658	12	33	10248	445
Tasmania ...	Sailing ...	36	8094	273	4	992	33	40	9086	306	2	788	19	...	...	...	2	788	19	38	8882	292	4	992	33	42	9874	325
	Steam ...	77	54447	2073	3	2684	89	80	57131	2162	...	...	...	...	...	...	...	...	77	54447	2073	3	2684	89	80	57131	2162	
	Total ...	113	62541	2346	7	3676	122	120	66217	2468	2	788	19	...	...	...	2	788	19	115	63329	2365	7	3676	122	122	67005	2487
United States of America...	Sailing ...	30	29094	574	...	...	...	30	29094	574	43	39360	629	...	...	...	43	39360	629	73	68454	1203	...	...	...	73	68454	1203
	Steam ...	8	10658	640	...	...	...	8	10658	640	10	19166	928	...	...	...	10	19166	928	18	29824	1568	...	...	...	18	29824	1568
	Total ...	38	39752	1214	...	...	...	38	39752	1214	53	58526	1557	...	...	...	53	58526	1557	91	98278	2771	...	...	...	91	98278	2771
Victoria ...	Sailing ...	48	16303	489	74	61864	1158	122	78167	1647	28	17112	339	34	30180	471	62	47292	810	76	33415	828	108	92044	1629	184	125459	2452
	Steam ...	541	425923	15381	181	150511	4703	722	576434	20084	...	...	...	...	...	...	...	...	541	425923	15381	181	150511	4703	722	576434	20084	
	Total ...	589	442226	15870	255	212375	5861	844	654601	21731	28	17112	339	34	30180	471	62	47292	810	617	459338	16209	289	242555	6332	906	701893	22541
Total ...	Sailing ...	533	360183	8040	222	129873	2753	755	490056	10793	128	86009	1642	61	44550	767	189	130559	2409	661	446192	9682	283	174423	3520	944	620615	13202
	Steam ...	1454	1198888	51380	223	177768	5947	1677	1376151	57327	62	116074	7408	1	1778	41	63	117852	7449	1516	1314457	58788	224	179546	5988	1740	1494003	64776
General Total...	Total ...	1987	1558566	59420	445	307641	8700	2432	1866207	68120	190	202083	9050	62	46328	808	252	248411	9858	2177	1760649	68470	507	353969	9508	2684	2114618	77978

STATISTICS, 1886—TRADE AND COMMERCE.

STATISTICS, 1886—TRADE AND COMMERCE.

SHIPPING—continued.

No. 24.—NUMBER, TONNAGE, and CREWS OF VESSELS of EACH NATION entered at Ports in the Colony, in the Year 1886.

Nationality of Vessels.	Description of Vessels.	Entered.								
		With Cargoes.			In Ballast.			Total.		
		Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.
British .. .. .	Sailing Steam	211	253,042	5,012	76	84,260	1,490	287	337,302	6,502
		233	358,096	10,921	37	46,051	1,737	270	403,147	18,658
British Possessions .. .	Sailing Steam	444	611,138	21,933	113	129,311	3,227	557	740,449	25,160
		322	107,141	3,028	146	45,613	1,263	468	152,754	4,291
American .. .. .	Sailing Steam	1,221	840,287	34,459	186	132,717	4,210	1,407	973,004	38,669
		1,543	947,423	37,487	332	173,330	5,473	1,875	1,125,758	42,960
French .. .. .	Sailing Steam	42	35,448	605	30	26,422	406	72	61,870	1,011
		9	17,451	835	.....	.....	.....	9	17,451	835
German .. .. .	Sailing Steam	51	52,899	1,440	30	26,422	406	81	79,321	1,846
		9	4,265	108	3	1,083	35	12	5,348	144
Norwegian .. .. .	Sailing	37	74,814	5,633	1	1,778	41	38	76,592	5,674
		46	79,079	5,741	4	2,861	76	50	81,940	5,818
Swedish .. .. .	Sailing	33	17,537	379	9	5,919	111	42	23,456	490
		15	22,094	847	.....	.....	.....	15	22,094	847
Chilian .. .. .	Sailing	48	39,631	1,226	9	5,919	111	57	45,550	1,337
		32	20,660	898	10	5,740	107	42	26,400	505
Hawaiian .. .. .	Sailing	5	2,743	54	6	2,576	67	11	5,319	121
		3	2,855	47	.....	.....	.....	3	2,855	47
Austrian .. .. .	Sailing	1	412	10	1	1,122	16	2	1,534	26
		1	1,715	93	.....	.....	.....	1	1,715	93
Spanish .. .. .	Sailing	2	2,127	103	1	1,122	16	3	3,249	119
		1	922	16	1	829	13	2	1,751	29
Bolivian .. .. .	Sailing	1	418	12	.....	.....	.....	1	418	12
		.....	.....	.....	1	859	12	1	859	12
Italian .. .. .	Sailing	1	749	13	.....	.....	.....	1	749	13
		661	446,192	9,682	283	174,423	3,520	944	620,615	13,202
General Total .. .. .	Steam	1,516	1,314,457	58,788	224	179,546	5,988	1,740	1,494,003	64,776
		2,177	1,760,649	68,470	507	353,969	9,508	2,684	2,114,618	77,078

No. 25.—TOTAL NUMBER, TONNAGE, and CREWS of VESSELS entered at each Port in the Colony, in the Year 1886.

Names of Ports.	Description of Vessels.	British.									Foreign.									Total.									
		With Cargoes.			In Ballast.			Total.			With Cargoes.			In Ballast.			Total.			With Cargoes.			In Ballast.			Total.			
		Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	
Sydney .. .	Sailing Steam	416	309381	6753	.....	.....	416	309381	6753	99	68265	1302	1	190	16	100	63455	1318	515	377646	8055	1	190	16	516	377836	8071		
		1171	1144892	49056	.....	.....	1171	1144892	49056	62	116074	7408	.....	.....	62	116074	7408	1233	1260966	56464	.....	.....	.....	1233	1260966	56464			
Newcastle .. .	Sailing Steam	1587	1454273	55809	.....	.....	1587	1454273	55809	161	184339	3710	1	190	16	162	134529	3726	1748	1638612	64519	1	190	16	1749	1638802	64535		
		112	49770	1250	194	123016	2532	306	172786	3782	29	17744	340	57	43417	722	86	61161	1062	141	67514	1590	251	166433	3254	392	233947	4844	
Port Stephens .. .	Sailing	8	9257	334	191	171536	5591	199	180793	5925	.....	.....	1	1778	41	1	1778	41	8	9257	334	192	173314	5632	200	182571	5966		
		120	59027	1584	385	294552	8123	505	353579	9707	29	17744	340	58	45195	763	87	62939	1103	149	76771	1924	443	339747	3886	592	416513	10810	
Twced River .. .	Sailing	.....	.....	.....	4	1400	36	4	1400	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	1400	36
		.....	.....	.....	2	146	7	2	146	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	146	7
Wollongong .. .	Sailing Steam	21	1890	173	17	1470	133	38	3360	306	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21	1890	173
		.....	.....	.....	8	2255	69	8	2255	69	.....	.....	.....	3	943	29	3	943	29	.....	.....	.....	.....	.....	.....	.....	11	3198	98
Grafton .. .	Sailing	.....	.....	.....	9	4308	175	9	4308	175	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		.....	.....	.....	17	6563	244	17	6563	244	.....	.....	.....	3	943	29	3	943	29	.....	.....	.....	.....	.....	.....	.....	20	7506	273
Wentworth .. .	Sailing	5	1032	37	14	3056	109	19	4088	146	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	1032	37
		158	25366	1125	.....	.....	158	25366	1125	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	158	25366	1125
Moama .. .	Sailing	96	16978	692	6	454	48	102	17432	740	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	96	16978	692
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total .. .	Sailing Steam	533	360183	8040	222	129873	2753	755	490056	10793	128	80009	1642	61	44550	707	189	130559	2409	661	440192	9682	233	174423	3520	944	620615	13202	
		1454	1198383	51380	223	177768	5947	1077	1376151	57327	62	110074	7408	1	1778	41	63	117852	7449	1516	1314457	53783	224	179546	5988	1740	1494003	64776	
General Total .. .	Sailing	1987	1558566	59420	445	307641	8700	2432	1366207	68120	190	202083	4050	62	46328	808	252	248411	9358	2177	1760648	68470	507	353969	9508	2684	2114618	77978	
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

SHIPPING—continued.

No. 26.—NUMBER, TONNAGE, and CREWS of VESSELS CLEARED in the Colony of New South Wales, to each Country, in the Year 1886.

Countries to which departed	Description of Vessels	British									Foreign.									Total.								
		With Cargoes			In Ballast.			Total			With Cargoes.			In Ballast.			Total.			With Cargoes			In Ballast			Total		
		Vessels	Tons.	Crews	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews	Vessels	Tons.	Crews	Vessels.	Tons.	Crews	Vessels.	Tons	Crews	Vessels.	Tons	Crews	Vessels.	Tons.	Crews.	Vessels.	Tons	Crews.
South Australia	Sailing	58	23704	611	...	...	58	23704	611	...	...	...	...	...	...	...	...	...	58	23704	611	...	...	...	58	23704	611	
	Steam	179	66262	2755	...	...	179	66262	2755	...	...	...	...	...	...	...	...	...	179	66262	2755	...	...	...	179	66262	2755	
	Total	237	89966	3366	...	...	237	89966	3366	...	...	...	...	...	...	...	...	...	237	89966	3366	...	...	...	237	89966	3366	
Western Australia	Sailing	17	4864	142	...	...	17	4864	142	...	...	...	...	...	...	...	...	...	17	4864	142	...	...	...	17	4864	142	
	Steam	4	3121	134	...	...	4	3121	134	...	...	...	...	...	...	...	...	...	4	3121	134	...	...	...	4	3121	134	
	Total	21	7985	276	...	...	21	7985	276	...	...	...	...	...	...	...	...	...	21	7985	276	...	...	...	21	7985	276	
Great Britain	Sailing	40	53225	1086	...	...	40	53225	1086	2	2399	50	...	...	...	2	2399	50	42	55624	1136	...	...	...	42	55624	1136	
	Steam	67	163526	8686	...	...	67	163526	8686	3	5600	249	...	...	...	3	5600	249	70	169126	8935	...	...	...	70	169126	8935	
	Total	107	216751	9772	...	...	107	216751	9772	5	7999	299	...	...	...	5	7999	299	112	224750	10071	...	...	...	112	224750	10071	
Burmah	Sailing	6	5863	112	1	1183	31	7	7046	143	1	940	13	...	...	...	1	940	13	7	6803	125	1	1183	31	8	7986	156
Canada	"	1	799	18	...	...	1	799	18	...	...	...	...	...	...	...	...	1	799	18	...	...	...	1	799	18		
Chili	Sailing	34	30010	570	2	1827	27	36	31837	597	6	5038	88	2	1293	29	8	6331	117	40	35048	658	4	3120	56	44	38168	714
China	"	8	4333	98	...	...	8	4333	98	11	6951	142	...	...	...	11	6951	142	19	11284	240	...	...	...	19	11284	240	
	Steam	3	4183	136	...	...	3	4183	136	...	...	...	...	...	...	...	...	...	3	4183	136	...	...	...	3	4183	136	
	Total	11	8516	234	...	...	11	8516	234	11	6951	142	...	...	...	11	6951	142	22	15467	376	...	...	...	22	15467	376	
Ceylon	"	1	1238	25	...	...	1	1238	25	1	700	12	...	...	...	1	700	12	2	1938	37	...	...	...	2	1938	37	
	Steam	1	1700	40	2	3933	101	3	5633	141	...	...	...	...	...	...	...	...	1	1700	40	2	3933	101	3	5663	141	
	Total	2	2938	65	2	3933	101	4	6871	166	1	700	12	...	...	...	1	700	12	3	3638	77	2	3933	101	5	7571	178
Cape Colony	Sailing	1	209	7	...	...	1	209	7	...	...	...	...	...	...	...	...	1	209	7	...	...	...	1	209	7		
Columbia	"	1	1367	21	...	...	1	1367	21	1	895	15	...	...	...	1	895	15	2	2262	36	...	...	...	2	2262	36	
Fiji	Sailing	20	8923	211	...	...	20	8923	211	1	260	7	1	413	10	2	673	17	21	9183	218	1	413	10	22	9596	228	
	Steam	31	17892	919	...	...	31	17892	919	...	...	...	...	...	...	...	...	...	31	17892	919	...	...	...	31	17892	919	
	Total	51	26815	1130	...	...	51	26815	1130	1	260	7	1	413	10	2	673	17	52	27075	1137	1	413	10	53	27488	1147	
France	Sailing	2	1158	23	...	...	2	1158	23	5	2873	59	...	...	...	5	2873	59	7	4031	82	...	...	...	7	4031	82	
	Steam	...	...	...	...	...	...	...	...	12	32132	2209	...	...	...	12	32132	2209	12	32132	2209	...	...	...	12	32132	2209	
	Total	2	1158	23	...	...	2	1158	23	17	35005	2268	...	...	...	17	35005	2268	19	36163	2291	...	...	...	19	36163	2291	
Germany	Sailing	1	896	19	...	...	1	896	19	...	...	...	...	...	...	...	...	...	1	896	19	...	...	...	1	896	19	
	Steam	...	...	...	...	...	...	...	...	4	7608	456	...	...	...	4	7608	456	4	7608	456	...	...	...	4	7608	456	
	Total	1	896	19	...	...	1	896	19	4	7608	456	...	...	...	4	7608	456	5	8504	475	...	...	...	5	8504	475	

SHIPPING—continued.

No. 26 (continued)—NUMBER, TONNAGE, and CREWS of VESSELS CLEARED in the Colony of New South Wales, to each Country, in the Year 1886—continued.

Countries to which departed.	Description of Vessels.	British.									Foreign.									Total.								
		With Cargoes.			In Ballast.			Total.			With Cargoes.			In Ballast.			Total.			With Cargoes.			In Ballast.			Total.		
		Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.
Guam ... ..	Sailing ...	2	903	23	...	...	...	2	903	23	...	...	...	...	...	...	...	...	2	903	23	...	...	...	2	903	23	
	Steam ...	1	296	20	...	...	...	1	296	20	...	...	...	...	...	...	...	...	1	296	20	...	...	...	1	296	20	
	Total ...	3	1199	43	...	...	...	3	1199	43	...	...	...	...	...	...	...	...	3	1199	43	...	...	...	3	1199	43	
Guatemala ... ..	Sailing ...	...	.....	...	...	...	...	.....	...	1	538	9	...	...	...	1	538	9	1	538	9	...	...	...	1	538	9	
Holland ... ..	" ...	2	2121	55	...	...	...	2	2121	55	1	699	12	...	...	...	1	699	12	3	2820	67	...	...	...	3	2820	67
Hong Kong ... ..	" ...	6	4675	88	...	...	...	6	4675	88	24	25201	354	...	...	...	24	25201	354	30	29876	442	...	...	...	30	29876	442
	Steam ...	40	51791	2087	...	...	...	40	51791	2087	...	...	...	...	...	...	...	...	40	51791	2087	...	...	...	40	51791	2087	
	Total ...	46	56466	2175	...	...	...	46	56466	2175	24	25201	354	...	...	...	24	25201	354	70	81667	2529	...	...	...	70	81667	2529
India ... ..	Sailing ...	9	12659	191	3	4842	79	12	17501	270	...	...	...	...	...	...	...	...	9	12659	191	3	4842	79	12	17501	270	
	Steam ...	17	25904	844	4	6512	210	21	32416	1054	2	3103	67	1	1792	37	3	4895	104	19	29007	911	5	8304	247	24	37311	1158
	Total ...	26	38563	1035	7	11354	289	33	49917	1324	2	3103	67	1	1792	37	3	4895	104	28	41666	1102	8	13146	326	36	54812	1428
Italy ... ..	Sailing ...	1	295	7	...	...	...	1	295	7	...	...	...	...	...	...	...	...	1	295	7	...	...	...	1	295	7	
Java ... ..	" ...	7	6787	136	1	1300	22	8	8087	158	16	11308	204	...	...	...	16	11308	204	23	18095	340	1	1300	22	24	19395	362
	Steam ...	2	4122	150	...	...	...	2	4122	150	1	1274	28	...	...	...	1	1274	28	3	5396	178	...	...	...	3	5396	178
	Total ...	9	10909	286	1	1300	22	10	12209	308	17	12582	232	...	...	...	17	12582	232	26	23491	518	1	1300	22	27	24791	540
Kaiser Wilhelm's Land	Sailing ...	...	.....	...	...	...	...	.....	...	2	1138	26	...	...	...	2	1138	26	2	1138	26	...	...	...	2	1138	26	
Mauritius ... ..	" ...	11	3677	92	...	...	...	11	3677	92	3	995	32	...	...	...	3	995	32	14	4672	124	...	...	...	14	4672	124
Mexico ... ..	" ...	2	2277	40	...	...	...	2	2277	40	5	3375	62	...	...	...	5	3375	62	7	5652	102	...	...	...	7	5652	102
New Guinea ... ..	" ...	2	579	26	...	...	...	2	579	26	...	...	...	...	...	...	...	...	2	579	26	...	...	...	2	579	26	
New Zealand ... ..	" ...	194	59502	1637	7	2114	61	201	61616	1698	8	2295	58	...	...	...	8	2295	58	202	61797	1695	7	2114	61	209	63911	1756
	Steam ...	73	86792	4034	...	...	...	73	86792	4034	...	...	...	...	...	...	...	...	73	86792	4034	...	...	...	73	86792	4034	
	Total ...	267	146294	5671	7	2114	61	274	148408	5732	8	2295	58	...	...	...	8	2295	58	275	148589	5729	7	2114	61	282	150703	5790
New Caledonia... ..	Sailing ...	11	4239	104	...	...	...	11	4239	104	5	2977	61	...	...	...	5	2977	61	16	7216	165	...	...	...	16	7216	165
	Steam ...	9	7321	360	...	...	...	9	7321	360	26	44520	3464	...	...	...	26	44520	3464	35	51841	3824	...	...	...	35	51841	3824
	Total ...	20	11560	464	...	...	...	20	11560	464	31	47497	3525	...	...	...	31	47497	3525	51	59057	3989	...	...	...	51	59057	3989
Nicaragua ... ..	Sailing ...	...	.....	...	...	...	...	.....	...	...	...	...	1	608	16	1	608	16	...	.....	...	1	608	16	1	608	16	
Peru ... ..	Sailing ...	3	2786	54	...	...	...	3	2786	54	1	867	18	...	...	...	1	867	18	4	3653	72	...	...	...	4	3653	72

STATISTICS, 1886—TRADE AND COMMERCE.

SHIPPING—continued.

No. 26 (continued)—NUMBER, TONNAGE, and CREWS of VESSELS CLEARED in the Colony of New South Wales, to each Country, in the Year 1886—continued.

Countries to which departed.	Description of Vessels.	British.									Foreign.									Total.								
		With Cargoes.			In Ballast.			Total.			With Cargoes.			In Ballast.			Total.			With Cargoes.			In Ballast.			Total.		
		Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.
Philippine Islands ...	Sailing ...	8	10003	162	...	...	...	8	10003	162	11	8267	134	...	...	...	11	8267	134	19	18270	296	...	...	...	19	18270	296
	Steam ...	2	3262	103	...	...	...	2	3262	103	2	2921	71	...	...	...	2	2921	71	4	6183	174	...	...	...	4	6183	174
	Total ...	10	13265	265	...	...	...	10	13265	265	13	11188	205	...	...	...	13	11188	205	23	24453	470	...	...	...	23	24453	470
Queensland ...	Sailing ...	67	18239	551	9	3085	124	76	21324	675	5	1802	38	...	...	...	5	1802	38	72	20041	589	9	3085	124	81	23126	713
	Steam ...	423	274549	13792	3	945	63	426	275494	13855	...	...	...	...	...	...	...	...	...	423	274549	13792	3	945	63	426	275494	13855
	Total .	490	292788	14343	12	4030	187	502	296818	14530	5	1802	38	...	...	...	5	1802	38	495	294590	14381	12	4030	187	507	298620	14568
Russia ...	Sailing ...	1	1193	14	...	...	...	1	1193	14	2	987	22	1	944	15	3	1931	37	3	2180	36	1	944	15	4	3124	51
Spain ...	Sailing ...	...	...	...	...	...	...	...	...	...	2	1016	24	...	...	...	2	1016	24	2	1016	24	...	...	...	2	1016	24
Sandwich Islands...	Sailing ...	2	1272	27	...	...	...	2	1272	27	22	14644	256	...	...	...	22	14644	256	24	15916	283	...	...	...	24	15916	283
Singapore ...	Sailing ..	1	902	17	...	...	...	1	902	17	1	1258	11	...	...	...	1	1258	11	2	2160	28	...	...	...	2	2160	28
	Steam .	1	1828	47	...	...	...	1	1828	47	...	...	...	...	...	...	...	...	...	1	1828	47	...	...	...	1	1828	47
	Total .	2	2730	64	...	...	...	2	2730	64	1	1258	11	...	...	...	1	1258	11	3	3988	75	...	...	...	3	3988	75
Sumatra ...	Sailing ...	2	1634	31	...	...	...	2	1634	31	3	1054	24	...	...	...	3	1054	24	5	2688	55	...	...	...	5	2688	55
Siam ...	Sailing ..	...	...	...	...	...	...	...	...	...	3	1335	27	...	...	...	3	1335	27	3	1335	27	...	...	...	3	1335	27
South Sea Islands ...	Sailing ...	21	3868	158	...	...	...	21	3868	158	11	3842	116	...	...	...	11	3842	116	32	7710	274	...	...	...	32	7710	274
	Steam ...	...	...	...	...	...	...	...	...	...	6	5473	254	...	...	...	6	5473	254	6	5473	254	...	...	...	6	5473	254
	Total .	21	3868	158	...	...	...	21	3868	158	17	9315	370	...	...	...	17	9315	370	38	13183	528	...	...	...	38	13183	528
Tasmania ...	Sailing ...	30	5791	204	1	73	4	31	5864	208	...	...	...	...	...	...	...	...	30	5791	204	1	73	4	31	5864	208	
	Steam .	49	35806	1365	1	66	14	50	35872	1379	...	...	...	...	...	...	...	...	49	35806	1365	1	66	14	50	35872	1379	
	Total ..	79	41597	1569	2	139	18	81	41736	1587	...	...	...	...	...	...	...	...	79	41597	1569	2	139	18	81	41736	1587	
United States ...	Sailing ...	151	203728	3577	2	2146	42	153	205874	3619	34	30787	480	2	2446	33	36	33233	513	185	234515	4057	4	4592	75	189	239107	4132
	Steam ...	7	9636	551	...	...	...	7	9636	551	9	17227	786	...	...	...	9	17227	786	16	26863	1337	...	...	...	16	26863	1337
	Total ..	158	213364	4128	2	2146	42	160	215510	4170	43	48014	1266	2	2446	33	45	50460	1299	201	261378	5394	4	4592	75	205	265970	5469
Victoria ...	Sailing ...	60	13737	465	1	23	3	61	13760	468	2	1424	23	1	249	8	3	1673	31	62	15161	488	2	272	11	64	15433	499
	Steam ...	757	592181	20767	5	4841	132	762	597022	20899	...	...	...	...	...	...	...	...	...	757	592181	20767	5	4841	132	762	597022	20899
	Total ...	817	605918	21232	6	4864	135	823	610782	21367	2	1424	23	1	249	8	3	1673	31	819	607342	21255	7	5113	143	826	612455	21398
Total ...	Sailing ...	783	497456	10602	27	16593	393	810	514049	10995	190	135865	2377	8	5953	111	108	141818	2488	973	633321	12979	35	22546	504	1008	655867	13483
	Steam ..	1666	1350172	56790	15	16297	520	1681	1366469	57310	65	119858	7384	1	1792	37	66	121650	7621	1731	1470030	64374	16	18089	557	1747	1488119	64931
General Total...	.....	2449	1847628	67392	42	32890	913	2491	1880518	68305	255	255723	9961	9	7745	148	264	263468	10109	2704	2103351	77353	51	40635	1061	2755	2143986	78414

STATISTICS, 1886—TRADE AND COMMERCE.

SHIPPING—continued.

No. 27.—NUMBER, TONNAGE, and CREWS of Vessels of each Nation Cleared at Ports in the Colony of New South Wales, in the Year 1886.

Nationality of Vessels.	Description of Vessels.	Cleared.								
		With Cargoes.			In Ballast.			Total.		
		Vessels	Tons	Crews	Vessels	Tons	Crews	Vessels	Tons.	Crews.
British ..	Sailing Steam	302	350,470	6,486	8	10,157	189	310	360,627	6,675
		258	391,086	18,383	7	11,759	337	265	402,845	18,720
British Possessions ..	Sailing Steam	560	741,556	24,809	15	21,916	526	575	763,472	25,395
		481	146,986	4,116	19	6,436	204	500	153,422	4,320
		1,408	959,086	38,407	8	4,538	183	1,416	963,624	38,590
American ..	Sailing Steam	1,889	1,106,072	42,523	27	10,974	387	1,916	1,117,046	42,910
		80	68,051	1,037	1	1,586	18	81	69,637	1,055
German ..	Sailing Steam	9	15,594	711	....	....	....	9	15,594	711
		89	83,645	1,748	1	1,586	18	90	85,231	1,766
		36	22,330	434	1	413	10	37	22,743	446
Frenc ..	Sailing Steam	16	23,223	917	1	1,792	37	17	25,015	954
		52	45,563	1,353	2	2,205	47	54	47,758	1,400
		9	4,655	133	2	1,308	31	11	5,963	164
Norwegian ..	Sailing	39	79,326	5,863	..	....	....	39	79,326	5,863
		48	83,981	5,996	2	1,308	31	50	85,289	6,057
Swedish ..	Sailing	43	26,044	501	4	2,646	52	47	28,690	553
Hawaiian ..	Steam	12	6,523	131	...	...	...	12	6,523	131
		2	1,534	27	..	..	..	2	1,534	27
		1	1,715	93	..	..	..	1	1,715	93
Austrian ..	Sailing	3	3,249	120	....	....	....	3	3,249	120
		2	1,751	27	..	..	..	2	1,751	27
Italian ..	"	1	749	12	..	..	..	1	749	12
Chilian ..	"	3	2,951	47	....	....	....	3	2,951	47
Bolivian ..	"	1	859	14	....	....	....	1	859	14
Spanish ..	"	1	418	12	..	..	..	1	418	12
Total ..	Steam	973	633,321	12,979	35	22,544	504	1,008	655,867	13,483
		1,781	1,470,030	64,374	16	18,089	557	1,747	1,488,119	64,931
General Total ..	.....	2,704	2,103,351	77,353	51	40,635	1,061	2,755	2,143,986	78,414

No. 28.—NUMBER, TONNAGE, and CREWS of Vessels Cleared at each Port in the Colony of New South Wales, in the Year 1886.

Names of Ports.	Description of Vessels	British.									Foreign.									Total.								
		With Cargoes.			In Ballast.			Total.			With Cargoes.			In Ballast.			Total.			With Cargoes.			In Ballast.			Total.		
		Vessels	Tons.	Crews	Vessels	Tons.	Crews	Vessels	Tons.	Crews	Vessels	Tons.	Crews	Vessels	Tons.	Crews	Vessels	Tons.	Crews	Vessels	Tons.	Crews	Vessels	Tons.	Crews	Vessels	Tons.	Crews
Sydney ..	Sailing Steam	242	18CS62	3950	26	16227	384	268	203089	4334	47	23756	594	7	5540	101	54	34296	695	289	215618	4544	33	21767	485	322	237385	5029
		1048	1047189	46264	4	3775	150	1052	105964	46414	58	109404	7351	1	1792	37	59	111196	7388	1106	11,669	53615	5	5567	187	1111	1162160	53802
Newcastle ..	Sailing Steam	1290	1231051	50214	30	20002	534	1320	125403	50748	105	138160	7945	8	7332	138	113	14,192	8088	1395	137211	58159	38	27334	672	1433	1399545	58831
		484	298490	6236	1	366	9	485	298356	6245	141	106439	1761	1	413	10	142	106852	1771	625	404929	7997	2	779	19	627	405708	8016
Port Stephens ..	Sailing	298	257821	8402	8	12196	350	306	270017	8752	7	10454	233	..	..	..	..	..	..	305	268275	8635	8	12196	350	313	280471	8985
		782	556311	14638	9	12562	359	791	508873	14997	148	116993	1994	1	413	10	149	117306	2004	930	673204	16632	10	12975	369	940	686179	17001
Tweed River ..	Sailing Steam	5	1762	45	..	..	..	5	1762	45	..	..	..	..	..	..	..	..	5	1762	45	..	..	..	..	5	1762	45
Wollongong ..	Sailing Steam	3	218	11	..	..	..	3	218	11	..	..	..	..	..	..	..	..	..	3	218	11	..	..	..	3	218	11
		37	3330	303	1	30	3	38	3360	306	..	..	..	..	..	..	..	..	..	37	3330	303	1	30	3	38	3360	306
Bateman's Bay ..	Sailing	40	3548	314	1	30	3	41	3578	317	..	..	..	..	..	..	..	..	..	40	3548	314	1	30	3	41	3578	317
		17	3460	115	..	..	..	17	3460	115	2	670	22	..	..	..	..	..	..	19	4130	137	..	..	..	19	4130	137
Grafton ..	Sailing	15	6266	281	..	..	..	15	6266	281	..	..	..	..	..	..	..	..	..	15	6266	281	..	..	..	15	6266	281
		32	9726	396	..	..	..	32	9726	396	2	670	22	..	..	..	..	..	..	34	10396	418	..	..	..	34	10396	418
Wentworth ..	Steam	2	404	14	..	..	..	2	404	14	..	..	..	..	..	..	..	..	2	404	14	..	..	..	2	404	14	
Moama ..	Steam	30	6260	231	..	..	..	30	6260	231	..	..	..	..	..	..	..	..	30	6260	231	..	..	..	30	6260	231	
Swan Hill Cross- ing.	Steam	160	26174	1129	..	..	..	160	26174	1129	..	..	..	..	..	..	..	..	160	26174	1129	..	..	..	160	26174	1129	
Tocumwall ..	Steam	..	..	..	1	200	9	1	200	9	..	..	..	..	..	..	..	..	..	1	200	9	1	200	9	1	200	9
General Total ..	.....	104	8792	379	..	..	..	104	8792	379	..	..	..	..	..	..	..	..	..	104	8792	379	..	..	..	104	8792	379
Total ..	Sailing Steam	4	600	32	1	96	8	5	696	40	..	..	..	..	..	..	..	..	..	4	600	32	1	96	8	5	696	40
		788	497456	10602	27	16593	393	810	514049	10995	190	13386	2377	8	5953	111	198	141818	2488	978	633321	12979	35	22540	504	1008	655807	13483
General Total ..	.....	1666	135112	56790	15	16297	520	1681	1366169	57310	65	49858	7534	1	1792	37	66	12,650	7621	1731	1470030	64374	16	18089	557	1747	1488119	64931
General Total ..	.....	2449	1847628	67392	42	32890	913	2491	1880618	68305	255	25723	9661	9	7745	148	264	263168	10198	2704	2103351	77355	51	40635	1061	2755	2143986	78414

SHIPPING—continued.

No. 29.—TOTAL TONNAGE of VESSELS (sailing and steam) Entered and Cleared with Cargoes and in Ballast at each of the Principal Ports of New South Wales, 1872-86, from and to places beyond the Colony

Year	Sydney		Newcastle		Grafton		Tweed River		Richmond River		Eden		Wollongong		Other Ports on Seaboard		Murray River Ports		Darling River Ports		Total		
	Entd	Cld	Entd	Cld	Entd	Cld	Entd	Cld	Entd	Cld	Entd	Cld	Entd	Cld	Entd	Cld	Entd	Cld	Entd	Cld	Entd	Cld	
1872	418164	360735	342514	427845	4251	6977	628	735	5050	4122	3883	13136										774490	813550
1873	474203	367351	389121	498468	2162	4141	1159	1195	6172	5619	1987	10900										874804	887674
1874	499326	422693	510291	543693	1428	3184	867	741	4457	4214												1016369	974625
1875	590700	468423	510902	573626	2180	4004	1491	1365	3813	3790		7893										1109086	1059101
1876	635269	502866	433423	535738	703	3451	1448	1303	2138	2142	1444	7740										1074425	1053300
1877	662217	511623	469349	577676	1452	2896	1157	1008	2031	615		7957										1136206	1101775
1878	712303	511801	542745	665885	892	1751	1405	1405	1657	634	532	8731	7840	11923								1267374	1192130
1879	759980	581694	492163	651501	278	1206	882	922	1162	615	1128	18609	12784	17740								1268377	1273347
1880	827738	641996	400598	516480	90	477	902	902	766	585	6771	13156	5593	11725								1242458	1190321
1881	955531	655161	481695	645543		307	2746	2746	630	172	7727	19050	7910	6732								1456239	1302611
1882	1101756	844677	592228	737772	199	310	4169	3970			18237	16173	3031	7143								1686620	1610045
1883	1260595	1115411	656916	926956	202	469	3477	3368			9112	16678	4887	8166								1935159	2071048
1884	1554118	1277843	708449	1066462	580	1685	3548	3150			14475	15192	3342	12109								2284517	2376441
1885	1608169	1283888	452946	722865	1420	3966	4320	4320			14674	14405	6450	14998	323	323						2088307	2044770
1886	1638802	1399545	416518	636179	4088	6260	3506	3578					7506	10396	1400	2166	17432	9638	25366	26174	2114618	2143986	

NOTE.—The totals of years prior to 1886 do not include Murray and Darling River trade

No. 30.—NUMBER and TONNAGE of VESSELS Entered Inwards, 1876-86

Year	From Great Britain		From British Colonies														From South Sea Islands		From Fisheries		From United States of America		From other Foreign States		Total.	
			Victoria		South Australia		Tasmania		New Zealand		Western Australia		Queensland		Other British Possessions											
	No	Tons	No	Tons	No	Tons	No	Tons	No	Tons	No	Tons	No	Tons	No	Tons	No	Tons	No	Tons	No	Tons	No	Tons		
1876	120	128523	811	304545	228	84612	105	32944	397	166462	1	89	404	134667	79	42234	40	9760	1	411	27	41781	100	38397	2313	1074425
1877	151	170349	891	443076	168	70116	118	31736	361	150194			428	130198	37	20984	42	11844	1	286	35	43701	129	54723	2361	1136206
1878	145	173708	903	486985	179	88219	155	37104	436	176334			407	142327	55	38167	31	9349			46	58479	122	56702	2469	1267374
1879	143	183590	843	466983	182	80657	116	35109	428	180867			385	141568	60	41829	43	8039			43	52366	148	77369	2391	1268377
1880	148	211372	794	460851	171	85702	124	45274	289	123344	1	181	376	144623	67	46238	40	6894			31	41673	118	76306	2108	1242458
1881	207	299220	743	530278	169	102966	128	43762	269	110928			370	151224	56	49406	60	18911			36	49364	160	100180	2254	1456239
1882	257	374299	731	561660	201	124081	161	65243	314	131380	1	277	438	187497	87	71025	32	5152	1	315	61	68334	153	97857	2437	1686620
1883	240	370877	803	654675	179	131659	164	68299	284	141640			574	261911	95	81757	25	3792	1	237	63	68608	159	151734	2587	1935159
1884	258	409630	750	646596	205	153930	169	85510	384	196027	4	2449	735	382415	153	144609	28	7049	2	629	85	90246	162	165122	2935	2284517
1885	259	432144	707	585004	168	126668	139	82932	313	172018	4	1965	607	306211	118	108890	37	6844			92	91608	157	174023	2601	2088307
1886	238	395063	906	701893	280	130103	122	67005	239	135410	13	7190	542	318102	101	98420	33	10248			91	98278	119	152906	2684	2114618

No. 31.—NUMBER and TONNAGE of VESSELS Entered Outwards, 1876-86.

Year	To Great Britain		To British Colonies														To South Sea Islands		To Fisheries		To United States of America		To other Foreign States		Total.	
			Victoria		South Australia		Tasmania		New Zealand		Western Australia		Queensland		Other British Possessions											
	No	Tons	No	Tons	No	Tons	No	Tons	No	Tons	No	Tons	No	Tons	No	Tons	No	Tons	No	Tons	No	Tons	No	Tons		
1876	45	54339	678	303376	218	81586	115	33003	375	142595	2	784	329	113195	197	113445	47	33288	1	286	112	115485	146	61868	2265	1053300
1877	50	63214	734	328238	185	62862	113	32826	357	149028	2	462	361	118677	141	106275	51	13671	2	350	86	107103	219	119069	2301	1101775
1878	47	70738	733	348076	188	70171	141	43485	405	163176	1	783	348	113018	174	124781	57	17900			103	127235	190	112767	2387	1192130
1879	68	99276	711	371772	200	75177	144	49497	387	157575	5	1277	333	123011	121	100980	58	15103			101	121076	268	157603	2396	1272347
1880	98	154091	625	365348	187	87114	117	48603	287	127105	6	1881	319	125620	129	77968	49	9760			64	84961	162	107870	2043	1190321
1881	94	160658	590	372110	150	81325	125	49826	284	127003	2	618	356	136014	123	118905	72	23546			116	145813	191	114443	2103	1330261
1882	108	195082	567	423704	188	102961	149	63144	305	156150	9	3015	425	161413	167	148915	41	9090			120	167821	261	178750	2340	1610045
1883	130	222296	725	583158	164	105856	153	71877	308	186342	11	4047	565	221138	197	183671	50	14149	2	551	144	182448	325	295515	2774	2071048
1884	132	251304	709	618973	232	163333	185	95380	408	239227	27	11600	609	301027	225	221936	56	21218	1	314	139	182453	287	269616	3010	2376441
1885	120	232522	624	502441	167	114480	112	60656	309	158732	17	8743	545	259432	213	224607	39	9836			141	188370	296	284951	2583	2044770
1886	112	224750	826	612455	237	89966	81	41736	282	150703	21	7985	507	298620	193	189771	38	13183			205	265970	253	248847	2755	2143986

## STATISTICS, 1886—TRADE AND COMMERCE.

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## SHIPPING—continued.

**No. 32.**—TOTAL TONNAGE of BRITISH and FOREIGN VESSELS Entered and Cleared with Cargoes and in Ballast at all Ports in New South Wales from and to places outside the Colony, 1872–86.

Year.	Entered.			Cleared.			Entered and Cleared.			Year.
	British.	Foreign.	Total.	British.	Foreign.	Total.	British.	Foreign.	Total.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
1872	685,480	89,010	774,490	715,192	98,358	813,550	1,400,672	187,368	1,588,040	1872
1873	802,073	72,731	874,804	816,946	70,728	887,674	1,619,019	143,459	1,762,478	1873
1874	927,033	89,336	1,016,369	893,113	81,412	974,525	1,820,146	170,748	1,990,894	1874
1875	1,027,335	81,751	1,109,086	974,306	84,795	1,059,101	2,001,641	166,546	2,168,187	1875
1876	995,055	79,370	1,074,425	973,844	79,456	1,053,300	1,968,899	158,826	2,127,725	1876
1877	1,026,211	109,995	1,136,206	997,445	104,330	1,101,775	2,023,656	214,325	2,237,981	1877
1878	1,133,590	133,784	1,267,374	1,068,454	123,676	1,192,130	2,202,044	257,460	2,459,504	1878
1879	1,149,179	119,198	1,268,377	1,145,585	126,762	1,272,347	2,294,764	245,960	2,540,724	1879
1880	1,157,508	84,950	1,242,458	1,102,416	87,905	1,190,321	2,259,924	172,885	2,432,779	1880
1881	1,343,132	113,107	1,456,239	1,220,867	109,394	1,330,261	2,563,999	222,501	2,786,500	1881
1882	1,523,778	162,842	1,686,620	1,453,978	156,067	1,610,045	2,977,756	318,909	3,296,665	1882
1883	1,701,494	233,695	1,935,189	1,831,461	239,587	2,071,048	3,532,955	473,282	4,006,237	1883
1884	2,145,229	239,288	2,284,517	2,154,873	221,568	2,376,441	4,300,102	460,856	4,760,958	1884
1885	1,818,151	270,156	2,088,307	1,797,431	247,339	2,044,770	3,615,582	517,495	4,133,077	1885
1886	1,866,207	248,411	2,114,618	1,880,518	263,468	2,143,986	3,746,725	511,879	4,258,604	1886

**No. 33.**—TOTAL TONNAGE of BRITISH and FOREIGN STEAM VESSELS Entered and Cleared with Cargoes and in Ballast at all Ports in the Colony, 1876–86.

Year.	Entered.			Cleared.			Entered and Cleared.			Year.
	British.	Foreign.	Total.	British.	Foreign.	Total.	British.	Foreign.	Total.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
1876	452,617	21,204	473,821	414,789	23,944	438,733	867,406	45,148	912,554	1876
1877	481,268	31,256	512,524	466,419	28,736	495,155	947,687	59,992	1,007,679	1877
1878	537,467	35,005	572,472	500,742	31,986	532,728	1,038,209	66,991	1,105,200	1878
1879	587,544	33,709	621,253	577,657	32,513	610,170	1,165,201	66,222	1,231,423	1879
1880	774,890	29,045	803,935	714,558	31,879	746,437	1,489,444	60,924	1,550,372	1880
1881	883,213	31,942	915,155	813,547	29,602	843,149	1,696,760	61,544	1,758,304	1881
1882	961,787	51,643	1,013,432	924,857	58,374	983,231	1,886,644	110,017	1,996,663	1882
1883	1,175,718	127,247	1,302,965	1,288,788	110,443	1,399,231	2,464,506	237,690	2,702,196	1883
1884	1,510,504	112,328	1,622,832	1,646,194	104,684	1,750,878	3,156,698	217,012	3,373,710	1884
1885	1,299,888	113,663	1,413,551	1,271,418	106,774	1,378,292	2,571,306	220,537	2,791,843	1885
1886	1,376,151	117,852	1,494,003	1,366,469	121,650	1,488,119	2,742,620	239,502	2,982,122	1886

**No. 34.**—TOTAL TONNAGE of BRITISH and FOREIGN SAILING VESSELS Entered and Cleared with Cargoes and in Ballast at all Ports in the Colony, 1876–86.

Year.	Entered.			Cleared.			Entered and Cleared.			Year.
	British.	Foreign.	Total.	British.	Foreign.	Total.	British.	Foreign.	Total.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
1876	542,438	58,166	600,604	559,055	55,512	614,567	1,101,493	113,678	1,215,171	1876
1877	544,943	78,739	623,682	531,026	75,594	606,620	1,075,969	154,333	1,230,302	1877
1878	596,123	98,779	694,902	567,712	91,690	659,402	1,163,835	190,469	1,354,304	1878
1879	561,635	85,489	647,124	567,928	94,249	662,177	1,129,563	179,738	1,309,301	1879
1880	382,618	55,905	438,523	387,858	56,026	443,884	770,476	111,931	882,407	1880
1881	459,919	81,165	541,084	407,320	79,792	487,112	867,239	160,957	1,028,196	1881
1882	561,991	111,197	673,188	529,122	97,693	626,814	1,091,113	208,890	1,300,002	1882
1883	525,776	106,448	632,224	542,673	129,144	671,817	1,068,449	235,592	1,304,041	1883
1884	534,725	126,960	661,685	508,679	116,884	625,563	1,043,404	243,844	1,287,248	1884
1885	518,263	156,493	674,756	526,013	140,465	666,478	1,044,276	296,958	1,341,234	1885
1886	490,056	130,559	620,615	514,049	141,818	655,867	1,004,105	272,377	1,276,482	1886



SHIPPING—*continued.*

**No. 35.**—TOTAL TONNAGE OF BRITISH AND FOREIGN VESSELS Entered and Cleared with Cargoes only at all Ports in New South Wales, from and to places outside the Colony.

Year.	Entered.			Cleared.			Entered and Cleared.			Year
	British.	Foreign.	Total.	British.	Foreign.	Total.	British.	Foreign.	Total.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
1872	474,724	31,384	506,108	708,294	97,931	806,225	1,183,018	129,315	1,312,333	1872
1873	531,112	28,238	559,350	808,809	69,269	878,018	1,339,921	97,447	1,437,368	1873
1874	620,133	42,830	662,963	886,793	81,387	968,180	1,506,926	124,217	1,631,143	1874
1875	746,689	41,474	788,165	963,148	83,123	1,046,271	1,709,837	124,597	1,834,436	1875
1876	759,197	52,275	811,472	956,798	78,646	1,035,441	1,715,995	130,921	1,846,913	1876
1877	776,480	64,157	840,637	991,055	102,237	1,093,382	1,767,535	166,394	1,934,019	1877
1878	828,310	84,147	912,457	1,063,112	115,993	1,179,015	1,891,422	200,050	2,091,472	1878
1879	850,533	80,146	930,681	1,128,277	124,178	1,252,455	1,978,810	204,324	2,183,136	1879
1880	968,774	55,921	1,024,695	1,086,833	87,269	1,174,102	2,055,607	143,191	2,198,797	1880
1881	1,105,483	79,413	1,184,896	1,217,186	107,896	1,325,082	2,322,669	187,309	2,509,978	1881
1882	1,246,970	114,170	1,361,140	1,437,494	149,313	1,586,707	2,684,464	263,483	2,947,847	1882
1883	1,378,413	172,131	1,550,544	1,814,211	228,982	2,043,193	3,192,624	401,113	3,593,737	1883
1884	1,704,414	184,113	1,888,527	2,101,993	213,991	2,315,984	3,806,407	398,104	4,204,511	1884
1885	1,533,872	209,069	1,742,941	1,747,821	243,568	1,991,389	3,281,693	452,637	3,734,330	1885
1886	1,558,566	202,083	1,760,649	1,847,628	255,723	2,103,351	3,406,194	457,806	3,864,000	1886

**No. 36.**—TONNAGE OF BRITISH AND FOREIGN STEAM VESSELS Entered and Cleared with Cargoes at all Ports in New South Wales, and to places outside the Colony, 1876–86.

Year.	British.		Foreign.		Total.		Year.
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
1876	435,908	410,767	21,204	23,944	457,112	434,711	1876
1877	466,429	464,046	31,256	28,736	477,685	492,782	1877
1878	486,427	500,480	35,005	28,969	521,432	529,449	1878
1879	515,536	573,443	33,327	32,513	548,863	605,956	1879
1880	703,857	711,543	27,072	31,879	730,929	743,422	1880
1881	782,592	811,587	31,942	28,719	814,534	840,306	1881
1882	853,463	920,575	41,974	54,472	895,437	975,047	1882
1883	1,039,971	1,286,267	116,390	109,163	1,156,361	1,395,439	1883
1884	1,354,706	1,620,440	109,776	103,119	1,464,482	1,723,559	1884
1885	1,153,999	1,260,237	113,051	106,874	1,267,050	1,367,111	1885
1886	1,198,383	1,350,172	116,074	119,858	1,314,457	1,470,030	1886

**No. 37.**—TONNAGE OF BRITISH AND FOREIGN SAILING VESSELS Entered and Cleared with Cargoes at all Ports in New South Wales, and to places beyond the Colony, 1876–86.

Year.	British.		Foreign.		Total.		Year.
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
1876	323,289	546,031	31,071	54,702	354,360	600,733	1876
1877	330,051	527,009	32,901	73,591	362,952	600,600	1877
1878	341,883	562,632	49,142	86,934	391,025	649,566	1878
1879	334,999	554,834	46,819	91,665	381,818	646,499	1879
1880	264,917	375,290	28,849	55,390	293,766	430,680	1880
1881	322,891	405,599	47,471	79,177	370,362	484,776	1881
1882	393,507	516,892	72,196	94,841	465,703	611,660	1882
1883	338,442	527,935	55,741	119,819	394,183	647,754	1883
1884	349,708	481,553	74,337	110,872	424,045	592,425	1884
1885	379,873	487,584	96,018	136,694	475,891	624,278	1885
1886	360,183	497,456	86,009	135,865	446,192	633,321	1886

STATISTICS, 1886—TRADE AND COMMERCE.

SHIPPING—continued.

No. 38.—TONNAGE of SAILING and STEAM VESSELS of EACH NATION ENTERED at Ports in New South Wales with Cargoes and in Ballast, 1872-86.

Nation.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
British	Tons. 172,034	Tons. 271,625	Tons. 339,608	Tons. 369,652	Tons. 333,981	Tons. 346,356	Tons. 424,530	Tons. 407,535	Tons. 388,661	Tons. 533,740	Tons. 668,990	Tons. 696,080	Tons. 860,968	Tons. 766,292	Tons. 740,449
British Possns.	513,446	530,443	586,697	654,220	661,074	678,927	710,775	742,272	768,847	809,392	854,788	1,005,414	1,133,336	1,051,859	1,125,758
American	65,326	32,291	43,636	45,134	49,222	70,888	86,593	74,077	49,693	72,005	73,183	76,315	78,678	92,197	79,321
German	7,807	13,000	10,240	9,291	10,995	9,783	10,708	8,884	19,995	14,441	51,756	43,293	45,051	47,828	45,550
French	9,165	13,081	18,040	14,132	13,199	12,867	14,395	11,873	7,196	13,747	15,758	91,821	86,083	91,166	81,940
Norwegian	1,592	1,664	2,370	1,337	649	3,539	3,432	2,058	600	1,658	8,961	13,184	15,689	25,057	26,400
Dutch	3,337	3,267	8,971	7,147	1,422	7,949	10,914	11,714	9,603	7,256	1,359	2,620	.....	729	.....
Italian	.....	.....	.....	.....	.....	.....	973	.....	800	.....	.....	.....	4,015	1,655	749
Swedish	1,110	577	1,509	2,492	1,620	3,511	1,667	3,209	630	1,163	4,182	1,923	2,742	4,908	5,319
Austrian	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,305	2,623	1,453	1,098	1,751
Chilian	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,184	2,825
Russian	.....	.....	.....	1,677	794	.....	836	1,022	.....	.....	.....	.....	.....	871	.....
Portuguese	.....	.....	.....	632	.....	632	632	.....	.....	.....	.....	.....	.....	.....	.....
South Sea Islds.	406	549	405	270	405	135	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Nations	367	3,302	4,883	3,052	1,053	1,619	1,601	3,510	3,433	2,837	5,338	1,916	6,502	1,463	4,526
Total Tons	774,490	874,804	1,016,369	1,109,086	1,074,425	1,136,206	1,267,374	1,268,377	1,242,458	1,456,239	1,636,620	1,935,189	2,284,517	2,088,307	2,114,618

No. 39.—TONNAGE of SAILING and STEAM VESSELS of EACH NATION CLEARED at Ports in New South Wales with Cargo and in Ballast, 1872-86.

Nation.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
British	Tons. 173,134	Tons. 259,481	Tons. 332,222	Tons. 367,317	Tons. 341,663	Tons. 343,992	Tons. 391,725	Tons. 403,230	Tons. 372,027	Tons. 486,328	Tons. 632,357	Tons. 733,645	Tons. 855,237	Tons. 753,799	Tons. 763,472
British Possns.	542,077	557,299	555,466	606,738	632,739	653,453	676,461	739,646	730,389	734,039	821,621	1,097,816	1,285,958	1,042,632	1,117,046
American	72,983	28,300	42,720	44,236	51,752	68,575	77,286	78,467	50,865	67,743	70,041	75,967	80,112	76,993	85,231
German	6,929	14,405	8,810	9,145	10,160	9,776	9,912	10,242	15,089	15,453	52,649	50,729	42,656	43,890	47,758
French	10,269	2,549	17,478	14,381	12,613	10,719	13,540	12,152	7,020	14,045	13,275	87,158	86,817	86,347	85,239
Norwegian	702	1,664	1,882	1,817	660	1,670	5,891	2,274	600	850	9,460	14,669	14,502	26,677	28,690
Dutch	4,647	2,608	10,400	8,862	330	6,894	11,944	11,809	10,231	8,022	2,029	2,620	.....	729	.....
Italian	.....	.....	.....	.....	.....	.....	973	799	.....	.....	.....	.....	1,655	1,655	749
Swedish	1,414	577	1,509	1,880	1,619	3,512	1,551	4,780	630	1,819	3,063	4,122	1,273	5,175	6,523
Austrian	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,269	3,435	2,799	1,098	1,751
Chilian	.....	.....	.....	798	.....	.....	.....	.....	.....	.....	.....	.....	1,813	2,297	2,961
Russian	.....	.....	.....	842	794	.....	836	1,712	.....	.....	1,025	686	.....	871	.....
Portuguese	.....	.....	.....	632	.....	632	632	.....	.....	.....	.....	.....	.....	44	.....
South Sea Islds.	1,066	549	405	270	135	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Nations	279	2,242	3,633	2,318	711	2,417	1,379	5,762	2,671	1,962	4,266	283	3,567	1,563	4,526
Total Tons	813,550	887,674	974,525	1,059,101	1,053,300	1,101,775	1,192,130	1,272,347	1,190,321	1,330,261	1,610,045	2,071,048	2,376,441	2,044,770	2,143,986

No. 40.—TONNAGE of STEAM VESSELS of EACH NATION ENTERED at Ports in New South Wales with Cargo and in Ballast, 1876-86.

Nation.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
British	Tons. 103,783	Tons. 103,126	Tons. 121,680	Tons. 133,738	Tons. 218,068	Tons. 273,739	Tons. 315,347	Tons. 358,446	Tons. 539,019	Tons. 426,607	Tons. 403,147
British Possessions	348,834	378,142	417,502	453,806	556,822	609,474	646,440	817,272	971,845	873,281	973,004
American	20,656	21,128	24,148	22,842	18,291	21,131	18,111	19,016	8,915	11,715	17,451
German	.....	.....	.....	.....	2,763	2,311	24,904	27,294	21,835	19,002	22,094
French	548	2,696	382	1,782	.....	2,010	5,520	80,937	80,433	82,946	76,592
Dutch	.....	7,432	8,760	8,434	7,991	6,490	.....	.....	.....	.....	.....
Other Nationalities	.....	.....	.....	651	.....	.....	3,109	.....	1,145	.....	1,715
Total Tons	473,821	512,524	572,472	621,253	803,935	915,155	1,013,432	1,302,965	1,622,832	1,413,551	1,494,003

No. 41.—TONNAGE of STEAM VESSELS of EACH NATION CLEARED at Ports in New South Wales with Cargo and in Ballast, 1876-86.

Nation.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
British	Tons. 104,761	Tons. 114,572	Tons. 115,523	Tons. 125,183	Tons. 198,836	Tons. 276,039	Tons. 300,282	Tons. 384,382	Tons. 555,193	Tons. 409,576	Tons. 402,845
British Possessions	313,048	351,847	385,219	451,520	515,722	537,508	624,575	904,406	1,082,948	861,842	963,624
American	20,542	21,126	21,125	21,128	21,125	18,108	21,129	12,844	9,829	9,882	15,594
German	.....	.....	.....	.....	2,763	2,814	29,932	22,282	22,062	19,289	25,015
French	382	332	381	.....	.....	2,010	3,397	75,317	79,701	77,703	79,326
Dutch	.....	6,480	10,480	8,434	7,991	6,490	.....	.....	.....	.....	.....
Other Nationalities	.....	798	.....	3,995	.....	180	3,916	.....	1,145	.....	1,715
Total Tons	438,733	495,155	532,728	610,170	746,437	843,149	983,231	1,399,231	1,622,832	1,378,292	1,488,119

## SHIPPING—continued.

No. 42.—TONNAGE of SAILING VESSELS of EACH NATION Entered at Ports in New South Wales, with Cargo and in Ballast, 1876-86.

Nation.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
British ... ..	230,198	243,230	302,850	273,797	170,593	260,001	353,643	337,634	321,949	339,685	337,302
Do Possessions ... ..	312,240	300,785	293,273	288,466	212,025	199,918	208,348	188,142	211,851	178,578	152,754
American ... ..	28,566	49,760	62,445	51,235	31,402	50,874	55,072	57,299	69,763	80,482	61,870
German... ..	10,995	9,783	10,708	8,884	10,232	12,130	26,851	15,999	23,216	28,826	23,456
French ... ..	12,651	10,171	14,013	10,091	7,196	11,737	10,238	10,884	5,650	8,220	5,348
Norwegian ... ..	660	3,539	3,432	2,058	600	1,658	8,961	13,184	15,689	25,057	26,400
Dutch ... ..	1,422	517	2,154	3,280	1,612	766	1,359	2,620	.....	729	.....
Italian ... ..	.....	.....	973	2,223	800	.....	.....	.....	4,015	1,655	749
Swedish ... ..	1,620	3,511	1,667	3,209	630	1,163	4,182	1,923	2,742	4,908	5,319
Austrian ... ..	.....	.....	.....	.....	.....	.....	2,305	2,623	1,453	1,098	1,751
Chilian ... ..	.....	.....	.....	.....	.....	.....	.....	.....	1,813	3,184	2,855
Russian ... ..	.....	.....	836	1,022	.....	.....	.....	.....	.....	871	.....
Portuguese ... ..	794	.....	632	.....	.....	.....	.....	.....	.....	.....	.....
South Sea Islands ... ..	405	135	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Nations ... ..	1,053	1,619	1,919	2,859	3,433	2,837	2,229	1,916	3,544	1,463	2,811
Total tons ... ..	600,604	623,682	694,902	647,124	438,523	541,084	673,188	622,224	661,685	674,756	620,615

No. 43.—TONNAGE of SAILING VESSELS of EACH NATION Cleared at Ports in New South Wales, with Cargo and in Ballast, 1876-86.

Nation.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
British ... ..	236,902	229,420	276,202	278,097	173,191	210,789	332,075	349,263	300,094	344,223	360,627
Do Possessions ... ..	319,691	301,606	291,242	288,126	214,667	196,531	197,046	193,410	203,010	181,790	153,422
American ... ..	31,210	47,449	56,161	57,339	29,740	18,108	48,912	63,123	70,283	67,111	69,637
German... ..	10,160	9,776	9,912	10,242	12,326	12,639	22,717	28,447	20,594	24,601	22,743
French ... ..	12,231	10,387	13,159	12,152	7,020	12,035	9,878	11,841	7,116	8,644	5,963
Norwegian ... ..	649	1,670	5,891	2,274	600	850	7,460	14,669	14,504	26,677	28,690
Dutch ... ..	330	414	1,464	3,375	2,240	1,532	2,029	2,620	.....	729	.....
Italian ... ..	.....	.....	973	2,223	799	.....	.....	.....	1,655	1,655	749
Swedish ... ..	1,619	3,512	1,551	4,780	630	1,319	3,053	4,122	1,273	5,175	6,523
Austrian ... ..	.....	.....	.....	.....	.....	.....	2,269	3,453	2,799	1,098	1,751
Chilian ... ..	.....	.....	.....	.....	.....	.....	.....	.....	1,813	2,297	2,951
Russian ... ..	794	.....	836	1,712	.....	.....	1,025	586	.....	871	.....
Portuguese ... ..	.....	632	632	.....	.....	.....	.....	.....	.....	44	.....
South Sea Islands ... ..	270	135	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Nations ... ..	711	2,387	1,379	1,857	2,671	1,962	350	283	2,422	1,563	2,811
Total tons ... ..	614,567	606,620	659,402	662,177	443,884	487,112	626,814	671,817	625,563	666,478	655,867

No. 44.—NUMBER of VESSELS, TONNAGE, and CREWS of VESSELS Entered, 1876-86.

Year.	Number of Vessels.			Tonnage.			Crews.			Year.
	British.	Foreign.	Colonial.	British.	Foreign.	Colonial.	British.	Foreign.	Colonial.	
				Tons.	Tons.	Tons.				
1876	448	134	1,731	333,981	79,370	661,074	13,565	2,263	30,219	1876
1877	393	161	1,807	346,356	110,923	678,927	13,127	3,476	31,709	1877
1878	533	187	1,749	424,530	132,069	710,775	15,939	3,813	31,487	1878
1879	506	169	1,716	407,535	118,570	742,272	15,008	3,852	32,281	1879
1880	377	116	1,615	388,661	84,950	768,847	16,637	2,880	34,507	1880
1881	483	145	1,626	533,740	113,107	809,392	19,276	3,283	36,096	1881
1882	627	207	1,603	668,990	162,842	854,788	22,174	3,819	35,940	1882
1883	657	238	1,692	696,080	233,695	1,005,414	24,023	9,204	41,275	1883
1884	751	247	1,937	860,968	240,213	1,183,336	30,759	8,850	47,662	1884
1885	584	271	1,746	766,292	270,156	1,051,859	26,001	9,755	42,165	1885
1886	557	252	1,875	740,449	248,411	1,125,758	25,160	9,858	42,960	1886

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## SHIPPING—continued.

No. 45.—AVERAGE TONNAGE and CREWS of VESSELS INWARDS—1876-86.

Year.	Average Tonnage of Vessels.			Average Crews of Vessels.		
	British.	Foreign.	Colonial.	British.	Foreign.	Colonial.
1876...	746	592	382	30	17	17
1877...	881	689	376	33	21	18
1878...	796	706	406	28	20	18
1879...	805	701	433	30	23	19
1880...	1,031	732	476	44	25	21
1881...	1,105	780	498	40	23	22
1882...	1,067	787	533	35	18	22
1883...	1,060	982	594	37	38	24
1884...	1,146	973	611	41	36	25
1885...	1,312	997	602	44	36	24
1886...	1,329	986	600	45	39	23

No. 46.—VESSELS REGISTERED in the Colony from 1876-86.

Year.	Barquentines.			Barques.			Brigs.			Brigantines.			Cutters.			Ketches.			Lighters.			Luggers.			Schooners.			Ships.			Sloops.			Steamers.			Total No.	Total tons.	Total men.
	No.	Tons.	Men.	No.	Tons.	Men.	No.	Tons.	Men.	No.	Tons.	Men.	No.	Tons.	Men.	No.	Tons.	Men.	No.	Tons.	Men.	No.	Tons.	Men.	No.	Tons.	Men.	No.	Tons.	Men.	No.	Tons.	Men.						
1876	11	5101	123	3	708	23	2	255	12	1	20	3	8	344	26	...	...	12	114	38	26	2262	138	1	724	14	...	...	31	2997	193	95	12520	570					
1877	6	1830	58	4	773	30	5	657	32	5	140	14	21	810	70	...	...	2	14	6	24	2240	123	...	...	...	...	36	5131	262	103	11595	595						
1878	9	3610	108	...	...	...	4	511	26	6	168	19	18	576	55	...	...	1	8	3	17	2238	108	...	...	...	...	41	5392	278	96	12503	597						
1879	5	2272	48	1	173	9	5	673	38	1	11	2	15	729	60	...	...	6	96	13	21	1916	111	...	...	...	...	36	3561	291	90	9431	572						
1880	5	1755	50	3	710	32	6	967	49	4	126	10	13	560	51	...	...	6	110	12	16	1638	98	1	1137	23	...	...	20	2159	168	74	9162	493					
1881	10	6656	140	3	654	21	4	521	21	3	139	10	8	410	29	...	...	5	46	10	18	1874	97	...	...	...	...	23	2713	115	74	13013	443						
1882	1	195	6	7	4041	98	3	831	34	7	1027	56	3	88	11	8	345	33	1	185	3	28	364	45	22	1819	133	5	5246	86	2	105	6	41	7764	509	128	22010	1020
1883	1	175	6	8	3546	80	2	379	15	4	714	34	3	78	7	10	539	46	...	...	30	352	60	22	1663	121	3	3120	51	...	...	72	9406	575	155	19972	995		
1884	3	942	32	10	4329	131	1	249	7	4	723	36	3	66	8	16	872	79	4	364	17	9	109	18	26	2372	164	1	819	15	...	...	84	11484	707	161	22334	1214	
1885	4	1510	40	1	284	11	3	501	30	3	31	5	13	722	60	1	25	2	4	55	10	20	1748	122	...	...	...	...	50	6387	394	99	11263	674					
1886	3	2048	24	2	406	13	4	716	25	1	49	3	4	201	8	6	397	10	9	84	13	15	1094	63	1	974	7	...	...	47	3489	235	92	9458	401				

No. 47.—VESSELS BUILT in the Colony from 1876-86.

Year.	Barquentines.		Brigantines.		Cutters.		Ketches.		Lighters.		Luggers.		Schooners.		Sloops.		Steamers.		Total Vessels.	Total Tonnage.
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.		
1876	1	309	2	255	...	...	5	196	...	...	12	114	18	1,192	...	...	22	1,399	60	3,465
1877	...	...	4	473	3	101	15	610	...	...	2	14	10	791	...	...	27	2,515	61	4,510
1878	1	598	1	98	...	...	12	425	...	...	1	8	8	658	...	...	26	1,060	49	3,442
1879	...	...	2	198	...	...	11	536	...	...	6	32	11	708	...	...	19	797	50	2,335
1880	...	...	2	277	3	104	9	392	...	...	4	32	11	1,133	...	...	12	861	41	2,799
1881	...	...	1	139	3	88	5	194	...	...	5	46	5	363	...	...	15	795	31	1,507
1882	...	...	...	...	3	78	4	225	...	...	17	219	13	779	2	105	24	3,276	65	4,734
1883	1	175	...	...	3	78	...	...	...	...	30	352	12	1,055	...	...	52	5,368	102	7,683
1884	1	245	...	...	3	66	11	664	4	364	3	109	11	1,070	...	...	64	5,145	103	7,683
1885	...	...	1	102	2	25	9	467	1	25	3	42	13	139	...	...	36	2,992	65	3,792
1886	...	...	...	...	1	49	3	165	6	397	8	76	9	643	...	...	40	2,637	67	3,976

No. 48.—VESSELS, REGISTERED in various Ports of Australia, Tasmania, and New Zealand lost on the Coast of New South Wales from 1880-86.

Year.	Under 50 tons.	50 to 100.	100 to 200.	200 to 300.	300 to 400.	400 to 500.	Over 500 tons.	Total.
1880	7	2	3	.....	.....	.....	2	14
1881	6	1	1	3	1	.....	1	13
1882	5	4	2	1	1	1	1	15
1883	2	6	3	1	.....	.....	.....	12
1884	6	3	1	.....	.....	.....	1	11
1885	3	4	1	1	1	.....	1	11
1886	6	5	7	1	1	.....	3	23

No. 49.—WRECKS and other CASUALTIES to SHIPPING within the Jurisdiction of New South Wales.

Date.	Vessel.	Tonnage.	Master.	Owner.	No. of Crew & Passengers	No. of Lives lost.	Description and Value of Property lost.	Particulars of Casualty.
1886. 13 Jan...	Mary Bannatine, schooner	115	Alfred Feast.....	R. S. Johnson .....	7	Nil...	Cargo of coals; value of vessel and cargo, £1,275; insured £1,000.	This vessel was taken aback by a sudden squall, when crossing the Clarence Bar, in the attempt to enter river, and she went ashore and became a total wreck.
15 „ ...	Lizzie Davis, schooner.....	85	R. A. Kearney...	J. W. Dixon.....	6	Nil...	In ballast; value, £1,400 .....	The Lizzie Davis drifted ashore near Tacking Point in a calm, the anchors not having been let go in time and she became a total wreck.
9 Feb...	Murray, steamer .....	199	David Anthorn...	John See .....	55	Nil...	General cargo; value of vessel and cargo £4,500; insured, £4,000.	This vessel was totally wrecked by striking on the rocks about 2 miles to the southward of the Old Manning Bar.
27 „ ...	Glossarial, steamer .....	85	Daniel Callaghan	R. Pyers .....	7	Nil...	Cargo of coals; value of vessel and cargo, £1,200.	Sprung a leak and foundered about 5 miles east south-east from Manning Head.
13 Mar...	Ann, ketch .....	28	Christopher Han- son.	Mary Woodward.....	3	Nil...	In ballast; value of vessel, £500; insured, £250.	The Ann was beached at Port Stephens during an easterly gale to save life; she became a total wreck.
30 „ ...	Emperor, brig .....	284	Thomas Kehoe...	Thomas Kehoe.....	9	Nil...	Cargo of coals; value of vessel and cargo, £1,750; insured, £1,400.	This vessel missed stays when working out of Port Stephens; there being no room to wear, she went on shore and became a total wreck.
4 April	Champion, ketch .....	36	F. Taylor .....	Messrs. Hutchins and Taylor.	4	Nil...	Cargo of timber; value of vessel and cargo, £1,000.	In the attempt to shift to a more secure berth inside the bar at Cape Hawke, when bad weather came on, this vessel's chain parted; she drifted on the edge of a small sand spit, and became a total wreck.
23 May...	Fifeshire, steamer .....	28	G. W. Webster...	J. Amos .....	23	Nil...	Cargo of produce; value of vessel and cargo, £3,000; insured £2,000.	This vessel went ashore during a dense fog on Morris' Beach, Terrigal, and became a total wreck.
30 „ ...	Ly-ee-Moon, steamer .....	745	A. Webber .....	A.S.N. Co. ....	86	71	General cargo; value of vessel and cargo, £25,000.	The Ly-ee-Moon struck on Green Cape and became a total wreck.
6 June..	Falcon, schooner .....	195	J. Wilson .....	B. Byrnes.....	8	1	In ballast; value of vessel and cargo, £2,500; insured, £1,500.	This vessel when working out of Sydney missed stays and drifted on to the North Head, and became a total wreck.
6 „ ...	Malua, steamer.....	20	J. Johnson .....	J. Johnson .....	5	Nil...	In ballast, value, not known .....	Went ashore to the south of Port Hacking during a fog, and became a total wreck.
16 July...	Prince of Wales, steamer...	41	A. M'Kay .....	J. Waterhouse .....	4	2	In ballast; value of vessel, £2,750.	In attempting to get the tow line from the ship Peterborough, the wheel chains of the Prince of Wales became jammed; this caused her to get athwart hawse the ship, which sank her.
25 „ ...	Jane, brig .....	160	W. Costen.....	P. Hogan .....	13	Nil...	Cargo of logs; value of vessel and cargo, £850.	This vessel went ashore from her anchors in Tallow Bay, near Cape Byron, during an easterly gale, and became a total wreck.
5 Aug...	Annie Powell, schooner ...	123	H. Harman .....	G. Troy.....	6	Nil...	Cargo of blue metal; value of vessel and cargo, £1,700; insured, £1,000.	During the passage from Kiama to Sydney, this vessel sprung a leak and foundered about 5 miles off Five Islands, near Wollongong.
8 „ ...	Condong, schooner .....	72	W. Coster .....	Messrs. Corrigan and Reidy.	6	2	Cargo of coals; value of vessel and cargo, £2,000; insured, £1,000	This vessel was caught in a sudden squall, she capsized and foundered about 9 miles east by north from Port Stephens.
18 „ ...	Mary Pashley, schooner...	71	M. Andrews .....	M. Andrews .....	6	Nil...	General cargo; value of vessel and cargo, £1,635; insured, £1,200.	While on the passage from Sydney to Nambucca the Mary Pashley came into collision with the steam-tug Game Cock, and sank off Red Head, near Newcastle.
25 Sept...	Sovereign of the Seas, ketch.	31	John Caffrey ...	Henderson & Spragg ...	3	Nil...	Cargo of sundries; value, not known	A portion of the wreck of this vessel was found on the beach near Port Macquarie, supposed to have been beached, and maliciously destroyed by the runaways in the Thames murder case.
6 Nov...	Kalara, steamer .....	90	R. D. Henry.....	D. L. Brown .....	14	Nil...	Vessel and cargo of timber valued at £5,150; insured, £3,750.	The Kalara sprung a leak and foundered about 1 mile north-easterly from Point Danger.
16 „ ...	Jessie Kelly .....	145	J. Conway.....	B. Burns .....	6	Nil...	Vessel and cargo of coals valued £1,920; insured, £1,200.	This vessel was lost by missing stays when working out of Port Stephens; she drifted on the rocks and became a total wreck.
6 Dec...	Corangamite, steamer .....	1562	Le Nevu .....	Messrs. Huddart Parker	141	Nil...	General cargo; value of vessel and cargo, £35,000; insured, £25,000.	The vessel went ashore in Wreck Bay during a fog, and became a total wreck.
8 „ ...	Keilawarra, steamer.....	784	N. G. Buttrey ...	Messrs. Howard Smith..	66	31	Vessel and general cargo valued £25,000.	Sunk by coming into collision with the steamship Helen Nicoll off North Solitary Islands.
8 „ ...	Helen Nicoll, steamer .....	384	R. A. Fraser.....	John See .....	58	4	General cargo .....	Loss of life occasioned when she came into collision with Keilawarra
18 „ ...	Brunswick, steamer.....	118	James Benson ...	John See .....	11	Nil...	Cargo of coals; value of vessel and cargo, £4,600.	When attempting to enter the Manning River the Brunswick struck on the bar and became a total wreck.



Particulars of Receipt	Rate of Duty	1878		1879		1880		1881	
		Quantity	Amount collected	Quantity	Amount collected	Quantity	Amount collected	Quantity	Amount collected
Spirits	£ gallon, 10s	1,089,191 galls	544,595 11 4	979,210 galls	489,605 2 9				
	" 12s			52,779 "	31,667 14 9	999,744 galls	599,847 17 0	1,103,101 galls	661,861 0 0
Colonial Distilled Spirits	" 12s								
Wine—Still	" 4s	184,360 "	36,872 0 1	144,813 "	28,962 12 11				
	" 5s			9,726 "	2,431 12 11	143,433 "	35,858 6 6	157,441 "	39,360 0 0
Wine—Sparkling	" 6s	13,363 "	4,008 19 1	10,466 "	3,140 2 11				
	" 10s.			700 "	349 19 4	10,757 "	5,378 15 3	15,405 "	7,702 0 0
Ale and Beer in wood	" 6d	473,225 "	11,830 12 7	521,710 "	13,042 15 7	340,815 "	8,520 7 6	445,013 "	11,125 0 0
	" 9d			13,604 "	510 3 6	8,533 "	320 1 0		
Ale and Beer in bottle	" 9d	587,546 "	22,033 0 1	599,402 "	22,481 6 6	573,162 "	21,493 11 5	625,447 "	23,454 0 0
	" 1s			34,254 "	1,712 14 6	24,600 "	1,232 10 0		
Tobacco—Manufactured	£ lb, 2s 6d	261,142	26,114 5 3	263,854 lb	26,385 8 10	241,965 lb	24,196 10 2	306,724 lb	30,672 0 0
	" 3s			6,803 "	850 8 3	5,016 "	627 1 3		
Tobacco in leaf	" 1s	1,164,225 "	58,211 5 5	753,158 "	37,657 18 0	801,720 "	42,586 0 10	1,125,398 "	56,269 0 0
	" 1s 3d			10,685 "	667 16 3	15,503 "	968 18 9		
Tobacco for Manufacturing purposes only	" 3s								
Cigars	" 5s	98,408 "	24 602 3 11	110,389 "	27,597 7 11	116,067 "	29,016 17 5	159,548 "	39,886 0 0
	" 6s								
Cigarettes	" 6s								
Tea	" 3d	5,060,720 "	63,259 0 0	6,703,466 "	83,793 6 7	5,923,336 "	74,041 14 0	6,897,008 "	86,212 0 0
Coffee	" 3d	443,808 "	5,543 7 2	441,664 "	5,520 16 1	553,062 "	6,913 5 6	577,027 "	7,212 0 0
	" 6d								
Chicory	" 3d	304,546 "	3,806 16 6	281,264 "	3 515 16 0	325,558 "	4,069 9 6	271 900 "	3,398 0 0
	" 6d								
Sugar—Refined	£ cwt, 6s 8d	3,573 cwt	1,191 1 4	4,197 cwt	1,399 4 11	3 187 cwt	1,062 8 5	5 250 cwt	1,750 0 0
Sugar Refined ex Refinery	" 6s 8d								
Sugar—Raw	" 5s	265,178 "	66,294 13 11	269,312 "	67,328 1 9	228,171 "	57,042 17 7	187,551 "	46,887 0 0
Sugar Raw ex Refinery	" 5s								
Molasses	" 3s 4d	1,573 "	262 3 10	3,596 "	599 7 7	11,701 "	1,950 3 11	13,875 "	2,312 0 0
Molasses ex Refinery	" 3s 4d								
Methylated Spirits	£ gallon, 2s	11,504 galls	1,150 8 2	10,380 galls	1,038 1 1	11,020 galls	1,102 1 9	13,410 galls	1,341 0 0
Opium	£ lb, 10s	18,697 lb	9,348 11 6	21,023 lb	10,514 8 1	21,830 lb	10,940 0 2	26,138 lb	13,068 0 0
	" 20s								
Rice	£ ton, 60s	3,775 tons	11,325 3 11	4,528 tons	13,585 7 7	3,433 tons	10,300 0 7	5,023 tons	15,069 0 0
Dried Fruits	£ lb, 2d	4,559,137 lb	37,992 16 2	3,885,838 lb	32,331 19 8	4,443,272 lb	37,027 5 5	6,942,927 lb	57,857 0 0
Nuts	" 1d	267,545 "	1,114 15 5	147,190 "	613 5 10	158,403 "	660 0 3	313,783 "	1,307 0 0
Malt	£ bushel, 6d	236,652 bshls	5,916 6 4	286,104 bshls	7,152 12 4	253,547 bshls	6,338 13 6	262,284 bshls	6,557 0 0
	" 9d								
Hops	£ lb, 3d	623,510 lb	7,793 17 8	490,260 lb	6,128 7 4	564,129 lb	7,051 12 4	785,764 lb	9,196 0 0
	" 6d								
Sarsaparilla	£ gallon, 4s	5,350 galls	1,070 0 6	4,524 galls	904 16 2	4,132 galls	826 7 0	4 545 galls	909 0 0
	" 12s								
Gold	£ oz, 1s 6d	10,407 ozs	780 10 11	740 ozs	55 10 8				
Specific Duties			174,742 2 10		167,769 10 10		176,161 10 9		244,345 0
Ad valorem Duties									
Bonded Warehouse License Fees			5,907 6 6		6,246 14 6		6,097 4 0		7,031 0 0
Rent of Goods in Queen's Warehouse			499 11 7		493 11 4		243 8 3		230 0 0
Pilotage			17,776 7 6		18,005 3 2		14 462 9 2		20,463 0 0
Harbour and Lights Rates			10,351 13 0		9,959 16 6		8 197 0 8		10,330 0 0
Removal Dues			3,023 15 8		2,997 5 0		2,022 5 0		2,698 0 0
Excise on Tobacco	£ lb, 1s								
Excise on Cigars and Cigarettes	" 2s 6d								
Tobacco Factory License Fees									
Deck—Cargo Dues									
Shipping Fees—Engaging and Discharging Seamen			5 19 9		5 8 6		1 18 0		5 0 9
Crown's Share of Seizures and Penalties			115 4 4		75 8 9		310 0 1		34 7 11
Surplus Proceeds, Sale of Overtime Goods			225 1 2		25 1 6		41 13 7		65 13 5
Surcharges			9 6 9		33 4 5		7 14 5		1 19 9
Tonnage and Wharfage Rates							6,973 18 3		14,177 9 8
Tax on Chinese									960 0 0
Fisheries Royalty									405 0 0
Proceeds of sale of Naphtha									
Duty collected on Samples									
Deposits on Stearine per Apollo Candle Co									
Sundries			12 10 10		44 2 0		24 4 10		14 11 6
Total			1,156,791 11 0		1,127 249 13 3		1 203 916 4 0		1,424,165 3 0







## PART IV.

## MILLS, MANUFACTORIES, &amp;c.

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## MANUFACTORIES, &amp;c.

No. 1.—MANUFACTORIES of Each Kind in the various METROPOLITAN ELECTORATES during the year 1886.

Description of Manufactory or Work.	Balmain.	Canterbury.	The Globe.	Newtown.	Paddington.	Redfern.	St. Leonards.	East Sydney.	West Sydney.	South Sydney.	Total.
<b>Agricultural Implements—</b>											
Agricultural Implements ... ..	...	...	...	...	...	...	...	...	...	...	2
Dairy do ... ..	...	...	...	...	...	...	...	...	1	...	1
<b>Raw Material, the Production of Pastoral Pursuits—</b>											
Boiling-down and Glue ... ..	...	11	...	...	...	9	...	...	...	...	20
Bone Mills ... ..	...	...	...	...	...	3	...	...	...	...	3
Fellmongering ... ..	...	...	...	...	...	7	...	...	...	...	7
Tanneries ... ..	...	8	1	...	1	9	5	...	...	...	24
Wool-pressing ... ..	...	...	...	...	...	...	...	3	3	...	6
Wool-washing ... ..	...	1	...	...	...	10	1	...	...	...	12
<b>Connected with Food and Drink, or the Preparation thereof—</b>											
Aerated Waters ... ..	4	3	1	4	2	5	2	5	5	12	43
Bakeries (Steam) ... ..	...	...	1	...	...	...	1	2	3	...	7
Biscuits ... ..	...	...	...	1	...	...	...	1	1	...	3
Breweries and Bottlers of Ale and Porter	1	1	1	1	2	2	...	1	2	2	13
Butchers (Manufacturing) ... ..	...	...	4	...	...	2	...	1	7	5	19
Coffee and Spice ... ..	...	...	...	...	...	1	...	1	3	...	5
Condiments ... ..	...	...	1	...	...	1	...	1	1	...	4
Confectionery (Wholesale) ... ..	...	...	...	3	...	...	...	9	8	1	21
Flour ... ..	...	1	...	...	...	...	...	1	3	1	6
Ice and Refrigerating ... ..	...	...	...	...	...	...	...	2	3	...	5
Jam ... ..	...	1	1	...	...	...	...	1	2	...	5
Meat-preserving ... ..	1	...	...	...	...	1	...	...	...	...	2
Self-raising Flour and Baking Powder	...	...	1	...	...	1	...	...	3	1	6
Sugar Refineries ... ..	...	...	...	...	...	1	...	...	1	...	2
Treacle Bottling ... ..	...	...	...	...	...	...	...	...	1	...	1
Vinegar ... ..	...	...	1	...	...	2	...	...	1	...	4
<b>Clothing—</b>											
Boots ... ..	1	1	1	3	...	18	...	5	4	4	37
Canvas Shoes and Slippers ... ..	...	...	...	...	...	...	...	...	...	1	1
Clothiers ... ..	...	...	...	1	1	...	...	40	19	2	63
Furriers ... ..	...	...	...	...	...	...	...	1	...	...	1
Hats and Caps ... ..	1	...	1	...	1	...	...	7	5	3	16
Oil-skin Clothing ... ..	...	...	...	...	...	...	...	...	2	...	2
Stays and Belts ... ..	...	...	...	...	...	...	...	2	...	...	2
Shirts ... ..	...	...	...	...	...	...	...	2	...	...	2
Umbrellas ... ..	...	...	...	...	...	...	...	...	1	2	3
Woollen Cloth ... ..	...	...	...	...	...	...	...	...	1	...	1
<b>Building Materials—</b>											
Bricks ... ..	4	52	2	4	...	14	12	...	...	1	89
Joinery (Steam) ... ..	6	6	4	6	5	10	2	13	17	5	74
Lime-kilns ... ..	...	2	...	...	...	3	1	...	...	...	6
Modelling ... ..	1	...	...	1	...	2	...	3	2	1	10
Monumental ... ..	1	1	...	1	5	1	...	3	2	4	18
Paint ... ..	...	...	...	1	...	...	...	1	...	...	2
Patterns ... ..	...	...	...	...	...	...	...	1	...	...	1
Pottery ... ..	1	3	3	4	...	1	5	...	1	1	19
Saw-mills ... ..	6	6	1	2	1	1	1	3	14	...	35
Stone-dressing ... ..	...	...	...	...	...	...	...	...	2	...	2
Stone Quarries ... ..	6	16	2	...	5	...	...	...	7	...	36
<b>Metal Works—</b>											
Cobalt and Manganese ... ..	1	...	...	...	...	...	...	...	...	...	1
Fire-proof Safes ... ..	...	...	1	...	...	...	...	...	...	...	1
Galvanized Iron and Plumbing ... ..	...	1	...	...	...	2	...	11	9	7	30
Iron and Brass Foundries ... ..	3	2	3	6	1	7	...	6	23	2	53
Machinery and Engineering ... ..	11	...	1	5	...	5	...	6	35	4	67
Patent Revolving Shutters ... ..	...	...	1	...	...	...	...	...	...	...	1
Pyrites ... ..	...	...	...	...	...	...	...	...	1	...	1
Smelting ... ..	...	...	...	...	...	1	...	...	1	...	2
Stoves ... ..	...	...	...	...	...	...	...	1	...	2	3
Tinware ... ..	...	1	...	2	...	4	...	7	5	4	23
Wire ... ..	...	1	...	...	...	...	...	2	4	1	8
Railway Carriage Works ... ..	...	...	1	...	1	...	...	...	1	1	4
<b>Ship Building, Repairing, &amp;c.—</b>											
Dry Docks, Floating Docks, and Ships	5	...	...	...	...	...	...	...	3	...	8
Masts and Blocks ... ..	...	...	...	...	...	...	...	1	1	...	2
Sails, Tarpaulins, &c. ... ..	2	...	...	...	...	2	...	1	9	1	15
Ship and Anchor Smiths ... ..	...	...	...	...	...	...	...	...	2	...	2
Ship and Boat Building ... ..	14	...	2	...	...	1	10	7	10	...	44
<b>Furniture, Bedding, &amp;c.—</b>											
Bedding ... ..	2	1	2	1	...	...	...	6	4	1	17
Billiard Tables ... ..	...	...	...	...	...	...	...	1	...	...	1

## STATISTICS, 1886—MILLS, MANUFACTORIES, &amp;c.

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## MANUFACTORIES, &amp;c.—continued.

## No. 1 (continued).—MANUFACTORIES of Each Kind in the various METROPOLITAN ELECTORATES.

Description of Manufactory or Work.	Balmain.	Canterbury.	The Glebe.	Newtown.	Paddington.	Redfern.	St. Leonards.	East Sydney.	West Sydney.	South Sydney.	Total.
<b>Furniture, Bedding, &amp;c.—continued.</b>											
Curled Hair... ..		1			2			1		1	5
Flock ... ..				1							1
Furniture ... ..	1		1	2		2	2	18	14	9	49
Mats and Matting ... ..								2			2
Picture-frames ... ..				2				5	3	2	12
Show Cases and Shop Fittings ... ..								5	2	1	3
Window-blinds ... ..			1	1				2	1	2	7
<b>Books, Paper, Printing, and Engraving—</b>											
Account Books ... ..								12	10		22
Die-sinking and Engraving ... ..								6	1		7
Paper Bags ... ..								1	2		3
Printing ... ..	2			4	1	2	1	27	22		59
Printers' Ink ... ..									1		1
Type... ..									1		1
<b>Goldsmiths' and Philosophical Instrument Makers—</b>											
Electro-plating ... ..								2	1		3
Jewellers ... ..								13	4	1	18
Philosophical Instruments ... ..								5	1		6
Watchmakers and Opticians ... ..								1			1
<b>Carriage Works—</b>											
Coaches and Waggons ... ..		6	6	13	6	7	3	14	10	6	71
Wheels ... ..										1	1
Wood Bending ... ..						1					1
<b>Chemical Works—</b>											
Bitters ... ..									1		1
Chemicals ... ..	1								3		4
Ink and Disinfecting Fluids ... ..										1	1
Patent Medicines ... ..									1		1
<b>Glass—</b>											
Glass ... ..	1			1							2
Glass Silvering ... ..										2	2
Glass Staining ... ..								1			1
<b>Waterworks—</b>											
Waterworks... ..						1		1		1	3
<b>Saddlery and Harness—</b>											
Saddlery and Harness ... ..			1	4	1	2		7	13	2	30
Saddle-trees ... ..				2		1					3
Whips ... ..									1		1
<b>Paving and Asphalt—</b>											
Stone-crushing ... ..				1							1
Tar Pavement ... ..				2					2		4
Wood Pavement and Asphalt ... ..		1		2			1	3			7
<b>Miscellaneous—</b>											
Bark Mill ... ..									1		1
Baskets ... ..				2				4		1	7
Bicycles ... ..				1							1
Brass Musical Instruments ... ..								1			1
Brushes ... ..								2		2	4
Chaff and Crushed Corn ... ..	4	23	1	15	6	9	5	2	8	3	76
Cooperage ... ..						2		3	6		11
Dyeing ... ..		1				1		3		3	8
Electric Machines ... ..								1			1
Electric Light ... ..					2			3			5
Fireworks ... ..					1						1
Gas ... ..	1	1					2		1	1	6
Japanning ... ..								1			1
Kerosene Oil ... ..						1			1		2
Ladders and Barrows ... ..				2					1	2	5
Laundries (Steam) ... ..		1		1				3		1	6
Millett Brooms ... ..						1					1
Mill Belts ... ..										1	1
Packing Cases ... ..		3				2		1			6
Perambulators ... ..			1	1							2
Portmanteaus ... ..				1				1			2
Ropes ... ..		2				4	1				7
Saw-mills (Firewood) ... ..	5			2		2	5	3	4		21
Scales ... ..								1	2		3
Soap and Candles ... ..	2	1		5	2	4			1		15
Soap-powder ... ..									1		1
Soda ... ..			1			2					3
Tobacco ... ..				1				1	3		5
Total Works ... ..	91	156	49	112	46	170	60	309	357	113	1,463





Description of Manufactory or Work.	Albany.	Argyle.	Balnaind.	Bathurst.	Bogan.	Borowu.	Bourke.	Braidwood.	Camden.	Carcoar.	Clarence.	Central Cumberland.	Durham.	Eden.	Forbes.	Glen Innes.	Gloucester.	Goulburn.	Grafton.	Grenfell.	Gundagai.	Gunnedah.	Gwydir.	Hartley.	Hastings and Manning.	Hawkesbury.	Hume.	Hunter.
	<b>Ship Building, Repairing, &amp;c—</b>																											
Dry Docks, Floating Docks, and Slips	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Sail-making, Tarpaulins, &c.	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ship and Boat Building	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...
<b>Furniture, Bedding, &amp;c—</b>																												
Bedding	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...
Furniture	...	1	...	2	...	...	...	1	...	1	...	...	...	...	...	...	1	...	2	2	...	...	...	...	...	...	...	...
Picture-frames	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Books, Paper, Printing, and Engraving—</b>																												
Paper	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Paper-bags	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Printing	...	2	1	5	1	2	1	2	4	1	...	1	...	2	2	3	...	3	1	...	1	...	1	...	4	...	1	...
<b>Goldsmiths' and Philosophical Instrument Makers—</b>																												
Jewellers	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...
<b>Carriage Works—</b>																												
Coaches and Waggons	...	4	1	3	2	3	2	1	3	...	...	1	5	1	1	2	4	5	6	3	2	3	...	1	2	4	4	...
<b>Waterworks—</b>																												
Irrigation	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Waterworks	...	1	...	1	...	...	...	...	...	...	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	1
<b>Saddlery and Harness—</b>																												
Saddlery and Harness	...	3	...	...	...	1	...	...	...	...	2	...	3	...	2	...	...	...	2	...	3	1	...	1	...	5	...	...
Whips	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Paving and Asphalt—</b>																												
Asphalt and Wood Pavement	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tar Pavement	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
<b>Miscellaneous—</b>																												
Bark-mills	...	...	1	...	...	...	...	1	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Baskets	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Broom-handles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Brooms (Millet)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Chaff and Crushed Corn	...	...	...	3	...	...	...	3	2	...	...	3	1	...	...	5	...	7	...	2	7	...	...	...	...	3	...	...
Coke	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cooperage	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dyeing	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gas	...	1	...	1	2	1	...	...	...	...	...	1	...	1	...	...	...	1	1	...	...	...	...	...	...	...	1	...
Kerosene Oil	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Perambulators	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ropes	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rubber Stamps	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Salt	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Saw-mills (Firewood)	...	...	...	...	...	...	...	...	4	...	...	10	...	...	...	...	...	2	...	...	...	...	...	...	...	6	...	...
Soap and Candle	...	...	1	1	2	2	...	1	...	...	...	...	...	...	1	...	...	1	1	...	...	...	...	1	...	...	...	...
Soap-powder	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Threshing Works	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Tobacco	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	39	35	23	37	38	11	34	23	46	16	46	111	37	186	32	30	19	50	50	18	32	19	17	30	36	52	26	11





## MANUFACTORIES, &amp;c.—continued.

No. 3.—MANUFACTORIES in each ELECTORATE with NUMBER of HANDS EMPLOYED for the years 1885 and 1886, and the POWER and VALUE of PLANT, &c., for 1886.

Electorates	1885.				1886.				Approximate power of Plant or Machinery.	Approximate value of Plant or Machinery.
	Number of Works, &c.	Hands Employed.			Number of Works, &c.	Hands Employed.				
		Male.	Female.	Total.		Male.	Female.	Total.		
<b>Metropolitan—</b>									Horse-power.	£
Balmain ... ..	51	1,042	5	1,047	91	1,243	10	1,253	499	133,652
Canterbury ... ..	129	1,235	29	1,264	156	1,413	27	1,440	1,072	304,030
Ghebe ... ..	34	306	4	310	49	429	51	480	279	32,915
Newtown ... ..	84	1,150	63	1,213	112	1,268	56	1,324	610	109,167
Paddington ... ..	20	329	.....	329	46	517	7	524	221	51,705
Redfern ... ..	178	2,938	227	3,165	170	2,758	223	2,981	1,487	383,455
St. Leonards ... ..	47	461	.....	461	60	595	.....	595	356	192,980
East Sydney ... ..	226	4,386	1,602	5,988	309	5,270	1,627	6,907	937	353,538
South Sydney ... ..	117	2,868	351	3,219	113	2,899	168	3,067	775	263,495
West Sydney ... ..	290	5,925	977	6,902	357	6,969	832	7,801	2,619	886,881
<b>Total Metropolitan</b> ... ..	<b>1,176</b>	<b>20,640</b>	<b>3,258</b>	<b>23,898</b>	<b>1,463</b>	<b>23,361</b>	<b>3,001</b>	<b>26,362</b>	<b>8,855</b>	<b>2,711,818</b>
<b>Country—</b>										
Albury ... ..	34	232	.....	232	39	269	1	270	311	51,396
Argyle ... ..	45	218	.....	218	35	237	.....	237	135	21,730
Balranald ... ..	46	353	1	354	23	168	.....	168	71	38,720
Bathurst ... ..	49	400	39	439	37	317	6	323	192	25,397
Bogan ... ..	51	237	.....	237	38	215	2	217	152	26,200
Boorowa ... ..	12	31	.....	31	11	33	.....	33	53	6,830
Bourke ... ..	24	282	.....	282	34	822	2	824	310	118,155
Braidwood ... ..	16	62	.....	62	23	100	.....	100	73	7,645
Camden ... ..	72	467	3	470	46	601	4	605	639	201,580
Carcoar ... ..	53	364	.....	364	16	90	.....	90	117	12,070
Clarence ... ..	66	1,293	.....	1,293	46	752	4	756	1,242	119,710
Central Cumberland ... ..	138	2,279	48	2,327	111	1,836	33	1,869	1,268	337,141
Durham ... ..	19	60	5	65	37	127	8	135	100	14,025
Eden ... ..	67	422	7	429	186	889	223	1,112	735	91,188
Forbes ... ..	29	89	.....	89	32	122	.....	122	164	26,300
Glen Innes ... ..	40	188	.....	188	30	170	.....	170	193	27,227
Gloucester ... ..	24	213	.....	213	19	241	.....	241	198	13,450
Goulburn ... ..	54	601	34	635	50	594	28	622	415	76,450
Grafton ... ..	49	357	2	359	50	386	3	389	260	43,310
Grenfell ... ..	13	48	.....	48	18	46	.....	46	88	10,553
Gundagai ... ..	20	58	.....	58	32	109	3	112	152	18,570
Gunnedah ... ..	13	41	.....	41	19	103	.....	103	167	16,270
Gwydir ... ..	16	80	.....	80	17	79	.....	79	102	7,270
Hartley ... ..	21	278	11	289	30	442	15	457	431	76,110
Hastings and Manning ... ..	44	332	1	333	36	427	.....	427	342	49,060
Hawkesbury ... ..	63	315	.....	315	52	252	.....	252	97	20,980
Hume ... ..	37	149	3	152	26	146	.....	146	135	17,445
Hunter ... ..	10	47	.....	47	11	48	11	59	498	55,300
Upper Hunter ... ..	37	102	.....	102	29	55	.....	55	136	18,010
Illawarra ... ..	38	270	2	272	36	360	1	361	252	31,726
Inverell ... ..	22	113	.....	113	17	55	.....	55	75	12,355
Kiama ... ..	43	299	.....	299	20	227	.....	227	155	29,260
Macleay ... ..	45	250	1	251	28	241	1	242	299	32,526
East Macquarie ... ..	.....	.....	.....	.....	8	39	.....	39	60	6,270
West Macquarie ... ..	.....	.....	.....	.....	2	24	1	25	15	3,000
East Maitland ... ..	19	190	.....	190	23	241	.....	241	122	6,900
West Maitland ... ..	62	442	.....	442	55	455	2	457	299	72,235
Molong ... ..	16	49	.....	49	14	40	.....	40	130	14,932
Monaro ... ..	40	157	.....	157	34	179	5	184	196	12,250
Morpeth ... ..	7	53	1	54	6	76	.....	76	40	3,090
Mudgee ... ..	34	127	4	131	33	167	4	171	231	45,720
Murray ... ..	43	162	.....	162	29	214	5	219	166	57,007
Murrumbidgee ... ..	70	451	.....	451	56	456	29	485	557	129,339
Namoi ... ..	27	100	1	101	23	89	.....	89	99	12,575
Nepean ... ..	69	222	2	224	63	263	5	268	269	21,435
Newcastle ... ..	80	1,351	45	1,396	70	1,340	45	1,385	375	147,991
New England ... ..	65	290	9	299	50	274	12	286	288	49,436
Northumberland ... ..	51	321	.....	321	44	406	.....	406	393	93,617
Orange ... ..	46	243	4	247	33	219	4	223	190	49,025
Parramatta ... ..	44	369	.....	369	33	325	1	326	85	66,515
Patrick's Plains ... ..	14	71	.....	71	23	63	.....	63	82	26,750
Queanbeyan ... ..	23	165	.....	165	20	114	4	118	133	20,650
Richmond ... ..	119	1,788	.....	1,788	95	1,937	12	1,949	1,790	437,832
Shoalhaven ... ..	56	318	9	327	63	301	24	325	286	37,610
Tamworth ... ..	28	154	.....	154	49	257	.....	257	156	10,438
Tenterfield ... ..	45	124	14	138	30	108	.....	108	130	16,220
Tumut ... ..	21	74	.....	74	14	45	.....	45	91	8,128
Wellington ... ..	24	74	.....	74	13	73	.....	73	76	16,200
Wentworth ... ..	56	491	.....	491	30	239	.....	239	138	27,025
Wollombi ... ..	28	199	.....	199	22	137	.....	137	151	6,760
Yass Plains ... ..	13	33	.....	33	22	118	3	121	59	10,645
Young ... ..	36	137	.....	137	40	160	2	162	199	26,385
<b>Total Country</b> ... ..	<b>2,436</b>	<b>18,685</b>	<b>246</b>	<b>18,931</b>	<b>2,231</b>	<b>18,928</b>	<b>493</b>	<b>19,421</b>	<b>16,337</b>	<b>3,089,939</b>
<b>General Total</b> ... ..	<b>3,612</b>	<b>39,325</b>	<b>3,504</b>	<b>42,829</b>	<b>3,694</b>	<b>42,289</b>	<b>3,494</b>	<b>45,783</b>	<b>25,192</b>	<b>5,801,757</b>

NOTE.—Where more than one kind of work is carried on under one establishment, it has frequently been found impossible to separately distinguish the number of hands, power, and value of plant of each work; in such cases the whole have been credited to the principal industry.

## STATISTICS, 1886—MILLS, MANUFACTORIES, &amp;c.

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## MANUFACTORIES, &amp;c.—continued.

No. 4.—MANUFACTORIES of each kind, with the number of HANDS, POWER, and VALUE of PLANT EMPLOYED in the year 1886.

Description of Manufactory or Work.	Number of Works.	Hands employed.			Power of Plant or Machinery.	Value of Plant or Machinery.
		Males.	Females.	Total.		
Agricultural Implements— Agricultural and Dairy Implements ... ..	49	281	.....	281	Horse Power. 87	£ 18,515
Raw Material, the Production of Pastoral Pursuits— Boiling-down and Glue ... ..	39	172	.....	172	116	12,668
Bone-dust and Manure ... ..	9	24	.....	24	75	2,950
Fellmongering ... ..	20	105	.....	105	42	7,140
Tanneries ... ..	97	625	2	627	356	86,585
Wool-pressing ... ..	8	359	.....	359	267	55,080
Wool-washing ... ..	63	1,506	3	1,509	691	124,225
	236	2,791	5	2,996	1,547	288,648
Connected with Food and Drink or the Preparation thereof— Aerated Waters ... ..	243	1,099	8	1,107	478	107,279
Beer, Ale, Stout, &c., &c. ... ..	74	986	1	987	683	268,835
Bread and Biscuits (Steam) ... ..	12	319	79	398	180	40,950
Butter ... ..	26	91	36	127	72	7,737
Cheese ... ..	132	587	225	712	66	14,191
Coffee and Spice ... ..	5	83	1	84	34	1,900
Condiments... ..	4	14	2	16	.....	350
Confectionery (Wholesale) ... ..	28	318	69	387	62	23,435
Fish (Preserved) ... ..	2	11	.....	11	.....	210
Flour ... ..	133	570	1	571	2,650	333,362
Ice and Refrigerating ... ..	9	267	.....	267	94	57,950
Jam ... ..	5	120	52	172	35	5,200
Maizena and Oatmeal ... ..	3	39	6	45	40	18,000
Meat-curing ... ..	6	17	.....	17	15	1,880
Meat-preserving ... ..	5	277	.....	277	240	20,550
Meat (Small Goods) ... ..	29	162	.....	162	77	3,925
Self-raising Flour and Baking Powder ... ..	8	59	10	69	20	2,400
Sugar (Refined) ... ..	2	213	1	214	156	160,000
Sugar (Raw) ... ..	64	2,259	.....	2,259	2,552	500,055
Spirits (Rum) ... ..	6	27	.....	27	.....	5,790
Vinegar ... ..	8	35	.....	35	6	970
Wine ... ..	6	17	2	19	.....	510
	810	7,570	493	8,063	7,460	1,574,579
Clothing and Textile Fabrics— Boots and Shoes ... ..	68	1,856	416	2,272	145	28,570
Clothing ... ..	71	1,144	1,686	2,830	4	4,255
Hats and Caps ... ..	19	116	45	161	.....	2,230
Oil-skin Clothing ... ..	2	11	27	38	.....	.....
Stays and Belts ... ..	2	.....	8	8	.....	60
Shirts ... ..	2	4	26	30	.....	.....
Umbrellas ... ..	3	6	5	11	.....	100
Woollen Cloth ... ..	8	104	78	182	238	40,500
	175	3,241	2,291	5,532	387	75,715
Building Materials— Bricks ... ..	330	2,959	.....	2,959	1,414	315,869
Joinery ... ..	92	1,174	.....	1,174	826	86,175
Lime ... ..	33	262	.....	262	27	11,288
Modelling and Patterns ... ..	12	98	.....	98	.....	4,650
Monumental ... ..	39	214	.....	214	13	4,404
Paint ... ..	2	16	.....	16	28	1,900
Pottery ... ..	27	267	1	268	207	54,607
Saw-mills ... ..	323	3,272	12	3,284	5,177	457,632
Stone-dressing ... ..	2	40	.....	40	42	8,500
Stone-crushing ... ..	12	208	.....	208	175	23,950
Stone Quarries ... ..	48	664	.....	664	98	32,745
	920	9,174	13	9,187	8,007	1,001,720
Metal Works, &c.— Iron and Brass Foundries ... ..	78	1,293	.....	1,293	666	99,110
Galvanized Iron and Plumbing ... ..	36	505	.....	505	50	52,450
Machinery and Engineering ... ..	75	2,197	.....	2,197	1,173	310,950
Railway Workshops and Carriage Factories ... ..	6	1,736	.....	1,736	324	201,500
Smelting Pyrites, Cobalt, &c. ... ..	12	726	.....	726	263	172,500
Tinware ... ..	42	328	6	334	14	12,085
Wire ... ..	11	101	.....	101	41	18,570
Ironworkers (other) ... ..	11	46	.....	46	14	1,520
	271	6,932	6	6,938	2,545	868,685
Ship Building, Repairing, &c.— Dry Docks, Floating Docks, and Slips ... ..	13	232	.....	232	166	73,650
Masts and Blocks ... ..	2	6	.....	6	4	400
Sails, Tarpaulins, &c. ... ..	17	86	1	87	3	530
Ship and Anchor Smiths ... ..	2	19	.....	19	14	3,100
Ship and Boat Building, &c. ... ..	67	733	.....	733	99	51,378
	101	1,076	1	1,077	286	129,058

MANUFACTORIES, &c.—*continued.*No. 4 (*continued*).—MANUFACTORIES, WORKS, &c., in the Colony.

Description of Manufactory or Work.	Number of Works.	Hands employed.			Power of Plant or Machinery.	Value of Plant or Machinery.
		Males.	Females.	Total.		
<b>Furniture, Bedding, &amp;c.—</b>					Horse Power.	£
Bedding ... ..	27	166	45	211	54	8,675
Curled Hair and Flock ... ..	6	20	.....	20	68	2,500
Furniture ... ..	90	890	43	933	113	21,317
Mats and Matting ... ..	2	107	.....	107	3	700
Picture-frames ... ..	14	37	.....	37	.....	690
Window-blinds ... ..	7	69	3	72	12	1,460
	146	1,289	91	1,380	250	35,342
<b>Books, Paper, Printing, and Engraving—</b>						
Account Books, &c. ... ..	22	257	186	443	3	2,850
Engraving, &c. ... ..	8	44	.....	44	.....	1,800
Paper ... ..	1	47	13	60	20	30,000
Paper-bags ... ..	4	17	37	54	1	1,500
Printing ... ..	138	3,022	31	3,053	429	398,430
Printing and other Inks ... ..	2	5	.....	5	8	445
	175	3,392	267	3,659	461	435,025
<b>Goldsmiths' and Philosophical Instrument Makers—</b>						
Electroplating ... ..	3	15	2	17	6	1,300
Jewellery ... ..	21	138	.....	138	.....	2,530
Mint ... ..	1	24	.....	24	.....	.....
Philosophical Instruments ... ..	7	26	4	30	1	6,350
	32	203	6	209	7	10,180
<b>Carriage Works—</b>						
Coaches and Waggons ... ..	215	1,879	3	1,900	167	78,208
Wheels, Wood-bending, &c. ... ..	2	17	.....	17	5	815
	217	1,914	3	1,917	172	79,023
<b>Chemical Works—</b>						
Chemicals ... ..	5	56	2	58	57	16,870
Patent Medicines, &c. ... ..	3	6	3	9	10	1,400
	8	62	5	67	67	18,270
<b>Glass—</b>						
Glass ... ..	2	52	.....	52	1	7,200
Glass Silvering and Staining ... ..	3	36	.....	36	16	3,700
	5	88	.....	88	17	10,900
<b>Waterworks—</b>						
Waterworks and Irrigation ... ..	14	66	.....	66	1,138	148,700
<b>Saddlery and Harness—</b>						
Saddlery and Harness ... ..	95	486	5	491	15	9,042
Whips, Saddle-trees, &c. ... ..	5	14	.....	14	.....	.....
	100	500	5	505	15	9,042
<b>Paving and Asphalting—</b>						
Asphalt, Wood, and Tar Pavement ... ..	13	73	.....	73	50	31,855
<b>Miscellaneous—</b>						
Bark-chopping ... ..	7	17	.....	17	22	850
Baskets ... ..	8	65	2	67	.....	160
Brooms, Millett ... ..	3	22	.....	22	.....	290
Brushes ... ..	4	24	.....	24	.....	340
Chaff and Crushed Corn ... ..	166	546	.....	546	611	32,884
Coke ... ..	3	47	.....	47	1	3,000
Cooperage ... ..	14	45	.....	45	6	1,320
Dyeing ... ..	10	29	13	42	6	1,680
Electric Light ... ..	5	13	.....	13	90	14,200
Gas ... ..	28	1,084	.....	1,084	479	494,313
Kerosene Oil ... ..	4	375	.....	375	327	291,500
Ladders and Barrows ... ..	5	21	.....	21	.....	160
Laundries (Steam)... ..	6	18	127	145	36	8,530
Packing Cases ... ..	6	37	.....	37	38	1,530
Perambulators ... ..	3	12	3	17	.....	450
Ropes ... ..	8	110	.....	110	111	31,795
Saw-mills (Firewood) ... ..	63	274	.....	274	389	20,620
Scales ... ..	3	8	.....	8	.....	240
Soap, Candles, and Soap-powder ... ..	46	308	13	321	331	89,745
Soda Crystals ... ..	3	10	.....	10	3	700
Tobacco, Cigars, &c. ... ..	13	559	144	703	120	64,500
Others not included above ... ..	16	13	6	19	126	7,693
	424	3,637	308	3,945	2,696	1,066,500
<b>General Total ... ..</b>	<b>3,694</b>	<b>42,289</b>	<b>3,494</b>	<b>45,783</b>	<b>25,192</b>	<b>5,801,757</b>

NOTE.—Where more than one kind of work is carried on under one establishment, it has frequently been found impossible to separately distinguish the number of hands, power and value of plant of each work; in such cases the whole have been credited to the principal industry.

JOINERY.—Only establishments using steam were included in returns prior to 1886. METAL-WORKERS.—Horse-shoers have been omitted in the return for 1886. Government railway shops have been set down as one establishment, and included in South Sydney. FURNITURE.—Only works using steam were returned prior to 1886. PRINTING.—All establishments are included in 1886. SADDLERS.—Manufacturing establishments only returned for 1886. WATERWORKS.—Sydney waterworks not included.

STATISTICS, 1886—MILLS, MANUFACTORIES, &c.

MANUFACTORIES, &c.—continued.

No. 5.—NUMBER of some of the PRINCIPAL WORKS with the HANDS EMPLOYED for each of the ten years 1877—1886.

Name of Work or Industry.	1877.		1878.		1879.		1880.		1881.		1882.		1883.		1884.		1885.		1886.	
	Works.	Hands.	Works.	Hands.	Works.	Hands.	Works.	Hands.	Works.	Hands.	Works.	Hands.	Works.	Hands.	Works.	Hands.	Works.	Hands.	Works.	Hands.
Agricultural and Dairy Implements.	49	263	43	372	47	221	55	254	65	285	52	246	69	370	73	268	83	409	49	281
Raw Materials, the production of Pastoral Pursuits																				
Boiling-down ...	40	103	38	65	37	95	51	167	48	299	47	185	48	198	49	245	38	281	39	172
Fellmongering ...	55	298	43	255	48	294	51	276	55	339	38	323	31	192	37	204	39	301	20	105
Tanneries ...	110	760	105	708	98	708	107	755	121	831	118	1003	110	854	115	796	111	788	97	627
Wool-washing ...	71	986	72	599	60	695	60	708	60	607	70	964	62	839	68	891	66	829	63	1509
Connected with Food and Drink or the preparation thereof—																				
Aerated Waters ...	137	681	146	769	155	795	143	724	174	909	176	890	175	953	206	1043	217	1159	243	1107
Bread and Biscuits ...	6	67	6	85	6	127	6	119	10	186	7	182	8	263	6	290	7	325	12	398
Breweries ...	38	456	43	538	45	561	45	595	50	637	56	699	59	747	60	788	70	805	74	987
Confectionery ...	49	403	49	454	56	477	61	349	58	305	58	364	57	415	56	414	56	416	28	387
Distilleries ...	2	16	2	17	2	13	2	7	1	10	20	31	10	24	8	16	7	18	6	27
Flour ...	163	623	165	664	161	546	150	566	159	695	166	603	154	685	161	662	159	662	133	571
Ice and Refrigerating ...	4	21	4	27	6	39	3	49	4	59	3	47	5	65	9	211	9	238	9	267
Jam ...	6	34	11	46	12	51	11	114	10	27	2	42	3	66	3	98	5	137	5	172
Meat, preserved and salted	19	318	19	316	19	234	17	193	14	90	14	321	13	303	14	432	13	369	11	294
Sugar, Raw and Refined	96	1214	77	1211	74	1613	76	1205	80	1887	91	2418	93	1499	103	2362	98	2858	66	2473
Clothing and Textile Fabrics																				
Boots ...	104	1915	71	1883	71	2123	75	2379	71	2226	62	2036	61	2125	68	2289	55	2105	68	2272
Clothing ...	42	2710	53	2983	50	2125	48	1580	53	2072	51	686	63	1926	75	2265	85	3072	71	2830
Hats ...	13	127	12	69	14	107	13	85	13	71	15	76	14	95	16	124	18	180	19	161
Shirts ...	13	349	12	309	10	317	9	191	7	171	4	97	3	69	3	50	4	100	2	30
Woollen Cloth ...	8	207	9	198	9	276	8	214	7	335	8	385	9	372	9	312	9	323	8	182
Building Materials—																				
Bricks ...	336	1715	383	1946	375	1812	390	2727	412	2476	478	3106	448	3002	431	3078	449	3617	330	2959
Joinery (Steam) ...	11	174	12	158	12	141	27	322	30	552	39	577	49	758	48	770	53	858	92	1174
Lime ...	100	264	123	290	87	217	98	270	98	333	91	279	81	248	75	264	77	264	33	262
Modelling ...	2	12	4	24	3	19	4	26	5	35	6	59	7	38	11	42	11	51	12	98
Monumental ...	5	27	6	36	6	36	8	47	9	78	9	83	9	70	21	133	23	164	39	214
Pottery ...	37	197	40	290	38	281	33	228	34	262	38	288	40	291	39	287	39	315	27	268
Saw-mills ...	215	1694	228	2077	232	2072	243	2458	280	2382	334	3013	370	3318	376	3477	415	3783	323	3284
Metal Works and Machinery																				
Iron, Brass, Copper, & Tin	109	1603	116	1227	125	1442	136	1757	140	1765	131	1736	140	1785	160	1768	174	1838	167	2178
Machinery & Engineering	44	588	48	802	41	606	48	933	58	1201	72	1404	70	1440	78	1729	86	1875	75	2197
Railway Workshops and Carriage Factories.	11	795	8	843	7	823	7	976	6	1001	8	1482	7	1594	8	2141	9	2171	6	1736
Smelting ...	22	653	25	488	21	552	16	1181	14	1517	21	1444	12	1729	14	1013	25	783	12	726
Wire ...	3	14	3	18	2	15	4	21	2	24	2	27	3	27	4	31	9	142	11	101
Ship Building and Repairing &c.—																				
Docks and Slips ...	9	186	9	194	10	132	10	109	11	148	10	154	14	194	17	352	15	284	13	232
Sail-making, &c. ...	10	35	11	50	11	55	11	55	11	69	12	60	19	51	14	58	16	61	17	87
Ship and Boat Building	106	593	100	510	93	531	81	416	67	466	70	522	68	548	74	1004	74	890	67	733
Furniture, Bedding, &c.—																				
Bedding ...	20	109	29	141	21	125	26	119	25	138	26	174	28	203	36	265	36	240	27	211
Furniture ...	3	26	6	89	6	92	5	76	7	72	10	115	10	175	8	156	11	220	90	933
Picture frames ...	9	28	12	25	13	42	14	30	12	28	13	40	16	51	24	75	21	51	14	37
Window blinds ...	4	29	5	37	6	45	7	44	7	62	7	57	8	62	8	70	10	82	7	72
Books, Paper, Printing, &c.—																				
Account Books, Binding, &c.	13	177	12	190	13	195	13	161	16	312	13	286	15	328	21	421	22	478	22	443
Paper ...	2	70	2	73	2	56	2	73	2	75	2	88	2	120	1	100	1	60	1	60
Printing ...	28	914	29	1219	36	1443	34	1449	45	1449	54	1600	65	1761	72	2142	81	2531	138	3053
Miscellaneous—																				
Brushes ...	2	15	3	36	3	44	2	43	2	34	2	36	3	36	6	48	6	53	4	24
Coaches and Waggons ...	140	1049	135	1164	151	1224	166	1450	173	1578	182	1539	203	1848	229	1936	245	2144	215	1900
Dyeing ...	5	12	6	17	5	13	6	35	10	51	9	41	10	45	11	47	10	38	10	42
Gas ...	11	207	11	275	10	325	12	342	15	541	17	408	19	526	20	589	27	1008	28	1084
Kerosene Oil ...	2	89	2	81	2	56	2	61	2	44	2	23	2	60	2	54	2	195	4	375
Packing Cases ...	5	45	3	31	6	40	6	110	6	40	7	37	7	51	8	44	9	54	6	37
Rope ...	6	120	5	82	4	74	4	84	6	85	6	34	6	100	7	128	9	148	8	110
Saddle and Harness ...	171	685	207	906	185	687	218	896	229	988	231	997	250	1054	266	1068	253	956	100	505
Soap, Candle, and Soap-powder.	36	173	34	180	34	169	38	203	38	232	40	263	38	220	34	204	40	223	46	321
Stone-crushing ...	1	3	2	11	2	11	3	27	16	63	40	214	36	402	65	668	61	550	12	208
Tobacco ...	26	550	24	492	20	425	17	514	18	487	22	676	22	723	21	688	16	668	13	703

NOTE.—Where more than one kind of work is carried on under one establishment, it has frequently been found impossible to separately distinguish the number of hands, power, and value of plant of each work; in such cases the whole have been credited to the principal industry.

JOINERY.—Only establishments using steam were included in returns prior to 1886. METAL WORKERS.—Horse-shoers have been omitted in the return for 1886. Government Railway Shops have been set down as one establishment, and included in South Sydney. FURNITURE.—Only works using steam were returned prior to 1886. PRINTING.—All establishments are included in 1886. SADDLERS.—Manufacturing establishments only returned for 1886. WATERWORKS.—Sydney Waterworks not included. For totals see Table No. 7.

## MANUFACTORIES, &amp;c.—continued.

No. 6.—NUMBER of FEMALES EMPLOYED in Principal Industries for the period 1877-86.

Name of Establishment.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Account Book, &c., Manufactories	71	64	68	64	84	83	131	144	177	186
Bakeries (Steam) .....	.....	.....	5	11	14	26	33	53	62	79
Bedding Manufactories .....	23	45	22	31	35	43	60	52	60	45
Boot " .....	305	299	373	341	377	341	377	418	433	409
Clothing " .....	2,081	2,138	1,487	830	1,260	994	1,071	1,112	1,794	1,686
Confectionery " .....	64	79	74	33	44	34	47	45	60	69
Gingerbeer, Aerated Waters, &c.	10	5	11	6	14	14	189	12	23	7
Hat Manufactories .....	70	24	30	26	12	23	24	45	55	45
Jam " .....	4	10	13	10	5	8	12	23	23	52
Printing Works .....	29	30	54	19	9	..... <sup>a</sup>	24	26	76	31
Paper-box, &c. ....	4	6	7	10	22	4	2	19	24	37
Shirt Manufactories.....	344	309	314	175	166	96	.....	50	100	26
Soap-powder " .....	12	23	14	22	23	39	30	28	26	11
Steam-washing Works.....	22	3	4	21	41	48	79	85	84	127
Tobacco Manufactories .....	62	62	41	56	50	86	90	155	257	144
Woollen Cloth " .....	51	53	119	100	157	119	112	137	189	78
Other Industries, not enumerated above .....	65	89	63	73	100	155	115	82	61	462
	3,217	3,239	2,699	1,828	2,413	2,113	2,396	2,486	3,504	3,494

<sup>a</sup> No return.

No. 7.—NUMBER of WORKS and HANDS EMPLOYED in each year 1877-86.

Year.	Metropolitan Electorates.				Country Electorates.				General Total.			
	No. of Manufac- tories, &c.	No. of Hands employed.			No. of Manufac- tories, &c.	No. of Hands employed.			No. of Manufac- tories, &c.	No. of Hands employed.		
		Male.	Female.	Total.		Male.	Female.	Total.		Male.	Female.	Total.
1877	810	10,488	3,070	14,558	1,792	11,227	147	11,374	2,602	21,715	3,217	24,932
1878	867	12,184	3,052	15,236	1,856	10,568	187	10,755	2,723	22,752	3,239	28,991
1879	905	12,523	2,481	15,004	1,756	10,492	218	10,710	2,661	23,015	2,699	25,714
1880	971	15,043	1,643	16,686	1,816	11,463	185	11,648	2,787	26,506	1,828	28,334
1881	995	15,671	2,222	18,893	1,985	13,227	191	13,418	2,980	28,898	2,413	31,311
1882	1,023	17,062	1,903	18,965	2,180	15,012	210	15,222	3,203	32,074	2,113	34,187
1883	1,049	17,872	1,971	19,843	2,217	14,974	425	15,399	3,266	32,846	2,396	35,242
1884	1,137	19,969	2,257	22,226	2,361	17,144	232	17,376	3,498	37,113	2,489	39,602
1885	1,176	20,640	3,258	23,898	2,436	18,685	246	18,931	3,612	39,325	3,504	42,829
1886	1,463	23,361	3,001	26,362	2,231	18,928	493	19,421	3,694	42,289	3,494	45,783

## BOILING-DOWN ESTABLISHMENTS.

No. 8.—NUMBER OF HANDS EMPLOYED, and QUANTITIES of TALLOW and LARD PRODUCED during each of the years 1877-86.

Year.	Number of Boiling-down Establishments.	Hands.	Estimated Quantity of New South Wales Tallow exported.	Estimated Quantity of New South Wales Tallow locally consumed.	Estimated Quantity of Tallow produced.	Estimated Quantity of Lard produced.	Value of Plant.
1877	36	89	cwt. 73,435	cwt. 88,846	cwt. 162,281	cwt. 31,808	£
1878	34	50	36,646	78,205	114,851	45,136	.....
1879	33	83	110,381	48,305	158,686	76,272	.....
1880	47	155	192,572	75,862	268,434	78,848	.....
1881	47	282	148,017	73,504	221,521	95,200	.....
1882	39	148	100,613	92,035	192,648	39,312	.....
1883	42	169	156,568	95,740	252,308	22,848	.....
1884	41	220	98,773	100,816	199,589	23,184	.....
1885	36	272	128,810	96,774	225,584	19,418	.....
1886	40	172	99,451	110,850	210,301	7,114	*13,158

\* Information not obtained previous to this year.

## STATISTICS, 1886—MILLS, MANUFACTORIES, &amp;c.

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## BOOT FACTORIES.

No. 9.—HANDS EMPLOYED and QUANTITIES MANUFACTURED during the years 1877–86.

Year.	Number of Establishments.	Hands Employed.			Boots made.	Value of Plant.
		Male.	Female.	Total.		
1877	104	1,610	305	1,915	Pairs.	£
1878	71	1,584	299	1,883	.....	.....
1879	71	1,750	373	2,123	.....	.....
1880	75	2,038	341	2,379	.....	.....
1881	71	1,849	377	2,226	.....	.....
1882	62	1,695	341	2,036	.....	.....
1883	61	1,748	377	2,125	.....	.....
1884	68	1,871	418	2,289	.....	.....
1885	55	1,672	433	2,105	.....	.....
1886	68	1,856	416	2,272	*1,881,210	*28,570

\* Information not obtained prior to 1886.

## BRICKYARDS.

No. 10.—HANDS EMPLOYED, NUMBER OF BRICKS MANUFACTURED, and POWER and VALUE of PLANT, during the years 1877–1886.

Year.	Number of Establishments.	Number of Hands.	Number of Bricks made.	Horse Power of Plant.	Value of Plant.
1877	...	1,715	No.	.....	£
1878	336	1,946	.....	.....	.....
1879	383	1,812	.....	.....	.....
1880	375	2,727	.....	.....	.....
1881	390	2,476	.....	.....	.....
1882	412	3,106	.....	.....	.....
1883	478	3,002	.....	.....	.....
1884	448	3,078	.....	.....	.....
1885	431	3,617	.....	.....	.....
1886	449	2,959	†243,831,217	†1,414	†315,869
1886	330	.....	.....	.....	.....

\* Not ascertained.

† Particulars not ascertained previous to this year.

## BREWERIES.

No. 11.—HANDS EMPLOYED, and QUANTITIES MANUFACTURED, during the years of the period 1881–1886.

Year.	Number of Establishments.	Hands Employed.	Quantity Manufactured, Ale, Beer, &c.	Value of Plant.	Horse Power of Plant.
1881	50	637	* Gallons.	£	.....
1882	56	699	9,642,800	.....	.....
1883	59	747	10,800,000	.....	.....
1884	60	788	12,175,300	.....	.....
1885	70	805	13,068,920	.....	.....
1886	74	987	14,716,000	.....	.....
			13,178,912	†268,835	†683

\* Quantities are approximate and have been computed by the Chief Inspector of Distilleries.

† Particulars not ascertained previous to this year.

## DISTILLERIES.

No. 12.—QUANTITY of COLONIAL DISTILLED SPIRIT made with HANDS EMPLOYED during each year of the period 1877–86.

Year.	Number of Distilleries.	Hands Employed.	Material used—Molasses.	Spirit Distilled (Rum).	Value of Plant.
1877	2	16	cwt.	Proof gallons.	.....
1878	2	17	26,531	150,737	.....
1879	2	13	20,576	124,156	.....
1880	2	13	32,592	128,285	.....
1881	2	7	20,882	110,063	.....
1882	1	10	14,399	74,377	.....
1883	20	31	25,035	118,066	.....
1884	10	24	31,596	152,766	.....
1885	8	16	34,523	160,403	.....
1886	7	28	39,380	193,343	.....
1886	6	27	41,098	202,420	*5,790

\* Information not obtained previous to this year.

## FLOUR MILLS.

No. 13.—NUMBER of MILLS for GRINDING and DRESSING GRAIN, with HANDS EMPLOYED during the years 1876-86.

Year.	Steam.		Water.		Wind.		Horse.		Total.		Number of pairs of Stones in operation.	Number of Hands Employed.			Quantity of Flour made.	Value of Machinery Plant, &c. (Approximate.)
	No.	Horse-power.	No.	Horse-power.	No.	Horse-power.	No.	Horse-power.	No.	Horse-power.		Males.	Females.	Total.		
1876	150	2,481	8	77	2	20	4	12	164	2,590	355	.....	...	.....	Tons.	£
1877	151	2,529	8	80	1	10	3	4	163	2,623	382	623	...	623	.....	.....
1878	152	2,577	10	88	1	10	2	2	165	2,677	395	657	7	664	.....	.....
1879	147	2,580	9	84	1	10	4	10	161	2,684	371	544	2	546	.....	.....
1880	140	2,551	7	88	1	10	2	10	150	2,659	347	566	...	566	.....	.....
1881	148	2,806	9	95	1	10	1	2	159	2,913	472	685	10	695	.....	.....
1882	156	2,929	7	72	1	10	2	14	166	3,025	403	604	9	703	.....	.....
1883	145	2,759	9	88	...	...	...	...	154	2,847	390	685	...	685	.....	.....
1884	153	3,109	8	98	...	...	...	...	161	3,207	404	659	3	662	.....	.....
1885	152	3,026	7	66	...	...	...	...	159	3,092	370	662	...	662	.....	.....
1886	†128	2,602	5	48	...	...	...	...	133	2,650	300	570	1	571	*113,302	*333,362

\* Information not obtained prior to 1886.

† Eleven not working.

## GASWORKS.

No. 14.—HANDS, &c., EMPLOYED, QUANTITY of GAS MANUFACTURED, 1877-86.

Year.	Number of Gasworks.	Hands Employed.	Quantity of Gas made.	Value of Plant.	Power of Plant.
1877	...	11	1,000 cubic feet.	£	Horse-power.
1878	...	11	.....	.....	.....
1879	...	10	.....	.....	.....
1880	...	12	.....	.....	.....
1881	...	15	.....	.....	.....
1882	...	17	.....	.....	.....
1883	...	19	.....	.....	.....
1884	...	20	.....	.....	.....
1885	...	27	.....	.....	.....
1886	...	28	*1,051,618	*494,313	*479

\* Information not obtained prior to 1886.

## SAW-MILLS.

No. 15.—HANDS EMPLOYED, POWER and VALUE of PLANT, and QUANTITY of TIMBER SAWN, &c., during each of the years, 1877-86.

Year.	Number of Establishments.	Hands Employed.			Power of Plant.	Value of Plant.	Quantity of Timber Sawn, &c.
		Male.	Female.	Total.			
1877	215	1,693	1	1,694	Horse-power.	£	Sq. ft.—1 in. thick.
1878	228	2,077	.....	2,077	.....	.....	.....
1879	232	2,072	.....	2,072	.....	.....	.....
1880	243	2,438	20	2,458	.....	.....	.....
1881	280	2,379	3	2,382	.....	.....	.....
1882	334	3,013	.....	3,013	.....	.....	.....
1883	370	3,318	.....	3,318	.....	.....	.....
1884	376	3,477	.....	3,477	.....	.....	.....
1885	415	3,775	8	3,783	.....	.....	.....
1886	323	3,272	12	3,284	*5,177	*457,362	*110,000,000

\* Particulars not ascertained previous to 1886.

STATISTICS, 1886—MILLS, MANUFACTORIES, &c.

SOAP AND CANDLE MANUFACTORIES.

No. 16.—HANDS EMPLOYED and QUANTITIES MANUFACTURED during each of the years 1876-86.

Year.	Number of Establishments.	Hands Employed.	Quantities Manufactured.		Value of Plant.	Horse-power Plant.
			Soap.	Candles.		
			cwt.	lb.	£	
1876	33	*	80,895	1,546,832	.....	.....
1877	36	173	92,958	4,133,808	.....	.....
1878	34	180	77,655	3,951,696	.....	.....
1879	34	169	64,524	1,198,736	.....	.....
1880	38	203	114,118	923,776	.....	.....
1881	38	232	106,962	1,165,808	.....	.....
1882	40	263	112,513	3,066,224	.....	.....
1883	38	220	121,794	2,807,728	.....	.....
1884	34	204	131,244	2,759,680	.....	.....
1885	40	223	138,849	1,683,360	.....	.....
1886	48	337	155,430	2,199,282	† 89,745	† 331

\* Not ascertained. † Particulars not ascertained previous to 1886.

SUGAR MILLS.

No. 17.—HANDS, &c., EMPLOYED, QUANTITY OF SUGAR, &c., MANUFACTURED during the years 1876-86.

Year.	Number of Mills.		Horse-power.		Quantity of Sugar Manufactured.	Quantity of Molasses Manufactured.	Hands Employed.	Approximate Value of Plant.
	Worked by Steam.	Worked by Cattle.	Steam.	Cattle.				
					cwt.	gallons.		
1876	19	31	302	136	93,960	273,480	.....	.....
1877	24	26	503	108	150,744	345,543	† 1,065	.....
1878	36	23	627	119	163,203	532,825	1,158	.....
1879	44	21	637	185	153,833	440,506	1,432	.....
1880	50	15	1,601	76	146,003	269,092	2,183	.....
1881	59	17	1,432	63	159,048	354,402	1,665	.....
1882	70	16	978	49	270,000	560,000	1,039	.....
1883	79	14	2,051	44	280,000	580,000	1,285	.....
1884	86	12	2,855	50	230,000	450,000	2,190	.....
1885	83	19	2,598	32	369,280	635,000	2,634	.....
1886	57	7	2,531	21	275,000	507,000	2,259	* 500,055

\* Information not obtained prior to 1886. † Includes hands employed for only portion of the year.

SUGAR REFINERIES.

No. 18.—NUMBER OF WORKS, HANDS EMPLOYED, and QUANTITIES PRODUCED for the year 1877-86.

Year.	Number of Establishments.	Number of Hands Employed.	Quantity of Sugar Melted.	Value of Plant.	Horse-power of Plant.
1877	2	165	259,650	.....	.....
1878	2	153	324,480	.....	.....
1879	3	181	388,480	.....	.....
1880	2	166	414,400	.....	.....
1881	3	222	514,400	.....	.....
1882	2	235	470,000	.....	.....
1883	2	214	468,000	.....	.....
1884	3	172	370,000	.....	.....
1885	4	224	384,000	.....	.....
1886	2	214	510,000	* 160,000	* 156

\* Information not obtained previous to 1886.

TOBACCO FACTORIES.

No. 19.—HANDS EMPLOYED, VALUE of MATERIAL USED and MANUFACTURED, &c., for the years 1885 and 1886.

Year.	No. of Tobacco Factories.	No. of Cigar and Cigarette Factories.	Hands Employed.		Value of Plant.	Horse-power of Machinery.	Tobacco Leaf Used.		Tobacco, Cigars, and Cigarettes, Manufactured.		
			Male.	Female.			Colonial Leaf.	Imported Leaf.	Article.	Quantity.	Value.
					£		lb.	lb.		lb.	£
1885	16	9	411	257	62,980	120	1,825,854	672,485	Tobacco	2,133,168	319,975
									Cigars	9,402	5,641
									Cigarettes	6,901	3,105
1886	17	9	559	144	64,550	120	1,853,407	561,514	Tobacco	2,044,240	306,636
									Cigars	7,125	4,275
									Cigarettes	5,340	2,403

NOTE.—The number of works shown in this table exceeds that shown in previous tables. All establishments are included above, irrespective of the number of hands and the quantity manufactured.



## WOOLLEN MILLS.

No. 20.—HANDS EMPLOYED and QUANTITY of WOOLLEN CLOTH MANUFACTURED during each year 1877-86.

Year.	Number of Establishments.	Hands Employed.			Quantity of Woollen Cloth Manufactured.	Value of Plant.	Horse-power of Plant.
		Male.	Female.	Total.			
1877	8	156	51	207	421,452	£	.....
1878	9	145	53	198	480,037	.....	.....
1879	9	157	119	276	415,400	.....	.....
1880	8	114	100	214	353,100	.....	.....
1881	5	178	157	335	358,000	.....	.....
1882	8	266	119	385	319,225	.....	.....
1883	9	260	112	372	352,000	.....	.....
1884	7	175	137	312	305,000	.....	.....
1885	6	134	189	323	337,750	.....	.....
1886	*8	104	78	182	324,788	†40,500	†238

\* Two mills not worked.

† Information not obtained prior to 1886.





## REVENUE.

No. 1.—REVENUE and RECEIPTS on account of the CONSOLIDATED REVENUE FUND for the year ended 31st December, 1886.

HEAD OF REVENUE OR RECEIPT	Year ended 31st December, 1886	HEAD OF REVENUE OR RECEIPT	Year ended 31st December, 1886.
REVENUE PROPER		Receipts for Services Rendered.	
Taxation.		£ s d	
CUSTOMS —		RAILWAY RECEIPTS	2,389,138 5 5
Spirits	699,106 12 3	POST OFFICE —	
Wine	48,948 19 8	Postage	330,301 12 3
Ale and Beer	69,207 11 1	Telegraph Receipts	140,954 8 7
Tobacco and Cigars	164,957 10 4	Commission on Money Orders	14,961 16 0
Tea	106,434 8 10	Total, Post Office	£ 486,217 16 10
Coffee and Chicory	13,171 4 8		
Sugar and Molasses	125,843 2 11	MINT RECEIPTS	7,897 1 7
Opium	22,091 13 5	FEES FOR ESCORT AND CONVEYANCE OF GOLD	880 7 4
Rice	17,070 19 2	PILOTAGE, HARBOUR AND LIGHT RATES, AND FEES	54,729 19 5
Dried Fruits	51,149 2 5	REGISTRATION OF BRANDS	833 13 5
Malt	14,661 14 5	PUBLIC SCHOOL FEES	63,164 10 7
Hops	15,715 17 4	FEES OF OFFICE —	
Ad valorem duties	274,084 3 7	Certificates of Naturalization	145 7 6
Specific duties	433,594 16 5	Registrar General	32,665 17 0
Bonded Warehouses, 20 Vic No 21	11,803 15 4	Prothonotary of Supreme Court	6,702 6 2
Rent of Goods in Queen's Warehouses, &c	129 11 2	Master in Equity	1,727 16 4
Total, Customs	£ 2,068,571 3 0	Curator of Intestate Estates	1,440 17 1
		Insolvent Court	3,941 13 5
EXCISE —		Sheriff	1,927 7 3
Duty on Spirits distilled in the Colony	5,813 12 3	District Courts	8,765 16 1
Duty on Tobacco, Cigars, and Cigarettes	102,978 5 10	Courts of Petty Sessions	10,860 12 5
Tobacco Factory License Fees	1,041 5 0	Shipping Masters	3,460 0 8
Total, Excise	£ 109,833 3 1	Other Fees	14,735 18 9
		Total, Fees	£ 86,373 12 8
STAMPS .. .. .	307,992 12 0	Total, Receipts for Services Rendered	£ 3,089,235 7 3
LICENCES —			
Wholesale Spirit Dealers	9,081 0 0	General Miscellaneous Receipts.	
Auctioneers	4,784 19 7	RENTS—Exclusive of Land —	
Retail Fermented and Spirituous Liquors	95,256 0 0	Tolls and Ferries	6,792 9 11
Billiard and Bagatelle Licenses	8,543 0 0	Wharfs	35,191 4 0
Distillers and Rectifiers	88 14 0	Government Buildings and Premises	8,521 2 10
Hawkers and Peddlers	2,576 0 3	Total, Rents exclusive of Land	£ 50,504 16 9
Pawnbrokers	661 7 6		
Colonial Wine, Cider, and Perry Licenses	1,205 0 0	FINES AND FORFEITURES —	
Licenses under the Gunpowder Act of 1876	679 10 0	Sheriff	395 13 1
Licenses to sell Tobacco, Cigars, and Cigarettes	2,008 15 0	Courts of Petty Sessions	18,242 12 5
All other Licenses	563 17 8	Unauthorized occupation of Crown Lands	779 19 9
Total, Licenses	£ 125,488 4 2	Crown's share of Seizures, &c	147 18 2
		Confiscated and Unclaimed Property	605 5 11
Total, Taxation	£ 2,611,835 2 3	Other Fines	
		Total, Fines and Forfeitures	£ 20,171 9 4
SALES —		UNCLASSIFIED RECEIPTS —	
Auction Sales	111,082 17 0	Amount transferred from the Public Instruction Endow-	
Improved Purchases, &c	260,525 17 3	ment Account, under the 6th clause of the Act 44	
Deposits on Conditional Purchases	112,892 9 9	Vic No 19, in aid of the Public Schools of the	
Instalments on Conditional Purchases (inclusive of		Colony	11,624 9 7
Interest)	514,161 11 0	Sale of Government Property	5,861 14 9
Balances on Conditional Purchases	74,504 4 10	Support of Patents in Lunatic Asylums	9,121 17 0
Miscellaneous Purchases	3,292 17 8	Collections by Government Printer	5,457 5 2
Total, Land Sales	£ 1,076,459 17 6	Store Rent and Carriage of Gunpowder	11,514 14 6
		Work performed by Prisoners in Gaol	4,721 4 6
INTEREST ON LAND CONDITIONALLY PURCHASED	129 978 4 5	Fees on presenting Private Bills to Parliament and on	
PASTORAL OCCUPATION —		Letters of Registration	5,710 10 1
Pastoral Leases (Runs), 15 years	131,893 1 9	Interest on Bank Deposits	17,073 14 3
Conditional Leases	59 558 2 5	Glebe Island Abattoir Receipts	8,097 6 7
Annual Leases	17,914 9 4	Fitzroy Dry Dock Receipts	1,856 2 5
Occupation Licenses	153,493 9 5	Assessment on Sugar Refinery	1,500 0 0
Homestead Leases, 15 years	10,659 4 4	Receipts under Fisheries Act	7,015 17 2
Quit Rents	1,401 9 8	Chinese Restriction Act	12,850 0 0
Total, Pastoral Occupation	£ 374,919 16 11	Other Receipts	76,254 9 4
		Total, Unclassified Receipts	£ 178,599 5 4
MINING OCCUPATION —		Total, General Miscellaneous Receipts	£ 249,275 11 5
Mineral Leases	19,049 7 7		
Mineral Licenses	1,588 0 0	TOTAL, REVENUE PROPER	£ 7,594,300 14 6
Leases of Auriferous Lands	4,510 0 10		
Miners' Rights	4,642 5 0		
Business Licenses	1,452 15 0		
Total, Mining Occupation	£ 31,242 8 5		
MISCELLANEOUS LAND RECEIPTS —			
Licenses to cut Timber, &c	8,649 16 8		
Fees on Transfer of Runs	619 0 0		
Fees on Preparation and Enrolment of Title deeds	4,298 10 0		
All other Receipts	17,786 19 8		
Total, Miscellaneous Land Receipts	£ 31,354 6 4		
Total, Land Revenue	£ 1,643,954 13 7		

## REVENUE—continued.

No. 2.—RECEIPTS on account of the CONSOLIDATED REVENUE FUND during each year from 1871 to 1886.

Year.	Taxation.				Land Revenue.		Services.			Miscellaneous.			Total Revenue.
	* Customs.	* Excise.	Stamps.	Licenses.	Sales.	Occupation.	Railways.	Post and Telegraph.	Miscellaneous Services.	Rents (land not included).	Fines and Forfeitures.	Unclassified.	
	£	£	£	£	£	£	£	£	£	£	£	£	£
1871 ... ..	881,247	28,546	77,500	75,911	262,531	235,447	361,426	118,719	81,534	29,258	6,000	80,781	2,238,900
1872 ... ..	1,002,443	23,849	94,298	79,613	436,483	403,970	421,888	148,953	88,929	35,062	5,751	70,772	2,812,011
1873 ... ..	1,150,867	36,593	94,629	82,717	845,410	292,504	483,575	158,497	86,803	31,192	7,182	60,945	3,330,913
1874 ... ..	969,062	44,684	100,871	85,872	1,163,572	262,594	532,852	149,709	88,334	33,513	7,437	75,814	3,514,314
1875 ... ..	988,628	39,840	4,725	88,809	1,760,570	260,059	598,664	164,008	95,825	33,790	8,173	83,212	4,126,303
1876 ... ..	1,021,240	45,835	455	93,876	2,513,404	259,599	678,392	190,882	96,053	21,070	8,635	98,220	5,037,661
1877 ... ..	1,082,191	48,035	1,658	101,248	2,967,857	268,420	799,947	224,449	95,136	24,069	8,988	129,880	5,751,878
1878 ... ..	1,155,636	44,220	10	109,852	2,076,004	249,700	860,285	226,405	96,892	6,097	9,940	156,878	4,991,919
1879 ... ..	1,114,951	44,070	1,840	111,860	1,386,687	245,337	976,898	259,170	92,234	10,869	10,092	227,657	4,481,665
1880 ... ..	1,188,930	43,864	72,303	112,197	1,382,026	264,409	1,189,564	286,134	118,384	37,337	12,371	204,471	4,911,990
1881 ... ..	1,393,676	68,705	192,503	115,965	2,483,338	337,650	1,459,684	330,414	154,978	53,785	14,416	109,213	6,714,327
1882 ... ..	1,480,046	78,297	228,138	116,931	2,455,041	459,353	1,828,094	358,525	176,466	55,476	17,072	165,097	7,418,536
1883 ... ..	1,546,857	12,193	214,975	117,683	1,269,480	386,600	2,081,128	403,794	181,809	45,782	19,798	190,242	6,470,341
1884 ... ..	1,726,811	79,967	226,048	120,028	1,363,483	389,862	2,302,013	442,964	197,666	53,185	21,344	194,221	7,117,592
1885 ... ..	1,759,955	116,497	253,504	122,695	1,314,552	562,096	2,492,690	472,564	203,209	51,258	22,007	216,341	7,587,368
1886 ... ..	2,068,571	109,833	307,993	125,438	1,206,438	437,516	2,389,138	486,218	213,879	50,505	20,171	178,599	7,594,301

\* For details of Customs and Excise duties see Part III, No. 51.

REVENUE—continued.

No. 3.—REVENUE derived annually from LAND SALES and OCCUPATION of PUBLIC LANDS, from 1877 to 1886.

Head of Revenue.	1877	1878.	1879.	1880.	1881	1882.	1883.	1884.	1885	1886.
<b>SALES.</b>	£	£	£	£	£	£	£	£	£	£
Auction Sales	1,957,057	1,061,670	698,981	435,572	566,404	707,594	178,304	95,772	118,738	111,083
Improved Purchases, &c.	133,358	239,943	156,471	245,094	494,262	179,949	117,561	305,455	408,721	260,526
Selections after Auction	166,730	124,197	66	42,363	351,885	417,715	37,480	767	.....	.....
Provisional Pre-emptive Right Sales	77,263	20,049	4,743	5,799	2,908	1,041	1,345	4,450	.....	.....
Deposits on Conditional Purchases	424,954	398,729	231,116	293,113	592,966	621,617	424,968	381,550	121,437	112,892
Instalments on Conditional Purchases	10,751	23,775	87,293	113,603	129,547	129,921	137,278	183,081	.....	.....
Instalments (including Interest) on Conditional Purchases.	.....	.....	.....	.....	.....	.....	.....	.....	440,286	514,162
Balances of Conditional Purchases	61,090	47,060	37,031	41,849	92,009	109,677	58,315	61,466	68,139	74,504
Miscellaneous Purchases	.....	.....	.....	.....	.....	.....	3,553	4,758	5,573	3,293
<b>Total, Land Sales</b>	£ 2,841,203	1,915,423	1,215,701	1,177,393	2,229,981	2,167,514	958,804	1,037,299	1,162,894	1,076,460
<b>ANNUAL LAND REVENUE.</b>										
Interest on Land Conditionally Purchased	126,654	160,581	170,986	204,634	253,357	287,526	310,676	326,184	151,658	129,978
<b>PASTORAL OCCUPATION.</b>										
Pastoral Leases	178,681	165,765	158,776	166,278	221,149	343,333	272,959	268,155	140,940	131,893
Annual and Special Leases	51,176	50,186	51,650	55,415	63,968	65,417	66,694	60,694	15,881	17,914
Conditional and Auction Leases	.....	.....	.....	.....	.....	.....	.....	.....	37,136	59,558
Occupation Licenses	.....	.....	.....	.....	.....	.....	.....	.....	294,686	153,493
Homestead Leases	.....	.....	.....	.....	.....	.....	.....	.....	15,768	10,660
Quit Rents	249	141	407	931	886	494	477	507	202	1,402
<b>Total, Pastoral Occupation</b>	£ 230,106	216,092	210,833	222,624	286,003	409,244	340,130	329,356	504,613	374,920
<b>MINING OCCUPATION.</b>										
Mineral Leases	5,563	5,138	5,570	9,569	7,088	7,119	8,221	15,363	20,750	19,049
Mineral Licenses	390	302	368	1,432	1,187	1,277	1,573	2,780	2,311	1,588
Leases of Auriferous Lands	2,001	2,725	3,290	2,422	4,775	5,195	2,640	4,111	2,991	4,510
Miners' Rights	2,807	2,992	4,211	6,110	6,398	5,856	4,560	4,215	4,143	4,642
Business Licenses	450	465	494	777	835	801	784	1,611	1,248	1,453
<b>Total, Mining Occupation</b>	£ 11,211	11,622	13,933	20,310	20,283	20,248	17,778	28,080	31,443	31,242
<b>MISCELLANEOUS LAND RECEIPTS.</b>										
Timber Licenses, Royalty, &c.	4,330	5,156	6,320	6,668	8,197	8,894	9,886	9,381	8,827	8,650
Fees on Transfer of Rums	1,232	1,189	964	1,366	2,242	1,678	1,953	1,116	715	619
Fees on Preparation and Enrolment of Title-deeds	14,369	9,664	6,128	5,253	9,689	9,009	3,958	4,445	3,860	4,298
All other receipts	7,232	6,003	7,159	8,084	11,237	10,281	13,759	17,382	12,553	17,787
<b>Total, Miscellaneous Land Receipts</b>	£ 27,163	22,012	20,571	21,371	31,365	29,862	28,656	32,324	25,955	31,354
<b>Total, Annual Land Revenue</b>	£ 395,134	410,307	416,323	468,939	591,008	746,880	697,240	715,944	713,669	567,494
<b>Total, Land Revenue</b>	£ 3,236,337	2,325,730	1,632,024	1,646,332	2,820,989	2,914,394	1,656,044	1,753,243	1,876,563	1,643,954

REVENUE—continued.

No. 4.—RECEIPTS on account of the CONSOLIDATED REVENUE FUND from TAXATION, LAND, REVENUE, and SERVICES, with the amount received per head during each year from 1871 to 1886.

Year.	Taxation.		Land Revenue.		Services.		Miscellaneous.		Total Receipts.	
	Amount.	Per Head.	Amount.	Per Head.	Amount.	Per Head.	Amount.	Per Head.	Amount.	Per Head.
1871 ... ..	£ 1,063,204	£ s. d. 2 1 10	£ 497,978	£ s. d. 0 19 7	£ 561,679	£ s. d. 1 2 1	£ 116,039	£ s. d. 0 4 7	£ 2,238,900	£ s. d. 4 8 1
1872 ... ..	1,200,203	2 5 7	840,453	1 11 11	659,770	1 5 1	111,585	0 4 2	2,812,011	5 6 9
1873 ... ..	1,364,806	2 10 2	1,137,914	2 1 9	728,875	1 6 9	99,319	0 3 8	3,330,913	6 2 4
1874 ... ..	1,200,489	2 2 6	1,426,166	2 10 6	770,895	1 7 4	116,764	0 4 2	3,514,314	6 4 6
1875 ... ..	1,122,002	1 18 5	2,020,629	3 9 2	858,497	1 9 4	125,175	0 4 3	4,126,303	7 1 2
1876 ... ..	1,161,406	1 18 5	2,773,003	4 11 9	965,327	1 11 11	137,925	0 4 7	5,037,661	8 6 8
1877 ... ..	1,233,132	1 19 3	3,236,277	5 2 11	1,119,532	1 15 7	162,937	0 5 2	5,751,878	9 2 11
1878 ... ..	1,309,718	1 19 10	2,325,711	3 10 8	1,183,582	1 16 0	172,908	0 5 3	4,991,919	7 11 9
1879 ... ..	1,272,721	1 16 10	1,632,024	2 7 3	1,328,302	1 18 6	248,618	0 7 2	4,481,665	6 9 9
1880 ... ..	1,417,294	1 19 1	1,646,435	2 5 4	1,594,082	2 3 11	254,179	0 7 1	4,911,990	6 15 5
1881 ... ..	1,770,849	2 6 7	2,820,988	3 14 2	1,945,076	2 11 2	177,414	0 4 8	6,714,327	8 16 7
1882 ... ..	1,903,412	2 7 11	2,914,394	3 13 4	2,363,085	2 19 5	237,645	0 6 0	7,418,536	9 6 8
1883 ... ..	1,891,708	2 5 4	1,656,069	1 19 8	2,666,731	3 3 11	255,833	0 6 2	6,470,341	7 15 1
1884 ... ..	2,152,854	2 8 10	1,753,345	1 19 10	2,942,643	3 6 10	268,750	0 6 1	7,117,592	8 1 7
1885 ... ..	2,252,651	2 8 4	1,876,452	2 0 6	3,168,463	3 8 0	289,802	0 6 2	7,587,368	8 3 0
1886 ... ..	2,611,835	2 13 4	1,643,955	1 13 7	3,089,235	3 3 0	249,276	0 5 1	7,594,300	7 15 0

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## EXPENDITURE.

No. 5.—DISBURSEMENTS from the CONSOLIDATED REVENUE FUND during the year ended 31st December, 1886.

Head of Expenditure.	Services of 1884 and previous years.	Services of 1885.	Services of 1886.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Schedules . . . . .	10 4 4	1,927 8 10	43,043 11 4	44,981 4 6
Executive and Legislative . . . . .	139 14 8	1,399 11 1	27,482 3 2	29,021 8 11
COLONIAL SECRETARY.				
Colonial Secretary . . . . .	.....	797 11 11	8,663 10 4	9,461 2 3
Protectorate of Aborigines . . . . .	.....	1,789 7 2	3,797 9 9	5,586 16 11
Military and Naval Forces . . . . .	2,098 10 6	75,823 2 3	152,219 1 0	230,140 13 9
Australian Military Contingent . . . . .	.....	3,354 17 5	.....	3,354 17 5
Police . . . . .	.....	12,780 17 9	265,663 4 3	278,444 2 0
Lunacy . . . . .	100 0 0	6,031 4 5	75,721 1 6	81,852 5 11
Immigration . . . . .	.....	.....	35,397 1 8	35,397 1 8
Charities and Asylums . . . . .	4,468 7 11	37,058 18 5	75,725 2 10	117,252 9 2
Other Branches of Colonial Secretary's De- partment . . . . .	6,099 17 5	12,797 6 5	74,554 1 8	93,451 5 6
Miscellaneous Services . . . . .	4,861 15 8	28,470 10 5	152,167 7 6	185,499 13 7
	17,628 11 6	178,903 16 2	843,908 0 6	1,040,440 8 2
TREASURER AND SECRETARY FOR FINANCE AND TRADE.				
Treasury . . . . .	48 0 11	2,785 0 6	24,087 5 4	26,920 6 9
Customs . . . . .	.....	975 5 8	59,875 7 7	60,850 13 3
Stores and Stationery . . . . .	35,324 14 7	55,434 4 5	122,107 18 0	212,866 17 0
Printing, Bookbinding, &c. . . . .	895 5 9	3,401 8 3	66,701 18 4	70,998 12 4
Other Services . . . . .	4,269 13 5	95,546 12 7	160,296 3 9	260,112 9 9
	40,537 14 8	158,142 11 5	433,068 13 0	631,748 19 1
PUBLIC INSTRUCTION.				
Public Instruction Act, 43 Vic. No. 23 . . . . .	1,500 0 0	55,892 16 8	600,136 2 10	657,528 19 6
Other Services . . . . .	92 5 0	12,167 5 7	71,331 18 2	83,591 8 9
	1,592 5 0	68,060 2 3	671,468 1 0	741,120 8 3
ADMINISTRATION OF JUSTICE.				
Prisons . . . . .	79 3 4	4,142 0 5	96,200 15 11	100,421 19 8
Petty Sessions . . . . .	.....	1,508 8 5	94,015 15 4	95,524 3 9
Other Services . . . . .	524 6 7	5,769 0 4	67,966 15 10	74,260 2 9
	603 9 11	11,419 9 2	258,183 7 1	270 206 6 2
ATTORNEY-GENERAL.				
Attorney-General, &c. . . . .	553 13 2	1,495 1 7	40,077 18 4	42,126 13 1
SECRETARY FOR LANDS.				
Department of Lands and Conditional Land Sales Branch . . . . .	.....	3,621 10 7	60,758 12 6	64,380 3 1
Commission to Land Agents, Appraisers, and others . . . . .	.....	7,274 9 7	67,674 2 4	74,948 11 11
Survey of Lands . . . . .	.....	41,277 3 6	336,807 19 4	378,085 2 10
Triangulation of the Colony . . . . .	.....	1,121 12 3	17,746 5 10	18,867 18 1
Miscellaneous Services . . . . .	2,397 4 3	9,362 14 8	1,565 8 9	13,325 7 8
	2,397 4 3	62,637 10 7	484,552 8 9	549,607 3 7
SECRETARY FOR PUBLIC WORKS.				
Department of Public Works . . . . .	168 6 6	417 2 2	5,901 16 3	6,487 4 11
Harbours and Rivers Navigation.— Engineer's Department . . . . .	.....	106 1 6	8,633 9 11	8,739 11 5
Fitz Roy Dock . . . . .	.....	437 2 11	4,737 5 2	5,174 8 1
Steam Dredges . . . . .	325 0 0	4,296 6 8	74,387 10 6	79,008 17 2
Public Works . . . . .	7,021 12 6	22,980 1 7	31,554 17 4	61,556 11 5
Colonial Architect . . . . .	334 11 10	708 16 5	18,566 8 9	19,609 17 0
Public Works and Buildings . . . . .	56,771 14 2	177,405 16 3	123,099 12 2	357,277 2 7
Roads and Bridges:— General Establishment and Field Super- intendence . . . . .	.....	458 16 1	25,431 8 9	25,890 4 10
Sewerage . . . . .	.....	.....	738 16 8	738 16 8
Construction and Maintenance of Roads and Bridges . . . . .	31,276 2 1	186,412 16 3	402,704 5 10	620,393 4 2
Railways and Tramways:— General Establishment . . . . .	.....	22 11 8	8,426 15 6	8,449 7 2
Works in Progress . . . . .	.....	1,242 17 10	17,778 9 8	19,021 7 6
Working Expenses . . . . .	.....	63,749 12 0	1,617,672 11 11	1,681,422 3 11
Miscellaneous . . . . .	1 12 3	.....	1,600 0 0	1,601 12 3
	95,898 19 4	458,238 1 4	2,341,233 8 5	2,895,370 9 1



## EXPENDITURE—continued.

## No 5 (continued).—DISBURSEMENTS from the CONSOLIDATED REVENUE FUND—continued.

Head of Expenditure.	Services of 1884 and previous years.	Services of 1885.	Services of 1886.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
<b>POSTMASTER GENERAL.</b>				
Post Office ... ..	110 0 0	11,763 13 11	181,436 10 5	193,310 4 4
Conveyance of Mails ... ..	3,618 0 0	42,518 13 9	178,678 12 1	224,815 5 10
Steam Postal Communication with Great Britain via San Francisco ... ..	.....	1,727 14 9	10,173 12 3	11,901 7 0
Money Order and Government Savings Bank Department ... ..	.....	956 12 4	11,931 10 2	12,888 2 6
Electric Telegraphs ... ..	.....	10,498 15 5	131,908 4 9	142,407 0 2
Telephones ... ..	.....	217 3 9	6,319 16 8	6,537 0 5
Other Services ... ..	.....	7,787 15 7	11,004 14 10	18,792 10 5
	3,728 0 0	75,470 9 6	531,453 1 2	610,651 10 8
<b>SECRETARY FOR MINES.</b>				
Mines ... ..	2,205 0 8	12,071 17 9	52,204 4 3	66,481 2 8
Rabbit Nuisance Act ... ..	.....	29,696 6 1	47,037 0 5	76,733 6 6
Other Services ... ..	394 13 9	47,338 11 0	45,065 5 11	92,798 10 8
	2,599 14 5	89,106 14 10	144,306 10 7	236,012 19 10
<b>SPECIAL APPROPRIATIONS.</b>				
Interest—Debentures and Funded Stock ... ..	127 10 0	4,346 10 0	1,514,962 10 4	1,519,436 10 4
„ Extinction of Loans, 31 Vic. No. 11 ... ..	220 0 0	34,912 10 0	25,110 0 0	60,242 10 0
Drawback and refund of Duties ... ..	.....	.....	53,278 19 2	53,278 19 2
Revenue and Receipts returned ... ..	.....	.....	155,338 12 7	155,338 12 7
Charges on Collections... ..	.....	.....	11,080 6 3	11,080 6 3
Endowment of Civil Service Superannuation Account ... ..	.....	.....	20,000 0 0	20,000 0 0
Endowment, Sydney and other Municipalities ... ..	.....	6,250 0 0	40,616 2 3	46,866 2 3
Other Services ... ..	.....	998 14 9	47,870 11 9	48,869 6 6
	347 10 0	46,507 14 9	1,868,257 2 4	1,915,112 7 1
Totals... .. £	166,037 1 3	1,153,328 11 6	7,687,034 5 8	9,006,399 18 5
Payments out of Accumulated Surplus Revenue .....	.....	.....	.....	72,468 15 8
			Grand Total .....	9,078,868 14 1

## No. 6.—PUBLIC EXPENDITURE, exclusive of Expenditure from Loans, during each year from 1877 to 1886.

Year.	Railways and Tramways.	Post and Telegraphs.	Other Public Works.	Interest on Debt and Extinction of Loan.	Immigration.	Public Instruction.	Other Services.	Total Expenditure.
	£	£	£	£	£	£	£	£
1877	453,598	312,226	806,325	591,744	69,332	277,666	1,999,319	4,501,210
1878	698,446	352,157	1,058,762	587,552	95,122	383,711	1,902,631	5,078,381
1879	809,245	383,391	1,314,819	584,339	82,123	387,786	2,183,806	5,745,509
1880	838,559	396,301	1,224,521	715,994	43,522	385,567	1,898,296	5,502,760
1881	786,269	421,594	1,139,671	719,752	45,966	552,363	2,123,327	5,788,942
1882	1,031,720	446,658	1,132,041	969,198	46,301	665,901	2,063,791	6,355,610
1883	1,439,327	504,055	1,262,806	927,905	112,319	879,120	2,665,556	7,791,088
1884	1,585,603	542,182	1,494,983	1,047,322	120,038	817,767	2,806,465	8,414,360
1885	1,729,894	570,999	1,323,991	1,300,184	52,050	751,335	2,838,035	8,566,488
1886	1,710,495	610,651	1,248,877	1,579,689	35,397	741,121	3,152,639	9,078,869

## No. 7.—PUBLIC EXPENDITURE per Head, exclusive of Expenditure from Loans, during each year from 1877 to 1886.

Year	Railways and Tramways.	Post and Telegraphs.	Other Public Works.	Interest on Debt, &c.	Immigration.	Public Instruction.	Other Services.	Total Expenditure.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1877	0 14 5	0 9 11	1 5 8	0 18 10	0 2 2	0 8 10	3 3 3	7 3 1
1878	1 1 3	0 10 8	1 12 2	0 17 10	0 2 11	0 11 8	2 17 10	7 14 4
1879	1 3 5	0 11 1	1 18 1	0 16 11	0 2 4	0 11 2	3 3 2	8 6 2
1880	1 3 1	0 10 11	1 13 9	0 19 9	0 1 2	0 10 7	2 12 4	7 11 7
1881	1 0 8	0 11 1	1 10 0	0 18 11	0 1 3	0 14 6	2 15 10	7 12 3
1882	1 5 11	0 11 3	1 8 6	1 4 5	0 1 2	0 16 9	2 11 11	7 19 11
1883	1 14 6	0 12 1	1 10 3	1 2 3	0 2 8	1 1 1	3 3 11	9 6 9
1884	1 16 0	0 12 4	1 13 11	1 3 9	0 2 9	0 18 7	3 3 9	9 11 1
1885	1 17 2	0 12 3	1 8 5	1 7 11	0 1 1	0 16 2	3 1 0	9 4 0
1886	1 14 11	0 12 5	1 5 6	1 12 3	0 0 9	0 15 1	3 4 4	9 5 3

## LOANS.

No. 8.—EXPENDITURE for PUBLIC WORKS and OTHER SERVICES, provided for by Loans Acts, from commencement of Loans' Account to 31st December, 1886.

	£	s.	d.	£	s.	d.
Railways ... ..	28,541,582	6	7			
Telegraphs ... ..	663,295	2	6			
Immigration ... ..	569,930	0	0			
Sewerage and Water Supply, Sydney	400,000	0	0			
Compensation to Municipal Council of Sydney for Land resumed under the Water Supply Act, 17 Vic. No. 35 ... ..	43,261	14	6			
New Water Supply for Sydney ... ..	1,894,193	18	9			
New Water Supply for Country Towns ... ..	251,150	5	5			
New Sewerage Scheme for Sydney, including resumption of land	460,682	0	9			
Sewerage, Shea's Creek to Webb's Grant ... ..	100,000	0	0			
Public Works, Queensland, when it formed part of N.S. Wales ... ..	49,855	8	6			
<b>Harbours and Rivers Navigation Improvements—</b>						
Improving the Harbour of Newcastle and the River Hunter ..	83,142	1	8			
Wharf, Newcastle ... ..	197,671	8	9			
Wharf, Bullock Island ... ..	6,939	4	0			
Steam Cranes, Newcastle ..	19,384	18	11			
Southern Breakwater, Newcastle Harbour ... ..	83,774	0	9			
Northern Breakwater, Newcastle Harbour ... ..	17,794	6	6			
Coal Staiths, Newcastle ... ..	24,058	7	11			
Navigation of the rivers Darling, Murray, and Murrumbidgee	99,379	18	5			
Improving the Navigation of the Edward River ... ..	4,902	13	1			
Harbour Works, Wollongong ... ..	45,021	10	1			
Harbour Works, Kiama ... ..	66,857	17	7			
Harbour Works, Lake Macquarie ... ..	48,312	16	9			
Improving the navigation of other Harbours and Rivers, &c.	68,856	18	2			
Steam Dredges and Punts ... ..	160,704	5	11			
Improvements, Circular Quay ... ..	15,339	2	8			
Steam Cranes, Wharf, &c., Darling Harbour ..	155,561	11	7			
Dam at North Rocks, Parramatta ... ..	5,000	0	0			
Dam at Hunt's Creek, Parramatta ... ..	8,000	0	0			
Fitz Roy Dry Dock ... ..	37,405	16	11			
Wharf, &c., Woolloomooloo Bay ... ..	28,164	16	10			
Reclaiming Land at Darling Harbour and Blackwattle Swamp	46,199	9	0			
Blackwattle Bridge and Causeway ... ..	10,000	0	0			
Increased Wharf Accommodation at Sydney	91,755	3	5			
Wharf, Eden ... ..	2,364	9	3			
Wharf, Morpeth ... ..	4,342	10	9			
Breakwater at the Clarence River ... ..	94,621	19	1			
Improving the entrance of the Moruya River ... ..	18,000	0	0			
Extension of Dock Accommodation ... ..	128,702	1	11			
Towards enlarging Wentworth Wharf ... ..	1,192	1	3			
Jetty, Byron Bay ... ..	3,809	17	10			
				1,577,259	9	0
<b>Public Works and Buildings:—</b>						
Purchase of Land, Phillip and Hunter Streets—for Police and other Public Offices	26,739	16	11			
Harbour Defences ... ..	470,517	0	6			
University of Sydney ... ..	78,127	8	7			
Affiliated Colleges ... ..	51,547	6	7			
Grammar School ... ..	25,000	0	0			
Australian Museum Enlargement ... ..	26,954	11	0			
Parliamentary Buildings ... ..	15,000	0	0			
Juvenile Reformatories ... ..	19,946	17	9			
New General Post Office ... ..	121,651	10	1			
New Printing Office ... ..	6,287	10	5			
New Public Offices ... ..	70,105	13	10			
Public Offices, Newcastle ... ..	7,579	13	6			
Custom House, Newcastle ... ..	10,870	3	11			
Receiving Houses at Redfern and the Necropolis	12,548	13	7			
Free Public Library ... ..	24,084	0	9			
Observatory ... ..	7,000	0	0			
Asylum for Destitute Children ... ..	5,000	0	0			
Additions to the Sydney Infirmary ... ..	5,000	0	0			
Public Works and Improvements, Sydney and Suburbs	2,460	17	0			
Lunatic Asylum ... ..	98,636	10	3			
Light-houses ... ..	71,946	4	9			
Glebe Island Abattoirs, Bridge, &c. ... ..	61,866	11	0			
Goals and Penal Establishments ... ..	38,430	4	0			
Court and Watch Houses ... ..	29,834	16	7			
Police Barracks and Stations, Sydney and Country Districts	22,941	6	6			
Fire Stations, Sydney ... ..	20,785	2	6			
Public School Buildings ... ..	50,000	0	0			
Home for State Children at Paddington ... ..	5,800	0	0			
New Site for Central Police Court ... ..	31,000	0	0			
Colonial Stores ... ..	15,000	0	0			
Government Resumption of Land ... ..	24,853	0	0			
Naval Stations, Port Jackson ... ..	34,568	11	5			
Court House and Post Office, Balmain ... ..	6,000	0	0			
Post and Telegraph Offices ... ..	4,370	0	0			
<b>Roads and Bridges—</b>						
Bridges throughout the Colony ... ..	528,298	19	3			
Metalling the Mudgee Road ... ..	22,000	0	0			
				1,502,453	11	5
<b>Repayments by Loans—</b>						
Loans repaid under various Acts ... ..				550,298	19	3
				1,335,230	0	0
<b>Total</b> ... ..	£			37,939,192	16	8

## LOANS—Continued.

No. 9.—ANNUAL EXPENDITURE on account of SERVICES authorized to be provided for by LOANS during the years 1877-86.

Head of Service	1877.	1878.	1879	1880	1881.	1882.	1883	1884.	1885	1886	Total.
	£	£	£	£	£	£	£	£	£	£	£
Railways .. .. .	819,368	721,840	1,149,963	1,522,168	2,155,844	2,195,028	2,527,937	2,929,251	2,986,278	2,754,683	19,762,360
Telegraphs .. .. .	28,567	12,168	2,272	11,740	47,454	32,812	36,326	51,503	22,889	27,956	273,687
Immigration ... ..	4,998	..	..	..	..	..	..	..	..	..	4,998
New Water Supply for Sydney .. .. .	..	..	..	28,368	98,730	298,425	374,959	329,724	349,030	414,958	1,894,194
Water Supply, Country Towns .. .. .	..	..	..	..	..	..	..	35,152	135,933	80,065	251,150
New Sewerage Scheme for Sydney .. .. .	..	..	460	4,022	16,443	32,865	91,378	86,843	123,980	104,691	460,682
Sewerage, Shea's Creek .. .. .	..	..	..	..	..	..	6,322	31,146	30,729	31,803	100,000
Eitzroy Dock .. .. .	1,980	1,204	3,013	3,746	170	..	..	..	..	..	10,113
Improving Navigation of Harbours and Rivers .. .. .	3,460	6,076	..	..	..	..	2,790	..	10,666	40,462	63,454
Wharf, Newcastle .. .. .	25,237	13,582	23,421	18,116	7,039	6,123	2,128	1,671	925	..	98,242
Wharf, Bullock Island .. .. .	476	..	..	..	..	..	..	..	..	..	476
Southern Breakwater, Newcastle .. .. .	8,364	9,888	8,650	4,966	1,863	7,789	7,755	648	..	739	50,662
Northern Breakwater, Newcastle .. .. .	..	..	..	..	..	..	..	2,196	3,809	1,868	7,873
Improving Edward River .. .. .	1,154	1,157	138	..	..	..	..	..	..	..	2,449
Harbour Works, Wollongong .. .. .	..	..	..	..	..	..	..	..	..	143	143
Harbour Works, Kiama .. .. .	214	..	323	253	97	713	896	..	..	..	2,496
Harbour Works, Lake Macquarie .. .. .	..	..	..	..	..	13,730	7,957	11,729	14,049	2,535	50,000
Steam Dredges and Punts .. .. .	8,515	1,176	..	..	..	..	136	1,357	10,179	12,276	33,639
Steam Cranes, Darling Harbour .. .. .	..	..	..	..	71	151,666	102,171	230	..	..	254,312
Increased Wharf Accommodation, Sydney .. .. .	..	..	4,604	15,636	24,922	18,432	8,147	7,725	9,217	8,925	97,608
Breakwaters, Clarence River .. .. .	7,894	2,316	..	..	11,067	12,077	6,854	14,114	20,573	..	74,895
Improving Entrance, Moruya River .. .. .	2,785	..	..	..	..	..	..	..	..	..	2,785
Extension of Dock Accommodation .. .. .	..	..	..	..	104	2,042	8,302	19,899	36,510	61,045	127,902
Towards Enlarging Wentworth Wharf .. .. .	..	..	..	..	..	..	..	19	..	1,173	1,192
Jetty, Byron Bay .. .. .	..	..	..	..	..	..	..	..	..	3,810	3,810
Harbour Defences .. .. .	3,735	33,227	21,270	14,582	22,640	39,757	24,819	4,683	54,729	61,814	281,256
University of Sydney .. .. .	..	..	..	..	..	..	..	..	..	23,127	23,127
Affiliated Colleges .. .. .	1,964	600	..	137	..	..	..	..	..	2,269	4,970
Juvenile Reformatories .. .. .	..	..	5,889	..	..	..	..	..	..	..	5,889
New General Post Office .. .. .	886	200	..	19	..	..	..	..	..	4,239	5,344
Printing Office .. .. .	..	..	..	..	..	..	..	288	..	..	288
New Public Offices .. .. .	35,795	..	..	..	..	..	..	..	..	106	35,901
Free Public Library .. .. .	..	..	..	..	..	..	..	500	11,423	2,946	14,869
Lunatic Asylums .. .. .	487	411	512	1,426	490	16,352	48,823	8,063	900	319	77,783
Lighthouses .. .. .	..	399	5,804	2,796	..	..	..	..	13	1,882	10,894
Gaols and Penal Establishments .. .. .	..	..	..	..	..	..	..	549	8,878	5,529	24,523
Court and Watch Houses .. .. .	..	..	..	..	..	..	..	..	..	7,898	7,898
Fire Stations, Sydney .. .. .	..	..	..	..	..	..	..	10,300	6,002	4,483	20,785
Public Schools, Buildings .. .. .	..	..	..	..	..	..	..	50,000	..	..	50,000
Childrens' Home, Paddington .. .. .	..	..	..	..	..	..	..	..	5,800	..	5,800
Site for Central Police Court .. .. .	..	..	..	..	..	..	..	..	31,000	..	31,000
Colonial Stores .. .. .	..	..	..	..	..	..	..	15,000	..	..	15,000
Resumption of Land .. .. .	..	..	..	..	..	..	..	24,853	..	..	24,853
Naval Stations, Port Jackson .. .. .	..	..	..	..	..	..	..	..	641	33,928	34,596
Custom House, Newcastle .. .. .	4,416	..	..	..	..	..	..	..	..	..	4,416
Glebe Island Abattoirs .. .. .	5	..	..	..	..	..	..	..	..	..	5
Court-house and Post Office, Balmain .. .. .	..	..	..	..	..	..	..	..	..	6,000	6,000
Post and Telegraph Offices .. .. .	..	..	..	..	..	..	..	..	..	4,370	4,370
Purchase of Land, Phillip and Hunter Streets .. .. .	..	..	..	..	..	..	..	..	..	26,740	26,740
Roads and Bridges .. .. .	35,054	10,873	45,386	40,644	10,434	4,948	7,462	28,954	25,322	29,362	238,439
Loans paid off .. .. .	100	1,200	..	..	..	..	..	..	..	..	1,300
Totals .. .. .	£ 995,454	816,317	1,271,705	1,668,619	2,397,368	2,832,759	3,265,711	3,674,707	3,896,145	3,766,356	24,585,141

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## LOANS—continued.

No. 10.—EXPENDITURE from LOANS and INTEREST PAID from 1877 to 1886, with TOTAL SUM authorized to be raised, and PUBLIC DEBT at the close of each year.

Year.	Total Expenditure from Loans at the close of each year.		Expenditure from Loans during each year.		Expenditure on account of Interest during the year.		† Total Loans Authorized.	Public Debt at close of each year.	
	* Amount.	Per Head Total Population.	Amount.	Per Head Mean Population.	Amount.	Per Head Mean Population.		Amount.	Per Head Total Population.
	£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£	£ s. d.
1877	14,349,506	22 5 10	995,454	1 11 8	517,359	0 16 5	15,734,396	11,724,419	18 4 3
1878	15,165,823	22 11 5	816,317	1 4 10	517,377	0 15 9	15,697,996	11,688,119	17 7 11
1879	16,437,528	23 3 4	1,271,705	1 16 10	516,249	0 14 11	23,022,864	14,937,419	21 1 1
1880	18,106,147	24 8 1	1,668,619	2 6 0	647,294	0 17 10	24,251,364	14,903,919	20 1 9
1881	20,503,515	26 6 7	2,397,368	3 3 1	647,642	0 17 0	33,024,764	16,924,019	21 14 8
1882	23,336,274	28 15 7	2,832,759	3 11 3	727,988	0 18 4	32,821,964	18,721,219	23 1 9
1883	26,601,985	31 0 3	3,265,711	3 18 3	798,620	0 19 2	34,728,204	24,632,459	28 14 4
1884	30,276,692	33 9 10	3,674,707	4 3 5	977,899	1 2 2	48,375,507	30,101,959	33 6 0
1885	34,172,837	35 13 6	3,896,115	4 3 8	1,230,441	1 6 5	48,337,807	35,564,259	37 2 6
1886	37,939,193	37 17 3	3,766,356	3 16 10	1,579,679	1 12 2	51,423,190	41,034,249	40 19 1

\* When the figures in this column exceed the amount of loans raised, advances have been made to Loan Funds from Consolidated Revenue and other Funds.

† Total authorized, less amounts paid off.

No. 11.—ESTIMATED VALUE of IMPORTS and EXPORTS of the Colony and AMOUNT of PUBLIC DEBT for each year from 1869 to 1886.

Year.	Imports.	Exports.	Total Trade.	Public Debt at the close of each year.
	£	£	£	£
1869	8,392,753	9,933,442	18,526,195	9,546,030
1870	7,757,281	7,990,038	15,747,319	9,681,130
1871	9,609,508	11,245,032	20,854,540	10,614,330
1872	9,208,496	10,447,049	19,655,545	10,773,230
1873	10,887,511	12,545,905	23,433,416	10,842,415
1874	11,293,739	12,345,603	23,639,342	10,516,371
1875	13,490,200	13,671,580	27,161,780	11,470,637
1876	13,672,776	13,003,941	26,676,717	11,759,519
1877	14,852,778	13,457,900	28,310,678	11,724,419
1878	15,104,645	13,134,405	28,239,050	11,688,119
1879	14,503,826	13,131,931	27,635,757	14,937,419
1880	14,176,063	15,682,802	29,858,865	14,903,919
1881	17,587,012	16,307,805	33,894,817	16,924,019
1882	21,467,899	17,677,355	39,145,254	18,721,219
1883	21,522,841	20,262,273	41,785,114	24,632,459
1884	23,160,916	18,577,290	41,738,206	30,101,959
1885	23,737,461	16,750,107	40,487,568	35,564,259
1886	20,973,548	15,556,213	36,529,761	41,034,249

BANKS.

No. 12.—AVERAGE ASSETS, LIABILITIES, CAPITAL, and PROFITS of the undermentioned BANKS of the Colony of New South Wales, for each Quarter of the year 1886.

BANKS	LIABILITIES						ASSETS						CAPITAL AND PROFITS				
	Notes in Circulation	Bills in Circulation	Balances due to other Banks	Deposits not bearing Interest	Deposits bearing Interest	Total Liabilities	Com.	Bullion	Landed Property	Notes and Bills of other Banks	Balances due from other Banks	Notes and Bills discounted, and all other Debts due to the Banks	Total Assets	Capital paid up	Rate per Annum of last Dividend	Amount of Dividend	Amount of Reserved Profits at the time of declaring such Dividend
FIRST QUARTER																	
New South Wales	£ 3756 28 15 4	£ 9434 16 0	£ 22463 1 9	£ 2551855 17 1	£ 3946133 6 10	£ 6905520 17 0	£ 840622 18 0	£ 36703 9 6	£ 186870 4 0	£ 3720 4 7	£ 710832 14 1	£ 6698912 19 1	£ 8477662 9 3	£ 1000000 0 0	17½ per cent	£ 87500 0 0	£ 580000 0 0
Commercial	463795 16 11	8460 12 5	137838 13 7	2262217 9 11	5146219 11 1	8018332 3 11	893135 0 5	10203 4 6	251787 7 3	47345 5 10	1008358 0 0	7250510 13 2	9461339 11 2	600000 0 0	25 per cent	75000 0 0	711292 6 7
Australasia	143473 0 0	9128 8 2	755 16 1	686384 16 11	1252075 10 7	2041767 11 9	469107 17 0	943 18 1	63727 13 1	14239 6 6	15967 5 9	2159834 14 10	2723820 15 3	1600000 0 0	15 per cent	120000 0 0	792000 0 0
Union of Australia	59066 10 8	9876 8 3	151 2 3	398149 14 0	874016 3 3	1336259 18 5	471427 6 11	463 2 11	64851 8 9	3685 16 11	270 8 2	2192461 18 10	2738160 2 6	1500000 0 0	16 per cent	120000 0 0	1115389 8 0
Australian Joint Stock	357585 12 5	650 7 0	13879 10 0	1105398 17 1	2432426 7 7	3915840 14 1	406172 17 7	13964 6 0	166271 4 11	32015 10 0	12012 2 0	4708591 6 3	5339027 6 9	500000 0 0	12½ per cent	31250 0 0	266019 12 3
London Chartered of Australia	32285 0 0	317 2 11	6357 1 6	211975 18 11	490800 3 4	742235 6 8	162221 7 4	80 5 2	32201 5 4	2384 4 7	2122 9 8	1161539 7 1	1360848 19 2	1000000 0 0	6 per cent	30000 0 0	118062 4 6
English Scottish and Australian Chartered Commercial Bank of Australia	115722 5 5	3355 4 10	1883 4 9	429678 0 4	933615 5 7	1484254 0 11	192113 1 11		76155 11 4	19080 9 3	4506 3 1	1762526 6 4	2054381 11 11	720000 0 0	10 per cent	36000 0 0	220000 0 0
City	4298 0 0	2251 1 10	321113 3 2	58617 6 0	142526 18 4	523896 9 4	36852 12 8		29000 0 0	1274 13 9		45344 1 9	525541 8 2	300000 0 0	12½ per cent	37500 0 0	376168 15 9
Mercantile Bank of Sydney	64244 17 8	424 10 2	4135 9 1	456832 8 4	1168042 4 10	1693729 10 1	190784 1 4	490 10 4	33141 9 3	1742 3 1	203181 1 4	1634241 9 9	2063580 10 1	240000 0 0	12½ per cent	15000 0 0	123383 9 5
Federal Bank of Australia	36044 0 0	360 6 1	231386 3 8	334444 8 1	1109994 0 1	1712228 17 11	106387 10 1		54353 5 2	5129 11 3	153206 14 1	1867215 8 10	2186292 9 5	300000 0 0	9 per cent	13500 0 0	162370 14 4
Queensland National Bank	12910 6 2	75 11 9		77550 0 11	235346 10 3	376832 9 1	58159 11 4		42476 16 2	2334 18 6		438814 18 4	541786 4 4	400000 0 0	8 per cent	13100 0 0	34917 18 5
Bank of New Zealand		2036 16 9	24455 18 4	24738 17 2	129324 10 5	180556 2 8	73275 12 4		14853 17 2	2081 13 10		89762 0 5	179173 3 9	652300 0 0	15 per cent	48922 10 0	315325 10 11
Totals	£ 1713813 15 5	£ 56141 13 4	£ 1200375 12 10	£ 8811398 19 7	£ 18379319 15 0	£ 30161044 16 2	£ 3988060 14 6	£ 65708 2 6	£ 1052191 13 7	£ 140033 18 1	£ 2110456 18 2	£ 31546080 11 11	£ 38902581 18 9	£ 10312300 0 0		702772 10 0	£ 5546034 12 9
SECOND QUARTER																	
New South Wales	£ 348501 13 11	£ 7884 15 1	£ 24318 7 8	£ 211758 17 7	£ 4025804 11 2	£ 6818268 5 5	£ 898451 3 3	£ 30079 18 4	£ 195024 1 6	£ 5968 6 2	£ 646594 10 8	£ 6690777 4 0	£ 8461895 3 11	£ 1000000 0 0	17½ per cent	£ 87500 0 0	£ 500000 0 0
Commercial	436011 0 0	8714 14 6	95666 6 0	2102683 11 1	5206700 18 1	7849776 9 8	728461 0 0	10986 10 11	25370 3 0	39599 2 9	328072 3 10	7350763 3 8	9211582 4 2	600000 0 0	25 per cent	75000 0 0	72054 3 1
Australasia	145948 18 6	10296 5 8	3999 0 6	583671 14 6	1239628 16 11	1983544 16 1	441895 10 2	760 19 6	63930 17 2	13533 1 0	3936 12 8	2397896 8 10	2922003 9 4	1600000 0 0	15 per cent	120000 0 0	792000 0 0
Union of Australia	54619 7 7	10821 14 1	176 4 11	348377 16 1	912572 12 1	1326567 14 9	556550 13 4	248 11 7	64876 16 1	7982 14 3	592 13 8	2229724 14 0	2859972 2 11	1500000 0 0	16 per cent	120000 0 0	1115389 8 7
Australian Joint Stock	342605 13 3	9088 5 1	32906 8 0	1013440 5 4	2364558 10 1	3767599 1 9	315985 2 5	11887 16 1	170771 12 3	28235 4 7	13164 17 1	4814876 4 2	5354920 16 7	500000 0 0	12½ per cent	31250 0 0	266019 12 3
London Chartered of Australia	36035 0 0	617 16 9	7063 7 4	192788 15 8	486289 12 11	722844 12 8	111755 16 2	7 7 11	32383 18 2	2741 1 11	1279 13 8	1187702 16 7	1385870 14 5	1000000 0 0	6 per cent	30000 0 0	138862 19 3
English Scottish and Australian Chartered Commercial Bank of Australia	112340 19 3	9252 10 0	4071 17 9	417574 14 3	918817 19 10	1462058 1 1	201112 10 2		76343 16 11	12470 9 8	3049 2 9	1776463 11 2	2074939 10 8	720000 0 0	10 per cent	36000 0 0	220000 0 0
City	5456 0 0	279 11 11	383553 10 9	45178 0 8	134750 1 3	559217 4 7	70215 9 5		29000 0 0	970 16 11		473051 9 3	573237 15 7	300000 0 0	12½ per cent	37500 0 0	376168 15 9
Mercantile Bank of Sydney	50870 0 0	259 1 9	23253 17 10	462181 16 7	1148972 15 5	1690542 11 7	164482 16 11	556 1 11	34802 19 11	1793 12 3	212284 7 0	1640953 12 6	2054853 10 6	240000 0 0	12½ per cent	15000 0 0	123383 9 5
Federal Bank of Australia	30499 13 7	462 14 6	207824 7 2	307998 10 9	1092703 0 10	1644558 6 10	118709 19 7		54508 4 0	5254 12 0	4382 1 6	1923932 9 4	2106787 6 5	300000 0 0	9 per cent	13500 0 0	162375 14 4
Queensland National Bank	13104 4 7	335 10 0		72098 3 0	278586 16 11	364124 14 6	45582 5 5		42476 16 2	1602 9 3		420352 14 6	510014 5 4	400000 0 0	8 per cent	16000 0 0	57170 10 7
Bank of New Zealand		2772 10 0	115610 3 1	22200 16 10	106396 8 8	247029 18 7	152293 7 9		14853 17 2	1710 10 9		76622 4 4	245480 0 0	652300 0 0	15 per cent	48922 10 0	315325 10 11
National Bank of Australia	47187 15 4	2893 0 4	526332 1 6	238359 14 2	408552 12 9	1223325 4 1	126315 6 10	564 3 10	44000 0 0			1064853 13 9	1236233 4 5	1000000 0 0	15 per cent	75000 0 0	730649 12 0
Totals	£ 1633235 6 0	£ 64662 10 3	£ 1424894 0 8	£ 8230658 13 4	£ 18353577 18 0	£ 29707028 8 3	£ 3964115 4 3	£ 55041 10 1	£ 111974 6 1	£ 125760 4 1	£ 1719202 15 5	£ 32186735 4 0	£ 39162829 3 11	£ 11112300 0 0		765672 10 0	£ 6046135 4 6

<sup>a</sup> And Branches. <sup>b</sup> Including £703,200 average amount of Government Securities held. <sup>c</sup> 15 per cent and bonus of 2½ per cent. <sup>d</sup> And Bonus. <sup>e</sup> Dividend, £75,000, bonus £12,500. <sup>f</sup> Including £113,811 11s 3d, average amount of New South Wales Government Debentures. <sup>g</sup> Dividend, 14 per cent bonus, 2 per cent. <sup>h</sup> 10 per cent and 5 per cent bonus, equal to 15 per cent per annum. <sup>i</sup> Including bonus of 2½ per cent per annum. <sup>j</sup> Including £703,384 12s 3d average amount of Government securities held. <sup>k</sup> Including £104,616 5s average amount of New South Wales Government Debentures.

BANKS—continued.

No. 12 (continued).—BANK LIABILITIES, ASSETS, CAPITAL AND PROFITS, &c., for the year 1886—continued.

BANKS.	LIABILITIES.						ASSETS.							CAPITAL AND PROFITS.			
	Notes in Circulation.	Bills in Circulation.	Balances due to other Banks.	Deposits not bearing Interest.	Deposits bearing Interest.	Total Liabilities.	Coin.	Bullion.	Landed Property.	Notes and Bills of other Banks.	Balances due from other Banks.	Notes and Bills discounted, and all other Debts due to the Banks.	Total Assets.	Capital paid up.	Rate per Annum of last Dividend.	Amount of Dividend.	Amount of Reserved Profits at the time of declaring such Dividend.
THIRD QUARTER.																	
New South Wales ..	£ s. d. 323104 9 3	£ s. d. 9910 17 0	£ s. d. 19645 8 11	£ s. d. 2348567 12 8	£ s. d. 4158054 18 7	£ s. d. 6864283 6 5	£ s. d. 799936 5 6	£ s. d. 37503 6 2	£ s. d. 195704 16 10	£ s. d. 7829 6 1	£ s. d. 747384 10 7	£ s. d. 6656065 1 7	£ s. d. 8444423 6 9	£ s. d. 1140800 0 0	17½ per cent.	£ s. d. 87500 0 0	£ s. d. 590000 0 0
Commercial ..	402113 5 4	9535 18 0	97717 0 11	1981911 4 6	5345090 7 6	7836967 16 3	770681 9 3	8209 12 6	261141 2 4	32778 12 5	707851 15 7	7505785 7 10	9292447 19 11	600000 0 0	25 per cent.	75000 0 0	720054 3 1
Australasia ..	128379 9 3	9920 18 11	4821 5 5	504740 11 3	1318107 3 7	1965969 8 5	433837 16 8	1387 19 2	04665 18 4	10900 4 5	3130 1 8	2382163 9 5	2896135 9 8	1600000 0 0	15 per cent.	120000 0 0	792000 0 0
Union of Australia ..	52533 1 6	8830 6 2	322 5 9	306326 10 0	971256 13 7	1339268 17 0	468222 2 10	1478 10 3	64909 6 10	7663 9 10	609 16 8	2310223 13 11	2853112 0 4	1500000 0 0	14 per cent.	105000 0 0	1100770 19 6
Australian Joint Stock	334415 16 11	5520 12 5	22528 13 1	929955 2 7	2411692 16 4	3704113 1 4	356282 3 9	12924 6 2	175731 2 5	26048 1 6	38772 0 2	5042957 10 3	5647715 4 3	500000 0 0	12½ per cent.	31250 0 0	276388 17 8
London Chartered of Australia.	37112 0 0	823 7 4	8046 12 9	166618 14 7	675332 16 4	837938 11 0	120752 13 8	59 16 9	31782 13 6	1716 15 6	2341 8 9	1340784 3 10	1497437 17 0	1000000 0 0	6 per cent.	30000 0 0	138062 19 3
English, Scottish, and Australian Chartered Commercial Bank of Australia.	110281 18 9	7117 8 10	38167 16 5	376276 17 8	1002799 19 2	1534624 0 10	197311 10 7	.....	76305 7 8	17253 18 3	7793 5 2	1733887 12 6	2082551 14 2	720000 0 0	10 per cent.	36000 0 0	220000 0 0
City ..	5200 0 0	449 12 0	415056 4 9	40660 16 0	114969 9 2	576336 2 8	67343 9 5	.....	29000 0 0	1008 12 6	.....	481628 19 7	578981 1 6	800000 0 0	12½ per cent.	50000 0 0	400698 12 5
Mercantile Bank of Sydney.	51165 15 4	247 5 7	13704 14 5	428980 12 11	1201068 11 4	1695166 19 7	173821 0 9	522 1 9	34649 8 8	2060 7 8	160845 10 4	1690724 14 3	2067123 3 5	240000 0 0	12½ per cent.	15000 0 0	128264 6 7
Federal Bank of Australia.	36518 4 7	544 6 7	362292 2 1	339389 7 2	1165987 1 1	1904731 1 6	121920 7 2	.....	54889 7 1	3610 10 8	193120 17 0	2012364 16 4	2385905 18 3	300000 0 0	9 per cent.	13500 0 0	169522 0 8
Queensland National Bank.	11172 17 0	35 19 9	.....	60171 15 9	270055 17 6	341436 10 0	33191 2 8	.....	42476 16 2	2013 4 8	.....	401295 16 3	478976 19 9	400000 0 0	8 per cent.	16000 0 0	57179 10 7
Bank of New Zealand	.....	1989 0 1	97863 1 11	22775 18 7	109370 9 1	231998 9 8	143206 7 1	.....	14853 17 2	1440 1 6	.....	72084 13 5	231584 19 2	652300 0 0	15 per cent.	48922 10 0	323156 4 7
National Bank of Australasia.	45032 4 6	3573 16 10	460418 8 8	394572 8 6	418092 1 3	1321688 19 9	125076 10 7	2441 18 2	44500 0 0	.....	.....	1160626 4 0	1332644 12 9	1000000 0 0	12½ per cent.	62500 0 0	698640 17 5
Totals ..	£ 1542009 2 5	59095 17 3	1540612 6 2	7915483 10 2	19202272 4 0	30259473 0 0	3861764 16 2	64527 10 11	1125363 5 5	117869 2 11	1857331 12 4	33006381 18 8	40033738 6 5	11253100 0 0	.....	750672 10 0	6053765 0 1
FOURTH QUARTER.																	
New South Wales ..	£ 332770 8 5	£ 11411 11 1	£ 29176 13 10	£ 2355419 2 6	£ 4264995 8 0	£ 6993773 3 10	£ 828559 11 10	£ 41615 17 2	£ 1988225 11 3	£ 6585 15 4	£ 1050917 4 9	£ 6801342 6 10	£ 8927846 7 2	£ 1215080 0 0	17½ per cent.	£ 87500 0 0	£ 740800 0 0
Commercial ..	419006 19 2	6858 2 1	74738 9 3	1978538 10 5	5635355 13 6	8114497 14 5	1012552 3 9	6392 0 4	263598 8 9	32935 1 1	836235 0 3	7342707 12 2	9494420 6 4	600000 0 0	25 per cent.	75000 0 0	730135 3 10
Australasia ..	130074 15 5	11907 12 9	2179 7 0	530856 0 2	1461082 12 0	2136100 7 4	378812 1 2	1172 13 3	66467 4 4	10747 11 4	16933 0 11	2382051 5 4	2856183 16 4	1600000 0 0	15 per cent.	120000 0 0	790000 0 0
Union of Australia ..	53170 3 0	10105 19 10	455 17 7	302466 18 0	1036832 18 8	1408031 17 1	402255 8 10	404 19 7	64940 3 0	10291 0 9	612 13 4	2328331 14 8	2806836 0 2	1500000 0 0	14 per cent.	105000 0 0	1100770 19 6
Australian Joint Stock	360800 13 9	6785 11 2	14737 19 10	971040 8 9	2496245 13 6	3849610 7 0	453174 18 7	16838 19 1	181099 7 1	25172 15 5	38144 3 3	5179384 9 3	5893814 12 8	500000 0 0	12½ per cent.	31250 0 0	276388 17 8
London Chartered of Australia.	37165 0 0	1480 7 0	8331 10 11	200820 19 5	654979 16 0	902777 13 4	117395 3 5	885 16 9	32161 18 5	3121 11 0	1402 18 7	1245192 8 1	1400159 16 3	1000000 0 0	6 per cent.	30000 0 0	158922 16 0
English, Scottish, and Australian Chartered Commercial Bank of Australia.	107070 6 6	7842 14 0	7080 10 2	439429 4 3	1023207 11 10	1534630 6 9	163330 2 4	.....	76243 16 11	12794 16 11	5359 4 2	1869760 19 8	2127939 0 0	720000 0 0	10 per cent.	36000 0 0	220000 0 0
City ..	5856 0 0	450 14 9	337959 16 6	50498 16 3	129405 15 7	524180 3 1	34185 10 3	.....	23384 12 4	1216 13 10	4607 1 10	462686 19 9	531030 18 0	800000 0 0	12½ per cent.	50000 0 0	400698 12 5
Mercantile Bank of Sydney.	49333 16 2	269 14 3	3068 9 1	535406 0 3	1240661 10 6	1828744 10 3	220344 6 7	741 11 4	35480 4 1	1590 9 3	240825 7 0	1701157 9 5	2200139 7 8	240000 0 0	12½ per cent.	15000 0 0	128264 6 7
Federal Bank of Australia.	40014 17 2	477 15 6	336804 13 4	398707 4 2	1205347 3 9	1981351 18 11	113658 8 3	.....	56257 5 11	4832 2 6	200859 19 0	2070099 12 6	2445707 8 2	300000 0 0	9 per cent.	13500 0 0	169522 0 8
Queensland National Bank.	10837 18 5	23 17 0	.....	54321 12 5	254354 17 2	319588 5 0	34921 11 0	.....	42476 16 2	1468 12 4	.....	389682 18 0	468549 17 6	400000 0 0	8 per cent.	16000 0 0	62068 17 4
Bank of New Zealand	.....	1433 14 6	93004 6 10	21163 17 0	98060 2 7	213662 0 11	120346 18 2	.....	14853 17 2	2148 12 4	.....	75095 10 0	212444 17 8	652300 0 0	15 per cent.	48922 10 0	323156 4 7
National Bank of Australasia.	49145 13 10	3357 12 6	391213 16 2	613341 3 5	435568 6 11	1492626 12 10	105231 10 6	11641 19 8	44500 0 0	.....	.....	1344410 16 4	1505784 6 6	1000000 0 0	12½ per cent.	62500 0 0	698640 17 5
Totals ..	£ 1595301 11 10	63406 12 5	1293925 18 11	8463484 19 0	19964768 3 8	31385887 5 10	4018973 7 5	79693 17 2	1139979 17 4	116631 2 5	2396794 12 5	33370024 13 1	41122097 9 10	11503917 0 0	.....	750672 10 0	6452241 14 8

\* And Branches.    † Including bonus of 2½ per cent. per annum.    ‡ 15 per cent. per annum, and bonus of 2½ per cent. per annum.    § Dividend £75,000, and bonus £12,500.    ¶ Including £704,400, average amount of Government Securities held.    \*\* Including £104,616 5s., average amount of New South Wales Government Debentures.    \*\*\* 10 per cent. and 2½ per cent. bonus, equal to 12½ per cent. per annum.    \*\*\*\* Including average amount of Government securities held.    \*\*\*\*\* And bonus.    ††† Including £459,157 18s. 10d., average amount of Government Securities held.

STATISTICS, 1886—MONETARY AND FINANCIAL.

## BANKS—continued.

No. 13.—ASSETS of BANKS trading in New South Wales, average of each year from 1871 to 1886.\*

Year.	Coin.	Bullion.	Notes and Bills of other Banks.	Balances due from other Banks.	Notes and Bills discounted and all other debts due to the Banks.	Landed Property.	Total Assets.
1871	1,867,278	184,553	34,364	1,299,636	7,593,538	301,157	11,280,526
1872	2,859,325	126,201	35,875	1,772,132	7,993,223	307,431	13,004,188
1873	1,972,092	76,483	34,069	2,707,554	9,116,831	296,545	14,263,574
1874	2,322,269	192,254	42,247	3,331,488	10,074,712	313,986	16,276,956
1875	2,476,456	112,319	51,461	3,581,149	11,770,185	326,741	18,318,311
1876	2,828,503	87,063	63,247	3,854,768	12,801,716	347,291	19,982,588
1877	2,586,053	84,415	62,324	3,158,520	15,354,507	385,875	21,631,694
1878	2,262,526	86,194	64,532	3,252,519	16,762,111	425,478	22,853,362
1879	2,488,175	83,824	50,614	3,527,303	17,098,052	486,869	23,734,837
1880	3,373,618	73,651	55,453	3,712,664	16,661,815	521,612	24,398,813
1881	3,594,914	80,068	73,285	3,110,110	19,038,386	585,224	26,481,987
1882	3,022,159	74,308	96,462	3,251,905	23,517,046	662,851	30,624,731
1883	2,798,536	80,018	113,677	2,944,965	25,894,669	748,140	32,580,005
1884	3,559,859	61,223	117,983	3,225,096	27,479,142	818,043	35,261,346
1885	4,171,043	62,066	131,448	1,936,042	30,556,628	958,349	37,815,576
1886	3,958,238	66,243	125,073	2,020,946	32,527,431	1,107,377	39,805,307

No. 14.—LIABILITIES of BANKS trading in New South Wales, average of each year from 1871 to 1886.\*

Year.	Notes in Circulation.	Bills in Circulation.	Balances due to other Banks.	Deposits not bearing Interest.	Deposits bearing Interest.	Total Deposits	Total Liabilities.
1871	694,344	42,816	171,896	†	†	6,662,856	7,571,912
1872	789,544	42,916	191,325	†	†	8,653,481	9,672,267
1873	1,005,639	34,289	191,794	†	†	11,369,184	12,600,906
1874	920,620	32,067	243,535	†	†	9,760,661	10,956,813
1875	1,080,088	34,811	251,727	†	†	13,132,772	14,499,398
1876	1,093,862	33,712	205,976	5,146,536	9,563,608	14,710,144	16,043,694
1877	1,129,279	37,618	252,172	5,061,231	10,984,264	16,045,495	17,464,564
1878	1,167,519	38,621	228,804	4,933,643	11,678,843	16,612,486	18,047,430
1879	1,123,123	41,703	152,422	4,898,724	12,352,454	17,251,178	18,568,426
1880	1,173,663	45,229	222,686	5,683,870	12,209,781	17,893,651	19,335,229
1881	1,390,376	52,687	393,848	7,719,236	11,869,979	19,589,215	21,426,126
1882	1,614,191	57,487	639,192	8,310,054	13,772,826	22,082,880	24,393,750
1883	1,677,146	64,596	625,124	7,158,975	16,302,407	23,461,382	25,828,248
1884	1,644,469	60,443	583,020	7,453,914	17,738,445	25,192,359	27,480,291
1885	1,714,095	55,300	868,543	8,819,979	18,387,705	27,207,684	29,845,622
1886	1,621,090	60,827	1,366,202	8,355,255	18,974,984	27,330,239	30,378,358

\* The figures in the preceding table are the quarterly averages, and differ slightly from the mean averages of the year as shown in tables Nos. 15-23 and 24.  
† Not separately shown for these years.

No. 15.—AMOUNT of NOTES of the several BANKS in Circulation on 31st December, 1886.

Banks.	On 31 December, 1886.	
	£	Average of the year. £
New South Wales ...	339,224	346,251
Commercial...	450,509	430,231
Australasia ...	136,575	139,863
Union of Australia ...	58,922	54,847
Australian Joint Stock	416,863	348,852
London Chartered ...	41,794	35,662
English, Scottish, and Australian Chartered	113,562	111,349
City ...	52,135	55,956
Mercantile ...	43,678	37,019
Bank of New Zealand	50,836	47,565
Federal Bank of Australia (Limited)	12,451	12,008
Queensland National Bank	.....	.....
Commercial of Australia ...	5,856	5,202
National of Australasia	.....	.....
Total ...	£ 1,722,405	1,623,905

## SAVINGS BANKS.

No. 16.—ABSTRACT of the BALANCE SHEET of the SAVINGS BANK OF NEW SOUTH WALES, on the 31st December, 1886.

	£	s.	d.	£	s.	d.		£	s.	d.		
Sydney ... .. Amount at the credit of 42,835 depositors ... ..				1,694,850	2	5	Lent on 902 mortgages, with interest to 31st December, 1886 ... ..	988,130	4	8		
Newcastle ... .. " " 2,221 " ... ..	84,877	8	0				Investments in—					
West Maitland ... .. " " 1,219 " ... ..	60,148	10	1				New South Wales Consolidated Revenue Debentures, with interest at					
Bathurst ... .. " " 930 " ... ..	38,689	19	0				£5 per cent. per annum to 31st December, 1886 ... ..	86,305	0	0		
Goulburn ... .. " " 871 " ... ..	32,681	15	1				Randwick Municipal Debentures, with interest at £6 per cent. per					
Parramatta ... .. " " 840 " ... ..	32,068	9	8				annum to 31st December, 1886 ... ..	10,200	0	0		
Windsor ... .. " " 506 " ... ..	27,900	7	4				City of Sydney Corporation Debentures, with interest at £6 per cent.					
Grafton ... .. " " 708 " ... ..	22,044	0	7				per annum to 31st December, 1886 ... ..	6,180	0	0		
Wollongong ... .. " " 388 " ... ..	19,705	13	4				Darlington Municipal Debentures, with interest at £6 per cent. per					
East Maitland ... .. " " 533 " ... ..	19,516	18	6				annum of 31st December, 1886 ... ..	£2,020	0	0		
Singleton ... .. " " 349 " ... ..	14,482	2	3				Darlington Municipal Debentures, with interest at £6 per					
Scone ... .. " " 229 " ... ..	10,441	14	1				cent. per annum to 31st December, 1886 ... ..	3,090	0	0		
Mudgee ... .. " " 299 " ... ..	9,426	17	0				5,110	0	0	107,795	0	0
Clarence Town ... .. " " 190 " ... ..	7,913	17	6				Deposits with—					
Carcoar ... .. " " 133 " ... ..	3,979	2	10				Commercial Bank, with interest to 31st December, 1886 ... ..	127,786	10	11		
Orange ... .. " " 127 " ... ..	2,771	10	11				Bank of New South Wales, with interest to 31st December, 1886 ... ..	124,259	3	1		
	52,378			386,648	6	2	City Bank, with interest to 31st December, 1886 ... ..	120,955	5	10		
Amount at the credit of Reserved Fund ... ..				2,081,498	8	7	Australian Joint Stock Bank, with interest to 31st December, 1886 ... ..	112,469	11	4		
Depreciation Account ... ..				184,810	0	0	Bank of Australasia, with interest to 31st December, 1886 ... ..	107,841	14	0		
Drafts drawn by the Branch Accountants upon Head Office, and included in their returns				12,536	11	4	Mercantile Bank, with interest to 31st December, 1886 ... ..	104,312	4	5		
up to, but not paid on 31st December, 1886 ... ..							English, Scottish, and Australian Chartered Bank, with interest to					
Amount at the credit of Profit and Loss Account carried to next year ... ..							31st December, 1886 ... ..	103,256	17	1		
							Union Bank, with interest to 31st December, 1886 ... ..	90,177	4	10		
							London Chartered Bank, with interest to 31st December, 1886 ... ..	88,892	13	9		
							Bank of New Zealand, with interest to 31st December, 1886 ... ..	83,271	3	11		
							Commercial Bank of Australia, with interest to 31st December, 1886 ... ..	19,031	4	7		
							National Bank of Australasia, with interest to 31st December, 1886 ... ..	19,031	4	7		
							1,101,284	18	4			
							Bank of New South Wales ("Working Account") ... ..	68,236	0	5		
								1,169,520	18	9		
							Permanent Investment, Land and Banking House ... ..	23,000	0	0		
							Cash received from Branch Accountants after 31st December, 1886, but included in their					
							returns to that date ... ..	1,051	10	3		
								£2,289,497	13	8		
				£2,289,497	13	8						

Total amount of deposits in the Savings Bank of New South Wales, £2,081,498 8s. 7d.

The rate of interest payable upon depositors' accounts closed during the year is £5 per cent. per annum; and on deposits in the bank up to 31st December the rate of interest is fixed by the trustees when the yearly accounts are made up.

The rate of interest paid on 31st December, 1886, for the year ended was £6 per cent. per annum.

When deposits made by any one individual exceed the sum of £100 no interest is allowed on such excess.

NOTE.—Interest is allowed on the full amount deposited by Penny Savings Banks, Charitable Institutions, and Friendly or other Societies.



SAVINGS BANK—*continued.*

No. 17.—INCREASE and DECREASE of the DEPOSITS, &c, in the SAVINGS BANK OF NEW SOUTH WALES, for the year ended 31st December, 1886

Branch	Amount of Deposits on 1st January, 1886		Amount of Deposits on 1st January, 1887		Increase		Decrease		Number of Depositors on 1st Jan, 1886	Number of Depositors on 1st Jan, 1887	New Accounts opened during the year 1886	Old Accounts closed during the year 1886	Increase	Decrease
	£	s. d.	£	s. d.	£	s. d.	£	s. d.						
Sydney	1,626,100	18 6	1,694,850	2 5	68,749	3 11	..	..	40,518	42,835	12,217	9,900	2,317	..
Newcastle ..	85,087	7 2	84,877	8 0	..	..	209	19 2	2,159	2,221	492	430	62	..
West Maitland	59,021	17 10	60,148	10 1	1,126	12 3	..	..	1,180	1,219	234	204	30	..
Bathurst	38,574	3 2	38,689	19 0	115	15 10	..	..	887	930	176	133	43	..
Goulburn	32,621	14 0	32,681	15 1	60	1 1	..	..	920	871	130	179	49	..
Parramatta	31,173	2 0	32,068	9 8	895	7 8	..	..	818	840	172	150	22	..
Windsor	27,922	3 2	27,900	7 4	..	..	21	15 10	524	506	70	88	..	18
Grafton ..	24,037	0 1	22,044	0 7	..	..	1,992	19 6	710	708	153	155	..	2
Wollongong	21,329	0 5	19,705	13 4	..	..	1,623	7 1	404	388	78	94	..	10
East Maitland	20,653	10 4	19,516	18 6	..	..	1,136	11 10	545	533	70	82	..	12
Singleton ..	16,686	17 8	14,482	2 3	..	..	2,204	15 5	361	349	48	60	..	12
Scone .....	9,431	7 7	10,441	14 1	1,010	6 6	..	..	219	229	33	23	10	..
Mudgee .....	8,792	18 7	9,426	17 0	633	18 5	..	..	284	299	56	41	15	..
Clarence Town	8,149	16 9	7,913	17 6	..	..	235	19 3	185	190	27	22	5	..
Carcoar . ...	4,169	6 0	3,979	2 10	..	..	190	3 2	129	133	27	23	4	..
Orange	2,905	3 11	2,771	10 11	..	..	133	13 0	125	127	27	25	2	..
	2,016,656	7 2	2,081,498	8 7	64,842	1 5	..	..	49,977	52,378	14,010	11,609	2,401	..

No. 18.—Amount of DEPOSITS at the credit of the PENNY BANKS in the SAVINGS BANK OF NEW SOUTH WALES, on 31st December, 1886.

	£	s.	d.		£	s.	d.
St Peter's	3,467	10	4	St Stephen's	137	19	11
Jewish Sabbath School	2,469	15	3	Tempe Park	108	5	5
Clippendale	775	14	10	Pymont	46	8	8
Surry Hills	518	17	6	Wollongong	16	1	4
Woollahia	484	6	0	Sussex-street Mission	15	1	2
Balmain	383	10	8	West Maitland	8	17	0
Glebe and Parramatta street	374	18	8	Wentworth Band of Courage	4	11	1
Petersham	232	14	4				
Mount Lachlan	183	10	9				
					£	9,228	2 11

No. 19.—Number of DEPOSITORS and the Amount of DEPOSITS in the SAVINGS BANK OF NEW SOUTH WALES, distinguishing the Number and the Amount of Deposits for the years 1876-86.

Year.	Number and Amount of Deposits.												Total		
	£20 and under		Between £20 and £50		Between £50 and £100		Between £100 and £200		Between £200 and £300		£300 and upwards				
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	
1876	14,695	£ 81,382 6 9	5,942	£ 192,593 14 8	4,946	£ 355,447 13 2	5,170	£ 570,672 6 5	151	£ 35,052 4 10	99	£ 68,664 6 6	31,003	£ 1,303,812 12 4	
1877	15,337	£ 83,390 19 9	6,062	£ 205,938 6 2	5,229	£ 373,299 16 5	5,329	£ 576,924 10 7	151	£ 35,368 19 1	112	£ 80,335 11 1	32,220	£ 1,355,258 3 1	
1878	15,979	£ 90,456 4 1	6,251	£ 200,928 8 0	5,130	£ 366,513 15 9	5,042	£ 560,231 18 8	122	£ 28,026 16 10	120	£ 86,859 13 0	32,644	£ 1,333,016 16 4	
1879	17,096	£ 95,640 18 1	6,490	£ 209,961 7 7	5,368	£ 380,356 8 0	5,492	£ 609,354 8 8	131	£ 30,690 6 1	112	£ 84,901 10 6	34,689	£ 1,410,904 19 9	
1880	18,357	£ 101,273 5 5	6,888	£ 225,211 6 0	5,776	£ 413,858 6 8	5,641	£ 622,237 3 2	144	£ 32,599 18 11	123	£ 94,180 10 8	36,929	£ 1,489,360 1 10	
1881	19,684	£ 108,993 4 2	7,291	£ 234,263 3 8	6,223	£ 447,891 14 11	7,007	£ 771,451 8 0	181	£ 42,457 8 6	146	£ 122,145 10 10	40,532	£ 1,727,202 1 1	
1882	20,502	£ 116,582 17 9	7,524	£ 254,164 2 3	6,521	£ 478,224 0 0	7,392	£ 825,580 5 4	183	£ 43,702 14 3	152	£ 138,387 9 7	42,274	£ 1,856,641 9 2	
1883	22,873	£ 128,079 15 3	8,627	£ 278,188 10 11	7,134	£ 478,345 19 0	6,859	£ 762,019 13 6	194	£ 47,098 12 3	155	£ 128,586 4 4	45,442	£ 1,822,318 15 3	
1884	23,935	£ 130,940 2 6	8,779	£ 282,225 8 7	7,109	£ 509,378 6 7	6,934	£ 774,798 16 2	184	£ 42,855 17 0	181	£ 147,150 10 1	47,122	£ 1,887,349 0 11	
1885	25,426	£ 139,118 15 5	9,208	£ 297,400 19 5	7,558	£ 542,330 12 10	7,380	£ 824,875 11 4	211	£ 48,929 1 1	185	£ 164,001 7 1	49,977	£ 2,016,656 7 2	
1886	27,260	£ 145,818 6 8	9,315	£ 304,671 2 2	7,673	£ 535,287 19 11	7,718	£ 872,174 8 2	220	£ 50,132 11 5	192	£ 173,374 0 3	52,378	£ 2,081,498 8 7	

No. 20.—INCREASE and DECREASE of DEPOSITS, and of the NUMBER of DEPOSITORS, &c, in the NEW SOUTH WALES SAVINGS BANK, for the years 1876-86.

Year.	Amount of Deposits on 1 January.	Increase on previous Year	Decrease on previous Year	Number of Depositors on 1 January.	New Accounts opened during the Year.	Old Accounts closed during the Year	Increase.
	£ s d	£ s d.	£ s d.				
1876	1,295,797 0 4	19,895 0 4	..	30,158	7,762	6,817	945
1877	1,303,812 12 4	8,015 12 0	..	31,003	7,996	6,779	1,217
1878	1,355,258 1 1	51,445 8 9	..	32,220	8,423	7,999	424
1879	1,333,016 16 4	..	22,241 4 9	32,644	9,169	7,124	2,045
1880	1,410,904 19 9	77,888 3 5	..	34,689	10,579	8,339	2,240
1881	1,489,360 1 10	78,455 2 1	..	36,929	11,876	8,273	3,603
1882	1,727,202 1 1	237,841 19 3	..	40,532	12,479	10,737	1,742
1883	1,856,641 9 2	129,439 8 1	..	42,274	12,632	9,464	3,168
1884	1,822,318 15 3	..	34,322 13 11	45,442	12,453	10,773	1,680
1885	1,887,349 0 11	65,030 5 8	..	47,122	13,160	10,305	2,855
1886	2,016,656 7 2	129,307 6 3	..	49,977	14,010	11,609	2,401
1887	2,081,498 8 7	64,842 1 5	..	52,378	..	..	..

STATISTICS, 1886—MONETARY AND FINANCIAL.

GOVERNMENT (POST OFFICE) SAVINGS BANK.

No. 21.—RETURN showing the NAMES of the various BRANCHES, the Dates of their ESTABLISHMENT, the Number of ACCOUNTS OPENED, the Number of ACCOUNTS CLOSED, and the Total Number and Amount of DEPOSITS and WITHDRAWALS, during the year 1886; also the Amount at Credit of DEPOSITORS on the 31st December, 1886.

Name of Branch.	Date of establishment.	Number of Accounts open at close of 1885.	Number of Accounts opened during 1886.	Number of Accounts closed during 1886.	Number of Accounts remaining open at close of 1886.	Total Deposits, including Interest.		Total Withdrawals.		Balances at credit of Depositors at close of 1886.	
						Number	Amount.	Number	Amount.	£	s
Sydney (C O) . . . . .	1 Oct, 1871	9,845	5,175	4,90	10,118	29,392	£ 309,768 19 11	21,052	£ 333,851 2 7	£ 390,451 9 2	
Shipping Office . . . . .	1 April, 1876	1			1		1 0 9			27 11 2	
Aberdeen . . . . .	11 Dec, 1871	54	5		43	46	138 2 10	19	138 13 9	683 3 2	
Adaminaty . . . . .	12 July, 1875	44	4	4	44	14	111 14 11	11	156 14 2	670 16 8	
Adamstown . . . . .	1 Oct, 1880				2	2	30 7 0			30 7 0	
Adelong . . . . .	11 Dec, 1871	143	48	39	152	253	1,556 15 2	130	1,628 15 9	3,065 6 9	
Albury . . . . .	1 Oct, 1871	467	262	213	516	1,425	8,104 12 3	559	7,281 12 8	10,382 6 0	
Angledool . . . . .	1 Oct, 1886				5	6	122 10 4	5	64 10 0	58 0 4	
Araoon . . . . .	1 Mar, 1882	11	3	2	12	16	158 5 11	5	161 0 5	170 11 6	
Araluen . . . . .	1 Sept, 1872	27	16	6	37	72	597 7 0	16	229 18 3	943 8 6	
Armidale . . . . .	1 Oct, 1871	689	133	170	657	1,105	8,388 19 0	551	12,113 15 1	15,135 13 10	
Ashfield . . . . .	1 Feb, 1875	235	125	120	240	723	3,211 12 1	365	3,135 17 10	3,493 19 2	
Balla . . . . .	1 Sept, 1872	100	23	39	84	130	966 13 11	97	1,288 12 6	1,290 4 10	
Balmain . . . . .	1 Oct, 1871	1,087	445	351	1,181	3,285	11,538 7 7	1,417	12,993 11 7	14,451 0 6	
Balranald . . . . .	1 July, 1882	79	36	16	79	136	805 12 9	81	871 14 2	881 3 0	
Barmedman . . . . .	22 May, 1884	24	7	12	19	18	284 12 8	29	499 18 11	232 0 4	
Barraba . . . . .	2 Sept, 1881	13	1	1	29	53	257 9 2	13	127 11 0	271 9 3	
Batemans Bay . . . . .	1 Oct, 1886		37	1	36	124	220 19 7	4	32 4 0	188 15 8	
Bathurst . . . . .	1 Oct, 1871	838	300	290	848	1,917	15,481 13 8	989	16,567 5 5	23,018 3 8	
Bega . . . . .	1 Sept, 1872	196	62	54	204	315	1,971 8 1	149	2,149 19 3	3,333 8 9	
Belmont . . . . .	12 Jan, 1881	12	9	4	17	61	327 3 9	23	189 8 7	255 9 0	
Berrama . . . . .	1 Oct, 1871	73	12	14	71	99	638 11 11	44	826 8 10	1,826 19 10	
Bethunga . . . . .	22 May, 1884	9	7	2	14	51	258 8 10	13	123 10 1	322 4 10	
Bmalong . . . . .	1 Feb, 1875	9	9	7	11	29	294 17 1	18	336 14 3	536 12 2	
Bingera . . . . .		32	14	14	32	80	556 16 3	39	538 0 7	736 12 2	
Blayney . . . . .	1 April, 1878	93	65	50	108	281	2,365 9 6	131	1,604 15 10	2,438 16 10	
Bodalla . . . . .	2 July, 1875	83	23	15	91	117	876 3 10	61	791 16 2	1,972 10 3	
Boggabri . . . . .	1 Oct, 1880		9		9	10	40 19 0			40 19 0	
Boliva . . . . .					63	66	399 4	44	674 6 2	1,014 9 8	
Bombala . . . . .	11 Dec, 1871	71	12	20	11	15	49 14 4	6	106 5 4	150 19 0	
Bomen . . . . .	2 Dec, 1878	12	2	3	80	241	507 12 9	75	569 7 4	543 10 11	
Botany (Lower) . . . . .	1 Sept, 1874	88	27	35	187	506	3,108 12 4	280	4,091 7 10	2,912 9 3	
Bourke . . . . .		194	114	121	187	42	387 0 5	26	622 3 8	562 4 2	
Bowenfels . . . . .	1 Feb, 1875	6	6	49	42	17	88 8 0	10	233 9 4	137 13 7	
Bowmung . . . . .	2 Sept, 1881	13	4	6	136	405	2,152 4 3	148	1,660 12 3	2,609 12 4	
Bowral . . . . .	1 Sept, 1883	113	84	85	155	225	1,542 4 3	127	1,561 7 1	3,150 12 6	
Bradwood . . . . .	1 Oct, 1871	154	36	35	109	51	423 4 11	27	362 17 6	275 17 5	
Brewarrina . . . . .	22 May, 1884	14	13	10	22	79	968 8 10	58	1,042 15 11	1,956 1 9	
Branston . . . . .	1 Sept, 1874	71	24	20	75	34	195 10 5	9	71 11 11	123 18 6	
Broads water . . . . .	1 Oct, 1886		21	1	23	45	290 14 4	1	10 0 0	280 14 4	
Broken Hills . . . . .			4	23	45	290 14 4					
Broughton Creek . . . . .	1 Jan, 1880	81	43	25	99	136	934 12 9	65	769 4 7	1,253 9 4	
Brushgrove . . . . .	1 July, 1882	36	11	14	33	33	321 9 8	25	356 15 0	345 1 10	
Bulahdelah . . . . .	1 Mar, 1878	43	6	10	39	50	583 5 2	16	692 15 11	1,782 11 8	
Bull . . . . .	4 June, 1877	226	75	98	203	566	4,783 5 11	339	5,520 15 0	7,337 16 10	
Bundanoon . . . . .	22 Sept, 1879	43	12	8	47	95	461 3 2	44	390 13 7	892 10 3	
Bundarra . . . . .	1 Jan, 1874	58	21	8	71	95	643 17 1	24	355 11 3	923 3 1	
Bungendore . . . . .	22 May, 1884	91	41	69	63	206	1,647 7 6	159	2,124 1 0	1,985 8 10	
Bungwall Flat . . . . .	8 Oct, 1880	56	21	15	62	116	1,223 7 10	42	1,189 2 0	1,172 6 1	
Burrage . . . . .	22 May, 1884	17	7	11	13	38	311 17 8	19	252 19 7	399 7 2	
Burrawang . . . . .	8 Oct, 1880	50	11	14	47	65	443 11 10	40	367 4 8	681 4 4	
Burrowa . . . . .	12 July, 1875	67	11	14	64	88	411 8 7	40	291 14 1	772 0 7	
Burwood . . . . .	1 Sept, 1872	215	142	103	249	711	3,530 15 8	291	2,961 10 10	3,035 18 9	
Camden . . . . .	1 Oct, 1871	211	69	54	226	406	2,199 14 2	173	2,380 16 2	4,240 18 2	
Campbelltown . . . . .		216	53	61	208	327	3,257 11 9	181	3,145 12 3	7,347 14 7	
Camperdown . . . . .	11 Dec, 1871	229	160	131	258	1,107	2,682 0 8	397	2,879 5 1	2,050 2 10	
Candelo . . . . .	2 Sept, 1881	12	4	7	9	15	40 18 1	15	43 7 3	34 14 2	
Cannonbar . . . . .	12 July, 1875	11	4	1	11	14	115 5 11	4	1,029 13 9	312 19 7	
Canowindra . . . . .	2 Mar, 1885	13	8	1	25	53	112 6 6	9	63 1 6	126 0 9	
Carcoar . . . . .	22 Sept, 1872	108	111	93	126	431	3,654 13 7	199	3,086 17 0	2,607 14 3	
Cauga . . . . .	22 May, 1884	15	10	2	23	20	33 15 4	2	4 7 9	96 1 0	
Carroll . . . . .	1 Mar, 1883	9	2	4	7	5	6 5 8	4	8 16 6	65 12 11	
Casino . . . . .	1 Feb, 1875	55	25	17	63	83	625 17 2	38	731 3 10	993 18 2	
Cassilis . . . . .	1 Sept, 1872	73	11	15	60	71	663 14 0	41	656 6 8	2,909 18 5	
Charlestown . . . . .	1 Aug, 1870	45	21	22	44	136	701 16 0	39	706 1 11	584 10 11	
Chatsworth Island . . . . .	4 June, 1877	35	15	35	65	78	558 4 9	76	1,042 9 0	863 6 7	
Clarence Town . . . . .	8 Oct, 1880	15	8	17	92	92	303 6 4	13	113 5 3	299 9 6	
Clifton . . . . .	12 Jan, 1881	193	150	154	189	644	7,840 4 6	419	7,123 0 0	6,792 0 2	
Cobar . . . . .	2 Sept, 1881	110	97	106	101	589	5,803 17 9	245	5,378 5 8	6,907 3 3	
Cobargo . . . . .	2 Dec, 1878	43	16	12	47	68	230 6 2	38	343 2 8	542 19 4	
Cobbera . . . . .	1 Oct, 1886		2		2	2	0 0 0			0 0 0	
Condobolin . . . . .	2 Dec, 1878	36	33	14	55	86	518 7 9	51	501 4 10	600 6 9	
Coolamon . . . . .	1 Oct, 1886		1		1	2	0 11 10			0 11 10	
Cooma . . . . .	1 Oct, 1871	186	67	61	192	297	2,646 13 2	140	2,187 8 9	3,304 10 1	
Coonabarabran . . . . .	12 July, 1875	66	7	6	67	43	405 0 11	25	371 7 3	816 3 7	
Coonamble . . . . .	8 Oct, 1880	43	25	21	47	79	498 18 0	61	460 4 2	762 6 8	
Coorabong . . . . .	12 July, 1875	58	14	33	39	90	1,270 6 1	91	2,160 2 2	883 5 4	
Cootamundra . . . . .	1 Mar, 1877	217	82	83	216	417	3,803 12 4	250	4,015 6 9	6,413 17 7	
Copeland North . . . . .	1 Mar, 1878	42	19	13	48	48	927 12 11	61	987 7 7	1,064 5 4	
Corowa . . . . .	14 Nov, 1881	106	40	28	118	221	1,385 1 7	64	1,708 4 5	1,798 19 9	
Cow Flat . . . . .	1 Sept, 1874	38	8	8	30	7	95 2 2	24	444 6 4	891 15 0	
Cowra . . . . .		73	61	47	87	198	2,103 12 0	122	1,916 17 1	1,525 9 11	
Crookwell . . . . .	8 Oct, 1880	46	18	17	47	92	314 2 3	27	402 2 2	349 8 7	
Cudal . . . . .	8 Jan, 1885	35	10	13	32	112	443 10 0	46	421 0 6	223 7 10	
Cundletown . . . . .	2 Mar, 1885	10	25	11	24	71	839 19 0	23	648 6 4	304 8 4	
Darlington . . . . .	1 Sept, 1882	163	122	123	160	390	2,251 19 6	349	3,167 4 10	4,487 3 6	
Deniliquin . . . . .	11 Dec, 1871	233	69	63	234	367	2,062 17 0	162	2,493 18 4	4,061 16 2	
Denman . . . . .	1 Jan, 1874	21	3	2	22	6	121 13 1	7	34 18 0	230 15 2	
Dubbo . . . . .	11 Dec, 1871	378	128	135	371	796	7,127 1 4	396	6,820 14 5	11,645 17 8	
Dungog . . . . .	1 Sept, 1874	79	22	23	78	98	713 18 5	41	981 8 1	993 12 8	
East Maitland . . . . .	1 Oct, 1871	100	43	42	101	232	2,101 17 9	124	2,380 1 10	2,380 17 9	
Euabalong . . . . .	1 April, 1880	14	4	4	14	22	173 1 4	8	114 10 9	411 16 9	
Eden . . . . .	1 Jan, 1874	35	7	5	37	27	354 11 7	31	549 1 6	1,117 13 4	
Edgecliff . . . . .	18 Oct, 1886		7		7	7	49 12 4		1 2 0 0	47 2 4	
Emmaville . . . . .	1 Sept, 1874	219	81	72	228	434	5,508 16 3	203	4,913 14 3		

GOVERNMENT (POST OFFICE) SAVINGS BANK—continued

No. 21 (continued) —RETURN showing the NAMES of the various BRANCHES, &c —continued.

Name of Branch	Date of establishment	Number of Accounts open at close of 1885	Number of Accounts opened during 1886	Number of Accounts closed during 1886.	Number of Accounts remaining open at close of 1886	Total Deposits, including Interest		Total Withdrawals		Balance at credit of Depositors at close of 1885		
						Number	Amount	Number	Amount	£	s	d
Glebe	1 Oct, 1871	341	434	236	539	2,491	7,832 4 2	790	5,288 10 3	£	s	d
Glen Innes	1 Sept, 1874	405	143	182	366	825	6,804 9 7	479	8,857 8 0	10,732	7	3
Gongolgon	1 July, 1882	20	1	7	14	23	146 10 9	14	215 6 10	212	9	0
Goonoo Goonoo	"	27	2	6	23	44	185 6 3	14	105 6 10	451	5	9
Gosford	1 Sept, 1874	179	198	158	219	662	6,996 8 0	376	5,444 8 3	5,855	8	3
Goulburn	1 Oct, 1871	590	223	249	569	1,630	12,024 6 10	797	12,442 17 2	16,896	15	10
Grafton	"	122	48	55	115	229	2,293 19 8	166	2,748 14 1	3,523	1	8
Granville	1 Jan, 1880	148	121	99	170	612	2,497 3 10	293	2,087 16 11	2,731	2	3
Grenfell	15 Jan, 1872	94	26	33	87	113	1,010 13 5	74	1,234 0 5	1,748	15	0
Gresford	1 Oct, 1886	"	"	"	"	"	"	"	"	"	"	"
Greta	1 Mar, 1877	65	33	37	61	152	1,244 6 11	75	1,247 4 3	1,478	6	8
Gulgon	15 Jan, 1872	100	22	23	99	146	1,196 6 9	102	1,268 13 5	2,293	15	4
Gundagai	11 Dec, 1871	153	49	90	112	215	2,247 3 11	193	3,530 13 8	2,754	6	8
Gunnedah	12 July, 1875	138	27	43	117	155	1,612 13 1	116	2,935 3 2	3,408	0	1
Gunning	14 Nov, 1881	64	21	15	70	117	636 8 10	51	986 1 9	1,550	4	0
Hamilton	1 Sept, 1883	75	41	38	78	204	897 11 6	86	632 10 9	716	17	8
Harden	"	39	25	20	44	114	849 12 10	63	620 17 7	890	14	7
Harris street	1 Oct, 1871	284	106	135	305	1,855	4,063 15 6	559	4,063 6 7	4,033	9	6
Hartley Vale	1 Jan, 1885	28	44	22	50	158	1,224 4 5	60	644 5 4	1,287	5	5
Harwood Island	1 Oct, 1886	"	"	"	"	"	"	"	"	"	"	"
Hawke's Nest	2 Mar, 1880	10	8	3	15	23	319 19 5	16	98 0 9	221	18	8
Hay	1 June, 1876	332	115	118	329	790	4,681 19 5	282	4,619 3 11	6,097	19	7
Haymarket	1 Mar, 1877	2,900	1,805	1,774	2,981	10,744	77,904 13 1	6,190	80,719 12 9	86,648	6	2
Hexham	1 Feb, 1875	13	5	1	17	30	154 13 2	6	155 11 8	174	5	7
Hill End	1 Jan, 1874	193	29	30	192	282	2,979 18 11	129	1,788 9 9	6,781	3	5
Hillston	1 Jan, 1880	34	16	16	34	51	270 9 10	25	581 17 4	445	2	9
Homebush	2 Sept, 1881	25	24	15	34	134	430 16 7	56	377 15 6	342	11	0
Home Rule	1 Jan, 1874	34	12	7	39	52	435 16 1	32	409 10 5	768	10	10
Howlong	1 Oct, 1886	"	"	"	"	"	"	"	"	"	"	"
Hunters Hill	"	"	"	"	"	"	"	"	"	"	"	"
Inverell	1 Sept, 1874	161	54	36	179	236	1,736 1 4	88	1,565 13 5	2,560	10	3
Ivanhoe	22 May, 1884	10	10	7	13	52	297 18 8	8	113 5 10	216	3	9
Jamberoo	11 Aug, 1884	12	9	1	20	26	224 13 8	8	64 5 0	240	0	5
Jereldene	1 Oct, 1886	"	"	"	"	"	"	"	"	"	"	"
Jerry's Plains	"	"	"	"	"	"	"	"	"	"	"	"
Jindera	1 Jan, 1885	13	4	4	13	27	111 13 3	7	39 1 3	166	3	8
Joadja Creek	22 May, 1884	29	45	26	48	169	1,343 2 2	80	677 19 4	1,769	5	7
Juncie Junction	1 July, 1882	80	60	36	104	288	2,017 18 7	121	2,017 5 11	2,217	2	3
Kangaroo Valley	22 May, 1884	21	18	7	32	73	182 5 10	6	19 15 3	322	18	0
Katoomba	1 Jan, 1885	28	68	50	46	245	1,757 5 0	104	1,369 4 9	796	14	0
Kempsey	1 Feb, 1875	78	42	39	81	200	1,161 1 5	76	1,570 3 2	1,837	17	6
Kiama	1 Oct, 1871	203	195	165	283	903	5,811 13 9	431	4,975 18 4	5,868	1	11
Kiandra	1 Sept, 1883	23	9	8	24	31	175 14 3	15	95 9 1	270	7	8
King street	1 Mar, 1878	391	318	323	386	1,878	11,571 0 8	1,007	10,558 2 10	11,462	19	4
Lake Cudgellico	2 Sept, 1881	6	1	4	3	4	69 17 10	5	144 4 4	164	11	11
Lambton	1 Sept, 1874	239	75	119	195	349	3,038 10 4	314	4,915 12 6	4,627	3	2
Lawrence	22 May, 1884	17	5	8	14	20	139 8 1	19	208 16 3	246	9	6
Leichhardt	15 June, 1882	210	100	104	261	876	2,861 2 0	341	2,187 10 5	2,062	9	3
Lidsdale	12 July, 1875	44	4	9	39	41	320 8 8	34	775 11 11	1,450	9	5
Lismore	"	161	62	44	179	312	2,059 8 5	185	1,848 10 11	2,731	12	0
Lithgow	2 Dec, 1878	365	124	123	366	704	6,890 14 5	483	7,308 19 10	11,512	2	4
Liverpool	1 Oct, 1871	283	99	115	267	743	4,898 2 9	419	6,240 7 11	7,689	17	8
Lochinvar	12 July, 1870	20	4	4	17	30	216 0 3	13	323 3 5	227	19	9
Lower Gundaroo	1 Dec, 1881	26	4	4	26	32	216 1 3	13	242 3 7	650	2	7
Macdonaldtown	1 Mar, 1882	63	32	30	70	255	285 17 8	103	434 9 4	193	16	5
Maclean	1 Sept, 1881	141	68	84	125	325	2,589 3 1	190	2,808 4 5	3,461	7	2
Major's Creek	1 Sept, 1875	104	13	32	85	158	723 5 0	76	1,221 9 9	1,903	19	2
Manilla	2 Sept, 1881	54	13	20	47	112	757 15 4	49	849 11 5	678	10	3
Manly	1 Feb, 1875	173	183	123	238	961	3,920 8 0	367	2,684 19 6	3,295	8	3
Marong	1 July, 1882	23	7	3	27	32	326 15 10	12	144 13 5	424	6	0
Marrickville	1 Mar, 1882	121	109	62	168	578	2,454 1 1	271	2,186 15 8	2,207	15	0
Marsdens	22 May, 1884	30	22	10	42	72	521 13 2	21	391 1 4	442	2	5
Marulan	10 April, 1875	40	5	4	41	26	324 8 8	12	197 14 9	748	15	3
Maryvale	1 Mar, 1883	12	2	4	10	13	118 8 2	8	85 4 6	98	0	5
Meranburn	1 July, 1882	19	1	4	16	14	85 12 11	14	90 4 1	96	1	11
Merimbula	1 Jan, 1874	36	13	9	40	63	352 12 5	28	649 8 5	508	4	1
Merriwa	1 Sept, 1874	28	11	10	29	46	286 14 1	27	264 19 8	504	11	11
Miller's Point	6 Feb, 1878	894	223	232	840	2,186	10,621 12 11	1,130	12,370 2 5	13,408	12	2
Milthorpe	22 Sept, 1879	19	3	4	18	22	119 10 9	23	406 10 0	243	19	8
Milton	1 Jan, 1874	62	17	9	70	69	337 17 10	25	301 0 11	1,180	6	1
Minmi	1 June, 1876	210	101	112	199	536	5,272 16 8	273	5,859 12 2	7,153	14	7
Mitchell	1 Sept, 1876	30	94	62	67	298	2,782 10 8	152	1,748 6 10	1,926	13	5
Mittagong	1 Sept, 1872	206	65	55	216	322	2,328 11 7	175	3,415 12 0	5,921	16	3
Moama	1 Jan, 1881	9	24	4	29	94	387 19 3	17	86 4 1	525	0	1
Mogil Mogil	1 Oct, 1886	"	"	"	"	"	"	"	"	"	"	"
Molong	1 Oct, 1871	113	30	36	107	215	1,060 0 9	122	1,634 17 7	888	5	7
Moree	1 April, 1880	63	19	34	48	83	622 1 7	50	650 5 3	969	1	9
Morpeth	1 Oct, 1871	198	39	38	199	268	1,844 17 7	133	2,710 1 5	5,156	1	4
Moruya	1 Jan, 1874	86	37	27	96	130	1,009 12 10	81	1,973 14 11	1,826	0	3
Mossiel	12 Jan, 1881	25	7	9	23	56	268 10 11	29	379 1 2	385	7	7
Moss Vale	1 Sept, 1876	114	55	34	135	295	1,353 11 1	107	1,480 0 11	2,159	9	10
Mount Hope	1 July, 1882	40	4	19	25	65	229 7 10	30	860 4 8	392	16	10
Mount Macdonald	1 Oct, 1886	"	"	"	"	"	"	"	"	"	"	"
Mount Victoria	1 Aug, 1876	93	22	25	90	195	1,026 14 4	87	1,303 0 2	2,420	0	6
Mudgee	1 Oct, 1871	140	26	26	140	173	1,323 1 9	111	1,258 10 5	3,404	13	2
Mundooran	1 Oct, 1886	"	"	"	"	"	"	"	"	"	"	"
Murrumburrah	1 Mar, 1877	147	33	62	118	249	2,527 17 9	157	3,165 0 10	4,581	12	6
Murrurundi	1 Oct, 1871	175	36	45	166	263	2,143 15 10	136	2,653 8 6	4,536	8	2
Muswellbrook	11 Dec, 1871	168	36	46	158	227	1,358 0 11	116	1,797 12 7	2,978	12	10
Nambucca	1 Oct, 1886	"	"	"	"	"	"	"	"	"	"	"
Narrabri	2 June, 1873	153	51	50	154	289	1,729 2 0	135	1,489 15 4	3,045	14	6
" Railway Station	11 Aug, 1884	14	8	5	17	51	254 12 11	22	266 17 3	343	1	9

STATISTICS, 1886—MONETARY AND FINANCIAL.

GOVERNMENT (POST OFFICE) SAVINGS BANK—continued

No. 21 (continued) —RETURN showing the NAMES of the various BRANCHES, &c—continued.

Name of Branch	Date of establishment	Number of Accounts open at close of 1885	Number of Accounts opened during 1886	Number of Accounts closed during 1886	Number of Accounts remaining open at close of 1886	Total Deposits, including Interest		Total Withdrawals		Balance at credit of Depositors at close of 1886		
						Number	Amount	Number	Amount	£	s	d
Peat's Ferry	22 May, 1884	95	187	174	108	637	£ 5,984	388	5,387	£ 3,279	5	7
Pelican Flat	8 Oct, 1880	36	6	14	28	30	222 19 0	35	228 14 11	607	10	11
Pennith	1 Oct, 1871	266	103	103	266	622	3,882 7 1	304	4,574 1 9	4,852	15	4
Petersham	1 Feb, 1875	210	110	80	240	538	2,488 2 8	287	2,636 10 4	3,140	15	6
Pictou	1 Sept, 1874	219	54	43	230	457	2,368 18 4	164	2,352 2 0	4,489	3	3
Pilliga	2 Sept, 1881	19	3	6	16	26	69 11 8	13	203 12 7	89	10	2
Port Macquarie	11 Dec, 1871	130	36	32	134	159	1,432 13 10	86	1,729 13 1	4,116	4	11
Prospect Reservoir	1 Oct, 1886		93	29	64	142	1,233 6 4	50	367 14 0	865	12	4
Pymont	1 Nov, 1882	343	262	251	304	1,923	7,178 0 7	880	6,544 7 2	7,214	8	6
Queanbeyan	11 Dec, 1871	128	235	258	105	888	9,448 10 11	521	8,434 8 9	6,670	4	8
Quirindi	1 July, 1882	81	29	29	81	224	968 17 10	62	1,122 5 1	1,633	11	1
Randwick	1 Oct, 1886		11		11	27	75 10 7	2	1 15 0	73	15	7
Raymond Terrace	1 Sept, 1872	117	33	35	115	240	1,899 1 2	82	1,989 12 1	2,584	13	2
Redfern	1 Oct, 1871	968	509	472	1,005	3,612	16,230 11 1	1,690	16,364 10 11	20,108	7	5
Richmond	1 Dec, 1871	201	82	62	221	301	1,545 14 4	144	1,336 19 5	2,891	0	8
Robertson	1 July, 1882	26	13	8	31	66	734 6 10	24	379 15 8	667	15	1
Rockley	1 Jan, 1880	40	13	10	43	83	373 10 10	23	330 2 6	642	2	9
Rookwood	12 July, 1875	59	61	35	85	339	1,263 11 5	120	1,035 3 4	1,149	17	9
Rydal	1 Jan, 1874	82	11	6	87	85	657 10 6	48	689 13 2	2,846	2	2
Ryde	1 Feb, 1875	200	86	84	202	561	2,915 17 7	274	3,205 19 6	3,257	14	11
Rylstone	2 June, 1878	82	17	21	78	104	1,520 10 8	82	1,328 0 5	3,458	10	0
Scone	11 Dec, 1871	75	30	15	90	121	1,155 1 10	59	865 17 8	2,244	12	4
Silverton	22 May, 1880	22	81	32	21	144	1,177 10 4	49	1,233 2 10	534	7	9
Singleton	1 Oct, 1871	412	106	83	435	625	5,156 14 4	246	4,604 12 7	8,837	19	4
Sofala	1 Sept, 1874	80	15	8	87	104	1,012 17 11	60	673 7 11	2,336	7	4
South Grafton	1 Mar, 1883	17	14	6	25	52	307 13 4	12	254 5 11	294	3	1
South Woodburn	1 Sept, 1883	30	18	17	31	73	545 3 1	38	627 5 11	466	1	10
Spung Hill	2 Feb, 1885	12	2		13	28	22 6 0	7	21 0 0	7	17	0
St Albans	1 Mar, 1883	8			6		1 0 9	2	22 9 11	8	11	7
St Leonards	1 Feb, 1875	755	399	359	795	2,380	11,188 8 5	1,186	10,634 3 7	10,938	1	11
St Mary's	1 Sept, 1876	59	21	29	51	118	583 7 10	71	1 181 4 0	600	2	6
St Peter's	1 Mar, 1882	67	51	43	75	241	1,324 8 7	137	996 19 6	1,101	15	4
Stanmore Road	1 Oct, 1886		18		17	44	356 9 11	12	65 3 0	291	6	11
Stroud	1 Feb, 1875	67	19	24	62	86	840 10 5	48	1,133 1 9	1,049	2	0
Summer Hill	11 Aug, 1884	17	36	25	28	295	1,405 4 6	50	997 7 11	566	10	2
Surry Hills	15 Sept, 1883	245	238	185	298	1,649	5,889 4 0	612	4,320 17 11	3,993	7	1
Tamworth	11 Dec, 1871	488	105	184	469	902	7,245 7 4	527	9,959 15 6	15,745	0	1
Tarago	22 May, 1884	22	9	6	25	54	342 12 3	24	482 7 7	332	16	10
Taree	1 Feb, 1875	117	29	29	117	176	1,120 9 2	83	990 18 11	2,298	0	2
Temora	8 Oct, 1880	118	44	58	104	228	1,884 11 1	179	3,072 12 3	2,471	7	0
Tenterfield	1 Sept, 1874	229	88	117	195	360	5,058 17 3	246	6,573 9 2	6,823	16	8
Terara	1 Sept, 1872	103	16	21	98	91	588 4 1	52	607 6 0	1,774	4	10
Tingha	1 July, 1875	41	17	7	51	87	769 15 1	23	281 9 5	1,926	13	4
Trunkay Creek	1 Feb, 1875	34	10	7	37	108	374 16 11	30	228 13 9	1,015	11	2
Tumbulgum	1 Sept, 1874	59	26	24	55	66	982 11 0	35	578 16 8	1,443	12	1
Tumut	1 Feb, 1875	103	12	37	83	107	593 10 2	67	673 15 10	1,060	4	11
Ulladulla	1 Sept, 1872	13			13	17	99 10 4	1	4 0 0	320	9	10
Ulmara	12 July, 1875	32	20	11	41	70	493 18 4	28	433 6 4	534	1	1
Ultimo	8 Aug, 1882	241	182	184	239	1,312	3,064 17 0	504	3,222 9 1	2,502	0	11
Upper North Creek	12 Jan, 1881	14			13	1	5 5 11	2	8 7 5	8	17	3
Uralla	1 Mar, 1878	114	24	30	108	220	1,601 2 3	106	2,236 19 5	2,934	19	3
Urana	1 Sept, 1883	34	11	12	33	47	421 1 3	30	402 3 3	302	16	10
Wagga Wagga	11 Dec, 1871	561	185	220	526	1,297	9,115 4 7	666	10,290 17 11	12,173	13	6
Walcha	2 Sept, 1881	84	37	14	107	177	582 12 4	26	396 11 10	1,475	11	10
Walcha Road	1 Oct, 1886		5		4	12	69 16 2	1	6 0 0	63	16	2
Walgett	8 Oct, 1880	81	24	24	82	87	749 13 4	73	1,317 13 0	570	4	6
Wallendbeen	1 Oct, 1886		4		3	9	41 17 8	2	15 15 0	26	2	8
Wallsend	1 Sept, 1874	393	181	202	372	1,086	7,252 10 9	496	8,318 16 4	8,342	15	1
Wauatah	11 Dec, 1871	73	30	33	70	130	982 14 4	79	1,320 12 2	820	16	0
Wardell	1 Jan, 1876	87	24	35	76	99	518 19 3	96	1,437 10 5	1,894	13	0
Warialda	1 Sept, 1874	48	10	12	46	62	367 15 1	34	513 9 3	902	3	4
Warren	1 July, 1882	56	23	21	57	133	446 12 5	43	616 15 11	726	9	9
Waterloo	25 June, 1883	337	251	267	321	2,244	7,047 13 8	944	6,255 4 5	5,531	1	11
Watson's Bay	1 Feb, 1875	50	7	14	43	68	295 8 7	37	419 9 2	383	16	11
Waverley	1 Aug, 1876	347	202	167	382	1,438	5,728 8 5	509	4,917 8 7	6,292	5	5
Wee Waa	11 Dec, 1871	46	1	11	36	8	122 8 9	10	105 1 8	1,257	5	0
Wellington	2 June, 1883	155	60	56	159	408	2,893 10 8	198	2,982 12 1	3,797	6	9
Wentworth	1 Mar, 1878	80	35	36	79	149	944 18 4	59	976 12 5	1,264	4	4
West Kempsey	1 Sept, 1874	89	24	25	88	137	623 15 4	81	929 2 7	1,343	12	1
West Maitland	1 Oct, 1871	315	169	123	361	987	6,443 6 3	470	5,497 12 8	8,648	5	6
West Tamworth	5 May, 1879	35	17	18	34	94	608 11 10	29	455 4 9	672	9	6
Whitton	22 Mar, 1884	37	27	16	48	142	666 10 10	35	436 14 0	670	5	5
Wickham		97	72	55	114	476	2,455 0 1	137	1,790 1 9	1,794	8	10
Wilcannia	5 May, 1879	91	54	50	95	239	1,756 6 3	84	1,292 12 2	1,887	2	5
Willanthry	2 Sept, 1881	5	1	3	3	11	150 16 2	5	44 10 4	154	7	6
William street	11 Aug, 1873	1,630	636	643	1,623	4,808	23,651 8 6	2,283	24,948 2 5	32,550	19	1
Windsor	1 Oct, 1871	83	27	30	85	163	1,022 2 6	83	1,100 4 1	2,209	13	3
Wingham	11 Dec, 1871	75	13	11	77	80	477 12 11	39	540 14 0	625	7	11
Wiseman's Ferry	1 July, 1882	46	8	7	47	158	512 18 9	23	514 3 10	873	19	5
Wollombi	11 Dec, 1871	42	10	6	46	47	383 1 2	19	343 7 11	1,401	3	1
Wollongong	1 Oct, 1871	308	252	233	327	1,059	9,306 8 1	641	8,364 5 7	10,654	14	0
Wolumla	1 Oct, 1886		4		4	8	52 3 4			52	3	4
Woodburn	5 May, 1879	24	12	12	24	37	284 14 6	34	314 0 3	382	17	1
Woodlaha	8 Feb, 1872	266	147	103	310	912	3,514 5 2	352	2,661 14 8	3,801	0	11
Woonona	11 Dec, 1871	84	15	21	78	106	1,079 5 0	62	1,501 7 0	3,023	19	8
Yass	8 Sept, 1872	221	50	55	216	323	1,576 7 4	188	1,854 3 6	3,254	4	1
Young	11 Dec, 1871	424	159	192	391	664	5,846 13 7	517	7,552 6 5	9,236	17	7
Grand Totals		57,538	27,874	20,846	59,566	167,161	1,123,966 10 11	87,169	1,172,555 5 4	1,423,305 7 6		

GOVERNMENT (POST OFFICE) SAVINGS BANKS—*continued.*  
 No. 22.—AMOUNT of DEPOSITS, ACCOUNTS OPENED, &c., in each year, 1877-86.

Year.	Number of Accounts opened during year.	Number of Accounts closed during year.	Number of Accounts remaining open at close of year.	Total Deposits (including Interest).		Total Withdrawals.		Balance at credit of Depositors at close of year.	Year.
				Number.	Amount.	Number.	Amount.		
1877 ... ..	8,268	5,462	16,076	47,948	£    s.    d. 344,687 4 8	17,871	£    s.    d. 278,532 5 7	£    s.    d. 467,452 10 10	1877
1878 ... ..	9,853	6,961	18,957	59,932	377,704 8 4	22,596	365,132 1 9	480,024 17 5	1878
1879 ... ..	10,780	8,170	21,567	67,444	411,316 4 0	27,612	379,983 18 6	511,357 2 11	1879
1880 ... ..	12,229	9,194	24,602	76,402	476,869 13 11	30,342	401,730 15 10	586,496 3 0	1880
1881 ... ..	17,516	10,266	31,852	98,270	860,702 3 7	35,159	475,696 19 9	971,501 6 10	1881
1882 ... ..	20,968	13,967	38,853	121,868	930,263 10 11	48,443	743,310 14 5	1,158,454 3 9	1882
1883 ... ..	25,009	18,141	45,721	147,627	974,003 8 8	59,475	948,938 8 3	1,183,519 3 9	1883
1884 ... ..	27,449	21,771	51,399	156,578	1,076,899 5 11	71,532	969,487 3 0	1,290,931 6 8	1884
1885 ... ..	29,135	22,986	57,538	170,750	1,201,776 7 4	75,600	1,020,813 12 0	1,471,894 1 11	1885
1886 ... ..	27,874	25,846	59,566	167,161	1,123,966 10 11	87,169	1,172,555 5 4	1,423,305 7 6	1886

## ACCUMULATION AND EXCHANGE.

**No. 23.**—STATEMENT showing DISCOUNTS, EXCHANGE, INTEREST, &c., allowed by BANKS within the Colony, also COIN and BULLION in STORE, and NOTES in CIRCULATION.

Banks.	Discount on Local Bills. Rate per cent. per annum.			Rate of Exchange on Bills on London at 60 days' sight.				Interest allowed to Depositors. Rate per cent. per Annum on Fixed Deposits for			Coin in Store.		Bullion in Store.		Notes in Circulation.	
	Currency.			Purchase Rate.		Selling Rate.		3 months	6 months	12 months	On 31 December, 1886.	Average of the Year.	On 31 December, 1886.	Average of the Year.	On 31 Dec. 1886.	Average of the Year.
	Under 3 months.	From 3 to 4 months.	Over 4 months.	Maximum.	Minimum.	Maximum.	Minimum.									
New South Wales.....	6 and 7	7 and 8	8 and 9	1% disc.	1% disc.	1% prem.	1% prem.	3 and 4	4 and 5	5 and 6	£ 713,308 6 4	s. d. 840,642 9 8	£ 41,033 16 10	s. d. 36,475 12 9	£ 339,224	£ 346,251
Commercial.....	6 and 7	7 and 8	8 and 9	1% disc.	1% disc.	1% prem.	1% prem.	3 and 4	4 and 5	5 and 6	£ 1,284,851 7 8	s. d. 852,707 8 4	£ 10,084 0 3	s. d. 8,935 7 1	£ 459,509	£ 430,231
Australasia.....	6 and 7	7 and 8	8 and 9	1% disc.	1% disc.	1% prem.	1% prem.	3 and 4	4 and 5	5 and 6	£ 327,906 12 10	s. d. 337,210 1 10	£ 2,016 4 7	s. d. 3,929 1 8	£ 136,575	£ 139,863
Union.....	6 and 7	7 and 8	8 and 9	1% disc.	1% disc.	1% prem.	1% prem.	3 and 4	4 and 5	5 and 6	£ 241,267 10 4	s. d. 474,613 18 0	Nil.	s. d. 648 16 1	£ 58,922	£ 54,847
Joint Stock.....	6½ to 8	7½ to 9	8 and 9	1% disc.	1% disc.	1% prem.	1% prem.	3 and 4	4 and 5	5 and 6	£ 603,721 8 6	s. d. 382,903 15 7	£ 4,207 4 9	s. d. 13,903 16 10	£ 416,863	£ 348,852
London Chartered.....	6 and 7	7 and 8	8 and 9	1% disc.	1% disc.	1% prem.	1% prem.	3 and 4	4 and 5	5 and 6	£ 145,697 10 1	s. d. 128,106 6 5	£ 1,061 8 7	s. d. 258 6 8	£ 41,794	£ 35,662
English, Scottish, & Australian Chartered City.....	6 and 7	7 and 8	8 and 9	1% disc.	1% disc.	1% prem.	1% prem.	3 and 4	4 and 5	5 and 6	£ 236,271 9 8	s. d. 188,591 16 3	Nil.	s. d. Nil.	£ 113,562	£ 111,349
Mercantile.....	6 and 7	7 and 8	8 and 9	1% disc.	1% disc.	1% prem.	1% prem.	3 and 4	4 and 5	5 and 6	£ 355,408 2 9	s. d. 188,608 1 5	£ 1,419 10 0	s. d. 577 11 4	£ 52,135	£ 55,056
New Zealand.....	7	8	9	1% disc.	1% disc.	1% prem.	1% prem.	3 and 4	4 and 5	5 & 6	£ 150,796 11 10	s. d. 115,169 1 3	Nil.	s. d. Nil.	£ 43,678	£ 37,019
Federal.....	6 and 7	7 and 8	8 and 9	1% disc.	1% disc.	1% prem.	1% prem.	3 and 4	4 and 5	5 and 6	£ 84,130 18 5	s. d. 111,022 2 4	£ 21,300 10 0	s. d. 4,376 16 11	£ 50,836	£ 47,565
Queensland National.....	6 and 7	7 and 8	8 and 9	1% disc.	1% disc.	1% prem.	1% prem.	4 and 4	5 and 5	6 and 6	£ 19,756 9 3	s. d. 42,963 0 0	Nil.	s. d. Nil.	£ 12,451	£ 12,008
Commercial of Australia.....	6 and 7	7 and 8	8 and 9	1% disc.	1% disc.	1% prem.	1% prem.	3 and 4	4 and 5	5 and 6	£ 151,159 1 0	s. d. 124,199 2 2	Nil.	s. d. Nil.	£ Nil.	£ Nil.
National of Australasia.....	6 and 7	7 and 8	8 and 9	1% disc.	1% disc.	1% prem.	1% prem.	3 and 4	4 and 5	5 and 6	£ 52,504 6 5	s. d. 52,149 5 5	Nil.	s. d. Nil.	£ 5,856	£ 5,202
	6 to 8	7 to 9	8 and 9	par.	1% disc.	1% prem.	par.	3 to 4	4 to 5	5 to 6	£ 4,439,742 6 2	s. d. 3,885,935 8 8	£ 81,122 15 0	s. d. 69,105 9 4	£ 1,722,405	£ 1,623,905

**No 24.**—STATEMENT showing DISCOUNT, EXCHANGE, INTEREST, &c., allowed by BANKS, also COIN and BULLION in STORE, and NOTES in CIRCULATION for the years 1876-86.

Period.	Discount on Local Bills. Rate per cent. per Annum.			Rate of Exchange on Bills on London at 60 days' sight.				Interest allowed to Depositors. Rate per cent. per Annum on Fixed Deposits for			Coin in Store.		Bullion in Store.		Notes in Circulation.	
	Currency.			Purchase Rate.		Selling Rate.		3 months.	6 months.	12 months.	On 31 December.	Average of the Year.	On 31 December.	Average of the Year.	On 31 Dec.	Average of the Year.
	Under 3 months.	From 3 to 4 months.	Over 4 months.	Maximum.	Minimum.	Maximum.	Minimum.									
1876	6 and 7	8	9	par.	1% disc.	2% prem.	1% prem.	3	4	5	£ 2,732,103 19 0	s. d. 2,828,506 0 3	£ 62,051 8 6	s. d. 87,063 11 0	£ 1,220,556	£ 1,094,003
1877	6 and 7	8	8 and 9	1% prem.	1% disc.	1% prem.	1% prem.	3	4	5	£ 2,435,126 5 4	s. d. 2,625,806 2 5	£ 106,023 2 4	s. d. 84,356 16 3	£ 1,242,081	£ 1,129,249
1878	6 to 8	8 to 10	8 to 10	1% prem.	1% disc.	1% prem.	1% prem.	3 to 5	4 to 6	5 to 6½	£ 2,227,114 10 2	s. d. 2,261,850 16 10	£ 39,154 4 2	s. d. 86,388 13 8	£ 1,238,350	£ 1,165,745
1879	7	8	9	1% prem.	1% disc.	1% prem.	1% prem.	4 to 5	5 to 6	6 to 7	£ 3,102,345 9 2	s. d. 2,487,165 8 1	£ 40,285 8 9	s. d. 84,254 12 0	£ 1,228,056	£ 1,123,117
1880	6 and 7	7 and 8	8 and 9	1% prem.	1% disc.	2% prem.	1% prem.	2 to 4	3 to 5	4 to 6	£ 3,637,568 9 1	s. d. 3,359,663 9 10	£ 54,412 8 1	s. d. 73,483 13 1	£ 1,361,206	£ 1,173,663
1881	5 and 6	6 and 7	7 and 8	1% prem.	1% disc.	1% prem.	1% prem.	2	2½ to 3	3 to 4	£ 2,885,890 0 5	s. d. 3,369,028 1 8	£ 97,273 6 3	s. d. 79,814 11 11	£ 1,669,101	£ 1,388,772
1882	5 and 6	6 to 8	7 to 10	1% prem.	1% disc.	2% prem.	1% prem.	2 to 4	3 to 5	4 to 6	£ 2,672,799 5 5	s. d. 2,825,337 13 7	£ 157,036 9 6	s. d. 74,336 6 8	£ 1,764,222	£ 1,632,614
1883	7 and 8	7 to 9	8 to 10	par.	1% disc.	1% prem.	1% prem.	4 to 5	5 to 6	5½ to 6½	£ 2,861,979 16 2	s. d. 2,805,535 13 10	£ 46,397 4 9	s. d. 78,762 10 2	£ 1,812,336	£ 1,680,472
1884	6 to 8	7 to 9	8 to 10	par.	1% disc.	1% prem.	par.	3 to 4	4 to 5	5 to 6	£ 3,863,872 14 7	s. d. 3,550,942 7 8	£ 46,753 8 8	s. d. 58,420 17 1	£ 1,720,234	£ 1,628,364
1885	6 and 7	7 and 8	8 and 9	par.	1% disc.	1% prem.	par.	3	4	5	£ 4,069,840 9 10	s. d. 4,269,105 4 4	£ 57,097 18 1	s. d. 1,921,072 4 10	£ 62,041 4 10	£ 1,755,933
1886	6 to 8	7 to 9	8 and 9	par.	1% disc.	1% prem.	par.	3 and 4	4 and 5	5 and 6	£ 4,439,742 6 2	s. d. 3,885,935 8 8	£ 81,122 15 0	s. d. 69,105 9 4	£ 1,722,405	£ 1,623,905

ACCUMULATION AND EXCHANGE--continued.

No. 25.—AMOUNT of MONEY on DEPOSIT in Banks of the Colony during the quarter ended 31st December in each Year, from 1871 to 1886, with rate per head.

Year	Banks.	Savings Banks.	Post Office Banks	Total.	Amount per head of Population.
1871	7,043,886	931,688	14,227	7,989,801	£ s. d. 15 8 7
1872	9,273,087	1,028,738	80,688	10,382,513	19 7 11
1873	10,279,324	1,164,561	206,070	11,049,955	21 0 8
1874	11,884,958	1,275,902	303,113	13,463,973	23 8 4
1875	13,650,892	1,295,797	354,075	15,300,764	25 14 11
1876	14,859,505	1,303,813	400,120	16,563,438	26 19 4
1877	16,325,043	1,355,258	467,453	18,147,754	28 3 10
1878	16,722,453	1,333,017	480,025	18,535,495	28 11 8
1879	17,862,840	1,410,905	511,357	19,784,102	28 1 8
1880	17,883,024	1,489,360	586,496	19,958,880	26 18 0
1881	20,308,017	1,427,202	971,501	22,706,720	29 3 2
1882	22,544,549	1,856,641	1,158,454	25,559,644	31 10 6
1883	23,739,134	1,822,319	1,183,519	26,744,972	31 3 7
1884	26,250,420	1,887,349	1,290,931	29,428,700	32 11 1
1885	26,709,386	2,016,656	1,471,894	30,197,936	31 10 6
1886	28,428,253	2,081,498	1,423,305	31,933,056	31 17 5

No. 26.—ESTIMATE of the COIN in CIRCULATION and in the BANKS on 31st December during each year from 1855 to 1886.

Year.	In Private Hands.				In the Banks.				Total.				Year.
	Gold.	Silver.	Bronze.	Total.	Gold.	Silver.	Bronze.	Total.	Gold.	Silver.	Bronze.	Total.	
1855	£	£	£	£	£	£	£	£	£	£	£	£	1855
1856	.....	.....	..	570,315	..	..	..	1,549,398	1,916,995	202,718	...	2,119,713	1856
1857	.....	.....	..	1,559,815	..	..	..	1,701,754	3,118,851	202,718	...	3,321,569	1857
1858	.....	.....	..	1,925,661	..	..	..	1,248,482	2,972,152	201,991	...	3,174,143	1858
1859	.....	.....	..	1,381,865	..	..	..	1,721,789	2,903,901	199,753	...	3,103,654	1859
1860	.....	.....	..	1,442,449	..	..	..	1,380,543	2,636,293	186,699	...	2,822,992	1860
1861	.....	.....	..	1,456,052	..	..	..	1,490,561	2,765,623	180,990	...	2,946,613	1861
1862	.....	.....	..	1,617,997	..	..	..	1,329,722	2,766,251	181,088	380	2,947,719	1862
1863	.....	.....	..	1,723,480	..	..	..	1,239,636	2,776,587	186,350	179	2,963,116	1863
1864	.....	.....	..	1,820,858	..	..	..	962,426	2,596,695	186,059	530	2,783,284	1864
1865	.....	.....	..	1,881,644	..	..	..	1,144,117	2,841,061	183,579	1,118	3,025,761	1865
1866	.....	.....	..	1,781,073	..	..	..	1,228,450	2,829,690	178,820	1,013	3,009,523	1866
1867	.....	.....	..	1,939,057	..	..	..	1,259,150	3,007,353	189,841	1,013	3,198,207	1867
1868	.....	.....	..	1,843,863	..	..	..	1,708,536	3,367,410	183,426	1,563	3,552,399	1868
1869	.....	.....	..	1,890,280	..	..	..	2,224,269	3,925,310	178,561	10,678	4,114,549	1869
1870	.....	.....	..	1,902,506	..	..	..	1,305,790	3,024,698	172,969	10,629	3,208,296	1870
1871	.....	.....	..	1,960,344	..	..	..	1,352,842	3,123,901	178,922	10,363	3,313,186	1871
1872	.....	.....	..	2,004,036	..	..	..	2,413,144	4,218,288	188,273	10,619	4,417,180	1872
1873	.....	.....	..	2,075,516	..	..	..	2,693,154	4,537,926	200,378	10,396	4,768,700	1873
1874	.....	.....	..	2,191,794	..	..	..	1,970,075	3,961,141	189,530	11,197	4,161,869	1874
1875	.....	.....	..	2,279,316	..	..	..	2,283,353	4,326,262	225,340	11,067	4,562,669	1875
1876	.....	.....	..	2,179,326	..	..	..	2,525,608	4,480,031	209,471	15,522	4,705,024	1876
1877	.....	.....	..	2,191,945	..	..	..	2,732,104	4,658,160	250,533	15,356	4,924,049	1877
1878	.....	.....	..	2,394,750	..	..	..	2,435,126	4,527,870	285,310	16,696	4,829,876	1878
1879	2,179,134	171,730	15,967	2,366,831	2,125,185	100,206	1,724	2,227,115	4,304,319	271,936	17,691	4,593,946	1879
1880	2,226,371	174,373	16,633	2,417,377	2,967,427	132,860	2,058	3,102,345	5,193,798	307,233	18,691	5,519,722	1880
1881	2,391,118	197,657	16,595	2,605,370	3,499,257	136,220	2,091	3,637,568	5,890,375	333,877	18,686	6,242,938	1881
1882	2,875,320	211,131	17,946	3,104,397	2,748,350	136,501	1,039	2,885,890	5,623,670	347,632	18,985	5,990,287	1882
1883	2,877,548	231,838	19,029	3,128,415	2,538,615	132,712	1,472	2,672,799	5,416,163	364,550	20,501	5,801,214	1883
1884	2,717,214	251,217	20,706	2,989,137	2,710,230	150,658	1,092	2,861,980	5,427,444	401,875	21,798	5,851,117	1884
1885	2,707,510	259,658	21,576	2,988,744	3,689,539	173,017	1,317	3,863,873	6,397,049	432,675	22,893	6,852,617	1885
1886	2,923,743	302,721	23,618	3,250,082	3,882,103	185,642	2,095	4,069,840	6,805,846	488,363	25,713	7,319,922	1886
1886	3,027,220	309,857	24,827	3,361,904	4,230,792	206,488	2,462	4,439,742	7,258,012	516,345	27,289	7,801,646	1886

No. 27.—COIN in CIRCULATION and in BANKS with AVERAGE PER HEAD OF POPULATION at the close of each year from 1870 to 1886.

Year.	Coin in Banks	Average	Coin in Private Hands.	Average.	Total in Banks and in Private Hands.	Average.
1870	£	£ s. d.	£	£ s. d.	£	£ s. d.
1870	1,352,842	2 15 2	1,960,344	4 0 0	3,313,186	6 15 2
1871	2,413,144	4 15 0	2,004,036	3 18 10	4,417,180	8 13 10
1872	2,693,154	5 2 4	2,075,546	3 18 7	4,768,700	9 0 11
1873	1,970,075	3 12 5	2,191,794	4 0 6	4,161,869	7 12 11
1874	2,283,353	4 1 0	2,279,316	4 0 10	4,562,669	8 1 10
1875	2,525,698	4 6 5	2,179,326	3 14 7	4,705,024	8 1 0
1876	2,732,104	4 10 5	2,191,945	3 12 7	4,924,049	8 3 0
1877	2,435,126	3 17 5	2,394,750	3 16 2	4,829,876	7 13 7
1878	2,227,115	3 1 10	2,366,831	3 12 0	4,593,946	6 13 10
1879	3,102,345	4 9 10	2,417,377	3 10 0	5,519,722	7 19 10
1880	3,637,568	5 0 3	2,605,370	3 11 9	6,242,938	8 12 0
1881	2,885,890	3 16 0	3,104,397	4 1 7	5,990,287	7 17 7
1882	2,672,799	3 7 2	3,128,415	3 18 9	5,801,214	7 5 11
1883	2,861,980	3 12 7	2,989,137	3 11 7	5,851,117	7 4 2
1884	3,863,873	4 7 10	2,988,744	3 7 9	6,852,617	7 15 7
1885	4,069,840	4 7 5	3,250,082	3 9 9	7,319,922	7 17 2
1886	4,439,742	4 8 7	3,361,904	3 7 1	7,801,646	7 15 8

## STATISTICS, 1886—MONETARY AND FINANCIAL.

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ACCUMULATION AND EXCHANGE—*continued.*

No. 28.—AMOUNT OF COIN and BULLION in the BRANCH ROYAL MINT and the BANKS on 31st December in each year, from 1876 to 1886.

Year.	Branch Royal Mint.		Banks.		Total.	Increase on previous Year.	Decrease on previous Year.
	Coin.	Bullion.	Coin.	Bullion.			
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1876	100 0 0	85,161 10 11	2,732,103 19 0	62,051 8 6	2,879,416 18 5	174,408 4 11	.....
1877	100 0 0	34,170 11 6	2,435,126 5 4	106,023 2 4	2,575,419 19 2	.....	303,996 19 3
1878	90 0 0	15,441 18 3	2,227,114 10 2	39,154 4 2	2,281,800 12 7	.....	293,619 6 7
1879	.....	34,952 13 6	3,102,345 9 2	40,285 8 9	3,177,583 11 5	895,782 18 10	.....
1880	.....	16,599 11 2	3,637,568 9 1	54,412 8 1	3,708,580 8 4	530,996 16 11	.....
1881	.....	12,377 7 7	2,885,890 0 5	97,273 6 3	2,995,540 14 3	.....	713,039 14 1
1882	.....	9,270 13 8	2,672,799 5 5	157,036 9 6	2,839,106 8 7	.....	156,434 5 8
1883	.....	12,388 11 2	2,861,979 16 2	46,397 4 9	2,920,765 12 1	81,659 3 6	.....
1884	.....	50,460 7 8	3,863,872 14 7	46,753 8 8	3,961,086 10 11	1,040,320 18 10	.....
1885	.....	17,377 6 4	4,069,840 9 10	57,697 18 1	4,144,915 14 3	183,829 3 4	.....
1886	.....	11,599 5 3	4,439,742 6 2	81,122 15 0	4,532,464 6 5	387,548 12 2	.....

No. 29.—THE COINS in CIRCULATION are those of the United Kingdom, as follows:—

Denomination of Coin.	Standard Weight.	Least current Weight.	Standard Fineness.
	Imperial grains	Imperial grains	
Gold ..... { Sovereign .....	123'27447	122'50000	} Eleven-twelfths fine gold, one-twelfth alloy, or decimal fineness '91666.
Half-sovereign .....	61'63723	61'12500	
Silver..... {	Crown .....	436'36363	} Thirty-seven-fortieths fine silver, three-fortieths alloy, or decimal fineness '925.
	Half-crown .....	218'18181	
	Florin .....	174'54545	
	Shilling .....	87'27272	
Bronze ... {	Sixpence .....	43'63636	} Mixed metal, copper, tin, and zinc.
	Threepence .....	21'81818	
	Penny .....	145'83333	
Halfpenny .....	87'50000		

Gold coins are legal tender for a payment of any amount, Silver for an amount not exceeding forty shillings, and Bronze one shilling.

No. 30.—RATES OF INTEREST allowed to DEPOSITORS by the BANKS IN NEW SOUTH WALES, during the year 1886.

Institutions.	Period.		Rate of Interest allowed		
	From	To	For 3 Months.	For 6 Months.	For 12 Months.
			per cent.	per cent.	per cent.
Banks..... {	January... .	June .....	3	4	5
	June .....	December .	4	5	6
*New South Wales Savings Bank .....	January... .	„ .....	5	5	5
†Government Savings Bank (Post Office) .....	„ .....	„ .....	4	4	4
Building Societies .....	„ .....	„ .....	5	6	7

\* See Tables Nos 15 to 19

† See Table No 20



ACCUMULATION AND EXCHANGE—*continued.*

## No. 31.—ACCOUNTS, WEIGHTS, and MEASURES.

ACCOUNTS KEPT IN Pounds, Shillings, and Pence.	<b>WEIGHTS.</b> The Weights in use are the Standard Imperial Weights of Great Britain, as regulated by the Act of Council 16 Victoria, No. 34. By this Act, Gold, Silver, Platina, Diamonds, or other Precious Stones, are to be sold by Troy Weight, and Drugs, when sold by retail, may be sold by Apothecaries' Weight.	<b>MEASURES.</b> The Measures in use are the Standard Imperial Measures of Great Britain, as regulated by the Act of Council 16 Victoria No. 34.
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## ROYAL MINT, SYDNEY BRANCH.

## No. 32.—NEW SILVER and BRONZE COIN issued.

Date.	Silver Coin issued.						Bronze Coin issued.		
	Half-crowns.	Florins.	Shillings.	Sixpences.	Threepences.	Total.	Pence.	Half-pence.	Total.
1868 to } 1875 } .....	£	£	£	£	£	£	£	£	£
1876.....	.....	.....	.....	.....	.....	.....	12,620	2,565	15,185
1877.....	.....	.....	.....	.....	.....	.....	815	230	1,045
1878.....	.....	.....	.....	.....	.....	.....	565	205	770
1879.....	17,000	15,972	12,000	3,681	4,647	53,300	680	230	910
1880.....	11,300	6,428	11,900	2,219	3,153	35,000	450	95	545
1881.....	14,600	10,600	12,000	3,600	2,700	43,500	300	410	710
1882.....	12,100	11,300	13,800	1,300	4,000	42,500	1,475	475	1,950
1883.....	11,200	9,300	13,000	2,400	3,700	39,600	1,015	360	1,375
1884.....	15,000	11,800	11,300	4,300	3,800	46,200	1,510	255	1,765
1885.....	11,100	7,200	12,450	5,550	7,600	43,900	2,040	445	2,485
1886.....	2,600	200	5,500	1,450	7,650	17,400	870	225	1,095
Total..... £	94,900	72,800	91,950	24,500	37,250	321,400	22,900	5,670	28,570

## No. 33.—WORN SILVER COIN withdrawn from Circulation.

Year.	Nominal Amount.		Actual Weight.		Net Loss.	
	Value.	Weight.	Before melting.	After melting.	Weight.	Proportional.
1873 to } 1876 } .....	£ s. d.	ounces	ounces	cunces	ounces	per cent.
1877.....	35,082 9 5	127,572'61	109,323'95	109,294'24	18,278'37	14'33
1878.....	6,415 0 0	23,327'27	20,017'36	20,011'90	3,315'37	14'21
1879.....	3,977 3 6	14,462'45	12,356'97	12,353'36	2,109'09	14'58
1880.....	9,324 0 0	33,905'44	29,328'45	29,320'15	4,585'29	13'52
1881.....	14,250 0 0	51,818'18	45,773'71	45,758'35	6,059'83	11'69
1882.....	7,700 0 0	28,000'00	24,596'40	24,578'05	3,421'95	12'22
1883.....	7,840 0 0	28,509'06	25,142'25	25,127'15	3,381'91	11'86
1884.....	6,577 13 0	23,918'67	21,076'85	21,064'80	2,853'87	11'93
1885.....	4,085 0 0	14,854'51	12,993'13	12,981'50	1,873'01	12'61
1886.....	4,530 0 0	16,472'70	14,574'30	14,562'15	1,910'55	11'60
1886.....	4,042 0 0	14,698'14	12,993'22	12,984'45	1,713'69	11'66
Total..... £	103,823 5 11	377,539'03	328,176'59	328,036'10	49,502'93	13'11

ROYAL MINT, SYDNEY BRANCH—continued.

No. 34.—WEIGHT and VALUE of GOLD RECEIVED for COINAGE, VALUE of GOLD COIN and GOLD BULLION ISSUED, and REVENUE DERIVED from MINT CHARGES, &c., from the opening of the Mint, on the 14th May, 1855, to the 31st December, 1886, inclusive.

Year.	Gold received for Coinage.		Gold Coin and Gold Bullion issued.						Revenue.					
	Weight.	Value.	Gold Coin.			Gold Bullion.			Total Value of Gold Coin and Bullion.	From Mint Charges.		From Silver.	From other sources.	Total.
			Sovereigns.	Half-sovereigns.	Total.	Weight.	Value.	On New South Wales Gold.		On Foreign Gold.				
	ozs.	£ s. d.	£	£	£	ozs.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1855 to 1875 ...	10,355,855'80	39,965,835 15 6	36,045,500	1,933,500	37,979,000	484,936'140	1,935,081 2 6	39,914,081 2 6	233,111 7 9	96,661 16 9	15,743 1 9	40,003 12 1	385,519 18 4	
1876 ...	431,905'27	1,605,557 19 8	1,613,000	30,000	1,643,000	2,129'789	8,292 17 4	1,651,292 17 4	3,941 8 10	3,687 10 5	1,179 10 10	1,687 14 1	10,496 4 2	
1877 ...	438,385'50	1,608,248 2 8	1,590,000	.....	1,590,000	1,709'643	6,656 18 7	1,596,656 18 7	3,316 9 11	3,691 11 8	2,612 3 4	1,282 14 9	10,902 19 8	
1878 ...	365,173'89	1,308,898 1 5	1,259,000	63,000	1,322,000	1,584'683	6,276 5 8	1,328,276 5 8	2,944 3 9	2,888 18 11	2,012 3 2	1,964 14 2	9,810 0 0	
1879 ...	394,606'76	1,434,871 3 2	1,366,000	47,000	1,413,000	1,139'438	4,588 8 9	1,417,588 8 9	2,535 12 1	2,961 14 1	2,202 4 1	1,670 0 8	9,369 10 11	
1880 ...	406,291'87	1,487,678 12 10	1,459,000	40,000	1,499,000	152'700	648 12 8	1,499,648 12 8	2,247 11 3	2,371 10 11	3,936 13 8	1,656 16 0	10,212 11 10	
1881 ...	465,584'70	1,702,102 7 2	1,360,000	31,000	1,391,000	78,349'931	306,649 8 9	1,697,649 8 9	2,622 17 4	2,601 4 4	3,631 12 11	1,599 6 10	10,455 1 5	
1882 ...	401,559'69	1,477,134 7 9	1,298,000	26,000	1,324,000	36,127'672	149,008 9 11	1,473,008 9 11	2,520 12 0	2,165 6 2	3,000 15 2	1,300 3 8	8,986 17 0	
1883 ...	374,141'20	1,353,665 9 6	1,108,000	110,000	1,218,000	30,895'460	124,610 4 4	1,342,610 4 4	2,174 15 3	1,733 2 7	2,472 5 11	628 6 9	7,008 10 6	
1884 ...	475,953'41	1,713,843 19 9	1,595,000	.....	1,595,000	16,680'440	70,591 18 1	1,665,591 18 1	1,961 0 0	2,820 0 6	3,203 5 10	581 7 8	8,565 14 0	
1885 ...	422,160'21	1,510,061 10 3	1,486,000	.....	1,486,000	12,048'590	46,978 1 7	1,532,978 1 7	1,785 15 8	2,661 11 10	2,606 11 5	577 8 0	7,631 6 11	
1886 ...	475,166'21	1,712,244 8 5	1,667,000	41,000	1,708,000	241'110	973 2 9	1,708,973 2 9	1,870 16 11	3,080 6 1	2,000 6 9	945 11 10	7,897 1 7	
Total	15,005,884'50	56,880,141 18 1	51,846,500	2,321,500	54,168,000	665,995'596	2,660,355 10 11	56,828,355 10 11	261,032 10 9	127,324 14 3	44,600 14 10	53,897 16 6	486,855 16 4	

No. 35.—COUNTRIES in which GOLD, RECEIVED for COINAGE at the MINT, was produced.

Period.	New South Wales.		Queensland.		New Zealand.		Victoria.		Tasmania.		South Australia.		Other Countries.		Coin.		Total.	
	Weight.	Value.	Weight.	Value.	Weight.	Value.	Weight.	Value.	Weight.	Value.	Weight.	Value.	Weight.	Value.	Weight.	Value.	Weight.	Value.
	ozs.	£	ozs.	£	ozs.	£	ozs.	£	ozs.	£	ozs.	£	ozs.	£	ozs.	£	ozs.	£
1855 to 1875 ...	5,854,449	22,493,389	1,693,969	6,100,405	1,750,261	6,877,753	1,437,453	5,904,855	5,692	21,983	443	1,596	8,118	29,196	37,376	142,217	10,787,761	41,571,394
1876 ...	121,593	459,201	310,247	1,126,315	1,674	4,656	133	226	.....	.....	822	2,807	374	1,327	3,543	13,717	438,385	1,608,248
1877 ...	107,348	382,741	234,723	838,880	16,009	61,439	72	142	27	101	465	1,522	2,593	8,845	3,938	15,226	365,174	1,308,898
1878 ...	106,900	396,353	239,925	848,250	38,146	156,437	65	61	1	4	1,444	5,118	861	467	7,264	28,181	394,607	1,434,871
1879 ...	116,670	434,337	224,144	787,063	63,987	260,733	22	20	109	419	608	2,231	3	9	750	2,866	406,292	1,487,679
1880 ...	145,478	549,918	251,476	876,856	57,804	233,891	19	19	.....	.....	2,786	10,217	.....	.....	8,021	31,202	465,585	1,702,102
1881 ...	129,142	491,240	199,866	698,233	36,888	149,162	91	180	82	326	509	1,830	37	137	34,944	136,027	401,560	1,477,134
1882 ...	121,777	450,766	196,679	679,794	33,764	138,395	11	11	72	282	2,189	7,931	.....	.....	19,649	76,487	374,141	1,353,665
1883 ...	104,933	386,670	310,996	1,094,702	25,789	106,432	88	211	131	510	13,619	49,549	80	173	19,419	75,596	475,053	1,713,844
1884 ...	93,990	340,802	300,108	1,063,808	1,561	4,726	60	239	31	126	10,458	38,299	92	340	15,860	61,722	422,160	1,510,062
1885 ...	91,855	330,779	329,357	1,169,128	34,519	139,615	80	110	12	46	8,581	30,704	302	1,142	40,719	475,166	1,712,244	
Total	6,994,135	26,716,196	4,291,490	15,283,436	2,060,402	8,133,239	1,438,095	5,906,075	6,156	23,797	41,924	151,803	12,459	41,637	161,223	623,960	15,005,884	56,880,142

STATISTICS, 1886—MONETARY AND FINANCIAL.

ROYAL MINT, SYDNEY BRANCH—*continued.*

## No. 36.—ESTIMATES OF GOLD, the PRODUCE OF AUSTRALASIA and NEW ZEALAND, 1851-86.

	New South Wales. <sup>a</sup>		New Zealand. <sup>b</sup>		Queensland. <sup>c</sup>		South Australia. <sup>d</sup>		Tasmania. <sup>e</sup>		Victoria. <sup>f</sup>		Total.	
	Weight.	Value.	Weight.	Value.	Weight.	Value.	Weight.	Value.	Weight.	Value.	Weight.	Value.	Weight.	Value.
	oz.	£	oz.	£	oz.	£	oz.	£	oz.	£	oz.	£	oz.	£
1851 to 1875 .....	8,415,572	31,175,174	7,955,344	30,987,723	1,889,458	6,940,406	24,687	87,695	28,802	111,786	45,509,964	182,039,854	63,823,827	251,342,638
1876 .....	155,166	581,689	318,367	1,268,559	374,776	1,427,929	9,858	34,135	11,107	44,923	963,760	3,855,040	1,833,034	7,212,275
1877 .....	122,629	463,130	371,685	1,496,080	353,266	1,307,084	11,811	41,946	5,777	23,289	809,653	3,238,612	1,674,821	6,570,141
1878 .....	117,978	423,184	310,486	1,240,079	283,522	1,052,490	10,746	36,654	25,249	100,000	775,272	3,101,088	1,523,323	5,953,495
1879 .....	107,640	399,187	284,100	1,134,641	281,552	1,023,237	14,251	50,429	60,155	230,895	758,947	3,035,788	1,506,645	5,874,177
1880 .....	116,751	434,641	303,215	1,220,263	228,120	820,643	13,246	48,441	52,595	201,297	829,121	3,316,484	1,543,048	6,041,769
1881 .....	145,532	550,111	250,683	996,867	259,782	925,012	16,976	61,889	56,693	216,901	858,850	3,435,400	1,588,516	6,186,180
1882 .....	129,233	491,594	230,893	921,664	230,090	829,655	15,668	55,743	49,122	187,337	898,536	3,594,144	1,553,542	6,080,137
1883 .....	122,257	452,611	222,899	892,445	193,994	698,138	15,938	58,600	46,577	176,442	810,047	3,240,188	1,411,712	5,518,424
1884 .....	105,933	390,229	246,392	988,953	261,824	923,010	21,455	75,036	42,340	160,404	778,618	3,114,472	1,456,562	5,652,104
1885 .....	100,667	366,388	222,732	890,056	308,348	1,119,170	18,327	65,443	41,241	155,309	735,218	2,940,872	1,426,533	5,537,238
1886 .....	98,446	355,600	227,079*	903,569	341,551	1,232,330	21,115	74,596	31,015	117,250	665,196	2,660,784	1,384,402	5,344,129
	9,737,804	36,083,538	10,943,875	42,940,899	5,006,353	18,299,104	194,078	690,607	450,673	1,725,833	54,393,182	217,572,726	80,725,965	317,312,707

<sup>a</sup> "Gold raised, and value." <sup>b</sup> New Zealand Statistics. Statistical Summary of the Colony of New Zealand. Exports, the produce of New Zealand. <sup>c</sup> Statistics of Queensland. Statistical View of Queensland. Exports (seaward), the produce of Queensland. <sup>d</sup> The amount of South Australian Gold received for coinage at the Sydney and Melbourne Mints. <sup>e</sup> Statistics of the Colony of Tasmania. Total value of Gold produced. <sup>f</sup> Victorian Year Book. Quantity and value of Gold raised in Victoria. \* Gold entered for duty for export, 1886.

STATISTICS, 1886—MONETARY AND FINANCIAL.

ROYAL MINT, SYDNEY BRANCH—continued.

No. 37.—QUANTITY and VALUE of GOLD SENT BY ESCORT in 1886 from the several Gold-fields of the Colony, and WEIGHT and VALUE OF GOLD, the PRODUCE OF NEW SOUTH WALES, RECEIVED FOR COINAGE at the Sydney Branch of the Royal Mint during the same period.

Gold Districts and Divisions.	Gold sent by Escort.		Gold received for Coinage.		
	Quantity.	Estimated Value.	Weight.	Gross Value.	Per Ounce.
	oz.	£ s. d.	oz.	£ s. d.	£ s. d.
Western ...					
Bathurst ... ..	2,010'90	7,348 3 3	788'29	2,880 13 11	3 13 1
Carcoar ... ..	9,284'28	30,057 17 1	9,358'84	30,302 7 10	3 4 9
Orange ... ..	5,895'50	20,609 13 8	5,939'45	20,769 2 6	3 9 11
Trunkey Creek .....			79'28	297 16 8	3 15 1
Tuena ... ..			190'60	724 17 7	3 16 1
Hill End ... ..	3,375'71	13,263 14 6	3,580'69	14,078 2 10	3 18 7
Tambaroora ... ..			246'06	976 19 10	3 19 5
Sofala ... ..	2,531'10	9,786 18 5	432'09	1,670 8 5	3 17 4
Stony Creek .....			161'24	632 18 11	3 18 6
Mudgee ... ..			2,240'51	8,674 2 4	3 17 5
Gulgong ... ..			1,597'00	6,218 0 7	3 17 10
Hargraves .....			99'97	394 17 10	3 19 0
Wellington ... ..			97'48	387 9 2	3 19 6
Parkes ... ..			3,789'68	13,814 9 1	3 12 11
Forbes ... ..	5,745'57	20,707 19 10	1,682'21	6,062 11 9	3 12 1
Grenfell ... ..			259'75	1,010 13 11	3 17 10
Young ... ..			366'45	1,463 19 5	3 19 11
Wilcannia ... ..	2,195'87	8,856 13 6	3,390'02	13,673 12 2	4 0 8
(Mixed) Western ... ..			4,452'79	16,116 6 7	3 12 4
Total Western ... ..	31,038'93	110,631 0 3	38,752'40	140,149 11 4	3 12 4
Southern ...					
Temora ... ..	6,341'87	24,786 2 10	4,816'87	18,837 19 2	3 18 2
Goulburn ... ..			119'57	459 8 5	3 16 10
Braidwood ... ..	6,160'22	24,127 10 7	1,445'95	5,665 8 10	3 18 4
Araluen ... ..			141'51	528 6 10	3 14 8
Shoalhaven ... ..			1,911'08	5,871 11 4	3 1 5
Nerrigundah ... ..			372'13	1,528 12 8	4 2 2
Bermagui ... ..			3'85	15 8 11	4 0 3
Adelong ... ..	5,788'42	22,671 6 3	4,689'74	18,379 7 2	3 18 4
Tumut ... ..	790'80	2,876 10 8			3 12 9
Tumbarumba ... ..	657'23	2,448 3 7	1,287'62	4,795 13 11	3 14 6
Wagga Wagga ... ..			856'29	2,904 9 1	3 7 10
Gundagai ... ..	118'67	416 16 7	72'17	253 9 9	3 10 3
Cooma ... ..			132'11	504 7 0	3 16 4
Kiandra ... ..			377'87	1,418 1 5	3 15 0
(Mixed) Southern ... ..			2,537'06	6,752 17 10	2 13 3
Total Southern ... ..	19,857'21	77,326 10 6	18,763'82	67,915 2 4	3 12 4
Northern ...					
Armidale ... ..			96'33	357 1 0	3 14 1
Rocky River ... ..			363'08	1,449 7 11	3 19 10
Nundle ... ..			181'27	690 16 6	3 16 3
Tamworth ... ..			314'33	1,185 6 10	3 15 5
Bingera ... ..			657'83	2,457 10 7	3 14 9
Copeland ... ..			1,555'81	5,263 3 5	3 7 8
Grafton ... ..			769'34	2,766 0 6	3 11 11
Tenterfield ... ..			1,270'10	4,260 19 6	3 7 1
(Mixed) Northern ... ..			2,403'12	7,310 0 5	3 0 10
Total Northern ... ..			7,611'21	25,740 6 8	3 7 7
Total sent by Escort ... ..	50,896'14	187,957 10 9			
Locality unknown ... ..			26,727'29	96,974 7 3	3 12 7
Total N.S.W. Gold received for Coinage ... ..			91,854'72	330,779 7 7	3 12 0

No. 38.—QUANTITY AND VALUE OF GOLD RECEIVED BY ESCORT into the Branch Royal Mint, from the several Gold Districts of the Colony.

Year.	Western District.		Southern District.		Northern District.		General Total.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	oz.	£	oz.	£	oz.	£	oz.	£
1876	94,879	357,496	27,418	104,743	4,492	16,894	126,789	479,133
1877	71,335	205,136	23,007	89,064	3,240	12,129	97,582	366,329
1878	50,371	182,721	19,783	76,250	5,339	20,195	75,493	279,166
1879	46,375	172,915	18,714	71,342	5,586	19,761	70,675	264,018
1880	44,023	164,155	25,416	97,641	8,368	29,293	77,807	291,049
1881	46,722	174,342	51,924	202,872	5,799	19,740	104,445	396,954
1882	40,563	152,239	55,508	218,864	5,906	20,138	101,977	391,241
1883	34,358	122,611	36,013	140,543	2,827	9,601	73,198	272,755
1884	36,745	132,472	29,821	116,789	2,911	10,252	69,477	259,513
1885	31,768	113,553	25,532	99,353	583	1,993	57,883	214,899
1886	31,039	110,631	19,857	77,327			50,896	187,958

ROYAL MINT, SYDNEY BRANCH—*continued.*

No. 39.—QUANTITY and VALUE of GOLD, the PRODUCE of NEW SOUTH WALES, from the year 1851 to 1886 inclusive.

Years.	Received at the Mint for Coinage.		Exported without passing through the Mint.		Estimated Produce of the Colony.	
	Weight.	Value.	Weight.	Value.	Weight.	Value.
1851 ... ..	oz. .....	£ .....	oz. 144,120'88	£ 468,336	oz. 144,120'88	£ 468,336
1852 ... ..	.....	.....	818,751'93	2,660,946	818,751'93	2,660,946
1853 ... ..	.....	.....	548,052'99	1,781,172	548,052'99	1,781,172
1854 ... ..	.....	.....	237,910'70	773,209	237,910'70	773,209
1855 ... ..	106,983'00	408,656	63,162'73	204,492	170,145'73	613,148
1856 ... ..	142,137'36	530,598	41,809'00	135,457	183,946'36	666,055
1857 ... ..	126,950'79	487,440	34,092'47	129,272	161,043'26	616,712
1858 ... ..	272,825'65	1,050,340	7,732'28	32,525	280,557'93	1,082,865
1859 ... ..	308,183'41	1,178,114	15,800'61	59,548	323,984'02	1,237,662
1860 ... ..	352,222'78	1,341,431	29,391'18	103,727	381,613'96	1,445,158
1861 ... ..	414,861'84	1,608,277	45,017'42	163,578	459,879'26	1,771,855
1862 ... ..	587,895'24	2,262,472	29,014'47	97,911	616,909'71	2,360,383
1863 ... ..	401,713'25	1,545,419	65,685'80	246,115	467,399'05	1,791,534
1864 ... ..	308,670'64	1,181,898	33,283'48	122,837	341,954'12	1,304,735
1865 ... ..	300,277'57	1,153,215	64,263'06	237,588	364,540'63	1,390,803
1866 ... ..	269,239'71	1,035,513	18,294'58	67,733	287,534'29	1,103,246
1867 ... ..	259,556'92	1,005,570	9,850'43	37,888	269,407'35	1,043,458
1868 ... ..	232,488'66	904,422	26,284'75	98,580	258,773'41	1,003,002
1869 ... ..	179,549'24	694,022	72,580'90	273,603	252,130'14	967,625
1870 ... ..	143,709'44	552,744	96,692'42	363,665	240,401'86	916,409
1871 ... ..	242,596'91	935,041	78,871'79	296,970	321,468'70	1,232,011
1872 ... ..	331,273'19	1,278,127	92,827'04	356,694	424,100'23	1,634,821
1873 ... ..	259,579'77	997,215	101,270'20	392,490	360,849'97	1,389,705
1874 ... ..	233,216'59	895,148	37,493'53	143,696	270,710'12	1,038,844
1875 ... ..	226,985'50	872,162	2,400'05	9,318	229,385'55	881,480
1876 ... ..	153,531'48	575,565	1,634'89	6,124	155,166'37	581,689
1877 ... ..	121,593'38	459,201	1,035'86	3,929	122,629'24	463,130
1878 ... ..	107,347'97	382,741	10,629'91	40,443	117,977'88	423,184
1879 ... ..	106,899'88	396,353	740'50	2,834	107,640'38	399,187
1880 ... ..	116,669'52	434,337	81'00	304	116,750'52	434,641
1881 ... ..	145,478'06	549,918	53'99	193	145,532'05	550,111
1882 ... ..	129,142'28	491,240	91'00	354	129,233'28	491,594
1883 ... ..	121,777'38	450,766	479'20	1,845	122,256'58	452,611
1884 ... ..	104,932'68	386,669	1,000'75	3,560	105,933'43	390,229
1885 ... ..	93,990'36	340,802	6,676'80	25,586	100,667'16	366,388
1886 ... ..	91,854'72	330,779	6,591'55	24,821	98,446'27	355,600
Grand Total ...	6,994,135'17	26,716,196	2,743,670'14	9,367,343	9,737,805'31	36,083,539

## STATISTICS, 1886—MONETARY AND FINANCIAL.

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## INSOLVENCIES.

No. 40.—NUMBER of INSOLVENCIES in the Colony, with AMOUNT of LIABILITIES, ASSETS, &c., during the years 1876-86.

Year	Number of Insolvents.			Amount of Liabilities as shown in the Insolvents' Schedules		Amount of Assets as shown in the Insolvents' Schedules		Number of Assignees elected by Creditors to act with the Official Assignee	Amount of Deficiency shown in the Insolvents' Estates		Amount of Court Fees in Insolvency collected under the Act of Council and paid at the Treasury.	
	Voluntary	Compulsory	Total	£	s. d.	£	s. d.		£	s. d.	£	s. d.
1876	461	41	502	492,846	12 0	169,603	7 8	2	323,243	4 4	1,738	17 0
1877	534	54	588	508,352	10 4	210,821	4 1	2	297,531	6 3	1,850	4 0
1878	652	64	716	664,736	5 4	350,176	9 2	.....	314,559	16 2	2,326	3 0
1879	767	96	863	781,334	4 3	306,103	8 7	.....	475,230	15 8	2,397	8 8
1880	784	50	834	479,863	13 11	292,233	0 6	.....	187,630	13 5	2,524	12 4
1881	664	60	724	379,289	12 11	218,211	15 8	..	161,077	17 3	2,067	11 0
1882	686	48	734	307,083	15 10	167,875	17 8	....	139,207	18 2	2,303	11 6
1883	720	65	785	444,593	16 3	245,836	4 1	3	189,757	12 2	2,680	18 10
1884	856	62	918	836,164	17 4	580,194	10 3	2	255,970	7 1	2,993	15 6
1885	849	80	929	773,212	4 8	589,358	15 4	2	183,853	9 4	3,123	19 2
1886	1,116	105	1,221	989,261	17 8	733,127	5 4	1	256,134	12 4	4,035	9 11

No. 41.—PROFESSIONS, TRADES, or CALLINGS of INSOLVENTS during the year 1886.

	Total		Total		Total
Accountants	2	Draymen	2	Quarryman	1
Advertising Agent ..	1	Dull Instructors	2	Rabbit	1
Agents	26	Drovers	2	Railway Employes	8
Architect	1	Engine Drivers	4	Restaurant-keepers	2
Artist	1	Engineers	5	Saddlers	8
Assayer	1	Farmers	49	Salesmen	2
Auctioneers	7	Fencers	6	Saw Sharpeners	2
Bank Manager	1	Fireman	1	Saw-mill Proprietors	3
Barrister	1	Forest Ranger	1	Sawyers	4
Bailiff	1	French Polisher	1	Selectors	5
Bakers	29	Fruterers	4	Shepherd	1
Bicycle Importer	1	Gaoler	1	Sheriff's Bailiffs	2
Boarding-house Keepers	14	Gardeners	4	Shipwrights	2
Boatman	1	Gasfitters	3	Shopman	1
Boat Builders	2	Graziers	20	Smelter	1
Bonedust Manufacturer	1	Greengrocers	4	Solicitors	10
Bookseller	1	Grooms	3	Splitters	3
Bookbinder	1	Grocers	16	Stable-keeper	1
Bootmakers	11	Glass Engraver	1	Stationers	4
Boundary Rider	1	Hatter	1	Stevedore	1
Blacksmiths	14	Hairdressers	6	Stockman	1
Bricklayers	3	Hay and Corn Dealers	2	Storekeepers	47
Brickmakers	10	Hawkers	8	Storekeeper's Assistant	1
Brokers	6	Horse Dealer	1	Station Manager	1
Bulldozers	51	Importers	2	Steward	1
Bullock Drivers	2	Insurance Agents	2	Stonemasons	7
Butchers	16	Ironmonger	1	Sugar Manufacturer	1
Bus Proprietors	3	Ironfounder	1	Surveyors	3
Cab Drivers	2	Jewellers	5	Tailors	14
Cab Proprietor	1	Labourers	111	Tank-sinker	1
Cabinetmakers	5	Lighterman	1	Tanners	2
Carniers	9	Mail Contractor	1	Teachers	7
Carpenters	39	Mariners	2	Telegraph Operator	1
Carters	3	Master Mariners	6	Tinsmith	1
Caterers	2	Merchants	8	Timber Getters	6
Cattle Dealer	1	Miners	59	Timber Merchants	7
Chemists	6	Millers	2	Tide Waiter	1
Clerks	24	Mill Owners	2	Theatrical Managers	2
Civil Engineers	2	Millner	1	Tile Maker	1
Clothier	1	Music Teachers	7	Tobacconists	7
Coachman	1	Naturalist	1	Tobacco Manufacturer	1
Collector	1	Newspaper Proprietors	2	Travellers (Commercial)	6
Commission Agents	11	No Occupation	98	Trainer	1
Compositor	1	Overseers	2	Umbrella Maker	1
Confectioners	8	Packer	1	Undertaker	1
Condiment Manufacturer	1	Painter and Glaziers	6	Upholsterers	3
Constables	3	Paper Manufacturer	1	Van Driver	1
Contractors	45	Photographer	1	Warehousemen	4
Cook	1	Plasterers	12	Widows (no occupation)	12
Cordial Manufacturers	5	Plumbers	14	Wheelwrights	2
Coachbuilders	6	Police Magistrate	1	Wine Merchants	2
Darymen	2	Postmaster	1	Woodcutters	2
Dealers	20	Poulterers	2	Wood and Coal Merchants	5
Decorators	3	Providore	1		
Draftsmen	2	Pressmen	3		
Drapers	10	Printers	2		
Doctors of Medicine	4	Publicans	72		
				Total	1,221

REAL AND LEASEHOLD ESTATES.

No. 42.—NUMBER and Amount of Transactions in REAL AND LEASEHOLD ESTATES, registered in the Colony.

Nature of Transaction.	1877.		1878.		1879.		1880.		1881.		1882.		1883.		1884.		1885.		1886.	
	No. of Deeds registered	Amount.	No. of Deeds registered	Amount.	No. of Deeds registered	Amount.	No. of Deeds registered	Amount.	No. of Deeds registered	Amount.	No. of Deeds registered.	Amount.	No. of Deeds registered.	Amount.	No. of Deeds registered	Amount.	No. of Deeds registered	Amount.	No. of Deeds registered	Amount.
Conveyances under Mortgage	334	£ 233,094 18 11	248	£ 158,784 2 8	223	£ 131,509 13 10	260	£ 133,739 5 8	198	£ 92,677 3 4	151	£ 67,620 5 4	132	£ 58,749 7 0	132	£ 126,685 8 9	122	£ 122,950 19 7	195	£ 122,478 17 4
Conveyances (absolute)	5,005	£ 2,223,895 1 0	4,704	£ 2,490,681 6 5	4,505	£ 1,673,050 18 2	5,987	£ 2,405,879 17 3	12,120	£ 4,974,436 19 4	12,654	£ 5,693,500 8 11	9,872	£ 4,022,470 4 6	9,222	£ 3,798,440 3 1	12,465	£ 5,245,421 10 8	11,345	£ 4,085,990 4 6
Assignments (absolute), Leasehold Estates	203	£ 110,798 15 2	266	£ 102,612 3 1	218	£ 80,758 12 5	147	£ 116,067 1 6	275	£ 180,824 13 8	288	£ 247,385 4 6	206	£ 143,052 12 0	287	£ 186,665 19 9	380	£ 230,640 8 6	319	£ 201,227 0 4
Mortgages	1,758	£ 1,308,774 11 3	2,440	£ 1,981,481 2 4	2,809	£ 2,461,964 3 2	2,995	£ 4,048,951 17 8	4,505	£ 5,268,449 0 1	4,159	£ 4,924,595 10 1	4,088	£ 5,832,472 0 0	4,653	£ 5,620,420 19 1	7,618	£ 11,360,108 1 9	6,933	£ 7,570,210 8 5
Discharges of Mortgages	1,902	£ 1,123,138 15 0	1,350	£ 896,445 8 9	1,235	£ 868,524 2 10	1,860	£ 715,147 15 0	2,386	£ 1,926,357 7 0	2,051	£ 1,676,223 17 8	1,338	£ 1,433,911 19 8	2,216	£ 1,957,764 14 10	3,473	£ 2,239,074 14 0	2,773	£ 2,515,398 5 0
Transfers of Mortgages	71	£ 49,528 9 9	58	£ 92,612 19 9	83	£ 59,595 0 0	96	£ 152,445 7 4	131	£ 295,050 2 9	80	£ 92,418 17 4	82	£ 210,895 15 0	263	£ 209,413 3 10	160	£ 247,320 9 4	138	£ 261,777 16 8
TOTALS	9,273	£ 5,059,230 11 1	9,066	£ 6,722,617 3 0	9,073	£ 5,275,402 10 5	11,345	£ 7,572,231 4 5	19,615	£ 12,737,795 6 2	19,383*	£ 12,701,744 3 10	15,768*	£ 11,701,461 18 2	16,773*	£ 11,890,390 9 4	24,218*	£ 19,445,516 3 10	21,703*	£ 14,757,082 12 3
Lease—Period exceeding three years	385	£ 148,425 12 5	339	£ 130,643 1 0	402	£ 168,599 5 6	477	£ 132,179 6 2	457	£ 141,654 11 0	474	£ 157,773 2 7	400	£ 146,751 16 4	529	£ 158,319 8 2	538	£ 174,585 4 2	580	£ 181,554 16 8
Annuity Deeds†	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Assignment for Creditors	11	..	43	..	56	..	12	..	4	..	12	..	8	..	64	..	47	..	63	..
Settlements ante and post nuptial‡	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Miscellaneous Deeds, i.e.— Partition deeds, appointments of trustees, disentailing deeds, disclaimers of trusts, deeds of gift, confirmations, powers of attorney, wills, releases of dower, &c., &c.	887	..	1,619	..	1,025	..	2,530	..	4,412	..	4,207	..	3,567	..	2,363	..	3,688	..	2,872	..
TOTAL NUMBER OF DEEDS REGISTERED	10556§	..	11067§	..	10556§	..	14364§	..	24488§	..	*24136§	..	*19743§	..	*19729§	..	128491*	..	125215*	81,554 16 8

\* 1882—Including 9,097 Transfers C.P's., for which fees are paid direct to the Treasury. 1883—Including 6,040 Transfers C.P's., for which fees are paid direct to the Treasury. 1884—Including 3,847 Transfers C.P's., for which fees are paid direct to the Treasury. 1885—Including 10,437 Transfers C.P's., for which fees are paid direct to the Treasury. 1886—Including 6,877 Transfers C.P's., for which fees are paid direct to the Treasury. † Yearly. ‡ Included in Miscellaneous. § Exclusive of Government Deeds, for which no fees are charged for registration. ¶ Government Deeds included, for which no fees are charged for registration. NOTE.—Leases for periods of three years and under are not registered.





REAL AND LEASEHOLD ESTATES—*continued*  
 No. 47.—DEALINGS registered under the REAL PROPERTY ACT.

Instrument	1876		1877.		1878		1879		1880		1881		1882		1883		1884		1885.		1886.	
	Num ber	Amount of con sideration	Num ber	Amount of con sideration	Num ber	Amount of con sideration	Num ber	Amount of con sideration	Num ber	Amount of con sideration	Num ber	Amount of con sideration	Num ber	Amount of con sideration	Num ber	Amount of con sideration	Num ber	Amount of con sideration	Num ber	Amount of con sideration	Num ber	Amount of con sideration
Transfers	2,866	£ 779,734	3,394	£ 1,046,340	3,607	£ 1,143,854	3,425	£ 1,122,547	4,696	£ 2,621,764	6,317	£ 3,024,959	7,422	£ 2,960,405	7,647	£ 2,604,774	8,673	£ 2,677,768	8,970	£ 3,164,734	9,242	£ 3,060,244
Mortgages	1,204	£ 1,100,576	1,423	£ 1,976,142	1,451	£ 2,908,784	1,860	£ 3,414,000	2,193	£ 3,902,272	2,366	£ 4,155,225	2,605	£ 4,710,855	2,825	£ 5,781,167	3,437	£ 4,447,739	4,043	£ 6,085,380	4,295	£ 5,975,898
Discharges	470	£ 370,919	605	£ 529,330	670	£ 302,858	737	£ 848,987	1,052	£ 1,945,915	1,501	£ 2,067,140	1,603	£ 2,417,460	1,369	£ 1,833,016	1,696	£ 2,684,470	2,068	£ 3,373,327	2,082	£ 2,164,254
Encumbrances	11	£ 20,941	6	£ 11,764	19	£ 2,830	24	£ 158,777	19	£ 188,198	10	£ 57,962	4	£ 2,200	4	£ 1,080	2	£ 1,250	6	£ 3,733,327	8	£ 2,164,254
Caveats					123		191		186		214		201		201		277		336		384	
Withdrawal of Caveats					46		89		78		91		120		111		137		188		233	
Transfers of Mortgage					53		52		70		92		55		76		65		135		166	
Transfer of Encumbrance																						
Leases					72		66		74		55		150		132		111		173		212	
Transfers of Lease					14		15		35		28		49		25		48		50		72	
Surrenders of Lease					13		22		17		9		12		9		14		20		17	
Notice of Marriage					2		2		2		2		2		4		8		7		11	
Notice of Death					27		46		38		68		62		62		68		90		87	
Registered Proprietor by Official Assignee					14		26		19		21		30		19		21		25		43	
Writs or Warrants					23		33		35		19		24		34		49		38		73	
Satisfaction of Writs or Warrants					8		5		3		5		10		6		5		9		6	
Vesting Orders					2		2		5		7		7		8		4		4		16	
Foreclosure of Mortgage							1						1		1						3	
Notices of Resumption													23		21		14		21		29	
Powers of Attorney					46		38		6		6		2		5		4		7		7	
Re entry of Lease									1		2		3		4		2		3		10	
Transmission by Indorsement					29		131		153		195		100		267		272		299		284	
Surrender of Registration Abstract													3								1	
Declaration of Trust					21		23		43		*		*		*		*		*		*	
Total	4,551	£ 2,272,170	5,428	£ 3,563,576	6,238	£ 4,358,326	6,788	£ 5,844,311	8,725	£ 1,658,149	11,008	£ 9,305,286	12,579	£ 10,090,920	12,830	£ 10,220,037	14,908	£ 9,811,227	16,502	£ 12,623,441	17,282	£ 11,200,396
Total number of Indorsements									23,660		20,537		19,997		17,802		16,384		23,448		18,115	
Total number of new Certificates											4,004		5,424		5,916		6,453		6,867		7,239	

\* Included in Caveats

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## LIENS.

No. 48.—NUMBER and AMOUNT of PREFERABLE LIENS ON WOOL, and of MORTGAGES ON LIVE STOCK, registered in the Colony.

Year.	Preferable Liens on Wool.			Mortgages on Live Stock.				
	No. of Liens.	No. of Sheep.	Amount of Liens.	No. of Mortgages.	No. of Sheep.	No. of Horned Cattle.	No. of Horses.	Amount Lent.
1876	920	4,828,951	£ s. d. 752,818 18 9	758	2,480,004	258,447	5,847	£ s. d. 2,157,834 18 8
1877	994	4,386,378	627,779 9 7	1,994	2,565,962	185,796	6,726	2,004,363 2 10
1878	1,027	4,611,696	714,272 16 1	914	2,647,183	183,210	8,412	2,059,348 9 9
1879	1,246	6,602,742	1,005,118 4 6	925	3,538,161	128,685	9,564	2,268,850 5 1
1880	1,479	6,216,741	981,171 19 8	901	4,858,265	183,555	401	2,818,967 1 1
1881	1,609	5,709,061	904,011 13 9	1,275	5,982,994	215,564	9,646	4,623,914 19 3
1882	1,289	4,837,667	801,174 10 5	1,074	3,865,331	112,441	8,391	3,391,984 3 10
1883	1,301	6,349,801	1,026,573 18 4	1,077	3,601,890	131,068	7,389	2,486,407 10 5
1884	1,379	4,168,185	973,179 7 1	1,471	2,696,994	77,241	8,097	1,881,082 9 2
1885	1,236	5,263,407	1,327,214 0 0	1,431	4,730,233	117,241	10,764	2,962,471 7 0
1886	1,187	9,049,194	1,454,154 0 0	1,363	4,323,553	79,616	10,349	2,404,813 0 0

N.B.—When any sum has been secured both by a Lien on the Wool and by a Mortgage of the Sheep, the amount is included under the head of Mortgages only.

No. 49.—NUMBER and AMOUNT of DISCHARGES of MORTGAGES ON LIVE STOCK, registered in the Colony.

Year.	Number.	Amount.
1876	190	£ s. d. 1,028,079 4 2
1877	225	1,292,703 3 6
1878	159	1,037,119 1 11
1879	161	1,247,708 4 11
1880	232	3,804,475 5 11
1881	399	2,781,122 2 2
1882	258	1,900,443 5 9
1883	126	600,425 19 3
1884	306	3,801,352 2 1
1885	208	1,173,672 11 0
1886	150	849,742 0 0

No. 50.—NUMBER and AMOUNT of LIENS ON GROWING CROPS in the Colony registered in Sydney.

Year.	Number.	Amount.	Year.	Number.	Amount.
1876	319	£ s. d. 16,418 14 2	1882	854	£ s. d. 40,378 12 7
1877	477	27,086 8 6	1883	814	50,789 5 5
1878	539	43,186 6 7½	1884	888	54,056 16 4
1879	778	55,869 1 4	1885	857	71,153 0 0
1880	797	81,625 19 11	1886	989	70,212 0 0
1881	897	42,255 3 7			

## MILITARY EXPENDITURE.

No. 51.—DETAILS of EXPENDITURE incurred by the Colony, in the year 1886, on account of its DEFENCE, and for MILITARY and NAVAL SERVICES.

Particulars.	Amount.
<b>MILITARY:—</b>	£ s. d.
Repairs to Military and Volunteer Buildings ... ..	2,436 0 5
Lighting Lamps, sweeping Chimneys, &c., Victoria Barracks... ..	238 8 6
Ordnance and Barrack Department and Gunpowder Magazines and Warlike Stores	25,066 9 7
Completion of Fortifications, Port Jackson ... ..	61,799 18 11
Improvements, Rifle Range ... ..	200 0 0
Works of Defence ... ..	7,132 9 11
	96,873 7 4
<b>PERMANENT AND VOLUNTEER MILITARY FORCES:—</b>	
General Staff ... ..	3,115 1 6
Artillery Force ... ..	50,529 5 0
Volunteer Force ... ..	147,817 12 11
Military Instructors ... ..	3,206 0 0
	204,667 19 5
<b>NAVAL:—</b>	
Volunteer Naval Artillery ... ..	1,274 8 3
“Wolverene” ... ..	11,403 12 7
Naval Brigade ... ..	11,004 18 6
Goodenough Royal Naval House ... ..	200 0 0
Naval Depôts ... ..	35,068 10 7
Torpedoes, expenses in connection with ... ..	729 11 9
	59,681 1 8
General Total ... ..	£ 361,222 8 5

## ROADS TRUSTS.

No. 52.—RECEIPTS and DISBURSEMENTS of the several ROADS TRUSTS in the year 1886, and also the NUMBER of MILES of ROAD under the care of the Commissioners.

ROADS TRUSTS.	RECEIPTS.			Balance on 31st Dec, 1885.	Amount.	ROADS TRUSTS.	EXPENDITURE.			Balance on 31st Dec., 1886.	Amount.	Extent of Roads.
	Rent of Tolls, &c.	From the Colonial Treasury for Roads and Bridges.	Total Receipts.				Salaries.	Miscellaneous.	Total Expenditure.			
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	Miles
South Head Roads Trust ...	30 12 0	6,500 0 0	6,530 12 0	224 18 1	6,755 10 1	South Head Roads Trust ...	150 0 0	3,482 6 11	3,632 6 11	3,123 3 2.	6,755 10 1	11
Parramatta Roads Trust...	196 16 8	200 0 0	396 16 8	455 9 1*	852 5 9*	Parramatta Roads Trust ...	156 3 4	684 14 5	840 17 9	11 8 0*	852 5 9*	17
Campbelltown Roads Trust † ...	.....	.....	.....	.....	.....	Campbelltown Roads Trust † ...	.....	.....	.....	.....	.....	7
Windsor Roads Trust ...	334 11 8	135 0 0	469 11 8	314 15 7	784 7 3	Windsor Roads Trust ...	26 0 0	327 12 4	353 12 4	430 14 11	784 7 3	18½
Richmond Roads Trust ...	91 13 4	323 0 0	414 13 4	125 3 5	539 16 9	Richmond Roads Trust...	32 0 0	497 17 2	529 17 2	9 19 7	539 16 9	25¼
Maitland Roads Trust ...	.....	1,040 0 0	1,040 0 0	241 9 5	1,281 9 5	Maitland Roads Trust ...	.....	847 15 7	847 15 7	433 13 10	1,281 9 5	50
Total ...	£ 653 13 8	8,198 0 0	8,851 13 8	1,361 15 7*	10,213 8 3*	Total ...	£ 364 3 4	5,840 6 5	6,204 9 9	4,008 19 6*	10,213 8 3*	129

\* Cheque for £11 8s. included but not presented. † This Trust failed to furnish return.

ELECTRIC TELEGRAPHS.

No. 53.—NUMBER and VALUE of TELEGRAMS sent from each Station in the Colony during the Year 1886.

Station.	Messages.	Value.			Station.	Messages.	Value.		
		No.	£	s. d.			No.	£	s. d.
Sydney ( <i>Chief Office</i> ) ...	601,402	35,091	16	1	Campbelltown ...	3,199	192	10	11
Albury ...	249,914	1,386	10	0	Camperdown ...	3,019	131	7	9
Abattoirs ...	999	35	3	10	Candelo ...	3,297	210	19	5
Aberdeen (Railway) ...	379	21	10	1	Canonbar ...	651	44	4	6
Adaminaby ...	1,143	73	13	0	Canowindra ...	1,040	55	18	7
Adelong ...	3,362	199	3	7	Canterbury ...	854	26	1	0
Albion Park ...	680	37	12	6	Capertee (Railway) ...	194	11	5	0
Angledool ...	2,383	189	6	5	Carcoar ...	4,134	258	18	9
Appin ...	811	47	1	4	Cargo ...	754	42	18	7
Arakoon ...	1,079	70	14	0	Carathool (Railway) ...	2,107	129	9	8
Araluen ...	1,007	58	5	1	Casino ...	8,948	645	5	8
Armidale ...	12,232	910	4	2	Cassilis ...	1,593	104	11	0
Armidale Railway ...	1,608	89	7	8	Chatsworth ...	1,921	114	14	6
Arncliffe ...	470	17	15	2	Clarence Town ...	1,768	99	9	5
Ashfield ...	5,071	212	6	8	Clifton ...	2,671	162	3	5
Australasian Steam Navigation Co.	2,009	217	17	8	Cobar ...	9,478	658	17	4
Ballina ...	7,405	444	2	2	Cobargo ...	1,913	109	17	1
Balmain ...	6,540	288	17	8	Cobbora ...	607	33	10	6
Balranald ...	4,931	339	17	6	Conargo ...	820	55	10	10
Barmedman ...	1,440	94	19	9	Condobolin ...	4,855	323	9	6
Baradine ...	1,419	87	12	1	Coolah ...	1,427	93	6	7
Barraba ...	1,454	93	0	11	Coolamon ...	955	51	9	7
Barrenjuey ...	401	22	15	8	Cooma ...	7,339	560	0	0
Barrington ...	3,258	307	19	6	Coonabarabran ...	2,631	161	6	0
Bateman's Bay ...	1,761	100	10	1	Coonamble ...	8,875	628	5	5
Bathurst ...	17,058	1,136	10	11	Cooranbong ...	1,122	68	15	9
Bega ...	11,474	750	10	2	Cootamundra ...	8,326	525	16	1
Bellbrook ...	415	22	8	5	Copeland North ...	752	47	12	1
Belmont ...	1,340	76	19	3	Copmanhurst ...	783	52	11	7
Bendemeer ...	918	58	6	7	Coraki ...	4,278	261	9	10
Berrima ...	953	62	5	3	Corowa ...	5,228	331	11	1
Bethunga (Railway) ...	456	27	4	2	Cowra ...	6,240	382	11	2
Binalong (Railway) ...	856	48	15	9	Croki ...	1,272	73	15	1
Bingera ...	2,810	202	17	6	Crookwell ...	2,793	164	5	11
Blackheath (Railway) ...	1,512	83	15	3	Croydon ...	1,738	66	16	3
Blacktown (Railway) ...	1,139	64	4	7	Cudal ...	1,424	86	2	2
Blackwall ...	734	40	11	5	Culcairn (Railway) ...	856	48	18	2
Blandford (Railway) ...	327	18	14	5	Cundletown ...	1,884	99	4	10
Blayney ...	3,938	229	11	0	Dandaloo ...	520	35	1	0
Boat Harbour ...	1,191	75	5	7	Dapto ...	474	27	3	5
Bodalla ...	1,685	104	12	11	Darlington ...	2,301	102	7	7
Boggabri ...	1,500	90	16	8	Darlington Point ...	500	30	11	8
Bolivia ...	628	40	14	5	Darlington Point (Railway) ...	235	13	5	4
Bombala ...	6,169	392	15	9	Deepwater ...	1,395	78	15	4
Bomen (Railway) ...	105	5	15	10	Delegate ...	1,521	96	19	11
Booligal ...	1,709	118	7	2	Deniliquin ...	11,164	769	9	11
Bourke ...	29,168	2,179	2	0	Denman ...	1,085	62	14	9
Bowenfels (Railway) ...	282	13	16	10	Douglas Park (Railway) ...	375	24	18	3
Bowna ...	663	43	14	9	Drake ...	881	59	13	3
Bowning (Railway) ...	441	28	5	6	Dubbo ...	15,941	1,034	8	6
Bowral ...	4,941	285	11	3	Dungog ...	2,971	169	10	2
Bowraville ...	1,059	59	18	7	East Maitland ...	4,739	285	9	1
Braidwood ...	6,116	379	11	7	Eualalong ...	1,473	104	19	5
Branxton ...	1,127	69	1	2	Eden ...	3,238	213	0	9
Breeza (Railway) ...	975	57	13	6	Edgecliff ...	5,912	281	12	5
Brewarrina ...	9,034	637	6	5	Emmaville ...	4,608	319	15	10
Brewongle (Railway) ...	393	21	2	5	Emu Plains (Railway) ...	499	28	5	0
Broadwater ...	2,569	157	17	2	Enngonia ...	1,348	101	14	2
Broke ...	389	22	2	7	Eugowra ...	911	49	10	11
Broken Hill ...	7,889	710	6	6	Euston ...	1,300	85	18	0
Brown Mountain ...	1,062	57	14	0	Exchange ...	54,714	4,210	2	5
Broughton Creek ...	2,916	137	1	8	Fernmount ...	3,045	181	9	0
Brunswick River Heads ...	1,138	78	16	0	Five Dock ...	242	14	19	2
Brushgrove ...	1,619	86	18	9	Forbes ...	11,416	782	14	8
Bulahdelah ...	999	57	15	4	Forster ...	873	46	12	4
Bulli ...	2,551	112	14	8	Frederickton ...	2,149	117	8	5
Bundanoon (Railway) ...	458	25	2	5	Gabo Island ...	224	11	0	9
Bundarra ...	2,345	164	0	7	George-street West ...	5,466	244	17	11
Bungendore ...	3,606	202	3	5	George's Plains (Railway) ...	239	12	6	4
Bungwall Flat ...	995	60	17	9	Gerogery (Railway) ...	533	31	4	8
Burrawang ...	817	62	12	10	Gerrington ...	805	44	6	3
Burrowa ...	2,100	150	12	9	Germanton ...	2,640	156	7	1
Burwood ...	7,995	328	3	6	Gilgandra ...	1,087	63	13	2
Byrock ...	3,711	227	10	6	Ginninderra ...	773	49	4	7
Cambewarra ...	326	16	8	4	Girilambone ...	1,290	91	4	5
Camden ...	2,659	143	15	2	Gladesville ...	802	31	2	2
					Gladstone ...	1,139	56	13	2

NOTE.—The values of Intercolonial telegrams are not included in return of Border Stations, but the Numbers are included.

## ELECTRIC TELEGRAPHS—continued.

No. 53 (continued).—NUMBER AND VALUE OF TELEGRAMS sent—continued.

Station.	Messages.	Value.	Station.	Messages.	Value.
	No.	£ s. d.		No.	£ s. d.
Glebe ... ..	6,354	277 7 11	Millie ... ..	1,524	103 12 3
Glen Innes ... ..	14,861	976 12 7	Milthorpe (Railway) ... ..	584	32 5 10
Gloucester ... ..	765	42 3 11	Milton ... ..	3,115	187 12 1
Gongolgon ... ..	1,454	99 0 4	Minmi ... ..	1,072	59 18 5
Goodooga ... ..	3,690	255 18 5	Mitchell ... ..	3,593	210 1 5
Gosford ... ..	5,461	331 8 3	Mittagong ... ..	3,585	293 4 10
Goulburn ... ..	24,266	1,654 10 7	Moama ... ..	1,273	80 3 6
Grafton ... ..	22,180	1,622 17 3	Mogil Mogil ... ..	1,442	107 14 4
Granville (Railway) ... ..	4,889	202 16 10	Mogo ... ..	762	43 17 1
Green Cape ... ..	488	34 7 6	Molong ... ..	3,108	204 4 11
Greenwell Point ... ..	858	46 8 5	Molonglo ... ..	446	28 2 9
Grenfell ... ..	4,040	245 3 5	Moonbi (Railway) ... ..	1,428	81 2 8
Greta ... ..	822	45 12 4	Morangarell ... ..	892	53 14 2
Gulgambone ... ..	633	37 9 9	Moree ... ..	9,299	807 10 7
Gulgong ... ..	2,822	165 13 10	Morpeth ... ..	4,242	234 4 6
Gundagai ... ..	6,585	411 3 8	Moruya ... ..	4,714	273 16 5
Gunnedah ... ..	9,146	635 5 10	Mossgiol ... ..	2,668	195 15 1
Gunning ... ..	1,436	87 17 11	Moss Vale ... ..	4,664	263 6 9
Guyra (Railway) ... ..	2,088	126 19 0	Moulamein ... ..	1,301	86 9 7
Hamilton ... ..	1,395	76 3 6	Mount Hope ... ..	1,580	103 2 7
Harden (Railway) ... ..	1,645	90 13 5	Mount M'Donald ... ..	1,085	62 11 4
Harrington ... ..	1,161	29 11 8	Mount Victoria ... ..	3,155	180 13 2
Harwood Island ... ..	1,372	81 16 3	Mudgee ... ..	10,769	670 7 0
Hay ... ..	18,688	1,341 3 5	Mullion Creek (Railway) ... ..	153	8 3 5
Haydonton (Railway) ... ..	1,911	109 12 1	Mulwala ... ..	1,095	67 19 10
Haymarket ... ..	25,130	1,341 19 6	Mundooran ... ..	629	40 4 7
Hoxham (Railway) ... ..	314	17 14 4	Mungindi ... ..	915	69 17 9
Hill End ... ..	1,184	69 10 9	Murrumburrah ... ..	2,668	152 4 5
Hillston ... ..	5,219	349 2 7	Murwillimbah ... ..	2,720	188 2 5
Hinton (Railway) ... ..	435	20 5 1	Muswellbrook ... ..	4,435	280 18 6
Homebush ... ..	6,397	353 17 9	Murrurundi ... ..	2,133	136 18 11
Howlong ... ..	1,516	85 15 8	Nambucca ... ..	1,218	74 11 6
Hunter's Hill ... ..	2,082	87 0 7	Nambucca Heads ... ..	1,135	69 15 11
Hurstville ... ..	510	19 10 6	Narrabri ... ..	10,806	724 11 6
Inverell ... ..	10,368	773 8 6	Narrabri (Railway) ... ..	2,549	140 3 10
Ironbarks (Railway) ... ..	659	39 11 1	Narrandera ... ..	10,879	709 19 8
Ivanhoe ... ..	2,645	185 10 1	Nelligen ... ..	1,003	53 7 1
Jamberoo ... ..	682	36 18 10	Nelson's Bay ... ..	1,066	54 5 4
Jerilderie ... ..	4,285	294 2 0	Nevertire (Railway) ... ..	4,078	246 16 10
Jerry's Plains ... ..	1,139	69 18 6	Newbridge (Railway) ... ..	580	31 4 3
Jervis Bay ... ..	418	17 6 0	Newcastle ... ..	55,445	4,198 2 5
Jindera ... ..	433	24 10 6	Newton Boyd ... ..	309	20 9 0
Jugiong ... ..	147	8 13 8	Newtown ... ..	13,063	558 16 4
Junee ... ..	6,156	376 2 3	Nimitybelle ... ..	1,372	89 2 4
Kangaroo Valley ... ..	863	48 13 0	North Richmond ... ..	496	28 6 4
Katoomba (Railway) ... ..	2,972	166 10 0	Nowra ... ..	3,853	221 13 5
Kelso ... ..	909	51 19 6	Nundle ... ..	837	53 2 2
Kempsey ... ..	10,227	684 7 7	Nymagee ... ..	5,302	351 16 2
Kiama ... ..	8,453	539 7 9	Nyngan ... ..	8,531	547 1 9
Kiandra ... ..	1,203	78 11 3	Oberon ... ..	1,492	100 12 9
King-street ... ..	28,345	1,719 7 11	Obley ... ..	418	26 3 0
Kogarah ... ..	1,093	43 15 6	Orange ... ..	13,658	839 5 1
Kurrajong (late Wheeney Creek) ... ..	743	40 3 1	Oxford Hotel ... ..	896	50 5 10
Kyamba ... ..	298	19 14 10	Oxford-street ... ..	17,651	824 14 4
Lake Cudgellico ... ..	2,038	136 12 11	Paddington ... ..	10,918	525 17 0
Lambton ... ..	1,868	80 11 6	Palmer's Island ... ..	1,826	99 18 7
La Perouse ... ..	20,818	31 18 8	Panbula ... ..	1,165	69 11 7
Largs ... ..	147	8 5 9	Parkes ... ..	3,868	222 11 4
Laurieton ... ..	1,323	77 19 9	Park-street ... ..	25,959	1,405 10 1
Lawrence ... ..	3,181	182 1 0	Parliament House ... ..	2,785	108 5 10
Lawson (Railway) ... ..	824	44 14 4	Parramatta ... ..	18,463	766 3 7
Leichhardt ... ..	2,565	110 6 7	Paterson ... ..	2,174	124 17 2
Lismore ... ..	14,087	943 5 7	Pelican Flat ... ..	616	36 13 5
Lithgow ... ..	4,915	322 3 0	Penrith ... ..	4,555	256 12 9
Liverpool ... ..	2,987	163 11 11	Petersham ... ..	7,363	313 6 3
Lochinvar (Railway) ... ..	733	39 18 6	Pictou ... ..	2,481	142 13 4
Louth ... ..	2,351	143 2 10	Pilliga ... ..	1,492	96 2 0
Lower Botany ... ..	1,912	76 15 7	Pooncarie ... ..	1,433	126 3 8
Lower Gundaroo ... ..	386	22 14 4	Port Macquarie ... ..	5,810	342 6 7
Lucknow ... ..	529	31 13 5	Port Stephens ... ..	46	2 15 1
Macleay (late Rocky Mouth) ... ..	5,275	325 16 6	Pymont ... ..	4,711	236 3 10
Major's Creek ... ..	408	25 9 4	Quarantine ... ..	3	0 3 10
Manilla ... ..	1,228	83 10 2	Queanbeyan ... ..	7,611	474 16 10
Manly ... ..	10,831	412 11 6	Quirindi ... ..	3,726	236 19 8
Marengo ... ..	455	28 18 0	Randwick ... ..	4,348	194 1 9
Marrickville ... ..	2,202	101 9 1	Raymond Terrace ... ..	2,842	156 7 3
Marsden's ... ..	1,694	111 16 7	Redfern ... ..	7,435	346 12 5
Marulan (Railway) ... ..	1,287	75 18 9	Redfern (Railway) ... ..	16,713	830 13 6
Maryvale (Railway) ... ..	350	20 14 10	Richmond ... ..	6,206	295 5 1
Mathoura (Railway) ... ..	675	39 7 9	Riverstone ... ..	1,217	71 11 5
Menangle (Railway) ... ..	302	16 1 9	Robertson ... ..	897	53 10 1
Menindie ... ..	4,128	349 18 8	Rockdale ... ..	354	13 0 5
Merimbula ... ..	1,202	63 2 6	Rockley ... ..	825	49 3 8
Merriva ... ..	1,686	102 3 9	Rookwood ... ..	1,556	60 9 1
Michelago ... ..	2,670	172 9 9	Royal Hotel ... ..	6,865	440 5 4
Miller's Point ... ..	3,685	220 11 6	Rydal (Railway) ... ..	696	38 3 10

STATISTICS, 1886—MONETARY AND FINANCIAL.

ELECTRIC TELEGRAPHS—continued.

No. 53 (continued).—NUMBER and VALUE of TELEGRAMS sent.—continued.

Station.	Messages.	Value.	Station.	Messages	Value.
	No.	£ s. d.		No.	£ s. d.
Ryde ... ..	2,710	132 4 6	Ulmarra ... ..	3,244	195 12 4
Rylstone ... ..	1,952	114 1 4	Uralla ... ..	3,278	194 14 8
Scone ... ..	2,125	134 10 1	Urana ... ..	4,176	281 12 6
Seal Rocks ... ..	255	15 1 10	Wagga Wagga... ..	24,497	1,752 15 5
Seven Hills (Railway) ... ..	297	16 5 9	Walbundrie ... ..	1,090	72 16 8
Shellharbour ... ..	1,084	61 2 10	Walcha ... ..	2,433	147 16 4
Silverton ... ..	27,374	2,921 17 11	Walgett ... ..	8,464	595 9 7
Singleton ... ..	6,920	456 17 9	Wallendbeen (Railway) ... ..	688	41 0 3
Singleton (Railway) ... ..	1,325	71 12 6	Wallerawang ... ..	1,323	68 6 6
Smithtown ... ..	3,662	198 18 8	Wallsend ... ..	5,549	260 7 6
Sofala ... ..	597	33 7 2	Waratah ... ..	1,612	94 5 11
South Grafton ... ..	3,121	161 19 0	Wardell ... ..	2,687	151 17 5
South Head ... ..	1,598	53 2 2	Warialda ... ..	3,190	225 14 8
South Woodburn ... ..	2,624	149 0 7	Warkworth (to 11 December) ... ..	357	20 3 6
Spring Hill (Railway) ... ..	304	16 18 4	Warren... ..	4,644	315 1 6
Springwood (Railway) ... ..	1,379	76 10 4	Waterloo ... ..	2,117	93 11 8
St. Albans ... ..	184	11 2 0	Wauchope ... ..	420	24 14 10
St. Leonards ... ..	7,836	369 13 6	Waverley ... ..	6,911	293 2 1
St. Mary's ... ..	729	40 0 1	Wee Waa ... ..	1,199	95 2 7
St. Peter's ... ..	1,618	66 1 1	Wellington ... ..	4,453	273 11 7
Stanmore Road ... ..	1,209	50 18 3	Wentworth ... ..	59,802	636 2 10
Stannifer ... ..	570	34 7 7	Werris Creek (Railway) ... ..	2,027	112 15 2
Stroud ... ..	1,647	95 14 8	West Kempsey ... ..	4,669	313 17 5
Summer Hill ... ..	4,836	195 6 0	West Maitland... ..	21,484	1,463 18 3
Surry Hills (late Crown-street.) ... ..	4,968	229 14 3	West Tamworth ... ..	927	51 12 9
Sutton Forest ... ..	1,919	115 15 4	Whitton (Railway) ... ..	2,709	167 6 7
Tabulam ... ..	1,138	71 6 8	Wickham ... ..	2,320	118 11 10
Tamworth ... ..	16,102	1,100 9 4	Wilcannia ... ..	18,577	1,499 8 5
Tarago ... ..	1,060	61 15 10	William-street ... ..	16,673	795 19 2
Taralga ... ..	1,036	63 0 11	Willow-tree (Railway) ... ..	678	39 10 4
Tarana (Railway) ... ..	638	33 11 2	Windsor ... ..	5,056	291 12 1
Tarcutta ... ..	705	42 4 7	Wingen (Railway) ... ..	291	15 12 2
Taree ... ..	4,995	309 15 2	Wingham ... ..	1,977	156 4 9
Tareena (late Salt Creek.) ... ..	339	33 17 0	Wiseman's Ferry ... ..	898	50 13 8
Tathra ... ..	1,063	52 10 9	Wollombi ... ..	1,366	84 17 10
Tattersall's ... ..	6,461	387 12 8	Wollongong ... ..	11,566	696 13 6
Temora ... ..	4,449	246 4 7	Wooluna ... ..	1,214	67 6 4
Tenterfield ... ..	150,469	690 16 2	Woodburn ... ..	1,172	61 12 8
Terara ... ..	1,072	62 19 11	Woollahra ... ..	4,725	203 1 0
The Rock (Railway) ... ..	648	37 17 1	Wyrallah ... ..	146	8 0 8
Tilpa ... ..	1,000	77 1 3	Yamba (late Clarence River Heads) ... ..	2,494	102 11 10
Tingha ... ..	2,930	187 16 6	Yarrhapiani (late Macleay Heads) ... ..	707	33 3 8
Tinonee... ..	1,395	77 7 11	Yass ... ..	5,331	360 14 1
Tocumwal ... ..	1,589	99 4 8	Yass (Railway) ... ..	328	17 8 11
Tomakin ... ..	710	44 2 3	Yerong Creek (Railway) ... ..	1,302	74 13 11
Trunkey ... ..	599	45 9 2	Yetman ... ..	939	74 10 5
Tuena ... ..	596	37 5 5	Young ... ..	10,466	707 3 11
Tumbarumba ... ..	2,609	174 6 8			
Tumbulgum ... ..	1,359	89 11 0			
Tumut ... ..	5,617	376 8 2			
Tweed Heads ... ..	966	59 9 9			
Ulladulla ... ..	522	28 1 8			
			Total ... ..	2,644,581	136,145 4 0

	Messages.	Value of Transmitted Messages.	Amount due New South Wales.
	No.	£ s. d.	£ s. d.
Brought down... ..	2,644,581	136,145 4 0	136,145 4 0
Intercolonial Balances ... ..	.....	.....	.....
International Business ... ..	7,881	42,460 9 9	5,365 18 4
New South Wales proportion on same ... ..	.....	.....	3,750 16 6
New Zealand Business ... ..	8,664	5,447 12 3	.....
New South Wales proportion on same ... ..	.....	.....	2,225 1 7
Receipts for construction of Telephone Lines ... ..	.....	.....	5,784 13 0
Receipts for maintenance of Telephone Lines ... ..	.....	.....	4,856 0 7
Total transmitted Messages ... ..	2,661,126		
Total value .. ..	.....	184,053 6 0	
Amount due New South Wales ... ..	.....	.....	£158,127 14 0

ELECTRIC TELEGRAPHS—*continued.*

No. 54.—NUMBER and VALUE of TELEGRAMS from and to various places outside the Colony.

* Telegrams transmitted from New South Wales.													
Foreign Telegrams		New Zealand		Victoria		South Australia		Western Australia		Queensland		Tasmania.	
No	Amount	No	Amount	No	Amount	No	Amount	No	Amount	No	Amount	No	Amount
	£ s d		£ s d		£ s d		£ s d		£ s d		£ s d		£ s d
7,881	42,460 9 9	8,664	5,447 12 3		16,670 16 3		5,471 15 1		481 12 1		11,712 6 8		1,120 12 1

  

Telegrams issued in New South Wales.													
Foreign Telegrams		New Zealand		Victoria		South Australia		Western Australia		Queensland		Tasmania	
No	Amount	No	Amount	No	Amount	No	Amount	No	Amount	No	Amount	No	Amount
	£ s d		£ s d		£ s d		£ s d		£ s d		£ s d		£ s d
6,800	34,323 5 5	8,028	4,424 2 9	148,849	15,897 12 0	83,252	5,393 6 6	2,968	533 6 2	100,696	14,901 3 8	5,987	907 16 9

\* No record kept for the first quarter of the year owing to the system of prepayment by stamps being in vogue for that period, therefore the number and value of transmitted and issued Local telegrams and number of transmitted Intercolonial telegrams cannot be given

No. 55.—NUMBER and VALUE of TELEGRAMS ; also, LENGTH of LINE, COST of CONSTRUCTION and REVENUE received, 1877-86.

Year	No of Stations	No of Telegrams	Receipts		Revenue received	No of Miles of Wire	Cost of Construction
			Amount for Telegrams	Total			
			£ s. d.	£ s. d.	£ s. d.		£ s. d.
1877	190	1,001,884	65,645 6 0	96,357 10 2	65,645 6 0	9,761	343,973 4 8
1878	236	1,132,287	98,125 8 7	98,125 8 7	76,226 18 11	11,760	413,258 4 2
1879	273	1,175,218	103,033 4 9	103,033 4 9	80,490 0 6	12,426	437,120 5 3
1880	289	1,319,537	123,172 4 5	123,172 4 5	84,110 4 8	13,188	462,225 12 0
1881	318	1,607,206	125,335 17 2	125,335 17 2	98,664 17 4	14,278	492,211 6 5
1882	345	1,965,931	153,554 11 4	153,554 11 4	120,265 13 4	15,901	536,399 10 3
1883	368	2,107,288	165,276 4 10	165,276 4 10	134,643 2 4	17,272	564,315 19 4
1884	394	2,334,052	176,260 13 7	176,260 13 7	146,386 8 2	18,681	601,459 13 2
1885	404	2,625,992	191,191 17 4	191,191 17 4	155,073 10 3	19,864	641,669 0 7
1886	425	2,661,126	184,053 6 0	184,053 6 0	158,127 14 0	20,797	666,028 6 11

NOTE.—In 1877 the Balance on Intercolonial business and Guaranteed Lines, &c., was £30,712 4s 2d, including £28,146 3s. 3d. for Foreign and New Zealand Telegrams

POST OFFICE.

No. 56.—NUMBER of POST OFFICES, &c., in New South Wales, also Number of LETTERS, NEWSPAPERS, PACKETS and BOOK PARCELS, &c., passing through the various POST OFFICES.

Year.	Number of Post Offices.	Number of Receiving Offices.	Number of Persons employed.	Number of Miles travelled by Mail conveyance.	Extent of Postal Lines in Miles.	Number of Letters.			Number of Newspapers.		Packets and Book Parcels.		Total.			Income.			Expenditure. (Includes the estimated outstanding Liabilities for the Year.)		
						Foreign.	Inland.	Town	Foreign.	Inland.	Inland.	Foreign.	Letters.	Newspapers.	Packets, &c.	£	s.	d.	£	s.	d.
1876	782	18	1,090	3,891,906	18,418	1,852,400	9,986,000	2,628,500	1,508,300	5,408,900	304,400	109,500	14,466,900	6,917,200	413,900	<sup>a</sup> 128,641	16	11	206,798	13	7
1877	810	48	1,180	4,095,530	19,508	1,979,500	11,579,500	2,950,000	1,652,000	6,733,000	263,600	135,000	16,509,000	8,385,000	398,600	<sup>b</sup> 154,170	18	3	226,305	5	6
1878	847	75	1,272	4,389,925	20,176	2,220,600	12,782,900	3,156,400	1,657,600	7,811,600	403,700	133,100	18,159,900	9,469,200	536,800	155,621	19	6	248,216	11	8
1879	884	101	1,452	4,776,925	21,368	2,442,700	13,772,600	3,192,000	2,020,000	9,447,100	459,200	136,300	19,407,300	11,467,100	595,500	<sup>c</sup> 171,366	17	0	263,787	17	6
1880	927	119	1,536	5,246,373	22,427	2,776,000	Inland. <sup>e</sup> 18,956,500		2,381,200	11,409,800	565,000	146,600	21,732,500	13,791,800	711,600	194,084	8	7	268,128	0	0
1881	973	155	1,691	5,467,182	23,094	3,159,400	<sup>e</sup> 23,196,200		2,726,400	13,801,500	670,800	180,500	26,355,600	16,527,900	851,300	<sup>d</sup> 205,446	7	11	<sup>e</sup> 273,451	5	11
1882	1,005	169	1,824	5,861,317	23,923	3,589,200	<sup>e</sup> 25,737,300		2,720,600	15,361,700	1,044,200	218,600	29,326,500	18,082,300	1,262,800	<sup>d</sup> 229,910	15	1	<sup>e</sup> 288,186	9	4
1883	1,046	188	1,960	6,264,300	25,162	4,168,100	<sup>e</sup> 31,258,300		3,014,500	16,562,800	1,379,200	269,700	35,426,400	19,577,300	1,648,900	<sup>d</sup> 261,812	16	3	<sup>e</sup> 326,674	0	5
1884	1,085	206	2,076	6,509,446	26,430	4,947,200	<sup>e</sup> 37,289,800		3,689,600	21,373,900	2,705,900	316,200	42,237,000	25,063,500	3,022,100	<sup>d</sup> 289,192	3	11	<sup>e</sup> 351,253	11	9
1885	1,115	202	2,155	6,621,996	26,683	5,328,200	<sup>e</sup> 34,023,000		3,987,900	21,579,500	2,894,200	552,600	<sup>f</sup> 39,351,200	25,567,400	3,446,800	<sup>d</sup> 316,171	12	11	<sup>e</sup> 375,964	17	6
1886	1,157	217	2,307	6,891,200	27,094	5,582,700	37,267,200		4,276,300	25,256,100	3,983,000	865,800	42,849,900	29,532,400	4,848,800	<sup>d</sup> 330,591	0	0	<sup>e</sup> 396,710	1	3

<sup>a</sup> This includes the amount of the postage contributions of the United Kingdom and the Australian Colonies to the cost of Ocean Mail Subsidy. <sup>b</sup> Of this amount the sum of £13,995 18s. 1d. was received on account of postage due to the Colony by the United Kingdom for the years 1875 and 1876. <sup>c</sup> This number embraces all letters posted in the Colony for delivery within the Colony, and includes those letters hitherto classified as Town Letters. <sup>d</sup> The total collections for this year amounted to £24,000 more; this sum was transferred to Stamp Duties as approximate value for Postage Stamps used for Duty Stamps purposes during the year. <sup>e</sup> This does not include outstanding liabilities, but is the total amount expended during the year, irrespective of date of claims. <sup>f</sup> During the year 1885 the practice of weighing instead of counting the correspondence posted was introduced, as the limited time at the disposal of the sorting staff prevented the counting from being very carefully done, and it was thought that by weighing and allowing a certain number of letters, &c., to the lb., greater accuracy would be insured. The returns for 1885 may therefore be considered more reliable than those for previous years.



## MONEY ORDERS.

No. 57.—MONEY ORDERS issued and paid at each Office in the Colony during the year 1886.

Name of District.	Orders Issued		Orders Paid		Name of District	Orders Issued		Orders Paid.	
	Number	Amount.	Number.	Amount		Number	Amount.	Number	Amount.
		£ s. d.		£ s. d.		£ s. d.		£ s. d.	
Aberdeen .....	266	720 10 6	62	293 8 10	Carcoar . . .	1,559	5,451 11 9	594	1,855 5 2
Adamnaby .....	648	2,015 12 4	55	200 13 2	Cargo .....	431	1,042 12 0	89	390 14 1
Adamstown .....	92	306 5 1	3	5 8 11	Carrathool ...	437	1,396 0 7	76	278 5 2
Adelong .....	816	2,426 15 7	511	1,731 6 7	Carroll . . .	149	284 2 8	235	76 2 10
Albury .....	2,183	6,217 3 10	1,867	6,042 5 11	Casino .....	1,013	3,608 5 6	225	847 18 4
Angeldool .....	86	285 1 10	2	7 4 0	Cassilis .....	744	4,360 5 7	151	665 0 10
Anvil Creek .....	483	1,432 7 4	176	555 11 10	Charlestown ..	256	779 13 8	53	173 15 7
Appin .....	423	1,260 18 6	45	122 18 6	Chatsworth Isl..	393	1,134 13 11	103	409 13 9
Arakoon .....	240	697 4 1	14	27 4 0	Clarencetown ..	525	1,512 10 7	115	482 12 5
Araluen .....	654	1,684 13 10	264	770 10 7	Clarkson's Cross	344	968 14 10	22	41 0 11
Armudale .....	2,554	7,664 2 8	1,379	3,941 2 7	Clifton .....	1,052	3,875 13 8	142	552 9 4
Arncliffe .....	8	26 18 6	2	0 15 0	Cobar .....	2,059	8,619 11 1	276	1,084 13 7
Ashfield .....	688	2,041 6 4	629	2,044 19 0	Cobargo .....	491	1,271 6 5	106	344 9 2
Ballina .....	1,276	4,576 9 1	284	1,095 13 6	Cobbora .....	47	76 11 1	4	5 16 0
Balmam .....	1,805	5,894 15 9	2,018	6,458 14 4	Collector .....	180	532 1 6	44	107 18 6
Balranald .....	428	1,482 9 8	167	647 8 7	Colly Blue .....	116	374 15 3	2	10 0 0
Baradine .....	200	533 0 4	21	75 4 2	Condobohn .....	693	2,329 17 4	149	537 18 6
Barmedman .....	270	1,424 10 9	59	239 6 10	Coolac .....	276	887 10 2	21	95 15 7
Barraba .....	687	1,783 17 11	94	485 14 11	Coolah .....	296	937 0 7	52	245 9 4
Barrington .....	474	2,311 14 4	56	309 16 7	Coolaman .....	397	1,007 0 1	78	267 12 10
Bateman's Bay..	478	1,521 12 5	263	1,399 10 4	Cooma .....	1,469	5,114 10 6	713	2,413 19 1
Bathurst .....	5,176	17,939 0 11	5,569	16,107 17 2	Coonabarabran	775	2,300 15 6	202	646 0 9
Bega .....	1,939	7,549 8 8	807	2,352 2 8	Coonamble .....	972	3,179 11 2	340	1,200 9 2
Belmont .....	163	492 19 4	682	4,540 19 2	Cooperbrook ..	290	789 19 2	33	155 5 11
Bendemeer .....	363	1,043 0 11	71	477 6 3	Cooranbong .....	572	2,201 16 2	83	290 7 5
Berridale .....	172	515 9 4	15	45 5 1	Cootamundra ..	1,790	5,587 10 1	1,038	3,047 15 8
Berrima .....	457	1,033 6 5	252	583 0 9	Copeland N. . .	698	2,881 15 7	228	1,351 2 5
Bethungra .....	306	803 3 10	76	361 19 5	Coraki .....	559	1,933 6 8	131	577 12 0
Binalong .....	895	2,929 8 10	127	335 8 11	Corowa .....	481	1,299 2 6	257	914 1 6
Bunda .....	262	503 4 2	58	267 7 9	Corunna .....	128	318 12 6	11	47 4 10
Bungera .....	679	1,942 17 0	179	715 10 2	Cow Flat .....	44	117 2 5	5	19 5 6
Blackheath .....	34	67 15 1	4	27 14 4	Cowra .....	1,553	4,665 12 5	435	1,540 1 3
Black Springs ..	104	203 3 9	21	60 2 6	Croki .....	349	896 6 7	62	240 2 5
Blackville .....	316	799 4 0	28	107 7 8	Crookwell .....	923	2,775 18 10	181	523 18 3
Blayney .....	1,247	3,598 11 3	544	1,962 17 5	Cudal .....	547	1,199 17 4	156	508 9 10
Boat Harbour ..	441	1,532 19 6	27	107 2 3	Cudgegong .....	124	253 16 10	32	134 3 0
Bodalla .....	661	2,695 14 0	51	197 2 9	Culcairn .....	242	547 8 2	13	41 10 11
Boggabri .....	800	2,421 13 8	89	303 17 2	Cundletown ..	584	1,661 4 4	108	386 8 11
Bolivia .....	265	763 0 7	25	116 5 8	Curraletubula	249	555 2 4	14	53 4 0
Bombala .....	955	2,821 3 5	331	1,030 18 6	Currawang .....	98	228 8 9	41	188 10 4
Bomen .....	73	160 2 0	21	58 15 6	Dalton .....	213	451 13 5	46	116 14 4
Boohgal .....	372	1,370 17 4	40	180 4 1	Dandaloo .....	282	1,356 15 6	21	72 17 9
Boorook .....	18	45 9 2	4	18 10 6	Dapto .....	227	559 4 1	32	85 16 7
Botany .....	228	538 3 1	146	509 19 8	Darlington .....	557	2,358 18 9	453	1,263 14 9
Bourke .....	2,473	10,619 19 5	1,033	4,778 0 8	Darlington Pt..	354	1,003 6 2	23	56 13 3
Bowenfels .....	224	621 15 10	101	317 5 9	Deepwater .....	412	1,079 9 8	67	247 11 3
Bowna .....	78	169 17 8	20	81 0 11	Delegate .....	414	1,108 11 1	57	143 11 0
Bowning .....	515	1,175 2 2	128	352 8 2	Denilquim .....	920	2,377 5 7	615	1,834 2 2
Bowral .....	1,248	3,053 8 1	490	1,593 8 7	Denman .....	344	874 0 10	69	320 5 5
Bowraville .....	305	731 5 7	17	59 18 6	Drake .....	71	348 18 7	21	99 1 11
Braidwood .....	1,846	5,590 8 11	864	2,382 9 6	Dubbo .....	2,845	8,589 15 7	1,914	6,011 6 3
Branxton .....	728	2,499 8 6	344	1,703 8 5	Dundee .....	154	400 1 11	28	85 15 10
Breeza .....	503	1,533 0 3	33	106 2 5	Dungaree .....	224	414 17 1	17	63 0 9
Brewarrina .....	610	2,174 18 9	190	793 1 2	Dungog .....	575	1,565 6 8	179	554 14 7
Bringelly .....	101	250 17 11	14	49 2 10	East Kempsey ..	111	360 17 11	11	42 5 6
Broadwater .....	135	412 13 9	16	44 17 9	East Maitland ..	1,088	3,604 16 9	710	1,919 12 8
Broke .....	144	485 11 11	28	99 11 10	Eaunabalong ..	277	1,338 19 11	19	93 3 0
Broken Hill .....	289	1,126 10 2	34	165 14 3	Eden .....	614	2,114 17 9	165	796 6 11
Broughton Crk..	823	2,302 3 2	167	529 4 6	Edgecliffe .....	85	211 12 3	12	45 12 4
Brown Mountain	40	73 17 6	..	..	Emmaville .....	1,746	6,519 0 3	356	1,336 0 9
Brushgrove .....	262	736 18 9	52	230 5 4	Emu .....	61	159 14 1	176	413 9 5
Bulahdelah .....	519	1,658 4 5	96	378 11 2	Emu Plains .....	120	268 5 5	49	129 7 7
Bulli .....	871	2,872 9 7	373	1,687 10 6	Enngonia .....	55	215 0 10	7	28 0 0
Bundanoon .....	318	961 2 10	102	308 15 0	Eugowra .....	465	1,330 8 7	89	321 3 2
Bundarra .....	477	1,565 13 2	102	337 15 4	Eulowrie .....	11	29 19 3	..	..
Bungendore .....	1,243	3,665 17 0	304	1,011 9 10	Eurobodalla ..	127	410 8 1	14	49 19 2
Bungonia .....	140	366 10 7	45	189 4 6	Euston .....	328	1,622 12 7	24	71 18 10
Bungwall Flat ..	390	873 18 11	27	143 4 4	Fernmount .....	544	1,676 19 9	82	301 12 2
Burrage .....	292	815 6 7	87	276 11 3	Forbes .....	1,645	5,064 17 5	933	3,149 2 8
Burrawang .....	347	862 14 6	91	215 7 1	Forest Reefs ..	367	1,025 8 11	42	139 11 5
Burrowa .....	850	1,924 17 2	359	1,642 19 3	Forster .....	254	703 8 3	47	141 1 7
Burwood .....	1,015	3,238 12 1	724	2,386 18 3	Frederickton ..	249	924 13 11	80	221 17 4
Byrock .....	642	2,402 15 0	112	393 14 1	Frogmore .....	252	546 3 0	63	229 18 2
Cadia .....	101	215 5 2	46	135 1 0	George-st. West	1,319	4,404 11 8	466	1,439 17 5
Cambewarra .....	233	570 0 7	70	214 5 1	Germantown .....	545	1,472 7 9	129	438 11 2
Camden .....	813	2,209 13 8	395	1,221 3 10	Gerogery .....	198	525 6 2	34	118 2 0
Camden H. P .....	213	607 6 3	22	72 6 0	Gerrungong .....	400	1,062 7 6	59	186 9 5
Campbelltown ..	765	2,192 6 2	526	1,701 4 8	Gilgandra .....	378	1,381 9 0	50	191 16 2
Camperdown .....	603	2,189 10 1	558	2,318 13 11	Gunninderra ..	81	183 6 1	1	3 0 0
Canadian Lead..	55	98 3 8	12	49 6 0	Gurilambone ..	217	647 1 0	39	163 10 11
Candelo .....	392	966 5 10	105	291 12 7	Gladstone .....	331	996 11 9	13	39 16 3
Cannonbar .....	130	437 17 7	23	109 1 3	Glebe .....	908	2,755 14 11	1,028	3,723 18 5
Canowindra .....	534	1,572 3 11	82	278 3 9	Glebeland .....	631	1,884 6 0	96	271 2 2
Canterbury .....	112	345 0 6	119	246 8 4	Glen Innes .....	2,284	7,206 0 1	1,421	4,685 16 10
Capertee .....	223	517 18 1	49	123 11 5	Gloucester .....	142	429 15 8	39	93 7 0

## STATISTICS, 1886—MONETARY AND FINANCIAL.

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## MONEY ORDERS—continued.

No. 57 (continued).—MONEY ORDERS issued and paid—continued.

Name of District.	Orders Issued.		Orders Paid.		Name of District.	Orders Issued.		Orders Paid.	
	Number.	Amount.	Number.	Amount.		Number.	Amount.	Number.	Amount.
Gongolgon .....	268	£ 840 4 10	19	£ 76 15 6	Maryvale.....	189	£ 433 3 1	48	£ 150 10 2
Goodooga .....	311	1,440 1 9	38	166 16 2	Mathoura .....	170	374 11 5	8	31 13 8
Goonoo Goonoo .....	161	371 5 10	20	61 6 7	Menindee.....	294	1,298 6 7	50	215 8 11
Gosford .....	1,404	5,287 16 5	353	1,179 2 1	Meranburn .....	197	427 3 11	35	127 8 5
Goulburn .....	5,576	16,375 11 4	6,822	20,458 11 10	Merimbla .....	245	768 14 7	82	301 4 1
Grafton .....	2,573	9,114 1 0	1,244	3,966 2 5	Merriwa .....	591	1,865 1 2	113	356 13 6
Granville .....	792	2,476 10 1	618	2,018 18 4	Michelago .....	1,867	9,492 13 3	92	344 15 11
Greenhill .....	131	376 18 3	13	53 1 6	Miller's Forest..	95	216 14 4	20	41 18 7
Greenwell Point .....	343	995 7 0	183	781 12 0	Miller's Point...	2,044	10,291 3 0	189	529 19 0
Grenfell .....	1,124	3,188 6 2	432	1,241 6 10	Millie .....	152	511 6 9	16	53 19 6
Gresford .....	12	26 10 0	6	6 13 0	Milperinka .....	294	1,236 1 6	30	160 12 8
Gulgong .....	1,089	3,338 15 11	425	1,452 0 1	Millthorpe .....	350	1,107 4 1	91	366 19 5
Gunbar .....	182	473 3 4	43	97 2 6	Milton .....	729	2,008 13 5	227	798 19 1
Gundagai .....	1,439	4,897 4 11	447	1,518 10 0	Minmi .....	1,170	3,898 6 4	231	559 17 3
Gunnedah .....	1,546	4,682 19 3	715	1,976 1 10	Mitchell .....	1,825	6,031 13 0	421	1,454 1 7
Gunning .....	716	1,967 14 0	376	1,104 19 3	Mittagong .....	1,188	3,325 2 6	595	2,102 7 6
Guyong .....	55	114 7 1	24	112 5 10	Moama .....	218	566 14 4	107	278 10 7
Guyra .....	48	132 16 11	11	26 9 3	Mogil Mogil .....	204	858 11 9	21	109 8 3
Hamilton .....	680	2,087 3 1	305	1,071 4 0	Molong .....	1,386	3,336 10 5	912	2,207 8 10
Harden .....	933	2,654 12 4	122	357 3 0	Molonglo .....	186	495 12 0	34	83 17 9
Hargraves .....	201	645 5 1	33	130 12 0	Monga .....	76	188 17 11	8	18 0 0
Harris-street .....	724	2,651 10 4	48	153 17 3	Moonbi .....	51	113 17 7	17	57 14 1
Hartley .....	170	408 1 2	45	91 12 0	Morree .....	965	3,858 17 0	232	810 13 10
Hartley Vale .....	745	1,899 8 10	83	220 13 1	Morpeth .....	580	1,681 13 0	383	1,257 0 6
Harwood Island .....	73	176 11 3	4	7 15 0	Moruya .....	994	2,910 14 9	549	1,868 19 3
Hawke's Nest .....	171	701 18 6	58	313 13 3	Mossiel .....	301	1,410 13 10	45	208 10 0
Hay .....	1,870	6,032 10 7	1,071	3,731 12 4	Moss Vale .....	1,127	3,238 19 11	600	1,692 2 5
Haymarket .....	5,040	17,568 10 7	4,231	12,470 2 7	Moulamein .....	139	310 8 4	38	104 14 7
Hexham .....	225	708 2 8	183	691 2 5	Mount Hope .....	429	1,585 1 8	83	385 8 8
Hill End .....	542	1,657 5 1	530	1,968 13 1	Mount M'Donald .....	440	1,240 13 0	73	270 13 4
Hillston .....	558	2,124 0 2	285	1,287 5 3	Mount Victoria .....	869	2,815 0 3	251	804 2 9
Hinton .....	188	543 9 7	116	343 16 2	Mount Vincent..	144	369 13 3	14	53 19 4
Homebush .....	163	718 18 1	75	260 14 0	Mudgee .....	2,626	8,317 15 1	1,857	5,745 4 4
Home Rule .....	169	372 9 1	71	256 11 11	Mulwala .....	210	661 18 9	20	48 14 6
Hoskinstown .....	181	631 13 10	12	45 9 2	Mundooran .....	38	76 16 9	3	14 12 0
Howlong .....	328	1,033 13 9	41	131 14 11	Murrumburrah .....	1,138	3,103 12 11	349	1,143 8 9
Hunter's Hill .....	28	56 1 1	20	64 18 8	Murrurundi .....	1,323	3,305 18 11	548	1,315 16 3
Hurtsville .....	123	321 5 0	90	306 0 6	Murwillumbah..	573	1,844 0 2	123	617 16 7
Ilford .....	283	682 5 8	63	233 1 8	Muswellbrook .....	1,324	3,527 6 10	499	1,456 14 9
Illabo .....	130	376 8 9	14	63 5 0	Muttama Reef...	73	221 7 7	16	51 2 4
Inverell .....	1,833	6,419 0 7	712	2,619 3 10	Nambucca .....	453	1,665 10 1	77	248 4 7
Ironbarks .....	662	2,105 6 1	152	595 9 8	Narrabri .....	1,507	4,683 0 4	900	3,283 12 8
Ivanhoe .....	226	862 17 0	44	224 4 6	Narrabri R. S. ..	396	1,255 10 11	43	185 9 4
Jamberoo .....	347	924 4 1	100	326 17 7	Narrandera .....	1,874	6,494 14 2	732	2,276 1 2
Jerilderie .....	469	1,246 15 0	146	499 2 2	Nelligen .....	390	1,022 2 3	52	199 17 1
Jerry's Plains .....	253	826 12 11	81	275 2 1	Nerrigundah .....	87	361 3 8	8	9 6 5
Jindera .....	200	487 1 6	24	101 10 9	Newbridge .....	242	620 6 9	81	220 7 8
Joadja Creek .....	399	1,327 2 4	35	113 9 4	Newcastle .....	8,428	28,784 1 2	5,924	19,667 7 4
Jugiong .....	215	562 8 11	14	39 5 5	Newtown .....	2,598	8,071 13 6	2,800	8,426 0 1
Junee Junction .....	1,351	4,214 1 2	530	1,829 1 5	Nimitybelle .....	482	1,316 10 11	64	251 14 4
Kangaroo Valley .....	427	1,075 17 9	91	332 15 8	Nomra .....	1,298	3,418 0 4	381	1,384 19 1
Katoomba .....	1,125	3,196 8 3	171	488 18 3	Numba .....	254	625 12 0	31	95 9 9
Kelso .....	268	700 3 4	63	178 1 3	Nundle .....	1,599	1,162 17 1	100	399 6 10
Kempsey .....	1,300	5,648 8 1	453	1,298 16 0	Nymagee .....	1,494	6,608 14 3	225	899 0 2
Kiama .....	1,906	6,450 17 4	584	2,039 4 9	Nyngan .....	1,516	5,610 16 11	454	1,631 3 1
Kiandra .....	391	1,323 15 8	47	278 13 7	Oaks .....	29	65 16 3	3	17 10 0
Kinchumber .....	29	127 6 8	18	52 9 6	Oberon .....	1,071	3,538 0 11	155	550 2 5
King-street .....	2,487	10,258 17 0	278	952 6 8	Obley .....	259	660 16 2	35	73 11 10
Kogarah .....	133	402 1 6	166	386 5 6	O'Connell .....	224	568 6 4	86	358 11 1
Kurrajong .....	35	48 0 4	4	9 3 9	Old Junee .....	131	372 11 6	34	123 2 7
Lake Cudgellico .....	488	1,829 4 11	68	325 11 4	Oneygamba .....	201	549 12 8	18	61 11 4
Lambton .....	1,088	3,569 15 7	586	1,660 1 5	Orange .....	3,368	9,939 5 8	2,410	7,119 1 8
Lawrence .....	421	1,163 5 7	124	400 14 3	Oxford-street ..	2,535	7,793 2 8	2,320	6,786 10 11
Leichhardt .....	667	2,285 5 7	765	2,760 12 3	Paddington .....	2,340	8,849 5 6	1,762	5,342 19 7
Lidsdale .....	54	116 15 8	22	98 14 7	Palmer's Island..	451	1,323 18 10	108	442 1 6
Lionsville .....	30	52 0 8	5	25 0 0	Pambula .....	348	933 11 10	79	225 1 7
Lismore .....	1,773	5,482 18 10	820	3,197 3 7	Parkes .....	1,143	3,285 2 3	344	1,316 8 4
Lithgow .....	2,607	7,973 18 3	1,141	3,146 14 10	Park-street .....	3,425	12,437 18 11	1,649	4,785 13 0
Little Hartley .....	201	512 5 11	10	15 1 8	Parramatta .....	2,854	9,014 11 0	2,830	8,733 7 5
Liverpool .....	779	1,948 6 8	632	1,857 12 3	Paterson .....	282	766 8 3	79	232 6 9
Lochinvar .....	227	704 4 11	225	993 13 8	Peat's Ferry .....	1,076	4,480 1 9	42	110 0 8
Louth .....	448	2,448 2 3	48	242 1 11	Pelican Flat .....	339	1,111 12 10	110	557 14 8
Lower Botany .....	27	107 7 2	23	78 5 0	Penrith .....	1,431	3,742 8 0	820	2,635 13 1
Lower Gundaroo .....	392	1,042 4 6	39	125 16 10	Petersham .....	868	2,770 2 4	1,252	3,817 15 4
Lucknow .....	214	550 17 2	46	139 6 2	Pictou .....	1,068	2,975 5 1	417	1,282 11 8
Luddenham .....	100	197 17 2	36	114 14 8	Pilliga .....	346	1,374 2 0	57	195 17 0
Macdonaldtown .....	94	180 1 4	265	689 17 3	Pooncarie .....	182	689 1 9	14	54 16 10
Maclean .....	1,000	3,483 8 6	332	901 15 2	Port Macquarie ..	1,172	4,102 12 2	302	1,229 4 2
Major's Creek .....	254	666 17 2	113	311 3 6	Prospect Reservoir.	147	426 4 3	13	21 7 8
Manilla .....	502	1,054 11 1	60	248 17 1	Pymont .....	808	2,781 7 9	707	2,260 2 6
Manly .....	997	3,000 4 5	471	1,507 2 11	Queanbeyan .....	2,580	8,059 10 10	828	2,890 2 1
Manrengo .....	330	775 9 3	51	241 16 6	Quirindi .....	1,226	2,912 12 7	364	1,047 17 5
Marrickville .....	542	1,567 9 2	590	1,748 16 6	Randwick .....	470	1,566 1 8	510	1,344 5 4
Marsdens .....	318	1,179 9 11	29	145 19 9	Raymond Terrace..	626	1,777 14 5	342	1,259 4 8
Marulan .....	547	1,259 10 10	225	852 1 9	Redfern .....	2,295	7,510 4 10	2,011	6,037 12 2

## MONEY ORDERS—continued.

## No. 57 (continued)—MONEY ORDERS issued and paid—continued

Name of District	Orders Issued		Orders Paid		Name of District	Orders Issued		Orders Paid	
	Number	Amount	Number	Amount		Number	Amount	Number	Amount.
		£ s d		£ s d			£ s d.		£ s d.
Reedy Flat	119	207 13 9	21	76 13 2	Ulladulla	162	391 9 6	76	318 18 8
Richmond	780	2,327 11 2	427	1,043 19 11	Ullmarra	493	1,697 11 10	109	588 16 0
Riverstone	275	563 5 4	201	627 7 3	Ultimo	349	880 0 3	176	522 8 7
Robertson	380	964 13 3	86	262 19 2	Upper Gundaroo	229	501 1 10	19	80 11 7
Rockley	503	1,241 1 10	130	469 14 11	Upper North Ck	37	119 6 6		
Rookwood	338	975 15 5	229	841 2 6	Upper Pyramul	72	180 18 9	14	53 12 6
Rooty Hill	75	166 8 10	117	441 1 6	Uralla	865	2,535 5 10	311	978 16 7
Rydal	292	723 14 7	131	279 11 4	Urana	531	1,904 18 6	124	372 4 3
Ryde	492	1,466 10 10	247	837 7 4	Vacy	22	37 11 8		
Rylstone	741	1,669 0 0	324	1,114 12 2	Wagga Wagga	3,382	10,587 14 2	1,965	6,030 19 10
St. Albans	205	643 18 7	22	71 13 5	Walcha	644	1,702 7 9	130	532 12 0
St Leonards	1,406	4,082 0 5	1,007	3,504 0 8	Walcha Road	66	158 15 4	1	2 0 0
St. Mary's	443	974 2 8	188	741 17 9	Walgett	851	3,563 14 11	268	909 0 9
St Peter's	385	1,098 7 9	272	761 16 9	Wallabadah	341	867 7 1	72	224 19 7
Scone	1,180	3,244 4 1	352	1,052 14 11	Wallendbeen	213	601 5 0	75	259 11 6
Shellharbour	389	969 1 4	64	257 12 2	Wallerawang	794	1,852 4 3	197	655 6 4
Silverton	1,728	7,379 16 0	486	2,815 15 3	Wallsend	2,059	6,892 11 6	599	1,736 8 2
Singleton	2,522	7,076 11 2	1,954	5,637 9 6	Wandsworth	82	201 4 9	18	73 16 2
Smithtown	411	1,401 19 8	37	143 15 6	Waratah	580	1,773 9 0	255	792 18 9
Sofala	486	1,705 12 5	187	551 9 9	Wardell	497	1,562 10 1	160	598 11 4
Somerton	136	219 13 8	10	13 19 7	Warialda	496	1,583 18 8	179	462 12 8
South Bowenfels	154	311 17 5	37	133 8 4	Warren	825	2,997 3 8	139	574 9 4
South Grafton	475	1,484 14 7	254	1,329 14 3	Waterloo	649	1,904 16 2	615	2,020 1 5
South Woodburn	456	1,378 16 3	76	301 1 1	Watson's Bay	43	99 8 1	26	95 18 11
Spring Hill	150	476 1 4	34	96 16 9	Wattle Flat	190	480 4 4	105	373 10 3
Stannifer	167	399 16 7	22	80 5 9	Waverley	826	2,659 13 7	1,063	2,855 11 6
Stanmore Road	54	149 17 0	22	48 5 10	Wee Waa	445	1,855 1 4	41	158 10 3
Stroud	482	1,260 16 3	188	580 6 10	Wellington	1,445	4,984 3 2	734	2,237 4 9
Summer Hill	416	1,216 13 8	455	1,246 2 1	Wentworth	644	2,523 16 10	228	805 19 4
Summer Island..	163	439 14 4	6	22 10 0	Werris Creek	422	1,276 5 9	76	216 19 2
Surry Hills	1,267	5,848 3 8	758	2,465 11 11	West Balmain	1	2 0 0	4	2 2 0
Swan Bay	11	20 10 9	1	2 17 0	West Kempsey	572	1,825 14 6	202	753 2 11
Sydney	32,723	130,852 2 11	163,592	508,494 8 4	West Matland	2,980	9,178 17 9	4,380	12,052 17 11
Tambaroora	151	381 7 6	121	261 0 6	West Tamworth	278	803 8 6	190	664 4 10
Tambar Springs.	180	490 6 11	8	35 5 0	Whitton	483	1,229 18 3	57	201 1 9
Tamworth	2,072	6,126 19 8	2,634	7,713 3 0	Wickham	1,160	3,607 2 7	365	964 7 7
Tarago	358	783 2 2	183	594 15 7	Wilcanna	1,444	6,435 4 10	486	2,504 6 3
Taralga	544	1,440 8 5	120	492 12 2	Willanthy	34	101 4 5	1	0 11 6
Tarana	250	638 13 7	67	287 16 2	William street..	2,549	8,741 4 2	1,423	4,356 5 9
Tarcutta	274	703 1 6	47	219 14 0	Willow-tree	244	474 12 0	32	118 13 11
Taree	728	2,393 10 3	296	897 14 3	Wilson's D'nfall	30	67 12 10		
Temora ..	1,209	3,942 7 11	399	1,862 0 5	Wilton	109	346 11 3	23	126 0 2
Tempe	117	327 16 3	43	124 2 1	Windeyer	81	220 18 0	47	198 10 11
Ten-mile Reef	140	345 19 6	17	104 2 9	Windsor	1,153	3,266 5 8	821	2,869 16 7
Tenterfield	1,665	5,502 12 3	547	2,074 13 6	Wingham	625	1,572 4 4	108	421 18 4
Terara	383	982 0 6	97	321 15 4	Wiseman's Ferry	453	1,545 5 2	46	172 5 10
The Exchange	1,500	5,717 6 1	68	228 5 3	Wollar	186	436 6 3	10	39 13 9
The Rock	153	354 15 2	31	114 14 6	Wollombi	534	2,181 3 7	93	427 16 4
Tibooburra	77	270 16 0	9	72 2 1	Wollongong	3,129	10,994 16 7	1,150	3,827 5 10
Tighe's Hill	302	867 15 2	47	171 9 2	Wolumla	264	612 13 9	69	168 5 8
Tingha	1,176	5,660 2 5	185	772 12 7	Wombat	101	216 18 7	42	129 13 5
Tinonee	300	701 15 6	74	186 10 6	Woodburn	363	1,092 1 1	90	355 8 6
Tocumwal	435	1,966 16 2	57	347 8 6	Woollahra	745	2,342 2 9	587	1,668 18 6
Trunkey Creek.	370	1,179 17 0	53	180 1 6	Woonona	314	1,053 9 2	61	164 7 1
Tuena	251	979 13 9	68	287 0 8	Wynndham	8	17 6 6	1	2 15 0
Tullumbar	139	228 1 11	31	98 5 1	Yass	1,865	4,696 14 8	1,039	2,809 2 3
Tumberumba	505	1,450 16 10	132	614 11 5	Young	2,261	6,781 0 6	1,106	3,319 13 2
Tumbulgum	386	1,102 16 2	46	299 15 10					
Tumut	1,003	3,062 13 3	439	1,477 19 0					
					Total	345,825	1,134,954 18 1	309,576	982,335 11 5

## STATISTICS, 1886—MONETARY AND FINANCIAL.

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MONEY ORDERS—*continued.*

No. 58.—NUMBER AND AMOUNT of MONEY ORDERS issued in New South Wales during 1886, and the places at which they were made payable; also, of MONEY ORDERS paid in New South Wales during the same year, and the places at which they were originally issued.

Issued in New South Wales and payable—	Issued in 1886.		Payable in New South Wales and issued—	Issued in 1886.	
	No.	Amount.		No.	Amount.
		£ s. d.			£ s. d.
In the United Kingdom ... ..	34,380	139,348 13 7	In the United Kingdom, Germany, and other foreign countries ...	6,937	23,279 0 3
New South Wales ... ..	265,479	822,631 17 4	New South Wales ... ..	266,656	831,027 3 3
New Zealand ... ..	3,735	14,281 3 5	New Zealand ... ..	5,336	16,397 14 7
Queensland ... ..	5,419	21,946 3 3	Queensland ... ..	12,314	47,764 15 4
South Australia ... ..	4,544	17,254 7 2	South Australia ... ..	2,768	8,588 12 5
Tasmania ... ..	1,444	5,580 3 1	Tasmania ... ..	2,256	6,982 10 2
Victoria ... ..	25,894	85,355 17 8	Victoria ... ..	13,125	44,309 10 8
Western Australia ... ..	142	951 19 11	Western Australia ... ..	395	1,053 11 0
Hong Kong ... ..	703	4,625 13 7	Hong Kong ... ..	32	123 17 0
India ... ..	1,197	9,237 17 11	India ... ..	339	886 7 0
United States ... ..	1,408	5,349 13 4	Cape of Good Hope ... ..	66	389 16 2
Cape of Good Hope ... ..	118	679 2 3	United States ... ..	239	1,006 13 1
Canada ... ..	113	556 15 10	Canada ... ..	69	315 18 6
Ceylon ... ..	25	118 11 10	Ceylon ... ..	2	12 0 0
Germany and other foreign countries ... ..	1,213	6,980 4 4	Mauritius ... ..	21	155 15 0
Straits Settlements ... ..	5	22 15 7	Straits Settlements ... ..	11	42 7 0
Mauritius ... ..	6	33 18 0			
Total ... ..	345,825	1,134,954 18 1	Total ... ..	309,576	982,335 11 5

No. 59.—NUMBER AND AMOUNT of MONEY ORDERS issued and paid, also COMMISSION—1876-86.

Year.	Issued.		Paid.		Commission.
	Number.	Amount.	Number.	Amount.	
		£ s. d.		£ s. d.	£ s. d.
1876 ... ..	112,684	465,770 10 11	101,492	421,161 15 8	4,663 1 6
1877 ... ..	129,120	494,468 19 2	120,493	459,476 15 9	5,247 18 6
1878 ... ..	142,025	538,799 17 8	129,143	487,458 6 3	5,772 0 6
1879 ... ..	159,897	582,422 14 8	142,201	515,075 17 11	6,487 13 0
1880 ... ..	190,606	669,022 3 5	168,944	583,340 1 1	7,684 6 0
1881 ... ..	220,670	771,977 15 3	195,757	675,025 9 10	8,799 8 0
1882 ... ..	247,716	883,523 14 5	218,334	771,860 10 4	10,027 9 0
1883 ... ..	275,592	963,698 8 8	239,595	829,770 0 5	11,370 14 0
1884 ... ..	305,883	1,068,068 5 3	270,678	921,904 6 7	12,650 18 0
1885 ... ..	337,856	1,169,569 5 10	298,082	997,960 19 1	14,243 5 6
1886 ... ..	345,825	1,134,954 18 1	309,576	982,335 11 5	14,927 1 0

PUBLIC WORKS.

No. 60.—GENERAL RETURN of all RAILWAYS, ELECTRIC TELEGRAPHS, ROADS, BRIDGES, BUILDINGS, &c., carried on during the year 1886.

Work, and where situated.	Whether Constructing or under Repair.	Estimated Expense	Fund from which the Expense is defrayed.	When Com-menced.	Whether Finished or Unfinished.	Expenditure on lines finished and open for traffic.	Amount of Expenditure on 31 December, 1886, on lines unfinished.		Amount expended in 1886		Amount expended for Furniture in 1886.	Remarks
							£ s. d.	£ s. d.	£ s. d.	£ s. d.		
<b>RAILWAYS.</b>												
Darling Harbour Branch	Under repair and construction.			1850	Finished	229,409 16 8			29,341 8 7			
Tramway, Pitt-street				1859	"	4,878 7 1						
Sydney to Granville				1850	"	1,056,390 4 10			21,936 17 10			
Granville to Liverpool				1855	"	158,849 7 9			334 4 2			
Liverpool to Campbelltown				1857	"	144,388 13 0			310 17 1			
Campbelltown to Menangle				1859	"	84,734 16 8			215 16 6			
Menangle to Picton				"	"	337,317 19 7			3 7 6			
Picton to Goulburn				1862	"	140,642 16 5			11,100 14 10			
Goulburn to Yass				1873	"	441,744 19 0			661 7 8			
Yass to Cootamundra				"	"	559,877 8 9			4,817 5 8			
Cootamundra to North Wagga Wagga				"	"	423,779 15 10			2,617 18 11			
North Wagga Wagga to Albury				1877	"	805,666 19 0			2,900 2 8			
Albury to River Murray				1882	"	92,950 7 1			7,163 12 7			
Junce to Narrandera				1879	"	355,203 11 11			486 9 9			
Narrandera to Hay				1880	"	583,040 14 11			944 15 5			
Narrandera to Jerilderie				1882	"	407,626 19 5			1,805 12 8			
Cootamundra to Gundagai				"	"	223,154 19 6			28,818 2 2			
Granville to Penrith				1858	"	581,353 5 6			23,865 17 1			
Penrith to Bathurst				1862	"	2,111,242 1 2			19,130 14 7			
Bathurst to Orange				1873	"	401,061 8 1			7,565 0 1			
Orange to Wellington				1877	"	454,600 18 6			12,751 5 6			
Wellington to Dubbo				1878	"	235,212 9 11			2,235 2 7			
Dubbo to Bourke				1880	"	1,283,742 3 9			9,902 0 2			
Wallerawang to Mudgee				"	"	947,335 18 1			1,412 1 5			
Windsor and Richmond				1862	"	170,598 16 1			902 16 4			
Newcastle to West Maitland				1853	"	673,381 16 9			15,229 18 10			
Morpeth Branch				1862	"	57,602 0 11						
West Maitland to Singleton				1858	"	352,304 15 1			3,161 17 6			
Singleton to Murrurundi				1867	"	738,626 5 3			730 15 3			
Murrurundi to Tamworth				1873	"	466,006 14 2			4,700 13 8			
Tamworth to Uralla				1879	"	946,355 14 8			928 8 5			
Uralla to Glen Innes				1881	"	735,232 4 8			2,019 13 9			
Glen Innes to Tenterfield				1882	"	703,261 7 9			92,403 18 6			
Weirris Creek to Gunnedah				1878	"	248,109 19 0			127 6 0			
Gunnedah to Narrabri				1880	"	305,263 5 5			255 19 10			
Rolling Stock—												
South and West				1850	"	2,488,623 11 1			187,903 10 2			
Richmond Line				1862	"	5,226 1 1						
North				1853	"	591,232 4 2			45,680 10 3			
Tramway				1859	"	1,712 12 3						
Machinery—												
South and West				1850	"	147,029 3 8			29,453 1 1			
North				1853	"	30,140 13 6			6,759 1 11			
Workshops—												
Redfern and Eveleigh				1850	"	499,437 12 3			85,861 13 9			

Consolidated Revenue £757,886 17 1  
 Loans ... .. 23,321,668 1 8  
 £24,079,554 18 9



No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated.	Whether Constructing or under Repair.	Estimated Expense.	Fund from which the Expense is defrayed.	When Com- menced.	Whether Finished or Unfinished.	If Finished, actual amount of Expenditure.	If Unfinished, amount of Expenditure on 31 December, 1886.	Amount expended in 1886.	Amount expended for Furniture in 1886.	Remarks.
<b>TELEGRAPHS.</b>										
Murrurundi to Doughboy Hollow	Constructing	.....	Loans, 50 Vict. No. 28, —£100,000.	1885	Finished	£ s. d. 1,006 9 9	£ s. d. .....	£ s. d. 336 10 6		
Glen Innes to Tenterfield	"	.....		"	"	"	4,748 16 6	.....	1,454 18 3	
Bathurst to Dubbo	"	.....		"	"	"	1,838 3 3	.....	1,809 11 9	
Port Macquarie to Wauchope	"	.....		"	"	"	407 4 0	.....	323 6 0	
Shellharbor to Albion Park	"	.....		"	1886	"	244 16 8	.....	244 16 8	
Morpeth to Largs	"	.....		"	"	"	112 2 7	.....	112 2 7	
Nowra to Tomerong	"	.....		"	"	"	191 2 10	.....	191 2 10	
Main Line to Conargo	"	.....		"	"	"	19 10 0	.....	19 10 0	
Gloucester to Taree	"	.....		"	"	"	267 18 0	.....	267 18 0	
Young to Cowra	"	.....		"	"	"	2,682 0 5	.....	2,682 0 5	
Silverton to South Australian Border	"	.....		"	"	"	1,300 10 8	.....	1,300 10 8	
Trangie to Dandaloo	"	.....		"	"	"	723 9 7	.....	723 9 7	
Chatsworth Island to South Woodburn	"	.....		"	"	"	769 3 6	.....	769 3 6	
Oberon to Jenolan Caves	"	.....		"	"	"	554 16 3	.....	554 16 3	
Menindie to Broken Hill	"	.....		"	"	"	558 16 11	.....	558 16 11	
Raymond Terrace to Stockton	"	.....		"	"	"	472 8 9	.....	472 8 9	
Lismore to Wyrallah	"	.....		"	"	"	78 4 9	.....	78 4 9	
Sydney to Pheasant's Nest	"	.....		"	"	"	1,992 8 5	.....	1,992 8 5	
Gosford to Woy Woy	"	.....		"	"	"	101 9 3	.....	101 9 3	
Illawarra Line, 11½ to 24 miles peg	"	.....		"	"	"	634 18 4	.....	634 18 4	
Yass to Yass Railway Station	"	.....		"	"	"	86 6 0	.....	86 6 0	
Colac to Jugiong	"	.....		"	"	"	97 4 0	.....	97 4 0	
Granville to Smithfield	"	.....		"	"	"	112 10 0	.....	112 10 0	
Illawarra Line to Audley	"	.....		"	"	"	65 8 0	.....	65 8 0	
Tarana to Wallerawang	"	.....		"	"	"	73 3 6	.....	73 3 6	
Redfern to Hurstville	"	.....		"	"	"	88 0 0	.....	88 0 0	
Eveleigh to Hurstville	"	.....		"	"	"	80 10 0	.....	80 10 0	
Strathfield to Hornsby	"	.....		"	"	"	705 11 1	.....	705 11 1	
Croydon to Five Dock	"	.....		"	"	"	78 5 0	.....	78 5 0	
City Extensions (Telegraph and Telephone)	"	.....		"	"	"	4,267 18 4	.....	4,267 18 4	
Louth to Wanaaring	"	.....		"	1885	Unfinished	.....	1,065 14 6	675 0 6	
Tumbulgum to Tweed Heads	"	.....		"	1886	"	.....	395 4 0	395 4 0	
Waratah to Gosford	"	.....	"	"	"	.....	28 11 6	28 11 6		
Blayney to Cowra	"	.....	"	"	"	.....	10 9 6	10 9 6		
Molonglo to Captain's Flat	"	.....	"	"	"	.....	94 7 6	94 7 6		
						24,359 6 4	1,594 7 0	21,486 12 4		
<b>ROADS AND BRIDGES.</b>										
Main North Road	Maintenance, repair, and construction.	.....	Consoli- dated Revenue.	1857	.....	.....	428,800 1 5	5,896 1 9	} ..... } Including main- tenance for 29 years.	
" South Road	"	.....		"	"	.....	.....	605,181 19 10		10,459 11 8
" Western Road	"	.....		"	"	.....	.....	512,275 10 10		10,804 17 3
Grafton, via Glen Innes, to Inverell	"	.....		"	1866	.....	.....	185,376 7 1		7,082 12 4
Grafton Punt Tolls	"	.....		"	1886	.....	.....	.....		1,398 14 4
Ferry to M'Guire's, Belmore River	"	.....		"	1884	.....	.....	689 12 9		12 12 0
Armudale to Maryland	"	.....		"	1868	.....	.....	107,830 15 0		2,696 1 2
Marx Hill to Bourke's Crossing	"	.....		"	1884	.....	.....	450 0 0		200 14 4
Smith's and Apple-tree Flat Road to Smith's Creek	"	.....		"	1886	.....	.....	74 2 0		74 2 0
Cowalong to Staine's Mill	"	.....		"	1885	.....	.....	866 16 7		348 8 6
Cowalong, via Pearce's Creek and Tintenbar, to Byron Bay	"	.....		"	1886	.....	.....	80 0 0		80 0 0
Bexhill to Williams'	"	.....		"	1884	.....	.....	1,132 7 6		356 6 0
Bungabbie Crossing of Back Creek	"	.....		"	1886	.....	.....	70 0 0		70 0 0
Bexhill to Numulga	"	.....		"	1885	.....	.....	186 4 0		Nil.

Bexhill to Tintenbar .....	1881	1,377	11	1	466	19	0
Coraki to Bungowalbyn Punt .....	1886	50	0	0	50	0	0
Byangum to Queensland Border .....	1879	6,331	8	3	778	15	11
Ballina to Cape Byron .....	1883	6,452	16	4	551	4	0
Pierce's Creek to Ballina Road .....	1886	250	5	6	250	5	6
Murwillumbah to Tumbulgum .....	1880	547	18	5	9	9	0
Palmer's Channel to Rocky Mouth .....	1884	324	2	10	78	0	0
Lismore and Brunswick Road to Durobrygrass .....	1886	258	16	0	258	16	0
Lismore to Nimbin .....	1883	3,677	3	5	400	9	7
Lismore to Numulga .....	1882	858	18	10	91	12	6
Lismore to Woodburn .....	1883	4,600	15	10	953	11	0
Lismore to Queensland Border .....	1875	3,147	4	7	2,644	15	3
Lismore to Brunswick .....	1880	10,066	2	5	608	12	1
Lismore and Ballina Road to Ballina and Cape Byron Road .....	1883	721	11	0	80	0	0
Lismore to Ballina .....	1884	1,000	0	0	532	17	0
Tumbulgum, <i>via</i> Chindera Village, to Teranora Creek .....	1886	2	8	0	2	8	0
Byangum to Tweed River Heads .....	1883	815	0	0	326	19	2
Tweed River to Brunswick River .....	"	3,476	12	3	1,219	19	4
Ballina to Tweed, <i>via</i> Brunswick .....	1886	153	10	0	153	10	0
Cudgen to Tweed .....	1878	1,800	11	7	238	15	9
Roads, Tweed River District .....	1884	2,388	14	5	378	14	5
Casino to Mount Lindsay .....	1876	4,317	0	3	343	0	10
Two-mile Creek to Newrybah .....	1885	454	8	4	84	19	9
Sandylands, Mountain Road .....	1886	44	16	0	44	16	0
Casino to Tabulum .....	1884	1,967	15	6	465	14	5
Casino to Coraki .....	1886	62	15	0	62	15	0
Casino to Gundarimbah .....	1884	142	0	0	25	0	0
Cross Roads to Ballina .....	1873	11,587	17	0	2,646	17	1
Grafton to Cross Roads, towards Casino .....	1864	17,120	0	0	346	19	5
Roads, Richmond River District .....	1884	2,385	16	5	290	18	0
Casino, <i>via</i> Wyrallah, to Casino and Ballina Road, at Chilcott's Wharf .....	1880	3,414	7	1	Nil.		
Wardell, <i>via</i> Tuckombil, to Lismore and Ballina Road .....	1875	8,308	18	8	707	16	6
East Wardell to Beach .....	1883	131	11	0	12	0	0
Chatsworth and Woodburn to Wombat .....	1884	118	8	0	46	8	0
Tintenbah to Alstonville .....	1883	1,158	3	6	258	3	6
Tintenbar to Toohey's .....	1884	550	0	0	210	0	0
Woodburn to Wardell .....	1881	2,182	14	2	284	12	5
Woodburn to Casino .....	1879	3,797	2	3	446	5	3
Woodburn to Selman's .....	1880	4,652	14	10	341	14	11
Boreham's to Little River .....	1884	439	3	0	7	10	0
Bluff Point to South Arm Ferry, Clarence River .....	"	358	10	9	Nil.		
Bluff Point Ferry to Tindal's .....	1885	90	16	0	Nil.		
Roads, Punts, &c., Lower Clarence .....	1886	448	16	11	448	16	11
South Grafton to Umarra .....	"	4	16	0	4	16	0
South Grafton to Yamba .....	"	912	3	11	437	15	8
Grafton to Apple-tree Flat .....	"	50	17	6	50	17	6
Grafton to Solferino .....	1874	11,564	12	6	473	4	8
Wharf, near Public School, Alnwyck Road .....	1886	30	0	0	30	0	0
North Grafton to Broadwater .....	1883	1,736	10	11	263	11	7
Coutt's Crossing, <i>via</i> Kangaroo Creek, to Nymboida .....	1881	1,751	0	2	159	5	4
Harwood to North Arm Ferry, Clarence River .....	1883	339	3	6	120	0	6
Newton Boyd Road to Nymboida .....	1878	1,105	7	3	100	0	6
Newton Boyd Road to Southampton .....	1886	40	0	0	40	0	0
Main Street, Emmaville .....	1885	370	15	3	204	15	3
Newton Boyd Road to Vegetable Creek .....	1875	14,126	6	11	588	15	10
Yarrowford to Ranger's Valley .....	1881	1,723	1	3	269	2	8
Barney Downs to Poverty Point .....	1883	385	11	10	73	6	0
Lawrence to King's Creek .....	1886	34	0	0	34	0	0
Lawrence to Tenterfield .....	1864	104,302	18	8	6,373	18	1
Tenterfield Railway Station Approach .....	1886	700	0	0	700	0	0

Consolidated Revenue.



No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated.	Whether Constructing or under Repair.	Estimated Expense.	Fund from which the Expense is defrayed.	When Com-menced	Whether Finished or Unfinished.	If Finished, actual amount of Expenditure.	If Unfinished, amount of Expenditure to 31 December, 1886.	Amount expended in 1886.	Amount expended for Furniture in 1886.	Remarks.
<b>ROADS AND BRIDGES—continued.</b>										
Tent Hill to Deepwater .....	Maintenance, repair, and construction.	.....	Consoli-dated Revenue.	1884	.....	.....	£ s. d. 649 19 6	£ s. d. 562 0 0		
Tenterfield and Grafton Road to Boorook .....	.....	.....		1881	.....	.....	521 4 6	121 2 8		
Armidale to Inverell .....	.....	.....		1878	.....	.....	14,974 14 9	2,251 5 8		
Armidale and Inverell Road to Dumaresq Creek .....	.....	.....		1886	.....	.....	70 0 0	70 0 0		
Armidale to Mhi Creek and Walcha .....	.....	.....		1879	.....	.....	1,179 18 6	194 7 8		
Walcha Railway Station to Surveyor's Creek .....	.....	.....		1886	.....	.....	140 0 0	140 0 0		
Bingera to Inverell .....	.....	.....		1879	.....	.....	2,696 6 1	156 13 4		
Coolati to Walangra and Ashford .....	.....	.....		1884	.....	.....	50 16 6	50 0 0		
Road to Wilkinson's property, Coolah .....	.....	.....		1886	.....	.....	50 0 0	50 0 0		
Warialda to Gunyerwarialda .....	.....	.....		1879	.....	.....	1,678 19 4	357 14 0		
Warialda to Ezzie's .....	.....	.....		1885	.....	.....	200 0 0	100 0 0		
Warialda, via Gragin, to Reedy Creek .....	.....	.....		1886	.....	.....	13 0 0	13 0 0		
Bingera to Warialda .....	.....	.....		1884	.....	.....	1,787 9 2	381 11 2		
Cobbedah to Rocky Creek .....	.....	.....		1874	.....	.....	7,834 5 9	142 19 9		
Warialda to Moree .....	.....	.....		1876	.....	.....	5,845 1 7	912 6 9		
Tenterfield to Scrub .....	.....	.....		1885	.....	.....	329 2 1	185 7 0		
Tenterfield to Bonshaw and Clifton .....	.....	.....		1878	.....	.....	4,400 2 3	649 12 7		
Tenterfield, via Glen Lyon, to the Border .....	.....	.....		1883	.....	.....	838 9 7	540 0 1		
Emmaville to Webb's Silver Lode .....	.....	.....		1885	.....	.....	250 16 0	250 0 0		
Graham's Valley to Glen Innes .....	.....	.....		1886	.....	.....	50 0 0	50 0 0		
Glen Innes to Vegetable Creek .....	.....	.....		1881	.....	.....	4,230 13 4	399 1 1		
Vegetable Creek to Tableland .....	.....	.....		1883	.....	.....	1,437 1 8	312 2 4		
Bandon Grove to Little River .....	.....	.....		1877	.....	.....	1,091 10 11	Nil.		
Ben Lomond Railway Station to Armidale and Maryland Road .....	.....	.....		1886	.....	.....	244 9 9	244 9 9		
Armidale to Grafton .....	.....	.....		1864	.....	.....	75,255 9 0	3,707 9 3		
Pint-pot Creek to Chandler River .....	.....	.....		1886	.....	.....	84 0 0	84 0 0		
Armidale to Yarrowick .....	.....	.....		1884	.....	.....	576 7 10	76 15 9		
Armidale to Kangaroo Hills .....	.....	.....		1886	.....	.....	266 0 0	266 0 0		
Main North Road, at Uralla, to Bundarra and Inverell .....	.....	.....		1879	.....	.....	10,119 11 6	1,218 6 2		
Main North Road, at Cragin, via Rose Hill, to Uralla and Bundarra .....	.....	.....		1886	.....	.....	65 5 1	65 5 1		
Main North Road, at Uralla, to Walcha .....	.....	.....		1877	.....	.....	3,545 19 1	235 16 10		
Mhi, via Gostwyck, to Uralla .....	.....	.....		1886	.....	.....	99 9 8	99 9 8		
Armidale to Gostwyck .....	.....	.....		1884	.....	.....	226 6 5	76 6 5		
Armidale to Castle Doyle .....	.....	.....		1886	.....	.....	100 0 0	100 0 0		
Uralla to Ballala .....	.....	.....		1881	.....	.....	644 8 6	171 0 0		
Manilla, via Barraba, to Bingera .....	.....	.....		1874	.....	.....	41,632 9 0	2,396 15 6		
Barraba to Bundarra .....	.....	.....		1884	.....	.....	565 2 3	107 2 0		
Road, Public School, Barraba .....	.....	.....		.....	.....	.....	106 18 6	27 18 6		
Bingera to Bundarra .....	.....	.....		1878	.....	.....	2,823 3 4	320 12 5		
Glen Innes to Wellhugrove .....	.....	.....		1875	.....	.....	4,158 1 1	288 16 0		
Glen Innes to Red Range and Kingsgate .....	.....	.....		1882	.....	.....	1,478 16 11	283 4 11		
Inverell to Vegetable Creek .....	.....	.....		1881	.....	.....	2,379 0 8	237 1 11		
Inverell, via Newstead and Paradise, to Kangaroo Camp .....	.....	.....		1884	.....	.....	2,127 10 0	255 11 3		
Inverell, via Dinton Vale, to Buckulla .....	.....	.....		1885	.....	.....	229 18 0	163 18 0		
Inverell to Gramen and Yetman, and Goondawinda .....	.....	.....		1878	.....	.....	5,748 13 1	1,352 15 7		
Inverell to King's Plains .....	.....	.....		1885	.....	.....	373 18 7	163 5 0		
Inverell to Reedy Creek .....	.....	.....		1880	.....	.....	731 19 11	62 14 0		
Wilson's Downfall to the Border .....	.....	.....		1885	.....	.....	734 15 1	368 10 11		
Bendella to Rutledge's, &c. .....	.....	.....		1886	.....	.....	60 0 0	60 0 0		
Inverell to Warialda .....	.....	.....		1877	.....	.....	10,042 13 11	789 12 2		
Green Valley to Kentucky Platform .....	.....	.....	1886	.....	.....	47 0 0	47 0 0			
Terrible Vale to Kentucky Railway Station .....	.....	.....	1885	.....	.....	148 16 10	21 11 7			

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Kentucky Creek Crossing .....	1886	53 8 3	53 8 3
Inverell to Queensland Border ..	1878	4,983 15 5	443 8 9
Armidale to Rock Vale ..	1879	1,199 2 7	9 0 0
Rock Vale Road, up Baker's Creek ..	1886	70 0 0	70 0 0
Inverell to Gum Flat ..	1884	514 4 0	14 7 6
Armidale to Long Swamp ...	1885	170 0 0	70 0 0
Rocky Creek to Moree ...	1881	640 1 7	288 18 3
Warnaldra to Yetman ..	1876	5,628 6 8	390 13 9
Willow-tree to Gunnedah .....	1868	34,359 6 3	196 3 1
Narrabri Station Yard ..	1866	190 0 0	190 0 0
Narrabri, <i>via</i> Moree, to Mungindi ...	1876	11,987 12 5	1,665 18 3
Old Gunnedah and Narrabri Road to Eulalie Creek	1881	1,015 18 0	313 18 0
Bingera to Moree ..	1878	2,694 8 3	442 6 9
Balo-street to Moree ..	1886	70 0 0	70 0 0
Pallamallawa, <i>via</i> Bularoo, to Moree ..	1885	264 16 7	88 13 0
Bingera to Eulowra, Palal, and Derra ..	1884	220 6 0	117 8 0
Main-street, Brewarrina ..	1886	30 0 0	30 0 0
Narrabri, <i>via</i> Walgett, to Brenda ..	1879	13,253 1 5	1,065 7 7
Main Road through Walgett ..	1886	2 0 0	2 0 0
Holders to Baradine ..	1880	124 0 0	124 0 0
Narrabri to Bingera ..	1886	9,384 16 3	2,679 6 2
Main North Road through Narrabri .....	1886	600 0 0	600 0 0
Walgett to Coonamble ...	1881	3 379 19 3	553 10 1
Kempsey to Fernmount ..	1885	10,617 17 8	1,469 16 4
Congarini Ferry to Kempsey and Fernmount ..	1872	280 0 0	84 0 0
Kinchela Creek to Spencer's Creek ..	1882	327 7 8	170 7 8
Kempsey to Armidale and Grafton Road ..	1882	63,714 5 11	3,061 4 8
Kempsey to Trial Bay ..	1885	4,226 15 1	1,009 14 1
Congarini Ferry, Boat Harbour, Nambuccera River ..	1882	458 11 11	453 11 11
Boat Harbour, <i>via</i> Spicket's Creek, to Nambuccera Heads ..	1886	1,537 18 2	133 17 4
South Bellinger School to Upper South Arm ..	1886	17 18 0	17 18 0
Moone Creek to Corindi ..	1885	512 14 9	112 14 9
Bellinger River, Deep Creek, to Gordon's Hotel ..	1886	71 10 2	71 10 2
Fernmount to Armidale Road ..	1878	9,708 13 7	1,001 9 0
Newton-Boyd to Ramornie ..	1885	101 2 0	46 0 0
Boat Harbour to Raleigh Mill ..	1883	952 16 6	492 5 10
Boat Harbour to Little North Arm at M'Fady's ..	1886	56 6 9	56 6 9
Fernmount to Grafton ..	1881	10,927 9 8	945 15 6
South Grafton to Corindi ..	1885	436 9 5	165 5 5
Blackman's Point to Ennis Feiry ..	1883	236 14 10	74 5 2
Myers' Selection to Never Never Plains ..	1884	148 3 6	Nil.
Bowraville to Congarini ..	1882	1,871 6 10	197 16 9
Road through Rawdon Island ..	1885	232 0 0	55 12 8
Wingham, up Cedar Party Creek ..	1882	381 0 0	71 0 0
Long Reach to Clybuccra ..	1885	205 19 11	23 12 0
Long Reach to Rainbow Reach ..	1886	35 0 0	35 0 0
Missibotti to Nambuccera Heads ..	1878	2,869 11 4	662 1 8
Nambuccera Ferry to Macleay Heads ..	1885	304 6 0	304 0 0
Nambuccera to Upper Waroll Creek ..	1886	57 12 0	57 12 0
Neville's Gate to Rolland's Plains ..	1885	100 0 0	Nil.
Port Macquarie to Kempsey ..	1864	16,393 9 11	820 5 8
Port Macquarie to Tacking Point .....	1886	28 0 0	28 0 0
Walcha to Great Northern Railway ..	1881	4,339 10 8	614 16 2
Walcha to Port Macquarie ..	1872	32,750 4 3	1,697 10 1
Walcha to Glen Morrison ..	1881	1,007 7 3	200 16 1
Walcha to Mulwerindie ..	1885	100 0 0	Nil.
Ennis Punt to Glen Esk Upper Plains ..	1884	661 11 0	261 11 0
Rolland's Plains to Ballangarry Wharf ..	1885	95 18 0	43 7 0
Rolland's Plains to Yarrowell Falls ..	1880	1,325 19 11	150 0 0
East Kempsey to Buggy Creek ..	1877	2,491 16 3	74 0 10

Consolidated Revenue.

No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated.	Whether Constructing or under Repair.	Estimated Expense.	Fund from which the Expense is defrayed.	When Com-menced.	Whether Finished or Unfinished.	If Finished, actual amount of Expenditure.	If Unfinished, amount of Expenditure to 31 December, 1886.	Amount expended in 1886.	Amount expended for Furniture in 1886.	Remarks.
<b>ROADS AND BRIDGES—continued.</b>										
East Kempsey to Sherwood .....	Maintenance, repair, and construction.		Consolidated Revenue.	1880			£ s. d. 1,221 19 5	£ s. d. 44 10 0		
Bowraville to Lumley Argents .....				1879			2,380 13 6	188 8 8		
Bowraville to Brokers .....				"			1,400 1 0	177 10 9		
Green Hills to Nelson's, Warneton .....				1881			1,036 4 0	249 19 3		
Cooperbrook to Harrington .....				1884			205 0 0	100 0 0		
Oakes Plains to Macleay Heads .....				1887			3,709 18 4	382 14 10		
Copmanhurst Wharf Approach .....				1886			10 8 0	10 8 0		
Wilson's River, via Bar Scrub, to Walcha .....				1877			1,677 14 0	204 6 0		
Telegraph Point, Wilson's River, to Hack's .....				1886			110 0 0	110 0 0		
Tinonee to Port Macquarie .....				1872			21,763 14 1	2,649 12 7		
Cundle, via Landsdown, to Jones' Island .....				1876			2,507 1 2	422 15 9		
Upper Camden Haven to Laurieton .....				1883			452 11 0	133 9 0		
Tinonee and Gloucester Road to Clarkin's Crossing .....				1876			1,530 8 0	245 2 6		
Tinonee to Farquer's Inlet .....				1883			392 0 0	172 0 0		
Tinonee to Wingham Ferry .....				1876			1,020 13 9	106 11 0		
Tinonee and Cundle Road to Wingham .....				"			2,197 6 11	190 0 0		
Wingham and Nowendoc Road to Karaak Flat .....				1884			242 7 6	85 16 0		
Wingham, via Bungay, to Bo Bo Creek .....				"			309 6 0	105 0 0		
Wingham, via Brimbin, to Landsdown .....				1885			154 4 0	0 14 0		
Wingham, on left bank Manning River, to Nowendoc .....				1883			3,887 12 4	1,479 17 11		
Wingham, via Dingo Creek, to Kelvin Grove .....				1876			1,389 11 1	205 12 6		
Wingham and Wherrol Flat to Bobbin Flat .....				"			1,116 3 6	94 12 6		
Rocky Crossing to Bobbin Flat .....				1886			35 0 0	35 0 0		
Burril Creek to Wingham and Black Flat .....				1876			777 16 0	96 0 0		
Taree to North Foster .....				1883			471 16 0	48 10 0		
Bungwall to Seal Rocks .....				1886			49 6 6	49 6 6		
Koree Island Road .....				1885			100 0 0	39 3 3		
Dumaresq Island Road .....				1878			540 0 5	74 6 11		
Oxley Island Road .....				1877			1,175 15 4	150 5 0		
Chalk Hills to Apple-tree Flat .....				1884			115 0 0	75 0 0		
Stroud, via Gloucester, to Tinonee .....				1875			32,188 7 2	2,910 7 9		
Clarkin's Crossing to Goolongolook .....				1884			369 2 0	314 8 0		
Old Bulladelah Inn to Raymond Terrace Road .....				1878			587 3 6	Nil.		
Bulladelah to Raymond Terrace and Stroud Road .....				1876			4,408 7 6	423 16 2		
Bulladelah to Foster .....				1878			4,253 10 9	605 13 3		
Sawyer's Point to Tea Gardens .....				1886			250 13 6	250 13 6		
Flyer's Creek to Dorney's .....				1884			386 8 0	176 17 4		
Dungog and Monkarai Road to Stroud .....				1876			1,602 16 5	94 16 3		
Gostwyck to Newport .....				1882			2,482 8 4	668 1 6		
Dungog to Stroud and Gloucester Road at Wisemantle's .....				1883			9,834 1 5	1,082 4 4		
Dungog and Underbank Road to Chichester River .....				1876			1,585 13 9	80 11 0		
Dungog and Gloucester Road to Myers' C.P. .....				1886			50 0 0	50 0 0		
Dungog and Gloucester Road to Fosterton .....				1877			1,158 5 9	161 7 6		
Upper Myall to Bulladelah .....				"			4,372 11 4	704 14 7		
Upper Myall to Larry's Flat .....				"			2,580 3 8	178 11 8		
Bungwall Creek to Upper Wallamba .....				1882			785 4 2	269 7 6		
Bandon Grove to Little River .....				1886			66 0 8	66 0 8		
Sugar-loaf Creek to Dungog and Bandon Grove Road .....				"			60 0 0	60 0 0		
Warkworth Road to Putty .....				1879			4,528 17 7	283 12 9		
Wollombi to Wiseman's Ferry .....				1878			6,145 1 10	1,112 19 3		
Wiseman's Ferry to St. Albans .....			1872			2,120 3 9	136 1 2			
Laguna to Railway Station at Morrisett .....			1883			3,295 0 9	688 0 0			

Upper Watagan to Cooranbong .....	1885	944 4 10	854 8 10
Murray's Run to Ten-mile Post, on Main North Road .....	1882	713 13 9	189 15 1
Murray's Run to Wyong Creek .....	1886	500 0 0	500 0 0
St. Albans, thro. Wallambine Common, to Mt. Manning .....	1879	4,277 10 5	337 12 0
St. Albans to Wheelan's Creek Cemetery .....	1886	30 0 0	30 0 0
Tuggerah Beach Lake to Gosford and Maitland Road, at Yangy Angy .....	1884	300 0 0	109 3 0
Erina Creek to Tuggerah Beach Lake .....	1881	2,010 9 7	379 9 6
How's Valley to Wollombi and Singleton .....	1886	200 0 0	200 0 0
Wollombi to Yango .....	1879	693 16 0	154 7 4
Wollombi Road at Ellalong .....	1885	349 10 0	323 19 0
Wollombi, up Narone Creek .....	1884	119 3 0	60 0 0
Broken-back Gap to Wyong Creek .....	1878	6,096 5 2	690 4 0
Mandolong to Cooranbong Wharf .....	1880	1,487 17 6	274 9 6
Tuggerah Beach Lake to Selection, East of Macham's .....	1886	200 0 0	200 0 0
Mulbring to Millfield .....	1878	3,504 13 7	1,117 14 8
Pokolbin Hills to Millfield .....	1886	52 3 6	52 3 6
St. Albans, up M'Donald River, to Melon Creek .....	1882	955 7 5	250 3 9
Wyong Creek to Mangrove Creek .....	1878	3,167 19 6	502 2 11
Pemberton's to Mouth Popran Creek .....	1883	279 8 6	98 15 0
Mangrove to Ten-mile Hollow .....	1880	534 13 0	50 0 0
Bumble Hill to Upper Wyong Creek .....	1880	1,151 2 6	237 18 0
Blue-gum Flat to Chittaway .....	"	417 11 11	60 0 0
Claydon's, on Road, Broken-back Road to Cooranbong, to Palmer's Inn, on Wallsend to Cooranbong Road .....	1886	161 2 0	161 2 0
Bullock Wharf, Wallumba River to Larry's Flat .....	1883	569 14 7	161 19 4
Bullock Wharf to Upper Mangrove .....	1879	2,220 5 7	238 0 0
Bullock Wharf down east side of Mangrove Creek .....	1886	114 0 0	114 0 0
Gosford to Blood-tree .....	1884	639 14 0	353 15 1
Gosford to Kincumber .....	1879	1,466 8 3	245 11 11
Gosford and Maitland Road to Government Reserve, Ourimba Creek .....	1883	273 2 0	116 6 0
Cessnock to south boundary of Josephson's 2,000 acres .....	1884	248 0 0	48 0 0
Kincumber to Lloyd's Wharf .....	1882	869 15 0	310 9 0
Wyong Creek to Gosford .....	1878	6,444 16 3	1,858 15 6
Congarini to Wollombi .....	1879	2,097 1 4	377 1 4
Wallsend to Gosford Road, Cooranbong .....	1878	4,566 8 2	731 0 8
Wallsend to Sandgate .....	1884	322 2 3	20 0 0
Wallsend to Lake Macquarie .....	"	1,414 15 0	577 15 6
Mining Townships to Lake Macquarie .....	1886	997 13 5	997 13 5
Adamstown to Lake Macquarie .....	"	22 15 0	22 15 0
Lambton to Charleston .....	1883	797 6 0	236 2 3
Millfield to Wollombi .....	1878	3,807 6 2	345 10 0
Adamstown to Lake Macquarie Heads .....	1885	2,556 14 3	617 0 0
Glebe, near Newcastle, to Adamstown .....	"	793 10 5	34 7 7
West Maitland to Black Water-hole .....	"	489 3 5	238 2 5
Minni to Taralba .....	1883	175 0 0	64 15 0
Roads in Colliery Townships, Lower Hunter .....	1885	7,389 11 8	3,989 11 8
Greta to Railway Station .....	"	115 18 3	32 1 9
Waratah to Maitland .....	1882	3,709 5 10	893 11 1
Maitland Road through Wickham .....	1886	1,000 0 0	1,000 0 0
East Maitland to Broken-back Gap .....	1877	11,557 18 3	834 19 2
East Maitland and Broken-back Gap to Meat-works .....	1885	397 18 7	347 18 7
Gresford, via Clevedon, to Lenisbrook .....	1886	40 0 0	40 0 0
West Maitland to Dummore .....	1883	659 16 5	223 1 0
Raymond Terrace to Hexham .....	1884	1,109 5 8	149 2 10
Raymond Terrace to Telegraphy Creek, by east side of Williams River .....	1886	17 6 8	17 6 8
Raymond Terrace, via E. side Williams River, to Seaham .....	1884	567 4 2	146 13 6
Wallaroba Road to Clarence Town and Brookfield .....	1886	100 0 0	100 0 0

Consoli-  
dated  
Revenue.

## No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated.	Whether Constructing or under Repair.	Estimated Expense.	Fund from which the Expense is defrayed.	When Commenced.	Whether Finished or Unfinished.	If Finished, actual amount of Expenditure.	If Unfinished, amount of Expenditure to 31 December, 1886.	Amount expended in 1886.	Amount expended for Furniture in 1886.	Remarks.
<b>ROADS AND BRIDGES—continued.</b>										
Clarence Town to Dungog .....	Maintenance, repair, and construction.	..	Consolidated Revenue.	1887	.....	..	£ s. d. 12,776 6 6	£ s. d. 703 16 10		
Clarence Town to Limeburner's Creek .....	..	..		1884	.....	..	566 14 0	287 16 6		
Gostwyck to Paterson, <i>via</i> Dungog .....	..	..		1886	.....	..	50 0 0	50 0 0		
Dunmore to Clarence Town .....	..	..		1877	.....	..	4,441 5 5	346 7 7		
Lochinvar to Railway Station .....	..	..		1885	.....	..	79 2 11	30 0 5		
Shadd's Creek to Gresford .....	..	..		1886	.....	..	30 0 0	30 0 0		
Dunmore Bridge to Paterson Punt .....	..	..		1880	.....	..	1,068 8 9	173 2 6		
Hunter and Paterson Road to Morpeth .....	..	..		1886	.....	..	50 0 0	50 0 0		
Gresford Deviation, Upper Paterson .....	..	..		1883	.....	..	1,359 18 4	110 0 0		
Massey's Creek to Gresford and Eckleston Road .....	..	..		1886	.....	..	30 0 0	30 0 0		
Filling up coal workings, Newcastle .....	..	..		1885	.....	..	400 0 0	285 12 1		
Stockton to Port Stephens, <i>via</i> Tellegerry Creek .....	..	..		1886	.....	..	143 5 10	143 5 10		
Raymond Terrace to Stockton .....	..	..		1882	.....	..	2,586 10 5	545 2 9		
Raymond Terrace to Stroud .....	..	..		1878	.....	..	18,626 15 3	1,764 13 11		
Union Inn, Rutherford, to Melville Ford .....	..	..		1885	.....	..	187 7 8	37 19 10		
Raymond Terrace and Stroud Road to Raymond Terrace and Seabam Road .....	..	..		..	.....	..	20 19 6	Nil.		
Raymond Terrace to Morpeth .....	..	..		1880	.....	..	5,114 9 2	401 7 0		
Morpeth Cemetery Road .....	..	..		1886	.....	..	150 0 0	150 0 0		
Deep Creek to Allandale Railway Station .....	..	..		1878	.....	..	692 13 11	21 14 6		
Hexham to Fullerton Cove .....	..	..		1884	.....	..	319 17 0	4 1 10		
Alnwick to Martin's Wharf .....	..	..		1885	.....	..	132 1 9	40 2 4		
Minmi to Woodford .....	..	..		1878	.....	..	1,964 14 0	203 8 9		
Harper's Hill to Allandale Railway Station .....	..	..		1879	.....	..	318 14 6	147 18 6		
Plattsburg to Minmi .....	..	..		1884	.....	..	2,272 19 11	140 6 9		
Muswellbrook and Mudgee to Merriwa .....	..	..		1883	.....	..	3,432 9 3	387 19 8		
Denison, <i>via</i> Uarby, to Cassilis .....	..	..		1886	.....	..	14 17 0	14 17 0		
Cassilis to Coolah .....	..	..		1884	.....	..	489 3 10	40 0 0		
Belford Public School Road .....	..	..		1886	.....	..	42 14 0	42 14 0		
Merriwa to Cassilis .....	..	..		1883	.....	..	3,878 12 2	895 11 2		
Main North Road to Hunter River, M'Mullen's Road .....	..	..		1886	.....	..	80 0 0	80 0 0		
Main North Road to Lincoln's Creek .....	..	..		1885	.....	..	270 12 11	151 12 11		
Main North Road to Dry Creek .....	..	..		1886	.....	..	43 5 6	43 5 6		
Muswellbrook to Denman .....	..	..		1876	.....	..	3,561 18 10	125 2 0		
Muswellbrook to Mudgee .....	..	..		1881	.....	..	11,131 18 2	1,863 10 5		
Muswellbrook to Junction, Muswellbrook and Mudgee Road .....	..	..		1883	.....	..	682 2 3	36 1 0		
North Road, Munnimba Brook, to Jerry's Plains Road .....	..	..		1882	.....	..	962 4 1	50 0 10		
Scone and Merriwa Road, at Kingdon Ponds, to Middle Creek .....	..	..		1885	.....	..	133 13 7	63 13 7		
Scone to Denison Diggings, at Moonan .....	..	..		1879	.....	..	2,530 8 4	155 4 8		
Lochiel to Black Creek .....	..	..		1886	.....	..	200 0 0	200 0 0		
Aberdeen, up Rouchel Brook, to Scrumlow .....	..	..		1882	.....	..	799 8 4	68 14 0		
Kayuga Watering-place Approaches .....	..	..		1886	.....	..	31 5 0	31 5 0		
Scone to Merriwa .....	..	..		1877	.....	..	3,917 15 10	180 12 0		
Singleton, <i>via</i> Goorangoola, to Dry Creek .....	..	..		1879	.....	..	1,727 12 6	51 10 0		
Singleton to Glennie's and Muswellbrook .....	..	..		1885	.....	..	173 17 0	108 15 0		
Singleton, <i>via</i> Newbridge, to Cooper's Flat .....	..	..		1884	.....	..	934 8 11	269 12 11		
John-street, Singleton .....	..	..		1886	.....	..	60 0 0	60 0 0		
Doyle's Creek to Jerry's Plains .....	..	..		1879	.....	..	737 5 4	169 7 4		
Belford to Branxton and Glendon .....	..	..		1886	.....	..	99 19 0	99 19 0		
Breeza to Merriwa .....	..	..	1882	.....	..	1,021 17 5	62 2 6			
Upper Broger's Creek Road .....	..	..	1886	.....	..	150 0 0	9 10 0			
Jerry's Plains to Denman .....	..	..	1884	.....	..	535 1 1	176 7 3			

Merriygoen, <i>via</i> Cagan, to Coonabarabran	1880	4,585	3	5	245	17	6
Qurindi, up Jacob and Joseph's Creek	1879	241	3	10	34	10	4
Qurindi to Borah Creek	1884	530	12	6	10	0	0
Qurindi, <i>via</i> Collyblue, to Tambar	1885	1,883	2	2	1,732	18	4
Coonabarabran to Wingdigson	1882	2,342	18	11	232	18	11
Coonabarabran to Gunnedah	1879	14,310	16	10	1,173	6	5
Coonabarabran to Ulumambri	1881	561	17	8	114	0	0
Gunnedah to Narrabri	1884	2,559	0	9	528	9	3
Gunnedah to Barraba	1882	2,063	14	5	175	8	3
Spring Creek to Birrewa	1885	2,069	8	11	1,038	8	0
Wallabadah to Qurindi	1878	1,809	14	9	202	7	0
Blandford to Isis River	1882	766	18	6	240	16	3
Gloucester to Copeland	1880	1,513	17	0	260	14	0
Gloucester to Cobark	1885	203	10	0	30	0	0
Nowendoc to Walcha	1879	1,811	5	1	176	7	4
Gloucester to Nowendoc	1884	4,914	11	6	240	5	6
Bowling Alley Point to Dungowan	1884	536	11	6	39	11	6
Dungowan Creek, <i>via</i> Cadell's, to Ogumbil Creek	1879	1,335	9	6	207	4	0
Dungowan Creek to Cadell's, north bank of river	1878	509	19	0	35	0	0
Wallabadah to Nundle and Swamp Creek	1882	3,542	14	2	142	15	0
Nundle towards Scone	1885	951	7	6	79	1	0
Werris Creek Gap to Railway Station	1878	74	17	0	24	17	0
Tamworth to Bowling Alley Point and Nundle	1885	13,312	18	8	882	12	11
Tamworth, <i>via</i> Moree Creek, to Attinga	1885	516	6	0	49	18	4
New England Road to Turner's Flat	1880	181	2	7	Nil.		
Curabubula to Tamworth	1885	6,180	5	8	186	2	6
Norton's Creek to New England Road	1885	242	7	0	92	7	0
Tamworth to the Forest	1883	221	6	0	36	3	6
New England to Hickey's Creek	1885	361	15	8	Nil		
Tamworth to Gunnedah	1874	21,758	14	10	646	14	5
Tamworth to Moonby	1886	79	10	6	79	10	6
Tamworth to Manilla	1884	19,050	8	4	906	2	2
Bringelly Cross Roads to Main South Road at Cobitty	1881	265	12	10	60	0	0
Campbelltown to Narrellan	1878	1,724	14	1	Nil		
Merriylands to Guildford Platform	1885	143	12	3	125	8	6
Picton to Burragorang Mountain	1874	8,137	10	0	1,836	19	7
Foot Burragorang to Cox's River	1881	542	17	1	108	13	0
Foot Burragorang up Wollondilly River	1882	532	4	6	149	17	6
Broughton Creek to Kangaroo Valley	1876	4,017	19	11	176	18	10
Broughton Creek to Woodhill	1885	636	0	6	584	0	6
Main South Coast Road	1879	34,817	7	9	4,280	12	5
Bottle Forest to Main South Coast Road, Westmacott's Pass	1883	1,124	14	2	429	12	2
Bowral to Lower Mittagong	1882	600	0	0	111	10	3
Bowral Road to Bunadoo Platform	1884	100	0	0	5	9	3
Bowral, <i>via</i> Alcorn's, to Robertson	1874	9,134	5	8	747	2	0
Robertson Cemetery Approach	1886	120	0	0	120	0	0
Nowra to Yalwal	1881	1,649	2	7	297	5	8
Albion Park to Macquarie Mountain	1885	550	11	5	30	5	6
Main South Coast Road to Jarvis Bay	1886	70	0	0	70	0	0
Nowra, <i>via</i> Nerriga, to Bradwood	1882	2,644	15	3	887	16	4
Nowra <i>via</i> Tourang, to Milton	1885	7,603	3	5	1,013	7	7
Broger's Creek to Kangaroo Valley	1883	1,380	0	0	326	0	0
Kangaroo Ground at Byrons to Old South Road, Moss Vale	1884	711	2	6	111	2	6
Kangaroo Valley to Yaranga Public School	1884	160	0	0	24	10	0
Cross Roads towards Taralga	1883	268	7	6	88	7	6
Alcorn's Hill to Macquarie Pass	1880	334	5	0	Nil		
Appin to Brook's Point	1884	55	6	0	18	4	0
Old South Road, Cross Roads to Little Forest	1875	8,572	8	1	662	2	5
Witas Meadow to Robertson Road	1884	312	14	0	112	4	0
Bull's Pass to Cataract River	1880	472	9	4	267	18	10

Consolidated Revenue

No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated	Whether Constructing or under Repair	Estimated Expense	Fund from which the Expense is defrayed	When Com menced	Whether Finished or Unfinished	If Finished, actual amount of Expenditure	If Unfinished, amount of Expenditure to 31 December, 1886	Amount expended in 1886	Amount expended for Furniture in 1886	Remarks
<b>ROADS AND BRIDGES—continued</b>										
Bulli, <i>via</i> Coal Cliff, to Blue Gum Forest	Maintenance, repair, & construction			1882			£ s. d. 5,577 6 3	£ s. d. 570 0 0		
Bulli Road	"			1886			1,820 16 2	1,820 16 2		
Coal Cliff Road	"			1885			1,000 0 0	608 0 0		
Barrier to Cambewarra	"			"			500 0 0	200 0 0		
Near Wallaby Creek, <i>via</i> Macquarie Pass, to Central Illawarra	"			1875			1,089 18 6	74 14 3		
Road, Southern Boundary Cotton Company's Reserve.	"			1885			100 0 0	31 0 0		
Mittagong to Joadga Creek	"			1883			213 8 1	100 0 0		
Fitzroy Iron Mines to Bowral	"			1871			2,275 2 3	28 2 3		
Kangaroo Road at Robertson Park to near Mount Murray	"			1884			295 13 0	196 4 7		
Old South Road, Mittagong, to Main South Road, Fitzroy Inn	"			1879			285 0 0	Nil		
Old South Road to Bundanoon Railway Station	"			1885			130 1 0	39 0 0		
Berima to Railway Station, Moss Vale	"			1876			1,924 5 0	331 10 6		
Main South Road, near Berima, to Bowral	"			1882			1,138 10 0	306 18 6		
Kangaroo Mount to Kangaroo Valley	"			"			461 1 7	138 12 0		
Belmore Falls Road, East of Weirs' Creek	"			1886			190 0 0	190 0 0		
Illawarra Road to Bond's Road	"			1878			587 17 5	53 0 10		
Sutton Forest to Main South Road, near Cowley's	"			1881			450 0 0	75 0 0		
Sutton Forest to Bundanoon	"			1882			590 16 0	176 1 0		
Kiama Road, at Blenkinsop's, to Bariengally	"			1877			2,109 0 9	243 17 4		
Burawang to Robertson Road	"			1884			221 10 0	41 1 0		
Moss Vale and Shoalhaven to Wallenderry Road	"			1882			1,447 16 4	420 7 4		
Moss Vale and Shoalhaven Road to Kangaroo River...	"			1886			100 0 0	100 0 0		
Jamberoo to Kiama	"			"			683 1 11	683 1 11		
Moss Vale and Nowra Road to foot Jamberoo Mountain	"		Consolidated Revenue.	1878			13,420 4 8	1,289 10 9		
Jamberoo Mount Deviation	"			1886			442 8 10	442 8 10		
Shepherd's Innery to Moss Vale and Nowra Road	"			1885			124 5 3	40 14 3		
Moss Vale to Shoalhaven Fencing	"			1886			300 0 0	300 0 0		
Moss Vale, <i>via</i> Kangaroo Valley, to Nowra	"			1880			10,012 16 11	1,759 18 8		
Head s Corner to Brown Mount Road	"			1885			50 0 0	15 0 0		
Goulburn to Cooma	"			1874			106,828 0 6	6,322 3 9		
Goulburn and Wheeo Road, at Hawthorn Trec, to Wheeo and Crookwell Road	"			1882			174 5 6	69 14 6		
Goulburn to Pomeroy	"			1880			2,548 15 6	300 3 1		
Goulburn to Upper Tarlo and Roslynn	"			1878			4,375 15 1	468 9 5		
Goulburn and Tuena Road, <i>via</i> Limekilns, to Goulburn and Tarlo Road	"			1880			386 11 0	75 0 0		
Goulburn and Crookwell Road, near Marsden's, to Goulburn and Tarlo Road, near Comfrey's	"			1886			50 0 0	50 0 0		
Goulburn and Tuena Road, <i>via</i> Fullerton's, to Sherwood	"			"			1,228 12 9	318 19 6		
Goulburn to Bungonia	"			1874			4,798 14 0	214 12 6		
Goulburn to Windellama	"			1876			6,778 15 6	312 3 9		
Goulburn, <i>via</i> Taralga, to Curraweela	"			"			17,361 17 5	1,645 2 4		
Goulburn, <i>via</i> Crookwell, to Binda	"			"			20,897 1 10	1,704 3 6		
Kippelaw, <i>via</i> Gurundi and Byalla, to Dalton	"			1886			63 2 0	63 2 0		
Fifty-mile Tree to Old Goulburn Road	"			1885			113 10 0	63 10 0		
Main South Road, Towrang, to Paddy's River	"			1881			973 7 2	80 18 0		
Richland's to End Saw Mill Traffic	"			1885			177 16 0	67 16 0		
Collector, towards Goulburn	"			1874			3,568 2 4	194 6 0		

Currawang to Wombat Railway Approach .....	"	1885	339 16 9	239 16 9
Collector, <i>via</i> Currawang, to Terrania .....	"	1882	2,620 7 10	287 12 9
Collector to Main South Road, Breadalbane .....	"	1881	1,258 16 3	176 6 1
Goulburn, <i>via</i> Gullen, to Wheeo .....	"	1874	25,169 7 4	1,698 18 6
Campbell's Lane, Middle Arm, to Ryanna .....	"	1884	270 0 0	52 0 0
Cotta Walla School to Mount Wayo and Peelwood Road .....	"	1881	581 17 11	57 0 0
Crookwell, <i>via</i> Red Ground, to Laggan and Binda Road .....	"	1883	132 17 3	Nil.
Crookwell, <i>via</i> Grabben Gullen, to Main South Road, at Gunning .....	"	1882	900 3 11	241 19 0
Bungonia to Inverary Park .....	"	1885	150 0 0	75 0 0
Gullen, <i>via</i> Crookwell, to Laggan .....	"	1874	3,996 1 2	295 6 1
Goldspie to Taralga and Rockwell .....	"	1881	535 3 10	99 11 6
Taralga and Bannaby to Swallowtail .....	"	1882	413 3 0	148 1 6
Marulan to Limekilns .....	"	"	1,734 13 0	355 3 9
Marulan, <i>via</i> Bungonia and Jacqua, to Windellama .....	"	1876	7,488 5 2	710 7 1
Marulan to Greenwich Park .....	"	1879	2,419 0 0	361 11 7
Dalton and Burrowa Road to Junction of Pudman Road .....	"	1885	202 12 0	120 3 3
Dalton to Gunning .....	"	1884	604 17 5	266 9 7
Dalton to Burrowa .....	"	1885	1,236 6 9	518 19 11
Greenwich Park to Towrang .....	"	1882	963 19 3	127 2 4
Laggan to Binda .....	"	1875	1,826 15 5	127 13 8
Taralga to Leighwood .....	"	1879	3,345 6 7	351 12 9
Binda to Peelwood .....	"	1884	362 7 6	36 19 0
Wheeo to Crookwell .....	"	1877	2,618 1 2	225 13 4
Wheeo to Binda .....	"	1883	649 8 2	28 11 0
Wheeo Post Office, <i>via</i> Byalla, to Gunning .....	"	1886	135 8 6	135 8 6
Wheeo to Burrowa .....	"	1879	4,648 17 0	220 19 0
Nunby to Junction Wheeo and Burrowa Road .....	"	1886	37 1 0	37 1 0
Goulburn and Binda Road to Abercrombie .....	"	1881	14,973 7 9	1,696 15 5
Bigga to Abercrombie .....	"	1879	761 17 0	60 5 6
Binda to Bigga .....	"	1885	345 11 9	207 11 9
Collector to Gunning .....	"	1878	2,464 19 6	97 17 4
Sharpening Stone Creek to Burrowa and Burragalong Road at Burrowa .....	"	1872	6,430 7 4	308 19 3
Sharpening Stone Creek and Burrowa Road, near Wall's, to Bowning .....	"	1879	330 5 7	25 4 4
Binalong to Burrowa .....	"	1877	7,127 1 2	270 0 6
Crawford-street, Queanbeyan .....	"	1886	750 0 0	750 0 0
Queanbeyan, <i>via</i> Yarralumla, to Ugarra Ford .....	"	1881	1,146 18 1	389 18 7
Lanyon Ford to Bulga Road .....	"	1886	90 0 0	90 0 0
Queanbeyan, <i>via</i> Gundaroo, to Gunning .....	"	1874	19,858 0 11	487 4 6
Queanbeyan to Murrumbateman .....	"	1878	6,337 12 7	1,144 12 0
Yass to Fairfield Bridge .....	"	1875	4,104 17 7	277 2 7
Yass to Manton's Creek .....	"	1880	648 1 10	11 12 4
Yass to Woolyards .....	"	1875	2,388 6 1	319 11 4
Yass to Black Range .....	"	1885	43 10 0	13 10 0
Geninderie to Welangra .....	"	1884	195 16 0	70 16 9
Camberra to Molonglo and Murrumbidgee River .....	"	1881	435 3 0	115 8 2
Bookham to Chidowla .....	"	1885	170 1 0	8 14 0
Yass to Bloomfield .....	"	1879	1,397 3 6	276 3 2
Guninderie and Gunderoo Road, <i>via</i> Mack's Reef, to Bungendore .....	"	1884	500 10 9	120 10 9
Bloomfield Road at Waroo Creek to Boambolo Ford and Mullion .....	"	1881	579 13 10	190 5 4
Bloomfield Weejasper to Tumut .....	"	1886	3 10 0	3 10 0
Dalton, <i>via</i> Jerrawa Platform, to Yass Railway Station .....	"	1880	736 19 7	203 11 11

Consolidated Revenue.



## No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated.	Whether Constructing or under Repair	Estimated Expense.	Fund from which the Expense is defrayed	When Com. menced.	Whether Finished or Unfinished	If Finished, actual amount of Expenditure	If Unfinished, amount of Expenditure to 31 December, 1886	Amount expended in 1886.	Amount expended for Furniture in 1886.	Remarks.
<b>ROADS AND BRIDGES—continued.</b>										
Bloomfield Crossing, Murrumbidgee, to Cooradigbee Valley	Maintenance, repair, and construction.	.		1881			£ s. d. 873 13 2	£ s. d. 126 5 6		
Main South Road, Bookham, to Cooradigbee Junction		.		"			658 8 0	128 6 6		
Bungendore, via Molonglo, to Queanbeyan and Bungendore Road		.		1879			2,298 0 5	474 5 0		
Bungendore to Molonglo . . . . .	"	.		1886			424 14 10	424 14 10		
Boro to Bungendore . . . . .	"	.		1885			35 13 0	20 9 0		
Yass to Bungendore	"	.		1882			4,902 0 7	736 9 2		
Bungendore Streets	"	.		1886			477 8 9	477 8 9		
Bungendore to Doughboy Hill	"	.		1882			1,852 0 4	367 17 2		
Bungendore and Molongolo Road to Black Range... .	"	.		1881			336 18 2	Nil.		
Mill Port Road, near Bungendore	"	.		1886			30 0 0	30 0 0		
Bookham to Bowring and Binalong Road at Illalong	"	.		1884			303 9 4	69 10 10		
Bowring to Binalong	"	.		1878	...		2,326 14 1	191 14 9		
Road through Burrowa	"	.		1884			599 17 9	8 11 0		
Road to Burrowa Cemeteries	"	.		"			62 3 10	37 3 10		
Rye Park to Dalton and Burrowa Road ...	"	.		1885			121 9 6	41 9 6		
Gunning and Burrowa Road to Yass Railway Station	"	.		1880			1,128 9 3	193 7 2		
Dalton to Karrawa	"	.		1882			2,051 4 6	390 14 6		
Frogmore to Junction, Whceo and Buriowa Road ...	"	.		"			481 4 6	61 4 6		
Frogmore to Reid's Flat	"	.		1886			40 0 0	40 0 0		
Burrowa to Young	"	.		1876			8,767 19 2	360 14 10		
Burrowa to Kenya	"	.		1885			207 0 0	38 18 0		
Murrumburrah, via Young and Grenfell, to Forbes...	"	.		1873			30,976 11 4	1,252 18 1		
Murrumburrah to Young and Harden	"	.		1880			532 7 6	98 7 4		
Murrumburra Streets ...	"	.		1886			9 15 0	9 15 0		
Marengo to Harden	"	.	Consolidated Revenue.	1885	...		199 18 0	97 19 0		
Reidsdale to Warumbucera	"	.		1879			508 15 11	Nil.		
Jerrybang to Public School, Solferino, near Young	"	.		1886			49 15 9	49 15 9		
Young and Cowra Road to Jerrybang	"	.		1879			876 10 2	104 16 0		
Young, via King's Plains, to Currawang	"	.		1885			118 6 0	58 6 0		
Young to Mopitty	"	.		1880			579 6 8	19 7 0		
Young to Temora	"	.		1883			3,046 4 4	352 18 2		
O'Connor's to Graham's	"	.		1886			17 14 0	17 14 0		
Wallendbeen to Murrumburrah	"	.		1872			2,319 5 10	117 16 4		
Wallendbeen to Gundagai ...	"	.		1886			37 7 0	37 7 0		
King-street, Wallendbeen	"	.		"			99 9 6	99 9 6		
Morangereil to Junction, Young and Temora Road	"	.		1883			1,500 8 0	181 14 0		
Culinga to Wallendbeen	"	.		"			309 6 3	64 6 9		
Tarago to Braidwood	"	.		1866			73,916 4 8	1,650 10 10		
Tarago to Lower Boro	"	.		1884			149 17 9	20 1 6		
Erlington to Araluen ...	"	.		1870			1,880 3 6	95 12 8		
Monga to Major's Creek, Erlington	"	.		1871			5,104 3 0	156 6 6		
Major's Creek to Fairfield	"	.		1880			2,094 5 8	242 9 2		
Braidwood to Erlington	"	.		1872			2,765 7 10	294 6 10		
Braidwood and Tarago Road, via Larbert, to Lower Boro	"	.		1881			401 2 0	26 2 0		
Braidwood, Sergeant's Point	"	.		"			1,112 4 2	252 1 7		
Sergeant's Point to Clyde River	"	.		"			198 16 10	Nil.		
Braidwood to Reidsdale and Bell's Creek	"	.		1872			1,501 7 2	80 16 8		
Braidwood to Araluen	"	.		1864			13,436 6 10	507 3 3		
Braidwood to Sandholes Crossing	"	.		1886			42 1 6	42 1 6		
Braidwood to Molonglo .. . . .	"	.		1874			3,103 7 6	161 3 6		

Elrington to Ballalaba	1875	1,007	19	10	136	7	4
Moruya and Campbell-street, Jindary, and Yarragee	1885	190	14	0	62	6	0
Braidwood to Nelligen (Clyde Road)	1863	27,083	11	6	1,596	6	5
Mogo to Nelligen	1881	942	9	2	9	8	0
Nelligen to Bateman's Bay and Milton Road, at M'Millan's	1874	1,005	2	2	150	8	6
Nelligen to Bolaro	1885	214	4	6	7	16	1
Nelligen to Bateman's Bay	1884	213	17	9	93	17	11
Milton, via Bateman's Bay Road, via Woodburn Road, Brookman's Ford, and Nelligen	1885	643	16	9	448	16	0
Milton and Bateman's Bay to Moruya and Bodalla	1874	17,462	10	3	1,792	2	7
Trunkabella Bridge to Reedy Creek	1883	639	10	4	198	2	4
Araluen to Moruya	1865	19,681	15	8	1,122	16	1
Panbula to Wolumla	1867	2,968	8	6	106	12	6
Panbula to Bald Hills	1886	89	12	6	89	12	6
Improvements to Sherwin's Range, Bibbenluke to Bobundarah	1884	800	0	0	529	0	0
Bega to Numbugga and Bembooka	1878	3,029	19	6	460	12	0
Numbugga School to Walls, at Numbugga	1886	278	15	0	278	15	0
Bega, via Wapengue, to Murrumbidgee River	1877	6,941	11	3	896	5	5
Main Road through Bega	1885	2,100	0	0	600	0	0
Road, North Bank, Bega River	1886	96	15	6	96	15	6
Bega to Bodalla	1872	16,593	5	9	923	15	10
Bega and Numbugga Road to Bronte	1886	99	18	0	99	18	0
Wandellow Road	"	141	11	5	141	11	5
Bodalla to Punkalla Creek	"	100	0	0	100	0	0
Broga to Bega and Bodalla	"	33	2	0	33	2	0
Towomba to Eden	1884	1,083	15	0	99	7	9
Eden to Sturt	1879	1,324	7	11	190	16	3
Towomba to New Buildings	1884	696	16	1	217	14	10
Towomba to Perico	1886	35	18	0	35	18	0
Eden to Panbula	1881	3,614	19	2	745	8	3
Wolumla Junction to Cross Roads	1872	4,122	6	6	308	7	10
Wolumla Bridge to Bega and Wolumla Road	1886	4	19	0	4	19	0
Wolumla and Lithgow to Candelo and Wyndham	1879	796	17	0	46	13	0
Pittman's Bridge to Bodalla	1880	1,567	13	3	403	17	11
Bombala to Buckley's	1886	100	2	0	100	2	0
Bombala to Delegate	1871	7,529	19	6	299	2	4
Bombala to Gummingarah	1881	1,135	1	5	23	0	10
Bombala to Merimbula	1864	69,418	8	5	3,960	12	4
Bodalla to Dignam's Creek	1879	3,093	15	5	496	4	11
Eurobodalla to Wagonga Deviation	1886	247	2	9	247	2	9
Cobargo to Wadbilliga	1883	1,292	2	2	187	0	0
Dry River to Bermagoe	1885	279	9	6	74	2	8
Saltwater Creek to Clarke's Selection	1886	266	16	0	266	16	0
Cobargo to Bermagoe	1883	901	3	0	186	3	0
Brianderry to Bega	1874	798	12	3	104	17	0
Bega to Wolumla	"	8,472	8	8	456	10	7
Bega to Tathra	1873	7,536	13	2	419	18	6
Cathcart to Panbula	1875	19,343	5	0	879	4	9
Cathcart to Bobundarah	"	5,795	1	3	1,030	14	10
Cathcart to Badgery Swamp	1884	49	7	9	12	13	2
Bobundarah to Seymour	1880	1,866	11	0	350	11	8
Burrogate to Honeysuckle	1882	493	16	7	18	18	0
Upper Brogo to Bega and Bodalla Road, at Cadajangarry	1885	150	0	0	44	18	0
Merimbula to Jellat Jellat	1874	1,779	14	0	113	18	6
Holt's Flat to Railway Bridge	1876	4,611	9	4	267	12	7
Candelo to Wyndham and Burrogate	1882	1,387	3	6	159	17	6
Candelo to Kamaruka	1877	435	10	4	Nil.		

Consolidated Revenue.

## No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated.	Whether Constructing or under Repair.	Estimated Expense.	Fund from which the Expense is defrayed.	When Commenced.	Whether Finished or Unfinished.	If Finished, actual amount of Expenditure.	If Unfinished, amount of Expenditure to 31 December 1886	Amount expended in 1886.	Amount expended for Furniture in 1886.	Remarks.
							£ s. d.	£ s. d.		
ROADS AND BRIDGES—continued.										
Monkey Hill to Hill End .....	Maintenance, repair, and construction.	.....	} Consol- dated Revenue.	1876	.....	.....	9,924 11 0	369 11 8		
Windeyer, via Campbell's Creek, to Rayner's .....	.....	.....		1883	.....	.....	427 18 0	147 18 0		
Cudgegong, via Cullenbone, to Gulgong .....	.....	.....		1880	.....	.....	5,136 6 1	239 9 0		
Hill End to Main Western Road .....	.....	.....		1873	.....	.....	17,746 13 10	343 9 0		
Hill End to Cudgegong .....	.....	.....		"	.....	.....	21,281 8 9	1,483 9 5		
Tabrabucca, via Crudine, to Monkey Hill .....	.....	.....		1884	.....	.....	806 6 2	347 18 10		
Greitti to Sally's Flat .....	.....	.....		1886	.....	.....	300 0 0	300 0 0		
Sofala to Ryston .....	.....	.....		1878	.....	.....	6,307 15 1	207 1 0		
Wallerawang to Rydal .....	.....	.....		1884	.....	.....	100 0 0	70 0 0		
Wallerawang to Mudgee .....	.....	.....		1857	.....	.....	160,705 6 9	1,184 16 2		
Sofala, via Cockatoo Hill, at Monkey Hill .....	.....	.....		1873	.....	.....	7,410 11 11	390 18 11		
Gulgong to Birriwa .....	.....	.....		1885	.....	.....	918 19 0	343 19 0		
Gulgong to Dinedoo .....	.....	.....		1886	.....	.....	49 10 0	49 10 0		
Cowra, via Miller and Gudgebong, towards Burrowa...	.....	.....		"	.....	.....	78 0 0	78 0 0		
Cowra to Young .....	.....	.....		1875	.....	.....	5,395 8 4	221 2 9		
Grentell to Goolagong .....	.....	.....		1882	.....	.....	1,336 11 0	420 16 4		
Cowra to Hovell's Creek .....	.....	.....		1883	.....	.....	337 18 2	24 7 5		
Grenfell to Morangaroll .....	.....	.....		1882	.....	.....	1,917 10 2	360 3 6		
Cowra to Milburn Creek .....	.....	.....		"	.....	.....	682 6 1	117 8 9		
Cowra to Forbes .....	.....	.....		1878	.....	.....	3,854 1 10	445 1 5		
Cowra, via Binmi Creek, to Walli .....	.....	.....		1886	.....	.....	229 0 0	229 0 0		
Cowra, via Moronglo, towards Frogmore .....	.....	.....		1882	.....	.....	1,343 1 1	274 4 3		
Cowra, via M'Collin's, beyond Burrowa River .....	.....	.....		1886	.....	.....	9 0 0	9 0 0		
Boga Bogalong to Marsden .....	.....	.....		1883	.....	.....	1,566 7 3	283 16 0		
Mandurama to Gully Swamp .....	.....	.....		1881	.....	.....	500 14 8	28 0 0		
Mandurama to Canowindra .....	.....	.....		1873	.....	.....	13,196 3 6	414 3 7		
Sheet of Bark to Mount M'Donald .....	.....	.....		1883	.....	.....	1,030 15 10	300 1 0		
Cargo to Canowindra .....	.....	.....		1882	.....	.....	794 15 8	25 0 0		
Cargo to Canoblas .....	.....	.....		1884	.....	.....	479 19 6	387 11 6		
Cargo to Canangle Creek .....	.....	.....		1886	.....	.....	85 18 0	85 18 0		
Cargo to Cudal .....	.....	.....		1883	.....	.....	672 3 0	29 15 4		
Cudal to Mandagery Creek .....	.....	.....		1886	.....	.....	42 0 0	42 0 0		
Cowra to Canowindra .....	.....	.....		1880	.....	.....	1,484 19 8	251 17 0		
Bigga to Mount M'Donald .....	.....	.....		1883	.....	.....	1,106 6 11	253 13 5		
Canowindra to Eugowra .....	.....	.....		1876	.....	.....	4,502 14 1	276 8 10		
Orange to Ophir .....	.....	.....		1864	.....	.....	3,717 16 8	205 12 6		
Matthews' to Brown's Creek Mine .....	.....	.....		1885	.....	.....	444 13 0	104 19 6		
Orange to Pinnacle, at Renshaw's .....	.....	.....		1884	.....	.....	413 17 10	167 16 10		
Orange to Mulhon .....	.....	.....		1880	.....	.....	746 16 3	184 1 4		
Mulhon to Ophir .....	.....	.....		1885	.....	.....	180 7 2	122 3 2		
Orange to Canoblas .....	.....	.....		1881	.....	.....	1,541 14 4	485 19 7		
Culvert, Piesley-street, Orange .....	.....	.....		1885	.....	.....	513 13 2	230 12 3		
Orange to Cadia .....	.....	.....		1880	.....	.....	2,226 15 4	367 10 0		
Orange and Cadia Road to Four-mile Creek .....	.....	.....		"	.....	.....	821 4 0	170 6 0		
Orange and Cargo Road, at Gioman's Hill, via Cave Creek, to Botee .....	.....	.....		1886	.....	.....	25 0 0	25 0 0		
Orange to Forbes .....	.....	.....		"	.....	.....	69,318 4 3	2,838 9 9		
Approach, Borenore Railway Station .....	.....	.....		"	.....	.....	600 11 10	600 11 10		
Orange to Icely .....	.....	.....		1881	.....	.....	840 2 5	96 17 0		
Orange to Carcoar .....	.....	.....		1871	.....	.....	9,727 14 1	542 19 5		
Orange, via Cargo, to Nanima .....	.....	.....		1875	.....	.....	22,133 16 8	1,106 14 4		
Wall's Junction to Botobalar .....	.....	.....		1884	.....	.....	341 9 6	88 16 6		
Lewis' Ponds to Orange .....	.....	.....		1882	.....	.....	474 8 6	213 3 6		

Lucknow to Orange and Carcoar Road .....	1875	3,204	11	5	237	0	0
Mallow Grove towards Trunkey .....	1882	407	4	4	107	6	6
Forest Reefs to Blayney .....	1880	2,632	2	3	528	11	10
Burrawang Cross Roads to Balderogery .....	1883	364	5	6	64	10	0
Martin's to Spring Hill Railway Station .....	1882	365	15	10	18	4	0
Spring Terrace to Long Swamp .....	1883	415	7	9	40	12	0
Spring Hill Railway Station to Hennessy's .....	1879	1,333	5	8	84	5	0
Forest Reefs to Spring Hill .....	1886	31	6	6	31	6	6
Icely to Spring Grove Railway Station .....	1876	4,744	9	6	409	17	7
Springs Railway Station to Newyear Bridge .....	1883	588	19	0	351	5	0
Spring Grove, <i>via</i> Guyong, to Byng .....	1882	1,147	15	7	148	1	9
Western Road, at Favill's, to Byng .....	1884	368	18	10	248	19	9
Spring Terrace to Forest Reefs .....	1883	405	19	7	53	19	8
Spring Grove Railway Station to Cadia .....	1878	4,281	7	7	563	19	9
Fuller's to Mitchell's .....	1886	99	15	0	99	15	0
Boree to Parkes .....	1870	34,041	12	6	2,093	9	5
Lyndhurst, <i>via</i> Cobb's, to Abercrombie .....	1879	3,590	8	7	524	6	8
Molong to Obley .....	1866	10,034	19	2	388	19	5
Molong to Warne Railway Station .....	1882	1,424	19	1	105	2	9
Dirty-hole Creek to Burnt Yards .....	1884	102	0	10	Nil.		
Molong, <i>via</i> Toohey's Inn, to Toogong .....	1880	3,552	13	7	383	3	7
Stony Creek to Burrendong .....	1879	1,801	6	11	258	17	3
Parkes to Friend's Slaughter Yards .....	1886	150	0	0	150	0	0
Parkes to Forbes .....	1878	4,076	6	9	727	10	7
Parkes to Bogan .....	1886	26	14	0	26	14	0
Forbes to South Condobolin .....	1882	1,881	15	2	614	13	6
Parkes to Condobolin .....	1884	2,538	16	0	1,463	12	8
Forbes to Bogan .....	1883	1,245	16	11	579	7	10
Forbes to Condobolin .....	1879	5,959	12	10	610	0	9
Obley to Dubbo .....	1878	3,478	7	0	493	0	2
Dubbo to Coonamble .....	1874	20,594	13	5	1,522	6	7
Dubbo, <i>via</i> Tomingley, to Bulgandramine .....	1886	2	9	0	2	9	0
Rylstone to Bylong .....	1885	266	5	1	211	13	1
Cudgegong to Rylstone .....	1883	1,774	12	0	335	11	3
Cudgegong to Village of Rylstone .....	1885	170	2	11	108	16	3
Cudgegong to Cassilis .....	1873	11,713	9	7	1,121	4	4
Cullenbone to Dubbo .....	1868	15,339	16	7	921	5	1
Cudgegong to Gulgong .....	1874	6,405	14	1	79	17	10
Cudgegong to Home Rule .....	1881	309	7	8	67	11	6
Falconer's, <i>via</i> Cobborah, to Gulgandra .....	1879	8,561	3	5	580	0	6
Guntawang to Wellington .....	1878	5,246	14	0	186	14	0
Wellington, Cave Roads .....	1886	21	11	6	21	11	6
Wellington to Buckinbah .....	1880	4,058	12	7	442	16	8
Wellington to Cobborah .....	1882	1,722	6	8	275	10	6
Wellington to Burrendong .....	1880	2,261	18	3	617	18	0
Wellington to Arthurville .....	1886	1,167	9	6	Nil.		
Mount Hope Tank, at Euabalong Road .....	1886	45	12	0	45	12	0
Cobar to Hillstone .....	1886	141	0	0	141	0	0
Cobar to Wilcannia .....	1886	342	18	5	342	18	5
Lichlan, at Murrin, to Mount Hope .....	1886	405	16	6	405	16	6
Mount Hope to Central Mine .....	1886	24	17	0	24	17	0
Warren to Nevertire Railway Station .....	1886	314	4	0	314	4	0
Bourke to Barrington .....	1886	368	18	5	308	18	5
Bourke to Ford's Bridge and Hungerford .....	1885	581	5	9	111	5	9
Bourke to Wanaaring .....	1886	1,086	2	1	542	2	1
Bourke to Cobar .....	1886	517	8	0	517	8	0
Wilcannia to Thackaringa .....	1885	749	12	9	218	8	10
Wilcannia, towards Tibbooburra .....	1886	702	3	7	507	10	3
Abattoir Road .....	1882	2,799	8	6	Nil.		
Breaking Metal, Blackwattle Swamp .....	1886	105	15	8	105	15	8

Consolidated Revenue.

## No. 60 (continued)—RETURN OF PUBLIC WORKS—continued.

Work, and where situated	Whether Constructing or under Repair	Estimated Expense	Fund from which the Expense is defrayed	When Com menced	Whether Finished or Unfinished	If Finished, actual amount of Expenditure	If Unfinished, amount of Expenditure to 31 December, 1886	Amount expended in 1886	Amount expended for Furniture in 1886	Remarks
							£ s d	£ s. d.		
<b>ROADS AND BRIDGES—continued</b>										
Parramatta to Ryde .....	Maintenance, repair, and construction			1884	.		3,472 0 0	2,431 5 3		
Parramatta to Rouse Hill ..	"			1886			40 0 0	40 0 0		
Parramatta to Pennant Hills ..	"			1885			197 16 8	196 0 2		
Prospect to Reservoir Road ..	"			1886			100 0 0	100 0 0		
Blacktown Station to Seven Hills ..	"			1884			218 4 2	68 5 0		
Blacktown, <i>via</i> Riverstone, to Box Hill ...	"			1873			2,017 5 11	459 15 8		
Blacktown Railway Station to Pearce's Corner .....	"			1885			179 5 0	141 0 0		
Books Ferry to Wiseman's Ferry ..	"			1884			97 13 4	65 0 0		
Maroota to Wiseman's Ferry ..	"			"			136 5 8	42 17 6		
Clarendon to Cornwallis ..	"			"			341 18 10	70 0 0		
West Portland <i>via</i> Moran's Rock to Bulga Road, Upper Colo	"			"			288 17 0	93 1 0		
Churchill's Wharf to West Portland ..	"			"			301 14 6	121 7 6		
Bell's Lane to Hennessey's ..	"			1871			5,732 5 5	564 15 6		
Rouse Hill to Schofield's Siding ..	"			1883			652 6 6	255 2 6		
Sackville Reach to East Portland ..	"			"			345 17 0	51 1 0		
Windsor to Penrith .....	"			1884			365 15 10	89 15 0		
Windsor, <i>via</i> Sackville Ferry, to Wiseman's Ferry ..	"			1883			2,471 1 8	1,177 13 11		
Cutting Gee's Rock, Colo ..	"			1884			2,175 18 0	1,066 7 0		
Upper Colo to Putty ..	"			1885			294 0 0	158 6 3		
Springwood to the Hawkesbury ..	"			1879			1,640 0 10	83 0 0		
Yarramundi <i>via</i> Aston Falls and Enfield, to Wilberforce	"			1883			372 18 0	57 19 6		
Richmond Bridge to Mudgee Road, Bowenfells ..	"			1876			12,738 3 6	836 14 0		
Buckingham street, Pitt Town ..	"			1886			80 0 0	80 0 0		
Bowenfells to Marsden's and Louthier ..	"			1881			1,113 8 8	189 18 0		
Wilberforce to Pitt Town Point ..	"			1885			51 3 6	19 16 0		
Oberon to Shooter's Hill ..	"		Consolidated Revenue	1883	...		301 19 0	50 0 0		
Ginkim to Oberon and Jenolan ..	"			"			1,440 10 5	14 3 6		
Katoomba to Jenolan ..	"			1885			2,511 7 6	135 16 6		
Oberon to Jenolan ..	"			1877			2,663 1 0	264 14 6		
Mount Victoria to Jenolan ..	"			1886			100 0 0	100 0 0		
Four mile Tree to Rockley ..	"			1884			422 0 0	91 2 6		
Blackheath to Govett's Leap and Mount St George	"			1883			644 10 7	40 4 0		
Blackheath to Hut Hill ..	"			1885			75 0 0	71 10 0		
Mount Victoria to Mount Wilson ..	"			"			1,184 16 0	369 7 4		
Louthier to Rydal ..	"			1880			994 18 8	62 19 6		
Main Western Road to Wentworth Falls ..	"			1886			30 0 0	30 0 0		
Springwood to Recreation Reserve ..	"			"			85 0 0	85 0 0		
Cox's River to Hartley and Oberon Road ..	"			1884			63 18 0	44 13 0		
Springwood to Saxafrax ..	"			1886			221 10 5	221 10 5		
Hartley to Luthgow ..	"			1878			2,483 10 10	374 1 7		
Lithgow to Vale of Clwydd ..	"			1886			127 6 6	127 6 6		
Little Hartley to Hartley Vale Platform ..	"			1885			529 2 4	229 2 4		
Hartley to Oberon ..	"			1877			3,689 0 4	143 17 6		
Hartley and Oberon Road to junction with Jenolan and Katoomba Road ..	"			1886			57 14 0	57 14 0		
Little River to 50 mile Tree Oberon and Swatchfield Road	"			1879			1,381 2 8	19 5 0		
Mutton Falls Public School to Oberon ..	"			1884			776 4 8	246 2 0		
Oberon to Swatchfield ..	"			1877			2,823 18 0	391 3 6		
Little Hartley to Gambenang ..	"			1878			1,004 19 9	69 12 6		
Gambenang to Louthier ..	"			1886			113 3 0	113 3 0		
O'Connell's to Swatchfield Road ..	"			1877			2,215 9 10	646 4 8		
Middle River to Meadow Flat ..	"			1878			1,820 12 10	142 11 0		

Lidsdale to Wolgan Valley . . . . .	1878	1,351 18 4	157 8 6
Bowenfells to Wallerawang . . . . .	1877	1,709 12 10	144 13 6
Magpie Hollow to O'Connell Plains . . . . .	1877	4,875 6 1	44 1 6
Magpie Hollow to Fish River Caves . . . . .	1884	85 18 2	9 12 2
Charles Creek, <i>via</i> Junction, to Fish River . . . . .	1886	9 16 0	9 16 0
Meadow Flat to Mitchell's Creek . . . . .	1880	968 4 10	234 17 10
Sunny Corner to Meadow Flat . . . . .	1885	4,482 4 5	2,482 4 5
Mitchell's Creek to Piper's Flat Railway Station . . . . .	1886	9 2 0	9 2 0
Bathurst, <i>via</i> Cowra, to Grenfell . . . . .	1870	79,561 8 9	2,811 12 0
Bathurst and Caloola to Trunkey . . . . .	1866	24,433 7 9	956 19 6
Bathurst, <i>via</i> Gorman's Hill Road, to Campbell's River . . . . .	1879	2,621 8 2	396 12 3
Bathurst to Gorman Hill and Perth Station . . . . .	1878	1,061 18 9	208 9 4
Bathurst to O'Connell Plains . . . . .	1876	7,399 17 3	610 1 5
Meadow Flat to Terrana . . . . .	1885	45 4 0	28 14 0
O Connell Plains, <i>via</i> Dirty Swamp, to Road, Mutton Falls to O'Connell Plains . . . . .	1872	2,306 12 3	78 0 1
O'Connell Plains to Campbell's River . . . . .	1885	159 0 0	9 0 0
Poor Man's Hollow to Bathurst and Trunkey Road . . . . .	1886	4 17 6	4 17 6
Bathurst and O Connell Plains to Cooper's, over Bridge . . . . .	1880	626 14 4	68 7 8
Tarana to O Connell . . . . .	1885	71 0 0	8 1 0
Bathurst, <i>via</i> Kellosnel, to Monkey Hill . . . . .	1887	7,391 12 2	2,614 5 11
Bathurst and Caloola Road to Rockley . . . . .	1873	10,580 2 7	605 11 5
Bathurst and Caloola Road to Teapot Swamp . . . . .	1878	1,155 1 4	136 1 0
Caloola, <i>via</i> Lime Kilns, to Rockley Road . . . . .	1871	3,714 4 4	88 0 6
Bathurst to Sofala . . . . .	1864	22,018 0 5	1,497 17 7
Bathurst to Ophir . . . . .	1877	9,556 8 7	570 2 6
Newbridge Station to Arthun Town . . . . .	1885	7,884 0 4	960 16 6
Newbridge to Evans' Swamp . . . . .	1879	400 0 0	Nil
Newbridge Station to Caloola . . . . .	1879	2,025 0 0	204 3 0
Macquarie Plains to Bloom Hill . . . . .	1877	380 11 6	30 0 0
Kelso to Kellosnel . . . . .	1877	304 19 9	47 5 0
Kelso to Sofala and Upper Turon . . . . .	1886	1 0 0	1 0 0
Kelso to White Rock . . . . .	1879	923 2 1	111 16 6
Kellosnel to Little Forest . . . . .	1878	3,096 2 0	471 7 0
Kelso, <i>via</i> Limeburner, to Peel and Sofala . . . . .	1877	6,506 8 9	679 8 2
Mount Lawson, Judge's Creek, to Thompson Creek . . . . .	1880	2,450 9 8	535 14 11
Mitchell's Creek Quartz Reef to Palmer's Oakey . . . . .	1879	1,797 1 8	275 17 0
O'Connell to Oberon . . . . .	1875	5,492 10 9	681 7 5
Sidmouth Valley to Tarana Road . . . . .	1873	2,230 6 7	75 0 0
Arthur Town to Tuena . . . . .	1883	3,937 6 5	59 13 8
Rockley Road to Camping Reserve, Vale Creek . . . . .	1883	119 19 9	29 19 9
Rockley to Caloola and Tuena . . . . .	1874	3,796 17 9	351 14 8
Rockley to Isabella River . . . . .	1883	874 17 8	188 0 8
Rockley <i>via</i> Campbell's River, to Dog Rocks . . . . .	1880	1,552 15 7	223 15 1
Teapot Swamp to No 1 Swamp . . . . .	1879	3,406 0 4	406 13 11
Teapot Swamp, <i>via</i> Mallow Grove, to Carcoa . . . . .	1885	1,032 13 1	45 14 0
Hargraves to Triamble . . . . .	1883	82 17 6	30 8 6
Carcoa to Village of Shaw . . . . .	1883	877 13 11	449 11 8
Evans Plains to Trunkey Road . . . . .	1885	368 18 4	130 18 0
Old Lachlan Road to Village of Shaw . . . . .	1885	156 17 4	44 4 10
Old Lachlan Road, at No 1 Village, to Mandurama and Carcoa Road . . . . .	1886	20 0 0	20 0 0
Carcoa to Flyer's Creek . . . . .	1879	905 0 4	127 2 4
Peel to Duramana . . . . .	1879	1,250 15 7	Nil
Lime Kilns to Palmer's Oakey and Upper Turon . . . . .	1878	3,029 8 11	504 2 6
Blayney, <i>via</i> Hood's, to Teapot Swamp . . . . .	1880	1,512 0 8	84 3 6
Blayney, <i>via</i> Grahamstown, to Millthorpe . . . . .	1883	788 2 10	38 9 0
Blayney to Shaw and No 1 Swamp . . . . .	1877	6,017 9 7	113 13 3
Blayney to Guyong . . . . .	1881	1,487 13 2	237 15 10
Blayney, <i>via</i> Parke, to Five Islands . . . . .	1883	440 18 10	191 2 6

Consolidated Revenue

No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated	Whether Constructing or under Repair.	Estimated Expense.	Fund from which the Expense is defrayed	When Com-menced	Whether Finished or Unfinished.	If Finished, actual amount of Expenditure	If Unfinished, amount of Expenditure to 31 December, 1886	Amount expended in 1886	Amount expended for Furniture in 1886.	Remarks.
							£ s. d.	£ s. d.		
<b>ROADS AND BRIDGES—continued.</b>										
Candelo to Brown Mountain and Mogilla	Maintenance, repair, and construction.	...	Consolidated Revenue.	1882	.....	.....	2,525 9 5	735 10 11		
Cut-hill Road, near Candelo	.....	.....		1886	.....	.....	78 16 6	78 16 6		
Brown Mount and Kamaruka to Fingerpost	.....	.....		1877	.....	.....	3,747 19 2	331 0 6		
Jindabyne Ferry to Long Point	.....	.....		1886	.....	.....	50 0 0	50 0 0		
Buckley's Crossing to Boloco and Jindabyne	.....	.....		1883	.....	.....	689 17 11	284 9 7		
Monteagle to Bumbaldry	.....	.....		1884	.....	.....	199 17 6	39 18 4		
Cooma to Braidwood	.....	.....		1875	.....	.....	9,723 8 3	481 19 4		
Cooma to Bobundarah	.....	.....		1880	.....	.....	1,720 11 9	161 15 0		
Old Burra Road	.....	.....		1886	.....	.....	91 13 2	91 13 2		
Cooma to Jindabyne	.....	.....		1881	.....	.....	3,608 11 1	980 12 9		
Cooma to Bombala	.....	.....		1864	.....	.....	27,939 18 6	2,649 9 8		
Cooma and Jindabyne to Middlingbank	.....	.....		1880	.....	.....	760 15 7	233 19 11		
Cooma and Jindabyne Road to Buckley's Crossing	.....	.....		1878	.....	.....	2,423 2 6	392 13 9		
Cooma and Jindabyne Road to Kiandra	.....	.....		1879	.....	.....	7,774 16 9	1,452 18 7		
Cooma, via Kiandra and Talbyng, to Tumut	.....	.....		1883	.....	.....	3,427 5 6	205 2 6		
Cooma to Countagunna	.....	.....		1879	.....	.....	1,970 8 1	289 19 0		
Buckley's Crossing to Maffra	.....	.....		1886	.....	.....	58 0 0	58 0 0		
Tumut to Brungle	.....	.....		1870	.....	.....	2,541 16 9	225 0 6		
Tumut to Adelong	.....	.....		1868	.....	.....	9,595 2 9	422 13 4		
Tanabandra to Tumut	.....	.....		1886	.....	.....	200 0 0	200 0 0		
Cooma, via Myalla, to Bobundarah and Nymtabelle	.....	.....		1884	.....	.....	287 0 0	87 0 0		
Cootamundra to Stockingbongle Bridge	.....	.....		1885	.....	.....	286 4 8	113 4 2		
Main South Road to Middle Adelong	.....	.....		1864	.....	.....	15,659 16 9	1,319 17 6		
Adelong to Main South Road, Hillas Creek	.....	.....		1874	.....	.....	2,920 0 0	162 9 7		
Gundagai to Bongongolong	.....	.....		1883	.....	.....	863 13 11	143 13 11		
Gundagai to Wagga	.....	.....		1864	.....	.....	15,908 12 11	786 13 11		
Gundagai to Tumut	.....	.....		.....	.....	.....	16,547 16 0	730 3 10		
Coolac to Cootamundra	.....	.....		1875	.....	.....	4,258 16 0	101 3 6		
Welaregang to Tumberumba	.....	.....		1878	.....	.....	10,746 8 1	712 0 0		
Welaregang, via Greg Greg, Kancoban	.....	.....		1886	.....	.....	1 0 0	1 0 0		
Middle Adelong to Tumberumba	.....	.....		1875	.....	.....	5,245 14 10	302 19 7		
Tumberumba to Upper Burra	.....	.....		1885	.....	.....	66 16 0	16 16 0		
Upper Tumberumba to Tumberumba	.....	.....		1874	.....	.....	1,815 6 9	192 14 1		
Tumberumba, via Mundaroo, to Jingellic	.....	.....		1882	.....	.....	6,894 11 9	642 8 8		
Main South Road, Little Billabong, to Tumberumba	.....	.....		1876	.....	.....	12,006 16 0	1,344 3 4		
Tumut to Kiandra	.....	.....		1870	.....	.....	4,362 3 11	611 16 9		
Tumut to Laemalac	.....	.....		1877	.....	.....	1,284 2 6	92 9 5		
Gilmore Creek to Riley's Crossing	.....	.....		1872	.....	.....	2,240 19 0	66 19 6		
Riley's Crossing to Reedy Flat	.....	.....		1877	.....	.....	1,207 14 6	108 14 6		
Gundagai to Brungle	.....	.....		.....	.....	.....	4,862 15 6	305 5 6		
Wagga Wagga to Cowabbee	.....	.....		.....	.....	.....	1,350 3 1	147 6 6		
Wagga Wagga to Bullenbong	.....	.....		1883	.....	.....	1,562 3 6	393 14 5		
Wagga Wagga to Lake Albert	.....	.....		1878	.....	.....	381 2 9	Nil.		
Wagga Wagga to Murrumburrah and Grenfell Road.	.....	.....		1868	.....	.....	14,955 10 11	180 9 11		
Wagga Wagga to Narrandera	.....	.....		1864	.....	.....	12,380 16 0	280 11 2		
Rocky Railway Station to Urana	.....	.....		1883	.....	.....	4,609 19 8	153 5 3		
Main South Road, Tarcutta, to Alfred Town	.....	.....		1879	.....	.....	10,931 0 3	207 3 0		
Main South Road, Kyamba, to Wagga	.....	.....		1881	.....	.....	4,570 13 7	439 2 10		
Carabost to Kyamba	.....	.....		1880	.....	.....	2,481 3 6	295 7 0		
Mimsa, via Marloubale, to Junee	.....	.....		1886	.....	.....	129 0 0	129 0 0		
Cootamundra to Temora	.....	.....		1882	.....	.....	7,368 3 2	397 3 2		
Main Street, Cootamundra	.....	.....		1884	.....	.....	1,490 16 8	500 0 0		

Conargo and Narrandera to Cudal .....	1880	2,678	1	5	347	13	8
Narrandera to Hay .....	1872	5,359	14	6	685	14	4
Bowna to Welaregang .....	1881	23,737	19	11	1,624	19	5
Germanton to Mountain Creek .....	1886	105	9	9	105	9	9
Culcairn to Germanton .....	1882	5,337	5	1	618	10	10
Germanton to Jingellic .....	1886	116	15	4	116	15	4
Germanton to Cookardina .....	1883	909	14	2	219	14	6
Burrumbuttock to Bucklesby .....	1886	40	0	0	40	0	0
Corowa to Murray Hut .....	1886	85	0	0	85	0	0
Corowa to Piney Range .....	1885	660	13	4	575	2	7
Corowa, via Sandy Ridges and Bull's Plains, to Jerilderie .....	1883	1,568	5	5	427	12	7
Jerilderie to Tocumwal .....	1884	484	13	4	414	13	4
Albury to Urana .....	1872	14,721	4	0	890	16	9
Coonong Railway Station towards Urana .....	1885	726	6	9	622	15	3
Albury and Corowa Road to Urana .....	1874	13,178	0	5	1,090	9	10
Albury to Wagga Wagga .....	1864	41,917	11	3	896	6	10
Gerogery Railway Station to Howlong .....	1881	5,944	8	4	1,035	4	4
Albury to Deniliquin .....	1864	52,317	2	2	2,842	7	10
Ebenezer to Jindera .....	1885	199	4	2	90	0	0
Crossing, Billabong Creek, to Walli Walli .....	1886	38	0	0	38	0	0
Gerogery Railway Station to Bungowannah .....	1876	3,679	11	1	175	19	0
Howlong to Walbundry .....	1883	1,395	19	2	691	5	9
Walla Walla to Gerogery and Bungowannah Road .....	1876	2,371	10	4	39	13	2
Hulong Station to Lake Cudgellic Crossing .....	1881	5,213	18	4	698	1	5
Hay and Narrandera Road to Darlington Point Railway Station .....	1884	191	12	11	Nil.		
Deniliquin to Urana .....	1874	13,184	4	1	1,119	14	9
Deniliquin to Hay .....	1873	14,241	12	10	670	18	2
Deniliquin to Naramona .....	1885	165	0	0	16	0	0
Deniliquin to Balranald .....	1875	15,839	11	2	618	8	7
Deniliquin to Moama .....	1868	9,721	15	1	383	13	1
Deniliquin to Moama Swamp .....	1886	243	1	2	243	1	2
Murray Hut to Tupal Road .....	"	170	0	0	170	0	0
Balranald to Hay .....	1877	5,004	17	10	677	11	4
Lachlan, at Wheelbah, to Gumbah .....	1882	1,336	19	2	Nil.		
Booligal to Wilcannia .....	1880	10,134	1	1	1,401	0	11
Wilcannia towards Wentworth .....	1883	2,108	7	1	108	7	1
Til Til to Oxley Bridge .....	1884	146	18	9	Nil.		
Hay to Booligal .....	1879	7,193	19	9	1,027	8	4
Hay to Gumbah .....	1881	3,253	7	6	795	8	6
Hay to Darlington .....	1884	897	4	5	18	16	0
Booligal to Hillston .....	1880	2,012	9	1	62	12	0
Carathool to Hillston and Gunbar .....	1881	2,507	12	3	1,259	15	5
Moama to Bama .....	1877	745	12	10	86	13	10
Moama to Tataha Public School .....	1886	30	12	0	30	12	0
Moama to Moulamein .....	1875	5,469	3	3	130	11	0
Moama to Caloola, Mars, and Wamboota .....	1879	2,460	10	11	523	0	0
Walbundry to Culcairn .....	1882	1,593	15	10	276	16	6
Nyngan to Cobar and Nymagee .....	1884	2,708	15	5	713	17	7
Wentworth to South Australian Border .....	1885	101	7	0	100	9	6
Balranald to Wentworth .....	1886	58	12	0	58	12	0
Euabalong to Mount Hope .....	"	247	11	4	247	11	4
Irish Town to Rookwood Railway Station .....	1884	223	19	0	150	0	0
Bankstown to Rookwood .....	1886	145	0	0	145	0	0
Auburn and Bankstown Road to Main South Road .....	1884	138	14	3	67	18	3
Main West Road, Eastern Creek, to Perkins' .....	1886	111	4	6	111	4	6
Main West Road, St. Mary's, to R. C. Orphan School .....	1878	1,640	18	4	388	16	0
Main West Road, St. Mary's, to Stockton .....	"	935	4	1	358	8	2
Denham Court to Ingleburn Platform .....	1886	46	5	0	46	5	0

Consolidated Revenue.



## No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated.	Whether Constructing or under Repair.	Estimated Expense.	Fund from which the Expense is defrayed.	When Com- menced.	Whether Finished or Unfinished.	If Finished, actual amount of Expenditure.	If Unfinished, Amount of Expenditure to 31 December, 1886.	Amount expended in 1886.	Amount expended for Furniture in 1886.	Remarks.
<b>ROADS AND BRIDGES—continued.</b>							£ s. d.	£ s. d.		
Abattoirs to White Bay Hotel .....	Maintenance, repair, and construction.	.....	Consolidated Revenue.	1885	.....	.....	1,300 0 0	1,287 15 0		
Petersham to Abattoirs .....	.....	.....		1886	.....	.....	841 18 0	841 18 0		
Pymont Bridge Road .....	.....	.....		1884	.....	.....	7,631 6 4	3,277 5 5		
Abattoir Road, Petersham, to Abattoirs .....	.....	.....		.....	.....	.....	599 19 8	33 19 0		
Bligh-street, Camperdown .....	.....	.....		1885	.....	.....	1,523 4 0	123 4 0		
Half-way House to Ricketty-street .....	.....	.....		1886	.....	.....	97 17 6	97 17 6		
Maroubra Bay Quarry .....	.....	.....		.....	.....	.....	313 15 3	313 15 3		
Forest Road to Kogarah .....	.....	.....		1885	.....	.....	264 10 0	229 10 0		
Gardner's Road, Ricketty-street .....	.....	.....		1884	.....	.....	875 10 6	148 13 3		
Botany Road, Williams' to Frankville .....	.....	.....		1886	.....	.....	20 0 0	20 0 0		
La Perouse to Little Bay .....	.....	.....		1884	.....	.....	403 5 0	20 0 0		
Breaking metal, Botany .....	.....	.....		1886	.....	.....	1,636 4 2	1,636 4 2		
Roads, Botany, Randwick, and Long Bay .....	.....	.....		.....	.....	.....	294 4 5	294 4 5		
Forest Road across Railway (Mort's Road) .....	.....	.....		.....	.....	.....	60 9 0	60 9 0		
Elizabeth-street, Waterloo .....	.....	.....		1884	.....	.....	519 11 8	261 1 2		
Done-street, Arncliffe .....	.....	.....		1886	.....	.....	239 13 1	239 13 1		
Randwick Toll-gate to La Perouse .....	.....	.....		1881	.....	.....	3,110 10 8	382 5 0		
Long Bay Road .....	.....	.....		1883	.....	.....	3,674 3 8	Nil.		
South Head Road .....	.....	.....		1879	.....	.....	34,495 14 2	4,000 0 0		
Bondi, via Coogee, to Long Bay .....	.....	.....		1886	.....	.....	3,361 6 1	3,361 6 1		
Approach, Rockdale Railway Station .....	.....	.....		1886	.....	.....	115 16 0	115 16 0		
Banks Meadow to Whisker's Road .....	.....	.....		1885	.....	.....	100 0 0	50 0 0		
Road, east side Botany Road .....	.....	.....		.....	.....	.....	1,500 0 0	41 1 0		
Anabel's-lane, Botany .....	.....	.....		1884	.....	.....	821 9 10	343 2 8		
King-street, Botany .....	.....	.....		.....	.....	.....	404 0 0	42 0 0		
Bay-street, Botany .....	.....	.....		.....	.....	.....	70 4 0	31 10 0		
Sylvania to Port Hacking .....	.....	.....		1886	.....	.....	200 0 0	200 0 0		
Walsh's Road, Botany .....	.....	.....		1885	.....	.....	500 0 0	71 3 8		
Stony Creek to Forest Road (Dent's Road) .....	.....	.....		1886	.....	.....	100 0 0	100 0 0		
Banks Meadow to Long Bay .....	.....	.....		1884	.....	.....	400 0 0	71 5 4		
Road round Wentworth Park .....	.....	.....		1885	.....	.....	4,476 19 0	3,654 19 0		
Sydney and Cook's River Road .....	.....	.....		1876	.....	.....	46,766 0 0	5,485 10 5		
Forbes-street, Newtown .....	.....	.....		1886	.....	.....	250 0 0	250 0 0		
Rocky Point to George's River .....	.....	.....		1879	.....	.....	4,343 14 5	563 16 9		
Tom Ugly's Point to Main South Road, near Croydon .....	.....	.....		1881	.....	.....	1,522 6 11	319 14 3		
Half-way House to Rocky Point .....	.....	.....		1882	.....	.....	742 14 5	158 3 2		
University Footways .....	.....	.....		1883	.....	.....	3,500 0 0	644 11 2		
Port Jackson to Peat's Ferry .....	.....	.....		1875	.....	.....	27,745 10 9	2,228 1 0		
Lane Cove Road, Miller-street, metalling from margin .....	.....	.....		1886	.....	.....	1,399 6 9	1,399 6 9		
Lane Cove to Cowan Creek, at Bobbin Head .....	.....	.....		1884	.....	.....	114 19 0	33 17 0		
Lane Cove Bridge Approaches .....	.....	.....		1886	.....	.....	23 18 0	23 18 0		
Lane Cove, via Stony Creek, to Pittwater .....	.....	.....		1883	.....	.....	1,882 13 5	784 10 2		
Pearce's Corner to Pennant Hills .....	.....	.....		1884	.....	.....	522 18 9	274 10 0		
Pearce's Corner to Peat's Ferry .....	.....	.....		1885	.....	.....	565 12 11	155 16 9		
Peat's Ferry to Berowra Creek .....	.....	.....		.....	.....	.....	148 17 6	73 17 6		
Field of Mars Common .....	.....	.....		1881	.....	.....	8,476 12 10	1,641 11 0		
Head of Navigation, Lane Cove .....	.....	.....		1883	.....	.....	2,972 4 2	185 15 6		
Metalling, Lane Cove to Fig-tree Bridge .....	.....	.....		1884	.....	.....	175 17 6	Nil.		
Iron Cove to Ryde, via Gladesville .....	.....	.....		1886	.....	.....	198 4 0	198 4 0		
Military Road, St. Leonards .....	.....	.....		1881	.....	.....	3,831 11 8	621 5 1		
Military Road, Watson's Bay .....	.....	.....	1885	.....	.....	660 13 7	25 1 0			
St. Leonards to Manly .....	.....	.....	1884	.....	.....	2,710 13 7	95 18 2			

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Spit Road, St. Leonards to Manly	..	..	1886	..	3,810 17 4	3,810 17 4
Manly Beach to Spit	..	..	1885	..	250 0 0	Nil.
Manly Cove to Pittwater	..	..	1879	..	6,716 5 2	1,995 16 7
Fencing Curl Curl Lagoon	..	..	1886	..	38 10 5	38.10 5
Pittwater to Barrangue	..	..	..	..	209 3 9	209 3 9
Balgowlah to Pittwater	..	..	1881	..	418 12 3	104 4 10
Duffy's Lane to Hornsby	..	..	1886	..	207 4 4	207 4 4
Manly and Pittwater to M'Garr's Creek	..	..	1884	..	137 11 4	2 12 6
Clearing at Harbord	..	..	1886	..	2,371 3 5	2,371 3 5
"  Field of Mars Common	..	..	..	..	4,840 8 11	4,840 8 11
"  at Heathcote	..	..	..	..	1,576 18 2	1,576 18 2
"  Springwood	..	..	..	..	108 7 6	108 7 6
Tents, &c, unemployed	..	..	..	..	262 10 0	262 10 0
Clearing at Blackheath	..	..	..	..	31 14 6	31 14 6
Repairs to Bridges	..	..	..	..	2,511 17 9	2,511 17 9
Expenses, Punts and Approaches	..	..	..	..	6,968 2 1	6,968 2 1
Contingent Vote	..	..	..	..	6,716 11 1	6,716 11 1
Conveyance of officers' equipment by rail	..	..	..	..	4,363 15 8	4,363 15 8
Construction and Maintenance, Tanks and Wells	..	..	1882	..	149,485 0 9	39,094 16 5
Tanks, Warren to Coonamble	..	..	1885	..	1,488 12 9	156 16 4
"  Parkes to Condobolin	..	..	..	..	1,694 5 8	276 8 10
Building caretakers' huts at 120 tanks	..	..	..	..	544 19 9	439 4 3
Fencing special leases, 100 tanks	..	..	..	..	20,000 0 0	10,800 13 1
Punt, Mulwalla Approaches	..	..	1884	..	250 0 0	Nil.
"  Middle Harbour	..	..	1886	..	200 0 0	200 0 0
"  Palmer's Island	..	..	1883	..	336 1 2	Nil.
"  Wyrallah	..	..	1885	..	400 0 0	Nil.
"  Oyster Channel	..	..	..	..	386 14 4	214 10 10
"  Book's Ferry	..	..	..	..	185 1 9	12 6 9
"  George's River	..	..	1886	..	399 14 11	399 14 11
"  Wiseman's Ferry	..	..	1884	..	80 0 0	Nil.
"  Jindabyne, Snowy River	..	..	..	..	236 0 0	Nil.
"  Lower Hunter	..	..	1886	..	44 10 0	44 10 0
"  Harwood Island	..	..	1885	..	1,219 15 0	130 7 5
"  Bateman's Bay	..	..	1886	..	280 18 10	280 18 10
"  Menndie	..	..	..	..	200 0 0	200 0 0
"  Seaham	..	..	..	..	175 0 0	175 0 0
"  Wentworth Ferry	..	..	..	..	391 9 9	391 9 9
Culverts, M'Donald's Water-race	..	..	..	..	60 0 0	60 0 0
"  Grattai Creek, Mudgee to Hill End.	..	..	..	..	1,050 11 9	1,050 11 9
"  Moss Vale and Shoalhaven Roads to Glen Innes	..	..	..	..	30 0 0	30 0 0
"  Creek at Tresender's, Spring Hill to Forest Reefs	..	..	..	..	50 0 0	50 0 0
Bridge, Darling, at Bourke and Polygonum Swamp	Erection	..	1877	Finished..	37,932 11 11	5,045 15 4
"  Lane Cove and Approaches	..	..	1880	..	42,718 6 9	1,232 11 1
"  Bingera Creek	..	..	1881	..	8,817 17 11	2,143 8 1
"  Lower Barwon	..	..	..	..	3,911 9 3	1,745 19 3
"  Palmer's Channel and Approaches	..	..	..	..	2,195 13 5	258 18 1
"  Gwydir, or Big River, Bingera	..	..	1883	..	30,127 0 9	7,553 1 11
"  Parramatta, at Gas Works	..	..	..	..	15,829 11 9	163 2 0
"  Cataract River, Broughton Pass	..	..	..	..	5,495 6 11	462 5 5
"  Six-mile and Anabranh, Wentworth to South Australia	..	..	1884	..	247 17 0	38 12 0
"  M'Donald River, St. Albans, and Approaches.	..	..	..	..	3,488 16 10	1,000 16 10
"  Hunter, at Denman	..	..	..	..	4,709 18 1	709 18 1
"  Coola Creek	..	..	..	..	220 9 7	177 9 7
"  Cowra	Repairs	..	..	..	307 18 1	24 12 10
"  Yarrim Creek	Erection	..	..	..	1,461 8 9	826 8 9
"  Parramatta River	Dolphin, &c.	..	1885	..	8,486 4 5	3,288 12 3
"  Wagga Wagga	Repairs	..	..	..	1,112 7 11	38 8 6
"  Morpeth Lagoon	Erection	..	..	..	490 5 0	170 5 0

Consolidated Revenue.

Loans and Con. Revenue.

Consolidated Revenue.

No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated.	Whether Constructing or under Repair.	Estimated Expense.	Fund from which the Expense is defrayed.	When Com-menced	Whether Finished or Unfinished.	If Finished, actual amount of Expenditure.	If Unfinished, amount of Expenditure to 31 December, 1886.	Amount expended in 1886	Amount expended for Furniture in 1886.	Remarks.
						£ s. d.	£ s. d.	£ s. d.		
<b>ROADS AND BRIDGES—continued.</b>										
Bridges on Road Banranald to Swan Hill	Erection		Consolidated Revenue.	1885	Finished	1,019 3 4		955 10 8		
Bridge, Burrangong Creek, Young	"			"	"	714 5 11		414 5 11		
" Hawes-street, Glen Innes	"			"	"	760 10 9		172 7 6		
" Browlie-street, Bega, Campbell's Lane	"			"	"	644 4 0		37 7 9		
" Five-mile Creek, Wentworth Road	"			"	"	846 7 0		415 7 0		
Bridges, Futters and Macanche's Creeks	"			"	"	500 0 0		239 8 11		
Bridge, Culgo Creek	"			"	"	684 15 6		184 16 6		
" Greenbah Creek and Approaches	"			"	"	872 4 1		722 4 1		
" Billabong, at Bourke, and Approaches	"			"	"	880 18 2		56 0 0		
" Mannos Creek, Ournie Road, and Approaches	"			"	"	860 11 11		474 6 11		
" Menindie Creek	"			"	"	1,045 3 5		95 3 5		
" Casino	Repairs			"	"	268 10 2		1 10 0		
" Erna Creek, East Gosford	Erection			"	"	3,695 15 0		2,164 15 0		
" Luskintyre	Repairs			"	"	61 12 9		12 8 0		
" Tycanna Creek, Moree Road	Erection			"	"	754 18 5		266 11 0		
" Big River, at Moree	"			"	"	2,984 19 2		1,796 3 10		
" Boggy Arm, Murray River	"			"	"	143 4 10		54 14 10		
" Tarbuc Creek, Bungwall to Foster	"			"	1886	"	287 6 0		287 6 0	
" Dunmore to Clarence Town	"			"	"	362 19 11		362 19 11		
" Wallarabba Creek	"			"	"	414 2 9		414 2 9		
" Reedy Creek, Cudgegong to Cassilis	"			"	"	869 6 6		869 6 6		
" Carwoil Creek, Cudgegong Village to Rylstone	"			"	"	709 16 1		709 16 1		
" Oakey Creek	"			"	"	641 4 7		641 4 7		
" Bogan River, at Dandaloo	"			"	"	996 6 10		996 6 10		
" Mandagery Creek, at Windred's	"			"	"	516 16 0		516 16 0		
" Blackman's Creek, Hartley to Lithgow	"			"	"	297 3 0		297 3 0		
" South Creek, Carne's Creek to Bringelly	"			"	"	212 3 10		212 3 10		
" Gunrock Creek, Moss Vale and Shoalhaven Road, to Wallenderry	"			"	"	264 9 9		264 9 9		
" Bibbenluke River, Holt's Flat, to Railway Bridge	"			"	"	665 10 6		665 10 6		
" Jellatt Jellatt Creek, Merimbula to Jellatt	"			"	"	648 1 4		468 1 4		
" Little Tarroni Creek, Moama to Maulamein	"			"	"	995 7 11		995 7 11		
" Devil's Elbow	"			"	"	500 0 0		500 0 0		
Culvert, Flyer's Creek, Upper Myall, to Bulladelah	"			"	"	346 17 1		346 17 1		
Bridge, Rylestone to Bylong (Breakfast Creek)	"			"	1885	"	282 17 0		81 11 0	
" Mulbrung Creek	"			"	1886	"	751 2 0		751 2 0	
" Lachlan, at Murrin	"			"	1883	"	1,738 19 2		68 4 8	
" Berry-street, Nowra	"			"	1885	"	129 0 0		100 0 0	
" Cunningham and Nimby	Repairs			"	1886	"	59 4 6		59 4 6	
" Four-mile Creek	Erection			"	"	304 12 10		303 2 10		
" Deep Creek, Milton to Bodalla	"			"	"	293 14 8		293 14 8		
" Deep Creek, Kempsey to Fernmount	"			"	"	97 0 0		97 0 0		
" Broadwater, Moree	"			"	"	354 5 0		354 5 0		
" Demondrille	"			"	"	322 16 3		322 16 3		
" Winburndale Creek	"			"	"	726 0 0		726 0 0		
" Biree River, Goodooga, and Approaches	"			"	1881	Unfinished		3,250 17 9		348 0 0
" Humumbah, Barwon River	"		"	1883	"		2,394 6 0		953 0 0	
" Manila	"		"	1881	"		30,485 1 0		623 16 8	
" Hunter River, at Dalwood	Repairs		"	1884	"		51 19 0		2 9 0	
" Leicester Creek, and Approaches	Erection		"	"			5,483 15 0		100 0 0	
" Belmore	Lighting		"	1886	"		60 0 0		60 0 0	
" Main South Coast Road	Erection		"	1884	"		3,855 6 6		180 14 2	

" Gundagai .....	Repairs .....	1884 .....	5,455 11 2	1,900 12 0
Culverts on Road Bulli to Blue Gum Forest .....	Erection .....	1885 .....	795 9 9	292 14 6
Bridge, Campbell's Lane .....	Repairs .....	" .....	15 10 10	15 10 10
" Howlong .....	Erection .....	" .....	5,649 9 1	4,184 7 6
" Wickham to Bullock Island (Throsby Creek) and Approaches .....	" .....	" .....	2,690 13 6	1,514 13 6
Bridges, parishes of Redbank and Pappenburra .....	" .....	1886 .....	918 4 0	918 4 0
Bridge, Johnson's Creek .....	" .....	" .....	330 12 7	330 12 7
" Barwon River, Cato Creek, and Brewarrina .....	" .....	" .....	2,166 15 4	2,166 15 4
" Head of Lane Cove Navigation .....	" .....	" .....	8 8 0	8 8 0
" at Hay .....	" .....	" .....	515 13 11	515 13 11
" Coonamble Creek .....	" .....	" .....	720 0 0	720 0 0
" Toomah River at Greg Greg .....	" .....	1885 .....	1,467 6 9	1,466 18 0
" Wilson's Creek, Lismore .....	" .....	1886 .....	147 2 8	147 2 8
" King Creek, Port Macquarie .....	" .....	Loans .....	1,729 18 6	1,729 18 6
" Brungle Gully .....	" .....	" .....	880 0 0	880 0 0
" Paterson .....	" .....	Loans & Con. Rev. .....	6,708 8 9	6,708 8 9
" Bega to Brogo .....	" .....	" .....	2,004 7 9	2,004 7 9
" Culgoa River .....	" .....	1884 .....	133 11 0	130 0 0
" Murrumbidgee, at Teemas .....	" .....	1886 .....	7,568 0 0	7,568 0 0
Roads and Bridges, Illawarra District .....	" .....	" .....	1,072 0 0	1,072 0 0
Bridge, Boree Nyrang .....	Repairs .....	" .....	116 11 3	116 11 3
" Broken Shaft Creek, Molong .....	Erection .....	" .....	53 0 0	53 0 0
" Bryant's .....	Repairs .....	" .....	120 0 0	120 0 0
" Candelo .....	Erection .....	" .....	70 0 0	70 0 0
" Nymboida Creek .....	" .....	" .....	90 12 5	90 12 5
Culvert, Dungog, Main-street .....	Repairs .....	" .....	90 0 0	90 0 0
Bridge, Walker's River, Lidsdale .....	Erection .....	" .....	228 0 0	228 0 0
" Bmanderry to Bega .....	" .....	" .....	38 8 6	38 8 6
" Tighe's .....	Reflooring .....	" .....	130 0 0	130 0 0
" Anvil Creek .....	Erection .....	" .....	114 10 0	114 10 0
Culvert, Gillespie's .....	" .....	" .....	106 0 0	106 0 0
Bridge, Saltwater Creek, Grafton District .....	" .....	" .....	196 6 2	196 6 2
Culvert, Morpeth, via Hinton Punt to Dunmore and Seaham .....	" .....	" .....	87 2 3	87 2 3
Bridge, Iron Cove .....	Painting .....	" .....	201 3 0	201 3 0
" Duck Creek .....	Erection .....	Consolidated Revenue. .....	1,346 0 0	1,346 0 0
" Old Mill at Ray's .....	Repairs .....	" .....	39 0 0	39 0 0
" Tallywang .....	Erection .....	" .....	75 0 0	75 0 0
" Carey's .....	" .....	" .....	81 4 0	81 4 0
" Elderslie .....	" .....	" .....	45 0 3	45 0 3
" Cook's River Dam .....	" .....	" .....	76 9 0	76 9 0
" Molong, at Bridgewater .....	" .....	" .....	437 2 6	437 2 6
" Makin's Creek .....	" .....	" .....	60 0 0	60 0 0
" Whiteman's Creek .....	" .....	" .....	109 6 3	106 6 3
" Windsor .....	" .....	" .....	177 5 4	177 5 4
" Stony Creek .....	" .....	" .....	72 10 0	72 10 0
" Parson's Creek .....	" .....	" .....	202 1 0	202 1 0
" Spring Creek .....	" .....	" .....	98 0 0	98 0 0
<b>ROADS UNDER TRUSTEES, AS PER SCHEDULE, ISSUED TO TRUSTEES.</b>				
Northern Roads .....	.....	.....	.....	10,170 0 0
Southern Roads .....	.....	.....	.....	5,903 0 0
Western Roads .....	.....	.....	.....	5,140 0 0
Unclassified Vote .....	.....	.....	.....	1,802 0 0
			197,807 12 3	5,784,957 18 10
			620,268 13 6	

No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated.	Whether Constructing or under Repair.	Estimated Expense.	Fund from which the Expense is defrayed.	When Commenced.	Whether Finished or Unfinished.	If Finished, actual amount of Expenditure.	If Unfinished, amount of Expenditure to 31 December, 1886.	Amount expended in 1886.	Amount expended for Furniture in 1886.	Remarks.
						£ s. d.	£ s. d.	£ s. d.		
<b>SEWERAGE BRANCH.</b>										
Sewerage, City of Sydney	Constructing		Loans and Consolidated Revenue.	1880	Unfinished		582,094 18 1	148,907 11 2		
Drainage, Redfern and Darlington	"			1884	"		3,274 10 7	228 5 4		
Sewer, Dowling-street, Redfern	"			1885	"		5,427 9 3	4,675 17 9		
Drain from Eveleigh Railway Yards	"			"	"		2,471 15 10	803 0 3		
Cost of Surveys for County and Suburban Towns Drainage	"			"	"		2,513 14 11	1,403 3 7		
Sewer, Chelsea-street, Redfern	"			"	"		500 0 0	Nil.		
Sewer, Blackwattle Bay	"			"	"		9,284 13 5	Nil.		
Storm-water Sewer, Wentworth Park	"			"	"		3,490 14 4	3,490 14 4		
Sewer, Alderson's Road	"			"	"		181 12 8	Nil.		
Collecting Sewer from Liverpool to Comber-street...	"			"	1886	"	677 19 3	677 19 3		
Street between boundary of City and Paddington	"		"	"	"	12 12 0	12 12 0			
University Connections	"		"	"	"	494 16 2	494 16 2			
<b>HARBOURS AND RIVERS.</b>										
<b>WATER SUPPLY.</b>										
Sydney	"		Loans	1880	"		1,878,013 8 4	419,236 12 4		
Providing water for Country Towns	"		Loans & Con. Rev.	1879	"		488,796 2 4	101,292 5 8		
Surveys in connection with Water Supply for Sydney, Newcastle, Maitland, &c.	"			"	Finished	15,943 4 11 <sup>a</sup>				a No expenditure in 1886.
<b>DREDGE SERVICE.</b>										
Excavation of Silt by Dredges	Annual Service		Consolidated Revenue.	1884	"	74,819 15 0 <sup>a</sup>				
"	"			1885	Unfinished		77,768 10 6	3,778 17 7		
"	"			1886	"		73,520 11 10	73,520 11 10		
Fitting Boiler, Tug "Achilles"	Constructing			1885	Finished	2,811 0 3 <sup>b</sup>		1,728 16 1		b £811 Os. 3d of this amount was paid from Dredge Service, 1886, voted.
New Dredge, Sydney Harbour	"			1879	Unfinished		16,769 6 9	1,736 9 10		
Additional Dredge and Punts for Sydney	"		Loans	1885	"		782 18 0	689 3 0		c No expenditure in 1886
Landing Silt and forming Ground	Annual Service		Consolidated Revenue.	1884	Finished	4,288 3 4 <sup>c</sup>				
"	"			1885	Unfinished		4,004 4 5	878 14 8		
"	"			1886	"		4,436 0 5	4,436 0 5		
Dredging Plant, Richmond and other Northern Rivers	Constructing		Loan	1883	"		16,551 15 11	7,349 5 3		
<b>SYDNEY.</b>										
Wharf, Hunter's Hill	"		Consolidated Revenue.	1885	Finished	597 7 0 <sup>d</sup>				d No expenditure in 1886. £97 7s. of this amount was paid from Incidental Expenses to Wharfs, 1886
Wharf, Putney	"			"	"	934 0 1 <sup>e</sup>		27 10 5		
Wharf, Botany	"			1872	"	6,693 6 2 <sup>f</sup>				e £334 Os. 1d of this amount was paid from Incidental Expenses to Wharfs, 1886.
Increased Wharf Accommodation, Sydney	"		Loans.	1873	Unfinished		89,682 10 4	740 10 4		f £916 9s. of this amount was paid from Incidental Expenses to Wharfs, 1886.
Completion Darling Harbour Wharf, including Compensation for Land	"			1882	"		157,219 10 10	1,350 17 4		g No expenditure in 1886.
Jetty, Woolloomooloo Bay	"		Consolidated Revenue.	1885	Finished	1,456 18 0 <sup>g</sup>				
Wharf, Ermington	"			"	"	447 0 0 <sup>h</sup>		152 1 1		
Wharf, Cobler's Beach	"			"	"	575 0 0 <sup>g</sup>				
Wood-paving Circular Quay	"		Loans	"	Unfinished		10,496 8 11	10,366 4 11		
Wharf and Wall, Blackwattle Bay...	"			1886	"		15 8 4	15 8 4		
Wharf, Field of Mars	"		Consolidated Revenue.	"	Finished	376 0 10 <sup>h</sup>		376 0 10		
White Bay Reclamation	"			"	Unfinished		161 15 10	161 15 10		
<b>HUNTER RIVER AND NEWCASTLE DISTRICT.</b>										
Road through Bullock Island	"			1876	"		4,790 18 11	107 16 5		i £76 Os. 10d. of this amount was paid from Incidental Expenses to Wharfs, 1886.
Wharf and Shipping Appliances, Newcastle, Bullock Island, and Stockton, exclusive of Steam Crane on Newcastle Wharf	"		Loans & Con. Rev.	1858	"		182,358 11 5	30,223 16 7		
Protecting Banks of Hunter River, West Maitland	"		Con. Rev.	1879	"		19,151 9 10	518 1 6		

Repairs, Newcastle Wharf .....	Improving .....	1881 ..	Finished...	7,230 2 0	.....	35 0 0
Expenses of Tugs, &c., on Special Services unconnected with dredging, together with expenses of Rocket Apparatus, Newcastle .....	.....	Con. Revenue.	1884 ..	800 0 0	.....	66 6 0
" " " " .....	.....	1885 ..	" ..	1,465 16 2	.....	888 17 10
" " " " .....	.....	1886 ..	Unfinished	.....	888 17 10	1,959 10 9
Removal of Rocks, Newcastle Harbour .....	Improving .....	Loans & Con. Rev	1858 ..	6,170 0 0	.....	1,777 9 4
Repairs, Northern Breakwater, Newcastle .....	Repairs .....	Con. Rev	1883 ..	9,630 2 11	.....	780 3 0
Southern Breakwater, Newcastle .....	Constructing .....	Loans & Con Rev	1886 ..	84,937 5 0	.....	186 2 0
Wharf and Shed, Belmore .....	" .....	Con. Rev.	1885 ..	317 1 3 <sup>w</sup>	.....	458 8 11
Wharf, Wickham .....	" .....	1886 ..	Finished	458 8 11 <sup>m</sup>	.....	6,876 15 2
LAKE MACQUARIE.	.....	Loans & Con Rev	1878 ..	.....	73,107 11 6	16 0 0
Improvements at Entrance .....	" .....	Con. Revenue.	1885 ..	358 17 1	.....	2,046 4 5
Bridge, Pelican Flat .....	" .....	1885 ..	Unfinished	.....	2,752 15 1	11,867 19 2
CLARENCE RIVER.	Improving .....	Loans & Con Rev	1862 ..	.....	170,459 8 10	28 19 0
Improvements at South Arm .....	Constructing .....	1885 ..	" ..	.....	382 18 0	273 6 10
Improvements at Clarence Heads .....	" .....	1886 ..	" ..	.....	273 6 10	284 11 8
Wharf and Store, Cowper .....	" .....	Consolidated Revenue.	" ..	.....	284 11 8	247 18 5
Jetty, Woolgoola Bay .....	" .....	1879 ..	" ..	.....	13,393 19 8 <sup>o</sup>	5 18 7
Wharf, Great Marlow .....	" .....	Loans .....	1883 ..	705 18 7 <sup>p</sup>	.....	2,586 15 10
Wharf, Chatsworth .....	" .....	1885 ..	Unfinished	.....	3,599 3 6	3,041 18 2
MANNING RIVER.	.....	Loans & Con Rev	1874 ..	.....	63,248 16 9	309 3 9
Dredge, Tug, and Punts .....	Improving .....	1885 ..	Finished...	501 5 2	.....	246 5 10
Wharf and Store, Cooperbrook .....	Constructing ..	1878 ..	Unfinished	345 4 8 <sup>q</sup>	4,847 16 2	1,240 16 1
Grab Dredge, Camden Haven.....	" .....	Consolidated Revenue.	1881 ..	2,035 15 9 <sup>r</sup>	.....	396 5 10
TRIAL BAY.	.....	1883 ..	" ..	97 10 0 <sup>s</sup>	.....	8 0 10 <sup>w</sup>
Harbour of Refuge .....	Improving .....	Loans & Con Rev	1884 ..	424 8 2 <sup>t</sup>	.....	3,169 1 9
Jetty, Trial Bay .....	Constructing ..	1886 ..	Unfinished	.....	3,809 17 10	3,809 17 10
RICHMOND RIVER.	.....	1879 ..	" ..	.....	2,239 16 5	1,199 16 7
Wharf, Swan Bay .....	Improving .....	1885 ..	Finished	308 18 6	.....	0 16 6
Removing Obstructions, Richmond .....	Constructing ..	" ..	" ..	339 10 11	.....	17 8 0
Public Wharf, Lismore .....	" .....	1886 ..	" ..	273 13 8	.....	273 13 8
Wharf and Shed, Boat Harbour, Wilson's Creek .....	" .....	1885 ..	" ..	352 2 11 <sup>v</sup>	.....	15 12 0
Wharf, Wardell .....	" .....	1886 ..	Unfinished	.....	15 12 0	436 16 10
Wharf, Tatham .....	" .....	Consolidated Revenue.	1885 ..	1,345 11 5 <sup>w</sup>	.....	17 9 9
Grab Dredge and Punts .....	" .....	1883 ..	" ..	1,217 9 9	.....	466 15 0
Jetty, Byron Bay .....	" .....	1885 ..	" ..	577 2 0 <sup>x</sup>	.....	1,003 10 9
NAMBUCCRA RIVER.	.....	Loans & Con Rev	1884 ..	Unfinished	1,192 11 8	2,369 5 10
Clearing Obstructions .....	Improving .....	1883 ..	" ..	.....	2,503 14 4	345 9 2
MACLEAY RIVER.	.....	1885 ..	" ..	.....	.....	.....
Wharf, Long Beach .....	Constructing ..	1886 ..	Finished...	345 9 2	.....	345 9 2
Wharf, Yarrahippin .....	" .....	1887 ..	" ..	.....	.....	.....
Wharf, Gladstone and Kinchela Creeks .....	" .....	1888 ..	" ..	.....	.....	.....
Wharf, Greenhills, Upper Macleay .....	" .....	1889 ..	" ..	.....	.....	.....
Reconstruction Wharf, Port Macquarie .....	" .....	1890 ..	" ..	.....	.....	.....
TWFD RIVER.	.....	Consolidated Revenue.	1885 ..	1,427 15 11 <sup>y</sup>	.....	.....
Wharf Accommodation .....	" .....	1883 ..	" ..	.....	.....	.....
HASTINGS RIVER.	.....	1884 ..	Unfinished	.....	1,192 11 8	1,003 10 9
Improving Navigation .....	Improving .....	1885 ..	" ..	.....	.....	.....
Wharf, Wanchope .....	Constructing ..	1886 ..	" ..	.....	.....	.....
Punts for Grab Dredge .....	" .....	1887 ..	" ..	.....	.....	.....
BOURKE.	.....	Loans .....	1883 ..	.....	2,503 14 4	2,369 5 10
Wharf and Store .....	Constructing ..	1884 ..	" ..	.....	.....	.....
BELLINGER RIVER.	.....	1885 ..	" ..	.....	.....	.....
Wharf, Cahills .....	" .....	1886 ..	Finished...	345 9 2	.....	345 9 2
TOMAKIN RIVER.	.....	1887 ..	" ..	.....	.....	.....
Removing Obstructions .....	Improving .....	1888 ..	" ..	.....	.....	.....
WOLLONGONG.	.....	Loans .....	" ..	.....	.....	.....
Removal Black Buoy Rocks .....	" .....	1889 ..	Unfinished	.....	6,155 2 5	1,260 9 10
Towards Deepening Wollongong Harbour .....	" .....	1890 ..	" ..	.....	195 2 1	195 2 1

l No expenditure in 1886.

m £17 1s. 3d. of this amount was paid from Incidental Expenses to Wharfs, 1886.

n £58 8s. 11d. of this amount was paid from Incidental Expenses to Wharfs, &c., 1886.

o No expenditure in 1886

p £5 18s. 7d. of this amount was paid from Incidental Expenses to Wharf.

q £95 4s. 8d. of this amount was paid from Incidental Expenses to Wharfs, 1886.

r £428 11s. 6d. of this amount was paid from Incidental Expenses, Votes of various years. No expenditure in 1886

s £90 of this amount was paid as compensation for cancellation of contract.

t £24 8s. 2d. of this amount was paid from Incidental Expenses, 1886 Vote

u No expenditure in 1886.

v £2 2s. 11d. of this amount was paid from Incidental Expenses, 1885.

w £354 11s. 5d. of this amount was paid from Incidental Expenses, &c., 1886.

x £77 2s. of this amount was paid from Incidental Expenses, 1886.

y No expenditure in 1886. £1,127 15s. 11d. of this amount was paid from Incidental Expenses to Wharfs, 1886.

No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated	Whether Constructing or under Repair	Estimated Expense	Fund from which the Expense is defrayed	When Com menced	Whether Finished or Unfinished	If Finished, actual amount of Expenditure	If Unfinished, amount of Expenditure to 31 December, 1886	Amount expended in 1886	Amount expended for Furniture in 1886	Remarks
<b>HARBOURS AND RIVERS—continued</b>										
<b>MORUYA</b>										
Improving entrance, Moruya Heads	Improving	£	Loans & Con Rev	1861	Unfinished	£ s d. ....	£ s d 33,861 16 2	£ s. d 872 15 7	£ s. d.	
<b>SHELLHARBOUR</b>										
Breakwater . . .	Constructing .		Con. Rev	1878 ...	"	...	7,963 15 7 <sup>a</sup>			<sup>a</sup> No expenditure in 1886.
<b>KJAMA</b>										
Construction Lighthouse	"		} Loans	1885	" Finished .	67,081 1 1 <sup>b</sup>	1,448 19 5	1,435 19 5		
Harbour Works ...	" ..			1861						
<b>SHOALHAVEN</b>										
Removal Obstructions Broughton's Creek . . .	Improving		} Consoli- dated Revenue.	1886	" Unfinished	399 1 4	2,056 15 2	1,830 14 7		<sup>b</sup> This expenditure in cludes only the specific votes for the Service A further sum of £19,806 14s 10d has been spent from Inci dental Expenses to Wharfs, &c , at various times
Yanco Cutting	"			"						
Wharf, Balranald	Constructing		} Loans & Con Rev	1866	" Unfinished	...	189,536 6 2 <sup>c</sup>	6,595 3 3		<sup>c</sup> No expenditure on account of Murray River in 1886
Improving Rivers	Improving ...			"						
<b>COCKAPOO ISLAND</b>										
Fitzroy Dock	Constructing & in use		} Loans & Consoli- dated Revenue.	1848	" Unfinished	{ In use since } Dec, 1857	33,590 5 3 <sup>d</sup>			<sup>d</sup> No expenditure in 1886
Dock and other works in connection with Docking Establishments	Elongation of			"						
Workshop and other Buildings	"		} Consoli- dated Revenue.	1885	" Unfinished	. . . . .	9,735 4 2 <sup>d</sup>			<sup>e</sup> No expenditure in 1886
Docking Vessels and other Contingent Expenses	"			"						
" " " "	"		} Loans & Con Rev	1885	" Finished.	43,430 15 6	2,280 0 0	2,731 16 0	2,731 16 0	
Fitzroy Dock—Salaries to 1870	"			"						
" " " " 1885	"		} Con. Rev.	1883	" Unfinished	..	2,400 0 0	80 0 0	2,400 0 0	
" " " " 1886	"			"						
Machinery	Nearly all erected & in use		} Loans	1885	" Finished .	1,192 1 3	12,314 3 1	59,003 5 0	59,003 5 0	
Extension of Dock Accommodation (new Dock)	Constructing			"						
<b>MISCELLANEOUS</b>										
Public Wharf, Wentworth	"		} Consoli- dated Revenue.	1885	" Unfinished	2,986 15 5	4,979 19 10	4,979 19 10	4,979 19 10	
Harbour and River Surveys	" ..			"						
"	"		} Loans	1884	" Finished..	2,903 15 9	268 0 0 <sup>e</sup>	1,434 13 2	1,434 13 2	
Lengthening Eden Wharf	"			"						
Wharf Pitt Water (Church Point)	"		} Consoli- dated Revenue.	1885	" Unfinished	586 5 6	486 6 2	486 6 2	486 6 2	
(Brisbane Water) ....	"			"						
Wharf, Beimgui .....	"		} Loans	1885	" Finished.	561 11 9 <sup>f</sup>	25 0 0	25 0 0	25 0 0	
Wharf, Green Point, Brisbane Water	"			"						
Wharf, Huskisson	"		} Consoli- dated Revenue.	1885	" Unfinished	...	17,340 17 2	612 5 9	612 5 9	<sup>f</sup> £61 11s 9d of this amount was paid from Incidental Expenses to Wharfs, 1886
Incidental expenses to Wharfs and other Public Works	"			"						
Salaries, specially voted as such. General Estab- lishment	"		} Consoli- dated Revenue.	1886	" Unfinished	...	15,608 18 3	15 608 18 3	15 608 18 3	
"	"			"						
						251,242 3 11	3,960,614 13 2	817,631 16 11		<sup>g</sup> £70 of this amount was paid for 1885 ser- vice
<b>PUBLIC BUILDINGS, &amp;c</b>										
<b>SYDNEY</b>										
Art Gallery	Repairs		} Consoli- dated Revenue.	"	" Finished...	46 1 10	...	46 1 10	46 1 10	
Artillery Barracks	"			"						
Attorney-General's Office	Furniture		} Loans	"	" Unfinished	74 12 5	...	74 12 5	74 12 5	
Audit Office ...	Repairs			"						
Botanic Gardens	"		} Consoli- dated Revenue.	"	" Finished	19 16 2	...	19 16 2	19 16 2	52 4 8
" Refreshment Rooms .. .	Erection .. .	1,000		"						
Brigade Office	Furniture		} Loans	1886	" Unfinished	1,252 1 0	...	352 1 0	352 1 0	109 16 2
Central Police Court	Repairs			"						
Civil Service Board Office	"		} Consoli- dated Revenue.	"	" Unfinished	109 17 10	...	109 17 10	109 17 10	31 7 5
City Improvement Board Office	"			"						
"	"		} Loans	"	" Unfinished	108 9 5	...	108 9 5	108 9 5	147 9 2
"	"			"						
"	"		} Consoli- dated Revenue.	"	" Unfinished	30 1 9	...	30 1 9	30 1 9	
"	"			"						

Clerk of the Peace Office .....	" .....	.....				26 17 2	.....	26 17 2	123 0 3
Colonial Architect's Office .....	" .....	.....				316 6 8	.....	316 6 8	71 2 11
Comptroller-General's Office .....	" .....	.....				0 11 0	.....	0 11 0	.....
Cook Park ..	Gas supply ..	.....				11 10 0	.....	11 10 0	.....
Coroner's Office ..	Repairs ..	.....				5 5 0	.....	5 5 0	0 12 6
Crown Law Office ...	" .....	.....				68 15 5	.....	68 15 5	166 2 6
Custom House ..	Additions ..	44,000	Surplus & Con Rev	1884	Unfinished	.....	26,200 0 0	5,000 0 0	.....
" ..	Repairs, &c. ..	.....				1 6 7	.....	1 6 7	45 17 2
Darlinghurst Receiving-house ..	" ..	.....				143 3 4	.....	143 3 4	12 12 7
" Court-house ..	Additions ..	7,500	Con. Revenue	1884	.....	13,405 19 9	.....	4,605 19 9	.....
" ..	Dwarf wall, &c ..	.....				1,220 16 0	.....	1,220 16 0	.....
" ..	Repairs, &c. ..	.....				281 0 10	.....	281 0 10	282 17 2
" Police Station ..	" ..	.....				6 14 0	.....	6 14 0	.....
" Gaol ..	Additions, &c. ..	.....				1,602 1 3	.....	1,602 1 3	40 13 7
Dawes Point Barracks ..	Repairs ..	.....				139 17 4	.....	139 17 4	121 13 9
" (Captain Hixson's Residence) ..	" ..	.....				42 6 9	.....	42 6 9	.....
Department of Prisons ..	Furniture ..	.....				.....	.....	.....	31 11 7
" Justice ..	Repairs ..	.....				225 10 7	.....	225 10 7	270 3 5
Distilleries Office ..	Furniture ..	.....				.....	.....	.....	7 16 2
District Court ..	Repairs ..	.....				299 7 0	.....	299 7 0	.....
Doman ..	" ..	.....				112 16 11	.....	112 16 11	8 7 6
" ..	Gas supply ..	.....				264 10 0	.....	264 10 0	.....
Erskine street Watch-house ..	Repairs ..	.....				0 16 10	.....	0 16 10	.....
Engineer for Existing Lines Office ..	" ..	.....				5 11 7	.....	5 11 7	.....
Fisheries Commission Office ..	" ..	.....				9 8 1	.....	9 8 1	7 5 7
Fort Macquarie ..	" ..	.....				0 13 10	.....	0 13 10	11 4 0
" ..	Gas supply ..	.....				12 11 2	.....	12 11 2	.....
Flagstaff Hill Reserve ..	" ..	.....				34 10 0	.....	34 10 0	.....
Fort Phillip Signal Station ..	Repairs ..	.....				36 2 5	.....	36 2 5	.....
Free Public Library ..	Additions ..	7,400	Loans, 1862	1885	.....	12,780 7 11	.....	7,147 1 3	.....
" ..	Alterations and repairs ..	.....				429 10 4	.....	429 10 4	.....
General Post Office, Extension ..	Superstructure ..	112,000	Cons. Rev	1886	.....	.....	126,854 3 6	6,000 0 0	.....
" ..	Ironwork ..	24,000	Surplus Revenue.	1881	Unfinished	.....	25,371 0 0	9,712 0 0	.....
" ..	Finishing trades ..	50,000				.....	31,600 0 0	13,600 0 0	.....
" ..	Hydraulic lifts ..	.....				.....	1,424 0 0	1,424 0 0	.....
" ..	Furniture and fittings ..	.....				.....	.....	.....	2,350 2 9
" ..	Alterations and repairs ..	.....				201 12 4	.....	201 12 4	.....
" ..	Light lamps ..	.....				11 10 0	.....	11 10 0	.....
Garden Island ..	Cottages ..	1,280	Loans, 1884.	.....	Unfinished	1,577 5 6	.....	1,577 5 6	47 14 6
" ..	Sail-loft, &c. ..	13,000				.....	4,427 1 7	4,427 1 7	.....
George-street South Police Station ..	Repairs ..	.....				.....	.....	.....	.....
" North Watch-house ..	" ..	.....				32 4 3	.....	32 4 3	.....
Government Interpreter's Office ..	Furniture ..	.....				19 14 2	.....	19 14 2	.....
" Boat-shed ..	" ..	.....				.....	.....	.....	14 0 9
" Printing Office ..	" ..	.....				1,243 0 11	.....	1,243 0 11	3 5 10
" House ..	Alterations and additions ..	.....				3,958 2 9	.....	3,958 2 9	2,870 9 11
" Stables ..	Repairs ..	.....				275 6 5	.....	275 6 5	133 12 7
" Guard ..	" ..	.....				23 7 5	.....	23 7 5	.....
Harbours and Rivers Department ..	" ..	.....				0 3 0	.....	0 3 0	30 9 11
Haymarket Post and Telegraph Office ..	" ..	.....				35 6 3	.....	35 6 3	.....
Health Office ..	" ..	.....				321 18 8	.....	321 18 8	93 8 8
Hyde Park ..	Gas supply ..	.....				444 10 0	.....	444 10 0	.....
" Asylum ..	Repairs ..	.....				22 7 6	.....	22 7 6	4 0 0
Immigration Barracks ..	" ..	.....				270 18 4	.....	270 18 4	52 1 4
Inspector-General Police Office ..	" ..	.....				3 17 1	.....	3 17 1	2 12 6
" Residence ..	" ..	.....				3 4 0	.....	3 4 0	.....
Insolvency Court ..	" ..	.....				15 18 7	.....	15 18 7	16 18 6
Inspector of Weights and Measures Office ..	Furniture ..	.....				.....	.....	.....	18 0 0
Lands Office ..	Repairs ..	.....				294 7 3	.....	294 7 3	80 15 0
" ..	Working lift ..	.....				256 10 0	.....	256 10 0	.....



No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated	Whether Constructing or under Repair.	Estimated Expense	Fund from which the Expense is defrayed	When Com- menced.	Whether Finished or Unfinished	If Finished, actual amount of Expenditure.	If Unfinished, amount of Expenditure to 31 December, 1886	Amount expended in 1886.	Amount expended for Furniture in 1886.	Remarks.
PUBLIC BUILDINGS, &c.—continued										
SYDNEY—continued										
		£				£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Lands Office	Lighting lamps	..	}	1886	Finished	71 5 0	.	71 5 0		
(Old)	Repairs	..		"	"	33 12 9	.	33 12 9		
Licensing Office	"	..		"	"	1 7 2	.	1 7 2	15 14 0	
Lunacy Office	"	..		"	"	45 12 7	.	45 12 7	2 19 5	
Marine Board Office	Furniture	..		"	"	..	.	..	82 7 6	
Master in Equity Office	Repairs	..		"	"	25 18 11	.	25 18 11	4 10 0	
Medical Adviser's Office	"	..		"	"	21 14 9	.	21 14 9	216 19 3	
Metropolitan Land Board Office	Furniture	..		"	"	..	.	..	78 1 0	
Mines Department	Alterations & repairs.	..		"	"	526 11 9	.	526 11 9	263 5 1	
Museum	Additions	3,000		"	"	2,571 0 6	.	2,571 0 6	6 15 0	
"	Repairs	..		"	"	190 7 7	.	190 7 7	..	
Mint	Alterations & repairs..	..		"	"	581 13 7	.	581 13 7	..	
Naval Brigade Shed	Repairs	..		"	"	30 8 10	.	30 8 10	2 7 10	
Naval Depôt	"	..		"	"	263 16 11	.	263 16 11	4 10 0	
Observatory	Alterations & repairs	..		"	"	511 11 8	.	511 11 8	116 2 6	
Ordnance Stores	Repairs	..		"	"	19 7 3	.	19 7 3	..	
Parliamentary Draftsman's Office	"	..		"	"	0 5 3	.	0 5 3	8 3 2	
" Buildings	Lighting gas	..		"	"	70 0 0	.	70 0 0	..	
"	Alterations & repairs.	..		"	"	1,056 1 2	.	1,056 1 2	706 2 11	
Public Works and Colonial Secretary's Office	Repairs	..		} Consolid- dated Revenue.	"	"	193 8 7	.	193 8 7	197 17 4
"	Working lift	..	"		"	381 10 0	.	381 10 0	..	
"	Lighting lamps	..	"		"	105 2 6	.	105 2 6	..	
Police Depôt (Carter's Barracks)	Repairs	..	"		"	11 6 9	.	11 6 9	48 0 0	
"	Laying on gas	..	"		"	113 18 6	.	113 18 6	..	
Public Instruction Office	Alterations & additions	2,500	"		"	..	.	1,560 10 8	..	
Phillip Park	Gas supply	..	"		"	17 5 0	.	..	..	
Queen Victoria Statue	"	..	"		"	34 0 0	.	34 0 0	..	
Railway Department	Repairs	..	"		"	6 10 5	.	6 10 5	10 15 5	
Roads, Streets, and Bridges Office	"	..	"		"	4 0 0	.	..	..	
Registrar-General's Office	Gas supply	..	"	"	427 15 0	.	427 15 0	..		
"	Additions, &c.	9,800	} Surplus Rev	1885	Unfinished	..	11,400 0 0	7,400 0 0	..	
"	Repairs	..		1886	Finished	116 3 4	.	..	283 4 5	
Sheriff's Office	Furniture	..	"	"	..	.	..	2 12 6		
Stamp Office	Repairs	..	"	"	32 4 7	.	32 4 7	11 5 0		
Stores Department	"	..	"	"	96 2 3	.	96 2 3	6 9 6		
Steam Launch "Nea"	Furniture	..	"	"	..	.	..	17 12 7		
Surveyor-General's Office	Repairs, &c.	..	"	"	152 17 10	.	152 17 10	686 14 7		
Supreme Court	Alterations & repairs	..	"	"	341 11 3	.	341 11 3	581 1 3		
South Sydney Morgue	Repairs	..	"	"	29 6 1	.	29 6 1	..		
"	Gas supply	..	"	"	3 18 7	.	3 18 7	..		
Technological Museum	Repairs	..	"	"	21 19 11	.	21 19 11	..		
Telegraph Office (Head)	"	..	"	"	5 5 8	.	5 5 8	..		
Treasury	"	..	"	"	114 13 11	.	..	114 13 11	155 11 6	
University	Medical School	60,000	} Surplus Rev	1885	Unfinished	..	30,194 1 11	22,100 0 0	..	
"	Natural History School	810		1886	Finished	1,186 1 11	.	..	376 1 11	..
"	Alterations & repairs.	..	} Consoli- dated Revenue	"	"	304 5 11	..	304 5 11	25 2 6	
"	Gas supply	..		"	"	81 18 9	..	..	81 18 9	..
Victoria Park	"	..		"	"	43 2 6	..	..	43 2 6	..
Victoria Barracks	Store shed	..	"	"	533 5 6	..	..	533 5 6	..	
"	Engineers' shed	..	"	"	338 1 0	..	..	338 1 0	..	
"	Lighting lamps, &c.	..	"	"	255 13 6	..	..	255 13 6	..	

Victoria Barracks .....	Alterations, additions, &c		Consolidated Revenue.	1886	Finished...	1,394 6 10		1,394 6 10	89 12 2
Volunteer Artillery Office .....	Furniture ..			"	"	"	"	"	20 1 8
William-street Post and Telegraph Office .....	" .....			"	"	"	"	"	1 13 0
Water Conservation Commission Office ..	Repairs ..			"	"	2 11 5		2 11 5	14 13 4
Water Police Court ..	Additions ..	4,400		1884	"	7,677 14 3		1,932 14 3	.....
" Woolloomooloo Police Station ..	Alterations & repairs ..		1886	"	364 17 1		364 17 1	182 16 0	
" " Watch-house ..	Repairs ..		"	"	9 8 2		9 8 2	.....	
" " " ..	Repairs ..		"	"	9 19 8		9 19 8	.....	
<b>SUBURBAN.</b>									
<b>BALMAIN.</b>									
Court-house and Post and Telegraph Office .....	Erection ..	9,600	Loans&Con Rev.	1885	Unfinished	.....	11,9500 0 0	10,300 0 0	.....
<b>BRADLEY'S HEAD.</b>									
Barracks .....	Repairs ..		Consolidated Revenue.	1886	Finished...	0 6 0		0 6 0	.....
<b>BOTANY.</b>									
Lock-up ..	" ..		"	"	25 10 1		25 10 1	.....	
Fortifications, Bare Island ..	Construction ..	26,500	Loans ...	1881	Unfinished	.....	31,345 10 0	1,616 0 0	.....
" ..	Repairs ..		"	1886	Finished...	20 9 11		20 9 11	.....
Telegraph Station, La Perouse ..	" ..		"	"	23 8 2		23 8 2	.....	
Sanatorium, Little Bay ..	" ..		"	"	255 9 9		255 9 9	77 11 8	
" ..	Coffins for paupers ..		"	"	40 10 0		40 10 0	.....	
<b>CALLAN PARK.</b>									
Asylum ..	Erection of cottage ..		"	"	227 2 3		227 2 3	.....	
" ..	Baths ..		"	"	471 11 8		471 11 8	.....	
" ..	Repairs ..		"	"	444 16 3		444 16 3	650 5 0	
<b>COCKATOO ISLAND.</b>									
Sheriff's Residence ..	" ..		"	"	9 18 11		9 18 11	.....	
Reformatory for Girls ..	Alterations & repairs ..		"	"	466 4 10		466 4 10	12 3 5	
<b>CAMPERDOWN.</b>									
Watch-house ..	Repairs ..		"	"	23 17 0		23 17 0	.....	
<b>GEORGE'S HEAD.</b>									
Barracks ..	" ..		Consolidated Revenue.	"	"	226 7 8		226 7 8	.....
<b>GLEBE.</b>									
Post and Telegraph Office ..	Erection ..	2,500	1885	"	2,290 16 0		504 16 0	113 15 0	
<b>GLEBE ISLAND.</b>									
Bridge ..	Gas supply ..		1886	"	21 10 10		21 10 10	.....	
Abattoirs ..	Repairs ..		"	"	0 2 0		0 2 0	.....	
<b>GOAT ISLAND.</b>									
Magazine ..	" ..		"	"	903 8 1		903 8 1	.....	
<b>GRANVILLE.</b>									
Lock-up ..	Additions ..		"	"	73 16 0		73 16 0	5 5 0	
<b>GLADESVILLE.</b>									
Asylum ..	Gas service ..	4,500	1884	"	2,872 9 6		612 9 6	.....	
" ..	Cementing verandahs ..		1886	"	259 12 0		259 12 0	.....	
" ..	Fencing ..		"	"	186 15 3		186 15 3	.....	
" ..	Baths ..	300	"	Unfinished	.....	100 0 0	100 0 0	.....	
" ..	Attendant's cottage ..	360	"	Finished..	422 19 3		422 19 3	.....	
" ..	Boiler ..		"	"	218 15 0		218 15 0	.....	
" ..	Alterations and additions ..		"	"	684 17 11		684 17 11	13 8 0	
<b>KIRRIBILLI POINT.</b>									
Admiralty House ..	" ..	3,400	Surplus Rev.	1885	"	9,167 1 9		5,624 12 9	1096 18 3
<b>LEICHHARDT.</b>									
Post and Telegraph Office ..	Purchase of site ..		1886	"	861 0 0		861 0 0	.....	
<b>MANLY.</b>									
Post and Telegraph Office ..	Gas-fitting ..		Consolidated Revenue.	"	"	33 10 0		33 10 0	.....
Police Station ..	Repairs ..			"	"	1 1 8		1 1 8	.....
Quarantine Station ..	Furniture ..			"	"	.....		.....	29 16 4
<b>MIDDLE HEAD.</b>									
Barracks ..	Repairs ..		"	"	113 18 6		113 18 6	2 0 6	
Shark Point Battery...	" ..		"	"	3 7 6		3 7 6	.....	
Steel Point Barracks.....	" ..		"	"	0 4 0		0 4 0	.....	

No. 60 (continued) — RETURN OF PUBLIC WORKS—continued.

Work, and where situated	Whether Constructing or under Repair	Estimated Expense	Fund from which the Expense is defrayed	When Com- menced	Whether Finished or Unfinished	If Finished, actual amount of Expenditure	If Unfinished, amount of Expenditure to 31 December, 1886	Amount expended in 1886	Amount expended for Furniture in 1886	Remarks	
<b>PUBLIC BUILDINGS, &amp;c —continued.</b>											
<b>NEWTOWN</b>											
Watch house . . .	Repairs	£	} Consoli- dated } Revenue	1886	Finished	£ s d 3 4 1	£ s. d	£ s. d. 3 4 1	£ s. d.		
Post and Telegraph Office	"			"	"	118 19 9		118 19 9			
Court house	"			"	"	114 16 1		114 16 1	78 17 6		
<b>NEWINGTON.</b>											
Benevolent Asylum	Erection	11,270	Surplus Revenue	1884	"	18,212 19 8	..	4,362 4 8	309 12 9		
<b>NORTH SHORE</b>											
Police Station	Furniture		} Consoli- dated } Revenue	1886	"				10 18 9		
<b>NATIONAL PARK.</b>											
Military Camp . . .	Additions, &c.			"	"	621 3 2		621 3 2	.	.	
<b>PADDINGTON</b>											
Post and Telegraph Office	"		} Consoli- dated } Revenue	"	"	265 6 11		265 6 11	140 15 3		
Ormond House	Repairs			"	"	29 3 0		29 3 0	14 5 0		
<b>PARRAMATTA</b>											
Protestant Orphan School	"		} Consoli- dated } Revenue	"	"	193 10 7		193 10 7			
Roman Catholic Orphan School	"			"	"	1 17 1		1 17 1	9 0 0		
Benevolent Asylum	Alterations & repairs.			"	"	229 1 0		229 1 0	9 8 0		
Court-house	Repairs		"	"	6 0 0		6 0 0				
Post and Telegraph Office	"		"	"	76 18 5		76 18 5				
Police Station	"		"	"	0 10 6		0 10 6				
Park . . .	Dwarf wall, &c	1,000	} Consoli- dated } Revenue	"	"	695 19 6		695 19 6			
Gaol . . .	Additions & repairs	..		"	"	1,537 9 4		1,537 9 4	95 17 5		
Lunatic Asylum .. .. .	Bath-rooms, &c.	..		"	"	535 0 7		535 0 7			
"	Alterations & repairs.	..	"	"	466 6 11		466 6 11				
<b>PORT JACKSON</b>											
Fortifications	Construction	21,000	Loans	1882	Unfinished		43,686 9 2	5,546 0 0			
Ship "Vernon"	Repairs		} Consoli- dated } Revenue	1886	Finished	388 3 0		388 3 0	3 18 0		
<b>REDFERN</b>											
Court house	Repairs			"	"	4 10 0		4 10 0			
<b>ROOKWOOD.</b>											
Post and Telegraph Office	Purchase of site		} Consoli- dated } Revenue	"	"	150 0 0		150 0 0			
Reformatory	Erection	20,000		Surplus Revenue	1885	Unfinished		16,255 7 11	12,915 0 0	3 6 0	
<b>ROSE BAY</b>											
Police Station	Repairs		} Consoli- dated } Revenue	1886	Finished	40 17 1		40 17 1			
<b>RIDE</b>											
Court-house	Furniture			"	"				5 19 0		
<b>SOUTH HEAD.</b>											
Signal Station	Repairs		} Consoli- dated } Revenue	"	"	3 16 3		3 16 3	..		
Barracks	"			"	"	329 17 4		329 17 4			
Reformatory . . .	Additions, &c			"	"	839 12 1		839 12 1	9 16 9		
Macquarie Light-house	Gas supply		} Surplus Revenue	"	"	221 18 10		221 18 10			
"	Repairs			"	"	4 15 8		4 15 8	26 10 10		
<b>SPECTACLE ISLAND</b>											
Torpedo Magazine	Additions	6,800	Revenue	"	Unfinished		3,217 4 6	3,217 4 6			
"	Repairs		} Consoli- dated } Revenue	"	Finished.	163 10 6		163 10 6	29 14 11		
<b>STANMORE</b>											
Police Station	"			"	"	3 13 2		3 13 2			
<b>ST LEONARDS</b>											
Post and Telegraph Office and Court-house	Erection	11,500	} Consoli- dated } Revenue	"	Unfinished		4,318 10 0	4,318 10 0			
Foreman of Works' Office . . . . .	Furniture	..		"	Finished ..	.....			0 7 6		
<b>ST PETERS</b>											
Lock-up . . . . .	Repairs . . . . .	.....	"	"	23 4 0		..	23 4 0	..		

<b>WAVERLEY.</b>									
Post and Telegraph Office .....	Erection .....	1,800		1886 .. Unfinished .....	1,200 0 0	1,200 0 0	.....		
<b>WOOLLAHRA.</b>									
Post and Telegraph Office .....	Repairs .....			" .. Finished ..	3 4 0	3 4 0	.....		
Police Station .....	" .....			" .. " ..	53 9 6	53 9 6	.....		
<b>COUNTRY.</b>									
<b>ADELONG.</b>									
Court-house .....	Furniture .....			" .. " ..			0 19 5		
Police Quarters .....	Erection .....	1,375		1885 .. " ..	1,347 3 0	912 3 0	22 10 5		
Post and Telegraph Office .....	" .....	1,500		1886 .. " ..	1,367 7 2	1,367 7 2	8 4 10		
<b>ALBURY.</b>									
Gaol .....	Repairs .....			" .. " ..	149 17 8	149 17 8	2 9 0		
Post Office .....	" .....			" .. " ..	71 19 7	71 19 7	.....		
Telegraph Office .....	Erection .....	6,000		1885 .. " ..	6,222 6 7	3,052 6 7	.....		
Court-house .....	Repairs .....			1886 .. " ..	173 7 0	173 7 0	.....		
Police Station .....	" .....			" .. " ..	25 5 3	25 5 3	33 2 5		
Lands and Survey Office .....	" .....			" .. " ..	17 18 0	17 8 0	69 6 2		
Police Barracks and Quarters .....	" .....			" .. " ..	79 1 8	79 1 8	13 13 0		
Public Buildings .....	Furniture .....			" .. " ..			0 3 6		
<b>ALBION PARK.</b>									
Lock-up .....	Temporary cell .....			" .. " ..	123 16 6	123 16 6	.....		
<b>ARAKOON.</b>									
Police Buildings .....	Repairs .....			" .. " ..	4 12 10	4 12 10	.....		
<b>ARALUEN.</b>									
Court-house .....	Erection .....	1,800		" .. " ..	1,600 9 6	1,600 9 6	.....		
<b>ARMIDALE.</b>									
Court house .....	Furniture .....		Consolidated Revenue.	" .. " ..			15 8 4		
Police Station .....	Repairs .....			" .. " ..	96 1 0	96 1 0	.....		
Gaol .....	" .....			" .. " ..	13 10 6	13 10 6	.....		
Post and Telegraph Office .....	" .....			" .. " ..	75 0 0	75 0 0	.....		
Lock-up .....	Erection .....	1,000		1885 .. " ..	1,118 7 8	868 7 8	.....		
Survey Office .....	" .....	3,500	1886 .. Unfinished ..		2,150 0 0	2,150 0 0	.....		
<b>ASHFORD.</b>									
Police Buildings .....	" .....	685	1885 .. Finished ..	939 6 0	272 0 0	.....			
<b>BALLINA.</b>									
Court-house .....	Repairs .....		1886 .. " ..	1 5 0	1 5 0	8 9 8			
Police Station .....	Furniture .....		" .. " ..			0 15 0			
<b>BALRANALD.</b>									
Lands Office .....	Furniture .....		" .. " ..			30 2 0			
Police Station .....	Repairs .....		" .. " ..	69 0 0	69 0 0	.....			
Court-house .....	Erection .....	3,500	1885 .. " ..	3,110 15 0	1,161 10 0	.....			
" .....	Repairs .....		1886 .. " ..	2 17 11	2 17 11	165 3 3			
Lock-up .....	Erection .....	1,600	" .. " ..	1,839 2 0	1,839 2 0	.....			
<b>BARADINE.</b>									
Police Buildings .....	Repairs .....		" .. " ..	9 15 0	9 15 0	.....			
<b>BARRABA.</b>									
Court-house .....	Furniture .....		" .. " ..			11 4 5			
Police Station .....	Repairs .....		" .. " ..	8 5 0	8 5 0	.....			
<b>BARRINGUN.</b>									
Court-house .....	" .....		" .. " ..	0 3 9	0 3 9	4 9 6			
<b>BARRENJUEY.</b>									
Light-house .....	" .....		" .. " ..	48 11 4	48 11 4	0 11 9			
<b>BATHURST.</b>									
Post Office .....	" .....		" .. " ..	87 15 6	87 15 6	.....			
Court-house .....	" .....		" .. " ..	95 5 6	95 5 6	27 18 6			
Police Station .....	" .....		" .. " ..	73 16 6	73 16 6	44 17 1			
Public Buildings .....	Furniture .....		" .. " ..			7 7 0			
Public Instruction Office .....	" .....		" .. " ..			4 12 2			
Gaol .....	Erection .....	95,000	Surplus Rev. 1884 .. Unfinished ..		71,071 8 3	39,550 0 0	.....		
" .....	Repairs .....		Con. Rev. 1886 .. Finished ..	28 11 4		28 11 4	.....		

No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated.	Whether Constructing or under Repair	Estimated Expense.	Fund from which the Expense is defrayed.	When Com-menced.	Whether Finished or Unfinished.	If Finished, actual amount of Expenditure.	If Unfinished, amount of Expenditure to 31 December, 1886.	Amount expended in 1886.	Amount expended for Furniture in 1886.	Remarks.	
<b>PUBLIC BUILDINGS, &amp;c.—continued.</b>											
BEGA.											
Court-house	Repairs	£	Consoli- dated Revenue.	1886	Finished	£ s. d. 5 0 0	£ s. d. 5 0 0	£ s. d. 5 0 0	£ s. d. 2 19 0		
Public Buildings	"			"	"	85 6 0	85 6 0	85 6 0			
BELLINGER RIVER.											
Pilot Station	"			"	"	12 6 4	12 6 4	12 6 4			
BENDEMEER.											
Court-house	Stable, &c.			"	"	149 0 0	149 0 0	149 0 0			
BERRIMA.											
Gaol	Repairs			"	Finished	42 9 5	42 9 5	42 9 5			
Police Station	"			"	"	35 14 1	35 14 1	35 14 1			
Post and Telegraph Station	Erection	1,050		"	Unfinished		300 0 0	300 0 0			
BOOLIGAL.											
Court-house	Furniture		"	Finished				11 17 7			
BOURKE.											
Court-house	Repairs		"	"	5 12 0	5 12 0	5 12 0	26 7 8			
Post and Telegraph Office	Additions	1,800	"	Unfinished		353 0 0	353 0 0				
Gaol	"	4,500	"	Finished	4,397 15 1		1,497 15 1				
"	Repairs		"	"	1 17 5	1 17 5	1 17 5				
Police Station	"		"	"	5 3 2	5 3 2	5 3 2				
Survey Office	"		"	"	34 7 6	34 7 6	34 7 6	150 15 3			
BOWRAL.											
Post and Telegraph Office	Erection	1,800	"	Unfinished		680 0 0	680 0 0				
Lock-up	"	1,400	"	"		750 0 0	750 0 0				
BOWRAVILLE.											
Police Station	Furniture		"	Finished				11 0 0			
BRAIDWOOD.											
Post and Telegraph Office	Additions & repairs	250	"	Unfinished		157 10 0	157 10 0				
Gaol	Repairs		"	Finished	21 2 2	21 2 2	21 2 2				
Police Officers' Quarters	"		"	"	5 0 0	5 0 0	5 0 0				
BRANXTON.											
Court-house	Repairs		"	"	15 19 0	15 19 0	15 19 0				
Police Station	Additions		"	"	95 0 0	95 0 0	95 0 0				
BROKEN BAY.											
Custom-house	Repairs		"	"	83 3 11	83 3 11	83 3 11	0 13 9			
Fisheries Office	Furniture		"	"				0 7 0			
BROKEN HILLS											
Police Station	Repairs		"	"	8 0 0	8 0 0	8 0 0				
BROUGHTON CREEK.											
Post and Telegraph Office	Erection	1,650	"	Unfinished		1,750 0 0	1,750 0 0				
BREWARRINA.											
Post and Telegraph Office	Repairs		"	Finished	56 0 0	56 0 0	56 0 0				
Court-house	"		"	"	7 0 0	7 0 0	7 0 0	23 5 0			
BRUNSWICK HEADS.											
Police Buildings	Erection	592	"	1885	"	592 0 0	592 0 0	8 5 0			
BUCKLEY'S CROSSING.											
Court-house	Repairs		"	1886	"	34 15 0	34 15 0				
BULLOCK ISLAND.											
Police Station	"		"	"	6 6 0	6 6 0	6 6 0				
BULLI.											
Court-house	"		"	"	5 0 0	5 0 0	5 0 0				

<b>BUNDARBA.</b>			} Consol- dated- Revenue.	1885 ..	Finished..	2,060 17 0	1,776 17 0	
Post and Telegraph Office .. . . . . .	Erection .....	1,800		1886 ..	" ..	26 0 0	26 0 0	
Court-house .. . . . . .	Repairs .....							
<b>BUNGENDORE.</b>								
Court-house and Lock-up .. . . . . .	Temporary cell .....			" ..	" ..	96 0 0	96 0 0	
Post and Telegraph Office .. . . . . .	Repairs .....			" ..	" ..	3 0 0	3 0 0	
<b>BUNGWALL FLAT.</b>								
Police Buildings .. . . . . .	Furniture .....			" ..	" ..			11 19 3
<b>BURRAGA.</b>								
Court-house .. . . . . .	" .....			" ..	" ..			8 16 0
Police Buildings .. . . . . .	Erection .....		1885 ..	" ..	630 0 0	430 0 0	15 8 11	
<b>BURROWA.</b>								
Lands Office .. . . . . .	Furniture .....		1886 ..	" ..			5 5 0	
Court-house .. . . . . .	Erection .....	5,100	1884 ..	" ..	5,750 12 9	1,538 13 11	281 6 2	
Police Buildings .. . . . . .	Stables .....		1886 ..	" ..	408 2 3	408 2 3	13 9 7	
<b>BYEROCK.</b>								
Police Buildings .. . . . . .	Erection .....		" ..	" ..	709 10 0	709 10 0		
<b>CAMDEN.</b>								
Police Quarters .. . . . . .	Repairs .....		" ..	" ..	38 0 0	38 0 0		
Court-house .. . . . . .	" .....		" ..	" ..	0 6 8	0 6 8	1 0 4	
<b>CAMDEN HAVEN.</b>								
Court-house .. . . . . .	Furniture .....		" ..	" ..			11 15 3	
<b>CANDELO.</b>								
Post and Telegraph Office .. . . . . .	Repairs .....		" ..	" ..	5 0 0	5 0 0		
Police Station .. . . . . .	" .....		" ..	" ..	3 2 0	3 2 0	7 15 3	
Court-house .. . . . . .	" .....		" ..	" ..	0 12 2	0 12 2	35 17 10	
<b>CANOWINDRA.</b>								
Court house .. . . . . .	" .....		" ..	" ..	46 0 0	46 0 0		
<b>CARCOAR.</b>								
Court-house .. . . . . .	" .....		" ..	" ..	10 0 0	10 0 0	0 10 6	
Police Station .. . . . . .	Furniture .....		" ..	" ..			4 5 0	
Post and Telegraph Office .. . . . . .	Repairs .....		" ..	" ..	7 0 0	7 0 0		
Lock-up .. . . . . .	Additions .....	2,500	1885 ..	" ..	1,515 5 8	815 5 8	21 14 3	
<b>CASINO.</b>								
Post and Telegraph Office .. . . . . .	Repairs .....		1886 ..	" ..	16 14 2	16 14 2		
Court-house and Lock-up .. . . . . .	Additions .....	1,250	" ..	Unfinished		858 0 0	858 0 0	
Police Station .. . . . . .	Repairs .....		" ..	Finished	6 2 2	6 2 2		
<b>CAPE ST. GEORGE.</b>								
Light-house .. . . . . .	" .....		" ..	" ..	284 18 3	284 18 3		
<b>CAMPBELLTOWN.</b>								
Court-house .. . . . . .	" .....		" ..	" ..	10 10 5	10 10 5		
Post and Telegraph Office .. . . . . .	" .....		" ..	" ..	35 0 0	35 0 0		
<b>CHATSWORTH ISLAND.</b>								
Lock-up .. . . . . .	" .....		" ..	" ..	7 0 0	7 0 0		
<b>CLARENCE HEADS.</b>								
Police Station .. . . . . .	" .....		" ..	" ..	18 2 3	18 2 3	3 0 0	
Light-house .. . . . . .	Furniture .....		" ..	" ..			3 2 1	
<b>CLARENCETOWN.</b>								
Post and Telegraph Office .. . . . . .	Alterations & repairs .....		" ..	" ..	119 0 0	119 0 0		
<b>CLIFTON.</b>								
Court house .. . . . . .	Furniture .....		" ..	" ..	5 4 2	5 4 2		
<b>COBAR.</b>								
Court-house and Lock-up .. . . . . .	Erection .....	5,500	1885 ..	Unfinished		4,073 0 0	3,573 0 0	
Post and Telegraph Office .. . . . . .	Repairs .....		1886 ..	Finished	15 0 0	15 0 0		
<b>COBARGO.</b>								
Police Buildings .. . . . . .	Fencing .....		" ..	Unfinished		25 0 0	25 0 0	
<b>COBBORAH.</b>								
Court-house .. . . . . .	Furniture .....		" ..	Finished			43 16 0	
<b>COLLECTOR.</b>								
Lock-up .. . . . . .	Stable .....		" ..	" ..	90 0 0	90 0 0		

No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated.	Whether Constructing or under Repair.	Estimated Expense	Fund from which the Expense is defrayed	When Com-menced	Whether Finished or Unfinished.	If Finished, actual amount of Expenditure.	If Unfinished, amount of Expenditure to 31 December, 1886.	Amount expended in 1886	Amount expended for Furniture in 1886	Remarks.	
						£ s. d.	£ s. d.	£ s. d.	£ s. d.		
<b>PUBLIC BUILDINGS, &amp;c.—continued.</b>											
COLUMBO.		£	Consolidated Revenue.								
Police Station	Furniture	.....		1886	Finished...	.....	.....	.....	2 16 0		
COOLAMAN.											
Police Station	Lock-up	.....		"	"	60 0 0	.....	60 0 0	.....		
COOPERSNOOK.											
Police Station	Furniture	.....		"	"	4 1 6	.....	4 1 6	.....		
COOMA.											
Court-house	Erection	7,500		"	Unfinished	.....	2,570 7 6	2,570 7 6	.....		
Crown Lands Office	Repairs	.....		"	Finished...	12 4 4	.....	12 4 4	323 18 10		
Gaol	"	.....		"	"	97 15 0	.....	97 15 0	.....		
CONDOBOLIN.											
Post and Telegraph Office	Erection	1,900		1885	Unfinished	.....	2,152 0 0	1,200 0 0	24 10 1		
COONAMBLE.											
Post and Telegraph Office	Additions	.....		1886	Finished...	115 0 0	.....	115 0 0	.....		
Police Station	Furniture	.....		"	"	.....	.....	.....	7 10 0		
Court-house	Fencing	.....		1885	"	292 3 0	.....	115 3 0	.....		
"	Repairs	.....		1886	"	19 7 0	.....	19 7 0	.....		
Lands Office	"	.....		"	"	0 6 11	.....	0 6 11	6 2 6		
Police Barracks	Erection	2,500		"	"	2,165 0 0	.....	2,165 0 0	.....		
Gaol	Additions	.....		1885	"	738 7 0	.....	515 7 0	.....		
"	Repairs	.....	1886	"	10 0 0	.....	10 0 0	.....			
COORANBONG.											
Court-house	Furniture	.....	"	"	.....	.....	.....	9 5 6			
COOLAH.											
Court-house	Repairs	.....	"	"	7 10 0	.....	7 10 0	.....			
COONABARABRAN.											
Gaol	"	.....	"	"	12 10 0	.....	12 10 0	.....			
COROWA.											
Police Station	"	.....	"	"	14 10 0	.....	14 10 0	.....			
Court-house	Erection	.....	"	Unfinished	.....	207 0 0	207 0 0	0 12 6			
COOTAMUNDRA.											
Court-house	Additions	.....	"	Finished..	145 8 0	.....	145 8 0	.....			
Gaol	Erection	4,500	1885	"	4,256 0 0	.....	406 0 0	.....			
"	Additional works	.....	1886	Unfinished	.....	1,044 0 0	1,044 0 0	.....			
"	Repairs	.....	"	Finished..	4 16 0	.....	4 16 0	19 7 5			
COWRA.											
Court-house	Repairs	.....	"	"	6 10 0	.....	6 10 0	.....			
Lock-up	Additions	1,000	"	Unfinished	.....	100 0 0	100 0 0	.....			
Police Station	"	.....	"	Finished...	211 7 0	.....	211 7 0	4 2 6			
CUDAL.											
Court and Watch House	Repairs	.....	"	"	0 16 11	.....	0 16 11	12 11 2			
CUDGELLICO.											
Police Buildings	Erection	1,008 10 0	1885	"	1,011 9 8	.....	411 9 8	7 6 3			
CUDGEBON.											
Police Station	Cottage, &c.	.....	1886	"	120 0 0	.....	120 0 0	.....			
CUNDLETTOWN.											
Court-house	Furniture	.....	"	"	.....	.....	.....	4 8 3			
DANDALOO.											
Court-house	Repairs	.....	"	"	131 10 0	.....	131 10 0	.....			
DELEGATE.											
Police Buildings	Additions	.....	"	"	127 0 0	.....	127 0 0	.....			

DEEPWATER.									
Police Station	Purchase of				30 0 0			30 0 0	
DENILIQUIN.									
Police Station	Repairs				1 16 6			1 16 6	38 14 0
Gaol	"				3 15 0			3 15 0	
Court-house	Erection	15,500		1884	12,794 8 6			5,724 16 9	10 6 6
"	Repairs			1886	6 12 7			6 12 7	
Lands Office	"				10 17 0			10 17 0	
Police Barracks and Quarters	Erection	2,000		1885	3,110 8 5			1,101 1 8	
Post and Telegraph Office	Repairs			1886	255 15 4			255 15 4	
DENMAN.									
Court-house	Furniture								1 14 6
Police Station	"								19 13 1
DUBBO.									
Court-house	Erection	10,000					2,873 0 0	2,873 0 0	
"	Repairs				4 8 6			4 8 6	15 0 0
Post and Telegraph Office	Erection	5,000					4,800 0 0	4,800 0 0	
"	Repairs								
Police Station	Cells				22 15 2			22 15 2	
"	Repairs				205 0 0			205 0 0	
Lands Office	"				5 2 6			5 2 6	
Gaol	"				20 1 5			20 1 5	26 1 4 2
Foreman of Works, Office	"				85 1 0			85 1 0	1 1 6
EDEN.									
Court-house	"				7 0 0			7 0 0	
Light-house	"				5 10 1			5 10 1	10 5 3
EUGOWRA.									
Police Station	Well				17 0 0			17 0 0	
EUSTON.									
Court-house	Furniture								1 10 0
FERNMOUNT.									
Police Station	"								4 0 0
FORBES.									
Post and Telegraph Office	Clock-tower			1885	398 10 2			98 10 2	
"	Repairs			1886	14 19 6			14 19 6	
Court-house	"				42 10 0			42 10 0	2 2 0
Police Station	Erection	1,600		1885	1,536 0 6			486 0 6	13 9 0
Lands Office	Repairs			1886	164 1 11			164 1 11	91 14 0
Gaol	Erection	6,000		1884	6,550 9 6			1,050 0 0	
"	Additional works			1886			475 0 0	475 0 0	
"	U.G. Tank						300 0 0	300 0 0	
"	Repairs							42 8 9	
FORSTER.									
Post and Telegraph Office	Site for				100 0 0			100 0 0	
FREDERICTON.									
Police Buildings	Repairs				6 10 0			6 10 0	
GADDOGA.									
Post and Telegraph Office	Erection	1,400					1,025 0 0	1,025 0 0	
GEROGERY.									
Police Station	Repairs								
GERRINGONG.									
Lock-up	Fencing				38 13 6			38 13 6	
GLADSTONE.									
Court-house	Repairs				44 14 3			44 14 3	
Police Station	Stable				4 1 5			4 1 5	76 16 1
GLEN INNES.									
Court-house	Repairs				80 5 0			80 5 0	
Foreman of Works, Office	Furniture								8 5 0
Police Station	Repairs								0 1 0
Lands Office	"				24 9 4			24 9 4	0 3 6
					12 0 4			12 0 4	54 13 10

Consolidated Revenue.



No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated.	Whether Constructing or under Repair.	Estimated Expense.	Fund from which the Expense is defrayed	When Com-menced	Whether Finished or Unfinished.	If Finished, actual amount of Expenditure	If Unfinished, amount of Expenditure to 31 December, 1886.	Amount expended in 1886.	Amount expended for Furniture in 1886	Remarks.
		£				£ s. d.	£ s. d.	£ s. d.	£ s. d.	
<b>PUBLIC BUILDINGS, &amp;c.—continued.</b>										
<b>GLEN INNES—continued.</b>										
Public Buildings	Purchase of land	.....	}	1886	Finished.	714 3 5	.....	714 3 5	.....	
Gaol	Erection	10,000		1885	"	"	12,344 15 9	.....	5,495 2 6	53 11 7
<b>GOSFORD.</b>										
Court-house	"	.....	} Consolidated Revenue.	"	"	1,311 12 6	.....	1,061 12 6	.....	
<b>GONGOLGAN.</b>										
Police Station	Repairs	.....	1886	"	"	8 0 0	.....	8 0 0	.....	
<b>GOULBURN.</b>										
Post and Telegraph Office	Additions, &c.	.....	} Surp. Rev	"	"	109 12 8	.....	109 12 8	.....	
Police Station	Stables	.....		"	"	345 0 0	.....	345 0 0	.....	
"	Repairs	.....		"	"	6 11 10	.....	6 11 10	16 19 9	
Court-house (New)	Erection	25,000		1884	Unfinished	.....	17,243 10 8	8,404 0 0	.....	
Foreman of Works' Office	Repairs	.....		1886	Finished..	4 8 0	.....	4 8 0	14 9 9	
Survey Office	"	.....	"	"	28 7 5	.....	28 7 5	1 1 0		
Gaol	Additions	.....	"	"	1,217 14 0	.....	1,217 14 0	0 4 10		
<b>GIBLAMBONE.</b>										
Court-house	Furniture	.....	"	"	.....	.....	.....	0 3 6		
<b>GRAFTON.</b>										
Custom-house	Repairs	.....	} Surp. Rev	"	"	0 19 0	.....	0 19 0	.....	
Post and Telegraph Office	Additions	630		"	Unfinished	.....	483 7 8	483 7 8	.....	
Court-house	Repairs	.....		"	Finished..	4 7 6	.....	4 7 6	.....	
Lands Office	"	.....		"	"	10 15 7	.....	10 15 7	40 11 1	
Gaol	Additions and repairs	.....		"	"	896 12 3	.....	896 12 3	.....	
Police Officers' Quarters	Repairs	.....		"	"	24 10 0	.....	24 10 0	.....	
Foreman of Works' Office	"	.....	"	"	26 0 0	.....	26 0 0	.....		
Post and Telegraph Office (South)	"	.....	"	"	1 19 6	.....	1 19 6	.....		
<b>GRENFELL.</b>										
Police Station	"	.....	} Consolidated Revenue.	"	"	4 19 6	.....	4 19 6	0 7 6	
Lock-up, Gaol	"	.....		"	"	7 12 5	.....	7 12 5	.....	
Post and Telegraph Office	"	.....		"	"	74 7 6	.....	74 7 6	.....	
Court-house	Furniture	.....		"	"	.....	.....	.....	3 5 0	
<b>GRESFORD.</b>										
Court-house	Resumption of land	.....	} Consolidated Revenue.	"	"	115 14 3	.....	115 14 3	.....	
"	Repairs	.....		"	"	1 6 9	.....	1 6 9	9 12 9	
Police Buildings	"	.....	"	"	3 15 0	.....	3 15 0	.....		
<b>GULGONG.</b>										
Court-house	"	.....	"	"	1 15 0	.....	1 15 0	.....		
<b>GUNDAGAI.</b>										
Gaol	Additions	2,000	} Surp. Rev	1884	"	2,218 17 0	.....	668 17 0	.....	
Police Station	Repairs	.....		1886	"	17 10 0	.....	17 10 0	.....	
Court-house	Furniture	.....		"	"	.....	.....	.....	49 10 10	
<b>GUNNEDAH.</b>										
Court-house	Repairs	.....	} Surp. Rev	"	"	3 0 0	.....	3 0 0	.....	
Police Station	"	.....		"	"	5 18 7	.....	5 18 7	.....	
Post and Telegraph Office	"	.....		"	"	115 15 0	.....	115 15 0	.....	
Police Buildings	"	.....		"	"	130 0 0	.....	130 0 0	.....	
Gaol	"	.....		"	"	0 4 9	.....	0 4 9	8 12 0	
<b>GUNNING.</b>										
Police Quarters	"	.....	"	"	90 0 0	.....	90 0 0	.....		
<b>HAMILTON</b>										
Watch-house	Additions	.....	} Surp. Rev	1885	"	236 9 0	.....	96 5 0	2 10 0	
Post and Telegraph Office	Purchase of site	.....		1886	"	400 0 0	.....	400 0 0	.....	

Location	Description	Value	Year	Status	Revenue	Revenue	Revenue
HARDY	Post and Telegraph Office		1886				0 8 11
HARLEY VALE	Police Station		"	"			1 6 0
HAY	Public Buildings		"	"	5 17 0		5 17 0
	Court house		"	"			2 18 7
	Police Station		"	"	5 4 0		14 17 11
	Gaol		"	"	7 2 0		
	Post and Telegraph Office		1885	Unfinished		282 0 0	152 0 0
	Survey Office		1886	Finished	94 0 3		94 0 3
HILLSTON	Court-house		"	"			280 17 0
	Lands Office		"	"			0 12 0
	Post and Telegraph Office		"	"	51 5 0		51 5 0
	Police Station		"	"	6 0 0		6 0 0
	Police Buildings	2,000	"	"	1,940 5 3		1,940 5 3
HORNBY	Lighthouse		"	"	29 8 3		29 8 3
HOWLONG	Court and Watch House		"	"			4 14 0
INTRELL	Post and Telegraph Office		"	"	232 0 0		232 0 0
	Police Station		"	"	5 8 5		5 8 5
	Court house	5,300	1835	Unfinished		5,012 0 0	3,486 0 0
IANHOE	Police Station		1886	Finished			3 6 0
JERILDERIE	Court-house		"	"	3 7 6		3 7 6
JERRY'S PLAINS	Post and Telegraph Office		"	"	1 10 0		1 10 0
JINDABINE	Police Quarters		"	"	722 0 0		722 0 0
JUGIONG	Court house		"	"	5 10 0		5 10 0
JUNFE JUNCTION	Post and Telegraph Office		"	"	700 0 0		700 0 0
	Police Station		"	"	30 0 0		30 0 0
	Court house		"	"	12 0 0		12 0 0
KELSO	Police Station		"	"	10 0 0		10 0 0
KEMPSEY	Post and Telegraph Office	2,500	1885	"	2,765 16 2		845 16 2
	Police Station		1886	"	7 10 0		7 10 0
KEMPSEY (WEST)	Court-house		"	"	9 14 5		9 14 5
	Post and Telegraph Office		"	"	20 0 0		20 0 0
KIAMA	Lock up		"	"	37 2 6		37 2 6
	Post and Telegraph Office		1885	"	773 11 0		373 11 0
	Police Officers' Quarters		1886	"	33 5 0		33 5 0
LAMPTON	Court and Watch House		"	"	230 17 6		230 17 6
	Police Quarters	1,000	"	Unfinished		580 0 0	580 0 0
LAKE MACQUARIE	Inspector of Fisheries' Office		"	Finished			1 5 9
LISMORF	Police Station		"	"			5 2 0
	Court-house		"	"	2 0 0		21 18 0

Consolidated Revenue.

No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated	Whether Constructing or under Repair	Estimated Expense	Fund from which the Expense is defrayed.	When Com- menced	Whether Finished or Unfinished	If Finished, actual amount of Expenditure.	If Unfinished, amount of Expenditure to 31 December, 1886	Amount expended in 1886	Amount expended for Furniture in 1886.	Remarks.	
		£				£ s. d.	£ s. d.	£ s. d.	£ s. d.		
<b>PUBLIC BUILDINGS, &amp;c.—continued.</b>											
LITHGOW.											
Court and Watch House . . . . .	Furniture . . . . .	.. .. .	Consolidated Revenue.	1886	Finished...	.. .. .		.. .. .	1 12 0		
LIVERPOOL.											
Benevolent Asylum . . . . .	Repairs . . . . .	.. .. .		"	"	"	168 4 11	.. .. .	168 4 11	.. .. .	
Court-house . . . . .	" . . . . .	.. .. .		"	"	"	73 4 4	.. .. .	73 4 4	.. .. .	
Police Barracks . . . . .	" . . . . .	.. .. .		"	"	"	6 10 0	.. .. .	6 10 0	.. .. .	
LOCHINVAR.											
Lock-up . . . . .	Erection . . . . .	.. .. .		"	"	Unfinished	.. .. .	865 0 0	865 0 0	.. .. .	
LOUTH.											
Court-house . . . . .	Repairs . . . . .	.. .. .		"	"	Finished...	6 17 6	.. .. .	6 17 6	.. .. .	
MACLEAN											
Court-house . . . . .	Furniture . . . . .	.. .. .		"	"	"	.. .. .	.. .. .	.. .. .	1 16 8	
MAITLAND.											
Survey Office . . . . .	Repairs . . . . .	.. .. .		"	"	"	2 15 0	.. .. .	2 15 0	30 17 9	
Gaol . . . . .	Extension . . . . .	.. .. .		"	"	"	1,335 18 7	.. .. .	1,335 18 7	.. .. .	
" . . . . .	Repairs . . . . .	.. .. .		"	"	"	10 6 3	.. .. .	10 6 3	2 0 0	
MAITLAND (EAST).											
Police Station . . . . .	" . . . . .	.. .. .		"	"	"	2 17 7	.. .. .	2 17 7	.. .. .	
Court-house . . . . .	" . . . . .	.. .. .		"	"	"	34 18 0	.. .. .	34 18 0	5 0 0	
Lands Office . . . . .	" . . . . .	.. .. .		"	"	"	11 18 0	.. .. .	11 18 0	165 9 7	
MAITLAND (WEST).											
Court-house . . . . .	Repairs . . . . .	.. .. .		"	"	"	37 15 0	.. .. .	37 15 0	.. .. .	
Post and Telegraph Office . . . . .	" . . . . .	.. .. .		"	"	"	34 10 0	.. .. .	34 10 0	.. .. .	
MAJOR'S CREEK.											
Police Barracks . . . . .	" . . . . .	.. .. .	"	"	"	7 10 0	.. .. .	7 10 0	.. .. .		
MARENGO.											
Court-house . . . . .	Furniture . . . . .	.. .. .	"	"	"	.. .. .	.. .. .	.. .. .	1 0 0		
MENINDIE.											
Court-house . . . . .	" . . . . .	.. .. .	"	"	"	.. .. .	.. .. .	.. .. .	3 18 0		
Police Station . . . . .	Repairs . . . . .	.. .. .	"	"	"	22 0 0	.. .. .	22 0 0	.. .. .		
MERIMBULA.											
Court-house . . . . .	Furniture . . . . .	.. .. .	"	"	"	.. .. .	.. .. .	.. .. .	0 7 6		
MEROE.											
Police Buildings . . . . .	Erection . . . . .	.. .. .	"	"	Unfinished	.. .. .	250 0 0	250 0 0	.. .. .		
MERRIWA.											
Post and Telegraph Office . . . . .	Repairs . . . . .	.. .. .	"	"	Finished..	60 0 0	.. .. .	60 0 0	.. .. .		
Court-house and Police Quarters . . . . .	Furniture . . . . .	.. .. .	"	"	"	.. .. .	.. .. .	.. .. .	75 13 5		
MILLTOWN.											
Lock-up . . . . .	Erection . . . . .	1,500	"	1885	"	1,746 16 9	.. .. .	866 16 9	.. .. .		
MILPARINKA.											
Police Station . . . . .	Repairs . . . . .	.. .. .	"	1886	"	19 10 0	.. .. .	19 10 0	.. .. .		
Court-house and Lock-up . . . . .	Erection . . . . .	1,500	"	"	"	1,569 10 4	.. .. .	1,569 10 4	.. .. .		
MICHELL.											
Post and Telegraph Office . . . . .	Repairs . . . . .	.. .. .	"	"	"	57 18 9	.. .. .	57 18 9	.. .. .		
MITTAGONG.											
Police Station . . . . .	Furniture . . . . .	.. .. .	"	"	"	.. .. .	.. .. .	.. .. .	8 18 3		
Court-house . . . . .	Additions . . . . .	1,800	"	1885	"	1,960 13 6	.. .. .	785 13 6	38 7 5		
MOAMA.											
Court-house . . . . .	Fencing . . . . .	.. .. .	"	1886	"	48 2 6	.. .. .	48 2 6	1 10 0		
MONTAGUE ISLAND.											
Light-house.	Repairs . . . . .	.. .. .	"	"	"	17 8 8	.. .. .	17 8 8	.. .. .		

<b>MOREE.</b>											
Court-house	"			"	"	49 16 11		49 16 11	57 2 10		
Police Station	"			"	"	0 10 6		0 10 6			
Lands Office	"			"	"	5 0 10		5 0 10	25 7 2		
<b>MORUYA.</b>											
Court-house	"			"	"	0 7 6		0 7 6	0 17 0		
Lands Office	Furniture			"	"				16 19 4		
<b>MOSSGIEL.</b>											
Police Station	Repairs			"	"	7 0 0		7 0 0			
<b>MOSS VALE.</b>											
Governor's Residence	"			"	"	316 12 2		316 12 2	185 2 1		
Police Station	"			"	"	5 17 6		5 17 6			
Court-house	"			"	"	1 2 6		1 2 6			
<b>MOUNT HOPE.</b>											
Police Station	Erection			1885	"	1,027 0 0		527 0 0			
<b>MOUNT MACDONALD.</b>											
Post and Telegraph Office	Purchase of			1886	"	150 0 0		150 0 0			
Police Buildings	Repairs			"	"	9 0 0		9 0 0			
Warden's Office	Furniture			"	"				1 11 6		
Court-house	Repairs			"	"	30 0 0		30 0 0			
<b>MUDGE.</b>											
Court-house	"			"	"	1 8 0		1 8 0	5 0 0		
Gaol	Lay on gas			"	"	115 0 0		115 0 0			
Survey Office	Gaolers' residence	1,650		1884	"	1,824 14 0		562 14 0			
Gaol	Furniture			1886	"				2 9 3		
	Repairs			"	"	65 2 4		65 2 4			
<b>MULWALA.</b>											
Court house	Erection	2,000		"	Unfinished		800 0 0	800 0 0	6 10 3		
Police Station	Alterations			"	Finished	490 13 6		490 13 6			
<b>MURRUMBURAH.</b>											
Lock-up	Additions				"	128 15 0		128 15 0			
<b>MURRURUNDI.</b>											
Gaol	Repairs			"	"	2 10 0		2 10 0			
Court-house	"			"	"	0 6 5		0 6 5			
Post and Telegraph Office	Additions			"	"	354 12 0		354 12 0			
<b>MUSWELLBROOK.</b>											
Court-house	Repairs			"	"	0 17 6		0 17 6			
Post and Telegraph Office	"			"	"	2 1 3		2 1 3			
Lock-up	"			"	"	59 10 0		59 10 0			
Survey Office	Furniture			"	"				21 9 5		
<b>NARRABRI.</b>											
Lands Office	"			"	"	1 7 11		1 7 11			
Gaol	Repairs			"	"	4 4 0		4 4 0			
Court-house	"			"	"	9 0 0		9 0 0			
Police Station	"			"	"	2 10 0		2 10 0	22 1 0		
Post and Telegraph Office	"			"	"	43 10 0		43 10 0			
<b>NARRANDERA.</b>											
Court-house	"			"	"	20 0 6		20 0 6	7 12 6		
Post and Telegraph Office	Additions			"	Unfinished		100 0 0	100 0 0			
<b>NELLIGEN.</b>											
Court-house	Furniture			"	Finished				3 12 0		
<b>NELSON'S HEADS.</b>											
Light-house	Repairs			"	"	3 18 6		3 18 6			
<b>NEWCASTLE.</b>											
Asylum	"			"	"	277 11 10		277 11 10			
Court-house	"			"	"	1 5 0		1 5 0	1 15 0		
Telegraph Office	Furniture			"	"				10 5 9		
Post Office	Additions	1,500		1884	"	3,191 3 7		1,109 19 4	131 14 4		
Lock up	Retaining wall			1886	"	108 0 0		108 0 0			
"	Repairs			"	"	4 2 6		4 2 6			

Consolidated Revenue.

No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated.	Whether Constructing or under Repair.	Estimated Expense	Fund from which the Expense is defrayed	When Commenced	Whether Finished or Unfinished	If Finished, actual amount of Expenditure	If Unfinished, amount of Expenditure to 31 December, 1886.	Amount expended in 1886	Amount expended for Furniture in 1886	Remarks.
<b>PUBLIC BUILDINGS, &amp;c.—continued.</b>		£				£ s. d.	£ s. d.	£ s. d.	£ s. d.	
<b>NEWCASTLE—continued.</b>										
Police Station.....	Repairs .....	.....	Consolidated Revenue.	1886	Finished.	78 18 3	.....	78 18 3	.....	
Pilot Station .....	" .....	.....		"	"	5 7 9	.....	5 7 9	.....	
Water Police Station .....	Sheds.....	.....		"	"	394 15 0	.....	394 15 0	.....	
" .....	Repairs .....	.....		"	"	17 11 0	.....	17 11 0	.....	
Artillery Barracks.....	" .....	.....		"	"	24 16 0	.....	24 16 0	.....	
Light-house .....	Retaining wall.....	.....		1885	"	395 0 0	.....	195 0 0	.....	
" .....	Repairs .....	.....		1886	"	2 5 6	.....	2 5 6	.....	
Fortifications .....	Barracks .....	8,000		1885	"	7,522 10 6	.....	3,222 10 6	60 5 7	
" .....	Construction.....	36,622		1881	Unfinished	.....	42,885 0 10	2,019 6 1	.....	
Custom House .....	Repairs .....	.....		1886	Finished..	53 13 4	.....	53 13 4	15 0 0	
" .....	Gas supply .....	.....	"	"	110 15 8	.....	110 15 8	.....		
Clerk of Works' Office .....	Furniture .....	.....	"	"	.....	.....	.....	4 8 9		
Morgue .....	Erection .....	1,200	"	"	1,087 0 0	.....	1,087 0 0	.....		
Leading Light Towers .....	Keeper's quarters ..	.....	"	"	209 14 0	.....	209 14 0	.....		
" .....	Additions and repairs ..	.....	"	"	184 10 0	.....	184 10 0	.....		
Fisheries Department .....	Furniture .....	.....	"	"	.....	.....	.....	12 18 6		
Boatmen's Houses .....	Drainage .....	.....	1885	"	904 15 0	.....	219 15 0	.....		
Harbours and Rivers Department .....	Furniture .....	.....	1886	"	.....	.....	.....	0 18 3		
<b>NOWRA.</b>										
Court-house .....	Repairs .....	.....	"	"	71 11 0	.....	71 11 0	.....		
<b>NUNDLE.</b>										
Court-house .....	Tank .....	.....	1885	"	334 2 6	.....	88 2 6	.....		
<b>NYMAGEE.</b>										
Post and Telegraph Office .....	Erection .....	1,600	"	Unfinished	.....	1,323 0 0	940 0 0	.....		
<b>NYNGAN.</b>										
Police Barracks .....	Repairs ..	.....	1886	Finished...	28 10 0	.....	28 10 0	.....		
Court-house .....	Furniture ..	.....	"	"	.....	.....	.....	0 5 0		
<b>OBERON.</b>										
Police Quarters .....	Repairs .....	.....	Consolidated Revenue.	"	"	45 8 7	.....	45 8 7	1 13 0	
Post and Telegraph Office .....	Erection ..	1,300		"	Unfinished	.....	820 0 0	820 0 0	.....	
<b>OBLEY.</b>										
Court-house .....	Repairs ..	.....	"	Finished...	20 10 0	.....	20 10 0	6 3 6		
<b>ORANGE.</b>										
Post and Telegraph Office ..	" .....	.....	"	"	57 6 6	.....	57 6 6	.....		
Police Station .....	" .....	.....	"	"	2 7 0	.....	2 7 0	.....		
Survey Office .....	" .....	.....	"	"	5 0 0	.....	5 0 0	2 18 10		
Land Board Office .....	" .....	.....	"	"	29 13 4	.....	29 13 4	87 19 7		
Gaol .....	" .....	.....	"	"	12 13 0	.....	12 13 0	.....		
<b>PARKES.</b>										
Court-house .....	" .....	.....	"	"	5 5 0	.....	5 5 0	.....		
<b>PATERSON.</b>										
Court-house .....	" .....	.....	"	"	5 12 0	.....	5 12 0	0 3 0		
Post and Telegraph Office .....	" .....	.....	"	"	19 11 6	.....	19 11 6	.....		
<b>PELICAN FLAT.</b>										
Police Buildings .....	Erection ..	.....	1885	"	456 15 0	.....	156 15 0	5 17 6		
<b>PENRITH.</b>										
Court-house .....	Repairs ..	.....	1886	"	19 15 0	.....	19 15 0	.....		
Post and Telegraph Office .....	" .....	.....	"	"	23 13 5	.....	23 13 5	.....		
<b>PICTON.</b>										
Court-house .....	Additions ..	.....	"	"	19 0 0	.....	19 0 0	6 8 0		

PORT MACQUARIE.									
Court-house .....	Repairs .....				6 0 0			6 0 0	
PORT STEPHENS.									
Light-house .....	" .....				7 17 5			7 17 5	2 0 3
PUBLIC BUILDINGS, NORTHERN DISTRICT.									
Public Buildings .....	" .....				19 14 0			19 14 0	
PURNAMOOTA.									
Court-house .....	" .....				7 0 0			7 0 0	4 18 9
QUIRINDI.									
Police Station.....	" .....				1 10 10			1 10 10	
Court-house .....	Tank, fencing, &c. ....				461 16 7			461 16 7	0 10 6
RAYMOND TERRACE.									
Post and Telegraph Office .....	Repairs .....				0 7 6			0 7 6	
Lock-up .....	" .....				137 13 0			137 13 0	17 2 8
ROCKLEY.									
Court-house .....	Furniture .....								2 2 9
Police Station.....	" .....								2 6 6
RICHMOND.									
Court and Watch House .....	" .....								4 8 9
Post and Telegraph Office .....	Repairs .....				168 10 0			168 10 0	
RYDAL.									
Police Station.....	" .....				91 12 4			91 12 4	7 19 6
SEAL ROCKS.									
Light-house .....	Retaining wall .....	1885			1,256 11 9			906 11 9	
" .....	Repairs .....	1886			64 11 5			64 11 5	
SCONE.									
Court-house .....	Furniture .....								0 17 6
SEYMOUR.									
Police Buildings.....	" .....								7 1 0
SHELLHARBOUR.									
Court-house .....	Repairs .....				148 17 0			148 17 0	9 0 0
SILVERTON.									
Police Station.....	Tank .....				60 0 0			60 0 0	5 10 0
SINGLETON.									
Police Barracks .....	Repairs .....				1 6 0			1 6 0	
Post and Telegraph Office .....	Additions .....				89 18 2			89 18 2	
Court-house .....	Repairs .....				15 10 11			15 10 11	6 19 4
Lands Office .....	" .....				3 10 0			3 10 0	
SOPALA.									
Lock-up .....	" .....				19 11 2			19 11 2	
SOMERTON.									
Police Station.....	" .....				3 0 0			3 0 0	
SPRINGWOOD.									
Police Station.....	" .....				31 0 0			31 0 0	
STROUD.									
Post and Telegraph Office .....	" .....				75 0 0			75 0 0	
SUNNY CORNER.									
Police Buildings .....	" .....				4 11 10			4 11 10	
SUTTON FOREST.									
Post and Telegraph Office .....	Additions .....				591 13 0			591 13 0	
TALBRAGAR.									
Court-house .....	Alterations .....				149 0 0			149 0 0	
TAMWORTH.									
Foreman of Works Office.....	Repairs .....				15 0 0			15 0 0	
Gaol.....	" .....				58 17 10			58 17 10	1 17 4
Police Station.....	" .....				5 18 4			5 18 4	2 0 0
Court-house .....	" .....				6 14 1			6 14 1	
Lands Office .....	" .....				93 16 0			93 16 0	33 7 7
Police Officer's Quarters .....	Erecting .....				270 8 3			270 8 3	
Post and Telegraph Office .....	" .....	8,000			7,474 19 5			2,802 17 5	477 17 7
" .....	Tower clock .....				490 0 0			490 0 0	

Consolidated Revenue.

No. 60 (continued).—RETRUN OF PUBLIC WORKS—continued.

Work, and where situated.	Whether Constructing or under Repair.	Estimated Expense.	Fund from which the Expense is defrayed.	When Com- menced.	Whether Finished or Unfinished.	If Finished, actual amount of Expenditure.	If Unfinished, amount of Expenditure to 31 December, 1886.	Amount expended in 1886.	Amount expended for Furniture in 1886.	Remarks.	
		£				£ s. d.	£ s. d.		£ s. d.		
<b>PUBLIC BUILDINGS, &amp;c.—continued.</b>											
<b>TARALGA.</b>											
Police Buildings.....	Erection	.....	}	1885	Finished...	1,628 6 4	.....	832 6 4	.....		
Court-house .....	Additions .....	.....		1886	Unfinished .....	.....	150 0 0	.....	150 0 0	.....	
<b>TARCUTTA.</b>											
Lock-up .....	Furniture .....	.....	}	"	Finished...	11 9 8	.....	11 9 8	.....		
Post and Telegraph Office .....	Erection .....	600		1885	"	"	629 10 0	.....	229 10 0	.....	
" .....	Repairs .....	.....		1886	"	"	10 1 3	.....	10 1 3	75 0 8	
<b>TAREE.</b>											
Post and Telegraph Office .....	"	.....	}	"	"	17 15 0	.....	17 15 0	.....		
Police Buildings.....	"	.....		"	"	6 3 0	.....	6 3 0	5 1 1		
<b>TAREENA.</b>											
Rabbit Inspector's Cottage.....	Erection	.....	}	"	"	220 4 3	.....	220 4 3	.....		
<b>TATALA.</b>											
Police Station.....	Furniture .....	.....	}	"	"	.....	.....	.....	3 16 7		
<b>TENTERFIELD.</b>											
Gaol .....	Repairs .....	.....	}	"	"	6 0 0	.....	6 0 0	.....		
Court-house .....	"	.....		"	"	85 17 3	.....	85 17 3	.....		
Police Station.....	Erection .....	3,220		1884	"	"	3,049 1 10	.....	258 7 11	.....	
<b>TIBOOBURRA.</b>											
Police Station.....	Repairs .....	.....	}	1886	"	13 0 0	.....	13 0 0	.....		
<b>TINGHA.</b>											
Court-house .....	Additions .....	.....	}	1885	"	1,405 16 0	.....	684 16 0	1 0 0		
Police Station.....	Repairs .....	.....		1886	"	6 15 0	.....	6 15 0	.....	.....	
<b>TINONEE.</b>											
Post and Telegraph Office .....	Site .....	.....	}	"	"	100 0 0	.....	100 0 0	.....		
" .....	Erection .....	.....		"	Unfinished .....	.....	300 0 0	.....	300 0 0	.....	
<b>TUENA.</b>											
Police Barracks .....	"	.....	}	1885	Finished...	483 1 9	.....	233 1 9	.....		
<b>TUMBERUMBA.</b>											
Lock-up .....	"	1,950	}	"	"	1,979 16 9	.....	512 6 9	.....		
Court-house .....	"	1,200		"	"	1,681 7 6	.....	81 7 6	11 18 9		
<b>TUMUT.</b>											
Court-house and Lock-up.....	Furniture .....	.....	}	1886	"	.....	.....	.....	0 16 0		
<b>ULMARRA.</b>											
Post and Telegraph Office .....	Additions .....	.....	}	"	"	167 0 0	.....	167 0 0	.....		
<b>URALLA.</b>											
Court-house .....	Repairs .....	.....	}	"	"	11 5 7	.....	11 5 7	111 14 5		
Post and Telegraph Office .....	Additions .....	.....		"	"	250 0 0	.....	250 0 0	.....	.....	
<b>URANA.</b>											
Forest Ranger's Office .....	Furniture .....	.....	}	"	"	.....	.....	.....	22 4 6		
<b>WAGGA WAGGA.</b>											
Post and Telegraph Office .....	"	.....	}	"	"	.....	.....	.....	15 0 0		
Gaol .....	Alterations .....	.....		"	"	154 1 11	.....	154 1 11	.....	.....	
Court-house .....	Repairs .....	.....		"	"	19 10 0	.....	19 10 0	.....	.....	
Police Station.....	"	.....		"	"	88 7 6	.....	88 7 6	10 17 6	.....	
Lock-up .....	Lay on water .....	.....		"	"	24 17 7	.....	24 17 7	.....	.....	
Public Buildings .....	Repairs .....	.....		"	"	72 0 0	.....	72 0 0	.....	.....	
Lands Office .....	"	.....		"	"	17 13 3	.....	17 13 3	167 11 6	.....	
<b>WALCHA.</b>											
Police Barracks .....	"	.....		}	"	"	57 0 0	.....	57 0 0	.....	
<b>WALCHA CROSSING.</b>											
Police Buildings.....	Erection .....	1,200	}	"	Unfinished .....	.....	650 0 0	650 0 0	.....		

WALGETT.										
Court-house	Repairs		} Consolidated Revenue.	1882	Finished	6 15 0		6 15 0	19 17 7	
Police Barracks	Additions					Unfinished	125 0 0	125 0 0	5 0 0	
Police Officers' Quarters	Erection					"	1,331 0 0	1,331 0 0		
Foreman of Works Office	Furniture					Finished			0 7 6	
Gaol	Erection	5,500				"	5,494 12 0	409 16 0		
WALLANDBEEN.										
Police Station	Repairs				1886	"	60 0 0	60 0 0		
WANAARING.										
Police Station	Stables					"	208 0 0	208 0 0		
WALSEND.										
Court-house	Additions				"	232 6 0	232 6 0			
WARATAH										
Court-house	Repairs				"	0 16 0	0 16 0			
WARDELL.										
Court-house	Furniture				"			3 4 6		
WARIALDA.										
Court-house	Repairs				"	2 8 0	2 8 0	18 19 0		
Public Buildings	"				"	367 0 0	367 0 0			
WARREN										
Police Station	"				"	1 6 9	1 6 9	8 6 3		
WEE WAA.										
Court-house	Furniture				"			3 15 7		
WELLINGTON.										
Gaol	Repairs				"	32 3 0	32 3 0			
Court-house	"				"	1 5 0	1 5 0			
Police Station	"				"	5 10 0	5 10 0			
Public Instruction Office	Furniture				"			6 12 6		
WENTWORTH.										
Custom House	U.G. Tank, &c.				"	137 6 0	137 6 0	83 14 6		
Court-house	Furniture				"			0 10 6		
Post and Telegraph Office	Additions, Tank, &c.	2,500		1884	"	2,922 2 0	516 2 0	1 16 0		
WEBBIS CREEK.										
Police Buildings	Repairs			1886	"	1 7 0	1 7 0	0 3 6		
WHELO.										
Police Station	"				"	2 0 0	2 0 0			
WILCANNIA										
Lands Office	Furniture				"			259 15 0		
Police Quarters	Additions				"	Unfinished	160 0 0	160 0 0		
Court-house	Repairs				"	Finished	112 8 0	112 8 0		
Custom House	Erection	800			"	Unfinished	150 0 0	150 0 0		
Police Station	Repairs				"	Finished	7 15 0	7 15 0		
Gaol	"				"	"	2 5 0	2 5 0		
WICKHAM.										
Watch-house	"				"	"	2 14 1	2 14 1		
WINDEYER.										
Police Station	"				"	"	6 0 0	6 0 0		
WINDSOR.										
Police Buildings	Repairs				"	"	40 16 8	40 16 8		
Post and Telegraph Office	Value land				"	"	10 10 0	10 10 0		
Court-house	Furniture				"	"		0 7 6		
Police Barracks	Repairs				"	"	106 4 0	106 4 0		
Gaol	"				"	"	47 11 6	47 11 6		
WINGHAM.										
Police Buildings	Stables				"	"	160 0 0	160 0 0		
WOLLOMBI.										
Lands Office	Furniture				"	"		33 3 9		
Court-house	Repairs				"	"	5 18 2	5 18 2		
								25 1 6		



No. 60 (continued).—RETURN OF PUBLIC WORKS—continued.

Work, and where situated	Whether Constructing or under Repair	Estimated Expense	Fund from which the Expense is defrayed	When Commenced	Whether Finished or Unfinished	If Finished, actual amount of Expenditure	If Unfinished, amount of Expenditure to 31 December, 1886	Amount expended in 1886	Amount expended for Furniture in 1886	Remarks.
		£				£ s. d.	£ s. d.	£ s. d.	£ s. d.	
<b>PUBLIC BUILDINGS, &amp;c.—continued</b>										
<b>WOLLONGONG</b>										
Post and Telegraph Office	Additions and repairs	.	} Consol- dated Revenue.	1886	Finished	474 11 6		474 11 6		
Gaol	Additions	.		1885	"	1,611 13 10		176 13 10	11 0 5	
Court-house	Erection ...	7,500		1884	"	10,346 11 6		651 17 6	103 4 2	
"	Lay on gas	.		1886	"	222 12 2		222 12 2		
<b>WOODBURN.</b>										
Court-house ... ..	Repairs ...	.		"	"	79 19 0		79 19 0	21 4 0	
<b>WYNDHAM</b>										
Police Station ..	"	.		"	"	1 1 7		1 1 7	3 5 0	
<b>YASS</b>										
Post and Telegraph Office	"	.		"	"	17 2 6		17 2 6		
Court-house . . . . .	"	.		"	"	7 13 4		7 13 4		
Police Station	"	.		"	"	5 0 11		5 0 11		
<b>YONG</b>										
Lock up . . . . .	Alterations	.		"	"	150 11 6		150 11 6	0 6 6	
Gaol	Repairs	.		"	"	161 10 10		161 10 10		
Post and Telegraph Office	Additions	.		"	"	285 14 3		285 14 3		
Court house	Erection	12,500		1884	"	11,464 18 11		2,992 19 2	188 9 11	
"	Dwarf wall, &c	.		1886	Unfinished		75 0 0	75 0 0		
Police Buildings	Erection	3,000		1885	Finished	3,186 2 10		1,335 2 10	30 15 9	
Public Buildings generally	Alterations & repairs	.		1886	"	2,072 13 7		2,072 13 7	284 11 0	
"	Superintendence	.		"	"	200 0 0		200 0 0		
"	"	.		"	"	850 0 0		850 0 0		
Gaols and Court-houses, &c.	"	.		"	"	793 17 9		793 17 9		
Post and Telegraph Offices .	"	.		"	"	83 13 9		83 13 9		
Public Buildings generally	Advertising	.		"	"	179 6 11		179 6 11		
Coffins for Paupers ....	Coffins and Burials	.		"	"	197 5 1		197 5 1		
Ballot Boxes . . . . .	Supply of	.		"	"					
						302,417 11 0	542,403 4 2	355,831 3 4	20,690 15 4	

SEWERAGE AND WATER WORKS, CITY OF SYDNEY.

Works	Whether Constructing or under Repair	Funds from which the Expense is defrayed	When Commenced	Whether Finished or Unfinished	Estimated Expenditure to 31 December, 1886	Expenditure in 1886
					£ s. d.	£ s. d.
Sewers .. . . .	Constructing	Government Loan, Corporation Debentures, Sewerage Rate.	1854 .	Unfinished	893,203 5 9	38,384 1 5
Water . . . . .	"	Government Loan, Corporation Debentures, Water Rate.	" . . . .	" . . . .	1,640,795 2 8	97,610 7 8



RAILWAYS—continued.

No. 62.—DECENNIAL RETURN showing the EARNINGS and EXPENDITURE of the several Lines of Railway.

Year.	Number of Miles open for Traffic.	Number of Passengers carried.								Amount for Coaching.	Miscellaneous Receipts.	Total.	Tonnage of Goods.	Amount for Goods.	Total Earnings.	Total Amount for Working Expenses.
		First Class.		Second Class.		Season-ticket Holders.		Workmen's Tickets, Weekly.	Total.							
		Single.	Return.	Single.	Return.	First Class.	Second Class.									
1876 .....	460	94403	207184	380099	1046044	242100	509116	.....	2478946	£ s. d. 228519 8 3	£ s. d. 5350 11 7	£ s. d. 233869 19 10	tons cwt. qrs. lb. 1244251 17 1 2	£ s. d. 459355 8 5	£ s. d. 693225 8 3	£ s. d. 339405 18 9
1877 .....	552	124771	233897	447718	1233140	300836	567282	.....	2957144	£ s. d. 270770 14 0	£ s. d. 2528 7 2	£ s. d. 273299 1 2	tons cwt. qrs. lb. 1410610 4 3 19	£ s. d. 542621 4 0	£ s. d. 815920 5 2	£ s. d. 418984 16 5
1878 .....	633	138777	365064	501330	1577054	394852	728656	.....	3705733	£ s. d. 305709 4 4	£ s. d. 1674 4	£ s. d. 307383 8 9	tons cwt. qrs. lb. 1594983 11 0 12	£ s. d. 595605 12 10	£ s. d. 902989 1 7	£ s. d. 536988 7 8
1879 .....	709	412103	245122	1440539	893062	492804	834174	.....	4317864	£ s. d. 317729 14 2	£ s. d. 3143 15 7	£ s. d. 320873 9 9	tons cwt. qrs. lb. 1693010 11 2 4	£ s. d. 631492 13 3	£ s. d. 952366 3 0	£ s. d. 604720 15 7
1880 .....	787	442678	378758	1607770	1372608	674226	964098	.....	5440138	£ s. d. 336817 12 3	£ s. d. 4542 6 4	£ s. d. 301359 18 7	tons cwt. qrs. lb. 1686889 1 0 17	£ s. d. 60656 13 1	£ s. d. 1161016 11 8	£ s. d. 647718 12 1
1881 .....	956	471155	557823	1643323	1723884	995382	1065524	450216	6907312	£ s. d. 437328 11 11	£ s. d. 2297 18 11	£ s. d. 489626 10 10	tons cwt. qrs. lb. 1996446 10 1 24	£ s. d. 954599 1 11	£ s. d. 1444225 12 9	£ s. d. 738334 4 0
1882 .....	1268½	615451	824502	1912492	2205832	1396656	1056720	972360	8984313	£ s. d. 582423 12 11	£ s. d. 9669 13 8	£ s. d. 592093 6 7	tons cwt. qrs. lb. 2557260 19 3 10	£ s. d. 1106770	£ s. d. 1698863 10 10	£ s. d. 934635 8 4
1883 .....	1320½	699753	1138246	2188652	2604774	1560170	990050	1090392	10272037	£ s. d. 657855 13 7	£ s. d. 6274 16 0	£ s. d. 664130 9 7	tons cwt. qrs. lb. 2796301 2 2 24	£ s. d. 1267334 2 7	£ s. d. 1931464 12 2	£ s. d. 1177788 7 10
1884 .....	1618½	788544	1185334	2475280	2642776	1699407	1147336	1314432	11 253109	£ s. d. 738332 9 4	£ s. d. 9314 7 0	£ s. d. 748146 16 4	tons cwt. qrs. lb. 3050802 10 0 8	£ s. d. 1338090 5 1	£ s. d. 2086237 2 3	£ s. d. 1301259 9 6
1885 .....	1732½	965670	1469534	2984666	3048682	2004012	1344506	1689276	13506346	£ s. d. 826385 1 8	£ s. d. 5098 10 10	£ s. d. 832383 12 6	tons cwt. qrs. lb. 3199461 5 1 23	£ s. d. 1341984 11 6	£ s. d. 2174368 4 0	£ s. d. 1458153 9 10
1886 .....	1889½	1040498	1639252	3260098	3326648	2357100	1486478	1771620	14881604	£ s. d. 846424 10 6	£ s. d. 3811 4 2	£ s. d. 850235 14 8	tons cwt. qrs. lb. 3141951 1 0 25	£ s. d. 1309834 1 7	£ s. d. 2160069 16 3	£ s. d. 1492992 1 1

## STATISTICS, 1886—MONETARY AND FINANCIAL.

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## RAILWAYS—continued.

No. 63.—EARNINGS, WORKING EXPENSES, CAPITAL INVESTED ON LINES OPEN, AND INTEREST ON CAPITAL, during each year, from 1855 to 1886.

Year.	Length of Line, 31 December.	Total Earnings.	Working Expenses.	Earnings per Train Mile.	Working Expenses per Train Mile.	Percentage of Working Expenses to Gross Earnings.	Net Earnings.	Capital expended on Lines open.	Interest on Capital.
	Miles.	£	£	d.	d.	Ψ cent.	£	£	Ψ cent.
1855	14	9,249	5,959	157'34	101'37	64'43	3,290	515,347	'638
1856	23	32,283	21,788	113'32	76'48	67'49	10,495	683,217	1'536
1857	40	43,387	31,338	96'58	69'75	72'23	12,050	1,023,838	1'176
1858	55	62,309	43,928	105'69	74'51	70'50	18,381	1,231,867	1'492
1859	55	61,760	47,598	100'41	77'38	77'07	14,162	1,278,416	1'107
1860	70	62,269	50,427	83'37	67'52	80'98	11,841	1,422,672	'832
1861	73	75,004	61,187	83'77	68'34	81'58	13,817	1,536,032	'899
1862	97	103,871	68,725	90'79	60'07	66'16	35,146	1,907,807	1'842
1863	124	123,941	96,867	94'38	73'76	78'16	27,073	2,466,950	1'097
1864	143	147,053	103,715	85'30	59'92	70'24	43,938	2,631,790	1'669
1865	143	166,032	108,926	82'42	54'07	65'60	57,106	2,746,373	2'079
1866	143	168,535	106,230	82'49	51'99	63'64	62,305	2,786,094	2'236
1867	204	189,072	117,324	82'02	46'87	62'08	71,748	3,282,320	2'185
1868	247	224,359	144,201	70'06	45'03	64'29	80,158	4,060,950	1'973
1869	318	264,975	176,362	71'17	47'37	66'57	88,613	4,681,329	1'892
1870	339	307,142	206,003	81'81	54'86	67'08	101,139	5,566,092	1'817
1871	358	355,322	197,065	91'57	50'79	55'46	158,257	5,887,258	2'688
1872	398	424,989	207,018	98'43	48'15	48'92	217,071	6,388,727	3'397
1873	403	484,236	238,035	104'71	51'47	49'16	246,201	6,739,918	3'653
1874	403	536,575	257,703	103'09	49'51	48'03	278,872	6,844,546	4'074
1875	473	614,648	296,174	100'20	48'28	48'18	318,474	7,245,379	4'396
1876	509	693,225	339,406	98'50	48'22	48'96	353,819	7,990,601	4'428
1877	598	815,920	418,985	92'95	47'73	51'35	396,935	8,883,177	4'468
1878	688	902,989	536,988	81'62	48'54	59'47	366,001	9,784,645	3'741
1879	734	952,366	604,721	77'94	49'49	63'49	347,645	10,406,495	3'341
1880	849	1,161,017	647,719	86'02	47'99	55'79	513,298	11,778,819	4'358
1881	995	1,444,226	738,334	88'33	45'16	51'12	705,892	13,301,597	5'307
1882	1268	1,698,863	934,635	84'05	46'24	55'02	764,228	15,843,616	5'135
1883	1320	1,931,464	1,177,788	78'07	47'61	60'97	753,676	16,905,014	4'484
1884	1618	2,086,237	1,301,259	78'19	48'77	62'37	784,978	20,080,138	4'201
1885	1732	2,174,368	1,458,153	78'61	52'72	67'06	716,215	21,831,276	3'370
1886	1890	2,160,070	1,492,992	80'01	55'30	69'11	667,078	24,079,555	2'901

## TRAMWAYS.

No. 64.—EARNINGS and EXPENDITURE of the CITY, SUBURBAN, and CAMDEN TRAMWAYS, and NORTH SHORE CABLE TRAMWAY, during the year 1886.

Lines and Months.	Total length of Lines in Miles.	Fares Paid. Total Tickets Collected.	Amount for Coaching.	Tonnage of Goods.	Amount for Goods.	Miscellaneous Receipts.	Total Earnings.	Expenditure for Working Expenses.	Net Earnings over Working Expenses.	Excess of Expenditure over Earnings.
		No.	£ s. d.	Tons cwt. qr. lb.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
<b>CITY &amp; SUBURBAN.</b>										
January	..	4,925,592	20,195 11 6	.....	.....	110 14 6	20,306 6 0	9,998 14 7	10,307 11 5	.....
February	..	4,219,466	17,552 14 8	.....	.....	206 2 0	17,758 16 8	15,508 13 7	2,250 3 1	.....
March	..	4,692,994	20,133 19 8	.....	.....	161 11 6	20,295 11 2	20,382 9 2	.....	86 18 0
April	..	4,719,489	20,386 10 5	.....	.....	123 14 10	20,510 5 3	15,067 11 2	5,442 14 1	.....
May	..	4,386,520	18,643 4 9	.....	.....	168 19 1	18,812 3 10	14,740 13 1	4,062 10 9	.....
June	..	4,175,359	17,433 5 0	.....	.....	178 12 4	17,611 17 4	17,296 0 0	315 17 4	.....
July	..	4,104,793	17,103 13 3	.....	.....	163 2 4	17,266 15 7	15,728 16 4	1,537 19 3	.....
August	..	4,202,742	17,795 6 3	.....	.....	167 16 7	17,963 2 10	22,207 4 2	.....	4,244 1 4
September	..	4,250,858	18,318 2 6	.....	.....	170 9 11	18,488 12 5	17,225 12 9	1,262 19 8	.....
October	..	4,296,657	17,644 9 5	.....	.....	149 10 4	17,793 19 9	15,199 15 6	2,594 4 3	.....
November	..	4,340,338	18,668 8 9	.....	.....	148 12 11	18,817 1 8	15,778 6 2	3,038 15 6	.....
December	..	4,662,765	20,608 2 3	.....	.....	134 3 3	20,742 5 6	21,542 5 11	.....	800 0 5
Total	27½	52,977,573	224,483 8 5	.....	.....	1,883 9 7	226,366 18 0	200,635 2 5	25,681 15 7	.....
<b>CAMDEN.</b>										
January	..	2,354	169 3 8	1,226 12 3 0	158 3 6	.....	327 7 2	118 15 7	208 11 7	.....
February	..	1,755	142 5 0	1,174 17 2 0	171 17 9	.....	314 2 9	163 12 9	150 10 0	.....
March	..	3,008	208 11 0	1,404 9 1 0	182 13 4	.....	391 9 4	334 14 10	56 14 0	.....
April	..	2,316	162 8 7	1,062 7 2 0	153 4 2	.....	315 12 9	164 2 11	151 9 10	.....
May	..	1,934	142 12 2	1,158 8 2 0	161 15 1	.....	304 7 3	199 12 5	104 14 10	.....
June	..	1,792	139 16 11	1,336 14 0 20	176 8 6	.....	316 5 5	147 5 1	169 0 4	.....
July	..	1,988	142 3 11	1,420 16 0 0	176 18 2	.....	319 2 1	156 4 7	162 17 6	.....
August	..	1,714	122 12 11	1,331 1 2 2	166 16 0	.....	289 8 11	178 3 8	111 5 3	.....
September	..	2,042	141 18 1	1,074 11 1 23	141 10 6	.....	283 8 7	153 4 6	130 4 1	.....
October	..	2,383	163 12 8	928 0 2 20	123 10 6	.....	287 3 2	171 10 10	115 12 4	.....
November	..	1,805	139 12 1	937 1 3 24	129 16 2	.....	269 8 3	222 6 0	47 2 3	.....
December	..	2,267	172 7 1	1,110 6 0 7	142 11 6	.....	314 18 7	224 5 6	90 13 1	.....
Total	7½	25,358	1,847 4 1	14,165 7 1 12	1,885 10 2	.....	3,732 14 3	2,233 18 8	1,498 15 7	.....
<b>NORTH SHORE.</b>										
January	..	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	..	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	..	.....	.....	.....	.....	.....	.....	.....	.....	.....
April	..	.....	.....	.....	.....	.....	.....	.....	.....	.....
May	..	52,992	220 16 0	.....	.....	.....	220 16 0	49 8 11	171 7 1	.....
June	..	140,800	586 13 4	.....	.....	.....	586 13 4	384 4 4	202 9 0	.....
July	..	122,593	510 16 1	.....	.....	.....	510 16 1	493 17 5	16 18 8	.....
August	..	126,787	528 5 7	.....	.....	.....	528 5 7	551 9 2	.....	23 3 7
September	..	128,419	535 1 7	.....	.....	.....	535 1 7	840 14 1	.....	305 12 6
October	..	127,647	531 17 3	.....	.....	.....	531 17 3	803 4 5	.....	271 7 2
November	..	123,986	516 12 2	.....	.....	.....	516 12 2	602 8 6	.....	85 16 4
December	..	147,151	613 2 7	.....	.....	.....	613 2 7	999 1 4	.....	377 18 9
Total	1½	970,375	4,043 4 7	.....	.....	.....	4,043 4 7	4,716 8 2	.....	673 3 7
GRAND TOTAL	36½	53,973,311	230,373 17 1	14,165 7 1 12	1,885 10 2	1,883 9 7	234,142 16 10	207,635 9 3	26,507 7 7	.....

TRAMWAYS—continued.

No. 65.—RETURN showing the EARNINGS and EXPENDITURE.

Year.	Total Length of Lines in Miles.	Number of Passengers carried.																Amount for Coaching.	Tonnage of Goods.	Amount for Goods.	Miscellaneous Receipts.	Total Earnings.	Expenditure for Working Expenses.	Net Earnings over Working Expenses.		
		Season-ticket Holders.										Work-men's Tickets Weekly 2nd Cls.	Other Passengers.												General Total.	
		Monthly.		Quarterly.		Half-yearly.		Yearly.		Total.			First Class.		Second Class.		Total.									
		1st Class	2nd Class	1st Class	2nd Class	1st Class	2nd Class	1st Class	2nd Class	1st Class	2nd Class		Single	Return	Single	Return										
1879.....	1½	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	£ s. d.	tons. cwt. qr. lb.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
1880.....	4½	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	443341	4416 8 4	.....	.....	4416 8 4	2277 16 10	2138 11 6	
1881.....	11½	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2086897	18968 2 11	.....	.....	12 1 6	18980 4 5	13443 18 6	5536 5 11
1882.....	29½	..	308	..	548	..	..	..	..	..	856	15269956	.....	1611	.....	24671	.....	26282	15296238	127123 18 5	5621 4 2 11	864 17 6	365 12 11	128354 8 10	120180 17 11	8173 10 1
1883.....	32½	..	..	..	..	..	..	..	..	..	..	25684285	.....	3225	116	25565	242	29148	25713433	190208 14 5	11315 4 1 0	1492 9 9	2227 15 9	193928 19 11	133217 15 0	10711 4 11
1884.....	35	..	..	..	..	..	..	..	..	..	..	30202303	.....	2835	988	21766	3490	29079	30231382	218884 12 3	9608 10 3 13	1607 6 9	2961 18 10	223453 17 10	215085 12 7	8368 5 3
1885.....	35	..	..	..	..	..	..	..	..	..	..	39594753	.....	3035	1144	18324	2858	25861	39620614	220331 18 10	13961 5 2 12	1936 7 11	4875 19 2	227144 5 11	207897 17 10	19246 8 1
1886.....	36½	..	306	90	368	..	..	..	..	90	674	*33948717	.....	2953	1248	17367	3026	24594	53973311	230373 17 1	14165 7 1 12	1885 10 2	1883 9 7	234142 16 10	207635 9 3	26507 7 7

\* The excessive increase is due to the change in the value of tickets and the abolition of cash fares.

## PART VI.

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No. 1.—NUMBER of HOLDINGS of VARIOUS SIZES in each

ELECTORATES.	Acres.	NUMBER OF HOLDINGS										
		1 to 5.	6 to 15.	16 to 30.	31 to 50.	51 to 100.	101 to 200.	201 to 300.	301 to 400.	401 to 500.	501 to 600.	601 to 700.
<b>Metropolitan—</b>	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Balmain ... ..	40	9	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Canterbury ... ..	516	316	91	33	26	6	2	.....	1	.....	1	.....
Glebe ... ..	8	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newtown ... ..	15	12	1	1	.....	.....	.....	.....	.....	.....	.....	.....
Paddington ... ..	145	53	12	2	1	.....	.....	.....	.....	1	1	.....
Redfern ... ..	205	73	10	3	3	1	.....	.....	1	.....	.....	.....
St. Leonards ... ..	119	114	93	34	21	13	4	3	2	.....	2	.....
East Sydney ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
South Sydney ... ..	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Sydney ... ..	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<b>Total Metropolitan</b> ... ..	<b>1,054</b>	<b>577</b>	<b>215</b>	<b>73</b>	<b>51</b>	<b>20</b>	<b>6</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>4</b>	<b>.....</b>
<b>Country—</b>												
Albury ... ..	8	10	19	27	32	36	19	8	16	4	8	3
Argyle ... ..	16	16	17	85	150	243	139	109	85	57	64	25
Balranald ... ..	5	2	2	31	26	32	7	19	15	8	85	4
Bogan ... ..	12	20	11	79	111	127	61	83	45	38	166	13
Boorowa ... ..	22	10	20	32	55	86	42	39	19	20	24	10
Bourke ... ..	7	1	2	46	21	20	11	20	2	7	67	2
Braidwood ... ..	78	32	15	49	71	81	56	31	26	13	12	9
Camden ... ..	158	86	71	171	297	347	171	96	69	26	31	9
Carcoar ... ..	32	25	22	84	160	209	137	101	66	42	73	22
Clarence ... ..	22	13	53	206	245	159	51	27	14	5	6	1
Central Cumberland ... ..	382	395	238	165	140	101	33	17	7	4	4	6
Durham ... ..	36	45	72	94	119	121	33	40	21	11	18	9
Eden ... ..	57	37	36	117	133	203	133	96	73	45	47	30
Forbes ... ..	37	22	13	28	37	53	30	31	25	14	78	9
Glen Innes ... ..	30	14	14	37	65	74	46	49	19	11	29	10
Gloucester ... ..	19	20	26	79	128	89	36	13	16	3	6	2
Goulburn ... ..	38	28	11	9	9	6	3	.....	.....	.....	.....	.....
Grafton ... ..	88	35	61	141	150	138	60	35	19	9	15	4
Grenfell ... ..	26	16	11	26	47	62	42	46	25	25	110	9
Gundagai ... ..	34	30	21	55	51	89	52	57	39	19	31	10
Gunnedah ... ..	31	10	5	26	26	51	22	30	20	16	53	6
Gwydir ... ..	28	10	5	36	56	62	31	58	32	14	138	5
Hartley ... ..	10	16	15	87	84	122	44	36	15	11	11	1
Hastings and Manning... ..	37	29	88	332	374	278	111	43	19	16	19	1
Hawkesbury ... ..	99	110	138	170	187	96	42	15	11	5	5	4
Hume ... ..	36	33	22	27	83	93	63	86	52	41	94	24
Hunter ... ..	18	39	89	119	92	72	35	15	11	3	6	6
Upper Hunter ... ..	67	28	22	94	127	187	99	90	61	33	35	25
Illawarra ... ..	54	61	52	61	111	101	33	13	2	5	2	4
Inverell ... ..	2	2	12	54	82	105	57	39	29	19	19	8
Kiama ... ..	57	35	40	55	121	159	51	18	5	.....	.....	.....
Macleay ... ..	26	30	105	265	301	199	66	52	17	8	13	6
East Macquarie ... ..	52	29	18	73	109	118	75	40	29	21	12	8
West Macquarie ... ..	13	19	16	25	64	103	65	35	15	11	14	6
East Maitland ... ..	33	25	39	29	43	20	9	7	3	3	3	2
West Maitland ... ..	29	19	13	10	.....	1	.....	.....	.....	.....	.....	.....
Molong ... ..	11	9	11	66	124	189	99	83	53	35	59	13
Monaro ... ..	42	28	18	74	104	189	90	106	66	43	68	27
Morpeth ... ..	15	51	138	107	79	20	9	3	3	1	.....	.....
Mudgee ... ..	180	69	43	198	224	226	112	56	31	17	16	11
Murray ... ..	24	16	20	17	27	28	20	40	24	19	45	13
Murrumbidgee ... ..	9	10	12	61	90	158	93	156	87	88	484	27
Namoi ... ..	8	9	8	47	56	48	28	27	18	15	94	3
Nepean ... ..	136	78	67	104	114	82	29	16	16	5	5	4
Newcastle ... ..	8	2	7	3	3	1	2	1	.....	1	.....	.....
New England ... ..	52	32	30	82	115	175	126	104	61	34	94	17
Northumberland ... ..	65	32	26	27	34	16	7	3	.....	1	1	.....
Orange ... ..	6	6	15	48	118	188	91	65	23	11	12	11
Parramatta ... ..	26	12	3	1	.....	.....	.....	.....	.....	.....	.....	.....
Patrick's Plains ... ..	14	30	26	79	89	92	58	39	35	17	22	12
Queanbeyan ... ..	8	13	6	52	48	78	56	53	26	24	35	14
Richmond ... ..	97	49	74	372	439	460	194	139	60	35	112	18
Shoalhaven ... ..	89	47	56	219	291	305	116	46	26	8	15	3
Tamworth ... ..	45	42	27	76	134	140	91	63	30	25	34	15
Tenterfield ... ..	47	20	8	66	77	92	36	26	13	6	17	1
Tumut ... ..	72	42	35	67	75	87	45	43	29	16	33	13
Wellington ... ..	40	13	10	48	71	108	57	59	30	16	28	8
Wentworth ... ..	5	2	1	30	18	16	8	14	12	5	36	4
Wollombi ... ..	53	52	44	128	168	168	56	25	13	5	15	5
Yass Plains ... ..	17	10	6	54	77	128	80	72	39	26	28	22
Young ... ..	48	29	15	57	86	112	80	92	46	37	95	15
<b>Total Country</b> ... ..	<b>2,826</b>	<b>2,055</b>	<b>2,120</b>	<b>5,092</b>	<b>6,568</b>	<b>7,149</b>	<b>3,548</b>	<b>2,825</b>	<b>1,663</b>	<b>1,057</b>	<b>2,646</b>	<b>549</b>
<b>General Total...</b> ... ..	<b>3,880</b>	<b>2,632</b>	<b>2,335</b>	<b>5,165</b>	<b>6,619</b>	<b>7,169</b>	<b>3,554</b>	<b>2,828</b>	<b>1,667</b>	<b>1,058</b>	<b>2,650</b>	<b>549</b>

PRODUCTION.

INGS.

ELECTORATE of the Colony for the year ended 31st March, 1887.

OF VARIOUS ACREAGES.

OF VARIOUS ACREAGES.															ELECTORATES.
801 to 900.	901 to 1,000.	1,001 to 1,500.	1,501 to 2,000.	2,001 to 3,000.	3,001 to 4,000.	4,001 to 5,000.	5,001 to 7,500.	7,501 to 10,000.	10,001 to 15,000.	15,001 to 20,000.	20,001 to 30,000.	30,001 to 40,000.	40,001 and upwards.	General Total of Holdings.	
No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	Metropolitan—
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Balmain.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Canterbury.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Glebe.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Newtown.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Paddington.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Redfern.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	St. Leonards.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	East Sydney.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	South Sydney.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	West Sydney.
I	...	3	...	...	I	...	...	...	...	...	...	...	...	2,013	Total Metropolitan.
8	2	5	4	4	I	I	I	2	2	...	...	...	...	220	Country—
22	17	61	20	19	12	4	11	5	7	2	2	...	...	1,188	Albury.
9	8	27	6	13	5	6	2	3	2	5	5	4	22	353	Argyle.
11	12	50	32	21	12	6	8	5	7	3	9	4	5	951	Balranald.
11	11	30	15	4	5	2	6	5	3	...	...	...	...	472	Bogan.
3	4	11	11	7	8	3	3	4	2	I	...	I	5	269	Boorowa.
2	7	10	9	13	4	...	I	2	3	I	...	...	...	525	Bourke.
10	12	22	8	10	8	5	3	I	I	...	...	...	...	1,612	Braidwood.
18	14	27	16	11	7	4	4	5	5	5	3	...	...	1,092	Camden.
I	4	5	...	...	...	...	...	...	...	...	...	...	...	812	Camden.
3	4	7	3	2	...	...	...	...	I	...	...	...	...	1,512	Carcoar.
9	6	14	9	9	7	4	2	I	I	...	I	...	...	682	Clarence.
26	20	59	20	16	3	2	I	2	...	2	...	...	...	1,158	Central Cumberland.
4	10	18	3	10	10	3	2	3	3	I	I	...	I	446	Durham.
5	8	15	12	3	3	I	4	I	3	I	I	...	...	455	Eden.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	457	Forbes.
2	3	7	6	I	...	...	I	...	I	...	...	...	...	104	Glen Innes.
10	4	31	10	25	11	6	9	5	4	I	6	4	I	776	Gloucester.
17	13	48	23	22	15	3	6	2	8	4	3	I	I	572	Goulburn.
4	7	23	13	17	8	2	8	4	4	I	4	5	10	654	Grafton.
7	4	35	17	14	9	4	10	4	...	3	4	4	7	406	Grenfell.
I	2	13	4	9	...	...	I	...	I	...	...	...	...	597	Gunnedah.
12	7	13	6	10	4	...	...	...	...	2	...	...	...	483	Gwydir.
...	4	8	2	3	...	...	...	...	...	...	...	...	...	1,401	Hartley.
23	22	67	41	40	25	9	7	8	10	10	12	3	8	899	Hastings and Manning.
2	2	8	5	4	2	...	...	2	...	...	...	...	...	939	Hawkesbury.
15	14	38	17	18	12	4	13	9	10	3	5	5	4	530	Hume.
2	...	2	I	...	I	...	I	...	...	...	...	...	...	1,035	Hunter.
5	...	12	8	7	3	3	4	2	2	I	I	2	I	507	Upper Hunter.
...	...	I	...	...	...	...	...	...	...	...	...	...	...	487	Illawarra.
2	3	4	2	5	...	...	...	...	...	...	...	...	...	542	Inverell.
3	4	15	11	10	4	I	4	I	...	...	...	...	...	1,104	Kiama.
4	I	8	7	5	I	I	I	2	I	I	...	...	...	637	Maclean.
I	2	3	I	I	...	...	...	...	...	...	...	...	...	418	East Macquarie.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	225	West Macquarie.
12	10	27	11	6	6	4	4	I	7	2	...	I	...	72	East Maitland.
17	21	56	40	31	19	2	21	10	8	6	3	I	2	843	West Maitland.
I	...	5	I	I	...	...	...	...	...	...	...	...	...	1,092	Molong.
9	4	21	8	8	6	I	I	3	5	I	2	...	...	429	Monaro.
10	14	51	30	31	15	14	16	3	2	...	8	4	31	1,253	Morpeth.
14	26	104	65	52	32	16	11	10	10	7	15	6	32	522	Mudgee.
4	7	23	10	14	6	I	5	I	6	I	6	I	5	1,675	Murray.
5	3	14	3	5	2	2	...	...	...	...	...	...	...	451	Murrumbidgee.
...	2	...	...	...	...	...	...	...	...	...	...	...	...	690	Namoi.
10	16	54	27	17	7	7	8	3	10	5	4	...	I	30	Nepean.
...	...	5	I	I	2	2	...	I	...	...	...	...	...	1,091	Newcastle.
3	3	9	I	2	2	I	I	I	I	I	...	...	...	224	New England.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	619	Northumberland.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	42	Orange.
11	7	19	11	10	4	3	8	6	...	3	I	...	I	607	Parramatta.
4	8	25	15	6	6	3	6	3	2	3	6	I	...	501	Patrick's Plains.
8	7	24	5	6	3	I	2	...	4	2	...	...	2	2,113	Queanbeyan.
2	2	2	5	3	...	I	...	...	...	...	...	...	...	1,232	Richmond.
12	13	28	18	7	6	6	15	I	2	2	3	...	2	837	Shoalhaven.
2	4	6	3	...	...	...	I	I	...	I	...	...	...	427	Tamworth.
12	9	19	15	9	3	I	2	2	3	...	...	...	...	631	Tenterfield.
2	5	13	3	5	4	2	3	4	2	...	I	...	...	532	Tumut.
3	5	3	6	7	I	...	4	...	2	5	...	I	...	188	Wellington.
I	2	12	4	5	...	...	...	I	I	...	...	...	...	758	Wentworth.
25	19	29	26	15	7	6	11	4	7	...	...	I	...	709	Wollombi.
9	13	27	13	18	7	7	11	2	5	3	...	...	4	831	Yass Plains.
427	440	1,280	665	601	321	155	243	137	158	90	106	49	149	42,919	Total Country.
428	440	1,283	665	601	322	155	243	137	158	90	106	49	149	44,932	General Total.



## HOLDINGS—continued.

No. 2.—NUMBER of HOLDINGS, AREA CULTIVATED, ENCLOSED and UNENCLOSED; also TOTAL EXTENT of HOLDINGS in each Electorate, with the NUMBER of HANDS EMPLOYED in Agricultural or Pastoral Occupations.

Electorate.	Number of Holdings of more than 1 acre.	Hands employed in Agricultural or Pastoral pursuits.	Area cultivated.	Area enclosed.	Area Unenclosed.	Total Area of Holdings.
			acres.	acres.	acres.	acres.
Albury ...	220	381	8,405	118,923	3,053	121,976
Argyle ...	1,188	1,769	22,759	753,703	29,228	782,931
Balmain ...	56	6	22	275	63	338
Balranald ...	353	1,872	5,379	2,720,910	46,619	2,767,529
Bogan ...	951	2,145	14,293	1,098,112	258,716	1,372,128
Boorowa ...	472	322	10,252	337,744	51,192	388,936
Bourke ...	269	1,425	486	684,763	190,126	874,889
Braidwood ...	525	420	5,350	225,417	7,225	232,642
Camden ...	1,612	.....	25,410	366,655	28,032	394,687
Canterbury ...	993	1,207	1,607	12,349	1,037	13,386
Carcoar ...	1,092	813	30,608	580,826	97,622	678,448
Clarence ...	812	1,317	21,779	90,030	3,664	93,664
Central Cumberland ...	1,512	.....	11,841	96,920	7,741	104,663
Durham ...	682	917	8,807	248,120	13,800	261,920
Eden ...	1,158	2,424	21,159	408,510	81,381	409,891
Forbes ...	446	1,004	8,315	385,920	45,296	431,216
Glebe ...	9	13	18	44	.....	44
Glen Innes ...	455	528	9,461	202,463	76,183	278,646
Gloucester ...	457	545	3,986	92,450	374,484	466,934
Goulburn ...	104	96	671	3,132	150	3,282
Grafton ...	776	1,110	13,732	116,841	19,255	136,096
Grenfell ...	572	1,025	9,912	788,197	81,507	869,704
Gundagai ...	654	1,111	26,625	715,467	44,088	759,555
Gunnedah ...	406	994	7,410	1,337,243	41,982	1,379,225
Gwydir ...	597	967	3,216	1,052,974	234,470	1,287,444
Hartley ...	483	612	4,822	100,743	33,509	65,275
Hastings and Manning	1,401	532	18,023	170,961	102,460	273,421
Hawkesbury ...	899	.....	14,636	78,282	5,709	93,991
Hume ...	939	1,550	44,783	1,904,084	22,935	1,927,749
Hunter ...	530	1,193	7,995	101,872	5,356	107,228
Hunter, Upper ...	1,035	1,257	12,209	1,209,970	70,968	1,280,938
Illawarra ...	507	.....	5,207	53,378	11,897	65,275
Inverell ...	487	717	14,995	363,842	43,266	407,108
Kiama ...	542	.....	26,956	60,135	727	60,862
Macleay ...	1,104	1,642	29,406	107,484	45,589	153,073
Macquarie, East	637	539	28,956	204,686	21,115	225,893
Macquarie, West	418	593	23,673	164,124	14,112	178,236
Maitland, East ...	225	375	1,923	28,265	4,377	32,642
Maitland, West	72	132	885	1,072	.....	1,072
Molong ...	843	1,456	37,905	447,990	59,875	507,865
Monaro ...	1,092	1,651	16,446	1,064,650	90,877	1,155,527
Morpeth ...	329	676	9,409	35,157	2,723	37,880
Mudgee ...	1,253	1,416	25,557	389,889	40,843	430,732
Murray ...	522	1,431	25,600	3,360,137	56,812	3,416,949
Murrumbidgee ...	1,675	3,041	43,871	4,824,573	250,788	5,075,361
Namoi ...	451	759	3,598	678,151	115,970	794,121
Nepcan ...	690	.....	5,767	100,559	12,432	112,991
Newcastle ...	30	63	59	2,240	1,701	3,941
New England ...	1,091	1,402	20,339	776,222	135,051	911,273
Newtown ...	29	10	17	225	6	231
Northumberland ...	224	323	925	18,941	24,538	43,479
Orange ...	619	631	31,052	180,918	18,332	199,250
Paddington ...	215	180	334	1,393	1,099	2,492
Parramatta ...	42	.....	119	294	1	295
Patrick's Plains	607	435	9,389	441,651	4,699	446,350
Queanbeyan ...	501	725	10,039	507,803	26,414	534,217
Redfern ...	297	726	576	7,595	585	8,180
Richmond ...	2,113	3,061	40,583	360,552	262,334	619,886
Shoalhaven ...	1,232	.....	66,646	223,573	35,227	258,799
St. Leonards ...	408	382	1,889	8,314	8,139	16,453
Sydney, East, South, and West	5	7	2	11	2	13
Tamworth ...	837	1,293	23,496	698,094	111,982	810,076
Tenterfield ...	427	333	5,840	78,134	31,242	109,376
Tumut ...	631	922	9,372	259,655	15,096	274,751
Wellington ...	532	934	17,346	229,329	45,495	274,824
Wentworth ...	188	1,742	1,607	236,354	20,024	256,378
Wollombi ...	758	821	8,545	102,918	47,781	150,699
Yass Plains ...	709	639	16,347	529,523	27,116	556,639
Young ...	831	1,182	39,053	729,463	26,614	756,077
Total ...	44,932	* 57,004	† 977,664	‡ 33,328,883	‡ 3,397,286	‡ 36,726,169

\* Not complete. † Land leased from Crown included. The extent of land cultivated other than Crown leases was 972,496 acres. ‡ Crown land not included

HOLDINGS—continued.

No. 3.—NUMBER of OCCUPIERS of LAND IN HOLDINGS of not less than one Acre in extent, with the ACREAGE UNDER CROP, the AREA ENCLOSED but not in cultivation, and the AREA UNENCLOSED, in the year ending 31st March, 1887.

Holdings of various sizes.	Number of Holders.	* Extent of Holding.			Acreage under Crop.			Acreage enclosed but not in cultivation.			Acreage unenclosed.		
		Freehold.	Leasehold.	Total.	Freehold.	Leasehold.	Total.	Freehold.	Leasehold.	Total.	Freehold.	Leasehold.	Total.
From 1 to 5 acres ...	3,880	8,194	4,210	12,404	2,862	1,907	4,769	4,962	2,144	6,836	640	159	799
6 15 ...	2,632	16,839	12,225	29,064	6,612	4,291	10,903	8,943	5,198	14,141	1,284	2,736	4,020
16 30 ...	2,335	28,842	27,869	56,711	10,354	16,027	26,381	16,133	11,144	27,277	2,355	698	3,053
31 50 ...	5,165	152,888	68,569	221,457	33,011	31,323	64,334	87,178	33,355	120,533	32,699	3,891	36,590
51 100 ...	6,619	386,699	149,439	536,138	69,088	48,211	117,299	236,781	91,420	328,201	80,830	9,808	90,638
101 200 ...	7,169	790,158	202,209	992,367	127,488	45,364	172,852	571,585	141,693	713,278	91,085	15,152	106,237
201 300 ...	3,554	748,558	137,839	886,397	84,690	25,720	110,410	511,824	99,692	611,516	152,044	12,427	164,471
301 400 ...	2,828	867,320	123,197	990,517	69,941	18,384	88,325	624,973	94,653	719,626	172,406	10,160	182,566
401 500 ...	1,667	668,249	90,207	758,456	47,532	10,207	57,739	501,656	72,375	574,031	119,061	7,625	126,686
501 600 ...	1,058	527,093	56,389	583,482	33,496	6,213	39,709	417,301	43,667	460,968	76,296	6,509	82,805
601 700 ...	2,650	1,592,356	99,625	1,691,981	48,777	5,099	53,876	1,222,387	76,883	1,299,270	321,192	17,643	338,835
701 800 ...	549	360,917	46,215	407,132	20,703	2,866	23,569	289,258	37,599	326,857	50,956	5,730	56,686
801 900 ...	428	329,815	37,870	367,685	14,499	1,274	15,773	270,766	29,153	299,919	44,600	7,443	52,043
901 1,000 ...	440	417,928	48,753	466,681	15,355	2,465	17,820	354,516	40,789	395,305	48,057	5,499	53,556
1,001 1,500 ...	1,283	1,420,689	197,168	1,617,857	46,562	4,342	50,904	1,201,143	161,843	1,362,986	172,984	30,983	203,967
1,501 2,000 ...	665	1,023,071	158,070	1,181,141	26,412	2,682	29,094	906,082	123,793	1,029,875	90,577	31,595	122,172
2,001 3,000 ...	601	1,315,712	160,587	1,476,299	22,951	1,571	24,522	1,154,269	123,821	1,278,090	138,492	35,195	173,687
3,001 4,000 ...	322	995,585	152,164	1,147,749	11,259	781	12,040	896,583	99,943	996,526	87,743	51,440	139,183
4,001 5,000 ...	155	715,420	47,676	763,096	5,021	36	5,057	653,028	39,313	692,341	57,371	8,327	65,698
5,001 7,500 ...	243	1,290,941	147,116	1,438,057	7,866	388	8,254	1,184,142	133,940	1,318,082	98,933	12,788	111,721
7,501 10,000 ...	137	1,088,357	105,258	1,193,615	4,650	79	4,729	1,021,953	79,379	1,101,832	61,754	25,800	87,554
10,001 15,000 ...	158	1,778,132	148,651	1,926,783	6,674	526	7,200	1,679,200	122,131	1,801,331	92,258	25,994	118,252
15,001 20,000 ...	90	1,349,006	215,671	1,564,677	7,944	8	7,952	1,289,630	114,154	1,403,784	51,432	101,509	152,941
20,001 30,000 ...	106	2,370,621	153,551	2,524,172	6,018	138	6,156	2,246,448	151,713	2,398,161	118,155	1,700	119,855
30,001 40,000 ...	49	1,603,398	100,677	1,704,075	2,670	.....	2,670	1,545,682	98,757	1,644,439	55,046	1,920	56,966
40,001 and upwards ...	149	10,118,121	2,070,055	12,188,176	10,182	7	10,189	9,700,594	1,731,088	11,431,682	407,345	338,960	746,305
General Total ...	44,932	31,964,909	4,761,260	36,726,169	742,567	229,929	† 972,496	28,596,747	3,759,640	32,356,387	2,625,595	771,691	3,397,286

\* Crown Leaseholds are not included.

† Total land cultivated, including Crown Lands &c., 977,664.

## STATISTICS, 1886—PRODUCTION.

## HOLDINGS—continued.

No. 4.—HOLDINGS of VARIOUS SIZES, and PROPORTION to TOTAL LAND in OCCUPATION, during the year 1886-87.

Size of Holding.	No. of Holdings.	Area, Freehold.	Area, Leasehold. <i>a</i>	Total.	Percentage of Land in each class of Holdings.
1 to 15 acres ... ..	6,512	25,033	16,435	41,468	10
16 " 200 " ... ..	21,288	1,358,587	448,086	1,806,673	491
201 " 400 " ... ..	6,382	1,615,878	261,036	1,876,914	517
401 " 1,000 " ... ..	6,792	3,896,358	379,059	4,275,417	1163
1,001 " 2,000 " ... ..	1,948	2,443,760	355,238	2,798,998	761
2,000 " 10,000 " ... ..	1,458	5,406,015	612,801	6,018,816	1638
10,000 " acres and upwards ... ..	552	17,219,278	2,688,605	19,907,883	5420
Total Holdings over 1 acre...	44,932	31,964,909	4,761,260	36,726,169	.....

*a* Leased from private persons.

No. 5.—AVERAGE AREA of HOLDINGS in the various Electoral Districts of the Colony, in the year 1886-87.

Electoral Districts.	Acres.	Electoral Districts.	Acres.	Electoral Districts.	Acres.
Albury... ..	554	Gunnedah ... ..	3,397	The Murrumbidgee ... ..	3,030
Argyle ... ..	665	Gwydir ... ..	2,157	The Namoi ... ..	1,761
Bairnald ... ..	7,840	Hartley ... ..	278	The Nepean ... ..	164
Bogan ... ..	1,427	Hastings and Manning ... ..	514	Newcastle ... ..	131
Burrowa ... ..	824	Hawkesbury ... ..	104	New England ... ..	835
Bourke... ..	3,252	Hume ... ..	2,058	Northumberland ... ..	194
Braidwood ... ..	443	Hunter ... ..	202	Orange... ..	322
Camden ... ..	245	" Upper ... ..	1,238	Patrick's Plains ... ..	735
Carcoar ... ..	621	Illawarra ... ..	129	Queanbeyan ... ..	1,066
Clarence ... ..	115	Inverell ... ..	836	The Richmond ... ..	293
Central Cumberland ... ..	69	Kiama... ..	112	Shoalhaven ... ..	194
Durham ... ..	384	Macleay ... ..	139	Tamworth ... ..	988
Eden ... ..	423	Macquarie, East ... ..	354	Tenterfield ... ..	256
Forbes ... ..	907	" West ... ..	426	Tumut ... ..	435
Glen Innes ... ..	613	Maitland East ... ..	145	Wellington ... ..	517
Gloucester ... ..	1,022	Molong ... ..	602	Wentworth ... ..	1,364
Goulburn ... ..	31	Monaro ... ..	1,057	Wollombi ... ..	199
Grafton ... ..	175	Morpeth ... ..	115	Yass Plains ... ..	785
Grenfell ... ..	1,520	Mudgee ... ..	344	Young ... ..	910
Gundagai ... ..	1,161	The Murray ... ..	6,545		

No. 6.—NUMBER of HOLDINGS OVER ONE ACRE in AREA, during each year from 1879-87.

Size of Holding.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.
1 to 5 acres	2,561	2,838	3,276	3,076	2,919	2,968	3,100	3,492	3,880
6 to 15 "	2,115	2,136	2,274	2,106	2,205	2,177	2,309	2,385	2,632
16 to 30 "	2,236	2,227	2,160	2,129	2,141	2,243	2,375	2,375	2,335
31 to 50 "	5,194	5,510	5,216	5,147	5,027	4,924	5,156	5,124	5,165
51 to 100 "	6,510	6,775	6,459	6,512	6,365	6,395	6,627	6,691	6,619
101 to 200 "	6,420	6,790	6,810	6,577	6,474	6,608	6,840	6,977	7,169
202 to 300 "	3,028	3,230	3,304	3,202	3,197	3,299	3,511	3,510	3,554
301 to 400 "	2,885	2,969	2,550	2,551	2,563	2,670	2,852	2,775	2,828
401 to 500 "	1,177	1,272	1,313	1,302	1,387	1,439	1,591	1,596	1,667
501 to 600 "	777	848	941	881	936	982	1,015	1,111	1,058
601 to 700 "	1,674	1,780	1,452	1,630	2,014	2,311	2,493	2,510	2,650
701 to 800 "	355	455	448	439	466	527	560	537	549
801 to 900 "	269	268	338	336	384	367	400	417	428
901 to 1,000 "	346	341	341	371	372	405	438	446	440
1,001 to 1,500 "	802	797	981	965	1,038	1,094	1,276	1,193	1,283
1,501 to 2,000 "	357	415	486	505	512	573	610	618	665
2,001 to 3,000 "	387	372	515	489	536	547	580	627	601
3,001 to 4,000 "	162	189	235	224	260	251	261	273	322
4,001 to 5,000 "	102	120	166	144	158	165	175	147	155
5,001 to 7,500 "	149	161	186	197	217	218	228	208	243
7,501 to 10,000 "	84	98	127	122	126	159	169	151	137
10,001 to 15,000 "	91	115	135	157	133	124	130	171	158
15,001 to 20,000 "	52	59	78	75	94	83	94	86	90
20,001 to 30,000 "	51	47	71	75	82	85	94	102	106
30,001 to 40,000 "	36	36	34	45	50	56	65	44	49
40,001 and upwards ...	67	70	96	97	104	123	130	160	149

## STATISTICS, 1886—PRODUCTION.

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## HOLDINGS—continued.

No. 7.—NUMBER of HOLDINGS of VARIOUS SIZES in each year, from 1879 to 1887.

Size of Holding.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.
1 to 15 acres	4,676	4,974	5,550	5,186	5,124	5,154	5,409	5,877	6,512
16 to 200 „ „ „	20,360	21,302	20,645	20,361	20,007	20,161	20,998	21,174	21,288
201 to 400 „ „ „	5,913	6,199	5,854	5,753	5,760	5,969	6,363	6,285	6,382
401 to 1,000 „ „ „	4,598	4,964	4,733	4,959	5,559	6,031	6,497	6,617	6,792
1,001 to 2,000 „ „ „	1,159	1,212	1,467	1,470	1,540	1,667	1,886	1,811	1,948
2,001 to 10,000 „ „ „	884	940	1,229	1,176	1,297	1,350	1,413	1,406	1,458
10,001 and upwards...	297	327	414	449	463	461	513	563	552

No. 8.—AVERAGE SIZE of HOLDINGS in each year, from 1876 to 1887

Year ended 31st March.	Average area of Holdings.	Year ended 31st March.	Average area of Holdings.
1876 ... ..	315 acres.	1882 ... ..	703 acres.
1877 ... ..	459 „	1883 ... ..	772 „
1878 ... ..	481 „	1884 ... ..	817 „
1879 ... ..	564 „	1885 ... ..	813 „
1880 ... ..	569 „	1886 ... ..	862 „
1881 ... ..	691 „	1887 ... ..	817 „

No. 9.—NUMBER of OCCUPIERS and EXTENT of HOLDINGS, &amp;c., during each year, from 1877 to 1887.

Year ended 31st March.	Number of Occupiers of Land (excluding those for Pastoral purposes.)	Total extent of Holdings.	Extent of Land in Cultivation.	Extent of Land enclosed, but not in Cultivation.	Extent of Land unenclosed.
		acres.	acres.	acres.	acres.
1877 ... ..	39,639	18,210,796	513,840	11,020,968	6,675,987
1878 ... ..	40,329	19,435,896	546,586	13,792,620	5,096,720
1879 ... ..	37,887	21,471,596	613,642	15,903,803	4,954,150
1880 ... ..	39,918	22,721,603	635,641	17,578,389	4,507,573
1881 ... ..	40,302	27,873,498	710,337	21,437,914	5,725,247
1882 ... ..	39,354	27,692,208	645,068	21,998,485	5,048,655
1883 ... ..	39,760	30,714,349	733,582	24,977,047	5,003,719
1884 ... ..	40,793	33,352,998	789,082	27,241,009	5,322,906
1885 ... ..	43,078	35,035,504	852,017	29,319,775	4,863,711
1886 ... ..	43,727	37,690,596	868,093	32,162,515	4,659,987
1887 ... ..	44,932	36,726,169	972,496	32,356,387	3,397,286

No. 10.—COMPARATIVE STATEMENT showing the AREA UNDER CULTIVATION and the ESTIMATED TOTAL PRODUCE of some of the principal crops for the years ended 31st March, 1887, and 31st March, 1886, respectively.

Crops.	Estimated Total Produce—1887 compared with 1886.						Acreage—1887 compared with 1886.						Estimated Average Yield per Acre—1887 compared with previous years.							
	1887.	1886.	Quantities.		Proportion per cent.		1887.	1886.	No. of Acres.		Proportion per 100.		1887.	Previous Years.	Quantities.		Proportion per cent.			
			Above.	Below.	Above.	Below.			Above.	Below.	Above.	Below.			Above.	Below.	Above.	Below.		
Grain—Wheat ... ..	bushels. 5,868,844	bushels. 2,733,133	3,135,711	.....	114'7	.....	acres. 337,730	acres. 264,867	72,863	.....	27'5	.....	bushels. 17'37	bushels. 13'07	bshls. 4'37	bshls. ....	33'4	...		
Maize ... ..	3,825,146	4,336,163	.....	511,017	.....	11'7	.....	146,957	132,709	14,248	.....	10'7	.....	26'02	34'19	...	8'17	...	23'9	
Barley ... ..	132,959	85,606	57,353	.....	67'0	.....	6,079	5,298	781	.....	14'7	.....	21'87	20'69	1'18	...	5'7	...	...	
Oats ... ..	600,892	279,104	321,637	.....	115'2	.....	23,947	14,117	9,830	.....	69'6	.....	25'08	21'31	3'77	...	16'2	...	...	
Hay—Wheat ... ..	109,841	74,606	35,245	.....	47'2	.....	74,070	105,122	.....	31,052	.....	29'5	.....	1'48	1'01	0'47	...	46'5	...	...
Barley ... ..	4,388	1,750	5,638	.....	150'7	.....	2,095	2,314	.....	219	.....	9'4	.....	2'09	1'33	0'76	...	57'1	...	...
Oats ... ..	182,921	72,484	110,437	.....	152'4	.....	126,388	96,945	29,443	.....	30'3	.....	1'45	1'14	0'31	...	27'2	...	...	
Lucerne and Sown Grasses ... ..	52,738	42,532	10,206	.....	24'0	.....	20,817	15,504	5,313	.....	34'3	.....	2'53	2'68	...	0'15	...	5'6	...	
Other Crops—Potatoes... ..	45,803	38,695	7,108	.....	18'4	.....	17,322	15,166	2,156	.....	14'2	.....	2'64	2'82	...	0'18	...	6'4	...	
Sugar-cane (Productive) ... ..	167,959	239,347	.....	71,388	.....	29'8	.....	5,915	9,583	.....	3,668	.....	38'3	28'39	19'36	9'03	...	46'6	...	
Tobacco... ..	cwt. 14,970	cwt. 22,947	.....	7,977	.....	34'8	.....	1,203	1,603	.....	400	.....	25'0	12'45	10'81	1'64	...	15'1	...	
Grapes for Wine ... ..	gallons. 601,897	gallons. 555,470	46,427	.....	8'3	.....	3,131	2,876	255	.....	8'8	.....	192'24	138'33	53'91	...	38'9	...	...	

No. 11.—AREA of LAND under DIFFERENT CROPS during each year, for the period 1877-87.

Year ended 31st March.	Wheat.	Maize.	Barley.	Oats.	Rye.	Millet.	Potatoes.	Tobacco.	Arrow-root.	Sorghum and Imphee.	Sugar-cane.		Hay.				Sown Grasses, Oats, Barley, Sorghum, &c., for Green food for Cattle.	Vines.	Gardens and Orchards.	Orangeries.	All other in Crop.	Total Number of Acres in Crop.
											Productive.	Unproductive.	Wheat.	Barley.	Oats.	Lucerne and Grass.						
1877	acres. 145,608	acres. 116,364	acres. 5,662	acres. 21,828	acres. 1,277	acres. 242	acres. 14,171	acres. 333	acres. 53	acres. 51	acres. 3,524	acres. 3,231	acres. 17,115	acres. 2,041	acres. 77,212	acres. 15,578	acres. 61,516	acres. 4,457	acres. 20,453	acres. ....	acres. 3,119	acres. 513,840
1878	176,686	105,510	5,055	18,580	1,168	239	13,862	399	51	57	3,331	3,735	29,640	1,875	79,333	14,930	65,072	4,183	19,900	.....	2,943	546,556
1879	233,252	130,582	6,152	22,129	1,302	254	16,724	835	27	47	2,949	4,489	22,888	1,414	61,684	18,110	60,249	4,237	18,017	4,287	4,008	613,642
1880	233,368	135,034	6,130	23,883	1,016	86	19,271	592	25	25	3,675	4,102	25,281	1,838	67,877	17,418	64,643	4,266	18,130	5,106	3,870	635,641
1881	253,137	127,196	8,056	17,922	1,095	211	19,095	1,791	37	65	4,465	6,506	41,137	2,202	68,758	18,996	102,540	4,800	18,626	5,939	7,698	710,337
1882	221,887	117,478	6,426	16,347	889	200	15,943	1,625	126	29	4,983	7,184	39,428	2,089	86,088	19,005	75,825	4,027	15,541	6,301	3,638	645,068
1883	247,361	118,180	6,473	24,817	1,031	200	14,462	1,815	13	37	6,362	7,176	42,592	2,499	112,477	21,999	92,606	4,448	17,060	6,716	5,253	733,582
1884	289,757	123,634	5,081	17,810	1,140	284	14,953	1,785	4	64	7,583	7,401	49,348	2,159	107,451	19,545	107,993	4,378	17,455	7,268	3,982	789,082
1885	275,249	115,600	7,035	19,472	1,110	118	12,417	1,046	12	41	6,997	10,520	86,584	2,174	121,922	15,966	140,528	4,584	20,416	6,911	3,309	852,017
1886	264,867	132,709	5,297	14,117	666	266	15,166	1,603	68	51	9,583	6,835	105,122	2,314	96,946	15,504	156,710	5,247	19,245	7,733	8,040	868,093
1887	337,730	146,957	6,079	23,947	1,095	325	17,322	1,203	22	102	5,915	9,202	74,070	2,095	126,488	20,817	165,820	5,840	18,605	7,920	6,110	977,664





AGRICULTURAL PRODUCTION—continued.

No. 13.—PRODUCE RAISED in the Colony during each year, for the period 1877-86.

Year ended 31st March.	Wheat.	Maize.	Barley.	Oats.	Rye.	Millet.	Potatoes.	Tobacco.	Arrowroot	Sorghum and Imphee (Grain).	Sugar-cane.	Hay.				Vines.			Oranges.
												Wheat.	Barley.	Oats.	Lucerne and Grass	Wine.	Brandy.	Fruit for Table use.	
	bshls.	bshls.	bshls.	bshls.	bshls.	bshls.	tons.	cwt.	lb.	cwt.	tons.	tons.	tons.	tons.	galls.	galls.	tons.	No. of doz.	
1877 ... ..	2,391,979	3,879,537	134,158	461,916	22,277	4,400	42,938 <sup>3</sup> / <sub>4</sub>	2,440	86,458	1,290	99,430	21,297	2,805	98,901	36,657	799,709	2,968 <sup>1</sup> / <sub>2</sub>	917 <sup>3</sup> / <sub>4</sub>	...
1878 ... ..	2,445,507	3,551,806	99,485	358,853	19,184	3,877	34,957 <sup>1</sup> / <sub>2</sub>	3,049	83,554	2,745	99,978	29,137	2,134	87,660	35,144	708,431	1,481 <sup>1</sup> / <sub>2</sub>	797 <sup>3</sup> / <sub>4</sub>	...
1879 ... ..	3,439,326	4,420,580	132,072	447,912	22,503	5,023	53,590	7,932 <sup>1</sup> / <sub>4</sub>	47,484	1,735	104,192	31,320	2,258	75,138	63,690	684,733	2,540	1,102	3,398,445
1880 ... ..	3,613,266	4,761,856	131,541	516,937	16,873	1,855	62,227 <sup>1</sup> / <sub>4</sub>	6,221 <sup>1</sup> / <sub>2</sub>	38,531	395	126,119	32,943	2,395	84,915	42,510	733,576	4,186 <sup>1</sup> / <sub>2</sub>	1,017 <sup>1</sup> / <sub>2</sub>	2,763,811
1881 ... ..	3,717,355	4,518,897	163,395	356,121	16,814	5,680	52,111 <sup>1</sup> / <sub>4</sub>	19,469 <sup>1</sup> / <sub>2</sub>	33,865	840	121,616	44,937	2,616	77,811	49,730	602,007	6,628	1,579 <sup>1</sup> / <sub>2</sub>	3,810,356
1882 ... ..	3,405,966	4,330,956	135,218 <sup>1</sup> / <sub>2</sub>	356,566	14,677 <sup>1</sup> / <sub>2</sub>	2,519	44,323	18,311 <sup>1</sup> / <sub>4</sub>	14,412	2,035	128,752	42,378	4,328	100,773	51,053	513,688 <sup>1</sup> / <sub>4</sub>	3,522	1,102 <sup>1</sup> / <sub>2</sub>	5,164,134
1883 ... ..	4,042,395	4,057,635	133,050	617,465	17,380 <sup>1</sup> / <sub>2</sub>	3,066 <sup>1</sup> / <sub>2</sub>	43,460 <sup>3</sup> / <sub>4</sub>	17,540 <sup>1</sup> / <sub>2</sub>	16,034	627 <sup>1</sup> / <sub>4</sub>	169,192	43,997	3,558	140,979	54,387	543,596	1,614	1,440 <sup>1</sup> / <sub>2</sub>	4,978,829
1884 ... ..	4,345,437	4,538,604	106,406	376,635	16,274	4,078 <sup>1</sup> / <sub>2</sub>	36,976 <sup>1</sup> / <sub>4</sub>	20,006 <sup>1</sup> / <sub>4</sub>	6,090	1,014 <sup>1</sup> / <sub>2</sub>	204,547	55,119	2,785	113,899	57,438	589,604	4,162	1,377 <sup>1</sup> / <sub>2</sub>	8,102,658
1885 ... ..	4,271,394	3,389,505	148,869	425,920	16,739	1,843	31,334 <sup>3</sup> / <sub>4</sub>	9,914 <sup>1</sup> / <sub>2</sub>	1,027	187	105,323	87,328	2,870	149,489	40,624	442,612	1,432	1,465 <sup>1</sup> / <sub>4</sub>	4,097,666
1886 ... ..	2,733,133	4,336,163	85,606 <sup>1</sup> / <sub>4</sub>	279,107	7,846	6,685 <sup>1</sup> / <sub>2</sub>	38,695	22,947 <sup>1</sup> / <sub>2</sub>	3,070	1,145	239,347	74,606	1,749	72,484	42,532	555,470	3,893	1,695	8,749,256
1887 ... ..	5,868,844	3,825,146	132,949	600,892	17,784	4,749	45,803	13,642	3,130	374	167,959	109,851	4,388	182,921	52,738	601,897	763	1,945	6,376,868

No. 14.—AREA OF LAND UNDER WHEAT: TOTAL YIELD PER ACRE for each year, from 1862-87.

Year ended 31st March.	Area of Crop.	Bushels.	Yield per Acre.	Year ended 31st March.	Area of Crop.	Bushels.	Yield per Acre.	Year ended 31st March.	Area of Crop.	Bushels.	Yield per Acre.	
1862 ... ..	123,468	1,606,034	13'01	1871 ... ..	147,997	999,595	6'75	1880 ... ..	233,368	3,613,266	15'48	
1863 ... ..	108,136	1,054,954	9'75	1872 ... ..	154,030	2,229,642	14'48	1881 ... ..	253,137	3,717,355	14'69	
1864 ... ..	103,942	808,919	7'78	1873 ... ..	177,551	2,898,463	16'32	1882 ... ..	221,887	3,405,966	15'35	
1865 ... ..	104,568	1,246,458	11'92	1874 ... ..	169,330	2,273,620	13'43	1883 ... ..	247,361	4,042,395	16'35	
1866 ... ..	131,653	1,013,863	7'69	1875 ... ..	166,911	2,148,394	12'87	1884 ... ..	289,757	4,345,437	15'00	
1867 ... ..	175,033	2,226,027	12'72	1876 ... ..	133,609	1,958,640	14'66	1885 ... ..	275,225	4,271,304	15'52	
1868 ... ..	149,142	1,433,807	9'61	1877 ... ..	145,608	2,391,979	16'43	1886 ... ..	264,867	2,733,133	10'45	
1869 ... ..	164,206	1,787,085	10'88	1878 ... ..	176,686	2,455,507	13'84	1887 ... ..	337,730	5,868,844	17'37	
1870 ... ..	189,452	3,200,959	16'89	1879 ... ..	233,252	3,439,326	14'74	Average yield for twenty-six years ... ..				13'23





AGRICULTURAL PRODUCTION—continued.

No. 16.—AVERAGE Yearly IMPORT, EXPORT, and PRODUCTION of BREADSTUFFS, with CONSUMPTION per HEAD and DEFICIENCY of HOME PRODUCE, for the years 1862-86 (in quinquennial periods).

Period of which an average has been taken	Imports.				Exports.				Excess of Imports over Exports.	Home Produce.				Total available for Food.	Consumption of Wheat per head	Home Produce per head.	Deficiency per head.
	Flour.	Equivalent in Wheat.	Wheat	Total	Flour	Equivalent in Wheat.	Wheat.	Total		Acres under Crop	Wheat required for Seed	Wheat Crop.	Balance available for Food				
1862-66	Cwt Average per annum 426,757	Bushels Average per annum 1,066,892	Bushels Average per annum 801,765	Bushels Average per annum 1,868,658	Cwt Average per annum 169,074	Bushels Average per annum 422,686	Bushels Average per annum 26,156	Bushels Average per annum 448,842	Bushels Average per annum 1,419,815	Acres Average per annum 114,353	Bushels Average per annum 342,942	Bushels Average per annum 1,146,054	Bushels Average per annum 1,003,112	Bushels Average per annum 2,422,927	Bushels Per annum 6.2	Bushels Per annum 2.5	Bushels Per annum 3.7
1867-71	362,216	905,540	750,705	1,656,245	118,044	295,110	34,891	330,002	1,326,243	165,162	206,452	1,949,494	1,743,042	3,069,285	6.4	3.6	2.8
1872-76	404,844	1,012,110	838,388	1,850,498	82,967	207,418	95,801	313,219	1,547,279	160,286	200,357	2,301,679	2,101,322	3,648,602	6.4	3.7	2.7
1877-81	611,656	1,529,140	545,914	2,075,054	143,368	358,421	103,755	462,173	1,612,878	208,410	260,512	3,121,486	2,860,974	4,473,852	6.4	4.0	2.4
1882-86	993,857	2,484,645	613,180	3,097,825	259,771	649,427	71,988	721,415	2,376,411	259,933	324,916	3,761,358	3,436,425	5,812,836	6.5	4.0	2.5
General average for the 25 years															6.4	3.6	2.5

No. 17.—IMPORT, EXPORT, and GROWTH of BREADSTUFFS for each year, from 1862 to 1886; also, CONSUMPTION per HEAD and DEFICIENCY of HOME PRODUCTION.

Year.	Imports				Exports.				Excess of Imports over Exports.	Home Produce.			Balance available for Food.	Total available for Food	Consumption of Wheat per Head	Home Produce per Head.	Deficiency.
	Flour	Equivalent in Wheat.	Wheat.	Total.	Flour.	Equivalent in Wheat.	Wheat.	Total		Acres.	For Seed	Wheat Crop.					
1862	Cwt. 293,460	Bushels. 733,650	Bushels. 446,640	Bushels. 1,180,290	Cwt. 115,980	Bushels 289,950	Bushels. 15,441	Bushels 305,391	Bushels 874,899	Acres. 123,468	Bushels. 154,335	Bushels. 1,606,084	Bushels. 1,451,749	Bushels. 2,326,648	Bhls. 6.5	Bhls. 4.0	Bhls. 2.5
1863	284,980	712,450	612,366	1,324,816	143,880	359,950	9,461	369,411	955,405	108,137	135,171	1,054,954	919,783	1,875,188	5.0	2.4	2.6
1864	472,265	1,180,661	1,163,914	2,344,576	161,200	403,000	18,682	421,682	1,922,894	103,942	129,927	808,919	678,992	2,601,886	6.7	1.7	5.0
1865	486,440	1,216,100	692,826	1,908,926	191,680	479,200	15,307	494,507	1,414,419	104,568	130,710	1,246,451	1,115,741	2,530,160	6.3	2.8	3.5
1866	596,640	1,491,600	1,093,081	2,584,681	232,533	581,332	71,890	653,222	1,931,459	131,653	164,566	1,013,863	849,297	2,780,756	6.6	2.0	4.6
1867	329,100	822,750	755,973	1,578,723	134,138	335,345	78,480	413,825	1,164,898	175,033	218,791	2,226,027	2,007,236	3,172,134	7.2	4.6	2.6
1868	404,840	1,012,100	609,011	1,621,111	149,188	372,970	12,974	385,944	1,235,167	149,142	186,427	1,433,807	1,247,380	2,482,547	5.4	2.7	2.7
1869	326,020	815,050	777,408	1,592,458	121,111	302,777	31,499	344,276	1,258,182	164,206	205,257	1,887,085	1,681,828	2,940,010	6.2	3.5	2.7
1870	387,900	969,750	569,638	1,539,388	100,375	259,937	22,914	273,851	1,265,537	189,452	236,815	3,200,959	2,964,144	4,229,681	8.6	6.0	2.6
1871	363,220	908,050	1,041,496	1,949,546	85,409	213,523	28,591	242,114	1,707,432	147,977	184,971	999,595	814,624	2,522,056	4.9	1.6	3.3
1872	336,280	840,700	631,299	1,471,999	71,160	177,900	94,680	272,580	1,199,419	154,030	192,537	2,229,642	2,037,105	3,236,524	6.1	3.8	2.3
1873	342,160	855,400	818,845	1,674,245	85,099	212,747	76,969	289,716	1,384,529	177,551	221,938	2,676,525	2,676,525	4,061,054	7.4	4.9	2.5
1874	347,880	869,700	740,019	1,609,719	85,415	213,537	27,901	241,438	1,368,281	169,330	211,662	2,273,260	2,061,598	3,429,879	6.0	3.6	2.4
1875	518,040	1,295,100	1,083,773	2,378,873	102,692	256,730	230,679	487,409	1,891,464	166,911	208,638	2,148,394	1,939,756	3,831,220	6.5	3.3	3.2
1876	479,860	1,199,650	918,005	2,117,655	70,471	176,177	48,775	224,952	1,892,703	133,609	167,011	1,958,640	1,791,629	3,684,332	6.0	2.9	3.1
1877	427,560	1,068,900	823,526	1,892,426	110,351	275,877	126,553	402,430	1,489,996	145,608	182,010	2,391,979	2,209,969	3,699,965	5.8	3.5	2.3
1878	663,480	1,658,700	780,604	2,439,304	90,920	227,300	66,116	293,416	2,145,888	176,686	220,857	2,445,507	2,224,650	4,370,538	6.6	3.3	3.3
1879	563,300	1,408,250	442,849	1,851,099	60,617	151,542	52,231	203,773	1,647,326	233,252	291,565	3,439,326	3,147,761	4,795,087	6.9	4.5	2.4
1880	743,000	1,857,500	422,473	2,279,973	101,470	253,975	121,853	375,828	1,904,445	233,368	291,710	3,613,266	3,321,556	5,226,000	7.1	4.5	2.6
1881	660,940	1,652,350	260,118	1,912,468	353,484	883,710	152,022	1,035,732	876,736	253,137	316,421	3,717,315	3,400,934	4,277,670	5.6	4.4	1.2
1882	979,720	2,449,300	698,518	3,147,818	333,380	833,450	68,677	902,127	2,245,691	222,478	278,097	3,414,558	3,136,461	5,382,152	6.7	3.9	2.8
1883	800,960	2,002,400	247,099	2,249,499	309,018	772,545	71,961	844,506	1,404,993	247,348	309,185	4,042,356	3,733,171	5,138,164	6.1	4.4	1.7
1884	890,360	2,225,900	469,785	2,695,685	320,088	800,220	51,351	851,571	1,844,114	289,753	362,191	4,345,437	3,983,246	5,827,360	6.6	4.5	2.1
1885	1,068,410	2,671,025	545,423	3,216,448	182,770	456,925	47,647	504,572	2,711,876	275,225	344,031	4,271,304	3,927,273	6,639,149	7.1	4.2	2.9
1886	1,229,840	3,074,600	1,105,079	4,179,679	153,596	383,990	120,306	504,296	3,675,383	264,861	331,076	2,733,133	2,402,057	6,077,440	6.2	2.9	3.3

The yield of wheat for the season 1886-7 amounted to 5.65 bushels per head, the probable deficiency for the year will be about 1.25 bushels per head.

AGRICULTURAL PRODUCTIONS—continued.

No. 18.—VALUE OF BREADSTUFFS IMPORTED AND EXPORTED from 1877 to 1886, with the EXCESS of IMPORTS during each year

Year	Total Imports	Total Exports	Excess of Imports
	£	£	£
1877	610,367	127,921	482,446
1878	624,842	77,518	547,324
1879	421,152	53,537	367,615
1880	486,374	83,251	403,123
1881	447,093	238,751	208,342
1882	836,074	248,039	588,035
1883	539,164	210,412	328,752
1884	606,122	186,677	419,445
1885	619,862	121,364	498,498
1886	869,657	106,341	763,316

No. 19.—CONSUMPTION OF BREADSTUFFS, AMOUNT OF FLOUR IMPORTED and MANUFACTURED in the Colony, and PERCENTAGE of HOME MANUFACTURE to TOTAL CONSUMPTION, during the period 1862-86

Period	Total Consumption of Flour in equivalent of Wheat	Flour imported for Home Consumption, in equivalent of Wheat	Flour manufactured in the Colony, in equivalent of Wheat	Percentage of Flour manufactured in Colony to whole Consumption
	bushels	bushels	bushels.	
1862-66	2,422,928	644,206	1,788,722	73.5
1867-71	3,399,288	610,429	2,788,759	83.2
1872-76	3,951,820	804,692	3,147,128	79.6
1877-81	4,836,028	1,463,399	3,372,629	69.7
1882-86	5,812,836	1,835,218	3,977,618	68.5

The above figures denote the yearly average for each period

No. 20.—COMPARATIVE STATEMENT showing the PRODUCTION of MAIZE in the Colony of New South Wales, for the six years ended 31st March, 1887.

Districts	Electonates	Year ended 31st March, 1882			Year ended 31st March, 1883			Year ended 31st March, 1884			Year ended 31st March, 1885			Year ended 31st March, 1886			Year ended 31st March, 1887		
		Area under Maize	Production	Average per Acre	Area under Maize	Production	Average per Acre	Area under Maize	Production	Average per Acre	Area under Maize	Production	Average per Acre	Area under Maize	Production	Average per Acre	Area under Maize	Production	Average per Acre
Tamworth and New England	Tamworth and New England	acres	bushels	bushels	acres	bushels	bushels	acres	bushels	bushels	acres	bushels	bushels	acres	bushels	bushels	acres	bushels	bushels
		2,399	44,481	18.5	2,993	65,487	21.8	2,315	43,969	13.9	1,555	28,486	18.3	2,937	55,959	19.0	3,117	56,210	18.0
The North Coast	The Macleay	16,202	859,083	53.0	18,260	911,019	49.9	19,193	996,655	51.9	21,265	918,250	43.1	21,261	919,112	43.2	23,222	804,299	34.6
	The Hastings and Manning	16,523	604,221	36.5	16,823	604,136	35.9	17,469	709,574	40.6	14,357	394,820	27.5	17,489	593,882	33.9	17,123	542,506	31.6
	The Clarence	9,701	463,770	47.8	9,646	481,652	49.9	10,727	388,934	36.2	10,973	421,645	38.4	14,212	478,521	33.6	15,147	316,758	20.9
	The Richmond	5,455	230,392	42.2	5,754	210,034	36.5	6,667	206,361	30.8	8,151	222,188	27.2	9,617	288,060	30.0	11,724	288,579	25.8
	Grafton	7,368	328,728	44.6	7,223	231,667	32.0	7,503	316,760	42.2	8,903	254,950	28.6	9,850	309,011	31.3	10,729	195,186	18.1
Glen Innes	Gloucester	2,119	62,264	29.3	1,981	57,676	29.1	2,327	76,874	33.0	2,368	45,410	19.1	2,511	74,804	29.7	2,635	80,688	30.6
	Glen Innes																		
	Tenterfeld	3,834	80,590	21.0	5,527	137,570	24.9	3,232	119,492	22.8	4,428	84,239	19.0	5,735	138,115	23.8	6,541	126,404	19.3
The Hunter River Valley	Inverell																		
	Morpeth																		
	Newcastle	10,978	367,663	33.4	11,179	314,059	28.0	13,630	452,172	33.0	9,788	212,726	21.7	12,275	366,053	29.8	11,777	322,584	27.4
Mudgee	The Hunter																		
	The Upper Hunter																		
Tumut	East & West Maitland	3,757	64,919	17.3	1,694	30,013	17.7	2,119	41,870	19.7	2,403	42,363	17.6	2,633	59,901	22.8	3,608	80,745	20.6
	Eden	1,617	52,025	32.1	2,013	67,600	33.5	1,512	48,285	31.9	2,229	69,340	31.1	2,550	113,655	44.5	2,642	94,175	35.6
The South Coast	Shoalhaven	13,875	509,382	36.7	13,481	469,508	34.8	13,955	474,461	34.0	11,184	349,813	31.2	11,710	392,374	33.5	11,875	268,874	22.6
	Kiama																		
	Illawarra																		
The Hawkesbury and the Nepean Rivers Valleys	The Hawkesbury	14,504	492,508	33.9	13,408	306,986	22.9	14,900	517,904	34.7	13,234	287,602	21.7	13,646	451,714	33.1	13,444	398,318	29.6
	The Nepean																		
	Wollombi																		
Other Districts of the Colony where maize is not grown in large quantities	Camden																		
		9,146	170,930	18.7	8,198	169,628	20.7	6,035	95,293	15.7	4,762	57,673	12.1	6,280	95,002	15.1	13,933	248,815	17.9
General Totals and Averages		117,478	4,330,956	36.9	118,180	4,057,635	34.3	123,634	4,538,604	36.7	115,600	3,389,505	29.3	132,709	4,936,163	32.6	146,957	3,825,146	26.02

## STATISTICS, 1886—PRODUCTION.

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## MINERAL PRODUCTION.

No. 21.—QUANTITY and ESTIMATED VALUE of MINERALS obtained in the Colony during the years 1884-85.

Minerals.	1885.		1886.		Increase in Value.	Decrease in Value.
	Quantity.	Value.	Quantity.	Value.		
Gold ... ..	oz.	£	oz.	£	£	£
Silver ... ..	103,736'36	378,665	101,416'80	366,294	.....	12,371
	794,173'80	159,187	1,015,433'50	197,544	38,357	.....
Coal ... ..	tons.		tons.			
Shale ... ..	2,878,863'23	1,340,213	2,830,175'00	1,303,164	.....	37,049
Tin... ..	27,462'00	67,239	43,563'00	99,976	32,737	.....
Copper ... ..	5,192'80	415,626	4,967'80	467,053	52,027	.....
Iron ... ..	5,746'00	264,920	4,026'80	167,665	.....	97,255
Antimony ... ..	4,175'79	25,793	3,685'87	19,068	.....	6,725
Bismuth ... ..	292'75	4,296	273'15	3,381	.....	915
Sundry Minerals ... ..	14'17	3,700	20'90	3,870	170	.....
Silver Lead Ore ... ..	456'76	7,820	69'22	5,327	.....	2,493
Asbestos ... ..	2,286'20	107,626	4,802'10	294,485	186,859	.....
	6'00	90	.....	.....	.....	90
Total Value ... ..	.....	2,775,175	.....	2,928,427	153,252	.....

No. 22.—ESTIMATED VALUE of MINERALS obtained in the Colony, to the close of the year 1886.

Gold ... ..	£
Silver and Silver Lead ... ..	36,469,138
Tin ... ..	1,231,939
Copper ... ..	7,402,456
Iron ... ..	4,964,250
Coal ... ..	250,922
Shale ... ..	18,352,669
Sundry Minerals... ..	995,413
	105,400
	£69,772,187

No. 23.—APPROXIMATE NUMBER of PERSONS engaged MINING for GOLD, SILVER, COPPER, TIN, IRON, COAL, and SHALE, during the years 1881-86.

Persons engaged Mining for—	1881.	1882.	1883.	1884.	1885.	1886.
Gold ... ..	9,056	9,215	6,750	6,548	5,911	6,767
Silver and Silver Lead... ..	.....	.....	.....	.....	929	1,297
Copper ... ..	1,177	1,442	1,913	1,746	1,000	622
Tin ... ..	4,530	5,146	4,100	2,850	3,395	2,814
Iron ... ..	.....	.....	.....	.....	180	120
Coal ... ..	4,297	4,647	5,481	6,227	7,097	7,847
Shale ... ..	231	317	293	116	324	100
Total ... ..	19,291	20,767	18,537	17,487	18,836	19,567

No. 24.—ESTIMATED VALUE of MINERAL PRODUCTS obtained in the Colony during the years 1876-86.

Year.	Gold.	Silver.	Silver and Lead.	Tin.	Copper.	Iron.	Coal.	Shale.	Antimony.	Bismuth.	Sundry Minerals.	Total Value.
	£	£	£	£	£	£	£	£	£	£	£	£
1876...	613,190	15,456	1,392	439,638	249,978	13,399	803,300	47,994	140	.....	.....	2,184,487
1877...	471,418	6,673	325	508,540	324,226	7,600	858,998	46,524	1,131	.....	7,725	2,233,160
1878...	430,033	13,291	258	395,822	345,158	6,666	920,036	57,211	1,964	.....	1,082	2,172,421
1879...	407,219	18,071	535	372,349	257,352	10,550	950,879	66,930	1,046	.....	525	2,085,456
1880...	441,543	21,878	890	471,337	364,059	15,335	615,337	44,725	1,652	.....	1,118	1,977,874
1881...	566,513	13,026	1,625	724,003	355,062	47,871	603,248	40,748	17,346	2,728	1,020	2,373,190
1882...	526,521	9,024	360	833,461	324,727	37,224	948,965	84,114	16,732	162	1,054	2,782,344
1883...	458,509	16,488	2,075	824,552	577,201	26,908	1,201,942	90,861	5,555	650	160	3,204,901
1884...	395,292	19,780	241,940	521,587	416,179	24,572	1,303,077	72,176	6,458	2,770	.....	3,003,831
1885...	378,665	159,187	107,626	415,626	264,920	25,793	1,340,213	67,239	4,296	3,700	7,910	2,775,175
1886...	366,294	197,544	294,485	407,653	167,665	19,068	1,303,164	99,976	3,381	3,870	5,327	2,928,427
	5,055,197	490,418	651,511	5,974,568	3,646,527	234,986	10,850,059	718,498	59,701	13,880	25,921	27,797,734

## MINERAL PRODUCTION—continued.

No. 25.—QUANTITY and VALUE of GOLD, the PRODUCE of the COLONY, COINED or EXPORTED, to the close of the year 1886.\*

Year.	Weight.	Value	Year.	Weight	Value	Year	Weight.	Value
	oz.	£		oz.	£		oz.	£
1851 ..	144,120 88	468,336	1864 ..	341,954 12	1,304,735	1877 ...	122,619'24	463,130
1852...	818,751'93	2,660,946	1865 ..	364,540 63	1,390,803	1878 ..	117,977 88	423,184
1853...	548,052'99	1,781,172	1866 ..	287,534 29	1,103,246	1879 ..	107,640'38	399,187
1854...	237,910'70	773,209	1867 ..	269,407 35	1,043,458	1880 ..	116,750'52	434,641
1855...	170,145 73	613,148	1868 ...	258,773 41	1,003,002	1881 ..	145,532'05	550,111
1856...	183,946'36	666,155	1869 ...	252,130 14	967,625	1882 ...	129,233 28	491,594
1857 ..	161,043 26	616,712	1870 ...	240,401'86	916,409	1883 ...	122,256 58	452,611
1858...	280,557'93	1,082,865	1871 ..	321,468'70	1,232,011	1884 ..	105,933'43	390,229
1859 ..	323,984'02	1,237,662	1872 ...	424,100'23	1,634,821	1885 ...	100,667 16	366,388
1860 ...	381,613 96	1,445,158	1873 ...	360,849 97	1,389,705	1886 ...	98,446'27	355,600
1861...	459,879'26	1,771,855	1874 ...	270,710'12	1,038,844			
1862 ..	616,909'71	2,360,383	1875 ...	229,385 55	881,480			
1863 ..	467,399'05	1,791,534	1876 ...	155,166 37	581,689			

\*For other information respecting Gold see Part V

No. 26.—QUANTITY and VALUE of TIN, the PRODUCE of the COLONY, EXPORTED since the opening of the Tin-fields in 1872.

Year	Ingots.		Ore		Total Value
	Quantity	Value	Quantity.	Value.	
	tons cwt.	£	tons cwt.	£	£
1872 ...	47 0	6,482	849 0	41,337	47,819
1873 ...	911 0	107,795	3,660 0	226,641	334,436
1874 ...	4,101 0	366,189	2,188 0	118,133	484,322
1875 ...	6,058 0	475,168	2,022 0	86,143	561,311
1876 ...	5,449 0	379,318	1,509 0	60,320	439,638
1877 ...	7 230 0	477,952	824 0	30,588	508,540
1878 ...	6,085 0	362,072	1,125 0	33,750	395,822
1879 ...	5,107 2	343,975	813 15	29,274	372,349
1880 ...	5,476 6	440,615	682 6	30,722	471,337
1881 ...	7,590 17½	686,511	609 6	37,492	724,003
1882 ...	8,059 0	800,571	611 0	32,800	833,461
1883 ..	8 680 1	802,867	445 4	21,685	824,552
1884 ...	6,315 16	506,726	349 13	14,861	521,587
1885 ...	4,657 18	390,458	534 18	25,168	415,626
1886 ..	4,640 18	449,303	326 18	18,350	467,653
	80,408 18½	6,595,102	16,480 0	807,354	7,402,456

No. 27.—QUANTITY and VALUE of COPPER, the PRODUCE of the COLONY, EXPORTED during each year, from 1858 to 1886.

Year	Ingots		Ore and Regulus		Total Value
	Quantity.	Value	Quantity	Value	
	tons.	£	tons.	£	£
1858 .	.....	.....	58	1,400	1,400
1859 ...	30	578	..	..	578
1860 ..	.....	.....	43	1,535	1,535
1861 ..	.....	.....	144	3,390	3,390
1862 ..	.....	.....	213	5,742	5,742
1863 ...	23	1,680	114	420	2,100
1864 ..	54	5,230	.....	.....	5,230
1865 ...	247	15,820	22	545	16,365
1866 ...	255	18,905	23	1,885	20,790
1867 ...	393	30,189	..	5	30,194
1868 ...	644	23,297	172	4,000	27,297
1869 ..	1,980	74,605	104	2,070	76,675
1870 ...	994	65,671	6	60	65,731
1871 ...	1,350	87,579	94	1,297	88,876
1872 ...	1,035	92,736	417	13,152	105,888
1873 ...	2,795	237,412	51	1,690	239,102
1874 ...	3,638	311,519	522	13,621	325,140
1875 ..	3,520	297,334	157	4,356	301,690
1876 ...	3,106	243,142	169	6,836	249,978
1877 ...	4,153	307,181	360	17,045	324,226
1878 ...	4,983	337,409	236	7,749	345,158
1879 ...	4,107	256,437	36	915	257,352
1880 ...	5,263	359,260	132	4,799	364,059
1881 ..	5,361	350,087	133	4,975	355,062
1882 ...	4,865	321,887	93	2,840	324,727
1883 ...	8,873	574,497	84	2,704	577,201
1884 ...	7,286	415,601	19	578	416,179
1885 ..	5,745	264,905	1	15	264,920
1886 ..	3,969	166,429	56	1,112	167,541
Total	74,669	4,859,390	3,459	104,736	4,964,126

## STATISTICS, 1886—PRODUCTION.

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## MINERAL PRODUCTION—continued.

No. 28.—STATEMENT of MINERS' RIGHTS, BUSINESS AND MINERAL LICENSES, issued at each Gold-field in the Colony in the year 1886

Name of Gold field	Miners' Rights	Business Licenses.	Mineral Licenses	Name of Gold field	Miners' Rights	Business Licenses	Mineral Licenses
Armidale . . . . .	157	7	10	Lionsville . . . . .	53	.	..
Adelong . . . . .	175	4	.....	Mount M'Donald . . . . .	116	25	...
Araluen . . . . .	111	2	4	Major's Creek . . . . .	61	..	.....
Albury . . . . .	60	9	.	Molong . . . . .	36	.	.....
Brewarima . . . . .	4	.....	...	Mudgee . . . . .	183	7	13
Boorook . . . . .	193	5	.....	Moruya . . . . .	187	..	1
Bulladelah . . . . .	17		12	Mitchell's Creek . . . . .	335	110	16
Elayncy . . . . .	49	.....	.....	Macleay River . . . . .	22	..	10
Bega . . . . .	4	...	..	Milparinka . . . . .	403	62	37
Bingera . . . . .	151	2	10	Murwillambah . . . . .	6	.	.
Barraba . . . . .	98	2	1	Murrumburrah . . . . .	64	4	..
Bateman's Bay . . . . .	13	...	...	Nana Creek . . . . .	28	..	..
Bombala . . . . .	40	29	6	Nowra . . . . .	53	..	2
Braidwood . . . . .	73	10	11	Nundle . . . . .	184	13	1
Bathurst . . . . .	110	14	13	Nerriga . . . . .	41	..	.
Berrima . . . . .	29	...	9	Nimtybelle . . . . .	7	..	...
Burrowa . . . . .	29	...	.	Nymagee . . . . .	2	.	...
Burruga . . . . .	84	6	1	Orange . . . . .	197	2	5
Barnedman . . . . .	134	31	..	Oberon . . . . .	52	..	6
Bourke . . . . .	7	3	.....	Parkes . . . . .	503	12	.....
Bendemeer . . . . .	6	1	8	Panamutha . . . . .		12	3
Cudal . . . . .	2	...	.....	Queanbeyan . . . . .	77	37	5
Copeland . . . . .	98	34	.....	Rylstone . . . . .	12	..	.
Cowra . . . . .	84	2	..	Rockley . . . . .	68	55	.....
Cooma . . . . .	46	.....	3	Reedy Flat . . . . .	73	6	.....
Canowindra . . . . .	139	4	7	Sofala . . . . .	394	19	.....
Carcoar . . . . .	129	5	.....	Scone . . . . .	45	1	2
Captain's Flat . . . . .	2	.....	.....	Singleton . . . . .	5	...	...
Cootamundra . . . . .	6	...	...	Temora . . . . .	389	82	..
Cobar . . . . .	14	...	3	Trunkey . . . . .	110	44	.....
Dubbo . . . . .	21	...	1	Tuena . . . . .	116	7	8
Dalmorton . . . . .	39	2	.....	Tumbarumba . . . . .	163	4	.....
Dungog . . . . .	30	1	...	Tumut . . . . .	50	1	1
Emmaville . . . . .	30	31	188	Tamworth . . . . .	12	.....	1
Eurobodalla . . . . .	36	11	...	Tenterfield . . . . .	367	20	18
Forbes . . . . .	342	15	3	Tingha . . . . .	3	6	242
Fairfield . . . . .	321	32	...	Tarcutta . . . . .	48	7	.....
Gundagai . . . . .	138	.	2	Tomingley . . . . .	74	11	..
Gulgong . . . . .	218	11	22	Uralla . . . . .	141	4	1
Grafton . . . . .	79	1	1	Urana . . . . .	7	.	...
Gundaroo . . . . .	4	...	.	Umberumberka . . . . .	103	964	286
Grenfell . . . . .	160	6	.	Wellington . . . . .	55	1	.....
Glen Innes . . . . .	75	4	76	Wollongong . . . . .	3	...	4
Gunning . . . . .	2	.....	3	Walcha . . . . .	88	.....	1
Goulburn . . . . .	34	.	17	Wilson's Downfall . . . . .	22	4	68
Hargraves . . . . .	289	28	.	Wilcannia . . . . .	8	5	1
Hill End . . . . .	300	12	.	Wagonga . . . . .	200	105	99
Hillston . . . . .	49	16	.....	Yarriaba . . . . .	15	.....	...
Ironbarks . . . . .	198	23	...	Yass . . . . .	2	.	...
Junee . . . . .	29	1	.	Young . . . . .	390	33	4
Kiandra . . . . .	117	1	...	Issued at the Local Offices	10,347	2,033	1,249
Lithgow . . . . .	26	...	3	Issued at the Treasury . . . . .	401	2	222
Little River . . . . .	107	5	...				
Lismore . . . . .	66	.	...	Total . . . . .	10,748	2,035	1,471

NOTE.—No miners' right or licenses were issued at offices which do not appear in the above table.

## STATISTICS, 1886—PRODUCTION.

## MINERAL PRODUCTION—continued.

No. 29.—NUMBER and DESCRIPTION of MACHINES employed in QUARTZ-MINING in the Colony, in the year 1886.

Mining Districts.	Steam-engines employed in Winding.		Crushing Machines.	Stamp Heads.	Whims and Pulleys.	Water-wheels.	Derricks.	Whips.
	No.	Aggregate horse-power.						
			No.	No.	No.	No.	No.	No.
<b>Bathurst District—</b>								
Blayney ... ..	3	48	.....	19	.....	.....	.....	.....
Mount M'Donald ... ..	3	95	3	.....	.....	.....	.....	.....
Trunkey ... ..	4	41	2	23	.....	1	.....	.....
Mitchell's Creek ... ..	2	10	2	10	.....	.....	.....	.....
Tuena ... ..	3	10	3	.....	.....	2	.....	.....
Oberon ... ..	1	12	1	10	.....	.....	.....	.....
Rockley ... ..	1	6	1	.....	.....	.....	.....	.....
Bathurst ... ..	.....	.....	1	6	.....	.....	.....	.....
Carcoar ... ..	1	.....	1	20	.....	1	.....	.....
<b>Tambaroora and Turon District—</b>								
Sofala ... ..	4	59	4	35	.....	.....	.....	.....
Hill End ... ..	3	.....	1	15	.....	.....	.....	.....
Ironbarks ... ..	2	24	1	.....	.....	.....	.....	.....
Wellington ... ..	3	60	3	.....	.....	.....	.....	.....
<b>Lachlan District—</b>								
Parkes ... ..	1	25	1	20	.....	.....	.....	.....
Barmedman ... ..	3	25	.....	.....	.....	.....	.....	.....
Junee ... ..	1	10	1	5	.....	.....	.....	.....
Grenfell ... ..	2	16	2	30	.....	.....	.....	.....
Murrumburrah ... ..	5	.....	2	15	.....	.....	.....	.....
Canowindra ... ..	2	35	2	.....	.....	.....	.....	.....
<b>Southern District—</b>								
Major's Creek ... ..	3	40	2	25	.....	.....	.....	.....
Araluen ... ..	1	12	1	10	.....	1	.....	.....
Nowra ... ..	5	72	6	50	.....	1	.....	.....
Wagonga ... ..	2	22	3	26	.....	1	.....	.....
Little River ... ..	10	16	1	10	.....	.....	.....	.....
<b>Tumut and Adelong District—</b>								
Nimitybelle ... ..	1	8	1	.....	.....	.....	.....	.....
Albury ... ..	4	34	4	32	.....	.....	.....	.....
Adelong ... ..	7	155	2	35	.....	2	.....	5
Tarcutta ... ..	1	8	1	.....	.....	.....	.....	.....
<b>Peel and Uralla District—</b>								
Nundle ... ..	5	28	4	29	1	2	.....	.....
Walcha ... ..	.....	.....	1	5	.....	1	.....	.....
Barraba ... ..	2	18	2	16	.....	.....	.....	.....
Scone ... ..	.....	.....	2	10	.....	2	.....	.....
Bingera ... ..	1	10	1	5	.....	.....	.....	.....
<b>New England District—</b>								
Solferino ... ..	.....	.....	1	5	.....	1	.....	.....
Dalmorton ... ..	4	15	4	21	.....	.....	.....	.....
<b>Hunter and Macleay District—</b>								
Copeland ... ..	7	84	6	45	.....	.....	.....	.....
Dungog ... ..	2	28	2	15	.....	.....	.....	.....
<b>Clarence and Richmond District—</b>								
Nana Creek ... ..	3	33	3	29	.....	.....	.....	.....
Grafton ... ..	2	.....	2	6	.....	.....	.....	.....
<b>Mudgee District—</b>								
Hargraves ... ..	3	24	.....	.....	.....	.....	.....	.....
Mudgee ... ..	1	14	1	10	.....	.....	.....	.....
<b>Albert District—</b>								
Mount Browne ... ..	2	30	2	24	.....	.....	.....	.....
<b>Total</b> ... ..	110	1,127	83	616	1	15	.....	5

## STATISTICS, 1886—PRODUCTION.

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MINERAL PRODUCTION—*continued*.

No. 30.—NUMBER and DESCRIPTION of MACHINES employed in ALLUVIAL MINING in the Colony, in the year 1886.

Mining Districts.	Steam-engines employed in Winding, Pumping, &c.		Puddling Machines.	Whims and Pulleys.	Whips.	Quicksilver, as Compound Cradles.	Sluices and Toms.	Water-wheels.	Hydraulic Hoses.	Pumps.	Sluice-boxes.	Derricks.	Stamp Heads.	Boring Machines.
	No.	Aggregate horse-power.												
Lachlan District—			No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Grenfell ... ..			2											
Canowindra ... ..			1											
Southern District—														
Major's Creek ... ..			8											
Little River ... ..								6		6	80			
Araluen ... ..	9	39						9	4	18	20			
Nerriga... ..								3		3	24			
Tumut and Adelong District—														
Adelong ... ..	3	74						5	4	1	4			2
Albury ... ..			1											
Peel and Uralla District—														
Nundle... ..	1	8								1				
Scone ... ..								1					5	
Bendemecr ... ..	3	30								3				
Walcha... ..											10			
Mudgee District—														
Hargraves ... ..			6											
Albert District—														
Mount Browne ... ..			17											
Total ... ..	16	151	35				5	23	5	35	134		5	2

No. 31.—QUANTITY and VALUE of KEROSENE SHALE PRODUCED YEARLY, during the period 1865-1886.

Year.	Quantity.	Average Price per Ton.	Total Value.	Year.	Quantity.	Average Price per Ton.	Total Value.
1865 ... ..	Tons.	£ s. d.	£	1877 ... ..	Tons.	£ s. d.	£
1866 ... ..	570	4 2 5'47	2,350	1878 ... ..	18,963	2 9 0'81	46,524
1867 ... ..	2,770	2 18 10'48	8,150	1879 ... ..	24,371	2 6 11'40	57,211
1868 ... ..	4,079	3 14 9'21	15,249	1880 ... ..	32,519	2 1 1'06	66,931
1869 ... ..	16,952	2 17 7'11	48,816	1881 ... ..	19,201	2 6 7'03	44,725
1870 ... ..	7,500	2 10 0'00	18,750	1882 ... ..	27,894	1 9 2'59	40,748
1871 ... ..	8,580	3 4 3'18	27,570	1883 ... ..	48,065	1 15 0'00	84,114
1872 ... ..	14,700	2 6 3'91	34,950	1884 ... ..	49,250	1 16 10'77	90,861
1873 ... ..	11,040	2 11 11'91	28,700	1885 ... ..	31,618	2 5 7'86	72,176
1874 ... ..	17,850	2 16 6'55	50,745	1886 ... ..	27,462	2 8 11'62	67,239
1875 ... ..	12,100	2 5 1'48	27,300		43,563	2 5 10'79	99,976
1876 ... ..	6,107	2 10 2'22	15,500	Total ... ..	441,242	2 5 1'42	995,413
1876 ... ..	15,998	3 0 0'00	47,994				



## MINERAL PRODUCTION—continued.

No. 32.—QUANTITY and VALUE of COAL and SHALE won during the year 1886 and the NUMBER of MINERS EMPLOYED in the Collieries.

Company.	Locaity.	Men employed.			Quantity.	Value.		Remarks.
		Above ground.	Under ground.	Total.		£	s. d.	
<b>COAL.</b>								
Australian Agricultural Co. ...	Newcastle ...	172	803	975	387,084	184,750	9 6	
Wallsend ...	" ...	180	940	1,120	483,884	240,000	0 0	
Newcastle Coal Co. ...	" ...	93	400	493	183,573	83,181	5 1	
Lambton ...	" ...	65	445	510	113,972	56,416	2 10	
Co-operative ...	" ...	70	442	512	240,274	116,105	9 9	
Pride of Ferndale ...	" ...	4	17	21	1,500	450	0 0	
Tighe's Hill ...	" ...	6	17	23	11,596	38,034	0 0	
New Lambton } New Duckenfield )	" ...	83	206	289	71,370	33,454	16 0	
Greta ...	Maitland ...	43	221	264	79,727	39,864	0 0	
Gret's Co. ...	" ...	7	33	40	18,555	9,277	10 0	
Duckenfield ...	Newcastle ...	47	221	268	113,474	54,928	4 6	
Brown's ...	" ...	58	280	338	114,324	55,309	2 0	
Waratah ...	" ...	2	8	10	7,149	2,859	12 0	
South Waratah ...	" ...	25	20	45	1,701	790	0 0	
East Waratah ...	" ...	36	132	168	37,371	18,752	0 0	
Goose ...	" ...	1	4	5	4,224	1,689	0 0	
New Park ...	Singleton ...	17	14	31	6,153	3,240	0 0	
Ellesmere ...	" ...	3	26	29	8,920	4,695	0 0	
Quarry Tunnel ...	" ...	1	4	5	1,800	810	0 0	
Sunderland ...	Four-mile Creek..	2	3	5	3,000	650	0 0	
Brookstown ...	Newcastle ...	4	15	19	14,830	7,037	16 0	
Clay Cross ...	" ...	2	17	19	3,082	710	14 0	
Dunkirk ...	" ...	4	30	34	12,203	5,990	0 0	
Hill End ...	" ...	4	8	12	3,271	959	17 0	
Longworks ...	Singleton ...	...	...	...	.....	...	...	Not at work.
Rix's Creek ...	" ...	1	2	3	836	501	0 0	
Wickham and Bullock Island	Newcastle ...	19	179	198	55,553	26,229	6 6	
Morriset ...	Lake Macquarie..	1	1	2	656	295	4 0	
Rosedale ...	Newcastle ...	2	3	5	1,420	680	0 0	
Burwood ...	" ...	47	225	272	72,566	39,911	10 5	
Lymington, Wallsend...	" ...	18	35	53	...	...	...	Sinking.
Thornley Colliery ...	Four-mile Creek..	2	7	9	6,613	1,927	12 0	
Young, Wallsend ...	Newcastle ...	2	3	5	...	...	...	Sinking for seam.
Great Northern ...	" ...	10	9	19	205	71	15 0	
Hillside ...	" ...	2	6	8	3,494	1,222	10 0	
Maryville ...	" ...	11	78	89	24,500	12,000	0 0	
Stockton ...	" ...	40	182	222	84,459	40,121	0 0	
Homeville and Font Hill	Maitland ...	3	4	7	2,000	550	0 0	
Rathluba ...	" ...	2	4	6	2,777	1,090	0 6	
		1,089	5,044	6,133	2,178,116	1,084,554	17 1	
Bulli A... ..	Wollongong ...	95	276	371	99,923	22,457	5 0	On strike since 13 Sept.
Bulli B... ..	" ...	...	...	...	.....	.....	.....	Not at work.
Osborne, Wallsend ...	" ...	55	170	225	77,386	28,896	19 6	
Coal Cliff ...	" ...	40	100	140	56,623	33,040	0 0	
Illawarra Coal Co. ...	" ...	59	134	193	71,913	28,355	9 0	
Mount Kembla ...	" ...	40	150	190	51,794	31,076	8 0	
North Illawarra ...	" ...	30	15	45	.....	.....	.....	Nil.
Australian Kerosene Oil and Mineral Co.	Joadja Creek ...	20	90	110	9,318	4,705	0 0	
Berrima ...	Berrima ...	3	6	9	2,262	896	11 6	
Broker's Nose ...	Wollongong ...	9	6	15	1,611	565	19 0	
		351	947	1,298	370,830	149,993	12 0	
Vale of Clwydd ...	Lithgow Valley...	6	60	66	51,558	12,649	14 10	
Lithgow Valley ...	" ...	5	66	71	52,654	12,618	11 5	
Esk Bank ...	" ...	8	68	76	67,774	16,341	0 0	
Esk Bank Old Tunnel	" ...	1	12	13	7,500	1,875	0 0	
Hermitage ...	" ...	...	11	11	9,019	2,063	11 11	
Zig-zag ...	" ...	10	65	75	60,000	15,000	0 0	
Coerwull ...	" ...	...	1	1	450	120	0 0	
Katoomba ...	Hartley ...	21	55	76	25,000	6,250	0 0	
Dubbo ...	Dubbo ...	...	...	...	...	...	...	Not working.
Carlo's Gap ...	Capertee ...	1	2	3	250	63	16 10	
Great Western...	.....	6	...	6	...	...	...	Boring.
N.S.W. Shale and Oil Co. ...	.....	3	15	18	7,024	1,634	0 0	
		61	355	416	281,229	68,615	15 0	
<b>SHALE.</b>								
Australian Kerosene Oil and Mineral Co.	Joadja Creek ...	See Coal.			25,700	64,250	0 0	
N.S.W. Shale and Oil Co. ...	Hartley ...	30	70	100	17,863	35,726	0 0	
		30	70	100	43,563	99,976	0 0	

## STATISTICS, 1886—PRODUCTION.

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MINERAL PRODUCTION—*continued.*

No. 33.—ESTIMATED QUANTITY and VALUE of COAL RAISED in the Colony to the close of the year 1886, and AVERAGE PRICE PER TON.

Year.	Quantity.	Average per Ton.	Value.	Year.	Quantity.	Average per Ton.	Value.
	Tons.	s. d.	£		Tons.	s. d.	£
Prior to 1829 ...	50,000	10 0	25,000	1858 ...	216,397	14 11'84	162,162
1829 ...	780	10 1'23	394	1859 ...	308,213	13 3'14	204,371
1830 ...	4,000	9 0'00	1,800	1860 ...	368,862	12 3'36	226,493
1831 ...	5,000	8 0'00	2,000	1861 ...	342,067	12 9'52	218,820
1832 ...	7,143	7 0'00	2,502	1862 ...	476,522	12 9'73	305,234
1833 ...	6,812	7 6'73	2,575	1863 ...	433,889	10 10'66	236,230
1834 ...	8,490	8 10'00	3,750	1864 ...	549,012	9 10'10	270,171
1835 ...	12,392	8 10'19	5,483	1865 ...	585,525	9 4'43	274,303
1836 ...	12,646	9 1'06	5,747	1866 ...	774,238	8 4'44	324,049
1837 ...	16,083	9 8'81	5,828	1867 ...	770,012	8 10'79	342,655
1838 ...	17,220	9 9'05	8,399	1868 ...	954,231	8 9'08	417,809
1839 ...	21,283	9 9'73	10,441	1869 ...	919,774	7 6'32	346,146
1840 ...	30,256	10 10'86	16,498	1870 ...	868,564	7 3'54	316,836
1841 ...	34,841	12 0'00	20,905	1871 ...	898,784	7 0'47	316,340
1842 ...	39,900	12 0'00	23,940	1872 ...	1,012,426	7 9'92	396,198
1843 ...	25,862	12 6'54	16,222	1873 ...	1,192,862	11 1'94	665,747
1844 ...	23,118	10 8'34	12,363	1874 ...	1,304,612	12 1'37	790,224
1845 ...	22,324	7 10'27	8,769	1875 ...	1,329,729	12 3'89	819,430
1846 ...	38,965	7 0'46	13,714	1876 ...	1,319,918	12 2'06	803,300
1847 ...	40,732	6 9'01	13,750	1877 ...	1,444,271	11 10'74	858,998
1848 ...	45,447	6 3'38	14,275	1878 ...	1,575,497	11 8'28	920,936
1849 ...	48,516	6 0'45	14,647	1879 ...	1,583,381	12 0'12	950,879
1850 ...	71,216	6 6'77	23,375	1880 ...	1,466,180	8 6'36	615,337
1851 ...	67,610	7 6'51	25,456	1881 ...	1,769,597	6 9'55	603,248
1852 ...	67,404	10 11'33	36,885	1882 ...	2,109,282	8 11'97	948,965
1853 ...	96,809	16 1'51	78,059	1883 ...	2,521,457	9 6'40	1,201,941
1854 ...	116,642	0 5'63	119,380	1884 ...	2,749,109	9 5'71	1,303,077
1855 ...	137,076	12 11'96	89,082	1885 ...	2,878,863	9 3'72	1,340,212
1856 ...	189,960	12 4'06	117,906	1886 ...	2,830,175	9 2'50	1,303,164
1857 ...	210,434	14 0'97	148,158	Total ...	37,022,410	9 10'97	18,352,669

## STOCK.

No. 34.—NUMBER of LIVE STOCK in the Colony at the close of each year, from 1860 to 1886.

Year.	Horses.	Horned Cattle.	Sheep.	Pigs.	Year.	Horses.	Horned Cattle.	Sheep.	Pigs.
1860...	251,497	2,408,586	6,119,163	180,662	1874...	346,691	2,856,699	22,797,416	219,958
1861...	233,220	2,271,923	5,615,054	146,091	1875...	357,696	3,134,086	25,353,924	199,950
1862...	273,389	2,620,383	6,145,651	125,541	1876...	366,703	3,131,013	25,269,755	173,604
1863...	262,554	2,032,522	7,790,969	135,899	1877...	328,150	2,746,385	21,521,662	191,677
1864...	284,567	1,924,119	8,271,520	164,154	1878...	336,468	2,771,583	25,479,484	220,320
1865...	282,587	1,961,905	8,132,511	146,901	1879...	360,038	2,914,210	30,062,910	256,026
1866...	278,437	1,771,809	11,562,155	137,915	1880...	395,984	2,580,040	35,398,121	308,205
1867...	280,201	1,728,427	13,909,574	173,168	1881...	398,577	2,597,348	36,591,946	213,916
1868...	280,818	1,761,411	15,080,625	176,901	1882...	328,026	1,859,985	36,114,814	154,815
1869...	280,304	1,795,904	14,989,923	175,924	1883...	326,964	1,640,753	37,915,510	189,050
1870...	337,597	2,195,096	16,308,585	243,066	1884...	337,172	1,425,130	31,660,321	211,656
1871...	304,100	2,014,888	16,278,697	213,193	1885...	344,697	1,317,315	37,820,906	208,697
1872...	328,408	2,287,660	17,566,048	218,904	1886...	361,663	1,367,844	39,169,304	209,576
1873...	334,462	2,794,327	18,990,595	240,680					

## STATISTICS, 1886—PRODUCTION.

## STOCK—continued.

No. 35.—NUMBER of HORSES, HORNED CATTLE, SHEEP, and PIGS in the Colony, on 31st December, 1886—according to Stock Districts.

Sheep Districts.	Horses	Cattle.	Sheep.	Pigs	Sheep Districts.	Horses.	Cattle.	Sheep.	Pigs.
Albury .....	5,624	11,772	539,561	1,930	Ivanhoe .....	1,944	2,465	1,270,632	142
Armidale .....	9,108	60,049	1,347,285	2,811	Kiama .....	8,583	64,595	2,731	17,629
Balranald .....	2,539	3,123	1,058,772	189	Maitland ..	16,157	52,101	7,904	12,691
Bathurst .....	14,002	28,265	402,795	6,037	Menindie .....	4,462	2,558	1,418,094	288
Berrima .....	3,490	22,457	12,383	3,228	Merriwa .....	2,675	7,325	324,972	415
Bombala .....	3,348	10,275	251,020	517	Molong ..	6,615	9,909	568,287	3,316
Booligal .....	2,856	2,932	1,013,532	184	Moree .. ..	5,364	35,926	676,341	728
Bourke .....	5,648	29,490	2,193,743	561	Mudgee .. ..	8,180	20,082	466,359	3,428
Braidwood .....	3,638	24,243	48,649	1,212	Murrurundi ..	5,303	22,107	397,018	1,093
Brewarrina ..	2,305	10,577	927,795	94	Narrandera ...	2,741	6,553	1,017,003	493
Broulee .. ..	2,554	19,148	2,080	5,083	Narrabri... .	2,652	4,778	366,438	752
Cannonbar .....	1,980	10,515	919,040	464	Picton .....	3,291	14,584	5,790	2,512
Carcoar .....	6,768	10,469	499,184	3,956	Pilliga .. . .	1,568	8,665	304,156	228
Casino .....	14,555	135,030	1,634	6,206	Port Macquarie..	8,271	36,099	1,783	8,156
Cobar... ..	2,002	6,395	1,198,951	213	Port Stephens ...	7,148	43,995	2,409	11,422
Condobolin .. .	2,760	5,067	1,253,127	554	Queanbeyan ..	4,070	24,525	338,863	1,132
Cooma .....	7,588	22,478	697,969	1,270	Singleton .....	9,143	48,740	95,332	4,493
Coonabarabran	2,808	4,402	611,600	724	Sydney .....	23,348	16,099	15,524	5,926
Coonamble .....	2,934	8,366	1,248,163	381	Tamworth .. .	14,055	43,208	1,581,897	4,286
Corowa .....	3,265	3,798	764,906	1,178	Tenterfield ..	5,476	61,139	168,253	1,569
Deniliquin .....	4,716	6,173	1,323,780	1,291	Urana .. . . .	2,329	3,023	835,898	359
Dubbo .. . . .	5,281	13,094	1,025,483	1,656	Wagga Wagga ..	5,915	10,526	1,284,745	2,236
Forbes .....	4,556	10,919	860,434	1,882	Walgett. ... ..	3,544	16,893	1,138,956	268
Eden .....	3,321	28,332	1,459	4,330	Warialda .. ..	8,832	43,207	776,940	998
Glen Innes .. .	11,131	73,230	623,547	3,764	Wentworth .. .	1,592	1,402	504,005	376
Goulburn .....	8,381	26,737	326,650	3,488	Wilcannia .....	6,525	17,865	2,368,918	726
Grafton .....	14,042	59,608	2,626	6,978	Windsor ... ..	8,795	15,310	6,385	5,940
Gundagai .....	9,389	36,955	837,915	3,826	Yass .. . . . .	4,515	9,673	373,837	2,121
Hay .. . . . .	3,164	4,193	1,121,128	657	Young .. . . . .	9,426	18,742	1,252,141	5,983
Hume.....	5,391	17,638	482,482	1,262	Grand Total .	361,663	1,367,844	39,169,304	*165,632

\* Also 43,944 Pigs in Holdings where no other stock was kept. The gross total is, therefore, 209,576.

No. 36.—STOCK SLAUGHTERED at GLEBE ISLAND ABATTOIRS during the year 1886.

Stock.	Number slaughtered.
Sheep ... ..	784,149
Lambs . . . .	30,172
Cattle .. . .	60,419
Calves .. . .	9,419
Pigs .. . . .	37,819
Total Stock ... ..	921,978

## STATISTICS, 1886—PRODUCTION.

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STOCK—continued.

No. 37.—APPROXIMATE NUMBER OF HORSES, HORNED CATTLE, SHEEP and PIGS in the various Electoral Districts on the 31st March, 1887.

Electorate.	Horses.	Cattle.	Sheep.	Pigs.
<b>Metropolitan :—</b>				
Balmain .. .. .	960	871	5,175	469
Canterbury .. .. .	3,401	2,424	167	2,255
Glebe .. .. .	864	159	23	7
Newtown .. .. .	1,276	265	.....	2
Paddington .. .. .	1,409	958	16	195
Redfern .. .. .	3,150	1,164	14	1,044
St. Leonards .. .. .	1,013	927	258	557
East Sydney .. .. .	1,566	105	.....	.....
South Sydney .. .. .	1,298	72	.....	.....
West Sydney .. .. .	1,801	126	.....	21
<b>Total Metropolitan</b> .. .. .	<b>16,738</b>	<b>7,131</b>	<b>5,653</b>	<b>4,550</b>
<b>Country :—</b>				
Albury .. .. .	1,875	4,909	53,596	1,236
Argyle .. .. .	7,655	26,803	333,107	4,071
Balranald .. .. .	7,927	9,910	3,282,823	945
Bogan .. .. .	10,723	31,974	2,872,725	3,073
Boorowa .. .. .	2,496	4,519	341,255	3,058
Bourke .. .. .	11,771	43,083	4,408,445	1,045
Braidwood .. .. .	3,733	23,910	43,304	1,384
Camden .. .. .	7,981	38,869	17,089	6,938
Carcoar .. .. .	7,166	11,755	551,652	4,725
Clarence .. .. .	5,320	13,361	216	3,067
Central Cumberland .. .. .	4,019	4,792	2,163	2,408
Durham .. .. .	5,298	24,451	1,549	7,202
Eden .. .. .	5,773	45,921	3,543	10,125
Forbes .. .. .	3,571	8,773	1,292,545	1,447
Glen Innes .. .. .	4,729	45,751	303,987	1,743
Gloucester .. .. .	2,636	28,641	893	4,480
Goulburn .. .. .	265	248	18	213
Grafton .. .. .	6,027	32,472	1,941	3,814
Grenfell .. .. .	4,053	10,163	1,048,380	1,639
Gundagai .. .. .	6,085	17,403	647,885	3,526
Gunnedah .. .. .	5,646	20,634	1,117,755	1,818
Gwydir .. .. .	10,876	54,763	1,438,878	1,696
Hartley .. .. .	2,784	7,140	63,148	1,802
Hastings and Manning .. .. .	7,858	30,289	2,720	17,684
Hawkesbury .. .. .	4,357	6,733	2,293	4,130
Hume .. .. .	10,107	23,468	1,479,573	3,960
Hunter .. .. .	3,194	10,099	4,243	2,375
Upper Hunter .. .. .	12,161	55,024	808,296	3,281
Illawarra .. .. .	2,020	12,769	689	3,841
Inverell .. .. .	5,067	20,264	377,790	2,218
Kiama .. .. .	2,435	21,941	387	7,130
Mackay .. .. .	6,325	22,327	605	7,613
East Macquarie .. .. .	3,839	9,040	133,243	1,993
West Macquarie .. .. .	2,676	5,162	103,115	1,442
East Maitland .. .. .	1,371	2,874	313	1,078
West Maitland .. .. .	205	131	.....	112
Molong .. .. .	5,889	8,694	342,201	3,490
Monaro .. .. .	10,053	30,592	879,336	2,171
Morpeth .. .. .	3,052	4,488	819	1,804
Mudgee .. .. .	8,040	18,721	329,458	4,770
Murray .. .. .	6,579	8,447	1,996,871	1,721
Murrumbidgee .. .. .	14,137	23,046	3,555,637	5,401
Namoi .. .. .	5,752	17,902	1,296,923	1,816
Nepean .. .. .	3,258	5,269	3,530	1,264
Newcastle .. .. .	417	773	50	443
New England .. .. .	8,679	51,992	1,638,253	3,436
Northumberland .. .. .	1,473	2,173	641	1,369
Orange .. .. .	4,083	6,714	82,319	2,496
Parramatta .. .. .	470	275	105	149
Patrick's Plains .. .. .	6,009	48,250	70,389	4,821
Queanbeyan .. .. .	3,696	11,679	383,445	1,502
Richmond .. .. .	12,060	116,841	1,109	7,024
Shoalhaven .. .. .	5,245	40,131	7,418	11,757
Tamworth .. .. .	6,613	31,371	628,390	3,493
Tenterfield .. .. .	3,429	41,094	71,378	1,638
Tumut .. .. .	5,095	23,139	208,259	3,089
Wellington .. .. .	3,080	2,657	273,657	2,251
Wentworth .. .. .	8,880	17,399	3,929,070	1,020
Wollombi .. .. .	3,074	8,119	614	3,922
Yass Plains .. .. .	5,057	10,383	453,806	2,479
Young .. .. .	5,239	10,544	628,677	3,478

NOTE.—For total stock for 1886 and previous years see Table No. 34



## PART VII.

## EDUCATION, RELIGION, AND CHARITIES.

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## STATISTICS, 1886—EDUCATION, &amp;c.

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## PUBLIC INSTRUCTION.

No. 1.—NUMBER OF TEACHERS and SCHOLARS, during the year 1886, in the Public and Private Schools of the Colony.

	Number of Schools.				Number of Teachers.			Number of Scholars on Rolls		
	Male.	Female.	Mixed.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
<b>SCHOOLS UNDER THE DEPARTMENT OF PUBLIC INSTRUCTION.</b>										
Public Schools .....	.....	.....	1,587	1,587	1,869	1,887	3,756	96,786	89,340	186,126
Provisional Schools .....	.....	.....	328	328						
Half-time Schools .....	.....	.....	169	169						
House-to-house Schools .....	.....	.....	58	58						
Evening Schools .....	.....	.....	20	20						
High Schools.....	4	4	.....	8						
<b>Total .....</b>	<b>4</b>	<b>4</b>	<b>2,162</b>	<b>2,170</b>						
<b>ORPHAN SCHOOLS.*</b>										
Protestant .....	.....	.....	1	1	1	.....	1	33	11	44
Roman Catholic .....	.....	.....	1	1	.....	2	2	45	18	63
<b>Total .....</b>	<b>.....</b>	<b>.....</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>78</b>	<b>29</b>	<b>107</b>
<b>REFORMATORIES AND INDUSTRIAL SCHOOLS.</b>										
Nautical School, Vernon .....	1	.....	.....	1	15	.....	15	205	.....	205
Industrial School for Girls, Biloela .....	.....	1	.....	1	.....	1	1	1	89	90
Shaftesbury Reformatory for Girls .....	.....	1	.....	1	.....	1	1	.....	24	24
<b>Total .....</b>	<b>1</b>	<b>2</b>	<b>.....</b>	<b>3</b>	<b>15</b>	<b>2</b>	<b>17</b>	<b>206</b>	<b>113</b>	<b>319</b>
<b>UNIVERSITY AND COLLEGES.</b>										
University of Sydney .....	1	.....	.....	1	30	.....	30	340	.....	340
St. Paul's College.....	1	.....	.....	1	2	.....	2	23†	.....	23†
St. John's College.....	1	.....	.....	1	3	.....	3	8†	.....	8†
St. Andrew's College .....	1	.....	.....	1	2	.....	2	20†	.....	20†
Sydney Grammar School.....	1	.....	.....	1	18	.....	18	429	.....	429
<b>Total .....</b>	<b>5</b>	<b>.....</b>	<b>.....</b>	<b>5</b>	<b>55</b>	<b>.....</b>	<b>55</b>	<b>769</b>	<b>.....</b>	<b>769</b>
<b>CHARITABLE INSTITUTIONS—SCHOOLS.</b>										
Asylum for Destitute Children, Randwick .....	.....	.....	1	1	3	2	5	157	97	254
Deaf and Dumb and Blind.....	.....	.....	1	1	2	5	7	46	29	75
Ragged Schools—Kent-street .....	.....	.....	1	1	.....	2	2	59	39	98
Harrington-st.....	.....	.....	1	1	.....	2	2	79	64	143
Glebe .....	.....	.....	1	1	.....	2	2	38	39	77
Waterloo.....	.....	.....	1	1	.....	2	2	50	76	126
<b>Total .....</b>	<b>.....</b>	<b>.....</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>15</b>	<b>20</b>	<b>429</b>	<b>344</b>	<b>773</b>
<b>PRIVATE SCHOOLS.</b>										
Undenominational .....	34	63	273	370	131	623	754	3,839	6,304	10,143
Church of England .....	11	7	38	56	50	93	143	1,794	1,579	3,373
Roman Catholic .....	26	27	162	215	148	748	896	11,222	13,798	25,020
Wesleyan .....	.....	1	.....	1	1	4	5	.....	46	46
Presbyterian .....	2	.....	1	3	7	1	8	83	16	99
Lutheran .....	.....	.....	2	2	1	1	2	49	36	85
<b>Total .....</b>	<b>73</b>	<b>98</b>	<b>476</b>	<b>647</b>	<b>338</b>	<b>1,470</b>	<b>1,808</b>	<b>16,987</b>	<b>21,779</b>	<b>38,766</b>
<b>General Total all Schools, &amp;c....</b>	<b>83</b>	<b>104</b>	<b>2,646</b>	<b>2,833</b>	<b>2,283</b>	<b>3,376</b>	<b>5,659</b>	<b>115,255</b>	<b>111,605</b>	<b>226,860</b>

\* Closed 30th September, 1886.

† Included in University, and omitted from general total



PUBLIC INSTRUCTION—*continued.*

## No. 2.—SCHOOLS under the DEPARTMENT of PUBLIC INSTRUCTION, during the year 1886.

Schools.	Teachers (all Schools).			Children (all Schools).			Expenditure (all Schools).
		Male.	Female.		Male.	Female.	
High Schools ... .. 8	In Charge of Departments ...	1,391	843	Number on Roll ... ..	96,786	89,340	Administration ... .. £ s. d. 68,865 16 10
Public Schools—Mixed ... .. 1,481	Assistants ... ..	126	287	Mean Quarterly Enrolment ...	79,702	73,542	Maintenance of Schools ... 430,080 13 0
Two Departments ... .. 39	Pupil Teachers... ..	310	621	Average Attendance ... ..	55,407	50,131	School Premises, Additions, &c. 155,072 0 7
Three Departments ... .. 67	Others ... ..	42	136	Number of Free Scholars ...	2,771	2,535	Other Expenditure ... .. 392 8 6
Provisional Schools ... .. 328	Total... ..	1,869	1,887				Total... .. £654,410 18 11
Half-time Schools ... .. 169							
House to House Schools... .. 58							
Evening Schools ... .. 20							
Total ... .. 2,170							Amount of School Fees received into Consolidated Revenue ... £63,164 10 7

## No. 3.—ENROLMENT and ATTENDANCE of CHILDREN at STATE SCHOOLS, with TOTAL COST and COST PER HEAD, for the years 1880–1886.

Year.	Gross Enrolment.	Quarterly Enrolment.	Average Attendance.	Total Expenditure.	Receipts from School Fees.	Net Cost to State.	Cost to State per Child of Average Attendance.	Total Cost per Child of Average Attendance.	Amount of Fees received per Child of Average Attendance.
1880	*	111,277	72,969	£ 409,281	£ 56,801	£ 352,480	£ s. d. 4 16 7	£ s. d. 5 12 2	£ s. d. 0 15 7
1881	146,106	125,506	82,890	480,000	46,347	433,653	5 4 7	5 15 9	0 11 2
1882	166,611	134,872	90,944	618,800	51,312	567,488	6 4 9	6 16 1	0 11 3
1883	155,918	130,205	88,546	821,853	51,427	770,426	8 14 0	9 5 7	0 11 7
1884	167,134	139,159	95,215	774,257	56,767	717,590	7 10 8	8 2 7	0 11 11
1885	180,929	146,570	100,462	663,508	58,926	604,582	6 0 4	6 12 1	0 11 8
1886	186,126	153,244	105,538	654,411	63,165	591,246	5 12 0	6 4 0	0 11 11

\* Not ascertained.

## STATISTICS, 1886—EDUCATION, &amp;c.

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## PUBLIC INSTRUCTION—continued.

No. 4.—NUMBER of PRIVATE SCHOOLS in EACH ELECTORATE, with TEACHERS and SCHOLARS for the year 1886.

Electorate.	Number of Schools.	Number of Teachers.			Number of Scholars on Roll.			Average Attendance of Scholars.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Albury ... ..	7	7	13	20	302	377	679	233	283	516
Argyle ... ..	2	.....	5	5	66	57	123	53	54	107
Balmain ... ..	23	7	67	74	608	919	1,527	547	809	1,356
Balranald ... ..	5	1	11	12	97	148	245	73	112	185
Bathurst ... ..	11	23	32	55	432	522	954	391	375	766
Bogan, The ... ..	10	5	27	32	292	323	615	198	237	435
Boorowa ... ..	1	.....	4	4	48	68	116	43	60	103
Bourke ... ..	4	.....	17	17	142	212	354	88	157	245
Braidwood ... ..	4	.....	10	10	82	125	207	70	110	180
Camden ... ..	12	6	24	30	174	192	366	150	177	327
Canterbury ... ..	59	13	124	137	711	1,395	2,106	603	1,225	1,828
Carcoar ... ..	3	.....	14	14	122	205	327	103	167	270
Clarence, The ... ..	5	1	5	6	48	56	104	40	50	90
Central Cumberland ... ..	22	22	45	67	579	535	1,114	530	462	992
Durham ... ..	1	1	.....	1	5	5	10	5	5	10
Eden ... ..	9	4	19	23	177	306	483	151	247	398
Forbes ... ..	4	1	17	18	184	339	523	138	260	398
Glebe ... ..	18	10	41	51	538	647	1,185	493	577	1,070
Glen Innes ... ..	4	.....	12	12	104	139	243	80	107	187
Gloucester ... ..	2	.....	3	3	43	46	89	30	26	56
Goulburn ... ..	14	14	28	42	473	582	1,055	473	582	1,055
Grafton ... ..	8	3	19	22	173	246	419	160	229	389
Grenfell ... ..	1	.....	1	1	26	28	54	26	28	54
Gundagai ... ..	4	1	11	12	151	172	323	138	159	297
Gunnedah ... ..	4	.....	8	8	98	112	210	72	80	152
Gwydir, The ... ..	1	.....	1	1	1	10	11	1	9	10
Hartley ... ..	6	11	10	21	201	116	317	178	100	278
Hastings and Manning ... ..	3	2	1	3	16	20	36	16	20	36
Hawkesbury ... ..	7	4	16	20	187	184	371	160	151	311
Hume ... ..	6	.....	7	7	94	116	210	71	96	167
Hunter ... ..	6	3	11	14	152	143	295	128	119	247
Hunter, The Upper ... ..	12	.....	20	20	200	199	399	157	163	320
Illawarra ... ..	8	2	13	15	132	205	337	104	172	276
Inverell ... ..	3	2	7	9	109	131	240	85	106	191
Kiama ... ..	4	.....	6	6	65	110	175	65	110	175
Macleay ... ..	1	.....	4	4	54	85	139	50	80	130
Macquarie, East ... ..	6	.....	16	16	144	185	329	123	160	283
Macquarie, West ... ..	3	.....	10	10	44	59	103	38	43	81
Maitland, East ... ..	8	12	15	27	138	135	273	121	114	235
Maitland, West ... ..	7	4	22	26	216	304	520	157	265	422
Molong ... ..	3	.....	9	9	79	73	152	69	65	134
Monaro ... ..	5	2	6	8	45	80	125	45	80	125
Morpeth ... ..	3	.....	7	7	157	162	319	120	123	243
Mudgee ... ..	7	1	26	27	185	326	511	162	287	449
Murray, The ... ..	4	1	5	6	98	85	183	57	63	120
Murrumbidgee ... ..	13	4	18	22	214	289	503	166	267	433
Namoi, The ... ..	3	1	5	6	71	112	183	50	95	145
Nepean ... ..	3	.....	10	10	79	135	214	79	135	214
Newcastle ... ..	8	2	19	21	203	342	545	203	342	545
New England ... ..	7	2	20	22	166	198	364	165	197	362
Newtown ... ..	24	7	55	62	488	747	1,235	426	658	1,084
Northumberland ... ..	4	.....	6	6	147	187	334	116	150	266
Orange ... ..	9	2	25	27	257	320	577	244	316	560
Paddington ... ..	37	17	94	111	681	1,132	1,813	583	1,022	1,605
Parramatta ... ..	14	17	32	49	317	362	679	297	311	608
Patrick's Plains ... ..	7	2	11	13	97	104	201	90	93	183
Queanbeyan ... ..	5	1	7	8	66	68	134	52	58	110
Redfern ... ..	29	11	42	53	841	887	1,728	684	757	1,441
Richmond ... ..	7	1	11	12	70	160	230	61	144	205
Shoalhaven ... ..	1	1	.....	1	6	5	11	6	5	11
St. Leonard's ... ..	28	24	60	84	572	643	1,215	474	511	985
Sydney, West ... ..	32	30	104	134	1,206	1,827	3,033	983	1,483	2,466
Sydney, South ... ..	27	31	72	103	1,912	1,928	3,840	1,718	1,693	3,411
Sydney, East ... ..	20	18	46	64	962	899	1,861	962	899	1,861
Tamworth ... ..	5	.....	12	12	77	149	226	71	134	205
Tenterfield ... ..	3	.....	6	6	70	117	187	49	89	138
Tumut ... ..	2	.....	8	8	99	119	218	90	108	198
Wellington ... ..	7	.....	14	14	110	143	253	84	116	200
Wentworth ... ..	4	1	4	5	35	51	86	29	45	74
Wollombi ... ..	1	.....	3	3	31	27	58	27	23	50
Yass Plains ... ..	2	1	5	6	54	104	158	45	89	134
Young ... ..	5	2	12	14	164	240	404	148	229	377
Total ... ..	647	338	1,470	1,808	16,987	21,779	38,766	14,697	18,873	33,570

PUBLIC INSTRUCTION—continued.

No. 5.—NUMBER of UNDENOMINATIONAL PRIVATE SCHOOLS in EACH ELECTORATE, with NUMBER of TEACHERS and SCHOLARS, for the year 1886.

Electorate.	Number of Schools.	Number of Teachers.			Number of Scholars on Roll.			Average Attendance.		
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Albury ... ..	2	2	2	4	47	18	65	35	15	50
Argyle ... ..	1	.....	2	2	6	14	20	6	14	20
Balmain ... ..	10	1	19	20	83	156	239	72	142	214
Balranald ... ..	3	.....	6	6	30	59	89	24	47	71
Bathurst ... ..	6	6	13	19	60	133	193	68	105	173
Bogan, The ... ..	5	1	6	7	37	49	86	24	40	64
Boorowa ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bourke ... ..	2	.....	5	5	7	42	49	7	34	41
Braidwood ... ..	1	.....	1	1	4	6	10	4	6	10
Camden ... ..	9	6	18	24	101	117	218	96	114	210
Canterbury ... ..	49	10	88	98	320	796	1,116	272	710	982
Carcoar ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clarence, The ... ..	5	1	5	6	48	56	104	40	50	90
Central Cumberland ... ..	10	.....	13	13	82	147	229	72	127	199
Durham ... ..	1	1	.....	1	5	5	10	5	5	10
Eden ... ..	5	4	4	8	39	28	67	39	26	65
Forbes ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Glebe, The... ..	16	7	33	40	248	377	625	212	319	531
Glen Innes... ..	1	.....	3	3	.....	13	13	.....	13	13
Gloucester ... ..	1	.....	1	1	1	17	18	1	9	10
Goulburn ... ..	10	4	12	16	145	153	298	145	153	298
Grafton ... ..	5	3	5	8	102	54	156	95	47	142
Grenfell ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gundagai ... ..	1	1	.....	1	9	.....	9	8	.....	8
Gunnedah ... ..	1	.....	1	1	5	10	15	4	8	12
Gwydir, The ... ..	1	.....	1	1	1	10	11	1	9	10
Hartley ... ..	1	.....	2	2	1	10	11	1	10	11
Hastings and Manning ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hawkesbury, The... ..	4	4	4	8	96	43	139	82	35	117
Hume, The ... ..	2	.....	3	3	8	40	48	6	33	39
Hunter, The ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hunter, The Upper ... ..	15	.....	5	5	28	38	66	25	35	60
Illawarra ... ..	4	2	3	5	48	60	108	36	44	80
Inverell ... ..	1	.....	1	1	.....	6	6	.....	6	6
Kiama ... ..	2	.....	2	2	3	32	35	3	32	35
Macleay, The ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Macquarie, East ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Macquarie, West ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Maitland, East ... ..	6	12	11	23	82	57	139	80	57	137
Maitland, West ... ..	2	1	3	4	.....	67	67	.....	52	52
Molong ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Monaro ... ..	3	2	1	3	18	20	38	18	20	38
Morpeth ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mudgee ... ..	2	.....	5	5	11	47	58	11	47	58
Murray, The, ... ..	1	.....	2	2	.....	20	20	.....	18	18
Murrumbidgee, The ... ..	6	1	7	8	45	72	117	21	79	100
Namoi, The ... ..	2	1	1	2	25	26	51	20	25	45
Nepean, The ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newcastle ... ..	5	.....	9	9	49	132	181	49	132	181
New England ... ..	4	2	5	7	64	42	106	63	41	104
Newtown ... ..	18	5	32	37	175	332	507	142	283	425
Northumberland ... ..	2	.....	2	2	13	21	34	13	21	34
Orange ... ..	3	.....	6	6	25	40	65	25	40	65
Paddington ... ..	30	13	61	74	321	580	901	283	551	834
Parramatta ... ..	10	3	29	32	94	254	348	81	231	312
Patrick's Plains ... ..	1	2	.....	2	40	.....	40	40	.....	40
Queanbeyan ... ..	3	1	2	3	13	25	38	9	22	31
Redfern ... ..	25	7	30	37	426	435	861	346	372	718
Richmond, The ... ..	5	1	5	6	13	85	98	13	74	87
Shoalhaven ... ..	1	1	.....	1	6	5	11	6	5	11
St. Leonards ... ..	16	10	32	42	133	222	355	122	197	319
Sydney, East ... ..	25	11	68	79	258	569	827	229	497	726
Sydney, South ... ..	19	3	33	36	246	465	711	231	436	667
Sydney, West ... ..	8	.....	11	11	161	170	331	161	170	331
Tamworth ... ..	1	.....	1	1	2	6	8	2	6	8
Tenterfield... ..	2	.....	3	3	14	33	47	9	29	38
Tumut ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wellington ... ..	1	.....	1	1	2	9	11	2	7	9
Wentworth ... ..	4	1	4	5	35	51	86	29	45	74
Wollombi ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yass Plains ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Young ... ..	1	1	1	2	4	30	34	4	28	32
Grand Total ... ..	370	131	623	754	3,839	6,304	10,143	3,392*	5,673	9,065

NOTE.—In some cases, especially where no Rolls were kept, the number of children in attendance when the Collector called, was returned both as the number on Roll and as the average attendance.

PUBLIC INSTRUCTION—*continued.*

No. 6.—CHURCH OF ENGLAND DENOMINATIONAL SCHOOLS in EACH ELECTORATE, with NUMBER of TEACHERS and SCHOLARS for the year 1886.

Electorates.	Number of Schools.	Number of Teachers.			Number of Scholars on Roll.			Average Attendance.		
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Balmain ... ..	8	4	22	26	163	265	428	163	241	404
Balranald ... ..	1	1	.....	1	7	5	12	7	5	12
Bathurst ... ..	1	4	1	5	81	.....	81	78	.....	78
Bogan, The ... ..	1	1	.....	1	3	3	6	3	3	6
Camden ... ..	1	.....	1	1	13	18	31	10	15	25
Canterbury ... ..	2	2	4	6	152	119	271	130	100	230
Central Cumberland ... ..	1	.....	3	3	7	23	30	5	20	25
Forbes ... ..	1	.....	1	1	5	18	23	4	16	20
Glebe, The... ..	1	1	.....	1	100	70	170	97	63	160
Glen Innes ... ..	1	.....	2	2	3	12	15	3	12	15
Grafton ... ..	1	.....	1	1	2	5	7	2	5	7
Gundagai ... ..	1	.....	3	3	4	26	30	4	26	30
Hartley ... ..	2	5	2	7	72	.....	72	72	.....	72.
Hastings and Manning ... ..	2	1	1	2	12	20	32	12	20	32
Hunter, The Upper ... ..	1	.....	1	1	4	3	7	4	3	7
Inverell ... ..	1	2	.....	2	25	.....	25	25	.....	25
Monaro ... ..	1	.....	1	1	.....	2	2	.....	2	2
Murray, The ... ..	1	.....	1	1	1	4	5	1	4	5
Murrumbidgee, The ... ..	1	.....	1	1	1	4	5	1	4	5
Nepean, The ... ..	1	.....	1	1	.....	6	6	.....	6	6
Newtown ... ..	2	2	4	6	34	36	70	34	30	64
Paddington ... ..	2	2	6	8	95	150	245	92	136	228
Parramatta ... ..	2	11	.....	11	131	.....	131	124	.....	124
Patrick's Plains ... ..	4	.....	6	6	14	56	70	10	50	60
Queanbeyan ... ..	1	.....	2	2	9	20	29	7	16	23
Redfern ... ..	1	.....	1	1	40	35	75	35	30	65
St. Leonards ... ..	5	1	5	6	60	56	116	54	50	104
Sydney, East ... ..	1	2	4	6	179	157	336	150	130	280
Sydney, South ... ..	2	3	8	11	400	370	770	358	263	621
Sydney, West ... ..	4	8	9	17	177	82	259	177	82	259
Wellington ... ..	1	.....	1	1	.....	2	2	.....	2	2
Young ... ..	1	.....	1	1	.....	12	12	.....	12	12
<b>Tota ... ..</b>	<b>56</b>	<b>50</b>	<b>93</b>	<b>143</b>	<b>1,794</b>	<b>1,579</b>	<b>3,373</b>	<b>1,662</b>	<b>1,346</b>	<b>3,008</b>

## PUBLIC INSTRUCTION—continued.

No. 7.—NUMBER of ROMAN CATHOLIC DENOMINATIONAL SCHOOLS in EACH ELECTORATE, with NUMBER of TEACHERS and SCHOLARS.

Electorates.	Number of Schools.	Number of Teachers.			Number of Scholars on Roll.			Average Attendance of Scholars.		
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Albury ... ..	4	4	11	15	220	331	551	170	243	413
Argyle ... ..	1	...	3	3	60	43	103	47	40	87
Balmain ... ..	5	2	26	28	362	498	860	310	426	736
Balranald ... ..	1	...	5	5	60	84	144	42	60	102
Bathurst ... ..	4	13	18	31	291	389	680	245	270	515
Bogan, The ... ..	4	3	21	24	252	271	523	171	194	365
Boorowa ... ..	1	...	4	4	48	68	116	43	60	103
Bourke ... ..	2	...	12	12	135	170	305	81	123	204
Braidwood ... ..	3	...	9	9	78	119	197	66	104	170
Camden ... ..	2	...	5	5	60	57	117	44	48	92
Canterbury ... ..	7	...	28	28	239	434	673	201	374	575
Carcoar ... ..	3	...	14	14	122	205	327	103	167	270
Clarence, The ... ..	...	...	...	...	...	...	...	...	...	...
Central Cumberland ... ..	11	22	29	51	490	365	855	453	315	768
Durham ... ..	...	...	...	...	...	...	...	...	...	...
Eden ... ..	4	...	15	15	138	278	416	112	221	333
Forbes ... ..	3	1	16	17	179	321	500	134	244	378
Glebe, The ... ..	1	2	8	10	190	200	390	184	195	379
Glen Innes ... ..	2	...	7	7	101	114	215	77	82	159
Gloucester ... ..	1	...	2	2	42	29	71	29	17	46
Goulburn ... ..	4	10	16	26	328	429	757	328	429	757
Grafton ... ..	2	...	13	13	69	187	256	63	177	240
Grenfell ... ..	1	...	1	1	26	28	54	26	28	54
Gundagai ... ..	2	...	8	8	138	146	284	126	133	259
Gunnedah ... ..	3	...	7	7	93	102	195	68	72	140
Gwydir, The ... ..	...	...	...	...	...	...	...	...	...	...
Hartley ... ..	2	...	6	6	55	106	161	45	90	135
Hastings and Manning ... ..	...	...	...	...	...	...	...	...	...	...
Hawkesbury ... ..	3	...	12	12	91	141	232	78	116	194
Hume, The ... ..	3	...	3	3	72	68	140	55	57	112
Hunter, The ... ..	6	3	11	14	152	143	295	128	119	247
Hunter, The Upper ... ..	6	...	14	14	168	158	326	128	125	253
Illawarra ... ..	4	...	10	10	84	145	229	68	128	196
Inverell ... ..	1	...	6	6	84	125	209	60	100	160
Kiama ... ..	2	...	4	4	62	78	140	62	78	140
Macleay, The ... ..	1	...	4	4	54	85	139	50	80	130
Macquarie, East ... ..	6	...	16	16	144	185	329	123	160	283
Macquarie, West ... ..	3	...	10	10	44	59	103	38	43	81
Matland, East ... ..	2	...	4	4	56	78	134	41	57	98
Matland, West ... ..	5	3	19	22	216	237	453	157	213	370
Molong ... ..	3	...	9	9	79	73	152	69	65	134
Monaro ... ..	1	...	4	4	27	58	85	27	58	85
Morpeth ... ..	3	...	7	7	157	162	319	120	123	243
Mudgee ... ..	5	1	21	22	174	279	453	151	240	391
Murray, The ... ..	2	1	2	3	97	61	158	56	41	97
Murrumbidgee, The ... ..	6	3	10	13	168	213	381	144	184	328
Namoi, The ... ..	1	...	4	4	46	86	132	30	70	100
Nepean, The ... ..	2	...	9	9	79	129	208	79	129	208
Newcastle ... ..	3	2	10	12	154	210	364	154	210	364
New England ... ..	3	...	15	15	102	156	258	102	156	258
Newtown ... ..	4	...	19	19	279	379	658	250	345	595
Northumberland ... ..	2	...	4	4	134	166	300	103	129	232
Orange ... ..	6	2	19	21	232	280	512	219	276	495
Paddington ... ..	5	2	27	29	265	402	667	208	335	543
Parramatta ... ..	2	3	3	6	92	108	200	92	80	172
Patrick's Plains ... ..	2	...	5	5	43	48	91	40	43	83
Queanbeyan ... ..	1	...	3	3	44	23	67	36	20	56
Redfern ... ..	3	4	11	15	375	417	792	303	355	658
Richmond ... ..	2	...	6	6	57	75	132	48	70	118
Shoalhaven ... ..	...	...	...	...	...	...	...	...	...	...
St. Leonards ... ..	7	13	23	36	379	365	744	298	264	562
Sydney, East ... ..	6	17	32	49	769	1,101	1,870	604	856	1,460
Sydney, South ... ..	6	25	31	56	1,266	1,093	2,359	1,129	994	2,123
Sydney, West ... ..	7	10	25	35	618	631	1,249	618	631	1,249
Tamworth ... ..	4	...	11	11	75	143	218	69	128	197
Tenterfield ... ..	1	...	3	3	56	84	140	40	60	100
Tumut ... ..	2	...	8	8	99	119	218	90	108	198
Wellington ... ..	5	...	12	12	108	132	240	82	107	189
Wentworth ... ..	...	...	...	...	...	...	...	...	...	...
Wollombi ... ..	1	...	3	3	31	27	58	27	23	50
Yass Plains ... ..	2	1	5	6	54	104	158	45	89	134
Young ... ..	3	1	10	11	160	198	358	144	189	333
Total ... ..	215	148	748	896	11,222	13,798	25,020	9,533	11,766	21,279

## STATISTICS, 1886—EDUCATION, &amp;c.

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## PUBLIC INSTRUCTION—continued.

No. 8.—NUMBER of WESLEYAN, PRESBYTERIAN, and LUTHERAN DENOMINATIONAL SCHOOLS, with NUMBER of TEACHERS and SCHOLARS for the year 1886.

Electorate.	Religion.	Number of Schools.	Number of Teachers.			Number of Scholars on Roll.			Average Attendance.		
			Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Canterbury ... ..	Wesleyan Methodist	1	1	4	5	...	46	46	...	41	41
	Total... ..	1	1	4	5	...	46	46	...	41	41
Hartley ... ..	Presbyterian	1	6	...	6	73	...	73	60	...	60
Hastings and Manning	"	1	1	...	1	4	...	4	4	...	4
Sydney, West... ..	"	1	...	1	1	6	16	22	6	16	22
	Total... ..	3	7	1	8	83	16	99	70	16	86
Albury... ..	German Lutheran...	1	1	...	1	35	28	63	28	...	53
Hume, The ... ..	" "	1	...	1	1	14	8	22	10	25	16
	Total... ..	2	1	1	2	49	36	85	38	31	69

## SYDNEY UNIVERSITY.

No. 9.—RETURN of the NUMBER of STUDENTS and RESULTS of PUBLIC EXAMINATIONS, 1876-86.

Year.	Number of Students qualified for Matriculation.	Number of Students attending Lectures.	Public Examinations.			
			Number of Seniors who came up.	Number of Juniors who came up.	Number of Seniors who passed.	Number of Juniors who passed.
1876 ... ..	34	58	53	356	40	212
1877 ... ..	23	61	63	303	38	135
1878 ... ..	24	62	58	364	41	243
1879 ... ..	58	83	76	333	64	247
1880 ... ..	64	76	66	381	54	209
1881 ... ..	80	81	48	392	36	231
1882 ... ..	101	97	57	398	43	240
1883 ... ..	85	128	57	473	36	299
1884 ... ..	142	203	65	563	48	379
1885 ... ..	115	203	84	645	73	440
1886 ... ..	122	340*	107	858	83	548

\* Of this number, 137 non-matriculated students attended courses of evening lectures.

NOTE.—The Public Examinations are similar to the *Middle Class* Examinations of Oxford and Cambridge. They are held annually, in November, and are intended to test the qualifications of boys and girls attending schools or being instructed privately. They are divided into Senior and Junior, and certificates of competency in the *several* subjects of examination are given to the successful candidates. These examinations are *distinct* from the examination for the Civil Service.

No. 10.—DEGREES CONFERRED since Foundation.

Year.	B.A.	M.A.	M.B.	M.D.	LL.B.	LL.D.	B.Sc.	B.E.	Total.
1856 ... ..	7	...	...	...	...	...	...	...	7
1857 ... ..	10	...	...	...	...	...	...	...	10
1858 ... ..	...	...	...	...	...	...	...	...	...
1859 ... ..	8	10	...	...	...	...	...	...	18
1860 ... ..	8	3	...	...	...	...	...	...	11
1861 ... ..	2	...	...	...	...	...	...	...	2
1862 ... ..	3	6	...	...	...	...	...	...	9
1863 ... ..	16	5	...	...	...	...	...	...	21
1864 ... ..	5	4	...	...	4	...	...	...	13
1865 ... ..	6	4	...	...	...	...	...	...	10
1866 ... ..	13	1	1	...	...	2	...	...	17
1867 ... ..	9	2	1	...	1	2	...	...	15
1868 ... ..	11	4	...	3	2	...	...	...	20
1869 ... ..	11	7	...	...	3	...	...	...	21
1870 ... ..	12	9	4	...	...	2	...	...	27
1871 ... ..	9	7	2	...	3	...	...	...	21
1872 ... ..	11	7	...	3	1	...	...	...	22
1873 ... ..	10	6	1	1	1	3	...	...	22
1874 ... ..	14	6	2	2	...	1	...	...	25
1875 ... ..	7	11	...	1	...	...	...	...	19
1876 ... ..	11	17	1	...	...	...	...	...	29
1877 ... ..	12	6	...	2	...	2	...	...	22
1878 ... ..	11	8	...	...	...	1	...	...	20
1879 ... ..	17	10	...	...	...	...	...	...	27
1880 ... ..	23	4	...	...	...	...	...	...	27
1881 ... ..	10	8	1	2	1	...	...	...	22
1882 ... ..	19	20	...	9	1	2	...	...	51
1883 ... ..	21	3	...	...	...	...	...	...	24
1884 ... ..	22	14	...	1	1	1	...	...	39
1885 ... ..	25	8	...	2	2	2	...	3	42
1886 ... ..	20	8	1	2	...	1	...	2	34
Total... ..	363	198	14	26	20	19	2	5	647

## STATISTICS, 1886—EDUCATION, &amp;c.

SYDNEY UNIVERSITY—*continued.*

## No. 11.—RECEIPTS and EXPENDITURE of the UNIVERSITY OF SYDNEY for the years 1876-86.

Year.	Receipts.				Expenditure.
	Government Aid.	College Fees.	Other Sources.	Total.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1876 ... ..	5,000 0 0	403 4 6	4,904 13 10	10,307 18 4	10,681 11 8
1877 ... ..	5,000 0 0	333 18 0	6,261 15 4	11,595 13 4	9,616 17 3
1878 ... ..	6,168 0 0	324 6 6	3,556 1 1	10,048 7 7	10,849 14 10
1879 ... ..	5,114 3 6	476 5 7	3,223 7 10	8,813 16 11	8,661 0 9
1880 ... ..	6,500 0 0	457 9 9	3,960 8 7	10,917 18 4	9,870 16 5
1881 ... ..	6,000 0 0	705 15 3	8,577 7 11	15,283 3 2	10,693 4 11
1882 ... ..	12,963 11 6*	1,080 3 6	2,105 15 7	16,149 10 1	12,700 19 3
1883 ... ..	14,342 15 0†	1,265 15 8	4,040 17 11	19,649 8 7	19,769 12 1
1884 ... ..	15,500 0 0	2,207 3 2	2,600 15 1	20,307 18 3	18,203 12 7
1885 ... ..	16,500 0 0	2,108 11 3	1,729 14 10	20,338 6 1	21,577 6 11
1886 ... ..	17,500 0 0	2,470 18 2	3,610 3 7	23,581 1 9	23,176 10 10

\* Includes additions, repairs, and furniture.  
† Exclusive of additions, repairs, and furniture; and also lighting lamps, &c.

## No. 12.—NUMBER of STUDENTS, &amp;c., with RECEIPTS and EXPENDITURE for the year 1886, of the SYDNEY UNIVERSITY and AFFILIATED COLLEGES, and of the SYDNEY GRAMMAR SCHOOL.

Institution.	Number of Teachers.	Number of Students.	Receipts.			Expenditure.	
			From the Government.	From other sources.	Total.	On Buildings.	Total.
			£	£	£	£	£
University ... ..	30	340	17,500*	6,081	23,581	22,780	45,956
St. Paul's College ... ..	2	23	2,769	2,135	4,904	3,611	5,783
St. John's College ... ..	3	8	500	750	1,250	100	1,250
St. Andrew's College ... ..	2	20	500	2,776	3,276	146	2,336
Sydney Grammar School ... ..	18	429	2,800	6,307	9,107	1,845	9,483

\* Does not include cost of buildings, &c., carried out by the Government, viz., £22,780.

## ART GALLERY, FREE LIBRARIES, AND MUSEUMS.

## No. 13.—NUMBER of VISITORS, RECEIPTS, and EXPENDITURE for the year 1886.

Institutions.	Number of Visitors.				Receipts from Government.	Expenditure.		
	For the year.		Average daily.			Purchases.	Salaries and Wages.	Total.
	Week-days.	Sundays.	Week-days.	Sundays.				
				£	£	£	£	
Art Gallery ... ..	130,115	90,430	418	1,739	5,000	2,118	1,013	3,131
Free Library—								
Reference Branch ... ..	97,955	5,475	323	105	*8,192	3,584	4,096	7,680
Lending Branch ... ..	63,081	2,174	216	44				
Technological Museum ... ..	31,297	17,937	99	325	4,399	2,756	1,640	4,396
Australian Museum ... ..	85,972	41,259	236	793	8,475	3,702	3,349	7,051

\* Amount expended on building not included, £7,576.

## STATISTICS, 1886—EDUCATION, &amp;c.

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ART GALLERY, FREE LIBRARIES, AND MUSEUMS—*continued.*

## No. 14.—RETURN of the FREE PUBLIC LIBRARY for the year ending 31st December, 1886.

	Cost of Purchase	Amount of Aid from Government, exclusive of Salaries and Maintenance.			Estimated value of Volumes, &c., presented as Donations and under Copyright Act.				Number of Volumes and Pamphlets in the Library.	Number of Visits during the year.
		Prior to 1886.	During 1886.		Prior to 1886.		During 1886.			
	£ s. d.	£ s. d.	£ s. d.	No.	£ s. d.	No.	£ s. d.			
Reference Library..	5,570 12 5	34,078 15 0	2,860 9 11	4,486	2,085 3 8	337	56 9 0	} 50,407	103,430.	
Lending Branch ...	.....	4,588 4 7	340 2 10	*68	22 7 1	*171	*23 2 3			} 21,285
Country Libraries—	.....	.....	.....	.....	.....	.....	.....	} 2,632	.....	
Loans of Books, in boxes only ...	.....	1,607 2 3	383 1 1	.....	.....	.....	.....			} 74,324
Total ...	5,570 12 5	40,274 1 10	3,583 13 10	4,581	2,110 10 9	508	79 11 3			

\* Under Copyright Act.

## No. 15.—NUMBER of VOLUMES in the FREE PUBLIC LIBRARY on the 31st December, 1886.

Synopsis of Classification.	Reference Department.	Lending Branch.	Country Libraries.	Total.
Natural Philosophy, Science and the Arts... ..	5,608	2,640	469	8,717
History, Chronology, Antiquities, and Mythology ... ..	4,868	2,210	677	7,755
Biography and Correspondence ... ..	3,355	2,685	684	6,724
Geography, Topography, Voyages and Travels, &c. ... ..	4,915	2,712	404	8,031
Periodical and Serial Literature ... ..	13,244	.....	.....	13,244
Jurisprudence ... ..	2,246	615	48	2,909
Theology, Moral and Mental Philosophy, and Education ... ..	3,075	1,011	64	4,150
Poetry and Drama ... ..	1,665	534	64	2,263
Miscellaneous Literature and Novels ... ..	3,933	4,010	222	8,165
Works of Reference and Philology ... ..	3,714	.....	.....	3,714
Patents ... ..	.....	4,301	.....	4,301
Duplicates and unbound Volumes... ..	1,195	.....	.....	1,195
Pamphlets ... ..	2,589	.....	.....	2,589
Books for the Blind ... ..	.....	567	.....	567
Total Number of Volumes ... ..	50,407	21,285	2,632	74,324

## No. 16.—NUMBER of VISITS of READERS to the LIBRARY, the NUMBER of DAYS the LIBRARY was OPEN to the PUBLIC, and the AVERAGE NUMBER of VOLUMES USED on SUNDAYS and on WEEK-DAYS, from 1st January to 31st December, 1886 :—

Total number of Visits to the Reference Library ... ..	103,430
Total number of Visits to the Lending Branch ... ..	65,255
Total ... ..	168,685
Total number of Days that the Reference Library was open (including Sundays) ... ..	355
Total number of Days that the Lending Branch was open (including Sundays) ... ..	343
Average number of Volumes used on Sundays—	
Reference Library (from 2 to 6 p.m.) ... ..	105
Lending Branch (from 2 to 6 p.m.) ... ..	54
Total ... ..	159
Average number of Volumes used on Week-days—	
Reference Library (from 10 a.m. to 10 p.m.) ... ..	650
Lending Branch (from 10 a.m. to 9 p.m.) ... ..	278
Total ... ..	928
SUMMARY OF VISITS TO THE LIBRARY, 1869—1886 :—	
1869 (three months—1 Oct. to 31st Dec.)... ..	17,006
1870 ... ..	59,786
1871 ... ..	60,165
1872 ... ..	48,817
1873 ... ..	76,659
1874 (eleven months) ... ..	57,962
1875 ... ..	66,900
1876 ... ..	72,724
1877 ... ..	124,688*
1878... ..	117,047
1879 (Exhibition open) ... ..	152,036
1880... ..	134,462
1881... ..	136,272
1882 (eleven months) ... ..	133,731
1883... ..	155,431
1884 (eleven months) ... ..	161,877
1885... ..	165,715
1886... ..	168,685

\* Lending Branch first opened.



ART GALLERY, FREE LIBRARIES, AND MUSEUMS—*continued.*

## No. 17.—CLASS OF BOOKS BORROWED from the LENDING BRANCH, from 1st January to 31st December, 1886.

No of days open	No of Tickets issued to Borrowers	No of Borrowers' visits	Synopsis of Classification of Reading	No of Volumes used	Daily average of Volumes used
343	4,822	65,255	Natural Philosophy, Science, and the Arts	9,004	26 250
			History, Chronology, Antiquities, and Mythology	7,816	22 787
			Biography and Correspondence	8,332	24 291
			Geography, Topography, Voyages and Travels	11,238	32 763
			Jurisprudence	1,302	3 795
			Mental and Moral Philosophy, &c	2,787	8 125
			Poetry and Drama	2,486	7 247
			Miscellaneous Literature	11,536	33 632
			Prose Works of Fiction	29,867*	87 075
			Patents	22	0 64
Total				84,390	246 029

\* These Volumes were taken out by 2,034 persons, 10 per cent borrowed Fiction only, and 90 per cent borrowed also other works.

## No. 18.—CLASS OF BOOKS READ, the NUMBER OF VOLUMES USED, and the NUMBER OF VISITS to the LIBRARIES, on SUNDAYS during the year 1886.

No of Sundays open	No of Visits	Daily average of Visits	REFERENCE LIBRARY.	No of Volumes issued	Daily average of Volumes issued			
52	5,475	105	Natural Philosophy, Science, and the Arts	1,198	23 039			
			History, Chronology, Antiquities, and Mythology	572	11 000			
			Biography and Correspondence	437	8 404			
			Geography, Topography, Voyages and Travels	975	18 750			
			Periodical and Serial Literature	1,264	24 308			
			Jurisprudence	252	4 846			
			Theology, Moral and Mental Philosophy, and Education	432	8 307			
			Poetry and Drama	478	9 192			
			Miscellaneous Literature and Collected Works	2,510	48 269			
			Works of Reference and Philology	737	14 173			
Total				8,855	170 288			
49	2,174	44	Natural Philosophy, Science, and the Arts	422	8 612			
			History, Chronology, Antiquities, and Mythology	286	5 837			
			Biography and Correspondence	239	4 877			
			Geography, Topography, Voyages and Travels	392	8 000			
			Jurisprudence	60	1 224			
			Mental and Moral Philosophy, &c.	119	2 429			
			Poetry and Drama	115	2 347			
			Miscellaneous Literature, Patents, and Prose Works of Fiction	1,012	20 653			
			Total ..				2,645	53 979

## No. 19.—NUMBER OF BOXES OF BOOKS BORROWED by COUNTRY LIBRARIES, with MILEAGE TRAVELLED, during the year 1886.

Town	Institution	No of Boxes borrowed	Mileage travelled	Town	Institution	No of Boxes borrowed	Mileage travelled
Adamstown	Mechanics' Institute	1	160	Mudgee	Mechanics' Institute	2	570
Ballina	School of Arts	2	1,192	Narrabri	Mechanics' Institute	1	321
Bathurst	Teachers' Association	1	144	Nowra	School of Arts	3	585
Berrima	School of Arts	2	249	Nyngan	Mechanics' Institute	3	1,985
Bowral	School of Arts	1	160	Orange	School of Arts	2	768
Brewarrina	School of Arts	2	1 681	O'Connell	Literary Institute	1	278
Bulli	School of Arts	3	236	Randwick	School of Arts	3	20
Casino	School of Arts	1	770	Ryde	Mechanics' Institute	1	16
Cobar	School of Arts	2	1,480	Sofala	Literary Institute	1	344
Coonamble	Mechanics' Institute	1	375	Uialla	Literary Institute	1	320
Denman	School of Arts	1	330	Urara	School of Arts	2	762
Eugowra	School of Arts	3	1,235	Walcha	School of Arts	3	1,345
Faiford	Mechanics' Institute	1	199	Waterloo	Working Mens' Library	1	3
Grafton	School of Arts	3	1,750	Wellington	Free Public Library	3	1,240
Granville	School of Arts	3	75	Wellington	Teachers' Association	2	744
Gulgong	Free Public Library	2	606	Wentworth	Mechanics' Institute	1	1,250
Harden	Mechanics' Institute	2	684	Wilcannia	Athenaeum	1	708
Liverpool	Free Public Library	1	22	Wollongong	School of Arts	1	132
Manilla	School of Arts	2	863	Wolumla	School of Arts	2	791
Merrima	School of Arts	1	396	Young	Mechanics' Institute	2	375
Milton	School of Arts	3	620				
Mittagong	School of Arts	3	385				
Total						77	26,169

SCHOOLS OF ART, PUBLIC LIBRARIES, &c.

No. 20.—NUMBER of SCHOOLS OF ART, PUBLIC LIBRARIES, &c., in the Colony of New South Wales, showing the DATE when FIRST OPENED, whether FREEHOLD or LEASEHOLD, COST of ERECTION, the AMOUNT RECEIVED from GOVERNMENT and from PRIVATE CONTRIBUTIONS, the NUMBER of VOLUMES of BOOKS, and the AVERAGE NUMBER of PERSONS USING the LIBRARY on days when open, during the year ending 31st December, 1886.

Name of Institution.	Date when first opened.	Freehold or Leasehold.	If Freehold, cost of erection	Receipts during the Year 1886.			Private Contributions of Books during the Year.	Total number of Volumes in the Institution.	Hours during which it is open.	Average number of persons using Library on days when open.
				From Government	From Private Contributions, &c	Total.				
Adamstown Mechanics' Institute . . . . .	26 July, 1879	Freehold	£ 470	£ s. d. 100 10 10	£ s. d. 47 2 6	£ s. d. 147 13 4	No. of Vols 2	No. 1,402	8.30 a.m. to 9.30 p.m.; Sun., 8.30 a.m. to 12.30 p.m.	.....
Adelong Literary Institute . . . . .	— 1877	Freehold	633	48 7 9	118 7 1	166 14 10	2	460	10 a.m. to 10 p.m.; Sun., 10 a.m. to 6 p.m.	30
Albury Mechanics' Institute and School of Arts	— 1862	Crown Grant	3,660	173 15 0	173 15 0	347 10 0	.....	1,050	8 a.m. to 10 p.m. . . . .	30
Anvil Creek School of Arts . . . . .	28 Aug., 1877	Freehold	132	10 12 6	24 15 0	35 7 6	20	665	9 a.m. to 10 p.m. . . . .	20
Armidale Literary Institute . . . . .	— April, 1867	Freehold	.....	.....	.....	.....	.....	.....	.....	.....
Ashfield School of Arts . . . . .	5 Sept., 1881	Freehold	4,096	34 12 4	328 3 9	362 16 1	.....	1,600	7 p.m. to 9 p.m. (Sun. excepted)	12
Balmain School of Arts . . . . .	1 Oct., 1858	Freehold	.....	.....	.....	.....	.....	.....	.....	.....
Balmain Working Men's Institute . . . . .	1 June, 1865	Leasehold	.....	.....	22 4 7	22 4 7	.....	550	7 p.m. to 10 p.m. . . . .	25
Barraba Mechanics' Institute . . . . .	20 May, 1885	Freehold	244	.....	10 17 6	10 17 6	48	90	Books issued as required . . . . .	.....
Bathurst Mechanics' School of Arts . . . . .	29 Aug., 1855	Freehold	12,000	307 0 8	346 5 10	653 6 6	.....	9,217	10 a.m. to 10 p.m. . . . .	60
Bega School of Arts . . . . .	31 Aug., 1869	Freehold	2,000	666 13 4	1,333 6 8	2,000 0 0	.....	3,887	9 a.m. to 10 a.m., 12 noon to 1 p.m., 5 p.m. to 6 p.m., 8 p.m. to 10 p.m.	35
Berrima School of Arts . . . . .	2 Jan., 1883	Leasehold	.....	22 5 3	32 2 3	54 7 6	.....	639	7 p.m. to 10 p.m. . . . .	12
*Blayney School of Arts . . . . .	— April, 1880	Freehold	3,600	.....	.....	.....	.....	.....	.....	.....
Bombala School of Arts and Mechanics' Institute	28 Nov., 1872	Freehold	2,200	89 0 5	70 6 6	159 6 11	.....	1,000	9.30 a.m. to 10 p.m. . . . .	.....
Botany School of Arts and Mechanics' Institute	7 Aug., 1867	Freehold	300	87 12 0	162 11 3	250 3 3	.....	900	7 p.m. to 10 p.m. . . . .	17
Bourke Mechanics' Institute . . . . .	3 July, 1871	Crown Grant	1,750	46 13 1	108 7 6	155 0 7	6	.....	7 p.m. to 9.30 p.m. (Sun. excepted)	11
Bowral School of Arts . . . . .	10 Aug., 1885	Freehold	1,256	.....	508 10 6	508 10 6	57	637	9 a.m. to 9.30 p.m.; Sat., 9 a.m. to 10 p.m.	12
Braidwood Literary Institute . . . . .	— Jan., 1858	Freehold	2,500	39 11 3	279 19 0	319 10 3	†	4,500	8.30 a.m. to 10 p.m.; Sun., 2 p.m. to 5 p.m.	30
Branxton Mechanics' Institute . . . . .	— Jan., 1866	Freehold	320	160 0 0	160 0 0	320 0 0	.....	468	9 a.m. to 10 p.m. . . . .	12
Brewarrina School of Arts . . . . .	14 July, 1873	Freehold	993	430 16 4	49 11 6	480 7 10	6	404	Mon., Wed., and Fri., 7.30 p.m. to 10 p.m.	.....
Broughton Vale Free Public Library . . . . .	10 Dec., 1884	Leasehold	.....	.....	.....	.....	22	589	5 p.m. to 7 p.m. . . . .	3
Burrowa Mechanics' Institute . . . . .	26 Jan., 1884	Freehold	1,050	.....	27 7 3	27 7 3	141	241	.....	.....
Burwood School of Arts . . . . .	5 Sept., 1879	Freehold	3,483	.....	148 18 6	148 18 6	.....	4,000	2 p.m. to 9 p.m. . . . .	40
Cambewarra School of Arts . . . . .	26 Aug., 1879	Freehold	391	.....	.....	.....	.....	105	7 to 10 p.m. . . . .	.....
Camden School of Arts . . . . .	26 Oct., 1866	Freehold	1,756	15 14 6	188 10 9	322 11 9	117	1,320	9 a.m. to 10 p.m. (Sun. excepted).	.....
Candelo School of Arts . . . . .	17 Mar., 1881	Freehold	400	.....	12 0 0	12 0 0	6	430	10 a.m. to 10 p.m. . . . .	180
Casino School of Arts . . . . .	18 Sept., 1875	Crown Grant	2,900	343 9 4	430 19 4	774 8 8	.....	1,250	Tues. and Sat., 7 p.m. to 9 p.m.	.....
Cathcart School of Arts . . . . .	18 Sept., 1880	Leasehold	.....	5 17 6	5 17 6	11 15 0	.....	216	10 a.m. to 10 p.m. . . . .	.....
Charlestown Literary Institute . . . . .	15 Sept., 1877	Freehold	70	10 7 0	29 9 7	39 16 7	.....	250	10 a.m. to 10 p.m. (Sun. excepted)	50
Clarence Town School of Arts . . . . .	14 May, 1879	Freehold	388	.....	10 5 0	10 5 0	.....	723	Tues., Thurs., and Sat. 7.30 p.m. to 9.30 p.m.	11
Clifton School of Arts . . . . .	— June, 1880	Freehold	.....	9 19 6	13 12 0	23 11 6	.....	200	9 a.m. to 9.30 p.m. . . . .	12
Condobolin School of Arts . . . . .	— Nov., 1884	Crown Grant	.....	.....	.....	.....	.....	.....	.....	.....
Cooma School of Arts . . . . .	29 June, 1881	Freehold	1,300	.....	104 10 6	104 10 6	.....	600	3 p.m. to 5 p.m., 7 p.m. to 9.30 p.m.	10
Coonabarabran Mechanics' Institute . . . . .	1 Oct., 1875	Freehold	300	2 9 4	20 2 3	22 11 7	.....	600	9 a.m. to 10 p.m. . . . .	6
Coonamble School of Arts . . . . .	1 Sept., 1881	Freehold	556	18 15 2	90 14 4	109 9 6	.....	778	10 a.m. to 10 p.m. . . . .	.....

\* Sold to the Municipal Council † Donation of £25 received.

## SCHOOLS OF ART, PUBLIC LIBRARIES, &amp;c.—continued.

## No. 20 (continued).—NUMBER OF SCHOOLS OF ART, PUBLIC LIBRARIES, &amp;c., in the Colony of New South Wales—continued.

Name of Institution.	Date when first opened.	Freehold or Leasehold.	If Freehold, cost of erection.	Receipts during the Year 1886.			Private Contributions of Books during the Year.	Total number of Volumes in the Institution.	Hours during which it is open.	Average number of persons using Library on days when open.
				From Government.	From Private Contributions, &c.	Total.				
Corowa School of Arts...	21 April, 1873	Freehold	£ 1,300	£ s. d. 30 0 0	£ s. d. 69 0 0	£ s. d. 99 0 0	No. of Vols. 116	No. 950	10 a.m. to 10 p.m. ...	60
Cowra School of Arts ...	— Oct., 1883	Freehold	138	.....	.....	.....	.....	330	.....	.....
Cudal School of Arts ...	6 June, 1881	Freehold	400	37 19 6	66 3 0	104 2 6	40	400	Sat., 2 p.m. to 10 p.m. ...	20
Cundletown School of Arts ...	— Feb., 1880	Freehold	352	85 0 0	167 0 0	252 0 0	.....	383	10 a.m. to 3 p.m. ...	.....
Deniliquin Mechanics' Institute and School of Arts	— Jan., 1865	Crown Grant	800	63 1 0	152 1 0	215 2 0	.....	1,588	10 a.m. to 2 p.m., 3 p.m. to 10 p.m. (Sun. excepted).	35
Denman School of Arts ...	5 Mar., 1872	Freehold	500	10 14 10	9 7 6	20 2 4	.....	1,300	10 a.m. to 10 p.m. ...	8
Dubbo Mechanics' Institute ...	4 Feb., 1867	Freehold	1,200	600 0 0	600 0 0	1,200 0 0	.....	1,400	9 a.m. to 10 p.m., Sun. 2 p.m. to 5 p.m.	27
Dungog School of Arts ...	1 July, 1872	Freehold	450	34 2 0	34 2 0	68 4 0	.....	940	9 a.m. to 10 p.m. ...	40
Forbes School of Arts ...	4 Feb., 1867	Crown Grant	1,000	36 18 4	69 0 0	105 18 4	.....	1,385	9 a.m. to 10 p.m. (Sun. excepted).	25
Frederickton School of Arts ...	1 Oct., 1871	Freehold	275	1 10 0	7 15 0	9 5 0	7	150	9 a.m. to 6 p.m. ...	.....
Glebe Free Public Library and School of Arts	— April, 1883	Rooms in Town Hall.	.....	16 11 1	43 12 0	60 3 1	6	1,500	8-30 a.m. to 3-30 p.m., 7 p.m. to 9 p.m.; Sat. 8-30 a.m. to 12 noon.	20
Glen Innes School of Arts ...	5 May, 1881	Council Chambers..	.....	.....	7 7 0	7 7 0	.....	20	6 p.m. to 10 p.m. ...	.....
Goulburn Mechanics' Institute	— 1860	Freehold	6,500	137 13 0	766 0 11	903 13 11	.....	4,780	11 a.m. to 1 p.m., 3 p.m. to 5 p.m., 7 p.m. to 9 p.m.	40
Grafton School of Arts ...	3 July, 1858	Freehold	2,000	163 8 7	269 10 4	432 18 11	.....	2,814	9 a.m. to 10 p.m. ...	.....
Grafton (South) School of Arts	13 Sept., 1877	Leasehold	.....	16 8 5	29 10 6	45 18 11	19	350	6 p.m. to 10 p.m. ...	11
Granville School of Arts ...	— 1880	Freehold	1,500	87 11 11	167 18 8	255 10 7	.....	600	7 p.m. to 10 p.m. ...	.....
Grenfell School of Arts ...	— 1870	Freehold	305	52 17 10	50 0 0	102 17 10	.....	400	9 a.m. to 9 p.m. ...	3
Gulgong Free Public Library...	12 Jan., 1880	Leasehold	.....	.....	.....	.....	.....	1,033	3 hours daily, Sat. 6 hours	4
Gundagai Literary Institute ...	25 Mar., 1873	Sufferance	.....	8 6 3	22 2 4	30 8 7	.....	1,800	2 p.m. to 4 p.m., 8 p.m. to 9 p.m.	6
Gunnedah School of Arts ...	6 July, 1880	Freehold	1,100	28 9 9	114 0 0	142 9 9	.....	720	7-30 p.m. to 9-30 p.m. ...	15
Guntawang School of Arts ...	— 1872	Freehold	70	.....	.....	.....	.....	400	.....	.....
Hamilton Mechanics' Institute	11 June, 1872	Freehold	200	34 19 9	124 9 3	159 9 0	6	782	9 a.m. to 9 p.m. ...	35
Hay Athenæum ...	26 Jan., 1875	Freehold	900	.....	90 10 6	90 10 6	.....	1,187	10 a.m. to 10 p.m. ...	25
Hinton School of Arts...	— Sept., 1869	Freehold	929	464 10 0	464 10 0	929 0 0	32	450	9 a.m. to 10 p.m. ...	24
Inverell Public Library and Reading Room	2 Aug., 1875	Freehold	.....	.....	9 2 1	9 2 1	.....	1,000	9 a.m. to 9 p.m. ...	30
Islington Mechanics' Institute	22 Feb., 1884	Freehold	339	22 2 7	261 5 9	283 8 4	.....	380	7 p.m. to 10 p.m. ...	10
Jerilderie Mechanics' Institute and Free Library	22 April, 1881	Leasehold	.....	.....	43 3 5	43 3 5	50	670	10 a.m. to 10 p.m. ...	15
Kiama Free Public Library ...	22 Sept., 1872	Freehold	150	.....	.....	.....	.....	1,250	12 a.m. to 2 p.m. ...	.....
Lambton Mechanics' and Miners' Institute	24 Dec., 1867	Freehold	726	40 6 7	158 15 10	199 2 5	.....	2,000	8 a.m. to 10 p.m. ...	.....
Largs School of Arts ...	— May, 1875	Freehold	1,130	13 3 1	47 18 7	61 1 8	20	300	10-30 a.m. to 10 p.m. (Sun. excepted)	12
Lawrence School of Arts ...	— June, 1885	Leasehold	.....	12 17 11	37 1 6	49 19 5	60	150	10 a.m. to 10 p.m. ...	20
Lismore School of Arts ...	1 Jan., 1881	Leasehold	.....	15 17 2	150 6 10	166 4 0	.....	350	9 a.m. to 10 p.m. ...	20
Maclean Mechanics' Institute ...	1 July, 1879	Freehold	254	13 5 0	96 6 7	109 11 7	.....	360	9 a.m. to 9 p.m. (Sun. excepted)...	15
Maitland (East) Mechanics' Institute	— 1859	Freehold	2,000	25 4 9	.....	25 4 9	.....	2,034	9 a.m. to 10 a.m., 4 p.m. to 5 p.m., 7-30 p.m. to 8-30 p.m.	6
Do (West) School of Arts ...	— 1856	Freehold	3,000	214 18 3	441 10 9	656 9 0	.....	6,500	9 a.m. to 1 p.m., 4 p.m. to 6 p.m., 7 p.m. to 10 p.m.	.....
Manilla Mechanics' Institute and School of Arts	11 Dec., 1855	Freehold	320	.....	96 10 6	96 10 6	2	141	Mon. Wed. & Fri. 7 p.m. to 10 p.m.	.....
Menindie Mechanics' Institute	1 April, 1882	Freehold	370	26 9 7	55 19 6	82 9 1	.....	284	Tue. and Fri., 7 p.m. to 9 p.m. ...	.....
Merriwa School of Arts and Mechanics' Institute...	14 June, 1869	Freehold	640	16 13 5	63 12 7	80 6 0	8	520	9 a.m. to 10 p.m. ...	10
Milton Mechanics' School of Arts	16 Aug., 1872	Freehold	900	7 16 4	28 19 6	36 15 10	.....	980	10 a.m. to 10 p.m. ...	14
Molong School of Arts...	1 July, 1878	Freehold	1,264	27 13 7	146 19 2	174 12 9	13	760	7 p.m. to 10 p.m. ...	11
Morpeth School of Arts	24 Sept., 1863	Freehold	2,600	6 5 3	112 4 11	118 10 2	50	1,300	9 a.m. to 10 p.m. (Sun. excepted)..	3

Moruya Mechanics' Institute and School of Arts	— Dec., 1880	Freehold	765	25 7 1	74 8 3	99 15 4	...	500	9 a.m. to 9 p.m.	6
Mount Pleasant School of Arts	— Jan., 1881	Freehold	120	...	...	...	...	...	...	...
Mudgee Mechanics' Institute	12 May, 1887	Freehold	3,580	48 14 7	181 18 6	230 13 1	1	3,377	10 a.m. to 10 p.m. (Sun. excepted)	50
Murrumbidgee Mechanics' Institute and School of Arts	— 1880	Freehold	350	33 1 4	74 10 9	107 12 1	20	413	10 a.m. to 10 p.m.	13
Muriurundi Mechanics' Institute and School of Arts	4 Sept., 1873	Freehold	1,000	12 5 1	66 8 6	78 13 7	...	1,000	7 p.m. to 10 p.m.; Sat., 3 p.m. to 5 p.m.	20
Muswellbrook School of Arts	5 Mar., 1872	Freehold	1,691	18 19 9	53 16 1	72 15 10	...	1,602	8 a.m. to 10 p.m.	50
Narrabri Mechanics' Institute	1 Jan., 1871	Freehold	900	...	65 13 0	65 13 0	...	397	4 p.m. to 6 p.m., 7 p.m. to 10 p.m.	9
Newcastle School of Arts	29 July, 1875	Freehold	5,000	266 8 2	265 11 6	531 19 8	36	6,100	10 a.m. to 10 p.m.	...
Newcastle (Glebe & Burwood) Mechanics' Institute	— Feb., 1882	Leasehold	...	51 3 0	77 12 4	128 15 4	5	640	9 a.m. to 9 p.m.	40
Nowra School of Arts	1 June, 1885	Leasehold	...	...	21 13 3	21 13 3	...	80	10 a.m. to 10 p.m.	20
Orange Mechanics' Institute and School of Arts	— 1858	Freehold	3,500	41 3 10	323 8 7	364 12 5	...	3,500	3 p.m. to 6 p.m., 7 p.m. to 10:30 p.m.	12
Pambula School of Arts and Mechanics' Institute	13 Dec., 1883	Freehold	370	11 0 6	20 7 6	31 8 0	...	430	9 a.m. to 9 p.m.	12
Parramatta School of Arts	— May, 1850	Freehold	2,400	15 6 11	188 11 11	203 18 10	...	1,439	7 p.m. to 10 p.m.; Sat., 3:30 p.m. to 5 p.m., 7 p.m. to 10 p.m.	40
Paterson School of Arts	— Sept., 1867	Freehold	503	7 16 7	17 1 8	24 18 3	3	616	Wed., Sat., 8 p.m. to 10:30 p.m.	8
Plattsburg Mechanics' Institute	— June, 1878	Freehold	6,100	...	128 4 0	128 4 0	...	1,060	9 a.m. to 10 p.m.	...
*Port Macquarie School of Arts	...	Crown Grant	...	...	...	...	...	...	...	...
†Qurindi School of Arts	...	...	...	...	...	...	...	...	...	...
Randwick School of Arts	— 1883	Council Chambers	...	20 14 1	40 1 0	60 15 1	...	783	Mon., Wed., Thur., Fri., 7:30 p.m. to 9:30 p.m.	12
Raymond Terrace School of Arts	24 Oct., 1871	Freehold	820	15 1 1	71 0 6	86 1 7	...	550	Tues., Thur., Sat., 8 p.m. to 10 p.m.	20
Redfern Public Library	1 Nov., 1871	Town Hall	...	...	25 0 0	25 0 0	50	2,400	9 a.m. to 3 p.m.; Tues., Thur., Sat., 7:30 p.m. to 9 p.m.	30
Richmond School of Arts	27 Aug., 1866	Freehold	1,363	20 8 9	32 15 0	53 3 9	...	1,200	7 p.m. to 9 p.m.	15
†Robertson School of Arts	4 June, 1886	Freehold	550	114 5 0	228 10 0	342 15 0	...	60	...	...
Scone School of Arts	— 1868	Freehold	900	13 12 3	99 18 9	113 11 0	1	1,600	9 a.m. to 10 p.m.	6
Singleton Mechanics' Institute	14 Sept., 1866	Freehold	2,250	...	204 0 5	204 0 5	...	3,633	10 a.m. to 10 p.m.	...
Sofala Literary Institute	— 1880	Rooms in Court-house.	...	1 18 3	16 8 8	18 6 11	100	500	9 a.m. to 6 p.m.; Wed., Sat., 9 a.m. to 10 p.m.	10
St. Leonards School of Arts	17 Oct., 1859	Freehold	2,200	14 1 3	98 11 6	112 12 9	...	2,300	3 p.m. to 6 p.m., 7 p.m. to 9 p.m.	6
Stroud School of Arts	1 April, 1859	Freehold	400	21 2 6	54 6 10	75 9 4	...	1,626	9 a.m. to 5 p.m.; Mon., Wed., Sat., 9 a.m. to 5 p.m., 7 p.m. to 9 p.m.	...
Sydney Mechanics' School of Arts	22 Mar., 1833	Freehold	26,000	2,079 19 0	3,750 10 4	5,830 9 4	35	29,252	9 a.m. to 10 p.m.	750
Tamworth Mechanics' Institute	— 1866	Freehold	1,454	16 12 7	90 15 6	107 8 1	...	1,252	9 a.m. to 10 p.m.	...
Tighe's Hill School of Arts	— 1879	Freehold	103	...	...	...	...	...	...	...
Tumbarumba Mechanics' Institute	— Mar., 1879	Leasehold	...	...	32 12 6	32 12 6	...	520	9 a.m. to 9 p.m.	...
Tumut Mechanics' Institute	1 Jan., 1879	Leasehold	...	65 14 4	233 13 2	299 7 6	...	430	6 p.m. to 10 p.m.	...
Uralla Literary Institute	8 Sept., 1874	Freehold	200	...	...	...	...	150	8 a.m. to 10 p.m.	...
Vegetable Creek Mining Institute	— Jan., 1882	Freehold	195	20 17 9	48 17 7	69 15 4	...	720	7 p.m. to 9 p.m. three days in week.	6
Wagga Wagga Mechanics' Institute	— 1863	Freehold	1,800	43 1 10	109 4 0	152 5 10	...	1,450	9 a.m. to 10 p.m.	...
Walcha School of Arts	21 Sept., 1875	Freehold	798	33 8 7	90 16 6	124 5 1	47	1,750	9 a.m. to 10 p.m.	...
Wallsend School of Arts	— 1870	Freehold	4,500	112 10 1	225 0 0	337 10 1	...	900	9 a.m. to 10 p.m.	20
Waratah School of Arts	— 1865	Freehold	680	9 3 6	28 6 9	37 10 3	11	850	10 a.m. to 10 p.m.	40
Warialda Mechanics' Institute	1 April, 1883	Freehold	310	24 1 10	148 7 8	172 9 6	...	423	9 a.m. to 10 p.m. (Sun. excepted)	20
Wentworth Mechanics' Institute	26 Nov., 1883	Freehold	1,000	52 10 0	85 19 0	138 9 0	...	700	9 a.m. to 10 p.m.	20
Wickham School of Arts	1 Jan., 1881	Freehold	3,350	147 14 2	212 5 6	359 19 8	58	1,200	10 a.m. to 10 p.m.	30
Wilcannia Athenaeum and Free Library	1 Dec., 1883	Crown Grant	1,600	72 4 4	87 18 8	160 3 0	25	724	10 a.m. to 1 p.m., 3 p.m. to 10 p.m.	23
Windsor School of Arts	— 1861	Freehold	1,500	...	84 11 3	84 11 3	7	1,100	7 p.m. to 10 p.m.; Wed., Sat., 4 p.m. to 5 p.m., 7 p.m. to 10 p.m.	...
Wingham School of Arts	23 Nov., 1875	Freehold	250	14 3 4	57 14 3	71 17 7	13	650	Three nights, 7 p.m. to 9 p.m.	20
Woodburn School of Arts	9 June, 1883	Sufferance	...	6 2 4	16 5 0	22 7 4	...	200	7 p.m. to 9 p.m.	...
Woodville School of Arts	30 Mar., 1877	Freehold	200	...	7 5 0	7 5 0	20	460	Tues., Wed., Fri., Sat., 8 p.m. to 10 p.m.	...
Wolumla School of Arts	17 April, 1883	Freehold	290	...	10 10 0	10 10 0	87	166	Wed., Sat., 3 p.m. to 5 p.m.	6
Wyrallah School of Arts	22 May, 1873	Leasehold	...	11 0 0	...	11 0 0	...	372	7:30 p.m. to 9:30 p.m.	16
Young Mechanics' Institute	9 Nov., 1875	Freehold	4,266	...	...	...	...	...	...	...

\* Not opened. † In course of erection.

NATIONAL ART GALLERY OF NEW SOUTH WALES.

No. 21.—RETURN of the NATIONAL ART GALLERY of NEW SOUTH WALES, for the year ending 31st December, 1886.

Hours between which it is open.	Date when first opened.	Amount of Aid from the Government.		Number of			Presentations.
		Prior to 31st Dec., 1886.	During the twelve months ending 31st December, 1886.	Oil-paintings.	Water-colour and other Drawings, Engravings, Photographs, &c	Statuary and other Works.	
On Monday, from 10 a.m. to 6 p.m.; Tuesday, from noon to 6 p.m.; Wednesday, from 10 a.m. to 6 p.m.; Thursday and Friday, from noon to 6 p.m.; Saturday from 10 a.m. to 6 p.m.; Sunday, from 2 p.m. to 5 p.m. During the winter months the Gallery closes at dusk.	June, 1876, in conjunction with the "New South Wales Academy of Art."  Re-opened as a "National Gallery," on 22nd September, 1880, in temporary building in Botanical Gardens.  Re-opened in present premises in Inner Domain, 23rd December, 1885.	£47,148 9s 4d for purchase of Works of Art—vested in Trustees.	£5,000, Parliamentary Votes for 1886.	Ninety-three	Eighty-four water-colours . . . . . 6,088 10 11 Autotypes . . . . . 100 0 0 117 drawings in black and white, etchings, engravings, negatives, and photogravures of copyright works, &c. . . . . 1,355 6 6	Thirteen pieces of statuary in marble, bronze, or terracotta, £4,994 3s 2d.  Forty-eight vases, plaques, &c., in bronze, iron, and ceramic and glassware, and reproductions of armour, £1,181 2s.	381 oil-paintings 1 do. on china. 4 water-colours. 3 Graphic sketches 1 proof engraving (Doré) 1 engraving, Mrs. Butler Thompson. 4 fusain, chalk, and crayon drawings. 6 sepia sketches. 41 studies from South Kensington Museum. 29 engravings from etchings by late Jas Barry R.A. 3 photographs. 2 marble statues—"The Seamstress" and "Work and Study." Statuettes—"Achilles and Lycaon," and "The Council of War." 20 casts from the antique. About 200 casts for instruction of art students. 2 cases small casts 2 Sévres vases. The "Aurora," "Apollo," "Schinkels," and a collection of 15 other European vases, and 30 Japanese vases Sundry engravings and vases. Collection of British war-medals. 20 vols works on Art subjects. Ivory brooch. Coronation medal (gold). Carrington Jug. Wedgewood Portrait Hunting Horn Of the above, 21 oil-paintings, the "Aurora Vase," with 19 others, were purchased by the Honorable the Colonial Secretary and transferred by him to the Art Gallery, together with the donations from the Japanese Commissioners; 2 oil-paintings, presented by Mr. Thos. Robertson; 1 by Mr. Thos. Walker, Concord; 1 by Mr. Timothy Lark, London; 1 by J. H. Wallis; 1 by W. M. Wallis; 1 by S. S. Thomas; 5 oil-paintings, 2 water-colours, 1 crayon, 1 cast from the antique, 2 cases small casts, &c., and 2 Sévres vases, were originally presented to the "New South Wales Academy of Art," and on the dissolution of that Society were handed over by its members to the "Art Gallery of New South Wales," together with 200 casts, 20 vols. of works on Art subjects, and sundry articles of furniture purchased by that Society, at a cost of about £270. 1 water-colour, "The Fisher Girl," recently presented by Mr. C. J. Royle. The marble statue, "The Seamstress," by Marshall Wood, was presented by Mr. Thomas Walker, of Concord; "Work and Study," by Mrs. L. W. Levy; the "Achilles and Lycaon," by Mr. A. C. Garrick; the "Council of War," by the late Mr. Jas. H. Williams, Consul for the United States; 5 Statuettes, by Messrs. Hebblewhite; 4 Busts, by late Marshall Wood; Photograph of "The Capitol," Washington, by the late Mr. J. A. Fairfax; 2 photographs of scenery in Blue Mountains, New South Wales, by Mr. J. H. Newman; 6 sepia sketches by Samuel Prout, by Miss Du Faur; the collection of British war-medals, casts from Castellani gems, "The Boxers," casts of Tankard, and Banquet of the Gods, by Mr. J. R. Fairfax; painting on china, by Mrs. C. J. Fairfax; ivory brooch, by His Honor Judge Josephson; gold Coronation Medal, by Mr. A. H. McCulloch, jun.; engraving, by Mr. Du Faur; Carrington Jug, by N. Pownall & Co; Wedgewood Portrait, by G. and R. Tangye & Co. Hunting Horn—Reproduction of, by Lieut.-Col. Rowe.
		£2,000. Museum Votes for same purpose. £4 17s 6d. Interest on London account.	£14 5s., Refund, &c.				
		In all, £54,167 11s. 10d.					
				£ s. d.			
				In all . . . . .	40,589 7 9		
				Sundry expenses—frames, freight, insurance, &c. . . . .	3,116 4 4		
				Total expended on Works of Art. . . . .	£43,705 12 1		
				£ s. d.			
				Wages . . . . .	4,445 5 8		
				Repairs to gallery, fittings, and furniture . . . . .	1,952 18 7		
				Sundries . . . . .	624 4 7		
					7,022 8 10		
					£50,728 0 11		

Total expenditure . . . . .	£ s. d.
Remittances to England not yet appropriated . . . . .	50,728 0 11
Cash balance to credit of Trustees . . . . .	2,556 19 7
	882 11 4
	£54,167 11 10

Number of visitors on 52 Sundays . . . . .	90,430
Number on 311 week days . . . . .	130,115
Total number for 363 days . . . . .	220,545
Average Sunday attendance . . . . .	1,739
Average week-day attendance . . . . .	418

## STATISTICS, 1886—EDUCATION, &amp;c.

325

## RELIGION.

No. 22.—NUMBER of CHURCHES and other BUILDINGS used for PUBLIC WORSHIP and the SITTINGS therein, with AVERAGE ATTENDANCE on SUNDAYS; also NUMBER of CLERGY and SERVICES performed.

DENOMINATION.	Number of Ministers registered under Acts 19 Vic. Nos. 30 and 34.	Number of Churches and Chapels.	Number of Schoolhouses used for Public Worship.	Number of Dwellings or Public Buildings used for Public Worship.	Total Number of Buildings of all descriptions used for Public Worship.	Approximate Number of Services performed during the year (including week-day Services).	Number of Persons	
							For whom there is accommodation.	Usually attending at principal Sunday Service (not including Sunday School children).
Church of England—								
Diocese of Sydney—								
Sydney and Suburbs ...	114	67	19	16	102	14,977	30,642	20,147
Country Districts ...	41	94	19	52	165	8,334	17,923	9,435
	155	161	38	68	267	23,311	48,565	29,582
Diocese of Newcastle ...	41	104	19	69	192	6,241	15,831	9,497
Diocese of Goulburn ...	43	110	16	87	213	5,568	16,364	7,417
Diocese of Bathurst ...	36	94	16	101	211	6,479	13,832	7,341
Diocese of Grafton & Armidale	32	65	9	175	249	4,480	9,423	5,350
Diocese of Riverina ...	16	21	8	77	106	1,763	2,920	1,609
	323	555	106	577	1,238	47,842	106,935	60,796
Roman Catholic Church—								
Diocese of Sydney—								
Sydney and Suburbs ...	92	50	11	6	67	20,082	24,920	29,251
Country Districts ...	33	82	10	59	151	8,907	16,040	11,573
	125	132	21	65	218	28,989	40,960	40,824
Diocese of Maitland ...	39	71	11	121	203	9,766	9,496	7,570
Diocese of Goulburn ...	37	62	10	188	260	6,725	16,820	10,555
Diocese of Bathurst ...	31	70	13	148	231	8,424	16,043	8,563
Diocese of Armidale ...	23	34	6	53	93	3,880	5,587	4,993
	255	369	61	575	1,005	57,784	88,906	72,505
Presbyterian Church—								
Presbyterian Church of New South Wales—								
Sydney and Suburbs ...	31	23	9	12	44	3,913	9,735	5,405
Country Districts ...	89	197	44	370	611	15,298	30,953	12,950
	120	220	53	382	655	19,211	40,688	18,355
Presbyterian Church—Synod of Eastern Australia—								
Sydney and Suburbs ...	2	1	.....	.....	1	160	600	200
Country Districts ...	6	19	9	51	79	1,561	3,010	985
	8	20	9	51	80	1,721	3,610	1,185
Presbyterian Church of Eastern Australia—								
Sydney ...	1	.....	.....	.....	.....	.....	.....	.....
Country Districts ...	5	7	.....	16	23	600	920	240
	6	7	.....	16	23	600	920	240
Presbyterian Church in Scotland—Country ...	1	2	.....	.....	2	200	120	80
Presbyterian Church—Unattached ...	1	1	1	1	3	204	185	110
Wesleyan Methodist Church—								
Sydney and Suburbs ...	47	57	9	6	72	9,990	16,909	9,750
Country Districts ...	92	298	17	305	620	27,796	51,600	28,063
	139	355	26	311	692	37,786	68,509	37,813
Primitive Methodist Church—								
Sydney and Suburbs ...	10	15	.....	2	17	3,102	3,010	1,565
Country Districts ...	15	52	4	12	68	7,425	8,270	4,645
	25	67	4	14	85	10,527	11,280	6,210
United Methodist Free Church—								
Suburbs of Sydney ...	1	3	.....	1	4	676	500	200
Country Districts ...	4	7	.....	4	11	800	1,170	650
	5	10	.....	5	15	1,476	1,670	850
Congregational Church (Independents)—								
Sydney and Suburbs ...	40	32	16	9	57	4,638	12,295	7,030
Country Districts ...	18	18	5	12	35	2,304	4,090	1,835
	58	50	21	21	92	6,942	16,385	8,865
Baptist Church—								
Sydney and Suburbs ...	12	6	2	4	12	1,180	2,440	1,165
Country Districts ...	6	22	4	38	64	2,699	4,020	2,045
	18	28	6	42	76	3,879	6,460	3,210
Particular Baptist Church—								
Sydney ...	2	1	1	4	6	250	600	150
Country Districts ...	1	2	.....	.....	2	271	436	215
	3	3	1	4	8	521	1,036	365

RELIGION—continued.

No. 22 (continued).—NUMBER of CHURCHES and other BUILDINGS used for PUBLIC WORSHIP, &c.—continued.

DENOMINATION	Number of Ministers registered under the Acts 19 Vic Nos 30 and 34	Number of Churches and Chapels	Number of Schoolhouses used for Public Worship	Number of Dwellings or Public Buildings used for Public Worship	Total Number of Buildings of all descriptions used for Public Worship	Approximate Number of Services performed during the year (including week-day Services)	Number of Persons	
							For whom there is accommodation	Usually attending at principal Sunday Service (not including Sunday School children)
Baptist Church (Unconnected) Suburbs	1	1	.	.	1	160	230	120
Baptist Church (Unconnected with the Baptist Union)—Country Districts . . .	1	1	2	...	3	468	700	400
Church of Christ—Sydney and Suburbs	3	3	1	3	7	516	1,050	725
Country Districts	4	1	...	5	6	381	480	109
	7	4	1	8	13	897	1,530	834
Lutheran Church—Sydney	1	1	.	...	1	70	300	200
Country	3	8	2	2	12	205	675	510
	4	9	2	2	13	275	975	710
Norwegian Evangelical Lutheran—City	1	.	.	.	.	.	.	...
English Independent Church—Country . .	1	1	.	...	1	200	200	120
Independent Congregational Church—Suburbs	1	.	...	2	2	156	70	60
Independent (Unconnected)—Country	1	1	.	2	3	56	300	130
Re-organized Church of Jesus Christ of Latter Day Saints	1	.	1	7	8	598	220	145
United Free Gospel Church	1	.	.	.	...	.	.	...
Hebrew Church—Sydney	2	1	.	.	1	231	750	350
Country . .	1	1	.....	.	1	283	100	40
	3	2	.	..	2	514	850	390
Hebrew Faith	1	1	.	.	1	5	50	..
Welsh Church—Country	1	1	.	.	1	208	250	90
Welsh Congregational Church	1	.....	.	.	.	.	.	.
Unitarian Church—Sydney	1	1	.	.	1	104	500	300
Catholic Apostolic Church—Sydney	1	.	.	1	1	305	80	45
Country	1	1	.	1	2	99	150	17
	2	1	...	2	3	404	230	62
Franco-Australian Mission	1	1	.	.	1	40	50	25
Free Church of England—Country	1	.	...	15	15	404	300	150
Bible Christian Church—Country	3	5	3	6	14	694	603	313
Anglo Israelite Church	1	.	...	.	.	.	.	.
New Church	1	.	.	1	1	52	150	56
Society of Friends (Quakers)	1	1	1	1	3	156	100	80
Salvation Army	1	.	.	81	81	26,012	27,750	27,000
General Total	999	1,717	298	2,126	4,141	220,096	381,762	241,569

No. 23.—AVERAGE ATTENDANCE at CHURCHES and CHAPELS and all other PLACES used for PUBLIC WORSHIP, of each DENOMINATION—1876—1886.

DENOMINATION	1876	1877.	1878	1879.	1880	1881	1882	1883	1884	1885	1886
Church of England	62,714	63,953	65,388	70,550	73,682	71,924	73,043	75,962	74,722	74,535	60,796
Roman Catholic	57,233	60,511	60,769	64,983	69,363	70,467	75,781	70,933	77,801	79,174	72,505
Presbyterian	18,647	19,417	20,142	20,329	21,449	22,374	21,858	25,952	24,579	26,570	19,970
Wesleyan Methodist ..	33,475	33,553	32,683	33,265	35,357	33,421	32,195	38,400	40,718	45,467	37,813
Other Methodists	7,950	8,400	8,880	9,650	10,500	10,755	10,920	7,490	6,346	7,698	7,060
Congregational . .	7,158	7,460	7,460	8,012	8,012	8,012	8,012	9,180	9,440	9,423	8,865
Baptist	2,342	2,527	3,210	3,413	2,107	2,480	2,476	3,392	3,396	3,410	4,095
Salvation Army	.	.	.	.....	.	.	*	*	*	*	*
Other Denominations	1,501	1,400	2,328	1,915	1,452	1,598	1,720	3,060	3,195	3,764	3,465
Total	191,020	197,221	200,860	212,117	221,922	221,031	226,005	234,369	240,197	250,041	214,569†

\* 9,000, 70,000, 28,500, and 27,000, returned by the Salvation Army authorities for the years 1883, 1884, 1885, and 1886 respectively not included  
 † Usually attending at principal Sunday Service, not including Sunday School children.

## STATISTICS, 1886—EDUCATION, &amp;c.

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## RELIGION—continued.

No. 24.—NUMBER of SUNDAY SCHOOLS of the several DENOMINATIONS in the year 1886, as well as the NUMBER of TEACHERS and the AVERAGE ATTENDANCE of SCHOLARS.

DENOMINATION.	Number of Schools.	Number of Teachers.			Average Number of Scholars.			
		Male.	Female.	Total.	Male.	Female.	Total.	
Church of England.	Diocese of Sydney. { Sydney and Suburbs ... Country Districts ...	75	409	722	1,131	5,532	6,740	12,272
		94	186	366	552	2,258	2,682	4,940
	Diocese of Newcastle ... ..	169	595	1,088	1,683	7,790	9,422	17,212
	Diocese of Goulburn ... ..	90	214	334	548	2,176	2,586	4,762
	Diocese of Bathurst ... ..	74	101	271	372	1,634	2,033	3,667
	Diocese of Grafton and Armidale ... ..	85	155	294	449	1,957	2,198	4,155
	Diocese of Riverina ... ..	53	97	209	306	1,169	1,518	2,687
		20	27	66	93	372	458	830
		491	1,189	2,262	3,451	15,098	18,215	33,313
	Roman Catholic Church.	Diocese of Sydney. { Sydney and Suburbs ... Country Districts ...	48	193	360	553	3,566	4,713
70			73	192	265	1,330	1,850	3,180
Diocese of Maitland ... ..		118	266	552	818	4,896	6,563	11,459
Diocese of Goulburn ... ..		71	21	128	149	1,459	1,644	3,103
Diocese of Bathurst ... ..		72	34	135	169	1,386	1,807	3,193
Diocese of Armidale ... ..		73	31	183	214	1,638	2,314	3,952
		38	19	74	93	609	835	1,444
	372	371	1,072	1,443	9,988	13,163	23,151	
Presbyterian Church.	Presbyterian Church of New South Wales. { Sydney and Suburbs ... Country Districts ...	28	171	235	406	1,633	1,843	3,476
		173	365	553	918	3,101	3,606	6,707
		201	536	788	1,324	4,734	5,449	10,183
	Presbyterian Church, Synod of Eastern Australia. { Sydney and Suburbs ... Country Districts ...	1	3	3	6	17	23	40
		8	21	23	44	169	174	343
		9	24	26	50	186	197	383
	Presbyterian Church of Eastern Australia. { Country Districts ...	7	8	10	18	87	101	188
	Presbyterian Church in Scotland. { Country ... ..	1	2	2	4	18	14	32
	Presbyterian Church, unattached. { Suburbs ... ..	1	8	12	20	57	94	151
Wesleyan Methodist Church.	{ Sydney and Suburbs ... ..	59	436	473	909	3,820	4,183	8,003
	{ Country Districts ... ..	265	804	873	1,677	5,965	6,963	12,928
		324	1,240	1,346	2,586	9,785	11,146	20,931
Primitive Methodist Church.	{ Sydney and Suburbs ... ..	16	103	78	181	702	858	1,560
	{ Country Districts ... ..	43	270	196	466	1,794	1,719	3,513
		59	373	274	647	2,496	2,577	5,073
United Methodist Free Church.	{ Suburbs of Sydney ... ..	4	15	13	28	135	145	280
	{ Country Districts ... ..	7	46	29	75	335	320	655
		11	61	42	103	470	465	935
Congregational Church (Independents).	{ Sydney and Suburbs ... ..	35	263	285	548	2,405	2,712	5,117
	{ Country Districts ... ..	24	75	83	158	425	569	994
		59	338	368	706	2,830	3,281	6,111



## RELIGION—continued.

## No. 24 (continued).—NUMBER OF SUNDAY SCHOOLS, &amp;c.—continued.

DENOMINATION.	Number of Schools.	Number of Teachers.			Average Number of Scholars.		
		Male.	Female.	Total.	Male.	Female.	Total.
Baptist Church ... { Sydney and Suburbs ... Country Districts ...	8	53	41	94	312	362	674
	16	49	52	101	382	381	763
	24	102	93	195	694	743	1,437
Particular Baptist Church ... { Sydney ... Country Districts ...	1	5	4	9	25	23	48
	1	7	8	15	90	76	166
	2	12	12	24	115	99	214
Baptist Church (Unconnected)—Suburbs ...	1	6	3	9	35	45	80
Baptist Church (unconnected with the Baptist Union)—Country ...	3	16	7	23	110	145	255
Church of Christ... { Sydney and Suburbs ... Country ...	4	22	19	41	145	180	325
	2	2	1	3	9	16	25
	6	24	20	44	154	196	350
Lutheran Church... { Sydney ... Country ...	1	1	1	2	16	14	30
	1	2	1	3	6	12	18
	2	3	2	5	22	26	48
English Independent Church—Country...	1	8	4	12	60	70	130
Independent Congregational Church—Suburbs...	1	5	4	9	35	40	75
Re-organized Church of Jesus Christ of Latter Day Saints ...	2	5	1	6	37	28	65
Hebrew Church ... { Sydney ... Country ...	1	8	7	15	75	81	156
	1	1	...	1	8	7	15
	2	9	7	16	83	88	171
Welsh Church—Country ...	1	4	1	5	20	7	27
Catholic Apostolic Church—Sydney ...	1	1	...	1	8	12	20
Society of Friends (Quakers)—Sydney ...	2	4	2	6	30	9	39
Franco-Australian Mission ...	1	1	...	1	3	4	7
Free Church of England—Country ...	2	2	4	6	20	18	38
Bible Christian Church—Country ...	9	19	21	40	115	99	214
New Church ...	1	3	2	5	17	23	40
General Total ...	1,596	4,374	6,385	10,759	47,307	56,354	103,661

## No. 25.—NUMBER OF SUNDAY SCHOOLS, TEACHERS, and SCHOLARS—1876-86.

Year.	Number of Schools.	Number of Teachers.	Average Attendance.		
			Male.	Female.	Total.
1876	1,058	7,099	27,443	31,394	58,837
1877	1,121	7,615	28,943	33,094	62,037
1878	1,196	8,063	29,877	34,699	64,576
1879	1,285	8,491	31,802	37,710	69,512
1880	1,340	9,027	33,304	39,089	72,393
1881	1,405	9,289	34,950	40,722	75,672
1882	1,318	9,190	34,393	41,334	75,727
1883	1,441	9,793	35,205	42,610	77,815
1884	1,461	9,426	35,883	43,202	79,085
1885	1,513	9,986	37,991	46,531	84,522
1886	1,596	10,759	47,307	56,354	103,661

## STATISTICS, 1886—EDUCATION, &amp;c.

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## RELIGION—continued.

No. 26.—AMOUNTS PAID to the CLERGY of DIFFERENT DENOMINATIONS since the passing of the Act for the Abolition of State Aid to Religion.

Year.	Church of England.		Roman Catholic Church.		Presbyterian.		Wesleyan Methodist.		Total—All Denominations.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.
1863	17,967	0 10	8,748	0 1	2,873	3 11	2,784	12 3	32,372	17 1
1864	17,518	11 1	8,233	19 0	2,614	6 8	1,179	7 9	29,546	4 6
1865	14,111	1 2	7,430	10 2	3,089	13 4	1,572	10 4	26,203	15 0
1866	13,977	12 0	7,445	16 8	2,852	0 0	1,572	10 4	25,847	19 0
1867	13,254	17 0	7,275	0 0	2,852	0 0	1,572	10 4	24,954	7 4
1868	12,766	17 3	7,083	6 8	2,846	15 1	1,965	12 11	24,662	11 11
1869	12,370	3 8	6,796	7 5	2,487	6 11	1,572	10 4	23,226	8 4
1870	12,386	9 6	6,583	6 8	2,179	18 4	1,572	10 4	22,722	4 10
1871	10,994	5 0	6,416	13 4	1,942	11 2	1,572	10 0	20,925	19 6
1872	12,186	12 0	6,034	5 11	1,822	11 3	1,484	1 1	21,527	10 3
1873	11,236	9 6	5,804	3 4	1,702	0 0	1,372	10 0	20,115	2 10
1874	11,224	7 11	5,962	10 0	1,560	3 4	1,372	10 0	20,119	11 3
1875	10,724	18 4	5,608	6 8	1,625	10 0	1,372	10 0	19,331	5 0
1876	10,212	13 3	5,300	0 0	1,778	10 0	1,029	7 7	18,320	10 10
1877	9,803	11 2	5,024	1 2	1,702	0 0	1,715	12 5	18,245	4 9
1878	9,180	2 3	4,550	0 0	1,702	0 0	1,029	7 9	16,461	10 0
1879	8,238	1 1	4,356	19 9	1,702	0 0	1,372	10 4	15,689	11 2
1880	7,739	2 0	3,892	12 1	1,702	0 0	1,715	12 11	15,049	7 0
1881	7,412	4 8	3,729	3 4	1,689	10 0	991	17 9	13,822	15 9
1882	6,557	10 4	3,487	10 0	1,636	3 4	1,455	8 7	13,136	12 3
1883	6,082	10 4	3,245	16 8	1,407	1 8	1,324	7 6	12,059	16 2
1884	5,975	5 2	3,025	0 0	1,177	0 0	1,222	10 0	11,399	15 2
1885	6,040	17 0	3,000	0 0	1,052	0 0	1,136	5 0	11,229	2 0
1886	5,790	17 6	3,000	0 0	902	0 0	1,050	0 0	10,742	17 6

No. 27.—ESTIMATED NUMBER of PERSONS of DIFFERENT RELIGIOUS PERSUASIONS at the close of the year 1886.

Denomination.	Adherents.	Denomination.	Adherents.
Church of England...	455,895	Baptists ...	9,819
Roman Catholic ...	276,843	Other Protestants ...	19,839
Presbyterians ...	96,790	Unitarians ...	1,202
Wesleyan and other Methodists ...	85,968	Hebrews ...	4,409
Congregational ...	19,138	Other Persuasions, and unspecified ...	32,063
			1,001,966

CHARITABLE INSTITUTIONS.

No. 28.—ADMISSIONS, READMISSIONS, DISCHARGES, DEATHS, &c., of the PATIENTS in the HOSPITALS FOR THE INSANE, &c., during the year 1886.

	Remaining on 31st December, 1885.			Admissions in the Year 1886						Total number of Patients under care.	Patients Discharged, Transferred, Died, and Escaped.												Remaining on 31 December, 1886.			Average numbers resident during the Year 1886.												
	Males	Females	Total	Admitted for the first time			Readmitted	Transferred from other Hospitals or Licensed Houses.			Discharged recovered			Discharged relieved.			Transferred to other Hospitals or Licensed Houses			Died.	Escaped and not recaptured within 28 days			Total number discharged, died, and escaped.			Males	Females	Total	Males	Females	Total						
				Males	Females	Total		Males	Females		Total	Males	Females	Total	Males	Females	Total	Males	Females		Total	Males	Females	Total														
Hospital for the Insane, Callan Park	330	128	458	166	116	282	4	4	174	75	501	318	819	72	34	106	7	6	13	8	7	15	35	19	54	2	2	124	66	190	377	252	629	350	221	571		
Hospital for the Insane, Gladesville	478	299	777	95	35	130	14	7	21	4	3	7	591	344	935	67	49	116	1	3	4	1	5	6	48	16	64	2	2	119	73	192	472	271	743	465	266	731
Hospital for the Insane, Parramatta. ) Free	606	357	963	50	21	71		17	3	20	673	381	1054	29	12	41	2	2	4	3	7	27	19	46	2	2	64	34	98	609	347	956	608	350	958			
Hospital for the Insane, Parramatta. ) Criminal	48	7	55	21	1	22					69	8	77	6		6				14	14				1	1	21		21	48	8	56	46	7	53			
Hospital for the Insane, Newcastle	127	113	240	7	10	17		1	1	5	8	139	127	266				4	4		1	1	10	9	19			14	10	24	125	117	242	125	114	239		
Licensed House for the Insane, Cook's River Road	10	140	150	6	13	19				5	5	16	158	174		4	4	2	1	3		72	72	1	3	4			3	80	83	13	78	91	10	77	87	
Total	1599	1044	2643	345	196	541	18	8	26	27	88	115	1989	1336	3325	174	99	273	16	10	26	27	88	115	121	66	187	7	7	345	263	608	1644	1073	2717	1604	1035	2639

NOTE.—Other information respecting Lunacy will be found in Part I., Tables 58 to 65.

No. 29.—AMOUNTS EXPENDED and COLLECTED at INSTITUTIONS FOR THE INSANE during the year 1886.

Name of Institution										Total Expenditure.			Collections		
										£	s.	d.	£	s.	d.
Hospital for the Insane, Gladesville	...	...	...	...	...	...	...	...	...	26,328	10	2	4,116	10	2
Do	Parramatta	...	...	...	...	...	...	...	...	28,842	19	9	2,110	11	2
Do	Callan Park	..	..	...	...	...	...	...	...	21,354	19	1	2,833	11	10
Do	Newcastle	...	...	...	...	...	...	...	...	7,188	17	5	583	18	8
Reception House, Darlinghurst	..	...	...	...	...	...	...	...	...	1,806	6	3	46	15	7

No. 30.—WEEKLY COST of PATIENTS in HOSPITALS FOR THE INSANE during the year 1886.

Institution.	Total No. under care.	Average No resident.	Total Annual Cost.	Calculated on Average Number Resident.											
				Salaries and Allowances.	Provisions, &c., &c.	Amusements, Books, and Periodicals.	Incidental Expenses and Minor Repairs.	Materials for Employment of Patients.	Stores, Bedding, &c.	Total Weekly Cost without deducting Collections	Weekly Cost deducting Collections.				
				£	s.	d.	s.	d.	s.	d.	d.	s.	d.	s.	d.
Hospitals for the Insane.															
Gladesville ...	935	731	26,328 10 2	5 0	5 11 3/4	1 1/4	3 1/2	3 1/4	2 1 1/2	13 9 1/2	11 8				
Parramatta ..	1,131	1,012	28,842 19 9	4 1 1/2	4 8 1/2	1 1/4	1 1/2	2 1/2	1 8 1/2	10 11 1/2	10 2				
Callan Park...	819	571	21,354 19 1	5 0 3/4	6 0	2 1/2	3 1/2	2 1/2	2 7 1/4	14 4 1/2	12 5 1/2				
Newcastle ...	266	239	7,188 17 5	4 2	5 2 1/2	1 3/4	5	2 3/4	1 4 1/2	11 6 1/2	10 7 1/2				

Average weekly cost for all Hospitals, without deducting collections, 12s. 7 1/2d.; or, deducting collections, 11s. 1 1/2d.



CHARITABLE INSTITUTIONS—continued.

No. 31 (continued).—NUMBER of HOSPITALS in the COLONY in the year 1886, showing PERSONS ADMITTED, DISCHARGED, DIED, &c.—continued.

Hospitals	Indoor Relief																					Outdoor Relief			Dormitories or Sleeping Rooms													
	Inmates on 1st January from previous year			Admitted during the year 1886			Total number			Discharged cured, or relieved			Discharged incurable			Discharged at their own request or on other grounds			Number who died			Total number discharged or died			Number remaining at end of the year			Daily average of Indoor Relief			Total number			Number	Capacity.	Number of beds		
	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total					
Merrima		1	1	9	6	15	9	7	16	7	6	13			1	1	1	1	9	6	15	1	1	1	1	1	1	2			2		4					
Mudgee	...	5	5	83	4	87	88	4	92	66	3	69							84	4	88	4	...	...	...	...	...	...	...	...	...	...	20					
Murrumbidgee		1	3	4	42	6	48	43	9	52	27	8	35	4	4	2	2	5	19	6	38	9	47	5	5	3	1	3	1	92	4	8,148	12					
Moruya*																		...																				
Muswellbrook		2	2	4	21	12	33	23	14	37	18	10	28			2	2	2	4	22	12	34	1	2	3							15						
Narrandera		10	10	117	14	131	127	14	141	90	6	96	6	6			19	3	22	115	9	124	12	5	17			11			20							
Narrabri	...	9	1	10	66	18	84	75	19	94	53	15	68	9	1	10	7	2	9	69	18	87	6	1	7	...	...	...	...	...	...	16						
Newcastle	...	28	2	30	383	75	458	411	77	488	320	57	377	16	3	19	14	2	16	30	11	41	380	73	453	31	4	35	29	5	34	48						
Nymagee				...	7	1	8	7	1	8	5	5	5						6	6	6	1	1	1	2	2	...	...	...	...	...	6						
Parkes		7	7	37	2	39	44	2	46	34	2	36					4	4	4	38	2	40	6	6	6	...	...	...	...	...	8							
Parramatta		14	5	19	209	40	249	223	45	268	178	36	214			26	7	33	204	43	247	19	2	21	2	2	...	...	...	...	...	27						
Queanbeyan		6	6	53	8	61	59	8	67	51	6	57			1	1	5	2	7	57	8	65	2	3	1	4	...	...	...	...	...	15						
Scone	...	5	5	40	7	47	45	7	52	31	7	38			7	7	...	15	38	7	45	7	7	7	4	1	5	...	...	...	...	...	12					
Silverton		3	3	107	2	109	110	2	112	85	2	87			9	9	15	109	2	111	1	1	1	1	1	4	...	...	...	...	...	10						
Singleton		10	4	14	47	16	63	57	20	77	39	10	49			9	2	11	48	12	60	9	8	17			11	4	3	7	12	42						
Sofala				2	2	2	2	2	2	1	1	1			1	1	1	2	2	2	2	2	2	2	2	2	...	...	...	...	...	6						
Sydney Hospital		145	64	209	2060	748	2808	2205	812	3017			232	90	322	2099	745	2844	106	67	173	...	...	...	...	...	...	...	...	...	...	238						
Sydney (Prince Alfred)		84	51	135	1122	658	1780	1206	709	1915			1397		191	1105	651	1756	101	58	159	152	...	...	...	...	...	...	...	...	...	164						
Sydney (St. Vincent)		64	22	86	598	273	871	662	295	957	548	238	786	9	7	16	15	6	21	30	22	52	602	273	875	60	22	82	56	35	91	100						
Tamworth				11	97	108							70		24					3		97			11													
Tcmora				28	6	34	28	6	34	19	4	23	3		3		6	2	8	28	6	34				1	1	2				8						
Tenterfield	...	3	3	62	10	72	65	10	75	50	9	65			7	1	8	63	10	73	2	2	2	2	2	...	...	...	...	...	10							
Urana	...	2	1	3	60	5	65	62	6	68	50	5	55	2		7	5	64	3	1	4	3	1	4	3	1	4	3	1	4	3	7						
Wagga Wagga	...	14	5	19	159	24	183	173	29	202	124	24	148	24	1	25	...	10	1	11	158	26	184	15	3	18	10	3	19	30	9	39	32					
Walgett	...	1	1	36	4	40	37	4	41	29	4	33	3		3		1	33	4	37	4	...	4	4	4	3	3	3	3	3	3	9						
Warialda	...	3	3	39	2	41	42	2	44	33	2	35	1		1	3		2	39	2	41	3	3	3	3	3	3	3	3	3	3	9						
Wellington	...			23	3	26	23	3	26	19	2	21			2		2	21	2	23	2	1	3	2	...	...	...	...	...	...	12							
Wentworth		8	8	72	13	85	80	13	93	71	13	84	2		2		3	76	13	89	4	4	7	7	123	68	191	3	3	3	10							
Wilcannia	...	12	12	125	125	137							106		17		17	123	14	...	14	11	11	11	11	11	11	11	11	11	11	3						
Windsor	...	23	11	34	63	31	94	86	42	128	55	27	82			10	7	17	65	34	99	21	8	29	...	...	...	...	...	...	56							
Wollongong	...	10	2	12	138	13	151	148	15	163	134	9	143	...		1	1	8	3	11	143	12	155	5	3	8	10	2	12	1825	1095	2920	17					
Yass	...			28	11	39	28	11	39	15	6	21			3	3	6	9	27	9	36	1	2	3	2	1	3	2	1	3	12							
Young	...	8	2	10	93	18	111	101	20	121	64	11	75	9	2	11	7	2	9	14	5	19	94	20	114	7	7	1	8	1	5	21						
Total		741	241	993	9019	2867	12122	9752	3102	13115	4511	895	7779	132	15	224	94	14	338	716	201	1249	8175	2431	12112	710	260	1003	284	80	619	3176	2850	34442	260	...	1481	

\* In course of erection

CHARITABLE INSTITUTIONS—continued.

No. 32.—RECEIPTS and EXPENDITURE of HOSPITALS in the COLONY in the year 1886.

Hospitals.	Receipts during the year.				Expenditure during the year.					Assets at close of year.	Liabilities at close of year.	
	Government Aid.	Private Contributions.	Other Sources.	Total Receipts.	Building and Repairs.	Maintenance.	Outdoor Relief.	Miscellaneous.	Total Expenditure.			
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Albury ... ..	761 19 2	511 12 6	.....	1,273 11 8	84 11 4	621 15 4	.....	593 4 1	1,299 10 9	86 11 3	181 17 5	
Armidale ... ..	914 11 8	533 2 9	1,127 19 10	2,575 14 3	141 10 5	2,213 2 5	.....	79, 2 0	2,433 14 10	.....	.....	
Balnarnald ... ..	482 11 7	182 4 4	3 0 0	667 15 11	1 10 0	789 2 0	.....	.....	790 12 0	114 1 6	.....	
Bathurst ... ..	1,612 15 5	888 1 7	2,294 12 1	4,795 9 1	930 0 0	2,130 18 3	.....	.....	3,060 18 3	1,184 10 10	.....	
Bombala ... ..	466 11 4	151 17 6	35 6 0	653 14 10	8 8 9	127 16 0	.....	1 2 0	137 6 9	1,419 10 5	55 6 9	
Bourke ... ..	604 5 10	539 9 10	344 10 0	1,488 5 8	14 5 8	1,080 5 9	.....	149 14 10	1,244 6 3	220 5 2	.....	
Braidwood ... ..	80 14 6	90 15 3	45 6 3	216 16 0	.....	60 6 7	.....	167 18 3	228 4 10	130 0 1	.....	
Brewarrina... ..	679 14 10	306 3 11	80 5 5	1,066 4 2	32 9 5	515 17 11	.....	39 5 0	587 12 4	478 11 10	.....	
Carcoar ... ..	232 17 3	202 6 0	55 1 0	490 4 3	108 3 3	483 11 10	.....	115 0 9	706 15 10	437 6 1	.....	
Casino ... ..	490 8 7	372 9 8	2 5 0	865 3 3	202 4 7	213 0 8	.....	479 12 2	894 17 5	.....	35 0 0	
Cobar ... ..	266 7 9	271 8 4	76 0 2	613 16 3	10 18 0	653 5 0	.....	39 3 5	703 6 5	170 12 11	.....	
Condoblin ... ..	300 0 3	380 4 9	.....	680 5 0	1 19 0	238 8 10	.....	307 12 3	548 0 1	132 4 11	.....	
Cooma ... ..	127 7 4	127 7 4	30 2 0	157 9 4	3 5 0	84 1 4	2 10 0	145 11 10	235 8 2	51 14 11	.....	
Coonamble ... ..	324 13 9	251 8 9	329 0 0	905 2 6	21 13 6	435 16 10	.....	272 13 11	730 4 3	2,148 11 2	68 11 5	
Cowra ... ..	349 14 5	59 8 0	342 6 5	751 8 10	92 14 6	235 19 2	.....	193 15 6	522 9 2	.....	.....	
Deniliquin ... ..	847 19 8	609 4 8	18 16 2	1,476 0 6	127 14 1	1,006 13 7	.....	341 12 10	1,476 0 6	.....	1 15 3	
Dubbo ... ..	674 16 2	641 14 5	128 12 4	1,445 2 11	16 16 10	966 0 8	.....	.....	982 17 6	479 2 3	3 0 3	
Emmaville ... ..	180 9 3	518 7 7	168 5 5	867 2 3	.....	570 17 3	.....	11 2 5	581 19 8	285 2 7	.....	
Forbes ... ..	469 3 5	298 8 1	120 2 4	887 13 10	131 19 2	249 11 9	.....	432 5 6	813 16 5	339 8 5	.....	
Glen Innes ... ..	335 1 4	201 12 7	15 16 10	552 10 9	15 19 5	151 10 3	.....	253 4 8	420 14 4	32 5 11	.....	
Goulburn ... ..	346 19 8	488 17 1	.....	835 16 9	24 6 3	550 4 6	309 13 2	.....	884 3 11	4,078 6 10	81 10 5	
Grafton ... ..	500 6 5	434 0 6	204 18 9	1,139 5 8	56 11 5	424 2 3	.....	419 13 7	900 7 3	238 18 5	.....	
Grenfell ... ..	261 5 10	85 17 1	65 15 0	412 17 11	.....	355 5 7	16 15 8	10 16 8	382 17 11	857 16 3	.....	
Gulgong ... ..	233 7 2	200 18 7	121 18 3	556 4 0	3 4 0	411 1 4	.....	27 15 11	442 1 3	114 2 9	.....	
Gunnedah ... ..	237 14 6	168 18 3	225 8 5	632 1 2	108 15 7	78 8 0	.....	287 6 6	474 10 1	982 12 5	.....	
Gundagai ... ..	423 15 8	100 13 4	494 13 8	1,019 2 8	9 3 6	126 12 6	.....	275 3 11	410 19 11	608 2 9	.....	
Hay ... ..	380 12 7	383 0 0	596 1 4	1,359 13 11	5 16 1	854 12 2	.....	61 14 6	922 2 9	1,163 16 8	79 16 5	
Hill End ... ..	92 15 0	89 12 3	38 17 0	221 4 3	15 9 0	333 10 5	.....	8 19 8	357 19 1	557 9 2	.....	
Hillston ... ..	.....	269 6 10	131 6 9	400 13 7	.....	474 17 4	.....	53 9 3	528 6 7	.....	.....	
Inverell ... ..	931 8 5	228 12 6	28 13 4	1,188 14 3	20 17 6	195 9 0	1 10 0	331 5 0	549 1 6	443 13 7	.....	
Kempsey ... ..	543 1 5	314 15 6	717 19 3	1,575 16 2	264 14 0	292 18 6	.....	1,095 6 7	1,652 19 1	723 7 1	76 12 11	
Lismore ... ..	384 17 3	230 2 2	591 5 5	1,206 4 10	527 6 10	98 7 9	8 15 0	312 9 9	946 19 4	259 5 6	.....	
Little Bay ... ..	9,405 13 9	.....	.....	9,405 13 9	377 2 0	8,586 4 4	.....	442 7 5	9,405 13 9	.....	.....	
Maclean* ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Maitland ... ..	510 11 0	744 13 0	50 0 0	1,305 4 0	33 7 3	493 18 2	50 0 0	441 12 11	1,018 18 4	8,566 14 4	.....	
Manning River* ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

\* In course of erection.

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CHARITABLE INSTITUTIONS—continued.

No. 32 (continued).—RECEIPTS and EXPENDITURE of HOSPITALS in the COLONY in the year 1886.

Hospitals.	Receipts during the year.				Expenditure during the year.					Assets at close of year.	Liabilities at close of year.
	Government Aid.	Private Contributions.	Other Sources.	Total Receipts.	Building and Repairs.	Maintenance.	Outdoor Relief.	Miscellaneous.	Total Expenditure.		
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Merriwa ...	164 13 0	53 0 1	56 13 9	274 6 10	.....	66 11 5	.....	202 12 10	269 4 3	222 7 0	12 0 3
Mudgee ...	254 11 9	216 9 9	54 1 7	525 3 1	2 12 6	608 5 4	.....	29 0 6	639 18 4	6 10 4	.....
Murrurundi ...	.....	162 12 11	245 12 4	408 5 3	16 15 0	187 6 5	.....	217 16 6	421 17 11	486 7 4	.....
Moruya ...	.....	16 1 8	.....	16 1 8	.....	.....	.....	17 0 0	17 0 0	804 1 6	.....
Muswellbrook ...	179 19 2	107 19 1	30 0 0	317 18 3	8 1 10	247 2 4	15 5 0	10 4 4	280 13 6	825 17 8	.....
Narrandera... ..	3 7 2 0	510 18 8	8 10 0	906 10 8	452 15 6	684 9 5	.....	88 18 3	1,226 3 2	.....	270 7 11
Narrabri ...	232 7 6	300 3 8	.....	532 11 2	29 2 6	170 14 4	.....	125 13 6	325 10 4	63 11 1	.....
Newcastle ...	1,329 0 4	1,139 10 10	552 16 9	3,021 7 11	436 6 2	1,619 18 7	.....	483 1 3	2,539 6 0	1,397 17 1	.....
Nymagee ...	.....	92 5 11	97 17 1	190 3 0	601 15 7	109 3 10	.....	160 4 8	871 4 1	218 16 2	.....
Parkes ...	188 6 2	217 4 11	24 4 11	429 16 0	25 7 0	102 7 7	.....	77 9 10	205 4 5	509 10 8	447 1 7
Parramatta... ..	438 13 2	405 9 0	566 19 6	1,411 1 8	65 9 6	662 2 3	.....	560 16 10	1,288 8 7	2,053 10 0	.....
Queanbeyan ...	369 12 4	223 2 6	113 2 6	705 17 4	118 12 9	459 2 10	.....	61 9 10	639 5 5	200 0 0	20 14 9
Scone ...	160 12 3	178 4 3	47 5 1	386 1 7	26 10 10	276 3 6	27 6 0	39 11 11	369 12 3	356 5 4	.....
Silverton ...	1,645 7 8	233 5 11	69 12 2	1,948 5 9	35 2 1	794 0 4	.....	51 12 0	880 14 5	1,435 14 10	40 0 2
Singleton ...	298 0 4	288 13 0	70 10 2	657 3 6	18 7 7	370 16 7	42 16 9	100 11 9	532 12 8	332 16 1	60 8 4
Sofala ...	30 15 0	30 0 0	2 10 0	63 5 0	16 8 0	29 3 6	1 0 0	24 15 3	71 6 9	94 18 3	.....
Sydney Hospital ...	11,704 4 9	4,554 11 1	1,347 2 0	17,665 17 10	587 10 0	4,839 13 11	.....	11,613 15 8	17,040 19 7	22,158 19 6	11,314 18 10
Sydney (Prince Alfred)	9,613 3 6	2,655 4 9	1,461 15 6	37,627 8 9	2,498 11 2	12,415 4 5	.....	452 14 3	15,366 9 10	24,630 11 8	.....
Sydney (St. Vincent)	.....	882 18 4	3,186 9 8	4,069 8 0	3,501 6 1	3,480 6 8	*	587 17 9	7,569 10 6	.....	.....
Tamworth ...	390 0 4	396 4 9	55 16 0	842 1 1	148 5 7	342 2 5	.....	47 14 9	538 2 9	204 5 4	495 0 1
Temora ...	206 12 10	107 13 3	61 14 5	376 0 6	40 8 2	110 19 7	.....	283 1 9	434 9 6	310 2 6	.....
Tenterfield ...	235 5 0	225 6 11	74 7 0	534 18 11	20 17 0	352 2 2	.....	24 15 0	397 14 2	820 11 4	76 5 4
Urana ...	341 7 9	277 3 5	53 13 9	672 4 11	45 6 0	139 8 7	.....	287 16 8	472 11 3	953 9 8	.....
Wagga Wagga ...	845 5 7	682 17 1	164 11 7	1,692 14 3	966 6 10	1,161 7 7	.....	.....	2,127 14 5	724 8 9	150 0 0
Walgett ...	413 0 11	360 11 8	31 9 4	805 1 11	16 5 0	225 13 8	.....	387 6 4	629 5 0	408 13 0	.....
Warialda ...	223 3 4	221 1 5	86 15 8	531 0 5	20 7 5	409 0 5	.....	16 15 0	446 2 10	775 14 11	446 2 10
Wellington... ..	155 14 3	123 18 11	.....	279 13 2	0 7 6	283 7 1	.....	9 19 2	293 13 9	97 14 11	.....
Wentworth... ..	542 16 4	525 18 5	62 8 10	1,131 3 7	68 18 5	459 10 4	5 16 0	587 7 11	1,121 12 8	112 9 10	.....
Wilcannia ...	523 5 6	517 11 0	77 1 4	1,117 17 10	8 14 6	1,131 7 1	15 0 0	139 19 4	1,295 0 11	.....	75 8 6
Windsor ...	290 8 6	447 12 7	918 0 0	1,656 1 1	461 7 8	539 0 0	.....	725 11 11	1,725 19 7	.....	.....
Wollongong ...	299 15 11	534 1 11	42 5 0	876 2 10	2 17 0	725 12 5	47 12 0	48 9 7	824 11 0	.....	.....
Yass... ..	194 18 10	57 18 5	122 5 2	375 2 5	84 1 8	331 5 10	.....	2 1 2	417 8 8	209 12 6	.....
Young ...	382 2 7	391 11 3	70 5 0	843 18 10	30 18 6	584 18 5	.....	26 16 6	642 13 5	329 18 7	.....
Total ...	56,427 1 5	51,913 7 5	18,240 0 6	126,580 9 2	13,748 11 8	60,023 2 1	543 19 7	24,882 5 1	99,197 18 5	87,039 1 10	13,991 19 5

\* Included in maintenance.







STATISTICS, 1886—EDUCATION, &C.

CHARITABLE INSTITUTIONS—continued.

No. 36.—NUMBER OF ADULTS REMAINING IN BENEVOLENT ASYLUMS at the close of each year, 1875—1886.

Asylum.	1875.		1876.		1877.		1878.		1879.		1880.		1881.		1882.		1883.		1884.		1885.		1886.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Sydney—Hyde Park (now Newington) ...	233	271	261	261	262	288	277	284	292	312	304	331												
„ Pitt-street ...	2	53	2	64	2	50	2	62	2	90	2	75	...	73	...	88	...	107	...	115	...	88	...	83
Parramatta—George-street ...	254	240	233	237	254	259	237	219	267	339	342	421												
„ Macquarie-street	4	15	4	12	3	13	3	13	7	11	7	15	4	16	7	23	268	276	292	297				
Liverpool ...	622	663	715	729	756	707	724	733	724	724	710	741												
West Maitland ...	6	4	6	3	8	3	12	2	12	1	9	3	10	3	10	3	12	4	12	4	10	6	23	12
Singleton ...	15	1	12	2	9	3	12	2	13	4	10	1	10	6	11	4	11	5	12	4	12	2	9	8
Totals ...	903	306	927	352	970	330	995	340	1,044	368	994	382	985	375	980	402	1,282	408	1,363	435	1,366	400	1,491	434
	1,209		1,279		1,300		1,335		1,412		1,376		1,360		1,382		1,690		1,798		1,766		1,925	

No. 37.—MEMORANDUM OF CHILDREN PLACED OUT by the STATE CHILDREN'S RELIEF DEPARTMENT.

Under Control on -	Supported by Government.			Adopted without payment.			Apprenticed.			Total under Control.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.
31 December, 1880 ...	20	32	52	.....	.....	.....	.....	.....	.....	20	32	52
31 „ 1881 ...	34	46	80	.....	.....	.....	.....	.....	.....	34	46	80
31 „ 1882 ...	90	132	222	6	9	15	.....	8	8	96	149	245
31 „ 1883 ...	190	236	426	6	10	16	2	10	12	198	256	454
31 „ 1884 ...	450	300	750	12	30	42	20	55	75	482	385	867
31 „ 1885 ...	624	434	1,058	21	52	73	95	89	184	740	575	1,315
31 „ 1886 ...	690	438	1,128	45	71	116	296	159	455	1,031	668	1,699

The children "supported by Government" are the only children paid for. The adopted and apprenticed children are not paid for.

No. 38.—AGES at which CHILDREN have been PLACED OUT since commencement of the System.

Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to 12.	Over 12.	Total.
13	39	130	162	170	140	174	167	251	230	197	195	177	2,045

No. 39.—ASYLUMS from which CHILDREN have been PLACED OUT since the commencement of the System.

Benevolent Asylum.	Rand-wick Asylum.	Roman Catholic Orphan School.	Protestant Orphan School.	"N.S.S. Vernon."	Infants Home, Ashfield.	Industrial School for Girls, Biloea.	Children's Hospital, Glebe Point.	Shaftes-bury Reformatory.	Coast Hospital, Little Bay.	Sydney Hospital.	Prince Alfred Hospital.	Department of Insane.	Benevolent Asylum, Newcastle.	Total.
1,182	305	180	182	70	52	33	8	1	26	1	2	1	2	2,045

CHARITABLE INSTITUTIONS—continued.

No. 40.—NUMBER of ORPHAN, INDUSTRIAL, and other CHARITABLE SCHOOLS of the Colony during the year 1886.

Orphan Industrial Schools, &c.	Inmates on 1 Jan., from previous year.			Admitted in 1886.			Total number.			Discharged or removed.			Number who died.			Total number discharged, removed, or died.			Number remaining at end of the year.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Protestant Orphan School* ...	33	11	44	...	...	...	33	11	44	33	11	44	...	...	...	33	11	44	...	...	...
Roman Catholic Orphan School* ...	45	18	63	...	...	...	45	18	63	45	18	63	...	...	...	45	18	63	...	...	...
Nautical School Ship "Vernon" ...	204	...	204	172	...	172	376	...	376	171	...	171	...	...	...	171	...	171	205	...	205
Female Industrial School, Biloela ...	6	100	106	4	47	51	10	147	157	9	58	67	...	...	...	9	58	67	1	89	90
Shaftesbury Reformatory for Females, South Head ...	...	29	29	...	7	7	...	36	36	...	12	12	...	...	...	12	12	...	24	24	24
Asylum for Destitute Children, Randwick ...	123	76	199	68	45	113	191	121	312	34	24	58	...	...	...	34	24	58	157	97	254
Sydney Female School of Industry ...	...	30	30	...	6	6	...	36	36	...	2	2	...	...	...	2	2	...	34	34	34
Deaf and Dumb and Blind Institution ...	43	35	78	11	4	15	54	39	93	8	10	18	...	...	...	8	10	18	46	29	75
	454	299	753	255	109	364	709	408	1117	300	135	435	...	...	...	300	135	435	409	273	682
Ragged School—Kent-street, Sydney ...	74	51	125	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	59	39	98
Harrington-street, Sydney...	49	40	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	79	64	143
Glebe, Sydney ...	105	66	171	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	38	39	77
Waterloo, Sydney ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	50	76	126
	228	157	385	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	226	218	444
Total ...	682	436	1138	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	635	491	1126

\* Closed 30th September, 1886.

No. 41.—NUMBER of DESTITUTE CHILDREN—including those detained at BILOELA and on the "VERNON"—supported by the State or Public Charity, during each year from 1875 to 1886.

Institution.	1875.		1876.		1877.		1878.		1879.		1880.		1881.		1882.		1883.		1884.		1885.		1886.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Orphan School (Protestant) ...	156	93	165	90	176	84	171	79	157	77	152	80	147	79	149	37	124	22	48	13	34	11	*33	*11
Orphan School (R.C.) ...	176	140	187	145	184	149	187	161	190	150	177	143	178	142	156	100	130	63	63	26	45	18	*45	*18
"Vernon" Nautical School...	103	...	100	...	92	...	113	...	124	...	148	...	177	...	186	...	213	...	202	...	202	...	205	...
Biloela Industrial School ...	4	58	5	75	9	83	14	76	18	97	16	101	21	109	16	114	13	106	10	95	6	100	1	89
Shaftesbury Reformatory ...	...	9	...	14	...	6	...	3	...	4	...	11	...	19	...	29	...	27	...	25	...	29	...	24
Randwick Asylum...	335	236	331	217	340	230	335	224	373	268	370	269	395	276	387	256	358	187	253	99	123	76	157	97
Benevolent Asylum (children) ...	182	...	194	...	191	...	164	...	191	...	177	...	147	...	156	...	161	...	149	...	122	...	130	...
Infants' Home, Ashfield ...	8	13	10	13	14	15	35	20	48	29	30	16	30	17	30	20	20	11	34	20	19	13	20	15
State Children's Relief Department ...	...	...	...	...	...	...	...	...	...	...	20	32	34	46	90	132	190	236	450	300	624	434	690	438
Total ...	1,513	...	1,546	...	1,573	...	1,582	...	1,726	...	1,742	...	1,817	...	1,858	...	1,861	...	1,787	...	1,856	...	1,929	...

\* Closed, September, 1886—not included in totals.

CHARITABLE INSTITUTIONS—continued.

No. 42.—NUMBER of INMATES and RELIEF afforded at various CHARITABLE INSTITUTIONS mainly supported by PRIVATE CHARITY during the year 1886.

Miscellaneous Institutions.	Inmates on 1st Jan. from previous year.			Admitted during the year 1886.			Total number.			Discharged, cured, or relieved.			Discharged at their own request or on other grounds.			Number who died.			Total number discharged or died.			Number remaining at end of year.			Dormitories or Sleeping Rooms.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	To tal.	No.	Capacity.	No. of beds.
Consumptives' Home (Harmony, Thirlmere), Picton	13	4	17	55	20	75	68	24	92	...	...	...	34	13	47	15	3	18	49	16	65	19	8	27	...	c. ft.	...
Home of Good Samaritan ... ..	...	62	62	...	110	110	...	172	172	...	...	...	...	88	88	...	4	4	...	92	92	...	80	80	3	42,228	...
Sydney Female Refuge ... ..	...	44	44	...	69	69	...	113	113	...	...	...	...	62	62	...	3	3	...	65	65	...	48	48	10	13,780	53
Infants' Home, Ashfield, Children	19	13	32	47	52	99	66	65	131	16	26	42	...	...	...	30	24	54	46	50	96	20	15	35	7	23,645	50
"    "    Women	...	11	11	...	43	43	...	54	54	...	35	35	...	...	...	...	...	...	...	35	35	...	19	19	11	18,260	30
Hospital for Sick Children, Glebe	20	23	43	142	130	272	162	153	315	126	122	248	7	7	14	10	9	19	143	138	281	19	15	34	5	29,520	41
City Night Refuge and Soup Kitchen*	18	...	18	...	...	...	18	...	18	...	...	...	...	...	...	...	...	...	...	...	...	18	...	18	...	...	...
Industrial Blind Institution ... ..	20	...	20	1	...	1	21	...	21	...	...	...	...	...	...	...	...	...	...	...	...	21	...	21	...	...	...

\* Meals given during the year, 65,685; shelter provided in 25,851 instances; daily average of 180 meals and 71 nightly shelters, representing 7,300 distinct persons. Employment was obtained for 435 persons, 149 of whom have received permanent engagements.

No. 43.—RECEIPTS and EXPENDITURE of various CHARITABLE INSTITUTIONS mainly supported by PRIVATE CHARITY during the year.

Miscellaneous Institutions.	Receipts during the year.				Expenditure during the year.				
	Government Aid.	Private Contributions.	Other Sources.	Total Receipts.	Building and Repairs.	Maintenance.	Outdoor Relief.	Miscellaneous.	Total Expenditure.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Consumptives' Home, Picton ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....
Home of the Good Samaritan ... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sydney Female Refuge ... ..	.....	545 16 0	839 4 3	1,385 0 3	64 6 11	1,168 17 6	.....	.....	1,233 4 5
Infants' Home, Ashfield ... ..	1,100 18 2	686 11 10	88 1 0	1,875 11 0	999 10 1	1,609 12 6	.....	134 4 10	2,743 7 5
Hospital for Sick Children, Glebe	1,000 0 0	844 9 6	297 0 3	2,141 9 9	32 6 9	2,304 3 11	.....	30 10 2	2,367 0 10
City Night Refuge and Soup Kitchen	.....	628 4 1	.....	628 4 1	18 5 1	609 19 0	.....	.....	628 4 1
Charity Organization Society ... ..	.....	631 0 6	.....	631 0 6	.....	.....	782 15 11	.....	782 15 11
Home Visiting and Relief Society	.....	233 12 6	192 0 7	425 13 1	.....	.....	312 7 0	113 6 1	425 13 1
Industrial Blind Institution ... ..	420 12 11	492 12 8	.....	913 5 7	1,088 17 2	.....	.....	.....	1,088 17 2

## STATISTICS, 1886—EDUCATION, &amp;c.

CHARITABLE INSTITUTIONS—*continued.*

**No. 44.**—NUMBER of PERSONS in various CHARITABLE INSTITUTIONS, mainly supported by Private Charity, at the end of each year, 1875–86.

Institution.	1875.		1876.		1877.		1878.		1879.		1880.		1881.		1882.		1883.		1884.		1885.		1886.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Industrial Blind Institution ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	...	10	...	20	...	20	...	21	...
Consumptives' Home ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12	4	12	5	13	4	19	8
House of the Good Samaritan ...	...	140	...	98	...	57	...	57	...	68	...	94	...	49	...	56	...	84	...	62	...	64	...	80
Sydney Female Refuge ...	...	27	...	34	...	40	...	47	...	46	...	37	...	40	...	47	...	37	...	43	...	44	...	48
Infants' Home, Ashfield (women)...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20	...	12	...	23	...	11	...	19
*City Night Refuge, &c. ...	...	40	1	44	...	24	...	20	...	20	...	20	...	20	...	20	...	20	...	20	...	19	...	18
Total... ..	40	168	44	132	24	97	20	104	20	114	20	131	20	89	29	123	42	137	52	133	52	123	58	155

\* See note to Table No. 42.

## PART VIII.

## MISCELLANEOUS.

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STATISTICS, 1886—MISCELLANEOUS.

METEOROLOGY—continued.

No. 2.—READINGS of EARTH THERMOMETERS, Sydney Observatory, 1886.

In the Ground	19 feet.				10 feet.				5 feet.				2 feet 6 inches.				1 inch.				Temperature in Ther-mometer Shed			
	Mean	Max	Min	Range.	Mean	Max	Min	Range.	Mean	Max.	Min	Range	Mean	Max	Min.	Range.	Mean	Max.	Min	Range	Mean.	Max	Min	Range.
1886.																								
January	65.9	66.4	65.5	0.9	66.2	67.0	65.6	1.4	67.8	68.8	66.8	2.0	70.1	71.4	68.8	2.6	71.2	74.0	68.2	5.8	72.8	92.3	60.2	32.1
February	66.7	67.1	66.2	0.9	67.3	67.8	66.7	1.1	68.9	69.7	68.2	1.5	69.6	71.6	67.7	3.9	68.2	72.2	61.0	11.2	68.3	93.1	48.8	44.3
March	67.3	67.7	66.8	0.9	67.6	67.9	66.8	1.1	68.9	69.1	66.5	2.7	68.3	71.4	65.3	6.1	65.9	71.5	61.2	10.3	65.4	80.0	48.9	31.1
April	67.8	68.2	67.2	1.0	67.2	67.8	66.5	1.3	68.1	69.1	66.5	2.6	68.3	71.4	65.3	6.1	65.9	71.5	61.2	10.3	65.4	80.0	48.9	31.1
May	67.1	67.4	65.6	1.8	65.5	66.5	64.2	2.3	65.0	66.4	63.5	2.9	63.7	65.4	60.9	4.5	59.0	63.5	54.0	9.5	58.7	75.3	44.1	31.2
June	66.5	66.8	65.7	1.1	63.4	64.3	62.1	2.2	61.8	64.4	60.3	4.1	59.2	60.5	57.5	3.0	55.2	58.0	51.3	6.7	53.8	64.3	41.6	22.7
July	65.6	66.4	64.9	1.5	61.4	62.5	60.6	1.9	59.3	60.3	58.7	2.1	57.2	58.0	56.0	2.0	54.2	57.3	50.2	7.1	53.8	66.1	41.7	24.4
August	64.6	65.1	64.1	1.0	60.3	60.8	59.8	1.0	59.1	60.0	57.8	2.2	57.9	58.0	57.3	1.3	55.4	57.2	52.8	4.4	55.8	69.3	43.8	25.5
September	63.9	64.6	63.8	0.8	60.4	61.0	59.9	1.1	59.8	60.6	59.0	1.6	59.8	61.2	58.5	2.7	58.1	63.7	54.3	9.4	58.9	75.4	44.7	30.7
October	64.1	65.1	63.7	1.4	61.4	62.4	60.6	1.8	61.3	61.9	60.7	1.2	61.7	62.9	60.9	2.0	60.8	65.1	56.0	9.1	63.5	88.9	49.0	39.9
November	64.5	64.9	64.2	0.7	63.0	63.6	62.0	1.6	63.7	64.4	62.2	2.2	65.3	66.7	63.2	3.5	65.3	69.5	60.7	8.8	68.8	90.1	53.9	36.2
December	65.1	65.4	63.9	1.5	64.5	66.6	63.8	2.8	65.6	66.3	64.3	2.0	67.2	68.5	65.7	2.8	67.8	72.0	63.0	9.0	69.2	87.1	52.8	34.2
Means	65.8				64.0				64.1				64.3				62.7				63.5			
In the year--Extremes	68.2	63.7	4.5		67.9	59.8	8.1		69.7	57.8	11.9		71.8	56.0	15.8		74.0	50.2	23.8		97.4	41.6	55.8	
1885	65.0	66.8	63.2	3.6	63.6	67.8	58.8	9.0	63.9	69.0	57.2	11.8	64.2	71.5	54.8	16.7	63.2	74.0	50.0	24.0	63.9	97.6	40.6	57.0
1884	64.1	66.2	62.4	3.8	63.0	66.8	58.8	8.0	63.4	69.0	57.6	11.4	63.7	71.1	55.7	15.4	62.3	74.0	51.4	22.6	63.2	100.8	40.7	60.1
1883	63.7	65.8	61.6	4.2	63.0	67.4	58.8	8.6	63.5	69.2	57.5	11.7	63.6	71.6	54.7	16.9	62.4	79.2	50.0	29.2	62.3	99.6	39.7	59.9
1882	63.4	65.5	60.1	5.4	63.2	60.8	58.0	10.0	64.1	70.3	57.8	12.5	64.4	72.9	55.1	17.8	63.5	76.1	50.0	26.1	63.3	99.9	38.9	61.0
1881	61.8	65.0	60.4	4.6	62.4	66.8	57.8	9.0	62.6	68.0	56.5	12.1	63.0	70.6	54.5	16.1	61.8	74.0	50.0	24.0	62.2	100.5	39.6	60.9
1880	63.0	65.2	61.0	4.2	62.9	66.9	58.5	8.4	63.3	68.8	57.2	11.6	63.4	70.8	54.8	16.0	62.2	73.5	48.7	24.8	62.8	94.9	38.8	56.1
1879	62.6	65.4	60.4	5.0	62.8	67.4	57.6	9.8	62.8	69.2	55.8	13.4	62.8	72.1	54.0	18.1	61.5	74.7	49.4	25.3	62.1	96.5	40.6	55.9
1878	64.8	67.8	62.3	5.5	65.5	71.2	60.2	11.0	64.9	72.8	57.2	15.6	64.5	74.9	54.3	20.6	62.9	78.0	49.0	29.0	63.6	102.7	38.7	64.0
1877	63.5	66.3	60.7	5.6	63.4	68.9	58.8	10.1	64.1	71.7	57.6	14.1	64.5	75.3	55.0	19.7	63.1	78.0	50.2	27.8	63.8	97.4	41.6	55.8
1876	63.8	66.9	61.0	5.9	63.9	69.9	57.9	12.0	64.7	72.3	56.3	16.0	64.9	76.0	52.8	23.2	63.3	80.0	47.2	32.8	63.6	96.9	39.1	57.8
1875	63.0	65.4	60.4	5.0	63.2	68.6	57.8	10.8	63.9	70.7	56.5	14.2	64.1	74.4	53.7	20.7	62.8	77.3	47.6	29.7	63.3	98.9	40.3	58.6
1874	62.7	65.4	59.7	5.7	62.7	67.5	56.8	10.7	63.3	69.0	54.9	14.1	63.7	72.6	52.0	20.6	62.7	77.7	46.4	31.3	63.0	90.3	36.9	59.4
1873	63.0	65.8	60.6	5.2	63.0	68.5	58.0	10.5	63.7	70.5	56.1	14.4	63.9	73.3	53.7	19.6	62.8	76.2	48.6	27.6	63.0	100.1	38.0	62.1
1872	63.2	65.8	60.4	5.4	63.4	69.8	58.0	11.8	64.0	71.7	56.3	15.4	64.1	75.7	53.7	22.0	62.5	78.7	46.9	31.8	62.6	98.3	36.8	61.5
1871	62.8	65.1	60.4	4.7	62.8	67.4	58.0	9.4	63.4	69.9	56.7	13.2	63.9	73.7	53.8	19.9	62.7	77.9	48.0	29.9	62.4	103.8	38.7	65.1
1870	63.2	65.8	60.4	5.4	63.3	68.5	57.9	10.6	63.9	71.9	56.6	15.3	64.2	76.1	54.0	22.1	63.0	81.2	47.9	33.3	62.8	105.2	38.7	66.5

No. 3.—MEAN TEMPERATURE of EACH MONTH, at Sydney, in the years 1856 to 1886, inclusive.

Year	January	Feb-ruary.	March.	April	May	June	July.	August	Sep-tember.	October.	Novem-ber.	Decem-ber.	Means.
1856	69.0	69.6	68.6	64.7	56.1	49.2	46.9	52.6	55.8	62.2	62.9	65.7	60.3
1857	70.2	71.2	68.0	64.1	54.5	53.0	52.2	51.9	55.1	59.7	64.7	68.6	61.1
1858	73.0	69.6	67.6	62.4	57.1	52.2	48.9	50.7	57.0	60.8	66.3	68.6	61.2
1859	70.6	69.8	68.2	63.8	58.5	52.5	50.6	55.3	57.3	65.3	66.4	69.5	62.3
1860	70.6	68.7	70.6	64.8	57.4	53.4	51.8	54.7	57.5	61.3	63.8	67.2	61.8
1861	69.7	71.6	71.5	64.7	56.6	54.6	51.1	52.4	57.6	64.3	64.5	69.0	62.3
1862	70.6	71.7	70.4	62.4	57.7	54.4	52.5	52.3	59.9	62.0	68.1	69.9	62.7
1863	71.9	72.1	69.4	63.8	59.0	55.0	52.6	53.9	57.0	62.3	66.4	67.8	62.6
1864	72.1	69.3	67.7	64.6	58.2	54.1	53.3	54.9	59.2	60.4	64.9	67.0	62.6
1865	69.5	71.1	69.2	66.4	56.5	52.9	51.0	55.0	61.1	64.1	67.7	70.5	62.9
1866	71.4	71.2	68.2	66.8	60.5	56.8	52.9	54.8	59.5	62.8	66.6	68.1	63.3
1867	71.1	70.8	68.5	66.4	61.0	56.2	54.3	54.7	59.3	68.5	69.4	70.9	64.3
1868	70.7	69.5	69.5	64.4	58.6	55.8	53.0	54.0	59.7	66.5	65.5	72.0	63.3
1869	72.9	70.1	71.6	65.1	58.3	55.2	52.3	55.4	56.7	62.0	66.3	70.1	63.0
1870	71.5	72.0	68.1	66.0	58.5	54.0	52.4	53.5	57.9	64.3	67.0	68.5	62.8
1871	69.5	70.7	65.7	63.9	59.5	53.8	53.1	55.7	58.8	60.6	65.7	71.6	62.4
1872	73.2	71.9	68.0	62.1	56.5	55.5	53.1	52.0	58.0	63.1	67.3	70.3	62.6
1873	69.7	70.5	67.9	63.6	60.2	57.8	51.4	56.5	60.1	63.9	62.9	71.3	63.0
1874	71.6	70.2	69.7	66.2	58.9	53.2	51.2	53.5	57.7	65.8	67.5	70.9	63.0
1875	72.7	69.7	69.6	65.0	57.0	55.6	52.5	57.3	57.4	64.5	68.1	70.7	63.3
1876	72.6	71.0	71.9	65.8	60.1	54.1	52.8	54.8	59.2	63.1	67.3	70.0	63.6
1877	72.0	72.3	69.9	64.7	59.4	54.9	54.8	56.3	58.4	62.4	68.2	71.6	63.8
1878	72.5	72.0	72.0	66.1	57.7	51.3	52.7	56.4	60.2	63.6	68.6	70.4	63.6
1879	71.9	70.6	67.6	62.2	56.7	52.2	51.5	55.3	59.6	63.6	66.1	68.2	62.1
1880	71.5	70.8	69.9	64.9	57.8	52.8	51.0	57.4	59.6	61.1	66.8	70.0	62.8
1881	69.9	70.2	70.0	63.8	60.5	52.9	51.2	54.8	58.1	59.8	65.5	70.0	62.2
1882	72.3	71.2	70.6	64.2	58.6	53.3	52.0	55.9	61.6	63.6	66.2	69.7	63.3
1883	70.3	70.2	67.9	63.6	58.8	54.6	52.2	55.8	56.8	62.1	64.4	70.8	62.3





Blayne	107	...	...	...	.....	.....	...	...	...	...	...	...	37'530	110	1'570	8 Dec.	...
Bobundarr	47	...	.....	.....	.....	.....	...	...	...	...	...	...	19'130	82	2'120	16 Dec.	.....
Bodalla	7	40	.....	58'8	92'5	S.	1'1	5'1	72'8	44'7	109'3	25'4	26'840	88	2'240	22 Feb.	...
Boggabri	170	...	.....	.....	.....	.....	...	...	...	...	...	...	27'420	75	2'040	24 July	...
Bozolong	157	...	.....	.....	.....	.....	...	...	...	...	...	...	27'630	59	3'600	6 Dec.	...
Bolagamy	246	...	.....	.....	.....	.....	...	...	...	...	...	...	23'450	73	1'660	7 Dec.	.....
Bombala	37	3,000	...	54'8	.....	S.	1'1	4'6	68'6	41'0	99'7	18'6	18'790	135	1'480	24 Feb.	...
Bomera	150	...	.....	.....	.....	.....	...	...	...	...	...	...	31'480	62	1'510	19 June	...
Bonehaw	120	...	.....	.....	.....	.....	...	...	...	...	...	...	38'960	47	.....	.....	No detail
Booberoi	266	...	.....	.....	.....	.....	...	...	...	...	...	...	12'880	52	3'070	17 Jan.	...
Boola Boolka	468	...	.....	.....	.....	.....	...	...	...	...	...	...	13'185	41	1'170	18 May	...
Boolcarrol	219	...	.....	.....	.....	.....	...	...	...	...	...	...	25'140	63	1'520	20 April	...
Boomanoomana	233	...	.....	.....	.....	.....	...	...	...	...	...	...	17'180	85	1'960	4 Dec.	...
Boondara	426	...	.....	.....	.....	.....	...	...	...	...	...	...	15'420	32	3'100	3 Dec.	...
Boonona	400	...	.....	.....	.....	.....	...	...	...	...	...	...	14'370	43	1'430	17 May	...
Boorara	487	...	.....	.....	.....	.....	...	...	...	...	...	...	17'400	59	2'580	5 Dec.	...
Booreeyamma	249	...	.....	.....	.....	.....	...	...	...	...	...	...	36'770	74	2'170	24 May	...
Booolong	87	...	.....	.....	.....	W.	...	...	...	44'9	...	23'0	41'075	96	2'220	14 Oct.	...
Booroona	321	...	.....	.....	.....	.....	...	...	...	...	...	...	17'150	33	1'630	17 June	...
Boocoomba	60	...	.....	.....	.....	.....	...	...	...	...	...	...	28'830	57	3'900	5 Dec.	.....
Booroomugga	325	...	.....	.....	.....	.....	...	...	...	...	...	...	20'730	54	.....	.....	Greatest fall and date unknown as there was no detail for December, the month in which the greatest amount of rain fell
Boranibola	150	...	.....	.....	.....	.....	...	...	...	...	...	...	25'925	77	1'420	3 Oct.	...
Butany (No. 1 dam)	...	...	.....	.....	.....	.....	...	...	...	...	...	...	43'570	117	5'500	15 Oct.	...
Waterworks	...	...	.....	.....	.....	.....	...	...	...	...	...	...	38'760	98	4'900	15 Oct.	...
Bourke	386	456	30'054	70'4	60'8	S.E.	1'2	2'5	85'4	55'4	118'9	35'5	18'610	51	2'290	3 Nov.	114'875
Bowral	25	...	.....	.....	.....	.....	...	...	...	...	...	...	28'740	98	3'550	25 July	Total evaporation incomplete No observations taken from 16th July to 1st September Total tank evaporation 63'16"
Box Cowell	270	...	.....	.....	.....	.....	...	...	...	...	...	...	20'330	56	2'520	5 Dec.	...
Box Hill	130	...	.....	.....	.....	.....	...	...	...	...	...	...	28'990	73	1'300	15 Oct.	...
Boyang	359	...	.....	.....	.....	.....	...	...	...	...	...	...	12'520	39	.....	.....	No detail
Braidwood	26	...	.....	.....	.....	.....	...	...	...	...	...	...	23'890	89	1'700	5 Dec.	...
Branxton	34	...	.....	.....	.....	.....	...	...	...	...	...	...	13'700	52	.....	.....	Observations commenced in July
Breeza	134	...	.....	.....	.....	.....	...	...	...	...	...	...	26'200	77	1'740	29 May	...
Brenda	359	...	.....	.....	.....	.....	...	...	...	...	...	...	21'620	62	1'380	18 July	...
Brewarrina	198	...	.....	.....	.....	.....	...	...	...	...	...	...	14'250	58	.....	.....	Observations commenced in August
Brewarrina	356	...	.....	67'0	.....	S.E.	1'9	2'2	83'7	50'1	116'1	24'8	18'770	66	1'420	3 Nov.	...
Briandary	28	...	.....	.....	.....	.....	...	...	...	...	...	...	19'760	68	1'670	21 Feb.	...
Bindingabba	506	...	.....	.....	.....	.....	...	...	...	...	...	...	12'210	46	2'700	4 Dec.	...
Bindley Park (No 1)	103	...	.....	.....	.....	.....	...	...	...	...	...	...	27'630	55	2'420	12 April	...
" (No 2)	105	...	.....	.....	.....	.....	...	...	...	...	...	...	26'560	56	1'670	29 May	...
Broke	41	...	.....	.....	.....	.....	...	...	...	...	...	...	1'380	9	.....	.....	For December only
Brotherony	245	...	.....	.....	.....	.....	...	...	...	...	...	...	19'800	56	3'960	16 Jan.	...
Broughton Creek	3	...	.....	.....	.....	.....	...	...	...	...	...	...	25'420	45	.....	.....	Observations commenced in July
Broula	290	...	.....	.....	.....	.....	...	...	...	...	...	...	28'980	80	2'550	6 Dec.	...
Brouley	227	...	.....	.....	.....	.....	...	...	...	...	...	...	17'330	64	0'950	17 May	...
Brownlow Hill	20	...	.....	.....	.....	.....	...	...	...	...	...	...	22'780	65	2'100	15 Oct.	...
Brundah	177	...	.....	.....	.....	.....	...	...	...	...	...	...	27'950	58	3'080	7 Dec.	...
Buckingbong	210	...	.....	.....	.....	.....	...	...	...	...	...	...	16'780	47	1'410	21 Sept.	...
Buckinguy	300	...	.....	.....	.....	.....	...	...	...	...	...	...	18'660	39	.....	.....	June and July, no detail
Buddigower	194	...	.....	.....	.....	.....	...	...	...	...	...	...	20'085	83	1'490	3 Nov.	...
Budgery	300	...	.....	.....	.....	.....	...	...	...	...	...	...	28'100	42	3'200	7 Dec.	...
Bukelong	36	...	.....	.....	.....	.....	...	...	...	...	...	...	21'290	84	1'550	21 Feb.	...
Bulbodney	244	...	.....	.....	.....	.....	...	...	...	...	...	...	25'330	...	.....	.....	No detail
Bulgandrammo	194	...	.....	.....	.....	.....	...	...	...	...	...	...	29'560	63	2'510	5 Nov.	...
Bulla Bulla	412	...	.....	.....	.....	.....	...	...	...	...	...	...	14'020	62	1'510	19 May	...
Bullenbong	179	...	.....	.....	.....	.....	...	...	...	...	...	...	19'140	63	1'530	4 Dec.	...
Bullh	...	...	61'2	.....	.....	S.	1'3	4'6	70'5	51'9	90'7	34'6	41'670	112	3'330	26 Mar.	...
Bull Plains	221	...	.....	.....	.....	.....	...	...	...	...	...	...	22'650	78	2'980	4 Dec.	...
Bundarra	113	...	.....	60'3	.....	W	0'5	4'1	71'4	49'3	89'5	32'0	41'150	84	2'620	12 Mar.	...
Bundemar	212	...	.....	63'2	.....	.....	...	...	...	...	...	...	31'590	71	4'270	5 Dec.	...
Bundy	244	...	.....	.....	.....	.....	...	...	...	...	...	...	25'420	62	2'870	4 Dec.	...

METEOROLOGY—continued.

No. 4 (continued).—ABSTRACT of METEOROLOGICAL OBSERVATIONS taken at various Stations in the year 1886—continued.

Stations.	Least distance from East Coast in Miles	Height above sea in feet	Mean of Observations taken at 9 a.m.								For 24 hours previous to 9 a.m.				Remarks.		
			Barometer.	Temperature in Shade.	Humidity, 0 to 100	Wind		Temperature in Shade.		Rain			Evaporation, inches				
						Direction.	Force. 0-6.	Clouds 0-10	Means.	Extremes.	Total Fall, inches.	No of Days		Greatest Fall, inches		Date	
						Max.	Min.	Max.	Min.								
Bungoma	40	..	..	..	..	..	..	..	..	..	..	22'810	99	1'840	7 Dec.	.....	
Buona Vista	...	..	..	..	..	..	..	..	..	..	..	34'080	104	3'750	15 Oct.	..	
Burzburgate	160	..	..	65'3	..	W.N.W.	1'7	4'6	81'9	48'6	107'0	27'5	32'090	115	1'840	5 Nov	..
Burdenda	251	..	..	..	..	..	..	..	..	..	..	..	21'000	51	2'120	4 Dec	.....
Burrabogie	285	..	..	..	..	..	..	..	..	..	..	..	15'710	55	1'350	18 Dec.	..
Burra Burra	234	..	..	..	..	..	..	..	..	..	..	..	24'760	47	..	..	No detail.
Burrawang	200	..	..	..	..	..	..	..	..	..	..	..	22'360	66	..	..	Detail from July to November inclusive only
Burrongong	214	..	..	..	..	..	..	..	..	..	..	..	18'670	76	1'260	27 Jan.	..
Burrowa	112	..	..	..	..	..	..	..	..	..	..	..	25'490	81	2'510	6 Dec	..
Burroway (No 1)	200	..	..	63'9	..	..	..	..	76'5	51'2	101'0	25'0	33'010	70	2'520	4 Dec.	..
" (No. 2)	202	..	..	..	..	..	..	..	..	..	..	..	36'060	81	3'970	4 Dec.	..
Burrundulla	124	..	..	..	..	..	..	..	..	..	..	..	32'130	61	2'770	4 Dec	..
Burta	566	..	..	58'6	..	S.	1'4	..	73'5	43'6	106'0	21'0	9'920	21	..	..	No observations for last six months, with exception of rainfall No detail for last six months' rainfall.
Burtundy	453	..	..	..	..	..	..	..	..	..	..	..	11'160	37	1'250	7 Jan.	..
Burwood	12	..	..	..	..	..	..	..	..	..	..	..	37'330	87	6'340	15 Oct.	..
Butherwah	206	..	..	..	..	..	..	..	..	..	..	..	15'720	61	1'000	4 Dec	.....
Bygoo	207	..	..	..	..	..	..	..	..	..	..	..	22'240	85	1'330	3 Oct.	..
Bylong	100	..	..	..	..	..	..	..	..	..	..	..	29'120	66	2'400	12 April	..
Bynya	234	..	..	..	..	..	..	..	..	..	..	..	17'320	48	1'300	{ 21 Sept } { 2 Oct }	..
Cadia	115	..	..	..	..	..	..	..	..	..	..	..	36'010	87	2'310	18 May	..
Cagan	167	..	..	..	..	..	..	..	..	..	..	..	31'990	70	2'700	5 Dec.	..
Carwarro	503	..	..	62'2	..	..	..	..	74'2	50'2	104'0	29'0	20'310	51	2'110	4 Dec.	No observations for months of April, November, and December, excepting rainfall Observations commenced in May.
Calala	145	..	..	..	..	..	..	..	..	..	..	..	23'900	58	..	..	..
Calga	218	..	..	..	..	..	..	..	..	..	..	..	32'010	74	2'730	5 Dec.	..
Camden	21	..	..	..	..	..	..	..	..	..	..	..	19'990	31	2'500	25 July	..
" Haven	..	..	..	66'0	..	S.	..	..	73'3	58'7	90'2	39'8	39'300	72	1'650	8 July	..
" Park	..	..	..	..	..	..	..	..	..	..	..	..	24'160	75	1'860	26 July	..
Campbelltown (No. 1)	18	..	..	..	..	..	..	..	..	..	..	..	24'140	73	2'020	15 Oct	..
" (No. 2)	18	..	..	..	..	..	..	..	..	..	..	..	19'510	66	2'330	14 Oct	..
Cangoura	97	..	..	59'2	..	N.E.	0'5	4'3	69'1	49'2	93'0	21'0	28'220	97	1'670	6 Dec	No observations for last six months, with exception of wind and rainfall
Canley Vale	17	..	..	..	..	..	..	..	..	..	..	..	24'280	80	2'160	13 Dec.	..
Cannonbar	272	..	..	66'7	..	S.	..	..	80'5	52'8	109'6	33'7	23'730	33	2'210	24 May	..
Cannon	320	..	..	..	..	..	..	..	..	..	..	..	13'825	47	1'380	4 Dec.	..
Canowindra	135	..	..	56'6	..	W.	0'9	3'6	70'2	43'0	98'0	23'4	24'900	87	1'670	7 Oct.	..
Cape St George	..	175	30'048	65'1	65'4	S.	1'9	3'1	72'5	57'6	96'4	38'5	27'060	69	2'000	16 April	..
Carabost	133	..	..	..	..	..	..	..	..	..	..	..	33'230	87	1'880	25 Nov.	..
Carcoar	111	..	..	56'8	..	N.E.	..	..	64'9	48'6	89'4	25'5	35'371	95	1'820	6 Nov.	..
Carrar	133	..	..	..	..	..	..	..	..	..	..	..	32'290	51	2'250	10 Oct.	..
Carroll	138	..	..	..	..	..	..	..	..	..	..	..	28'090	67	2'220	29 May	..
Casino	28	50	..	67'6	..	N.W.	1'4	3'6	81'0	54'1	105'9	30'6	50'700	132	3'300	26 July	..
Cassils	120	1,500	..	60'6	..	S.E.	..	4'4	68'9	52'2	94'7	32'8	29'800	87	1'870	13 April	..
Cattle Creek	123	..	..	..	..	..	..	..	..	..	..	..	39'630	89	..	..	No detail for May and November, the months in which the greatest quantities of rain fell.
Cavan	93	..	..	55'2	..	..	..	..	70'7	39'6	100'0	18'0	30'920	89	1'780	2 Aug	..
Charlton	332	..	..	..	..	..	..	..	..	..	..	..	18'550	41	1'930	24 July	..
Clare	386	..	..	..	..	..	..	..	..	..	..	..	13'340	25	2'100	17 June	..
Clarence Heads	..	120	30'085	69'8	82'6	S.W.	1'2	5'6	79'2	60'4	96'8	46'0	66'100	121	3'310	17 Oct.	..
Clifton	141	..	..	..	..	..	..	..	..	..	..	..	28'570	81	1'450	12 Mar.	..
Coal Cliff	..	250	..	63'1	..	S.W.	..	..	69'7	56'4	102'0	44'0	41'580	97	4'330	15 Oct.	..
Coan Downs	298	..	..	..	..	..	..	..	..	..	..	..	15'950	54	1'970	19 May	..

Cobar	340	...	...	67.2	...	S.	...	...	81.5	52.8	110.7	32.0	20.760	51	2.000	18 May	.....	
Colano	277	...	...	...	...	...	...	...	...	...	...	...	26.340	55	2.700	5 Dec.	.....	
Colinroobee	227	...	...	...	...	...	...	...	...	...	...	...	18.600	85	1.030	18 May	.....	
Collarenebri	264	...	...	...	...	...	...	...	...	...	...	...	29.600	64	2.460	27 May	.....	
Collindina	210	...	...	...	...	...	...	...	...	...	...	...	20.955	81	2.120	4 Dec.	.....	
Colombo Creek (No. 1)	217	...	...	...	...	...	...	...	...	...	...	...	3.090	11	...	.....	For November and December only.	
Colombo Creek (No. 2)	224	...	...	...	...	...	...	...	...	...	...	...	13.780	51	1.590	4 Dec.	.....	
Comongin	252	...	...	...	...	...	...	...	...	...	...	...	23.270	33	...	.....	Returns only from May to December inclusive	
Condobolin (No. 1)	227	...	...	59.4	...	N.E.	0.5	3.3	75.8	42.9	102.3	24.6	22.410	67	1.670	6, 7 Dec	.....	
Condobolin (No. 2)	227	...	...	...	...	...	...	...	...	...	...	...	22.220	53	2.240	16 Jan	.....	
Connamara (Queensland)	219	...	...	...	...	...	...	...	...	...	...	...	17.800	38	4.400	23 Dec	.....	
Conoble	372	...	...	...	...	...	...	...	...	...	...	...	13.120	37	1.260	13 Oct	.....	
Coerwull	70	...	...	...	...	...	...	...	...	...	...	...	27.300	49	...	.....	No detail for April, August, and September.	
Coolah (No. 1)	137	...	...	...	...	...	...	...	...	...	...	...	36.270	54	2.670	6 Dec	.....	
Coolah (No. 2)	137	...	...	...	...	...	...	...	...	...	...	...	37.680	66	2.460	5 Dec	.....	
Coolamatong	14	...	...	...	...	...	...	...	...	...	...	...	20.710	83	1.750	2 Jan.	.....	
Coolamon	183	...	...	...	...	...	...	...	...	...	...	...	20.120	71	...	.....	Observations commenced in February.	
Cooma (No. 1)	52	2,637	30.035	55.8	78.7	E.	3.4	6.6	72.1	39.5	102.7	12.2	15.770	97	0.730	15 Oct	21.066	Evaporation from a bucket if it is reduced 35 per cent it equals that from a tank.
Cooma (No. 2)	52	2,637	...	53.6	...	...	...	...	70.3	36.9	99.6	9.6	14.730	98	0.680	5 Dec.	.....	
Coombie	339	...	...	...	...	...	...	...	...	...	...	...	15.350	44	1.600	18 May	.....	
Coomoo Coomoo	130	...	...	...	...	...	...	...	...	...	...	...	33.940	65	3.000	19 June	.....	No December return sent in Completed from Llangollen.
Coonabarabran	185	...	30.169	61.1	70.8	S.E.	1.2	3.0	76.8	45.3	106.6	23.2	43.380	97	2.600	5 Dec.	62.448	Evaporation for ten months Evaporation from a bucket if it is reduced 35 per cent equals that from a tank.
Coonamble (No. 1)	237	...	...	...	...	...	...	...	...	...	...	...	29.660	66	2.830	5 Dec.	.....	
Coonamble (No. 2)	237	...	...	...	...	...	...	...	...	...	...	...	28.370	66	2.950	5 Dec.	.....	
Coommbia	266	2,056	...	...	...	...	...	...	...	...	...	...	24.350	73	1.700	18 June	.....	
Cootamundra	138	...	...	...	...	...	...	...	...	...	...	...	28.110	65	2.820	4 Dec	.....	
Coradgery	186	...	...	...	...	...	...	...	...	...	...	...	27.155	63	2.840	7 Nov.	.....	
Cordeaux River	6	...	...	67.8	...	W.	...	...	...	...	...	...	54.420	106	7.980	15 Oct.	.....	No observations for December excepting rainfall
Coree	156	...	...	...	...	...	...	...	...	...	...	...	12.580	26	...	.....	Greatest fall and date unknown	
Cornalla	272	...	...	...	...	...	...	...	...	...	...	...	14.740	57	1.670	4 Dec	.....	
Corona	580	...	...	...	...	...	...	...	...	...	...	...	11.460	31	1.440	24 July	.....	
Coronga Downs	368	...	...	...	...	...	...	...	...	...	...	...	20.880	48	1.850	2 Aug	.....	
Corowa	201	...	...	...	...	...	...	...	...	...	...	...	21.415	92	1.340	5 Dec.	.....	
Corralla	395	...	...	...	...	...	...	...	...	...	...	...	19.380	65	1.500	24 July	.....	
Cotlong	334	...	...	...	...	...	...	...	...	...	...	...	13.540	30	...	.....	Returns for nine months October, November, and December	
Cowabee	195	...	...	...	...	...	...	...	...	...	...	...	18.800	61	1.360	2 Oct.	.....	(missing months), completed from Thelagerin East
Cowl Cowl	310	...	...	...	...	...	...	...	...	...	...	...	14.130	47	1.560	1 Oct.	.....	
Cowley (Queensland)	322	...	...	...	...	...	...	...	...	...	...	...	20.905	52	1.730	7 Dec	.....	
Cowper	11	...	...	...	...	...	...	...	...	...	...	...	35.690	...	3.550	26 July	.....	
Cowra	126	...	...	64.0	...	W.	...	...	77.5	50.5	110.0	27.6	30.810	88	1.370	4 Oct	.....	
Crookwell	76	...	...	54.4	...	N.W.	...	...	65.2	43.6	97.8	22.1	33.210	109	2.460	8 Dec.	.....	
Crowl Creek	275	...	...	...	...	...	...	...	...	...	...	...	18.560	51	1.880	4 Dec.	.....	
Crown-street	4	...	...	...	...	...	...	...	...	...	...	...	39.590	103	4.400	14 Oct.	.....	
Croydon	9	106	...	...	...	...	...	...	...	...	...	...	33.425	115	4.600	15 Oct	.....	
Cudal	141	...	...	...	...	...	...	...	...	...	...	...	27.330	77	2.070	7 Nov	.....	
Cudgen Scrub	1	...	...	...	...	...	...	...	...	...	...	...	87.080	188	3.840	25 July	.....	
Culpotaro	355	...	...	...	...	...	...	...	...	...	...	...	13.560	36	1.160	17 May	.....	
Cultova	455	...	...	...	...	...	...	...	...	...	...	...	15.060	40	1.860	24 July	.....	
Cumbalum	2	...	...	...	...	...	...	...	...	...	...	...	86.410	152	5.450	26 July	.....	
Cumbogolong	266	...	...	...	...	...	...	...	...	...	...	...	26.630	70	3.280	4 Dec	.....	
Cumboogle	179	...	...	...	...	...	...	...	...	...	...	...	34.290	77	3.800	4 Dec.	.....	
Cumnoek	153	...	...	...	...	...	...	...	...	...	...	...	28.630	90	...	.....	Observations commenced in May	
Cunningham Plains	124	...	...	...	...	...	...	...	...	...	...	...	26.560	82	2.820	7 Dec	.....	
Cunmynenk	334	...	...	...	...	...	...	...	...	...	...	...	14.550	49	1.750	4 Dec.	.....	
Currandooley	52	...	...	...	...	...	...	...	...	...	...	...	24.890	56	2.360	7 Dec.	.....	
Currawarna	363	...	...	...	...	...	...	...	...	...	...	...	20.920	44	1.920	2 Aug.	.....	
Currawinya	511	...	...	...	...	...	...	...	...	...	...	...	17.170	47	...	.....	Greatest fall and date unknown	
Curriwillinghi	350	...	...	...	...	...	...	...	...	...	...	...	29.080	64	1.740	24 July	.....	
Cuthawarra	531	...	...	...	...	...	...	...	...	...	...	...	14.370	31	1.780	17 May	.....	
Cuthero	474	...	...	...	...	...	...	...	...	...	...	...	12.580	28	1.580	3 Dec.	.....	

METEOROLOGY—continued.

No. 4 (continued).—ABSTRACT OF METEOROLOGICAL OBSERVATIONS taken at various Stations in the year 1886—continued.

Stations	Least distance from East Coast in Miles.	Height above sea in feet.	Mean of Observations taken at 9 a. m.							For 24 hours previous to 9 a. m.				Remarks			
			Barometer	Temperature in Shade	Humidity, 0 to 100.	Wind		Clouds 0 to 10	Temperature in Shade.		Rain.				Evaporation, inches		
						Direction.	Force, 0 to 6.		Means	Extremes.	Total Fall, inches.	No of Days	Greatest Fall, inches.			Date	
Max.	Min.	Max.	Min.	Total Fall, inches.	No of Days	Greatest Fall, inches.	Date										
Dalkeith	120	.	.	.	.	.	.	.	.	.	.	.	29'950	89	1 660	13 April	
Dartmouth	69	.	.	.	.	.	.	.	.	.	.	.	27'540	74	2'020	12 April	
Deep Creek	48	.	.	.	.	.	.	.	.	.	.	.	22'030	69	1'400	7 Dec.	Observations commenced in February.
Denilquin (No. 1)	287	320	30'119	62.9	74.4	S.	0.6	3.4	80.9	44.8	117.1	21.2	13'940	62	0.880	8 Jan.	
" (No. 2)	287	320	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14'000	71	0'910	7 Jan.	
Denman (No. 1)	73	.	.	.	.	.	.	.	.	.	.	.	24'000	50	1'550	13 April	
" (No. 2)	382	.	.	.	.	.	.	.	.	.	.	.	22'430	52	1 800	2 Nov.	
Derra	233	.	.	.	.	.	.	.	.	.	.	.	24'190	49	1'970	13 April	Commenced observations in March
Dinby	205	.	.	65.2	.....	.....	.....	.....	78.3	52.0	108.5	31.5	29.560	76	1'920	5 Dec.	No observations—January and February
Dine Dine	263	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	17.810	51	1 640	2 Oct.	
Douglas	54	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	27'680	85	1'310	12 Nov.	
Druidool	242	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	36'090	76	1'860	2 Dec.	
Dubbo (No. 1)	182	865	30'051	62.9	69.4	E.	0.5	2.9	77.5	48.2	106.9	22.7	34'830	96	4'360	12 April	
" (No. 2)	182	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	33'750	91	4 330	5 Dec.	
" West	183	.	.	61.3	.....	N.E.	0.7	4.2	72.8	49.8	101.0	28.8	36'490	114	4 860	5 Dec.	No observations for November, with exception of rainfall
Dumble	340	.	.	59.6	.....	.....	.....	.....	75.5	43.6	113.5	28.0	23'930	70	1'700	4 Oct.	
Dundullmal	162	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	32'890	62	3'940	5 Dec.	
Dungalar	283	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	26.820	57	2'150	4 Dec.	
Dungarvan	464	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	17'320	51	1'750	24 July	
Dungog	30	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	18.680	56	.....	.....	Observations commenced in August
Dungowan	95	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	26.690	55	.....	.....	Observations commenced in April.
Dunlop	422	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	13'510	27	2'140	24 July	
Eastern Brook	114	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	34'770	106	2 300	29 May	
Eauabalong	261	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	19'250	60	1 900	16 Jan.	
Eden	107	30'025	60.4	75.0	.....	S.W.	1.2	4.9	67.2	53.6	91.0	38.1	32'500	99	3 000	27 Jan.	
Edgeroi	207	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	30'410	79	2 250	25 July	
Eenaweena (No. 1)	255	.	.	64.8	.....	N.E.	.....	.....	78.7	50.8	111.0	28.0	27'840	106	3 620	4 Dec.	
" (No. 2)	264	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	23'660	74	.....	.....	Commenced observations in February
Eldorado	405	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	11'230	31	.....	.....	Commenced observations in August.
Ellerslee	195	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	22'470	88	1'280	3 Oct.	
El'crston	74	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	29'830	94	1'590	17 Jan.	Commenced observations in February
Elsmora	527	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	18.840	51	2'160	15 Jan.	
Emmaville	100	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	43'170	58	3'450	28 May	
Emu	36	.	.	63.6	.....	S.	0.7	4.8	72.3	54.2	99.6	32.3	25'660	129	2'250	15 Oct.	
Enngonia	421	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	8.520	16	.....	.....	Commenced observations in October
Eremeran (No. 1)	273	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	20'050	57	.....	.....	Greatest fall and date unknown.
" (No. 2)	274	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	21'150	52	1'580	16 Jan.	
Errowanbang	118	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	31'020	72	2'030	18 May	No detail
Euchora	42	1,216	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	32'980	.....	.....	.....	
Eugowra	165	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	32'000	86	2 200	6 Dec.	
Eulah	215	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	33'260	54	2'080	5 Dec.	
Euroka	282	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	21'260	53	.....	.....	Greatest fall and date unknown.
Eurongilly	136	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	25'750	87	.....	.....	Greatest fall and date unknown.
Euston (No. 1)	422	.	.	63.9	.....	S.	0.9	2.6	82.0	45.7	115.8	18.9	12'110	51	1'850	8 Jan.	
" (No. 2)	420	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	11'360	24	1'650	7 Jan.	
Eversleigh	78	3,576	29'986	56.4	71.6	E.	1.3	4.1	68.1	44.6	93.8	24.4	34'660	110	1'700	15 Oct.	
Fernside	112	2,600	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	36'230	77	1'860	3 Oct.	
Florida	320	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....	21'370	47	1'680	2 Aug.	
Forbes	176	1,200	30'062	63.1	.....	W.	0.3	1.6	75.9	50.4	110.9	31.2	24'120	68	1'910	6 Dec.	No observations for October, excepting of rainfall.

Forest Home	178	...	...	...	...	...	...	...	...	...	...	...	6,150	9	...	.....	.....	For December only.
Fort Bourke	391	...	...	...	...	...	...	...	...	...	...	...	17,100	38	1'500	5 Dec	...	
Gambleally	285	...	...	...	...	...	...	...	...	...	...	...	30,370	55	2,450	25 May	.....	
Ganmain	182	...	...	...	...	...	...	...	...	...	...	...	21,763	87	1'180	21 Sept	.....	
Garra	159	...	...	...	...	...	...	...	...	...	...	...	31,950	95	2,040	19 May	.....	
Geraldra	125	...	...	...	...	...	...	...	...	...	...	...	21,910	70	...	.....	No detail for months in which greatest quantities of rain fell	
Gerara	390	...	...	...	...	...	...	...	...	...	...	...	1,630	5	...	.....	For December only.	
Germanton	149	...	...	...	...	...	...	...	...	...	...	...	24,800	94	1,040	20 Aug	.....	
Ghoolendaadi	170	...	...	...	...	...	...	...	...	...	...	...	29,590	60	1,910	25 July	.....	
Gilgandra	205	...	...	...	...	...	...	...	...	...	...	...	38,580	76	3,850	4 Dec	.....	
Gilgoin	317	...	68.0	...	...	N.E.	...	79.4	56.5	104.2	35.7	...	20,130	58	1,750	18 June	.....	
Gilwarry	279	...	...	...	...	...	...	...	...	...	...	...	26,710	67	3,310	5 Dec	.....	
Gimma	200	...	...	...	...	...	...	...	...	...	...	...	39,450	56	3,010	5 Dec.	.....	
Gladesville	9	132	30.061	63.5	74.9	W.	0.7	4.5	71.1	55.9	94.0	38.9	32,850	132	4,260	15 Oct.	.....	
Glen Alpine	124	...	...	...	...	...	...	...	...	...	...	...	33,240	72	2,250	31 Jan.	.....	
Glenariff	343	...	...	...	...	...	...	...	...	...	...	...	17,840	37	3,360	4 Dec.	.....	
Glencoe	181	...	...	...	...	...	...	...	...	...	...	...	18,230	38	1,300	24 Nov	.....	
Glenfern	140	...	...	...	...	...	...	...	...	...	...	...	34,050	94	2,330	6 Nov.	.....	
Glenfield	30	...	...	...	...	...	...	...	...	...	...	...	19,960	62	...	.....	Commenced observations in February	
Glen Innes (No 1)	90	...	59.7	...	...	E.	0.7	4.0	72.5	46.8	102.3	26.1	41,100	92	2,950	13 April	.....	
" (No. 2)	90	...	...	...	...	...	...	...	...	...	...	...	5,580	28	...	.....	For November and December only	
" (No. 3)	90	...	...	...	...	...	...	...	...	...	...	...	40,720	96	...	.....	No detail	
Glenlyon	539	...	...	...	...	...	...	...	...	...	...	...	12,320	32	1,550	3 Dec.	.....	
Glen Moan	104	...	62.2	...	...	S.	1.6	4.3	74.1	50.2	102.0	30.0	37,150	82	2,130	28 May	.....	
" Waagan	177	...	...	...	...	...	...	...	...	...	...	...	24,900	83	...	.....	Commenced observations in June	
Gnalta	534	...	...	...	...	...	...	...	...	...	...	...	11,480	36	...	.....	No detail for August, the month in which the greatest quantity of rain fell	
Gnomery	359	...	...	...	...	...	...	...	...	...	...	...	22,380	51	1,710	24 July	.....	
Goangra	275	...	...	...	...	...	...	...	...	...	...	...	28,490	...	...	.....	No detail for last four months.	
Gongolgan	326	...	...	...	...	...	...	...	...	...	...	...	17,050	43	...	.....	No detail of rainfall in August and November	
Goolhi	167	...	67.2	63.6	...	S.E.	0.6	3.4	81.8	52.7	105.0	30.7	29,720	128	1,550	9 April	.....	
" (No. 1)	...	...	...	...	...	...	...	...	...	...	...	...	27,920	...	...	.....	No detail	
" (No. 2)	...	...	...	...	...	...	...	...	...	...	...	...	26,010	...	...	.....	do	
" (No. 3)	...	...	...	...	...	...	...	...	...	...	...	...	27,830	...	...	.....	do	
" (No. 4)	...	...	...	...	...	...	...	...	...	...	...	...	30,330	...	...	.....	do	
" (No. 5)	...	...	...	...	...	...	...	...	...	...	...	...	27,360	...	...	.....	do	
" (No. 6)	...	...	...	...	...	...	...	...	...	...	...	...	28,100	...	...	.....	do	
Goonal	236	...	...	...	...	...	...	...	...	...	...	...	27,460	97	1,620	11 Oct.	.....	
Goonoo Goonoo	110	1,550	...	...	...	...	...	...	...	...	...	...	29,480	61	2,340	2 Aug	.....	
Goomanawa	206	1,200	...	64.1	...	S.E.	...	...	74.7	53.5	97.5	31.0	33,770	83	2,960	5 Dec	.....	
Goormpa	474	...	...	...	...	...	...	...	...	...	...	...	10,210	27	1,020	2 Oct	.....	
Gosford	7	...	64.0	...	...	S.	2.1	4.0	76.2	51.8	100.5	37.0	42,420	133	3,210	15 Oct.	.....	
Goulburn	54	2,129	30.064	56.8	76.0	N.W.	0.6	2.7	70.6	42.8	107.1	19.6	22,200	86	1,360	3 Dec.	46.962	
Gowrie	20	...	...	...	...	...	...	...	...	...	...	...	23,395	73	4,250	13 Dec.	.....	
Grafton	22	40	...	69.7	...	S.E.	0.5	3.8	82.3	57.0	107.9	37.9	39,650	114	2,540	26 July	.....	
Gragin	143	...	...	...	...	...	...	...	...	...	...	...	42,380	91	2,180	27 May	.....	
Grahweed	282	...	...	...	...	...	...	...	...	...	...	...	17,760	40	...	.....	Commenced observations in July	
Gravesend	190	...	...	...	...	...	...	...	...	...	...	...	36,140	114	...	.....	Greatest fall and date unknown.	
Grenfell	155	...	...	...	...	...	...	...	...	...	...	...	32,100	87	3,650	6 Dec.	.....	
Groongal	265	...	...	...	...	...	...	...	...	...	...	...	15,520	60	1,260	17 May	.....	
Gudgenby	84	...	...	...	...	...	...	...	...	...	...	...	14,280	63	...	.....	Commenced observations in August.	
Gulgambone	220	...	...	...	...	...	...	...	...	...	...	...	28,985	60	3,000	4 Dec	.....	
Gulgong	132	...	61.0	...	...	...	...	...	71.5	50.5	97.7	25.5	33,020	68	3,120	6 Dec.	.....	
Gumbardo (Queensland)	278	...	...	...	...	...	...	...	...	...	...	...	27,570	51	2,760	24 July	.....	
Gum Creek	270	...	...	...	...	...	...	...	...	...	...	...	14,330	40	1,250	8 Jan.	.....	
Gummin Gummin	199	...	...	...	...	...	...	...	...	...	...	...	38,720	62	...	.....	No detail.	
Gundabendegal	150	...	...	...	...	...	...	...	...	...	...	...	20,920	46	1,530	4 Dec	.....	
Gundabloui	277	...	...	...	...	...	...	...	...	...	...	...	29,620	45	...	.....	No details for last five months.	
Gundare	141	...	...	...	...	...	...	...	...	...	...	...	34,210	61	1,590	5 Dec.	.....	
Gundaroo	70	1,893	30.062	55.2	...	N.W.	1.2	4.9	...	...	...	...	28,000	95	1,530	7 Dec.	.....	
Gunnedah	156	925	30.029	65.3	75.7	S.	0.9	2.4	76.5	54.1	106.9	34.2	31,280	70	1,930	26 Jan	.....	
																		No observations for months of March and April, with exception of rainfall.



Lachlan Downs	296	...	...	...	...	...	...	...	...	...	...	20'450	44	1'550	18 May	.....
Lake Bathurst	48	...	...	...	...	...	...	...	...	...	...	24'950	85	1'340	7 Jan.	.....
Lake Cobham	583	...	...	...	...	...	...	...	...	...	...	16'760	34	.....	.....	.....
Lake Cowal	205	...	...	...	...	...	...	...	...	...	...	21'780	72	1'670	6 Nov.	.....
Lake Cudgellico	261	...	60'7	.....	W.	0.7	2'9	71'5	49'8	99'9	50'8	17'210	43	1'870	5 Nov.	.....
Lake Dick	474	...	...	...	.....	.....	.....	.....	.....	.....	.....	10'970	27	.....	.....	No detail.
Lake George	56	...	...	...	.....	.....	.....	.....	.....	.....	.....	30'750	85	2'000	7 Dec.	.....
Lake Moon Moon	315	...	...	...	.....	.....	.....	.....	.....	.....	.....	0'940	3	.....	.....	For December only.
Lake Victoria	502	...	...	...	.....	.....	.....	.....	.....	.....	.....	9'670	41	1'250	20 Sept	.....
Lalaltee	238	...	61'0	.....	W.	1'9	3'8	73'1	48'9	107'5	27'0	16'740	104	2'300	4 Dec.	.....
Land's End	67	...	...	...	.....	.....	.....	.....	.....	.....	.....	24'940	92	1'770	5 Dec.	.....
Lawrence	13	...	68'2	.....	.....	.....	.....	80'0	56'4	104'1	33'1	47'130	106	3'300	12 Oct.	.....
Leconfield	33	...	...	...	.....	.....	.....	.....	.....	.....	.....	27'710	78	2'380	13 Mar.	.....
Leila	345	...	...	...	.....	.....	.....	.....	.....	.....	.....	18'330	48	1'400	6 Dec.	.....
Lerida	350	...	...	...	.....	.....	.....	.....	.....	.....	.....	19'230	59	1'640	13 Oct.	.....
Liddleton	65	...	...	...	.....	.....	.....	.....	.....	.....	.....	27'040	99	1'610	7 Dec.	.....
Lila Lower	498	...	...	...	.....	.....	.....	.....	.....	.....	.....	20'600	40	1'610	4 Dec.	.....
Linden	52	...	...	...	.....	.....	.....	.....	.....	.....	.....	36'810	100	2'900	15 Oct.	.....
Lindsay	174	...	...	...	.....	.....	.....	.....	.....	.....	.....	41'470	64	2'500	19 June	.....
Lismore	13	...	70'2	78'8	S.S.W.	1'7	5'0	80'5	60'0	101'7	38'5	53'730	150	3'280	26 July	.....
Llangollen	124	...	...	...	.....	.....	.....	.....	.....	.....	.....	29'730	97	1'820	13 April	.....
Lord Howe Isle	.....	...	...	...	.....	.....	.....	.....	.....	.....	.....	53'990	179	.....	.....	No returns—January, March, and April.
Louth	423	...	...	...	.....	.....	.....	.....	.....	.....	.....	19'060	33	2'210	26 July	.....
Lue	95	...	...	...	.....	.....	.....	78'6	.....	102'3	.....	33'740	101	1'490	31 Aug.	.....
Maitland (West)	18	98	65'2	.....	W.	1'1	3'8	75'4	54'9	103'8	35'4	30'650	117	2'910	28 Sept.	101'556
Majura	70	...	...	...	.....	.....	.....	.....	.....	.....	.....	23'000	94	1'610	5 Dec.	.....
Manfred	399	...	...	...	.....	.....	.....	.....	.....	.....	.....	14'735	43	.....	.....	Greatest fall and date unknown.
Manilla (No. 1)	135	...	...	...	.....	.....	.....	.....	.....	.....	.....	29'330	70	1'600	2 Aug.	.....
(No. 2)	135	...	...	...	.....	.....	.....	.....	.....	.....	.....	9'220	33	.....	.....	Commenced observations in September.
Maragle	115	...	...	...	.....	.....	.....	.....	.....	.....	.....	33'580	97	3'000	27 June	.....
Marengo	128	...	...	...	.....	.....	.....	.....	.....	.....	.....	21'630	76	.....	.....	Commenced in July.
Marra	442	...	...	...	.....	.....	.....	.....	.....	.....	.....	14'760	37	2'620	24 July	.....
Marsdens	187	...	65'3	.....	N.E.	1'4	1'8	75'9	54'7	104'8	60'0	20'890	83	2'460	6 Dec.	.....
Martindale	73	...	...	...	.....	.....	.....	.....	.....	.....	.....	22'930	60	1'730	12 April	.....
Maryland (No. 1)	92	...	60'4	.....	E.	.....	4'6	70'1	50'6	93'0	29'0	45'490	121	2'550	28 May	.....
(No. 2)	21	...	...	...	.....	.....	.....	.....	.....	.....	.....	23'070	64	.....	.....	Greatest fall and date unknown
Mathoura	282	...	...	...	.....	.....	.....	.....	.....	.....	.....	14'840	46	.....	.....	do do.
Mayfield	256	...	...	...	.....	.....	.....	.....	.....	.....	.....	12'640	60	.....	.....	do do.
M'Gee's Tank	227	...	...	...	.....	.....	.....	.....	.....	.....	.....	19'210	47	2'500	2 Oct.	.....
Melrose	251	...	63'9	.....	N.E.	2'2	3'6	78'4	49'3	108'8	28'9	18'840	58	1'740	7 Dec.	.....
Plains	225	...	...	...	.....	.....	.....	.....	.....	.....	.....	21'530	54	1'940	4 Dec.	.....
Mena Murtlee	511	...	...	...	.....	.....	.....	.....	.....	.....	.....	7'810	19	0'950	13 Oct.	.....
Menindie	492	30'086	65'8	.....	S.	1'1	3'3	74'8	56'7	106'1	36'5	15'525	38	2'398	25 July	.....
Mercadool	276	...	...	...	.....	.....	.....	.....	.....	.....	.....	28'240	70	.....	.....	No detail.
Merigal	210	...	...	...	.....	.....	.....	.....	.....	.....	.....	29'760	66	3'080	5 Dec.	.....
Merrere	351	...	...	...	.....	.....	.....	.....	.....	.....	.....	19'240	49	.....	.....	do.
Merriwa	98	...	...	...	.....	.....	.....	.....	.....	.....	.....	30'170	43	3'320	25 July	.....
Merrowie	196	...	...	...	.....	.....	.....	.....	.....	.....	.....	15'960	48	1'480	18 May	.....
Merry Anbone	263	...	...	...	.....	.....	.....	.....	.....	.....	.....	26'970	61	4'170	5 Dec.	.....
Merton	215	...	...	...	.....	.....	.....	.....	.....	.....	.....	26'360	65	3'040	4 Dec.	.....
Merungle	308	...	...	...	.....	.....	.....	.....	.....	.....	.....	12'330	37	1'140	{ 17 May 17 June }	.....
Meryula	336	...	...	...	.....	.....	.....	.....	.....	.....	.....	21'550	44	1'620	25 July	.....
Methven	73	...	...	...	.....	.....	.....	.....	.....	.....	.....	25'290	88	1'380	6 Nov.	.....
Miandetta	273	...	...	...	.....	.....	.....	.....	.....	.....	.....	25'340	61	2'000	5 Dec.	.....
Michelago	52	...	...	...	.....	.....	.....	.....	.....	.....	.....	20'040	67	1'660	5 Dec.	.....
Midkin	202	...	...	...	.....	.....	.....	.....	.....	.....	.....	33'230	54	2'420	19 Jan.	.....
Millie	214	...	...	...	.....	.....	.....	.....	.....	.....	.....	32'070	95	2'860	25 May	.....
Milparinka	599	...	67'2	54'8	S.E.	1'9	3'2	79'7	54'8	111'8	32'3	12'030	40	2'100	24 July	.....
Milton	1	30'012	59'6	77'1	W.	1'0	4'4	71'7	47'5	106'0	29'8	30'200	107	2'580	15 Oct.	.....
Mittagong	27	...	52'1	.....	.....	.....	.....	63'1	41'1	104'6	21'6	30'380	88	3'660	26 July	.....

Greatest fall and date unknown.

No detail.

For December only.

Commenced observations in February.  
No observations for August, with exception of rainfall.

No returns—January, March, and April.

No observations for last six months, with exception of rainfall.  
Evaporation from a bucket, if this is reduced 35 per cent. it equals that from a tank.

Greatest fall and date unknown.

Commenced observations in September.

Commenced in July.

Greatest fall and date unknown  
do do.  
do do.

No detail.

do.



METEOROLOGY—continued.  
 No. 4—(continued).—ABSTRACT of METEOROLOGICAL OBSERVATIONS taken at various Stations in the year 1886—continued.

Stations.	Least distance from East Coast in Miles	Height above sea in feet.	Mean of Observations taken at 9 a.m.							For 24 hours previous to 9 a.m.					Remarks.			
			Barometer	Temperature in Shade.	Humidity, 0 to 100.	Wind.		Clouds 0 to 10	Temperature in Shade.		Rain.			Evaporation, inches.				
						Direction	Force. 0 to 6.		Means.	Extremes.	Total Fall, inches.	No of Days	Greatest Fall, inches			Date.		
Mittagong Head Station	183	..	..	..	..	..	..	..	..	..	..	20 300	87	1 360	5 Dec.	..		
Moama	290	320	..	60.9	..	S.	1.9	2.7	77.3	44.4	110.1	26.8	15 860	53	1 380	19 Aug.	..	
Mole River	102	..	..	..	..	..	..	..	..	..	..	..	42,550	92	3 120	28 May	..	
Molong (No. 1)	140	..	..	60.1	..	N.W.	1.2	3.8	73.9	46.2	105.7	26.6	35 580	106	1 700	19 May	..	
" (No. 2)	140	..	..	..	..	..	..	..	..	..	..	..	32 350	80	..	..	..	Commenced observations in April.
Molten Plains (No. 1)	372	..	..	..	..	..	..	..	..	..	..	..	22 610	49	1 880	2 Nov.	..	
" (No. 2)	423	..	..	..	..	..	..	..	..	..	..	..	22,430	46	..	..	..	Commenced observations in April.
Momba	485	..	..	..	..	..	..	..	..	..	..	..	14 060	32	1 350	5 Dec.	..	
Moobong	182	..	..	..	..	..	..	..	..	..	..	..	26 995	81	2 010	13 Dec.	..	
Moodanong	314	..	..	..	..	..	..	..	..	..	..	..	13 090	46	1 360	2 Oct.	..	
Mooki Springs	123	..	..	..	..	..	..	..	..	..	..	..	28 360	90	1 940	29 May	..	
Moolah	378	..	..	..	..	..	..	..	..	..	..	..	14 510	47	..	..	..	No detail
Moolpar	356	..	..	..	..	..	..	..	..	..	..	..	15 000	70	1 220	3 Dec.	..	
Moonagee	280	..	..	..	..	..	..	..	..	..	..	..	20 650	32	3 730	4 Dec.	..	
Moorara	460	..	..	..	..	..	..	..	..	..	..	..	11 220	27	..	..	..	No detail
Moore Park	2	..	..	..	..	..	..	..	..	..	..	..	43 650	128	6 260	15 Oct	..	
Moothumbil	270	..	..	..	..	..	..	..	..	..	..	..	20 280	49	1 900	18 May	..	
Mootwingee	500	..	..	..	..	..	..	..	..	..	..	..	13 680	33	2 000	4 Dec	..	
Morangarell	162	..	..	62.4	..	N.	1.5	3.2	74.5	50.3	105.0	26.1	24 210	100	2 030	5 Dec	..	
Morice	204	..	..	69.4	..	N	1.0	2.9	82.9	55.8	109.3	34.1	33 970	96	1 760	21 April	..	
Morpeth	15	..	..	63.7	..	N E.	..	..	73.8	53.6	100.2	34.3	33 460	91	2 755	27 Sept	..	
Moruya Heads	0	50	30 033	61.5	76.1	W.	1.4	4.8	71.2	51.9	103.6	34.8	26 910	99	2 000	27 Jan.	56 393	Evaporation from a bucket, if it is reduced 35 per cent. it equals November and December only.
" (Telegraphs)	0	50	..	..	..	..	..	..	..	..	..	..	5 220	19	..	..	..	
Moss Vale	31	2,205	..	56.5	..	W.	1.4	4.9	64.8	48.1	94.4	28.2	29 330	112	3 380	16 April	..	
Mount Deering	560	..	..	..	..	..	..	..	..	..	..	..	11 940	35	..	..	..	No detail
Mount Gipps	553	..	..	..	..	..	..	..	..	..	..	..	11 090	32	..	..	..	do
Mount Hope	296	..	..	61.9	..	S.	0.8	1.8	67.1	56.6	103.7	38.4	18 970	66	1 500	18 May	..	No observations for March, with exception of rainfall.
Mount McDonald	115	2,400	..	..	..	..	..	..	..	..	..	..	30 910	72	4 800	7 Dec	..	
Mount Mitchell	74	..	..	57.4	..	..	..	..	64.5	50.3	99.0	31.8	40 040	104	2 070	28 May	..	
Mount Murchison	487	..	..	..	..	..	..	..	..	..	..	..	12 320	28	1 430	24 July	..	
Mount Oxley	363	..	..	..	..	..	..	..	..	..	..	..	21 730	49	..	..	..	No detail.
Mount Poole	604	..	..	..	..	..	..	..	..	..	..	..	12 610	25	1 580	9 Oct	..	
Mount Victoria	61	3,490	30 076	55.2	77.5	W.	..	4.4	66.3	44.1	96.1	28.2	30 270	96	2 210	26 July	49 535	Evaporation from a bucket, if this is reduced 35 per cent. it equals that from a tank.
Moura	161	..	..	..	..	..	..	..	..	..	..	..	30 860	96	2 090	12 April	..	
Mowabla	222	..	..	..	..	..	..	..	..	..	..	..	21 310	53	3 430	6 Nov	..	
Mudall	263	..	..	..	..	..	..	..	..	..	..	..	23 590	42	3 170	12 April	..	
Mudgee	121	1,635	..	61.8	72.8	W.	0.5	3.5	78.6	45.0	103.6	21.6	34 000	88	3 560	6 Dec.	71,943	Evaporation from a bucket, if this is reduced 35 per cent. it equals that from a tank.
Mulgoa	29	..	..	60.2	..	S.W.	..	..	68.0	52.4	90.0	33.5	25 680	123	2 800	15 Oct	..	
Mulla Mulla	279	..	..	..	..	..	..	..	..	..	..	..	27 590	69	3 680	5 Dec.	..	
Mulurulu	420	..	..	..	..	..	..	..	..	..	..	..	15 750	44	1 440	24 July	..	
Mulwala	222	..	..	..	..	..	..	..	..	..	..	..	20 940	84	2 260	3 Dec.	..	
Mumblebone	270	..	..	..	..	..	..	..	..	..	..	..	26 660	72	3 110	6 Dec.	..	
Mundooran	165	..	..	..	..	..	..	..	..	..	..	..	26 990	43	..	..	..	Commenced observations in May.
Mungery	203	..	..	..	..	..	..	..	..	..	..	..	24 570	55	2 250	4 Dec	..	
Murgha	319	..	..	..	..	..	..	..	..	..	..	..	13 750	39	2 060	4 Dec.	..	
Murra Numbla	71	..	..	..	..	..	..	..	..	..	..	..	20 295	93	1 830	2 Nov.	..	
Murray Downs	367	..	..	..	..	..	..	..	..	..	..	..	15 020	51	1 350	7 Jan.	..	
Murril Creek	204	..	..	..	..	..	..	..	..	..	..	..	18 840	66	..	..	..	No detail.
Murrumbidgee	216	..	..	..	..	..	..	..	..	..	..	..	24 860	58	3 450	7 Dec.	..	

Murrumburrah	126	...	62'8	...	S.E.	...	...	76'3	49'3	103'4	27'2	25'940	91	1'490	7 Dec.	.....
Murrurundi	94	1,545	61'7	.....	N.W.	1'0	4'0	71'2	52'2	92'5	31'9	38'630	81	2'150	15 Oct.	.....
Muswellbrook	68	475	64'1	.....	S.E.	0'7	2'9	78'9	49'3	108'1	27'9	26'380	103	1'940	13 April	.....
Myall Creek	156	...	65'2	.....	.....	...	...	78'5	51'9	103'0	31'0	40'040	93	2'150	28 May	.....
Myall Flat	220	...	...	.....	.....	...	...	...	...	...	...	38'640	87	...	.....	.....
Nanami	148	...	...	.....	.....	...	...	...	...	...	...	31'620	100	4'680	8 Dec.	.....
Nanima	176	...	...	.....	.....	...	...	...	...	...	...	34'390	74	2'200	5 Dec.	.....
Naradhan	249	...	...	.....	.....	...	...	...	...	...	...	18'860	58	1'430	18 May	.....
Narra Allen	118	...	...	.....	.....	...	...	...	...	...	...	28'360	72	1'090	18 May	.....
Narrabri	196	697	66'1	.....	S.S.W.	0'8	2'5	80'6	51'5	110'5	29'4	35'060	100	2'840	24 July	.....
Narramine	194	...	...	.....	.....	...	...	...	...	...	...	36'410	...	...	.....	.....
Narrandora	211	574	...	.....	.....	...	...	...	...	...	...	17'315	73	...	.....	.....
Narrawin	315	...	67'5	.....	.....	...	...	79'0	56'0	109'4	34'9	21'270	56	2'600	8 Dec.	.....
Nebea	230	...	...	.....	.....	...	...	...	...	...	...	29'820	66	...	.....	.....
Negoa	62	...	...	.....	.....	...	...	...	...	...	...	26'780	76	2'020	12 April	.....
Nelgowrie	250	...	...	.....	.....	...	...	...	...	...	...	28'650	66	1'790	18 June	.....
Nelungaloo	182	...	...	.....	.....	...	...	...	...	...	...	25'170	65	2'400	6 Dec.	.....
Nelyambo	448	...	...	.....	.....	...	...	...	...	...	...	13'690	20	...	.....	.....
Noppan Tunnel	12	...	58'6	.....	S.W.	0'7	2'3	70'8	46'5	102'0	25'0	26'195	99	2'180	15 Oct.	.....
Netley	480	...	...	.....	.....	...	...	...	...	...	...	13'980	30	1'470	3 Dec.	.....
Netley (back station)	516	...	...	.....	.....	...	...	...	...	...	...	12'240	31	2'140	4 Dec.	.....
Newetire	246	...	...	.....	.....	...	...	...	...	...	...	28'150	62	5'020	4 Dec.	.....
Newcastle	1	180	30'022	65'7	71'4	N.W.	1'4	3'9	73'4	57'9	96'6	38'8	117	2'900	13 Mar.	.....
Newstead	109	...	...	.....	.....	...	...	...	...	...	...	45'140	...	...	.....	.....
Newton Boyd	58	...	...	.....	.....	...	...	...	...	...	...	23'720	69	...	.....	.....
Nidgery	322	...	...	.....	.....	...	...	...	...	...	...	22'700	42	2'600	4 Dec.	.....
Nillera	326	...	...	.....	.....	...	...	...	...	...	...	18'420	39	...	.....	.....
Nimago	313	...	...	.....	.....	...	...	...	...	...	...	21'750	63	1'290	{25 July } {10 Oct }	.....
Nocoleche	486	...	...	.....	.....	...	...	...	...	...	...	15'990	57	...	.....	.....
Norley	587	...	...	.....	.....	...	...	...	...	...	...	13'230	37	...	.....	.....
North Peak	343	...	...	.....	.....	...	...	...	...	...	...	20'920	54	1'800	18 May	.....
Nowendoc	56	...	55'3	.....	W.	0'4	3'1	66'2	44'4	91'6	23'9	42'520	148	2'270	28 Jan	.....
Nowra	8	...	62'6	.....	S.	0'7	3'7	74'0	51'0	107'0	36'6	24'830	96	2'190	15 Oct.	.....
Numbardi	467	...	...	.....	.....	...	...	...	...	...	...	16'010	42	1'560	4 Dec.	.....
Nundoro	547	...	...	.....	.....	...	...	...	...	...	...	17'450	42	1'800	3 Nov.	.....
Nuntherungee	518	...	...	.....	.....	...	...	...	...	...	...	11'470	24	...	.....	.....
Nymagee	309	...	...	.....	.....	...	...	...	...	...	...	21'370	94	1'220	4 Dec.	.....
Nyngun	268	...	...	.....	.....	...	...	...	...	...	...	22'550	41	3'230	5 Dec	.....
Oakey Creek	147	...	62'8	.....	N.E.	2'0	4'3	74'6	51'0	103'2	27'6	30'450	96	1'500	26 July	.....
Oakhampton Park	26	...	...	.....	.....	...	...	...	...	...	...	19'020	57	...	.....	.....
Oaklands	187	...	...	.....	.....	...	...	...	...	...	...	26'820	52	2'720	16 Nov.	.....
Obella	173	...	...	.....	.....	...	...	...	...	...	...	31'970	79	1'650	{25 July } {4 Dec }	.....
Obley	172	...	...	.....	.....	...	...	...	...	...	...	33'340	65	1'900	.....	.....
Orange	124	2,891	53'9	.....	N.E.	...	4'6	64'4	43'4	92'5	24'3	46'230	107	2'280	8 Dec.	36'754
Orcel	256	...	...	.....	.....	...	...	...	...	...	...	27'610	46	...	.....	.....
Overton	210	450	...	.....	.....	...	...	...	...	...	...	17'160	86	1'050	2 Oct.	.....
Oxley's Peak	108	2,000	...	.....	.....	...	...	...	...	...	...	33'430	78	3'120	28 May	.....
P. Well	396	...	...	.....	.....	...	...	...	...	...	...	12'280	35	...	.....	.....
Packsaddle	571	...	...	.....	.....	...	...	...	...	...	...	15'430	36	2'360	4 Dec.	.....
Paddington	375	...	...	.....	.....	...	...	...	...	...	...	17'295	39	1'720	14 Oct.	.....
Paika	371	...	...	.....	.....	...	...	...	...	...	...	13'440	32	2'750	4 Dec.	.....
Pallal	156	...	...	.....	.....	...	...	...	...	...	...	36'740	74	1'710	25 July	.....
Pan Ban	430	...	...	.....	.....	...	...	...	...	...	...	14'320	40	1'800	4 Dec.	.....
Panjee	280	...	66'3	.....	.....	...	...	78'4	54'1	112'0	26'0	23'720	52	3'020	7 Dec.	.....
Parramatta	16	...	...	.....	.....	...	...	...	...	...	...	28'370	105	4'900	15 Oct.	.....
Peate's Ferry	15	...	...	.....	.....	...	...	...	...	...	...	29'500	72	...	.....	.....
Pennant Hills	13	...	...	.....	.....	...	...	...	...	...	...	32'970	98	5'280	15 Oct.	.....
Picton	21	549	60'3	.....	W.	0'5	3'8	72'3	48'3	99'3	25'5	25'380	96	1'990	26 July	.....
Pier Pier	266	...	...	.....	.....	...	...	...	...	...	...	24'100	64	2'340	5 Dec.	.....
Pilliga	240	...	...	.....	.....	...	...	...	...	...	...	31'210	64	1'940	24 July	.....

No observations for November, with the exception of rainfall.  
Commenced observations in March.

No detail.  
Greatest fall and date unknown.  
No observations for October, with exception of rainfall.  
Greatest fall and date unknown.

No detail.  
No observations for last four months, with exception of rainfall.

No detail.  
Commenced observations in July.

No details for last three months.

No detail for October and November.  
Detail not given for last six months.

Detail not given for last six months

Observations commenced in May

[that from a tank.  
Evaporation from a bucket, if it is reduced 35 per cent it equals  
Greatest fall and date unknown.

Greatest fall and date unknown.

Greatest fall and date unknown.

METEOROLOGY—continued.

No. 4—(continued).—ABSTRACT of METEOROLOGICAL OBSERVATIONS taken at various Stations in the year 1886—continued.

Stations.	Least distance from East Coast in Miles	Height above sea in feet.	Mean of Observations taken at 9 a. m.							For 24 hours previous to 9 a. m.				Evaporation, inches.	Remarks.			
			Barometer	Temperature in Shade.	Humidity 0 to 100	Wind.		Temperature in Shade.				Rain						
						Direction	Force. 0-6.	Clouds 0-10	Means.	Extremes	Total Fall, inches	No of days	Greatest Fall, inches			Date		
Pine Lodge	184	..	..	..	..	..	..	..	Max	Min.	Max.	Min.	5 310	15	..	..	..	For November and December only.
Pine Ridge	140	..	..	..	..	..	..	..	..	..	..	..	31 370	77	1 810	25 July	..	..
Piney Range	165	..	..	..	..	..	..	..	..	..	..	..	29 570	55	4 900	6 Dec.	..	..
Pinnacle	170	..	..	..	..	..	..	..	..	..	..	..	29 660	65	5 000	6 Dec	..	..
Pirillie	416	..	67.5	..	E.	2.0	2.0	80.6	54.4	113.1	34.1	..	20 840	48	1 530	5 Dec	..	No observations for March, with exception of rainfall.
Pisie	198	..	..	..	..	..	..	..	..	..	..	..	13 390	26	..	..	..	Greatest fall and date unknown
Pitt Town	26	..	65.0	..	..	..	..	77.3	52.6	107.7	30.2	..	25 970	128	3.600	15 Oct	..	..
Poolamacca	575	..	..	..	..	..	..	..	..	..	..	..	15 900	22	..	..	..	No detail.
Pooncarne	452	..	..	..	..	..	..	..	..	..	..	..	11.740	35	1 650	4 Dec.	..	..
Popiltah	503	..	..	..	..	..	..	..	..	..	..	..	11 670	32	1 720	4 Dec.	..	..
Port Macquarie	..	49	30.062	64.4	80.6	S.W.	1.5	4.4	73.6	55.1	88.0	33.6	55 390	136	3 240	1 April	73.216	Evaporation from a bucket f is reduced 85 per cent., it equals that from a tank.
Port Stephens	..	..	65.0	..	W.	1.8	4.1	75.6	54.3	93.2	30.6	..	68 320	126	6 600	13 Mar.	..	..
Prairie Home	145	..	..	..	..	..	..	..	..	..	..	..	32 950	84	1 600	18 June	..	..
Premier	136	..	..	..	..	..	..	..	..	..	..	..	35 770	64	2 100	18 June	..	..
Puckawidgee (No. 1)	274	..	61.3	..	..	..	..	73.6	48.9	108.0	28.1	..	12.620	78	1.730	4 Dec.	..	..
" (No. 2)	276	..	..	..	..	..	..	..	..	..	..	..	12 410	..	..	..	..	No detail
Purnanga	495	..	..	..	..	..	..	..	..	..	..	..	17 120	35	1.940	4 Dec	..	..
Quabothoo	266	..	66.6	53.9	S.W.	..	..	78.1	55.0	105.0	33.0	..	20.575	98	1 510	18 June	..	..
Quantambone	340	..	..	..	..	..	..	..	..	..	..	..	19 910	47	1 780	2 Nov	..	..
Quat Quatta	103	..	..	..	..	..	..	..	..	..	..	..	20 490	74	2.470	4 Dec	..	..
Queanbeyan (No. 1)	60	..	57.0	..	N.W.	2.1	5.0	66.2	47.6	95.6	24.7	..	22 740	75	1.800	6 Dec.	..	..
" (No. 2)	60	..	..	..	..	..	..	..	..	..	..	..	23 260	99	1 740	4 Dec	..	..
Quirindi	115	1,278	66.8	..	S.E.	0.4	..	80.5	53.1	107.6	30.0	..	29 060	71	..	..	..	[detail for rainfall. No observations taken on October, with exception of rainfall. No Record of last five months lost.
Rangari	149	..	..	..	..	..	..	..	..	..	..	..	13 100	16	..	..	..	..
Rawden	89	..	57.5	..	..	..	..	67.1	47.8	93.0	27.0	..	29 860	94	2 220	5 Dec.	..	..
Raymond Terrace	10	..	..	..	..	..	..	..	..	..	..	..	45.920	129	3 550	13 Mar.	..	..
Red Hill	104	..	..	..	..	..	..	..	..	..	..	..	32.240	81	..	..	..	Commenced observations in May.
Reedy Creek	144	..	64.9	..	..	..	..	76.8	52.9	99.2	30.0	..	39.750	100	2 150	9 Oct.	..	..
Reedy Flat	113	..	..	..	..	..	..	..	..	..	..	..	38 690	55	..	..	..	Commenced observations in March.
Richmond	25	62	..	..	..	..	..	..	..	..	..	..	22.007	90	2.796	15 Oct.	..	..
Ringwood	215	..	..	..	..	..	..	..	..	..	..	..	21 290	86	2 220	4 Dec.	..	..
Robertson's Mountain	169	..	..	..	..	..	..	..	..	..	..	..	31 470	61	..	..	..	No detail for Nov, month in which greatest quantity of rain fell.
Rockgedgiel	138	..	..	..	..	..	..	..	..	..	..	..	31 190	75	1 620	18 June	..	..
Rooty Hill	25	..	..	..	..	..	..	..	..	..	..	..	26 580	86	3.890	14 Oct.	..	..
Rosedale	47	..	..	..	..	..	..	..	..	..	..	..	19.285	84	0.940	2 June	..	..
Rotherwood	127	..	..	..	..	..	..	..	..	..	..	..	31 260	111	1 820	10 April	..	..
Roto	295	..	..	..	..	..	..	..	..	..	..	..	15 400	49	1 710	18 May	..	..
Rylstone	94	..	..	..	..	..	..	..	..	..	..	..	26 200	67	2 150	6 Dec.	..	..
Salisbury Downs	550	..	..	..	..	..	..	..	..	..	..	..	19 200	47	2.150	3 Dec.	..	..
Salt Creek	143	..	..	..	..	..	..	..	..	..	..	..	28 030	..	..	..	..	No record for first three months.
Sandy Camp	258	..	..	..	..	..	..	..	..	..	..	..	18 230	51	1 810	25 July	..	..
Sandy Creek (No. 1)	174	..	..	..	..	..	..	..	..	..	..	..	27 780	71	..	..	..	Commenced observations in February
" (No. 2)	157	..	..	..	..	..	..	..	..	..	..	..	16.180	40	..	..	..	Commenced observations in July.
" (No. 3)	98	..	..	..	..	..	..	..	..	..	..	..	21 740	78	1 390	25 Nov.	..	..
Santry	205	..	..	..	..	..	..	..	..	..	..	..	3 320	22	..	..	..	For October and November only.
Saumarez	79	..	..	..	..	..	..	..	..	..	..	..	32 420	71	1.840	4 Oct.	..	..
Savernake	225	..	..	..	..	..	..	..	..	..	..	..	21.300	82	3.110	4 Dec.	..	..
Scone	78	680	63.5	..	..	..	..	74.0	53.0	101.4	33.3	..	25 000	67	0.980	{ 12 April 18 June }	..	..
Sherwood	17	..	..	..	..	..	..	..	..	..	..	..	30 230	76	3 850	15 Oct.	..	..

Silverton	562	...	...	...	...	...	...	...	...	...	...	...	...	7'370	19	...	...	...	For January, February, July, and August only.
Singleton	40	135	...	64'7	...	...	...	...	72'6	56'7	103'2	38'9	...	29'220	103	1'600	29 May	...	
Sixteen-mile Gums	303	...	...	...	...	...	...	...	...	...	...	...	...	3'600	4	...	...	For December only.	
Springs	170	...	...	...	...	...	...	...	...	...	...	...	...	35'220	84	4'300	4 Dec.	...	
Springfield (No. 1)	4	...	30'145	63'3	71'9	N.E.	1'0	2'4	70'5	56'0	98'0	39'0	...	36'770	97	4'920	15 Oct.	...	
" (No. 2)	353	...	...	...	...	...	...	...	...	...	...	...	...	16'840	41	1'580	5 Dec.	...	
Springwood	42	1,216	...	61'9	...	W.	1'2	...	70'9	52'9	100'8	36'5	...	29'940	80	2'850	14 Dec.	...	
Steam Plains (No. 1)	260	...	...	...	...	...	...	...	...	...	...	...	...	12'380	58	1'670	4 Dec.	...	
" (No. 2)	260	...	...	...	...	...	...	...	...	...	...	...	...	12'100	54	1'580	4 Dec.	...	
Strathbogie	105	...	...	...	...	...	...	...	...	...	...	...	...	46'610	71	3'350	28 May	...	
Sussex	314	...	...	...	...	...	...	...	...	...	...	...	...	22'220	68	1'910	2 Aug.	...	
Sutton	60	...	...	...	...	...	...	...	...	...	...	...	...	27'740	69	2'040	5 Dec.	...	
Sydney	5	146	30'089	63'5	70'7	W.	0'7	4'9	70'3	56'7	97'4	41'6	...	39'426	152	4'682	15 Oct.	...	
Tabratong	163	...	...	...	...	...	...	...	...	...	...	...	...	20'040	64	1'420	2 Dec.	...	
Talawanta	365	...	...	...	...	...	...	...	...	...	...	...	...	20'390	61	1'850	3 Nov.	...	
Talmoi	227	...	...	...	...	...	...	...	...	...	...	...	...	34'360	51	2'100	10 Oct.	...	
Talyealye	490	...	...	...	...	...	...	...	...	...	...	...	...	15'240	37	2'150	4 Dec.	...	
Tamworth	116	1,271	30'088	65'2	72'0	S	0'8	3'0	79'1	51'2	101'0	26'4	...	12'125	38	1'210	27 Jan	51'736	
" West	116	...	...	...	...	...	...	...	...	...	...	...	...	28'540	48	...	...	Observations for first 6 months only. No detail.	
Tapio	467	...	...	...	...	...	...	...	...	...	...	...	...	11'300	37	2'040	7 Jan.	...	
Tarago	48	...	...	...	...	...	...	...	...	...	...	...	...	31'400	76	2'490	7 Jan.	...	
Taralga	64	...	...	...	...	...	...	...	...	...	...	...	...	24'040	65	2'300	8 Dec.	...	
Tarcoola	450	...	...	...	...	...	...	...	...	...	...	...	...	13'290	38	2'090	4 Dec.	...	
Taree	10	...	...	67'2	...	W.	1'3	4'3	76'6	57'8	101'5	39'4	...	36'460	181	2'460	28 Jan.	...	
Tareela (No. 1)	158	...	...	...	...	...	...	...	...	...	...	...	...	33'370	100	...	...	Observations commenced in April. Observations commenced in June.	
" (No. 2)	158	...	...	...	...	...	...	...	...	...	...	...	...	25'920	84	...	...	...	
Tareena (late Salt Creek)	518	...	...	...	...	...	...	...	...	...	...	...	...	7'460	50	0'770	7 Jan.	...	
Tarella	512	...	...	...	...	...	...	...	...	...	...	...	...	11'940	35	1'280	24 July	...	
Tarraro	187	...	...	...	...	...	...	...	...	...	...	...	...	34'210	62	2'430	25 July	...	
Tarrwong	346	...	...	...	...	...	...	...	...	...	...	...	...	12'560	28	1'120	21 Sept	...	
Tellaraga	234	...	...	...	...	...	...	...	...	...	...	...	...	32'230	66	2'050	11 Oct.	...	
Temora	178	...	...	...	...	...	...	...	...	...	...	...	...	30'110	75	3'300	7 Dec.	...	
Tenandra	202	...	...	...	...	...	...	...	...	...	...	...	...	32'550	73	2'500	5 Dec.	...	
Tenterden	99	...	...	...	...	...	...	...	...	...	...	...	...	44'520	114	2'110	15 Oct.	...	
Tenterfield (No. 1)	80	...	...	57'2	...	E.	0'9	4'3	67'2	47'1	96'1	23'0	...	45'830	87	3'000	28 May	No observations for October, with exception of rainfall. Commenced observations in August. Greatest fall and date unknown.	
" (No. 2)	80	...	...	...	...	...	...	...	...	...	...	...	...	23'660	62	...	...	...	
Terembone	237	...	...	...	...	...	...	...	...	...	...	...	...	26'850	69	...	...	...	
Terrangan	258	...	...	...	...	...	...	...	...	...	...	...	...	22'680	45	3'210	4 Dec.	...	
Teryawynia	455	...	...	...	...	...	...	...	...	...	...	...	...	13'820	37	1'200	13 Oct.	...	
Texas	128	...	66'2	...	...	...	...	...	78'8	53'5	104'0	30'0	...	39'080	71	3'300	27 May	...	
Tharwa	63	...	...	...	...	...	...	...	...	...	...	...	...	24'320	80	2'490	5 Dec.	...	
Thelangerin East	332	...	...	...	...	...	...	...	...	...	...	...	...	13'010	38	1'310	3 Dec.	...	
The Brigalows	289	...	...	...	...	...	...	...	...	...	...	...	...	17'230	30	...	...	No detail.	
The Meadows	365	...	...	...	...	...	...	...	...	...	...	...	...	17'830	39	...	...	Greatest fall and date unknown	
The Peak	237	...	...	...	...	...	...	...	...	...	...	...	...	18'290	46	2'450	2 Oct.	...	
The Priory	312	...	...	...	...	...	...	...	...	...	...	...	...	20'230	56	1'450	5 Dec.	...	
The Reefs	161	...	...	...	...	...	...	...	...	...	...	...	...	18'820	65	1'420	8 Dec.	...	
Thononga South	303	...	...	...	...	...	...	...	...	...	...	...	...	13'210	48	1'350	17 May	...	
Thorndale	286	...	...	...	...	...	...	...	...	...	...	...	...	23'160	55	2'850	5 Dec.	...	
Tibooburra	615	...	...	...	...	...	...	...	...	...	...	...	...	16'460	48	...	...	Commenced observations April.	
Till Till	396	...	64'7	...	...	S.	...	...	78'1	51'1	120'0	29'9	...	15'020	39	1'410	17 June	...	
Tilpa	435	...	...	...	...	...	...	...	...	...	...	...	...	14'260	29	2'250	25 July	...	
Tiltgara	412	...	...	...	...	...	...	...	...	...	...	...	...	14'760	45	1'360	14 Oct.	...	
Tinapagee	488	...	...	...	...	...	...	...	...	...	...	...	...	19'250	43	2'090	29 Nov.	...	
Tinda	238	...	...	...	...	...	...	...	...	...	...	...	...	22'970	56	3'750	7 Dec.	...	
Tindarey	354	...	...	...	...	...	...	...	...	...	...	...	...	19'080	48	2'890	4 Dec.	...	
Tintaldra	124	...	...	...	...	...	...	...	...	...	...	...	...	31'910	127	1'530	27 Jan.	...	
Tintinalloey	475	...	...	...	...	...	...	...	...	...	...	...	...	12'965	27	...	...	No detail.	
Toganman	260	...	...	...	...	...	...	...	...	...	...	...	...	13'570	42	1'430	4 Dec.	...	
Tolarno	485	...	...	...	...	...	...	...	...	...	...	...	...	13'830	34	1'280	18 May	...	

METEOROLOGY—continued.

No. 4—(continued).—ABSTRACT of METEOROLOGICAL OBSERVATIONS taken at various Stations in the year 1886—continued.

Stations.	Least distance from East Coast in Miles.	Height above sea in feet.	Mean of Observations taken at 9 a.m.								For 24 hours previous to 9 a.m.				Remarks.		
			Barometer	Temperature in Shade.	Humidity, 0 to 100.	Wind.		Temperature in Shade.		Rain.			Evaporation, inches.				
						Direction.	Force, 0-6.	Clouds 0-10	Means.	Extremes.	Total Fall, inches.	No. of Days		Greatest Fall, inches.		Date	
							Max.	Min.	Max.	Min.							
Tomago.....	7											45'310	108	5'780	12 Mar.		
Tondeburine.....	200											37'570	59	3'900	7 Nov.		
Tongo.....	488											11'210	39	1'030	4 Dec.		
Tooma.....	125											30'460	102	1'580	27 Jan.		
Toorale.....	412											16'780	42	1'650	24 July		
Toulby.....	378											20'390					
Trigamon.....	146	810	30'082	65'5		W.	1'2	2'2	78'8	52'1	104'0	31'0	41'110	85	1'910	27 May	No detail.
Tulcumbah.....	137			64'6		S.E.	1'2	2'4	76'6	52'6	107'0	32'0	29'330	87	2'210	2 Aug.	No observations for December, with exception rainfall.
Tulloona.....	184			67'0		N.	0'6	2'6	78'0	56'0	102'9	31'4	38'020	95	1'990	28 Jan.	
Tumbarumba (No. 1).....	106												36'315	114	1'300	5 Dec.	
" (No. 2).....	106												34'695	118	1'120	13 Dec.	
Tumut.....	114												31'070	110	1'760	26 Nov.	
Tuppal.....	252												18'270	76	1'660	4 Dec.	
Turanville.....	74												26'630	47	1'740	29 May	
Turee Vale.....	128												35'010	72			Observations commenced in March.
Turlee.....	413												17'740	36			No detail.
Tweed River.....	0												20'720	35			For November and December only.
Tyrie.....	236												21'680	49	1'470	12 April	
Uarby.....	282												13'695	57	1'060	21 Sept.	
Ukolan.....	141												26'920	49	1'740	2 Aug.	
Ulonga.....	328												13'790	53	1'400	4 Dec.	
Uralla.....	87												37'280	118	1'850	18 Nov.	
Urana.....	218	400											13'950	41			No detail.
Urawilkie.....	225												31'050	55	1'950	5 Dec.	
Uriarra.....	77												29'980	70			Observations commenced in March.
Urisino.....	527												12'615	34	1'160	3 Dec.	
Wagga Wagga (No. 1).....	161	615	29'943	59'7	70'1	N.E.	0'8		72'5	47'4	105'0	20'9	24'040	84	1'300	22 Sept.	
" (No. 2).....	161												22'600	75	1'270	17 Dec.	
Walbundrie.....	182												21'530	69	1'570	4 Dec.	
Walcha.....	83			54'3		N.W.		4'4	66'5	42'2	87'8	23'8	33'080	128	3'430	17 Jan.	No observations for December, with exception of rainfall.
Walgett.....	286	522	30'140	67'7	66'8	N.E.	1'0	2'2	79'5	55'9	109'9	34'7	28'850	63	2'850	5 Dec.	Tank evaporation, 58'406, eleven months.
Wallabadah.....	94												33'570	91	1'650	13 April	
Wallandry.....	198												9'320	21			Commenced observations in October.
Walma.....	283												25'630	63	2'750	5 Dec.	
Wambangalang.....	184												36'990	86	4'220	4 Dec.	
Wamberra.....	440												11'590	37	1'540	7 Jan.	
Wanaaring (No. 1).....	481												14'360	44	1'920	4 Dec.	
" (No. 2).....	482												13'030	36	2'200	5 Dec.	
Wanera.....	165												28'830	86	1'970	8 Dec.	
Wangamana.....	453												17'140	44	2'000	24 July	
Wangamong.....	174												15'290	60	2'030	4 Dec.	
Wanganella.....	293												12'520	60	1'660	4 Dec.	
Wantabadgery.....	140												23'110	81	1'090	18 May	
Wargam.....	296												13'560	57	2'790	4 Dec.	
Warialda (No. 1).....	162			64'1		N.E.	1'3	3'8	76'8	51'2	101'3	28'9	38'360	125	1'830	10 Oct.	66'210 Evaporation from a bucket, if it is reduced 35 per cent. it equals that from a tank.
" (No. 2).....	162												37'180	87	1'780	9 Oct.	
Warrana.....	247												30'720	58	2'700	4 Dec.	
Warraweena.....	383												19'990	43			Greatest fall and date unknown.
Warree.....	218			64'7		N.E.			74'5	54'9	101'8	34'3	30'280	83	3'000	5 Dec.	No observations for March, with exception of rainfall.
Warren.....	237												27'870	45	4'250	5 Dec.	

Warrengong	133	...	...	...	...	...	...	...	...	...	...	...	...	32°63'	64	3°06'	6 Dec.	.....
Warroo	197	...	...	...	...	...	...	...	...	...	...	...	...	24°58'	72	2°30'	6 Nov.	.....
Warwillah	280	...	...	...	...	...	...	...	...	...	...	...	...	12°35'	82	1°82'	4 Dec.	.....
Weblands	140	...	...	...	...	...	...	...	...	...	...	...	...	33°23'	71	2°06'	18 June	.....
Weetalabah	134	...	...	...	...	...	...	...	...	...	...	...	...	30°87'	55	2°33'	25 July	.....
Weinteriga	483	...	...	...	...	...	...	...	...	...	...	...	...	12°46'	40	1°47'	25 July	.....
Wellington	153	...	...	...	...	...	...	...	...	...	...	...	...	34°31'	61	3°45'	4 Dec.	.....
Wellwood	120	...	...	...	...	...	...	...	...	...	...	...	...	40°68'	128	1°80'	5 Dec.	.....
Wentworth	476	144	30°11'2	64°5	63°9	N.	1°8	3'3	77°9	51°1	112°7	27°6	11°38'	75	1°75'	8 Jan.	.....	
Whinstone	24	...	...	54°6	...	S.E.	...	...	65°0	43°6	110°6	23°3	35°81'	135	3°96'	26 July	.....	
Whitton	245	...	...	...	...	...	...	...	...	...	...	...	11°62'	45	...	.....	Commenced observations in April.	
Widgiewa	218	...	...	...	...	...	...	...	...	...	...	...	15°51'	62	1°15'	4 Dec.	.....	
Wilcannia	473	...	...	...	...	...	...	...	...	...	...	...	12°00'	35	...	.....	Greatest fall and date unknown.	
Wild's Meadows	16	...	...	...	...	...	...	...	...	...	...	...	7°51'	29	...	.....	For November and December only.	
Wilgar Downs	300	...	...	...	...	...	...	...	...	...	...	...	24°17'	53	...	.....	Greatest fall and date unknown.	
Willara	485	...	...	...	...	...	...	...	...	...	...	...	18°84'	47	2°17'	29 Nov.	.....	
Willeroon	302	...	...	...	...	...	...	...	...	...	...	...	18°84'	46	1°69'	5 Dec.	.....	
Willowdale	166	...	...	...	...	...	...	...	...	...	...	...	29°22'	131	...	.....	No detail.	
Willowtree	106	...	...	...	...	...	...	...	...	...	...	...	4°32'	17	...	.....	For April, November, and December only.	
Willurah	277	...	...	...	...	...	...	...	...	...	...	...	14°49'	47	...	.....	Greatest fall and date unknown.	
Winbar	430	...	...	...	...	...	...	...	...	...	...	...	14°95'	33	1°52'	18 May	.....	
Windsor	30	58	...	...	...	...	...	...	...	...	...	...	22°385	188	3°238	15 Oct.	.....	
Wingadee	260	...	...	...	...	...	...	...	...	...	...	...	26°090	52	3°010	6 Dec.	.....	
Wingen	85	1,002	...	62°3	...	...	...	...	73°3	51°2	100°0	30°0	31°160	87	2°360	29 May	No observations for May and June, with exception of rainfall.	
Winnalabrinna	419	...	...	...	...	...	...	...	...	...	...	...	21°240	48	2°850	5 Dec.	.....	
Wolla Wolla	207	...	...	...	...	...	...	...	...	...	...	...	32°190	54	2°690	5 Dec.	.....	
Wollongong	0	67	30°09'2	64°8	73°4	S.W.	1°6	3'5	73°5	56°1	98°4	38°7	35°440	93	3°630	15 Oct.	.....	
Wollun	105	3,550	...	...	...	...	...	...	...	...	...	...	34°890	106	1°720	27 Jan.	.....	
Womboin	314	...	...	...	...	...	...	...	...	...	...	...	20°870	38	...	.....	Commenced observations in June.	
Wonaminta	560	...	...	...	...	...	...	...	...	...	...	...	14°260	38	1°880	2 Nov.	.....	
Wongwibinda	94	...	...	...	...	...	...	...	...	...	...	...	40°760	133	2°600	25 Feb.	.....	
Woodburn	6	...	...	...	...	...	...	...	...	...	...	...	56°660	85	...	.....	Greatest fall and date unknown.	
Woodhouselec (No. 1)	64	2,600	...	52°4	...	W.	1°6	3'7	60°9	43°7	94°8	20°3	32°240	126	2°460	21 Jan.	.....	
" (No. 2)	64	...	...	...	...	...	...	...	...	...	...	...	25°960	73	3°100	9 Dec.	.....	
Woodlands (No. 1)	252	...	...	...	...	...	...	...	...	...	...	...	22°770	56	2°220	7 Dec.	.....	
" (No. 2)	144	...	...	...	...	...	...	...	...	...	...	...	28°330	107	1°620	29 May	.....	
Woodstock	73	1,860	...	...	...	...	...	...	...	...	...	...	30°270	102	2°150	5 Dec.	.....	
Woolerina	302	...	...	...	...	...	...	...	...	...	...	...	27°600	73	1°750	10 Oct.	.....	
Wunnamurra	244	...	...	...	...	...	...	...	...	...	...	...	14°500	56	2°230	4 Dec.	.....	
Wyalong (No. 3)	204	...	61°1	...	...	S.W.	0°7	2'9	80°9	41°2	115°5	19°6	27°220	83	3°220	7 Dec.	No observations for last five months, with exception of rainfall.	
Wyangaic	34	...	...	...	...	...	...	...	...	...	...	...	47°550	137	2°460	11 Oct.	.....	
Wyong	3	...	...	...	...	...	...	...	...	...	...	...	44°830	78	2°100	26 July	.....	
Yabtree	141	...	...	...	...	...	...	...	...	...	...	...	25°450	93	1°380	26 Nov.	.....	
Yalcowinna	538	...	...	...	...	...	...	...	...	...	...	...	13°180	27	...	.....	No detail.	
Yalgogin	215	...	...	...	...	...	...	...	...	...	...	...	19°495	64	2°120	2 Oct.	.....	
Yallaroi	121	...	64°6	...	...	N.E.	1°5	3'7	76°1	53°0	102°0	29°2	35°950	106	1°750	28 May	.....	
Yallowin	108	...	58°8	...	...	N.E.	0°8	4'2	71°0	46°6	93°6	26°5	40°860	114	1°770	3 Aug.	.....	
Yambla	164	...	...	...	...	...	...	...	...	...	...	...	30°360	103	1°400	5 Dec.	.....	
Yamma	235	...	...	...	...	...	...	...	...	...	...	...	15°130	73	0°890	21 Sept.	.....	
Yancannia	540	...	...	...	...	...	...	...	...	...	...	...	16°330	32	...	.....	Greatest fall and date unknown <sup>1</sup> .	
Yanko	242	...	62°9	...	...	S.E.	1°6	2'4	74°4	51°3	110°0	30°0	14°110	86	0°800	21 Sept.	.....	
Yarawa	250	...	...	...	...	...	...	...	...	...	...	...	31°490	71	...	.....	Greatest fall and date unknown.	
Yarraman	122	...	...	...	...	...	...	...	...	...	...	...	33°140	66	1°730	18 June	.....	
Yarrawall	16	...	66°4	...	...	W.	1°2	3'1	77°7	55°1	100°0	35°0	37°430	158	3°940	26 July	.....	
Yass	92	1,657	59°6	...	...	...	...	...	...	...	...	...	30°230	102	2°100	7 Nov.	.....	
Yerong Creek	160	...	...	...	...	...	...	...	...	...	...	...	19°970	81	1°750	5 Dec.	.....	
Yetman	150	...	...	...	...	...	...	...	...	...	...	...	38°430	67	3°530	28 May	.....	
Young	140	...	63°4	...	...	S.E.	1°0	2'3	80°9	45°9	109°5	26°2	28°850	106	2°470	7 Dec.	61°231	
Youngara	230	...	61°5	...	...	S.W.	0°8	2'7	74°9	61°5	106°0	24°8	19°920	89	1°980	7 Dec.	No observations for November, with exception of rainfall. Tank evaporation, 50°634.	
Yowendah	293	...	...	...	...	...	...	...	...	...	...	...	24°885	69	...	.....	Commenced observations in April.	
Zangawirra	562	...	...	...	...	...	...	...	...	...	...	...	5°310	11	...	.....	For October, November, and December only.	

## ELECTORS AND VOTERS.

No. 5.—NUMBER OF ELECTORS ON THE ROLLS OF THE SEVERAL ELECTORAL DISTRICTS OF THE COLONY, AND THE NUMBER OF VOTES RECORDED AT THE GENERAL ELECTION IN 1887.

Electorates.	Number of Members elected.	Number of Electors on the Roll	Number of Persons who voted. (Not including informal votes.)	Number of Persons who recorded informal votes.	Total number of Persons who voted.
Albury...	1	1,447	876	18	894
Argyle...	2	2,759	1,712	11	1,723
Balmain...	3	7,900	4,532	108	4,640
Balrarnald...	2	4,049	†1,546	43	1,589
Bathurst...	1	1,863	1,290	18	1,308
Bogan, The...	2	4,876	2,340	19	2,359
Boorowa...	1	1,103	*	.....	.....
Bourke...	2	4,431	2,026	21	2,047
Braidwood...	1	1,501	916	23	939
Camden...	2	4,977	3,028	58	3,086
Canterbury...	4	12,645	6,616	160	6,776
Carcoar...	2	3,514	1,940	.....	1,940
Clarence, The...	1	1,951	1,159	13	1,172
Central Cumberland...	3	7,882	3,973	67	4,040
Durham...	1	1,491	1,020	30	1,050
Eden...	2	3,289	*	.....	.....
Forbes...	2	2,409	1,257	16	1,273
Glebe, The...	2	3,256	2,364	84	2,448
Glen Innes...	1	2,832	1,171	20	1,191
Gloucester...	1	1,638	956	14	970
Goulburn...	1	2,187	*	.....	.....
Grafton...	1	2,068	*	.....	.....
Grenfell...	1	1,597	809	15	824
Gundagai...	1	2,614	1,267	19	1,286
Gunnedah...	1	2,047	983	47	1,030
Gwydir...	1	2,174	*	.....	.....
Hartley...	1	2,220	1,381	30	1,411
Hastings and Manning...	2	2,933	1,613	15	1,628
Hawkesbury, The...	1	2,283	1,637	38	1,675
Hume...	2	2,606	*	.....	.....
Hunter...	1	1,403	*	.....	.....
Hunter, The Upper...	2	2,871	1,631	6	1,637
Illawarra...	1	2,873	1,687	29	1,716
Inverell...	1	2,049	1,270	21	1,291
Kiama...	1	1,621	*	.....	.....
Macleay, The...	1	3,032	1,629	31	1,660
Macquarie, East...	2	2,805	1,253	11	1,264
Macquarie, West...	1	1,109	704	8	712
Maitland, East...	1	1,161	*	.....	.....
Maitland, West...	1	1,633	*	.....	.....
Molong...	1	1,867	*	.....	.....
Monaro...	2	3,109	1,720	12	1,732
Morpeth...	1	1,250	929	12	941
Mudgee...	3	3,933	2,191	40	2,231
Murray, The...	2	2,879	1,351	26	1,377
Murrumbidgee, The...	3	7,936	3,183	31	3,214
Namoi, The...	1	2,517	1,173	20	1,193
Nepean, The...	1	1,862	1,384	21	1,405
Newcastle...	2	5,160	3,846	44	3,890
New England...	2	3,908	2,077	31	2,108
Newtown...	3	6,123	3,389	57	3,446
Northumberland...	3	5,482	4,046	71	4,117
Orange...	2	2,684	1,836	21	1,857
Paddington...	3	7,742	5,008	151	5,159
Parramatta...	1	2,046	*	.....	.....
Patrick's Plains...	1	1,737	*	.....	.....
Queanbeyan...	1	2,608	1,244	20	1,264
Redfern...	4	8,592	4,950	103	5,053
Richmond, The...	2	5,179	2,801	27	2,828
St. Leonards...	2	5,283	*	.....	.....
Shoalhaven...	1	2,166	1,651	15	1,666
Sydney, East...	4	10,888	6,820	63	6,883
Sydney, South...	4	9,620	6,476	126	6,602
Sydney, West...	4	11,523	7,240	189	7,429
Tamworth...	2	3,067	1,752	32	1,784
Tenterfield...	1	2,326	1,022	27	1,049
Tumut...	1	1,744	1,269	26	1,295
Wellington...	1	1,342	850	16	866
Wentworth...	2	5,444	1,545	†38	1,583
Wollombi...	1	1,912	1,041	17	1,058
Yass Plains...	1	1,953	1,225	22	1,247
Young...	2	3,425	2,182	24	2,206
Total ...	124	256,406	128,787	2,275	131,062
Total Uncontested Seats (14 Electorates.)	17	30,178	.....	.....	.....
Total Contested Seats (58 Electorates)	107	226,228	128,787	2,275	131,062
Grand Total ...	124	256,406	128,787	2,275	131,062

\* Not contested. † Approximate.

## PUBLICANS' LICENSES.

No. 6.—NUMBER OF LICENSED (PUBLICANS') HOUSES in each LICENSING DISTRICT for the year 1886.

Licensing District.	No.	Licensing District.	No.	Licensing District.	No.
Albury .....	38	Glen Innes .....	18	Parkes .....	17
Armidale .....	42	Gosford .....	19	Parramatta .....	43
Ballina .....	21	Goulburn .....	61	Penrith .....	17
Balranald .....	16	Grafton .....	43	Picton .....	5
Barraba .....	5	Grenfell .....	16	Port Macquarie .....	6
Bathurst .....	72	Gunnedah .....	22	Port Stephens .....	11
Bega .....	22	Gundagai .....	31	Quirindi .....	12
Bellinger .....	11	Hartley .....	27	Queanbeyan .....	28
Berrima .....	20	Hay .....	39	Raymond Terrace .....	5
Bingera .....	9	Hillston .....	31	Richmond River .....	18
Bombala .....	10	Hill End .....	7	Rylstone .....	7
Bourke .....	49	Inverell .....	26	Ryde .....	11
Braidwood .....	13	Jerilderie .....	7	Scone .....	8
Brewarrina .....	30	Kiama .....	10	Shoalhaven .....	14
Broulee .....	15	Lismore .....	21	Silverton .....	28
Burrowa .....	15	Liverpool .....	18	Tamworth .....	41
Camden .....	5	Maclean .....	20	Temora .....	31
Campbelltown .....	11	Macleay River .....	16	Tenterfield .....	19
Carcoar .....	31	Maitland .....	60	Tumbarumba .....	10
Cassilis .....	12	Manning River .....	15	Tumut .....	11
Cobar .....	23	Menindie .....	10	Tweed River .....	11
Condobolin .....	14	Metropolitan .....	840	Urana .....	8
Cooma .....	29	Milparinka .....	16	Wagga Wagga .....	63
Coonabarabran .....	10	Mitchell .....	31	Walcha .....	6
Coonamble .....	14	Moama .....	10	Walgett .....	24
Cootamundra .....	18	Molong .....	34	Waratah .....	61
Copeland .....	5	Moree .....	21	Warialda .....	14
Corowa .....	21	Mudgee .....	45	Wellington .....	20
Cowra .....	13	Murrurundi .....	10	Wentworth .....	19
Deniliquin .....	35	Muswellbrook .....	9	Windsor .....	21
Dubbo .....	88	Narrabri .....	33	Wollombi .....	5
Dowling .....	4	Narandera .....	28	Wollongong .....	21
Dungog .....	8	Newcastle .....	102	Yass .....	20
Eden .....	9	Nymagee .....	11	Young .....	38
Emmaville .....	10	Orange .....	41		
Forbes .....	28	Paterson .....	5		
Germanton .....	7	Patrick's Plains .....	22		
				Total .....	3,231

## MILITARY.

No. 7.—DISTRIBUTION of the REGULAR MILITARY FORCES of the Colony on the 31st December, 1886.

Branch of Service.	Major General Commanding.	Colonel Commanding Artillery Forces.	Assistant Adjutant General.	Dept. Assistant Quarter-Master General.	Chief Pay Master.	Medical Officer.	Brevet Colonels.	Brevet Lieutenant-Colonels.	Majors.	Captains.	Subalterns.	Accountant.	Warrant Officers.	Sergeants.	Trumpeters.	Rank and File.	Total.
General Staff ...	1	.....	1	1	1	1	1	.....	2	2	...	1	2	13	...	...	26
New South Wales Artillery .....	.....	1	.....	.....	.....	.....	1	2	.....	3	6	...	5	26	9	327	380
Total ...	1	1	1	1	1	1	2	2	2	5	6	1	7	39	9	327	406





STATISTICS, 1886—MISCELLANEOUS.

MILITARY—continued.

No. 9.—DISTRIBUTION of the NAVAL BRIGADE on the 31st December, 1886.

Corps or Company.	Captain Commanding Brigade, Sydney.	Commanders.	Lieutenants Commanding Companies.	Sub-Lieutenants.	Medical Officers.	Clerk and Accountant.	Warrant and Petty Officers.	Midshipmen and Cadets.	A.B's.	Gunnery Instructors.	Total.
Sydney ...	1	2	6	7	3	1	24	28	486	2	560
Newcastle ...	.....	1	1	1	1	.....	4	2	96	1	107
Total ...	1	3	7	8	4	1	28	30	582	3	667

No. 10.—NUMBER and CALIBRE of ARTILLERY GUNS in Colony on the 31st December, 1886.

Description.	Guns.				
	Mounted.		Dismounted.		Total Guns.
No.	Calibre.	No.	Calibre.	No.	
25-ton ... (M.L.R.)	2	10-inch	.....	.....	2
18-ton (,,)	6	"	.....	.....	6
12-ton (,,)	6	9-inch	.....	.....	6
110-pounders (B.L.R.)	.....	.....	2	7-inch	2
10-inch (S.B.)	8	10-inch	.....	.....	8
8-inch (,,)	3	8-inch	3	8-inch	6
80-pounders (M.L.R.)	24	6.3-inch	1	6.3-inch	25
68-pounders (S.B.)	10	8.12-inch	8	8.12-inch	18
42-pounders (,,)	10	6.97-inch	.....	.....	10
40-pounders (B.L.R.)	5	4.75-inch	.....	.....	5
32-pounders (S.B.)	20	6.41-inch	10	6.41-inch	30
24-pounders (,,)	.....	.....	6	5.82-inch	6
20-pounders (B.L.R.)	.....	.....	1	3.75-inch	1
16-pounders (M.L.R.)	10	3.6-inch	.....	.....	10
12-pounders (Howitzer)	10	4.58-inch	.....	.....	10
9-pounders (M.L.R.)	7	3-inch	.....	.....	7
6-pounders (,,)	7	3.668-inch	.....	.....	7
Machine Guns (Nordenfelt)	2	1.5-inch	.....	.....	2
64-pounders (M.L.R.)	2	1.0-inch	.....	.....	2
9-pounders, brass (S.B.)	2	0.45-inch	.....	.....	2
.....	16	6.27-inch	.....	.....	*16
.....	4	4.2-inch	.....	.....	4
Total	154	.....	31	General Total	185

\* Also 24 unserviceable.

RECAPITULATION OF ARTILLERY GUNS.

Number and Description.	Calibre.	Weight of Shot or Shell.				
		Tons	cwt.	qrs.	lb.	
<b>BRASS.</b>						
10 12-pounders (Howitzer)	4.58-inch	7	8	3	24	
4 9-pounders (S.B.)	4.2-inch	11	15	2	24	
7 6-pounders (,,)	3.668-inch	6	14	2	13	
<b>IRON.</b>						
2 25-ton (M.L.R.)	10-inch	43	14	2	6	
6 18-ton (,,)	10-inch	297	6	3	14	
6 12-ton (,,)	9-inch	169	9	5	19	
2 110-pounders (B.L.R.)	7-inch	47	7	0	16	
8 10-inch (S.B.)	10-inch	95	16	7	10½	
6 8-inch (,,)	8-inch	85	7	1	16½	
25 80-pounders (M.L.R.)	6.3-inch	360	17	3	15	
18 68-pounders (S.B.)	8.12-inch	86	14	0	7½	
10 42-pounders (,,)	6.97-inch	32	16	3	0	
5 40-pounders (B.L.R.)	4.75-inch	77	11	2	0	
30 32-pounders (S.B.)	6.41-inch	117	5	3	0	
6 24-pounders (,,)	5.82-inch	.....	.....	.....	.....	
1 20-pounder (B.L.R.)	3.75-inch	.....	8	2	10	
10 16-pounders (M.L.R.)	3.6-inch	28	19	0	10	
7 9-pounders (,,)	3-inch	11	7	0	13	
16 64-pounders (,,)	6.27-inch	9	14	1	6	
2 Machine Guns (Nordenfelt)	1-inch	} Rounds of Ammunition.				
2 " " (,,)	0.45-inch					10,000
2 " " (,,)	1.5-inch					204,900
.....	.....	15,989	.....	.....	.....	
185 ... Total.	Total	1,478	14	0	12	

## FIRE SERVICE.

No. 11.—NUMBER of FIRE ALARMS in SYDNEY and SUBURBS and LOCALITY WHERE FIRES OCCURRED during 1886

City and Suburbs of Sydney.	Class of Fire.									Total Fires.	False Alarms.	Chimney Alarms.		Grand Total.
	Slight.			Serious.			Totally Destroyed.					Attended with engines and reported as house fires.	Attended with hand-pump only.	
	In-sured.	Not in-sured.	Un-known.	In-sured.	Not in-sured.	Un-known.	In-sured.	Not in-sured.	Un-known.					
<b>City—</b>														
Bourke Ward ... ..	7	1	...	2	...	...	...	...	...	10	4	...	2	16
Brisbane „ ... ..	7	2	5	2	...	...	...	...	...	16	4	...	5	25
Cook „ ... ..	5	...	9	...	...	...	1	...	...	15	...	1	2	18
Denison „ ... ..	7	2	11	1	...	1	2	...	...	24	4	2	10	40
Fitzroy „ ... ..	3	...	2	1	...	...	1	...	1	8	4	2	2	16
Gipps „ ... ..	7	...	...	1	...	...	...	...	...	8	...	...	...	8
Macquarie „ ... ..	9	...	2	2	...	...	...	...	...	13	1	2	...	16
Phillip „ ... ..	4	...	5	3	1	...	3	...	...	16	4	2	2	24
<b>Suburbs—</b>														
Alexandria ... ..	2	...	...	...	...	...	...	...	...	2	...	...	2	4
Balmain ... ..	5	...	2	1	...	...	2	1	...	11	...	...	...	11
Burwood... ..	1	1	...	...	...	...	...	...	...	2	...	...	...	2
Camperdown ... ..	1	1	3	...	...	...	...	...	...	5	...	...	...	5
Canterbury ... ..	...	...	...	...	...	...	1	...	...	1	...	...	...	1
Croydon ... ..	...	...	...	...	...	...	1	...	...	1	...	...	...	1
Darlington ... ..	...	...	1	1	...	...	...	...	...	2	1	1	1	5
Druitt Town ... ..	...	...	...	...	...	...	1	...	...	1	...	...	...	1
Enfield ... ..	...	...	...	...	...	...	1	...	1	2	...	...	...	2
Five Dock ... ..	...	...	...	...	...	...	...	1	...	1	...	...	...	1
Granville ... ..	...	...	...	...	...	...	...	1	...	1	...	...	...	1
Glebe ... ..	5	...	1	...	...	...	...	1	...	7	1	1	...	9
Leichhardt ... ..	...	...	2	1	...	...	2	1	...	6	2	...	...	8
Marrickville ... ..	3	1	...	...	...	...	...	...	1	5	1	...	...	6
Newtown... ..	2	...	2	...	...	...	...	...	...	4	...	...	...	4
North Willoughby ... ..	...	...	1	...	...	...	...	1	...	2	...	...	...	2
Paddington ... ..	4	...	1	1	...	...	2	...	...	8	1	...	...	9
Parramatta ... ..	2	...	1	...	...	...	...	...	...	3	...	...	...	3
Petersham ... ..	...	...	1	...	...	...	1	...	...	2	1	...	...	3
Randwick ... ..	...	...	...	...	1	...	...	1	...	2	1	...	...	3
Redfern ... ..	4	2	1	...	...	...	1	...	...	8	...	...	...	8
Rookwood ... ..	...	...	...	...	...	...	...	...	...	...	1	...	...	1
St. Leonard ... ..	2	...	...	...	...	...	1	...	...	3	...	...	...	3
St. Peters ... ..	1	...	...	...	...	...	...	...	...	1	...	...	...	1
Strathfield ... ..	...	...	...	...	...	...	1	...	...	1	...	...	...	1
Waterloo... ..	2	...	2	...	...	...	...	...	...	4	1	1	1	7
Waverley ... ..	...	...	...	1	...	...	2	...	...	3	...	...	...	3
Woollahra ... ..	2	...	2	1	...	...	1	...	...	6	1	1	...	8
The Harbour ... ..	...	...	1	...	...	...	...	...	...	1	...	...	...	1
<b>Total</b> ... ..	<b>85</b>	<b>10</b>	<b>55</b>	<b>18</b>	<b>2</b>	<b>1</b>	<b>24</b>	<b>7</b>	<b>3</b>	<b>205</b>	<b>32</b>	<b>13</b>	<b>27</b>	<b>277</b>

## STATISTICS, 1886—MISCELLANEOUS.

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FIRE SERVICE—*continued.*

No. 12.—NUMBER OF FIRE BRIGADES in OPERATION during 1886, and NUMBER of MEN ATTACHED to each Brigade, and FIRES ATTENDED.

Name of Station or Brigade.	Average number of men.	Number of fires attended.	Name of Station or Brigade.	Average number of men.	Number of fires attended.
Metropolitan, 3 Stations ... ..	30	205	SUBURBAN— <i>continued.</i>		
VOLUNTEER COMPANIES, CITY—			Paddington ... ..	15	12
No. 1, Pitt-street ... ..	17	32	Parramatta, No. 1 ... ..	20	4
No. 4, South Sydney ... ..	24	87	" No. 2 ... ..	25	4
No. 5, East Sydney ... ..	18	84	Redfern ... ..	21	31
Theatre Royal ... ..	23	43	St. Leonards ... ..	27	4
Standard Brewery ... ..	21	113	Woollahra ... ..	18	15
Surry Hills ... ..	15	10	COUNTRY—		
SUBURBAN—			Deniliquin ... ..	25	1
Alexandria ... ..	18	15	Forbes ... ..	30	11
Balmain ... ..	29	10	Grafton, North ... ..	25	15
Burwood ... ..	17	6	" South ... ..	18	14
Glebe ... ..	19	30	Hay ... ..	12	*
Mount Lachlan ... ..	19	8	West Maitland ... ..	26	3
Newtown ... ..	21	13	Total firemen ... ..	533	†257

\*No return. †Viz., 205 in Metropolitan District, and 52 in other districts.

No. 13.—DECLARED AMOUNT of RISKS held by FIRE INSURANCE COMPANIES in the CITY and SUBURBS of SYDNEY.

Name of Company.	1884.	1885.	1886.
	£	£	£
Alliance British and Foreign Insurance Company ... ..	603,335	582,848	598,399
Australian Alliance Insurance Company ... ..	572,772	524,738	494,155
Australian Mercantile Union Insurance Company ... ..	324,978	352,896	564,877
Australian Mutual Insurance Society ... ..	4,845,368	5,307,552	7,954,923
City Mutual Insurance Company ... ..	1,470,000	1,688,520	1,912,835
City of London Insurance Company ... ..	143,185	164,300	186,109
Colonial Insurance Company of New Zealand ... ..	252,541	254,760	223,193
Colonial Mutual Insurance Company ... ..	760,305	862,544	1,166,600
Commercial Union Assurance Company ... ..	4,402,060	5,089,716	5,880,175
Cornwall Insurance Company ... ..	51,700	48,335	100,000
Equitable Fire and Marine Association of New Zealand ... ..	.....	109,496	232,383
Fire Insurance Association ... ..	171,633	297,918	.....
Guardian Insurance Company ... ..	231,074	237,712	239,598
Hamburgh Magdeburg Insurance Company ... ..	106,115	131,580	140,720
Hanseatic Insurance Company ... ..	135,000	137,200	128,780
Imperial Insurance Company ... ..	1,120,000	1,320,000	1,117,000
Industrial Mutual Insurance Company ... ..	986,338	1,098,011	1,112,685
Lancashire Insurance Company ... ..	485,000	323,800	.....
Lion Insurance Company ... ..	431,527	318,627	391,475
Liverpool and London and Globe Insurance Company ... ..	3,181,290	3,200,000	3,026,837
London and Lancashire ... ..	656,585	659,361	461,762
London and Provincial Insurance Company ... ..	366,182	372,482	281,205
Manchester Insurance Company (R. Nott, Agent) ... ..	290,550	229,342	200,373
Manchester Insurance Company (McArthur & Co., Agents) ... ..	.....	32,150	266,296
Mercantile Mutual Insurance Company ... ..	2,239,710	2,746,754	3,565,595
National Insurance Company, New Zealand ... ..	645,571	695,278	1,010,786
Netherlands Fire Insurance Company ... ..	63,885	.....	.....
New Zealand Insurance Company ... ..	975,000	1,550,027	1,719,198
North British and Mercantile Insurance Company ... ..	644,965	860,763	815,410
Northern Assurance Company ... ..	632,000	700,000	600,000
Norwich Union Insurance Company ... ..	2,360,252	2,700,038	2,040,844
Pacific Insurance Company ... ..	487,000	511,000	594,000
Phoenix Insurance Company ... ..	366,065	596,804	1,055,369
Prussian National Insurance Company ... ..	135,000	137,200	128,780
Queen Insurance Company ... ..	714,136	821,921	1,045,933
Royal Insurance ... ..	530,000	560,000	552,795
Scottish Union and National Insurance Company ... ..	.....	225,566	301,108
South British Insurance Company ... ..	314,047	447,994	657,950
Standard Insurance, New Zealand ... ..	915,000	1,115,000	1,285,894
Sun Insurance Company ... ..	383,410	420,832	421,292
Sydney Mutual Insurance Company ... ..	.....	.....	57,825
Union Insurance Company ... ..	524,500	605,735	536,600
United Insurance Company ... ..	1,548,627	1,834,284	2,156,417
United Australian Mutual Insurance Company ... ..	69,681	318,498	377,194
Victoria Insurance Company ... ..	1,554,600	1,440,000	1,550,000
Totals ... ..	£ 36,690,987	41,631,582	46,253,370

COPYRIGHT AND PATENTS.

No. 14.—NUMBER OF REGISTRATIONS EFFECTED in the Office of Copyright Registry between 1st July, 1879, and 31st December, 1886.

	1879. *	1880.	1881	1882	1883	1884	1885	1886.	Total
<b>PART I.—LITERATURE.</b>									
Books ... ..	15	13	13	20	13	25	18	29	146
“Book” means and includes any volume, part or division of a volume, newspaper, pamphlet, libretto, sheet of letter-press, sheet of music, map, chart, or plan, separately published.									
Encyclopædia, review, magazine, periodical work, newspaper, or work published in a series of books or parts—Registration of title of work ... ..	8	13	9	9	4	6	8	14	71
Lecture.									
Dramatic production—									
Printing and publishing right—Registrations included under “Books.”									
Playright—Registrations in manuscript ... ..	6	2	1	11	3	1	9	2	35
Musical production—									
Printing and publishing right	6	6	1	3	5	.	8	1	30
Performing right ... ..				2	.	.			
<b>Total Registrations</b> ... ..	<b>35</b>	<b>34</b>	<b>24</b>	<b>45</b>	<b>25</b>	<b>32</b>	<b>43</b>	<b>46</b>	<b>284</b>
<b>Total Receipts</b> ... ..	<b>£ s. 13 14</b>	<b>£ s. 12 8</b>	<b>£ s. 8 3</b>	<b>£ s. 14 2</b>	<b>£ s. 8 4</b>	<b>£ s. 11 10</b>	<b>£ s. 12 8</b>	<b>£ s. 16 9</b>	<b>£ s. 96 18</b>
<b>PART II.—FINE ARTS.</b>									
Paintings . . . . .	.	1	.	1	1	1	1	16	23
Drawings . . . . .		2	1	2	1	1	1		7
Works of Sculpture . . . . .									
Engravings . . . . .	13	13	6	.	9	4	3	1	49
For giving impressions from a plate, block, or slab.									
Photographs and their Negatives ... ..	30	101	65	19	58	91	48	37	449
Or other similar works produced by the action of light or any chemical process.									
<b>Total Registrations</b> ... ..	<b>43</b>	<b>117</b>	<b>72</b>	<b>22</b>	<b>69</b>	<b>97</b>	<b>56</b>	<b>54</b>	<b>530</b>
<b>Total Receipts</b> ... ..	<b>£ s. 4 18</b>	<b>£ s. 9 6</b>	<b>£ s. 6 11</b>	<b>£ s. 1 19</b>	<b>£ s. 6 5</b>	<b>£ s. 6 17</b>	<b>£ s. 5 17</b>	<b>£ s. 6 12</b>	<b>£ s. 48 5</b>
<b>PART III.—DESIGNS.</b>									
(Useful, Ornamental, or Otherwise)									
Class 1. Articles of manufacture, composed wholly or chiefly of any metal or mixed metals	13	30	27	14	15	40	28	20	187
Class 2. Articles of manufacture, composed wholly or chiefly of wood, stone, cement, or plaster	1	8	3	1	.	7	4	4	28
Class 3. Articles of manufacture, composed wholly or chiefly of glass	.	6	.	.	1	1	...	...	8
Class 4. Articles of manufacture, composed wholly or chiefly of earthenware	..	...			..	1	...	...	1
Class 5. Articles of manufacture, composed wholly or chiefly of ivory, bone, papier-maché and every other solid substance not already comprised in the above classes, numbered 1, 2, 3, 4	.	2	2	1	.	3	2	1	11
Class 6. Paperhangings	.				..	..	..	..	..
Class 7. Carpets, tapestry, floorcloths, and oilcloths	..				..	..	..	..	..
Class 8. Shawls, if the design be applied solely by printing or by any other process by which colours are or may hereafter be produced upon tissue or textile fabrics	.				..	..	..	..	..
Class 9. Shawls not comprised in class 8	.				..	..	..	..	..
Class 10. Yarn, thread, or warp, if the design be applied by printing or any other process by which colours are or may hereafter be produced	...	..	..	.	...	...	...	...	...
Class 11. Woven fabrics, composed of linen, cotton, wool, silk, or hair, or of any two or more of such materials, if the design be applied by printing or by any other process by which colours are or may hereafter be produced upon tissue or textile fabrics, excepting the articles included in class 12	...	..	..	...	...	...	...	...	...
Class 12. Woven fabrics, composed of linen, cotton, wool, silk, or hair, or of any two or more of such materials, if the design be applied by printing or by any other process by which colours are or may hereafter be produced upon tissue or textile fabrics, such woven fabrics being or coming within the description technically called furnitures, and the repeat of the design whereof shall be more than 12 in. by 8 in.	.	.	.	.	...	...	1	...	1
Class 13. Woven fabrics, not comprised in any preceding class	.	..	..	.	...	...	...	...	...
Class 14. Lace and any article of manufacture or work of art or substance not comprised in any preceding class	2	5	4	2	3	.	.	5	21
<b>Total Registration</b> ... ..	<b>16</b>	<b>51</b>	<b>36</b>	<b>18</b>	<b>19</b>	<b>52</b>	<b>35</b>	<b>30</b>	<b>257</b>
<b>Total Receipts</b> ... ..	<b>£ s. 9 19</b>	<b>£ s. 30 8</b>	<b>£ s. 20 8</b>	<b>£ s. 11 13</b>	<b>£ s. 11 14</b>	<b>£ s. 29 8</b>	<b>£ s. 21 18</b>	<b>£ s. 18 1</b>	<b>£ s. 153 9</b>

## STATISTICS, 1886—MISCELLANEOUS.

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COPYRIGHT AND PATENTS—*continued.*

## No. 15—TOTAL RECEIPTS and EXPENDITURE under the Copyright Act of 1879.

Year.		Registrations.	Receipts.	Expenditure.
			£ s. d.	£ s. d.
1879	...	94	28 11 0	100 0 0
1880	...	202	52 2 0	200 0 0
1881	...	132	35 2 0	211 18 6
1882	...	85	27 14 0	210 13 9
1883	...	113	26 3 0	200 10 0
1884	...	181	47 15 0	216 7 0
1885	...	134	40 3 0	203 16 1
1886	...	130	41 2 0	200 5 0
Grand Totals		1,071	298 12 0	1,543 10 4

## No. 16.—CLASSIFIED RETURN of the LETTERS OF REGISTRATION for INVENTIONS granted in New South Wales during the year 1886.

Class of Invention.	Number of cases referable to each class.	Class of Invention.	Number of cases referable to each class.
1. Drains and sewers, including the manufacture of drain-tiles and drain-pipes	1	16. Preparation of India-rubber, gutta-percha, vulcanite, ebonite, celluloid, &c...	1
2. Sewing and embroidering	2	17. Production and applications of gas	7
3. Manure	5	18. Metals and alloys—	1
4. Preservation of animal and vegetable substances (without the use of cold); also, preparation of same for market...	2	(1) Alloys	...
5. Marine propulsion	...	(2) Antimony	...
6. Manufacture of iron and steel	...	(3) Bismuth	...
7. Aids to locomotion	...	(4) Copper, &c.	...
8. Steam culture	...	(5) Gold—Alluvium, &c.	...
9. Watches, clocks, and other time-keepers	...	(6) Gold	5
10. Firearms and other weapons, ammunition and accoutrements	2	(7) Gold, silver	2
11. Paper: Manufacture of paper, pasteboard, papier mâché, &c.	1	(8) Gold, silver, other metals, precious stones	3
12. Cutting, folding, and ornamenting paper, including envelopes, cards, paper-hangings, &c....	1	(9) Quartz, &c.	...
13. Typographic, lithographic, and plate printing (excluding electro-telegraphic and photographic printing); also advertising	4	(10) Minerals and other substances (including precious stones)	...
14. Bleaching, dyeing, and printing calico and other fabrics and yarns	...	(11) Ores, minerals, metals, &c.	12
15. Electricity and Magnetism—	...	(12) Nickel	...
(1) Galvanic and thermo-electric piles and batteries	...	(13) Quartz, &c.	1
(2) Magneto and dynamo-electric generators	...	(14) Silver, &c....	1
(3) Miscellaneous apparatus for generating	...	(15) Sulphurets, amalgam, &c.	...
(4) Electric and magnetic motors; transmission of energy to a distance; electric distribution systems and apparatus	1	(16) Tin, &c.	...
(5) Circuits, conductors, cables, and insulators; insulating and coating conductors	3	(17) Platinum, iridium, &c.	1
(6) Electric current governors and regulators; starting and stopping devices for dynamos; safety appliances	...	(18) Lead	...
(7) Armatures, commutators, contact-makers and breakers, switches, cut-outs, relays, coils, magnets, and solenoids	...	19. Photography, photo-lithography, and photo-mechanical printing	3
(8) Measuring and testing electric currents	1	20. Weaving	...
(9) Telegraphic and signalling systems and apparatus, call-bells, studs, keys, &c.	...	21. Ship-building, repairing, sheathing, launching, &c.	...
(10) Telephonic systems and apparatus; application of the telephone to medicine and to scientific research; microphones, &c.	3	22. Bricks and tiles, artificial stone and concrete	6
(11) Electric lighting systems and installations; arrangement of leads and lamps	...	23. Plating or coating metals with metals	...
(12) Electric lamps and candles, carbons, filaments, regulators, &c.	1	24. Pottery	2
(13) Various applications of electric lighting	...	25. Medicine, surgery, and dentistry	3
(14) Electrolysis, electro-deposition, electro-metallurgy, and the applications of electricity to the arts and manufactures	3	26. Music and musical instruments	1
(15) Electric and magnetic fire-alarms, methanometers, water-gauges, sorting apparatus, &c.; the applications of electricity and magnetism to medicine, meteorology, and navigation	...	27. Oils, fats, lubricants, candles, and soap	2
(16) Secondary batteries and accumulators for storing electric energy	1	28. Spinning, including the preparation of fibrous materials and the doubling of yarns and threads	1
		29. Lace-making, knitting, netting, braiding, and plaiting; including the manufacture of fringe and chenille...	...
		30. Preparation and combustion of fuel	6
		31. Raising, lowering, and weighing	7
		32. Hydraulics	3
		33. Railways and tramways	12
		34. Saddlery, harness, stable-fittings, &c.	1
		35. Roads and ways	5
		36. Bridges, viaducts, and aqueducts	...
		37. Writing instruments and materials	3
		38. Railway signals and communicating apparatus	1
		39. Furniture and upholstery	3
		40. Acids, alkalies, oxides, and salts	4
		41. Aeronautics	...
		42. Preparation and use of tobacco	2
		43. Books, portfolios, card-cases, &c.	...
		44. Lamps, candlesticks, chandeliers, and other illuminating apparatus; excluding inventions for lighting by gas or electricity	7
		45. Needles and pins	...
		46. Carriages and other vehicles for railways and tramways	12
		47. Umbrellas, parasols, and walking-sticks; awnings and sunshades	1

COPYRIGHT AND PATENTS—*continued.*

No. 16 (*continued*)—CLASSIFIED RETURN of the LETTERS OF REGISTRATION for INVENTIONS—*continued.*

Class of Invention	Number of cases referable to each class	Class of Invention	Number of cases referable to each class
48. Sugar ..	4	83. Agriculture—traction engines ..	..
49. Steam-engines	9	84. Trunks, portmanteaus, boxes, and bags ..	2
50. Paints, colours, and varnishes ...	1	85. Ice-making, ice safes, ice houses; cooling, chilling, refrigerating, and use of cold as a preservative agent; including the transportation of substances at low temperatures	3
51. Toys, games, and exercises...	1	86. Unfermented beverages, aerated liquids, mineral waters, perfumes, extracts, &c	1
52. Ventilation	4	87. Tea, coffee, chicory, chocolate, cocoa, &c. (comprising their manufacture, but not the preparation of drinks therefrom) ...	...
53. Farmery	1	88. Fire engines, extinguishers, escapes, alarms, &c, including fire-proof dresses and fabrics ..	1
54. Artists' instruments and materials	1	89. Washing and wringing machines	1
55. Skins, hides, and leather	..	90. Chains, chain cables, &c	..
56. Preparing and cutting cork, bottling liquids, securing, opening, and stoppering bottles	4	91. Dressing and finishing woven fabrics, and manufacturing felted fabrics, including folding, winding, measuring, and packing	1
57. Brushing and sweeping	2	92. Stone, marble, slate, and cement	4
58. Nails, rivets, bolts, screws, nuts, and washers	4	93. Glass and glassware ..	1
59. Hinges, hinge-joints, and door-springs	1	94. Carriages and other vehicles for common roads	2
60. Locks, latches, bolts, and similar fastenings	3	95. Brewing, wine-making, and distilling alcoholic liquids	4
61. Cooking, bread-making, and the preparation of confectionery ..	2	96. Timber ..	..
62. Air, gas, and other motive-power engines	9	97. Houses, structures, and other fabrics	6
63. Water-closets, earth-closets, urinals, &c.	...	98. Machine belts and bands	2
64. Safes, strong rooms, tills, and similar depositories	2	99. Signalling ..	..
65. Wearing apparel—head coverings	..	100. Measuring, counting, indicating, and registering, including tell-tales and devices for recording the time of workmen	2
66. Wearing apparel—body coverings	..	101. Submarine and pneumatic, also dresses and appliances for prevention of drowning, and natatory appliances	..
67. Wearing apparel—foot coverings	2	102. Rope-making	..
68. Wearing apparel—dress-fastenings and jewellery	2	103. Wool ..	2
69. Anchors	..	104. Hardware, edge tools, and cutlery	2
70. Metallic pipes and tubes	1	105. Stone blue, starch (including fire-proof starch), size, and other stiffening and gumming materials	..
71. Mining, quarrying, tunnelling, well-sinking, and boring, mining explosives and blasting appliances	3	106. Scenic, panoramic, and illusional apparatus, translucent advertisements, and transparencies; also, theatres, &c.	1
72. Milking, churning, and cheese-making	..	107. Mechanism for transmitting and converting motion	2
73. Masts, sails, rigging, &c	...	108. Shaping and working metals	...
74. Casks and barrels	..		
75. Steering and manœuvring vessels	..		
76. Optical, mathematical, and other philosophical instruments, including nautical, astronomical, and meteorological instruments	1		
77. Harbours, docks, canals, &c	2		
78. Grinding grain and dressing flour and meal	4		
79. Purifying and filtering water, including distilling sea water to produce fresh water	3		
80. Artificial leather, floorcloth, oilcloth, oilskin, and other waterproof fabrics	3		
81. Agriculture—field implements, &c, including methods of tilling and irrigating land	13		
82. Agriculture—barn and farmyard implements; including the cleansing, drying, and storing of grain	7		
Number of Inventions registered		203	
,, Assignments registered		31	
Total registrations		234	

No. 17.—NUMBER of LETTERS OF REGISTRATION and ASSIGNMENTS thereof for INVENTIONS or IMPROVEMENTS registered up to the end of 1886

Year.	Registrations.			Year	Registrations.		
	Patents	Assignments	Total		Patents.	Assignments	Total
1855	..	..	3	1872	43	5	48
1856	..	..	1	1873	43	6	49
1857	..	..	1	1874	39	21	60
1858	..	..	10	1875	34	16	50
1859	..	..	11	1876	44	18	62
1860	..	..	10	1877	62	27	89
1861	..	..	13	1878	45	19	64
1862	..	..	14	1879	57	16	73
1863	18	4	22	1880	89	23	112
1864	15	2	17	1881	113	13	126
1865	15	5	20	1882	129	21	150
1866	20	5	25	1883	149	24	173
1867	20	4	24	1884	183	29	212
1868	21	2	23	1885	161	27	188
1869	27	5	32	1886	203	31	234
1870	32	4	36				
1871	27	5	32	Total	*1,589	*332	†1,984

\* From 1863 only

† Total since 1855

STATISTICS, 1886—MISCELLANEOUS.

LOCAL GOVERNMENT.

No. 18.—ANNUAL and CAPITAL VALUE of RATABLE PROPERTY in the Municipalities of the Colony during the years 1882-6.

Municipalities.	1882.		1883		1884		1885		1886.	
	Annual Value.	Capital Value	Annual Value	Capital Value	Annual Value	Capital Value	Annual Value	Capital Value	Annual Value	Capital Value.
City of Sydney . . . . .	£ 1,490,357	£ 29,807,140	£ 1,671,493	£ 36,772,840	£ 1,799,793	£ 39,595,440	£ 1,850,214	£ 40,704,700	£ 1,905,888	£ 41,929,520
Suburbs of Sydney . . . . .	1,314,919	19,749,107	1,449,947	20,676,070	1,690,109	23,046,854	1,935,884	29,410,787	2,289,683	32,960,620
Country Municipalities ..	1,064,560	11,697,199	1,266,502	14,425,195	1,524,218	17,661,067	1,713,578	21,828,805	1,727,951	21,657,828
	3,869,836	61,253,446	4,387,942	71,874,105	5,014,120	80,303,361	5,499,676	91,944,292	5,923,524	96,547,968

NOTE.—The annual value is that at which the property in the various districts was assessed for Municipal purposes.

No. 19.—ABSTRACT of the RECEIPTS and DISBURSEMENTS of the MUNICIPAL COUNCIL of SYDNEY on ACCOUNT of the CITY FUND for the year ending 31st December, 1886

RECEIPTS			DISBURSEMENTS		
<b>CITY FUND</b> (Incorporated by Act of Colonial Legislature, 43 Vic No 3)					
	Revenue £ s d	Total Amount £ s d		Salaries £ s d	Contingencies £ s d
City Rate, raised by assessment under the authority of the Act of Council 43 Vic No 3	132,823 4 1		Office of Mayor	1,000 0 0	
Watering Street Rate, year 1883, raised by assessment under the authority of the Act of Council 18 Vic No 30			"    Town Clerk and Dept	781 7 8	
Fees and Fines—Building Fees	9 0 10		"    City Treasurer and Dept	768 1 6	
"    By laws	2,514 6 6		"    City Engineer and Surveyor and Dept	3,171 8 4	
"    Hoarding Licenses, &c	2,072 19 6		"    Inspector of Nuisances and Department	1,550 0 0	
Rent and Dues from Markets—George street	153 15 0		"    City Architect and Department	1,123 3 4	
"    Belmore	8,554 19 6		"    Health Officer	450 0 0	
"    Eastern Fish	5,406 1 0		"    Clerk of Markets	250 0 0	
Rent of Randwick Toll gate	2,508 15 2		"    City Solicitor	225 0 0	
"    City Wharfs	1,300 0 0		"    Messenger and Office keeper	227 15 9	
"    Public Baths	2,044 10 0				
"    Exhibition Building	536 0 0		City Improvements—Wages		72,810 2 10
"    Town Hall Offices	1,131 0 0		"    Metal		20,567 4 7
"    Vestibule	1,200 0 0		"    Street Works		53,403 0 5
Cleansing Earth Closets	212 8 6				
Land Lease	951 14 8		City Markets—Expenditure		3,182 19 7
Paving Rate	490 10 0		Interest Expenses		7,454 17 0
Auctioneers' Licenses	3,377 15 9		Street Watering—Material		1,649 10 0
City Endowment	1,275 19 2		Office Expenses—Advertising		197 13 9
Sale yard Dues	18,750 0 0		"    Stationery		215 9 4
Bailiffs' Costs	1,393 2 2		"    Printing		365 6 4
Repayment of Works and sale of Stores	264 11 0		"    Furniture and Sundries		1,543 16 3
Sale of Street Sweepings and Manure	570 13 10		Town Hall Expenses		8,229 9 6
Removal of Rubbish	166 19 7		Bunnerong Road Trust		155 0 11
Supervision of Night carts	196 5 4		Exhibition Building		270 13 5
Porters' Licenses and Sundries	16 0 0		Government Leases, Insurance, &c.		149 4 4
Interest Account	4,500 0 0		Uniforms, Collection of Land Rates, Photographic Views, Disinfectants, &c, &c		784 11 3
Balance due to Union Bank, 31 December, 1886	23,824 19 0	192,585 12 1	Salaries of Auditors		80 0 0
"    "    31 December, 1885	10,922 2 9		Lighting Expenses		11,024 16 11
		7,902 16 3	Fire Brigade Board		1,719 8 8
			Rent and Repair of Baths		257 14 6
			Streets Loan—Sinking Fund		6,000 0 0
			Law Expenses		64 3 0
			Jubilee Celebration		216 4 2
					44,161 3 11
					£ 200,488 8 4
					£ 200,488 8 4
<b>WATER FUND</b> (Incorporated by Act of Colonial Legislature, 43 Vic No 3)					
Water supplied to Houses	51,674 19 1		Salaries of Officers	£ 4,933 17 11	
"    by Meter	13,986 14 7		Interest Expenses		6,460 0 0
"    by Contract	14,036 12 7		Office Expenses and Rent		2,411 14 5
Rent of Fountain	63 18 0		Incidental Expenses		154 17 6
Plumbers' Licenses and Accounts	1,076 1 3		Law Expenses		98 18 2
Sale of Stores and Repayment of Works, &c	1,229 0 1		Sir D Cooper—Rent		1,500 0 0
Rents	41 16 0		General Works—Wages		25,895 17 1
Interest Account	3,278 11 6		"    Castings and Pipes		30,646 18 2
Fixed Deposit		85,337 13 1	"    Coal and Repairs		9,114 3 8
		50,000 0 0	Botany Works—Wages		5,394 19 3
			"    Coal		5,853 4 6
			"    Machinery		5,040 17 0
			Balance due by Union Bank, 31 December, 1886	47,219 13 9	92,676 9 9
			"    "    31 December, 1885	9,492 8 4	
					37,727 5 5
					£ 135,337 13 1
					£ 135,337 13 1
<b>SEWERAGE FUND</b> (Incorporated by Act of Colonial Legislature, 43 Vic No 3)					
Rate for year 1886	36,944 4 9		Interest Expenses		12,020 15 0
"    "    1885	867 9 3		Office Expenses and Rent		1,202 2 2
Suburban Rate	93 12 6		Incidental Expenses		1,184 13 7
Miscellaneous Receipts	305 14 6		General Works—Wages		14,046 10 11
Interest Account	1 9 0		"    Sundries		3,520 8 8
Balance due by Union Bank, 31 December, 1886	12,586 16 2	38,152 10 0	Salaries of Officers		1,909 11 1
"    "    31 December, 1885	12,355 4 9		City Fund—Interest Account		4,500 0 0
		231 11 5			
					38,384 1 5
					£ 38,384 1 5
					£ 38,384 1 5

NOTE.—Number of persons paying City Rates, 7,946. Amount of Rate struck per £1 sterling, 1s 6d. Total estimated annual assessed value of Ratable Property in the Municipality, £1,905,888. Total estimated annual value of Ratable Property in the Municipality, £2,086,476. Total estimated capital value of Ratable Property in the Municipality, £41,929,520. Extent of roads, streets and lanes in the Municipality, about 100-miles. The number of Electors on Roll, and those entitled to one or more votes—Number of Electors on Roll, 7,946, number entitled to one vote, 501; number entitled to two votes, 2,742, number entitled to three votes, 1,994, number entitled to four votes, 2,709. The area of wood-blocking laid and in course of being laid, 232,320 square yards. Miles of sewerage, 61½ miles. Average daily consumption of water, total gallons, 6,300,000. Average daily consumption of water per head, 25 gallons.



Name of Borough.	RECEIPTS								Salaries and Office Expenses.		For Public Works.																
	Ordinary Rates		For Lighting		Subscriptions.		From Government.		Other Sources		Total exclusive of Loans		Loans.														
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.									
Albury ...	1,456	10	6	362	17	9	...	...	798	15	0	1,254	19	9	3,873	3	0	...	654	4	10	2,859	17	2			
Alexandria ...	2,557	11	3	401	2	5	911	7	10	1,196	2	5	347	15	4	5,413	19	3	...	261	17	0	4,409	14	4		
Armidale ...	1,158	13	6	632	7	6	10	9	0	550	11	9	203	0	0	2,555	1	9	...	223	9	6	352	12	4		
Ashfield ...	5,401	4	11	1,593	9	4	548	3	2	3,732	10	3	1,256	5	0	12,531	12	8	...	461	14	11	7,440	7	9		
Balmain ...	8,982	11	6	2,992	5	7	304	9	7	3,380	10	5	3,993	12	11	19,653	10	0	...	1,291	14	9	13,808	13	0		
Bathurst ...	3,001	5	6	1,000	6	0	150	0	0	1,431	7	8	927	15	6	6,510	14	8	...	378	0	0	4,863	10	8		
Burwood ...	3,038	0	10	1,004	3	4	316	8	0	2,326	19	4	242	14	0	6,928	5	6	10,000	0	0	670	18	7	10,622	17	7
Camperdown ...	1,370	2	6	458	0	10	51	11	5	697	16	8	717	16	11	3,295	8	4	5,000	0	0	490	10	2	2,894	1	7
Central Illawarra ...	950	0	0	...	...	...	...	...	...	489	10	1	...	...	...	1,439	10	1	...	139	10	1	1,300	0	0		
Cootamundra ...	602	16	7	...	...	...	...	...	...	1,555	5	3	44	6	0	2,202	7	10	...	230	15	10	747	17	10		
Cudgong ...	867	6	2	...	...	...	...	...	...	439	11	7	...	...	...	1,306	17	9	...	184	12	6	623	4	7		
Darlington ...	1,239	13	0	...	...	...	...	...	...	561	3	0	891	10	7	2,692	6	7	5,000	0	0	253	0	0	4,335	14	7
The Glebe ...	7,190	9	8	2,396	16	7	191	15	0	3,296	9	7	3,282	16	6	16,358	7	4	...	646	6	0	9,653	10	7		
Goulburn ...	3,110	3	5	793	3	0	102	5	6	1,797	12	6	1,899	5	4	7,702	9	9	...	834	4	4	3,685	1	5		
Granville ...	1,130	1	0	154	5	9	130	14	5	1,485	5	4	6	6	6	2,906	13	0	...	100	7	10	2,271	1	0		
Grafton ...	1,463	2	2	370	2	4	50	1	11	691	16	11	343	15	7	2,918	18	11	...	399	12	5	1,208	12	1		
Gosford ...	90	0	0	...	...	...	...	...	...	...	...	...	...	...	...	90	0	0	...	100	0	0	...	...	...		
Hill End ...	121	16	11	...	...	...	1	6	0	237	13	6	...	...	...	360	16	5	...	86	13	9	162	11	10		
Hunter's Hill ...	1,709	0	11	...	...	...	...	...	...	483	8	1	118	6	3	2,310	15	3	3,120	0	0	198	3	0	1,142	16	11
Junee ...	188	9	7	...	...	...	...	...	...	...	...	...	...	...	...	188	9	7	...	86	11	11	...	...	...		
Kiama ...	849	17	2	164	5	6	...	...	...	286	12	2	34	11	0	1,335	5	10	...	32	17	10	1,305	13	7		
Marrickville ...	4,312	3	10	1,077	18	1	1,018	5	3	1,748	2	3	185	10	3	8,341	19	8	10,000	0	0	437	8	8	9,429	0	2
Maitland East ...	1,036	15	6	...	...	...	...	...	...	795	15	6	60	13	11	1,893	4	11	2,000	0	0	249	8	6	1,482	19	5
Maitland West ...	2,915	4	11	*1,428	2	4	...	...	...	1,805	12	1	536	16	11	6,685	16	3	...	440	13	6	4,059	6	0		
Morpeth ...	362	13	1	...	...	...	...	...	...	590	18	9	55	9	9	1,009	1	7	...	142	17	7	1,060	11	4		
Mudgee ...	966	13	2	222	9	9	13	3	11	395	18	3	205	19	1	1,804	4	2	...	264	6	8	978	3	6		
Narrabri ...	515	16	4	...	...	...	...	...	...	1,696	19	6	33	17	0	2,246	13	8	...	236	5	9	1,235	16	10		
Narrandera ...	451	9	5	...	...	...	...	...	...	615	12	10	250	12	4	1,317	14	7	...	241	19	0	486	19	2		
Newcastle ...	6,733	15	2	1,684	7	11	1,500	0	0	4,689	9	9	10,156	9	7	24,764	2	5	...	1,720	15	5	14,873	1	10		
Newtown ...	5,688	6	3	1,420	12	0	457	18	5	2,728	7	3	1,462	11	1	11,757	15	0	5,000	0	0	784	7	5	7,963	6	3
North Willoughby ...	1,970	15	0	...	...	...	67	11	0	733	7	3	10	3	6	2,781	16	9	2,000	0	0	262	9	9	3,679	18	4
Orange ...	1,436	5	2	725	17	6	...	...	...	655	6	10	918	3	4	3,735	12	10	...	721	9	6	2,112	4	9		
Paddington ...	6,435	13	3	1,607	14	3	...	...	...	3,333	2	10	1,400	19	0	12,777	9	4	...	588	10	8	10,621	7	3		
Parramatta ...	2,998	12	2	706	12	7	...	...	...	1,966	14	4	942	1	4	6,614	0	5	14,600	0	0	759	13	9	5,095	17	9
Petersham ...	4,623	12	3	1,159	4	7	754	9	7	3,316	9	6	1,116	0	0	10,969	15	11	...	598	7	4	6,512	5	9		
Plattsburg ...	1,170	17	4	291	19	0	2	10	0	786	9	11	58	8	6	2,310	4	9	...	136	9	4	1,881	10	2		
Queanbeyan ...	330	0	0	...	...	...	...	...	...	75	12	9	1	8	0	407	0	9	266	10	11	559	13	0	177	10	8
Redfern ...	7,675	5	0	1,918	16	3	713	13	7	3,570	6	8	1,938	6	0	15,816	7	6	...	753	5	6	14,362	3	8		
Randwick ...	1,772	5	10	442	17	7	815	6	2	1,177	7	10	984	16	3	5,192	13	8	6,000	0	0	579	10	8	7,108	6	0
Richmond ...	348	19	1	...	...	...	176	7	8	276	10	1	2	17	6	804	14	4	...	90	11	7	1,339	13	2		
Shellharbour... ..	611	4	5	...	...	...	...	...	...	515	10	10	29	5	2	1,156	0	5	...	99	13	11	264	12	0		
Singleton ...	647	0	0	215	0	0	...	...	...	454	0	0	89	0	0	1,405	0	0	...	232	0	0	966	0	0		
St. Leonards East ...	3,232	6	5	808	1	7	69	8	6	1,246	19	3	2,722	7	6	8,079	3	3	5,000	0	0	629	10	7	5,202	8	6
St. Leonards... ..	4,256	17	10	826	3	5	91	14	7	1,174	12	8	885	0	6	7,234	9	0	...	647	14	2	2,852	18	9		
Tamworth ...	1,921	12	0	*767	0	11	...	...	...	1,282	17	2	216	1	1	4,187	11	2	...	476	2	3	2,893	1	6		
Victoria ...	1,792	9	11	596	15	3	185	15	1	827	10	2	1,107	8	11	4,509	19	4	2,150	0	0	796	13	0	2,148	0	4
Wallsend ...	1,496	12	8	237	9	4	...	...	...	1,050	2	7	...	...	...	2,784	4	7	1,000	0	0	358	8	5	2,660	19	1
Waterloo ...	2,763	2	9	615	10	9	450	0	0	1,472	17	5	...	...	...	5,301	10	11	15,000	0	0	696	18	7	7,471	4	4
Waverley ...	3,825	16	4	1,274	15	6	483	18	6	1,849	9	5	1,021	2	2	8,455	1	11	5,000	0	0	377	10	0	7,656	7	5
Windsor ...	555	19	1	185	13	0	83	0	0	314	0	9	42	10	9	1,181	3	7	...	133	16	4	1,188	9	11		
Wollongong ...	606	19	7	207	15	8	69	17	8	904	8	6	326	18	2	2,115	19	7	1,906	8	4	212	0	6	5,491	8	11
Woollahra ...	6,024	9	6	1,243	13	0	1,110	3	11	2,564	9	0	1,604	9	2	12,547	4	7	...	864	10	10	3,741	12	0		
Wagga Wagga ...	1,808	4	2	576	7	10	...	...	...	891	15	7	88	19	0	3,365	6	7	...	444	17	5	1,507	15	0		
Young ...	708	2	10	...	...	...	45	12	0	1,012	13	2	11	8	0	1,777	16	0	...	135	15	3	1,473	6	3		
Total Boroughs..£	128,474	17	4	32,564	4	0	10,877	7	8	71,958	12	2	44,030	11	9	287,995	12	11	93,042	19	3	23,399	0	4	213,666	5	5

\*In West Maitland, £554 16s, and in Tamworth, £96 4s. 1d., for water rates, are included in lighting

STATISTICS, 1886—MISCELLANEOUS.

MENT—continued.

OF BOROUGH AND MUNICIPAL DISTRICTS.

EXPENDITURE.					Assets at date of Balancing.	Liabilities at date of Balancing.	Outstanding Loans.		Name of Borough.
For Lighting.	Miscellaneous	Interest on Loans.	Repayment of Loans.	Total Expenditure.			Amount.	Rate of Interest Charged.	
£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	per cent.	
412 13 5	204 14 0	...	...	4,131 9 5	196 4 7	...	...	.....	Albury.
363 13 7	756 1 0	524 11 6	...	6,315 17 5	911 0 0	...	8,500 0 0	6	Alexandria.
503 0 5	201 18 10	351 12 6	200 0 0	1,832 13 7	...	...	4,200 0 0	8	Armidale.
1,140 17 4	2,359 10 9	...	...	11,402 10 9	1,510 6 0	...	...	...	Ashfield.
1,889 5 3	5,245 19 1	2,277 0 0	...	24,512 12 1	8,351 1 4	...	37,700 0 0	6	Balmain.
908 12 7	931 19 2	105 0 0	...	7,187 2 5	7,500 0 0	3,531 17 3	1,500 0 0	7	Bathurst.
1,061 17 10	1,100 8 9	558 10 0	333 6 8	14,347 19 5	2,749 10 8	150 0 0	15,000 0 0	5½, 5¾, 6	Burwood.
928 5 8	1,175 3 3	175 15 2	500 0 0	6,163 15 10	5,800 0 0	1,300 0 0	9,000 0 0	6½	Camperdown.
.....	.....	.....	.....	1,439 10 1	264 13 0	.....	.....	.....	Central Illawarra.
.....	121 7 9	.....	.....	1,100 1 5	1,894 13 2	134 7 0	.....	.....	Cootamundra.
.....	39 16 10	161 3 6	191 6 4	1,200 3 9	133 5 4	40 8 11	2,000 0 0	7	Cudgong.
233 5 10	1,064 6 6	150 0 0	.....	6,936 6 11	506 0 0	141 0 0	5,000 0 0	6	Darlington.
1,521 2 7	2,678 16 5	690 0 0	1,000 0 0	16,189 15 10	766 17 1	.....	11,000 0 0	6	The Glebe.
746 0 0	995 2 6	.....	.....	6,260 8 3	4,909 14 3	.....	.....	.....	Goulburn.
269 6 3	296 9 10	.....	.....	2,937 4 11	1,204 6 4	176 6 8	.....	.....	Granville.
658 5 8	150 0 0	379 5 11	.....	2,795 16 1	.....	1,091 2 11	4,000 0 0	6	Grafton.
.....	5 0 0	.....	.....	105 0 0	.....	.....	.....	.....	Gosford.
.....	9 16 10	.....	.....	259 2 5	105 8 0	.....	.....	.....	Hill End.
.....	332 12 7	.....	211 0 6	1,884 13 0	.....	.....	4,200 0 0	6, 6½	Hunter's Hill.
.....	.....	.....	.....	86 11 11	101 17 8	.....	.....	.....	Junee.
80 14 1	660 14 6	.....	.....	2,080 0 0	10,800 0 0	7,939 7 7	.....	.....	Kiama.
908 5 4	1,002 7 10	682 16 9	800 0 0	13,259 18 9	.....	.....	15,000 0 0	6, 6½	Marrickville.
.....	183 12 7	6 2 6	.....	1,922 3 0	1,066 4 3	.....	2,000 0 0	6½	Maitland, East.
*1161 8 1	744 19 7	368 3 11	.....	6,774 11 1	400 0 0	1,046 6 2	4,000 0 0	7	Maitland, West.
42 9 9	.....	.....	.....	1,245 18 8	.....	59 8 4	.....	.....	Morpeth.
141 15 0	161 13 1	422 8 8	200 0 0	2,168 6 11	6,700 0 0	5,150 0 0	4,200 0 0	7, 8, 9	Mudgee.
.....	5 18 0	.....	.....	1,478 0 7	401 0 0	50 0 0	.....	.....	Narrabri.
.....	129 17 5	.....	.....	858 15 7	458 19 0	65 0 0	.....	.....	Narrandera.
1,497 10 7	4,168 0 0	1,425 18 10	.....	23,685 6 8	13,333 6 8	2,905 14 11	25,000 0 0	5	Newcastle.
1,240 15 0	751 2 11	1,652 11 6	3,000 0 0	15,392 3 1	1,200 0 0	.....	30,000 0 0	5½, 6	Newtown.
.....	147 6 2	60 0 0	.....	4,149 14 10	470 16 10	.....	3,000 0 0	6	North Willoughby.
395 17 11	514 16 10	486 7 3	200 0 0	4,430 16 3	3,873 9 8	7,717 16 2	6,200 0 0	5½ to 8	Orange.
1,465 13 11	2,966 15 9	958 14 3	500 0 0	17,101 1 10	.....	7,463 17 3	12,000 0 0	6	Paddington.
454 3 9	453 15 0	1,206 6 3	6,462 8 0	14,432 4 6	1,000 0 0	106 18 0	23,100 0 0	6	Parramatta.
1,288 1 1	2,503 14 0	912 5 8	.....	11,814 13 10	.....	.....	10,000 0 0	6	Petersham.
235 19 8	.....	247 8 6	.....	2,501 7 8	29 2 11	1,291 19 1	.....	.....	Plattsburg.
.....	.....	14 10 11	.....	751 14 7	.....	.....	.....	.....	Queanbeyan.
1,644 0 0	581 17 9	600 0 0	800 0 0	18,741 6 11	500 0 0	654 17 10	10,000 0 0	6	Redfern.
566 13 6	2,473 16 7	948 4 8	.....	11,676 11 5	.....	429 5 10	16,000 0 0	6	Randwick.
.....	36 5 8	.....	.....	1,466 10 5	.....	588 18 9	.....	.....	Richmond.
.....	.....	.....	.....	364 5 11	589 2 9	.....	.....	.....	Shellharbour.
296 0 0	37 0 0	.....	.....	1,531 0 0	.....	240 0 0	.....	.....	Singleton.
663 15 4	3,737 7 11	602 5 10	.....	10,835 8 2	2,945 0 4	.....	15,000 0 0	6	St. Leonards, East.
562 0 0	2,081 13 0	.....	.....	6,144 5 11	5,414 3 11	1,830 9 3	.....	.....	St. Leonards.
576 7 9	468 15 7	.....	.....	4,414 7 1	.....	.....	.....	.....	Tamworth.
595 14 2	1,103 15 0	520 4 8	.....	5,164 7 2	322 12 4	315 1 8	9,000 0 0	5, 6	Victoria.
175 15 4	138 5 5	70 0 0	.....	3,403 8 3	135 0 0	.....	1,000 0 0	7	Wallsend.
636 15 1	1,364 18 4	736 5 0	.....	10,906 1 4	2,804 16 10	.....	15,000 0 0	6	Waterloo.
1,287 17 8	2,872 3 5	694 12 10	.....	12,888 11 4	.....	.....	15,000 0 0	6, 6½	Waverley.
169 18 2	54 14 10	.....	.....	1,546 19 3	100 0 0	298 12 6	.....	.....	Windsor.
385 11 0	317 17 7	259 10 4	.....	6,666 8 4	568 0 0	2,000 0 0	5,000 0 0	6	Wollongong.
1,083 10 1	7,376 12 7	.....	.....	13,066 5 6	.....	.....	.....	.....	Wollahra.
664 15 0	263 11 10	180 0 0	.....	3,060 19 3	1,187 0 0	191 11 4	3,200 0 0	5	Wagga Wagga.
.....	188 14 3	.....	.....	1,797 15 9	1 18 11	.....	.....	.....	Young.
28,857 13 8	55,161 7 6	18,427 16 11	14,393 1 6	353,910 5 4	91,265 11 10	46,910 7 5	325,800 0 0	...	Total Boroughs.

\* In West Maitland £308 15s. 3d. expended in Water Supply; included under "Lighting."

Name of Municipal District.	RECEIPTS								Salaries and Office Expenses.	For Public Works.
	Ordinary Rates.	For Lighting.	Subscriptions.	From Government.	Other Sources.	Total exclusive of Loans.	Loans.			
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Adamstown ...	293 11 8	.....	.....	207 1 8	15 10 0	516 3 4	1,000 0 0	100 0 0	897 0 0	
Ballina ...	316 9 0	.....	135 10 0	607 2 8	38 0 0	1,097 1 8	.....	81 4 0	1,215 13 0	
Balranald ...	335 0 0	.....	.....	522 0 0	41 0 0	898 0 0	.....	280 0 0	123 0 0	
Bega ...	781 6 3	201 15 8	40 7 8	1,804 12 2	93 3 6	2,921 5 3	.....	191 15 7	2,358 9 0	
Blayney ...	548 19 11	.....	221 8 9	951 19 0	128 2 4	1,850 9 11	476 3 0	175 8 4	1,880 4 10	
Botany West ...	1,537 7 0	.....	180 0 0	673 11 1	3 5 4	2,394 3 5	3,000 0 0	302 7 11	2,780 11 4	
Bourke ...	1,512 15 2	.....	51 15 9	1,364 2 11	224 10 9	3,153 4 7	2,000 0 0	344 16 1	1,033 13 5	
Broughton Creek and Bomaderry ...	371 7 11	.....	.....	866 3 6	.....	1,237 11 5	.....	100 1 3	2,126 11 8	
Broughton Vale ...	123 7 0	.....	6 0 0	57 5 7	.....	186 12 7	.....	23 10 9	71 10 0	
Bowral ...	366 5 3	.....	.....	216 16 4	.....	583 1 7	.....	190 18 11	317 15 8	
Campbelltown ...	690 18 3	.....	.....	637 17 6	.....	1,328 15 9	.....	84 8 0	316 17 0	
Canterbury ...	1,632 6 3	.....	60 11 0	1,497 2 3	72 3 6	3,262 3 0	.....	313 4 9	1,991 13 9	
Carcoar ...	136 4 7	.....	.....	105 10 2	38 7 2	280 1 11	.....	29 18 3	190 3 8	
Casino ...	418 6 0	.....	16 11 6	469 7 4	4 1 0	908 5 10	.....	106 3 6	678 10 1	
Central Shoalhaven ...	224 16 1	.....	10 0 0	.....	.....	234 16 1	.....	71 13 4	41 2 5	
Cobar ...	221 14 11	.....	.....	336 4 0	40 18 6	598 17 5	.....	156 19 6	142 10 4	
Concord ...	722 5 0	.....	3 7 6	911 16 10	18 5 6	1,653 14 10	525 0 0	117 0 0	1,631 0 11	
Cooma ...	467 18 11	.....	10 19 0	725 9 7	.....	1,204 7 6	.....	196 4 0	989 3 5	
Coonamble ...	230 5 0	.....	.....	395 15 3	.....	626 0 3	.....	192 19 7	564 7 2	
Deniliquin ...	900 5 4	.....	.....	504 5 7	3,381 16 0	4,786 6 11	2,955 16 4	758 13 4	4,026 10 7	
Dubbo ...	1,216 5 8	405 8 6	.....	1,045 3 6	1,203 8 11	3,870 6 7	2,000 0 0	273 15 0	2,399 0 1	
Five Dock ...	779 11 6	.....	.....	629 10 2	37 10 6	1,446 12 2	.....	106 10 6	589 17 6	
Forbes ...	783 5 6	1,000 0 0	.....	476 19 0	33 18 8	2,294 3 2	50 0 0	280 15 8	786 3 4	
Gerrington ...	410 14 2	.....	.....	786 5 2	.....	1,196 19 4	.....	43 2 6	990 3 10	
Glen Innes ...	1,426 1 6	148 11 11	17 0 0	1,152 3 6	170 2 4	2,913 19 3	3,000 0 0	516 17 1	938 12 10	
Grenfell ...	367 12 4	.....	.....	486 11 11	2 13 0	856 17 3	.....	132 1 10	1,351 8 10	
Gulgong ...	285 8 4	.....	.....	325 15 8	10 5 1	621 9 1	.....	178 14 11	270 10 0	
Gunnedah ...	225 5 9	.....	5 1 6	.....	.....	230 7 3	.....	56 13 6	100 14 3	
Hamilton ...	1,248 0 5	239 13 3	.....	855 19 9	180 10 7	2,524 4 0	1,500 0 0	257 9 9	3,759 13 1	
Hay ...	1,352 18 4	152 5 1	.....	896 18 5	1,379 15 1	3,781 16 11	3,000 0 0	542 0 0	1,187 2 3	
Inverell ...	896 0 3	.....	.....	745 4 4	71 19 2	1,713 3 9	1,537 12 10	193 4 1	1,236 15 0	
Kempsey ...	321 13 1	.....	.....	321 13 1	53 1 7	696 7 9	.....	33 2 8	236 16 6	
Kogarah ...	885 0 6	.....	75 17 0	.....	.....	960 17 6	.....	148 12 4	542 2 7	
Lambton ...	600 8 9	.....	1 1 0	427 9 9	9 0 6	1,038 0 0	1,000 0 0	91 0 0	1,214 18 7	
Leichhardt ...	4,100 0 0	1,250 0 0	650 0 0	2,900 0 0	400 0 0	9,300 0 0	.....	1,650 0 0	8,906 14 0	
Lismore ...	947 10 4	185 8 10	184 8 0	873 1 9	357 10 2	2,547 19 1	10,000 0 0	366 14 10	2,341 1 5	
Liverpool ...	669 9 6	68 2 2	27 12 2	1,048 11 10	74 5 10	1,888 1 6	4,000 0 0	290 16 0	1,472 18 1	
Manly ...	2,192 16 4	544 17 2	1,559 9 5	3,239 7 6	4,274 18 10	11,811 9 3	.....	470 4 2	9,191 5 7	
Merewether ...	1,065 15 7	.....	500 0 0	545 13 4	0 10 0	2,111 18 11	1,000 0 0	114 17 6	2,287 2 8	
Molong ...	255 13 8	.....	.....	76 12 0	.....	332 5 8	500 0 0	119 15 6	196 8 6	
Musclebrook ...	322 0 6	.....	.....	265 19 9	189 4 5	777 4 8	105 12 2	131 12 7	488 11 2	
Macdonaldtown ...	1,581 15 0	395 8 9	6 14 6	794 1 3	708 9 11	3,486 9 5	.....	198 1 6	683 5 5	
North Illawarra ...	375 6 9	.....	19 10 0	1,071 15 5	.....	1,496 10 2	.....	77 10 0	725 4 6	
Nowra ...	324 8 11	.....	20 0 0	925 14 5	14 1 11	1,284 5 3	.....	43 1 6	1,096 13 2	
Numba ...	220 16 3	.....	.....	104 8 5	31 0 0	356 4 8	.....	74 2 0	270 17 3	
Parke ...	373 10 4	.....	.....	355 6 1	.....	728 16 5	.....	133 14 0	857 15 3	
Penrith ...	960 0 0	.....	181 0 0	454 1 8	0 10 0	1,595 11 8	.....	192 0 0	1,439 0 0	
Prospect and Sherwood ...	968 1 6	.....	.....	422 16 7	100 0 0	1,490 18 1	.....	288 16 8	1,679 16 1	
Raymond Terrace ...	270 3 3	.....	4 8 1	342 8 1	3 0 0	619 19 5	.....	162 2 4	338 0 7	
Ryde ...	1,034 4 0	.....	28 10 0	468 10 0	102 4 0	1,633 8 0	.....	186 0 0	1,416 0 0	
Strathfield ...	1,049 15 0	259 2 5	10 0 0	1,189 8 0	.....	2,508 5 5	2,000 0 0	327 9 4	3,016 6 2	
Silverton ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	
South Singleton ...	203 5 6	.....	.....	414 17 0	10 0 0	628 2 6	400 0 0	204 19 0	253 4 10	
St. Peters ...	1,331 0 6	550 16 3	136 19 6	854 8 7	125 18 0	2,999 2 10	.....	247 18 8	1,901 17 8	
Taree ...	190 0 0	.....	0 6 0	145 13 0	.....	335 19 0	.....	68 11 6	252 13 9	
Tenterfield ...	487 4 3	.....	.....	390 10 3	62 8 6	940 3 0	.....	219 11 6	493 15 4	
Ulladulla ...	449 19 9	.....	.....	580 0 4	36 15 6	1,066 15 7	.....	106 17 3	1,799 16 0	
Umarra ...	480 17 11	.....	.....	445 15 5	30 16 0	957 9 4	.....	105 14 8	675 12 10	
Uralla ...	240 11 3	.....	.....	349 12 3	1 8 6	591 12 0	.....	52 8 9	623 7 7	
Waratah ...	862 7 2	.....	1 1 0	328 18 0	906 10 6	2,098 16 8	.....	134 5 0	2,045 16 4	
Wellington ...	191 15 4	.....	6 17 0	279 8 5	0 7 0	478 7 9	.....	92 9 9	139 16 3	
Wentworth ...	524 8 2	.....	.....	736 6 7	250 3 3	1,510 18 0	.....	112 15 0	568 10 9	
Wickham ...	1,448 9 4	333 1 10	445 4 0	1,873 15 11	246 3 11	4,356 15 0	601 13 0	361 5 6	3,597 1 7	
Wilcannia ...	895 5 7	1,985 12 0	42 8 0	1,636 2 0	328 1 8	3,887 9 3	.....	471 9 2	1,755 17 3	
Yass ...	615 15 10	.....	.....	546 16 5	31 5 7	1,193 17 10	.....	197 10 0	211 13 5	
<b>Total, Municipal Districts.</b>	<b>47,262</b> 1 4	<b>6,72</b> 3 10	<b>4,669</b> 18 3	<b>44,663</b> 15 11	<b>15,555</b> 2 6	<b>118,851</b> 3 7	<b>40,651</b> 17 4	<b>13,893</b> 12 5	<b>89,647</b> 0 4	
<b>Total, Boroughs...</b>	<b>128,474</b> 17 4	<b>32,564</b> 4 0	<b>10,877</b> 7 8	<b>71,958</b> 12 2	<b>44,030</b> 11 9	<b>287,995</b> 12 11	<b>93,042</b> 19 3	<b>23,399</b> 0 4	<b>213,666</b> 5 5	
<b>Grand Total...</b>	<b>175,737</b> 0 5	<b>39,284</b> 7 10	<b>15,547</b> 5 11	<b>116,622</b> 8 1	<b>59,585</b> 14 3	<b>406,756</b> 16 6	<b>133,694</b> 16 7	<b>37,292</b> 12 9	<b>303,313</b> 5 9	

\* Incorporated 22nd October, 1886.

† Water rates

STATISTICS, 1886—MISCELLANEOUS.

MENT—continued.

BOROUGH AND MUNICIPAL DISTRICTS.

EXPENDITURE.					Assets at date of Balancing.	Liabilities at date of Balancing.	Outstanding Loans.		Name of Municipal District.	
For fighting	Miscellaneous.	Interest on Loans.	Repayment of Loans	Total Expenditure.			Amount.	Rate of Interest Charged.		
£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	per cent.			
31 6 9				1,028 6 9	487 16 9			1,000 0 0	8	Adamstown.
385 14 3		75 0 0	100 0 0	1,857 11 3	1,351 7 8	1,063 0 0		900 0 0	7½	Ballina.
70 0 0				473 0 0		26 1 9				Balranald.
201 15 8	171 17 8			2,923 17 11	607 15 4					Bega.
85 7 8		70 0 0		2,211 0 10	115 12 1			1,000 0 0	7	Blayney.
157 12 8		90 0 0		3,330 11 11	802 19 0			3,000 0 0	6	Botany West.
53 14 11	727 1 2	95 6 8		2,254 12 3	1,784 13 9	2,367 15 3		2,000 0 0	7	Bourke.
46 19 0				2,273 11 11	604 6 5					Broughton Creek and Bomaderry.
				95 0 9	157 8 6					Broughton Vale.
				508 14 7	74 7 0					Bowral.
37 15 0	59 12 0	44 0 0		542 12 0	204 7 7			400 0 0	7	Campbelltown.
4 6 3	366 2 1			2,675 6 10	375 13 2					Canterbury.
16 3 9	64 5 1			300 10 9		7 11 4				Carcoar.
	127 0 8	26 4 10	178 15 1	1,116 14 2	262 17 10	173 10 9				Casino.
		36 4 9		149 0 6		423 4 0				Central Shoalhaven.
	99 7 7			398 17 5	321 10 1					Cobar.
	244 3 10	120 0 0	100 0 0	2,212 4 9	433 9 8					Concord.
	61 11 4	4 10 8		1,251 9 5	250 0 0					Cooma.
	90 9 9			847 16 6						Coonamble.
99 4 10	449 2 9	209 16 0	844 3 8	6,387 11 0	6,532 6 9	3,105 16 4		2,955 16 4	7	Denilquin.
343 6 8	1,140 18 4	328 15 0		4,485 15 1	746 6 3	154 4 3		6,000 0 0	6, 7	Dubbo.
2 12 11	620 10 7	137 18 11		1,397 10 5	3,250 0 0	2,300 0 0		1,500 0 0	6½	Five Dock.
	527 4 9	439 8 10		2,033 12 7	290 13 6	93 10 7		7,324 0 0	6	Forbes.
	55 17 5			1,089 3 9	850 0 0					Gerringsong.
76 18 7	296 0 2	219 0 3	1,000 0 0	3,047 8 11	2,172 1 8			3,000 0 0	7	Glen Innes.
7 0 0	119 10 11			1,610 1 7	393 4 0					Grenfell.
	101 15 0			550 19 11	71 6 4	90 0 0				Gulgong.
	25 12 4	11 4 2		184 4 3	46 3 0					Gunnedah.
152 17 10	99 11 9	67 5 0		4,336 17 5	360 0 0	85 12 9		1,500 0 0	7	Hamilton.
118 3 7	606 5 2	451 6 0		2,904 17 0	6,000 0 0	200 0 0		3,000 0 0	8	Hay.
	144 3 8	109 15 9		1,683 18 6				1,537 12 10	8	Inverell.
	87 12 11			357 12 1	42 15 1					Kempsey.
	398 12 10			1,089 7 9		310 1 3				Kogarah.
	37 19 3	140 0 0		1,483 17 10	367 7 3			2,000 0 0	7	Lambton.
1,938 13 4	445 0 0	800 0 0		13,740 7 4				16,000 0 0	5	Leichhardt.
32 16 0	440 7 10	224 17 5	4,300 0 0	7,714 17 6	7,550 0 0			10,000 0 0	6	Lismore.
310 1 9	284 18 9	160 0 0	1,500 0 0	4,018 14 7	1,654 2 10	1,160 0 0		4,000 0 0	6	Liverpool.
500 13 4	1,813 8 9	693 15 6		12,669 7 4	955 10 8			14,000 0 0	6, 7	Manly.
				2,402 0 2				1,000 0 0	8	Merewether.
40 2 8	19 3 5	15 15 9		391 5 10	438 8 2	325 13 2		500 0 0	9	Molong.
		38 16 4		659 0 1	1,200 0 0	368 15 3		532 0 4	7	Musclebrook.
358 3 8	681 18 8	349 0 0		2,270 9 3	1,218 3 8			5,700 0 0	6, 9	Macdonaldtown.
	144 2 8			946 17 2	80 0 0	151 3 11				North Illawarra.
	107 5 10			1,247 0 6	307 15 3	270 12 5				Nowra.
	34 18 10			379 18 1		44 4 4				Numba.
	6 7 9			1,017 17 0	175 18 11					Parkes.
	64 0 0	15 0 0		1,710 0 0						Penrith.
	46 6 0			2,014 18 9						Prospect and Sherwood.
	253 7 3			753 10 2		523 7 4				Raymond Terrace.
	28 10 0	78 0 0	100 0 0	1,809 0 0	175 0 0	205 1 6		1,100 0 0	7	Ryde.
365 4 0	447 8 7			4,156 8 1				2,000 0 0	6½	Strathfield.
										Silverton.
	275 12 11	17 10 5	169 11 11	920 19 1	107 4 5	400 0 0		400 0 0	7	South Singleton.
472 2 3	242 10 4	96 0 0		2,960 0 11	187 0 11			1,600 0 0	6	St. Peters.
				321 5 3		187 2 2		2,000 0 0		Taree.
	79 7 0	21 16 5		814 10 3	355 0 0	400 0 0		400 0 0	8	Penterfield.
	24 16 4			1,931 9 7	200 0 0					Ulladulla.
	41 18 11			823 6 5	490 10 7					Umarra.
	19 12 5			695 8 9	93 11 11					Uralla.
	73 14 6	230 10 1	529 14 8	3,014 0 7	153 17 8			3,000 0 0	7	Waratah.
	21 1 10	0 18 7	61 8 6	315 14 11	192 12 10					Wellington.
		85 17 3		767 3 0	520 5 8	12 0 0				Wentworth.
363 11 3	82 19 6	830 13 9		5,235 11 7				10,000 0 0	7	Wickham.
	377 6 1	606 5 0	300 0 0	3,510 17 6	402 14 0			7,000 0 0	8	Wilcannia.
52 12 8	401 0 5			862 16 6	50 0 0					Yass.
5,548 0 11	13,965 13 11	6,930 13 4	9,183 13 10	139,168 14 9	45,464 6 2	14,448 8 4		114,349 0 0		Total, Municipal Districts.
28,857 13 8	55,161 7 6	18,427 16 11	14,398 1 6	353,910 5 4	91,265 11 10	46,910 7 5		325,800 0 0		Total, Boroughs.
34,405 14 7	69,127 1 5	25,358 10 3	23,581 15 4	493,079 0 1	136,729 18 0	61,358 15 9		440,149 0 0		Grand Total.

LOCAL GOVERNMENT—continued.

No. 21.—RATABLE PROPERTY and VALUE of IMPROVEMENTS in BOROUGHs and MUNICIPAL DISTRICTS.

Name of Borough.	When proclaimed.	Estimated number of dwellings.	Date when last Rate was struck.	Amount of Rate levied in the pound sterling.		Estimated total capital value of Rateable Property.	Annual value upon which Rates are struck.	Roads.		Estimated value of made roads and streets.	Estimated value of Town Hall or Municipal Buildings the property of the Council.
				Ordinary Rate.	Special Rate.			Miles.	Miles.		
				s.	d.	£	£	Miles.	Miles.	£	£
Albury ...	4 June, 1859	750	28 April, 1886	1	0	350,000	35,550	23 $\frac{3}{4}$	42	12,000	3,150
Alexandria ...	{ 27 Aug., 1868 16 June, 1886 }	2,000	2 April, 1886	1	0	800,000	54,500	11	13	35,000	3,000
Armidale ...	13 Nov., 1863	650	— April, 1886	1	0	250,000	25,000	20	29 $\frac{1}{2}$	4,000	6,000
Ashfield ...	28 Dec., 1871	1,680	6 April, 1886	1	0	2,300,000	112,465	25	9	.....	.....
Balmain ...	21 Feb., 1860	4,600	9 Mar., 1886	1	0	3,069,216	174,004	43	7	51,600	25,000
Burhurst ...	13 Nov., 1862	1,619	31 Mar., 1886	1	0	1,191,980	59,599	24	33	38,400	2,000
Burwood... ..	27 Mar., 1874	1,000	15 April, 1886	1	0	600,000	81,287	13	17	27,000	.....
Camperdown ...	13 Nov., 1862	1,150	20 April, 1886	1	0	707,840	35,392	9	4	30,000	5,720
Central Illawarra	19 Aug., 1859	350	14 April, 1886	1	0	380,000	19,000	90	30	14,400	500
Cootamundra ...	20 May, 1884	322	28 April, 1886	1	0	176,098	15,615	2 $\frac{1}{4}$	11 $\frac{1}{2}$	3,000	.....
Cudgegong ...	20 July, 1860	611	4 May, 1886	1	0	410,650	20,533	129	171	38,700	3,000
Darlington ...	11 Aug., 1864	650	12 Mar., 1886	1	0	290,000	26,972	4	...	15,000	3,000
The Glebe ...	1 Aug., 1859	3,132	22 Mar., 1886	1	0	1,563,265	142,115	16 $\frac{1}{2}$	3	.....	7,000
Goulburn ...	4 June, 1859	1,810	6 May, 1886	1	0	937,354	79,065	21	179	23,100	.....
Granville ...	20 Jan., 1885	642	10 May, 1887	1	0	460,910	46,091	...	...	.....	.....
Grafton ...	19 July, 1859	1,020	5 May, 1886	1	0	593,241	34,791	24	24	.....	.....
Gosford ...	10 Nov., 1886	136	20 April, 1887	1	0	69,856	7,000	...	...	.....	.....
Hill End... ..	6 Aug., 1873	175	6 April, 1886	1	0	28,798	2,880	10 $\frac{1}{2}$	2 $\frac{1}{2}$	12,500	.....
Hunter's Hill ...	5 Jan., 1861	380	11 May, 1886	1	0	590,194	29,470	8	12	8,000	2,000
Kiama ...	26 July, 1886	291	3 Dec., 1886	1	0	24,855	11,059	...	...	.....	.....
Kiama ...	11 Aug., 1859	509	6 May, 1886	1	0	441,024	22,051	30	90	30,400	500
Marrickville ...	1 Nov., 1861	2,300	1 Dec., 1886	1	0	898,800	89,880	50	50	90,000	5,000
Maitland East ...	10 Mar., 1862	450	5 May, 1886	1	0	270,000	17,000	26	6	3,000	.....
Maitland West ...	13 Nov., 1863	1,294	7 May, 1886	1	0	617,226	59,530	32	2	.....	.....
Morpeth ...	1 Dec., 1865	256	13 April, 1886	1	0	116,282	8,452	6	3 $\frac{3}{4}$	.....	.....
Mudgee ...	21 Feb., 1860	550	14 April, 1886	1	0	349,800	22,570	7	7 $\frac{1}{2}$	7,000	5,500
Narrabri ...	5 Sept., 1883	359	18 May, 1886	1	0	184,440	15,370	6	10	4,500	.....
Narrandera ...	17 Mar., 1885	196	12 May, 1887	1	0	99,800	9,980	2	16 $\frac{1}{2}$	4,300	1,000
Newcastle ...	{ 7 June, 1859 14 Sept., 1886 }	2,578	12 April, 1886	1	0	1,428,310	142,831	13 $\frac{1}{2}$	11 $\frac{1}{2}$	80,000	2,500
Newtown ...	12 Dec., 1862	3,400	2 Mar., 1886	1	0	1,437,456	133,196	14	5	.....	7,000
North Willoughby	23 Oct., 1865	500	7 May, 1886	1	0	1,070,140	51,561	15	45	.....	.....
Orange ...	9 Jan., 1860	585	27 April, 1886	1	0	445,650	18,590	14	1 $\frac{1}{2}$	31,800	.....
Paddington ...	17 April, 1860	3,053	13 April, 1886	1	0	3,176,580	142,946	19	...	125,000	3,500
Parramatta ...	27 Nov., 1861	1,734	28 April, 1886	1	0	460,000	79,879	72	17	70,000	12,000
Petersham ...	14 Dec., 1871	1,680	23 Mar., 1886	1	0	1,196,988	92,076	35	15	.....	5,000
Plattsburg ...	27 Dec., 1876	601	31 Mar., 1886	1	0	265,220	26,522	5 $\frac{1}{2}$	4 $\frac{1}{2}$	14,399	.....
Queanbeyan ...	2 Feb., 1885	275	1 Jan., 1887	1	0	104,570	10,457	3	8	.....	.....
Randwick ...	22 Feb., 1859	750	3 May, 1887	1	0	932,850	83,285	24	46	36,000	9,000
Redfern ...	11 Aug., 1859	4,000	— Mar., 1886	1	0	1,672,460	167,246	19	9	102,488	5,400
Richmond ...	18 June, 1872	223	17 Feb., 1886	1	0	139,582	6,979	7 $\frac{1}{2}$	0 $\frac{1}{2}$	5,000	.....
Shellharbour ...	4 June, 1859	250	21 April, 1886	1	0	195,870	13,989	50	6	1,680	400
Singleton ...	30 Jan., 1866	356	29 April, 1886	1	0	144,660	14,466	6	5 $\frac{1}{2}$	10,000	300
St. Leonards East	17 Aug., 1860	972	19 April, 1886	1	0	800,000	65,453	10	...	.....	3,500
St. Leonards ...	31 May, 1867	1,009	6 July, 1886	1	0	1,230,000	79,954	20	45	39,000	.....
Tamworth ...	17 Mar., 1876	715	23 Mar., 1886	1	0	355,750	30,526	15	17	16,500	750
Victoria ...	20 Jan., 1871	6c3	29 Mar., 1886	1	0	800,200	40,010	5 $\frac{1}{2}$	2 $\frac{1}{2}$	29,632	.....
Wallsend ...	27 Feb., 1874	629	30 Mar., 1886	1	0	321,200	32,120	10	4	16,873	500
Waterloo... ..	16 May, 1860	1,666	25 Mar., 1886	1	0	697,729	64,253	12	10	48,000	4,500
Waverley ...	13 June, 1859	1,486	4 May, 1886	1	0	1,766,420	88,321	15	32	.....	2,000
Windsor ...	4 Mar., 1871	430	23 Mar., 1886	1	0	123,470	12,347	9	4	.....	.....
Wollongong ...	22 Feb., 1859	482	2 April, 1886	1	0	642,185	30,887	15	10	.....	8,000
Woollahra ...	17 April, 1860	1,600	12 April, 1886	1	0	2,173,640	108,682	22	44	.....	.....
Wagga Wagga ...	15 Mar., 1870	811	6 May, 1886	1	0	850,543	42,527	20	30	12,360	3,000
Young ...	3 Aug., 1882	491	6 May, 1886	1	0	276,860	19,965	20	30	17,500	.....
Total Boroughs	.....	59,761	.....	.....	.....	40,479,962	2,856,289	1,102 $\frac{3}{4}$	1,170 $\frac{5}{12}$	1,099,132	140,220

STATISTICS, 1886—MISCELLANEOUS.

LOCAL GOVERNMENT—continued.

No. 21 (continued).—RATABLE PROPERTY and VALUE of IMPROVEMENTS in BOROUGHs and MUNICIPAL DISTRICTS.

Name of Municipal District.	When proclaimed.	Estimated number of dwellings.	Date when last rate was struck.	Amount of rate levied in the pound sterling.		Estimated total capital value of ratable property.	Annual value upon which rates are struck.	Roads.		Estimated value of made roads and streets.	Estimated value of Town-hall or Municipal buildings the property of the Council.
				Ordinary rate.	Special rate.			Made.	Un-made.		
				s.	d.	£	£	miles.	miles.	£	£
Adamstown ...	31 Dec., 1885	250	13 May, 1886	1	0	132,000	3,600	1½	2	2,000	.....
Ballina ...	4 June, 1883	132	1 Feb., 1887	1	0	49,118	5,262	½	3¼	1,452	.....
Balranald ...	27 Sept., 1882	150	1 April, 1886	1	0	18,361	6,669	½	4	1,250	.....
Bega ...	12 Nov., 1883	410	12 Mar., 1886	1	0	339,866	21,744	11	14	8,243	.....
Blayney ...	31 Oct., 1882	244	25 Mar., 1886	1	0	137,127	11,160	7½	9½	3,826	3,000
Botany West ...	13 Jan., 1871	325	29 April, 1886	1	0	496,790	29,453	16	20	.....	500
Bourke ...	3 July, 1878	486	24 Mar., 1886	1	0	401,142	32,235	4	7½	2,360	160
Broughton Creek and Bomaderry	24 Oct., 1868	268	17 April, 1886	1	0	247,590	8,253	60	16	10,000	.....
Broughton Vale...	22 April, 1871	102	10 April, 1886	1	0	12,326	2,467	30	40	500	.....
Bowral ...	17 Feb., 1886	250	8 July, 1886	1	0	170,818	10,922	...	...	.....	.....
Campbelltown ...	21 Jan., 1882	384	15 April, 1886	1	0	139,040	6,308	30	...	14,960	1,000
Canterbury ...	17 Mar., 1879	461	7 April, 1886	1	0	446,964	35,464	45	30	.....	.....
Carcoar ...	11 Nov., 1878	135	11 Mar., 1886	1	0	108,000	5,396	3	6	5,000	.....
Casino ...	14 Jan., 1880	300	16 Mar., 1887	1	0	53,798	8,849	9	28	5,000	.....
Central Shoalhaven	7 Nov., 1878	86	6 April, 1886	1	0	110,000	2,238	17	3	2,000	.....
Cobar ...	18 Mar., 1884	233	14 April, 1886	0	6	28,490	8,822	...	...	.....	.....
Concord ...	11 Aug., 1883	230	15 April, 1886	1	0	176,090	17,609	9½	9½	.....	250
Cooma ...	6 Nov., 1879	275	23 Mar., 1886	0	10	286,912	27,864	8	37	8,000	.....
Coonamble ...	3 May, 1880	195	6 April, 1886	1	0	225,342	11,267	2½	4½	4,500	.....
Deniliquin ...	16 Dec., 1868	560	27 April, 1886	1	0	211,814	22,542	12	12	14,000	4,200
Dubbo ...	16 Feb., 1872	570	22 April, 1886	1	0	270,000	25,562	20	...	12,970	1,100
Five Dock ...	25 July, 1871	260	23 Mar., 1886	1	0	600,000	22,771	25	36	13,780	2,500
Forbes ...	27 April, 1870	439	29 Mar., 1887	1	0	209,700	20,970	34½	25½	8,100	50
Gerrington ...	22 April, 1871	160	10 May, 1887	1	0	180,680	9,934	20	44	16,000	200
Glen Innes ...	17 June, 1872	800	— Mar., 1886	1	0	262,078	26,208	34	42	6,000	1,500
Grenfell ...	4 May, 1883	166	20 April, 1886	1	0	79,289	7,004	1½	7½	1,351	.....
Gulgong ...	5 Feb., 1876	358	14 April, 1886	1	0	86,000	8,500	52	20	6,600	.....
Gunnedah ...	{ 17 Sept., 1885 } { 22 Feb., 1886 }	210	6 July, 1886	1	0	90,590	8,684	4½	21	4,250	.....
Hamilton ...	{ 11 Dec., 1871 } { 14 Sept., 1886 }	633	21 April, 1886	1	0	374,747	30,340	5½	4½	18,822	800
Hay ...	10 June, 1872	500	15 April, 1886	1	0	321,426	25,140	5	16	7,600	2,000
Inverell ...	4 Mar., 1872	500	10 May, 1886	1	0	140,000	14,000	22	13	20,000	1,000
Kempsey ...	9 June, 1886	470	— Sept., 1886	1	0	320,000	16,000	16	30	8,000	.....
Kogarah ...	22 Dec., 1885	300	29 June, 1886	1	0	315,000	30,865	9	48	1,540	.....
Lambton ...	24 June, 1871	623	6 April, 1886	1	0	168,555	36,580	8	4	10,000	.....
Leichhardt ...	14 Dec., 1871	2,420	7 June, 1886	1	0	820,000	96,400	40	20	.....	.....
Lismore ...	4 Mar., 1879	400	6 May, 1886	1	0	94,878	17,498	4	16	15,000	.....
Liverpool ...	27 June, 1872	535	3 May, 1886	1	0	186,000	13,389	20	...	.....	1,500
Manly ...	6 Jan., 1877	580	— April, 1887	1	0	1,110,700	77,769	...	...	.....	.....
Merewether ...	20 Aug., 1885	519	19 April, 1886	1	0	67,430	19,836	½	...	3,000	.....
Molong ...	13 Nov., 1878	315	10 Feb., 1886	1	0	151,376	8,253	12	39	1,200	.....
Musclebrook ...	13 April, 1870	212	21 April, 1886	1	0	87,330	7,277	4½	3	4,031	.....
Macdonaldtown ...	23 May, 1872	966	19 April, 1886	1	0	316,350	31,635	4½	1½	7,270	900
North Illawarra...	24 Oct., 1868	291	4 May, 1886	1	0	198,385	8,758	22	16	4,000	800
Nowra ...	29 Dec., 1871	210	2 Aug., 1886	1	0	80,000	8,000	16	12	4,000	.....
Numba ...	24 Oct., 1868	120	1 April, 1886	1	0	46,000	4,997	25	...	241	.....
Parkes ...	28 Feb., 1883	348	3 May, 1886	1	0	72,000	8,000	9	24	1,478	500
Penrith ...	12 May, 1871	...	.....	1	0	400,000	23,000	48	36	.....	1,000
Prospect and Sherwood...	5 July, 1872	340	17 April, 1886	1	0	241,440	24,144	31	47	.....	500
Raymond Terrace	7 July, 1884	159	31 Mar., 1886	1	0	60,000	5,403	1½	6½	700	.....
Ryde ...	{ 11 Nov., 1870 } { 11 June, 1872 }	405	19 Mar., 1886	1	0	275,000	25,000	36	18	.....	1,000
Strathfield ...	2 June, 1885	205	12 April, 1886	1	0	261,460	26,146	...	16	.....	.....
Silverton ...	22 Oct., 1886	275	12 April, 1887	1	0	160,580	16,058	...	...	.....	.....
South Singleton...	10 Dec., 1884	101	7 April, 1887	1	0	21,750	2,175	2½	3	834	100
St. Peters ...	13 Jan., 1871	904	24 Mar., 1887	1	0	368,588	33,505	15	2	.....	3,000
Taree ...	25 Mar., 1885	136	1 Oct., 1886	1	0	40,000	4,000	¼	2	400	.....
Tenterfield ...	22 Nov., 1871	388	10 May, 1886	1	0	145,334	13,240	24	50	10,000	900
Ulladulla ...	14 April, 1874	350	— June, 1886	1	0	120,000	12,000	...	...	.....	.....
Ulmarra ...	16 Nov., 1871	251	7 April, 1886	1	0	212,940	10,647	56	132	1,120	170
Uralla ...	24 April, 1882	87	22 Mar., 1886	1	0	58,805	4,642	1¼	7½	4,840	.....
Waratah ...	23 Feb., 1871	360	27 April, 1886	1	0	180,000	18,000	15	15	10,000	.....
Wellington ...	13 May, 1879	269	8 April, 1886	1	0	81,380	8,138	4½	33	1,707	350
Wentworth ...	23 Jan., 1879	213	1 May, 1886	1	0	112,000	10,256	6	8½	2,000	.....
Wickham ...	{ 25 Feb., 1871 } { 14 Sept., 1886 }	910	14 April, 1886	1	0	365,000	29,375	9	2½	21,600	350
Wilcannia ...	3 Feb., 1883	294	5 April, 1886	1	0	208,540	19,053	1¼	10	3,250	.....
Yass ...	12 Mar., 1873	294	23 Mar., 1886	1	0	144,127	14,971	10	24	2,640	.....
Total Municipal Dis-tricts.	.....	24,322	.....	...	...	14,138,486	1,161,347	943½	1,086¼	†137,415	29,330
Total Boroughs	.....	59,761	.....	...	...	40,479,962	2,856,289	1,102¾	1,170½	†109,9132	140,220
Grand Total	.....	84,083	.....	...	...	54,618,448	4,017,636	2,046¼	2,256¾	†1416547	169,550

† Not complete.

LOCAL GOVERNMENT—continued.

No. 22.—ELECTORS and VOTERS for ALDERMEN in BOROUGHs and MUNICIPAL DISTRICTS.

Name of Borough.	Electors on the Roll						Electors who voted at the last Annual Election						Number of Wards open for Election of Aldermen at last Election	Number of Wards Elections contested in	Number of Aldermen elected	Total Number of Aldermen representing the Municipality	Number of Wards in Municipality		
	Electors entitled to				Total Number		Number who recorded				Total Number								
	One Vote	Two Votes	Three Votes	Four Votes	Resident	Non Resident	Total	One Vote	Two Votes	Three Votes	Four Votes	Resident						Non Resident	Total
Albury ..	494	289	56	35	806	68	874	173	190	41	26	423	7	430	..	..	3	9	..
Alexandria ...	525	442	123	57	800	347	1,147	*	...	...	...	...	...	...	4	..	4	12	4
Armidale ..	225	156	51	32	396	68	464	40	66	22	22	146	4	150	..	..	3	9	..
Ashfield ..	859	1,065	323	153	1,500	900	2,400	..	..	..	..	..	..	..	3	2	3	3	3
Balmain ..	1,380	1,175	368	214	2,840	297	3,137	706	666	157	53	1,510	72	1,582	4	3	4	12	4
Bathurst ..	537	379	327	165	1,353	55	1,408	347	229	133	23	717	15	732	4	2	3	9	3
Burwood ...	390	349	203	73	..	..	1,015	..	..	..	..	..	..	..	3	2	3	9	3
Camperdown	358	317	79	24	653	125	778	..	..	..	..	..	..	..	3	3	3	9	3
Central Illawarra	159	136	66	18	369	10	379	*	..	..	..	..	..	..	3	..	3	9	..
Cootamundra	193	73	30	24	229	91	320	44	39	22	13	111	7	118	..	..	3	9	..
Cudgegong ...	327	235	35	25	611	11	622	*	..	..	..	..	..	..	..	..	3	9	..
Darlington ..	48	233	80	23	247	137	384	25	142	52	13	184	48	232	..	..	3	9	..
Glebe, The	172	790	357	237	1,022	534	1,556	38	218	105	70	318	113	431	4	2	4	12	4
Goulburn ..	1,083	585	151	87	1,869	37	1,906	*	..	..	..	..	..	..	3	..	3	9	3
Granville ...	928	179	39	39	612	573	1,185	167	63	24	11	247	18	265	..	..	3	9	..
Grafton ..	457	266	76	50	545	304	849	..	..	..	..	..	..	..	4	..	4	12	4
Gosford	†	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	6	6	2
Hill End ..	174	15	6	1	156	40	196	*	..	..	..	..	..	..	..	..	3	9	..
Hunter's Hill	318	159	64	28	421	148	569	31	26	10	3	70	..	70	3	1	3	9	3
Junee ..	218	80	21	13	250	82	332	55	36	9	7	106	1	107	..	..	3	9	..
Kiama ...	246	182	45	12	466	19	485	41	46	12	2	101	..	101	3	1	3	9	3
Marrickville	1,261	635	205	94	..	..	2,195	*	..	..	..	..	..	..	3	..	3	9	3
Maitland East	324	209	43	27	534	69	603	81	84	20	14	196	3	199	..	..	3	9	..
Matland West	924	341	100	36	..	..	1,401	430	224	64	31	749	..	749	..	..	4	12	..
Morpeth ...	178	70	22	17	44	243	287	58	27	11	7	101	2	103	..	..	3	9	..
Mudgee	217	134	62	27	393	47	440	*	..	..	..	..	..	..	..	..	3	9	..
Narrabri ..	229	121	32	21	360	43	403	119	90	20	19	239	9	248	..	..	3	9	..
Narrandera	49	94	21	14	162	16	178	*	..	..	..	..	..	..	..	..	2	6	..
Newcastle ..	1,370	1,050	235	220	2,765	110	2,875	752	500	200	170	1,602	20	1,622	4	3	4	12	4
Newtown	628	1,455	352	231	..	..	2,666	*	..	..	..	..	..	..	4	..	4	12	4
North Willoughby†	621	204	36	47	415	493	908	..	..	..	..	..	..	..	2	..	2	6	2
Orange ..	638	351	125	54	1,132	36	1,168	..	..	..	..	..	..	..	3	..	3	9	3
Paddington ...	553	2,532	496	246	..	..	3,827	230	835	223	141	..	..	1,429	4	4	5	12	4
Parramatta	1,130	406	130	55	1,510	211	1,721	..	..	..	..	..	..	..	4	3	4	12	4
Petersham	397	692	207	74	1,023	347	1,370	..	..	..	..	..	..	..	4	4	4	12	4
Plattsburg	536	82	36	11	595	70	665	245	55	31	10	324	17	341	..	..	3	9	..
Queanbeyan .	153	79	14	8	214	40	254	79	55	10	5	146	3	149	..	..	3	9	3
Randwick ..	916	365	176	93	..	..	1,550	*	..	..	..	..	..	..	..	..	3	9	..
Redfern ..	284	714	287	235	..	..	1,520	*	..	..	..	..	..	..	4	..	4	12	4
Richmond ..	168	71	12	5	208	48	256	117	51	10	4	165	17	182	..	..	3	9	..
Shellharbour	101	94	45	9	236	13	249	..	..	..	..	..	..	..	..	..	4	9	..
Singleton	218	105	42	32	314	83	397	54	42	25	11	121	11	132	..	..	3	9	..
St Leonards, East	285	176	155	121	700	37	737	..	..	..	..	..	..	..	..	..	3	9	..
St Leonards	985	599	168	111	..	..	1,863	..	..	..	..	..	..	..	3	1	3	9	3
Tamworth	444	198	58	41	660	81	741	66	19	2	16	103	..	103	3	1	3	9	3
Victoria	122	205	94	52	338	135	473	28	82	50	32	169	23	192	..	..	3	9	..
Wallsend ...	640	24	12	4	680	..	680	271	16	10	4	301	..	301	..	..	3	9	..
Waterloo	139	529	130	78	772	104	876	83	300	93	50	476	50	526	..	..	3	9	..
Waverley ..	988	454	182	134	772	986	1,758	..	..	..	..	..	..	..	3	3	3	9	3
Windsor ..	254	194	49	19	480	36	516	63	47	13	6	126	3	129	3	2	3	9	3
Wollongong .	36	147	42	18	532	40	572	86	62	22	14	182	2	184	..	..	3	9	..
Woollahra ..	404	904	260	209	..	..	1,777	*	..	..	..	..	..	..	3	..	3	9	3
Wagga Wagga	404	245	83	59	726	65	791	*	..	..	..	..	..	..	3	..	3	9	3
Young ..	239	105	31	23	386	12	398	76	58	24	17	175	..	175	..	..	3	9	..
Total Boroughs	25,255	20,689	6,442	3,735	31,096	7,211	56,121	4,505	4,268	1,415	794	8,359	445	11,110	96	47	177	513	96

\* No contest

† Incorporated 10 November, 1886.

‡ Figures for 1885.

STATISTICS, 1886—MISCELLANEOUS.

LOCAL GOVERNMENT—continued.

No. 22 (continued).—ELECTORS and VOTERS for ALDERMEN in BOROUGHs and MUNICIPAL DISTRICTS.

Name of Municipal District.	Electors on the Roll.							Electors who voted at the last Annual Election.							Number of Wards open for Election of Aldermen at last Election.	Number of Wards Election contested in.	Number of Aldermen elected.	Total number of Aldermen representing the Municipality.	Number of Wards in Municipality.
	Electors entitled to				Total number.			Number who recorded				Total number.							
	One Vote.	Two Votes.	Three Votes.	Four Votes.	Resident.	Non-Resident.	Total.	One Vote.	Two Votes.	Three Votes.	Four Votes.	Resident.	Non-Resident.	Total.					
Adamstown ...	260	16	2	2	264	16	280	96	13	2	1	111	1	112	...	...	...	...	
Ballina ...	97	56	9	11	124	49	173	25	33	5	10	67	6	73	...	...	...	...	
Bega ...	213	188	62	43	...	...	500	49	65	35	29	...	...	178	...	...	...	...	
Balranald ...	91	37	7	11	114	32	146	41	24	5	5	75	...	75	...	...	...	...	
Blayney ...	132	62	23	22	171	68	239	35	47	20	28	114	6	120	...	...	...	...	
Botany West ...	871	189	39	29	375	753	1,128	...	...	...	...	...	...	...	...	...	...	...	
Bourke ...	233	159	63	45	371	129	500	2	10	16	14	41	1	42	3	...	4	9	
Broughton Creek and Bomaderry.	119	77	2	1	198	1	199	...	...	...	...	...	...	...	3	...	5	9	
Broughton Vale ...	66	33	3	...	86	16	102	...	...	...	...	...	...	...	...	...	1	6	
Bowral ...	188	87	29	8	198	114	312	65	52	18	3	132	6	138	...	...	...	...	
Campbelltown ...	443	128	43	14	351	277	628	...	...	...	...	...	...	...	...	...	...	...	
Canterbury ...	1,216	190	34	39	900	579	1,479	...	...	...	...	...	...	...	2	...	3	6	
Carcoar ...	120	39	6	7	140	32	172	...	...	...	...	...	...	...	...	...	...	...	
Casino ...	189	74	28	11	184	118	302	36	31	17	10	84	10	94	...	...	...	...	
Central Shoalhaven...	53	35	7	1	93	3	96	8	15	2	...	25	...	25	...	2	1	...	
Cobar ...	262	56	17	16	324	27	351	66	26	13	8	113	...	113	...	...	...	...	
Concord ...	224	115	25	13	209	168	377	47	52	15	6	103	17	120	...	...	...	...	
Cooma ...	210	105	20	17	314	38	352	51	42	11	13	114	3	117	...	...	...	...	
Coonamble ...	58	73	28	14	155	18	173	17	31	13	10	71	...	71	...	...	...	...	
Deniliquin ...	220	130	40	36	350	76	426	...	...	...	...	...	...	...	...	...	...	...	
Dubbo ...	295	180	96	89	613	47	660	56	60	29	37	182	...	182	3	2	...	3	
Five Dock ...	378	143	51	36	210	398	608	38	32	22	4	82	14	96	3	1	...	3	
Forbes ...	404	112	35	18	515	54	569	71	41	14	8	132	2	134	...	...	...	...	
Gerrigong ...	60	50	32	8	138	12	150	...	...	...	...	...	...	...	...	...	...	...	
Glen Innes ...	323	23	59	27	591	48	639	41	68	27	10	146	...	146	3	2	...	3	
Grenfell ...	151	37	19	6	165	48	213	56	24	15	6	100	1	101	...	...	...	...	
Gulgong ...	290	86	12	6	350	44	394	104	40	9	3	156	...	156	...	...	...	...	
Gunnedah ...	183	62	14	6	202	63	265	121	...	...	...	108	13	121	...	...	...	...	
Hamilton ...	743	98	21	15	773	104	877	170	21	9	6	193	13	206	...	...	...	...	
Hay ...	201	85	46	49	260	121	381	21	20	14	22	75	2	77	...	...	...	...	
Inverell ...	242	217	46	20	495	30	525	91	96	36	14	231	6	237	3	3	...	3	
Kempsey ...	299	108	21	14	331	111	442	307	21	12	5	387	18	405	...	...	...	...	
Kogarah ...	764	132	44	34	263	711	974	77	50	28	12	125	42	167	...	...	...	...	
Lambton ...	466	56	22	6	534	16	550	203	31	16	6	256	...	256	...	...	...	...	
Leichhardt ...	1,653	961	218	88	...	...	2,920	...	...	...	...	...	...	...	4	3	4	12	
Lismore ...	304	137	42	26	427	82	509	109	78	33	20	235	5	240	...	...	...	4	
Liverpool ...	1,370	157	44	30	442	1,159	1,601	121	70	14	68	221	2	223	...	...	...	...	
Manly ...	371	219	106	105	...	...	801	...	...	...	...	...	...	...	...	...	...	...	
Merewether ...	440	59	16	6	515	6	521	208	...	...	...	207	1	208	...	...	...	...	
Molong ...	120	75	9	10	176	38	214	...	...	...	...	...	...	...	...	...	...	...	
Musclebrook ...	118	68	19	7	181	31	212	33	27	12	3	75	...	75	...	...	...	...	
Macdonald Town ...	249	320	68	36	594	79	673	41	70	15	7	128	5	133	3	1	...	3	
North Illawarra †	224	42	4	3	243	30	273	74	21	3	...	98	...	98	...	...	...	...	
Nowra ...	294	80	17	2	263	130	393	...	...	...	...	...	...	...	3	...	...	3	
Numba ...	51	55	1	1	105	3	108	...	...	...	...	...	...	...	...	...	...	...	
Parkes ...	216	63	21	7	279	28	307	77	38	11	6	131	1	132	...	...	...	...	
Penrith †	781	205	29	6	656	365	1,021	472	207	21	4	675	29	704	...	...	...	...	
Prospect & Sherwood	1,181	140	39	18	343	1,035	1,378	...	...	...	...	...	...	...	...	...	...	...	
Raymond Terrace ...	122	58	15	5	150	50	200	52	38	8	3	98	3	101	...	...	...	...	
Ryde ...	232	222	36	17	383	124	507	...	...	...	...	...	...	...	3	1	3	9	
Strathfield ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Singleton South ...	95	29	8	3	83	52	135	56	17	5	2	63	17	80	...	...	...	...	
St. Peters ...	515	255	51	42	...	...	863	...	...	...	...	...	...	...	3	2	3	9	
Silverton ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Taree ...	77	49	10	3	112	27	139	39	10	36	1	74	12	86	...	...	...	...	
Tenterfield ...	340	104	20	9	289	184	473	62	46	10	6	124	...	124	...	...	...	...	
Ulladulla ...	264	68	43	14	349	40	389	17	14	4	5	40	...	40	...	...	...	...	
Ulladulla ...	90	157	19	...	251	15	266	...	...	...	...	...	...	...	3	...	...	3	
Uralla ...	87	35	9	2	99	34	133	29	22	7	2	59	1	60	...	...	...	...	
Waratah ...	639	116	35	16	360	446	806	84	40	16	8	123	25	148	...	...	...	...	
Wellington ...	270	50	12	8	242	98	340	191	42	9	7	247	2	249	...	...	...	...	
Wentworth ...	122	84	10	15	185	46	231	37	47	8	13	105	...	105	...	...	...	...	
Wickham ...	811	251	68	21	749	402	1,151	334	205	52	12	485	118	603	...	...	...	...	
Wilcannia ...	98	85	26	32	184	57	241	28	46	16	22	112	...	112	...	...	...	...	
Yass ...	213	110	20	13	318	38	356	...	...	...	...	...	...	...	3	...	3	9	
Total Municipal Districts.	21,411	7,699	2,020	1,219	18,339	8,920	32,349	4,018	2,983	683	399	6,523	382	7,083	44	19	175	510	
Total Boroughs..	25,255	20,689	6,442	3,735	31,096	7,211	56,121	4,505	4,268	1,415	794	8,359	445	11,110	96	47	177	513	
General Total ...	46,666	28,388	8,462	4,954	49,435	16,131	88,470	8,523	7,251	2,098	1,193	14,882	827	18,193	140	66	352	1,023	

\* No contest.

† Figures for 1885.

‡ Incorporated 22nd October, 1886



## DREDGING PLANT AND TUGS.

No. 23.—DREDGING PLANT AND TUGS in the Service of the HARBOURS and RIVERS DEPARTMENT during the year 1886.

DREDGES.									
Name of Dredge.	Description.	Size.		Engines.	Cyl.	W.P.	Stroke.		Dredges to.
		ft.	ft.		in.	lb.	ft.	in.	ft.
"Newcastle"	Double ladder	145	× 34	Pair Condensing ...	23	24	3	0	32
"Samson"	do	110	× 24	Pair High Pressure ...	16	35	3	0	35
"Vulcan"	do	110	× 24	do do ...	14	25	2	6	24
"Hunter"	do	110	× 30	Single Condensing ...	32	10	3	6	26
"Hercules"	Single ladder	100	× 26	do ...	24	7	3	6	26
"Fitz Roy"	do	100	× 25	Single High Pressure ...	15½	30	2	6	15
"Clarence"	do	103	× 23	do do ...	18	40	5	6	17
"Archimedes"	do	68	× 20	do do ...	15½	45	2	6	18
"Pluto"	do	67	× 25	do do ...	16	45	2	6	12
"Titan"	do	55	× 18	do do ...	13	45	2	6	8
"Charon"	do	68	× 20	do do ...	15½	45	2	6	18
"Ulysses"	do	100	× 27	Single Diagonal Condensing ...	18	40	4	0	20
"Minos"	do	100	× 27	do do ...	18	40	4	0	20
"Alcides"	do	100	× 27	do do ...	18	40	4	0	20
"Alpha"	Grab	50½	× 22½	Pair Vertical High Pressure ...	6	60	0	14	25
"Beta"	do	50½	× 22½	do do ...	6	60	0	14	25
"Gamma"	do	52	× 22½	do do ...	7	60	0	14	25
"Delta"	do	52	× 22½	do do ...	7	60	0	14	25
"Epsilon"	do	52	× 22½	do do ...	7	60	0	14	25
"Zeta"	do	52	× 22½	do do ...	7	60	0	14	25
"Eta"	do	52	× 22½	do do ...	7	60	0	14	25
"Theta"	do	52	× 22½	do do ...	7	60	0	14	25
"Iota"	do	52	× 22½	do do ...	7	60	0	14	25

  

TUGS.									
Name of Tug.	Size.		Engines.	Cylinder.	Stroke.	Working Pressure.			
	ft.	in.		in.	in.	lb.			
"Ajax"	130	0 × 21	Pair Jet Condensing ...	30	20	20			
"Thetis"	132	6 × 20	do do ...	30	20	20			
"Dione"	95	0 × 12	Pair Compound Surface Condensing...	32 & 16	30	40			
"Cyclops"	80	0 × 15	Pair High Pressure ...	15	30	40			
"Ceres"	111	0 × 15	Compound Surface Condensing ...	36 & 20	20	20			
"Charybdis"	82	0 × 14	External Pipe Condensing ...	18	36	45			
"Little Nell"	89	0 × 12	Pair Surface Condensing ...	16	16	50			
"Achilles"	89	0 × 12	Pair High Pressure ...	16	16	60			
"Orestes"	108	0 × 16	Compound Surface Condensing ...	36 & 18½	24	85			
"Rhea"	91	0 × 18	do do do ...	28 & 15	20	90			
"Pearl"	110	0 × 12	Single High Pressure ...	21	36	45			
"Hector"	70	0 × 14	do do ...	18	36	45			
"Ganymede"	64	0 × 14	Compound Surface Condensing ...	18 & 9	14	90			
"Seylla"	50	0 × 9	Pair High Pressure ...	7	10	50			
"Athena"	61	0 × 12	Pair Compound Surface Condensing...	14½ & 8	12	75			
"Neptune" (Hopper Barge)	152	0 × 24	do do do ...	20 & 36	24	80			
"Juno" (Hopper Barge)	152	0 × 24	do do do ...	20 & 36	24	80			

STATISTICS, 1886—MISCELLANEOUS.

LANDS SALE AND OCCUPATION.

No. 24.—LANDS ALIENATED and UNALIENATED in each County of the Colony on the 31st December, 1886.

Counties.				*Area Alienated.	Area Unalienated.	Counties.				*Area Alienated.	Area Unalienated.
OLD SETTLED DISTRICTS.											
				Acres	Acres					Acres	Acres
Argyle	...	...	...	447,497	801,783	King	...	...	...	180,662	959,338
Bathurst	...	...	...	536,295	654,105	Macquarie	...	...	...	195,473	1,330,287
Bligh	...	...	...	286,917	790,203	Murray	...	...	...	435,206	1,002,034
Brisbane	...	...	...	485,853	1,014,467	Northumberland	...	...	...	518,990	980,650
Camden	...	...	...	477,472	1,002,848	Phillip	...	...	...	152,169	882,881
Cook	...	...	...	185,133	865,027	Roxburgh	...	...	...	201,330	770,830
Cumberland	...	...	...	511,725	403,155	St. Vincent	...	...	...	364,890	1,368,870
Durham	...	...	...	927,799	427,401	Wellington	...	...	...	245,840	814,160
Georgiana	...	...	...	445,443	786,077	Westmoreland	...	...	...	117,399	1,142,201
Gloucester	...	...	...	750,507	1,143,893						
Hunter	...	...	...	89,389	1,226,451	Total	...	...	...	7,555,989	18,366,661
OTHER DISTRICTS.											
Arrawatta	...	...	...	116,843	1,234,837	Kilfera	...	...	...	16,049	1,018,191
Ashburnham	...	...	...	83,227	1,422,953	Killara	...	...	...	6,845	1,692,995
Auckland	...	...	...	88,670	1,078,690	Landsborough	...	...	...	4,497	1,183,343
Baradine	...	...	...	43,264	1,298,176	Leichhardt	...	...	...	207,556	1,902,124
Barrona	...	...	...	3,877	1,358,043	Lincoln	...	...	...	54,635	1,315,605
Benarba	...	...	...	106,369	1,603,631	Livingstone	...	...	...	9,089	2,335,861
Beresford	...	...	...	66,213	834,917	Manara	...	...	...	28,365	2,527,155
Bland	...	...	...	181,647	1,405,553	Menindie	...	...	...	5,720	1,509,800
Blaxland	...	...	...	45,740	2,521,850	Mitchell	...	...	...	174,855	716,025
Booroondarra	...	...	...	4,930	1,451,970	Monteagle	...	...	...	69,812	814,668
Bourke	...	...	...	162,365	1,056,195	Mootwingee	...	...	...	4,312	2,187,048
Boyd	...	...	...	534,060	408,020	Mossgiel	...	...	...	65,557	2,584,043
Buccleuch	...	...	...	35,575	804,105	Mouramba	...	...	...	6,474	1,502,646
Buckland	...	...	...	408,240	647,660	Murchison	...	...	...	84,702	1,123,608
Buller	...	...	...	8,921	898,159	Nandewar	...	...	...	113,902	715,438
Burnett	...	...	...	171,507	1,116,493	Napier	...	...	...	70,570	687,190
Cadell	...	...	...	285,751	277,449	Narran	...	...	...	56,780	2,247,220
Caira	...	...	...	322,833	1,259,267	Narromine	...	...	...	32,163	1,120,117
Canbelego	...	...	...	6,557	1,529,443	Nicholson	...	...	...	193,450	1,146,070
Clarke	...	...	...	13,125	928,955	Oxley	...	...	...	68,613	692,987
Clarence	...	...	...	85,871	753,569	Parry...	...	...	...	379,907	401,453
Clarendon	...	...	...	197,230	740,170	Perry...	...	...	...	19,330	1,803,390
Clive	...	...	...	24,219	969,061	Poole	...	...	...	260	1,351,420
Clyde	...	...	...	87,997	1,785,923	Pottinger	...	...	...	426,485	1,231,395
Cooper	...	...	...	469,272	1,322,728	Raleigh	...	...	...	7,631	984,649
Courallie	...	...	...	263,469	1,004,051	Rankin	...	...	...	4,632	2,525,548
Cowley	...	...	...	21,861	715,419	Richmond	...	...	...	62,689	633,631
Cowper	...	...	...	18,168	2,398,472	Robinson	...	...	...	5,208	1,942,792
Culgoa	...	...	...	4,911	1,520,849	Rous	...	...	...	145,600	1,236,800
Cunningham	...	...	...	118,019	1,349,501	Sandon	...	...	...	178,969	711,911
Dampier	...	...	...	34,774	979,286	Selwyn	...	...	...	49,802	1,117,558
Darling	...	...	...	66,783	854,817	Stapylton	...	...	...	149,515	1,437,685
Delalah	...	...	...	880	1,320,080	Sturt	...	...	...	567,159	429,321
Denham	...	...	...	60,342	766,498	Taila	...	...	...	36,568	1,642,792
Denison	...	...	...	189,932	610,068	Tandora	...	...	...	1,055	1,330,145
Dowling	...	...	...	50,040	1,285,320	Tara	...	...	...	27,365	1,477,915
Drake	...	...	...	71,907	839,453	Thoulcanna	...	...	...	846	910,514
Dudley	...	...	...	27,346	949,654	Tongowoko	...	...	...	1,488	1,657,392
Evelyn	...	...	...	1,356	2,209,244	Townsend	...	...	...	1,348,445	760,995
Ewenmar	...	...	...	66,644	1,142,356	Ularara	...	...	...	2,350	1,236,690
Farnell	...	...	...	1,900	2,120,020	Urana	...	...	...	1,045,256	716,124
Finch	...	...	...	89,650	2,552,270	Vernon	...	...	...	98,286	939,024
Fitzgerald	...	...	...	2,980	1,563,740	Wakool	...	...	...	798,249	1,034,711
Fitzroy	...	...	...	16,313	823,367	Waljeers	...	...	...	173,170	1,099,150
Flinders	...	...	...	18,719	1,872,481	Wallace	...	...	...	60,800	1,301,120
Forbes	...	...	...	58,601	832,289	Waradgery	...	...	...	547,891	1,299,269
Franklin	...	...	...	150,408	748,152	Wellesley	...	...	...	145,070	797,010
Gipps	...	...	...	196,364	1,377,196	Wentworth	...	...	...	54,304	2,178,016
Gordon	...	...	...	47,550	884,282	Werunda	...	...	...	2,180	1,912,700
Gough	...	...	...	148,455	1,052,145	White	...	...	...	8,763	1,260,997
Goulburn	...	...	...	159,253	721,387	Windeyer	...	...	...	20,731	1,954,689
Gowen	...	...	...	75,061	1,043,659	Wooore	...	...	...	2,900	1,723,060
Gregory	...	...	...	252,487	1,908,093	Wynyard	...	...	...	134,161	981,999
Gresham	...	...	...	8,434	759,566	Yancowinna	...	...	...	8,317	1,599,363
Gundabooka	...	...	...	11,240	1,494,040	Yand	...	...	...	11,143	2,020,617
Harden	...	...	...	158,550	851,930	Yungnulgra	...	...	...	7,689	1,794,651
Hardinge	...	...	...	45,078	1,019,882	Yantara	...	...	...	3,079	2,074,830
Howes	...	...	...	31,827	992,173	Young	...	...	...	10,825	1,750,465
Hume	...	...	...	411,301	541,029						
Inglis	...	...	...	49,250	442,270	Total	...	...	...	14,460,512	155,498,988
Irrara	...	...	...	9,321	2,663,319						
Jamieson	...	...	...	131,530	1,245,470	General Total	...	...	...	22,016,501	173,865,649
Kennedy	...	...	...	13,522	1,054,318	Total area of Colony	...	...	...	.....	195,882,150

\* Lands under process of alienation by conditional purchase, viz. 17,414,229 acres are not included.

## LANDS SALE AND OCCUPATION—continued.

## No. 25.—LANDS GRANTED FOR RELIGIOUS AND PUBLIC PURPOSES, during the Year 1886.

County.	Place.	No.	Area of Grants.	County.	Place.	No.	Area of Grants.
SETTLED DISTRICTS.				SETTLED DISTRICTS—continued.			
				a. r. p.			
Argyle ...	Boro Lower ...	I	2 0 0	Durham—contd.	Muswellbrook ...	I	3 0 0
	Goulburn ...	I	0 1 0		Seaham ...	I	5 2 29
	Mannafield (Towrang)	I	2 0 0	Georgiana ...	Buraga ...	I	2 0 0
	Pomeroy ...	I	3 2 3		Diamond ...	I	2 0 0
	Tirrana ...	I	2 0 0		Leighwood ...	I	9 3 36
Bathurst ...	Barry (Five Islands)	I	11 0 0		Memundie ...	I	2 0 0
	do	I	2 0 0		Streamville ...	I	2 0 0
	Bathurst ...	I	0 0 12½	Gloucester ...	Copeland ...	I	0 2 28
	do ...	I	6 3 39		do	I	0 1 26
	do ...	I	2 0 23		Wangat ...	I	6 3 0
	do ...	I	0 1 22	Hunter ...	Jerry's Plains ...	I	8 0 0
	Brownlea ...	I	2 0 0		Neilson's Creek ...	I	2 0 0
	Cadogan ...	I	2 0 0	King ...	Bevandale ...	I	2 0 0
	Coota ...	I	2 0 0		Crookwell ...	I	10 0 10
	Cowra ...	I	2 2 0		Curran's Creek ...	I	2 0 0
	Glen Logan ...	I	2 0 0		Gunning ...	I	200 0 0
	Macquarie ...	I	0 2 0		do	I	7 3 37
	Newbridge ...	I	11 0 0		Lerida ...	I	2 0 0
	Tinandra ...	I	2 0 0		Walla Walla ...	I	2 0 0
	Walli ...	I	7 3 34		Winduella ...	I	0 0 21
Bligh ...	Bowman ...	I	2 0 0	Macquarie ...	Beechwood ...	I	1 1 22
Brisbane ...	Giant's Creek ...	I	6 3 15		Bobin Flat ...	I	2 0 24
	Gungal ...	I	13 0 32		Gladstone ...	I	60 0 0
	do	I	0 1 13		Holey Flat ...	I	5 0 0
	Merriwa ...	I	8 0 0		Landsdowne ...	I	2 0 0
	Oxley's Peak ...	I	2 0 0		Laurieton ...	I	8 1 8
	Page River ...	I	2 0 0		Telegraph Point ...	I	7 3 35
	Parkville ...	I	15 0 23	Murray ...	Argyle Cutting ...	I	2 0 0
	Park ...	I	2 0 0		Jerrabatgulla ...	I	2 0 0
	Wingen ...	I	13 0 27		Merigan Creek ...	I	2 0 0
Camden ..	Belanglo ...	I	2 0 0		Nerrabundah ...	I	0 3 0
	Belmore Falls (Barrangarry)	I	2,100 0 0		Queanbeyan ...	I	110 0 0
	Berrima ...	I	10 1 0		do	I	14 0 18
	Budjong ...	I	2 0 0	Northumberland	East Maitland ...	I	3 1 36
	Budjong Vale ...	I	2 0 0		Gosford ...	I	0 3 8
	Fitzroy ...	I	372 0 0		do	I	0 3 17
	Macquarie Pass ...	I	11 0 28		do	I	55 1 0
	Pheasant Ground ...	I	2 0 0		Hogan's Brush ...	I	100 0 0
	Redbank ...	I	10 3 20		Kincumber ...	I	0 1 0
Cook ...	Blackheath ...	I	2 0 0		Murray's Run ...	I	2 0 0
	Lawson ...	I	2 0 32		Throsby Creek ...	I	0 2 15½
	do	I	2 3 14		Waratah ...	I	0 0 34
	Lett ...	I	2 0 0	Phillip ...	Whittingham ...	I	9 1 7
	St. Joseph's ...	I	2 0 0		Bara Creek ...	I	2 0 0
	Springwood ...	I	350 0 0	Roxburgh ...	Capertee ...	I	2 0 0
	do	I	10 0 0		Cullen ...	I	2 0 0
	Wentworth Falls ...	I	1 2 0		M'Donald's Hole ...	I	2 0 0
	do	I	10 0 24		Sunny Corner ...	I	5 1 9
	do	I	2 2 0		do	I	49 3 0
	do	I	5 2 0	St. Vincent ...	Brooman ...	I	2 0 0
	do	I	45 0 0		Little River ...	I	0 3 27
Cumberland ...	Bankstown ...	I	1 2 0		Meangora ...	I	2 0 0
	Bulgo ...	I	1 3 38		New Bristol ...	I	2 0 0
	Canterbury ...	I	25 2 2		Nowra ...	I	10 2 0
	Concord ...	I	66 2 15		Termeil ...	I	2 0 0
	Coogee ...	I	0 1 0		The Falls ...	I	2 0 0
	do	I	1 1 24		Yerriyong ...	I	2 0 0
	do	I	2 2 17	Wellington ...	Avisford ...	I	2 0 0
	Homebush ...	I	12 3 0		Boomey ...	I	2 0 0
	Longbottom ...	I	0 1 0		Bradshaw's Flat ...	I	2 0 0
	Manly Cove ...	I	667 3 0		Lower Mookerawa ...	I	2 0 0
	Mossman's Bay ...	I	3 2 7		Merinda ...	I	4 1 29
	Mowbray Point ...	I	5 0 23		Mudgee ...	I	69 3 0
	North Willoughby ...	I	45 3 38		do	I	43 3 10
	do	I	1 1 22½		do	I	1 0 0
	Parramatta North ...	I	1 3 34		Nubrygyn ...	I	2 0 15
	Randwick ...	I	4 0 37		Piambong ...	I	2 0 0
	do	I	1 2 30		Sally's Flat ...	I	2 0 0
	do	I	2 1 10		Triangle ...	I	2 0 0
	do	I	3 3 36		Welbang ...	I	94 0 0
	do	I	3 0 15		Windeyer ...	I	12 0 19
	do	I	1 0 25	Westmoreland ..	Ariel (Jerry's Mount)	I	2 0 0
	do	I	2 1 4		Bimlow ...	I	2 0 0
	do	I	1 1 37		Blossom Hill ...	I	2 0 0
	do	I	3 0 0		Bolton Vale ...	I	2 0 0
	do	I	1 0 12		Budthingaroo ...	I	2 0 0
	do	I	1 0 19		Chatham Valley ...	I	2 0 0
	Richmond (Pugh's Lagoon)	I	4 2 18		Essington ...	I	2 0 0
	do	I	1 3 32		Oberon ...	I	12 3 32
	Riverstone ...	I	25 3 0		Slippery Creek ...	I	2 0 0
	Sutherland ...	I	142 0 11				
	Wiseman's Ferry ...	I	4 0 0				
Durham	Dungog ...	I	8 2 12				
				TOTAL, SETTLED DISTRICTS		163	5,145 2 30½

## STATISTICS, 1886—MISCELLANEOUS.

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## LANDS SALE AND OCCUPATION—continued.

## No. 25 (continued).—LAND GRANTED FOR RELIGIOUS AND PUBLIC PURPOSES.

County.	Place.	No.	Area of Grants.	County.	Place	No.	Area of Grants.
OTHER PARTS OF THE COLONY.				OTHER PARTS OF THE COLONY—			
			a. r. p.		<i>continued.</i>		a. r. p.
Arrawatta ...	Arthur's Seat... ..	I	2 0 0	Cowper ...	Bourke ... ..	I	401 0 0
	Eden Valley ... ..	I	2 0 0		do ... ..	I	17 3 10
	Inverell ... ..	I	1 0 0		do ... ..	I	22 1 4
	Sapphire Swamp Oak	I	2 0 0		Ryrock ... ..	I	2 0 19
	Wandera ... ..	I	2 0 0		do ... ..	I	15 2 22
	do ... ..	I	8 1 8	Culgoa ...	Barrington ... ..	I	16 0 0
Ashburnham ...	Belmore ... ..	I	13 0 0	Cunningham ...	Currabobolin ... ..	I	2 0 0
	Cargo ... ..	I	14 0 0		Condoulin ... ..	I	5 0 0
	do ... ..	I	142 1 0		do ... ..	I	27 0 20
	Garra ... ..	I	10 1 7	Dampier ...	Countegany ... ..	I	2 0 0
	Mogong ... ..	I	2 0 0		Newstead ... ..	I	1 3 38
	Molong ... ..	I	5 0 0		Noorooma ... ..	I	8 1 8
	do ... ..	I	1 3 34½		do ... ..	I	0 2 0
	Nyrang Creek ... ..	I	9 2 20		Quaamaa ... ..	I	2 0 0
	Parkes... ..	I	4 0 0		do ... ..	I	0 1 36
	do ... ..	I	10 0 0	Darling ...	Tilba Tilba ... ..	I	24 0 0
	Yamma ... ..	I	2 0 0		Barraba ... ..	I	100 0 0
Auckland ...	Bega ... ..	I	8 3 0		Rockmore ... ..	I	2 0 0
	do ... ..	I	7 2 22	Denison...	Mulwala ... ..	I	0 0 19½
	do ... ..	I	5 0 0		Nangunnia ... ..	I	2 0 0
	do ... ..	I	14 1 23	Dudley ...	Pelican Island ... ..	I	2 0 0
	Candelo ... ..	I	2 1 39		West Kempsey ... ..	I	5 3 31
	do ... ..	I	5 0 0	Evelyn ...	Milparinka ... ..	I	8 1 8
	Colombo ... ..	I	8 0 7	Ewenmar ...	Balladoran ... ..	I	2 0 0
	do ... ..	I	0 1 14		Coradgerie ... ..	I	2 0 0
	do ... ..	I	1 2 0	Finch ...	Collaarindabri ... ..	I	2 0 0
	Rocky Hall ... ..	I	1 0 0	Fitzroy ...	Blaxland's Flat ... ..	I	2 0 0
	do ... ..	I	1 0 0		Nana ... ..	I	7 3 17
	Towamba ... ..	I	9 2 0	Forbes ...	Coura ... ..	I	3 3 34
	Wolumla ... ..	I	137 1 0		do ... ..	I	10 0 0
	Yarramine ... ..	I	2 0 0		Goolagong ... ..	I	2 0 19
Baradine ...	Bogalarie ... ..	I	2 0 0		Walla Walla ... ..	I	2 0 0
	Come-by-Chance ... ..	I	2 0 0	Gordon ...	Rocky Ponds ... ..	I	2 0 0
	Kienbri ... ..	I	2 0 0		Terra Bella ... ..	I	2 0 0
	Pilliga... ..	I	0 2 1		Wellington ... ..	I	8 0 0
	Walgett ... ..	I	10 0 6		Yeoval ... ..	I	1 3 38
	do ... ..	I	0 1 0	Gough ...	Brodie's Plains ... ..	I	1 2 0
Beresford ...	Cowra Creek ... ..	I	2 0 0		Emmaville ... ..	I	18 0 0
	Hill Dyke ... ..	I	2 0 0		Glen Innes ... ..	I	1 2 0
	Jingera... ..	I	2 0 0		Inverell ... ..	I	0 0 19
	Umaralla ... ..	I	2 0 0	Gough ...	Inverell ... ..	I	2 0 0
Bland ...	Bagdad ... ..	I	2 0 0		do ... ..	I	1 0 19
	Barmedman ... ..	I	9 0 0		Kangaroo Flat ... ..	I	2 0 0
	Milong ... ..	I	2 0 0		Mount Mitchell ... ..	I	2 0 0
	Morangarell ... ..	I	2 0 0		Yarrowford ... ..	I	2 0 0
	Narraburra ... ..	I	2 0 0	Goulburn ...	Albury ... ..	I	1 0 0
	Temora ... ..	I	15 0 0		do ... ..	I	14 2 30
	Yeo Yeo ... ..	I	2 0 0		do ... ..	I	11 0 17
Blaxland ...	Mount Hope ... ..	I	10 0 0		Bell's Lagoons ... ..	I	2 0 0
	Nombrinnie ... ..	I	8 1 8		Bowna ... ..	I	8 1 8
Bourke ...	Coolamon ... ..	I	2 0 20		Germanton ... ..	I	4 3 3
	Grong Grong... ..	I	2 0 0		Gerogery ... ..	I	2 0 0
	do ... ..	I	8 1 8		Mountain Creek ... ..	I	2 0 0
	Mimosa East ... ..	I	2 0 0	Gowen ...	Armatree ... ..	I	2 0 0
	Trickett ... ..	I	2 0 0		Belar ... ..	I	2 0 0
Boyd ...	Toganmain ... ..	I	2 0 0		Biamble ... ..	I	2 0 0
Buckland ...	Carroll ... ..	I	2 0 0		Caigan ... ..	I	2 0 0
	Currabubula ... ..	I	4 0 30		Coonabarrabran ... ..	I	9 3 34
	Warrar Ridge ... ..	I	2 0 0		Quandong ... ..	I	2 0 0
Caira ...	Balanald ... ..	I	7 0 0		Warkton ... ..	I	2 0 0
	do ... ..	I	0 1 0		Yalcogrin ... ..	I	2 0 0
Canbelego ...	Girilambone Railway Station.	I	2 0 0	Harden ...	Binalong ... ..	I	15 2 0
					Bookham ... ..	I	11 3 14
Clarence ...	Bundango ... ..	I	2 0 0		Cootamundry... ..	I	10 0 0
	Donayman ... ..	I	2 0 0		do ... ..	I	0 2 0
	Grafton ... ..	I	50 0 0		do ... ..	I	0 2 0
	do ... ..	I	4 1 24		Coppabella ... ..	I	2 0 36
	do ... ..	I	3 2 26		Jugiong ... ..	I	7 3 32
	Lawrence ... ..	I	5 1 8		Kahlaryan ... ..	I	2 0 0
	do ... ..	I	0 0 37		Mooney Mooney ... ..	I	2 0 0
	do ... ..	I	54 2 0		Murrumburrah ... ..	I	7 3 14
	Mororo ... ..	I	2 0 0	Hardinge ...	Booroolong ... ..	I	2 0 0
	Tucabin ... ..	I	7 3 33		Spring Gully ... ..	I	2 0 0
Clarendon ...	Clarendon ... ..	I	4 2 0		Stanborough ... ..	I	2 0 0
	Cooba ... ..	I	10 0 0	Hume ...	Burrumbuttock ... ..	I	16 1 14
	Jewnee ... ..	I	2 0 1		Walbundrie ... ..	I	182 3 0
	Mitta Mitta ... ..	I	2 0 0	Ingkis ...	Tamworth ... ..	I	1,450 0 0
	Sebastopol ... ..	I	2 0 0	Irrara ...	Berawinia ... ..	I	17 0 36
Clarke ...	Ryanda ... ..	I	2 0 0		Wanaaring ... ..	I	13 3 21
Cooper ...	Narrandera ... ..	I	29 1 31	Kilfera ...	Hatfield ... ..	I	2 0 0
	do ... ..	I	1 3 36	Leichhardt ...	Coonamble ... ..	I	0 1 15½
	do ... ..	I	200 0 0	Lincoln ...	Ballimore Lower ... ..	I	2 0 0
Courallie ...	Moree... ..	I	19 0 0		Belarbigal ... ..	I	2 0 0
Cowley ...	Yumbarra West ... ..	I	2 0 0		Dapper ... ..	I	2 0 0

LANDS SALE AND OCCUPATION—continued.  
No. 25 (continued).—LAND GRANTED FOR RELIGIOUS and PUBLIC PURPOSES.

County.	Place.	No.	Area of Grant.	County.	Place.	No.	Area of Grant.
OTHER PARTS OF THE COLONY— <i>continued—</i>				OTHER PARTS OF THE COLONY— <i>continued—</i>			
			a. r. p.				a. r. p.
Lincoln ...	Dubbo...	1	15 0 0	Rous ...	West Ballina ...	1	0 2 0
	Elong Elong ...	1	2 0 0		do ...	1	5 1 8
	Spicer's Creek ...	1	2 0 0	Sandon ...	Cameron's Creek ...	1	2 0 0
Mitchell ...	Arajoel ...	1	2 0 0		Everton Vale ...	1	2 0 0
Monteagle ...	Cocomingla ...	1	2 0 0		Tilbuster ...	1	2 0 0
	Congera ...	1	2 0 0	Sturt ...	Currathool West ...	1	2 0 0
	Grenfell ...	1	12 0 0		Currathool ...	1	0 2 0
	do ...	1	0 0 20		Do ...	1	13 0 32
	Marengo ...	1	12 2 0	Tongowoko ...	Tibooburra ...	1	8 1 8
	M'Henry's Creek ...	1	2 0 0	Townsend ...	Deniliquin ...	1	163 1 0
	Warrowrie ...	1	2 0 0	Urana ...	Clive ...	1	2 0 0
	Weddin ...	1	2 0 0		Jerilderie ...	1	0 2 0
	Young ...	1	1 0 20		Springbank ...	1	2 0 0
	do ...	1	2 2 0	Vernon ...	Walcha ...	1	0 0 12
	do ...	1	22 3 20		do ...	1	0 1 28
	do ...	1	2 2 36		do ...	1	806 0 0
Mowamba ...	Nymagee ...	1	10 0 0		do ...	1	100 0 0
Murchison ...	Little Plain ...	1	2 0 0	Waljeers ...	Oxley ...	1	2 0 0
	Molroy ...	1	2 0 0	Wallace... ..	Cabmurra ...	1	2 0 0
Nandewar ...	Narrabri ...	1	0 2 0		Jinderbone Crossing ...	1	5 0 0
	do ...	1	15 2 19		Moonbah ...	1	2 0 0
Narran ...	Angledool ...	1	2 0 0		Paupong ...	1	2 0 0
Narromine ...	Trangie ...	1	2 0 0		Seymour ...	1	210 0 0
	do ...	1	11 3 16	Waradgery ...	Hay ...	1	4 0 0
Nicholson ...	Hillston North ...	1	9 0 15		Maude ...	1	2 0 0
Oxley ...	Dooran ...	1	2 0 0	Wellesley ...	Bobundarah ...	1	2 0 0
	Nevertire ...	1	9 0 0		Bombala ...	1	279 0 0
	Nyngan ...	1	8 0 0		Cathcart ...	1	0 1 0
Parry ...	Wombramurra ...	1	2 0 0		Delegete ...	1	12 0 0
Pottinger ...	Baan Baa ...	1	2 0 0		Pipeclay Spring ...	1	2 0 0
	Boggabri ...	1	1 0 0		Tombong ...	1	2 0 0
	Yarraman ...	1	4 2 0	Wentworth ...	Wentworth ...	1	0 2 0
Raleigh ...	Bowra ...	1	8 2 0		do ...	1	20 0 0
	Gordonville ...	1	2 0 0	White ...	Rocky Glen ...	1	16 2 0
	Raleigh ...	1	2 2 0		do ...	1	200 0 0
	Weekes ...	1	4 0 0	Wynyard ...	Wee Waa ...	1	0 0 19
Robinson ...	Cobar ...	1	51 1 20		Adelong Crossing ...	1	31 3 0
Rous ...	Ballina ...	1	13 0 32		do ...	1	2 0 0
	do ...	3	14 0 0		Grahamstown ...	1	29 3 25
	do ...	1	15 2 6		Greenbank ...	1	2 0 0
	Bexhill ...	1	7 2 0		Jellingroo ...	1	2 0 0
	Byangum ...	1	2 0 0		Mundarlo ...	1	8 0 0
	Casino ...	1	10 0 0		Reedy Flat ...	1	84 1 0
	Cooloon ...	1	0 1 0		South Gundagai ...	1	158 3 0
	Dunoon ...	1	2 0 0		Tumut ...	1	4 1 36
	Lismore ...	1	1 2 0		Umbango ...	1	2 0 0
	do ...	1	14 0 20		Wagga Wagga ...	1	0 1 20
	do ...	1	7 1 16		do ...	1	12 0 0
	do ...	1	15 0 0	Yancowinna ...	Silverton ...	1	10 0 0
	North Lismore ...	1	34 2 33		Total ...	270	5,954 1 25
	Tintenbar ...	1	8 2 4		Settled Districts ...	163	5,145 2 30
	do ...	1	17 1 22		General Total ...	433	11,100 0 16
	Tucki Tucki ...	1	2 0 0				
	Tuckombil ...	1	2 0 0				

No. 26.—LANDS SOLD, otherwise than Conditionally, in the Year ended 31st December, 1886.

Districts.	Lots.				Area.				Total Price.
	Town.	Suburban.	Country.	Total.	Town.	Suburban.	Country.	Total.	
SETTLED COUNTIES.									
Argyle ...	No. 15	No. 5	No. 1	No. 21	a. r. p. 5 2 33	a. r. p. 17 2 35	a. r. p. 32 3 35	a. r. p. 56 1 23	£ s. d. 538 3 2
Bathurst ...	1	2	6	9	0 1 0	3 0 5	283 3 12	287 0 17	510 4 8
Bligh ...	...	2	5	7	.....	4 0 0	320 0 0	324 0 0	410 0 0
Brisbane ...	8	10	32	50	3 1 29	90 0 2½	2,308 2 30	2,402 0 0	3,300 12 5
Camden ...	1	4	6	11	0 2 0	6 0 4	248 0 8	254 2 12	399 15 6
Cook ...	...	1	1	2	.....	1 3 0	52 0 0	53 3 0	80 0 0
Cumberland ...	118	165	236	519	42 2 10	314 1 4	238 0 20	594 3 34	24,552 19 2
Durham ...	6	...	3	9	3 0 0	.....	85 2 10	88 2 10	177 3 9
Georgiana ...	...	...	9	9	.....	.....	537 1 0	537 1 0	675 1 3
Gloucester ...	34	1	4	39	15 3 27	2 0 0	179 2 16	197 2 3	723 1 3
King ...	31	6	1	38	13 1 19	81 0 4	40 0 0	134 1 23	772 18 0
Macquarie ...	7	17	2	26	2 0 16	68 0 38	80 0 0	150 1 14	481 10 0
Murray ...	21	5	3	29	9 2 34	27 1 27	121 0 0	158 0 21	505 0 0
Northumberland ...	64	...	8	72	27 0 13½	.....	212 1 32	239 2 5½	2,990 8 3
Phillip ...	4	5	8	17	1 0 38½	10 0 0	343 1 0	354 1 38½	506 19 9
Roxburgh ...	13	5	4	22	4 0 28½	8 2 19½	123 3 0	136 2 8½	683 0 10
St. Vincent ...	21	58	8	87	9 3 15	187 1 10	1,650 3 18	1,848 0 3	3,683 6 0
Wellington ...	2	4	12	18	0 2 5½	8 0 0	492 2 0	501 0 5½	815 5 6
Westmoreland ...	...	6	7	13	.....	12 0 0	259 2 0	271 2 0	356 7 6
TOTAL, SETTLED COUNTIES ...	346	296	356	998	139 1 28½	841 1 29½	7,609 1 21	8,590 0 38½	42,161 17 0

## STATISTICS, 1886—MISCELLANEOUS.

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## LANDS SALE AND OCCUPATION—continued.

## No. 26 (continued).—LANDS SOLD, otherwise than Conditionally.

Districts.	Counties.	Lots.				Area.				Total Price.
		Town.	Suburban.	Country.	Total.	Town.	Suburban.	Country.	Total.	
PASTORAL DISTRICTS.										
Albert	Barrona	No.	No.	No.	No.	a. r. p.	a. r. p.	a. r. p.	a. r. p.	£ s. d.
	Booroodarra			40	40			2,036 3 0	2,036 3 0	2,545 18 9
	Delalah			45	45			3,255 0 0	3,255 0 0	4,110 15 0
	Evelyn	5		17	17			840 0 0	840 0 0	1,050 0 0
	Farnell			11	16	1 1 0		840 0 0	841 1 0	1,124 0 0
	Fitzgerald			5	5			200 0 0	200 0 0	250 0 0
	Irrara			11	11			640 9 0	640 0 0	800 0 0
	Killara			35	35			6,760 0 0	6,760 0 0	9,462 0 0
	Mootwingee			23	23			1,200 0 0	1,200 0 0	1,580 0 0
	Poole			25	25			1,540 0 0	1,540 0 0	2,030 0 0
	Ranken			5	5			260 0 0	260 0 0	325 0 0
	Tandora	1		16	16			1,260 0 0	1,260 0 0	1,525 0 0
	Thoulcanna			18	19	0 1 0		935 0 0	935 1 0	1,221 5 0
	Tongowoko			11	11			546 0 0	546 0 0	682 10 0
	Ularara			18	18			1,480 0 0	1,480 0 0	1,855 0 0
	Werunda			28	28			1,310 0 0	1,310 0 0	1,637 10 0
	Woore			30	30			2,060 0 0	2,060 0 0	2,575 0 0
	Yancowinna			18	18			1,780 0 0	1,780 0 0	2,250 0 0
	Yungnulgra	82	5	13	100	19 2 32 <sup>3</sup> / <sub>4</sub>	4 0 36 <sup>3</sup> / <sub>4</sub>	2,130 0 0	2,153 3 19 <sup>1</sup> / <sub>2</sub>	5,332 13 5
	Yantara			49	49			2,818 0 13	2,818 0 13	3,552 19 6
	Young			36	36			2,700 0 0	2,700 0 0	3,300 0 0
Albert and Warrego	Landsborough			29	29			3,080 0 0	3,080 0 0	3,866 0 0
Bligh	Ewenmar			38	38			1,520 0 0	1,520 0 0	1,900 0 0
	Gowen	6		15	15			2,705 0 0	2,705 0 0	3,756 5 0
	Leichhardt			5	11	2 3 22		853 0 0	853 3 22	1,110 5 0
	Lincoln			35	35			6,052 0 0	6,052 0 0	7,591 3 0
	Napier			8	8			610 0 0	610 0 0	822 10 0
	Gregory	5		11	16	1 1 0		1,303 0 0	1,304 1 0	1,680 5 0
	Buller			17	17			3,711 2 0	3,711 2 0	4,814 7 6
Bligh and Wellington.				12	12			1,249 0 0	1,249 0 0	1,873 10 0
Clarence	Clarence	19	33	9	61	7 1 32	2 14 1 35	492 2 0	714 1 27	3,396 9 0
	Richmond	18	6	4	28	6 3 29	21 1 0	447 2 0	475 2 29	1,449 15 0
	Rous	104	26	3	133	50 3 9	48 0 34	218 0 0	317 0 3	2,704 16 0
Clarence and Macleay.	Fitzroy			2	2			340 0 0	340 0 0	425 0 0
Clarence and New England.	Clive			14	14			1,059 0 0	1,059 0 0	1,420 14 0
	Drake	7		43	50	3 2 0		2,442 0 0	2,445 2 0	3,604 15 0
	Gresham	1		9	10	0 1 32		622 0 0	622 1 32	858 3 0
Darling	Caira	13		18	31	6 1 12		4,857 3 0	4,864 0 12	7,139 16 3
	Kilfera									
	Manara			32	32			10,080 0 0	10,080 0 0	12,100 0 0
	Menindie			33	33			1,940 0 0	1,940 0 0	2,425 0 0
	Perry	1		44	45	0 2 0		2,896 2 0	2,896 2 0	3,620 0 0
	Taila	11		4	15	5 1 5		1,068 0 0	1,073 1 5	1,391 10 0
	Tarn			15	15			930 0 0	930 0 0	1,230 0 0
	Wentworth			15	15			1,060 0 0	1,060 0 0	1,325 0 0
	Windeyer			39	39			1,790 0 0	1,790 0 0	2,242 10 0
Darling and Albert	Livingstone			20	20			2,460 0 0	2,460 0 0	3,095 0 0
Gwydir	Benarba			10	10			2,707 0 0	2,707 0 0	3,383 15 0
	Burnett			23	23			2,370 2 0	2,370 2 0	2,961 17 6
	Courallie	4		12	16	2 0 0		1,816 1 0	1,818 1 0	2,763 16 3
	Murchison			9	9			786 3 30	786 3 30	1,008 1 10
	Stapylton			6	6			1,684 2 0	1,684 2 0	2,117 12 6
Gwydir and New England.	Arrawatta			11	11			1,250 0 0	1,250 0 0	1,570 0 0
Lachlan	Bland	42	3	35	80	9 3 5 <sup>1</sup> / <sub>2</sub>	7 1 16	7,139 0 0	7,156 0 21 <sup>1</sup> / <sub>2</sub>	10,093 7 2
	Blaxland			45	45			3,588 0 0	3,588 0 0	4,470 0 0
	Bourke			36	36			8,632 1 0	8,632 1 0	10,935 12 6
	Clarendon	29	4	11	44	9 0 18 <sup>1</sup> / <sub>2</sub>	19 1 28	976 3 0	1,005 1 6 <sup>1</sup> / <sub>2</sub>	2,480 6 3
	Cooper	2		71	73	1 0 0		20,474 2 0	20,475 2 0	25,285 16 3
	Dowling			17	17			3,588 0 0	3,588 0 0	4,505 0 0
	Forbes			3	15	18	3 0 0	3,317 0 0	3,320 0 0	4,359 10 3
	Franklyn			2	2			206 0 0	206 0 0	257 10 0
	Gipps			63	63			14,334 2 23	14,334 2 23	18,169 3 1
	Harden	13	3	9	25	4 3 0	6 0 0	452 1 25 <sup>3</sup> / <sub>4</sub>	463 0 25 <sup>3</sup> / <sub>4</sub>	1,311 7 5
	Monteagle	26	31	21	78	9 3 9 <sup>3</sup> / <sub>4</sub>	66 2 13	637 1 16	713 2 38 <sup>3</sup> / <sub>4</sub>	1,684 0 11
	Mossgiel			32	32			2,853 0 0	2,853 0 0	3,601 5 0
	Mouramba			29	29			2,100 0 0	2,100 0 0	2,612 10 0
	Nicholson	10	1	14	25	5 0 0	1 0 9	2,232 1 20	2,238 1 20	2,905 15 5
	Sturt			15	15			3,147 3 0	3,147 3 0	4,898 6 3
	Waljeers	4		3	7	2 0 0		1,200 0 0	1,202 0 0	1,718 0 0
Lachland and Murrumbidgee.	Waradgery			9	9			3,067 3 9	3,067 0 0	3,834 3 9
Liverpool Plains	Baradine	2		9	11	1 0 0		2,260 2 0	2,261 2 0	2,848 2 6
	Buckland	89		15	104	37 2 8		1,352 3 0	1,359 1 8	3,977 7 6
	Darling	4	11	3	18	2 0 0	72 1 36	142 0 0	216 1 36	509 10 0
	Denham			3	3			797 0 0	797 0 0	996 0 0
	Jamieson			26	26			5,162 1 0	5,162 1 0	6,582 16 3
	Nandewar			45	45			2,457 3 14	2,457 3 14	4,467 12 0
	Parry	9		9	9	4 2 0			4 2 0	70 0 0
	Pottinger	1	2	25	28	0 2 0	15 0 32	2,712 1 0	2,727 3 32	3,445 16 3
Liverpool Plains and New England.	Dudley	10		10	10				57 3 8	938 0 0

LANDS SALE AND OCCUPATION—continued.

No. 26 (continued).—LANDS SOLD, otherwise than Conditionally, in the year ended 31st December, 1886.

Districts.	Counties.	Lots.				Area.				Total price. £ s. d.
		Town.	Suburban.	Country.	Total.	Town.	Suburban.	Country.	Total.	
PASTORAL DISTRICTS—continued.										
Liverpool Plains and New England.	Raleigh	26			26	11 2 1½			11 2 1½	380 0 0
Manaro	Auckland	7		7	14	3 1 34		301 2 18	305 0 12	659 14 6
	Beresford	28	4	3	35	12 2 32	4 3 15	212 3 20	430 1 27	401 17 0
	Cowley			1	1			90 0 0	90 0 0	112 10 0
	Dampier	60	29	15	104	16 2 15	154 3 24	214 1 10	385 3 9	1,455 3 5
	Wallace	38		6	44	8 3 10½		725 2 0	734 1 10½	1,222 3 0
	Wellesley	59	5	21	85	29 1 6	15 3 6	1,497 3 0	1,542 3 12	2,869 9 0
Murrumbidgee	Boyd			21	21			4,232 1 0	4,232 1 0	5,809 12 6
	Buccleuch			5	5			554 0 0	554 0 0	853 15 0
	Cadell			2	2			433 0 0	433 0 0	541 5 0
	Denison			18	18			2,698 1 0	2,698 1 0	3,419 12 6
	Goulburn	28	14	22	64	13 1 36	19 0 0½	1,917 0 38	1,949 2 34½	3,116 15 4
	Hume	6	1	14	21	2 3 37	8 1 24	1,907 2 0	1,918 3 21	2,549 0 0
	Mitchell			10	10			1,826 2 0	1,826 2 0	2,349 18 9
	Selwyn	4	2	2	8	1 0 0	4 0 0	740 0 0	745 0 0	831 18 0
	Townsend			46	46			8,202 1 0	8,202 1 0	14,461 4 2
	Urana			58	59	0 2 0		11,840 2 0	11,841 0 0	23,274 9 9
	Wakool			22	22			1,823 0 0	1,823 0 0	5,067 16 3
	Wynyard	13	13	12	38	6 1 0	27 0 22	1,469 2 0	1,502 3 22	2,439 0 0
New England	Gough		39	7	49	0 1 19	114 1 32	418 3 30	533 3 1	1,627 18 8
	Hardinge			1	1			92 0 0	92 0 0	115 0 0
	Hawes			1	1			40 0 0	40 0 0	50 0 0
	Sandon	3		10	13	1 2 0		218 0 0	219 2 0	387 0 0
New England and Macleay.	Vernon			16	16			1,284 3 0	1,284 3 0	1,673 3 9
Warrego	Cowper			31	31			4,680 0 0	4,680 0 0	5,850 0 0
	Culgoa			5	5			200 0 0	200 0 0	250 0 0
	Finch			15	15			4,041 0 0	4,041 0 0	5,181 5 0
	Gunderbooka			7	7			790 0 0	790 0 0	975 0 0
	Narran			13	13			2,062 0 0	2,062 0 0	2,587 10 0
	Robinson			6	6			400 0 0	400 0 0	505 0 0
	Yanda			28	28			3,551 1 0	3,551 1 0	4,439 1 0
Warrego and Wellington.	Caubelego		1	19	20		2 0 0	1,162 2 0	1,164 2 0	1,515 18 9
Wellington	Ashburnham	36	84	14	134	14 1 11½	288 3 21½	1,501 1 31	1,804 2 23½	3,932 15 3
	Clyde			18	18			5,034 0 0	5,034 0 0	6,292 10 0
	Cunningham			20	20			4,531 1 0	4,531 1 0	5,664 1 3
	Flinders			18	18			3,203 0 0	3,203 0 0	4,013 15 0
	Narromine	26		20	46	9 2 26		3,934 0 0	3,943 2 26	5,993 4 0
	Gordon		4	16	22	0 3 16	10 0 0	1,611 3 0	1,622 2 16	2,123 11 3
	Oxley		1	11	12	0 2 0		3,359 0 0	3,359 2 0	4,218 15 0
	Kennedy			22	22			3,307 3 0	3,307 3 0	4,134 13 9
Total, Pastoral Districts		847	334	2135	3316	329 1 20	1186 1 23	277,932 1 8½	279,448 0 11½	397,159 14 1
" Settled "		346	296	356	998	139 1 28½	841 1 29½	7,609 1 21	8,590 0 38½	42,161 17 0
		1193	630	2491	4314	468 3 8½	2027 3 12½	285,541 2 29½	288,038 1 10½	439,321 11 1

No. 27.—LANDS SOLD otherwise than Conditionally, 1876-86.

Year.	Extent of Land Sold.				Total Price. £ s. d.
	Town Lots.	Suburban Lots.	Country Lots.	Total.	
1876	691 0 0½	4,358 2 10½	1,868,009 3 11½	1,873,059 1 22½	1,971,292 8 3
1877	548 3 1½	1,522 2 21½	2,148,687 2 36½	2,150,759 0 19	2,196,922 4 8
1878	710 0 9½	1,586 2 23½	1,208,395 3 12½	1,210,692 2 5½	1,441,004 3 1
1879	455 1 19½	2,049 0 22½	474,689 3 13	477,194 1 15	590,368 3 7
1880	516 3 38½	1,920 2 24½	623,674 3 15½	626,112 1 38½	722,732 17 2
1881	623 0 16½	2,769 2 31	1,325,513 3 31½	1,328,906 2 39½	1,484,897 10 6
1882	449 1 10½	1,645 2 25½	1,027,903 2 39½	1,029,998 2 35	1,252,596 15 1
1883	720 0 21½	3,950 1 35½	163,784 3 35½	168,455 2 12½	256,982 2 9
1884	658 2 11½	2,861 3 22½	290,659 1 25	294,179 3 19	433,338 4 10
1885	136 1 24½	1,060 2 21½	293,828 0 14	295,025 0 20	446,311 12 6
1886	468 3 8½	2,027 3 12½	285,541 2 29½	288,038 1 10½	439,321 11 1

## STATISTICS, 1886—MISCELLANEOUS.

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LANDS SALE AND OCCUPATION—*continued.*

No. 28.—NUMBER OF CONDITIONAL PURCHASE APPLICATIONS RECEIVED in each district during the year 1886, the AREA APPLIED FOR, and the AMOUNT OF DEPOSIT PAID THEREON.

District.	No. of Applications.	Area applied for.		Deposit paid.		District.	No. of Applications.	Area applied for.		Deposit paid.	
		a.	r. p.	£	s. d.			a.	r. p.	£	s. d.
Albury ... ..	76	11,400	2 0	1,157	15 0	Metropolitan ... ..	3	260	0 0	42	0 0
Armidale ... ..	185	28,480	2 20	2,872	0 3	Milton ... ..	55	3,648	1 0	386	16 6
Balranald ... ..	1	280	0 0	28	0 0	Molong ... ..	79	9,664	1 0	966	8 6
Bathurst ... ..	58	3,462	1 0	346	4 6	Moree ... ..	116	43,270	3 30	4,379	1 11
Bega ... ..	88	5,146	1 0	534	12 6	Moruya ... ..	88	6,353	3 0	662	7 6
Berrima ... ..	87	7,028	3 0	775	3 6	Mudgee ... ..	40	3,294	3 20	329	9 9
Bingera ... ..	24	3,757	1 0	417	10 6	Murrurundi ... ..	72	14,044	2 0	1,446	9 0
Bombala ... ..	32	2,900	0 0	290	0 0	Murwillumbah ... ..	90	11,055	0 0	1,184	5 6
Bourke ... ..	1	160	0 0	32	0 0	Muswellbrook ... ..	40	2,811	0 0	281	2 0
Braidwood ... ..	109	8,224	1 0	845	8 6	Narrabri ... ..	46	20,559	3 0	2,061	1 6
Brewarrina ... ..	Nil.	.....	.....	.....	.....	Narrandera ... ..	34	14,025	0 0	2,027	18 0
Burrowa ... ..	185	21,793	1 37	2,200	10 0	Newcastle ... ..	7	1,358	0 0	202	12 0
Campbelltown ... ..	4	1,280	0 0	160	0 0	Nowra ... ..	68	9,828	3 0	1,379	3 6
Carcoar ... ..	98	12,102	2 0	1,210	5 0	Orange ... ..	30	3,268	0 0	326	16 0
Casino ... ..	44	10,294	0 0	1,080	8 0	Parkes ... ..	56	17,690	2 0	1,816	16 0
Cassilis ... ..	132	17,587	0 0	1,817	14 0	Parramatta ... ..	33	1,990	0 0	368	0 0
Cobar ... ..	1	200	0 0	20	0 0	Paterson ... ..	50	4,237	0 0	463	4 0
Condobolin ... ..	32	10,378	0 0	1,037	16 0	Penrith ... ..	22	2,321	1 0	427	16 0
Cooma ... ..	77	6,561	0 0	683	2 0	Picton ... ..	29	2,464	0 0	284	8 0
Coonabarabran ... ..	33	5,994	3 30	603	9 11	Port Macquarie ... ..	93	8,700	2 0	969	1 0
Coonamble ... ..	116	38,630	0 0	3,958	14 0	Queanbeyan ... ..	57	7,209	1 0	720	18 6
Cootamundra ... ..	84	16,006	3 0	1,601	13 3	Raymond Terrace ... ..	63	5,500	1 0	613	0 6
Corowa ... ..	66	14,165	3 27	1,740	10 2	Rylstone ... ..	28	1,980	0 0	198	0 0
Cowra ... ..	79	9,603	0 0	1,004	0 0	Scone ... ..	108	13,293	1 0	1,338	16 6
Deniliquin ... ..	54	22,430	3 0	2,407	7 6	Singleton ... ..	87	11,419	1 0	1,199	11 0
Dubbo ... ..	152	60,105	0 0	6,207	10 0	Stroud ... ..	98	10,399	0 0	1,095	18 0
Dungog ... ..	57	3,884	1 24	404	8 10	Tamworth ... ..	157	28,876	0 0	3,021	12 0
Eden ... ..	75	6,700	1 0	710	0 6	Taree ... ..	230	19,672	1 0	2,053	1 6
Forbes ... ..	82	19,548	0 11	2,029	19 6	Tenterfield ... ..	38	5,825	0 0	640	10 0
Glen Innes ... ..	110	15,561	2 0	1,604	3 0	Tumut ... ..	117	19,175	1 20	1,957	12 9
Gosford ... ..	64	4,375	0 0	568	4 0	Urana ... ..	50	8,980	0 0	1,270	13 6
Goulburn ... ..	176	11,642	3 35	1,203	3 0	Wagga Wagga ... ..	160	45,181	3 0	4,816	19 6
Grafton ... ..	174	18,646	2 31	2,335	15 9	Walcha ... ..	109	21,917	0 0	2,253	14 0
Grenfell ... ..	104	18,480	2 0	1,869	8 6	Walgett ... ..	3	4,196	2 0	419	13 0
Gundagai ... ..	28	4,072	2 15	407	5 3	Warialda ... ..	28	7,081	0 0	708	2 0
Gunnedah ... ..	59	19,429	2 0	2,021	19 0	Wellington ... ..	112	14,869	0 0	1,550	18 0
Gunning ... ..	93	7,434	2 0	786	16 0	Wentworth ... ..	Nil.	.....	.....	.....	.....
Hay ... ..	85	34,797	3 0	3,587	19 0	Wilcannia ... ..	Nil.	.....	.....	.....	.....
Hillston ... ..	12	3,317	3 0	335	19 0	Windsor ... ..	54	3,134	0 0	459	18 0
Inverell ... ..	65	7,769	3 37	776	19 6	Wollombi ... ..	14	813	2 0	81	7 0
Kempsey ... ..	179	23,554	3 0	2,602	9 6	Wollongong ... ..	Nil.	.....	.....	.....	.....
Kiama ... ..	Nil.	.....	.....	.....	.....	Yass ... ..	49	5,837	3 0	587	15 6
Lismore ... ..	70	6,935	0 0	773	11 9	Young ... ..	67	11,123	2 0	1,401	4 9
Lithgow ... ..	117	7,821	3 10	802	3 8						
Liverpool ... ..	6	720	0 0	126	0 0						
Maitland ... ..	7	566	0 0	56	12 0						
						<b>Total</b> ... ..	6,061	954,560	0 27	102,428	15 0



LANDS SALE AND OCCUPATION—*continued.*

No. 29.—Number of CONDITIONAL PURCHASE APPLICATIONS made in each district in 1885 or 1886 which were confirmed by the Local Land Boards in 1886, and the area allowed.

District	No. of Applications confirmed.	Area allowed.		District.	No. of Applications confirmed.	Area allowed.	
		a.	r. p.			a.	r. p.
Albury ... ..	24	3,676	1 8	Metropolitan ... ..	2	430	0 0
Armidale ... ..	69	13,309	2 0	Milton ... ..	38	2,483	0 0
Balranald ... ..	Nil.	.....		Molong ... ..	33	3,769	2 0
Bathurst ... ..	22	1,593	2 0	Moree ... ..	108	41,573	0 30
Bega ... ..	79	6,480	3 0	Moruya ... ..	80	6,435	1 0
Berrima ... ..	31	2,786	0 0	Mudgee ... ..	41	3,483	2 0
Bingera ... ..	12	2,216	0 0	Murrurundi ... ..	35	6,646	3 0
Bombala ... ..	20	2,616	3 0	Murwillumbah ... ..	15	2,060	2 0
Bourke ... ..	1	160	0 0	Muswellbrook ... ..	16	1,276	0 0
Braidwood ... ..	69	5,115	2 0	Narrabri ... ..	34	13,479	3 0
Brewarrina ... ..	Nil.	.....		Narrandera ... ..	46	35,460	2 0
Burrowa ... ..	128	13,903	2 37	Newcastle ... ..	2	110	0 0
Campbelltown ... ..	Nil.	.....		Nowra ... ..	60	5,846	3 20
Carcoar ... ..	46	4,694	3 0	Orange ... ..	39	4,259	3 25
Casino ... ..	11	1,687	1 38	Parkes ... ..	33	12,110	3 0
Cassilis ... ..	34	6,050	2 0	Parramatta ... ..	27	1,985	0 0
Cobar ... ..	2	640	0 0	Paterson ... ..	23	1,813	1 0
Condobolin ... ..	20	7,381	3 0	Penrith ... ..	16	2,594	1 0
Cooma ... ..	37	4,143	2 0	Picton ... ..	20	1,984	0 0
Coonabarabran ... ..	15	3,175	3 30	Port Macquarie ... ..	28	1,826	0 0
Coonamble ... ..	76	29,983	3 0	Queanbeyan ... ..	44	4,146	0 0
Cootamundra ... ..	66	13,824	2 0	Raymond Terrace ... ..	15	1,217	0 0
Corowa ... ..	36	8,481	1 14	Rylstone ... ..	35	2,333	3 0
Cowra ... ..	78	9,022	2 0	Scone... ..	38	5,014	1 0
Deniliquin ... ..	25	11,718	1 0	Singleton ... ..	15	2,585	0 0
Dubbo ... ..	147	75,633	2 0	Stroud ... ..	18	1,016	2 0
Dungog ... ..	11	767	0 24	Tamworth ... ..	105	18,639	0 0
Eden... ..	67	5,152	3 0	Taree... ..	99	7,685	3 0
Forbes ... ..	52	12,841	1 11	Tenterfield ... ..	1	100	0 0
Glen Innes ... ..	48	5,723	2 0	Tumut ... ..	38	4,508	1 0
Gosford ... ..	27	4,561	2 0	Urana ... ..	43	11,204	1 36
Goulburn ... ..	146	11,012	2 35	Wagga Wagga ... ..	143	43,854	3 0
Grafton ... ..	78	9,361	2 31	Walcha ... ..	24	5,224	0 0
Grenfell ... ..	73	16,067	0 0	Walgett ... ..	7	8,836	2 0
Gundagai ... ..	17	2,439	0 0	Warialda ... ..	23	9,070	2 0
Gunnedah ... ..	34	12,359	3 0	Wellington ... ..	64	6,082	0 0
Gunning ... ..	83	7,850	3 0	Wentworth ... ..	Nil.	.....	
Hay ... ..	87	45,478	0 0	Wilcannia ... ..	Nil.	.....	
Hillston ... ..	9	4,491	2 0	Windsor ... ..	21	1,425	2 0
Inverell ... ..	27	3,742	3 37	Wollombi ... ..	2	80	0 0
Kempsey ... ..	66	5,800	2 0	Wollongong ... ..	Nil.	.....	
Kiama ... ..	1	50	0 0	Yass ... ..	49	5,014	2 0
Lismore ... ..	20	1,701	0 0	Young ... ..	56	17,365	2 0
Lithgow ... ..	68	5,205	0 0				
Liverpool ... ..	Nil.	.....		Total ... ..	3,501	688,299	0 16
Maitland ... ..	3	326	0 0				

## STATISTICS, 1886—MISCELLANEOUS.

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LANDS SALE AND OCCUPATION—*continued.*

## No. 30.—CONDITIONAL PURCHASES reduced or increased in area during the year 1886.

	No.	Acreage Deducted.		
		ac.	r.	p.
Conditional Purchases reduced in area ... ..	709	12,500	0	35
		Acreage Added.		
Conditional Purchases increased in area... ..	326	3,315	0	2

## No. 31.—NUMBER and AREA of Conditional Purchases DECLARED VOID and FORFEITED; or, the Voidance and Forfeiture of which were reversed during the year 1886.

	Number.	Area.		
		ac.	r.	p.
Conditional Purchases declared Void ... ..	329	51,470	0	0
Conditional Purchases declared Forfeited ... ..	393	50,815	0	20
Total ... ..	722	102,285	0	20
Void Conditional Purchases, the voidance of which has been reversed ...	136	21,001	0	13
Forfeited Conditional Purchases, the forfeiture of which has been reversed...	173	27,180	0	15
Total ... ..	309	48,181	0	28

## No. 32.—NUMBER and AREA of Conditional Purchases DECLARED LAPSED during the year 1886, or the lapsing of which was reversed.

Number of Conditional Purchases.		Area.		
		ac.	r.	p.
Lapsed ... ..	755	126,931	2	8
Reversal of Lapsing ... ..	439	56,272	2	39

## No. 33.—NUMBER of ACRES SOLD CONDITIONALLY in the Years 1862 to 1886 inclusive, together with the AMOUNT REALIZED for DEPOSIT, for BALANCE of PURCHASE MONEY, for INTEREST and the GROSS AMOUNT REALIZED in each Year.

Year.	Sold Conditionally.		Amount realized.			Gross Amount realized.
	Number of Selections.	Area.	For Deposit.	For Balance of Purchase Money.	For Interest.	
		a. r. p.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1862 to 1875	87,941	8,333,657 0 12	2,083,414 9 9	301,979 16 10	383,928 14 2	2,779,293 0 9
1876	12,654	1,984,212 0 0	496,053 8 2	68,834 1 5	99,328 14 8	664,216 4 3
1877	12,009	1,699,816 0 0	424,954 0 0	71,852 15 6	126,657 8 9	623,464 4 3
1878	12,602	1,588,247 3 18	398,728 11 1	a 70,835 5 5	160,581 1 1	630,144 17 7
1879	7,540	924,136 1 0	232,285 2 9	b 124,161 15 1	171,147 17 11	527,594 15 9
1880	8,583	1,147,001 2 39	293,112 17 7	c 155,452 7 0	204,634 2 7	653,199 7 2
1881	14,220	2,329,202 0 15	592,965 16 1	d 221,555 18 10	253,356 14 0	1,067,878 8 11
1882	14,607	2,392,219 3 0	621,617 1 11	e 239,587 13 0	287,526 13 9	1,148,731 8 8
1883	10,725	1,621,947 3 12	424,968 0 10	f 195,590 19 1	310,676 6 7	931,235 6 6
1884	10,657	1,453,937 0 33	381,550 4 0	g 244,547 2 8	326,183 18 9	952,281 5 5
1885	5,372	1,114,871 3 2	121,436 13 11	h 508,424 17 4	151,657 19 7	781,519 10 10
1886	6,061	954,560 0 27	112,892 9 9	j 588,665 15 10	129,978 4 5	831,536 10 0
Total ...	202,971	25,543,709 18 11	6,183,978 15 10	2,791,488 8 0	2,605,657 16 3	11,581,095 0 1

a Includes £23,774 16s. 6d. on account of Instalments.  
 b " £87,131 5s. 6d. " "  
 c " £113,603 1s. 1d. " "  
 d " £129,546 17s. 1d. " "  
 e " £129,921 0s. 7d. " "

f Includes £137,277 8s. 6d. on account of Instalments.  
 g " £183,080 19s. 3d. " "  
 h " £440,286 8s. 2d. " "  
 j " £514 16s. 0s. 0d. " "

STATISTICS, 1886—MISCELLANEOUS.

LANDS SALE AND OCCUPATION—(continued.)  
No. 34.—LAND held under ANNUAL LEASE in the year 1886.

District.	No. of Lease.	Area.			Rent.			District.	No. of Lease.	Area.			Rent.		
		a.	r.	p.	£	s.	d.			a.	r.	p.	£	s.	d.
Albury ... ..	23	15,920	2	0	180	1	6	Maitland ... ..	2	1,860	0	0	8	0	0
Armidale ... ..	14	6,875	0	0	36	0	0	Milton ... ..	7	5,760	0	0	21	10	0
Bathurst ... ..	545	354,882	0	0	1,501	13	6	Molong ... ..	10	8,446	0	0	42	18	6
Bega ... ..	1	317	0	0	2	0	0	Moree ... ..	5	3,510	0	0	16	0	0
Berrima ... ..	47	36,195	0	0	136	0	0	Moruya ... ..	8	3,540	0	0	23	0	0
Bingera ... ..	1	640	0	0	2	0	0	Mudgee ... ..	328	202,578	0	0	861	8	0
Bombala ... ..	10	5,479	0	0	26	0	0	Murrurundi ... ..	74	45,833	0	0	172	0	0
Braidwood ... ..	139	95,643	0	0	403	1	6	Muswellbrook ... ..	14	8,401	0	0	33	10	0
Burrowa ... ..	227	136,912	0	0	618	9	4	Narrandera... ..	1	335	0	0	2	0	0
Carcoar ... ..	563	395,145	0	0	1,610	14	0	Nowra ... ..	28	17,226	0	0	101	0	0
Cassilis ... ..	598	400,915	3	0	1,507	19	3	Orange ... ..	135	94,544	0	0	378	0	0
Condobolin... ..	7	6,170	0	0	28	14	0	Paterson ... ..	68	43,912	0	0	158	0	0
Cooma ... ..	21	22,630	0	0	200	19	6	Penrith ... ..	3	2,080	0	0	8	0	0
Coonabarabran	14	9,075	0	0	36	0	0	Picton ... ..	152	108,507	0	0	402	0	0
Cootamundra ... ..	1	1,150	0	0	4	0	0	Port Macquarie	24	17,190	0	0	56	7	0
Corowa ... ..	1	393	0	0	2	0	0	Queanbeyan	159	109,282	0	0	424	16	1
Cowra ... ..	39	38,470	0	0	151	2	0	Raymond Terrace	3	1,920	0	0	6	0	0
Deniliquin ... ..	14	10,418	3	0	67	4	0	Rylstone ... ..	191	132,645	0	0	485	15	2
Dubbo ... ..	1	1,920	0	0	6	0	0	Scone ... ..	313	252,411	2	0	1,052	1	11
Dungog ... ..	3	2,390	0	0	8	0	0	Singleton ... ..	41	24,811	0	0	130	19	5
Eden ... ..	2	1,963	0	0	69	0	0	Stroud ... ..	156	122,578	0	0	510	12	6
Forbes ... ..	8	5,595	0	0	31	19	0	Tamworth ... ..	6	4,132	0	0	20	0	0
Glen Innes ... ..	20	11,223	0	0	46	0	0	Taree ... ..	20	13,720	0	0	64	0	0
Gosford ... ..	2	1,920	0	0	8	0	0	Tumut ... ..	2	1,060	0	0	6	0	0
Goulburn ... ..	271	165,590	0	0	743	12	5	Urana ... ..	3	1,268	1	0	16	15	6
Grafton ... ..	73	50,044	0	0	250	0	0	Walcha ... ..	1	1,920	0	0	6	0	0
Gunnedah ... ..	1	750	0	0	4	0	0	Wellington... ..	587	432,303	0	0	1,729	18	3
Gunning ... ..	176	110,312	2	0	470	6	0	Windsor ... ..	7	3,977	0	0	14	0	0
Hay ... ..	4	6,969	0	0	26	0	0	Wollombi ... ..	1	692	0	0	4	0	0
Inverell ... ..	9	4,288	0	0	24	12	5	Yass... ..	94	63,820	0	0	255	0	0
Kempsey ... ..	13	8,770	0	0	32	0	0								
Lismore ... ..	11	7,220	0	0	24	0	0								
Lithgow ... ..	245	174,697	3	0	666	6	0								
									5,547	3,821,145	0	0	15,933	6	9

Average rate per acre, 1d. ; square miles, 5,970.

No. 35.—LAND held under CONDITIONAL LEASE in the year 1886.

District.	No. of Lease.	Area.			Rent.			District.	No. of Lease.	Area.			Rent.		
		a.	r.	p.	£	s.	d.			a.	r.	p.	£	s.	d.
Albury ... ..	153	102,030	2	0	856	3	11	Lismore ... ..	5	890	0	0	7	8	4
Armidale ... ..	383	213,284	2	0	1,777	7	10	Lithgow ... ..	39	11,443	3	0	95	7	4
Balranald ... ..	12	15,018	3	0	123	3	2	Milton ... ..	22	1,551	3	0	16	8	10
Bathurst ... ..	54	16,291	2	0	135	15	3	Molong ... ..	87	62,897	0	0	524	2	10
Bega ... ..	7	1,750	0	0	15	1	8	Moree ... ..	150	219,451	2	0	2,175	6	9
Berrima ... ..	4	2,787	0	0	23	4	6	Moruya ... ..	9	2,703	0	0	26	7	8
Bingera ... ..	41	27,278	0	0	227	6	4	Mudgee ... ..	18	7,681	2	0	64	0	3
Bombala ... ..	61	34,301	1	0	291	15	5	Murrurundi ... ..	58	35,524	0	0	296	5	8
Bourke ... ..	56	53,898	0	0	449	3	0	Muswellbrook	2	451	0	0	3	15	2
Braidwood ... ..	42	12,857	3	0	113	5	8	Narrabri ... ..	207	277,452	0	0	2,297	2	0
Brewarrina ... ..	50	65,954	3	0	549	12	6	Narrandera	33	37,728	0	0	314	8	0
Burrowa ... ..	94	44,638	3	0	385	10	7	Newcastle ... ..	1	229	3	0	1	18	4
Camden (See Picton)								Nowra ... ..	2	240	0	0	3	0	0
Carcoar ... ..	38	16,797	3	0	140	7	5	Orange ... ..	6	2,494	0	0	20	15	8
Casino ... ..	36	26,069	0	0	217	4	11	Parkes ... ..	79	89,930	0	0	872	5	0
Cassilis ... ..	45	14,602	1	0	158	19	0	Paterson ... ..	1	256	0	0	2	2	8
Cobar ... ..	8	8,695	0	0	72	9	2	Picton ... ..	2	1,080	0	0	9	0	0
Condobolin... ..	63	71,186	0	0	725	14	4	Port Macquarie	4	728	0	0	6	3	0
Cooma ... ..	431	193,129	3	0	1,627	17	4	Queanbeyan	68	35,177	3	0	293	18	10
Coonabarabran	76	49,540	2	0	412	16	9	Raymond Terrace	1	343	0	0	2	17	2
Coonamble ... ..	164	187,601	2	0	1,564	16	11	Rylstone ... ..	5	1,620	0	0	13	10	0
Cootamundra ... ..	49	35,243	2	0	293	13	11	Scone ... ..	24	8,630	1	0	71	18	5
Corowa ... ..	50	14,351	3	0	198	2	10	Singleton ... ..	2	1,870	0	0	15	11	8
Cowra ... ..	23	16,172	0	0	134	15	4	Stroud ... ..	11	4,882	0	0	40	13	8
Deniliquin ... ..	27	8,635	2	0	71	19	4	Tamworth ... ..	206	122,401	3	0	1,020	0	4
Dubbo ... ..	226	265,845	0	0	2,266	7	7	Taree ... ..	5	2,420	0	0	20	3	4
Dungog ... ..	1	265	0	0	2	4	2	Tenterfield ... ..	92	53,922	1	0	449	7	1
Eden ... ..	14	4,824	3	0	47	5	7	Tumut ... ..	123	59,167	0	0	498	7	6
Forbes ... ..	118	104,384	3	33	954	8	11	Urana ... ..	30	24,390	0	0	203	5	0
Glen Innes... ..	54	22,786	3	0	189	13	2	Wagga Wagga	149	137,655	2	0	1,147	2	11
Goulburn ... ..	193	52,911	3	0	451	11	2	Walcha ... ..	68	42,333	0	0	352	15	7
Grafton ... ..	34	13,732	3	0	130	13	3	Walgett ... ..	41	67,720	0	0	564	7	2
Grenfell ... ..	181	162,485	2	0	1,515	0	5	Warialda ... ..	81	81,714	0	0	680	19	0
Gundagai ... ..	89	47,269	0	0	393	18	2	Wellington... ..	56	20,899	0	0	174	12	9
Gunnedah ... ..	113	103,048	3	0	858	14	10	Wentworth... ..	51	59,615	0	0	496	15	10
Gunning ... ..	37	10,522	2	0	93	9	0	Wilcannia ... ..	32	32,645	0	0	272	0	10
Hay ... ..	147	194,174	3	0	1,618	2	7	Yass... ..	26	9,316	1	0	92	0	4
Hillston ... ..	67	83,956	1	0	699	12	10	Young ... ..	51	29,834	3	0	286	4	11
Inverell ... ..	180	103,200	1	0	860	0	1								
Kempsey ... ..	12	4,178	0	0	34	16	4								
									5,280	3,954,988	3	33	34,056	15	0

Average rate per acre, 2½d.

## STATISTICS, 1886—MISCELLANEOUS.

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LANDS SALE AND OCCUPATION—*continued.*

No. 36.—PASTORAL and HOMESTEAD LEASES and OCCUPATION LICENSES issued during 1885 and 1886.

Year.	Pastoral Leases.			Occupation Licenses.			Homestead Leases.		
	No.	Area.	Amount.	No.	Area.	Amount.	No.	Area.	Amount.
1885	1,589	Square miles. 105,207	£ s. d. 134,123 0 0	1,543	Square miles. 99,736	£ s. d. 94,608 5 10	.....	.....	.....
1886	1,589	106,287	136,481 7 8	1,450	100,821	102,140 0 9	233	3,556	15,172 7 4

No. 37.—LEASES under the "Crown Lands Occupation Act of 1861" and "Crown Lands Act of 1884," in force during 1886.

Number.		Estimated Area.	Rent and Assessment received.
1,589	Pastoral Leases ... ..	Square miles. 106,287	£ s. d. 136,481 7 8
233	Homestead Leases... ..	3,556	15,172 7 4
1,450	Occupation Licenses ... ..	100,821	102,140 0 9
19	Pastoral Leases in Second-class Districts ... ..	510	559 16 0
3,291	Total ... ..	211,174	254,353 11 9

## REVENUE FROM LANDS AND GOLD FIELDS.

No. 38.—AMOUNT OF REVENUE derived from LANDS and GOLD FIELDS in the year 1886.

UNDER THE "LANDS ALIENATION ACT OF 1861" AND "CROWN LANDS ACT OF 1884."						
Description.	No. of Lots.	Area sold.	Average price per Ac	Total Amount of Sales.	Amount received.	
Sold at Auction	Town ... .. 1,014 Suburban ... .. 517 Country ... .. 793	a. r. p. 421 3 14	£ s. d. 49 19 2½	£ s. d. 21,074 16 0	} 103,704 18 5	£ s. d.
		58,087 2 21	10 5 5¼	18,933 2 3		
		227,573 3 32	1 14 7¾	100,627 6 5		
Improved lots sold to owners of improvements	1,957	227,573 3 32	1 6 0	296,249 15 0	296,249 15 0	
Reclaimed lands sold at appraised price	16	2 3 11½	298 0 0	841 0 0	841 0 0	
Proceeds of sales of unnecessary roads	8	61 3 21	2 15 6	171 14 1	171 14 1	
Sales without competition in special cases	7	37 3 2	2 19 11	113 5 4	113 5 4	
Rescission of reservation from water frontage	4	9 0 37	141 19 5	1,310 12 0	1,310 12 0	
Sold conditionally	6,061	954,560 0 27	.....	1,128,924 17 6	112,892 9 9	
GENERAL TOTAL...	10,377	1,242,598 1 37½	.....	1,568,246 8 7	515,283 14 7	
Balances received on Conditional Purchases	...	...	...	...	588,665 15 10	
Interest " " "	...	...	...	...	129,978 4 5	
TOTAL AMOUNT RECEIVED					£ 1,233,927 14 10	
UNDER THE "CROWN LANDS OCCUPATION ACT OF 1861" AND "CROWN LANDS ACT OF 1884."						
Number.		Estimated area.	Rent and Assessment received.			
19	Pastoral Leases not converted under Act of 1884	Square miles. 510	£ s. d. 559 16 0			
1,450	Occupation Licenses	100,821	102,140 0 9			
1,589	Pastoral Leases	106,287	136,481 7 8			
5,547	Annual Leases	5,970	15,933 6 9			
233	Homestead Leases	3,556	15,172 7 4			
5,280	Conditional Leases...	6,180	34,056 15 0			
TOTAL		223,324	304,343 13 6			

## STATISTICS, 1886—MISCELLANEOUS.

REVENUE FROM LANDS AND GOLD FIELDS—*continued.*No. 38 (*continued*).—AMOUNT OF REVENUE derived from LANDS and GOLD FIELDS (*continued*).

UNDER THE "GOLD FIELDS ACT."										£	s.	d.		
Leases for Mining purposes other than Gold	...	...	...	...	...	...	...	...	...	19,049	17	7		
Auriferous Leases	...	...	...	...	...	...	...	...	...	4,510	0	10		
Miners' Rights	...	...	...	...	...	...	...	...	...	4,642	5	0		
Business Licenses	...	...	...	...	...	...	...	...	...	1,452	15	0		
Mineral Licenses	...	...	...	...	...	...	...	...	...	1,588	0	0		
Fees for Escort and conveyance of Gold, &c.	...	...	...	...	...	...	...	...	...	880	7	4		
TOTAL										£	32,122	15	9	
MISCELLANEOUS.														
Fines	...	...	...	...	...	...	...	...	...	1,084	3	1		
Licenses to cut Timber	...	...	...	...	...	...	...	...	...	8,649	16	8		
Quit Rents	...	...	...	...	...	...	...	...	...	1,401	9	8		
Fees on Transfers	...	...	...	...	...	...	...	...	...	619	0	0		
Fees on Deeds	...	...	...	...	...	...	...	...	...	4,298	10	0		
Sundry Collections	...	...	...	...	...	...	...	...	...	17,786	19	8		
TOTAL										£	33,839	19	1	
RECAPITULATION.														
REVENUE RECEIVED IN 1886 AS PER LANDS DEPARTMENT RETURNS.										£	s.	d.		
Total Receipts ...	{	Under Lands Alienation Act of 1861 and Crown Lands Act of 1884								...	...	1,233,927	14	10
		" Occupation Act								...	...	304,343	13	6
		" Gold Fields Act								...	...	32,122	15	9
		Miscellaneous								...	...	33,839	19	1
GENERAL TOTAL										£	1,604,234	3	2	

NOTE.—The information in the above table was compiled from figures supplied by the Lands Department, and differs somewhat from the actual receipts shown by the Treasury, for which see Part V, Table 2.

## CURRENT WAGES.

No. 39.—NOMINAL RATES OF WAGES of various Trades, &amp;c., during 1886.

Stonemasons	...	...	...	11/- per day of 8 hours.	Saddle, collar, and harness makers	...	...	...	30/- to 50/- per week of 54 hours.
Bricklayers	...	...	...	11/- " "	Sailmakers	...	...	...	30/- to 50/- " "
Plasterers	...	...	...	11/- " "	Tailors	...	...	...	50/- to 60/- per week, piecework.
Quarrymen	...	...	...	7/- to 10/- " "	Pressers	...	...	...	50/- to 60/- " "
Carpenters and joiners	...	...	...	9/- " "	Silk hatters	...	...	...	50/- to 70/- " "
Painters	...	...	...	9/- " "	Upholsterers	...	...	...	10/- to 12/- per day.
Labourers (Builders)	...	...	...	8/- " "	Compositors	...	...	...	25/- to 50/- per week of 48 hours; or piece-work, 1/1 per thousand day, and 1/2 per thousand night work.
Plumbers, gasfitters, and galvanized-iron workers	...	...	...	10/- to 11/- " "	Coopers	...	...	...	40/- to 50/- per week, 1/- to 1/3 per hour.
Slaters	...	...	...	10/- to 12/- " "	Coal-miners	...	...	...	8d. to 1/3 per hour.
Iron-moulders	...	...	...	8/- to 9/4 " "	Coal lumpers and trimmers	...	...	...	1/3 per hour day, 1/6 per hour night work.
Boiler-makers and iron ship-builders	...	...	...	10/- " "	Wharf labourers	...	...	...	1/- per hour.
Engineers	...	...	...	9/- to 12/- " "	Bootmakers, &c. (factory hands)	...	...	...	25/- to 55/- per week.
Labourers working with engineers, boiler-makers, &c.	...	...	...	5/- to 7/- " "	Cooks and pastry-cooks	...	...	...	30/- to 60/- " "
Shipwrights	...	...	...	11/- to 12/- " "	Drapers	...	...	...	30/- to 70/- " "
Coachmakers, builders, wheelwrights, smiths, painters, and trimmers	...	...	...	6/- to 10/- " "	Furniture-makers (cabinet-makers, French-polishers)	...	...	...	25/- to 50/- " "
Wheelwrights and blacksmiths	...	...	...	35/- to 60/- per week, of 9 hours per day.	Tobacco operatives	...	...	...	25/- to 50/- " "
Farriers	...	...	...	35/- to 55/- per week, of 8 hours per day.	Gas-stokers	...	...	...	8d. to 1/- per hour, 8-hour shifts.
Pattern-makers	...	...	...	8/- to 10/- per day of 8 hours.	Brick and pipe makers	...	...	...	10½d. to 1/- per hour.
Brass founders and finishers	...	...	...	8/- to 10/- " "	Sawyers and mill-workers	...	...	...	8d. to 1/3 " "
Tinsmiths and sheet-iron workers	...	...	...	7/- to 9/- " "	Butchers	...	...	...	8d. to 1/- " "
Ironworkers (Eskbank)	...	...	...	8d. to 1/- per hour.					

The rates given above are those accepted by the various Trade and Labour organizations.

# LEGISLATIVE ASSEMBLY.

**Member's Name** *Mr. Alan Cickering*

**Visitor's Name** *Wol Griffiths*

**Address** *Quail Bank, Ltd*

**Object of Visit** *a commission on Inigation 1924*

**Date** *15 Mar 29*



1887.

(SECOND SESSION.)

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LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

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ROYAL COMMISSION—CONSERVATION  
OF WATER.

---

THIRD AND FINAL REPORT

OF THE

COMMISSIONERS.

---

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,

17 *May*, 1887.

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SYDNEY: CHARLES POTTER, GOVERNMENT PRINTER.

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1887.





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1887.

NEW SOUTH WALES.



## ROYAL COMMISSION—CONSERVATION OF WATER.

## FINAL REPORT OF THE COMMISSIONERS.

To His Excellency the Right Honorable CHARLES ROBERT, BARON CARRINGTON, Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies, &c., &c., &c.

MAY IT PLEASE YOUR EXCELLENCY,—

We, your Commissioners, appointed on the 10th day of May, 1884, “to make a diligent and full inquiry into the best method of conserving the rainfall, and of searching for and developing the underground reservoirs supposed to exist in the interior of this Colony, and also into the practicability, by a general system of water conservation and distribution, of averting the disastrous consequences of the periodical droughts to which the Colony is from time to time subject,” have the honor to submit this our Final Report:—

In our First Report we dealt fully with the general subject remitted to us for inquiry; and in the second with the utilization of the flood-waters of the river Murray, and with the works for water conservation and irrigation carried out in Victoria. In the former we indicated that it was our intention to make a careful examination of the northern tributaries of the Darling, and to endeavour to ascertain the extent to which it might be practicable to conserve the flood-waters at the heads of the coastal river basins, with a view to the irrigation of the lower lands.

Scope of First and Second Reports of Commission.

We then directed attention to the necessity of having the country explored by competent engineers and surveyors, with a view to devise the most appropriate schemes for conserving and distributing water in the different river basins of the Colony; and again, in March, 1886, we requested the Honorable the Colonial Secretary to cause a sum of £12,000 to be placed upon the Estimates to be laid before Parliament, which we calculated would be sufficient to defray the cost of eight survey parties for a period of twelve months, to be employed in surveying the principal western and coastal river basins. This exploration we regard as essentially necessary before any practical work can be accomplished; and we think it would be a great public advantage if it could be completed by such time as Parliament has passed some legislative enactment on the lines of that sketched out in our First Report. We understand that the late Parliament did make the appropriation asked for; but we are not aware that any steps have been taken to organize the field parties required to do the work.

Suggested surveys of western and coastal river basins.

Examination of head-waters of Murray in connection with Victoria.

Having in view the fact that the Colonies of Victoria and New South Wales contemplated an agreement for the utilization of the flood-waters of the river Murray, in regard to which the present state of circumstances represents a loss to this Colony which, on the basis of the value for irrigation of water in other countries, may be computed at over £200,000 per annum, we desired to have made a thorough examination of the head-waters of the Murray, and to appoint our engineer, in conjunction with an engineer to be appointed by Victoria, to that duty. Our communications on this subject, however, do not appear to have been considered.

Conference between Commissioners of Victoria and N. S. Wales on the Murray waters.

Our Second Report bore special reference to the two Conferences which had been held between this Commission and the Water Supply Commission of Victoria, on the subject of the utilization of the waters of the River Murray. The outcome of these Conferences was a number of proposals which the two Commissions mutually agreed to recommend to the Governments of New South Wales and Victoria as the basis of a treaty between them, setting forth the conditions under which each Colony should be permitted to divert supplies from the river.

Objections on part of South Australia.

It would seem that, subsequently, the Government of South Australia expressed much surprise that a treaty affecting the River Murray had been considered by an Intercolonial Conference upon which that Colony had no representation. That South Australia was not invited to take part in the Conference arose from no want of courtesy, nor from any desire on the part of Victoria, or of New South Wales, to exclude her from their deliberations. These had exclusive reference to that portion of the Murray which formed the common boundary of the two Colonies, and to the tributaries from each. Provision was made for maintaining the normal flow of the river, and for the diversion of such surplus water only as might be available after that condition had been met.

Suggestions as to Conference between Commissioners of South Australia, Victoria, and N. S. Wales.

While, therefore, the object of the Conference was to provide for as complete a utilization of the Murray waters as possible, it was not sought to infringe on any rights which South Australia might be deemed equitably to possess. It was natural, however, that South Australia should be apprehensive that her rights of navigation and to the normal flow of the river might be jeopardised by the action of a Conference upon which she had no representation; and she has suggested the holding of a final Conference between this Commission, the Water Supply Commission of Victoria, and a Commission which she has appointed for that purpose.

It was anticipated that the Conference would have taken place before now, but as the President of the Victorian Commission, the Hon. Alfred Deakin, M.P., found it necessary to leave Victoria to attend the Imperial Conference now being held in London, the date of assembling was deferred until his return. He is expected to arrive in Melbourne in June or July next. Soon after that date it may be practicable for representatives of the three Colonies to confer together upon the subject, with a view to submit to the Government of each the conditions upon which the flood-waters of the Murray and its tributaries may be best conserved and equitably appropriated.

Diversion from Murray by Victoria and South Australia.

It appears to us that the question is one which demands immediate consideration; for although a large part of the Murray is within the geographical boundaries of New South Wales, Victoria has already entered upon schemes for intercepting the flow of her principal tributaries to the Murray, and has assumed the right to grant to the Messrs. Chaffey Bros. power to divert from the main stream an indefinite supply to carry on irrigation operations over a large tract of land in Victoria. South Australia is also dealing with the matter exclusively from the point of view of her own interests; and in our own Colony large landed proprietors are exercising the power of appropriating the water of several of the principal rivers without permission or regulation by constituted authority.

Examination of country between Murray and Murrumbidgee.

The large extent of valuable country lying between the Murray and the Murrumbidgee seemed to us to possess many special advantages for purposes of irrigation, and we therefore determined to ascertain, as far as the means at our disposal would enable us to do it, to what extent it might be practicable to use the waters of those rivers for irrigation, as well as for stock and domestic purposes. In pursuance of instructions issued by us in May last to our Engineer, Mr. H. G.

M'Kinney,

M'Kinney, that officer has made a detailed inspection of the Murray and Murrumbidgee Rivers, gauging them in a number of places, as detailed in his report, which is appended, and also examining various lakes and other natural depressions. The main objects of the engineering investigations were to determine—1st, whether works for water conservation and supply on a large scale in the southern part of Riverina are practicable; 2nd, to ascertain what quantity of water could be made available for such works; and 3rd, to indicate the nature of these works, and state what surveys are required for them.

On several previous occasions Mr. M'Kinney furnished reports, in compliance with our instructions, regarding questions connected with the Murray-Murrumbidgee doab,\* and as our recent instructions included the entire doab within their scope, these reports should be considered as preliminary to and connected with that now appended. The first of these reports related to the Yanko Creek, and gave the results of levels and investigations carried out by him from the point on the Murrumbidgee which he proposed as a new outlet down to Cuddell, as well as furnishing opinions regarding the works required for the improvement of the creek, together with an estimate of their cost. With the data so supplied, the subject of the Yanko Creek was dealt with by us and made over to the Harbours and Rivers Department. The first of our recommendations regarding the construction of a new outlet from the Murrumbidgee to the Yanko Creek has been carried out by that Department, and the result has been that a much better supply of water has passed down the Yanko and Colombo Creeks for some months past than would otherwise have been afforded. We also recommended that in a number of cases the necks of bends on the former creek should be cut through, and this also is now in progress. Although in this case only the utilization of flood-water is contemplated, the importance of the improvement of the Yanko Creek is much greater than the cost of the work would indicate. There can be no doubt that the length of this creek, following its bends, is considerably over 200 miles, and that of the Colombo Creek little, if anything, short of 100 miles. Residents in the neighbourhood consider it doubtful whether a supply would have flowed more than 30 miles in the Yanko Creek if the improvements had not been carried out. A stream actually flowed through the whole length of the Colombo Creek for some time, and the water in the Yanko was expected to reach the Billabong during last December. Only those acquainted with such districts as that in which the Yanko and Colombo Creeks are situated can appreciate the value of such an important increase to the water-frontage.

In addition to his report on the Yanko Creek, the Engineer furnished a report on the river Murray as a source for canals, another on the Murrumbidgee River as a source for canals, and a third on the Tantangara Basin, which is situated on the Upper Murrumbidgee. These appeared in the Appendix to our First Report, and they require to be referred to now, as they contained statements of a very important character which our Engineer considers his fuller investigations have completely borne out. In the report on the River Murray as a source for canals, dated 8th April, 1885, Mr. M'Kinney, after an inspection of plans of the Murray, and of the river itself from Dora Dora to Tocumwal, gave the opinion that the best site for the head-works of a canal for the diversion of a supply of water from the Murray through the district between that river and the Billabong Creek is at the end of the Jindera Range of hills, and about 8 miles west from Albury. Further examination of the proposed site and its neighbourhood has confirmed the opinion first formed by the Engineer.

For the purpose of supplying water for irrigation, and in a less degree for stock, in the district between the Murray River and the Billabong Creek, the project brought forward by the Engineer, as the result of his investigations, is to have a weir constructed across the Murray at Jindera to divert a supply of water into a canal which would follow the general direction of the Murray to near Howlong, and then turn off towards Coreen. Beyond that place the main canal would follow a line slightly to the north of west, and passing along nearly in the centre of the strip of land between the Billabong and Tuppal Creeks, would tail into the former at some point near Moulamein. At a short distance beyond Coreen one branch would proceed in a north-westerly direction towards Jerilderie, and another in a south-westerly direction

\* A doab is the tract of country lying between two rivers.

Tuppal Canal. direction towards Tuppal. This system of canals might fairly be termed "permanent," as the Murray at Albury has never been known to fail entirely.

Proposed weir  
at Tocumwal.

For the purpose of affording a supply when the river is high to the country between the Murray and the Edward, the Engineer proposes that a weir should be constructed across the former river at Tocumwal, and he suggests that the Victorian Government might be willing to share the cost of this work. He has ascertained from the projects prepared by the Government of Victoria that a pumping station is proposed to be erected by that Colony on the Murray, about 8 miles up stream from Tocumwal. From the information which he has collected, the Engineer thinks it not unlikely that a supply of water can be diverted in a south-westerly as well as in a north-westerly direction from Tocumwal; and if that opinion proves correct, there is little doubt that the Victorian Government will be willing to co-operate with this Colony in the construction of a weir.

It will be seen that the works proposed for the water supply of the districts lying between the Murray River on the south and the Billabong Creek and Edward River on the north embrace the following:—(1) A system of high-level canals with head-works at Jindera, near Albury; and (2) a system of canals, partly artificial and partly natural, with head-works at Tocumwal.

Area irrigable  
by Murray  
Canal.

It is anticipated that these canals will be availed of for domestic purposes and for stock, but their chief use will be for irrigation. Judging from the river records of the last eight years, the Engineer estimates that the area which can be irrigated annually from the canal taken off near Albury is 420,000 acres, of which 290,000 acres will be thoroughly irrigated, and 130,000 acres would receive one flooding only. From the supply to be drawn off near Tocumwal he estimates that an area of 150,000 acres will be irrigated, thus making the gross area irrigated by the Murray waters 570,000 acres. Although this is a small extent of land compared with the whole irrigable area, still the immense importance of even a proportion of 1 acre of irrigation annually to about every 10 acres unirrigated, will be at once understood and appreciated by anyone who has seen the results of irrigation on the Murray, the Murrumbidgee, or the Darling. Reference to our First Report will show that even in the countries where irrigation is practised on an extensive scale the area under irrigation in any one year is but a small fraction—in America the two hundred and fiftieth part—of that requiring irrigation.

Necessity for  
immediate  
surveys.

We are strongly of opinion that the reasons advanced in favour of the Engineer's proposals warrant the initiation of the surveys necessary for the preparation of the details of both projects. Not only so, but we consider that delay in the commencement of the surveys means serious loss to the Colony. The value of the waters of the Murray which run uselessly to the ocean amounts to several hundreds of thousands of pounds annually, and these projects, for which we recommend that surveys should be made without delay, are the first of a definite nature which have been advanced to deal with the subject.

Utilization of  
Murrumbidgee  
waters.

With regard to the utilization of the waters of the Murrumbidgee, the proposals of the Engineer are of an equally bold and comprehensive description. In this case, as in that of the Murray, his recent investigations have confirmed the opinion given in his report of 8th April, 1885, regarding the best site for the head-works of a permanent canal. The site recommended on the Murrumbidgee is at the foot of the Malibo Range, about 6 miles from Wagga. One advantage of the highest importance is claimed for this site, namely, that the nature of the country near it is such that the same weir will enable a supply to be obtained for a canal on each side of the river. These canals would follow courses approximately parallel to the Murrumbidgee, but at a considerable distance from it, and would extend to the One Tree Plain on the north side, and to the Old Man Plain on the south. The northern canal would, in an average year, irrigate 180,000 acres, and the southern canal system, including Lake Urana, 340,000 acres. In addition to the branch canals for the distribution of the water, the Engineer proposes to have a large supply branch capable of carrying 2,000 cubic feet per second, the chief purpose of which will be to maintain a supply of water in Lake Urana, and thereby turn to useful account the immense storage capacity of that natural basin. This part of the project depends on proof being obtained that Lake Urana can be converted

Proposed weir  
near Wagga.

Area irrigable  
from Mur-  
rumbidgee.

Lake Urana.

into

into a suitable storage reservoir at a moderate cost; but this is a point about which there appears to be little doubt.

The system of canals having their head-works at the Malibo Range would carry a supply at all seasons; but for the distribution of flood-water only the Engineer proposes a series of weirs, one of which would be near Pevensy, and about 12 miles north-west from Hay; another is proposed at a point on the Murrumbidgee almost due east from Paika Lake; a third would be required at or near Balranald; a fourth below the outlet to Lake Waldaira, and in addition one would be required near Maude, and two between Paika and the junction of the Murrumbidgee with the Lachlan. The propriety of constructing a weir at the new outlet of the Yanko Creek is left an open question till time has elapsed to test the action of the improvements which are now in progress.

Proposed weirs on the Murrumbidgee.

As in the case of the Murray, so in that of the Murrumbidgee, we are of opinion that the surveys for the system of canals and weirs proposed by our Engineer should be commenced without delay. Whilst the surveys are in progress legislation on the lines recommended in our First Report should be enacted. In the comprehensive Bill which was recently passed in Victoria the leading principles which we recommended have been adopted, and form, in fact, the groundwork of the Bill. The soundness of the principles laid down in our First Report regarding legislation may therefore be assumed; and as our neighbours on the other side of the Murray have profited by the general principles we have laid down, so we may perhaps find much to adopt in the details of their Bill.

Necessity for immediate surveys.

With reference to the necessity for these works, the Engineer, in his report on "Irrigation in Riverina," has furnished a statement showing approximately the number of stock in the districts which will be benefited by the proposed canals—that is, the tract of country extending from the railway line connecting Wagga and Albury on the east to the junction of the Murray and Murrumbidgee on the west, and from the Murray on the south to the Mirool Creek on the north. The whole of this land is occupied by pastoralists, and as the land, with comparatively trifling exceptions, consists of rich, deep, alluvial soil, the numbers of stock given are a mere fraction of those which could be supported if the resources of the land were developed by irrigation. But the necessity for the proposed works is still more forcibly illustrated by the following table, which shows the loss in stock resulting from one bad season alone—namely, 1884—in the stock districts mentioned:—

Loss of stock through drought.

Stock District.	Number of Sheep.				Number of Cattle.				Number of Horses.			
	1st January, 1884.	1st January, 1885.	Increase.	Decrease.	1st January, 1884.	1st January, 1885.	Increase.	Decrease.	1st January, 1884.	1st January, 1885.	Increase.	Decrease.
Albury .....	381,984	410,396	28,412	.....	6,220	12,877	6,657	...	2,389	5,828	3,439	...
Balranald ...	1,501,745	1,094,078	.....	407,667	8,552	5,106	...	3,446	2,740	2,535	...	205
Corowa .....	415,292	329,314	.....	85,978	2,960	3,385	425	...	2,255	3,361	1,106	...
Deniliquin ..	983,465	787,480	.....	195,985	4,427	5,367	940	...	3,183	4,249	1,066	...
Hay .....	1,593,585	1,058,696	.....	539,889	5,368	3,495	...	1,873	2,443	2,608	165	...
Narrandera...	1,083,283	928,312	.....	154,971	6,258	6,613	355	...	1,788	2,461	673	...
Urana .....	750,132	601,038	.....	149,094	3,959	1,827	...	2,132	2,012	1,703	...	309
Wagga .....	1,495,009	1,108,408	.....	386,601	2,763	13,367	10,604	...	9,442	6,793	...	2,649
Totals ...	8,209,495	6,317,722	23,412	1,920,185	40,507	52,037	18,981	7,451	26,252	29,538	6,449	3,163

This statement shows that the actual diminution in the number of sheep in the districts specified was 1,891,773, whereas, taking the natural increase at only 12 per cent., there should have been an increase of 985,139, so that the total loss in sheep for the year was 2,876,912. It is necessary to explain here that the figures given are for the whole area of the stock districts mentioned, while in the Engineer's report the numbers refer only to so much of the districts as will be benefited by the canals he proposes. As some of the districts enumerated—in particular, Albury and Wagga—are, to an important extent, refuges in times of drought for the stock of other less-favoured places, the table may fairly be taken as a whole to show the absolute loss in sheep in the tract of country represented in the list. In explanation of these losses, the Chief Inspector of Stock, referring to the statistics of the whole Colony, says that the decrease was "caused by the severe drought, through loss of lambs, deaths from starvation, and from forced sales, and removals to other Colonies."

In



Value of  
stock lost  
through  
drought.

In addition to the loss in the number of sheep, the wool on those remaining was naturally deteriorated in an important degree. It would be impossible to estimate the amount of loss sustained through this deterioration in the quality of the wool, and it would also be impossible to estimate the value of the sheep removed to other Colonies, and disposed of by forced sale; but if we take these two items as balancing, we have the actual net direct loss represented by the value of 2,876,912 sheep. Assuming the value of these as 6s. 8d. per head, we find the amount to be £958,971, or, in round numbers, £960,000. In other words, the *direct* loss in stock alone in Southern Riverina due to drought was *in one year* about one-fourth of the estimated cost of all the works required for the utilization of the waters of the Murray and Murrumbidgee. It has to be remembered, too, that the direct loss thus ascertained is only an important portion of the total loss. Now, the construction of the works proposed will not only render such losses impossible, but will enormously increase the carrying capability of the land, as it has been proved that even the most primitive form of irrigation, namely, the flooding of the native grasses, will make such land as that in Riverina capable of carrying five sheep to an acre, whereas at present the average is over two acres to a sheep.

System of  
surveys.

With regard to the system of carrying out the surveys we have recommended, we are of opinion that the most expeditious, economical, and satisfactory arrangement would be one similar to that adopted in the case of the original projects for water conservation in Victoria—that is to say, that the surveys and levels should be carried out by contract under the control and supervision of one or two competent engineers experienced in the construction of canals, and who would apply such checks as they might deem necessary to the work supplied to them by the engineers and surveyors employed by contract. On the superintending engineer or engineers would devolve the duty of preparing in detail from the plans and measurements supplied to them the detailed estimates and plans of the proposed works, and the estimates of returns from them. This is substantially the method which was adopted in Victoria when the preparation of projects for water conservation was placed in the hands of Messrs. Gordon and Black. It will be seen from our Second Report that the projects prepared by these gentlemen formed the groundwork of all the schemes which have been carried out, as well as of others which are likely to be undertaken.

Necessity for  
maintaining  
records of  
river gauges.

There is another point referred to in Mr. M'Kinney's report which calls for special remark, namely, the necessity for maintaining the records of the various river gauges, and also of continuing the system of observation of discharges which he has initiated under our instructions. These records and observations are especially necessary in the case of the Murray and the Murrumbidgee, but it is also highly desirable that the same procedure should be continued on all the western rivers of the Colony. Not only so, but we are of opinion that a similar system should be adopted on our coastal rivers.

Stations of  
river gauges.

When the Commission entered on its duties, it was found that, with the exception of the gauge records maintained by Mr. Russell, the Government Astronomer, the information obtainable regarding our rivers was meagre and fragmentary. Even in the case of the observations supplied to the Government Astronomer, much remained to be done to connect the results with known levels, and to gauge the discharges corresponding to recorded heights of the river. What we have done may, we consider, be fairly regarded as a sound basis on which the system we have initiated may be continued and extended. Besides availing ourselves of the records obtained by the Government Astronomer, copies of which that gentleman kindly supplied to us regularly, we deemed it advisable to make special arrangements for obtaining river records from Albury, Tocumwal, Moama, Euston, Wentworth, Hay, Balranald, Dubbo, and Warren, and returns of the gauge readings at these places are regularly forwarded to us.

Absence of  
proper legis-  
lation.

The utilization of the waters of our rivers must soon become the most important question before the Colony. Already the absence of proper legislation regarding water-rights has been known to exercise a retarding influence on pastoral and agricultural enterprise. As matters at present stand, the enterprising grazier or farmer who erects machinery or constructs works for purposes of irrigation does so at considerable risk, as his right to use water for irrigation may be disputed either

by

by private individuals or by the Government. Preferring the uncertainty of the seasons to such risk, the great majority allow the water to pass by and go to waste. Very different is the state of affairs in Victoria, and even in South Australia. The former Colony is proceeding so rapidly with works for water conservation that in all probability within a few years from the present time no quantity of water will reach the Murray, except in high floods, from any of its Victorian tributaries west of Albury, excepting the Ovens. To pave the way for the works which have been and are being carried out in Victoria a system of discharge observations of a very complete description is followed, and till we have complete information of a similar nature in this Colony we cannot satisfactorily undertake any important work.

In our First Report we alluded to a survey which we had entrusted to Mr. Cornelius Haylock, L.S., for the purpose of determining whether it would be possible to divert a portion of the Snowy River water into the Murrumbidgee.

Diversion of Snowy River into the Murrumbidgee.

To Mr. P. F. Adams, the late Surveyor-General, is due the suggestion that such a scheme might be possible. In his evidence before the Commissioners (see Appendix to First Report), he expressed his opinion that the respective levels were favourable to the project, but the country to be traversed by the canal might prove to be of too mountainous and rocky a character to justify the large expenditure which would be necessary for tunnels, excavations, &c. Mr. Adams suggested that the canal should leave the Snowy River at a point about 5 miles above the junction of the Eucumbene, and be led across the lowest gap on the watershed dividing the Snowy from the Murrumbidgee, and thence into Slack's Creek, a tributary of the Murrumbidgee.

Levels of country.

Mr. Haylock began his survey at a point about 10 miles on the road from Cooma to Jindabyne, and carried it for a distance of 31 miles. The severe drought which prevailed at that time compelled him to abandon the survey abruptly. No future opportunity presented itself for Mr. Haylock to prosecute his survey, and as the question of the proposed diversion still remained undecided, Mr. J. B. Donkin, one of our number, was deputed in January last to ascertain by means of barometric observations, the difference of level between the proposed offtake on the Snowy River and the gap in the Dividing Range.

Mr. Haylock's survey.

From Commissioner Donkin's Report (*See Appendix*) it appears that the most suitable point of offtake would be below the junction of the Gungarlin and Snowy Rivers, at about 180 feet above the Gap, and that the supply which could be availed of, including a contribution from the Crackenback and Eucumbene Rivers, would be about 16 million gallons per hour in the driest seasons. Such an increase to the volume of the Murrumbidgee, coming at the most opportune time of the year, when the river is at its lowest, would not only serve to keep a constant stream in the river, but would also afford a supply which it might be found practicable to divert into Lake George.

Report by Commissioner Donkin.

The value of Lake George as a natural reservoir cannot be over-estimated if complete surveys bear out the cursory examinations of Commissioners Donkin and Gipps; and should it be possible to effect the proposed diversion of Snowy water into the lake it is not improbable that, by commanding the divide between the Murrumbidgee and the Lachlan, a considerable supply could be devoted to irrigation, and to the use of miners on the Temora, Young, Wombat, and Grenfell Gold-fields. As the mining industries of these fields are at present in a languishing condition, and must continue to be so while the water supply is precarious, we consider that a series of surveys should be undertaken for the purpose of ascertaining whether the several schemes are possible of accomplishment.

Diversion to Lake George.

The investigations carried out by Mr. Donkin have so far placed beyond the region of doubt the question as to whether the levels of the intervening country would permit of a diversion from the Snowy into the Murrumbidgee, but there still remains the task of demonstrating absolutely by a detailed survey and levelling whether, in view of the physical difficulties to be overcome, the necessary works can be constructed at a cost which would afford a reasonable presumption that they would be remunerative.

Necessity for detailed survey.

In order to encourage the further development of the dead river-beds of Kiandra, already proved to be highly auriferous, and for purposes of water conservation, it is advisable that the survey of the Murrumbidgee River should commence

Development of gold-bearing drifts at Kiandra.

at

at the head of the Tumut River, one of its largest tributaries, at a point under the Big Bogong Mountains, where, according to the opinion of Commissioner Gipps, C.E., extensive flats and swamps offer a favourable opportunity for conserving a large body of water, which he considers could be led on to the highest gravel-drift spurs of the Kiandra Gold-field by a canal and pipe line under 40 miles in length. After serving this purpose, he contends that the supply, together with a large stream from the head-waters of the Snowy River, could be discharged into a capacious reservoir at Providence Flat, and conducted thence by canal over the divide of the Murrumbidgee River into the Bolaira Plains, where a dam 60 feet high would impound an immense reservoir. He proposes that this supply should be allowed to flow down the rocky bed of the Murrumbidgee River for about 40 miles, till it reaches the offtake of his proposed canal scheme near the junction of Slack's Creek. This canal would provide for the irrigation of a large portion of the Manero Plains, and for the delivery into Lake George of the flood-waters of the different rivers and creeks intersecting its course. From this immense natural reservoir he suggests that it would be possible to supply different towns and gold-fields, and to irrigate a large area of agricultural land on both sides of the divide of the Murrumbidgee and Lachlan Rivers.

Providence  
Flat.

Diversion into  
Lake George.

Country be-  
tween Bogan,  
Darling, and  
Lachlan  
Rivers.

The area of country lying between the Bogan, Darling, and Lachlan Rivers and the Willandra Billabong—represented as an almost total blank on most maps of the Colony—having attracted the attention of the President, he deputed Mr. Victor Czarlinski, M.E., C.E., to examine and report on the district, with a view to ascertain whether it would be possible to divert a portion of the waters of the Bogan and Macquarie across that part of the Colony, over the lowest point on the range.

This portion of the Colony may be considered as practically destitute of water for use in irrigation. The rainfall, though not insignificant as regards the annual mean, is not ample and frequent enough to permit of the adoption of irrigation on an extensive scale. The falls of rain are so scanty, and come at such irregular periods, that the creeks are really intermittent.

Under these circumstances the settlers have been obliged to have recourse to tanks and dams for the conservation of sufficient water for stock. These means of storage seem to supply this want fully, but so far they are quite inadequate for the purposes of irrigation. Settlers in the Cobar District suffer more from want of grass than from want of water; and it seems probable that this privation must continue till such time as an efficient supply of water for irrigation is placed at their command. Mr. Czarlinski is of opinion that this object may be achieved by means of a canal to divert water from the Upper Macquarie basin.

Canal from  
Upper Mac-  
quarie basin.

He also concurs in the opinion expressed originally by the Engineer of the Commission, Mr. H. G. McKinney, M.E., M.I.C.E., that it would be practicable to divert supplies from the Macquarie along the right bank of the Bogan from Narromine. The natural features of the country are such that the works would be comparatively inexpensive.

Gingham  
Gap.

Mr. Czarlinski reports that it is possible to bring the waters of the Upper Macquarie through the Gingham Gap on to the ridge between the Bogan River and the Bulbodney Creek.

The district examined by Mr. Czarlinski appears to him to be wholly outside the influence of the Darling; and even should it be possible to divert water south-west from Brewarrina, the canal could not follow a higher level than the bank of the river, and no supply could be sent into the arid country between the Darling and the Lachlan. Nor is there any possibility of bringing water across from the Darling at Wilcannia to the Willandra Billabong, as the place where the latter runs out is found to be higher than the bank of the Darling.

Willandra  
Billabong.

Water-  
bearing strata  
in the  
cretaceous  
formation.

Mr. Czarlinski entertains no doubt as to the existence of water-bearing strata under the cretaceous formation east of the Darling, and he is confident that considerable supplies may be obtained near the river at a depth of about 700 feet. He advances the theory that the supply in this cretaceous strata is derived from a tract of country extending along the north-western limit of the Darling watershed in Queensland, and flows southward till its progress is arrested by the old Devonian range which crosses the Darling near Wilcannia. To the objection which might

be

be raised that in course of time this cretaceous basin, vast though it be, would overflow, it is urged that the rainfall over the Queensland portion of the basin is not copious or frequent enough to admit of such a contingency; besides, a large quantity of the water which soaks into the strata is returned again to the surface by capillary attraction, and by vegetable absorption at the principal point of infiltration.

During his tour of inspection Mr. Czarlinski became impressed with the necessity for destroying the noxious scrub and useless timber, which not only absorb moisture, but prevent a considerable quantity of water from reaching the tanks and dams. Noxious scrub.

In March, 1886, we employed Mr. J. B. Hotson, C.E., to make an examination of the river Darling from Mungindi to Lake Poopelloe, with a view to ascertain what depressions near the river could be used as storage reservoirs. We directed Mr. Hotson that he should, after having satisfied himself by a preliminary inspection that any depression had, or could at a moderate expense be made to have, a capacity of at least a thousand million gallons, with an average depth of at least 15 feet, make such survey and sections as would fix the position of the depression on the map, and indicate approximately its capacity. He was directed to connect such depression with the river by a surveyed and levelled line, and to obtain information which would enable an estimate to be prepared of the cost of utilising the depression. Mr. Hotson's survey of depressions along Darling River.

This part of the country, as will be seen by reference to the evidence which we took at Walgett, the minutes of which are appended to our First Report, had been visited by one of the severest and most protracted droughts which had ever desolated any portion of the Colony. But soon after Mr. Hotson began his work heavy falls of rain occurred, and the country became almost impassable. The Barwon was in flood, and it was with extreme difficulty that any work whatever could be done. Under these circumstances long delays ensued, and but a very small portion of work could be accomplished. Mr. Hotson had only reached Walgett when it became apparent that the survey must be abandoned for a time at least, as the flood now spread for miles on each side of the river. Survey stopped by floods.

Mr. Hotson's examination was not, however, wholly barren of results. At the township of Gundabloui, on the Mooni River, he marked a site where a dam, if carried to a height of 8 feet above summer level, would impound a large body of water, which would probably extend a distance of about 20 miles. The water, in addition to being used for irrigation on the banks of the Mooni, could, by means of pumping to a small height, be employed to fertilise the adjoining waterless country in the south-west. Dam site at Gundabloui.

To the south of Gundabloui, at a point about half-a-mile above the junction of the Mooni with the Barwon, it would appear that a dam might be erected with advantage. No specific site was, however, determined on by survey.

On the Ballone River or Creek, an ana-branch of the Boomi, Mr. Hotson selected two sites for overshot dams—one on the northern arm of the creek, and one on the southern; but at a subsequent period of his inspection he was led to the conclusion that such works would be rendered unnecessary by the erection of a dam at the Werribilla waterhole, a natural reservoir in the channel of the Barwon, about a mile above the junction of the Gwydir. The water, which is about 40 feet deep at summer level, is held back by a bar of rock which crosses the main channel, and abuts on the banks. The position appears to be eminently favoured by nature for the construction of an overshot dam. By means of such a work the several Ballone and Banarway Channels could be maintained permanently full, the dry country to the north and west of Collarindabri would be brought within reach of irrigation, and the surplus water of the Barwon could be diverted westerly to join the natural drainage system trending towards the big Warrambool. The flooded state of the river prevented Mr. Hotson from taking cross-sections of the stream and running a line of levels; but he is of opinion that the dam would require to be about 25 feet high and 130 feet long. No apprehension need exist as to the effect of such a work on the navigation of the stream, there being no steamer traffic on the upper portions of the Barwon. Dam sites on Ballone River.

Dam site  
below  
Moomin and  
Gwydir  
Rivers.

Below the junction of the Moomin and the Gwydir there exists a site for an overshot dam, which would probably back the water a distance of 15 miles up both streams; and several sites may be found where an overshot dam would be of local advantage.

Dam sites on  
Grawan  
Creek.

On the Grawan Creek, which falls into the Barwon a few miles below Collarindabri, Mr. Hotson surveyed two sites for dams; and on the Meaki, the main branch of the Grawan, he noted a site, but was unable to determine its true position. In connection with these works a dam would be necessary at the lower end of the Thalaba Creek, near the Pian Creek, and one some distance up the Thalaba. The country between the Grawan and the Thalaba could be commanded for irrigation by pumping to a height of about 10 feet above the level to which these works would raise the water.

Dam site on  
Pagan Creek.

In the lower portion of the Pagan Creek an overshot dam of about 20 feet in height would maintain water in the creek to a considerable distance.

Mr. Hotson, on his return journey to Sydney *via* Narrabri, obtained information as to sites on Pian Creek where timber overshot dams might be constructed with benefit to the district. These structures, which need not be of a great height, would throw the water back for miles between well-defined banks.

Results of  
Mr. Hotson's  
survey.

It is to be regretted that Mr. Hotson's survey had to be so abruptly stopped, because of the continually inundated condition of the country along the banks of the Barwon. But though the principal object of the survey has not been achieved, yet what has been accomplished possesses a decided value. A number of sites have been indicated where the construction of dams will impound large bodies of water that may be diverted over tracts of country at present absolutely waterless. The soil is fertile, and abundant building materials exist for the construction of dams. Nothing but action on the part of the State is wanting to make these natural conditions contribute to the general prosperity of the Colony.

Inspection of  
Darling River  
by Commis-  
sioners Donkin  
and Gipps.

At a later period of the year the flooded state of the Darling presented a favourable opportunity for a personal visit, and for obtaining information respecting the river. We accordingly deputed two of our number, Commissioners Donkin and Gipps, to make an inspection of the river from Bourke to Wentworth. Proceeding by steamer, with the exception of a journey by coach from Wilcannia to Menindie, they examined a number of witnesses, and, where opportunity offered, inspected some of the lakes in the vicinity of the river. These depressions are filled by the overflow of the Darling. When the river falls most of them flow back into the stream, and, as in the case of Lake Menindie, contribute so materially to the volume of the river as to prolong by two or three months the period for which navigation is possible. Others of these lakes retain the water for a time until it finally disappears by percolation and evaporation, leaving in most instances a luxuriant growth of herbage behind.

Menindie  
Lake.

Menindie Lake and Cawndilla Lake (which are, in fact, one lake) cover an area of over 60,000 acres, with a depth in places of 16 feet, and according to the opinion of Mr. W. J. Hanna, C.E., the local Road Superintendent, this body of water could be retained at a cost of about £700. (*Vide* Evidence.) At the time of the Commissioners' visit, Lake Woytchugga, near Wilcannia, covered an extent of about 4,000 acres, with a depth of 10 feet in places; and Mr. J. W. Brougham, of Outer Netallie Station, was confident that the expenditure of £100 would be sufficient to retain the water. A simple dam which he threw across this lake at a cost of £10 held back a considerable body of water for two years. (*Vide* Evidence.)

Diversion into  
lakes by  
means of dam  
on Terya-  
weynya Creek.

On the east side of the Darling the flood-waters of the river have been diverted as far as Lake Bullabulka, filling a system of about twenty-two lakes, which comprise an area of about 52,000 acres. This very satisfactory result has been achieved through the enterprise of a number of pastoral lessees in the district who combined to defray the cost of a dam on Teryaweynya Creek. (*Vide* Appendix to Report on Darling River.)

The examination by the Commissioners was too cursory to justify any absolute expression of opinion concerning these lakes; but there can be no doubt that it would be

be possible at a small cost, in the manner recommended in the Commissioners' Report on the Darling, to make use of them as large natural reservoirs.

During the late drought the losses in stock from want of grass and want of water have been startling. It would be impossible to give even an approximate statement of the mortality, but some idea of it may be formed from the fact that on three stations in the Darling District the loss in two years was over a quarter of a million of sheep, irrespective of the deficiency in lambs. On Billilla Station the actual loss in two years was 156,000 sheep, and in one of the years there was no lambing. Feed of course rose to famine prices—hay and chaff being sold at £50 a ton, and flour (which was given to the horses for want of fodder) at £40 a ton.

Losses in stock  
in Darling  
district.

Individual effort so far seems to have been powerless to cope with these disastrous droughts, and it would appear that irrigation and water conservation must be resorted to as a means of counteracting their effects. At present the Darling country seems to have attained its limit of expansion; and unless the benefits of irrigation can be placed within the reach of the pastoralist his enterprise must remain restricted, and he must continue to see his flocks perish in the frequently recurring times of drought.

Necessity for  
irrigation.

Wherever irrigation has been tried on the Darling it has been successful. At Winbar 7 acres yielded 30 tons of lucerne hay per annum, at a cost of about £3 a ton, during a drought when chaff delivered at the station cost £23 a ton. The Manager estimated that the experiment had resulted in a saving of £1,000 in one year. (*Vide Evidence.*) At Tapio eighteen sheep to the acre were maintained in splendid condition on a patch of 22 irrigated acres, while on the rest of the run 13 acres barely sufficed to keep a sheep alive. In view of this fact the statement of Mr. N. Sadleir, of Albemarle Station, that by means of irrigation the carrying capacity of country is increased a hundred-fold need not be regarded as a mere figure of speech. On an area 3 miles square, irrigated by the flow of flood-waters over low-lying land, he kept 8,000 sheep in the middle of summer, and had a good lambing; and he avers that the very same land, not irrigated, did not carry 1,200 sheep. In fact no opinion adverse to irrigation was expressed by settlers on the river. The only difficulties which seemed to present themselves were in regard to the maintaining of a permanent supply in the river to make irrigation possible during the time when it is most needed—a prolonged drought, and the want of practical knowledge to employ the methods of irrigation.

Successful  
results of  
irrigation.

The solution of this difficulty lies in the construction of weirs at various points in the Darling. Throughout the whole course of the river traversed by the Commissioners there exist bars of rock at frequent intervals. These would afford excellent sites for weirs; and the construction of such works is rendered still more practicable by the presence of abundance of building material at many points on the river.

Rocky bars in  
Darling River  
regarded as  
weir sites.

In this connection the question must arise as to the possible influence which an artificial obstruction in the stream might exercise on the banks. It may yet be premature to hazard a decided opinion on the matter, but if we may judge from existing natural conditions there is no reason to apprehend that a weir across the Darling would cause the banks to erode. At Brewarrina and at Curranyalpa the presence of a bar of rock of considerable magnitude has not induced the river to cut a fresh channel. At the time of the Commissioners' visit to the former place during the drought of 1885 it came under their notice that the natural bar, which is known as "The Fisheries," backed up the water in the Barwon a distance of about 30 miles, there being a considerable depth immediately behind the bar.

Erosion of  
banks.

Though navigation must occupy a secondary position with regard to irrigation, yet, should weirs be constructed on the Darling, it may be possible to preserve both navigation and irrigation. The maintenance of a constant stream, and the extension of the railway to a point lower down the river than Bourke, would undoubtedly direct to Sydney a considerable amount of trade which is now diverted to adjoining colonies. At present the settlers on that part of the Darling which may be regarded as inaccessible to the railway at Bourke experience great inconvenience and uncertainty in receiving supplies and sending away produce. The river is their highway, but when it ceases to be a river they are subjected to loss and delay

Navigation of  
Darling.

delay through having to fall back on the tedious and costly land carriage by teams. Instances have occurred where wool has been detained for twelve months awaiting dispatch to market; and on one occasion a steamer occupied over three years in the journey from Morgan (S.A.) to Bourke.

Detention of wool on river.

Uniform method of adjusting river gauges necessary.

Commissioners Donkin and Gipps observed that no uniform method of adjusting the river-gauges is adopted on the Darling. In some places the height of the river is read as from the bed; in others it is taken as from "summer level," a term which receives a variety of interpretations. To obviate the confusion which arises from these irregular methods, and to ensure trustworthy records along the whole course of the river, it seems advisable that some common zero should be adopted from which to read the heights of floods. It appears to us that zero should be regarded as that level of the water when the river just ceases to flow over the rocky bars.

Examination of coastal rivers.

In pursuance of our decision to examine the coastal rivers and the northern portion of the Darling Basin, we held meetings and took evidence at Camden, Penrith, Richmond, and Windsor, in the drainage area of the Hawkesbury, and subsequently deputed three of our number, as well as our Engineer, to proceed to the Macleay, Clarence, and other rivers of the northern coast, and also to the tableland of New England. The programme arranged was carried out in full, excepting that part of it relating to the Macleay, and this was left over with the intention of taking it up afterwards in conjunction with other coastal basins further south. There has not, however, been time to carry out this intention, which is a matter to be regretted, as there is reason to believe that the valley of the Macleay will be found to afford a favourable field for irrigation.

Valley of the Hawkesbury.

The evidence obtained by us regarding the beneficial effects of irrigation in the valley of the Hawkesbury was conclusive on this point. As the average rainfall at Windsor, obtained from returns extending over a period of twenty-three years, is nearly 33 inches, and that at Richmond, found from the records of the last five years, 26 inches, it might be inferred that the want of irrigation would not be felt. It must, however, be borne in mind that a good average annual rainfall is not by itself sufficient proof that irrigation is not necessary. The true position of a district in this respect is not known till it is ascertained, first, what are the products of that district, and, second, whether the rainfall is sufficient for those products in the seasons when most required. In the case of the Hawkesbury District, we found that fruit, maize, fodder-producing crops, and vegetables are extensively grown; but that the rainfall, so far from being seasonable, is greatest in winter and least in spring. Hence it is not surprising that the evidence obtained was strongly in favour of irrigation. In a number of instances evidence of this description was based on actual experience. The well-known scientist, Mr. John Tebbutt, F.R.A.S., of Windsor, who is the proprietor of a valuable agricultural estate, described the result of irrigation on his land as "magnificent." Mr. John Gow, of Mulgrave, who expended £250 on plant for the irrigation of 10 acres of vines and fruit trees, expressed himself as well satisfied with the experiment, as his crops were doubled by the first season's operations. The water in this case was raised 55 feet, so that altogether it was an instance of irrigation carried out under most unfavourable circumstances, yet with satisfactory and remunerative results.

Results of irrigation.

The technical questions involved in the utilization of the waters of the Nepean and Hawkesbury Rivers, on a large scale, were dealt with briefly by our Engineer in two reports, which are herewith appended, as is also a copy of the plan referred to in one of them, showing the extent of land subject to floods near Richmond and Windsor. Combining the information which these reports and the plan afford with the evidence which we obtained, we are in a position to state (1) that there is a widespread demand for irrigation in the valley of the Nepean and Hawkesbury, and (2) that, so far as technical information is available, it tends to show that there are great facilities for satisfying this demand.

Enterprise prevented by existing riparian laws.

Our inquiries on the Nepean and Hawkesbury corroborated the conclusions at which we had arrived from our investigations elsewhere, that the present unsatisfactory state of the law on the subject of water-rights acts as a bar to agricultural progress. The enterprising men who have already commenced irrigation, and who are



are thoroughly convinced of its value, know that their operations are carried on at more or less risk of interruption. It is not surprising that there are others who appreciate the importance of irrigation, but who are deterred from resorting to it by the risks involved.

It has frequently been stated, and with much apparent reason, that the first step towards dealing effectively with the question of water conservation on the Darling is to provide for the storage of surplus water on the upper parts of the basin of that river, so as to be in a position to, in some measure, equalize the flow. The investigation of this question was one of the leading objects in view in connection with the visit of the Commission to what, in our First Report, was termed the "effective" portion of the basin of the Darling. Under this designation are included the upper parts of the drainage area of the Gwydir and the entire drainage areas of the Macintyre and Dumaresq Rivers.

In examining the nature and requirements of this district, a point which claims prominent attention, and which cropped up repeatedly in the evidence taken by us, is the decrease in the rainfall in a westerly direction from the summit of the Dividing Range. Another matter which has an important bearing on the supply of water is the presence of a large extent of heavily timbered and gently undulating tableland, and also of plains of considerable area in this upper portion of the Darling Basin. The combined effect of these two important features is sufficient to explain why even the Upper Darling is far from being such a river as might be expected to flow from such an extensive catchment area. A light rainfall, a gently undulating or comparatively level country, deep soil, and heavy timber, are conditions which tend to prevent the formation of streams and to reduce the discharge of rivers; and these are the conditions which exist on a large proportion of the drainage area of the Upper Darling.

Another point which is made clear by these considerations is, that while in places like Glen Innes, which is near the top of the Dividing Range, or like Inverell, which is in a valley on its western slope, the rainfall may, in ordinary seasons, be sufficient, it is necessary to travel but a short distance from Inverell, in a westerly or north-westerly direction, to find land suitably situated for irrigation, and on which the rainfall is so deficient and irregular as to point inevitably to the conclusion that, without irrigation, agriculture and horticulture will be subject to great risk. Thus, while the rainfall at Walcha, Glen Innes, and Tenterfield is respectively 25.25, 31.96, and 29.71 inches, that at Goolhi, Moree, and Tullooona is, respectively, 18.31, 17.90, and 18.52 inches, the respective distances between the corresponding places in their order being 100 miles, 110 miles, and 100 miles. The diminution of the number of rainy days as the distance from the Dividing Range increases is still more marked. Under these circumstances, as might be expected, the evidence obtained by the Commission at Glen Innes, Inverell, and Tenterfield, while tending to show that the want of water conservation at those places is seldom felt, the case is quite different beyond a distance of 40 or 50 miles west from them. Regarding the district beyond this limit, the evidence conclusively showed that the necessity for irrigation has already begun to be felt.

On the subject of the storage of flood-water in the basin of the Upper Darling, the result of the inquiries of the Commission was not as satisfactory as had been hoped. The only really extensive natural reservoirs brought to notice in the evidence taken by the Commissioners were that known as "The Mother-of-Ducks Lagoon," and the Llangothlan Lagoon, situated on Ben Lomond, and about 25 miles from Glen Innes. The former, which is the much more important mountain lake, covers an area of about 3,360 acres, and, though shallow, would afford such storage capacity as would make it well worth utilizing if its situation were more favourable; but located as it is, almost at the top of the Dividing Range, and with no possibility of diverting any very large supply of water into it, there is very little hope of making the lagoon play an important part in any large project for water conservation. It is not unlikely, however, that, as stated by one of the witnesses, it may be turned to account for purposes of town supply.

Though the general conclusions arrived at from the partial inspection of the effective portion of the drainage area of the Darling, as well as from the evidence taken,



taken, were, on the whole, less encouraging than might have been anticipated, yet, according to Commissioners Gipps and Townsend, the prospect of augmenting the low supply in the Darling by storing water on a large scale in times of flood, and allowing it to escape by degrees afterwards, is not altogether doubtful. The former Commissioner, guided by a hasty examination, and the latter by an intimate knowledge of the country embraced in the heads of the Gwydir, Macintyre, Severn, Dumaresque, Peel, and Namoi Rivers—recommend the examination of extensive reservoir sites above the junction of the Bluff and Mole Rivers—on the Bluff River, below the junction of Deepwater and Mole Rivers; on Deepwater River, at Bolivia Station; on Beardy River, at about 352 miles on the Northern Railway line, and at the head of Limestone Creek. They are of opinion that the water supply from such reservoirs could be availed of for irrigating a very extensive area of rich agricultural land, and for developing a large mining district known to abound in extensive gravel drifts containing gold, tin, and diamonds, which would yield very profitable returns if provided with a liberal supply of water.

Drainage area  
of Clarence  
River.

The drainage area of the Clarence is in marked contrast to that of the Upper Darling, and a comparison of the two brings out clearly the main points of difference between the eastern and western slopes of the Dividing Range. It has already been pointed out that, in the case of the Upper Darling, the leading features of a large portion of that district tend strongly to reduce the flow of surface water, and to keep down the discharge of the river to a minimum. In a great measure the case of the basin of the Clarence is precisely the reverse of this. The eastern face of the Dividing Range, on which the Clarence and its principal tributaries, except the Nymboi and the Orara, take their rise, is steep and in many places precipitous, and the mountains, amongst which are the sources of these two tributaries, are of a similar description. With a few exceptions, the rivers and creeks which combine to form the Clarence flow in narrow ravines, and might, as a general rule, be classed as mountain torrents. The average rainfall is high, and exceptionally heavy falls of rain frequently occur within very short periods of time. These circumstances combined have the effect of making the discharge of the Clarence River great at all times in proportion to its catchment area, and of occasionally causing extraordinary floods, which attain the most formidable dimensions, but last for only short periods. The information available regarding the flood discharges of our rivers is very meagre, but what there is tends to show that a high flood in the Clarence represents a greater discharge than is ever carried at any one time to the South Australian border by all our western rivers combined. Mr. E. J. Statham, Assistant Engineer in the Roads Department, stated in his evidence that the flood discharge of the Nymboi, below its junction with the Little River at Buccarumbi, was found by him to be about 270,000 cubic feet per second. In Appendix A 7 to the First Report of the Commission is a table which was compiled by the late Mr. P. H. Gell from observations made by him, and from this it will be seen that the combined discharge of the Murray, Murrumbidgee, and Lachlan, during the period extending from August, 1871, till August, 1874, never exceeded 67,500 cubic feet per second. The northern arm of the Clarence—that is, the Clarence River proper—is considerably larger than the Nymboi, and, in addition to the latter, the Orara and Mitchell Rivers have to be taken into account. Hence, it is a fair inference from Mr. Statham's evidence that, with a high flood in the Nymboi and the Orara, and a moderate flood in the Clarence and in its other tributaries, the discharge at Grafton is at least 500,000 cubic feet per second. On the other hand, there can be no doubt that the discharge of the Darling at Wentworth is less than that of the Murray; so that, according to the evidence received, the volume of water passing Grafton in a high flood is from four to five times greater than the flood discharge, below Wentworth, from the whole western basin.

Great floods.

Discharge of  
Clarence com-  
pared with  
discharge of  
western rivers.

Flood dis-  
charge at  
Grafton.

Causes of  
great flood  
discharge.

It is a matter of considerable difficulty to obtain anything better than rough approximations in the case of the flood discharges of such rivers as the Nymboi; but, making ample allowance for probable errors, it seems perfectly safe to conclude, from Mr. Statham's figures, that the flood discharge of the Clarence is much greater than that of our whole western system of rivers combined. This conclusion, startling though it appears at first sight, is very easily explained. The exceptionally great discharging capabilities of the drainage area of the Clarence have already been described, and we have only to contrast them with the unfavourable circumstances under

under which the western rivers carry their gradually diminishing supplies to Wentworth. It has to be borne in mind, too, that the duration of a flood in the Nymboi is reckoned by hours, in the Clarence at Grafton by days, and in the Murray at Wentworth by months. In short, Mr. Statham's figures, remarkable though they are, can be in a large measure accounted for by the circumstances of the case. The catchment area of the Nymboi at Buccarumbi, where it was gauged by Mr. Statham, is little, if anything, under 2,000 square miles. If a fall of 5 inches of rain were to take place within twenty-four hours, at a time when the ground was already moist, the proportion which would flow off would, in all probability, amount to over three-fifths of this. Three inches of rainfall over 2,000 square miles would be sufficient to cause a flow of 161,000 cubic feet per second for twenty-four hours; but the maximum discharge would be much greater than this, as the surface water in such a flood would reach Buccarumbi from almost every part of the catchment area within twenty-four hours. The discharge obtained by Mr. Statham is considerably over that mentioned, but it is only natural that, at the period of maximum confluence of the streams which constitute the Nymboi, the discharge would be in excess of the mean outflow produced by the rainfall.

In our Engineer's report of 23rd October last, which is appended, he has pointed out the difficulties which the high floods of the Clarence place in the way of any projects for irrigation. The same causes would operate in some degree in adding to the expense of works for the utilization of the water for motive power or for hydraulic sluicing. Still, we believe there is a profitable field for the employment of a portion of the Clarence waters for both these purposes.

The area of the basin of the Richmond River is about 2,660 square miles, and of this the proportion of plain country is so small that the whole area may be classed as "effective." As compared with the western rivers of the Colony, the Richmond is of far greater importance than would be anticipated by judging from the extent of its catchment area. From the mouth of the river to Lismore, which is at the head of the navigation on the North Arm, the distance is about 70 miles. Lismore is at the junction of two large creeks—Leicester Creek and Wilson's Creek—the former about 140 feet wide, and the latter about 125 feet wide, at the ordinary surface level. From Lismore to Coraki the general width of the North Arm is from 200 to 300 feet, while the width of the river below the confluence of the North Arm with the main stream at Coraki is from 300 feet to a quarter of a mile. The North Arm has been known to be affected by the tidal waters as far as Wyralla, which is about 15 miles below Lismore. The main Richmond River is navigable for steamers of small draught to within about  $2\frac{1}{2}$  miles of Casino, while the Bungawalban Creek, or South Arm of the Richmond, is navigable for vessels drawing 5 or 6 feet of water to a distance of from 20 to 30 miles from the main river. It will thus be seen that the Richmond River is a great natural highway, by means of which all parts of the rich delta land through which it flows possess navigable communication with the ocean. But the circumstances which combine to provide great facilities for navigation militate against the use of any large proportion of the river water for purposes of irrigation.

The rainfall of the Richmond River District, though high, is frequently unseasonable, and on this account serious losses have occasionally been sustained. The mean rainfall at Casino is nearly 39 inches, yet the Clerk of Petty Sessions at that place estimated that in 1885 the loss of cattle through scarcity of grass and water in the Richmond River District was between 15,000 and 16,000. In one case at least, pumping from the river for watering stock and for irrigation purposes has been resorted to with advantage. At Ballina we found an instance of irrigation, chiefly of fruit-trees and vegetables, carried on with water raised from a well by a windmill. It is evident from these facts that notwithstanding the high average rainfall the question of water conservation in the Richmond River District should be kept in view, so that when Crown lands are disposed of, whether by sale or lease, the bearings which such land might have on any possible project for the storage or distribution of water should be carefully considered.

The causes set forth in the Engineer's report of 23rd October last, which will render irrigation on a large scale difficult, if not impracticable, in the valley of the Clarence, apply, though with less force, to the basin of the Richmond. In the

case

case of the former river the influence of the tides extends throughout the delta land and to some distance among the hills bordering on it; but in that of the Richmond the influence of the tidal water ceases to be felt at a considerable distance within the limits of the delta. Other points in favour of irrigation on a large scale in the Richmond River District, as compared with that of the Clarence, are,—(2) that the alluvial land is less broken into islands; (3) that the river is narrower, and the construction of weirs easier; and (4) that the extent of the alluvial land is greater. The causes which operate against any large irrigation project are,—(1) the high average rainfall, which tempts the majority of the landholders to endure present risks; (2) the uneven nature of the ground; (3) the presence of marshes, and the consequent necessity for drainage in conjunction with irrigation; and (4) the high cost of compensation.

**Site for a weir.** Should a project for utilizing the water of the North Arm of the Richmond be found practicable, it is probable that the best site for a weir will be found about half a mile up-stream from the Wyralla Saw-mills. The width of the river at that place is about 200 feet, the bank on the right side is from 12 to 15 feet high above the ordinary level of the water, and on the left side there is a hill into which that end of the head-works would abut. We do not, however, anticipate that the necessity for irrigation on an extensive scale will be felt and appreciated till this part of the country is more completely opened up. As an essentially agricultural district, a much larger population than the present is required for its development. Until a greater proportion of the land has been cleared and broken up, and a larger population has been settled upon it, the question of water conservation for purposes of irrigation may be expected to remain in abeyance. It seems surprising, however, that nothing has been done towards utilizing the waters of the Richmond, and particularly of the main river near Casino, for motive power. Above Casino, and for some distance below that place, the Richmond has the character of a hill torrent. The supply of water is abundant, the rate of fall is evidently very rapid, and the facilities for utilizing the river for motive power are correspondingly great. The chief reason assigned for taking no step towards utilizing the river for this purpose is said to be the risk of damage from floods; but, even taking into account the exceptional height of the floods, we are confident that means can be found to obviate the risk.

**Drainage areas of Brunswick and Tweed Rivers.**

**Sugar-cane crop.**

The extreme north-east of the Colony is occupied by the drainage areas of the Brunswick and the Tweed, the extent of the former being, roughly, about 100 square miles, and that of the latter 400 square miles. Throughout both areas the rainfall is very high—that at Antony, near the mouth of the Tweed, being about 59 inches. Although navigation will probably continue to be regarded as the most important question in connection with these rivers, and drainage will demand a certain amount of attention, still, as sugar-cane is, and probably will remain, the chief product of the district, and as it is a crop which benefits largely by irrigation, the question of water conservation for this purpose should not be lost sight of. For domestic purposes, and for stock, the demand for a better water-supply has already arisen. The Tweed, which is navigable to a distance of 30 miles from its mouth, is affected by the tides to such extent that its waters, when the river is low, are salt to a distance of 25 miles from the ocean. As the supply in wells is not good, the question of providing water for all purposes in the valley of the Tweed, from Murwillumbah downward, is one which, in a rapidly rising district like that of the Tweed, should not be long deferred. Settlement on the Brunswick is still in its infancy, and the Tweed District is developed to only a very limited extent; but the fertility of this part of the Colony must ensure rapid settlement and give the district a degree of importance altogether out of proportion to its area.

**Coastal Rivers.**

Our investigation having reference to the coastal rivers was necessarily dependent upon the means at our disposal for the purpose. The amounts placed to our credit were wholly inadequate to do what was requisite, and the long intervals which occurred between the payment of them, during which the rent of offices and the salaries of the office staff had to be continued, has had the result of making this portion of our work dilatory, expensive, and ineffective. It was not until the period allotted for the existence of the Commission had nearly expired that arrangements could be made for the visit of a delegate from the Commission to the rivers on the northern coast. Our application for an extension of time was granted eight weeks after

after it was made, and too late to enable us to make that careful examination of the Macleay, Hastings, Manning, and Hunter Rivers which their importance demanded. While we regret that the information which we have been able to obtain in reference to the possibility of storing flood-waters at the heads of the coastal rivers, and their diversion for the purposes of irrigation in dry seasons, and the mitigation of floods in wet years, is not commensurate with the importance of the subject, we trust that the inquiries which we have made will be of value in directing the attention of those who may hereafter be entrusted with the instrumental examination of the country to points of vantage; and we are not without hope that the more regular and abundant rainfall of the districts lying between the ocean and the Main Dividing Range, the natural fertility of large areas of the soil, the greater density of population settled in this portion of the Colony, and its proximity to large markets, will, consequent upon legislation, enable the inhabitants to combine their energy and capital in the creation of schemes of water supply, speedily lead to the establishment of large and prosperous farming communities, the rewards of whose industry, being no longer dependent upon the vicissitudes of the seasons, will cease to be precarious.

Since, in our First Report (page 104), we expressed the opinion that the Government should establish farms in localities having command of water for irrigation, we have become more deeply impressed with the propriety of such a course as a means of making known to the agricultural community the benefits of irrigation, and of giving practical instruction in the art of wet cultivation. The great advantages of irrigation are readily admitted as a matter of theory, but agriculturists as a body are generally slow to adopt new methods. A State irrigation farm, carried on by means of youths such as those who are now drafted from the "Vernon," or even as a reformatory for juvenile offenders, would, we anticipate, be self-supporting, and would do more to substitute for the present haphazard and unprofitable methods of agriculture a system of scientific farming adapted to the Colony than could be expected as the result of any amount of merely theoretical teaching.

There are numerous localities where such farms might be established, and we think it would be desirable that they should be so placed as regards the varying soils and climates of the Colony, as would give scope for the growth of the widest range of vegetable products peculiar to the temperate and sub-tropical zones.

#### SUMMARY AND CONCLUSIONS.

The system which we followed in dealing with the important questions which we were appointed to consider has already been briefly alluded to, but it is necessary to give a complete outline of it before stating the conclusions at which we have arrived, and the recommendations which we desire to make.

On entering on our duties we found that there was great divergence of opinion on the subject of water conservation and supply, that the information available regarding our rivers was meagre and fragmentary, and that on some important points public opinion was in danger of being misled by statements and theories which there was ample evidence to refute. Under these circumstances we saw that the first step to take was to ascertain the opinions held both by the leading experts and by the pastoralists, farmers, and others whose practical experience qualified them to give useful evidence on the subject of water conservation. Whilst pursuing our investigations on this principle we instructed our Engineer to prepare from all available sources a compilation of the levels which had been taken along the courses of our rivers and throughout the interior of the Colony generally; also to deal with the question of river gauge records, to make discharge observations, and to collect details regarding the extent, nature and physical conditions of the principal drainage areas of the Colony.

In the preparation of our First Report it was our aim to furnish a concise summary of the information obtained in evidence, and of that collected as described, regarding the rivers, lakes, and drainage areas—in other words, to supply in a compact form a description of those physical features which have an important influence

influence on the question of water conservation and supply in the interior of the Colony, together with an abstract of the evidence obtained, and our conclusions regarding the preliminary action required. As we deemed the evidence conclusive as to the necessity for water conservation throughout the country west of the Dividing Range, we mentioned in our First Report some of the surveys which should be made, and we gave a draft of a bill such as, in our opinion, is required to deal with the question of riparian rights.

Having thus described the western drainage areas so far as regards their bearings on the subject of water conservation, and having summarized the available information bearing on the same subject, and stated some of the steps most urgently required, we were in a position to concentrate our attention on the consideration of intercolonial rights in the River Murray. This is a question which was brought prominently forward, owing chiefly to sweeping suggestions which were made to the Government of Victoria for utilizing the waters of the Murray in that Colony. In order to arrive at an understanding on this subject, we had two conferences with the Water Conservation Commission of Victoria—the first being held in Melbourne, and the second in Sydney. At the latter a series of resolutions was adopted as containing the basis of an equitable agreement for the division of the Murray waters. An account of the proceedings of the Conferences, and a description of works for water conservation and supply which we visited when in Victoria, constitute our Second Report.

Intercolonial rights in River Murray.

Coastal rivers

Having disposed of the question of the Murray waters, so far as our powers extended, it remained for us to carry out an inspection of the coastal rivers, to investigate more fully the conditions of the River Darling, and to obtain information of a definite nature as to the best means of utilizing some portion of the water available in the interior of the Colony. Owing in a large measure to causes which have already been referred to, this programme has been only partially carried out. In the case of the surveys which were commenced under our instructions on the Upper Darling, the season proved so unfavourable for such work that the survey had to be abandoned. But notwithstanding these drawbacks we have received much valuable information on the subject of our inquiry, whilst our Engineer's report on irrigation in Riverina, which will be found in the Appendix, contains, in our opinion, by far the most important proposals of a definite nature which have yet been made in this Colony regarding water conservation on an extensive scale.

Survey of Upper Darling.

Irrigation in Riverina.

The general conclusions at which we have arrived as a result of our investigations are:—

Vital necessity for water conservation.

(1.) That on water conservation mainly depend the prosperity and the development of the whole extent of the Central and Western Divisions of this Colony, and that, though less required in the Eastern Division, it will add in many places there also in an important degree to the productiveness, and therefore to the value, of the land.

Water for stock.

(2.) That as the landholders, as a general rule, are quite equal to the task of providing sufficient water for the stock which the land can carry under present conditions, Government works for supplying water to stock are required only on a limited scale, and generally only on travelling stock routes.

Irrigation.

(3.) That the great object of water conservation in this Colony, and particularly in the country west of the Dividing Range, is for irrigation.

Chief purposes of irrigation.

(4.) That the purposes for which irrigation is chiefly required are (a) to provide fodder and grain for horses, cattle, and stud sheep; (b) to afford supplies to be kept in reserve for saving stock of all kinds in bad seasons; (c) to produce fruit, vegetables, and miscellaneous crops; and (d) to increase generally the productive powers of the land.

Prospect of irrigation being profitable.

(5.) That any well-considered and properly-executed project for irrigation in the country west of the Dividing Range would afford a good direct return on the capital invested, and would be a distinct benefit to the Colony at large.

Necessity for legislation.

(6.) That legislation on the subject of water rights is a matter of pressing necessity, both to protect the rights of the State, and to foster and encourage local and private enterprise.

Our

Our recommendations, which are based on the foregoing conclusions and on the experience we have gained regarding the necessities of the country, may be classed under two heads; namely, 1st, those of a general nature, and relating chiefly to the subject of water conservation as a whole; and 2nd, those relating to particular projects or to local action. Under the first head we beg to recommend,—

- (1.) That the maintenance of river gauge records as extended by us should be made still more complete, and the records kept continuously and in a careful and systematic manner. River gauge records.
- (2.) That the gauging of the rivers initiated by us should be continued in a systematic manner, so that the discharge of all rivers likely to be tapped for water supply purposes may be known for all readings of the gauges. This information is particularly necessary in the cases of the Murrumbidgee, the Darling, and the Murray. Gauging of rivers.
- (3.) That the subject of legislation on the lines suggested in our First Report should receive early consideration. Legislation.

Regarding particular works and projects we beg to recommend,—

- (1.) That as projects for the construction of irrigation canals from the Murray and the Murrumbidgee have been submitted to us in a definite form by our Engineer, and as the information supplied with these projects has been carefully worked out, and is of a most favourable nature, the necessary funds for the required surveys should be sanctioned as estimated, and the surveys started forthwith. Necessity for immediate surveys for canals from Murray and Murrumbidgee.
- (2.) That a sum of £5,000 should be sanctioned for a more complete examination of the Lachlan, Macquarie, and Darling Rivers; and of Lake George, Lake Bathurst, and Lake Cudjellico. Other surveys.
- (3.) That, as great bodies of water from time to time flow down the Paroo, Bulloo, and Warrego, and run to waste in polygonum swamps, and down fissures in the ground, a survey should be undertaken to ascertain whether it would be possible, by the conservation or diversion of these waters, to turn them to greater national advantage. Paroo, Bulloo, and Warrego.

With reference to the foregoing recommendations and conclusions, we desire to add that in our opinion water conservation is fast becoming the greatest question with which the Government and people of this Colony have to deal. Though, in a season such as this, its paramount importance may be lost sight of by many those who have had practical experience of the droughts of past years will readily admit that the losses which have severely affected an important proportion of the landholders might have been in a large degree mitigated if works such as those for which surveys are now recommended had been in existence. We trust that the question will be dealt with by the Government in a broad and comprehensive manner; that the charge of water conservation will be made a distinct office, and placed in competent and experienced hands; and that, in short, the whole subject will be treated with the consideration which its importance demands. Paramount importance of water conservation.

It is our painful duty to announce the death of one of our number, Mr. Richard Lennon Murray, who from the outset of our inquiry devoted himself with untiring zeal to the work. In spite of an enfeebled constitution he maintained an unceasing and active interest in the investigations of the Commission until shortly before his death, a few months ago. In expressing our regret that, in the preparation of our Final Report, we have been deprived of the benefit of his information and matured judgment, we desire to place on record our high sense of the important assistance which Mr. Murray rendered during the progress of the inquiry. Death of Commissioner R. L. Murray.

Mr. G. W. Townsend, one of our number, having been exclusively employed upon the Colo Valley railway survey for the last two years, has been unable to give the attention to the affairs of the Commission that he was anxious to have done. Commissioner G. W. Townsend.

At the outset of our inquiry three years ago, we found it necessary to engage the services of certain gentlemen to assist us in the engineering and surveying, clerical and draughting work of the Commission. We selected Mr. H. G. M'Kinney, M.E., M.I.C.E., as our engineer, Mr. J. S. Ramsay as assistant secretary, and Mr. W. C. Higinbotham as draughtsman. About eighteen months ago we also appointed Mr.

F. H. Maynard as assistant draughtsman. These officers having performed the duties of their respective positions entirely to our satisfaction, and having become conversant with the direction which our inquiry took, and the conclusions at which we have arrived, we recommend that, in the public interests, their services be retained by the Government to assist in continuing to carry out work which we have initiated, and which may be undertaken on the strength of our proposals.

As it is unnecessary to make any recommendation regarding our secretary, Mr. Charles Robinson, since he already occupies an important and responsible position in the public service, the Commissioners desire to express their thanks to him, and to mark their appreciation of the valuable services rendered by him, by recording in this place their unanimous feeling of satisfaction at the zealous attention, the large experience, and the tact displayed in the management of his portion of the work of the Commission.

Publications  
collected by  
the Commis-  
sion.

We attach hereto a list of the publications relating to the subject of our inquiry which we have obtained from various parts of the world, and which we are now prepared to hand over to the Government.

Maps and  
plans.

The maps, plans, and diagrams which have accompanied our reports have been prepared under the direction of Mr. Cyril Higinbotham. Our President, being aware of many inaccuracies and defects of the Colony maps hitherto published, instructed that gentleman to compile a map of New South Wales on a scale of 2 miles to the inch. No map on that scale has yet been published; and while this map will show all the information obtainable up to the present date, it will have the immense advantage over all others in that it will be almost absolutely accurate. This map is necessarily incomplete, but we strongly recommend that steps may be taken to finish the work remaining to be done. We desire to acknowledge the ready help which we have received from the officers of the several Government Departments when we have had occasion to apply to them for information. To the Surveyor-General, Mr. P. F. Adams, we are indebted more particularly for courteously placing at the disposal of the Commission the services of Mr. James Tayler (chief lithographer) and his staff, by whom the plans and maps accompanying our Reports have been reproduced.

Collection of  
county and  
parish maps.

In connection with our inquiry, we found it necessary to obtain the county and parish maps of the Colony. These maps, which form the most complete collection in existence, we are now prepared to hand over to the Government.

Maps pub-  
lished by the  
Commission.

Among the appendices will be found a sketch map of the Colony, which shows by a red tint the maps already published by the Commission, viz.:—The north-eastern portion of the Western Division, the Lake District near Menindie, and the Murray and Murrumbidgee drainage area. These maps will form useful guides in the preparation of the proposed Colony map, part of which is in course of compilation (shown by blue hatching), and for which our draftsman has laid down the basis, and reduced over 225 plans of feature surveys to the scale of the map, 2 miles to 1 inch. When complete, this map will show cities, towns, villages, settlements, railways constructed and proposed, mountains, hills, rivers, creeks, and other water-courses, dry channels, lakes, lagoons, swamps, springs, Government wells, tanks and dams, lessees' improvements (including fences, dams, tanks, wells), main roads, tracks, travelling stock routes, trucking stations, boundaries of counties, runs (leasehold and resumed areas), and the marked trees along surveyed lines.

Appendices.

We attach appendices, as follows:—

Minutes of General Evidence.

Letter from Mr. A. Dewhurst, District Surveyor, Tamworth.

Reports on Water Conservation and Irrigation in Europe and America, received through the courtesy of the Colonial Office.

Notes and Memoranda regarding the Nepean and Warragamba Rivers, by the Engineer.

Memorandum of the Levels of the Hawkesbury River, by the Engineer, with plan showing Windsor and Richmond during the flood of 1870.

Reports (4) on Survey of Upper Darling (Barwon) River, by Mr. J. B. Hotson, C.E. Memorandum



- Memorandum on the Clarence River and its Catchment Area, by the Engineer.
- Report on the district between the Lachlan, Bogan, and Darling Rivers, by Mr. V. Czarlinski, M.E., C.E.
- Report on the Darling River, by Commissioners Donkin and Gipps, with Minutes of Evidence taken.
- Further Report on the Darling River, by Commissioner Gipps, C.E.
- Minutes of Evidence taken by Commissioners Murray, M'Mordie, and Gipps, on Northern Coastal Rivers, &c.
- Report by Commissioner Targett on the Northern Coastal Rivers.
- Report on Irrigation and Water Conservation in Riverina, by the Engineer.
- Report on the proposal to divert the Snowy River into the Murrumbidgee River, and into Lake George, by Commissioner Donkin.
- Catalogue of Works on Water Conservation and Irrigation, collected by the Commission.
- Sketch Map, illustrating maps published by the Commission.
- Map of Colony, for reference.

We have the honor to be,

Your Excellency's most obedient servants,

WILLIAM JOHN LYNE, *President.*

RUSS. BARTON, *Vice-President.*

JOHN B. DONKIN,

FREDK. A. FRANKLIN,

HARRY GILLIAT,

JOHN KIDD,

D. McMORDIE, B.E., M. Inst. C.E.,

GEO. W. TOWNSEND,

WALTER S. TARGETT.

} *Members.*

Sydney, 9 May, 1887.



#### DISSENT ON CERTAIN POINTS FROM THE COMMISSIONERS' REPORT.

I REGRET to be compelled to differ from the rest of the Commissioners relative to the treatment proposed for the irrigation of the districts included in the lower portion of the Murray and Murrumbidgee valleys, or what are termed by our Engineer as the south-western districts of the Colony. The reasons for my objections may be stated as follows:—

1. Because I consider that the examination and survey of these rivers should comprise the whole area of their basins, instead of the limited portion recommended by the Commissioners.
2. Because I consider that the storage and distribution of the Murray and Murrumbidgee Rivers should commence at a much higher point on their streams than the above recommendation contemplates.
3. Because I consider the permanent canals proposed, with the exception of the Lower Murray Canal, are impracticable under present conditions, and, for many reasons, are inadvisable.
4. Because I consider that by erecting a series of movable weirs across these rivers, and by pumping with the horse-power available from the fall of water over the crest of such weirs, a large volume of water could be thrown into surface or inundation canals, which would irrigate different sections of the country far more economically than would be possible by the proposed permanent canals.

It is evident that no correct estimate of the water-supply to be derived from any river basin can be properly gauged unless its rainfall records are accompanied by a faithful representation of its topographical features. For in some parts the rain falls into swampy flats, where it quickly evaporates and soaks into the soil; whilst in other parts, where steep ridges prevail, it serves at once to swell mountain torrents, and to produce floods. In order, therefore, to derive the highest value from rainfall it is absolutely necessary to initiate such a system of examination and survey as will ensure the fullest advantage being taken of the physical features of the country, so that each section of a watershed may be made to contribute its largest capacity of water-supply. Especial attention should, however, be directed to the storage of water in the high-lands of a river basin, because when it is known in what position and quantity water can be stored at such an elevation it is easy to determine how it can be distributed to the best advantage. In fact there should be one continuous chain of evidence from the top to the bottom of every valley as to its water-supply, and as to the best means of conserving and distributing such supply, otherwise its value can never be justly appreciated.

By simply surveying detached portions of a river basin, in order to provide only for their requirements, great and lasting injury may be done to the basin as a whole. Such a course might seriously interfere with, and perhaps altogether prevent, the due development of its powers for water-supply, thus prohibiting the promotion of different industries which could have been maintained by a more efficient and systematic treatment of the basin. In this country, unfortunately so liable to continuous droughts, we cannot afford to lose any opportunity in connection with increasing the water-supply, when and where most available; therefore it is the more necessary that there should be an exact examination and survey of the Murray and Murrumbidgee valleys before the country is committed to the expensive irrigation canals proposed.

With regard to the storage and distribution of the Murray and Murrumbidgee waters, it seems to me that the Commissioners in their support of the above canals have been too much influenced by the figures of the Engineer, who, in his proposals for such capacious permanent canals, without any provision for storage of water above their point of offtake, appears to have been guided entirely by his experience on the Baree Doab Canal in India. But in that country the constant streams of some of the largest rivers in the world contribute a fraction of their supply to feed the canals, whereas in this country the longest rivers are often reduced to mere brooks. Their flow is so irregular that no dependence can be placed on them for a constant supply of even the smallest volume, whilst just at the time their streams are lowest the country suffers most from drought. Hence the positive necessity for some provision for storage reservoirs before constructing canals.

In

In my Report on the Upper Murray, included in the Appendix of the First Report of the Commission, I have drawn attention to several sites for impounding lakes, of so great capacity that not only would they serve largely to diminish the evil consequences of high floods, but they would conserve sufficient water to maintain a constant navigable stream from Welaregang to Albury—over 150 miles—and it would then be available for irrigation canals below. Besides these sites, I am convinced, after an examination and partial instrumental survey of the country at the head of the Tooma River (one of the chief tributaries of the Upper Murray), that the large swamps and flats at the foot of some of the highest peaks offer excellent opportunities for the conservation of immense sheets of water, which could be conducted by an economical canal along the divide of the Murray and Murrumbidgee Rivers so as to command the Marracle, Tumberumba, Ouranie, and Jingellic Gold-fields, after which it would provide for the irrigation of a large tract of the rich agricultural lands in the Billabong Valley from Germanton downward.

Our Engineer, Mr. McKinney, M.I.C.E., after a hurried ride through the district on beaten tracks, has instructed the Commission that such a canal would be a commercial failure, in comparison with his proposed low-level canals, on account of the difficulties attending its construction, and its consequent great expense. He also ridicules the accepted idea that American canals are constructed under similar difficulties, although he has never visited that country, and has consequently had no experience in the construction of such canals. Actual observation and experience, both in America and this country, compel me to differ entirely from his opinion relative to the cost of such a canal; and in support of my contention I append a list of American canals, some of which have been constructed through the roughest portions of the Sierra Nevada Mountains.

Name of Canal.	Length in Miles.	Discharge in cubic feet per second.	Discharge in 24 hours in gallons.	Total Cost.	Cost per Mile.
North Blomfield .....	157	800	432,000,000	£ 141,768 0 0	£ 903 0 0
Milton .....	80	750	405,000,000	78,315 0 0	978 0 0
Eureka Lake .....	163	625	337,500,000	144,668 0 0	887 0 0
South Yuba .....	123	{ 1,750	{ 945,000,000	112,337 0 0	913 0 0
San Juan .....	32	{ 750	{ 405,000,000		
La Grange.....	20	325	175,000,000	58,618 0 0	1,832 0 0
		750	405,000,000	90,000 0 0	4,500 0 0

The greater portion of the La Grange Canal is cut in granite, and in places it is supported by solid stone walls from 50 to 70 feet high. Thus it is evident to any unprejudiced mind that canals can be constructed in a mountainous country at a much lower estimate than those inexperienced in their construction can possibly imagine; and this is chiefly due to the great fall or steep declivity that can be given them, owing to their elevation, which largely reduces their sectional area. By actual survey of over 30 miles of the rough precipitous ridges near the head of the Tooma and Tumut Rivers, and by the construction of a large mining ditch, 6 miles in length, I have proved that canals could be constructed as economically in our mountain ranges as in the Sierra Nevadas, as an equal fall is available. The number of settlers and miners that would be served by the high-level canal proposed by me would be over 1,000, exclusive of towns; and this, owing to the inducement offered by a large permanent water-supply for hydraulic sluicing, would rapidly increase, whilst the settlers served by the proposed low-level canals from the Murray would not exceed 500. Therefore, by assuming (after a hasty inspection, and without a more careful examination) that there is no possibility of irrigating or improving the water-supply of the Upper Murray District, a very great injury may be inflicted on its principal industries, and its settlement thereby retarded.

My reasons for objecting to the proposed permanent canals are as follows:—  
 1. Insufficiency of water-supply. 2. Great cost of construction. 3. Cost of maintenance. 4. Small returns, and consequent heavy loss to the State, which would increase annually. 5. Possibility of changing the course of both rivers connected with them during a heavy flood.

In

In the first place it must be assumed that a constant stream will have to be allowed to flow down the Murray and Murrumbidgee Rivers for the supply of settlers on both banks, and to satisfy claims on account of riparian rights. For this purpose I would allocate 1,500 cubic feet a second, which would represent a flow in the river Murray of 1 foot above summer level at Albury, and a flow of 3 feet in the Murrumbidgee above summer level at Wagga Wagga. On this hypothesis, and by taking as a basis of calculation the Government Astronomer's records of the mean height above summer level of the western rivers, it appears that the supply available for the proposed Murray River Canal below Albury in 1885 would have been almost nil for January, February, March, April, May, and December; for July, 800 cubic feet per second; for June, August, and November, about 2,000 cubic feet per second; and for September and October, over 2,000 cubic feet per second. For six months, therefore, during the driest period, there would have been only a small uncertain and intermittent supply for the canal, barely sufficient to account for leakage and evaporation, whilst its service for the rest of the year would have been greatly neutralised on account of the abundant rainfall in June, August, and September. According to the records of the Murrumbidgee flow for 1884, the supply available for the proposed permanent canals would have been almost nil for January, February, March, April, May, June, August, and December; for July, 300 cubic feet per second; for September, 2,300 cubic feet per second; for October, 800 cubic feet per second; and for November, 1,000 cubic feet per second. Consequently, there would only have been a scanty intermittent supply for eight months in that year, whilst the copious rainfall in June and October would have largely neutralised the benefits of the canal's supply in July and September. From this it is apparent that neither the Murray nor Murrumbidgee canals can be termed permanent, nor can they be made so without very extensive storage provision above their points of offtake.

The cost of the proposed Murray Canal just below Albury is estimated at £1,412,250, but this provides for no lining, for no interest during construction, and for only £25,000 for land resumption. In comparison with the cost of similar works in Europe this estimate is decidedly low. The average cost of French canals, only 5 feet deep, is £11,600 a mile. The Cavour Canal in Italy cost £80,470 a mile. The Caluso Canal, Italy, with a supply of only 366.26 cubic feet a second, and the steep declivity of 17 feet per mile, cost £1,700 a mile. But supposing this Murray Canal could be constructed for £1,412,250, it is still questionable whether it would prove a profitable work. The interest on the cost, at  $4\frac{1}{2}$  per cent., would amount to £63,549 a year, and the working expenses are estimated at about £13,951 per annum, whilst the gross revenue is estimated at £177,500 per annum. This estimate evidently assumes that the whole irrigable area commanded by the canal will be irrigated immediately after its completion, which is hardly probable, considering that there are not more than 500 settlers dwelling on it, and their homesteads are scattered, whilst a few large landholders own most of the rest of it. Even if the district were densely populated, on comparing the prospective returns of such a work with those actually obtained in India, where labour costs only £3 a year for an ordinary workman, it will be seen by the following table that very different results might be anticipated than those suggested in the estimate of our Engineer.

Name of Canal.	Year.	Outlay to end of year.	Interest at $4\frac{1}{2}$ per cent.	Working expenses.	Receipts from water-rates.	Irrigable area in acres.	Irrigated area in acres.
		£	£	£	£		
Baree Doab .....	1877-78	1,537,990	67,955	50,240	93,876	.....	266,995
Agra .....	1877-78	808,479	32,215	8,319	3,709	.....	163,634
Orissa ... ..	1876-77	1,728,400	76,300	18,050	4,049	100,000	100,000
Midnapore .....	1876-77	683,500	29,790	9,570	6,150	80,000	54,000
Sone .....	1876-77	1,908,504	73,660	18,620	5,090	500,000	300,000
North Behar .....	1884-85	1,100,000	45,000	10,000	7,500	100,000	50,000

It is evident, therefore, that even under exceptionally favourable circumstances, when there is a very extensive area under cultivation supporting a dense population, and when labour is very cheap, both for cultivation, for the construction of the canal, and its maintenance, even then large irrigation canals are rarely profitable.

In

In the above table it will be seen that the lowest working expenses are noted opposite the Agra Canal, which has a capacity of 2,000 cubic feet a second, being equal to that proposed for the Murray Canal. If, with labour at £3 a man per annum, it cost £8,300 to maintain and serve the distribution of the supply of the canal, it must surely be assumed that similar services in this country would cost more than double that sum.

At the same time I fear many generations would pass away before the returns of the Murray and Murrumbidgee Canals would realise sufficient to cover even the interest on their cost of construction.

According to the valuable report on the state of the Public Lands by Messrs. Morris and Rankin, in 1883, it appears that there were only 244 settlers in the Deniliquin District, including the counties of Townsend, Cadell, and Wakool, and embracing 4 million acres at the lower end of the Edward and Billabong Rivers, whilst  $2\frac{1}{2}$  million acres were aggregated in large estates. The Counties of Denison and Hume were little better, the selectors having chiefly sold out to pastoralists; consequently less than 500 *bonâ fide* settlers would be benefited by the proposed Murray Canals. Nor does the prospect of profitable canals improve with the Murrumbidgee Canals, for most of the country traversed by them is in the hands of pastoralists, whilst in the instance of Waradgery County, having an area of 1,836,160 acres, the land is almost entirely included in twelve pastoral holdings. There is no doubt that these canals would greatly increase the value of alienated land in the districts they would traverse, but unless the Government resumed it, the State would reap no advantage from such enhancement.

Bearing in mind that the slope of the Murray Canal from the point of off-take at Bungowanna is 1 foot in 5,000 feet, whilst that of the river itself averages only 9 inches a mile from that point downward, it appears possible that, unless the head works are very substantial, and of sufficient height to resist the entrance of any flood, the river—in such a flood as 1867, which was 27 feet above summer level, and 10 feet above the right bank below the site of weir—might force its way into the canal, and pouring down it with overwhelming force, might form an entirely new channel for itself. Such a disaster has actually happened in the Mississippi River from the cutting of a channel of less than one-quarter the area of the proposed canal. The same danger threatens the Murrumbidgee Canal, which has a fall of  $1\frac{1}{2}$  feet towards the Urana Lake, in comparison with a fall of only 10 inches a mile in the river bed. Thus there would be a possibility of these two rivers reuniting their streams near Jerilderie, and following the course of the Billabong River.

In consideration of the many and serious defects I have alluded to, it is evident that the proposed canals, under present conditions, would be injudicious and impracticable.

As an instance of the stimulus to manufacturing as well as agricultural industries that might be anticipated from the erection of movable weirs in favourable positions across the Murray and Murrumbidgee Rivers, I would briefly refer to the experience of a similar structure across the Kansas River at Lawrence. The river bed at the point of its location is 600 feet wide, and is composed partially of rock, sand, fine gravel, and strata of blue clay. The length of the weir is 700 feet; its height is 8 feet. It provides a supply to two canals 60 feet wide on one bank and 50 feet on the other. The available horse-power from these canals is estimated at 2,500, which it is anticipated might be increased to 4,000 horse-power by adding 2 feet to the height of the weir. The canals are each  $\frac{1}{2}$  mile long, and their frontages are divided into water-power allotments from 150 to 450 feet in length. The water-power not only provides motive-power for several large mills, but also raises several million gallons of water a day, 150 feet high, for the supply of the town.

The value of this power on the Murray and Murrumbidgee Rivers at each point of location of weirs, estimating only on the small average flow of 500 cubic feet a second, with a fall of 10 feet, would be equal to 567 theoretical and 400 effective horse-power with turbines. No less than 13,200 cubic feet of water could be raised 16 feet high a minute by 400 horse-power, which is far more than that proposed by the largest pumping scheme on the Victorian side of the Murray. This height of 16 feet would be sufficient for the discharge of the water supply into surface or inundation canals, which would cost infinitely less in construction and maintenance than the proposed permanent canals, whilst the supply could be distributed with much greater facility.

The

The cost of the movable weirs, if constructed on the Poiree Needle system, would not exceed £40 a foot,—so that it may be estimated that they could be thrown across the above rivers at a cost of £20,000 each including headworks for canal. This estimate is based on the average width of the rivers not exceeding 400 feet.

The rent of the available horse-power at each station, at £10 per horse-power per annum, would probably return over £1,000 a year, supposing Water Boards to rent it for the supply of surface canals constructed under their authority. Supposing Government constructed the canals from each station, the supply of 13,200 cubic feet a minute would be sufficient to irrigate 60,000 acres in winter and 25,000 acres in summer. With a charge of 5s. per acre a revenue of £21,250 would be realized, which would allow of 5 per cent. on an outlay of £200,000 for the construction of the canal and weir works, and £11,250 per annum for maintenance expenses.

The advantage of such a system is at once apparent. It could be expanded gradually to meet the requirements of the country; it would stimulate all classes of industry, because the same water-supply would be available for a large number of weirs on each river flowing from one pond to another, and on its course distributing the great benefit of 400 horse-power at each weir location, and it would cost far less than permanent canals. With all due deference, therefore, to the opinions of my colleagues, and with much regret at being called on to differ from them, I would submit that the system of impounding the Murray and Murrumbidgee Rivers by movable weirs would, on account of the above reasons, be of far greater advantage to the country than the proposed permanent canals.

FRED. B. GIPPS, C.E.

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#### REMARKS BY COMMISSIONERS ON MR. GIPPS'S DISSENT.

Mr. Gipps's protest may be divided into two parts: first, an expression of opinion by that gentleman on points regarding which he dissents from our Final Report; and second, a series of statements, some of which are at variance with facts, and others very misleading. If Mr. Gipps had confined himself to the former, that is, to a statement of points in which he could not agree with the other members of the Commission, no exception would have been taken to the position assumed, but the course adopted is very different. The paragraphs numbered 2, 3, and 4, on page 22, the first paragraph on page 23, the last paragraph on page 23, and the second and fifth paragraphs on page 25, are mere expressions of opinion which Mr. Gipps is entitled to make. But the first numbered paragraph on page 22, which states his dissent from the Report on the ground that complete surveys are required, as well as the lengthy remarks on the same subject throughout his protest, cannot be considered a dissent, as we have not placed any limit on the completeness and comprehensiveness of the proposed surveys. On the contrary, we have laid stress on the necessity for an extended series of discharge observations, and for complete and accurate surveys. In both the present and past reports of our Engineer on the subject of canals from the Murray and Murrumbidgee the same point is insisted on, and he has stated that the more complete the surveys are made the less will be the first cost and the charges for maintenance. Mr. Gipps's remarks as to the necessity for surveys are, therefore, an endorsement of the Report, and not in any sense a dissent.

Mr. Gipps's remarks regarding our Engineer, Mr. M'Kinney, create the impression that the experience of the latter was limited to the Baree Doab Canal, and did not include any works through hilly or mountainous districts. As a matter of fact, both of these points suggested are entirely incorrect. The statement of Mr. M'Kinney's experience given in his report, which is now appended, and which is altogether at variance with Mr. Gipps's remarks, is in accordance with original testimonials submitted to the Commission at the time of his first appointment. Mr. Gipps's inaccuracy on this subject is remarkable, as he was a member of the Commission when Mr. M'Kinney was appointed.

Regarding the list of large American canals mentioned by Mr. Gipps, we have been unable in the short time at our disposal to verify the statistics given, but it appears strange to us that if these canals bear any analogy to possible canals in these Colonies, neither Mr. Deakin nor Mr. Derry, who were sent specially from  
Victoria

Victoria to report on such works, seems to have heard about them. This omission of Mr. Deakin and Mr. Derry is doubly surprising when we consider that these gentlemen described in detail works of comparatively trifling importance, while the South Yuba canals, which Mr. Gipps describes as carrying 2,500 cubic feet per second, are not referred to.

We entirely fail to see the consistency of Mr. Gipps's remarks regarding the Engineer's estimates. Mr. Gipps first gives a list of statistics regarding American canals, to show that these estimates are too high, and afterwards instances of European canals, to show that they are too low.

During the tour of the Engineer he regularly forwarded a diary, showing in detail the journeys, surveys, and inspections made by him. These journals show that Mr. Gipps's description of that tour as "a hurried ride over beaten tracks" is inaccurate and unfair. Mr. Gipps should be the last to make a charge of this kind, as he repeatedly urged that the Engineer was taking too much time in his investigations.

The table of statistics of Indian canals which Mr. Gipps supplies is altogether misleading. The Baree Doab Canal was commenced before the Mutiny, and when this event took place the work had to be stopped. Half-excavated channels and great quantities of building material were left as they then stood, and the work was abandoned for years, so that exceptional losses were incurred. Both the Agra and the Sone Canals were incomplete, and the irrigation but partially developed at the time the statistics were compiled. The Orissa, Midnapore, and North Behar Canals were made chiefly in response to agitation in England regarding the necessity for preventing the possibility of famines, and are probably the worst specimens of Indian canals which could have been selected. In proof of this statement it is sufficient for us to add the following extract from the last official report on the Canals of the North-west Provinces:—

"The net profits and the percentage on the total capital outlay derived in 1885-86 from all the canals in the North-western Provinces is compared with the results of the previous ten years in the following statement:—

Year.	Capital at end of each Year.	Net Profits.	Percentage on Capital.
	Rupees.	Rupees.	
1875-76 .....	39,856,800	2,426,186	6.08
1876-77 .....	42,012,822	2,576,406	6.13
1877-78 .....	43,466,488	3,155,858	7.26
1878-79 .....	44,621,616	3,828,437	8.57
1879-80 .....	46,035,380	2,806,249	6.09
1880-81 .....	64,561,716	3,538,941	5.48
1881-82 .....	66,206,214	4,082,750	6.17
1882-83 .....	67,633,960	4,301,052	6.36
1883-84 .....	69,092,987	5,069,145	7.33
1884-85 .....	70,283,698	3,128,769	4.45
1885-86 .....	75,149,595	3,544,623	4.72

"Notwithstanding a second year of abnormally heavy rainfall and disastrous floods, and the increase of the capital account by 48½ lakhs [one lakh at par = £10,000], due to the completion of the Betwa Canal, and commencement of work on the Nadrai Aqueduct, it will be seen that the net result is a clear profit of Rs. 3,544,623, or 4.72 per cent., on the total outlay of 751½ lakhs invested in the canals of the North-western Provinces."

WILLIAM JOHN LYNE, *President.*

RUSS. BARTON, *Vice-President.*

JOHN B. DONKIN,

FREDK. A. FRANKLIN,

HARRY GILLIAT,

JOHN KIDD,

D. McMORDIE, B.E., M. Inst. C.E.,

WALTER S. TARGETT,

GEORGE W. TOWNSEND.

} *Members.*



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ROYAL COMMISSION ON CONSERVATION OF WATER, &c.

MINUTES OF EVIDENCE.

THURSDAY, 7 JANUARY, 1886.

At Sydney.

Present:—

MR. BARTON, M.P.,  
MR. DONKIN, J.P.,  
MR. FRANKLIN, C.E.,

MR. GIPPS, C.E.,  
MR. LYNE, M.P.,  
MR. M'MORDIE, B.E., M.I.C.E.,

MR. G. W. TOWNSEND.

W. J. LYNE, ESQ., M.P., PRESIDENT, IN THE CHAIR.

Mr. John Booth called in and examined:—

9909. *President.*] Please state your name? John Booth.
9910. Where do you reside now? At Cultowa.
9911. That is near the Darling? It is on the Darling, and frontage. Mr. J. Booth.
9912. Has it frontage to the Darling? Yes, nearly 14 miles. 7 Jan., 1886.
9913. What is the state of the Darling now? When I came down a few weeks ago it was almost dry, there being but a few waterholes in it. State of Darling.
9914. Are there any rocky bars along your frontage? There are none just immediately on our frontage, but there is one above and one below us. The one 17 miles below our place is a very large rocky bar, about 150 feet wide I should think. Bars.
9915. What is the kind of rock? It is a sort of limestone with rotten granite bars through it, as far as you can judge.
9916. From your knowledge of the Darling and of the soil, do you think it would be possible to erect weirs at any inconsiderable cost on bars of that kind? I should think you could do so at a comparatively small cost. The foundations are all made—you could not have better foundations than the rock—it is solid and well defined right across on each side of the banks. Weirs.
9917. Do they rise with the banks? They run straight across, and rise a little with the banks. There are bars of rocks that run right through that portion of the country.
9918. If a weir were made to the top of the bank it would back the water for many miles? I should say so.
9919. Lake Poopelloe is partly on your run? Wangalara is the name of the lake on our run, and Poopelloe is the name of the big lake adjoining it on Murtie Run. Poopelloe and Wangalara Lakes.
9920. Is that a permanent lake? It is not exactly permanent. The Suttors had Cultowa for about twenty-three years, and they say that during that time it was dry for long only about twice. We have had the run only five years, and there has been no water in it all that time. The lake is not properly shown on the map. There are really two lakes separated by a small ridge, one of which is on Murtie.
9921. The lake is filled by the Darling water? Yes.
9922. Is there a defined channel? Yes. Channel.
9923. Would there be any difficulty in deepening the channel and bringing the water into the lake? You would not gain anything by that; you would do away with the difficulty of filling the lake, but if you cut the channel lower, you lessen the depth of the lake.
9924. *Mr. Franklin.*] The water would flow back? Yes.
9925. *President.*] Is there a rocky bar below the outlet from the Darling to the lake? Yes, but not near it; it is some distance from it, but near enough to influence the water filling the lake. Bar at outlet.
9926. What depth is the lake? I have never seen the lake full, but the marks on the trees indicate that it must hold from 14 to 17 feet. Depth.
9927. Is it good holding ground? Very good. Ground.
9928. I suppose the water keeps fairly fresh? It is quite fresh, though there was just a little in the lake when we bought the run there was about 3 feet of water in the lake, and that was quite fresh, although it was about four years previous to that since the lake had been filled. Freshness of water.
9929. Do you know if the Darling is lower now than it has been for many years? Not from my own knowledge, but old Darlingites say it has never been so low before. State of Darling.
9930. Having been there only four or five years, you cannot give us reliable information as to the extent of evaporation? Not from calculation; I could give a sort of a guess. Evaporation.
9931. What would that guess be based upon? From observations made on the water in the tanks.
9932. What is your idea of the evaporation? About this time of the year, that is during this month and the next, I find our tanks go down from 1 to 2 inches a day.
9933. You find they go down much more in windy weather than in calm weather? Much more quickly; the wind scoops the water out and dries it up.
9934. What is the area of the lake? It is about 9 miles long, by nearly 6 miles\* wide. Area of Lake.
9935. Is the country surrounding it of such a nature that it could be raised by embankment in any direction? Yes; the question is could you fill it to any extent.

9936.

\* NOTE (on revision):—I should have said "5 miles."—J.B.

- Mr. J. Booth. 9936. You could not fill it above the level of the flood? No; the flood rises over the surface about 6 feet above the present lake, that would make it 6 feet above 17 feet; you could raise it to that height by a large gate.
- 7 Jan., 1886.
- Gate. 9937. Would it be expensive? We were thinking of doing it ourselves one time; we reckoned the gate would cost from £1,000 to £1,500.
- Crown Lands. 9938. Is the country around the lake sold, or is it Crown Lands? Crown Lands, nearly every inch of it.
- Shafts. 9939. Have you sunk for water on your run? All around it; I have put down shafts at the ends and sides every few miles.
- Supply. 9940. With what success? With a success of salt water in every one of them excepting one; in this one I got a splendid supply of fresh water, enough to water 20,000 sheep, and the rest of the wells were as salt as the sea.
- Depth. 9941. At what depth was the fresh water? They were all at the same depth—about 50 feet.  
9942. Did you ever go deeper, that is through the salt water? No.  
9943. You never tried to tap the under strata? No.  
9944. Did you get salt water above the fresh? We struck the fresh water at the same depth as the salt.  
9945. Have you any idea of the cause of the difference? I have no idea.
- Fresh and salt water. 9946. Have you any idea of the cause of the salt water? Not the slightest. If you put one shaft down you get fresh water, and a few hundred yards away you put down another and you get salt, it must be a different run of water—there must be a bar between the two; you get fresh water quite near the salt water, in the same drift and at the same depth.
- Creeks. 9947. *Mr. Franklin.*] Are there any defined creeks on the upper part of the Darling above the lake, running towards the lake? No.
- Reservoir. 9948. Do you think it would be possible, by raising a head of water on the Darling above the lake and carrying it through the country, that that might be made a permanent reservoir? I think so.  
9949. Could you give any idea of the height of the weir that would raise the water within a mile of that place? If you take the bar of rocks about 50 miles above our place, known as the Curanyalpra rocks, and put a weir there, you could raise the water to the top of the banks of the lake; by doing that you could store about 30 or 40 feet of water.
- Diversion. 9950. Supposing that could be made a permanent lake, do you know how the country lies to the south and west—is it possible to direct water to the south? I think so; I do not think you could do it to any great extent except towards the south.
- Levels. 9951. You are not aware of the levels? Except just from general observation; I have improved all the country myself, and having been running the levels for the different drains and tanks, I have a sort of an idea.  
9952. Do you know to what height the water should rise in the Darling at the entrance of the creek that runs into the lake? If the water rises 12 feet above ordinary summer level, it runs from the river towards the lake.
- B nks of river. 9953. What is about the height of the banks of the river at that part? About 30 or 40 feet.  
9954. Do you know if there are any difficulties between those two points, from the bar of rocks, along the course that might be adopted towards the lake; are there any heavy cuttings necessary, or is the country generally level? There are no difficulties at all; there is a slight rise going about 5 miles from the river, and after that point it is a dead level to the lake.
- Area of lake. 9955. You give 54 square miles\* as about the area of the lake? Yes.
- Depth. 9956. What would you take as the general average depth over that area? If you skirt off a batter of about 200 yards from the outside top surface of the lake, you would get about 14 or 15 feet of water inside that.  
9957. But take the lake as it is now with its sloping banks, what would be its greatest depth? I would have to go into figures to tell you that.  
9958. Would the mean depth be 3 feet? It would be more than that a long way; I think it would be roughly about 14 feet—it is an immense body of water.
- Produce carrying. 9959. *Mr. Donkin.*] How do you get your produce away from the station—by navigation or railway? By navigation when the river has been high enough, but this year we are availing ourselves of the railway to Bourke.
- Locking of Darling. 9960. Do you think the country would be warranted in going to any great expense in locking the Darling for navigation, or would it be more advisable to look forward to a railway? I should say if there were no railway you should lock the Darling, because all the foundations of the locks are formed.
- Navigation. 9961. *Mr. Franklin.*] Would not the water be more valuable to you for stock than to use it for navigation? There is no doubt it would be a great advantage to all the runs along there if the river were locked.  
9962. *Mr. M' Mordie.*] Locking and making weirs are different things; locks are for the passage of steamers? Yes, but I suppose they answer the same purpose in damming the river.  
9963. Of course a weir could be combined with a lock, but a weir would dam the water without a lock? Yes.  
9964. *President.*] Do you not think that if you had a 50 or 30-mile stretch of navigable water it would be quite sufficient for all practical purposes? But then you could not do that without spoiling the navigation of the river.  
9965. But suppose that between Wilcannia and Bourke, about 170 miles by land, you had three weirs—one below Wilcannia, one above Bourke, and one in the centre—do you not think that would be quite sufficient navigation to tap both railways, the railway to Bourke and a railway to Wilcannia? Well, yes, it would tap the railways, but that would not do away with the difficulty of high carriage in that district, because the railway rates are very high.  
9966. It would not open navigation to the Murray, but it would answer all other purposes? Yes, at a certain rate.  
9967. It would tend to give you facilities to catch the railway at other places? Oh yes.
- Evaporation. 9968. *Mr. Townsend.*] You mentioned that about 2 inches of evaporation occurred in some hot days in the summer months: did that include what was used for stock, or was it in excess? That is the rate without stock drinking. I know this from a measure which I kept in the centre of the tank.  
9969. What is the least amount you have ever lost? It has been so small during the cool parts of the year that you could hardly notice it. 9970.

\* NOTE (on revision):—It should be 45.—J.B.

9970. What is the steepness of the slopes of the tanks? They are all 3 to 1, and from 18 to 20 feet deep. Mr. J. Booth.
9971. Have you seen anything lately in the newspapers about a proposal by the Harbours and Rivers Department to remove the rocky bars in the Darling? I have. 7 Jan., 1886.
9972. Do you think it a wise one? Certainly I do not. Removal of bars.
9973. *President.*] Why? Simply because there are the natural bars, and you gain nothing by removing them; they must be used some day for locks, and I would not injure them.
9974. Do you think that if the rocky bars were moved or lowered it would tend to lower the water in seasons like the present? It would simply do this: if you remove the bars now in front of the big water-holes, you would lessen the water-holes by that much and do no good.
9975. *Mr. Townsend.*] You were speaking of wells: do you know a well sunk on the 70-mile track? I know a little about it; it is only a drift well. Wells.
9976. Do you know the creek called Sandy Creek, that heads from the ranges? Very well. Sandy Creek.
9977. Do you think that runs down to the Darling? It comes near the Darling; it runs out on one of our neighbour's back blocks.
9978. Do you think it finds its way into Lake Poopelloe? I do not.
9979. Could water be taken from Lake Poopelloe towards Teryaweyna Lake? Yes, at a very small cost. Lakes.
9980. *Mr. Donkin.*] Have you ever seen any sand in the Darling? No. Sand.
9981. Could you get a cartload of sand? I do not think you could as drift; there is little or no sand between our place and Bourke.
9982. *Mr. Gipps.*] What is the greatest depth of the lake you have ever known? I have never seen the lake full—I can only judge by the marks on the trees—I have only seen about 3 feet of water in the lake, but we have only had the place five years. Depth and area of lake.
9983. What area did that 3 feet cover? It covered about the area I have already stated.
9984. How long did that last? It lasted about six months.
9985. Did much stock water at it? We had about 9,000 cattle on it.
9986. What is the character of the watershed around the lake? A sort of light sand and firm clay. Watershed.
9987. You do not see any rocky outcrops? Not a bit of rock. There is one other thing I should like to point out about the lake. There is an inlet in the country about 3 miles from the border and the lake, where I believe you could store enough water to supply the whole district; it lies about 20 feet below the lake, and a channel of about  $2\frac{1}{2}$  or 3 miles would fill it; it is about 2 miles square. Inlet for storage.
9988. Does the water never get into it? There is rain-water in it now, about 14 feet deep.
9989. *Mr. Franklin.*] It has no inlet from the lake? No.
9990. It is good holding ground? Splendid.
9991. What would be the extent of the work required to be done? The Suttor Bros. had a survey made from point to point to see what it would cost. The deepest part of the cutting would be about 15 feet deep. There would be about a mile at that depth, and the rest would be from 5 to 6 feet.
9992. *President.*] What would be the average depth over that 3 miles of water? It is a flat sort of a place; it would average about 40 feet solid water, and about 3 miles in circumference.
9993. *Mr. Gipps.*] What is the character of the bed of the lake; what is the soil—is it loamy? It is a sort of stiff clay. Soil.
9994. It would not take up much water? Yes, it takes up an immense lot of water when dry. The river runs in for two or three weeks before it makes any impression.
9995. *Mr. Franklin.*] Do you find when the lakes are getting low that the water has a tendency to become salt? This lake has no such tendency; it is not as sweet as when full, but it is good drinking water. Quality of water.
9996. *Mr. M'Mordie.*] What is the greatest loss of water you have known in that lake during the summer? I have never known any great loss in it. It was nearly dry when we bought the place. The 3 feet of water in it lasted about six months for watering stock. Loss of water.
9997. What could you allow for evaporation during that time? There were cattle on the lake. You can scarcely tell the evaporation; the cattle were all over it. Evaporation.
9998. It would be considerably less than the 3 feet during the six months? It dried up within six months.
9999. It dried up with evaporation and the watering of stock? Yes.
10000. The evaporation during the six months must have been less than 3 feet? Yes.
10001. *Mr. Franklin.*] Have you any sheet of water you do not disturb by the stock, and on which you could take observations of the evaporation? I think we have, but not for any length of time.
10002. *Mr. M'Mordie.*] Evaporation at the rate of 1 inch a day would dry up the 3 feet in a month? Evaporation alone?
10003. Yes? Well, that is the rate in a tank, and the water is confined to a depth; but the lake is an immense body of water about 9 miles long, spread over an area of about 54\* miles and about 3 feet deep—that makes a great difference.
10004. The evaporation would be greater in a shallower depth? Yes.
10005. Still the lake did not evaporate 3 feet in six months? I should think it was about six months.
10006. *Mr. Gipps.*] Was there any rainfall during the six months in the lake? A little—not much—but it was during the coolest six months of the year.
10007. *Mr. Franklin.*] You do not raise river water for growing crops? No.

\* NOTE (on revision):—It should be 45.—J.B.

SATURDAY, 3 APRIL, 1886.

At Camden.

Present:—

MR. BARTON, M.P.,  
MR. DONKIN, J.P.,MR. GIPPS, C.E.,  
MR. GILLIAT,

MR. MURRAY.

RUSSELL BARTON, Esq., M.P., VICE-PRESIDENT, IN THE CHAIR.

Mr. J. K. Chisholm called in and examined:—

- Mr. J. K. Chisholm. 10008. *Vice-President.*] How long have you been resident in this district? I was born in it, and have been for nearly thirty years an actual resident.
- 3 April, 1886. 10009. During that time your experience has extended to the nature of the country, its productiveness, its floods, and all that kind of thing? Yes.
- Productiveness. 10010. In the early days was this particular district producing better crops, and better adapted for agriculture than now? It produced much larger wheat-crops. In fact, wheat was the great crop of the district. It has now given place to other crops.
10011. Is there any particular reason for it? Wheat is now grown, but it is grown more for fodder, that is for hay, than for grain.
- Rust. 10012. Why? About twenty-three years ago the rust attacked the whole of the wheat-crops. And since then it has scarcely been possible to grow wheat.
10013. Is that about twenty-three years ago? I think it was in 1862 or 1863.
10014. To what do you attribute it? That is a question upon which doctors differ very much. I have no doubt myself that it is the result of some atmospheric condition which we do not quite understand. It is a fungoid disease. I believe it is very analogous to mildew, which attacks the crops very much in England.
10015. Do you think it is more likely to arise from changes in the condition of the temperature than from the fact of certain qualities in the soil being exhausted? I think it must be owing to atmospheric conditions, because luxuriant crops in new lands often suffer most.
10016. And that is the consequence of the district not being able to produce as much as it formerly did. Has it increased or decreased in prosperity? It has remained comparatively stationary. It certainly has not progressed as it should have done. I believe we have less population than we had some fifteen or twenty years ago, but that is owing to a variety of causes.
10017. You do not attribute it entirely to the fact of your not being able to produce grain? No.
- Want of water. 10018. But I suppose that under the present conditions if there were sufficient water the district would produce crops equally remunerative? Yes, I should say so. The want of water here has had this effect, that people rely more upon stock than they formerly did upon farming.
- Rust. 10019. Did you find any great difference in the rust of wheat on the higher and the lower lands, that is to say, on the lands subject to floods and the lands which are above flood-mark? I think there was not much difference to be observed. Rust seems to attack the crops almost everywhere.
- Floods. 10020. I should like to obtain your experience with reference to the floods of the district? I have no accurate knowledge of the floods previous to 1860. My knowledge of previous floods I have derived from Mr. Russell's work on the climate of New South Wales, and from other sources.
10021. How frequently have these floods occurred since 1860? I think that up to 1860 no really high flood was recorded here; a great part of Camden, as perhaps you are aware, was really built, as subsequent events proved, within the flood-mark, and in March, 1860, the highest flood occurred within the knowledge of Sir William Macarthur, one of the oldest residents, and in April of the same year, within six weeks, a still higher flood occurred.
- Rainfall. 10022. Did that flood do a great deal of damage? Yes, a large amount of damage to all the land within its reach. Hearing I was to be examined by the Commissioners, I made out last night a copy from my rain-gauge of the amount of rainfall for the last twenty years, made at my residence, within 6 miles of this place. (*Appendix A.*) I suppose that would be applicable to the whole district; from that you will see that the average is about 33·31 inches; on one particular occasion we had a phenomenal rainfall of 2·19 inches in twenty minutes.
10023. What quantity of rain has fallen at the times of those excessively high floods? The rainfall in 1860 was the heaviest I recollect, but neither Sir William Macarthur nor myself kept a rain-gauge at that time.
10024. But, since then? Since then, the record I have given you will pretty well tell you the heaviest rainfalls within the twenty-four hours.
10025. Then, according to that, from 4 to 5 inches of rain falling in twenty-four hours is sure to give a flood? Yes; if it fell within twenty-four hours, it would most decidedly; but it would depend upon the dry condition of the land previously—that is to say, how long the drought had lasted.
- Alluvial deposits from floods. 10026. What proportion do you think the benefit derived by the district from an extended flood would bear to the damage done—what I mean is this, that in a flood there is a considerable amount of deposit, an enormous amount of alluvial matter is placed on the low lands? I think that is incorrect; the only deposit we get is land which has been swept off the agricultural lands higher up towards the source of the river, and the fertilizing properties of that deposit would depend upon how long that land had been cultivated; my opinion is, that the deposit generally is a very slight one.
10027. From which the district generally receives little benefit? Of course, alluvial lands are benefited, but not to any appreciable extent; grass-lands are occasionally benefited to some considerable extent, but it is on the principle of robbing Peter to pay Paul; flood-waters passing over agricultural lands which have been recently ploughed strip them of the loose earth (if there is any current), which is partially deposited on the lands below, which become submerged by the back-water; but this is obviously at the expense of owners higher up the stream.
- Dealing with flood-waters. 10028. Has there ever been suggested to your mind any particular direction in which action might be taken to prevent these floods, or to assist the carrying off of great bodies of storm-water? Sir William Macarthur's idea was, that if some cutting were made at an angle of the river, enabling the flood-waters to pass off more rapidly.

rapidly, floods would not rise so high above ; but there is very little fall in the river ; so, if the water could be made to run three miles an hour instead of two, it would hold one-third more water ; it could be done, to some extent, by the way I suggest ; and further down too, at a place called Shancomore, I think something could be done.

Mr. J. K.  
Chisholm.

3 April, 1886.

10029. What is the average height of the very high floods that have done so much damage? The flood of 1867 rose 30 feet over the floor of the Camden bridge.

10030. What would it be above the present summer-level of the river? I do not know the height from the bed of the river to the floor, but I should think it would be about 50 feet.

10031. And you think the floods have been 20 feet over that? Yes.

10032. That would be 70 feet altogether? Yes; I do not say that from any measurement I have made.

10033. Do you think it is only the last few feet of this high-water which has done any damage, or, taking 70 feet as the maximum of the high floods, how high would the water have to rise before it did any great damage to the district? Of course, where the water passes over newly turned soil, it would not take a very high flood to do a great deal of damage; but the chief damage sustained by the crops is really from logs passing down the stream.

10034. What I want to know is, supposing we take 70 feet as the maximum of floods, would a 50-foot or 60-foot flood do any considerable amount of damage—how high would a flood have to go, taking that as a proportion, before any great damage would be sustained through the whole district? I should say the higher the flood rises the greater would be the damage done in proportion; what we call minor floods, or freshets, really do no damage whatever.

10035. To what height do they rise without doing any damage? From 10 to 12 feet over the floor of the bridge; a flood of that height would not do much damage.

10036. Then it would mean that, taking 70 feet as the maximum, a 60-foot flood would do very little damage? Comparatively little.

10037. Do you know anything about a gorge, some 10 miles from here, I understand, called Bent's Basin? Yes; that is the part of the river I was alluding to when I mentioned Shancomore; that is where the obstruction exists.

10038. Do you know on the river or its tributaries in this district any place where large quantities of flood-waters might be stored at a reasonable cost by damming the river or its tributaries—that is, by impounding water in any way? I have never examined the district with a view to ascertain that, but I have no doubt that there are a number of such places.

10039. Do you think that there are large quantities of land, of large acreage, which would be considerably benefited by irrigation, if it were possible? Yes, I do.

10040. Do you think the nature of the soil is adapted to irrigation? I do.

10041. And that it could be made to produce much larger crops than it does at present? I think decidedly so.

10042. Do you think, in case that any work of that kind were undertaken by the Government, people would be prepared to bear the expense in the shape of interest on the capital invested? I think that if they saw any benefit was to be derived from it they would.

10043. Have they had any experience in the district to guide them as to the expediency or otherwise of irrigation? Only upon a small scale. The recent droughts are directing their attention very much to the necessity for some irrigation scheme for agricultural lands. Of course, I understand, you refer to agricultural lands.

10044. I am alluding to either agricultural or pastoral lands—that is to say, if pastoral lands will be made to pay better than the agricultural; but that is a question which does not seem to have been decided anywhere? I do not think the time has yet arrived here for the irrigation of pastoral lands, unless to a very limited extent. For the production of fodder-crops it would prove invaluable. I think that in England pastoral lands are mostly irrigated by sewage highly diluted.

10045. It is your opinion, then, that people would be prepared to pay from 4 to 4½ per cent. upon outlay? I have every reason to think so. In such seasons as we are now having it is simply a question of crop or no crop. If they could see the crop would pay, they would pay any reasonable amount.

10046. Do you think that in this district legislation is necessary to enable private individuals to avail themselves of the surplus waters or the waters which are at present available? Yes; I should think the question of riparian rights might be involved in any private attempt. I think it is very desirable there should be legislation.

10047. What direction do you think legislation should take—do you think that in any legislation the Government, or a Trust under the Government, should have entire control of all the water-rights, that is to say, over all the systems of the Colony? That is a question I am not quite prepared to answer. I may say that I have read the report of your Commission and, as far as I can understand it, some of the suggestions there contained quite meet with my approval.

10048. You think that the suggestions contained in the report of the Water Commission would be likely to meet the case for the benefit of the general public? I think so.

10049. You say that there has been some irrigation on a small scale in the district, but you are hardly prepared to give us an opinion as to what increase of crop would be upon that land? No; we have really had no practical test of it yet.

10050. Could you give us any idea of the acreage of the district which might be brought under irrigation if water were available? I should say nearly the whole of the alluvial lands upon the river.

10051. Have you any idea of how many acres or square miles that would be? No; it varies so much. In some cases the land goes a long way back, and in other cases the alluvial lands are very confined.

10052. Has there been any interest in the question as to the best supply of water to the town? The people are very anxious to have a better supply. The present supply is distributed from water-carts from the river.

10053. I suppose the river is subject to pollution from the town and district? No; I think that none of the sewage of the town finds its way into the river. The pollution at the present time is chiefly from stock. The river has been so low that the stock, in drinking the water and standing about in the bed of the river, have polluted it.

10054. Has the river ceased running during this year? It has never actually ceased, but it has simply trickled. Up to last Saturday it was running, and that was about all; but some heavy rain fell at the source, and brought down a little flood of about 4 or 5 feet.

- Mr. J. K. Chisholm. 10055. From what source is it proposed to bring the supply of water for the town? I saw a gentleman here who is, I suppose, acting under the directions of the Government making surveys, as I understand, with a view to bring water from the canal near Kenny's Hill.
- 3 April, 1886. 10056. And you think that would be the best supply which you could get? I think that in some ways it might be the best. It would fall then by gravitation, whereas if the water were taken direct from the river it must be pumped, and there would always be a difficulty in placing an engine out of the way of a flood. Some means would have to be taken for its protection.
- Supply in Nepean. 10057. Do you think that taking water off from the Nepean for the waterworks has materially decreased the quantity of water running down the river? Most decidedly. Nearly the whole of the available supply was diverted to the canal, which I believe for some time did not exceed 3,000,000 gallons a day.
- Bargo River. 10058. And is there no tributary of any importance between here and the source from which a supply could be drawn? I think the Bargo River is left free. I do not think that is included in the Sydney supply.
- Supply. 10059. Is that an important tributary? In an ordinary season it would give quite an ample supply for all purposes here. It has hardly ever been known to cease running. I may say that Mr. Russell, in his work upon New South Wales, spoke of the river as being quite dry in 1839. Although I was rather young at that particular time, I recollect that my father lived where I now live, and nearly all the drinkable water in that part of the country dried up. My father had to send a cart to Camden three times a week to get a cask of water for drinking purposes.
10060. Was that to the river? Yes.
10061. And it was not dry at that time? It had holes in it, but it had ceased to run, from all accounts.
10062. *Mr. Gipps.*] What is the distance between the Sydney supply canal and Camden? In a direct line, from 3 to 4 miles.
10063. What is the difference in height? That I cannot quite say. I saw Mr. Stack when he was making surveys, and he told me that the water would rise to the church hill.
10064. Do you know the locality of the proposed compensating dam on the Bargo River? No.
10065. I believe that a site was proposed by Mr. Clark for a compensating reservoir? I am not aware of that.
- Dam. 10066. You do not know of any site which could be made available? The Bargo River is confined between precipitous banks. I should think there would be no difficulty in constructing a very large dam there.
13067. Has the river there much fall? That I can hardly say. Where the old road used to cross, there was a considerable fall; the water flowed rather rapidly.
10068. You would want a very high dam to throw the water back over a great distance? No, I think not.
10069. And the water thrown back would be impounded between very steep walls? From my knowledge of the place I think so.
10070. What width should you say it would be? It is narrow where the road crosses, but I could not say exactly.
10071. Would it be 200 or 300 feet? Not quite so much as 300; I think it might be about 200 feet.
10072. And what would be the distance from that point to Camden? I only know it by the road. We used to travel, I should think, about 18 miles from Camden.
10073. Are there no basins higher up? I do not know. I have very little knowledge of that particular district.
- Irrigation. 10074. Have you yourself attempted irrigation? No, I have made dams; the district is admirably adapted for making dams. We have a very retentive soil, and couch-grass grows well to bind the banks.
- Dam. 10075. What is the height of the largest dam? I should think not above 15 feet.
10076. Is it just an embankment thrown up? Yes.
10077. There is no puddle-wall in it? It was puddled in making, but nothing further; it is just an ordinary earthen bank.
10078. And does it hold water well? Oh, very well.
10079. Are there any wells in the neighbourhood? I hardly know of one; if you go down any distance, you would come in contact with brackish strata, and you would get almost unusable water.
- Sand. 10080. You do not go through any sand at all? I am speaking of my own side. There is a great difference between the other side and this.
10081. On the flats just below here would you not get into any sand? I think you would.
- Water. 10082. And you would get good water? I think so.
- Depth. 10083. At what depth? Alluvial soil varies; in some places it might be 15 or 20 feet deep, and then you come to gravel, and then sand.
10084. You do not know of anyone who has a well? I do not know of anyone. They have nearly all cemented tanks.
- Windmill. 10085. Do you know anyone with a windmill, or do you know anything of the use of windmills? There are a few. I think in most places they are being discarded for steam-engines.
10086. They are not found to act? Being dependent on the wind, they are irregular in their action.
10087. You do not know of any yourself? Yes; Mrs. Onslow has had one for some time.
10088. What is the diameter of the sails? I could not say; it is not a very large one.
10089. Do you know anything of the locality near Bringelly Creek, at Saddleback? No.
- Bent's Basin or Shanmore. 10090. *Mr. Gilliat.*] You referred just now to Shanmore or Bent's Basin; can you give us any information as to the width of the gorge there; is it much contracted from the width of the river above? The basin is deep; it is some 300 or 400 feet in length, by from 80 to 100 in breadth, as far as I can recollect. I have been there occasionally, but I cannot say what the actual width of the gorge is.
10091. It is decidedly narrower than the river above? Yes.
- Cultivation. 10092. *Mr. Murray.*] Do you know of any ground being broken for cultivation in recent years in this district? Most of the land under cultivation has been so for a great many years.
10093. What I wanted to know is, whether, where the virgin soil is broken, the wheat has been subject to rust in the present season? From my knowledge, I should say very little new soil has been broken during the last few years.
- Rust. 10094. You do not know actually whether the rust is the result of the soil being deprived of some of the properties necessary to the production of wheat, or whether the rust is produced from atmospheric changes? I know that up to 1862 no rust attacked the wheat-crops; we had the most luxuriant crops. It is hardly likely



likely that the constituents of the soil would have been exhausted so suddenly. The rust in that year was universal, and was not confined to this district, nor to the Colony. I think there were visitations of the same thing in Tasmania, and even at the Cape in the same year, showing that the cause was a very wide-spread one.

Mr. J. K.  
Chisholm.  
3 April, 1886.

10095. In the event of the Government adopting a system of irrigation for the district, what class of crops would be likely to be grown? This district used to be rather noted for its maize crops. I think that agricultural lands which have been so long tilled would, even with a system of irrigation, require manuring to get really good crops.

10096. Then you think the crops would be maize and hay, that is, oats and wheat grown for hay? Under an effective system of irrigation, I have no doubt many other crops might be grown, such as lucerne, rye-grass, turnips, mangolds, &c., by which a great impetus would be given to dairying, and all kinds of farming.

10097. *Vice-President.*] Have you had any experience in the difference of the value of land with and without irrigation? I have not.

10098. Have you any idea of the increased value of land under irrigation? No.

10099. Do you think it would be advisable for the Government to undertake any irrigation works on a model-farm, as an educational medium? I do decidedly, because I think people would be much more likely to approve of irrigation, if they saw a practical working of the system.

Mr. Francis Fergusson called in and examined:—

10100. *Vice-President.*] How long have you been resident in this district? Thirty-eight years. Although I have been here a very long time, my experience and knowledge are confined to purely local matters.

Mr.  
F. Fergusson.  
3 April, 1886.

10101. During your residence here you have, of course, had experience of the agriculture of the district? I have.

10102. And what is the state of agriculture here now as compared with what it was (say) twenty-five or thirty years ago; the place is not nearly so prosperous, in consequence of—what? The failure of the wheat crops. At the period you mentioned wheat was fetching a high price; but I do not know, considering the low price of wheat at the present time, whether it could be grown here profitably, even supposing that other conditions permitted of its growth.

State of  
agriculture.

10103. Have not the crops failed in consequence of the rust? Yes.

Rust.  
Causes.

10104. To what do you attribute that? Entirely to the absence of phosphate of lime in the soil. I am led to that conclusion from a knowledge that the wheat-plant takes up lime very largely. I know also that in Argyle, where the soil is on the limestone formation, rust is entirely unknown. I heard the last witness state that in one year it was almost universal; that might be owing to the minute spores being carried by the wind. I do not think, however, that they would injure the plant, because they would not be able to live upon it. That is my opinion.

10105. Do you think the present want of prosperity in the district is simply attributable to the failure of the wheat-crops? No, I do not think that. I think it is owing to a series of bad seasons—we have had five consecutive bad seasons—and the bulk of the tenant farmers are not very well off. Every bad season now, of course, helps to make them worse.

10106. What crop has been substituted for the wheat-crop which has failed? Mostly hay. Of course, a great deal of the land has been turned into pasture for the production of milk, to supply the Sydney market.

Crops.

10107. Do you think the district could be improved by largely applying the principle of irrigation? I am certain that it would be improved, but I have no idea of how you could distribute the water upon the hilly land in such a way that it could be made of use for the purpose of cultivation. I can understand how water could be distributed on the hill-side, but I cannot understand how they would cultivate between the drains.

Irrigation.

10108. Do you think that the soil here is adapted for irrigation? I do.

10109. Have you had experience leading you to suppose that it would produce very much larger crops with than without irrigation? On a small scale I have, but it is scarcely worthy of consideration. The piece of land I put under irrigation this year has yielded enormous crops, while similar land not watered produced nothing.

10110. And what crop do you suppose could be grown here with advantage under a system of irrigation? Lucerne, hay, and maize. As to the pasture land, I may say that I think that would be greatly benefited, if you were to cultivate under some system of irrigation such grasses as Italian grass and the prairie grass for dairy purposes.

Crops.

10111. Do you think it would pay to have large orchards in this district; is the soil adapted to them? It is particularly adapted to grape-vines.

Orchards.

10112. Would it pay to grow the vines under a system of irrigation? I scarcely think so. It would be very seldom that the grape-vines, if the ground were properly prepared, would require irrigation, unless you had an exceptionally dry season; it is a very deep-rooting plant. The plant would doubtless be benefited by irrigation in a season like this; but this is an exceptional season.

Vines.

10113. With reference to other orchard-trees, do you think it would pay to irrigate? I think it would pay well.

10114. Do you know what has been done in other countries with regard to this matter? I do not. But speaking of applying it to fruit-trees, I may mention that I had peach-trees growing upon land which was not irrigated, and the fruit was the size of walnuts; but some other trees of the same kind, growing upon land which was irrigated, produced fruit the size of cricket-balls. That is the effect which irrigation has upon the peach-tree.

Peach-trees.

Effect of  
irrigation.

10115. I suppose both descriptions of trees were healthy? Yes.

10116. Have you had any experience in silos in the making of ensilage? None. I have no personal knowledge; but I see a gentleman present who has had a large experience, and he will be able to give you some valuable information. I may state, however, that I thoroughly believe in it; I think it is a splendid thing for the storing of feed for cattle.

Silos.

10117. You said just now that you hardly knew how irrigation was to be carried out on the hills—do you think that the flats are more suited to irrigation? I did think so until I was told differently by a practical man. This practical irrigationist told me that it was easier to water upon a hill-side.

Irrigation on  
hills.



- Mr. F. Fergusson. 10118. Do you think that the hilly country here is sufficiently rich to produce good crops under irrigation? The bulk of the hills are worn out, and you would require to put into them proper food for the plants. The flat lands, on the other hand, where there has been a back-water at any time, require no manure. I have known such land to be cultivated for thirty years, and to produce the most luxuriant crops without any manure. Of course, there is a great deal of difference between a back-water and the flowing water. The flowing water takes away the fertilising particles, whereas the back-water deposits them.
- 3 April, 1886.
- Floods. 10119. During the last thirty-five years you have seen some of those large floods? I have.  
10120. What is your idea of the maximum height of these floods? I should say from 70 to 75 feet from the bed of the river, but I may say that previous to the passing of Sir John Robertson's Land Act, we did not have such severe floods as we have now.  
10121. Do you really think that that had the effect of increasing the floods? I know that in the Mitta-gong Range, and in the Wingecarribee country at one time, a week's rain would produce a very small flood, but now twenty-four hours' rain produces a considerable flood.  
10122. To what do you attribute that? Well, I think the clearing of the land has a great deal to do with it. Every tree which you take away is a natural dam; now that all those are removed the water comes down more quickly—now there are no trees to take up the water. Each tree might take up a very small quantity, but in the aggregate the quantity would be enormous.  
10123. And do you not think that the consolidation of the ground by stock has had something to do with it? Yes.
- Fresh. 10124. Take 75 feet as the maximum, how much below that point could a flood rise without doing material damage to the district? A rise of 55 or 60 feet from the bed of the river is only a fresh; it would do no injury unless it went over a crop at a certain stage. If it went over a crop of wheat in flower, of course, the crop would be spoiled. If it went over a crop of maize at a certain stage, it would spoil it; but if there were no crops growing, it would benefit the place instead of injuring it.
- Benefits to land. 10125. When a flood has not been high enough to do any damage you think, then, that it has benefited the land? Yes, if it is back-water; if the water rushes over the land, it does it a positive injury, but if not, it leaves a fertilising sediment. I have already said that flowing water takes away the fertilising particles lying on the top, and if the land should happen to have been recently ploughed, the chances are that a great deal of earth would be taken away. In such cases as this, of course, a flood would do a considerable injury, because when you take away the top soil you take away the cream of it.  
10126. If any means could be adopted by which these very high floods could be prevented, would it be of great benefit to the district? Yes, in case of the very high ones.
- Town supply. 10127. Have you formed any opinion as to the best way of conveying water to the town for the use of the inhabitants? I think the most economical way would be to have a pumping apparatus and reservoir, at the highest point of the town; you would then be able to let the water flow to each house by gravitation.  
10128. Would that be easier than the gravitation supply from the canal at Kenny's Hill? Very much. The price of the pipes would form a very large item in the expense of such a scheme as that.  
10129. Do you think that the river here is sufficiently pure for the purpose? Generally speaking. It may be a little bad just now; but there has been a drain upon it, which perhaps may not occur again for years. I presume that, when the Prospect Reservoir is full, they would not take away any of our water at a time like this.
- Supply in river. 10130. Has the taking up of the water for the temporary supply decreased the water in the river? Very materially; so much so that until the last few days in many places the river had practically ceased to run. Down below here it was very little more than a chain of water-holes.  
10131. Was any injury done to the people in consequence? I have not heard of any.
- Model farm. 10132. Do you think it would be a good thing for the Government under certain conditions to establish a small farm under irrigation in an agricultural district like this, for the sake of educating the people? I do; if you demonstrate to the people the practicability of the thing, that will be sufficient. They want to see the scheme working first, and then they would be willing to pay interest on the outlay. The more enterprising people would certainly do so.  
10133. Do you think the majority would do so? Yes; but it must first be demonstrated that the thing is practicable.
- Value of land. 10134. Say that you have a farm or orchard of 100 acres of good alluvial land, what would be the difference in the value of that land under irrigation and its present value? I can only form an opinion; but I should say, roughly speaking, that land which would be worth a pound per acre without irrigation would, if irrigation were applied to it, be worth about four times that amount.  
10135. Do you know that in other parts of the world—in California, for instance—that land, which ten years ago could not be sold for a dollar an acre, is now worth £30 an acre after irrigation? I have heard of the increased value of the land.  
10136. And that has been done under the same climatic conditions as those which you find here? Yes, excepting, as I understand, that they construct receiving places for irrigation at a less cost than we could do here.
- River bed. 10137. *Mr. Gipps.*] What is the character of the bed of the river here? Mostly sand.  
10138. And does it extend for any distance on each side of the river? Yes, a considerable distance.
- Well. 10139. Has that been proved? Yes; I have seen it proved by the sinking of a well. I have seen a well sunk 500 yards away from the river, and when you got to the bed of the river you came to the sand and to the water.  
10140. Did they try to pump it out? No, that was in the olden times; the water was drawn up by a windlass.
- Supply. 10141. Did you think that an unlimited supply of water could be obtained? Yes.  
10142. And good water? Yes.
- Country. 10143. What is the character of the country between the Bargo and Wollondilly? I should say it was a very rough country with bad soil, rocks, and sandstone—a rough, wild country.
- River banks. 10144. Would the banks of both rivers be rocky and precipitous? Yes; but I only speak from looking at them casually. I have no personal knowledge.  
10145. Have you been upon the Wollondilly? No, but I have been upon the Bargo.  
10146. Do you know of any site there for a dam? No, I do not.  
10147. *Mr. Gilliat.*] Can you give any idea of the area of land liable to flood? No, I cannot. I can only speak with reference to the immediate neighbourhood. 10148.

10148. Can you give us any idea of the area available for irrigation—that is, the alluvial flats—the richest part of the land of which you were speaking just now? No, I cannot.
10149. Have you any idea how much it would be in square miles or acres? I could not form an idea.
10150. You spoke of the supply of the township with water; you think that this should be done by pumping from the river to an elevation in the neighbourhood—that scheme would contemplate the construction of a weir in the river? Not necessarily. The water might be taken from the holes.
10151. You do not think a weir would be necessary? No; it might be necessary in a season like this, when you were taking all the water away to Sydney; but I hope it will not always be so.
10152. Can you give us any information with reference to Bent's Basin? Yes; I know that there is a great contraction in the river there, and that is the place, I think, which causes us to have such high floods.
10153. You attribute the floods then to the checking of the water in the gorge? Yes.
10154. *Mr. Murray.*] Is the depth of the soil on the flats very great? Very great.
10155. The country about here is mostly of an undulating character? Yes, very undulating.
10156. What is the present state of cultivation? The ground is very good; but if it were to be brought again under cultivation, it would require manure as well as irrigation.
10157. Is the soil light on these ridges? Yes.
10158. What sort of subsoil have you? Clay in the majority of instances.
10159. And you think that all these ridges could be improved by irrigation? Undoubtedly.
10160. *Vice-President.*] I understand that several gentlemen who have lately come to the district have gone to great expense in attempting to irrigate their land and to farm on improved principles? Yes.
10161. Do you think that that in itself would be sufficient without the Government undertaking anything of the sort—do you think that the properties of these gentlemen would act as a sort of educational farm? I do not think they would have the same good effect that the Government institution would have.
10162. I believe that these gentlemen have improved the mode of farming here considerably? Yes.
10163. They have not only altered the system of farming; I believe they have attempted irrigation, and are endeavouring to effect an improvement in stock? Yes.
10164. *Mr. Gipps.*] As to the water-supply question of the town, what do you estimate to be the cost of the pipes? I estimate that the town could be supplied copiously at a cost of considerably less than £1,000. That is, taking the engine, pumps, pipes, and everything into consideration. A Tangye pump, with boiler and 3-inch pipe, would supply everyone in Camden most copiously.
10165. Would that supply be sufficient for the motive power of manufactories and that sort of thing? No, I do not think so.
10166. I think you could lay a foot wrought-iron pipe connecting the canal with Camden, that would be 4 miles at about £3,000. Do you not think it would be far more advantageous to bring a large quantity of water, which you could apply for irrigation or manufacturing purposes, than to simply obtain sufficient water for domestic purposes? You see you would require an enormous reservoir.
10167. But you must remember that in the scheme which you suggest pumping would be a constant expense? Yes.
10168. But in the other case, you would have laid the pipes and would have done with it? Yes, but you would want an enormous reservoir.
10169. Would you not have a great advantage in being able to use the water under pressure for motive power? Yes, if the pressure were sufficiently great.
10170. What is the population of Camden? That is a statistic which I cannot give you. The population varies very much. I know that, speaking of the district generally, we have 1,500 people less than we had twenty-five years ago.
10171. And is the population gradually diminishing? Until recently it has been diminishing; all the young and more enterprising of the people have gone away to the newer districts. There is no outlet for young men here; they have gone away in order to get more room.
10172. Lately, the population has been steady? Yes.

Mr. Jeremiah Frederick Downes called in and examined:—

10173. *Vice-President.*] Have you been long resident here? Twenty-six years. I succeeded Mr. George M'Leay in 1859.
10174. Have you been connected with the Agricultural Society here? Yes, to some extent.
10175. And have you paid particular attention to agriculture since you have been in the district? Yes, I have a good number of tenants all living by agriculture.
10176. I believe, for a great number of years the wheat crop here has almost entirely failed? You may say for nearly twenty years, that is since rust first attacked it. A great deal of wheat is grown now, but it is cut for hay.
10177. To what do you attribute the failure of the wheat crops? To rust.
10178. What is the cause of the rust? I think it is atmospheric; that is my own idea. I have tried all kinds of lands—virgin soil and other soils, and the result has been just the same.
10179. You have found no improvement in the matter of rust in virgin soil as against the old soil? No; there was a description of wheat brought from America a few years ago in which there was a large amount of silica, which resisted the rust for two years; in fact, my son had a very good crop of wheat, free from rust, but last year the rust affected it. He succeeded for two years, but in the third year the grain gave in.
10180. Do you think the present crops grown are less profitable than the wheat-crop would be? No. At the present price of wheat it would decidedly be better to make it into hay.
10181. Then you do not attribute the present want of prosperity in the district to the failure in the wheat-crop? No.
10182. To what do you attribute the want of prosperity in the district—we have been told that there are not as many persons here as there were fifteen or twenty years ago; if that is the case, there must be a reason for it? I think the dry seasons during the last five, six, or seven years have had a great deal to do with it. You may say that this is the seventh year of drought.
10183. Have you any experience of irrigation in the district? No, I have not.
10184. Have you formed any opinion of the value of irrigation in a district like this? No, I have not. I have

- Mr. J. F. Downes. have noticed that after floods on grass-land, in my own district, the production of grass after the flood has subsided has been enormous.
- 3 April, 1886. 10185. And you think that the effects of irrigation would be the same? I should say so, to a great extent.
- Value of land. 10186. Judging from your experience, to what extent do you think the value of the land would be enhanced by systematic irrigation? It would certainly be trebled or quadrupled in value. I think you would be able to grow on one acre as much as you could otherwise grow upon four or five.
- Water-rate. 10187. And is it your opinion that if any work of that sort were undertaken by the Government, under trustees or otherwise, the people would be prepared to pay interest on the outlay? Yes, I think so.
- Local Trusts. 10188. You think they would pay a tax to recover the interest on the money? Yes, I quite think so.
- Floods. 10189. Supposing any irrigation were undertaken, what would be the best means of carrying it out? I think local trusts would perhaps be best.
- Height. 10190. You have had during the time you have been here experience of floods? Yes.
10191. What do you imagine is the highest point attained by a flood over the summer level? As far as I can remember, about 70 feet. It would be higher, I dare say, in Camden, because the water is thrown back from Mr. Fergusson's land and the Macquarie Grove estate; there is an embankment on the other side which throws the water back; at Camden, it is over the tops of the fences before it breaks over the banks with us at Brownlow Hill, which is 5 miles below Camden.
- Damage. 10192. Have you found that these high floods do a great deal of damage? The chief damage is done to the fencing; but since we have adopted wire, we have found it a great saving.
- Benefits. 10193. Is there no corresponding benefit derived by the district from these floods? Yes, from the back-water; the chief flood-water is back-water; it leaves a sediment behind which enriches the land.
- Highest flood. 10194. What height does the flood have to rise, allowing 70 feet to be the maximum, before it would damage the district? I have found that the lower floods do the most damage. A flood rising to 50 feet above the level of the bed of the river has been much more destructive than a very high flood when the water passes over everything. My own place is 50 feet above the plain, and the water in 1873, the highest flood I remember, was 14 feet up towards my house. That was a very high flood in the river. Mount Hunter Creek was higher than I have ever seen it. The water came down to me a banker; it backed up, and went over the plains above, where I had never seen it. The greatest damage I remember a flood doing was in 1860, I had nine stacks of wheat and hay, and the whole of it was taken away. I had the whole plain under crop that year, and I think I must have lost 2,000 bushels of wheat. There have been much higher floods than that since, but it was high enough to float the stacks, and it took them over the tops of the fences. I have seen floods 20 feet higher than that since.
- Storage. 10195. Do you know of any place in the district where we could conserve large quantities of flood-water so as to make it available for irrigation? I do not, except about Menangle. I think there is a place there, a few miles from Menangle, which might be used. The river lately has been very low until this last week.
10196. Has it been lower this season than you have ever known it before? Yes; since the water has been taken, I have seen it so low that you could put the whole of the water through a 12-inch pipe.
10197. And the place you mention is the only place you think water could be conserved at? I am not acquainted with the upper part of the river, I have been as far as the Nepean Towers.
- Available land for irrigation. 10198. Do you think that, if a large work were carried on, a considerable quantity of land could be made available for irrigation? Yes, I think so.
10199. What would be the extent of it? Some thousands of acres. I am speaking now more of the alluvial flats adjoining the river.
10200. Do you not think that the ground back from the river would pay for irrigation? It would, but it is not equally good, although some of the very best ground is on the high lands.
10201. Would there be a proportionate increase of crops upon the high land? I think there would, upon a great deal of the land; it would depend a great deal upon the land; the water upon the poor ground would be of very little account.
- Model farm. 10202. Do you think it would be a wise thing for the benefit of the district and the country generally for the Government to initiate some scheme, such as a model farm, in order to show the advantage of irrigation to the district? I think it would; the cost would not be very great, and I think that the farm could be made to pay for itself.
10203. You think that it would be advantageous as an educating medium in the district? Yes, I think it would be a very great benefit. There is nothing like ocular demonstration in these matters.
- Agricultural Board. 10204. What do you think would be the best principle of supervision over any work of the sort? I think that something like an Agricultural Board or a local Trust would work well.
- Bent's Basin. 10205. Do you know anything of a place some ten miles below here which throws a large quantity of water back over the district—an enormous steep gorge? I know Bent's Basin, but I question very much whether, though that were opened up, it would relieve the water here very much. I do not think it would. As I said before, the water is thrown back from Fergusson's land and the Macquarie Grove estate long before it comes down to me. I do not think that, as far as Camden is concerned, the work suggested would benefit us in the slightest degree.
- Discharge of floods. 10206. What would be the best direction in which to move, with the view to relieve Camden and the immediate district from these high floods? There is a place where the water passes through some large granite boulders. Some of them are immense; if they could be blown up and lowered out of the run of the water, I think it might do great good. Not long since, I was down looking at the point where the water passes through a mountain. The bed there is full of timber and boulders; if they were cleared, it would make a vast difference.
10207. We heard that there was a large bend in the river below here, which retarded the outflow of the water, and that if a channel were constructed across there, to carry off the water at a very rapid rate, it would relieve this part of the district—do you know anything of that? I do not quite understand where that would be; a part of my own land is very high on one side, and the other is an outlet on to the plains; if you opened this gap, as it is called, I think you would jeopardise the people below.
10208. You think that the relief should be found above? Yes.
10209. Is it your experience that these floods have increased in number or in height of late years? We have had nothing to speak of since 1873. We have had only a very few floods.
10210. But previous to 1873? They were numerous; in 1860 and 1861 they were very numerous.
10211. And very high? Yes, now the clearing of the land has increased the flow of the water very much.
- 10212.

10212. Have you found that of late years a small amount of rainfall has produced a very high flood? Yes. Mr.
10213. And it is in consequence of the great drought that you have had less floods of late years? Yes. J. F. Downes.
10214. Referring back to the irrigation question, do you think that a system devised by the Government, by offering bounties either directly or through the local societies, for the irrigation of the land and showing the results, would be desirable or practicable—do you think it would be as beneficial as though the Government were to do the work themselves? If you get a few men like Mr. Paling in the district, I think there would be no difficulty in the way. 3 April, 1886.
10215. As a matter of fact, some gentlemen in the district, Mr. Paling amongst them, laid out considerable amounts of money in attempts at irrigation? Yes, no doubt. There is no doubt, I think, that they will pay, but the first cost is more than most people could afford. Irrigation.
10216. *Mr. Gilliat.*] You referred in your evidence to your son having been very successful for several years in the growth of an American wheat extremely rich in silica, but you say that the grain subsequently deteriorated? Yes; last year it gave in: the rust attacked it. American wheat.
10217. Have you paid any attention to the question as to whether that deterioration might not have been the result of the absence of some constituent from the soil, say the silica itself? That is very likely.
10218. You do not, then, attribute the failure of the wheat-crop to the wearing out of the land in any other way; still, you think that the failure of some constituent in the soil might have been the cause of the rust? It might have been.
10219. Do you think the people of the district would be willing to contribute towards the interest on a system of irrigation if it were adopted? Yes, I think so, provided it be not too heavy and the works were likely to give them good results. I should like to say at this point, with reference to the water-supply of Camden, that I should like to know what the people below are going to do if that scheme is adopted. They come to the river for water; it was on the point of ceasing to run the other day, when this fresh came down. In the course of a few days, I think, it would have ceased to run altogether. Water-rate.
10220. *Vice-President.*] But is not the river, like most others, full of large waterholes which would always be full? There would be holes, but the water was becoming very bad. Waterholes.
10221. *Mr. Gipps.*] You think the people would be justified in making a claim upon the Government for compensation for the water which they had diverted from the higher point? Yes. Compensation.
10222. And that they should supply you with water as compensation? Yes; I have thought so all the way through.
10223. Is the population sufficient down the river in any locality to warrant the Government in undertaking a water-supply for them? Yes. Population.
10224. Are there any towns below this? There is no town below Camden until you come to Penrith. Towns.
10225. As to the water supply at various places down the river, do you think that some overshot dams should be constructed to conserve water for the use of the inhabitants without any very great expense—do you think the river is so formed as to permit of it? Oh, yes; but even if we could depend upon such a supply of water as we have had during the last few days, I think it would be better that, instead of the water coming down the channel to Sydney continually, we should be allowed to take it once a fortnight or once a month for (say) twenty-four or forty-eight hours. I think that would be sufficient to give us a supply, but since the water has been cut off altogether, we have been nearly at a stand-still. Local supply.
10226. Do you think, if such a supply as you have named were left occasionally, that it would be sufficient for the use of the inhabitants? Yes.

Mr. William Henry Paling called in and examined:—

10227. *Vice-President.*] I think the matter about which we wish to examine you chiefly, Mr. Paling, concerns the silos. I believe you have had recent experience in the storage of ensilage; I believe you have gone to considerable expense in constructing silos, and have had some experience in the results. Will you kindly tell us what they have been? The silos we have constructed have been made upon a very substantial basis, cemented and bricked; and we have put different sorts of food—grass, and maize, and mixed food—into them. A great many people thought that they would be a tremendous failure; we were almost afraid to open them, but to our great astonishment we found that the food was very good, and that the cattle ate it greedily. Mr. W. H. Paling.
10228. What have you found in your experience to be the best size for the silo? I cannot say that we have had any experience beyond that which we have gained from the silos which we have made. 3 April, 1886.
10229. And what size are they? About 12 feet by 12, divided into four compartments. Silos.
10230. What is the depth? 13 feet. This year we have had them filled with green maize.
10231. Could you give us any idea of the cost? I could give you the cost to a penny, but I have not the figures with me. I think, however, that the shed, silos, and everything cost about £270. Cost.
10232. You say that you have found them admirably adapted to green produce; is it necessary that the produce should be in any particular state when it is put into the silos? We find that it must be put in green. Putting in produce.
10233. And does it matter whether it is wet or dry when it is put in? No.
10234. If you were cutting down your hay in wet weather, you would still put it into the silos direct? Yes.
10235. And without any ill effect? Yes.
10236. Is it a fact that you can keep that material for any length of time you please? We have found that we can keep it for eight months. In fact, the longer we keep it the better it gets. On the whole, we are very much pleased with the silos; in fact, I am so pleased that I wish to enlarge them. Results.
10237. Are they adapted for the food of both cattle and horses? Yes.
10238. Have you any experience in irrigation at all? None whatever.
10239. Have you formed an opinion as to the practicability of irrigation? Yes, I formed some ideas in the course of my travels. I found that, in Italy, where they irrigate they get as much as ten times the lucerne they get otherwise. In one year the crop is increased tenfold. All that I have seen of irrigation leads me to believe that it cannot fail in increasing the crop if it is properly carried out. Irrigation.
10240. Have you formed any opinion as to the best form of irrigation for this particular district? In order to ensure plenty of water we have erected a very large dam. The basin contains about fifty million gallons. From that basin we intend to convey it to different parts of the farm, and to pump it where it is necessary to raise it.

10241.

- Mr. W. H. Paling. 10241. What is your opinion of the increased value of the land by a proper system of irrigation? I should say that it would be worth from four to ten times the value.
- 3 April, 1886. Storage. 10242. Do you know of any place in this district which would be adapted for the conservation of very large bodies of water? Yes; Camden is particularly adapted for that purpose. It is hilly, and we have merely to dam the water up to keep it.
10243. Have you had any experience of floods since you have been here? No.
10244. We have it in evidence that the Nepean has almost stopped running during the last few weeks. Did you experience any inconvenience from the shortness of supply during that time? No; we are not yet ready to irrigate. We have plenty of dams on our own place—plenty of water.
10245. You do not find the water materially deteriorated in consequence of the short supply? No; it has not affected us. I may say that, in order to go systematically to work, I had my farm surveyed, and the levels have been taken.
- Dam. 10246. What is the height of the dam? 31 feet.
10247. Over what area will that impound water? It will cover 11 or 12 acres.
10248. What is the average width? About 2 chains. I did not do it very accurately, because it was not necessary. I roughly estimated that the dam would hold about fifty million gallons. There are several large hollows coming into the creek where a large quantity of water will be stored.
- Level. 10249. What is the difference between the level of the river and the by-wash? 34 feet.
10250. What is the height of the dam above the water-mark in the basin? About 4 feet.
10251. What is the height of the top of the dam above the river-level now? 35 feet.
10252. Then, in an ordinary flood the dam would be 10 or 15 feet under water? It would be quite that. If there were a flood, we should expect to see the water coming over the dam.
10253. How do you propose to protect the dam from a flood? Various plans have been suggested to me, but I have not yet determined which to adopt.
- Catchment area. 10254. Do you know the catchment area for the dam? I suppose there would be about 500 or 600 acres. We are so situated that we get all the water from our neighbours' land.
- Supply. 10255. In ordinary seasons you would expect to have the dam kept supplied by the rainfall? Yes. We shall also pump from the river. We intend to use a Tangye pump, to put the water over the adjoining lands for the purpose of agriculture. In the case of no rain coming, we shall pump from the river. We have a 14-horse-power engine for that purpose, and a 10-inch pump.
10256. Has anyone else in the district attempted irrigation on a scale like this? No. In making the dam, we found that all the good soil of the farm had been washed down to the bank of the river, and when the dam was in course of construction, I had the fine earth distributed over the land again.
- Cost of irrigation. 10257. To what cost do you intend to go in your irrigation works? We have expended something like £2,000 for irrigation, and we shall expend perhaps another £2,000.
10258. That will be £4,000 for these experimental works? Yes.
- Area. 10259. How many acres do you hope to irrigate? Five hundred.
10260. The first cost then would be something like £8 an acre? About that.
- Water-rate. 10261. Do you think that, if the Government were to undertake any large works of this kind, the people of the district would feel inclined to pay interest for the outlay on irrigation? I think they would borrow money on their watch to do it. I am sure they would, if they had any sense.
10262. You do not think there would be any doubt about their being willing to pay the interest? Not the slightest.
- Supervision. 10263. Under what supervision do you think it would be well to place works of this sort in the district—do you think it would be best to place them under a local trust, or to have an engineer? I think you want a competent agricultural engineer. I do not think you would find the people here with the requisite knowledge; you would have to teach them first. I do not know that any local man would have the requisite knowledge; I do not think they have even read books on the subject. I am trying to get a man over from Victoria to assist me in my irrigation works.
- Legislation. 10264. Do you think that any legislation is required at present in order to regulate and protect riparian interests throughout the country? I think that in some cases it would be well to give the people a right to construct dams across the rivers.
- Irrigation. 10265. *Mr. Gipps.*] You say that you propose to conserve fifty million gallons of water in this reservoir, and with this fifty million gallons you propose to irrigate 500 acres? Yes, we intend to do that; if we find that that quantity is not sufficient, we must adopt other means to increase the supply.
- Water per acre. 10266. Do you know what quantity of water per acre that would allow; how many waterings would you give in the course of a year? In dry seasons I should say there would be a watering once a month, perhaps twice a month, if we could afford it.
10267. Therefore you would want at least twelve waterings a year? Yes.
10268. And how many inches would you allow for each watering? Not less than 3 or 4. If you irrigate at all you must irrigate very well.
10269. That means, then, with only one watering a month, 48 inches a year? Yes.
10270. Are you aware that your fifty million gallons would only provide for less than about one-sixth of that quantity; you would not be able to irrigate more than 100 acres; two waterings a year of 2 inches each would take up your fifty million gallons? But of course we propose to refill the dam.
- Force of pumps. 10271. How much does your pump throw up? I am told that it will throw up over 10,000 gallons a minute, but I cannot say accurately.
10272. Then you propose to continue filling the reservoir—you will not be dependent upon the storage? Certainly not; that is why I built the pump near the river. We have secured a 10-inch pump. I believe the water contained in the dam, with the means we have of refilling it, will be sufficient for the 500 acres.
- Watering in Italy. 10273. Do you know how many waterings in Italy they give in the course of a year? I could not say exactly.
10274. Are you aware that it is 2 inches each watering, and that there are from four to six waterings a year? I dare say, unless you water liberally it is of no use at all?
- Silos. 10275. *Mr. Murray.*] Have you weighed the stuff which you have put into your silos? No.
10276. Nor when you have taken it out? No.
10277. So you do not know how many tons you have put in? Our silos will contain about 35 tons each. We calculated that by reckoning the dray-loads we put in. About 120 dray-loads were put into four silos.
- 10278.

10278. You are keeping no accounts, then, as to the real value, allowing for the cost of labour and interest on the outlay? No; I do not think the ensilage loses weight when taken out: yesterday, when the members of the Commission were present, as I daresay you observed, it was quite as moist as when it was put in.

Mr.  
W. H. Paling.  
3 April, 1886.

Mr. John Lakeman called in and examined.—

10279. *Vice-President.*] How long have you been a resident of the district? I have lived here since my birth.

Mr.  
J. Lakeman.

10280. Then, of course, you have had considerable experience of the floods? Yes.

10281. There seems to be a diversity of opinion as to the heights to which these floods actually rise; we should like to ascertain, as nearly as possible, what height a good flood would reach over the present summer level of the river? I have heard it said as much as 70 feet. I do not know whether any actual measurement has been taken; but you must have noticed the building immediately above the tram station, the water was in that building to a depth of something like 18 inches. It was of course in the building round the corner as well, and almost up to the corner opposite Toll's.

3 April, 1886.  
Floods.

10282. Is it your experience that these floods do a considerable amount of damage to the district? They have done.

Damage.

10283. We have had in evidence this morning, that the floods do little or no damage up to a height of about 55 or 58 feet, and that it is the last 10 feet which really do the great damage? There is a great deal of truth in that. The last few feet in a small rise do not do a great deal of harm; they may catch some crops.

10284. Has it suggested itself to you, that there might be some means adopted of relieving the district of these floods? Yes, I think that improvement might be made at the gorge, which has been mentioned in evidence, if you do not fall into the danger of flooding the lower lands too quickly.

10285. Do you think it would be possible to stop the rush of water on these higher flats, somewhere higher up the river? I think it is very likely.

10286. Have you noticed during your long residence here that the floods have increased in size of late years, in proportion to the height which they obtained before? Up to 1873, when we had our highest flood, there had been an increase in the height of the floods caused by heavy rainfalls, and the clearing of the land; but since 1873, the rainfall has been so light that we have had no floods worth speaking about.

Increase of  
floods.

10287. And I suppose the consolidation of the land by the treading of stock has contributed to an increase in the size of floods? I do not think that has a great deal to do with it. The measurement of the rainfall as regards inches has not much to do with it. There may be 6 or 7 inches of rainfall without any perceptible rise, and at another time you may get more rainfall in a much less time, causing a flood. I have had experience at my own place; I built a dam in a dry gully; I suppose it drained about 200 acres of very steep land; below the dam was a small gully, coming in off a cleared paddock. After it had been raining for twenty-four hours, I went down and found that very little water had run from the timbered country, but was running fast from the small paddock which had been cleared. I saw the mistake which I had committed in making the dam higher up, and I intend to divert the water from the cleared land on to the area drained by the dam.

10288. Are there any places in this immediate district where large quantities of water could be conserved at a reasonable cost by means of dams? I think the gorge is the most likely place; of course, provision would have to be made for an outlet. In times of flood it is naturally dammed. It has been suggested that a blind creek passing through Saddleback Hill should be used to carry off the flood-water in case of a high flood, and so relieve the country above it.

Storage.

10289. Have you had any experience in irrigation? None whatever.

10290. Do you think it would benefit the district if the Government should see their way to construct large works for the conservation of water, with a view to irrigate many thousands of acres? I think it is a question on which the people will want a lot of education. In the first instance, we have not yet a population which cares for steady plodding with small results.

Irrigation.

10291. You do not think people are yet educated up to that? I am afraid not.

10292. Do you think it would be advisable for the Government to undertake irrigation on a small farm, or something of that sort, as an educating medium for the people here? It might do good.

Model farms.

10293. Has there been any great outcry for the want of irrigation in this district; has the want been felt sufficiently to make people interested in the construction of works of that sort? No; of course, there is a great want of water for stock, but I do not think the people have given irrigation much attention beyond that.

Want of water

10294. Is there any water for stock in the present season? At Brownlow Hill, where I live, water is dearer now than it was ever known to have been.

10295. To what do you attribute that? We have had rains enough to bring on the crops on the cultivated land during the last five years, but we have had no rain for the last ten years to thoroughly soak the land. I know of some cases in the present season where people could not get a bucket of water to wash their faces with.

10296. Where is that? That is at the back of Mr. Downes's property at Brownlow Hill. You asked me a question just now with reference to legislation, I think that is the keynote of the matter. We want undoubtedly legislation on this subject; a great deal might then be done. Many people would help themselves if they were protected, but in the present state of affairs they hesitate to do so. A case like this often occurs: Take a creek on each side of which there is an owner, it may be advantageous to one of the owners that a dam should be constructed; it may cost a mere bagatelle; if the adjoining owner objects, of course, he cannot construct the dam. No harm would have happened to that man by conserving the water, and yet on the dog-in-the-manger principle he objects to the construction of the dam. I know of one case on a creek at which it is very narrow; the bank on one side is about 20 feet higher than that on the other, and the work of half-a-dozen men for two months would make a dam to throw the water back a mile. It so happens the land belongs to two individuals, and the party on one side would like to make a dam, but he does not know whether he could get permission for the use of the clay on the other side. And then there is the question of flooding to be considered.

Legislation.

10297. You think, then, it would be wise to have legislation to protect people's rights, and to encourage the conservation of water; you think that that would be a great benefit to the country? Yes; I have no doubt that

that



Mr. J. Lakeman. that a great deal would be done in the shape of irrigation, not only by damming the rivers, but by the selection higher up of places where there are large reservoirs, from which you would be able to obtain a pressure.  
3 April, 1886.

Mr. John Benson Martin called in and examined :—

Mr. J. B. Martin. 10298. *Vice-President.*] You have been a resident here for a great many years? In the town since 1852; in the district, I think, about four years more.

10299. During that time you have had experience of a great number of floods? Yes.

3 April, 1886. 10300. What do you think is about the average of the highest floods above summer level? That I am quite unable to say; I never studied the question. I never made any inquiry; but this morning I handed to Mr. Donkin some newspaper slips, among which were two letters to the *Sydney Morning Herald* by Sir William Macarthur; he was a very accurate observer, and you can rely upon the facts given by him in these letters. (*Appendix B.*)

Floods. 10301. The evidence which we have had to-day establishes the maximum height of these floods at about 70 feet? I cannot form an estimate; I never looked into that particular question; the information is easily obtainable. The surveyors were here the other day inquiring into the supply for the town; they took their levels from the highest point of flood-mark. A gentleman asked me to show him a suitable place both for obtaining a supply from the river and for a reservoir on the hill; and requested me to point out to him the highest known flood-level about the town; that is opposite the tram station; he took that as his datum point.

Damages. 10302. Has it been the rule that these floods have done a great deal of damage to the district? Not for many years. The singularity about them is that they have been disastrous only since 1860.

10303. Previous to that they were not so? Not at all so. To estimate how little we cared about them, I may tell you that my father purchased 640 acres in 1832, 8 miles in a direct line down the river, perhaps 12 miles following the course of the river. He lived at Parramatta at that time, and managed by a farm overseer. They commenced clearing on the river banks, and in his case, as in other cases on the river frontage, the house was built on the first bank of the river, so little apprehension was there of any damage. They used to take a yoke or a pair of bullocks, and they went down to the river to supply themselves by that means.

10304. In what year was that? That would be about 1845 or 1846.

10305. And at that time there was no apprehension at all from floods? No; we all lived upon the river banks. I think the floods taught the people the danger. Every one lived upon the banks; in fact, in those days, if any one had become the possessor of land at the bridge here, he would have built on the banks near to it; in fact, there was a police station-house on the other side of the bridge.

Increase of floods. 10306. To what do you attribute the great increase in floods after that? In a great measure to the clearing of the country; in some degree to the accidental direction of a storm.

Benefits from floods. 10307. Is there any compensating advantage in these floods? None whatever; so few benefit by the still water. The scour does far more damage than is compensated for by the still water. We had an instance here: the land above here, as far as Mr. Fergusson's farm, lies under the direct scour; I daresay there has been at least 6 or 7 feet of alluvial soil taken away from that land.

10308. In a series of floods? Yes; there is nothing but a bare clay-pan in the centre of the scour now. A blade of grass has never grown since.

10309. It has been said that only high floods have done any great damage to the district: suppose we take 70 feet as the maximum of high water at flood-time, how many feet under that would the water have to rise before it would do any damage? I have a map here and the plan of my house, from which you will see the extent of damage which I myself suffered. I had 30 acres of land fronting up the street bounding the tram station; I had it on a lease of ninety-nine years, and I built upon it a house costing about £600. I felt as sure as any person could reasonably hope to be that I should make a fortune out of the place, as it possessed some attractive building sites; the position was good, and the soil magnificent. You may now see, outside, the foundations of the house. I had occupied the place a few months, and had built several additions; I had just finished building a large dining-room, when, without any warning whatever, the flood rose to the eaves and nearly drowned the whole of us. Large masses of cumulus clouds came up from the south-east, and in the course of a couple of hours the rain fell in such incessant torrents as I had never before seen. If the water had reached only the level of the houses, probably no one in the town would have suffered. The question of damage of which you speak in the case of the lower floods would depend upon the season of the year. If a flood occurred during the ripening of the wheat, it would do an immense deal of damage; but, leaving out of the question the chance of its coming during the ripening of the crops, very little damage would happen, if it did not go beyond a certain level.

Relief works. 10310. What would that be—10 or 12 feet lower than its highest level? Yes, about that.

10311. Do you think there is any possibility of relieving the district of these floods? I have suggested that an angle of the river might be cut off. I could not say that that would be certain relief, because the floods depend upon a combination of causes. I can show you on the map here the point where the mischief is done; it is at a point of the river between Campbell's Ford and Bent's Basin; but that is not the only obstruction.

10312. We have been told there are a number of granite boulders at the bottom of the river? They must be sandstone; there is no granite in the district.

10313. It is said that if these were removed the water would be assisted to run off in time of flood? I defy you to remove them; if you blast them all to pieces, it would be impossible for you to get them away; they would still lie there in blocks. You would alter their shapes, but I do not see how you could remove the obstruction.

Storage. 10314. Have you in your experience of the district noticed any places on the river which would be good sites for dams for the conservation of large bodies of water? I cannot say that I have, because my general recollection just now is, that if one side is firm the other is not. The river acts as rivers usually do; where on one side you have a hard soil, the whole force of the water is thrown upon the opposite bank. The drift is carried that way generally; hence you have sand on one side. My opposite neighbour on the river had a farm on the high bank, which was not affected by floods; on my side, the bank was cut away by the scour of the stream.

10315.

10315. Have you had experience of the advantage of the irrigation of land in this district? I could not give any evidence favourable to any notion of irrigation; I am prejudiced against it, and being so, it is only fair I should tell you so. I have given the matter very little study, except with the view of finding what would be likely to condemn it, and for this reason the few attempts at irrigation in this district must end in failure. The attempts have been made only by rich men. If they intend to grow crops of corn for ensilage or grain, they will find it would cost them at the rate of about 10s. a bushel. My idea is that irrigation can only be carried out with advantage when the land is situated at the base of a mountain-stream which is fed by perpetual snows or springs; then, when you can get a certain supply by gravitation, it might pay. Mr.  
J. B. Martin.  
3 April, 1886.  
Irrigation.
10316. Have you thought out the question of water supply to Camden? Only as it has been suggested to me by the gentlemen who were looking for a site for the reservoir and comparing the two projects, that is to say, the supply from the river here and the supply from the canal at Kenny's Hill. Town supply.
10317. Which do you favour? I think that from Kenny's Hill would be better. You might take the water from some point nearer than that, perhaps; then we should get it by gravitation, and should never incur any risk with reference to the engine. I do not see how you could sufficiently protect an engine near to the river here.
10318. Do you think that the people on the river have suffered by the diversion of water for the Prospect scheme? Yes; I am so far impressed with the idea that we have suffered, that I was about to ask the people to unite in a petition to the Government, praying them to allow us to have even a week or two of the run of the water, to let us have a mere cleansing fresh. The river has never been like this; I never saw the river before when you were obliged to go under the bridge for water. Now they had not only to go under the bridge, but a fortnight ago they were obliged to go some hundreds of yards up the river. We were not absolutely deprived of water. Suffering through proposed scheme.
10319. In case of great drought, do you think it would answer the purpose if the water were allowed to run down and flush the river once or twice in the month? I was going to propose that a public meeting should be held; but a thunderstorm happened at the head of the river, and raised the water four feet in one night. We have suffered from two things; the old bed of the river being filled up by sand, its shape is altered—the corners are cut off; on the banks there is a stratum of ironstone, and as soon as the water-pressure is removed the springs begin to run, and thus little pent-up pools become perfectly red, full of flocculent matter which is stirred up until you cannot see anything. On the surface there is an iridescent film produced, I think, by oxide of iron. We suffer from the foulness of the water in that way until the river is cleansed by a fresh from above. The water will become hard from the cause I have named, or perfectly green from stagnation.
10320. *Mr. Gilliat.*] What is the width of the river at Bent's Basin or Shancomore Gorge? Where the river enters the gorge at Campbell's Ford I should say about 100 yards wide. Width of river.
10321. What is the width of the gorge at its narrowest point? Very little more than the river; I should think about 40 or 50 yards.
10322. Could you give the Commission any information as to the area in miles or acres of land which is subject to flood in this district? That is a matter of calculation; I cannot speak off-hand upon a matter of that kind. You spoke just now about the difference between the height of the floods now and in former years, but not with reference to the special causes of the floods being worse at one time than at another, either now or then. I believe that depends a great deal in the first place upon the fact that the ground has been cleared everywhere, and has been trampled hard; it therefore follows that all the water is brought down more rapidly to the river than ever it was. Every year that is becoming worse and worse. Besides that, there is not so much land under cultivation as formerly. When the lands on the hills were under cultivation, they acted on the water like a sponge; now that they have reverted to grass, the old furrows running up and down the hills become little watercourses themselves, deep gutters cutting into saline subsoils. In fact, I may say that the quality of the water has been affected, creeks which were formerly sweet are now so full of mineral salts that they would float an egg in dry weather. Flooded country.  
Quality of water.

WEDNESDAY, 7 APRIL, 1886.

At Penrith.

Present:—

MR. DONKIN, J.P.,  
MR. FRANKLIN, C.E.,  
MR. GIPPS, C.E.,

MR. GILLIAT,  
MR. MURRAY,  
MR. TOWNSEND.

F. A. FRANKLIN, Esq., C.E., IN THE CHAIR.

Mr. Alfred Colless called in and examined:—

10323. *Chairman.*] You are proprietor of the *Nepean Times*? Yes.
10324. Have you been a resident of Penrith for any length of time? I have been in the district close on thirty-five years; I am a native of the district, and I have not been out of it more than a fortnight at a time. Mr. A. Colless.  
7 April, 1886.
10325. How far south of Penrith are you acquainted with the Nepean? As far as the junction of the Nepean and Warragamba rivers, and along the whole line dividing the Nepean electorate. The Nepean.
10326. Do you know the actual distance from the railway-bridge at Penrith to the junction of the Warragamba? I have always understood it to be 12 miles.
10327. Do you know whether the average width of the river from the bridge upwards has been ascertained? I do not. Width.
10328. Are you aware whether at any time accurate soundings have been taken? Yes, when Mr. Clark was here making inquiries respecting the scheme for supplying water to Sydney. Soundings.
10329. Would you say that the water is standing at ordinary summer-level now? No; my idea is that at the present time the river is 18 inches or 2 feet lower than it ever was before within my recollection.
10330. Is there any point of natural obstruction below the bridge? Yes, about a quarter of a mile below.
10331. What is the nature of that obstruction? A natural dam; I may tell you that a large portion of the dam has been removed. Obstruction.

10332.



- Mr. A. Colless. 10332. What does the dam consist of? Boulders embedded in natural drift and silt.
10333. Does the bar seem to be sufficiently retentive to hold back the water? Yes.
- 7 April, 1886. 10334. In ordinary seasons it has been sufficient to retain the water at a permanent level? Yes; 18 inches above the present height.
10335. Since when did the lowering of this natural reservoir take place? Within the last two or three years.
10336. What is the cause of it? The removal of the boulders for road-metal.
10337. Have the boulders been removed by the Government? No.
10338. By whom? Private people—by persons owning adjoining land.
10339. I suppose that the bar is of considerable magnitude? Yes; it extends for some distance on either side. The removal of the boulders has been stopped.
10340. Can you give any idea as to the quantity which has been removed (say) per month? No; they have been removed from different places; the whole locality is composed of bluestone.
11341. At present the stream appears to be too low to be serviceable to the surrounding country—does it benefit the lower part of the river by allowing the water to go? No.
- Lowering of bar. 10342. You do not think that the further lowering of the bar would benefit people on the banks lower down? No.
10343. If the river were lowered still further, would it damage any interest established on the river where pumping is carried on? I am not aware that any pumping is carried on between here and Richmond, except by one or two windmills.
- Population. 10344. What is the population of the electorate of Penrith? I should imagine that it is between 7,000 and 8,000.
10345. Notwithstanding the immense volume of water in the river, you say that no means are adopted to supply these people and stock with water? Not by means of pumping or gravitation.
- Valuable land. 10346. The land eastward of the river is exceedingly valuable for agricultural purposes? Very.
10347. And it would be largely benefited if it had a good supply of water? Yes.
- Water-supply. 10348. Does the district suffer very much owing to the intermittent supply of water? Yes, very much; and on the western bank some very valuable farms are affected.
10349. How do the people on the area between South Creek and the Nepean, including Penrith, supply themselves with water in drouthy seasons? Principally by tanks and wells.
- Town supply. 10350. How are they supplied in the town itself? By tanks, and when these fail, water is drawn from the river in casks. There is a small tank in connection with the railway station where people obtain water at so much per cask.
10351. So that, in fact, that is a small private water-supply? Yes.
10352. But it is not adequate? No.
10353. Are you aware whether any suggestion has been made recently for raising water from the river for the general supply of the district? Yes; not for the Penrith ward of the municipality only.
10354. Has anything like the cost of the work been arrived at? An estimate was made by Government officers.
- Water-rate. 10355. Have the municipality or the people in any way pledged themselves to pay the interest on the cost of tanks which would give them a permanent supply of water? They have never gone so far as that; I should say that the basis of calculation would be the annual value of the ratable property. I believe that a calculation has been made at so much per room.
10356. So that if any means could be adopted for lifting water within a reasonable distance of Penrith, which by gravitation would supply the town and district for stock and other purposes, there would be little doubt about getting the interest on the cost? Very little with regard to the town; I cannot speak with regard to the district.
- Bar. 10357. *Mr. Gipps.*] Has the removal of the bar of the river below the bridge been discontinued? I believe it has been stopped by the Government.
10358. What is about the width of the bar down the river? Fully 500 feet.
10359. And then the river goes into another bend? Yes.
10360. Does that extend any distance further down? Yes.
10361. Is there a similar bar below that again? Yes; portions of that bar have also been removed, but I believe the removal of it has been stopped.
- Movable weir. 10362. Suppose a movable weir were thrown across the bar so as to allow of the use of the water for motive power, would the population avail themselves of that water for manufacturing purposes; would it be a benefit to the town? It would be a great benefit; I think that if something of the kind were done it would be availed of by people outside the district.
- Value of property. 10363. What is the value of property per acre on either side of the river? I imagine that property on this side, being agricultural land, would be worth £40 or £50 per acre. On the otherside it is more valuable; I have heard of as much as £100 per acre being paid.
- Price of water. 10364. What is the price per cask of water drawn from the railway-engine tanks? The drawer pays 4d. per cask to a private speculator, Mr. T. Smith, who has to pay 3s. per thousand to the Government. He then charges from 1s. up to 2s. 6d. per cask of about 80 or 90 gallons according to distance.
10365. Can you give any idea as to the aggregate amount paid for this supply? I have no means of ascertaining.
10366. Would it be £1,000 a year? Not so much.
10367. How many people avail themselves of this means of supply? It depends entirely on the weather. I know that a few days ago the lessee of the tank paid £12 for a month's supply, that is at the rate of 3s. per 1,000 gallons.
10368. *Chairman.*] You know all the country between this and the commencement of the precipitous banks of the Nepean? Yes.
10369. Do you know whether any suggestion was ever made for getting water out at any point of the river this side of the precipitous banks? No; I have not heard of any suggestion being made by engineers.
- Peppercorn's scheme. 10370. *Mr. Gipps.*] Have you heard of a scheme proposed by Mr. Peppercorn? Yes; but I do not know where he proposed to take the water out.
10371. You know that the Mulgoa Creek enters the Nepean near the property known as Regentville, and that on the southern boundary of Regentville, the banks of the river begin to rise precipitously? Yes.

10372. And that there is a low ridge of land to the eastward of the river intervening between that and the general level of the valley of the Nepean? Yes.
10373. Do you know the height of that range just before you enter the gorge—I mean the little saddle-back to the eastward of the river? No.
10374. The valley behind that is, I suppose, the general level? Yes.
10375. Is the fall pretty general all the way down towards Richmond and Windsor parallel with the banks of the river? Yes. Mr. A. Colless.  
7 April, 1886.
10376. Can you indicate roughly on that line between Penrith, and Richmond, or Windsor, the contour which is made by the flood-level line? I could hardly do so without being on the spot.
10377. Are there any intervening ridges between the Nepean and South Creek to prevent the waters of the two from joining at flood-time? There is a ridge between Penrith and South Creek, the ridge which you see at the back of the town. Ridges.
10378. Do you know of any place between Penrith and Castlereagh, or towards Windsor, where the water passes through the range and joins South Creek? No.
10379. Do you know any place below where the waters of the two join and make one line of flood? No.
10380. *Mr. Murray.*] How much do you think the land on this side of the river would be enhanced in value if it had a supply of water in dry seasons? I should say, 25 per cent. Enhanced value of land.
10381. Do you think that the people of the district would be willing to pay a reasonable rate of interest on the cost of works which would give them an adequate supply of water? I think they would. Water-rate.
10382. Have you any idea of the extent of the agricultural land which would be benefited by a comprehensive system? The whole of the land along the eastern bank of the river would be benefited.
10383. How many miles along the river, commencing from the population boundary of Penrith? The whole distance from Penrith down.
10384. Then all the land intervening between South Creek and the Nepean would be benefited? Yes.
10385. In addition to that you think the supply to the town would be availed of by the people, and that they would have no objection to pay their share of the interest on the cost of the works? Yes.
10386. Suppose the river were dammed at some point above Penrith, do you know of any outlet in the mountains through which the country behind might be watered? Only from the Mulgoa Creek.
10387. *Chairman.*] You are acquainted with the locality where the Nepean and Warragamba Rivers join; do you know the relative levels of the height of the Mulgoa and the present water-level of the river? No. Levels
10388. Does the country fall rapidly above the bank of the river towards the Mulgoa? Yes.
10389. In a distance of two miles, how much do you think it falls? I could not say.
10390. *Mr. Donkin.*] Did people in the district take much interest in Mr. Woore's Warragamba scheme? They did not. Woore's scheme.
10391. What is the quality of the water in the river? It is usually good; of late it has been a little muddy; I do not know what is the cause of this. Quality of water.
10392. Has there been any appreciable difference in the quantity of water coming down since the Sydney water-supply works have been in operation? No.
10393. Has not the water gone down gradually within the last two or three years? Yes, it is 18 inches or 2 feet lower than it used to be.
10394. Has not the rainfall been less? Very much less.

Mr. David John Worboys called in and examined:—

10395. *Chairman.*] You have been a resident of this district for some time? Nearly forty years. Mr. D. J. Worboys.  
7 April, 1886.
10396. During that time has the valley of the Hawkesbury gone on increasing in value? Most decidedly.
10397. Has the increase in the value been in a great measure due to improvements made on the land? I think it may be attributed to several causes; for example, increase of population, and the increase in competition in consequence. Increased value of land.
10398. But have not the farmers contributed towards the improvement and value of the land by improved methods of working it? I should not say they have to any great extent; the droughts during the last few years have materially affected the crops. A few years ago, the district was regularly visited by floods every second year or so. These materially improved the quality of the soil; but for some years past there have been no floods, consequently the land has become poorer. Floods.
10399. Then it is the absence of periodical supplies of moisture which throws the district back? Decidedly so.
10400. The advantages of a good supply of water having been fairly demonstrated to the farmers over a long period, can you tell us what they have done themselves to make up for the deficiency in the rainfall? Absolutely nothing that I know of. Water conservation.
10401. They have never attempted to devise any scheme by which they might serve themselves, by taking water out of this large natural reservoir between the Nepean Bridge and the Warragamba? Nothing has been done; there has been a great deal of talk about it.
10402. Are you aware that in Victoria, in closely settled districts like this, they raise water by inexpensive means, and distribute it over the land? Yes. Water-raising.
10403. And are people in this district acquainted with the fact? Many of them are.
10404. Do you think that they would be prepared to pay for a supply of water which would enable them to produce crops to the same extent as formerly—would they pay sufficient to return the interest on a moderate outlay? I think that some of them would; but you must remember that a large proportion of the farmers are tenants. They have farms from 30 to 40 acres in extent, and the tenancy in the majority of instances is from year to year. Unless they should get leases of their farms, I doubt whether these farmers would be willing to pay any large amount for a supply of water.
10405. What rent do they pay per acre? It varies according to the locality, from 15s. to 25s.; in some cases, more. Rent.
10406. In that case it would be advisable for the proprietors of large areas to make themselves responsible for the interest on the outlay, which would entitle them to charge more in letting the land? Decidedly so; that would be the safest way of doing the business.
10407. You have assessed the values of properties here for municipal purposes? Yes.
10408. Do you think that the land has deteriorated in value in consequence of the absence of water? I think so. Deterioration of land in value.

- Mr. D. J. Worboys. 10409. Suppose a constant supply of water could be provided, to what extent do you think the value of the land would be increased? Nearly 100 per cent. on many farms; there are isolated cases where the benefit would not be great. The land immediately on the banks gets more moisture than that farther back; but taking the districts throughout, I say the value of the land would be materially increased if a good supply of water were provided.
- 7 April, 1886. 10410. Would it be increased 80 per cent. throughout? I believe so.
- Supply of Penrith. 10411. In dealing with the large body of water between the railway-bridge and the junction of the two rivers, by pumping and conveying it along the valley of the Hawkesbury, do you think it would be advisable at the same time to consider the supply to Penrith for domestic purposes? I think so.
10412. Suppose that the people in Penrith had to pay 5s. per room per year for a supply of water, do you not think they would be paying much less than they are now paying for a very small supply? Decidedly so; it would be one-half less than I myself pay.
10413. How many houses are there in Penrith? 500.
10414. How many rooms are there per house? They average about six rooms.
10415. Taking the average at four, then, at 5s. per room, that would represent a return of £500 per annum—do you think the townspeople would willingly pay that? I think so.
- Flood-level of Nepean. 10416. *Mr. Gipps.*] What is the height of the highest flood-level of the Nepean above summer-level? I cannot give the exact figures; but I know that in the flood of 1867 the water rose to the bottom of the railway-bridge. A log was lodged on the coping of the piers.
10417. How many days did it take for the flood to rise to that level? About nine days.
10418. Was there continuous rain during the whole time? Nearly so.
10419. What time did it take for the flood to subside? The water did not go down to the usual level for some weeks; but it was well within the banks of the river in about twelve or thirteen days.
10420. Are floods more numerous than they used to be? They are not nearly so numerous.
10421. Are they as high as they used to be? We have had no flood to speak of since 1867; there have been freshes which have broken over the banks twice only since then.
- Silt. 10422. Is much silt deposited by the floods? A great deal.
- Value of land. 10423. What is the average value of land in the district generally? Farming land on an average is worth from £40 to £50 per acre, in some cases as high as £100 per acre; but in back land (say) 2 miles from the river, not more than from £15 to £20 per acre.
- Reach. 10424. How do you account for the impounding of the water in the reach above the bridge? A little lower down than the bridge the water is shallow. There used to be an old wooden bridge there many years ago, and this has been covered with silt; the bar has been formed in this manner—at any rate, that is my idea.
- Bar. 10425. Is the bar impermeable? I think so, especially the bottom one.
10426. Before that was filled up there was no reach at all, then? Yes, the reach was there; it was all deep water right down from the spur of the mountains to Penrith.
- Depth of water. 10427. What is the depth of the water over the bar below the bridge? Not above 4 or 5 inches; in summer-time never more than 12 inches, unless there is a rise in the river.
- Width. 10428. What is the width of it? There has been a slight rise during the last day or two. A fortnight ago it was only about 40 feet wide; I walked across it without wetting the tops of my boots.
- Undercurrent. 10429. Is there another branch or bed of the river just below the bridge? I believe there is an undercurrent.
10430. Where does that run into the river again? About 2 or 2½ miles lower down.
- Bar. 10431. Then there is another bar? Yes; in fact, from this to Richmond the river is partially filled up with boulders, sand, and dead timber, and thus bars have been formed at different places.
- Change of river-course. 10432. Has the river changed its course, to your knowledge? Yes; just below the bridge it used to run to the westward of the present course; it is only when there is a rise in the river that the water runs in the old course.
10433. Did the river run in two channels? Yes.
10434. Where did they meet? About 2 miles lower down.
- Crops. 10435. What are the principal crops grown here? Corn, pumpkins, and hay, and fruit, and vines. A very large amount of land is under vines, and a large revenue is obtained from grapes and wine.
- Yield. 10436. What is the average yield of corn? It has been so poor this year that the farmers have simply cut it down to feed the cattle on the stalks.
- Fruit. 10437. Is much fruit grown here? A good deal.
10438. Does the drought make any difference in the yield of the orchards? Decidedly so—poorer fruit and smaller quantity.
- Decrease of floods. 10439. *Mr. Murray.*] To what do you attribute the decrease in the floods during recent years? I cannot give any reason.
10440. As a rule, we have ascertained that floods have increased in most of the rivers during recent years? They have been on the decrease here.
10441. Do you think that the lowering of the river would be injurious to the district? Decidedly so.
- Value of ratable property. 10442. What is the value of ratable property in the municipality? Over £22,000, rental value.
10443. Suppose a scheme for a supply of water to the town were adopted, do you not think that many people would avail themselves of the water for garden purposes, and that thus more than the £500 which you estimated would be collected? I think so.
- Factories. 10444. Are there any factories or mills which would make use of the water? I think not.
10445. Would a good supply of water be likely to call into existence any factories? I believe it would.

Mr. Robert C. Riley called in and examined.

- Mr. R. C. Riley. 10446. *Chairman.*] You are a resident in the district? Yes.
- 7 April, 1886. 10447. Where do you reside? On the Mulgoa, between Regentville and the Fairlight estate, about 6 miles from here.
- Fall of Mulgoa. 10448. Is there much fall from the upper part of the Mulgoa into the Nepean? There is a range at the back of us which extends to the river; from the top of that range there is a tremendous drop down into the Mulgoa valley.
10449. What is the drop from the precipitous banks of the river into the Mulgoa? The country falls all the way; it is very abrupt in some places. 10450.

10450. What is the distance between the river and the creek at your place? The nearest point would be about a mile; in other places, from  $1\frac{1}{2}$  mile to 2 miles. Mr. R. C. Riley.
10451. Can you give any idea as to the difference between the height of the bed of the creek and the water in the river at the present time? No. 7 April, 1886.
10452. Is there much settlement beyond you towards the Warragamba? Very little. Settlement.
10453. What is the nature of the country? Rough grass-tree country, which is only used for stock. Country.
10454. Did it ever occur to you that water could be raised into a reservoir at Regentville, and be distributed by gravitation below the gorge? I believe it could be done there; there is a gully higher up. My father had levels\* taken from that with the idea of getting water from the river. Distribution of water.
10455. From that gully could you throw water upon the lower part of the Regentville property? Easily.
10456. Then if water were lifted into that gully, it could be conveyed on to the lower land? The gully falls right into the Mulgoa valley; the gully is about  $\frac{3}{4}$  of a mile above the Regentville boundary.
10457. There is an inexhaustible supply of water there, is there not? Yes, and it is very deep; I have tried in several places and found it to be from 15 to 16 feet right up to the banks. I have tried it in the middle, but could never reach the bottom with an ordinary fishing-line. Supply.
10458. Suppose the water contained in that large natural reservoir were distributed over the district, would it not materially increase the value of the land and the prosperity of the farmers? There is not the slightest doubt of it; it would make a tremendous difference both to pastoralists and agriculturists. Value of land.
10459. To what extent do you think it would increase the produce? I should say double. Produce.
10460. Do you not think that in considering a general scheme of water-supply for the district, a supply for the town of Penrith ought to be considered at the same time? I think it would be a decided advantage to combine the two. Town Supply.
10461. *Mr. Gipps.*] Does Mulgoa Valley rise rapidly from the river? I do not think it does; it is gradual. Mulgoa Valley.
10462. Has it not a much steeper fall than the river itself? It must have.
10463. Are there any positions for storage reservoirs in the creek itself, in large floods? As you get higher up, near Mulgoa village, there may be; that is 6 or 7 miles. There is a good bit of water there at flood-time. Storage.
10464. What would be the area of any one of the floods? I suppose you can get them from 2 to 3 miles back on either side of the creek. Area of flood.
10465. Do you know the height of that above the river? I could not say.
10466. Did you ever look down from the top of the range on to the river? Often.
10467. Does the river seem much lower than the creek? I should say it is a great deal lower.
10468. *Mr. Gilliat.*] Can you give any information as to the height of the flood-water at your place in the river? I have not taken particular notice. Height of floods.
10469. *Mr. Gipps.*] What is the height of floods in the Mulgoa Valley? I should say that the water was backed up for 2 or 3 miles in the creek from the river in the highest flood I have seen.
10470. Have you ever known a flood in the creek without there being a flood in the river? I do not remember it.
10471. *Mr. Donkin.*] Do you call this a dry season? It is the worst season we have had for many years. Dry seasons.
10472. Do you think that there are 40 feet in the gorge near Evans's? I believe there is.

Mr. John Price called in and examined:—

10473. *Chairman.*] How long have you been a resident in the district? Thirty years. Mr. J. Price.
10474. In what way have you been employed? As a working man. 7 April, 1886.
10475. Farming? Part of the time.
10476. You have seen all the floods which have occurred in the district during that period? Yes. Floods.
10477. Which was the greatest flood in your recollection? That in 1867.
10478. Do you know how far that flood-line extended along the eastern valley of the Hawkesbury; for instance at Penrith, how far did it extend on the line of railway towards the ridge near us? About a quarter of a mile from the river, east.
10479. From Penrith south, towards Regentville, do you know what form the flood-line took? I know that it extended as far back as Windmill Hill, as we call it. The water rose almost up to the railway-station in that flood.
10480. Then the Court-house is far above the flood-level? Yes.
10481. Is there a depression between Penrith and Castlereagh, out of which the water passes in flood-time on to the back country? There is, 6 or 7 miles down; it comes into Rickaby Creek. Depression.
10482. Then a defined level above flood-line would be found on the eastern side of Rickaby Creek? Yes.
10483. Then below that, where does the water break through into South Creek from Rickaby Creek? Rickaby Creek runs into the river close to Windsor. Rickaby Creek.
10484. Do you know of any flood-line from Rickaby Creek round towards Riverstone? No; I am not well acquainted with that part. I know that there is a tremendous stream in Rickaby Creek between here and Richmond.
11485. Is the high-land known as the Castlereagh Reserve isolated like an island at flood-time? The stream cuts off again between that high land and Penrith. Castlereagh Reserve.
10486. Since you have been here I suppose property has been gradually increasing in value? The rents have increased. Value of property.
10487. Has the general value of property increased? I think so.
10488. From your earliest recollections what was the nature of the holdings in the district? 50 acres was considered a good farm for agricultural purposes. Size of farms.
10489. Then the holdings have been small, and the farms have been rented? Yes; until lately they nearly all belonged to the M'Henrys and their representatives.
10490. What rent can farmers afford to pay for these farms of 40 or 50 acres considering all the conditions? They have to pay £1 an acre. I paid £50 a year for 60 acres. Rent.
10491. I suppose one of the conditions was, you had to keep the fences in repair? There was no condition of that sort, but for our own safety we kept the fences up.

10492.

\* NOTE (on revision) :—Mrs. J. J. Riley has the papers of these levels.

- Mr. J. Price. 10492. It is evident you must have produced the rent of your farm? I did, and £200 over it, in five years.  
 10493. Did you have good seasons? Far better seasons than we have now.  
 7 April, 1886. 10494. Would you consider that a fair return for the acreage? Ycs.  
 10495. Would that return have been continuous if you had a continued supply of water? Yes.  
 Artificial supply. 10496. As the rains are not to be depended on, do you think that the condition of things could be maintained by an artificial supply of water? If water were supplied at reasonable rates I am sure it would.  
 10497. I suppose you lost by bad seasons, and could make a profit no longer? My successors have not done so.  
 Value of constant supply. 10498. Then the value to you of a constant supply of water would have been almost equal to 15s. per acre? Yes.  
 10499. You think that a constant supply of water would increase the value of the land about ninety per cent.? I believe there is material in the ground to produce such a result. A farmer who has got four bushels of corn to the acre this year told me that he would have had a hundred if there had been a seasonable fall of rain.  
 Quality of land. 10500. This is one of the best agricultural districts in the colony? It is one of the best, but not equal to the Hunter River district.  
 10501. Can you tell why it is, considering that this flat is so valuable, and that it suffers from the want of water, that no effort has been made to urge on the Government the necessity of utilizing the water lying at your very doors? The owners of the property would not take any steps, and the tenants were not in a position to do so.  
 10502. Do you think the tenants would voluntarily pay more rent if they had the advantage of a permanent supply of water? No doubt of it.  
 Water-rate. 10503. Have you any reason to believe that the owners of the land would willingly pay the interest on the outlay for permanent supply if it were done at a moderate cost? I think so.  
 10504. You must have heard all sorts of opinions expressed on the subject? Yes; we are now trying to get water from Glenbrook for the town.  
 10505. Suppose we were to deal with a comprehensive scheme for supplying all the different towns on the Hawkesbury and the country on the flats, do you not think it would be advisable to include Penrith in the scheme? I should imagine so.  
 Irrigation. 10506. Do you know of any irrigation in the district by pumping from the river? No; in some places there are wells and windmills to raise the water for orchards.  
 Orchards. 10507. The natural condition of the orchards is very good, considering all the changes which have taken place? Yes.  
 Supply of Penrith. 10508. You say that there is immediate necessity for supplying Penrith with water; what is the cause of that necessity—is it that you have had continuous drought? Yes.  
 10509. How are you supplied with water now? From the tank at the railway-station.  
 10510. I suppose the people do not avail themselves of that supply until their tanks run out? There are hundreds of people who have no tanks; they have to buy water all the year round.  
 Householders. 10511. What is the number of householders in Penrith? I think there are over 600 houses.  
 Buying water. 10512. Do you think that two-thirds of the people would be under the necessity of buying water for half the year? Quite that number. Many have to buy it all the year round.  
 10513. Then there must be an enormous sum of money paid during the year for water? Yes.  
 Glenbrook Creek 10514. Far and above the proportionate rate for a permanent supply? Yes; I think the houses will average four rooms each. We have had a survey made of Glenbrook Creek with a view to get a supply from that source.  
 10515. Where is that creek? A mile or two above Mr. Dibbs's house, on the western side of the river.  
 10516. How do you propose to bring the water across the river? Either at Regentville or across the bridge. We have asked the Government to furnish us with an estimate of the cost of the work, but up to the present we have not received a report.  
 10517. Do you think that if water were raised from the river at Regentville, there would be sufficient fall to supply Penrith? The water in Glenbrook is better than that in the river. Glenbrook is an ever running stream; it is discharging sufficient water now to fill a 3-foot pipe—enough to supply Sydney, I should think. It is 500 feet higher than Penrith. We have had an offer from a private company to undertake certain works, but we have refused it pending the report from the Government. The objection to the river water is that there is too much magnesia in it, and I have known the water in the river to be unfit for use for a great length of time; it has been muddy for some months past.  
 Quality of river water. 10518. You think that if we could give a permanent supply of water along the whole valley of the Hawkesbury, it would be beneficial generally to the district? I do indeed. I wish I could persuade you to recommend that the water be put on Mr. Riley's mountain on the eastern side of the river, nearly opposite Glenbrook. It would supply Sydney.  
 10519. *Mr. Gipps.*] Where was your farm? On the bank of the river just below Regentville.  
 Crops. 10520. What crops did you cultivate? Maize and lucerne.  
 Yield. 10521. What number of bushels per acre did you get in a good year? I could not tell you; I used to feed pigs, and different things; I kept no record.  
 10522. How many cuttings of lucerne did you make in the year? Three.  
 10523. What height would the crop be when cut? The highest would be from 15 to 18 inches; some would be considerably lower than that.  
 10524. Did the lucerne run out? The seasons became very dry, and I thought it a good thing to get out of it.  
 10525. Are they growing lucerne there now? I think they use the land for grazing.  
 Vineyards. 10526. Do you know the value of vineyards here per acre? I have had no experience myself, but from report I believe that if they get one shilling a piece for a vine it is a paying business.  
 Yield. 10527. What would be the average crop for a vine? Perhaps about 4 lb. for a staked vine.  
 10528. *Mr. Donkin.*] Did your farm have a frontage to the river? Yes.  
 10529. That is permanent water? Yes.  
 Irrigation. 10530. When you had permanent water, did you ever think of using it for irrigation? No.  
 10531. Why do not the people make use of it for that purpose? Simply because the landlords do not seem inclined, and the tenants are not able.

10532. You say that the land at Maitland, on the Hunter, is richer than the land here—how do you know that? All that I go by is the fact that in the Maitland District I hear that they get six cuts of lucerne a year, whereas here four is the very outside. Mr. J. Price.  
7 April, 1886.
10533. How do you account for the difference? I suppose the land is richer, and there is more rain or moisture.
10534. *Mr. Murray.*] Has the cessation of floods caused a material fall in the value of land? When we had floods we had greater crops. I have known as many as four floods in the year. Effect of floods.

Mr. Samuel Jackson called in and examined:—

10535. *Chairman.*] You have been a resident in the district for some years? Upwards of 50.
10536. During those years you have been engaged in the capacity of surveyor? I have been a surveyor for about 40 years. Mr.  
S. Jackson.  
7 April, 1886.
10537. Do you know the locality of the junction of the Warragamba with the Nepean? Yes; at present the water is not more than knee-deep at the mouth of the Warragamba, then you get into deep water again. I have never seen the river dry there. The Warragamba.
10538. Do you know a spot immediately below the junction of the two rivers where there is a narrow gorge with precipitous banks? Yes; the water runs there a little at present. That is the only spot between that point and Penrith where the water is running. Gorge.
10539. Do you know the nature of the back country to the east of this particular point, about a quarter of a mile below the Warragamba towards Mulgoa Creek? It is a ridge; there is no opening until you are a considerable distance down. Ridge.
10540. Mulgoa Creek is situated at the bottom of a steep gorge, is it not? Mulgoa Creek takes its rise at Luddenham. It flows through a valley; it is a very gently falling creek. At present it is a series of water-holes. Rise of Mulgoa.
10541. Taking the point which I have indicated, what would be the comparative levels of the present water-level and the creek? Lieutenant Woore made levels there. Levels.
10542. Were levels taken over to the Mulgoa Creek? Certainly, the whole way to Sydney, and Mr. Woore's family have the papers still.
10543. How did Lieutenant Woore propose to get the water across the ridge? After carrying the water across the Nepean, there would be a short tunnel.
10544. How did the levels correspond? After coming out into the valley, he crosses Mulgoa Creek and goes off away down by Prospect; there is a gradual descent all the way. Lieutenant Woore's dam was to be 170 feet high, and he considered that that would be sufficient to throw the water down. He took levels, but he did not run a check level. I told him that the thing was altogether impracticable. He did the work as an amateur; the Government simply found him the men.
10545. Does the country between the river and the creek fall abruptly? Yes.
10546. Do you know whether the difference of the levels has been ascertained? It has.
10547. Suppose we went below the junction of the Warragamba and the Nepean, in order to throw water into any part of the Mulgoa Creek, would a tunnel have to be a mile or two miles in length, or of what distance? You would have to raise the water considerably higher than Lieutenant Woore proposed to raise it, because his weir was to be above the junction in the Warragamba itself. Tunnel.  
Height of weir.
10548. How far back does the water go up the Mulgoa Creek in flood-times? In 1867, when we had the largest flood which I have ever seen, the water came up to my fence, which is near the junction 4 miles from Penrith.
10549. What height was that above summer-level? About 50 feet or more.
10550. From that you say that there is a difference of 100 feet between the levels of the river and the creek, if the creek rose in the same ratio all the way back? I should think there is quite that; but of course you would have to take levels to make sure. Levels.
10551. The district has been suffering of late owing to drought? This is one of the driest times we have had for many years; the river is lower now than I have ever seen it. Droughts.
10552. These continued droughts deteriorate the value of property? Yes; I should like to point out an easy way in which the land could be watered. It is a well-known fact that the banks at the river are a little higher than the land beyond, which is all good farming land. If the water be once raised to the tops of the banks, this land can be watered with the greatest of ease, there being a gradual fall; this applies to the land all the way down to Windsor. In flood-time the water runs along Lennox-street, Richmond, towards the Common; the same thing occurs all the way up the river. Watering of land.
10553. How do you account for this? By the action of the floods when receding.
10554. Do you know the average depth of the long basin of the Nepean from the bridge to the junction of the two rivers? It has been sounded in several places—not long since by Dr. Cox, and some gentlemen who came up for the purpose of examining Erskine Creek, to ascertain if that would be a good site for a reservoir. Site for reservoir.
10555. Do you know what the average depth is? I do not; there is no very great depth in any part.
10556. Do you know that beyond the obstruction below the Nepean bridge—that is the natural weir—there is a gradual fall in the bed of the river all the way to the sea? Yes; the river has been lowered by the removal of boulders from that weir, but the Government have stopped it. Removal of boulders.
10557. What was the objection to the removal of the boulders? Simply that it was ruining the river—that it would ultimately let all the water off.
10558. Is it not a fact that the river is exceedingly deep in places from the bridge to the mouth of the gorge? At the present time there is a shallow spot immediately opposite the cloth factory; it is so shallow that at the time of the champion race we had to caution Hanlan to beware of it. You might strike it there by a deep-drawing boat. This spot was selected by the late Sir John Jamieson for the foundation of a pier. Depth of river.
10559. Suppose we were to determine on a general scheme for supplying the river-flats of the Hawkesbury, which do you think would be the best site at which to raise the water? The water in the Warragamba is exceedingly pure; but you would have the disadvantage there of having to cross the Nepean; below the junction, there are many places. Site for raising water.
10560. Before you can raise the water of the Warragamba into anything like a natural outflow, you would have to run up a dam 100 feet high? Yes. Dam.  
10561.

10561. Suppose we were to raise water at some points on the Regentville property, do you not think that we should get a level from which the water would gravitate throughout the Hawkesbury? Immediately opposite my door there is a nice plateau where a reservoir might be placed. Of course, it would necessitate machinery to pump the water up. The height of this is about 420 feet above the river; and when Mr. Fuller, surveyor, was here, he told me it would be quite sufficient to throw the water into Crown-street reservoir. This is one of the proposals for supplying Sydney, which was condemned as being too expensive. For the purpose of supplying the valley, this would be one of the best places you could select, because once you raised the water to that point, you could supply the whole neighbourhood.
- Canal. 10562. Suppose we were to raise the water at that point, what direction would a canal have to take, going by Castlereagh, so as to work out into Riverstone? It is quite practicable to do that. The old Castlereagh township is on high land; you cannot pass between that and the river. You can go from Regentville to Penrith, following the ridge. From Penrith you skirt the lagoon, and then proceed below the high land of the Castlereagh. You would have to pass nearly parallel to the river to get down to Richmond. In my opinion a much readier method would be to raise small weirs along the river, at such places as Jackson's falls and Howell's mill-dam.
10563. The canal which we want must be above flood-level; how does the land lie above flood-level? The Richmond road runs on high land. If you follow the direction of the northern road toward Richmond Hill, that would be a direction nearly parallel with the river.
- Mr. John Cleeve called in and examined:—
- Mr. J. Cleeve. 10564. *Chairman.*] You are a land agent and C.P.S. of the district? Yes.
- 7 April, 1886. 10565. From observation, I suppose, you know a great deal in connection with the settlement of the district? Not very much, because my work keeps me indoors; but I hear a great deal from people.
- Want of water. 10566. You know that the residents on the plains have suffered very much of late years from want of water? Yes, especially the farmers.
10567. Do you not think that a constant supply of water for the valley of the Hawkesbury would improve the condition of the settlers and re-establish the agricultural industry of the district? In dry seasons, such as we have experienced lately, it is actually necessary to have some sort of irrigation to make the farms pay.
- Windmills. 10568. Do any of the farmers make use of the water in the river? None, for farming purposes. There are a few windmills; but the water is raised simply for domestic and garden purposes, not for growing cereals.
- Want of irrigation. 10569. Can you give any reason for the apparent want of energy on the part of the farmers? My idea is, that, as the whole of our farming population belongs to the working classes, that is, men who employ little or no labour beyond their own and that of their families, they have not the means to go in for irrigation; and I am told that the landlords do not care about assisting them in that direction. We have no first-class farmers, that is, men with capital. All our farmers are working men, and they utilise the ground according to their own knowledge and ability.
- Farming. 10570. Do you think that if the holdings were larger in area, and that a proper system of farming were adopted coupled with irrigation, the country would be capable of producing much more than it does now? I think that, even with the present holdings, farming would pay much better if we had irrigation.
10571. What do you think would be the increase in productiveness if there were a constant supply of water? During the last few seasons the land has actually returned next to nothing. The farmers have been hardly able to pay expenses. If they had irrigation they would make a good living off the land.
- Water-rate. 10572. Do you think that for a proper system of irrigation these farmers could, without any hardship or difficulty, pay a fair interest on the outlay for irrigation works? I am quite certain of it.
10573. Are the people alive to the necessity for such a work? I have heard them speak about the good it would do, if they had a plentiful supply of water; but they had always represented their not being able to bring it on to the land themselves, and the owners were not willing to assist them. Our agriculturists, taken as a body, are not a highly educated class, not sufficiently well informed to do anything more than the seasons allow them; they depend almost solely on the seasons.
- Irrigation area. 10574. *Mr. Gipps.*] What area of land do you suppose would be benefited by irrigation? Certainly a couple of miles on this side of the river, and Emu Plains on the other side.
10575. Taking it as a whole, do you suppose it would be 20,000 acres? It all depends on how far back you go. If you go back from the river from Penrith towards Richmond, the land is of very little use for agricultural purposes, there being too much sand. When you get to Richmond, the country is quite different.
10576. I suppose there are fully 50,000 acres? I think so.
- Water-rate. 10577. Do you suppose that the tenant would pay 5s. or 10s. per acre per year for the advantages of irrigation? I could hardly say. I should think 10s. was a large amount.
- Rent. 10578. What is their rent? From 15s. to £1 per acre per annum.
10579. Suppose they got double the crop by irrigation, do you not think they would be willing to pay for it? I have no doubt they would willingly pay for it after they had been practically convinced of the advantage. The difficulty would be at the commencement.
- Manufactories. 10580. Do you think that, if motive power were available, manufactories would be established at Penrith? That and cheaper rates on the railway line, and more frequent transit than at present, would probably do so.
- Fruit. 10581. Is there much fruit grown in the district? A great deal—principally grapes, oranges, peaches, and apples.
10582. Do the orchards pay well? I think so.
10583. In all seasons? I am told that the grape-crop has been very fine this year. I have heard of £40 an acre being paid by Sydney buyers for the grapes.
10584. Do you not think that the vineyards would yield larger crops if they had irrigation? Certainly.
- Model Farm. 10585. *Mr. Murray.*] Do you not think that if we had a farm irrigated as an example, showing what could be done, the people would be likely to go in for irrigation? Yes; that would be a good idea. Our farmers like to be assured of the success of anything before they venture on adopting it themselves.
10586. Do you think that, if a supply of water were provided for the municipality, a large number of the residents would avail themselves of it for supplies for domestic purposes? Yes.
10587. *Mr. Donkin.*] How long have you lived here? Eighteen years.



10588. Do you think that the seasons are drier than they used to be? Certainly.

Mr. J. Cleeve.

10589. The grape-vine industry has only sprung up within the last ten or fifteen years? No; it was here when I came here, but it has been increasing every year lately.

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10590. What are the largest vineyards? Mr. Cox's and Dr. M'Kay's.

10591. The river does not open into flats until we get lower down than Penrith? The back country is Flats, good for light crops, oaten hay, and grape-vines.

10592. There is ten or twenty times a larger area of good land in the Richmond and Windsor district than there is here? I believe so.

10593. *Mr. Townsend.*] Do you think that if the uplands on the high ridge between the Nepean and South Creek, and between Rodd's Creek and Eastern Creek, Mount Druitt Range, and around that range on the other side to Eastern Creek, were watered, that the lands would be sufficiently enhanced in value to warrant the expense of bringing the water on to them for fruit-growing purposes? When you get a certain distance from here towards St. Mary's, the land is held in large holdings by a few people, and I do not think that the same advantage would be taken of the water as would if the land were held by a large number of people. No doubt, if the work were done, it would do a great deal of good to the district.

Distribution of water for fruit-growing.

FRIDAY, APRIL 16, 1886.

At Richmond.

Present:

MR. BARTON, M.P.,  
MR. DONKIN, J.P.,

MR. GIPPS, C.E.,  
MR. MURRAY,

MR. TOWNSEND.

RUSSELL BARTON, Esq., M.P., VICE-PRESIDENT, IN THE CHAIR.

Mr. Valentine John Stuart Blomfield called in and examined:—

10594. *Vice-President.*] What are you? I am an Associate Member of the Institution of Civil Engineers; I am Road Superintendent for this district.

Mr. V. J. S. Blomfield.

10595. How long have you been in this district? Between four and five years.

10596. Does your experience extend over the district for any length of time beyond that? No. I have visited the district before that; that is all.

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10597. During your experience, have you noticed any places that you think would answer the purpose of containing large quantities of water for the purpose of irrigation? I think that water might be stored in the Wheeny Creek, near the Kurrajong; but I cannot say for certain whether a survey has been made. I cannot give you the levels of the Wheeny Creek; that is the creek above Richmond Bridge.

Storage in Wheeny Creek.

10598. What height do you put it at above Richmond Bridge? 370 feet.

10699. Where Bell's line of road crosses Little Wheeny Creek, is that the site you would recommend? No; it would be lower down than that. Allowing 100 feet, that leaves a balance of 270 feet above the Richmond Bridge—that is a clear 200 feet above the floods.

10600. Have you made any calculation at all as to what quantity of water that would conserve? No, I have not. It would be a large reservoir; but I do not think the reservoir would be sufficient of itself for irrigation purposes. It would have to be fed by a stream such as the Grose or the Colo. The Colo, I think, might be utilised.

Feeding from Colo.

10601. In what way? It may be turned into the reservoir. I do not think that the area of itself would be large enough.

10602. And in what way could these other waters be utilised? They would have to be brought through the ridge by means of a tunnel.

10603. Otherwise, do you think the creek of itself is not sufficient for irrigation purposes? It would only be useful for a comparatively small area, because the demand on it would be very considerable.

10604. Is that the only place you know of? I know of one small place, but it is infinitesimal compared with this one. It is a small place named Clarke's Flat, near Riverstone, which might be utilised for irrigating the farms lying between Riverstone and Windsor.

Clarke's Flat.

10605. That is smaller than Wheeny Creek, then? Yes. It would do just to irrigate the farms about Riverstone and Windsor.

10606. What is the character of that place? It is a valley about  $\frac{3}{4}$  of a mile from Riverstone station. The bottom of it is about 100 feet above high-water mark.

Character.

10607. Do you know anything of the river between here and Penrith, or above Penrith? No, I cannot say that I do.

10608. Then you could not give any information as to whether it would be likely that we could take water from the river itself to irrigate the farms on each side by gravitation? No, I cannot say.

10609. Do you know of any place on the Grose River that might be made available for conserving large quantities of water for irrigation purposes? Only what we have seen to-day.

Grose River.

10610. At what part of the Grose River do you think we could get the best returns by damming—I mean, where the dams could be erected with the greatest economy and the largest amount of water obtained? I do not know anything about the levels. I scarcely think that where we have been to-day there would be fall enough; but that would all be settled by survey.

10611. Do you know anything about the rivers or the fall of them? No.

10612. Has anything been done in the district up to the present time by way of irrigation to any extent? There is a farmer named John Gow at Mulgrave who has irrigated the whole of his vineyard and orchard by means of pumping from South Creek.

Irrigation.

10613. Do you know what the result has been? The result has been very favourable; but in what proportion I cannot say. His orchard bears a wonderful comparison to the adjoining properties. Mr. Pitt, of North Richmond, has also a windmill, and he has laid the water through his garden; I believe also through his orchard, but I cannot say for certain.

10614. That is the extent, as far as you know, of attempts that have been made at irrigation in the district? Yes.

10615.



- Mr. V. J. S. Blomfield.  
16 April, 1886.
10615. Do you know whether there is a feeling in the district in favour of irrigation? I have heard it said by farmers that irrigation would be of great value to them in growing crops. In fact, I have heard some people say that the only thing that will save this district is a small flood. I mention that to show how dry the ground is.
10616. Have you ever heard people advance the proposition that Government in some way ought to construct large irrigation works for the benefit of the district? No; I do not think that I have ever heard that.
10617. Have you ever heard people express the opinion that, if large works were constructed, the people would be ready to pay for them? No, I do not think that I have heard that.
- Water-rate. 10618. Do you yourself think that they would pay a tax equal to the interest on the outlay—(say) 4 or 5 per cent.? There are, no doubt, a good many farmers who would be willing to do so, but I do not know whether the majority of the farmers would. They are very conservative in this district.
- Supply for stock. 10619. Do the people of this district generally depend upon the river for water for their stock and for domestic purposes? Generally. Some few in the towns have small tanks, but the majority depend entirely upon the river.
- Town supply. 10620. Have you ever thought of the question of the supply of water in the towns of Windsor and Richmond for domestic purposes? Yes. Various schemes have been proposed; but I have not thought it right to express any opinion on their relative merits, being a Government officer; but I know what the schemes are.
10621. What is your opinion of the scheme best adapted for the district? That is a question which I have not gone into sufficiently, and cannot express an opinion.
10622. I suppose every scheme that has been propounded must have been a pumping scheme? I do not think I have ever heard of a gravitation scheme.
- Droughts. 10623. Has there been any suffering here or loss through want of a sufficient supply of water in the district during the last drought? I do not think this district feels the drought very severely, except in the loss of crops. There is good water sufficient for the consumption of the people and for stock. With regard to Clarke's Flat, the comparative levels are:—Clarke's Flat, 106 feet; Riverstone, 78 feet; Windsor, 41 feet. The flood-waters are supposed to have risen about 7 feet above the rails at Windsor station, as the station-master informed me this morning.
- Levels. 10624. Have you had any experience here of the floods yourself? None.
- Hawkesbury river-bed and banks. 10625. *Mr. Gipps.*] What is the general character of the river-bed and banks of the Hawkesbury? Just above the junction of the Grose there is shingle; then, I think, nearly the whole way down the banks are alluvial, until you get below Pitt Town; then they come into rock again. Above, the river has been silted up for miles with sand—even below Pitt Town. Then you get into mud and rock.
10626. Then, do you not think a large proportion of the stream runs beneath the sand? I think a good quantity of water runs in the upper part of the river down as far as Windsor. It is tidal up to Windsor.
10627. Do you think a sunken weir would help to raise the water and increase the stream very largely? I could not say; I have not gone into that.
- South Creek. 10628. Do you know anything of South Creek? Yes; for some distance above Windsor it is deep water.
- Supply. 10629. Is there a constant stream running into it? The stream is very slight, but it is constant, except in a very dry season. It is tidal for some distance above Windsor.
10630. Are there any positions there for reservoirs? I have not gone right up the stream; I could not say.
10631. With regard to the Wheeny Creek at the junction, what is the character of the basin; does it consist of large flats with steep sides? I have never examined that creek thoroughly right down to the junction. I merely looked down the valley from the ridge above. It is sandstone country generally.
10632. You have no idea whether a dam could be erected at that spot? No, I have not.
10633. What distance would that be from Richmond? I suppose about 10 miles.
10634. You said you did not think there was sufficient watershed there to fill a reservoir, and you propose to divert the Colo River? That was an idea I had, but it might not turn out to be feasible.
- Diversion from Colo. 10635. In what way would you divert the Colo River? By making a dam across the Colo where it is suitable, at a sufficient height, then tunnelling through the ridge that divides the Colo from the Wheeny.
10636. You do not know what distance you would have to go up the stream to divert the water? No; I do not know that I can say anything about that, because I have not the levels.
- Movable weir. 10637. Do you think a moveable weir could be erected on the river which would preserve water which might be used for manufacturing purposes and water-supply in different parts? I have not gone into that question.
10638. Motive power could be supplied, I suppose? I do not exactly understand your meaning. Would you first explain what you wish to convey by the term movable weir?
10639. A weir that would keep up the water in dry times? Yes, I think so.
10640. You think a movable weir would be exceedingly valuable in dry times for the power it would afford for manufacturing and water-supply purposes? I think it would be very valuable indeed, but I do not know whether there is sufficient energy in the district to make use of it for manufactures.
- Site for dam on the Wheeny. 10641. *Mr. Donkin.*] The dam you propose as a site for a reservoir in the Little Wheeny Creek is about the junction of the two? I merely regard the Wheeny Creek as a probable site for a reservoir. I never fixed upon any particular site in my own mind.
- Extent of floods. 10642. How far from Richmond did these floods from the Hawkesbury come; did they first open out from the river below Penrith? I have never been up the river higher than where we crossed it to-day, but I believe that floods extend nearly the whole way to Penrith.
- Flood-level. 10643. Do you know what the average flood-level is above the Hawkesbury floods? No, I cannot say.
10644. It was said to be at Windsor Railway-station 7 feet above the railway; that would give 37 feet above Mulgrave? Mulgrave is shown on the railway time-table as 42 feet above the level of the sea, Windsor 41, and the flood-level given by the station-master is 48. Against that I have been informed that in the flood-time at Mulgrave they went in a boat over the top of the station-house. So you see there is a discrepancy somewhere. The flood-level was probably higher than that.
10645. Do they cart water for Richmond from the river? No; they pump it from the lagoon below the churchyard.
- Wells. 10646. Have you had any experience of any wells being sunk? There is a well at Mulgrave; there is one near Richmond which the Railway Department use.
- Supply. 10647. Do they get a plentiful supply of water? So I am told; Mulgrave, I believe, has an everlasting supply of beautiful water. 10648.

10648. Could they not make use of wells more largely? I believe you could sink wells in the flat between Windsor and Richmond and get water there. The water seems to run underground from above where we crossed in the coach to-day. It comes right underneath this common. Mr. V. J. S. Blomfield.
10649. *Vice-President.*] To what depth? I do not know; the stationmaster could tell. 16 April, 1886.
10650. *Mr. Donkin.*] You saw the Grose River to-day, and you know the Hawkesbury pretty well; which is the greater stream, the Hawkesbury, where we crossed to-night, or the Grose River? I have never seen it in flood-times. Grose and Hawkesbury Rivers.
10651. At the present time? I should think certainly the Hawkesbury.
10652. You do not know in what proportion? No; I may state, the stream has been reduced considerably by the dry season, and they have been draining off water above for Sydney. There is certainly less water in the river than there has been for some time at Windsor.
10653. Are there any other crops grown here besides maize? Yes, lucerne; I believe they have been trying wheat, oats, &c. Crops.
10654. *Mr. Townsend.*] The best place from which to take the water supply would be at Wheeny Creek? Yes, somewhere there; it would be an excellent place for a dam. I have an aneroid observation at the Blacksmith's Creek, but I have not got it here. Dam at Wheeny.
10655. That is 1½ mile beyond Tootie? Yes, there is plenty of fall in the river if it can be intercepted. Fall.
10656. Have you ever thought about what the expenditure would be of a sunken weir that would intercept the soakage which is proved to exist in the Nepean River? I have not given the matter sufficient consideration to answer this question. Sunken weir.
10657. What is the greatest distance that you know of a well that bottomed in drift from the Nepean? I do not know personally anything about these wells. I do well.
10658. If you had the command of the water, would you prefer to irrigate the river-flats or the high lands? I do not know that I should prefer to do one or the other; I should certainly do both if I had land. Mr. John Gow irrigates the high lands and the flats, the high land more especially, because it is the driest. Irrigation.
10659. There is greater necessity to irrigate the high lands than the flats? Decidedly so.
10660. *Mr. Murray.*] I believe there is a very large quantity of agricultural land in the district? Yes, a large quantity. Agricultural land.
10661. And that the ridges are rich as well as the low, level lands? Not all, some are very stony, some are sandstone, some clay and gravel mixed. Some of the ridges are very suitable for vineyards or orchards. Ridges.
10662. They are actually now under cultivation? Yes.
10663. You said a while ago that the principal crop was maize—what is the average yield in a fair season? I do not know. Yield of crop.
10664. You think that it would be very greatly increased by irrigation? Certainly; especially in dry seasons, because I have known the crops to be entirely lost in some places through the dryness of the season.
10665. Have you any idea of the yield this season? No.
10666. Is this considered a good or a bad season? I do not know.
10667. If the yield would be very largely increased by irrigation, and the farmers could see that, would they not agree to pay a fair percentage on the outlay upon a scheme of irrigation? I think that, ultimately, all the farmers would be only too glad to have it, but I think it would be a long time before many of them would be willing to pay for it. Water-rate.
10668. *Mr. Townsend.*] Instead of putting it as a percentage on the outlay, if you were to put it at so much per acre, would they pay for the conservation of the water for irrigation purposes—what do you think they would be prepared to pay per acre? Oh, I could not say: I have no practical knowledge of what the yield is.
10669. *Mr. Murray.*] Are the farmers on their own land, or are they tenants? There are both classes; there are a large number of tenants, but a good proportion are on freehold land. Class of farmers.
10670. *Mr. Gipps.*] Do you know of any trap basaltic outcrops in the country? The only outcrop of basaltic formation I know of is at Mount Tomah. Basaltic outcrop.
10671. Is that on this side or the other side of the river? On the other side of the river.

SATURDAY, 17 APRIL, 1886.

At Richmond.

Present:—

MR. BARTON, M.P.,  
MR. DONKIN, J.P.,  
MR. GIPPS, C.E.,

MR. MURRAY,  
MR. M'MORDIE, M.I.C.E.,  
MR. TOWNSEND.

RUSSELL BARTON, ESQ., M.P., VICE-PRESIDENT, IN THE CHAIR.

Mr. George Matcham Pitt called in and examined:—

10672. *Vice-President.*] How long have you been resident in this district? Since I was born, that is, since 1837. Mr. G. M. Pitt.
10673. Then of course you have had over 40 years' experience of the district? Yes.
10674. Will you tell us what has been the effect of the floods in your time here? The whole character of the river has changed. I took the level of the flood of 1867. 17 April, 1886. Floods.
10675. Was that the highest you know of? Yes, that was about 64 feet above the ordinary level of the river at that time.
10676. What was its duration? It did not keep up to the highest point very long; but it was an eight or nine days' flood. It was 52 feet above the deck of the Richmond bridge.
10677. Do these floods do much damage in the district? They do. The first flood was in 1857—the time the "Dunbar" was wrecked. From that time there were a series of floods up to 1867, and from that on again. The flood which did the most damage was the 1870 flood. It did not rise so high as the flood of 1867, but it came with greater force and rose more rapidly. Its velocity was 12 miles an hour at one time. Damage. Velocity.

- Mr. G. M. Pitt.  
17 April, 1886.
10678. What was the nature of the damage it did? It altered the whole river; in fact, nearly every flood had its own characteristics; one would silt in the river, and one would scour it out. In 1867, the river was nearly dammed at the Richmond Bridge; and in 1870, it washed away the banks and widened the river some three chains or more at the bridge, and a new channel was formed on the eastern side; and a few miles lower down the course of the river was entirely changed. Prior to that we had a tide at Richmond Bridge 18 inches to 2 feet, extending up to the confluence of the Grose River. There has been no tide since.
10679. That is in consequence of the river silting up? Yes; the body of the river is raised. We used to have beautiful deep water where now there is none.
10680. Have you had experience of any flood that has cleared the river? Yes.
10681. Then you think that other floods coming down might clear it out again? I do. When we have rapid floods it will clear the river. That is the only chance we are looking forward to.
- Benefit from floods.  
10682. Did these floods do great damage to the crops? No; I think a flood every three years is rather a benefit to the district.
10683. Does a flood benefit the land to a great extent? Considerably.
10684. You think then that the floods do more good than harm? I do.
- Irrigation.  
10685. Have you had any experience of irrigation in this district? No; I have not, except in a small way with my own windmill. I pump from the river and try to irrigate on the high lands, but when the ground gets so dry, it takes so much water to saturate it that I cannot carry out my idea without going to larger expense for pumping gear.
10686. Do you know of any other attempts that have been made at irrigation in this district? No.
10687. Then you could not give us any information as to what benefit is likely to be derived from irrigation in this particular district? I believe that on the high lands it would be invaluable.
10688. What about the low lands? I would not irrigate the low lands. I have been in communication with several gentlemen who have lucerne paddocks on the low lands, and who, if they could turn water on their paddocks, would be able to make sure of their crops, and they would pay a higher rent for the land. I have some high land which I would willingly pay a pound an acre per annum to have irrigated.
10689. What amount of water per acre do you consider you would require? I do not think it would want a great quantity if we could regulate the supply.
- Water-rate.  
10690. Do you think then that the majority of people residing in the district and owning property would be willing to pay something like 4 or 5 per cent. interest on the outlay on the construction of large irrigation, or how much per acre would they be willing to pay for having their land irrigated by some large and comprehensive scheme? The benefit would be incalculable; we can scarcely realise what the result would be if we could turn on the water as we require it.
10691. Would they pay something like 4s. or 5s. per acre? I am sure they would. They would be able to get crops of lucerne where now they can get none.
- Storage.  
10692. Do you know of any place suitable for conserving large bodies of water in this district so that it could be rendered available for irrigation at sufficiently high levels to enable us to irrigate by gravitation? We have only one or two places in these large gorges such as the Grose River and the Wheeny Creek.
10693. Is that Little Wheeny or Big Wheeny? Big Wheeny.
10694. Are those the only two places you know of? Those are the only two where you can erect a dam.
- Fall of river.  
10695. Do you know what the fall of the river is from here to Penrith? Only by estimate, but not accurately. A very elaborate survey of the contour of the 1867 flood was made by the Harbours and Rivers Department some years ago.
- Contour of flood.  
10696. And you have not made any estimate as to what quantity of water those places would be likely to conserve? No; I speak only from my own local knowledge; I think a very large quantity could be conserved.
- Irrigation by pumping.  
10697. Do you think that any plan of pumping the water from the river would be feasible for the irrigation of the lower or higher grounds? No, I do not see where you could pump from. The Government have started a scheme for supplying Richmond and Windsor with water. Half a mile above my house there was a place 18 to 20 feet deep and a quarter of a mile long—a magnificent sheet of water; they made a survey, and it was agreed to sell a portion of the Common to carry out the scheme; but there came a freshet and a flood, and the whole thing was put an end to in consequence of the basin silting up, and at the present time the whole is a bed of sand. The Grose would no doubt be a suitable place.
- Underground current.  
10698. Do you think there is a very large extent of water coming down and going away in underground currents, under sand and drift in the bed of the river? I think there is.
- Sunken weirs.  
10699. Do you think a scheme of sunken weirs on the clay or bed-rock would materially increase the quantity of water that would be available? I do not think it would. Another thing, I do not think the water would be so pure. As soon as ever the river begins to get low, the water gets a taint of some sort of chemical; it will even corrode galvanized iron; I think it is from the springs. At the sides of the river there are many springs; the lower it gets, the harder the water becomes.
- Springs.  
Wells.  
10700. Do you know whether many wells have been sunk in the district, and what their character is? There are several wells sunk down to the drift.
- Supply.  
10701. Have they a large supply of water? Some have, and some have gone dry lately which have not been dry before.
10702. You do not know any from which large quantities of water could be got for irrigation? There are one or two in the town which you could not empty.
- Depth.  
10703. What depth? I think they average about 60 feet. It is not soft water; it is not so valuable as the water of the Grose River for domestic purposes.
10704. Have you any idea of the quantity of arable land in the district that might be brought under irrigation? No; that could be calculated easily.
- Water-holding capacity of soil.  
10705. Is the soil sufficiently impermeable here for irrigation to carry the water over it so that it would not easily soak through and disappear? A good deal of it would be, but the nearer you get to the river the more the water would be wasted; still, I think not a great deal. The ground holds the water better than one would imagine; you see water lying on it long after the rains and floods.
- Formation of soil.  
10706. What is the character of the soil, is it alluvial or volcanic? There is no volcanic soil here; it is alluvial. There is a clay subsoil over the Kurrajong; it is a clay shale. Where my orchards are, there is a clay shale underneath.

10707. What are the principal crops that are grown here by the farmers? Indian maize and straw crops.
10708. More than lucerne? Yes; there were more crops of lucerne some time ago, but owing to the dry seasons and turning of stock on pastures, they have run out.
10709. What is about the average crop of corn here in a fair season? In a fair season I should put it down at about 40 bushels, considering the droughts and one thing with another.
10710. You never produce more than one crop in the year? No.
10711. Would you consider 40 bushels to the acre here would pay on the average? I think it would.
10712. What is the average price of that corn? From 2s. 6d. to 3s.
10713. What is the value of arable land in the district, on the flats or on the high lands? The value of the low land, according to a sale which took place the other day, is about £36 10s. to £37 per acre. I should put the average value at £30.
10714. What is the value of the high arable lands? It is difficult to form an opinion as to the value of the high lands? it was worth more than the low lands when we had so many floods, but now we cannot grow anything on the high lands for want of water. At the same time, however, I think it is worth half as much as the low lands, or £15 per acre.
10715. Are the watersheds of the Grose and the Wheeny extensive? Yes.
10716. Sufficiently extensive to supply water for the irrigation of the arable lands? Yes; the Grose particularly embraces a very large area; the Wheeny watershed is not so large, but still it is extensive.
10717. *Mr. Murray.*] You grow lucerne extensively? Not very extensively.
10718. How many cuttings a year do you get? I think about five.
10719. And on the average how many tons? About 1 ton to the acre; that would be 5 tons a year—that is, in good seasons.
10720. What sort of a crop is there this year? A poor one.
10721. What would be the average? I question whether it will amount to 2 tons per acre for the year.
10722. And the corn? Very poor.
10723. About how many bushels to the acre? I could not tell you exactly; I do not think it would be over 20 bushels to the acre.
10724. *Vice-President.*] In many cases there is no crop of corn at all? None at all; five acres of my own produce nothing.
10725. *Mr. Murray.*] Is there much cultivation further up? On the Kurrajong side there is.
10726. You stated that when the floods were frequent the value of the high lands was equal to that of the low lands? Yes.
10727. If you had irrigation, would it not bring the value of the high lands back again to what it was originally? I believe it would.
10728. You say the value is about £15 to the acre—would it not be doubled by irrigation? I am certain it would.
10729. *Mr. Gipps.*] How many crops of lucerne do you get in a year? As far as I know, from four to five crops.
10730. Can you give any exceptional cause of the height of the flood of 1867—was it due only to heavy rain-falls above Richmond, or to other extraordinary causes? It was due principally, in my opinion, to heavy falls of rain taking place simultaneously in different places and the water then coming down in a body.
10731. Was there no other reason—was there no high tide flowing in and a heavy gale blowing? I think not.
10732. There was nothing to back the tides up? I do not think that would affect it at all.
10733. You say that the current in 1867 was less than the current in 1870, that there was less water coming down? Yes.
10734. Consequently there must have been some cause? The heavy rain of 1867, and its raining longer.
10735. Still that ought to have given a larger current, which must have been backed up by the high winds below? I do not think so.
10736. What was the height of the flood in 1870? It was about 13 or 14 feet below that of 1867.
10737. What is the diameter of your windmill? 16 feet.
10738. Yet you find that of no effect? Not for irrigation.
10739. I suppose you have not estimated the horse-power? When we have a nice steady breeze I put it down at 2-horse power; during a gale it goes much higher.
10740. With regard to the site of a reservoir, have you examined Big Wheeny Creek? I know the place well.
10741. Is there a large area in the basin there, where a dam 80 feet high would impound water? It opens out in a sweeping ravine.
10742. Still there are narrow gorges? Yes, very narrow.
10743. Do you know anything of the fall higher up? No, I do not.
10744. Does the current show much velocity? Not a very great fall.
10745. 8 or 10 feet a mile? It may be a little over that.
10746. What do you think the fall is in the Grose River? I think it is less in the Grose; it is not so steep as the Wheeny; there are larger levels and stretches of water.
10747. Does that extend right up the river? Yes.
10748. And then small falls? Yes.
10749. Does the gravel or boulder drift extend far beyond the bank of the river? Yes; the town of Richmond is over the boulder drift. A peculiar drift of boulders is to be seen above the Lower Zigzag, on the Western line.
10750. But is there a regular boulder-stream right under the flats? Yes.
10751. Is that impermeable? I do not know. That is where they tap the water here.
10752. *Mr. Donkin.*] To what extent has the river silted up during the last ten years? The present level is, I should think, some 3 feet above its original bed. It has silted up to the extent of about 10 feet.
10753. Do you think it has been raised 10 feet? Where I live it must be 15 feet.
10754. And do you think that another flood will clear it out? One flood will scour it, another will silt up the stream; if we have a sharp flood, with a swift current, it will probably carry it away.
10755. You were speaking of the proposed reservoir at the Grose, is that where the first fall is? I take the top of the first level reach of water, which is somewhere about there.

Mr.  
G. M. Pitt.  
17 April, 1886.  
Crops.

Value of land.

Grose and  
Wheeny water-  
sheds.

Lucerne.

Value of lands.

Crops of lucerne.

Floods.

Windmill.

Dam.

Gorges.

Current.

Drift.

- Mr. G. M. Pitt. 10756. Do you think there is sufficient elevation there to bring it down by gravitation; what is the height, is it 150 feet? Less than that. That large basin would be a grand reservoir from which to pump water on the Richmond hills. I think it is the only place from which to get a supply for the town.
- 17 April, 1886. 10757. The big flood of 1867 was over Mulgrave Station? Yes.
- Height of flood. 10758. Do you know how it was with regard to Windsor Railway-station? Windsor and Richmond were completely covered, right up to the "Royal Hotel."
- Site for dam. 10759. *Mr. Townsend.*] Do you not think a better place for a dam would be below the junction of Little and Big Wheeny? I think it would be, to dam the water back and do nobody any injury.
- Compensation. 10760. Do you not think that would largely supplement the supply? Yes, it would.
10761. Have you any idea what the compensation would be for owners of land just around the junction; there are one or two blocks sold there? If you mean for being smothered out, I do not think you need trouble much about that. You could not make the land of any less value than it is at present. I should be very easily dealt with myself; the Government might give me some land elsewhere for that which would be flooded out.
- Macdonald and Colo Rivers. 10762. Do you know whether in 1867 the Macdonald and the Colo were in high flood at the same time? I believe they were.
10763. Would not that account for the backing up of the water in 1867? It may. I should like to mention one little thing which occurred during the last flood; I was standing near Richmond Bridge during the 1867 flood, the water having been 52 feet above the deck, and gone down about 15 or 20 feet; there was a sluggish current. All of a sudden, the bank on one side began to move, with a roar like the sound of artillery; there was a narrow opening through which about 2 acres of land kept sailing out, and this came bodily out of the opening of about 50 yards, at a depth of about 40 feet; and we could see the trees gradually disappearing.
- Soil. 10764. *Vice-President.*] What was the nature of the soil? All alluvial. It seemed as if some large animal, or else the water itself, was underneath carrying it out. It was a most remarkable thing to look at, and it was wonderful to see trees 40 feet high sailing out and gradually disappearing; I saw that twice. About 2 acres of land all came out through the narrow neck. The occurrence occupied about twenty-five minutes.

Mr. T. H. F. Griffin, manager of Commercial Bank, called in and examined.

- Mr. T. H. F. Griffin. 10765. *Vice-President.*] How long have you resided in the district? Only eight years.
- 17 April, 1886. 10766. And during that time you have had exceptional opportunities of judging of the prosperity of the residents? Yes, pretty good.
- Farmers. 10767. What is the general characteristic of the farmers here, are they prosperous—would you say this is a prosperous district? Yes.
- Floods. 10768. The farmers generally are well-to-do? Yes, they are fairly well-to-do.
10769. In your experience what effect have the floods had on the farmers generally? I have seen only one flood in eight years, and that was more than six years ago; the effect of that flood was not very severe. I was anticipating, when I saw the water coming up, that it would smother everything, and that there would be a great disaster. I found, however, that it was not so. The farmers were not very adversely affected; they lost their spring crops. Many of them told me that it enriched their land, and did a great deal of good. It was not a severe flood; the water backed up quietly and did not seem to do much damage.
- Droughts. 10770. What has been the effect of the late drought—has it militated seriously against the prosperity of the people? I do not think it has particularly; the rainfall has been pretty equal the whole time. The chief effect, in my opinion, is the draining of the underground sources of supply, the wells on the high land going dry. The lucerne crops do not get the supply which is necessary; lucerne strikes its roots to a great depth and the underground supplies which the roots used to reach have been drained away.
- Rainfall. 10771. How does the rainfall of the last few years compare with the average rainfall of the district? It has been considerably under the average, judging from Mr. Tebbutt's observations, for perhaps twenty years; the average is 26.137. The heaviest rainfall in the five years has exceeded 31 inches only by a little. The heaviest rain since Mr. Tebbutt has been taking observations—I think since 1862—was more than 70 inches, and that was in 1870. The rainfall of 1870 was rather more than that of the year 1867, the year of the great flood.
10772. Do you think that in dry seasons the quantity of rain falling at different times makes a considerable difference in the effect the drought will have—what I mean to say is, that, in seasons of drought, is it that the rain comes at a number of times in small quantities, or is it the reverse, that it comes seldom, in large quantities? No, it comes so seldom and in such small quantities. I may say that in the month of August, 1885, there was no rain at all, and the two previous months there was little more than 1½ inch. During the months of July, August, and September there was less than 1½ inch. (*Appendix C.*)
10773. In times of drought like this do you find that the rain falls at a number of different times instead of at one time: we find in the western district that, in times of drought, although we get nine or ten inches of rain, it is spread over such a number of times, and comes in such small quantities, that it is of no benefit? In 1884, although it was a very fair year, there were so many light falls of rain that it almost evaporated before it could penetrate the ground; it had no effect whatever. No doubt, we should have fine crops here if we had 15 inches of rain coming in large doses at proper intervals.
- Wells. 10774. Have you had any experience of wells in the district? I have only examined two wells that have been sunk here during my residence. They struck water at a depth of about 45 feet in clay or sand, but no boulders; there were a few small stones weighing perhaps an ounce or an ounce and a half. Two wells have been sunk recently in the ridge where this town stands, and a well has been sunk on the low land about a quarter of a mile from here in a straight line; the water was struck there in clay about 10 feet below the surface, and the supply was very good. This was on the property of Mr. Eather.
10775. Have you any reason to think they would get water at a shallow depth like that on the flats? Yes, I am sure of it.
10776. Where a windmill could be used? Yes. A well was sunk on the property of Mr. Bowman recently, and the miner sinking it, when he got down to a depth of about 12 or 15 feet, was loosening the clay with a crowbar, which he drove down into the ground at his feet; a rush of water then took place through the hole, and they had to abandon the well; the water shot up in a stream as thick as a man's arm.
- 10777.

10777. Is the water good, and would it be fit for stock? Very good for stock, but it is rather brackish. Mr. T. H. F. Griffin.
10778. It would not be suitable for irrigation? I could not say. I do not think it is sufficiently salt to be unsuitable for irrigation. All the wells here on the high and low ground are alike in that respect; they are more or less of a mineral character. 17 April, 1886.
10779. Do you think any comprehensive system of irrigation might be carried out by Government, or by a local Trust? Undoubtedly so. Irrigation.
10780. Do you think people would be willing to pay so much per acre towards the interest on the outlay? I think they would be very glad to do so. Water-rate.
10781. What is your opinion as to the best way to carry out such works—do you think that it ought to be done by the Government, or under a local Trust? I should think a local Trust. Trusts.
10782. And in your opinion there would be no difficulty, if the Government or a local Board were to levy such a rate upon the land in the district as would return a reasonable sum towards the interest on the outlay? I should imagine not, seeing what the results of irrigation in other countries have been.
10783. What experience have you had of irrigation in this district? Only Chinamen's gardens; they show what can be done by irrigation on a small scale.
10784. Has there been any scarcity of water in the district for stock in consequence of this drought? Undoubtedly; the lagoons and waterholes have almost dried up; wells in the town have gone dry in consequence of the continual droughts and the gradual slackening off of the rainfall. apply of water.
10785. *Mr. Gipps.*] What is the average depth of the wells on the high land? They vary very much; two I speak of struck water at from 45 to 50 feet, and there are others more than 60 feet deep. Depth of wells.
10786. Are those at 60 feet on the same level? No, rather higher.
10787. What I want to know is whether you can get water at the same level throughout? I imagine so.
10788. What is the stratum? In the last two cases the stratum was clay; there is nothing like drift, no boulders, but small pebbles. Stratum.
10789. Does it seem to be clay from decomposed shale? No, blue; inclined to white here and there.
10790. *Mr. Donkin.*] Which do you think would be the most feasible site for a reservoir, on the Grose or the Wheeny? I do not know much about the Wheeny; the Grose at present is scarcely capable of water storage. I should imagine that below the Vale of Avoca a dam 80 feet would be sufficient to irrigate all those flat lands. Reservoir.
10791. Do you know how the discharge of the Grose appears as compared with the Hawkesbury at the present time? No; of course, the watershed is much smaller than that of the Hawkesbury, and it is fed by nothing like the number of streams. Discharge of Grose.
10792. Is the water of very good quality? Beautiful water.
10793. *Mr. Townsend.*] Do you not think that the clay is clay that lies on the drift? I have no doubt this flood-land and the land behind it are of riverine formation; within a short distance from where we are now sitting there are large deposits of water-worn pebbles of the same nature as those you pick up on the river bank. Formation of drift.
10794. Do you know anything of the wells between Castlereagh and Penrith? Nothing. Wells.
10795. Do you know whether the water from the wells improves by use? I should not like to give an opinion. Generally, a well in constant use is said to improve; but I have no experience of wells; my own water-supply is from rain conserved in tanks.
10796. You have no means of knowing what quantity of land in the district could be improved by irrigation? No. I could only say that it must be a great many thousand acres.
10797. *Mr. Donkin.*] Ten thousand acres? Yes, quite that.
10798. *Mr. Murray.*] Are the farmers here mostly tenant farmers, or owners? Mostly tenants. Tenants.
10799. What is the average rental they pay? From £1 an acre for poor land up to £2 for good land. Rents.

Mr. Wm. Lamrock called in and examined:—

10800. *Vice-President.*] How long have you been residing in this district? For 44 years. Mr. Wm. Lamrock.
10801. During that time, of course, you have seen a number of floods? A great number. 17 April, 1886.
10802. What has been your general idea of those floods—that they were detrimental or beneficial to the district? The greater part I think have been beneficial. I was in Windsor at the time of the 1867 flood, and when I came home, I went up the bank of the river towards the Grose, and I saw that it had done a great deal of harm there to the farms. The silt went over the top of the fences; we could not see the fences of the farms, from the bridge up to Yellow Mundy. Floods.
10803. That was the only case in which severe damage had occurred? Wiseman's Ferry was very much silted up. Silt.
10804. But generally, floods have been rather beneficial than otherwise? When they have come to a moderate height, and left a coating of silt.
10805. Do you know of any particular reason why that flood was so high in 1867? There was a very heavy downfall of rain, and I have heard it said there was a very high tide at the mouth of the Hawkesbury, and the east winds were blowing so as to dam the water back. Causes of flood.
10806. And that flood silted up the river so much as to change its course? I do not think that flood did so much as subsequent floods. During that flood, I came in a boat from Mr. Town's place to the "Royal Hotel," after it had begun to subside.
10807. Have you ever thought out the question of irrigation, that is, as to whether it would be very beneficial to the district? I know that a good scheme of irrigation would be beneficial. Irrigation.
10808. Have you had experience that would lead you to think so? No; but I have the opinion of a practical farmer at Freeman's Reach, Mr. Conlon; like Mr. Pitt, he has a windmill, and he grows splendid crops. He grows more lucerne on 10 acres, than you would on 50 acres without irrigation.
10809. Therefore, you have come to the conclusion that it would be exceedingly beneficial to the district if any extensive system could be adopted? I have not the slightest doubt about it.
10810. Do you think there would be any difficulty in levying a rate to pay the interest on the outlay? I think people do not like paying taxes, as a rule; but if they were compelled to do it, they would soon get into the way. Water-rate.
10811. What quantity of land do you imagine there would be in this particular district that could be brought

- Mr. Wm. Lamrock. brought under irrigation? I suppose it would only be the low lands of the Hawkesbury; you could not irrigate the Kurrajong.
- 17 April, 1886. 10812. What quantity? I have not the slightest idea, but an immense area.
10813. More than 10,000 acres? Oh, yes; more than 50,000 acres on the Hawkesbury.
- Supervision of works. 10814. What principle would you favour for having large works of this sort carried out—should it be done by the Government, or by a Local Trust? I really do not know; I think it ought to be under a Commission appointed by the Government; local bodies do not act very well, except for particular towns or properties of their own.
10815. I suppose you have not seen any place, or had your attention called to any place which would be a good one for conserving large quantities of water? I could not add anything to what Mr. Pitt has told you.
- Wells. 10816. Do you know anything of the wells? I know there are wells in the town. Some 20 years ago, there was a well sunk at the back of the "Royal Hotel" in Richmond, and there was an oak log found, before they came to the water, about 20 or 30 feet deep.
- Supply. 10817. You do not know anything about the quantity of water tapped by that well? No; I heard that a well beside here, and several other wells in the town have been dry. There is good water in these wells, but it is not like rainwater; it is used in preference to the lagoon.
- Crops. 10818. What is about the average crop of corn to the acre in a fair season? I think Mr. Pitt's estimate rather low; I think 60 or 70 bushels in fair seasons.
10819. Mr. Pitt's estimate was that 40 bushels would be the average of good and bad seasons? Well, that is not far wrong; 60 bushels is a fair average in fair seasons.
10820. *Mr. Gipps.*] What crop at each cutting? A good crop is a ton to the acre.
10821. *Mr. Murray.*] What sort of crops do you grow? Oranges.
10822. Your land is on the Kurrajong Heights? On the slopes.
10823. Then, any irrigation system would not affect your land? No, unless it was from the Wheeny Creek.
- Wheeny and Grose. 10824. Would that supply your district with water? I think it would be made to supply it. The Wheeny Creek and the Grose River are the only two good sources of water on the Kurrajong that I know.
10825. Is any corn being grown on the Heights? I think not; I have grown maize, but it does not pay to grow corn.
10826. I suppose it is principally fruit that is grown on the Heights? Yes.
10827. *Mr. Gipps.*] Are the banks of the Grose alienated for any distance up? I do not know; I do not think so. A man had a place up near Blackheath. I think that the Grose starts from about 25 miles beyond Mount Tomah, that would be the head of the Grose.
- Alienated lands. 10828. Lower down, as far as boats can reach, is that alienated? The greater part of it is.
10829. And beyond that? It is Government land beyond.
- Timber. 10830. Has much timber been cleared off in this district? Yes, an immense quantity; they are taking timber now from the Kurrajong Heights.
- Rainfall. 10831. Does the destruction of timber appear to influence the rainfall? No.
10832. Does the rain come during several days, or does it fall more in thunderstorms? Last year, we had thunderstorms; this year, we have had none.
10833. Is there much fever in this district, or in the town? I do not know; I have heard that there has been typhoid.
10834. *Mr. Donkin.*] The rainfall in the Kurrajong is greater than in Richmond? It is, on the Heights—at all events, I think it is, as a rule.
10835. You were speaking of the Grose, the catchment area is reserved, is it not? I heard it was reserved for a railway route.
- Irrigation of orange-trees. 10836. Have you ever known the Kurrajong water to be used for the irrigation of orange-trees? No.
10837. You do not know what the effect would be? It would be very good, I have not the slightest doubt.
- Dairying. 10838. *Mr. Townsend.*] Do you think, if the water were applied in any quantity that the people would abandon crop-growing for dairying and fruit-growing? They might for fruit-growing; but as for dairying, there is such a scarcity of labour here, it is doubtful whether it would pay. Dairying ought to pay now better than growing crops.
10839. *Vice-President.*] You said that your principal crop was oranges, do you grow them to any extent? My son and I have 56 acres between us.
10840. Do you think it would be beneficial if you could irrigate them? Yes; some of the trees were without leaves before the rain came. It was only by keeping the land well cultivated and loose, that the trees have been kept alive.
10841. Do you know that a new principle has been adopted in America in irrigation, by means of which pipes are used, enabling good results to be obtained with the use of a very small quantity of water? No, I do not know anything of that system. I find that, by proper drainage, the more you drain land the more moisture you create.
- Value of orange crops. 10842. *Mr. Gipps.*] What is the value of the orange crop? I had 35 acres last year, and I got £600 for them. Mr. Cleeve had about the same quantity, but a better crop; he got £800.

Mr. Arthur Dight called in and examined:—

- Mr. A. Dight. 10843. *Vice-President.*] Have you been long residing in this district? Nearly all my life, within 1½ mile of Richmond.
- 17 April, 1886. 10844. Then you have had very considerable experience of the floods? I never took a note of them; I did not keep a diary. The only thing I made a note of was the 1867 flood; that surpassed all the others.
- Floods. 10845. Have you any idea as to what height that rose above the natural bed of the river? Mr. Tebbutt said it was 15½ feet higher than any previously recorded flood.
- Benefits. 10846. In your experience have the floods been beneficial to the district or otherwise? The land certainly is improved, but it is at the cost of the crop for a year. It is paying rather dearly for the good done. I had an idea of keeping a model farm, but the floods put me out of heart altogether.



10847. Then, as a general rule, there has been very much loss in consequence of the floods? There is no Mr. A. Dight. question about that.
10848. More than was compensated for by the benefits arising from the floods? Yes. During the last 17 April, 1886. eight years we have had no floods, and we have suffered from the other extreme.
10849. To the same extent? No, not to the same extent.
10850. What is the nature of the land in this district generally—is it rich alluvial soil? All alluvial on Nature of land. the flats. There is some good soil on the high land, and some very useless.
10851. Have you had any experience of irrigation? None whatever.
10852. It is your opinion that the land could be made to produce very much larger crops by irrigation? Irrigation. Well, on the flats a week after you had gone to the expense of irrigation you might very likely have a flood. Of course, that would not apply to the high lands.
10853. What are the crops grown in this district generally? Maize and horse-provender. Crops.
10854. What is about an average crop of maize? We consider 60 bushels rather above the average; still, Maize. I have seen 100 bushels.
10855. Has the quantity been materially lessened during the droughts? I think so.
10856. What would you think the average crop would be this year? I have not been amongst it; I cannot answer that question. I have discontinued farming.
10857. Have you heard that there have been many failures of the crops this year? I am told that the earlier corn is very good, but the latter crops are an entire failure.
10858. In consequence of the drought? Yes.
10859. What do you consider an average crop of lucerne here? I question whether, these last two summers, Lucerne. they have had much more than half a ton on the average.
10860. How much per annum? Four or five cuttings a year; from 2 to 2½ tons per acre per annum.
10861. What would it be in a fair season? From 20 to 25 cwt. each acre four or five times a year.
10862. More than double? Yes.
10863. You are of opinion, then, that the high lands would be more suitable for irrigation than the low lands? I think it would be more profitable.
10864. After the floods have left, has the land benefited considerably by their deposit? There is always a Flood-deposits. deposit which enriches the soil.
10865. Have you noticed that after the flood you have had better crops for several years running? It depends upon the tillage; you can go in depth and get fresh alluvial. If a person could arrange to have the land flooded every four or five years, especially if he knew when the flood was coming, it would be very beneficial.
10866. Do you think farmers here would join in a scheme for the irrigation of their crops? I think they Irrigation. will require to be educated up to it; each one will want to see the result of some other person's experiments.
10867. In spite of the floods and droughts, are the farmers here generally a well-to-do class? I think they are; they are a very frugal people; you rarely see an insolvent in this district.
10868. What is the rent of land for farming purposes? From 10s. to £2 an acre. Rent.
10869. What is about the size of the farms here? They are generally small farms. Farms.
10870. How many acres? All along the bank of the river nearly 30 acres; but the floods have swept away 3 or 4 acres. I think there are more farms from 20 to 30 acres than of any other size.
10871. Can a family make a living on 25 to 30 acres? Many are better off in service; but they are their own masters, and they manage to grub along.
10872. Is that the order of things here generally in regard to these small farms? As far as I am aware, it is.
10873. I suppose you could not give information as to the best sites available for the erection of dams? No.
10874. Do you know anything about wells in the district? No.
10875. *Mr. Murray.*] Are they mostly tenant farmers? Mostly tenant farmers. Tenant farmers.
10876. Who are the large landowners? Well, I think Town and myself are the largest holders of flooded Landowners. land within 10 or 12 miles of this place. Town occupies nearly all his land himself; he has a large stud of horses; but he rents other lands.
10877. If the large landowners saw their way to increase the value considerably, so as to get a higher rent, Water-rate. would they not pay the interest on the outlay? They would require to be educated on the matter. My opinions are rather crude on the subject; I felt diffident at giving evidence here at all.
10878. *Mr. Gipps.*] How many years did you say you had lived here? Ever since I was born.
10879. Are the droughts more frequent here of late years than before? No, I think not; when I was a Droughts. child, I recollect, there was not sufficient moisture for the people to grow wheat.
10880. You have known worse droughts than the present? I have known quite as bad, at all events; I have known that large reach near the railway bridge at Penrith very shallow, and covered thick with weeds.
10881. Has much timber been taken off? These flats originally were very heavily timbered, but in many Timber. cases they were let to little farmers for a certain number of years to clear, and everything was felled and burnt off.
10882. Is timber being taken now? There is very little left that is any good.
10883. Do you think the denudation of the forests has influenced the weather at all? No, I do not think so. Denudation of forests.
10884. *Mr. Donkin.*] Has the river altered its course to any extent? It has widened it considerably; the River. bank has been swept away; it is now nearly twice the width it used to be.
10885. And it has silted up? Yes.
10886. Do you think the next flood would scour it out? You never can tell; I should doubt it. I am Scour. told the tide used to run up to nearly 2 miles above the bridge, but that there is no tide there at all now.
10887. Do you recollect the year of the first flood in the Hawkesbury; the first description, I think, was First Hawkes- given in an illustration in the "Life of Margaret Catchpole"; do you recollect that year? I think that bury flood. was in 1809 or 1810, ten years before I was born.
10888. You recollect her living here? No, I do not; but she attended my mother at my birth, I believe.
10889. *Mr. Townsend.*] What is the character of the land you described as useless soil? A kind of pipe- Useless soil. clay and iron gravel.
10890. Is there a great quantity of loamy soil between here and Castlereagh? No; there is some particu- larly sandy land; I do not recollect any loamy.
10891. With water that land would grow almost anything, would it not? With water and manure; but it is poor itself.



- Mr. A. Dight. 10892. Do you not think that by the irrigation of the higher lands the low flats could be supplied by soakage? The foot of the ridge is lower than it is beyond.
- 18 April, 1886. 10893. Yes, but the water would soak along? Not without being conveyed.
- Drought in 1838. 10894. *Vice-President.*] Was that great drought you spoke of in 1838 or 1839? In 1838. Wheat went up to £1 a bushel. I might remark that the 1864 flood was the highest I had ever seen at that time. I saw Mr. George Bowman, and I asked him whether it was as high as the 1816 flood; and I recollect my father saying he had swum to the river, and that he could put his foot into the water at the back and front of his house, but it did not come inside. I asked a tenant whether it came into the house, and he said "No." I asked George Bowman whether it was as high as the flood of 1816, and he said, "When I get to my father's farm I can tell exactly;" but he said afterwards it was not so high by 6 or 7 inches as the 1816 flood; so the 1864 flood was the highest flood after that of 1816.
- Highest flood. 10895. Did that great drought of 1838 terminate in any floods in 1839? I cannot recollect; it was over my low lands thirteen times in one year.
10896. *Mr. Murray.*] Was the flood of 1864 higher than the flood of 1870? I cannot answer that question.

Rev. Dr. Cameron called in and examined:—

- Rev. Dr. Cameron. 10897. *Vice-President.*] Have you been long in this district? I have been here since 1856—thirty years.
10898. Then you have seen some of the floods that are so much talked about? Yes.
- 17 April, 1886. 10899. Is it your opinion that these floods are detrimental to the district? In the first instance they have been, but ultimately beneficial.
- Floods. 10900. You think there is more than a compensating balance? I think so; before I came here, I was told there had been no floods for fifteen years of any consequence. The 1864 flood was the first I saw, and the yield of the soil, which had been about 100 bushels per acre, had gone down to about 15 bushels per acre. After that series of floods, the soil came up to its original fertility, yielding as much as it had done before, from 80 to 100 bushels per acre.
10901. Was the reduction of the crops caused by the soil being worn out, or the want of moisture? I should think that it was due to the constant cropping without the soil being replenished in any way. I think floods have a marvellous effect in restoring the fertility of the soil.
10902. So that the farmers would look forward to a flood as improving their farms? It would do good, if they were prepared for it. Of course, the floods are very destructive in the first instance.
10903. Was the 1864 flood a very high flood? Yes.
10904. Not so high as the 1867 flood? I did not see that in 1867.
10905. What floods were there between them? We had a series of floods, sometimes two or three in one year. We had a sort of cycle of wet seasons that produced floods.
- Cycle of wet seasons. 10906. Do you look upon the farmers of this district as a thriving, prosperous class? I think they may fairly be regarded as such. I have heard that if they could calculate on good seasons—if they could get one good year out of three—they could do very well, the land is so productive.
- Yield of crops. 10907. Do you know what quantity of corn per acre they get on the small farms? I should think, in fair seasons, about 80 bushels per acre. I have heard of their getting 100. I do not know what is the average this year.
- Irrigation. 10908. Is corn more profitable to the farmer than lucerne? I could not say.
10909. Have you heard the question of irrigation mooted in the district? It has been more a question of water-supply for the towns of Richmond and Windsor; that is what we are more interested in.
10910. You have had no personal experience of irrigation? No, except of irrigation by Chinamen; they have given us practical experience of what irrigation will do.
- Wells. 10911. Do you know anything of the wells in the district? Yes.
10912. Do you know of large supplies of water having been made available from wells? This last year has told upon most of the wells; a great many that never went dry have gone totally dry during this drought.
10913. To what depth have the wells been sunk? 50 or 60 feet.
10914. Do you know of any shallow wells on the flats? Mr. Town recently put one down on Mr. Bowman's farm to a depth of about 30 feet.
10915. As far as you know, they have never been taken advantage of for irrigation purposes? No; the water is not particularly good, it is rather brackish.
- Town water-supply. 10916. *Mr. Gipps.*] What are the present proposals with regard to the water-supply of Windsor and Richmond? I have heard of four. I think there is the Government scheme, which is to pump water up into a reservoir near Clarke's Hill, then lay it on by gravitation to supply Richmond and Windsor and the intermediate district; then I have heard of another proposal, to pump the water up on this side, to save the reservoir, and lay it on in that way on a sort of arrangement such as they have in America, I understand—to pump it up into a tank and then let it flow from that; then there is the Prospect scheme, and the Grose scheme.
- Population. 10917. What is the population of Richmond? By last census the population of Richmond was 1,239.
10918. And of Windsor? I think about 1,900.
- Supply. 10919. How are they supplied with water at the present time? We have tanks underground and wells. A very large number of people depend upon that miserable lagoon there, which is really not fit for human use at all.
- Water-casks. 10920. How do they get the water? By pumping it into water-casks and taking it round.
- Water-rates. 10921. How much do they pay for the water? They get it free; the lagoon belongs to the municipality.
10922. You think that if they got a proper and sufficient water-supply they would be willing to pay rates for it? Yes; well, I would not say anything as to their willingness to pay rates, but I have not the slightest doubt that, if a good supply of water were furnished to the town, they would very soon begin to feel the benefit, and pay the rates ungrudgingly.
10923. How many houses are there in Richmond? I should say between 100 and 200.
10924. With an average of four rooms? I should say so.
10925. *Mr. Donkin.*] You know the Colo River and the Wheeny Creek and the Grose? I know Little Wheeny; I cross it every week.
- Little Wheeny. 10926. Which of those sources do you think would be the best for water-supply? It has often struck me, in crossing Little Wheeny, that there is sufficient water there to supply both these towns. It is a running stream of beautiful, clear water all the year round, and there is sufficient height there. No doubt, the Grose
- water

water is quite as good, and there is a large supply ; but I do not think you could get the elevation unless you went further up. I think we could more easily get the water from the Wheeny Creek than from the Grose. Rev.  
Dr. Cameron.

10927. I suppose you have known the Grose for many years? Yes. 17 April, 1886.

10928. Have you ever known it to be dry? Never.

10929. Would there not have to be a great deal of tunnelling to bring it from there? I suppose there might be.

10930. *Mr. Townsend.*] Do you know anything of Castlereagh? Yes.

10931. Do you know whether water from wells is used there for irrigation. I do not; I have not been there of late years.

10932. I want to know whether the water obtained there is fit for irrigation? I could not say.

MONDAY, 19 APRIL, 1886.

At Windsor.

Present:—

Mr. BARTON, M.P.,  
Mr. DONKIN, J.P.,

Mr. GIPPS, C.E.,  
Mr. MURRAY, M.P.

RUSSELL BARTON, Esq., M.P., VICE-PRESIDENT, IN THE CHAIR.

Mr. Benjamin Richards called in and examined:—

10933. *Vice-President.*] How long have you been in this district? All my life; I am now sixty-eight.

10934. Will you tell us what your experience has been of the floods since you can remember? I think it was about fifty-five years ago since the first flood of which I have any distinct recollection, viz., the early part of 1831. Mr.  
B. Richards.  
19 April, 1886.

10935. Was that a high flood? Not a very high flood; a fairly large one, but nothing like what I have seen many times since. Previous to that flood there was a three years' drought; after that we had several floods at short intervals. I cannot tell exactly the date, but in 1831 there was a flood, and in 1834, and in 1835, and another very dry season. Flood.

10936. Do you remember at any time several years passing without floods? Yes.

10937. Can you tell me about what time they were? I cannot tax my memory to that extent, but I think you will get that information from others.

10938. What has been your experience of the floods—have they been very destructive in the district? They have been destructive, but as a rule not so very destructive. The larger ones—such as those of 1857, 1864, 1867—were destructive. Effects.

10939. Those are the three largest you remember? Yes.

10940. Were they very destructive to the farmer? Yes.

10941. On account of the great height, and their coming at a time when the crops were nearly ripe? On account of the great height—the 1867 flood particularly. I cannot say the others did any great amount of damage.

10942. I suppose there were more crops on the soil in 1867 than in 1857? I will not say that; I question it, because I do not think that agriculture has been on the increase. I think, even as far back as 1835 and 1840, we produced as much in this district as we do now.

10943. It is only very high floods that do harm in the district? That is all.

10944. Is there any benefit derived from the floods? Yes, I think so.

10945. To fully compensate you for any loss, the crops being increased for the next few years? When the floods come, they injure the crops; but that is really no very great loss, because they improve the soil.

10946. Have you ever experienced as great a drought as this before? Yes; I think that from 1828 to 1831 was the greatest drought that ever I remember. I was very young, but I remember the circumstances of that drought; I know that no one had anything to feed stock with, and that they dug up the roots of the couch-grass to feed them on. Droughts.

10947. Was that a more severe drought than the drought of 1838 or 1839? I think so.

10948. How long did these droughts continue? I only go by what I have heard. The old hands call it the "three years' drought." One year we were devoid of a wheat-crop altogether, and next year it was only partial, but the rain came late in September, and it just brought about half a crop.

10949. Has there been much loss in the district in consequence of this last drought? I think so. Loss.

10950. Have there been any crops this year at all in the way of corn? I think about half a crop. Crops.

10951. What was it last year? It was better last year.

10952. And the year before? I think about three years ago we missed the corn crop.

10953. You think there has not been more than half a crop this year? I am positive not more.

10954. What do you consider a crop in a fair season? About 50 bushels to the acre; I think that a good average crop. Some of the flats may yield more, but these are exceptional.

10955. At that rate you would not have more than 25 bushels to the acre this season? I do not think so. That would apply to my own, and that is reckoned as good soil as any on the Hawkesbury.

10956. Has the lucerne been affected in the same way? Yes, more so; I do not think we have had one good cut this year.

10957. In fair average seasons, how many cuts of lucerne do you get? Four or five cuts.

10958. What is a fair crop? About a ton.

10959. *Mr. Gipps.*] A ton of hay, or of greenstuff? A ton of hay.

10960. *Vice-President.*] Have you had any experience of irrigation? I have not. Irrigation.

10961. And you have not seen it at all? Not to any extent.

10962. What is your opinion of it? I think it would be very desirable.

10963. Do you think it would enhance the value of the land by producing greater crops? Unquestionably.

10964. Do you think, from your experience here, that if the Government were to propound a scheme of irrigation, there would be any difficulty in levying a tax upon the land to pay interest on the outlay? I do not think so. Water-rate.

10965. What would be your opinion as to how it should be managed—do you think it should be managed by a Government Department or by a local Trust? I think a local Board. Local Trusts.

- Mr. B. Richards. 10966. A Local Government Bill has been before Parliament for some time—if that were carried, do you think it would assist to establish these local Trusts? I have not read myself up in that matter.
- 19 April, 1886. 10967. Do you think local government a good thing—where you can levy your own taxes, make your own rates, and spend the money yourselves? Yes, I think so.
- Irrigable area. 10968. Have you any idea as to what quantity of land there is in this immediate district which could be put under irrigation? I think nearly the whole of it.
- Storage. 10969. Do you know of any places where large dams could be constructed to conserve large quantities of water for irrigation purposes? I could not point out any places in particular, but I am certain there are plenty of natural reservoirs where water could be conserved.
10970. You do not know of any particular one? I think all our rivers and creeks could be dammed and made to conserve water. There is any amount of high land where there are natural watersheds and running streams.
10971. You have not gone into the matter sufficiently to be able to state that there are any particular places? No.
- Crops. 10972. I suppose maize and lucerne are the principal crops? Yes.
- Dairying. 10973. Is there much dairying done here? Very little, I am sorry to say. I think it would be a step in the right direction.
- Fruit growing. 10974. Is there any great quantity of fruit grown? Not a great deal.
10975. That is another thing that is neglected? Yes.
- Course of river. 10976. During your knowledge of this district, has this river altered its course very much in consequence of floods? Yes; there have been large landslips.
10977. The flood of 1867 is the one which silted up the river, is it not? Yes; it did the greatest damage.
10978. Had you ever known any large floods to silt it up before that, and smaller ones following and opening it out? No; I cannot say I have any distinct recollection of it.
10979. Is it your opinion that if we get a series of small floods it is likely the whole body of the river would change? I think it would take the proper channel.
- Tides. 10980. We have had in evidence that the tides, many years ago, used to rise as far as the Grose? Yes; the confluence of the Grose with the Nepean River.
10981. How far do they go now? I do not know whether it rises so far now.
10982. Can you give an opinion as to the cause of that very high flood of 1867,—was it simply in consequence of tremendous rains at the time, or was the water held up by strong winds and high tides? I could not say; we had very heavy rains at the time—the heaviest I ever experienced.
- Silt. 10983. *Mr. Murray.*] In the silting up, is the silt always of the same character? I think so. I have never noticed anything but sand.
10984. Any alluvial deposit? No; I have not noticed that.
10985. Is the sand beneficial to the land? No; it fills the bed of the river.
- Deposits on farms. 10986. Is the deposit which is left on the farm, as a rule, silt or sand? It is generally silt. In 1867, there were some spots where sand was left, which were very much damaged; that was noticeable about Yarramundi, but it is not very general. Many farms that were comparatively poor before the flood of 1867 have been good farms ever since, simply because of the deposit which was left. In one or two cases, where the land has been covered with raw sand, the farms have been of little value since.
10987. Are they principally tenant-farmers here? Yes, most of them.
- Rent. 10988. What rent do they pay? From 30s. to 40s.
- Landowners. 10989. Is the land held by a few or a great many landowners? By a great many; there are no very large landowners in this district.
- Water-rat 10990. Do you think those landowners would be willing to contribute towards the interest on the outlay upon a system of irrigation? I am an owner of land, and I should be willing.
10991. You think that irrigation would enable you to get larger crops? Yes; any one who would stand out and refuse to accept irrigation would have to give up farming, because he would not be able to compete with farmers on irrigated land.
10992. *Mr. Gipps.*] Where do you derive your water-supply from? The river.
10993. Is it ever brackish? Not to my knowledge.
- Wells. 10994. Are there many wells in the district? About the towns, but not very many; there are more in Richmond than in Windsor.
- Depth. 10995. What is the average depth? 40 or 50 feet in Richmond. Many people in Richmond have put wells down and they tell me they go that depth and, as a rule, get very good water.
- Stratum. 10996. In what stratum? Mostly on the boulder.
- Windmills. 10997. Are there any windmills in Richmond? I have one; I do not think they are much use.
10998. No good? They are good as far as they go, that is, when the wind blows; they are not regular.
10999. What is the size? From 12 to 14 feet.

Mr. J. B. Johnston called in and examined:—

- Mr. J.B. Johnston. 11000. *Vice-President.*] How long have you been a resident in this district? Since I was born, 1809.
- 19 April, 1886. 11001. What is your experience in reference to the floods—have you found that the high floods do considerably more damage than the smaller ones? There has only been one flood in my experience that did much damage; that was an exceedingly high one, the 1867 flood.
- Floods. 11002. Have the floods been rather beneficial than otherwise? In many places they have been very beneficial; for instance, I have a piece of land over the creek here, which is very low, in fact, it used to be always under water many years ago. Well, that high flood brought down silt and left it 2 feet deep all over it. That raised the land and improved it.
- Effects. 11003. Do you find, when there is a series of years without floods, that the land becomes poor? Well, it will not produce such large crops.
11004. But then it is enriched by the next flood that comes? Yes. Two years, last September, there was a small flood, it just went over the low land about the river; it went over that low land of mine across the creek. The consequence was, that during this exceedingly dry season, we have had five good cuttings of lucerne. Although the floods will damage the crops that are on the land, yet when they come, they prove beneficial in following years.
- 11005.

11005. As a general thing, have there been light crops this season? Very light in the neighbourhood of Windsor; down the river and that way, they have had good crops because they have had rain.
11006. Have you had any experience of irrigation? No, nothing worth speaking of, except with reference to Chinamen who water their gardens. It strikes me that plants require water above ground, as well as below the surface, to supply the deficiency of atmospheric moisture.
11007. Do you find that when irrigated the land produces much larger crops? Yes.
11008. Do you think that, if any scheme of irrigation were adopted over a large area in this district, it would be very beneficial? It would be very beneficial, if the people could be got to adopt the system and carry it out.
11009. Do you think there would be any difficulty about that? I cannot say.
11010. You think they would require educating up to it? I think so; people follow the old plan of growing corn and trusting to Providence for better times to come.
11011. I suppose that if it were shown to these people that, by a system of irrigation, they could produce three or four times the quantity of grain, or double the present quantity that they do now, they would be willing to pay for the privilege of using the water? One would think so.
11012. Do you think a system of irrigation would be managed better by a local Trust or by the Government? I should think by the Government; but, of course, local authorities would know better when the thing was required and when it should be applied.
11013. I mean, would it be better for the carrying out of large works, for the spending of money in the district, and for making laws to govern the system? That is a matter that requires a great deal of consideration. In the first instance, at all events, I think it would be advisable for the Government to carry out the works; then they might leave it to local authorities to use them. It is very questionable whether the people in the district would be disposed to contribute sufficient funds to construct the works in the first instance.
11014. Do you know whether there are many wells in the district? I think there are a few.
11015. You do not know whether they touch any large underground currents of water, from which supplies could be drawn for irrigation purposes? No; there is a well here, that I get a supply from; it is very good water, but the supply would easily be exhausted.
11016. Do you know of any depressions in the country, where, by means of dams, large quantities of water could be conserved? Yes, at Pitt Town common, a large amount of water could be conserved at a sufficient elevation to throw it over the land, and also over the Wilberforce side. I do not think there is much difficulty in finding places to construct reservoirs; the difficulty would be to get the work done.
11017. *Mr. Murray.*] Are you a large landowner? No; I have about 200 acres, and that is not all agricultural.
11018. Do you work it all yourself? I do not work any myself.
11019. I suppose you would be willing to contribute towards the interest on the outlay, upon a system of irrigation? I should.
11020. Do you think it would make a great revolution in the farming district? It would make a very great alteration; we could depend upon getting crops when we put in seed, unless floods came and took it away. It is 20 years since we had a great flood.
11021. Do you think that these reservoirs, if made, would be a preventive against floods, through being catchments for the water? To the extent of their capacity they would prevent the floods. Many people were under the impression that the Sydney water-scheme would take a great amount of water, but I do not think it would have any effect on the floods.
11022. *Vice-President.*] Have you not found that in consequence of the water taken for the Sydney supply the water in the river has decreased considerably? No; I do not think it has. In 1840 and 1841, we had three successive seasons of drought; the river was then salt, and the water could not be used, up to the Cattai Creek. I was living on the river at the time.
11023. How far is that below Windsor? About 8 miles.
11024. It was salt to there in that dry season? Yes; it is not salt now up to where I was living, nearly 20 miles below this place; it is not salt to within 30 miles of Windsor; it is a little brackish, but they use it.

Mr. John Tebbutt, F.R.A.S., called in and examined:—

11025. *Vice-President.*] I think you have a record, have you not, of the rainfalls and floods in the district for a long time past? I have a record of the floods since 1856—every flood and every fresh; also a record of the rainfall from 1862 to the present time. They have been published, with other meteorological results, in four parts, and there is another part in the press now.
11026. Will you tell us what has been your experience of the floods? I may say that, if a flood comes in June, July, or August, the destruction, so far as the crop is concerned, is not very great, because the crop is pretty well all gathered in; but in any other month of the year a flood is very destructive. I suppose that the flood of 1867 and one or two in 1870 were the most destructive.
11027. Were there two large floods here in 1870 and 1873? There was a high flood in April, 1870; on the 26th and 27th of February, 1873, the water rose above the flood-mark of April 29 and 30, 1860; the flood of April, 1860, was about 3 inches below the great August flood of 1857; the flood of February 26 and 27, 1873, was a very high flood.
11028. Do you think there is, as a rule, any compensating advantage from these floods, in the shape of improvement of the land? Yes, in some cases; but the drawbacks are perhaps quite as great as the benefits. A rich deposit is left in some instances, whilst in others we have the soil swept away and a sandy deposit left.
11029. Which is the more common of the two? I rather think the destructive element.
11030. Then you think it would be beneficial to the district if anything could be done to prevent these floods? Most certainly.
11031. We have it in evidence from many people that, as a rule, floods are beneficial rather than otherwise? There is one thing to be considered, namely: how would that be done—by embankments, or by clearing away obstructions to allow the water to fall away freely?
11032. Both by detaining the water at higher levels, and also by clearing the channel and removing obstructions? The engineering work would have to be very good, or, if it broke away, it would create more destruction than ever; it would be awful, the water would come down so suddenly.

11033.

- Mr. J. Tebbutt, F.R.A.S.  
19 April, 1886.  
Duration of floods.  
Course of river.
11033. Then you think, taking the floods as a whole, they have done more harm than good? I can hardly decide the matter. It is *in equilibrio*. The floods renew the soil, and we have better crops; but I rather think they have done more harm than good.
11034. What is about the average duration of the floods on the ground; do they vary much in the time they remain? I should say the time is from four to six days; altogether they may take two or three days to rise, and two or three to fall.
11035. Has there been much alteration in the natural bed of the rivers during your experience of the floods? Yes, there has been a considerable alteration; I suppose the channel of the river is changed in some places to the extent of 150 yards.
- Silt. 11036. Is it widened? It is in some places quite removed; the other side was formerly the middle of the river.
11037. Has the bed of the river silted up since you remember? Very much; the reach extending downward from Ben the Fisherman's Point was a splendid one. Regattas were held here; but now there is very little water.
11038. Have you observed that at any particular height of the floods the river was more likely to silt up than at others, or at any particular height to clear it out? No; it has not been cleared to my knowledge.
11039. There has never been any clearing of the river by the smaller floods? Not that I am aware of.
11040. We have been told in evidence at Richmond that the small floods would very likely clear the silt out; have you had any such experience? No.
11041. Do you think it has been a great drawback to the district that the river has been silted up? Yes, a very great drawback; it injures our trade. In the lower parts of the river we should have one or two steamers carrying passengers and cargo if it were not for the silting up of the river.
11042. To Windsor? Yes.
11043. And they cannot do so now? No; very recently a flat-bottomed vessel was in use.
11044. A short time ago steamers used to run up here? Yes; a very large vessel could go up at one time; it was very deep here.
- Droughts. 11045. What has been the effect of the droughts in this district; have they recently been as bad as they were formerly? There have been worse droughts in the past. Some forty years ago there was an extensive drought, and couch-grass had to be dug up and washed for the stock; that has not been done yet in this case.
11046. I suppose at that time there was not much crop in the district? The floods are very destructive; that has told its tale in the large amount of relief extended to the farmers in the district for their losses. We have had several Flood Relief Committees; I have been Secretary myself to two of them.
- Loss 11047. Do you think the floods here have been a source of greater loss to the farmers than droughts? I rather think so, as judged by that.
11048. Of course, whatever compensating balance there may have been in floods, there can be none in droughts? Very frequently we can grow crops here during a drought, the land is so low. On the high lands they suffer severely.
- Rainfall cycles. 11049. Has the rainfall materially altered in the district during your experience? It has been very variable since I commenced observations. I have traced a three-year period, but it has quite disappeared now; I cannot see any more of it. That period must be due to some minor cause. As regards any larger cycle, observations have not been sufficiently extensive to verify it; it is only in recent years that reliable observations have been taken in the Colony.
11050. How far back do your observations go? Only to 1863, as far as the rainfall is concerned; as regards floods, to 1857.
- Clearing of timber. 11051. Do you think that the clearing off of the timber has anything to do with the rainfall? That is a question I cannot decide; there has not been a sufficient number of observations to enable me to say yes or no to that question. I dare say it will be decided in America before long, perhaps in Germany also.
- Irrigation. 11052. Have you had any experience of irrigation in the district? Only as far as my Chinese tenants are concerned; they irrigate from the river, and it is wonderful what a change they effect in their gardens.
11053. By steam? Yes.
11054. Simply to produce vegetables? Yes; they do not go beyond that.
- Effect. 11055. What has been the effect of the irrigation? It is magnificent. Before the gardens were irrigated there was nothing to be seen in them; three days afterwards they were like a Paradise.
11056. Do you think it would have a beneficial effect on the district generally if some large scheme of irrigation were developed? I think so, but I do not know whether the profits would meet the expenses.
- Cost. 11057. Do you know what it has cost these Chinamen for irrigation? I believe the cost of their apparatus is £150 or £160. They have been irrigating four or five acres of land, and they have some more which they have not yet commenced to irrigate.
11058. Do you say the cost of the engine and appliances is not more than £160? That is what they told me.
11059. And that enabled them to irrigate four acres? Yes; the water does not stand upon the land as it does on the rice-fields; they pour it on.
11060. You do not know what the daily cost of irrigation is, then? I do not know what the cost is in the consumption of wood and coal. They had an engineer at £4 or £5 a week, but they soon dispensed with him.
11061. Do you think it would be possible for you to get that information for the Commission? I think I could manage that; I should be happy to supply any written information on the subject.
- Water-rate. 11062. Do you think from your knowledge of the district that, if large irrigation works were established, it would be beneficial to the locality—do you think there would be any difficulty in levying a rate upon the land to pay the interest upon the outlay? I am afraid that farming is not a very remunerative business at the best of times.
11063. Not if you could double the crops? I do not think you could double them.
- Increase of crops 11064. We have evidence from a gentleman here that he is satisfied it would increase the crops four-fold at least? Perhaps a little allowance must be made. In scientific matters we consider bias in a great measure.
- Management. 11065. Is it your opinion that any work of this sort should be under the control of a Government Department or under a local Trust? From my experience I do not believe in local Trusts.
- Local government. 11066. Then you are not of opinion that the proposed Local Government Bill will be of much benefit to the country? The worst of it is that we get so little for our money. If the money were properly expended we should derive a benefit, but it seems to me that local bodies spend more than they ought to do in arriving at a small amount of benefit.
- Wells. 11067. Do you know anything of the under-currents of water in the district? There is one well to my knowledge

knowledge in the town ; it is at the barracks, and I was informed just now by a very good authority that there is 36 feet of water in it. It is brackish, but I think you would find that to be the case with every well within the municipal boundary. If you sink a well on the peninsula, or on the low lands, you get good water.

Mr.  
J. Tebbutt,  
F.R.A.S.

19 April, 1886.  
Quality.

11068. Is the water you get on the low lands fit for irrigation purposes? Yes.

11069. It does not contain salts injurious to vegetation? I think not.

11070. Since the river has silted up are there any extensive waterholes in the river, from which supplies could be drawn, sufficient for irrigation? I have no idea what quantity of water would be required for irrigation. At one time, no doubt, there would have been a good supply. Waterholes.

11071. Do you think that by putting sunken weirs in the old river channel it would stop the flow of water under the gravel, and give us a larger quantity of water for any purposes we may require? I think so. Sunken weirs.

11072. You think there is a large underflow in the silt that filled up the river? Yes; and our rainfall itself might be conserved. An immense quantity of water falls every year upon our soil here. Undercurrent.

11073. What is the average? The average rainfall is 32·8 inches. I will give a statement of the number of gallons. (*Appendix.*) That makes the average slightly over 17 gallons to the square foot. 1884 was a very dry year, drier than 1865. That would amount to 742,000 gallons per acre, and that is an immense quantity of water. I have given the average for 23 years. Rainfall.

11074. Do you know the rainfall on the ranges, Kurrajong—is it much in excess of this? Oh, much. Comrie's is somewhere about 52 inches, I believe; it is pretty nearly the Sydney rainfall. The mountains intercept the clouds, and showers fall that we have not.

11075. Was that rainfall pretty evenly distributed through the district? I may say for 8 or 10 miles round Windsor. Mr. Griffin has kept a rain-gauge for five or six years at Richmond, and his rainfall is almost exactly the same.

11076. *Mr Gipps.*] Did it fall in heavy storms, or in light rains, or at any particular period? Chiefly in winter.

11077. Gradually? Sometimes in heavy falls we have 4½ inches in a day.

11078. *Vice-President.*] Do you find any great difference in the quantity of rain falling at any particular time in wet and dry seasons—suppose you have a rainfall of 30 inches in one year and only 20 inches in another, do you find the rainfall in the year you have had the most was in larger quantities, or that when only 20 inches fell it was divided into small falls that would do very little good? In heavy years the rainfall is made up of heavy rains.

11079. It is not merely a difference between the 20 inches and 11 or 12, but that the 11 or 12 is spread over such a number of light falls that it is of little benefit; this is our experience in the western district, and I was wondering whether it was the same thing here? These heavy falls come at the floods. My return shows for a time a greater quantity every third year.

11080. *Mr. Murray.*] You mentioned that the floods were more destructive than beneficial? I think they are. Effects of floods.

11081. I presume the floods totally destroy the crops, the droughts only partially so? Yes. Another consideration is that, if we have a pretty good flood and the ground becomes saturated, we can stand what we term a drought, on the low lands in particular, for three or four years. The reason why we call this a great drought is, that we have not had a flood for some years, and we have no supply of water laid up.

11082. You consider that this is some compensation for the destruction done by the floods? Yes.

11083. Was 1862 your earliest observation? I commenced in the beginning of 1863; one year's work was done at the Telegraph Office by the telegraph clerk; that was 1862; after that, I took up the work, and have continued it ever since. Observation

11084. There has been scarcely sufficient time to observe whether there has been a falling off in the rainfall? No; it would require a century's observations.

11085. Do you think there is a falling off within the last five or six years? There has been; but I imagine we shall have more rain during the next five or six years. That is the way it has been so far as we can trace it.

11086. What is the value of the land? The best land is, I suppose, £50 an acre. Value of Land.

11087. What rent do the tenant-farmers pay? About 30s., I suppose, up to £2. It is very little that I get £2 for. Rent.

11088. Why is it valued at such a high rate, if it brings in such a low rental? I do not know; if the best land were put up, it would bring from £40 to £50.

11089. Then the farmers must be doing well? Small farmers can do best; a little farmer with a few cows makes money where a large farmer cannot. Farmers.

11090. If these farmers had a certainty of water on their land, would they not be inclined to pay a higher rate; being liable to drought frightens them from giving a high rental, I suppose? No doubt, they would give a higher rent. Another thing I should very much like to see is a good market.

11091. Have you had any experience in lucerne growing? Yes.

11092. What is the average yield of lucerne in a good year? Four or five cuttings—about 8 or 10 tons per acre. Lucerne yield;

11093. So much as 2 tons to the cutting? More than that sometimes.

11094. What would the price be in the market? It varies very much, from 30s. up to £4. The yield of maize is from about 60 to (I have known) 100 bushels; but that is a very rare thing. I have had 90 myself, but I think the average may be taken to be about 70. Maize

11095. This is not a good season, I believe? No.

11096. What is the average this year? In the peninsula, it will be about 70; but those are the best crops in the district; over the river, it is not above 50 or 55 bushels.

11097. And the lucerne? I do not know what it is this season; I do not suppose they will get more than 2 or 3 tons this season off an acre.

11098. Is it your impression that if there were a system of irrigation established, it would be a great benefit to the district? I think it would. Irrigation

11099. Would it increase the produce in the district to a great extent? I think so. There is another thing I should like to speak about; of course, we have a good water-supply already, as far as domestic purposes and live stock are concerned. Our river formerly had very good water in it, and the creek also, but within the last eight or ten years, the water has been almost ruined by several establishments on the creek. There are two wool-washing establishments and a tannery, and they have been pouring their filth into the creek and spoiling the water—it is not fit for beasts, much less for human consumption. The argument used in defence of these establishments is that, if we object to them, we are driving trade away. I say, they should be compelled to deodorize the stuff, and use it for manure. Pollution of River.

11100

- Mr. J. Tebbutt, F.R.A.S. 11100. This is South Creek? Yes; it empties into the river. It is a tidal river, and a tidal creek.
- 19 April, 1886. 11101. It does not affect the water further down? Oh, yes; as soon as the polluted water escapes from the creek, it is carried to and fro by the tide. I think the tide goes as far as Freeman's Reach.
11102. *Mr. Donkin.*] The salt-water does not come near Windsor? It has been known to be brackish at Pitt Town during a long drought.
- Cycles. 11103. The salt-water does not come here? No. In dry seasons, it gets as far as Pitt Town.
11104. You said you had observed three-year cycles? Yes; it has disappeared now.
11105. From your experience of dry years, do you think that we are due now for heavy rains? Not for three or four years; but that is merely surmise.
- Navigation 11106. You said that some years ago navigation was carried out to some extent to Windsor? Yes.
11107. Did the inhabitants before the time of the railways depend upon the navigation for their supplies? From the lower part of the river. When my father and uncle were in business, they got thousands and thousands of bushels of grain from the lower parts of the river.
- Local Trusts. 11108. Speaking of local Trusts, you do not think they would answer to carry out a scheme of irrigation, how do you think it ought to be done? By the Government.
- 1867 Flood. 11109. You recollect the 1867 flood? Yes.
11110. How far was that above the railway-station? I cannot tell.
11111. You know it was above Mulgrave Station? Yes; I think it was over the roof. It was 62½ feet over the mean tidal level.
- Rainfall. 11112. Mulgrave is higher than Windsor? No; it is lower than some parts.
11113. What do you make the average rainfall during that number of years? 32·8 inches for the twenty-three years. The rainfall for 1882 was 19·2 inches, and in 1870, it was 62·5 inches. That is quite three times as much, but these are extremes.
- Extremes. 11114. Do you think it would increase the rainfall to plant the flats with timber? I cannot say.
11115. Mr. Russell said he thought trees were the result of rain, not rain the result of trees? Yes; but sometimes the trees may act again upon the rain; that is the point.
- Climate 11116. *Mr. Gipps.*] Have you noticed any change in the climate in your experience with regard to heat and cold? The change in the temperature is very slight.
11117. What is the average heat? The average temperature is 64 degrees for twenty years.
11118. Do you experience any frosts here at all? Yes; we have had the thermometer down to 19 degrees on the grass, and up to 117 degrees in the shade.
11119. Did that affect the vineyards or orange plantations? I do not think it did very much. The intense cold was in the winter.
- Sand deposits. 11120. Which floods bring down the most sand, those from the Grose or those from the Nepean? I think neither. It was in 1870 that so much sand was brought down, but I cannot say from what place.
11121. Which branch was in the highest flood in 1870? I do not know; in 1867 a great deal of water came from the western district through the Grose, and from the south, and we had an easterly gale. The three causes combined produced the flood.
- Population. 11122. What is the population of Windsor? Somewhere about 2,000.
11123. How many houses are there? I cannot say.
- Water-supply. 11124. What is the present source of the water-supply? The river.
11125. How do they get their water? It is brought by water-carts. For some time the water was pumped up by a small engine to Cadell's brewery; at other times it is brought directly from the river.
- Price per barrel. 11126. What is the price per barrel? I have not paid anything. I depend principally upon underground tanks. I think it is about sixpence a cask.
11127. How many gallons in a cask? 50 or 60.
- South Creek. 11128. Are there any large creeks or rivers in the vicinity? We have South Creek, which empties into the Hawkesbury.
- Storage. 11129. Are there any positions for storing water in it? I do not know about that; it would have to be stopped up at the mouth.
12130. Would that impound a large area? Yes; I do not know how many miles; there are two branches. We have another small creek emptying into that again. It was called Jacky Carr's Creek. A good deal of water comes into that from Killarney way. In heavy rains a great deal of water comes through that creek into the main one.
11131. Are there any rivers that flow into the Hawkesbury? The Grose and the Colo.
- Cattai Creek. 11132. Are there any other streams? Cattai Creek.
11133. Is that a permanent creek? I do not know much about that.
- Killarney. 11134. You do not know any position from which the country could be supplied by gravitation? The only place is Killarney; it is pretty high.
- Carr's Creek. 11135. That has reference to South Creek? Yes, it comes down that branch—Carr's Creek.
11136. What height is that above tidal level? About 50 feet above the mean tidal level.
11137. That would supply the flats? Yes, that would supply the low levels.
11138. You said that the water from the Barrack well was brackish? So I am informed.
11139. Is that constantly used? I do not know.
11140. What does it bottom on? Through shale, I expect.
- Soil. 11141. Is the valley permeable or impermeable on the flats? Permeable.
- Formation. 11142. What are the general geological features with regard to the rocks? Chiefly sandstone.
11143. Are there any basaltic dykes? Not in my experience.
- Analysis of water 11144. *Mr. Murray.*] Has any analysis been made of the water? Not that I am aware of, unless Mr. Moriarty made an analysis. He gave us a report some five or six years ago, and he drew attention to the state of the water, and I pointed out that it was affected by the refuse from the tannery and wool-washing establishments.

Mr. H. J. West called in and examined:—

- Mr. H. J. West. 11145. *Vice-President.*] I understand you are a delegate from the Riverstone Political and Local Improvement League? Yes.
- 19 April, 1886. 11146. What experience have you had in the district? Seven years. I was one of the early purchasers in the Riverstone Estate, when it was first subdivided. 11147.



11147. What has been your experience in reference to the last five years as to the crops in the district, during what they call the drought; has the district been much affected by the drought? Yes; it has been greatly affected. Mr.  
H. J. West.
11148. I suppose that is shown in the very small returns that are got from the land? Yes; the principal productions here are oranges and grape-vines, within a radius of 5 or 6 miles from the Station. 19 April, 1886.  
Drought.
11149. Have they been affected by the drought? Not so much as you might expect.
11150. Has the neighbourhood been short of water in consequence of the drought? It has been very short.
11151. Then I presume there has not been sufficient water in the district for irrigation purposes? Oh, yes. There is Eastern Creek, it would supply Riverstone, with a population of 40,000 people, and also meet all requirements for irrigation purposes in a well planned Government scheme. Eastern Creek.
11152. Is there any place where that creek could be dammed so as to supply water for the irrigation of the district? Yes; there are several places along the creek. There is the portion at the rear of Riverstone Meat Works, that could be dammed up for that purpose. There is another portion on the Grange Farm Estate, and several other places along the creek. Storage.
11153. Have you had any experience of irrigation at all except in that locality? No, except at the rear of my house. I have a creek there dammed up, and by means of a force-pump I raise water to rear a few vegetables for my own table. Irrigation.
11154. Do you irrigate the trees? No, I do not. I do not believe in irrigation for orchards or vineyards.
11155. Do you not think it would be beneficial to irrigate orchards? I do not think I would attempt it. I would not attempt to carry water to my young trees, I should just let them take their own course; they have taken their own course, and done well.
11156. What is your opinion as to the benefit of irrigation for farm produce? So far as the nature of the soil about there is concerned, it is better for oranges and vineyards, and not so much for farming. It would be beneficial to the district if we could get water for domestic purposes and for manufacturing purposes, local industries, such as meat works, or whatever may come into the district. That is why I think irrigation would be beneficial in Riverstone, not so much for market purposes as for manufacturing and local industries. Storage.
11157. Do you mean that a system of irrigation would be beneficial for supplying the water required for consumption or as a motive power? As a motive power, and to supply domestic requirements.
11158. You think then that any system by which large quantities of water could be stored up for distribution would be of great benefit in the development of the district? It certainly would.
11159. Do you think the large landowners would be willing, supposing their land were enhanced in value by a system of irrigation, to pay a rate towards the interest on the outlay? Yes. During the last five years, I suppose, there have been about thirty estates cut up. I suppose that the revenue to the vendors must have been £200,000. They have been cut up into blocks with 30-foot frontages to 5 or 6 acres. They have been sold and settled upon, especially the farming blocks, and there would be a large revenue from these estates. Water-rate.
11160. How much land in this immediate vicinity do you suppose has been brought under cultivation during the last four or five years? About 200 acres. Cultivation.
11161. Not more than that? No; that is chiefly in orchards and vineyards. The district is young; it has only lately been put into the market. I have 10 acres myself under cultivation.
11162. In orchards? A young orangery.
11163. You do not know of any case in New South Wales where irrigation has been tried for orchards? I do not.
11164. Do you know of any sites particularly adapted for reservoirs? There is a site supposed to have been selected somewhere at the rear of Mr. Parrington's residence. Reservoirs.
11165. If any work of this sort were carried out, what would be the best way of controlling it—should it be under Government engineers, or a Department, or a local Board? It should be under a local Board, most decidedly. Management.
11166. Do you think from your experience that there is any necessity for legislation in that direction to enable people to make dams and reservoirs for themselves, or for villages to do this? I think it is quite necessary, and should be done. The Local Government Bill provides for that, if I am not mistaken. Legislation.
11167. Do you think that a Local Government Bill on the lines of similar Bills passed in Victoria, Queensland, and South Australia, would be beneficial to the country if passed? I am not acquainted with the Bills passed in the other Colonies.
11168. But you think that a Local Government Bill, giving power to tax land in the immediate neighbourhood for improvements in the district, and giving local authorities power to spend money, would be an advantage? Most decidedly, a great advantage.
11169. Are there any wells in your district? There was a well close to Riverstone Railway station, formerly occupied by Mr. Barbour some years ago, and not a stone's throw from where the Cosmopolitan Hall is erected. There is a well there about 20 feet deep; the water is brackish. Wells
11170. Is that the only well you know of? That is the only one.
11171. Is there anything else that you would suggest to the Commission? I would mention that the Riverstone League is about to have a boring machine brought into the district. They have sent to the Under Secretary for the Department of Mines to ask that a site may be approved; so we mean business. We may find either water, coal, or gold. Riverstone  
League.
11172. Is it proposed to bore to any great depth? Yes; the Inspector will have to come first and examine the site.
11173. What is your object? To get what we can, either gold, coal, or water.
11174. What inducement have you held out to the Government to come and bore there more than any other part of the country? We think the natural position of the country justifies the application.
11175. *Mr. Murray.*] What is the nature of the soil? It is a kind of loamy soil.
11176. Very deep? 8 or 9 inches is about the average.
11177. What is the subsoil? Red and yellow clay.
11178. Do you think that irrigation would not be beneficial? I do not think it is necessary for surface working. Irrigation.
11179. We have had it in evidence, from others who grow oranges, that it is almost impossible to keep the young trees in leaf this season; do you not think that water would help them? It is a matter of opinion. Some think that on hot days water will have a tendency to injure them. My young orange-trees have been planted eighteen months, and they are looking well. I have not put a pint of water to any of the trees.



- Mr. H. J. West. 11180. Have you had any experience of orange growing? Not much. This is the first time, and I believe in surface working.
11181. Have you seen older trees shedding their leaves in a dry season? I have not seen it, but I have heard of it.
11182. What do you propose to pay the Government for the use of the diamond drill? I could not tell you till the matter comes before the League.
11183. *Mr. Gipps.*] What distance is Riverstone from Windsor? About 8 miles.
11184. Is Riverstone on the actual creek-flats or on the higher ground? One portion lies on the flats adjoining the Eastern Creek, and another towards the old Windsor Road.
11185. Is the Eastern Creek a constantly running stream? Yes.
11186. A small one? A very heavy stream in wet wether.

Mr. John Gow called in and examined :—

- Mr. J. Gow. 11187. *Vice-President.*] Where do you reside? At Mulgrave, 2 miles from Windsor.
11188. Have you been long a resident in the district? In the district, over fifty years; in my present occupation, over thirty years.
- Floods. 11189. Then you have seen some floods passing over the ground? Yes.
11190. Are you of opinion that these floods have done great damage to the district? They have acted both ways. In some places the damage has been serious, and in others the effect has been very beneficial. The floods have improved some land and destroyed other land.
11191. You could not say whether the benefit has been greater than the injury? Well, I think, taking the whole district, the floods are better than the droughts.
11192. Do you think the benefit of the floods arises from the irrigation of the land, or from the deposits which the floods leave? From both.
- Yield of crops. 11193. What would you call a fair average crop of corn in this district in a season of flood? From 50 to 100 bushels have been produced.
11194. What would be the average through the district this season? Well, I am not acquainted with it very much this year. Many crops have entirely failed, but early crops are fair. They might run something like from 40 to 50 bushels. My own will run about 60.
- Irrigation. 11195. I think you have some experience of irrigation? I have had one year's experience of it.
11196. In what way have you been irrigating? By means of a steam-pump.
11197. And how have you distributed the water? I have pumped it up to a higher level, to a tank; and from either side perforated pipes along the higher levels have distributed the water.
11198. And what has been the result? This year the result has been considerable; it has more than doubled the crop.
11199. Have you any idea as to the quantity of water that you have used in irrigating? For the vines we have used about 2 inches to 5 inches, about  $2\frac{1}{2}$  gallons to the foot.
11200. And on the oranges? I have not practised on the oranges; I have only just planted them.
11201. Your experience is chiefly with regard to vines? Yes.
11202. What effect has it had on the fruit-trees generally? A very good effect. Fruit which would have been utterly useless has turned out very good.
11203. Has it paid you for the labour? Yes, I think so.
11204. You are of opinion that, if some large scheme of irrigation were introduced, it would be generally beneficial to the district? Yes, I think it would. I think we stand at a great disadvantage here. The only place I know of which would irrigate the district generally is the Grose River. It would depend on whether that river could be sufficiently dammed to raise the water.
11205. Do you know anything of Wheeny Creek? Very little.
11206. Do you not think it possible to bring water from the higher levels to the Nepean? It would be possible, but very expensive.
- Water-rate. 11207. If it could be carried out at a reasonable cost, would it be beneficial to the district? Yes.
11208. Do you think the landowners would contribute to pay interest on the outlay? That would depend on the outlay.
11209. What do you think yourself the owners of the best lands in the district would be willing to pay per acre for a supply of water; you are getting 30s. an acre without water; what would you pay per acre if the same land could have a supply of from 5 to 10 inches of water to the acre? It would depend greatly upon the seasons. In dry seasons it would be very valuable; in ordinary seasons it would be worth but little.
11210. It would enable you to make sure of a crop every season, wet or dry? Yes, no doubt.
11211. Do you think it would be worth while to pay 5s., 8s., or 10s. for the use of the water? I think it would.
- Waterings. 11212. Is the quantity of water that you use upon your vines ample for them, or is that all you can give them? We had any quantity of water; we might have used a little more. Another year I shall commence sooner, and give three waterings instead of two.
- Cost of plant. 11213. What has been the cost originally for the plant? I only intended to water 10 acres when I first laid it down, and that cost about £250.
11214. From what depth have you to raise the water? About 55 feet.
11215. That is the greatest depth? Yes.
11216. From a creek? From South Creek.
- Cost of pumping 11217. What was the cost per acre for the pumping and distributing of the water? I have no estimate of that; we have done it among ourselves. One person could nearly always attend to it, both to the distribution and the pumping. You might say it occupied the time of one person, and about half the time of another person.
11218. And there is wood and coal to be added to that? Yes; that would not amount to above 5s. a day.
11219. Would 15s. a day cover the whole cost? Yes, about that.
11220. And how much would that water? It would only just water in the height of summer for particular purposes.
11221. Six months in the year? Oh, no; only about two months, using it altogether for grape-crops.
11222. Do you know of anyone else who is likely to follow in your footsteps in consequence of the experience gained by you? Yes; there are two or three persons, who were speaking to me about it. 11223.

11223. They are likely to do the same thing? I think so.
11224. What sort of pump do you use for forcing water? Shanks's pump. Mr. J. Gow.
11225. Has that given you satisfaction? Yes; entire satisfaction.
11226. What is the delivery of that pump? About 1,800 gallons an hour. If I were commencing again, I would have one that would throw 5,000 to 7,000 gallons per hour for 20 acres. 19 April, 1886.
11227. What size of engine have you? A 2-horse power engine; the grazing land would pay for it. Engine.
11228. Have you tried it in that way? Yes; I am sure it would pay over and over again.
11229. Watering on the ordinary land? Yes, with perforated pipes.
11230. Do you include perforated pipes in your £250 cost? Yes.
11231. Do you know anything at all as to the system prevalent in America of watering underground through the roots by pipes? No; I believe in it though; I believe it is the best system. My object is to put the water on in such a manner that it will penetrate 18 inches or 2 feet straight away. We found the correct way was to let it flow down the holes very slowly; perforated pipes underground would be an admirable idea. Surface watering is a most injurious thing. Underground watering.
11232. How many times do you require to saturate the ground for fruit-trees? About three times when it is excessively dry. Three good waterings with attention to the land afterwards are sufficient. Watering fruit-trees.
11233. *Mr. Gipps.*] What is the depth of water to each watering? About 2½ inches, about 2 or 3 gallons to the foot.
11234. Do you know much about wells in this district? Not very much; I know of one adjoining me.
11235. What has been the character of this well? Good water. Wells.
11236. Fit for irrigation? I do not think we have enough for that.
11237. What would be the depth? The well near me is about 10 feet.
11238. You are on low ground? Yes; I do not believe it is a living spring, but only soakage.
11239. *Mr. Murray.*] Is there plenty of water at South Creek for a large quantity of land? Yes. Supply in South Creek.
11240. Of good quality? Good enough for that.
11241. You irrigate 10 acres? Yes.
11242. Is your plant capable of irrigating very much more? It depends upon the seasons. I think it would manage 20 acres, working night and day.

THURSDAY, 15 JULY, 1886.

At Sydney.

Present:—

MR. BARTON, M.P.,  
MR. DONKIN, J.P.,

MR. FRANKLIN, C.E.,  
MR. GIPPS, C.E.,

MR. M'MORDIE, B.E., M.I.C.E.

RUSSELL BARTON, Esq., M.P., VICE-PRESIDENT, IN THE CHAIR.

Mr. W. T. Poole called in and examined:—

11243. *Vice-President.*] We wish to examine you in regard to your recent trip to Europe; but instead of putting to you the usual stereotyped questions, perhaps it will be better if we leave it to yourself to give us what information you may think useful to us and adapted to the colony? Yes; probably that will be the better way. I may say that, prior to my leaving the colony for Europe I received a communication from the President of this Commission, requesting me to obtain information on the subject of water conservation and irrigation in the various countries which I might visit. As far as my time would permit, I have done that. The first place which I thought would be instructive to examine was the well known plains of Lombardy, which have been subject to irrigation for centuries; and I made a trip through these plains from Venice right up to Milan. I may say that the first thing I was anxious to ascertain was the nature of the subsoil, and the soil itself. I found that from Verona to Milan, which is through the principal part of the plains, the plain itself is underlain with a free gravel-drift the whole way through. I had ample opportunities of judging of that from the formation in the railway cuttings. I do not recollect a single instance where there was anything but a gravel-drift. Mr. W. T. Poole.  
15 July, 1886.
11244. *Mr. Gipps.*] What depth? The soil itself? Irrigation in Lombardy.  
Subsoil.
11245. Yes; above the gravel-drift? About 18 inches. Depth.
11246. And how deep was the gravel-drift? I never saw the bottom of the drift.
11247. *Mr. Franklin.*] Were the side cuttings dry? Quite dry.
11248. There was no water-bearing gravel at that depth? No.
11249. *Mr. Gipps.*] The features of the country are level? Oh, yes; between Verona and Padua it is level, but much lower; but from there to Venice it may be described in the words of Dr. Lang as "drowned land." Now as to the system. I noticed that most of the subsidiary streams intersecting this plain have been raised; the banks have been raised artificially; in many cases the bed of the stream itself is above the level of the surrounding land. In a case like that, of course, it is easy to pierce these banks, and let the water flow by gravitation over the whole country within reach of it. Features of country.  
Subsidiary streams.
11250. *Vice-President.*] Nature has done exactly there what art has done in America? Partly nature, and partly art. The banks have been raised artificially by man's labour, and the continued flow of the water from the mountains downward has brought the gravel along and raised the beds. The whole country looks like a checker board, intersected as it is by these irrigation works. The holdings are very small. Banks.  
Holdings.
11251. *Mr. Gipps.*] What river do they draw water from? I cannot tell you that; but I noticed that lots of the subsidiary streams were in the position I have stated. The Po itself is not interfered with.
11252. I heard the Po was dry? It was not perfectly dry where I crossed it; but no doubt a vast quantity of water is diverted from it. So far as the reticulation is concerned, I noticed there were two sets of ditches. This bears upon the nature of the substrata. The delivery ditches were running full, and necessarily they had been puddled; and within 8 or 10 feet of them in most cases was a dry open ditch with gravel on the bottom. I concluded from these observations that the object of the dry ditches is to provide for local storm-water—practically, absorbing ditches. It does not appear to me that water runs through them; the irrigation-water, as it percolates through the upper soil, finds its way readily into the gravel below and disperses to its natural levels. River Po.  
Reticulation.  
Delivery ditches.  
Absorbing ditches.]

- Mr. 11253. *Mr. Franklin.*] You are speaking now of the main channel and the distributaries running at right angles, or at any angle from it—what sort of sluices have they? They are very rudimentary—that is, for the farm reticulation. It is just a simple wooden valve running across the ditches, and the ditches in most cases seem to have a cross-section about equal to our railway catchwater-drains.
- W. T. Poole. 11254. What I mean is, what are the sides-sluices like? They are lifting-sluices.
- 15 July, 1886. 11255. And the tow-paths are carried over these on arches? Yes; where there is navigation, but in most cases there is no navigation.
- Sluices. 11256. They do not go into elaborate brickwork? No; in the main openings, where the water is taken from a main river, the works are substantial; but on what may be called the subsidiary streams, the works are light, and what we would call temporary.
- Tow-paths. 11257. *Vice-President.*] How are these main arteries supplied? From the main rivers.
- Openings. 11258. That is, from constantly running rivers: they have no water in reserve in dams or reservoirs? I saw none. The formation of Italy is altogether different from that of this country; there you have a central backbone range that gives you water all the year round, either in the rainfall, or in melting snows.
- Supply. 11259. What water per acre do they put on the land for irrigation purposes? I do not know; I thought that was a matter which could be easily ascertained here. A detail of that kind, and also the cost of the works done, did not appear to me to be of very much value, because I know from long experience that the cost of works in Italy will be but a poor guide to us here; labour and everything else is so much cheaper in Italy.
- Cost of works. 11260. *Mr. Donkin.*] What is the crop under irrigation? Grass and every kind of crops. I would like to read an extract from my diary.
- Crops. *May 18, 1885.*—From Verona to Milan the country is one large garden, well watered naturally; and in addition, this portion of the beautiful plains of Lombardy is thoroughly irrigated, and the crops on every hand exceedingly good, especially the grass crops. The system of irrigation is very simple, and, I think, very effective. The soil all through is underlaid with a gravel drift.
11261. Do they flood the lands? You see the water creeping over; the ditches are kept just level full. Of course, the delivery ditches are not very far apart.
- Distance 11262. What distance? They did not appear to me to be above four or five chains, and sometimes less; between ditches. that, too, is determined by the smallness of the holdings. Italy, especially in this part, is broken up into small holdings.
- Irrigation 11263. *Mr. Franklin.*] Are the boundaries of these irrigable holdings protected by raised banks so as to hold a given quantity of water? No; the system seems to be this: the delivery ditches are running almost constantly, and when the farmer wants the water on to the land, he simply puts on the valves and raises it up; and when he does not want it, passes it on to somebody else.
- system. 11264. You did not ascertain under what system of supervision that is done? No, I did not. Every little holding is divided into little patches of beans, rye, grass-crops, and so on. It is very easy to ascertain a man's boundary; you will see it defined by a row of mulberry trees, and vines are festooned from the trees.
- Surface-soil. 11265. *Mr. Donkin.*] What is the surface-soil? The surface-soil is rather darker in its colour than (say) for instance, the soil of the Macleay River. It is a pure alluvial deposit; looking at it geologically, it is unmistakably alluvial.
11266. *Mr. Franklin.*] Had you an opportunity to compare any of the irrigated land with unirrigated land as to the crops produced? No; and I saw no land but what was irrigated, unless it happened to be a bit of rise, and in these cases it was gravel. This system continues to within a few miles of Milan.
- Works on Meuse 11267. *Vice-President.*] What was your next point? My next point was to visit the Meuse at Namur, River. Belgium. Feeling interested in what I saw there, I put myself in communication with the engineer in charge of the works as well as I could. He could not speak English, and I could not speak French; but I took the precaution to bring an interpreter with me from Brussels, and we got along very well together, the engineer being very courteous. I went first of all to the *barrage*, as they term the dam down below Namur, and had a look at it.
- Barrage. 11268. *Mr. Franklin.*] Those were the headworks you saw? No; there are a number of these barrages on the Meuse. I afterwards inspected another one; but they are both the same in principle; they are combined needle and automatic dams. First of all there is the lock or passage near one bank of the river, then the remaining portion of the river is divided into two sections, with a very firm and massive dividing wall between the two sections; one of these sections is fitted with an automatic system, and the other with the needles. The engineer was kind enough to call his men out to show me the action of both systems.
- Locks. 11269. *Mr. Franklin.*] You are referring to the movable weirs? Yes, to both the automatic and the needle systems.
11270. Before you describe the action of the two systems of movable weirs, please state how they prepare the foundation for the fixing of these weirs? In masonry.
- Foundations. 11271. *Mr. Gipps.*] Concrete, is it not? No, masonry.
11272. In every case you saw? In these two cases; but, I take it, there is no ready-cut-and-dried rule to provide for the foundations of expensive works of this kind.
- Crest-level. 11273. *Mr. Franklin.*] What would be the crest-level, taking the ordinary general level of the river; how far do they consider it proper to raise the foundation of this crest—you know, what we call summer level? Oh no, it is not summer level; it is not above a foot or eighteen inches above the bed of the river.
11274. It is all submerged work? Yes, what I saw.
11275. Any unwatered? No. At this point I would like to quote from my diary:—

*May 27, 1885.*—Took the train from Brussels to Namur; on arrival there, inspected first the weir below the town; found it to be partly needle and partly automatic; then went up the river, and introduced myself to the engineer in charge of the works, and with him visited the weir above the town; this, like the weir below the town, is an extensive and complete work, with a lock on one side for navigation; the weir is then divided into two sections, apparently about the same length each. One section, needles; and the other, the new automatic system. The engineer showed me the working of both systems; they are both excellent, but require extensive masonry foundations and dividing walls to render them manageable and safe. The engineer likes the needle system as the most economical in construction, and as forming a more water-tight weir, and the automatic as the safer system in times of sudden flood. The rise of water here, due to the weir, is 1·80 metres, and at the one below the town 1·50 metres. I incline strongly to the engineer's opinion that a compound automatic and needle system is the best; he has promised to send to London for me a complete copy of the detail drawings of the automatic system. Plans and details of the needle system I shall try and get in Brussels.

The divisions run on the longitudinal axis of the river.

11276.

11276. Are there shutters in the automatic system, and do they oscillate if the river rises over a certain level? Yes, they hinge over, as you will see in this plan (*Appendix E*). In these other plans (exhibited) you will see a section of the needle weir. At the time I was in Belgium there was a Commission of European engineers who came to examine these works. Mr. W. T. Poole.  
15 July, 1886.
11277. They pitch the needles do they not? Yes, into position. Working of needles.
11278. In putting the needles over the top of the crest, suppose they spread at the foot, what means have they of putting them on the crest? They cannot spread at the foot; there is no means of altering them when once they are in position; you can only throw down the locking bar and start afresh. Suppose there are two men pitching, and when the needles are up, there is not quite room for another one, they simply put down a covering needle, and the pressure of the water brings it up close. No doubt, some practice is required; of course, out here, men at first would be inexperienced with the weir; you would require some spare needles.
11279. Having raised the works by means of the weir, what do they do with that at the back of the weir, is there an off-take with revetment walls? No, it did not appear to me so. These works are not for irrigation, they are simply to raise the level of the water at various points for navigation; but, when once you raise the level of the water, you can devote the water to any purpose whatever. There are no irrigation works around Namur. Purpose of works.
11280. *Mr. Gipps.*] Is it all tidal works? No, it is not tidal water; you are a long way above tidal influence at Namur.
11281. *Mr. Franklin.*] Really, the object of raising the water over the large area of the river is that you keep a head of water, so that you can make your locks on one side; it reduces the current and gives you a certain series of falls? Yes; and they have the water for any purpose whatever. Of course, the tow-path is on the one side only of the river; there is no haulage on the opposite side.
11282. *Mr. Donkin.*] Have they trap-doors to open and let the water escape before it comes to the point of oscillation? Yes, by the central openings in the shutter itself. Trap-doors.
11283. *Mr. Franklin.*] They are provided to tide over threatened danger from a flood? Of course, they are the regulating medium. I intended to examine the enormous masonry work at Gileppe; but finding myself so near the coast, I was anxious to get across to London; and once there, I put myself in communication with the Agent-General, and asked him what he was doing or had done in the matter of your inquiry as to water conservation. Mr. Yardley told me he had, through the agency of the Foreign Office, collected all the information it was possible to obtain, something like half-a-ton weight, and had forwarded it on through our Government for the use of this Commission.
11284. *Vice-President.*] I should like to know where it is? I am only telling you what he told me. Naturally, I then felt reluctant to travel back to Belgium to seek for information which you would likely have.
11285. *Mr. Donkin.*] Do you know in round figures the cost of the weir you described? No; I cannot see what use that would be. Prices in Belgium are no guide for us here. Cost of weir.
- [The Vice-President retired, and Mr. Franklin took the chair.]
11286. *Chairman.*] Did any of the systems you saw in operation strike you as applicable to our rivers? Yes; it struck me that the combined needle and automatic system, or either one of them, would answer. And if you could once get over the difficulty of making the needles act automatically, I should say adopt the needle system on all the lower reaches of our rivers, but do not use them in the upper parts of the river where heavy timber is likely to be brought down. Where the current is slow and reasonably free of timber and rubbish, I would certainly be strongly in favour of this comparatively inexpensive system; but in other cases, where there is a great fall on the river (say) a flow of water 4 or 5 miles an hour, I should be in favour of fixed dams. Weirs applicable here.
11287. How do you think they could be applied (say) between Wilcannia and Bourke, supposing you wanted to raise the water temporarily to a certain height? I have never been in that district; but I take it, there is very little fall in the river. I ascertained the rate of the flow of water at Namur to be 1 metre per second—something like  $2\frac{1}{4}$  English miles per hour.
11288. If this system of movable weir were applied here in our rivers, such as the Darling, the conditions being appropriate, what sort of work would be necessary to protect the banks? At the site where the weir crosses? Protection of banks.
11289. Yes? It is shown in the plan I have produced.
11290. *Mr. Donkin.*] Do you not think it would be possible to have an automatic bar attached to the needles, so that when the water came up, it would raise each needle up? I should not advise that; I should advise certainly the letting down of the cross-bar and allowing that section of needles to go straight away; that would be the easiest way. Working of needles.
11291. Would wooden needles do? They are wooden needles, made of pine  $3\frac{1}{2}$  to 4 inches square. Size of needles.
11292. *Chairman.*] With regard to your general observations of the different systems, did anything occur to you particularly as perfectly applicable to our requirements here? As to being adapted for all cases.
11293. For the retaining and distributing of water? I have never seen any system of barrage or dam that would suit all cases.
11294. Or any cases? Oh yes, some cases.
11295. Have you fixed your mind on any part of the Colony where you might apply any of those cases you have stated? Well, take Gunnedah, on the Namoi; I should certainly consider that the combined needle and automatic system would be applicable there. Application to the Namoi.
11296. For throwing water back in steps up the river-bed? Yes; but do not make the steps too heavy. I think you should not go more than 8 or 9 feet from the sill.
11297. That would give in the ordinary fall of the Namoi about 9 miles of water? About that.
11298. *Mr. Gipps.*] Are you aware that the needle system is being used in America in greater heights and greater falls than you mention? I am not aware of it; but it seems to me that, if the velocity of the water in the channel is sufficient to move the gravel along its bed, that is not a position for a needle-dam. Needle system in America.
11299. You believe the proper position for a moveable weir is where the current runs slowly, and where plenty of time could be given by telegraph or otherwise to remove the needles? Yes.
11300. And that could be carried out from Bourke to Wentworth, from Wagga Wagga to Wentworth, and from Albury to Wentworth? Yes. As I said before, I consider this system applicable in all the lower reaches of our rivers, but not where you approach the mountain ridges. In those cases I should suggest a solid dam. The sections are divided into about 4 feet; the river is divided, for the purpose of barrage, into two. There is the lock outside; but that may be dismissed from our view just now. It may not

Mr. W. T. Poole. not be necessary in small rivers to divide them at all; and where there is a large opening, it may be necessary to have three or four sections. Because the Meuse is divided into two, I do not take that as a hard and fast rule. The reason for using the automatic shutters is to prevent damage to the barrage or dam in times of sudden flood, and not with a view to facilitate the navigation. The needles all across, or the automatic system all across, would provide for that just as well. The needles are very much cheaper than the automatic.

15 July, 1886.

Works on the Severn.

11301. *Mr. Donkin.*] Is the wood preserved in any way? No; it did not seem to be even painted.  
 11302. *Chairman.*] Have you anything to add? Not with respect to these. I examined the works on the Severn with a similar object, and I can give you some information on that point. At my request, the Agent-General caused a set of plans of the works at Diglis Locks to be drawn and sent to the Commission.  
 11303. *Mr. M'Mordie.*] The works on the Severn are for the purposes of navigation, and not of irrigation, are they not? They are for navigation; but it seems to me that if you raise the water by works, you can do anything you like with it afterwards.  
 11304. But there is a difference in the works required to be constructed? That may be.  
 11305. *Mr. Gipps.*] The works on the Severn are for drainage too? Not a bit. The Severn is like our Macleay in the formation of its banks.

THURSDAY, 22 JULY, 1886.

Present:—

MR. BARTON, M.P.,  
 MR. DONKIN, J.P.,

MR. FRANKLIN, C.E.,  
 MR. GIPPS, C.E.,

MR. M'MORDIE, B.E., M.I.C.E.

RUSSELL BARTON, Esq., M.P., VICE-PRESIDENT, IN THE CHAIR.

Mr. W. T. Poole called in and further examined:—

Mr. W. T. Poole. 11306. *Mr. Franklin.*] Referring to the works on the Meuse, what is the level of the crest above the bed of the river? By the crest do you mean the foundation of the masonry on the top of the needles?  
 11307. The level across the bed of the river on which the automatic weir is fixed—the sill? It seemed to me that, as much as possible, they carried heavy foundations; they do not raise up the crests more than is absolutely necessary.

12 July, 1886.

Level of sill.

Navigation.

11308. *Vice-President.*] Is the river open for navigation at this particular place? Yes. In all places that I saw, both in Belgium and in Britain, navigation is altogether apart from the works for the conservation of water; they are two separate subjects. They have works first of all, by fixed or movable weirs, to raise the water to some determined height; what is to be done with the water afterwards is another consideration. At the places which I visited in Belgium, the water is used principally for navigation purposes; of course, it is so in Britain; here is an example in the works at Diglis Locks, on the Severn, plans of which I produce; the water is used for navigation purposes, and also for the supply of manufactories along the banks of the river. In both cases, I speak advisedly, the water is not diverted for irrigation; it is there stored for any purpose for which it might be required. I do not think that there is any specific, fixed rule as to the height of the foundation or crest above the normal bed of the river; I think that that is a matter which is determined altogether by local circumstances.

Diglis Locks.

Foundation works.

Purpose of works.

11309. *Mr. Franklin.*] There is a very strong objection to raising permanent obstructions to any very great height in our rivers? I know that in both the weirs which I examined on the Meuse, the foundation works were entirely submerged; I could not see anything of them on the lower side of the dam, but they were certainly not at any very great depth below what we should term the summer level.

11310. You say that these weirs were constructed for the purpose of conserving water? Yes.

11311. Was it conserved with a view to its distribution for irrigation purposes? Not in these cases.

11312. Is it so in some cases? Not in any of the works of which I have submitted plans to you; the works are constructed merely to hold back the water.

11313. For what purpose? Principally for navigation, and for the use of manufactories along the banks of the river.

11314. When the obstruction was made by a movable weir, was there any advantage taken, by deviation of the river, in carrying navigation around the point of obstruction? Advantage is taken on the Meuse of the bends or peculiarities of the river; there is a navigable passage, as they call it. The crest of the works would be above the ordinary level of the river if it was left free; the water is held up to a height of 1·80 metres at the weir above Namur, and at the weir below 1·50 metres; the lock and navigation works are altogether distinct from the impounding works.

Locks.

11315. The downward navigation is carried on from the raised head of water above the weir? The upper water is the level of the lock when it is full, and when the lock is empty the lower flood-gates are lifted; where there is not a natural ana-branch they construct one.

Size of locks and passages.

11316. What are the sizes of the passages and the locks? In the case of the automatic systems there are two kinds, one large and one small; there is a navigable pass, so that a vessel of larger size than the lock is made to hold can go through; if they do not value the water, they throw down a considerable section of the automatic weirs, to allow the vessel to steam through; but she has to go through against the rush of water; they have this provision in case of extreme necessity.

Oblique weirs.

11317. *Mr. Donkin.*] Do they use oblique weirs in the Continent? Movable weirs do away with the necessity for that; as where they have needles or automatic weirs they can regulate the head of water so nicely by taking out sections of needles, or throwing down sections of the weirs.

11318. You have explained how they move the shutters from the automatic weirs; in the needles, I understand, they take a few sections out? Yes.

Working the needles.]

11319. *Mr. Gipps.*] They take one out? No; what is done is this: the whole length of the section of the weir—the needle section—is divided into about 4 feet lengths or bays, the cross-bar supports the upper end of the needle, the lower end being supported against the masonry work. On the foundation works there is a lock and hinges; the cross-bar comes across, and is locked on the other side. Suppose you want to throw down that section of needles, you simply unlock the bar and away they go.

11320.

11320. *Mr. Donkin.*] We have on our rivers overshot timber-dams of inch planking. Do you think that wooden needles would apply there? If your foundation is correct, I do not see why you cannot erect needles on it. What you have to provide is a cheek for the foot of the needles. I should be very unwilling to venture an opinion as to what is suitable for any position unless I knew the locality; but there is no magic in masonry, or concrete, or timber foundations, as long as they are sufficiently heavy and watertight—I have no particular choice. I should take whatever material was handy, provided it was suitable for the particular work.
11321. I think you said that they only carried out this needle or shutter system in large works? I have not seen any other works; of course I do not profess to give an epitome of engineering construction in relation to the conservation of water throughout Europe. I selected the places where I thought I should see good examples of the two systems—that is, of movable weirs.
11322. *Mr. Franklin.*] In any of those works in practical operation did you see any case which would apply to the friable banks which we have to contend with? The Meuse has alluvial banks. Cases of friable banks.
11323. *Mr. Donkin.*] Has the Severn also? Oh, certainly.
11324. How are the banks secured? They are just laced with rubble masonry. Protection of banks.
11325. *Mr. Franklin.*] In some cases it is necessary to do a work of this kind where there is not rubble at command within an easy radius; have you seen any works where the banks of the river and the flanks of the weir have been secured by such material as we have at command, such as wood? In none of the cases which I saw were the banks so secured, because it was stonework. If you were to ask if I thought such a system would be effective, where you had plenty of timber, I should have no hesitation in saying "Yes."
11326. As you know, some of our rivers are very deep in the banks; we should have to protect them to the full flood-height, and we have no local material except timber for the purpose. What I want to know is whether any of the drawings which you have represent the work done by timber? No; I do not think that there is an example of the ends of the works being secured by means of timber, because stone is general all over Europe—it is much more plentiful than timber.
11327. Are these rivers of greater velocity than our rivers generally—take the Meuse for instance? The velocity of that is about a metre a second, or  $2\frac{1}{4}$  miles per hour; but that is not its flood-rate. Velocity of rivers.
11328. Did you hear that where the off-take is made in the impounded water—whether the off-take is for irrigation or for navigation purposes—there is a large amount of silt settled at the point of the take-off? No; the Engineer of the Severn works never made the slightest complaint on that score. Silt.
11329. He never said that at any time they had to correct the work by bringing the regulator nearer to the off-take? He never made any complaint of that kind.
11330. *Mr. Donkin.*] It is a very low weir in the Severn? It is not high. Weirs in Severn.
11331. *Mr. Franklin.*] I am speaking of the weirs on the Meuse? No complaint was made to me on that point. The weirs on the Meuse are in straight reaches of the river, not in bends as on the Severn, and they are at right angles. Weirs in Meuse.
11332. On the upper side of the weirs, do they adopt any measure with respect to the banks of the river? They carry up what we should term hand-packed ballast in masonry for a short distance on the face of the banks.
11333. They do not raise the banks? No.
11334. Does the Meuse flood to any great height? The construction of the weirs is altogether different from the English system, it being automatic or easily movable; you can scarcely term the needles automatic, but the other portion is. The needles are so easily removed that what would be an obstruction in time of flood is readily taken away, and the river has its whole full cross-section for the discharge of the waters, with the exception of the small space occupied by the central dividing wall, which is a slight affair in relation to the total cross-section of the river. Obstruction to floods.
11335. Did you hear whether there had been any diversion of the stream above by the construction of the low weirs? No. I have received a letter from the Engineer of the Meuse works, in which he states that the barrage to which I refer is the sixth down from the French frontier. There are a number of others below that again, before you come to the Dutch frontier. Diversions.
11336. These six obstructions are in one river? Yes; in the part of it which runs through Belgium.
11337. They are under State management? Yes. State management.
11338. Did you hear of any objections being made by the people on the lower parts of the river, of the retention of the water in the upper weirs of the system? No; the river flows naturally, notwithstanding the slight obstruction. The system appears to me to be not to put too high a weir at any place, but to throw the water back in a succession of reasonably low steps by these comparatively inexpensive weirs—that is, inexpensive when compared with fixed weirs. System of low weirs.
11339. You have told us that the formation of the river-bed is somewhat raised, in consequence of the constant deposit of surface-material on its banks—that there is a natural fall away from the river on each side? No; that was with respect to the river passing through Lombardy; but, geologically, the whole of the valley of the Meuse at Nanur has been made up by the river, the same as other valleys are made up by rivers, as the Maccleay, the Clarence, and the Manning River flats, for example. Geological formation of Meuse valley.
11340. I want to know whether by the construction of these automatic weirs the water is at the command of any side of the country by gravitation? Not immediately opposite the weirs. Command of country.
11341. Or behind them? No; but you can command the country below with that water.
11342. That is, taking the natural fall of the country with the natural fall of the river? Yes.
11343. Would the water be taken off by off-takes from the back water of the river? I told you on the last occasion that there are no irrigation works on the Meuse; the works are for the conservation of water for navigation. If the people wanted to irrigate, they could do so.
11344. You think that where the country is suitable a head of water could be raised and distributed through canals for irrigation purposes? I say, that if you raised the water (say) 10 feet, you could afterwards use it for any purpose you chose.
11345. *Mr. M'Mordie.*] How long would the water last for irrigation purposes? I presume that would depend on the supply coming into the river and the acreage to be irrigated.
11346. But the capacity of the reservoir in the river would not be worth considering for irrigation purposes? If the cross-section of the river was half a mile or a mile, and the average depth 8 or 10 feet, you certainly could draw from that pretty considerably.
11347. Do you know of any cases where weirs are put across rivers, to conserve water for irrigation purposes? Weirs for irrigation purposes.

Mr.  
W. T. Poole.  
22 July, 1886



- Mr. W. T. Poole. purposes? I cannot refer to particular cases from memory, but there are cases where weirs are put across rivers to throw back the water.
- 22 July, 1886. 11348. By raising a head of water, so as to throw it out into the country? Yes; but not to irrigate in the immediate vicinity of the weirs.
- Storage reservoirs. 11349. You know of cases where river-beds are used for storage reservoirs? Yes; why not? If you have a river with a fall of 5 or 6 inches in the mile, and you constructed weirs—I am not wedded to any particular system (whether fixed dams, automatic or needle weirs), so long as it is economical and effective—and you throw water back to the foot of the next barrage, with a depth of 8 or 10 or 20 feet by half a mile wide, you would store a very large amount of water.
- Adaptability of the weirs to Darling River. 11350. *Mr. Franklin.*] You are aware that the Darling falls to a very low level, and remains at that level sometimes for many months—that it becomes so low as to render it dangerous for cattle to approach the small pools of water; do you think that by the automatic system we could throw back steps of water in the river, and make the whole frontage available at a safe level for stock? I think so. I have no doubt in my own mind that it would be an absolute certainty.
- Grand Junction Canal. 11351. Have you thought, in connection with that, that it would entirely stop navigation? Unless you provide for it. I have often thought, as a colonist and a politician, whether the water was not more valuable for irrigation purposes than for navigation, but I do not see any particular reason why you could not provide for both. Take the Grand Junction Canal, where I was brought up as a boy, on the summit levels, when you get up towards Tring. You are up almost on the summit, between Birmingham and London, where natural water is very scarce, and is of great value. There they have a system of side-locks.
- Side-locks. If a vessel is coming down the stream, the whole of the water is not allowed to escape to allow that one vessel to go through. The side-locks are constructed on the sides of the main lock, and a third of the water would be drawn off into the upper side-lock, and another third into the lower side-lock, the other third being allowed to escape. Take a boat coming the other way. The water in the lower side-lock was allowed to come into the main lock first, and from the upper side-lock second, and only the balance of one-third taken from the upper reservoir. These side-locks are of very simple construction, and are not costly. A puddle-wall all around them, some rough rubble masonry to line the sides, and a simple ratchet-valve are all that are required. This is the system all the way up and down that canal.
- Flood waters. 11352. Can you tell us what they do in Italy with regard to the waste waters—flood-waters, which are likely to submerge the works? You know that here we have very high floods, and if we could not control the river at the head, we should have to take large masses of water down over the works. The river Darling, for example, is liable to extreme floods, which would stop all operations of navigation through locks. Is there such a case as that in Italy? Of course, they are not subject there to such a tremendous range of rainfall; their rainfall is more regular; there are the summer, the spring, and the ordinary rains, and the snow-waters, and they know pretty well, in average seasons, what they will have to contend with. They are not subject to terrific downpours of rain in given districts in a few hours, as we are, and their works, naturally, are not constructed to provide for a contingency which, perhaps, does not happen once in fifty or sixty years.
- Height of needle weirs. 11353. *Mr. Gipps.*] To what extreme height, above the river-bed, can needle weirs be applied with advantage? I should be very unwilling to give an opinion as to the extremity to which the system can be carried. If you choose to strengthen the whole of the works, and cross-section the ironwork framing, and strengthen the needles themselves, you could then raise the height of the water above the barrage in a corresponding degree; but, with the section in use in the Namur Valley, I should say that it would be impossible—at any rate, it would be an unwise thing to attempt—to raise the weir 50 per cent. or even 25 per cent. higher.
11354. Are you aware that the French engineers state that the bar system can be applied up to 15 feet in depth? I am not aware of that from my own personal knowledge. I should say that it is quite possible. You would have to calculate the strain that the iron frame would be subjected to, and then you would have to design framing which would be sufficiently strong for the purpose. I see no insuperable difficulty in that.
11355. *Mr. Franklin.*] The works which you have seen are comparatively low-level works, and the frames which carry the needles are comparatively high? Yes.
11356. If the works were carried to a greater height, it would be necessary to have heavier frames? You would have to calculate the force of the water against the framework.
- Cost. 11357. *Mr. Gipps.*] What is the cost per foot of the needle weirs? I cannot tell you; my knowledge of contract-work here convinced me that it would be of no value to inquire as to what Continental prices were, as they would be no guide to us.
- Ratio of cost. 11358. Are you aware that the comparison of cost between needle weirs and masonry weirs, in the same proportion, is 20 to 50? I should be very reluctant to give an opinion as to the ratio of cost between the two systems in any and every position. If I had to construct a dam in a given locality, and there were abundance of stone at hand, and if I had to send 14,000 or 15,000 miles for iron framework, to construct a needle dam, it is likely if I were answerable for the cost of the work that I should use stone. But on our rivers, where, as a rule, there is no stone, and where material of every kind for constructive purposes must be brought a considerable distance, I should most certainly be in favour of the automatic and needle system, because the total amount of material is very small indeed, compared with that used in a fixed dam. All things being equal—that is, the position, and the facilities to get materials reasonably and quickly—I should certainly favour the needle system, or the combined needle and automatic system, where you did not want an excessive height—anything up to 14 or 15 feet.
11359. *Vice-President.*] What other inquiries did you make which would be likely to be of interest to the Commission? The plans which I produce of the several works give one of the best illustrations of the mode of using fixed weirs. The plans show the weirs and locks near Tewkesbury, under the supervision of the Severn Commission. Knowing that the feeling here was pretty general in favour of fixed dams, I thought that it was only right to get an example of that system from the English practice, as well as to get an example of the needle and automatic system adopted in Belgium. I put myself in communication with the engineer for the Severn works, and he wrote to me on the 11th July, 1885, expressing his willingness to accompany me down the river, and to prepare this set of tracings, for the sum of ten guineas. I saw the Agent-General, and represented to him that in my opinion the tracings would be of value here, and he agreed to purchase them, therefore they are Government property. The other plans I paid for myself.
- Weirs and locks at Tewkesbury. 11360. Did you examine any works designed for irrigation purposes only? Only those in Lombardy, which are

are considered the best. There are irrigation works in Scotland, but I did not think it worth my while to look at them. I should like to say again, that the geological construction of Italy is altogether different from that of this Colony. They have a central backbone range, and abundance of water, both from the sky and the melting of the snow. I should also like to refer to the enormous difficulty which any trust or company in England have to get an Act of Parliament dealing with any natural watercourses. They are not only tied as to the level, but are also under severe penalties if they throw the water back so as to interfere with the drainage of the land above. The engineer of the Severn works told me that they had great difficulties on that account. They had the whole of the farming body up in arms against them for attempting to raise the water at all. They declared that their land would be flooded, and their crops destroyed. But now there is a much better feeling; they are much more contented, and they approve of the works. Steps are being taken to raise the weirs and deepen the navigation right through—in other words, to conserve a greater quantity of water.

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11361. *Mr. Donkin.*] Were these works constructed by a private company? Yes.

11362. What is the water used for? For navigation, and for the supply of manufactories on the banks.

11363. How do they regulate matters; do they supply the water, and charge so much for it? Yes.

11364. Did you see any works that were carried out by the Government? No; I would point out this peculiarity. You observe the obliqueness of the dam across the river. You see that the river is widened above the dam on one side, and below the dam on the other. They are tied down by their Act not to lessen the cross-sectional area of the river; therefore in putting the weir across they have had to widen the river out, and only raise it such a height that the section across it would be equivalent to the cross-section of it in its natural state. Why I was anxious to get these plans was that I knew that one of the objects of the Commission was to report as to the best means of storing water for irrigation purposes. Once you have the water stored, you can do as you like with it. You will observe from the plans that in the Severn works the navigation is totally distinct from the weir.

Obliqueness of  
dam and widen-  
ing of cross-  
section.

11365. *Mr. M'Mordie.*] What is the width of the river Severn? Above the weir, about 165 feet. The weir line is about 500 feet.

11366. Is not the supply which could be given off above the weir only equal to what is coming in? Certainly. Supply

11367. The object of weirs for irrigation purposes must be to store water or to raise the level? It is to do both. If there were not a weir on the river, the water would flow down to the sea rapidly.

11368. *Mr. Franklin.*] You know that on our rivers in the interior there are large deep depressions corresponding with the general level of the beds of the rivers. If we had all these places stored with water it would be exceedingly valuable in times of drought? Yes, you could devote it to any purpose you required; I should say, as a general proposition, that not one drop of storm-water should be allowed to go to the sea until it has done duty somewhere.

Depressions.



## APPENDICES TO GENERAL EVIDENCE.

## APPENDIX A.

RAINFALL at Gledswood, Camden, for 20 years, commencing 1866

1866		Inch	pts
1867		32	·12
1868		48	·15
1869		30	00
1870	8 90 fell in December	36	28
1871		58	35
1872		34	32
1873		25	78
1874		40	·19
1875		42	24
1876		34	·43
1877		27	·18
1878		34	·17
1879		34	91
1880		40	·81
1881		26	·27
1882		21	26
1883		19	·77
1884		35	·02
1885		20	07
	Average 33 inch. 31 pts	24	·86
	Heaviest rainfalls in 24 hours		
		Ins	pts
1869	May 8	5	40
1871	April 29	5	78
1874	Feb. 26	5	37
1878	Feb. 5	4	84
1879	Sept. 10	5	60
	On the 7th of April, 1867, a phenomenal thunder shower fell, giving 2 ins 19 pts in twenty minutes.		

J K CHISHOLM

## APPENDIX B

[To Evidence of Mr. J. B. Martin]

THE LATE FLOOD IN THE NEPEAN. ARE THERE NO MEANS AVAILABLE TO ABATE THE DESTRUCTIVE CHARACTER OF THESE INUNDATIONS?

*To the Editor of the Herald*

Sir,

Reliable information with reference to unusual occurrences, disastrous or otherwise, finding ready admission into your columns, I should make no apology for trespassing upon them, had I not an ulterior object in requesting you to give insertion to my communication

The late flood in this (Nepean) branch of the Hawkesbury was produced by rain over the basin of its upper waters, rather than by any considerable fall in this neighbourhood.

The entire quantity by rain gauge, from nightfall on the 13th instant to the same period on the 17th, amounted to 4·15 inches, of which 2·44 inches (comprising the only hard rain) fell during the last ten hours of the period, and after the flood had reached its maximum. The total rise of the water appears to have been about 47 or 48 feet, being within 5 feet of the maximum attained by the June flood of 1867, and 8 feet 6 inches below the great flood of April, 1860, the highest yet known on this part of the river.

The late flood could not be termed a very high one, yet through merely local causes it has been more damaging than earlier experience would have led one to anticipate. I will particularize we had exposed more or less to the action of the waters the following perishable crops—Maize, about 26 acres, the greater part a magnificent crop in full cob, barley, sown early last month to produce a late autumn crop of grain, 10 acres; potatoes, haricot beans, &c, 10 acres, mangolds and swedes, sown immediately after the first rain last month, and very flourishing, 24 acres, lucerne, fit for mowing, about 80 acres, low-lying pastures—a very thick sward of rich, succulent grasses above ankle deep, about 300 acres. They have fared as follows—The maize, excepting about 2 acres of late planted, which is destroyed, is uninjured, 10 acres of swedes, the same; 14 acres of mangolds, much damaged, several acres quite destroyed, the soil removed and deposited in heaps and ridges, 10 acres of barley quite killed, the season too far advanced to re-sow a crop before winter; 10 acres in potatoes and sundry crops destroyed, lucerne—the crop, over about 70 acres, quite destroyed, and the broad surface of luxuriant, rich pasture brown with muddy sediment, the very abundance of the grass being rendered a nuisance likely to cause the pastures to be unserviceable for a considerable time. Besides the above, there was in the vineyard a crop of grapes in prime condition, ten days ago estimated to produce, after fifteen or twenty days of moderately fine weather, about 10,000 gallons of wine. They have been so damaged as to lower the estimate to three or four thousand gallons of inferior quality. It was the rain of the last day especially which ruined them, the temperature, as indicated by thermometers exposed to it, having increased with the increasing copiousness of the rain from 60°–62° to 70°–72°. This last, however, is not to be placed to the score of flood.

The above constitute the major evils, the minor instances of damage branch into such a variety of detail that I forbear to state them. One's losses, however, are not to be repaired by grieving over them, so

we

we have not lost the fine weather succeeding the rains. By the help of the mowing-machine a goodly portion of the lucerne is cut down and being carted to the nearest muck-heaps, the wreck is being cleared off, the ditches cleared out and repaired. The horse-hoes and hand-hoes are effectively at work amongst the swedes and mangolds, and the fast rotting grapes are undergoing conversion into, I fear, no very near resemblance to "Johannisberg," nor even to "Camden Park" of 1858.

But it is not to parade our losses, or our diligence in repairing them, that I trespass upon your attention. We made no complaint on former occasions; and yet, in common with immediate neighbours, who were equally uncomplaining, we suffered very grievously in the flood of last June; but with an infinitely greater extent of disaster in 1860 and 1861, and again in 1864. Please bear these dates in remembrance.

I have had a long term of experience on this spot—more than fifty years. The flooded lands on this property are the nearest of any to its source on this side of the river. Higher up the stream, to its very commencement, the waters are confined between rocky precipitous banks, far above any floods. The first one I witnessed, as well as I remember, was just forty-nine years ago, being succeeded the same autumn by two more (all high) floods. The following year there were again three high floods, but all were ushered in by long periods of very heavy rains. They rose very gradually, continuing at their highest levels many hours, sometimes for days. They were serious matters in those times to trans-Nepean residents, and were apt to find out weak places in the commissariat, but they did not damage the land nor sweep away the fences in the fashion of later floods. From 1820 to April, 1830, there was no flood. Every year there were periods of heavy rain and corresponding freshes in the river, without extensive overflows; but in this year, and again in April, 1831, there were floods, about as high as the recent one. They did no damage (I hardly think they removed a panel of fence), although I remember to have thought the 1830 flood got up more rapidly, that is, with heavy rain of shorter duration, than I had been used to. Succeeding 1831, there was another long interval without flood, ending in April, 1842. From this time forward they have been greatly more frequent, being sometimes produced by very trifling rainfalls. Dividing my half-century into two periods of twenty-five years, I find that in the first there were ten floods, and in the second about twenty-seven, thus:—1819, 3 floods; 1820, 3; 1830, 1; 1831, 1; 1842, 2; 1843, 1; 1844, 1; 1845, 1; 1848, 2; 1850, 2; 1852, 1; 1853, 1; 1855, 1856, 1857, 4 (I was absent in Europe, but believe that more than I have specified occurred); 1860, 5; 1861, 2; 1864, 3; 1866, 2; 1867, 1; 1868, 1; total, 27. Besides, I may state from hearsay, that previously to 1819, and dating from the first occupation of a hut on the banks of the river, near the sill of the present Camden bridge, by constables Warby and Jackson, as far back as 1805, not more than two, or at most three, floods happened; yet no one supposes, the average of years being taken, that more rain falls now than formerly. I pass over the floods from 1843 until we come to 1860. This was a very remarkable year, with a greater rainfall than I had witnessed since 1819—producing five floods, two of them the very highest by several feet yet experienced. The first rose, after very little rain about this quarter, with unprecedented rapidity (it rose in six or eight hours), doing an immense amount of damage. I was desirous to mark in several spots the extreme level reached by the waters; but when the person employed proceeded to drive in with an axe the stakes which had been provided, he could not accomplish it, the ground beneath the surface being so dry and hard; it had not been moistened 6 inches deep.

Since 1860, we notice as a rule that the floods come up with greater rapidity. I can assert confidently that, besides their increased frequency, there is a marked change in their shorter duration, and in the rainfall requisite to produce them—that they rise and pass off with greater rapidity, and that the flood-waters instead of assuming the appearance, for several successive days, of tranquil lakes over the greater portion of their extent, now take the character rather of rapid currents, quick to rise and then disappear, but doing an infinitely greater amount of damage. I am aware that the clearing of the country, and the hardening of the surface by the trample of stock, may be alleged to partly account for the change; but these reasons are only to a limited extent applicable to our case. The basin of the Nepean lies chiefly on the flanks of barren sandstone hills and mountains, totally unoccupied by man, or by his flocks and herds, and presenting now much the same features as fifty years back.

But there is another change—one in the state of the channel of the river—which, although it has perhaps, been of slow progress, has become very marked when comparison is made of the present condition of certain spots with what they are remembered to have been thirty or forty years ago. The banks from immediately above the low level channel have become densely covered with trees and brushwood, so as very greatly to obstruct the flow of the water during freshes. After much reflection, I am inclined to attribute the marked changes in the floods chiefly to this circumstance. With your permission, I will revert to the subject in another letter, in which I will state what steps seem best calculated to stay the great and increasing destructiveness of these floods.

Camden Park, 22nd February, 1868.

WILLIAM MACARTHUR.

THE LATE FLOOD IN THE NEPEAN. ARE THERE NO MEANS AVAILABLE TO ABATE THE DESTRUCTIVE CHARACTER OF THESE INUNDATIONS?

*To the Editor of the Herald.*

Sir,

I resume the subject of my former letter upon floods in the Nepean, and the means calculated to abate their frequency and severity.

The bed of the river for the most part consists of loose, shifting sand, and the portions subject to overflow—the outer banks—consisting of light sandy loam, are usually from 45 to 55 feet above the bed. They in most places comprise a considerable area in proportion to the ordinary volume of the stream, being from 80 to 150 yards across. The water is fringed with trees growing close to its margin at low-water level (many of them of considerable size) of *Casuarina* and *Tristania* ("river oak" and "water gum"), which interlace their branches over mid channel. They must exceedingly check the flow of the current from the time the river begins to rise, but they have always existed; besides these, the whole of the great ravine between the outer banks has become much filled up by large sapling trees and brushwood—a tangled thicket generally of mingled wreck and rank vegetation, and altogether very different from the state in which I first knew it. This altered condition of the proper channel must tend to force the currents in flood-

time over the cleared and cultivated lands beyond the outer banks. If this channel were to be completely cleared from side to side of all obstructing vegetation, I believe the flow of water in times of heavy rain might be accelerated in the proportion of as much as six to four, and of course the capacity of the channel to carry off the accumulating waters be increased in the same ratio. The highest flood yet known attained the height of about 55 or 56 feet. Now, a rise of 40 feet hereabouts would do us no damage; even at 43 or 44 feet it would generally be of little consequence. It is the last few feet in high floods which do so much mischief. But, besides the main channel of the river, which I should propose to have cleared out, there are other channels—"races" they are often termed—taking usually alternate sides of the river, and cutting off the angles formed by its tortuous course. Opposite the greater bends these "races" are sometimes a mile from the river. They are the portions first covered with water when the rivers overflow, and are hardly ever susceptible of being cultivated, owing to the violent currents to which they are subject. They are frequently thickly clothed with brushwood, and in many instances have never been cleared. These channels, also, ought to be freed from every obstruction.

There are again several points, one especially, where the river is constricted between high rocky banks, the bed being a series of falls or rapids. In these places, also, it is believed that the waterway may be materially improved by clearing out the obstructing brushwood (which, it is hardly needful to repeat, should be cleared out wherever the current is obstructed), and probably by lowering or altering the channel. Indeed, it is asserted that in one place, by cutting a comparatively trifling channel on the Cumberland side, an immense bend of the river might be saved, and that an opening being once made, the waters in flood rushing over the increased declivity would soon establish a sufficient channel.

The foregoing proposals, as you may observe, are all with the view of preventing the too rapid accumulation of the flood-waters, by freeing the points most obstructed from whatever may impede the outflow. But higher up the stream than the first flooded lands, above Menangle viaduct, for instance, the more the channel could be dammed up or obstructed the better, as there are here no lands susceptible of injury from flood. I do not conceive any such measures would be requisite, but the nature of the channels of the upper waters favours the idea that their headlong course in violent rains might be greatly retarded by blasting the overhanging rocks at the numerous points where the streams change from comparatively tranquil reaches to foaming rapids. Nearly the highest and the most destructive flood we have known was apparently wholly caused by the waters suddenly pouring down upon us through these rocky channels of the river's head waters. It was not a distressing flood on the Hawkesbury, if even seriously felt, and here took only about six hours from the commencement of the fresh to reach its extreme point. There are places between the rocks where it must have been stopped back to the height of 70 or 80 feet. These rocky ravines are of very irregular width, but tolerably uniform in the height of their precipitous sides—usually from 200 to 300 feet. Numerous piles of rock, thrown by means of gunpowder across these channels at favourable points, so as to form rude dams, would have great effect in delaying the arrival of the flood-waters below until they could be more safely conveyed away. But, as I have said, I allude to this portion of the subject as only of secondary importance probably to the thorough clearing out of the channels lower down.

You will observe that hitherto I have dealt with the question only in a limited point of view, that of the proprietors on the Nepean, from Mulgoa upwards; but there is a much larger interest to be considered—that of the proprietors from Penrith downwards. The Warragamba falls into the Nepean at Mulgoa. The course of the former river, rising above 20 miles beyond Goulburn, is two and a half times longer than the Nepean, and the area of its basin must be more than five or six times as extensive. It would seem, therefore, to be the soundest principle, in dealing with the flood-waters of those rivers in the interests of the large agricultural population on the Hawkesbury, to hasten down those of the shorter river, and to hold back by all available means those of the longer. The measure of damming up the waters of the latter to a level high enough to reach Sydney by gravitation is, as you are also aware, one of the means of water supply under consideration. It is therefore on several grounds that I hope the bold proposal of my old friend Mr. Woore may after full investigation prove to be the most feasible. I shall rejoice in the hope of an unlimited supply to Sydney of the purest water, and that the intelligent mind which imagined this plan should meet with its just reward; but it will be an additional gratification to have the reasonable assurance that the same measure may be made a means of greatly mitigating the effects on the Hawkesbury of the flood-waters of its principal tributary. It must require the united flood-waters from both rivers to create a high flood below. The waters of the Nepean must be first down. I would hasten their arrival, while Mr. Woore's plan would hold back for hours the waters of the Warragamba. I am quite sure that hereabouts, at all events, it is often a mere question of an hour or two whether it is a flood or no flood.

But is there not also the probability of relief to the Hawkesbury low lands by reasonable outlay upon the course of the river below Windsor? I have always understood the channel about the Upper Portland Head to be exceedingly constricted, and at other points likewise. The tide no doubt must have great influence at times in checking the outflow. These are all questions requiring early and careful investigation: I think they are of importance sufficient to be referred by the Government to a Commission. The expense of the inquiry should be borne by the general revenue, but the expense of works to prevent or mitigate the great floods would fall most fairly upon the parties who benefit by them. Government might very properly undertake necessary works, taking power by Act of Parliament to levy rates upon the river-side proprietors to cover interest and gradually extinguish the principal of the outlay. For the relief of the Nepean, I believe that £100 to £200 per mile would be ample, and there are not, I think, above 30 miles of its course which require to be dealt with. Our share at Camden would be for the half of 13 or 14 miles; I would gladly compound for no flood by paying a much more considerable sum than at my estimate we should become liable for.

23 February, 1868.

W. MACARTHUR.

## APPENDIX C.

RAINFALL at Richmond, New South Wales, from 1881 to April 1886.

Month.	1881.	1882.	1883.	1884.	1885.	1886.
January .....	5·002	0·410	5·165	0·567	3·772	2·266
February .....	3·238	0·887	6·305	0·258	1·338	0·906
March .....	2·273	0·714	0·406	0·961	2·521	0·860
April .....	1·632	2·174	2·817	5·968	1·237	.....
May .....	2·432	1·414	3·909	3·411	0·413	.....
June .....	0·476	4·202	0·028	2·945	7·209*	.....
July .....	1·418	0·122	0·482	3·431	1·286	.....
August .....	2·883	0·800	2·099	0·316	.....	.....
September .....	1·941	0·020	5·274	1·196	1·121	.....
October .....	2·921	7·456	1·290	3·083	0·739	.....
November .....	1·054	1·691	2·164	1·959	1·626	.....
December .....	1·768	2·265	1·134	0·820	4·243	.....

\* NOTE.—The rain on the 23rd and 24th June was measured by deputy. I have reason to believe that the fall on the 24th was greater by 0·500 inch than that recorded.

1881.	1882.	TOTALS.	1884.	1885.
27·038.	22·155.	1883. 31·073.	24·915.	25·505.
Average for five years, 26·137 inches.				

T. H. F. GRIFFIN.

## APPENDIX D 1.

ESTIMATE of the Original Cost and Working Expenses of the Irrigation Appliances at the Chinamen's Gardens, the Peninsula, Windsor.

Original cost of engine, boiler, and pipes .....	£	s.	d.
Repairs soon after commencing to work .....	145	0	0
Fixing engine, boiler, and pipes .....	8	0	0
Carriages from Sydney, and other expenses .....	11	0	0
	20	0	0
Total cost of starting operations .....	£184	0	0
Cost of coal per week .....	1	0	0
Castor oil for engine .....	0	2	0
Chinaman's wages for occasional attendance on the engine during the week .....	0	5	0
Weekly outlay, exclusive of wear and tear .....	£	1	7

With the above-mentioned appliances my Chinese tenants effectually irrigate about 5 acres of land, and with an additional outlay of a few pounds they propose to extend their operations to about 5 acres more. It is extremely difficult to obtain a satisfactory statement from the Chinese, owing to their imperfect knowledge of English, but I have done the best I could for the Commission. The Chinese refused to draw their water supply from the Hawkesbury River, but two other gardens have been recently established by these foreigners on the South Creek. The water in this tributary of the Hawkesbury is said to be slightly brackish, but it is not known if its effect on vegetation is injurious. That question will doubtless soon be decided.

JOHN TEBBUTT.

## APPENDIX D 2.

RAINFALL at Mr. Tebbutt's Observatory, Windsor, New South Wales, from 1863 to 1885, both years included.

Receiving Surface of Gauge=6·6 feet above ground.

Year.	Rainfall.	
	Inches.	Gallons to Square Foot.
1863 .....	35·997	18·695
1864 .....	55·030	28·579
1865 .....	19·957	10·365
1866 .....	28·378	14·738
1867 .....	44·300	23·007
1868 .....	27·039	14·042
1869 .....	32·625	16·944
1870 .....	62·513	32·466
1871 .....	34·468	17·901
1872 .....	25·206	13·091
1873 .....	41·380	21·490
1874 .....	32·078	16·659
1875 .....	32·273	16·761
1876 .....	26·422	13·722
1877 .....	35·139	18·249
1878 .....	36·328	18·867
1879 .....	40·149	20·851
1880 .....	21·557	11·195
1881 .....	27·460	14·261
1882 .....	19·205	9·974
1883 .....	29·500	15·321
1884 .....	24·214	12·575
1885 .....	23·171	12·034
Means for the 23 years .....	32·800	17·034

Windsor, 23 July, 1886.

JOHN TEBBUTT.



## APPENDIX.

*Appendix to evidence of Mr. A. Dewhurst, given before the Commissioners, at Tamworth, 9 May, 1885.*  
(See *Evidence to First Report*, p. 149.)

Mr. District-Surveyor Dewhurst to The Secretary, Royal Commission for the Conservation of Water.

Sir,

District Survey Office, Tamworth, 1 November, 1886.

In compliance with a promise made to the Commissioners who honored Tamworth with a visit of inquiry, to ascertain facts in connection with Water Conservation and Supply, I have now the honor to enclose a tracing of a survey just completed (*vide* portfolio of maps and plans), showing the water catchment and approximate storage area at the locality which was officially inspected, and at the time (provisionally of course) approved as a suitable reservoir for the convenience of the town.

It appears that the whole catchment area does not exceed 850 acres, while the average rainfall over seven years equals 31 inches yearly; \* and the evaporation during summer (October to March inclusive), when the fall is greatest, equals 54 inches, and in winter 17 inches.

The country is volcanic, faulty, and porous to an unusual extent; and, although the enclosed letter from a resident of seventeen years discloses the information that during the period the gully ran down "several times," I am satisfied the stream was small, and only lasted an hour or two.

Under these circumstances, and taking into account the small watershed exhibited by the survey, I must respectfully withdraw any remarks which I made under examination in Tamworth favouring in any degree a scheme for the supply of water with this area as a factor, and retire upon the more reasonable scheme of utilizing the underground waters of the Peel valley.

May I request you will do me the favour to bring this matter under the notice of the Commission at their next sitting, and inform me at your earliest convenience, after it has been considered, whether any reason remains for locking up this area longer from sale and settlement.

I have, &c.,

A. DEWHURST, D.S.

If the Commission still consider this area should be reserved for the collection and storage of water, it would be evidently desirable to resume at once John Gill's 40 acres, being portion 3, parish of Tamworth, as it is the only site for the erection of a dam. The land is poor and stony; its market value is not more than 25s. per acre.—A.D.

\* The average number of days on which rain fell during twenty-one years is 71.

Mr. William Ahern to Mr. District-Surveyor Dewhurst.

Sir,

Dead Horse Gully, 29/10/86.

I received your note this morning, 29th instant, asking for information about the farm that I sold to Mr. Cohen. I resided on it for seventeen years. The creek which comes from the hills at the back; after heavy rain the creek comes down,\* and if the winter is moist remains for some time. At the head there is almost a permanent water-hole from a spring;† but there are some places where water could easily be obtainable from old springs.‡ The creek comes down after heavy rains; and it has been down several times in seventeen years, but the exact number I do not know. But should you require any further information, if you let me know when I am in town, I will call and give you all the information that I know.

I have, &c.,

WM. AHERN.

\* Every gully comes down after heavy rain.

† The spring has been dry for years, I understand.

‡ These are soakages from

the overlying soil—they have dried up years ago.—A. DEWHURST.

CORRESPONDENCE ON WATER CONSERVATION AND IRRIGATION IN EUROPE AND AMERICA, RECEIVED THROUGH THE COURTESY OF THE COLONIAL OFFICE.

Mr. Fenton to Earl Granville.

(No. 125.—Commercial.)

My Lord,

The Hague, 17 October, 1884.

I have the honor to acknowledge the receipt of your Lordship's despatch, marked Circular Commercial, of the 6th instant, instructing me to take steps to procure through the Netherlands Government, for communication to the Government of New South Wales, any available information on the subject of the storage, conservation, and distribution of water in this country.

In reply, I have the honor to state that, having made inquiries unofficially on this subject of Mr. de Willebois, and having also consulted a gentleman of my acquaintance, who is an authority in matters connected with water engineering, I have ascertained that no such information as that desired by the Government of New South Wales is to be obtained in this country, for the reason that, so far from there being any necessity for the adoption of measures for storing or conserving water in the Netherlands, one of the greatest difficulties the country has to contend with is that of getting rid of the large quantity of superfluous water which is to be found throughout nearly the whole length and breadth of the Kingdom.

I may add that Mr. de Willebois has also informed me that neither in any part of the Dutch East India Possessions do special works exist for the collection or conservation of water.

Under these circumstances I propose to abstain from addressing any official request to the Netherlands Minister for Foreign Affairs for information on the subject in question, unless I should be otherwise instructed by your Lordship.

I have, &c.,

H. P. FENTON.

The Hon. L. Sackville West to Earl Granville.

(No. 244.—Commercial.)

My Lord,

Washington, 2 November, 1884.

I have the honor to acknowledge the receipt of your Lordship's despatch, marked Circular of this series, of the 6th ultimo, relative to the wish of the Royal Commissioners in New South Wales, to be furnished with certain information respecting the method adopted in this country for conserving the rainfall and of developing the underground reservoirs of water, and to enclose to your Lordship herewith copy of a note which I have received from the Acting Secretary of State, together with copy of a letter from the Agricultural Department enclosed therein transmitting the accompanying documents.

I have the honor to submit to your Lordship that to collect all the information alluded to in the letter from the Agricultural Department would occupy even a competent person some months, and entail considerable expense.

I have the honor to be, with the highest respect, my Lord,

Yours, &c.,

L. S. SACKVILLE WEST.

The Acting Commissioner, United States Department of Agriculture, to the Secretary of State, Washington.

United States Department of Agriculture,

Sir,

Washington, D.C., 29 October, 1884.

I have the honor to acknowledge the receipt of your letter of the 24th instant, accompanying a copy of a note from Mr. West, the British Minister at this capital, asking for any available information this Government might possess in regard to the subject of the conservation of water, and of developing the underground reservoirs thereof for agricultural purposes.

In response I have the honor to report that this department has no further data at present than may be found in the enclosed report made by a commission appointed on artesian wells and their practicability, among the Colorado foot hills of the Rocky Mountain Range. I also beg to refer you for the information of Mr. West and the Government of New South Wales to a report made by Major J. W. Powell, Director of the United States Geological Survey, entitled, "The Arid Lands of the United States." Major Powell has probably other data in this regard, which would be of service to the Royal Commission of New South Wales. I beg leave also to refer to a report of the United States Commission of Irrigation in the Sacramento Valley, &c., &c., Cala. Pub. Doc. H. of R., 43rd Congress, 1st Ex. Doc., No. 290, no copy of which is, however, in this department.

There is a large amount of information scattered through the many reports of United States Explorations, Geological Surveys, and also in State and Territorial reports. At present this is not directly available. This department is, however, engaged in the preparation of a report on the questions referred to in the memo. of the New South Wales Commission. It will probably be printed during the ensuing winter, and will contain the data desired so far as it is possible to ascertain the same.

The general Government has not taken any positive steps towards any similar inquiry to that which is under way in New South Wales. Heretofore action has been had mainly by and through private enterprises in the establishment of land reclamation and irrigation works.

On the States and Territories of the United States affected by insufficient rainfall (which for full agricultural duty should not be less than 30 inches per annum,) laws and local customs, more or less insufficient in character, provide for the distribution of running and surface waters, and for the regulation of the amounts to be used by each irrigator.

In the volume referred to, "The Arid Lands of the United States," a good account is given of the system in use in Utah.

The State of Colorado has a code of laws designed to incorporate water companies, and to regulate the use, preservation, and distribution for farming purposes, of the waters of that state; an officer known as the State Engineer (Honorable E. S. Nettleton, Denver, Col.), is in general charge.

There are nine district judges having special powers to settle all water disputes. These districts are conterminous in area with the judicial districts of the State. Copies of the laws of Colorado on this subject may be found in the Law Library of Congress (General Statutes, State of Colo., pages 560 and 587). They are of importance, and contain features worthy of study.

The State of California contains extensive works for the conservation, storage, and distribution of water, chiefly from the mountain sources, while the watercourses of the State are very largely utilized for irrigation purposes.

These works have, in the first case, been constructed as aids to hydraulic and mining enterprises; they are, however, largely available for agricultural uses also. The surplus of water is entirely consumed in this way.

The irrigation system dependent upon the lakes and watercourses of late years has been almost entirely constructed by co-operative corporations of the farm owners organized under State law. For more direct and fuller information I beg to refer you to the reports of the State Engineer of California for the years 1880-81-82 and 1883, which, especially the first volumes, will be found full of important data. Mr. William Hamilton Hall, State Engineer, Sacramento, Cala., will undoubtedly forward the documents named.

The old Mexican local laws, as well as the miners' code, as to the use of water, both prevail in California, as also in Nevada and the Territory of Arizona.

In the latter, extensive irrigation works are now under way.

In Western Kansas and Western Texas private enterprise under State laws is now engaged in extending irrigation and water storage works. The detail of these efforts will, in some degree at least, be presented in the report now being prepared by this department.

I have, &c.,

E. A. CARMAN,

Acting Commissioner.

Department

Department of State, Washington, to the Honorable L. S. S. West.

Sir,

Department of State, Washington, 31 October, 1884.

Referring to your note of the 20th instant, requesting such information as may be available in relation to the subject of the conservation of water and of developing the underground reservoirs thereof for agricultural purposes, I now have the honor to enclose herewith the reply of the Commissioner of Agriculture, to whom the subject was referred.

The report of the commission appointed on artesian wells referred to in the note of the Commissioner is herewith enclosed.

The many other reports referred to are not now available.

The Department of Agriculture is, however, engaged in the preparation of a report on the questions referred to in the memorandum of the New South Wales Commission.

This report will be sent to you when printed, probably during the coming winter, and will, it is thought, contain the data desired, as far as it is possible to ascertain the same.

Accept, sir, the assurances of my highest consideration.

I have, &c.,  
W. HUNTER,  
Acting Secretary.

Mr. Locoock to Earl Granville.

(No. 23.—Commercial.)

My Lord,

Belgrade, 24 November, 1884.

I have been unable to obtain any information such as that sought for by the Royal Commissioners charged in New South Wales to inquire into the question of the conservation of water, and for which I was instructed to apply to the Servian Government in your Lordship's despatch, marked "Circular Commercial," of the 6th October.

The question of the water supply in Servia is not one which has hitherto occupied the Government, and the natural supply by streams and rivers, and by the pretty regular rainfall, is such that it is unlikely that it will ever be necessary to construct works of any importance for the conservation of water. The above refers to water for irrigation. In the villages and small towns any natural flow of water which exists is supplemented by ordinary wells, these also being used, where necessary, for the watering of flocks and herds.

I have, &c.,  
SIDNEY LOCOCK.

Sir H. Barron to Earl Granville.

(No. 14.—Commercial.)

My Lord,

Stuttgart, 29 November, 1884.

In obedience to the instructions conveyed in your Lordship's circular of October 6th, I have the honor to transmit herewith a Report on the Public Water Supply in the Kingdom of Wurtemberg, under the Government of King Charles, published by the Ministry of the Interior. This work seems exactly to meet the requirements of the New South Wales Government, as expressed in Mr. Secretary Robinson's letter of July 17th. The distribution of water for irrigation purposes has been brought to great perfection in the Black Forest region of Wurtemberg and Baden, and might be there studied with advantage. This branch of the subject is not treated in the accompanying report, but I beg to call particular attention to the description therein of the works executed for supplying drinking water to the arid highlands of the Suabian Alp, a novel and interesting work. No private or joint stock firms exist here which undertake to supply water to the public. This is a business of the communal authorities. In towns they have proved themselves quite equal to this task, but not so in rural districts. In 1865 the Government determined to aid the communes in their efforts by recommending to them a distinguished specialist, the Oberbaurat Dr. Von Ehmman, as a consulting engineer for the execution of hydraulic works. In 1869 the office of "Staats-Techniker" for the public water supply was created in favour of the same Dr. Von Ehmman. Henceforward he was obliged to give his advice gratuitously to those communes which might require it for carrying out any important water-works. An additional functionary was appointed in 1877 under the title of "Wasserbanispektor."

Stuttgart, 1881.  
Greiner and  
Pfeiffer.

This official and gratuitous organisation of the service gave a great impulse to the creation of new works. Down to the end of 1880 more than 200 such were executed, and many others were planned. New waterworks, with high pressure, and mostly with auxiliary steam power, have been erected in all the large towns, viz., at Stuttgart, Ulm, Heilbron, Esslingen, Ludinsburg, Tübingen, Friedenstadt, Cannstatt, and Reutlingen. The village of Nussdorf, standing on a waterless ridge 357 metres above the sea level, was the pioneer of this movement among the rural communes so far back as 1866. Availing itself of the new facilities granted by the Government, the corporation decided unanimously to erect a steam pump for the purpose of forcing spring water to a tank 120 metres above the valley. The work was rapidly, cheaply, and successfully completed at a cost of £3350, and acted as a powerful encouragement to other villages similarly circumstanced to adopt the same course.

Numerous communes of the Suabian Alp, in the same plight as Nussdorf, were debarred by their poverty from adopting the same remedy. This range of hills is composed of a porous rock, through which the rain-water percolates as through a sieve. Some few rivulets which arise disappears in the earth soon after their formation. For its water supply this population had hitherto been restricted to a scanty rainfall, collected in cisterns and horse-ponds. This repulsive water was, moreover, at times entirely deficient; in such cases the peasants had to send their carts many miles to fetch water from the valleys at immense inconvenience and expense.

In 1867 the Government determined to take this matter in hand on an extensive scale. The first scheme which suggested itself was to drain and collect all the surface waters which could be found into large



large tanks. This idea, evidently a mere development of the old system of cisterns, proved to be impracticable on a large scale for the following reasons:—

- 1st. The porous nature of the soil and the absence of clay hindered the collection of the water and the construction of tanks.
- 2nd. The water derived from surface drainage was objectionable on sanitary grounds.
- 3rd. The peasants were prejudiced against draining their lands.

It was determined, therefore, to raise the waters from the valleys by mechanical means. To execute such a design was palpably above the strength of the small, scattered, and isolated communities. It was determined, therefore, to carry it out on a broad and comprehensive plan, under the direction and partly at the expense of the State.

Such a plan was drawn up by Dr. Ehmann, founded on the principle of supplying the arid plateau of the Alp with pure water from the valleys by means of water power alone. The financial difficulty was got over by uniting several communes together for this particular enterprise into one group, similar to the body known in Flanders as a "Watering," each commune contributing to its expense in proportion to its population. The Government took upon itself the supervision of the works, all the preliminary expenses, and a large share of the expenses of construction. This undertaking was begun in 1870 with the first group, consisting of three communes, and was most successfully completed in 1881. The nine groups, comprising 102 communes, with 37,315 inhabitants, cover an area of seventy square miles.

The leading idea of the scheme was to divide the whole district into a certain number of independent sections, according to the topographical and hydrographical character of the soil, each section to be provided with one pumping station, which should force the pure spring or river water from the valley to one or more tanks on the high ground, the water to be thence distributed by its own weight through a network of cast-iron pipes to all the villages included in the section. The pumps are all driven by water power alone; but in some of the stations a small auxiliary steam-engine has been provided, which might be adapted to the pump if necessary in case of a long drought. This assistance has not yet, however, been found necessary. These works have, some of them, been in operation for thirteen years without any material repairs or any lengthened interruption of the supply having been found necessary, even during the severest winters.

The aggregate length of the cast-iron main and branch pipes is 223 miles; that of the wrought-iron house-pipes 87 miles. The number of house-pipes leading from the mains to private houses and stables is over 7,000. The nine water wheels employed in driving the pumps possess an aggregate force of 300 horse-power. By this means a daily supply of 1,100,000 gallons is forced up to heights varying from 115 to 305 metres. The normal supply of water in the sixty-two tanks is 4,400,000 gallons; the number of hydrants provided for extinguishing fire is 1,600; the number of street-pumps (in seven groups alone) is 178. The minimum daily supply of water provided is 75 litres (16½ gallons) per head of the population; but this might, if necessary, be largely increased.

The aggregate gross cost down to the end of 1880 of these nine waterworks amounted to £284,400. Of this sum £220,955 was borne by the communes, and £63,445 by the state. Some of the outlay was paid exclusively by the communes, such as branch pipes, street pumps, purchase of land, of water power, of fishing rights, and compensations for irrigation. Other expenses, such as those of surveys, estimates, and superintendence were borne exclusively by the State. The cost of erecting the works themselves was in a certain fixed proportion borne by the parties jointly, 20 per cent. being the proportion assumed by the State in the seven last groups. Some further trifling disbursements will bring the final aggregate outlay of the State up to £65,543. The gross cost of each of these nine several waterworks varied from £6,780 to £50,000. The capital charge falling on the communes varies from £4 5s. to £7 10s. per head of the population. Thanks to the exclusive use of water power, the working expenses are trifling, including only wages, grease, heating, and lighting materials. They are divided among the communes of each group in the ratio of their resident population. The amount of these expenses and that of the revenue derived from private consumers are not stated.

I have, &c.,  
H. BARRON.

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Sir E. B. Malet to Earl Granville.

(No. 143.—Commercial.)

My Lord,

Berlin, 2 December, 1884.

On the receipt of your Lordship's Circular Commercial Despatch of the 6th of October last, relative to the wish of the New South Wales Government to obtain information respecting the conservation of water in this country, Mr. Scott lost no time in requesting the Acting Minister for Foreign Affairs to furnish him with any available information with regard to the storage and distribution of water in Germany.

In a note dated the 29th ultimo, Count Hatzfeldt informs me that Wurtemberg is the only one of the confederated states in which any such system is established to any great extent.

The system of water supply in the Rauhe Alp district was carried out during the years 1870-1881, and Count Hatzfeldt forwards for presentation to the New South Wales Government a work entitled, "*Die öffentliche Wasser-Versorgung im Königreich Württemberg*," by Dr. Von Ehmann, giving full details as to the system in question.

I have, &c.,  
E. B. MALET.

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Mr. Jocelyn to Earl Granville.

(No. 17.—Commercial.)

My Lord,

Darmstadt, 26 December, 1884.

With reference to your Lordship's despatch marked "Circular" of this series, of the 16th of October last, with regard to the conservation of water, I have received from Monsieur Turban a reply to my request for information on the subject, a translation of which is herewith enclosed.

His Excellency in stating that the matter referred to in your Lordship's question has not been studied or reported upon in Baden has nevertheless afforded very valuable information as to the conservation

conservation of water with a view to the prevention of floods and its utilization for agricultural and other purposes, and the reports in illustration of it which I now have the honour to forward will doubtless be of service to the Royal Commissioners.

I have thanked Monsieur Turban for his courtesy in giving the above information.

I may mention that with regard to the Grand Duchy of Hesse I have learnt that no information whatever on the subject exists, the conformation of the country being such as to preclude all necessity for the conservation of water.

I have, &c.,  
N. JOCELYN.

(Translation)

Monsieur Turban to Mr. Jocelyn.

Karlsruhe, 19 December, 1884.

Sir,  
With reference to your note of the 8th ultimo, I have taken the necessary steps to inquire of the Department of Roads and Waterways what publications or private documents have appeared in Baden respecting the collection and distribution of water, and also what has appeared on the subject in neighbouring countries which might be of interest to Her Britannic Majesty's Government.

In reply to my inquiry, I have been informed by the above-named technical department that, with the exception of a short pamphlet on the stoppage of valleys to diminish the danger of inundations, entitled "The Floods and their Disastrous Consequences on the Rhine in November and December, 1882, by Honsell, Berlin, 1883," no publication of the kind exists.

The favoured situation and circumstances of Baden have hitherto given no cause to consider the question of the collection of water. On the other hand, the Government of Wurtemberg has conducted investigation as to the establishment of a chain of reservoirs, by means of which not only the prevention of inundations, but also the utilization of the collected water for agricultural and industrial purposes, has been kept in view.

The results of this inquiry have been made public in a memorandum on the "Diminution of Floods in the River Steinbach by the construction of reservoirs, Stuttgart, 1883."

The same theoretical principles that govern the successful endeavours to collect water in reservoirs are to be applied to the regulation of the outflow of a lake at a high level.

With regard to the majority of the Swiss lakes, reports referring to this subject are extant.

The most exhaustive of these, and having special reference to the retention of water in a great inland basin, is to be found in the publication "The Bodensee, and the deepening of its high water level," by Honsell.

In the hope that the above information, referring though it does to much that has been done in a neighbouring country, will prove of interest, I have the honour to transmit to you the accompanying copies of the works of M. Honsell above mentioned, who is the Chief Architect and Inspector of the Department of Roads and Waterways for the Grand Ducal Government.

I avail, &c.,  
TURBAN.

Mr. Sanderson to Earl Granville.

(No. 44—Commercial.)

My Lord,

Bucharest, 28 December, 1884.

With reference to your Lordship's circular of the 6th October, instructing Mr. White to procure through the Roumanian Government, for communication to the Governor of New South Wales, any available information respecting the storage of water, I have the honor to enclose a copy of the note I have received from Monsieur Stourdza in reply to that addressed to him by Mr. White on the 16th October last.

The Foreign Minister regrets that he can give no useful information on this subject as the matter is not provided for by legislation and no methodical system is applied in practice.

I have, &c.,  
PERCY SANDERSON.

[Enclosure.]

Monsieur Stourdza to Monsieur Sanderson.

Monsieur le Chargé d'Affaires,

Bucarest, le 15-27 decembre 1884.

En réponse à la note de la Légation de S. M. Britannique du 4-16 octobre dernier, No. 22, j'ai l'honneur de porter à votre connaissance qu'il n'existe, dans la législation ou dans les réglemens d'administration du Royaume, aucune disposition relative à la conservation des eaux pluviales et qu'aucune mesure, fondée sur un système méthodique, n'est pratiquée à cet égard dans aucune des localités du pays.

En regrettant de ne pouvoir fournir sur cette matière quelque indication utile au Gouvernement de la Nouvelle-Galle du-Sud, je vous prie, M. le Chargé d'Affaires, de vouloir bien agréer, etc.

D. STOURDZA.

Foreign Office to Colonial Office.

Sir,

Foreign Office, February 12th, 1885.

I am directed by the Secretary of State for Foreign Affairs to transmit to you, to be laid before the Earl of Derby, a despatch with its enclosures from Her Majesty's Ambassador at Vienna relating to the system adopted in Austria for the conservation of rain water; and am to request that the documents and drawings accompanying this despatch may be forwarded to the Government of New South Wales.

I am, &c.,  
PHILIP W. CURRIE.

Sir A. Paget, No. 7—Commercial.

[Enclosure.]

## [Enclosure.]

Sir A. Paget to Earl Granville.

Vienna, 9th February, 1885.

My Lord,  
On the receipt of your Lordship's circular despatch of the 6th of October of last year, I at once addressed a note to the Ministry for Foreign Affairs, communicating to his Excellency the wish expressed by the Governor of New South Wales in his despatch to the Earl of Derby, to be supplied with information on the subject of the system of conservation of water adopted in this empire.

I have now the honor to transmit, herewith, a translation of Count Kalnoky's reply in which his Excellency, after stating that the conservation of rain water is, as a rule, owing to climatic influences only found to be necessary in the southern provinces of the empire, has been good enough to furnish me with reports, accompanied by drawings, of the system adopted for the purposes in question in the provinces of Dalmatia, Istria, and Carniola.

I have, &c.,  
A. PAGET.

(Translation)

## [Sub-enclosure.]

In reply to Sir A. Paget's note of the 12th October of last year relating to the system adopted in Austria for the conservation of rain water, the I. and R. Ministry for Foreign Affairs, while calling attention to the fact that the conservation of water in question, is, as a rule, owing to climatic influences, only found to be necessary in the southern provinces of the empire, has the honor to place the following information at the disposal of his Excellency:—

- 1-5. Description and drawings of cisterns employed for general public use.
6. Description and drawings of the station cisterns in use on the State railways of Dalmatia.
- 7-8. Volumes V-VII (1878) of the Austrian Engineer and Architect's Journal, with a report on the supply of water on the State railways of Istria and Dalmatia.
9. A pamphlet published by the I. and R. Agricultural Society of Carniola relating to the collection, the purification, and the preservation of drinking water.

The undersigned for the Minister for Foreign Affairs,

SZÖGYÉNIJI.

The Principal Under Secretary to the President of the Water Commission.

Sir,

Colonial Secretary's Office, Sydney, 19 March, 1885.

January, 1885.

Referring to my letter of the 9th instant, I am now directed by the Colonial Secretary to transmit to you the accompanying copy of a further despatch that has been received by His Excellency the Governor, enclosing the documents specified in a schedule thereto annexed.

I have, &c.,  
CRITCHETT WALKER.

Mr. R. G. W. Herbert to the Officer Administering the Government of New South Wales.

My Lord,

Downing-street, 29 January, 1885.

I am directed by the Secretary of State to transmit to you, for communication to your Lordship's Government, the documents specified in the annexed schedule, which have been received from the Foreign Office.

I have, &c.,  
R. G. W. HERBERT.

## Description of Document.

COPIES of despatches from Her Majesty's Representatives at Rome, Dresden, and Paris, on the subject of the storage and conservation of water.

Sir J. Lumley to Earl Granville.

(No. 195.—Commercial.)

My Lord,

Rome, 19 December, 1884.

With reference to your Lordship's Circular Commercial of October 6th, I have the honor to forward the accompanying works, as per enclosed list, on the subject of the conservation of water in Italy, for the information of the Government of New South Wales. In transmitting these documents to me, the Italian Foreign Office informs me that certain of the books desired are not in the possession of the Ministry of Public Works; but that the "Report by Domenico Guglielmini on the Nature of Rivers" and the "Report on the Method of Regulating Rivers and Torrents," by Frisi, can be purchased at the booksellers in Rome. As, however, the library of the Ministry of Public Works contains most important treatises in hydraulics, the accompanying works are now forwarded, and the Ministry promises to add to them the acts of the Commission of the Cavour Canal as soon as they shall arrive from the Technical Office at Turin, which has been requested to send them to Rome as early as possible.

I shall not fail to transmit these acts to your Lordship, together with the works by D. Guglielmini and Frisi above-mentioned.

I have, &c.,  
J. SAVILE LUMLEY.

Mr. Strachey to Earl Granville.

My Lord,

Dresden, January 4, 1885.

In reply to my request for materials to enable me to furnish the information required on water supply by the Government of New South Wales, the authorities here have sent me the annexed "*Wasserwerk der Stadt, Dresden*," with an Atlas by the projector and constructor of the city waterworks. The book contains a variety of information on the various systems of water supply at present in use, to which I need not refer, as the facts in question are already well known to hydraulic engineers. But this capital is furnished with water on a plan which is comparatively little known, and I will therefore concisely sketch its leading idea and particularities.

The water which supplies Dresden is not brought, after the fashion of the ancients, in aqueducts, or derived from rivers like the Thames and Marne, and adapted for use by artificial filtration, or absorbed

absorbed by natural filtration from a river into a contiguous and parallel canal sunk at a lower level. The observation has been made that the water which rises from borings near a river sometimes has a temperature higher in winter, lower in summer, than the water near the banks. This and other circumstances indicate the existence of what the Germans call the "ground water" (so often mentioned in the sanitary discussions of Petten Koffer and others), or subterraneous supply, which is perpetually percolating the earth at certain depths below the surface. The essential assumptions for this are—a suitable alternation of porous and impermeable strata (the former to retain the water like a sponge, the latter to prevent it pouring away downwards), and a suitable dip, in the geological sense, so that the water available may be the drainage of a large area of sub-filtration. These conditions exist in the neighbourhood of Dresden. The Elbe cuts through layers of fine diluvial sand-grit and conglomerate, which rest on the outlying granite of the mountains of Saxon Switzerland and the Lausitz, the whole descending towards the river. The rainfall of this large plateau is absorbed by the sand, but cannot percolate the granite, and therefore flows to the valley of the Elbe, where, accordingly, a series of experiments, conducted over several years, showed that there was ground-water excellent in quality, and so abundant that the daily requirement of Dresden—1,326,000 Saxon cubic feet—is a mere vanishing fraction of the available subterraneous supply.

The water on Herr Salbach's plan is obtained as follows:—On the right bank of the Elbe, parallel to the stream, and sunk from four to five metres below the surface of the soil, is a conduit of slashed pipes of 55 metres maximum diameter, and 1,438 metres in length. This apparatus is bedded in and internally loaded with gravel; the pipes are always full of water. At intervals on the conduit are two wells, each 7 inches in diameter and placed 40 metres apart, into which the pipes discharge their contents. From the wells issue suction pipes, through which the water is pumped into the central cisterns of the works, whence it is driven by steam power to the main reservoirs on the Dresden Heath. The descent of water to the Elbe, its passage over the principal bridge of the city, and the arrangements of street and house distribution are details of the ordinary character into which I need not enter. I hope I have made it clear that this water of gravitation, as it has been called, does not come from the Elbe, and that it is not spring water, but that it comes rather from the mountains of Bohemia and the Lausitz. I ought to add that when the Elbe runs high above its normal level, its extra pressure checks the pour of the ground water into the river, so that at such times the water pressure in the collectors would tend to be low. That apparatus is therefore placed with reference to a level at which the subterraneous flow will usually have a higher tension than that of the Elbe as against the river's banks.

Perhaps it is superfluous to say that the city of Dresden did not hand over the water supply to private speculators. The cost of the works has been about £385,000. The pipes have a total length of about 156 kilometres. Last year nearly 6,000,000 litres of water were consumed for all purposes, public and private fountains, watering parks and streets inclusive. The charge to private persons is two marks per annum, for inhabited space, kitchen or bath-room, for closets, &c., six marks each. For manufactories, hotels, and other establishments where much water is consumed, the charge is, as a rule, by measurement, the minimum price being twelve pfennigs ( $1\frac{1}{2}$ d.) per cubic metre.

The water as obtained in the houses of the city inevitably differs in temperature and taste from the official descriptions of samples studied at the works. But it is vastly superior to the usual water of European cities, meeting chemically all the requirements of modern sanitary science.

If Dresden were supplied by "artificial" or "natural" filtration its drinking water would be heavily loaded with nitrogenous organic substances, nitric-acid, ammonia, magnesium-chloride, silica, clay, &c., &c., which reads like the familiar London catalogue. Such are the contents of Elbe water taken from above the city and properly filtered.

I have, &c.,

G. STRACY.

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Lord Lyons to Earl Granville.

(No. 8.—Commercial.)

My Lord,

Paris, 9 January, 1885.

With reference to your Lordship's Commercial Despatch of the 6th October last marked "Circular," and to Sir J. Walsham's Commercial Despatch No. 306 of the 12th October last, I have the honor to inclose a copy of a note which has been addressed to me by the French Government, in answer to the application made to them, at the instance of the Government of New South Wales for information on the subject of the conservation of water.

I send also to your Lordship two parcels which accompanied the note, and which contain documents, the titles of which are mentioned in it.

I have endeavoured, but hitherto in vain, to obtain copies of the works which are, it is stated in the note, to be bought. I will forward these works hereafter, should I succeed in obtaining them; but I think it better, without waiting any longer for them, to forward now the documents sent by the French Government.

I have, &c.,

LYONS.

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Sir J. S. Lumley to Earl Granville.

(No. 3.—Commercial.)

My Lord,

Rome, 14 January, 1885

With reference to my despatch of this series, No. 195, of the 19th ultimo, I have now the honor to forward the "Report by Domenico Guglielmini on the Nature of Rivers," and the work "On the Method of Regulating Rivers and Torrents" by Frisi, therein referred to in connection with the information required by the Government of New South Wales on the subject of the conservation of water.

I have, &c.,

J. SAVILE LUMLEY.

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Mr.

Mr. Vivian to Earl Granville.

My Lord,

Brussels, 2 April, 1885.

With reference to your Lordship's Circular, marked "Commercial," of the 6th of October last, I have the honor to enclose copy of a letter from the Minister of Foreign Affairs, stating that the accompanying report on the reservoir of La Gilleppe, which was prepared by the Department of Public Works for the Belgium National Exhibition of 1880, is the only official work published in Belgium on the conservation, storage, and distribution of rain water; but that as reservoirs have lately been constructed in connection with the new barracks, he has asked the Minister for War to furnish some information respecting them, which he will furnish to me later on.

I have, &amp;c.

C. VIVIAN.

[Enclosure.]

P<sup>er</sup> de Caraman to Mr. Vivian.

Bruxelles, le 31 mars 1885.

M. le Ministre,  
En réponse à la lettre que la Légation de Sa Majesté Britannique a bien voulu adresser à mon Département, sous la date du 10 octobre dernier, j'ai l'honneur de transmettre sous ce pli à votre Excellence une notice sur le lac réservoir de la Gilleppe. Cette notice est le seul ouvrage publié par l'Administration des Ponts-et-Chaussées relativement à la question de l'emmagasinage et de la distribution de l'eau de pluie.

Des réservoirs d'eau fluviale ont été exécutés dans ces derniers temps à proximité des nouvelles casernes. J'ai prié M. le Ministre de la Guerre de m'adresser des renseignements au sujet de ces installations; j'aurai soin de transmettre à votre Excellence, dès qu'elles me seront parvenues, les indications qui m'auront été fournies par mon collègue.

Je saisis, &amp;c.

P<sup>er</sup> DE CARAMAN.

The Marquis of Lansdowne to Earl Granville.

My Lord,

Canada, Government House, Ottawa, 3rd April, 1886.

With reference to Lord Derby's Despatch (No. 164) of the 30th September, 1884, relating to information desired by the Government of New South Wales on the question of the conservation of rainfall and the development of underground reservoirs of water, I have the honor to forward to your Lordship herewith a copy of an approved Report of a Committee of the Privy Council, embodying a Report from the Minister of Marine and Fisheries on the subject, as it relates to the Dominion.

2. It will be seen that no systems of Irrigation or Conservation of Water for agricultural purposes are necessary in the Dominion, except in British Columbia, in regard to which a report from the Acting Director of the Geological Survey of Canada is appended to the enclosed Minute of Council.

I have, &amp;c.

LANSDOWNE.

[Enclosure.]

CERTIFIED Copy of a Report of a Committee of the Honorable the Privy Council, approved by His Excellency the Governor-General in Council on the 27th March, 1886.

The Committee of the Privy Council have had under consideration a despatch, dated 30th September, 1884, from the Right Honorable the Secretary of State for the Colonies, transmitting a copy of a Despatch from the Governor of New South Wales respecting the desire of the Royal Commissioners appointed in that Colony in connection with the question of the conservation of water, to obtain information as to the best method of conserving the rainfall and developing the underground reservoirs of water.

The Minister of Marine and Fisheries, to whom the despatch and enclosures were referred, reports that so far as agricultural necessities are concerned, Canada is happily situated in regard to water. The distribution of rainfall throughout the season is, in the older settled portions of the country, sufficient in ordinary years to maintain continuous growth of plants, and the observations taken for a limited period in the North-west Territories show the same result, so that no systems of irrigation or conservation of water are required in the agricultural interests of Canada, and that with respect to British Columbia he appends herewith a Report from the Acting Director of the Geological Survey, referring to means taken for irrigation of a section of British Columbia where the rainfall is insufficient for the growth of crops.

The Minister observes that there are, however, large works consisting of dams, bulkheads, and slides, constructed in the interests of the lumber trade for the conservation of water in the streams to enable them to be utilised for the purpose of floating lumber and logs, but information in regard to the construction of these works does not appear to be called for in the interests of the Commission.

The Committee recommend that your Excellency be moved to inform the Right Honorable the Secretary of State for the Colonies of the efforts made by the Minister of Marine and Fisheries to collect any information that would be of service in promoting the object of the Royal Commission appointed by the Government of New South Wales.

All which is respectfully submitted for your Excellency's approval.

JOHN J. MCGEE,  
Clerk, Privy Council,  
Canada.

[Sub-enclosure.]

The Geological Survey Department to the Deputy Minister of Marine.

Dear Sir,

Geological Survey of Canada, Ottawa, March 18, 1886.

In answer to your question as to irrigation in British Columbia, I may say that irrigation is practised over a considerable part of the southern interior portion of that province where the rainfall is insufficient for the growth of crops.

The main region in which irrigation is resorted to may be described as extending southward from the 51st parallel to the international boundary, and being limited to the east and west respectively by the mountains of the Gold and Coast Ranges. A second subordinate dry region is separated from this by the Gold and Purcell Ranges, and lies between the last named and the western base of the Rocky Mountains proper, along the upper portions of the Columbia and Kootanie Rivers, extending northward from the 49th parallel for about 100 miles. As this last mentioned region is comparatively restricted in area, &c., little land has there yet been brought under cultivation, it need not be further alluded to.

In the region first described the arable land is as a rule confined to the valleys of the larger streams and rivers, which are generally wide and trough-like, with flat bottoms, or series of terrace flats ("benches") at various elevations, and traverse a country which may be characterised as a high broken plateau, a hilly region. The principal valleys in which agriculture with irrigation is now carried on are as follows:—

Fraser Valley (in part), Valley of the Main Thompson River, and of the south and part of the north branch of the same stream; Nicola, Okanagan, Similkameen, and part of the Kettle River Valleys. Ditches of several miles in length have in several places been made for the purpose of conveying the water to and distributing it over the cultivated lands, and trestles supporting "flumes" or wooden troughs are employed in crossing ravines or passing round bluffs. No machinery has yet been employed as far as I am aware for the purpose of raising water from lower to higher levels, and the whole method

method in use is so simple and obvious (besides being practically identical with that used over great areas in the Western States) as to render it unnecessary to describe it in detail.

I have, &c.,  
 GEORGE M. DAWSON,  
 Acting Director, Geological Survey.

Earl Granville to Governor the Right Honorable Lord Carrington.

My Lord,

Downing-street, 14 July, 1886.

With reference to previous correspondence respecting the conservation of water, I have the honor to transmit to you herewith, for the information of your Government, a copy of a letter from the Foreign Office, with a despatch from Her Majesty's Ambassador at St. Petersburg on the subject.

I should be obliged if you will enable me to reply to the inquiry in the Foreign Office letter, as to the wishes of your Government in regard to the translation of the report referred to in the papers at an estimated cost of £30.

I have, &c.,  
 GRANVILLE.

The Foreign Office to The Colonial Office.

Sir,

Foreign Office, June 24, 1886.

I am directed by the Secretary of State for Foreign Affairs to transmit to you, to be laid before Earl Granville, with reference to previous correspondence, the accompanying despatch and two enclosures, as marked in the margin, respecting irrigation. Sir R. Morier.  
No. 62.—Com-  
mercial.

And I am to inquire what his Lordship wishes with regard to the question of translating the report.

I am, &c.,  
 T. V. LISTER.

[Enclosure.]

Sir R. Morier to Earl Rosebery.

(No. 62—Commercial.)

My Lord,

St. Petersburg, 16 June, 1886.

On the receipt of your Lordship's Circular Commercial Despatch of October 6, 1884, Sir Edward Thornton addressed a note to the Russian Government, asking if they would kindly furnish some details with regard to the storing of water and the system of irrigation at present carried out in this country, for the information of the Government of New South Wales.

In reply to this communication, I have received the enclosed Memorandum on the system at present adopted in the southern and south-eastern regions of Russia, where, owing to the long seasons of drought, irrigation is carried out on a large and extensive scale.

In addition to the Memorandum I also have the honor to enclose the Report which was published by the Imperial Society of Engineers in 1882, giving full details as to the irrigation works in the Caucasus.

I have caused a translation to be made of the above-mentioned Memorandum, but as the enclosed Report is a more serious undertaking, I would submit to your Lordship that, should the Colonial Office consider it desirable, I could easily find a person capable of making a translation of this work at a cost of £30.

The portions of the Report which bear on the main question of inquiry instituted by the Government of New South Wales will, however, be found all carefully marked in the index.]

I have, &c.,  
 R. B. D. MORIER.

(Translation)

[Sub-enclosure.]

The necessity of adopting measures for the accumulation and storing of water arises chiefly, owing to climatic conditions, in the southern and south-eastern regions of Russia, also in the Crimea and the Caucasus.

In these parts of the Empire the atmospheric precipitation is very inconsiderable (about 200 mm.—about 8 inches—per annum) and moreover, the greatest rainfall takes place late in the autumn and winter (about two-thirds of the whole quantity); in the summer and spring, when there is an almost entire absence of rain, while heavy dews prevail, attaining, for instance, in the south-eastern Steppes of Russia 160 mm. (about 6 inches). In the month of June it is necessary to have recourse to artificial measures for preserving the water for agricultural requirements as also for purposes of irrigation.

In the Caucasus, where there are numerous rivers which are fed by the waters that issue from the snow-capped summits of the main chain of the Caucasian range of mountains, from the smaller Caucasian heights and other elevations, the greatest abundance of water occurs during the dry season, namely in June, July or August, covered or open water-courses are constructed for a regular distribution of the water. Owing to the great incline of the rivers, which frequently exceeds one fathom (fathom or sagène=7 feet) per verst (1 verst=½ mile English) the current is rapid, and constructions are made in the rivers which direct the stream towards the head of the water-courses, the water in which, in its turn, is regulated by sluices. The water is then conducted through main and subsidiary water-courses to plots of land under irrigation to water-mills and villages. Moreover, in some localities in the Trans-Caucasus, which are less bounteously supplied with water, reservoirs are formed by damming up small streams, the walls of the dams being from 3 to 4 fathoms high.

In the waterless Steppe portion of the Crimea, and in the province of Ekaterinoslav, also partly in that of Kherson and in the southern portion of Kharkoff, water reservoirs are formed in dales and along the courses of small rivers and brooks.

For the formation of such reservoirs the water is generally confined by walls from 3 to 6 fathoms high, constructed of earth; simple arrangements are at the same time made for allowing the superfluous water to escape and for feeding the main and secondary irrigating courses which distribute the water over the surface of land requiring irrigation.

There, where the water supply is derived from springs, the water reservoirs are replenished several times during the summer, and the water, besides being used for domestic purposes and for cattle, &c., is also employed for the irrigation of fields and meadows. In the waterless Steppes the water reservoirs are generally filled only once a year, and the supply is furnished by melting snow. The water so stored is used for the irrigation of meadows and arable lands. By means of such a reservoir as many as 400 dessiatins (1 dessiatina=2.70 acres English) of meadow and arable land may be irrigated.

The Steppe country of south-eastern Russia has a clay soil and subsoil, the latter being sometimes from 8 to 14 fathoms in depth. The soil is impregnated with various salts which are injurious to vegetable life, and which form so-called salines. Over the whole extent of this country but few rivers and rivulets occur, and there is also a total absence of springs in this region. In order, therefore, to accumulate water for agricultural purposes, artificial reservoirs are formed in dales and along river beds, which are plentifully supplied during the season of spring by the melting snows. Dams, with walls from 3 to 6 sagène (7 feet English) high are constructed for the formation of such reservoirs, and in connection with these there are also contrivances for letting off superfluous water. In these reservoirs there is water all the year round, the loss from filtration and evaporation not exceeding a column of water of about 1 fathom in height. In many parts of the province of Samara beyond the Volga, and in the northern portion of the province of Astrakhan, from the River Samara to the basin of the River Eruslan inclusively, the peasants erect in the earthen hollows and depressions dams over an extent of several hundred fathoms, the walls being generally from 0.50 to 1 fathom high. By means of these constructions, and after a plentiful fall of snow in winter, a considerable quantity of snow-water is accumulated and, forming a so-called "liman," inundates areas of land of about 500 dessiatins.

Latterly, in order to irrigate considerable extents of meadow land and to disalkalize the saline soil, the water derived from melted snow is used to great advantage in the south-eastern plains and waterless regions of the Empire. The method employed consists of erecting an ordinary earthen dam from 4 to 6 fathoms high across the bed of a river or hollow, the crest of the dam rising considerably over the surrounding plain. From this dam down the course of the river or hollow, longitudinal embankments are erected. In spring, during the melting of the snow, the water collecting at the dam flows along canals to the part of the Steppe destined for inundation, and by means of earthworks or embankments is distributed over the various land plots. Generally speaking, these plots are kept three weeks under water, and they afterwards yield rich growth of grass.

Wells lined with timber are also sunk in parts of the country devoid of water, and these wells are from 8 and not unfrequently 20 fathoms deep, with a diameter of half a fathom.

ZIELINSKI,  
Major-General.

#### NOTES AND MEMORANDA REGARDING THE NEPEAN AND WARRAGAMBA RIVERS.

THE Warragamba scheme of Mr. Thomas Woore was intended not only to supply Sydney with water but also to provide for the irrigation of a large extent of land in the county of Cumberland. Mr. Clark examined the scheme so far as related to the former object, but did not consider its merits in connection with the latter. Mr. Woore's proposal was to construct a dam in the Warragamba, near its junction with the Nepean, and thus to intercept and, to some extent, render available for use the drainage of 3,247 square miles. The dam proposed by Mr. Woore was to be 170 feet high, and composed chiefly of boulders, but rendered watertight by a vertical wall of masonry running along its centre. Mr. Clark showed that in order to fulfil the objects aimed at it would be necessary to provide a dam 214 feet high, instead of 170 feet, and that the cost of the waste weir alone would be over a million and a quarter sterling. These drawbacks, added to the risk attendant on the construction of a dam of such height, and the risk and expense of carrying the supply across the Nepean, were sufficient to condemn the scheme.

The attainment of the second object aimed at in Mr. Woore's scheme does not seem to be beset by any such serious difficulties as those mentioned. But the supply to the low lands along the valley of the Nepean can be more easily obtained than by damming the Warragamba. From levels taken by the Harbours and Rivers Department, in connection with Mr. Clark's report, it was found that the summer level of the Warragamba near its junction with the Nepean is 45 feet above Sydney high-water mark. At Penrith, the valley of the Nepean throughout a width of 2½ miles is under 86 feet above the same datum, and beyond that place it has a fairly steady fall in the direction of the river. It is evident, therefore, that a dam of moderate height in the Nepean would render it possible to irrigate the low-lying land by gravitation. As the Nepean, down to about 3 miles from Penrith, flows within steep and rocky banks, only a short dam would be required; and if a suitable site can be obtained at the place where the rocky banks disappear, a supply of water could be diverted into an open cutting, and the necessity of tunnelling would be avoided. As the summer level of the river at Penrith is only 1 foot lower than that at the junction with the Warragamba there would be nothing to gain, so far as the levels are concerned, by taking out a supply higher up the river than the place suggested.

Another method of providing a supply of water for irrigation, as well as for domestic and stock purposes, along the valley of the Nepean is by pumping direct from the river, and delivering the water at such height as would enable it to flow over the plains by gravitation. The information collected for the Lower Nepean scheme for the supply of Sydney throws some light on this project. In Mr. Clark's report on the Lower Nepean scheme it was admitted that there is such extensive natural storage in the Nepean that no dam was required in connection with that scheme. Throughout the 10½ miles from the railway bridge at Penrith to the junction of the Nepean with the Warragamba the depth of water below summer level varies from 30 feet to 100 feet, and there is deep water to a distance of several miles up the Warragamba. The pumping station proposed in the Lower Nepean scheme was 2½ miles up the river from Penrith—that is, near the place where the banks cease to be high and rocky, and where the alluvial banks begin. There is every reason to believe that this would be the best site for a pumping station for the supply of water for irrigation. As the height of the lift is a very important factor in connection with the cost of pumping, it should be stated that the maximum range of the river-level at Penrith is 42 feet; the highest flood-level, according to the records of the Railway Department, being 86 feet above Sydney high-water mark, while the summer-level, according to the information supplied by the Harbours and Rivers Department to the late Mr. Clark, is 44 feet above the same datum. The range of surface-level at the proposed pumping station would exceed that at Penrith; but the excess cannot be great, as the difference in the flood section is comparatively trivial. The range of the water-level in the Warragamba, according to information received from the Harbours and Rivers Department, is 70 feet; but this is easily accounted for by the small sectional area through which floods have to pass below the junction of the two rivers.

As the Commissioners have now seen these rivers, and are in a position to appreciate the importance of the supply carried by them, it is perhaps needless for me to point out the necessity of having a gauge in the Nepean at the Penrith Bridge

I have, &c.,  
H. G. MCKINNEY, M.E., M.I.C.E.,  
Engineer to the Commission.

Penrith, 7 April, 1886.

#### MEMORANDUM OF THE LEVELS OF THE HAWKESBURY.

ALTHOUGH no surveys, so far as I have been able to ascertain, have been made with a view to determine the practicability of utilising the waters of the Hawkesbury on the plains adjoining it, still much light is thrown on this subject by the surveys and levels which have been taken by the Department of Harbours and Rivers and the Department of Railways. The most important record regarding the levels of the Hawkesbury District is a plan prepared under the directions of Mr. Moriarty, Engineer-in-Chief of Harbours and Rivers. This plan shows the extent of land covered by the flood-water of the Hawkesbury in 1867, or more correctly that portion of the flooded area extending from the mouth of the Grose to Pitt Town. In this



this length the flooded area shown in the plan is little short of 40 square miles in extent, and the town of Windsor is represented by two islands, which together include an area of only about 340 acres.

The height of the flood of 1867 at Richmond above high-water mark at Windsor was 65.49 feet. The high-water mark at Windsor would appear to be slightly above the high-water mark at Sydney, judging by the fact that, the level lately taken by the Railway Department on the Southern and Northern Junction Railway, the high-water level at the site of the proposed Hawkesbury Bridge was found to be 1.81 feet above the Sydney high-water level. It would therefore seem sufficiently accurate for present purposes to assume that high-water at Windsor is 2 feet above high-water at Sydney. This would give the flood-level of 1867 at Richmond as 67½ feet above the latter datum.

The section along the line of railway from Blacktown to Richmond shows that to a distance of nearly 11 miles from the latter place only three comparatively narrow ridges of land rise above the flood level of 1867. Omitting a ridge about a mile and a-half in width, situated at a distance of about 8 miles from Richmond, the average level of the ground throughout the 11 miles mentioned is only from 40 to 50 feet above Sydney high-water mark.

In a previous Memorandum it was mentioned that the highest flood-level at Penrith is 86 feet above Sydney datum. The distance by river from Penrith to Richmond is only about 15 miles, so that the rate of fall in the surface of the river during a very high flood is about a foot and a half per mile. If a canal from Penrith to Richmond were proved to be otherwise practicable, it appears that the levels of the land, so far as data are available, are highly favourable. If it were necessary to give such a canal a course even more tortuous than that of the river the rate of fall would still be ample. In fact a large extent of land between Richmond and Blacktown is only slightly above the summer level of the Nepean at Penrith, and in several places portions of the railway line are even below this level.

In connection with the Grose River there was a scheme for the supply of Sydney from that source, but Mr. Clark showed that to give the necessary head the supply would have to be taken from a point about 15 miles from the mouth of the Grose. The scheme on this and other grounds was rejected. More recently it was proposed by the Engineer-in-Chief for Harbours and Rivers to draw a supply from the Grose for the towns of Richmond and Windsor. In this case there was to be a reservoir on the top of Pitt's Hill, at an elevation of 152 feet above Windsor high water mark. The subject of utilising the waters of the Grose for irrigation does not appear to have received serious consideration though the present large supply naturally stored could be greatly increased, and though, as pointed out by Mr. Donkin, a good site for a weir is available.

Richmond, 17 April, 1886.

H. G. M'KINNEY, M.E., M.I.C.E.,  
Engineer to the Commission.

## UPPER DARLING (BARWAN) SURVEY.

### REPORT No. 1.

The Engineer-in-charge, Darling River Survey, to The Secretary of the Royal Commission on Conservation of Water.

Sir,

Collarindabri, Barwan River, May 10th, 1886.

I have the honor to forward progress report having reference to sites for schemes of water conservation in the counties of Finch and Benarba. The explorations, reconnaissance, and trial surveys and levels connected with these have not been extended beyond a limit of 20 miles on either side of the main drainage channel of the Barwan or Upper Darling. The fall of this main drainage in the districts under consideration appears to average somewhat under a foot per mile. Numerous reaches of still water occur throughout. These are impounded at a low level by natural bars. The depth at many points is considerable, and the water may, in most instances, be considered as permanent. The low level at which it lies, relative to the surrounding country, is, however, an obstacle to its being used in any way except for stock-watering purposes. The soil along the banks and in the immediate vicinity of the main channel is, for the greater part, unproductive—not apparently from any inferiority in quality, but from its very porous nature, which rapidly absorbs the water, and returns it to the river by percolation. The generally friable nature of these banks would probably render abortive any attempt to maintain the water at a high level by the construction of weirs, as the river would have a tendency to form new channels at points above these works.

The tributaries to the main stream in these counties are the Mooni, flowing from Queensland in a southerly direction, and the Gwydir, or Meei, draining a large extent of country to the east. Ana-branches, known as the Boomi River and the Ballone Creek, also pursue a course, mainly parallel with the river, on the south-east side. The books containing field-notes of trial surveys and sections made on these streams are forwarded. The Mooni River, after rainfall over its watershed in Queensland, brings down a large supply of water, none of which is apparently at present turned to account. I have marked a favourable site for a dam at the surveyed township of Gundabloui. This might be carried to a height of 18 feet above the summer-level of water, the storm-channel and by-wash above its site being regulated to within 2 or 3 feet of the crest of the embankment. The 16-foot contour which I have carried for about 7 miles up the stream on both sides shows a large reservoir of water impounded, and which would extend beyond the furthest point surveyed, probably to the vicinity of the Queensland border. There are considerable areas of naturally fertile land on portions of both sides of this proposed reservoir which, if irrigated, might be profitably cultivated.

South-west of the channel of the Mooni there is an extensive district totally devoid of any defined watercourses leading towards the river Barwan. The main fall of the country is south-west, and the various drainage channels or warrambools flow, in wet seasons, in courses nearly parallel with the Barwan. Much of the water which would be impounded in proposed Mooni reservoir would be available, at little cost, for the irrigation of portions of this area. This object could be attained by pumping to a small height, and thence distributing; or by shallow cuttings regulated by sluices made at certain points, such as that where the watercourse known as the Mungaroo Warrambool approaches the site of reservoir.

A work subsidiary to the foregoing might be constructed on the Mooni about half a mile above its junction



junction with the Barwan. A dam at this point would render the water available for certain areas of good land on both sides of the lower reaches of the river. But as to this latter, no special survey has been made, beyond cross-sections of both rivers at the junction. The banks of the Mooni are generally retentive of water, and large permanent lagoons exist at various points of its course.

As already stated, there are no streams of importance below the Mooni flowing into the Barwan from the north-west; and no direct affluent is found throughout the whole of that region until the Bokhara is reached. The drainage system throughout follows courses roughly parallel with river, uniting ultimately with the Big Warrambool which joins the river at a point nearly south from Narran Lake. There are numerous positions on these shallow watercourses or warrambools where water might be conserved over considerable areas, but at no great depth. This has been already effected on a small scale by some of the pastoral tenants.

On the south-east side of Barwan I have directed my attention to the Ballone River, or Creek, an ana-branch connecting with the Boomi River near the lower junction of that branch with the Barwan. The Ballone channel extends southerly for about 24 miles, having generally well-defined and sound banks throughout. Near Collymongoul Station it divides into two arms, which, as they approach the Barwan, join the river by various channels. The plan will indicate two positions I have selected as suitable for overshot dams, one on each main branch. That on the north arm will be 14 feet above level of water in lagoon, and on the south arm 13 feet. These dams will impound water to a depth varying from 16 feet to 32 feet, for almost, if not altogether, the entire length of main channel, and also along the Banarway branch, which goes off, as shown on plan, towards the Barwan in a northerly direction. It seems unnecessary to interfere with the levels of the upper inlets of these channels at the Barwan. In rainy seasons the Ballone, in addition to the flood-water from the Barwan, receives considerable drainage from the country eastwards by watercourses, such as the "Big Leather" and "Gingham."

The materials for constructing the overshot dams on the Ballone are to be obtained at the sites of the works. A hill which occupies the country lying between the two is formed by the upheaval of cretaceous strata, consisting of sandstones and impure limestone. Excavations made contiguous to the works would doubtless disclose materials suitable to be laid in cement for the faces of the dams.

A short distance south of the lower mouth of the Ballone the river Meei or Gwydir enters the Barwan. There has been apparently very little water flowing down this channel for a considerable time, and it is at present dry. The usual flood discharge has been, I understand, diverted at a point in the upper channel, where a natural embankment has been formed by fallen timber, &c. The Barwan, when in flood, backs up the Gwydir channel for several miles, but no water is retained after the subsidence of the flood, there being no waterholes of any dimensions in the channel. So far as regards the formation of the banks, there are numerous sites where an overshot dam might be constructed to retain the local drainage. That indicated on plan is situated below the junction of the Moomin with the Gwydir. It is, in common with the Ballone dams, connected with the Barwan by a line of levels. Contour lines are run along lower portions of Gwydir and Moomin 16 feet above bed of river at site for dam. This would throw the water back in both streams for many miles—probably from 15 to 17. Suitable materials for construction are not present on the surface in the vicinity of the site.

Considerable areas of naturally fertile soil occur on both sides of these rivers, a large proportion of which might be irrigated at little cost from the proposed 16-foot level of the water.

The raising of the permanent water-level on these and other channels would render necessary the resumption of small portions of the purchased and selected areas, which occur at intervals along the banks.

As regards the unalienated blocks on the resumed parts of the pastoral runs, it is obvious that reserves would be requisite over certain areas the value of which would be so largely increased by the facilities for irrigation which the contemplated works would provide.

I have, &c.,

JOHN B. HOTSON.

#### UPPER DARLING (BARWAN) SURVEY.

##### REPORT No. 2.

The Engineer-in-charge, Darling River Survey, to The Secretary of the Royal Commission on Conservation of Water.

Sir,

Walgett, Barwan River, 16 June, 1886.

In continuation of the report transmitted in May, I have now the honor to direct the attention of the Commissioners to the features presented by a bar of rock which exists in the main channel of the Barwan, at a point situated about 60 chains above the junction, already described, of the river Gwydir or Meei.

Immediately above this bar the water, at summer level, is about 40 feet in depth. The position is known as "Werribilla Waterhole." The natural features existing here, and in the district westward of it, lead me to the conclusion that the objections which are in force as to the construction of weirs in the Barwan on most parts of its course may in the present instance be set aside. A suitable site for a substantially constructed weir is to be found at a point where the course of the main stream has been gradually altered by erosion of the rock, leaving apparently solid abutments on the banks. One effect of a weir in this position would be to cause an almost constant flow by way of a channel or depression running in a westerly direction. It would be necessary to raise the permanent level of water sufficiently to command for irrigation purposes the now waterless plains to the north and west of Collarindabri.

This appears also to be the most favourable route by which to convey a portion of the surplus water of the Barwan, across the country, in a generally westerly direction; so as to unite with the line of drainage formed by the shallow Warrambools already alluded to in a former report. The district through which these flow during wet seasons appears to have its lowest level at an average distance of 17 miles north-west from the river. In order to convey the water over this intervening space it would be necessary to cut through the slightly elevated ridge which divides these drainage areas. The greatest depth at any point

point would probably not exceed from 9 to 12 feet. The line of cutting would be some 4 or 5 miles north of Collarindabri.

It was my intention to have taken cross-sections of the river at the points now under consideration, and to have carried a line of levels westward along proposed channel, but the heavy and continuous rains of the past month, followed by a high flood, which is only now beginning to subside, rendered any such work impracticable. I must, therefore, at present confine myself to indicating approximately the nature of the works suggested. The height from rock to crest of weir may be taken as upwards of 25 feet, and the length as about 130 feet. The question as to the interruption to navigation need not arise, so far as regards these upper reaches of the river, there being no traffic by water, except for merely local purposes.

The construction of this weir would render unnecessary the two overshot dams in the branches of Ballonne River, previously reported on, as the raised river level would maintain the various Ballonne and Banarway channels permanently full. A detailed survey over a large area in this locality, along with an extended system of levels, is requisite in order to indicate the precise nature and extent of the above works, and the advantages they would entail. It is, however, evident that by irrigating portions of the plains referred to large areas of good soil would be rendered capable of profitable cultivation, which, in the absence of permanent water, at the required level, cannot be attempted. The small enclosures made at wide intervals by some of the settlers, and which have been watered by pumping from existing lagoons and water-holes, have been in every case, so far as my knowledge extends, in the highest degree productive. The gradual disappearance of the water from which these supplies were raised had, previous to the recent rains, caused most of the cultivated areas to relapse into a barren state.

Ten miles below Collarindabri, the Grawan Creek enters the Barwan, having a main branch channel named the Meaki, which falls into the river 3 miles higher, at a point opposite Bundinbarrina. In addition to these main channels there are others which do not flow except in cases of high flood. In that event a portion of the flood-waters of the Gwydir or Meei, and of its ana-branch the Moomin, overflow to the Grawan channels. The inlet channels of the Grawan, situated between Collarindabri and the mouth of the Meei, are apparently at a height above ordinary river level sufficient to prevent the reflux of water entering them during floods. This water may be impounded by overshot dams at the lower ends of the Grawan and the Meaki channels. On the former stream, and indicated on the general map, are two surveyed sites for dams. The upper of these, about 3 miles above junction with Barwan, is the more favourably situated. The position for dam on Meaki can at present be indicated only approximately as from 40 to 60 chains above junction. The flooded state of the country at the date of attempted survey in that direction precluded any reliable data being obtained. The height of the dam in Grawan would be 19 feet above bottom of channel at that point. That in Meaki would be similar, or possibly somewhat higher. The assumed height above datum of the water thus impounded in the various channels is 473 feet. The relative heights of the land between the Grawan and Thalaba are shown upon sections which have been taken across that area. The positions of these sections are indicated upon general map.

These works upon the Grawan and Meaki will necessarily be supplemented by a similar work at the lower end of the Thalaba Creek, near to the point where the Pagan Creek is formed, and also by another dam situated several miles up the Thalaba, at a point above the entrances of two channels, which in times of flood communicate with the Grawan.

It would have been desirable to have had the necessary surveys made in these localities, and I have endeavoured to reach them previous to the preparation of this report. The great height of the water has, for some weeks past, rendered this impossible, and the description of the works required must be deferred until the water is greatly lowered in level.

The large area of land lying between the courses of the Thalaba and Grawan is, in general, of good quality for agricultural purposes. The irrigation of the greater portion of it can be accomplished by pumping to a height of from 10 to 12 feet above the proposed raised level of these channels. The total rise of the Barwan in this part of its course, during the present flood, has been about 32 feet. It has at this date (June 16th), fallen 4 feet, and the subsidence still continues. The flooded state of all watercourses, together with the unfitness for traffic of the unsubmerged land after the heavy rainfall, have delayed the progress of this work for several weeks. The obstacles to any advance during that period will be understood by all who have had experience of this part of the Colony during a wet season.

I have, &c.,  
JOHN B. HOTSON.

### UPPER DARLING (BARWAN) SURVEY.

#### REPORT No. 3.

The Engineer-in-charge, Darling River Survey, to The Secretary of the Royal Commission on Conservation of Water.

Sir,

Sydney, July 20th, 1886.

I have the honor to report my return to Sydney, in accordance with instructions received to suspend proceedings, in consequence of the high floods prevailing on the Barwan and its branches.

On a date subsequent to the dispatch of my general report in June, I proceeded to survey and examine the upper inlet from the Barwan to Pagan Creek, situated 4 miles below the position marked "Brothers," in county Denham, on general map. The river and the inlet to Pagan were then in high flood, and the actual channels of latter, and those of Thalaba and Pagan, were indistinguishable. It is, however, evident that for water-conservation purposes the Thalaba and Pagan must be regarded as one stream; the inlet referred to being regulated so as to cause the Thalaba water to continue its flow along the Pagan channel, at periods when local rain has caused a rise in the Thalaba, the Barwan being at the same time low. This result is to be obtained by the construction of self-acting gates on the inlet mentioned, admitting a portion of the Barwan water when high, but preventing its return when the relative levels of the river and the watercourses under consideration are reversed.

The water would be impounded at a lower part of the Pagan by an overshot dam, situated about 16 miles below the work described, at the most favourable site to be obtained for construction below Eurie Eurie. The height to which this dam ought to be carried would probably be about 20 feet, but precise

precise levels, &c., cannot be obtained until subsidence of floods. These have also rendered impracticable any attempt to indicate the best site for weir on the Barwan below Walgett, or to obtain levels and other data respecting the effect of such a structure upon the Barwan and Namoi Rivers. One result, however, would be the maintaining of permanent water in the Pagan channel below the dam suggested below Eurie Eurie.

The country between the Pagan and Pian Creeks is level across, and the soil is generally of good quality. The position of a considerable portion of it is favourable for irrigation being applied from either the Pagan or Thalaba.

In the lower portions of the channel of the Pian Creek one or two shallow earthwork dams have been put in by pastoral tenants. Proceeding up the creek towards the Namoi, a few points present themselves where overshot dams, constructed of ironbark or other suitable and available timber, might be constructed with advantage. The height of these would not, however, be great—say from 7 to 10 feet. Below Gorian, a dam site occurs, on which a timber overshot of 12 feet would impound flood-water between well-defined banks for several miles. A similar position which may be pointed out is near the present crossing of Pian Creek by main road, at about 10 miles west of the Namoi crossing, near Wee Waa.

Proceeding towards Narrabri from the last-named point, a large extent of high-class land presents itself, bordering the Gunnedra ana-branch of the Namoi. This area, which embraces portions of great natural fertility, is, in general, waterless, with the exception of the inadequate supply obtained from a few wells.

A suitable position for an overshot dam, formed of ironbark, is to be found on this Gunnedra branch about 11 miles below the point where the flood-water from the Namoi enters the channel. The height of dam would be approximately 16 feet, and the length 100 feet. It appears probable that a portion of the flood-water impounded above the dam could be diverted into a cross-channel situated somewhat under 2 miles higher up, and which leads to the upper channel of Pian Creek. The work in question would be of the greatest advantage to the settlers on these creeks, but a special survey would be necessary before the details of the scheme could be obtained. The information on the subject which I have been enabled to gather was got merely in passing through the district on my return route to Narrabri.

I have, &c.,

JOHN B. HOTSON,  
Engineer-in-charge, Darling River Survey.

#### UPPER DARLING (BARWAN) SURVEY.

##### REPORT No. 4.

The Engineer-in-charge, Darling River Survey, to The Secretary of the Royal Commission on Conservation of Water.

Sir,

Sydney, July 23rd, 1886.

I have the honor to submit for the information of the Commissioners the following abstract of work done by me during my recent survey of the Barwan River and its branches, over the portion of its course embraced between the boundary of Queensland and Walgett.

The progress of the work was, as you are aware, subject to constant interruption and delay by the very heavy rains and consequent floods which commenced soon after my arrival in the district, early in April, and continued throughout the months of May and June. More than half of my time during these three months was unavoidably lost, although every endeavour was made by me to overcome the obstacles to progress by which I was surrounded.

The following are the works referred to:—

- No. 1.—Cross-section of Barwan below Mungendi, at Queensland border, plotted and submitted. There is no gauge yet fixed at Mungendi. The levels taken along river downward from above section need not be plotted, as they would serve no useful purpose.
- No. 2.—Cross-section at mouth of Mooni River, also of Barwan immediately below that point. Cross-section of Mooni River, at site of proposed dam at Gundabloui township. These might be plotted to scale of 40 feet horizontal and 4 feet vertical to inch. Traverse and contour lines along course of Mooni River above site of proposed dam. For useful purposes these might be plotted to a scale of 5 chains to an inch. The proposed works on this river would secure a great permanent storage of water, available for irrigation and other purposes. (See my report of May 10th, 1886.)
- No. 3.—Cross-section of Barwan at Mogil Mogil. May be plotted to scale of 40 feet horizontal and 4 feet vertical to inch. There is no gauge yet fixed at Mogil Mogil.
- No. 4.—Sites for two overshot dams on branches of Ballone Creek. The cross-sections of these may be plotted to scale of 40 feet horizontal and 4 feet vertical to inch. Traverse of two arms of Ballone Creek, with traverse and contour lines extending to inlet of Banarway Creek. It would be of advantage to have all this work plotted to scale of 5 chains to an inch. Large permanent storage of water obtained by the two dams referred to. (See my report dated May 10th, 1886.)
- No. 5.—Traverse of Meei or Gwydir River and Moomin branch. Site for dam below junction of these streams, with contour lines along both streams. May be plotted to scale of 5 chains to an inch. (See report of May 10th, 1886.)
- No. 6.—As to proposed weir in Barwan above Collarindabri, and the results to be obtained. (See report of June 16th, 1886.)
- No. 7.—Cross-sections of Grawan Creek, the upper of which, for site of proposed dam, may be plotted to 40 feet and 4 feet to inch. Traverse of Grawan Creek and branches, with levels throughout, partly contoured, until flood rose above position of contour line. Surveyed lines of levels across from Grawan Creek to Thalaba; also traverse and levels across to Mcaki-Creek from Grawan Creek. All above might usefully be plotted to scale of 5 chains to inch, and reduced levels noted at the station points along lines. (See report dated 16th June, 1886.)

No. 8.

No. 8.—Traverse and levels of upper inlet to Pagan Creek, connecting also with Thalaba, might be plotted to scale of 5 chains to inch, with levels noted on plan. No detailed survey of Pagan Creek could be made, owing to the very high flood. (See report, July 20th, 1886.)

The foregoing is a summary of the work actually done, with references to reports in which details will be found.

I beg also to direct the attention of the Commissioners to the map of the north-east portion of Western Division of Colony, upon which I have indicated the sites of the various proposed works now referred to. This map, along with the parish maps used by me, are now returned.

Any further information which the Commissioners may wish, and which it may be in my power to supply, will be submitted to them whenever required.

I have, &c.,  
JOHN B. HOTSON,  
Engineer-in-charge, Darling River Survey.

#### MEMORANDUM ON THE CLARENCE RIVER AND ITS CATCHMENT AREA.

COMPARED with the western and south-western rivers of this Colony the course of the Clarence is short, and its catchment area appears small in extent. On this account the importance of the Clarence is not understood, except by those who have seen it or have studied its conditions. In order to obtain a correct conception of the relative conditions of the eastern and western rivers it is necessary to bear in mind that the latter flow for hundreds of miles through districts which scarcely ever contribute to the discharge of the rivers, and in which the rivers diminish steadily in volume as they flow towards the ocean. On the other hand, the plain country on the eastern coast is comparatively small in extent, so that practically the whole of every large catchment area may be classed as "effective." Another point which operates in favour of the eastern catchments is their high rate of rainfall. At Grafton, which occupies a fairly central position in the Clarence basin, the mean rainfall is about 34 inches, while the mean rainfall on the Upper Murrumbidgee is only  $21\frac{1}{2}$  inches. Thus, although the effective catchment area of the Murrumbidgee is 11,900 square miles, while that of the Clarence is under 8,400, the quantities of rain falling on those areas are in the proportion of 256 to 286, or approximately as 8 to 9. This would practically mean that if equal proportions of the rainfall were carried off by the Clarence and the Murrumbidgee the discharge of the former at its mouth would exceed that of the latter at Wagga in the proportion of 9 to 8. But the Clarence basin, as the smaller area may naturally be expected to lose less by evaporation, percolation, and absorption than the basin of the Murrumbidgee. From a rough measurement of the velocity of the Clarence at Copmanhurst, added to information obtained from Mr. E. J. Statham, assistant engineer of the Roads Department, I conclude that the discharge of the Clarence seldom falls below 1,000 cubic feet per second. So far as can be judged from the few observations already made, the corresponding summer discharge of the Murrumbidgee at Wagga is about 600 cubic feet per second. These figures confirm the suggestion that the proportion of rainfall discharged from the Clarence basin is greater than that from the basin of the Upper Murrumbidgee.

Regarding the flood discharge of the Clarence, no detailed observations have been made, but Mr. Statham, who has kindly furnished me with a cross-section of the Nymboi taken by him, has made some experiments to determine the velocity of that river during high floods, and he has come to the conclusion that the flood discharge of the Nymboi below its junction with the Little River is over 270,000 cubic feet per second.\* The maximum discharge of the main northern branch of the Clarence is believed by Mr. Statham to be considerably greater than that of the Nymboi. Taking this fact into consideration, and bearing in mind that the Orara, the second large southern tributary, has a mean width of about 80 feet during floods, and a depth of from 25 to 30 feet, it will readily be understood that a flood in the Clarence attains to enormous proportions.

Owing to several causes, the importance of the Clarence for other purposes besides navigation has hitherto received little or no attention. So far as regards irrigation, this is not surprising, as, in the first place, only a short period has elapsed since the district was settled; and, in the second place, the rainfall in ordinary seasons is sufficient to ensure fair crops. Still, the statistics which will be placed before the Commission, as well as the evidence of witnesses, will show that the diminution of produce in the Clarence District in dry seasons is a serious matter. Nor is this in any way remarkable, for the rainfall, though relatively great, is frequently unseasonable; so that all the bad effects of a scarcity of water for agricultural purposes are felt, while the rainfall would be more than sufficient if it occurred when required. In northern Italy, where the rainfall is 20 per cent. in excess of that at Grafton, irrigation is extensively and successfully practised. The case of the Dehra Doon Valley, in Upper India, affords a much more striking comparison, as irrigation has long been carried on there on a considerable scale, though the mean rainfall is more than two and a half times greater than that at Grafton. A direct proof of the advantages of irrigation in the Clarence Valley is afforded by the Chinamen's gardens, which are irrigated from wells, with the usual satisfactory results.

The utility of irrigation in the basin of the Clarence is beyond dispute; but the question of carrying out irrigation works on anything like an extensive scale is surrounded with serious difficulties. In the first place, the river, when low, is affected by the sea-water to Copmanhurst, which is about 30 miles by the river upstream from Grafton. The immediate consequence of this is that any supply of water taken from the Clarence for the irrigation of the delta land would have to be drawn from the river at or above Copmanhurst. As the conduit would, under these circumstances, pass through 15 to 20 miles of irregular and hilly country, it would necessarily be very expensive.

Another very serious difficulty in the way of diverting a supply of water from the Clarence is the great height and high velocity of the floods to which the river is subject. While the great flood of 1876 rose to 23 feet 8 inches above high-water-mark at Grafton, the corresponding rise at Moleville, 10 miles above Grafton, was 34 feet, that at the mouth of the Orara, 11 miles further up the river, was 62 feet, and at

\* NOTE.—This discharge appears almost incredible; but Mr. Statham has explained how he arrived at this conclusion and has shown me a tracing of the cross section of the Nymboi at Buccarumbi when in flood. According to Mr. Statham's levels and measurements the water section there during a high flood is 21,880 square feet, and the velocity about 8 miles per hour; and from these data the discharge was calculated.—H. G. MCK.

at Copmanhurst, 30 miles above Grafton, 77 feet. It follows from this that in time of flood the fall in the surface of the river from Copmanhurst to Grafton is about 54 ft. more than when the river is at ordinary level. Mr. Statham found that during a high flood the velocity in the contracted portions of the river from Copmanhurst to Moleville is from 11 to 13 feet per second. At such times the banks are overflowed in many places, and the flood-water frequently crosses the necks of bends, thereby increasing the effective fall in an important degree. It was owing to this cause that in 1876 the flood-water passed with a dangerously high velocity across the bend on which the town of Grafton is built. Provision for floods of that description would be a serious item in connection with the distribution channels, as well as with the head works of any irrigation scheme.

Another serious obstacle to the constructions of extensive irrigation works is the irregularity of the delta land and its division into islands. The action of the Clarence in regard to the accumulation of alluvial soil differs materially from the process going on in the case of the rivers of the west and south-west of the Colony. Such rivers as the Darling and its tributaries flow with moderate velocity in flood-time as compared with the Clarence; and while their alluvium is deposited over wide areas, and is very little subject to subsequent disturbance, the alluvium of a large portion of the Clarence delta bears the appearance of having been deposited in large quantities, and of having been greatly altered by eddies and changes of current. Though the general conditions of the western rivers differ widely from this, parallel cases may in some cases be found at the point of emergence of these rivers from the hilly country. The best instance of this with which I am acquainted is that of the Macquarie at Dubbo, where a deposit many feet in depth is sometimes left by one great flood, and subsequently removed or altered by another. Owing to such cases much of the alluvial land of the Clarence has an irregular and ridgy outline. Besides, the lower portion of the delta is practically cut off from the upper by the hills, which arise almost from the brink of the river at Rocky Mouth or Maclean. These hills would form an expensive barrier to the irrigation of the alluvial land between this place and Clarence Heads.

There is yet another point which would demand a heavy outlay in connection with any large irrigation work in the Clarence Valley. This is the presence of tracts of low land which would require to be provided with a system of drainage in conjunction with the irrigation works.

The conclusion to which I have been obliged to come is, that while irrigation in the delta of the Clarence would in many cases be decidedly beneficial, the obstacles in the way of utilising a supply of water from the river for this purpose are of serious importance. Under these circumstances the question of irrigation from wells is one deserving of consideration. An abundant supply of water suitable for irrigation has in several places been found at depths of from 20 to 30 feet; but hitherto only Chinamen appear to have made use of it. It seems highly probable that as the cultivation of the alluvial land extends, and agricultural competition becomes more keen, a demand for the complete investigation of the practicability of an extensive system of irrigation will arise. Meanwhile it is necessary to indicate the measures which should be taken in order that the prospect of utilising the available supply in the river should not be marred.

The most important point to be attended to is the reservation of all probable sites for storage reservoirs, especially where such sites are at a considerable elevation. It frequently happens that the best sites for reservoirs are rich alluvial flats surrounded by hills, and unfortunately comparatively few such places remain unalienated. The reservation of the valley above and below such places would, however, be useful; and in the case of possible sites which yet remain unalienated it would be advisable to have special surveys made to determine their merits. I understand that the Surveyor-General has devoted special attention to this question in connection with the country west of the Dividing Range; and I have no doubt that in regard to the Coast District, it has only to be brought to his notice to receive similar consideration.

It is not irrigation alone which has to be considered in dealing with the supply of water in the Clarence and its tributaries. The presence of one of the largest supplies of water in the Colony within the bounds of an extensive gold-field is a very suggestive coincidence. Not only is the supply abundant for sluicing purposes, but the rapid fall in the tributary rivers affords the means of obtaining power for working machinery on a large scale. An example of what can be done with the water-power in such a river as the Clarence is furnished by the case of the Connecticut River in the United States. The catchment area of this river is slightly less than that of the Clarence, but it is made to yield 15,000 horse-power, and thereby returns a revenue of about £20,000 per annum.

I attach hereto a sketch map showing the coast river-basins from the Nambuccra to the Tweed. This map was very kindly supplied to me by Mr. Statham, Assistant Engineer for Roads, who also gave me rough copies of cross-sections of the Nymboi, Blick's River, and Whiteman's Creek, and from whose experience I obtained much useful information when inspecting the southern tributaries of the Clarence.

Grafton, 23 October, 1886.

H. G. MCKINNEY, M.E., M.I.C.E.,  
Engineer to the Commission.

## REPORT ON THE DISTRICT BETWEEN THE LACHLAN, BOGAN, AND DARLING RIVERS.

V. Czarlinski, Esq., M.E., C.E., to The Secretary, Royal Commission, Conservation of Water.

Sir,

Sydney, 27 January, 1887.

I have the honor to present the President and the Members of the Commission with my Report on the district between the Lachlan, the Bogan, and the Darling Rivers, which I visited under instructions contained in your letter of April 30th, 1885, as also instructions received from the President verbally.

I have, &c.,

V. CZARLINSKI, M.E., C.E.,  
Assistant to the President.

### 1.—OROGRAPHICAL DESCRIPTION.

The country bounded in the north-west by the Darling, in the north-east by the Bogan, and in the south by a portion of the Lachlan River, and its effluent the Willandra Billabong, occupies the most central position in New South Wales, and its area is equal to about 46,000 square miles. Position and area.

The surface configuration of this triangular tract of country may in its general form be described as that of a tetrahedron, formed by the remnants of what was once a range of some magnitude,\* and which, from its position in the Colony, may be designated by the name of Central Range. Surface configuration.

The position of the summit of this tetrahedron range is fixed by the junction of its three main ridges on Nangeribone Run, where the Crawl, the Nangeribone (head of the Panjee), and the Tarran Creeks take their rise and run towards the Darling, Bogan, and Lachlan Rivers respectively, defining in that way the directions of the general fall of three of the sides of this tetrahedron, while the position and fall of the plane forming the basis are defined by the position and the fall of the rivers which bound the tetrahedron.

The south-easterly ridge, starting from the range at the head of the Bogan River, at a point which determines the division of the Bogan, Lachlan, and Macquarie River watersheds, runs in a north-westerly direction, keeping parallel with, and almost equidistant from, the courses of the Bogan and Lachlan Rivers, till it reaches the summit of the tetrahedron, nearly opposite the points where the Bogan trends towards the north and the Lachlan to the south-west. Ridges dividing main water-sheds.

The altitude of the points composing this dividing line, if peaks existing here and there are excepted, remains almost constant at a height of about 1,200 feet above sea-level, on the portions from the summit at Nangeribone (1,265 feet) to near the head of the Bogan proper, on Coradgery Station. There is however, a slight fall towards the centre of the line about the heads of Murga Creek, as Melrose Plains homestead, situated right on the dividing line, is at an elevation of 1,195 feet only. The elevation gradually increases as we go nearer the summit on the Macquarie watershed division, where it attains about 1,700 feet. This line, though well defined in its whole length, seldom appears as a sharp ridge of steep inclined slopes, and, with the exception of both ends, it mostly occurs as a slight undulation, on a high table-land gently descending towards the main drainage channels on both its sides.

The ridge separating the territories of which the Lachlan and Darling Rivers are the main drainage channels, runs from the summit at Nangeribone towards Wilcannia, in the same westerly direction as the dividing line between the Bogan and the Lachlan, and of which it is a continuation. But it soon loses its well-defined character, as when from the extremity of the granitic outcrop it trends with the Devonian to the south, it abuts at North Peak on to a table-land, which is like a depression of the crest of the two watersheds.

This plateau, inclined towards the west, or, in other words, following the direction of the main crest of the old Central Range dividing the great River systems of the Darling and the Murray, and which here has been flattened, is in the south and the north skirted by chains of low ridges. The southern ridge is crossed twice by the Forbes-Wilcannia Railway survey, at an altitude of 329 and 309 feet respectively. To the west it gradually and almost unnoticeably goes over into the plain of the Darling Valley, opposite Wilcannia, and its eastern limit is formed by a range extending from Mount Hope in the south to the banks of Crawl Creek in the north. Two other lines of ridges running transversely to the length of the plateau divide it into three portions. It will easily be understood that such configuration forms of the two upper or easterly portions almost enclosed basins in themselves. They comprise a sort of neutral zone between the watersheds of the Darling and Lachlan, from which the escape of the rain waters in any direction is rendered difficult by nature. However, the ridges bounding in the north having a decided slope to the Crawl Creek, which belongs to the Darling watersheds, though its waters might never reach the present surface drainage channel of that river, and the tendency of the few creeks on their southern side being to flow in the direction of the Lachlan, the higher gradients of this table-land may well be considered as lying within the Lachlan basin.

The third main dividing line is that which causes the rain waters to flow on the eastern side towards the Bogan, and on the western side towards the Darling.

Running from the summit due north after leaving the porphyritic outcrops at the head of Mulga Creek, it trends to the north of east, narrowing the area of the slope which sheds its waters to the Bogan, by approaching that river to within 12 miles. From that point it takes a north-westerly direction parallel with the river course, reaches Mount Oxley, and finishes with a granitic hill in the corner formed by the Bogan and a Darling ana-branch called the Dry Bogan. This

\* First discovered by Mr. C. S. Wilkinson, Government Geologist, and referred to in his evidence given before the Commissioners in their First Report, Minutes of Evidence, Q.Q. 942, 971, 975.



This ridge is easily discernible on its whole length by prominent peaks of 1,400 to 1,500 feet high, remaining witnesses of a grand range which once existed here, but through deficiency of accurate surveys all its minor bends cannot be fixed on the map. In the first part there are few variations in the altitude of this line—I mean a line passing through the lowest points on the ridge of the range. Starting at Nangeribone, 1,265 feet high, and crossed by the Nymagee-Nyngan road, at the head of Nymagee Box Creek, at 1,200 feet, it maintains about this height to the head of the Mulga, whence the ridge begins gradually to lower till it descends to the level of the flooded valley of the Darling, which is about 360 feet, the surveyed line for the Cobar Railway crossing it at 955 feet, the Nyngan-Bourke line at 781 feet, and the proposed Byrock-Brewarrina line at 690 feet above sea level.

Slopes

The position of the summit in relation to the main drainage channels, and the nature of the rocks about the summit and the ridges, furnish by themselves to some degree an explanation of the present configuration of the three main slopes, and the distribution thereon of more recently formed deposits.

This culminating point is about equidistant from the Lachlan and the Bogan, as in a straight line about 48 miles separate it from both rivers. The nearest point of the Darling is however 160 miles distant. The fall from the summit in those straight directions to the rivers can be taken as a gauge of the mean declivity of the slopes. The total fall towards the Lachlan being 665 feet, the declivity of the slope is 14 feet per mile. The Tarran Creek takes a course following closely that shortest line to the Lachlan. On the Bogan side the total fall amounts to 627 feet, giving a mean fall of 13 feet per mile, which is most nearly approached by the Panjee Creek.

In the direction of the Darling the tendency to follow the shortest route is for a considerable distance marked by the Crowl Creek. The total fall from the summit to the nearest point on the Darling being 960 feet, the declivity of this slope is equal to only 6 feet per mile in average.

As a result of the eccentric position within the area encompassed by the main rivers, of the summit, where the named creeks rise, steep slopes to within a short reach of the rivers mark the watersheds of the Lachlan and the Bogan, while the waters shed to the Darling descend over a slope gently inclined almost throughout. Steep slopes engender torrential watercourses, but as in the Bogan and the Upper Lachlan basins down to Euabalong the watersheds are narrow, their occasional torrents are short, and so deposit but little of the debris of rocks brought down from the hills, carrying the great bulk to the main channels or their immediate shores. The consequence is that on the respective sides, and along the rivers, alluvial plains do not extend far back from the banks; this is especially true in the case of the Bogan. The basin of that river being too limited and the nature of the rocks at the heads unfavourable to furnish material enough for the building up on its left bank of extensive plains from alluvial deposits; their extreme width does not exceed about 5 miles. Moreover, the tributaries to the Bogan and the Lachlan compelled by the contours, results of old convulsions of the earth's surface, to wind their courses through wider depressions and gaps, have ridded their waters from silt, ere reaching the rivers. They filled first the enclosed depressions, and to such an extent that in the so formed flats it is now often a difficult matter to discover and trace the beds of the tributaries. However, they do reappear, and the junction of most of them with the recipient river is marked by channels cut deep and wide enough to make it evident that at times they discharge down the hills great volumes of water with tremendous force.

On the Darling side, the mean fall being less and the distance greater, the creeks, though torrential at the heads in times of rainstorms, die out in the alluvial plains which they helped to form, but which were mainly built up by the Darling itself. So far away from the Darling do these creeks die out that no one can positively tell the spot where the river receives their waters, if it receives them at all.

After this general description, in which I have endeavoured to exhibit the general similarities and differences in the surface character of the sides of the tetrahedron, it will be convenient, for the consideration of features characteristic only to each of the three areas, to treat them separately.

#### THE BOGAN SLOPE.

**Area.** The side sloping to the Bogan occupies an area of about 7,000 square miles, or only a little over 15 per cent. of the whole area, and is the smallest of the three watersheds.

**Aspect of surface.**

The range bounding it in the east, the central part of which is known as Harvey's Range, has a very abrupt flank towards the Bogan and stands like a wall dominant above the adjoining western table-land. The ridge of this range being highest, about 1,700 feet, at the division point of the Lachlan, Bogan and Macquarie basins declines towards the north, descending to about 1,000 feet, a few miles to the west of Dubbo.

**Gaps and table-lands.**

Three gaps, the Burrell in the south end, the Gingham in the centre, and the Gundong in the north, give access from the Bogan watershed to the high table-land of the Macquarie on the east side of the range. This table-land slopes, in a general sense, in a north-easterly direction or parallel to the course of the Macquarie, that is to say, the general position of Lewis Ponds Creek is more elevated than that of the Bell River, which is higher situated than the Little River. At the opening of the Gingham gap the Macquarie table-land is about 200 feet higher than that of the Bogan, which, through that gap, is reached by a very steep descent. The sill of the gap is 1,200 feet above sea-level, and about 10 miles to the west of it a surveyed railway line crosses the Ten-mile Creek at a height of 945 feet. The table-land of the Bogan preserves a character of undulations, interspersed with small open and almost level plains; and it would present no superior difficulties to the construction of canals, even if they were to run on the higher parts along the southerly dividing range, as the spurs from that range subdividing the watershed into secondary drainage areas are neither formidable in height nor precipitous in shape, and suitable places on the many depressions of their ridges would afford easy passages to lead the canal from one into the other of these minor basins.

**Panjee and Trowel Creeks basins.**

A more rugged appearance is presented by the country where the slope bends from the north-west to the full north, and where consequently the waters of the Panjee and Trowel Creeks flow in a north-easterly and easterly direction respectively; but whereas the hilly country above the Bulbodny Creek extends to within a short distance from the bank of the Bogan, the broken country of the Panjee reaches only to about half-way between the high edge of the slope and the river, the greatest irregularities of the surface occurring naturally in the neighbourhood of that edge. Within the basin of the Trowel Creek the pronounced mountainous character about the heads changes towards the lower course into gentler undulations, which extend again to about 5 miles from the river about Nyngan.

Referring

Referring to the annexed geological and hydrological map, it will be noticed that the Bulbodny Creek forms a sharp angle with the Bogan. Within that angle runs a ridge almost parallel to the Bogan, forming the division between the river and the creek, and limiting the Bogan valley proper. This ridge, originating on Coradgery Station, runs at the back of Crowl or Sandy Creek, along the north-eastern boundary fence of Burra Burra, forming there a gap through which the Bullock Creek passes, thence, running at the back of Middlefield block, it extends over the Albert Waterhole block, and follows on Orange Plains, close to the north-eastern boundary of that run. The eastern flank of that ridge sheds its waters direct into the Bogan, giving rise after heavy rainfall to watercourses of only a few miles length. There is nothing in the way of natural difficulties to prevent the leading of a canal on to this ridge and along it, from which higher position both sides could be commanded.

No very distinctive features—at least, so far as my knowledge goes—occur below the basin of Trowel Creek, with the exception of the New Year's Range and the Pink Hills, marked on the map close to the river. The decreasing height of the main divide, and the narrowing area of the slope, explain the absence of any important water-channel, though the undulating character is maintained also in this lower portion of the area drained by the Bogan.

#### THE LACHLAN SLOPE.

The tract of country tinted in yellow shades on the geological and hydrological map comprises that portion of the northern watershed of the Lachlan which is drained or otherwise affected by the central part of the course of that river.

The area is equal to about 14,000 square miles, of which, however, 5,000 square miles are occupied by the enclosed plateaux on the crest of the Dividing Range, contributing no water to the river, and about 3,000 square miles receive at flood-times water from the river; so that the area actually drained is reduced to only 6,000 square miles.

On the whole the drained portion, from the heads of Goobang Creek to near Mount Hope in the west, and from the Dividing Range to the river's bed, may be described as generally undulating, similar to that on the Bogan side. This slope is, however, distinguished by a series of ranges, running north and south across the valley of the river, and which are continued on the southern bank. Some of them are bold, as the Grudgery Range, which is pierced alike by the Goobang and its tributary, the Gunningbland, as by the Lachlan. Upon the waters of the Lachlan it has acted as a natural formidable weir, rising as it does wall-like in the midst of the almost level plain of the banks. If, for information on the country situated west of Yarrabundry Creek, we refer to existing maps, the profuse number of dots over that portion would lead to the wrong impression that this country is a plain with isolated, unconnected, and unsystematically situated hills, whereas in fact they represent the highest peaks of ridges dividing well-defined watersheds. With regard, however, to the northern end of the Bogandillen or Manna Range, prominent on the south side of the Lachlan, the task of tracing the ridge would be difficult, as the action of denudation and of pressure of water on the barrier which once existed there has been so effective as to leave only landmarks, such as the Wollamundry, the Wollawigany, Wollongong, and Derriwong Hills.

Another line of demarcation starts from the main range with the Boona Mountains, conspicuous by abrupt cliffs of the old red sandstone, and which, passing over the Condobolin Hill, of similar formation, and the Tuga Hill, abuts as a yet elevated ridge on the river at Condobolin. Here a reef crossing the bed shows its continuation on the southern bank, but without any trace of it on the surface.

A well-marked and extensive upheaval occurs between the Nangeribone summit and a point on the river, where it has caused the Lachlan to bend from a north-westerly course to the south of west. It is a true mountainous piece of country, extending over a large area in all directions. The ridge from which on the eastern side flows the last well-defined tributary, divides the southern side of our tetrahedron into two distinct halves—the eastern capable of discharging its waters to the Lachlan; and the western, which, producing on the higher ground only a few insignificant and short rivulets whose waters can never reach the river, is, in its lower reach bordering the Willandra Billabong, subjected to floods.

Mount Manara is a prominent link in the chain of sandhills extending southwards to the Culparlin Range. Limiting in the west the area drained or commanded by the Lachlan, these sandhills are said to form the only obstacle to the meeting of the Lachlan and Darling flood-waters.

With regard to the country east of Tarran Creek, it is remarkable that the peculiar sections into which this part of the slope has been divided are the result of a subsiding at one time of a stretch of country in the region of the present river-bed. The visibly-sharp broken-off sides of the narrow portions of Devonian sediments, which remained relatively undisturbed to form the divisions, bear testimony to such an occurrence. The volcanic cones and dykes about Parkes and Euabalong exhibit the cause of the cataclysm. The waters gathering behind the outstanding barriers of rock would find no difficulty to force a passage where the gigantic shaking, producing crevices and chasms, had already materially weakened the power of resistance of the barriers. These natural dams, with apertures as fixed points where the bed of the then forming river would have to pass, helped at once the water to rebuild what the fiery element had just destroyed, by compelling the stream to deposit what material it brought down from the hills. The field from which to gather being extensive, this material was abundant enough to fill the lower portions of the sections till there were created the present plains of the valley. At the present day the water, continuing its levelling action, does not confine itself to one channel, but, breaking through the friable loam of the banks, has created networks of depressions, lagoons, and ana branches. A slight fall from the river back of the wide plain is the cause that most of the tributary creeks, with minor watersheds, have not been able to cut a channel right through to the river, but empty into swamps as much as 10 miles away from the Lachlan channel.

#### THE DARLING SLOPE.

The portion drained towards the Darling of the district defined by the three main rivers and a line which would strike the Darling if the Willandra were prolonged in the direction of its course to the west, covers an aggregate area of about 25,000 square miles, made up by about 12,600 square miles of mountainous and generally undulating country, 4,400 square miles of a low plateau, transitory between the hilly portion and the plain of the present valley, and the valley itself which embraces an area of about 8,000 square miles. In this valley all watercourses, lakes, and depressions are exclusively supplied from floods, and the valley is occasionally exposed to total submersion.

Considering



Surface appearance.	Considering the modulation of surface of the higher or hilly part, it may be described as a generally rolling country. In appearance, if a narrow strip of mountainous land, consisting of deep gullies and precipitous flanks, and extending from the summit by Nymagee towards Cobar, be excepted, the monotonous regularity of the undulations is only diversified by some isolated peaks and bluffs, remains of broken-up ridges. Each undulation of the ground is separated from the next by a depression of a corresponding shape, but reversed, the width of the flat bottom of the one being almost equal to that of the flattened top of the other.
Sub-divisions.	The whole area is subdivided by ridges of more or less prominence into separate drainage areas, some of which are extensive. A prominent range, leaving the eastern main divide near the head of Yanda Creek, runs to the north of west, and passing at the distance of about 4 miles east of Cobar joins after some bends Rankin's Range, which is almost on the bank of the Darling. It divides the sub-drainage areas into two distinctive groups: those sloping to the north-west, and those inclined to the south of west.
North-western slope.	The north-western slope comprises the larger basins of the Mulga Creek (2,700 sq. miles), the Yanda Creek (2,500 sq. miles), and the smaller basins of Kerrigundi and Gundabooka Creeks together (1,050 sq. miles). The Gundabooka mountains, connected on one side with the Dunlop Range by a ridge of low hills, and in the south with the main dividing ridge, separates the Yanda watershed from a series of minor basins, of which the Kerrigundi Creek has the largest. Outside of hills which form part of watershed divisions occurs the isolated Tindarey chain within the basin of Yanda Creek.
South-western slope.	The south-western group of basins includes the extensive basin of the Crawl or Sandy Creek (5,550 sq. miles) and the limited area (800 sq. miles) of the western flank of a ridge which, extending from Rankin's Hills by the boundary of Pullpulla and Wuttagoona stations, runs south to Barnato, and gives rise to a number of small watercourses. These disappear as soon as they enter the most permeable soil of the plateau at the foot of this elevated chain.
Low plateau.	This very absorbent, spongy, and sandy stretch of country, in which the Crawl Creek also loses its channel, is chiefly characterised by low sandy ridges and small swamps. It is separated from the inundated plains of the Darling by a chain of sandy ridges extending from Mount Manara and Macculloch's Range in the south, to Greenough's Hills north of Lake Poopelloc, and Rankin's Hills. Other low ridges extending from Mount Manara by the Neckarboo Range towards Barnato form its eastern edge, and divide it from the drained portion of the Crawl Creek basin.
Crawl Creek basin.	In connection with the extensive basin of the Crawl, it has to be noticed as a remarkable feature that the main drainage channel, through its close position to the southern limit of the basin, draws its supply from only one side. All the tributaries come in from the northern watershed, and with the exception of a high spur intervening between the Nymagee Box Creek, and the upper course of Crawl Creek, their respective drainage areas are formed and divided by undulations of but medium prominence. Still, of a more mountainous character is the land between the gully in which Cobar is situated and the Buckwaroon Creek, where some valleys of amphitheatrical shape have been formed by erosion. On the Box Creek, about 10 miles below Nymagee, two high spurs, coming within a short distance of each other on the opposite banks, and encircling as they do an extensive plain, offer the only instance to my knowledge where a large storage reservoir could be made within this district.
Valley.	The black-soil plain along the course of the Darling opposite Bourke, about 12 miles wide, is reduced to a narrow neck by the Dunlop and Rankin's Ranges; it then widens out again; when past Macculloch's Range its breadth takes an excessive development. This is the area, at times almost completely covered by floods, in which the river has in the course of more recent ages been shifting its bed, with the result of creating a network of large and small billabongs, lagoons, and innumerable depressions called lakes. As is usual for most of the lower courses of Australian rivers, the bank falls slightly back from the river.

## 2. GEOLOGICAL FORMATION.

The flow and escape of the rain-water from the surface are regulated and governed by the physical properties, disposition, and apportionment of the component parts of the ground. It is therefore, in a hydrographical study, essential to the acquisition of a true understanding of existing conditions, and especially of those affecting the circulation of water underground, that we should add to our geognostic knowledge an inquiry into the geological changes undergone by the country under consideration.

The Government Geologist, Mr. C. S. Wilkinson, has, in his evidence already referred to, made a general statement as to the substances of rocks of the Old Central Range and its surroundings, their lithological conditions and proportions of superficial extent. It is therefore unnecessary to dwell here upon those subjects; but since that time the character of large portions of areas marked on the maps with the First Report of the Commissioners as "not geologically examined" has been recognized, and accordingly those portions have been attributed to the basins of corresponding geological origin. As the field for research of artesian water is indicated by the character and confined to the area of particular formations, this modification of limits is important. In compiling the accompanying geological and hydrological map regard has been paid to these recent alterations as shown on a map prepared by Mr. Wilkinson for the Colonial Exhibition in London, and which he kindly put at my disposal.

The discovery of cretaceous beds between Bourke and Wilcannia on the left bank extends the possibility of striking artesian waters to the eastern shore of the Darling. So far a tolerably extensive patch of country about Bourke, and the land lying between Acre's Billabong and the Darling, have been found to be of cretaceous age. It may also be expected that, with the exception of what has been recognized as Devonian, the intervening country and further down to the dividing Devonian outcrops opposite Wilcannia will also prove to be of similar formation; but the recognized development of the area occupied by paleozoic rocks forbids the expectation of finding the cretaceous beds to extend much in width.

It has been ascertained that the silurian deposits reach a long way further north, and there is little doubt that they will be found beyond the limits ascribed to them at present in the west of Cobar. The disposal of the patches known to belong to the Devonian class of rocks indicates the existence of a considerable basin of that origin, although in places it is covered by recent or pleistocene deposits of shallow depth. There is information to hand indicating as an approximate position of the shores of the paleozoic mass a line passing outside of Mount Oxley, the Gundabooka Mountains, touching the Darling with the Dunlop and Rankin's Ranges, which thence takes a turn to the south, skirting the foot of the Devonian range extending towards Barnato, and of Neckarboo Range; it turns there by the north by Macculloch's Hills towards

Wilcannia

Wilcannia. This is of course an outline from which there are departures in the form of indentations occupied by more recent deposits, as also of Devonian outrunners, promontories in the cretaceous ocean, of which it marks the south-eastern shore in this region. These primary sediments extend also in the south over a field larger by far than has been hitherto allotted to them. The largest portion of the country between that massive barrier of porphyry and Devonian rocks, extending from the junction of the Nymagee Box Creek down to Mount Hope, and the Devonian dyke, called the Grudgerly and Gunningbland Ranges, is composed of Devonian rocks. In the valleys and occasional hollows the old rocks have been covered with tertiary and recent alluvial deposits; but even there silurian and Devonian schists appear frequently in the banks, and at the bottom of the creeks, and of the Lachlan. The Devonian formation extends also for some distance in the west of the porphyritic outburst near Mount Hope.

Within the basin of these old sediments the occurrence of granite and porphyry is mostly confined to the main dividing ranges. Through the agency of these early eruptions has been determined the still prevailing divisions of watersheds, and was shaped the original configuration of the country. But a ceaseless action of denudation, the disintegration of *debris*, and settling of deposits, have since softened the ruggedness of surface and angularity of outline, and reduced the elevation of prominences. In speaking of elevation I have in mind the difference of levels between the top of the hills and the bottom of the valleys, for the absolute height above sea level varies from one geological epoch to another through its dependence, not only on the destructive action of atmospheric influences, but also on the alternate upheaval and subsidence experienced by whole parts of the continent.

The basaltic outburst, which we find to have taken place at the heads of the Bogan, near Parkes, and below Euabalong in the Lachlan watershed, as also near the northern course of Mulga Creek, producing merely local effects, cannot have much changed the original surface arrangement of the whole.

The schists, mostly of a micaceous nature, frequently intersected by quartz reefs, form the bulk of the hills, where they appear exposed on the surface or are covered with a few inches of soil, the result of their own disintegration. Some of the hills, principally between Cobar and Nymagee, are covered to such an extent with small, round, waterworn nodules of ironstone that not a blade of grass or other herbage can pierce the black coating which glitters under the rays of the sun like a mirror. To this peculiarity is due the name of "buckshot country," which it locally bears. This shows the sterility of the hills for agricultural and pastoral purposes. But immense mineral riches, hidden in their bowels, wait for the development of mining industries. Although the Cobar, Nymagee, and Mount Hope copper mines have a world-wide fame, and gold is occasionally extracted near Byrock, on the Nyngan-Cobar and the Nyngan-Nymagee roads, these minerals are so profusely distributed over the whole of the primary basin that the wealth of it may be said to be yet untouched. Hopes may also be entertained for the discovery of silver, as there is no want of indications in that direction.

The depressions and valleys towards the heads of the creeks and watercourses are filled with alluvial soil 6 to 8 feet deep, but at the lower ends, as the valleys widen out, the depth of deposits also increases, and the rich fertility of these red plains is well known.

The red sand-hills, characteristic of the country at the foot of the basin, of older impermeable formation, are of Eolian origin, and due to the disintegration of their Devonian neighbours. They are scattered over a chiefly flat and permeable soil, interspersed with clay pans, where the drainage of local rain causes the formation of swamps.

The materials which have settled over an older valley bottom of the Darling and Lachlan Rivers, forming the present undatable black soil plains, has been made up from *debris* brought down by the floods of those rivers. Both sand and black soil are capable of great fertility when water is abundant. A deep deposit of alluvium, chiefly of clay, covers also the layers of rock over a narrow belt of land, averaging about 4 miles in width, on the west bank of the Bogan.

The most common kinds of trees covering the country are the mulga, pine, yarran, and mallee, the box, coolabah, belar, ti, and common gum trees. Valuable timber is scarce, and good sound box is generally confined to forests on the higher ridges. These forests have generally an undergrowth, in which the currant bush is foremost. The higher plains are mostly overrun with yarran and pine, which last seems of late to take the place of whatever other disappeared essence. It grows as a dense scrub, and is rarely found in useful size and quality. Extensively spread out is also the mallee and ti-tree scrub, mainly over the sandy permeable soil of the level plateaux. The low lands and the banks of the Darling and the Lachlan are open, the surface being only covered by low cotton bush and salt bush, and roley-poley: all the main river beds and every flood channel that leaves them are fringed with a line of gum-trees. On the Bogan the bush extends right to the edge of the river, and open plains exist in isolated patches in various parts of the basin, right up to the heads of the Bogan proper.

### 3. HYDROGRAPHICAL CONDITIONS.

The hydrographical features of a country differ from one part to another, the variation being caused by dissimilarity of certain conditions. Special modes of escape of the rain water from over the surface are determined by peculiar shapes of contour and the nature of the soil.

It will be discharged by defined channels, gather in certain points and evaporate, sink in the ground, or disappear by any combination of two or all of these means. But any particularly prevalent state of surface conditions will determine upon the prevalence of one or the other mode, and as similarity of causes provokes analogous results a natural classification of territories according to similar hydrographical conditions is rendered possible.

#### A.—SURFACE WATERS.

Districts formed of impermeable rocks are generally marked by a multitude of watercourse beds, as at times of rain the bottom of every fold of the surface is turned into a rivulet or small torrent. This is also what happens on the surface of the paleozoic basin on the west side of the Bogan. But here a severe action of denudation and accumulation of debris has levelled down original asperities, and totally filled minor depressions. Channels of small feeders have completely disappeared, except in the more rugged, elevated, and steeper inclined regions at the heads. As a consequence a greater proportion of rain water, deprived of proper channels which ensure quicker discharge, permeates the soil, and loses itself in the fissures of the substrata to the detriment of supply in the main drainage channels. But the larger valleys themselves have received deep deposits of soil of various natures, and the bed of their watercourses have been raised with the general surface of the valley, so that the soakage waters rarely get the opportunity of reaching them from underground.

A main feature of all beds of the creeks rising on this paleozoic ground is, that appearing as well defined deep cut trenches towards their heads, they become almost untraceable, even in their upper course, whenever their valley attains a great width, except by the growth of timber. They reappear with high banks in the lower course, where the valley is more contracted. The sluggish waters that build up the plains of the larger depressions, in more readily depositing the silt carried in suspension lost the power to keep themselves open a channel; but when a contraction of ground forced the volume of water that rolled in a thin sheet over these plains to gather again, and assume a greater depth, endowed with new power, it preserved a clear way through the narrows.

Formation of  
gilgies.

Over the whole area of this hilly and impermeable country the occurrence of swamps or deep and extensive depressions which would hold larger volumes of water is rare. But in the level made up ground of the flats, where they are composed of loose soil, groups of small round depressions have been formed which are known by the name of "gilgies." The cause of their formation seems to be the washing out of the soluble salts of lime and magnesia, by the water freely soaking through the loose surface soil. In consequence empty spaces would be formed on the bottom of the permeable and above the surface of the underlying impermeable stratum, provoking a subsequent falling in of the ground. Considerable quantities of water are absorbed in these holes. The existence of the little mounds between the small depressions, and surrounding each of them, may be accounted for by the swelling of the calcareous matter previous to its disintegration and removal. So there would be first a lift of the upper ground, followed by a partial settling.

Lower plateau  
swamps.

There are some small swamps on depressed portions of the crest of the main divides, and they are the sources of several of the watercourses. The lower almost level plateau bordering the older formation affords the greatest facilities for the formation of swamps. There the numerous clay-pans gather the local downpour, which is dissipated into the air. The formation of water channels of any size was rendered impossible through its orographical conditions and the great proportion of very permeable soil. All the water received even through channels of the impermeable strata, disappearing here completely, is absorbed as it spreads out.

Valley.

All the great depressions of lakes and channels within the plains of the valleys of the Lachlan-Willandra and mostly occurring in that of the Darling owe their existence to the action of the shifting course of flood-waters, and are therefore the recipients of flood-waters only, without possessing any drainage power or area of their own.

#### WATERCOURSES TRIBUTARY TO THE BOGAN.

Although this inquiry is restricted to the western watershed it is convenient with regard to the heads that the eastern watercourses should be mentioned, for all the head feeders come in from that side, and besides these there are lower down no tributaries self-existent from own watersheds, as the channels emptying on the eastern side below Brady's Cowal bring in flood-waters from the Macquarie basin.

The Bogan proper rises on Coradgery Run, at the back and south of Coonumbra Hill, in limestone country. It has a well defined bed, which it preserves throughout until it passes Muddall. It winds its course, with a moderate fall, through undulating country and open plains alternately; the banks and the bottom are chiefly of clay and loam. It receives, on Coradgery Run, the Timaldrie Creek, another small stream, and the Cookapoie Creek, which is a deep and important feeder. The insignificant Cargi Ponds come next in.

Eastern creeks.

The Burril Creek, rising in Burril Gap, after at first a rapid descent, soon widens out into shallow flats. The Ten-mile Creek is an important torrent of the steep western flanks of Harvey's Range, originating in Gingham Gap. Shut in between narrow gorges, and falling in cascades, sometimes at the bottom of a precipice, its channel is clean, in solid rock, or now and then encumbered with boulders, rubble, and coarse gravel; of similar material also has it built up its banks when, freed of the ties of the granite walls, it enters the wider silurian valley, but always keeping a distinct bed to the junction with the Bogan.

The Tomingley and Gundong Creeks, being watercourses also springing from the granite range, present, in their upper courses, a similar disposition, but the distance from their heads to their natural outlet being greater, and the lower country they have to pass through being of a less undulating character, their waters lose the power to force an open bed through the deep alluvial deposits. On the contrary, continuing at every rush of water from the heads to carry down sand and other loose debris, they have the tendency to efface the last vestiges of their ancient courses. Large holes that existed forty years ago in Tomingley Creek are now filled up. Gundong Creek, although a head branch of the Tomingley, takes, when in flood, a short cut to the Bogan, over a flat, emptying near Bulgandramine homestead. There also comes in, by another depression, some of the flood-waters breaking out of Tomingley Creek, some distance below the junction with Gundong Creek.

Brady's Cowal, the last of the eastern creeks, rises on Wallaby Run, and its still less distinctive lower course discharges high flood-waters into the Bogan, a few miles below the mouth of the Tomingley.

All these watercourses from the Burril, originating in granite, form one distinctive class, having this in common that all of them have springs as sources. They are the most precipitous and the only real mountain streams within the basin of the Bogan.

Western creeks.

Returning to the area on which this investigation bears in particular, the first creek joining in the west is the Back or Genarin, rising from several branches on Tomilico block of Coradgery Run. It follows a straight direction due north, but having lost a proper channel on the plains of the Curra and Tolma blocks, it gains again a deep bed some 12 miles before joining, as such, the Bogan, on Wallenbillen Run, about 20 miles above Dandaloo.

The Birchen or Bullock Creek heads in the west corner of Burra Burra, in the ironbark country of the tableland of the main divide. Fed by several branches from generally undulating country, which extends to within a few miles of the river, it grows into an important watercourse and empties with a deep and wide channel, 10 miles above Dandaloo, or half a mile south of Alagala homestead, opposite Derribong. 2 miles above its mouth it receives the Cowl or Sandy Creek, heading from a ridge at the back of Curraweena block. This creek has an equally deep channel, and at flood times it assumes a width of about  $\frac{3}{4}$  of a mile.

The Bulbodney Creek, the upper course of which is also called Boburdanell, rises from a yarran flat on Jumble Plains, near the north-eastern boundary of Burra Burra; but a few miles from the source

source its valley, in which there are numerous gilgies, widens out into very extensive alluvial plains, so that almost from the very heads the channel of the creek presents a frequently disconnected line, or rather a chain of holes. With a larger watershed than Bullock Creek it has a worse channel, and receives a smaller number of feeders. From the ridge, running along the western boundary of Orange Plains, and which forms its divide from the Bogan, several gullies without defined channels empty into the lower course.

The Panjee, Sandy Crowie, or Grahway Creek heads as Nangeribone Creek from the summit of the main dividing ridges, and is by far the most important of the Bogan tributaries. The Nangeribone Creek is formed by a great number of small gullies and channels in the corrugations of granitic ground. But in consequence of having undergone a greater denudation this range does not present the wild and bold appearance of that other range, from which spring the previously described group of creeks of granitic origin. Here the debris of broken up peaks filled in the precipitous gorges with deep deposits of gravel and sand, which form the bed of the present watercourses. The fall of the main creek is about 200 feet for the first 4 miles from the head; it decreases then to an average of about 12 feet per mile for the next 16 miles, and of 7 feet per mile for the further 18 miles. From Panjee head station to the mouth of the creek, for a distance of 40 miles, it falls from 4 to 3 feet per mile. Though running out several times the Panjee Creek has, on the whole, a very good bed, in places by far exceeding in width and depth that of the Bogan itself. At the Panjee homestead it is 8 feet deep, and when floods break over the banks they assume a width of over 1 mile. At the woolshed, 4 miles east of the bank, rock (silurian slate) is met with at 3 feet below the surface, whereas an alluvial deposit of 60 feet in depth intervenes between the bottom of the creek and a layer of sandstone.

The Trowel or Whitbarrow Creek is the last of the tributaries of more extensive basins that are worth mentioning. Heading about 10 miles north-east of Nymagee, in a somewhat rugged part of the main dividing range, it empties a little south of Nyngan. It loses itself several times. Small watercourses, as Stoney and Shallow Creeks, having well defined beds, with banks 3 to 6 feet high in the upper courses, and with stoney and gravelly bottoms, but hardly noticeable in out-widened gullies, send flood waters into the Trowel in streams 30 to 50 yards wide, and in the centre about 3 feet deep, and with force enough to uproot the fence posts.

#### WATERCOURSES OF THE LACHLAN SLOPE.

The Goobang Creek, having gathered the waters from an extensive mountainous basin, enters the plain of the Lachlan Valley through a break in the Grudgery Range. But following an almost parallel course it only joins the river at Condobolin. The Goobang, rising at an elevation of about 1,700 feet, has the considerable fall of about 700 feet to Parkes, which lies about midway between the heads and the gap in the Grudgery. From Parkes to this gap it falls 300 feet, and the incline from there to the junction, nearly double the distance, is only 80 feet. Halfway on its course through the plains the Goobang receives the Gunningbland Creek, which also breaks through the same Devonian barrier. A few miles lower it is joined by the Yarrabundry Creek, which has only a very limited gathering ground about the heads. The shifting beds of the Goobang and Gunningbland Creeks have left in the plains, as vestiges of older courses, some swamps and useful lagoons. One of such, about 4 miles long, near Burrawang homestead, has been turned by a small dam into an almost permanent water reservoir, from which about 200 acres of land are irrigated by a 4-horse power engine and centrifugal pump. The channels of both creeks, although very much silted at places, are generally deep and well defined. At Condobolin the Goobang channel exceeds in importance that of the Lachlan.

Creeks contributing to the supply in the Lachlan.

The Murrumbogie Creek empties also into the Goobang, but draining a very small area it is insignificant.

The Murda Creek rises on Melrose Plains, and has a comparatively large but not throughout well-defined basin. It winds its course on a tableland between low undulations. The bed is easily traceable to Mowabla, but nowhere attaining larger dimensions, yet its valley discharges at times streams 150 yards wide and 20 feet deep. It empties into the Lachlan Valley, about 12 miles below Condobolin, without any channel being traceable.

The Tarran Creek: With regard to the designation of this drainage system, which is locally known by the names of Sandy and Crowie Creek, I have chosen the name of one of the most important head creeks, to avoid confusion with the Crawl or Sandy running towards the Darling, and the Sandy or Nangeribone Creek running as the Panjee Creek to the Bogan, all these three systems diverging from the same point on the dividing Range. The course of Tarran Creek runs parallel with the crest, and at the foot of the eastern slope of the range which extends from the summit southwards to the bank of the Lachlan. It receives the waters of this slope through a number of well-defined creeks. Although some watercourses leave the Yellow Range, there are apparently no important channels coming in through the plains extending on its eastern bank. The Tarran empties into Morumbil or Flanigan Swamp, a little below the southern boundary of Palisthan Run, about 12 miles from the Lachlan, which it is said to have reached during the flood of 1870.

This completes the list of creeks which do contribute at times to the supply in the Lachlan. All the watercourses rising on the western downs run out to nothing scores of miles away from the main river.

The Berthong Creek, rising on the opposite side of the head of Eremeran Creek, and after running for some distance west, takes a turn to the south and runs out on Wirchelliba.

Creeks not contributing to the main river.

The Marobee Creek spreads out over the plains of Tara and Coan Downs in the west of Bogallo Peak.

Within the plateau a few creeks—on Lachlan Downs, Thule, and Keginnie—disappear in sandy ground after running a few miles.

The Willandra Billabong is an effluent most probably marking the direction of a course followed in older times by the Lachlan itself, which through its own deposits, and the formation of sandhills, has been forced to cut a channel more south.

The Kiarcathur and Booberoi Creeks are important ana-branches within the flooded zone of the Lachlan.

Conoble Creek runs out of the Willandra, and turns back into it by North Abbotsford.

#### WATERCOURSES

## WATERCOURSES OF THE DARLING SLOPE.

The western flank of the old Central Range is divided, as has been shown before, by a ridge leaving the northern branch of the main divide above Nymagee, and extending to the Rankin Hills, into two main slopes. On the northern side of this ridge the waters are gathered in the following creeks:—

Creeks running north.

The Mulga, which rising on porphyritic ground, and with the upper bed very much silted up with sand, runs out repeatedly in the flats of its generally wide valley. The waters from the slopes are brought in by gullies without marked channels. It is believed to empty on Jandra Run, but long ere reaching the Darling Valley its course becomes a mere depression marked only by a more prolific vegetation.

The Yanda Creek, rising near Nymagee, in the corner of the two creeks bounding the northern slope, is of a similar character. Its channel, 8 to 9 feet deep, and in places 20 to 30 yards wide, is already in its upper course on the Nyngan-Cobar road, only remarkable by the growth of gum saplings over a belt of about 50 yards in width. It has not run through for the last fifteen years.

A few watercourses descend from the Gundabooka Range, which run out after a short distance.

The Kerrigundi Creek comes down, a steep torrent, from the range on Pullpulla Station. It after good rains, 10 to 12 feet deep, and sometimes 3 miles wide.

Creeks running east.

The southerly portion of the south-westerly slope constitutes the great watershed of the Crowl or Sandy Creek. The main drainage channel of this basin has, as the name indicates, a bottom filled with sand throughout. From a deeper drift filling an older bed beneath, water may be drawn at any time by piercing a layer of cement intervening between the two strata of sand. The creek is said to run out on Moira Plains—some pretend that it reaches only Kew—but it must oftener happen to lose itself in the very permeable soil before reaching Tiltagara. At any rate there is no traceable channel lower down. It has almost no watershed on the southern bank, on which side there is a complete absence of feeders. From the north it is joined by the Box Creek, coming down as a well defined channel from the granitic mountain beyond and round Nymagee. Lower down it receives another Box Creek, which is merely a wide gully gathering the waters from round Cobar, and from a creek originating at Buckwaroon Hill. Between the two Box Creeks there is a number of gullies, formed by low spurs from the range extending between Nymagee and Cobar. At the bottom of all these gullies is a shallow deposit of soil, rarely exceeding a depth of 6 to 7 feet, and after heavy rains there come down streams of water up to 300 yards wide, but only 2 to 3 feet deep. Yet in many cases these waters filter into crevices not apparent on the surface, as they are filled with loose soil, for they mostly disappear after a short run.

In the northern portions of this slope a number of creeks rise on the western flank of the Devonian chain of hills, which shed the waters from their north-eastern side to the Kerrigundi, and from the south-eastern to the Buckwaroon affluent of the Crowl. Steep and stony at their heads, they lose themselves in sandy soil at the foot of the range. An idea of their incline may be gathered from the fact that a dam on one of them, the Cameron Creek, 30 feet high, backs up the water only 1 mile when full.

## B.—UNDERGROUND WATERS.

However hard a rock may be, it is, properly speaking, never absolutely impermeable. A portion of rain water is absorbed by filtration in the crevices of the granite; some is absorbed by the superficial detrital stratum of the stiffest of clays, and some between the interstices left by the grains of sand of the arenaceous grounds.

The subterranean water accordingly will occur in limited contracted veins or diffused sheets. Those nearest to the surface are due to local rainfall. Deeper ones, often of great extent, are separated by impermeable strata. The higher position of infiltration can always be found by a research on a geological map of the country of the corresponding acquiferous stratum, but not always can be detected the inferior line of discharge.

We can also imagine a series of strata disposed in a huge natural saucer, on the horizontal border of which the rain permeates. When the empty space forming a reservoir in the permeable strata gets filled, the water stops motionless, and any surplus must overflow. If a hole is bored to the bottom of the saucer an artesian jet of water must rise, which will be followed by a certain current of the subterranean water.

In some, the underground waters may be stagnant or flow like rivers; springs might rise from the sheets, imprisoned between impermeable strata, or flow out at the surface on the basis of the permeable stratum.

Underground water in the paleozoic formation.

In reference, under this respect, to the district between the Lachlan, Bogan, and Darling Rivers, it is in the granitic and porphyritic portions that the water circulates, in narrow veins, and where occur superficial springs. Such are known to exist at the heads of the Tomingley and the northern branch of the Nymagee Box Creek.

We cannot look to the great paleozoic basin for any important underground sheets of water, as filtering in between the dislocated layers of schists they can have no depth and they must be unconnected; moreover, the water is generally of bad quality, as the minerals it meets render it in the best cases brackish. We find there, also, no surface springs. The waters following the incline of the slates sink deeper than is the case in the granitic ground. In Barton shaft, at Cobar, water was tapped at 601 feet below the surface, or about 110 feet above sea level.

Sheets of water extend at the bottom of the alluvial deposits within the valleys. They belong to the class owing their existence to local rainfall, and are, therefore, not reliable sources for any greater demands. This water is often salt, except in the sand deposits in the immediate neighbourhood of the watercourse beds, where they are almost always to be found. Mr. Gordon, on Alagala (opposite Derribong), excavated a tank on the left bank, and about 200 yards back from the Bogan. When he reached a depth of 9 feet through clay, he met with drift from which water bursted out with such force that he had to stop work. The river was, at the time, perfectly dry.

Springs from gilgias.

There are a few springs breaking out near the creeks and originating from gilgias. An important one of this class exists at Kerriwah Station on the Bulbodney Creek, where 3,000 sheep are constantly watered.

The

The cretaceous beds occupying the Valley of the Darling on the eastern bank contain several over-lying aquiferous strata. Those nearest the surface contain the soakage from local rain. They are mostly unconnected, the waters gathering in portions of older river-beds and occasional hollows which are now filled in. The next in depth from the surface have their line of infiltration along the flank of the paleozoic mass, only a short distance away from the river, and they discharge into the river in the form of small springs from the side of the bank, or bubbling up from the bottom. Some are salt, some fresh, according to the minerals they meet in their course. The water in wells tapping these underground currents would rise moderately, as the line of infiltration occupies a position not much higher than the outlet.

The deepest aquiferous strata have not yet been reached on this side of the Darling, although their existence under the cretaceous sandstone is undoubted. They have not been looked for, as the discovery of the cretaceous origin of the left bank of the Darling is so recent. These strata draw their supply from a belt of country extending along the north-western limit of the Darling watershed in Queensland. Ammonites, belemnites, and fossils of the saurian species characteristic to the oolitic floor of the Jurassic formation have been found all over the intervening country between the Nive River—one of the Warrego heads—and the Wallambilla Creek emptying in the Condamine above Surat. The southern limit of these eminently permeable oolitic beds is approximately indicated by the disposition of the rivers. The bearing of geological formation on hydrological features is so intimate that both are often valuable guides in a reciprocal research. I take it that the line of this limit passes from above the heads of the Paroo, by Mangalore, round the heads of the Nebine, Mungallala, and Wallam Creeks (which, originating on the lower impermeable cretaceous beds, disappear in the upper cretaceous sands), down to the junction of the Maranoa with the Condamine, which flows along the eastern edge of this formation. North of this line is the infiltration ground of the waters finding their way under the older cretaceous deposits. In seeking to discover the whereabouts of discharge it must be remembered that the cretaceous sediments were here, as usually, deposited in a deep basin encompassed by land, and that consequently we are here in presence of the case of the imaginary saucer, wherefrom the waters imprisoned between the various strata cannot escape, unless by overflow. It is here the covered Devonian range that passes across the Darling about Wilcannia, which prevents these deep artesian water-veins from continuing their course further down in the direction of the waters flowing over the surface. It has been contended that these waters must find their way to the ocean, for otherwise, however great the underground reservoir might be, it would in time get filled and the waters would overflow; and so in fact they do overflow from time to time, and would continually do so were the supply kept up by continuous rains around the border of the enormous basin. But we know that the rain is far from being regular and copious (see on diagram of rainfall over the basins of the tributaries of the Darling within Queensland the records relating to the Warrego, Paroo, and Bulloo Rivers). We know also that through capillary action the water, especially near the upper line of infiltration, is drawn to the surface, and there absorbed by direct evaporation and through the medium of vegetation, principally all the thirsty varieties of the eucalyptus family. Subsequent rains must, therefore, be of sufficient copiousness to make up all the loss in the superficial ground before a fresh over-saturation can produce a new overflow. This takes place in rainy seasons, and causes occasionally the great floods on the upper courses of the Queensland tributaries to the Darling. A further proof of the correctness of this view is supplied by the series of mud springs, where the water under the great pressure from beneath forces itself outlets to the surface by not finding any lower down. This opinion is confirmed also by the great variation in the supply of all the artesian wells on the north-west side of the Darling, which, overflowing or reaching within a few feet of the surface, subside invariably in a few days after they have been tapped. It would be interesting and valuable to be enabled to connect by accurate records the variation of height and yield of the existing artesian wells with the rainfall over the infiltration area, as the result would show the importance and reliability of supply from this source, and thus would be decided the question whether the incurrence of expense in that direction would be advisable. I would suggest that arrangements be made to secure the keeping of trustworthy records, such as (1) height of water in, and yield of, wells; (2) quality of water in hydrotimetric degrees; (3) state of rivers in infiltration area; (4) rainfall. A comparison of the diagrams of these records would also directly suggest the source of each well.

From these artesian veins water-supplies might be obtained on the eastern bank at not too great a distance from the river, and at a moderate depth of about 700 feet, as we are here close to the edge of the cretaceous basin.

On to the southern flank of the Devonian barrier lean the tertiary and pleistocene deposits. Water is and will be obtained in them, but it can neither be of an artesian character nor of great supply within that portion of the Darling basin, as we are there too close to the edge of the drainage-ground, and the rainfall is the smallest. I refer of course not to portions in the neighbourhood of the mouth of the Darling, where artesian veins may be met with, finding their supply from the basin of the Murray system. We must, as a matter of fact, look to the heads of the Murray as the source of the underground rivers in the limestone of the coast about Mount Gambier.

Ordinary wells might yield strong supplies of water within the tertiary area bordering the Lachlan and the Willandra. They are, however, invariably salt, whereas, on the southern side, unlimited quantities of fresh water have been found.

Within the plateau one can count upon only the unreliable sources of well-water from the scant local rainfall.

#### 4. RAINFALL.

The amount of rain that falls on an average over this district has been stated in the First Report of the Commissioners in the descriptive parts of the basins of the Darling, the Bogan, the Lachlan, and of the Manara County drainage areas. The map of the rainfall which I submit with this report represents how the average rain varies from one part to another within this district, so that from it an idea might be gathered of the supply available to feed the various watercourses and the springs and wells bottoming in the strata saturated by percolation of a portion of the local rainfall only. The information contained in that map might also prove useful to the settlers in that part of the country for fixing the holding capacity to be given to tanks, knowing in each case the area from which the tank may draw its supply.



Within the area represented on the map meteorological observations are recorded on eighty-seven stations. The largest number of these have been established only within the last two or three years, so that the averages have had to be arrived at from a smaller number of older stations, and the delimitation of areas upon which generally obtain the same conditions of rain has been fixed by comparison of the results registered in corresponding years at the older stations and at those of more recent date.

As the question has been raised by witnesses of the practicability of drawing a supplementary supply of water into the Bogan from the Macquarie, I have thought it useful to illustrate also the rainfall over the neighbouring portion of the Macquarie basin.

The irregularity of the rain seasons generally, as of the distribution of the scanty downpours making up the yearly totals, and all other particulars with regard to meteorological phenomena over this district, have been fully described in the First Report, and the accompanying map will supply sufficient details without needing any lengthy explanation.

## 5. CONSERVATION OF WATER.

### Existing Works.

All the works for the conservation of surface water in this district have been undertaken almost exclusively for the purpose of securing a supply for domestic use and for watering stock. The only instance where the stored water has been applied to cultivation is that already mentioned on Burrawang Station, in the Lachlan District, and on a very small scale irrigation has been attempted by Mr. C. J. Wallace, on the Priory, between Cobar and Nymagee. The irrigation at Winbar is carried on by drawing water from the Darling without any special arrangements for storage.

### Tanks and dams.

The wants of domestic consumption and of stock have largely been provided for all over that country by means of tanks excavated in the soil and dams thrown across the watercourses. With regard to tanks, the injudicious choice of sites is apparent in many places, especially remarkable for this fault being those established by the Government. In this case the chief aim seems to have been to place them close to the roads without regard to the surface configuration, and to whatever might have been the difficulties of making the water converge towards the excavations. It will suffice to state that as most of the roads follow close to or even on the crest of dividing ridges, the tanks situated so near the upper edge of the watersheds cannot possibly get a supply adequate to their holding capacity. They ought to have been made at lower levels, and the roads diverted accordingly, which in many cases would have also entailed considerably less expense. The dams on the creeks are often faulty in construction, through not having been sunk deep enough into the impermeable basis of the ground. However, the tanks and dams, such as they are, on the stations provide ample water for drinking purposes, and the complaint invariably met with throughout the driest district round Cobar relates only to the want of grass. In consequence of the absence of sufficient resources of water within this large district itself, extensive irrigation for the purpose of satisfying this want is out of the question, unless, indeed, it were possible to bring the water by means of canals from basins better favoured by nature.

### Irrigation.

### Practicability of supplying the district from outside basins.

The Upper Macquarie basin, through its higher position, is conveniently placed for such diversion into the Bogan basin, and with a thorough system of works for the conservation of water executed in the regions of the head tributaries, where the average rainfall ranges from 22 to 36 inches, not only would a greater and more regular supply of water be ensured to the settlers in that basin, but a surplus would be available for those on the Bogan.

### Diversion from the Macquarie to the east bank of the Bogan.

Concurring absolutely with the opinion expressed by Mr. H. G. M'Kinney, M.E., M.I.C.E., in his "Report on the Macquarie River and the district between the Macquarie and the Bogan Rivers" (annexed to First Report of the Commissioners, pp. 134-136) on the practicability of supplying and distributing the Macquarie waters on the right bank of the Bogan by diversions from Narromine down, I have been led to the conclusion that, considering the natural facilities of that country, the necessary works would be relatively inexpensive, and the capital returned in a remarkably short time. Over a hundred thousand acres of the plain between the two rivers could be irrigated, and if a charge were made of ten shillings per acre for water the yearly sum obtained (£50,000) would, at 5 per cent., justify the Government to spend on such works one million pounds sterling—a sum by far superior to what would be required.

### Diversion to the west bank of the Bogan.

My inspection of the Upper Bogan country, and the tributaries of the Macquarie from the Little River to the Molong and Bell Rivers, has also convinced me of the possibility of bringing a supply of water through the Gingham Gap on to the ridge between the Bogan and the Bulbodny Creek in the western watershed of the Bogan, by means of a canal gathering the waters of the tributaries mentioned, on a higher level than is done at present by the Macquarie. However, though I have no doubt about the possibility of carrying out such works—and the levels inscribed on the map will bear out the justness of that opinion—yet the difficulties in the way of constructing the canal are such as to relegate the recommendation of its undertaking for centuries to come, when, through want of room for an overgrown population, it will have become a necessity.

### Diversion towards Cobar impracticable.

Proceeding now to the suggestion contained in Question 1339 (Minutes of Evidence, First Report), as to the possibility of dealing "with the head waters of the Bogan, so as to send water down from Mudall towards Nymagee, between Nymagee and Cobar," I think it unnecessary to waste many words about it. The orographical description of the main dividing ridge between the Bogan and the Darling, and the relative situation as regards levels of the whole course of the Bogan from its very head, show conclusively the absurdity of the idea, for it would mean the bringing of water from Mudall *up* hill—not down. It is therefore clear that this portion of the Darling watershed must rely upon the resources that may be rendered available from its own basin.

### Diversions from the Darling.

Whether or not it would be practicable to tap the Darling above or about Brewarrina, the diverted water could never be led into the portion of country designated in this report as the hilly part, formed of primary rocks. There are sufficient levels known and marked to show as much. The canal could only follow the edge of the valley, which is either on a level with banks of the river or lower, and it would be impossible to lead water from that source into the most moisture-needing plateau between the Lachlan and the Darling.

It is also very questionable whether it would be possible to bring Darling water across the country from Wilcannia to the Willandra Billabong, even should the piercing of the intervening sandhill chains not

not make the expense an extravagant one, as it would seem, from the flood-levels on the Willandra country and at Wilcannia, that the extremity of the traceable channel of the Willandra is rather higher situated than the bank of the Darling at Wilcannia.

It remains now to be seen whether, with any advantage to pastoral interests, the local rainfall might be conserved in a larger measure than is done at present. It being established that domestic and stock wants are sufficiently secured with present arrangements, an increased supply would have the object to serve irrigation purposes.

Conservation of local rain for irrigation by improved methods of gathering.

It has been affirmed by several witnesses from that dry country before the Commission, and to me when travelling there, that although the total rainfall per year is small, it would, where it reaches 12 inches, cause an abundant growth of feed were it to come down four or five times a year in falls of from 3 to 2½ inches each. The question in that case is reduced to a proper distribution of water with regard to time, and it would be solved by gathering the rain-water and distributing it artificially at need and will. As only a portion of the rain can be saved, it is evident that only to a portion of the area over which it falls can be extended the boon of an artificial watering. But the aim should be to make this fraction as important as possible by reducing the effects of the causes which make the gathering of the water only a partial one. Such result would be obtained by withdrawing as much as possible the rain-water from the effects of evaporation and percolation by ensuring a speedy discharge over the surface into the storage reservoirs. To effect this, recourse must be had to a *proper* system of drainage, by making inexpensive trenches and races in every fold of the ground, which would end in tanks properly situated. Where the storage is provided for by dams and creeks, a small channel should be kept open and clean by means of plough and scoop in the bed, throughout the length of the watercourse and all its feeders, in addition always to a network of drains leading the water from the field to these natural waterways. At Glenariff Station, where such improved system has lately been introduced, the effect has been most beneficial. A dam on the Mulga Creek, previously dry for years, has been filled, so to say, in no time. In this way, even in so dry a country as that between the Lachlan and the Darling, sufficient water could be stored for irrigation, were it only of a few acres on each holding, to make provisions of fodder in silos and stacks for more valuable stock in times of excessive drought. But the establishment of even so simple a system of water conservation demands technical skill and instruments mostly unprovided for by pastoralists. They should, therefore, in their interest, have recourse to advice from qualified persons, which no doubt they would have every facility of obtaining should the proposals recommended in the First Report of the Commission, with regard to local water authorities, ever enter the phase of accomplished facts.

Necessity for professional advice.

Much improvement would also result from the destruction of scrub and all that growth which is neither grass nor timber—and there is almost none worth the name of forest—as a portion of the moisture now absorbed by noxious vegetation would produce valuable feed, while the remainder would be able to reach dams and tanks more readily. But such an achievement is for the present rendered impossible by the provisions of the Land Act and the Forest Regulations.

Improvement through destruction of scrub, &c.

V. CZARLINSKI, M.E., C.E.,  
Assistant to the President.

## REPORT ON THE DARLING RIVER.

To the President and Members, Royal Commission, Conservation of Water,—

Gentlemen,

We have the honor to report that, in connection with our examination of the Darling River in flood, we left Sydney for Bourke on Saturday, 18th September, and on the 20th proceeded down stream by steamer. As fully as opportunity permitted, we investigated the river to its junction with the river Murray, a distance of about 1,100 miles by water, or about 440 miles by road, the stream, as compared with the road, being as about 2½ to 1. A remarkable circumstance in connection with the Darling is, that from Bourke to Wentworth, a distance of 1,100 miles, the river does not receive a single affluent of any importance, except the Warrego River, and it is only on rare occasions of high flood that the waters of the Warrego reach the Darling. We examined thirty-seven witnesses, minutes of whose evidence are attached hereto.

The time at our disposal being limited, we were unable to make a thorough inspection of the lake system along the course of the river, but we succeeded in visiting some of the more important lakes near Menindie. Instrumental examination will, however, be necessary to determine accurately the value of these lakes as reservoirs; but the evidence placed before us justifies our expressing the opinion that very large bodies of water can be permanently conserved in these depressions at a comparatively small expenditure. It is estimated by the Road Superintendent of the district, Mr. W. J. Hanna, C.E., that the water in Menindie Lake and Cawndilla Lake, which covers an area of over 60,000 acres, could be retained at a cost of about £700. Several witnesses asserted with confidence that Menindie Lake, in discharging its waters back into the river, suffices to maintain the navigation of the Darling from that point downwards for a period of three months longer than would be possible without such an augmentation of the volume of the stream. From the accompanying plan (Appendix No. 1), showing the lake system in the vicinity of Menindie, it will be seen that after the flood-waters of the Darling have filled Menindie Lake they are still further backed out into Cawndilla Lake, a large depression containing 21,836 acres, and into Speculation Lake. Appendix No. 2 will convey an approximate idea of the body of water in Menindie Lake at the time of our visit. By means of a dam erected on the Teryaweynya Creek by the owners of adjoining stations, the flood waters of the Darling have been directed on the east bank as far as Lake Bullabulka, filling a system of about twenty-two lakes, comprising an area of about 52,000 acres.

As an instance of the significant results which may be achieved at a small cost, it is only necessary to cite the case of Mr. J. W. Brougham, of Outer Netallie Station, near Wilcannia, who, by an expenditure of £10, succeeded in retaining a considerable body of water in Lake Woytchugga for nearly two years. This lake, which is now nearly full, has a depth in places of 10 feet, and covers an area of fully 4,000 acres. This witness also asserts that an outlay of £100 would be ample to secure the retention of the lake in its present condition. A view of the lake is presented in Appendix No. 3. The



The question as to the possibility of erecting weirs in the Darling engaged a large share of our attention. We elicited that at intervals of from 10 to 20 miles along the whole course of the river from Wentworth to Bourke there exist bars of rock, which would afford excellent foundation for any works in the nature of a weir. In the vicinity of some of these bars sufficient building material is to be found suitable for the construction of masonry. The Jandra Rocks, about 40 miles by river below Bourke, are a striking case in point. A view of this remarkable outcrop is shown in Appendix No. 4. The evidence adduced by us seems to preponderate in favour of the opinion that properly constructed works would not induce erosion of the banks.

The absence of a constant stream in the Darling has been very prejudicial to the interests of the settlers in the western part of the Colony. Sometimes barges laden with wool and general merchandise have been detained for twelve months awaiting even so slight a rise in the river as would permit navigation for steamers drawing 3 feet of water. This detention has not only caused the deprivation of a year's interest on the capital lying idle, but has involved a direct loss through deterioration in the quality of the merchandise. One instance was brought to our notice of a steamer laden with goods which occupied over three years (May, 1883, to June, 1886) upon the journey from Morgan to Bourke.

The only means by which Sydney can secure a large accession of trade and consequent revenue would seem to be found in the extension of the railway to Wilcannia or Menindie, and the maintenance of a permanent stream, by locks or weirs, between Bourke and the railway terminus that may be established down the river. The residents themselves concur in this opinion.

The fact that great bodies of water from time to time are discharged down the Paroo and Bulloo Rivers only to spread out aimlessly into polygonum swamps and clay pans, and then to disappear rapidly by percolation and evaporation, would seem to justify a contour survey of that region to determine to what extent the flood-waters might be concentrated in the natural depressions which are known to exist. Private enterprise has done a great deal towards ascertaining whether an artesian supply exists west of the Darling, but in many instances energy has been misapplied. A number of shallow wells have been sunk, and the pastoralist has had the mortification of obtaining salt water, or an indifferent supply of fresh water, whereas one well or bore carried to a depth of 1,000 feet to 2,000 feet might perhaps have determined at one stroke the possibility of obtaining an artesian supply. The subject bears forcibly on the future of that part of the Colony, and the question might well arise as to whether it would not be a wise course to devote national funds to the purpose of dealing with a problem which individual effort has been powerless to solve. It was stated to us in evidence that water might probably be diverted from the upper portion of the Paroo towards the South Australian border near Silverton. The respective levels, it is said, will permit of such a project, but further investigation must determine whether the scheme, even if possible, be advisable in other respects.

At Winbar and Tapio we witnessed the effects of irrigation applied with intelligence and method and in each case the result was an undoubted success. At the former station the manager is so satisfied with the result of his experiment on 7 acres that he intends to extend his operations. He obtained 30 tons of lucerne hay per annum at a cost of little more than £3 per ton, during a drought when £23 per ton was paid for chaff delivered at the station. He calculated that by means of irrigation he had saved £1,000 in one year. At Tapio 22 acres were under irrigation, and the growth of lucerne, &c., was so luxuriant that eighteen sheep to an acre were maintained in splendid condition. These results were achieved on soil that during the drought would not have grown a blade of herbage. Mr. N. Sadleir of Albemarle, kept 8,000 sheep on an irrigated patch 3 square miles, in the middle of summer, and the lambing was good. He asserts that the same piece of country, if it had not been irrigated, would not have supported 1,200 sheep. Every witness examined was prepared to admit the benefits of irrigation, but some appeared to doubt whether the system could be adopted with profit. The fitful supply of water, and the insecurity of land tenure, seem to be the considerations which operate most forcibly in deterring the pastoralist from experiments in irrigation. The mortality in the flocks has been terrible. One station lost £12,000 worth during the late drought, on another property 6,000 head of cattle perished; and within the sheep district of Wilcannia the losses in sheep in 1884 were, according to the statement of the local Inspector of Stock, probably 400,000, or equivalent to £100,000. The loss on three stations in two years was over a quarter of a million sheep, irrespective of the loss of lambs. Hay and chaff were sold at £50 a ton, and flour at £40 a ton. These appalling figures cannot but convince the pastoralist that something must be done to provide against such calamitous droughts; but it may require action on the part of the Government to persuade him of the vast possibilities of water conservation and irrigation. This action might well find expression in the establishing of an experimental irrigation farm under Government control, and in the offering of bonuses for the purpose of stimulating the art of cultivation with water.

Great diversity prevails along the river in the methods of noting the heights of floods. For example, the record of the height at one point bears no relation to that at any other point. Readings appear to be taken variously as from the bed, navigation level, and summer level. Considerable confusion arises from the laxity of the methods employed, and a record on the upper river does not enable a resident on the lower river to foretell with any degree of precision what rise he may expect in his locality. At Bourke the height of a flood is read from a datum called "summer level," which is 6 feet above the bed; at Louth the readings are also taken from "summer level," but in that case the term is applied to the bed of the river. Most of the witnesses seemed to concur in the opinion that it would be best to adopt the height of some well-known flood as a datum, and, taking that as zero, to read all future floods downwards from it. The records would thus bear an absolute relation to each other. The flood of 1864 seems to have been the highest of which we have any knowledge, but being an incident of a generation almost passed away there might be considerable difficulty in determining its height along the river. For this reason it would appear advisable to adopt the present flood as the datum. We, however, incline to the opinion, also freely expressed, that the datum should be registered at that discharge of the river when the water is barely flowing over the rocky bars. Appendix No. 5 shows the town of Bourke at the time of our visit. By instrumental examination we found that a further rise of about 3 feet would cause the whole town to be submerged. The danger to life and property involved through an absence of trustworthy intelligence as to the height of a flood in its progress down stream is illustrated in Appendices 6 and 7. The former represents Yanda Station, around which a dyke 3 feet high has been thrown to keep out invading waters; and the latter picture is a view of a homestead on Toorale Station which would have been inundated had the river risen 6 inches more.

Leaving

Leaving Wentworth by steamer for Morgan (S.A.) we had the opportunity of seeing the Lower Murray, which, even for small steamers, is not navigable for about three months in the year. A noteworthy feature of the river at that part is the spurs or wings which have been constructed by the South Australian Government, for the purpose of nullifying the effects of the sand-bars and other obstructions to navigation in the river. There are three series of works, namely—four spurs at Hart's Island, three at Pyap's Reach, and two at Pensey's Reach, and their cost of construction has been about £2,750. The object of this simple and ingenious device is to check that portion of the stream which would otherwise spread over the sand-bars, and to divert it with increased velocity in order by its own action to dredge the deep channel still deeper. The works therefore not only serve the purpose of maintaining a permanently navigable depth of water in the river, but they act as beacons by denoting the position of the bars. Each spur consists of two rows of round piles driven into the bed of the river, the space between the rows being filled up with the limbs and branches of the gum-trees which supplied the piles. The spurs project from the bank of the river, at angles varying from 25° to 85° with the current. So far as these works have been carried to completion they have been found to fully answer the purpose for which they were designed.

During our inquiry we ascertained from witnesses that the waters of the Willandra Billabong, an affluent of the Lachlan, do not reach the Darling. They approach to within 35 miles of that river, then take a sudden turn, and, after filling Lake Gol Gol, empty into Manie Creek, which is a billabong running from the Murrumbidgee into the Murray.

The opinion which has hitherto prevailed to some extent that the climate of the extreme west of New South Wales might be tempered, and the humidity of the atmosphere intensified, by leading the waters of Spencer's Gulf into Lakes Torrens and Eyre, is now found to be untenable. We are indebted to Mr. J. W. Jones, Conservator of Water, Adelaide, for the information that recent investigations have proved the northern end of Lake Torrens to be 100 feet above sea level.

In conclusion, we would recommend that all lakes and depressions throughout the Colony of sufficient depth and capacity to conserve water permanently should, at once, be reserved from sale. Otherwise, we are of opinion that considerable difficulties will present themselves when the national question of water conservation receives attention.

We have, &c.,

JOHN B. DONKIN,  
FREDK. B. GIPPS, C.E.

Sydney, 17 March, 1887.

#### FURTHER REPORT ON THE DARLING RIVER, BY MR. F. B. GIPPS, C.E.

I FOUND that the height of the flood-level at Bourke was 37 ft. 3 in. above summer level, whilst an instrumental examination showed that an additional 3 ft. would submerge the principal streets. In this condition the river Darling resembles a fan, having its apex or handle at Wentworth. A short distance below Bourke the flood-waters covered the country for 5 or 6 miles beyond the banks; but gradually they contracted, as large streams were drawn off by tallywalks or ana-branches to fill extensive lakes and shallow depressions on both banks of the river, until, at a few miles below Menindie, they were confined to the channel, which in places was little over 200 ft. wide. A few miles above its junction with the Murray River, at Wentworth, the channel widened out to 400 ft., but it was only 15 ft. 7 in. above summer level. The velocity of the stream in the channel, as measured by one of Stanley's tachometers, was half a mile per hour less at Wentworth than at Bourke.

Though there are several creeks draining large areas, notably Yanda and Kerrigundi, discharging into the river on its left bank, between Bourke and Wilcanuia, they do not appear to have much influence on the flow of the river, except after heavy local rains, when, according to evidence, they have caused a rise in it of several feet. Their streams are backed up for many miles by the river when in flood. The Warrego and Paroo are the only tributaries of importance that discharge into the river between the same points on the right bank. The former unites its waters with the Darling in a distinct but shallow channel; but the latter has rarely been known to flow further than Lake Perry—a large shallow depression about 40 miles from the right bank of the Darling—where it sinks into the flat rotten bed of the lake. The flood-waters of the Darling cover the country for many miles towards the same lake, and returning by the course of what is known as the Paroo channel, have frequently been mistaken for the Paroo River.

Throughout the whole distance, from Bourke to Wentworth, the river is very tortuous, having but few straight reaches more than a mile long; and it measures about 3 miles by its course to every straight mile by land. The bed of the river is chiefly composed of stiff gypseous clay covered with alluvium, except where crossed at rare intervals by rocky bars of conglomerate and sandstone. It has no regular grade or fall for any distance, but is divided into shallow falls and deep waterholes. Its banks, with exception of the rocky spurs which crop out at long intervals, are composed of black alluvium where low, and of beds of gypsum, and gypsum marls, covered by a top stratum of fine red sandy loam, where high. The high banks vary from 6 to 20 ft. in height above the flood-level; they are seldom opposite, but form long bends or elbows in the river. A wide belt of gum and box trees generally skirts either bank, so that the river, in flood, reaching up to the lower limbs, has the appearance of a narrow stream winding through an interminable forest. The flood-water is very muddy, and, if left standing, quickly deposits a thick coating of very fine silt.

The Darling River, in high flood, supplies a large system of lakes contiguous to and at considerable distances from both banks. Some of these are only shallow depressions covering large areas, whilst the deepest have a maximum depth of only 20 ft. The high flood-water of their shores may be easily distinguished by a belt of stunted box-trees which invariably surround it. Their shores are surrounded by sandhills, varying from 20 to 60 ft. high, except at the point they receive their supply, where the bank is broken away for some distance, and the country seems almost level. They receive and discharge flood-waters by the same channel. In every instance that came under my observation their supply streams had to surmount a rim, just at their point of discharge into the lakes, which intervened between the deepest point of the channel and lake.

From the limited experience gained by our hasty journey down the Darling, I am not prepared to formulate exhaustive proposals as to its future treatment, which only extensive and accurate surveys can properly determine; but I would beg to submit the following suggestions as worthy of consideration, and as bearing more particularly on the line of action that should be pursued for the proper development of  
this

this river. For this purpose it seems to me necessary to ensure: 1st. The canalisation of the river to provide for irrigation and navigation at all seasons. 2nd. The conservation of water in the deepest lakes at as early a period of floods as possible, that they may be drawn on for a regular supply to the river to account for loss from navigation and irrigation. 3rd. The settlement of a peasant proprietary on the rich deep alluvial soil of both banks.

The character of the river banks, together with the large deposits of silt by floods, prohibits the adoption of fixed weirs in its channel for the canalisation of the Darling, and favours the construction of movable weirs. The width of the channel at base rarely exceeds 80 ft., except at waterholes; and the banks rise abruptly to within a few feet of the top, where they are much broken, partly from the wash of the steamers, but chiefly from the surface drainage of the surrounding country. In considering the type of movable weir most suitable for the damming of the river, guided largely by Mr. Poole's evidence as to his experience on the Meuse River, I am inclined to prefer the Poirée needle weir and the improved shutter weir. The Poirée weir is simple and economical in construction, and can be rendered quite water-tight by a canvas curtain in front. It can be manœuvred with facility, and can be raised and lowered in a few minutes. It also provides a footway across the river. I advise the trial of one of these weirs at the rocky bar at Wilcannia as soon as the flood subside sufficiently for the laying of its foundations. I have selected this town as some such work is urgently required there, because its water supply is pumped direct from the river, and suffers considerably, both as to quality and quantity, when the stream is low. By placing two such weirs, 200 or 300 ft. apart at each station, provision could be made for the navigation of the river without any expensive locks. When down, these weirs would not in any way interfere with the flood discharge of the whole sectional area of the channel, so that there would be no increase of deposition of silt and erosion of banks to fear. The average length of the crest of these weirs, with 12 ft. rise of water, would not exceed 150 ft. Their cost, therefore, at £30 per foot, would average £4,500. They would back the river up over 30 miles, and would impound a large volume of water. The actual loss of water, each time the weirs were lowered to allow of the passage of steamers and barges at any station, would be only about 1,000,000 gallons.

I would here draw attention to the urgent necessity of legislation to prevent the drainage of town sewerage and of wool-washing establishments into the river, as at present such drainage is very deleterious to the health of those who are compelled to drink the water in dry seasons, and renders it quite unfit for the supply of towns.

I recommend instrumental surveys;—1st. Of the river and its neighbourhood, from Bourke to Wentworth, to fix stations for the movable weirs, and to determine where and to what extent it will be necessary to raise the low banks in order to prevent the dispersion and prevent waste of flood-waters, and to divert them more directly into the deeper lakes. 2nd. Of the Warrego and Paroo Channels, to discover if they might not be diverted so as to discharge their streams into the deeper lakes and depressions in the country they traverse, instead of wasting their waters as at present. 3rd. Of the Yanda, Kerri-gundi, Cowal, or Pine Creeks, and the ana-branches and tallywalkas on the left bank of the Darling. 4th. Of Lakes Wangalara, Poopelloe, Woytchugga, Tandure, Pomamaroo, Menindie, Cavndilla, Tandou, Nettlego; and also of the principal lakes supplied by the Big Tallywalka on the left bank, and by the Big Ana-branch and Paroo River on the right bank, for the purpose of showing what depth of cutting will be required to connect the deepest part of each lake on a certain grade with the channel which supplies it, and to fix points in the channel for the construction of sluice-gates to regulate the influx and efflux of flood-waters.

With regard to the large shallow depressions, with their flat rotten beds, more fitted for evaporating and absorbing pans than for conservation of water, owing to their exposure to a hot, almost tropical sun, and to high winds which at times have been known to blow their water from one end of their beds for over half a mile beyond the other end, I would advise that small works should be constructed to prevent floods entering them until the deeper lakes are filled.

Having provided a sufficiency of water in the river, for irrigation on a moderate scale, to allow of cultivation independent of the seasons, and for continuous navigation to allow of produce being easily and economically conveyed between our different railway termini, having also large inducement to offer in the rich deep soil of the banks and adjacent country, it requires only a little careful legislation secure the settlement of the whole river frontage by a peasant proprietary. In order to encourage such settlement, I suggest that Government should reserve special blocks on the river frontage, and offer small selections, varying from 20 to 100 acres on 20 years' lease, to employees on the different works on the rivers or lakes. This would allow them to form homes and cultivations by means of their wages, so that at the end of their employment they would be in an independent position. Californian experience has shown that a few acres in such a position, cultivated in vines, orange, walnut, and other fruit trees, would ensure a man a more regular income than most of the large squattages at present provide, and without any of the anxiety. The water necessary for irrigation would have to be lifted from 10 to 20 ft. from the channel to top of bank, either by steam-power or windmills. In the former instance several settlers might combine and purchase the necessary plant and pay for its working expenses; in the latter instance the settler would, in most instances, be able to purchase the necessary plant without co-operation and erect it himself.

FRED. B. GIPPS, C.E.

Sydney, 20 January, 1887.

EVIDENCE TAKEN BY COMMISSIONERS DONKIN AND GIPPS ON  
THE DARLING RIVER.

SEPTEMBER-OCTOBER, 1886.

TUESDAY, 21 SEPTEMBER, 1886.

At Yanda Station, Darling River.

Present:—

MR. DONKIN,

MR. GIPPS.

Mr. D. W. F. Hatten examined:—

- Mr. Donkin.*] You were examined before the Commission some time ago? Yes; I gave some evidence at Bourke last year. Mr. D.  
W. F. Hatten.
- That was in the height of the drought, before this recent flood? Yes. 21 Sept., 1886.
- How long have you been resident on the river? Thirty-one years—since the latter end of 1855. Floods.
- How many floods have you known since your residence here? The floods in 1863, 1864, 1870, 1879, and the present one.
- When you came here in 1855, was the river then in a state of flood? No; it was very low.
- Have you seen the river lower than it was during the last twelve months? The only time was in 1862; then it was dry for miles. Last summer it was dry for miles, with the exception of a few little pools. All the straight reaches were dry.
- Were you the first to form this homestead? It was formed by Mr. T. A. Smith, of Bathurst.
- Mr. Gipps.*] Was there any under-current in the river during the drought—could you always get water by sinking? Yes. Under-current.
- Was it fresh? In some places it was fresh, and in some it was as salt as brine. Between here and Jandra there are a number of salt springs in the river. Some of them bubble up several inches in height.
- Is there any rock with which those springs are connected? In some places we meet a kind of rotten rock.
- Mr. Donkin.*] What have you been in the habit of reading the height of the river from—have you any zero? None whatever; we judge by the ordinary marks on the trees which the flood leaves.
- Mr. Gipps.*] What were the relative heights of these floods above what you term summer level? I should think the 1864 flood was 45 feet above. The next highest flood was that of 1870, which was about 43 feet above. Of course I only speak from the marks on the trees. Heights of floods.
- Mr. Donkin.*] What do you mean by summer level? I suppose summer level is the bed of the river. Summer level.
- What would you consider the best guide to read the river by, by a previous well-known flood, or by the bed of the river? By a well-known flood, I should think.
- What flood would you take as a guide? The 1864 flood; that was 4 feet higher than the present.
- Then the whole of Bourke must have been under water in that flood? It was under water.
- Mr. Gipps.*] Do you think the flood level of 1864 would be sufficiently defined in order to locate it exactly? I think so.
- Mr. Donkin.*] There is no doubt in your mind that great confusion has arisen through taking summer level as a guide? There has been great confusion.
- Is it possible to have a flood as high as the 1864 flood? Quite possible, if the rivers were all to come down at once.
- All the way down the river there is a high bank on one side and a correspondingly low bank on the other side? Yes, but when you get below Wilcannia the banks are low on both sides.
- What is the average width of the river now? I should say 6 miles. Width of flood.
- Do you know of any large depressions on the Darling where water could be conserved? Below Wilcannia there are several lakes—Lake Poopelloe, for instance, on Cultowa Run.
- Mr. Gipps.*] During the flood of 1864, was there a general rain throughout the country? No; it was one of the driest seasons we had. On the lower end of the Darling there was no rain at all. The floods arose from the rains in Queensland; we had no local rain. From Wilcannia down there was no rain. The rainfall was so slight that had it not been for the flood all the stock would have died at the lower end of the river.
- Mr. Donkin.*] You know Lake Poopelloe? Yes. Lake Poopelloe.
- What depth of water would it average? About 12 feet. The bottom is nearly level.
- Are there many rocky bars across the river? Yes.
- You think then that it would be possible to erect weirs or locks across the river? I think it would.
- Do you think it would pay the country to go to the expense of erecting weirs or locks? I think it would pay better than the railways. Weirs.
- And what do you think the water should be used for? For irrigation and for general transit.
- Could any great body of water be conserved in Yanda Creek? No; it is almost a dead level. Yanda Creek.
- Mr. Gipps.*] Where does the Yanda Creek rise? Near Cobar.
- Is there a rocky channel? A very deep defined channel.
- Is there generally much of a stream in the creek itself? It had not run for fifteen years until February, 1885.
- Then it ran because of local rain at its source? Yes.
- Was it very deep? There must have been an average of 10 feet of water. It carried away every dam with the exception of one of ours.
- What is the average depth of the bed of the creek? I should think about 8 or 9 feet.
- With steep sides? Yes.
- Do you think a dam at the mouth would throw back much water? I am sure it would.
- To what distance? To several miles. And

- Mr. D. And of what width? Not very wide. I suppose the creek itself is not more than from 20 to 30 yards  
W. F. Hatten. in width.
- 21 Sept., 1886. Would the impounding of the water in the creek be of much benefit? It would benefit all that tract  
of country between here and Cobar, about 100 miles.  
Has the creek a regular fall? A very slight fall. We have a dam in the creek now, and it is full.  
There are 3 miles of water in it. At the deepest part there would not be more than 8 or 9 feet.  
Do you think that water could be diverted into any large depressions on its course? No, because the  
country falls gradually towards the river.  
Not even down south? There are no depressions that would hold great quantities of water. You could  
only dam the creek.  
It could not be thrown into Lake Poopelloe? No; there are too many ridges intervening.
- Dunlop's Range. Mr. Donkin.] Is Dunlop's Range isolated? Yes; there are a few little spurs, but there is no extent  
of rangy country.  
Do you think that if a weir were thrown across the Darling that the small ana-branches could be made  
use of for navigation? I am sure they could.
- Tanks. Mr. Gipps.] How do you supply stock with water? By means of excavations.  
What is the average depth of the tanks? From 15 to 20 feet.  
And the average capacity? From 10,000 to 20,000 cubic yards.  
Have they ever been filled? They are all full now.
- Evaporation. What amount do you reckon you lose by evaporation during the year? I have never reckoned it, but I  
am convinced that fully a third of the water is lost every year. We have 291,491 yards excavated.
- Cost of excavation. Mr. Donkin.] What is the average cost of excavation? 15d.; some tanks cost 18d. a yard.  
Rainfall. That does not take into account your own supervision? No.  
What has been the average rainfall here? 13·58 inches for six years.  
What was the lowest rainfall? 6·11 inches, in 1884, and the highest was 22·57 inches, in 1882.
- Mr. Gipps.] Do the rains fall in heavy storms? Yes; we had 11 inches and some points in February  
in a very few hours.  
What are the winds? East winds.
- Irrigation. Mr. Donkin.] With so much water in the river, have you ever tried irrigation? No.  
You know it has been tried at Winbar? Yes.  
Was it a success there? Yes, but I doubt whether the outlay would counterbalance the large  
expenditure for machinery and preparing the ground.
- Wells. Mr. Gipps.] Have you any wells sunk? One.  
What distance from here? 40 miles.  
What is the character of the country? It is red soil.  
What depth is the well? 110 feet.  
Did you get fresh water in it? Yes, at 36 feet.
- Strata. What is the character of the strata you passed through? It is a kind of rotten rock.  
The whole distance? Yes. At first we went through clay, and we got water in the coarse gravel and  
water-worn pebbles. This was on the top of rotten rock. We went 70 feet into that, and only got a  
small supply of fresh water. We got some very salt water.
- Salt water. Did the salt water rise? Yes, to 80 feet; but as we used it and kept on sinking the water increased  
very much. It came in so strong that we could not keep it down with horses and a whim.  
What was the diameter of the well? 6 feet by 3 in the clear, timbered with sawn gum slabs and centred.  
Was there a large supply of fresh water? Only 7 feet. We put a drive of 20 feet on each side,  
but the water did not increase.  
Mr. Donkin.] You think that by going deep enough water could be obtained on this back country? Yes.  
Mr. Gipps.] You say you have seen fresh- and salt-water springs in the bed of the river? Many of them.  
Did you notice the difference of the strata? No; you would see them boiling up in the same kind of  
rock within a very few yards of each other.  
Mr. Donkin.] With your long experience here, have you come to any conclusion in your own mind as  
to how this large body of water could be conserved? I have not.  
You see no means except by the natural depressions? That is all.  
Would it involve a large cost to conserve the water in Lake Poopelloe? No; a small expenditure would  
keep it filled.
- Paroo River. You know the Paroo, does it ever join the Darling? Yes, when the Darling water backs out to meet it;  
but there is no defined channel.  
Could any large body of water be retained in the depressions on the Paroo? I think so, and at a small  
cost. There are two or three lakes on Tongo Run, Mr. Rankin's, that could be so dealt with.
- Depth of tanks. Have you ever tried covering the tanks? No, but I am convinced of the great benefit to be derived  
from such a course. I may mention that a tank 10 feet deep is of no use. To stand a drought the  
tanks must be from 15 to 20 feet deep.  
How long will it take the water in the river to subside to its ordinary level? About three months,  
I suppose.
- Lakes. What are the names of the lakes below Wilcannia? Lake Poopelloe, Lake Woytchugga, and others.  
And how far are the Paroo lakes from Wilcannia? There are lakes on the Momba Run, no distance  
from Wilcannia.  
How far is it to Mr. Rankin's? About 90 miles from Wilcannia.
- Bad water. You did no deep sinking here? No. Several wells have been sunk round the mountain, but the water  
is so bad that the cattle cannot drink it. If you poured water on the ground it would leave a crust that  
you could not break with your boot.
- Herbage. Do you find after the past long drought that the herbage has come back again? Yes; the herbage  
is as good as I ever saw it.  
You think the country has not deteriorated? It has as regards carrying capabilities. The shrubs are  
eaten down and the branches broken off, and the country will not carry stock as in its maiden state.  
If you spell the country it will improve. The salt-bush will never come back; it has been eaten out.
- Soil. Which do you find best for cultivation, the red soil or the black? The red soil. It is not so porous  
as the black, and the growth is quicker.

Mr.

*Mr. Gipps.*] Have you tried lucerne-growing? It has been tried with great success on several places around here.

How many cuttings do they get? I could not say.

*Mr. D.  
W. F. Hatten.*

21 Sept., 1886.  
Lucerne.

*At Gundabooka Station.*

Mr. William Harrison examined:—

*Mr. Donkin.*] How long have you been on the Darling? Seven years at Gundabooka, and about two years at Wilcannia.

*Mr.  
W. Harrison.*

Is this the largest flood you have seen in the river? Yes.

21 Sept., 1886.

What do you go by here as to the height of a flood? We have no guide but the marks on the trees. How do you determine the height of a flood, from the bed of the river, or summer level? By the spread of the water.

Summer level.

The flood of 1864 was the highest, was it not? Yes, according to the tradition of the blacks.

Flood of 1864.

What is the difference between the 1879 flood and the present one? About 6 inches, that of 1879 being the highest.

Does the flood-water of the Darling, on Gundabooka, find its way out back;—have you any ana-branches? No.

Is it all dry bank? Yes.

River dry.

Was the river dry between 1879 and the present flood? Yes, within six months ago.

Was the river absolutely dry? Yes, absolutely.

Water-holes.

There are large water-holes in the river, are there not? Plenty of them.

Do you know a place in the river known as Jandra Rocks? Yes.

Is the river very deep there? No; it stopped running altogether. There is a rocky bar across the river.

Rocky bars.

Are there any other bars that you are aware of? Yes, the Toorale Rocks below here, above the junction of the Warrego.

Of what nature are the rocks? Sandstone, rather harder than the stone at Gundabooka Mountain.

Do you think there would be any great difficulty in erecting weirs across the river at these rocky bars? I fancy not.

There is no actual drop in the river, as at Brewarrina? Not that I know of. The water finds its way through until it stops.

When the river was dry the whole communication by river was stopped? Yes, for eighteen months at least.

Which do you think would be of the greatest importance to the country in conserving the water in the river, irrigation or navigation? Navigation.

Navigation.

You look upon navigation as necessary to the settlers on the Darling? I do.

Do you think that if stone weirs were erected on these rocky bars across the river the short ana-branches could be made use of as water-ways to take the traffic through? No.

You have the railway to Bourke now, and there is the probability of its being taken to Wilcannia; do you think that carriage by rail will do away with the water carriage—in fact, that the railway can compete against the river? I think so.

Railway.

If that be the case there is scarcely any necessity to keep up navigation? We only require navigation between the railway points.

You think that if weirs were erected between Wilcannia and Bourke sufficient means would be afforded for the conveyance of produce on the river between those points? Yes, if at stated intervals and good long distances.

Do you know of any large depressions in which the water might be retained at a moderate cost? Yes. Stony Creek.

There is Stony Creek, which comes out of the Kerrigundy Creek.

Has it a deep channel? Not very.

What height would the river require to be before it would discharge into it? Within 2 feet of its present head.

Then a slight dam at the off-take from the river would hold back a large quantity of water in the creek? I think so.

Do you know whether the Warrego has been in flood since 1879? The waters of the Warrego have not joined the Darling from 1879 till the present time.

Warrego River.

What do you think is the width of the river now between here and Wilcannia? 6 or 7 miles.

There is not much current away from the actual bed of the river? Very little.

Have you tried irrigation at all? No.

They have at Winbar? Yes.

Was it a success? Yes, but it was an expensive arrangement.

You have a great deal of red soil which seems splendid for growing cereals; do you not think it would pay to irrigate that now, considering the quantity of water you have and the shortness of lift? I think it would.

Irrigation.

Do you not think it would be advisable for people who have water to try it over small areas? Yes, but you must bear in mind the time the river is down, when you have to lift 60 feet.

Do you not think that the irrigation of a few acres in cases of great necessity would save your stud stock? I do not think it would; I do not think the soil is good enough.

Soil.

How do you supply the back of your run? By tanks.

Have you any wells? No; the water is all salt at any reasonable depth.

Wells.

To what depth have you gone? 100 feet.

You have no deep wells? No.

Do you think if you went far enough you would get fresh water? I dare say.

Has there been any cultivation here at any time? No; it has never been tried on the station.

*Mr. Gipps.*] What is the average width of the river between its two banks from here to Wilcannia? I should guess about 100 yards.

Width of river.

What is the average depth? To the bottom it is a good 50 feet.

And how much higher is the left bank than the right? About 12 feet I should say.

What strata do the banks show? There are two banks that are composed of old soil, then comes the strata. gypsum, about 2 feet underneath, and then that continues until you come to the rock.

Does

- Mr. W. Harrison. Does the country rise from the left bank of the river towards Gundabooka Range? Yes, gradually for the first 10 miles, then rather quickly after that.
- 21 Sept., 1886. What would be the height of the first 10 miles, 50 or 60 feet higher than the bank? Yes.  
Gundabooka Range. Is the Gundabooka Range connected in any way with the Cobar Range? No.  
Or any other range? No. It is simply an isolated range.  
Then beyond the Gundabooka Range the country sinks again? No; it keeps on rising until it runs into half a dozen ranges.  
There would be no means of carrying a channel across country between the Gundabooka Range and Cobar? No.
- Soil. What is the character of the surface soil? Red loam.  
What depth does it go to? The country is undulating out there. There are stony rises and dips in between. In places the red loam goes from 2 to 5 feet, and on the ridges stones are sticking out.  
There is no sub-soil.  
Is it gypsum underneath? Yes, and sandstone.
- Yanda Creek. Do you know anything of the Yanda Creek? It passes close to the back of our run.  
Does it run frequently? It has run twice during seven years to my knowledge.  
Is there any under-current? Yes, but only after heavy rains, like the drainage from all those mountains. We have some dams close to the mountain, and as long as there is a soakage from the mountain our dams remain perfectly good. Directly the under-current becomes exhausted the water goes away from the dams. At times you could sink down 10 or 12 feet and get water; at other times you would sink 600 feet and not get any.  
Always fresh? Oh, no.
- Springs. Are there any springs in the Gundabooka Ranges? Only soakages.  
Are there any springs in the river bed? Always running springs, both fresh and salt.  
Have you noticed any difference in the character of the strata with regard to the fresh water and the salt? You may see them alongside each other and not tell the difference.  
What is your idea with regard to these springs? I hardly know. I suppose the river leaves a deposit behind and it oozes out again. The wells we put down alongside the river have no connection with the river.  
Are the sandstone rocks bedded or tilted? They are bedded.  
Have you ever found any fossils in the sandstone rocks by which you could distinguish their age? No.
- Wells. Have you sunk any wells? Two, to a depth of 100 feet.  
What was the character of the strata passed through? A peculiar sandstone, something between gypsum and sandstone.  
Do you get water at the bottom of the wells? Yes, salt water; we could not use it.  
Did you try drawing from the wells? Yes; but it is impossible to get better water.  
Did you notice whether there was any current in the salt water? There is no current; the water just oozes from the sides.
- Tanks. What is the capacity of your tanks? From 9,000 to 22,000 cubic yards.  
And the depth? They average 15 feet.  
Are they full? To the top.  
How long would they last if there were no rain? They would last nine months without rain.
- Evaporation. How much would you lose by evaporation? I should think a third, but that is only a guess.  
How do you get the water into the tanks? By properly constructed drains. The drains lead into a silt tank, and then into the main tank.  
Are the tanks lined? No.  
What slope do you give the sides? At the ends, 8 to 1; at the sides, 2½ to 1.  
Is the fall of the country in any one direction, say, from north to south, regularly, or from east to west? No.
- Brackish water. Does the soil hold the water well? Yes; not on the surface, but a foot from the surface.  
Does the rock make the water brackish? No; the gypsum does, but the sheep drink the water all the same.
- Irrigation. Mr. Donkin.] According to your statement the people on the Darling depend simply on the river, and nothing can be done by irrigation? I think it would not pay financially.  
If you do not get irrigation it means starvation? That is so. We have the mulga to fall back on.  
That will not last for ever? It will not be cut down in our grandchildren's time.  
Is the mulga sufficient to keep you through a drought? Yes, if we get plenty of it.
- Rainfall. Mr. Gipps.] What is the rainfall? In 1884 we had 8 inches; in 1885, 17½ inches; this year we have had 8¼ inches up to the present.  
Mr. Donkin.] Is the mulga spreading? It is, but not to a great extent.  
You think it is a grand stand-by if you had plenty of rain? It is the only thing that has kept us from starvation.
- Loss in sheep. Have you lost many sheep here during the last year or two? Not so many as our neighbours. During the last six years we have lost as many as 50,000 sheep.
- Price of chaff. What would their value be? About 5s. per head, or over £12,000. I may mention that in one year I spent £1,000 for horse feed. I was paying £35 a ton for chaff.

WEDNESDAY, 22 SEPTEMBER, 1886.

At Gundabooka Station.

Present:

MR. DONKIN, | MR. GIPPS.

Mr. John Mackay examined:—

Mr. J. Mackay.  
22 Sept., 1886  
Floods

Mr. Gipps.] What is your occupation? Grazier.  
How long have you been on the river? Since 1862.  
How many floods have there been since your residence here? The first high flood was in 1863, and the second in 1864. There was a bit of a fresh in 1866, and then the river ran in a good stream from the



the end of 1869 till 1873 or 1874. The 1864 flood was the highest flood, and it was 6 feet higher than this flood. The last flood previous to the present one, when the river overflowed its banks, was in 1879.

What is the width of the river now? I suppose about 4 miles.

What is the width between its banks? About 100 feet.

And its depth within the banks? About 27 feet.

Have you ever seen the river dry? The river stopped running here on 6th November, 1885, and commenced to run again on 23rd December following, between which dates is the only time I have ever known this to occur. River dry.

How do you get your water then? There is a large hole here about  $2\frac{1}{2}$  miles long and from 8 to 14 feet deep. The water is always fresh.

When the bed of the river is dry, do you see any springs? I have not noticed any. In these high banks there are springs. Springs.

Are the springs fresh or salt? Mostly fresh. Some of them are salt.

Do you notice any rock where the springs occur? No; the only rock is the ferruginous clay. Wells.

Have you ever tried sinking wells? Yes.

To what depth? There is one on Gundabooka Mountain that I sank 175 feet. I sank 140 feet and drilled 35 feet.

Did you get water? Plenty water, but it was so salt or mineral that nothing could drink it.

Do you know of any lakes or billabongs in this vicinity where you could conserve water? It is all billabongs on the other side of the river.

Which is the longest one you know of? The Taloula Billabong. It breaks out from the Warrego about 3 miles above the junction of the river, and goes away down the back country. Taloula Billabong.

How many miles? I suppose it is continuous down to Campadore. Below Dunlop they call it Mundy Creek.

Has the channel any breadth? In some places. There is one hole called the Taloula Waterhole about 3 miles from here. In ordinary times that hole is never dry. It is silted up a good deal, but it is perhaps 8 or 10 feet deep.

The river has to be in flood to fill it? Yes.

Has it any direct channel to discharge into the river? No; it is just a network of channels.

Have you tried irrigation at all? Only for the garden. Irrigation.

Does it seem to increase vegetation? The soil will grow anything if watered.

*Mr. Donkin.*] Have you sheep or cattle? Both.

How many acres on an average do you allow for a sheep during all seasons? I should say about 6 acres to keep them in condition.

Do you not think this soil will grow lucerne? I do. Lucerne.

Which soil do you prefer, the black or the red? The red soil.

You think that if people had an example of what can be done by irrigation they would be inclined to try it? I think so. I know the soil will grow anything if watered. I know that hay could have been grown splendidly this present season. I put some wheat in, which grew splendidly. Excellence soil.

How long is it since the waters of the Warrego joined the Darling before the present time? It must be about eighteen months. I believe it has not joined of late years because there are so many dams on the Warrego.

This flood has washed the dams away? I believe so.

You depend for your supplies on the river? I used to do so, but I can send to Bourke now.

Have you lost many of your stock since you have been here? A good many.

Have you any suggestions to make? No; I have often thought that the lowness of the river must be caused by so many dams above. I do not remember during my earlier residence on the river of its ever having so small a volume of water running as has been the case on several occasions during the past six years, although the rainfall in this quarter has, I believe, been fully equal to the average formerly falling. Effect of dam on river.

#### *At Sunnyside.*

Mr. Henry Gillett examined:—

*Mr. Donkin.*] How long have you been on the Darling? About thirty-four years.

Where did you come to? I was about fourteen years with John McKinley, the explorer.

Where was he? He used to own nearly all the Darling country at that time.

Where were you living? At Weinteriga.

How far up do you know the river? I am not acquainted with it further than Fort Bourke.

In what year were you up there first? In 1853.

Who was living there then? Nobody but blacks.

In what state was the river when you came? It was dry. We used to sleep in the bed of the river.

Just about that time the river came down one night while we were sleeping in its bed. We heard a roaring noise which we thought was caused by the blacks. It was the river coming down. We ran on to the wrong side of the river, and in the morning we had 8 feet of water to go through. Sudden flood.

To what height did that flood rise? About 10 feet.

When was the next flood after that? There were a number of little ones. The 1864 flood was the biggest. It was about 6 feet higher than this flood. Flood of 1864.

What height was the 1879 flood? I do not know much about that. The 1870 flood was nearly up to that of 1864. It only wanted a few inches of it.

What do you go by as to the height of a coming flood? By telegrams; we have no other warning.

What do you call summer level here? I call it about a couple of feet deep in the shallow places.

Have you tried irrigation, besides what you have done in your garden? No; but I know that any mortal thing would grow here if you watered it. Irrigation.

Why do you not try an acre or two of lucerne? A man wants means. If I had laid out money in an engine when I first came here I would have done well.

You are satisfied that irrigation would pay? There is no mistake about it; you cannot beat it.

Mr. J.  
Mackay.

22 Sept., 1886.

Taloula Billabong.

Irrigation.

Lucerne.

Excellence soil.

Effect of dam on river.

Mr.  
H. Gillett.

22 Sept., 1886.

WEDNESDAY,



WEDNESDAY, 22 SEPTEMBER, 1886.

At Louth.

Present:—

MR. DONKIN,

MR. GIPPS.

Mr. Thomas Francis Josephson examined:—

- Mr. Donkin.*] You live at Pulpulla? Yes.
- Mr. T. F. Josephson. How long have you been in the district? On this occasion I have been here since 1881; I came to the district in 1866-1867.
- 22 Sept., 1886. Where was that to? To Jandra, on the Darling.
- How long were you there? About eight or nine months.
- What condition was the river in at that time? It was in flood; the steamers were running.
- Flood of 1864. That was after the big flood of 1864? Yes.
- And the river had kept up all the time? I do not know whether it had kept up, but I saw steamers running when I was there in June, 1867.
- Height. Do you know how the 1864 flood compared with this present one? As far as I can judge, it was 5 or 6 feet higher. The marks were shown to me, and were then quite distinct 18 inches above the floor of the Jandra house.
- When you were there, did they gauge the heights of the flood by summer level or from the bed? They used to go by the height the floods rose upon the trees on the banks.
- Summer level. There seems to be considerable doubt in the minds of many people on the river as to what is summer level, and the heights to which the floods have come; do you know of any plan which could be adopted? I should think that summer level would represent the amount of water in feet flowing over different falls in the river at that time. I should say summer level would be when there were about 2 feet of water flowing over the falls.
- Do you not think it would be better to gauge the river by some well-known flood, and take that as zero, in order to send information down the river about coming floods? I should think so.
- Do you know of any large billabongs or ana-branches where any quantity of water could be conserved? Not in this neighbourhood. There is one billabong on Jandra, which runs out 7 miles straight into the run, but in the 1864 flood the Bogan broke over at Mount Oxley, and it ran in just above Yanda Station.
- Breaking out of Bogan. That would be through Jandra Station? Yes.
- How many miles out from Bourke was that water? About 6 or 8 miles.
- Then you think that shows conclusively, judging from the trend of the country from the Bogan, that water could be diverted from the Bogan all over Jandra black soil? Most certainly. The black soil is the limit of the flooded country in the highest floods. The red soil is said to be never flooded.
- In fact you can judge by the class of timber as to whether the soil is liable to inundation? Yes, generally. The mulga, for instance, is never flooded.
- Rocky bars. You know there are rocky bars in the river; do you think there would be any great difficulty in constructing locks or weirs on these bars? There are numerous rocky bars. From Curranyalpa up there are sufficient bars to lock the river, if it were possible to put locks on to them. There are sufficient materials for construction.
- Mundy Creek. Do you know the large billabong on the other side of the Darling, through Toorale, known as Mundy Creek? Yes; I have been across it.
- Do you think any large body of water might be conserved there? Yes; it could be conserved if it were possible to make use of it, but it would be just as easy to conserve water in the river itself. The creek is no great distance out.
- You make use of the river, do you not, to send your produce to the seaboard? Only occasionally; I would not do so if I had the railway.
- Navigation and railway. Which do you think would be of the greatest benefit to the country, to consider the advantages of navigation, or to conserve the water of the river for the purposes of stock and irrigation? I believe, as a commercial undertaking, a railway along the course of the Darling would give better results for the outlay than a series of locks in the river. I believe there are other water-channels where the purposes of irrigation might be served without the risk to be encountered in stopping the flood-waters of this river.
- Have you seen irrigation tried on the Darling? I have seen the irrigation at Winbar since it was started. At Pulpulla it is entirely dry country, there is no natural water? No natural water.
- Is there any natural water between the Bogan and the Darling? The only permanent natural water I know of is a spring at Nymagee. There are soakages on Pulpulla.
- Roughly speaking, how many miles would you call it straight across from the Darling at this point to the Bogan or the Lachlan? About 250 miles to the nearest point of the Lachlan.
- Extent of dry country. And there is no natural water over that tract of country? Not that I have heard of. There are several wells.
- There is no surface permanent water? No.
- Tanks. What do you find to be the best size and depth for your tanks? It all depends upon the area of country to be watered, and also the stock coming to the water. About 2 cubic yards excavation should be allowed per sheep. It also depends very much on the quality of the catchment area more than on the size of the tank.
- What is the shallowest depth you make your tanks? Ten feet.
- Evaporation. Do you find the evaporation great? Yes. It is considerable in summer during the months of December, January, and February.
- Have you any idea as to what proportion you lose by evaporation from a tank say 10 feet deep? It entirely depends upon the stock. The stock make more difference in the depth of the water than evaporation. A flock of thirsty sheep will lower a tank 6 inches in a day in summer, consequently a large area of water is of more consequence than depth, provided the catchment is good. It depends also on the water itself; clear water will evaporate more quickly than muddy water or clayey water.
- How do you account for that? The sun penetrates deeper into clear water and warms it. Also, an exposed tank which is open to the wind will evaporate more than one which is not so exposed; the waves beating up on the side of the tank increase the loss through the earth soaking up the water and evaporating it, therefore steep batters are advisable wherever possible.
- Have

Have you tried to cover in any of the tanks to keep off the wind and sun? No, except the tanks for domestic purposes. Mr. T. F. Josephson.

After this last severe drought, I suppose most of the herbage—cotton-bush, &c.—has been eaten out; do you find it has recovered after this good season? Cotton-bush recovers; salt-bush does not. 22 Sept., 1886.

Do you think the country has improved for pastoral purposes since stocking was introduced? No, on the contrary. Clayey soil becomes so hard through stocking that nothing will grow on it. Sandy soil improves under stock. Soil.

It is not so rich as in its average state?—It is richer, but there is not the same quantity of grass there used to be. The sweeter varieties being eaten out, and the coarser ones neglected, there is a natural tendency towards the increase of the latter.

You know the range running out from here called the Dunlop Range? Yes. Dunlop Range.

Is it continuous? That goes from Gundabooka Mountain down through the Rankin's Hill blocks, and down to Barnato.

You say the water came in through Jandra? The Mulga Creek comes down along the course of the railway, and runs in nearly at Jandra Station.

In speaking of the Dunlop Range, do you think the water could be brought across country through the back of that creek and some miles out so as to water some of the back country? No; there is rising ground between all these creeks. There is a watershed between Yanda Creek and Mulga Creek.

And does the Dunlop Range form a watershed between Yanda Creek and this lower country? I do not know exactly which is called the Dunlop.

These hills near Louth? They are merely isolated. There is a watershed between Yanda Creek and Kerrigundy Creek, which is the next drainage creek below us here, and runs in at Stony Point just below Winbar. Gundabooka Mountain lies between Yanda Creek and Kerrigunda Creek. Neither of these creeks is of any consideration.

Do you think something ought to be done to retain the water in the river? No; there is quite sufficient water for stock purposes in the river.

But not for irrigation? No; but I do not think the time has come for that yet. Irrigation.

Have you put down any wells on Pulpulla? I have wells which have been sunk by other people—one 80 feet, and one 60 feet. I have put down several trial shafts without success. Wells.

Do you think fresh water could be obtained if you went deep enough? I have fresh water in the soakage springs. There is 28 feet in one, but the well is not reliable in drought.

*Mr. Gipps.*] What is the character of the falls in the river that you made mention of? The river when it is at what I call summer level consists of long reaches of deep holes with a distinct fall between. Of how many feet? For instance, there is a fall of about 6 inches at the crossing here, and so on every half mile or so. Falls in river.

Therefore the bed of the river, instead of having a regular inclination, is formed by a distinct series of falls with deep holes in between? Yes.

Are these falls rocky? Not all of them; in some cases they consist of little shingly gravel.

How do you account for the formation of the deep holes? I should think they were scoured out by the current running round the curves in the river, because on the inner elbow of every curve there is a deposit of sand, while the outside of the elbow is always scoured out. There is generally a hole in the outside of the elbow.

Does the river appear to you to be changing its course in any way by making its way towards the east or west? No; there is very little alteration. In the heaviest flood in the river there is very little cut away.

Do you know of any bars of rock crossing the river? There are numerous bars of rock. There is one at Yanda, one at Toorale, one at Curranyalpa, and I think there is one at Campadore. Rocky bars.

And can you see these bars of rock cropping out in each bank? Yes, distinctly cropping out, and about half-bank high.

What is the nature of the rock? Most of it is a sort of indurated clay, as far as I can make out. Some of the rock is sandstone.

Is it gypseous rock at all? A little in some cases.

I have noticed in the Murrumbidgee that the bars are formed of gypsum? Those at Curranyalpa were, so far as I can judge, of indurated clay, nothing more; but there are sandstone rocks here at Louth.

Do the conglomerate rocks which form Dunlop Ranges cross the river at any point? No; I have seen no conglomerate near the river. Out on Rankin's Hills there are conglomerate rocks.

At what point of the Bogan did the river leave its channel and make across the country? On one of the Beemery blocks opposite Oxley's Tableland. Breaking out of Bogan.

What was the height of that flood? It must have been 6 feet above the present flood.

Then the whole country was in flood at that time? All the rivers came down at once.

Did the water come straight across country in a sheet, or follow any channel? It followed the channels, certainly.

There was a distinct channel? The river was as it is now. Of course more land was submerged, and the stream was wider. In fact the flat black-soil country between the Darling and the Warrego was one sheet of water. The river was 7 miles out from Jandra on this side, and the people at Jandra were camped out at the Saltwater Well, 7 miles from the station, and had to go in in a boat.

What is the average rainfall at Pulpulla? It is from 12 to 14 inches per annum. Rainfall.

Does the rain fall in sudden storms or in a continuous fall? In storms; we have very little continuous rain. The body of the water falls generally in heavy thunderstorms.

What winds bring up these storms? A northerly wind shifting to north-west, and then south-west. Winds.

Are these storms local? They are very patchy.

It does not follow then that if there are continuous rains in Queensland they will come down here? We look for the tail end of the Queensland tropical rains in February, but we do not always get them.

With regard to the springs, have you ever tried opening them up at all? I have sunk to various depths upon them, down to 28 feet. Springs.

Did they rise above the ground? They rise after wet weather to the surface.

Do the springs go right down into the ground, or do they come laterally from the rock? My belief is that they are accumulations of water in the crevices of the rock. These springs are all on the westward

- Mr. T. F. Josephson. westward slope, consequently I think the water is collected between layers of rock, and where there is a fault there the water springs up.
- 22 Sept., 1886. What is the inclination of these rocks? About 20 degrees.
- Character of rock. And what is the character of the rock? Chiefly altered sandstone.
- Fossils. Very hard, indurated? Yes, metamorphic, having been under the action of fire.
- Have you discovered any fossils in them, or been able to distinguish their age? I found a recent fossil of a fungus, but that was not in the rock. I found on the tops of the hills numerous layers of rock with impressions of water waves. It is a very common thing here. They may have been formed by wind, but still they are the marks of waves in the sand before the rock was formed.
- Volcanic action. Are there any indications of volcanic action in the country? None whatever.
- No basalt, no trachite? Nothing of the sort; nothing but these conglomerate rocks, which contain rounded quartz, which has evidently been carried a long way. The quartz is round like eggs.
- There is nothing to account for the tilting of the rocks? Not on the surface. They have evidently been upheaved, but not with sufficient force to bring any volcanic rocks to the surface.
- Wells. How many wells have you on Pulpulla? I have two, 60 and 80 ft. deep, but dry. I have three shafts of 28 ft., one of which has water in it, and there is one shaft of 20 ft. with water in it from the springs.
- Did you never get any water in the 60- and 80-ft. dry wells? No. The rock was so hard that the men would not go on with the work for the price. It was deep red sandstone with nodules of quartz in it.
- Was it bedded or tilted? Flat, in beds.
- The rock was so hard that you never tried to go deeper? I did not sink these wells; my predecessor did.
- Do you not think that by going deeper there would be some chance of getting water? I would not like to try myself. I would sooner put down a tank than go on sinking wells.
- There are no borings in that country? No?
- Sandstone ranges. Are there any sandstone ranges at all? Yes, there are well-defined sandstone ranges.
- Bedded, I suppose? Yes, they are all tilted to an angle of about 20 degrees.
- I suppose it is all broken country? Yes; there are flats running between these ranges of no great extent, a mile or 2 miles wide.
- Tertiary strata. As these ranges run out, is there no indication of any tertiary strata then? It is all tertiary.
- It can hardly be tertiary if it is tilted like that? No?
- There is no volcanic action in the tertiary? Well, there are no volcanic rocks on the surface.
- Winds. With regard to the winds here, are they regular in summer? Yes.
- Sufficient to drive a windmill? Yes, quite, most days in the week.
- Tanks. Mr. Donkin.] In making your tanks, what time do you reckon will elapse before getting them filled in ordinary seasons? If a man is lucky he may get a tank filled the day it is finished. Sometimes I have waited two years.
- In some cases people have to wait longer than that? Oh, yes; some wait for years.
- There is no certainty as to the time of waiting after the tank is excavated? No.
- What length of drains do you make to your tanks? I have drains 3 and 4 miles long to a tank.
- Mr. Gipps.] The tanks are always located in depressions? Yes, so that one can obtain water over the excavation if possible, but always having regard to the catchment area.

Mr. James Ramsay examined:—

- Mr. J. Ramsay. Mr. Donkin.] At present you are living at Wuttagoona? Yes.
- 22 Sept., 1886. How long have you been residing there? About two and a half years.
- Were you in this district previously to that? Yes; I was on Tindayrey for four years.
- That is near Cobar? Between Cobar and Bourke.
- Have you any knowledge of the Darling River? Very little.
- Wuttagoona has not a frontage to the river? No.
- So the flood does not affect you? No, not as to a supply of water.
- What do you depend on for your water supply, there being no natural water? There is no natural water whatever, so we depend on tanks and dams.
- Waterless country. Do you know of any natural water between the Bogan, the Darling, and the Lachlan? I do not know of any permanent water.
- Then there is a tract of country of 200 or 300 miles in extent between those three rivers without any permanent water? I do not know of any except in small crab-holes, which only last a few months.
- Tanks. What size do you generally make your tanks to be efficacious? I look on the tank as a necessary evil to procure material for my dam, and sometimes I can make a very effective dam with a very small excavation—say 5,000 or 6,000 yards.
- You have some shallow watercourses? We have two creeks running right through the blocks.
- Actually you combine the tank and dam together? I never make a tank unless I can save a large quantity of water on the surface.
- But do you not find that the dams wash away sometimes in heavy floods? Dams do wash away, but I think it is for want of selecting a suitable site for them.
- What depth do you make your tanks? They vary from about 10 feet to 18 or 20 feet.
- Evaporation. Do you find you lose much water by evaporation? I think there is a great loss by evaporation.
- Have you ever recorded the quantity? No.
- Have you ever tried irrigation? No.
- Wells. Have you any wells on the station? There were two wells—one on Wuttagoona, and one on this end.
- Do you get good water? No.
- At what depth do you get the water? About 140 feet.
- Do you know of any deep bores being put down to test the country? None whatever.
- Do you think there is a possibility of getting fresh water if you went deep enough? I think we would get a supply.
- Soil. What is the character of the soil out back? Mostly red soil, with a few white flats, but not many.
- What you call mulga country? Yes.
- How many acres do you allow to a sheep? Seven. It is not safe to stock over that. Have

Have you had any losses in stock? Not many since I have been here there were a great many before I came, both of cattle and sheep. Mr. J. Ramsay.

You do not know what the losses were? I could not say. When I came here I did not find half the stock I expected on the station. 22 Sept., 1886.

Do you think anything could be done artificially to preserve the stock against these droughts? I think the only means is to spare portions of the country. I consider one-third of the run ought to be always in reserve. I have watched the thing very closely, and I think that by preserving one-third of the run always idle we might save the stock. Besides it is necessary to do that for the sake of saving the country itself. I notice that we have lost many of the most nutritious grasses which are annuals. These are fast disappearing, and unless a portion of the country be spared it will be impossible to save them. Losses in stock.  
Spelling country.

Do you know of any instance in which that plan has been adopted? I have never seen it adopted. It has been my wish to do it, but I have never been able to do it.

It can be done now that you have fixity of tenure? I do not see any obstacle, except the expense of making paddocks.

Are you trying the plan of preserving part of the run? I have not the means of doing so; I am trying to work up a station, and I cannot put sufficient outlay on it to do so.

How many years experience have you had in grazing? I suppose for the last twenty-five years.

And that is your opinion as to sparing a portion of the run? Quite.

You were in the Mirool country before you came here? Yes. Mirool Creek.

Is the country similar to this? Yes.

The Mirool heads at Temora, does it not? Pretty near there.

Do you know the creek? Tolerably well.

Do you know where it discharges? I have not been much below the Warre block, within 25 miles of Narrandera.

It has a sandy bed? Yes.

Does the water percolate to any great extent in the Mirool Creek? Yes; it scarcely remains any time.

More so than in any other creek? More so than in any I have had to do with.

What scrub do you depend on here in bad seasons to keep the sheep alive? Principally the mulga, leopard-wood, white-wood, belar, cotton-bush, and a bush whose name I do not know. They call it blue-bush. Edible scrubs

With plenty of water, do you think the mulga is sufficiently nutritious to keep sheep alive during a drought? Only for a term. I should not like to feed them on it for a couple of months if they had to live on the mulga alone.

Mr. Gipps.] Your station is situated on the left bank of the Darling? Yes.

How far distant from the river? The nearest point is about 19 miles.

What is the character of the country with regard to its physical features; is it rolling country or plain? It is undulating. There are little rises on the portion near the river, and the other part of the run is very rough.

Are there many trees in that country? A good many trees.

Of what kind chiefly? We have the mulga and iron-wood, and two sorts of box; one is called gum but it is really box. They are the red box and white box, known as coolabah and bimbah. Then we have a number of other trees, the mallee scrub in places, the belar and the sandalwood, and a white wood which is very good for stock, and leopard-wood.

Are the trees scattered or pretty close together? The mulga country is very close.

Are you cutting down or ringbarking any trees? None at all.

Does grass grow well? In the opener parts.

Do any of those trees indicate the presence of water beneath them? I could not say. On the course of the creek we have the real gum. Trees indicating water.

That is a sure indication of the course of the creek? Yes, and the white box or the bimbah. You can trace the creek by noticing where this bimbah grows thickly along its course.

Have you many dams on your run? A good many. Dams.

What is the average height? I suppose, counting from the lower side, they would average 14 or 15 feet.

Are they in the beds of the creeks? Some of them.

What creeks? One we know as Wuttagoona, and there is Kerrigundy. Creeks.

Do these creeks flow into the Darling? Yes, they come in about 3 or 4 miles below Louth.

They rise at what distance from the river? As the crow flies I suppose it would be about 40 miles.

Are these creeks frequently running? Only after heavy rains.

Do floods in the Darling affect them in any way by backing up the water to any distance in the creeks? Yes, but only near the river. The creeks in time of heavy local flood are very deep.

For what distance? I think the dams have perhaps affected the creeks, but in the open creek, where there is no dam, the waters would back for 10 or 12 miles after heavy rain. Many times, after heavy rain, we cannot cross the creek at Kerrigundy.

What is the average depth of the bed of the creek? It varies much in different places. You might ride over the creek in some places without knowing it. At times the water rises to 10 or 12 feet.

Then the flood throws out a very large expanse of water? I have seen it 3 miles wide.

Was that from the flood on the river itself? No.

Was it a flood in the creek? It was a flood in the creek itself. It made a little rise in the river here.

How many dams have you on the creeks? About eleven in all.

Does every one of them conserve water? Yes, over a considerable distance; some of them for about 1½ mile in the course of the creek.

Then there is a good fall in the creek? A great fall. Fall in creek.

Right down to the river? I do not know it beyond the blocks I am on, but it was sufficiently strong to wash our fencing up.

Are there any springs on the run? They speak of a spring or two in the hills, but I do not put much faith in them.

Any mud springs? No.

Have you tried any well-sinking? I tried a well at Tindayrey, but it was not carried on.

Mr. J. P. Morrison examined:—

- Mr. J. P. Morrison. *Mr. Donkin.*] How long have you been in Louth? Thirteen years.  
 22 Sept., 1886. What have you been engaged in? In contracting and fencing.  
 Have you had any experience of the floods here? A little.  
 Which was the first flood you remember? The highest I saw was in 1879.  
 Was it higher than the present flood? Far higher; it must have been fully 5 feet higher than this.  
 Mundy Creek. Do you think a large body of water could be conserved in Mundy Creek? Yes; the creek is deep in parts.  
 You can see it from the Dunlop Hill? Yes.  
 Navigation stopped. How long has the river been dry sufficient to stop navigation? For two years at a time to my knowledge.  
 One steamer was stuck here for eighteen months.  
 At Louth, here, what do you depend on as your means of transit, river or railway? We depend mostly on the river, but by railway it has much improved.  
 Do you think it would be sufficient for the general purposes of the residents here if there were means of communication between the railway termini, say Bourke and Wilcannia? Yes, by water-carriage.  
 Do you know any large lakes or depressions in the back country where water could be conserved? On the other side of the river, but not on this side.  
 What depth of water could be conserved in the lakes on the other side? There would be 14 or 15 feet of water in the centre.  
 Irrigation. Have you seen irrigation tried on the river? Yes, at Winbar, and it was a success. I am sure it could be more generally adopted.  
 Have the selectors and small holders suffered much loss through the drought? Very much so.  
 Homestead leases. Under the new Land Act, have many homestead leases been taken up? A great lot of country has been taken up on all the runs.  
 Do you think the people will be able to succeed without adopting some artificial means of raising pasture by irrigation? I do not think it.  
 Wells. *Mr. Gipps.*] Are there any wells in this town? I have one about 44 feet deep.  
 Is it fresh water? Yes. It rises 3 feet, and I get an unlimited supply.  
 What is the character of the strata you went through? It was clay the whole distance down for about 40 feet, then we came on to about 3 feet of drift, and then on to a sort of white sandstone.  
 How far is the well from the river? About 200 or 300 feet.  
 You do not think it is soakage from the river? No, it is not soakage from the river; it comes in from the back country. The well does not rise or fall with the river.

Mr. Peter Matthews examined:—

- Mr. P. Matthews. *Mr. Donkin.*] How long have you been residing here? About twenty years. The last four or five years I have been in Cobar, but previously to that I was living here.  
 22 Sept., 1886. Do you know the Darling well? I do; between Bourke and Wilcannia.  
 Flood of 1864. Do you remember any flood in the river? The 1864 flood is the one I know most about.  
 How much higher was that flood than the present one? Louth was entirely under water. It was about 6 feet higher than this flood.  
 Are there any marks on the trees to indicate its height? No; but the water went right out on the plains.  
 Bogan water. Do you know whether the water from the Bogan in the 1864 flood came across the back country through Jandra? It did not, but only through those plains from Bourke out.  
 How long will it take the river to run down to its usual height? It depends on how the Murray is situated.  
 Dry river. What is the longest time you have known the river dry? I have never seen the river so dry in my life as it was the past season.  
 Does the river ever cease running? It never actually ceases running; it goes underneath the sand.  
*Mr. Gipps.*] Do the floods come down suddenly in a wave, or gradually? I have seen the river rise 3 or 4 feet in a night, but generally it rises gradually.  
 Dunlop Range. Does Dunlop Range continue on to Cobar Range? No; there is a range below here which goes in a broken sort of way towards Cobar, but it runs right on to the Lachlan, and leaves Cobar a long distance away.  
 Does not Dunlop Range keep on rising? It is only a small range by itself. At the back of it the country is low again. It runs into flats.

Mr. A. D. Turner examined:—

- Mr. A. D. Turner. *Mr. Donkin.*] You are the Post and Telegraph Master here? Yes.  
 22 Sept., 1886. How long have you been in Louth? Eight years.  
 Rainfall. Have you kept a rain-gauge since your residence here? Yes, the whole time.  
 How does this year compare with previous years? I have only kept the record from day to day up till the beginning of last year. The rain last year and this year has been exceptionally heavy. Total rainfall for 1885 was 18.75. Total rainfall for 1886, up to the 1st September, was 11.04. (*Appendix to Report on Darling River, No. 8.*)  
 When does the heaviest rain generally fall? Last year's fell in January, and this year's in July.  
 River gauge. What floods have you seen? Only the 1879 flood.  
 Do you keep any gauge of the river? There is no Government gauge; it is all guess-work on my part.  
 How did the 1879 flood compare with the present flood? It was from 14 to 18 inches higher than this one.  
 What do the other stations above you read their gauge from, is it summer level? I do not think they have any standard.  
 Summer level. What do you call summer level? The information about the river is telegraphed to the head office every morning, but I do not think you can come to any summer level in the river. Last year the river was running all the year round, and this year it was not running at all.  
 What do you take it from when you send it down? From the bed of the river. Even that is not correct, because this waterhole at the back has filled up tremendously since the 1879 flood. If

If you take summer level from the bed of the river, and higher up the river they take it as 2 or 3 feet above the bed, would not that mislead people lower down? Some of the stations read from navigation level. Mr.  
A. D. Turner.

Are the Government aware you have not a proper gauge here? My department is aware of it. Before the flood of 1879 I applied for a gauge, and I received instructions to have one erected, but I did not receive the instructions until after the flood came down; so I was unable to have the gauge erected. After the flood disappeared I reported the matter to the department, but I have not yet received word to erect a gauge. 22 Sept., 1886.

What length of time have you known the river to be dry since you have been here; that is, unnavigable? For over two years. Dry river.

Suppose there were a 5-foot rise at Bourke, what rise would you expect here? About 4 feet.

*Mr. Gipps.*] Have you kept any record of evaporation? No.

*Mr. Donkin.*] With regard to summer level and navigation level, what would you suggest should be taken as a standard by which to read the different floods; should it be the bed of the river, or summer level, or navigation level, or the height of any known flood? I should say there ought to be some standard for summer level all through. For instance, here the river has to rise 6 feet before you can call it proper navigation level, that is, to enable boats to pass down from 100 yards up stream.

If you wired to Menindie "river is 2 feet below 1879 flood," would they understand you? No. They do not know the river as regards previous floods? No. At Bourke they send from navigation level. I send from the bed of the river. I judge by the rocks.

FRIDAY, 24 SEPTEMBER, 1886.

At Winbar.

Present:—

MR. DONKIN,

MR. GIPPS.

Mr. J. C. Paterson examined:—

*Mr. Donkin.*] You are storekeeper of Winbar Station? Yes.

How long have you been here? Between five and six years.

Have you seen the Darling in flood before the present one? No. This is the first big flood I have seen. What was the state of the river here before this flood? It was perfectly dry in many places. You could walk across it. Mr.  
J. C. Paterson.  
24 Sept., 1886.

Are there any deep holes in the river? Yes, there is here, and one at Campadore.

Is that close to the station? Yes.

What depth of water was there in that hole in the last drought? Perhaps 12 or 13 feet.

You had plenty of water? Yes.

You have tried irrigation at the station? Yes.

Irrigation

How long is it since it was first started? In the beginning of 1884, I think.

That was right in the middle of the drought? Yes.

Was there sufficient water in the river to continue irrigation? We would have had to cease if we had not had a fresh.

There was not sufficient to keep up irrigation? I think not.

How many acres had you under irrigation? Seven acres.

What size of pump did you use to lift the water? A 10-inch centrifugal pump.

What was the lift? About 40 feet from the bank to the water.

What system did you adopt for laying out the ground for irrigation? We laid the ground out in squares, about eight squares to the paddock, and ran a main drain through, which we dammed all round. We ran the water into one of the squares, and as soon as that was thoroughly irrigated we opened the dam or check and let the water run over another square.

How do you check the main drain? We simply dam it up with earth.

What did you put in as the first crop in 1884? Lucerne.

Lucerne.

Had you any difficulty in ploughing the land before flooding? Yes; the ground is very sticky; it is a black loamy sort of soil.

How many floodings did you give it for a crop? In summer we flood when the crop is taken off, and again about a fortnight before cutting. In winter we give one flooding after cutting. Flooding the soil.

About how many inches to each check? I should say about 6 inches of water. About a fortnight before we cut the crop we thoroughly flood the ground.

What quantity of lucerne per acre do you generally take off? About a ton.

Quantity of lucerne per ton.

How many crops do you get per annum? About five crops. We flooded the present crop in June, and it is ready for cutting now.

As soon as you have cut that you will flood the ground again? Yes.

Do you expect to get five crops this year? Yes.

Number of crops.

Have you ever tried to preserve the lucerne in silos? Never.

How do you make use of it for food? We use some of it green, but we stack most of it, and cut it for chaff.

What do you use it for? For horse-feed only.

Not for stud sheep? No.

What do you think is the most profitable crop to grow? Lucerne is the most profitable.

Have you tried prairie grass? Yes; we tried a small patch, but it did not answer. We also tried sorghum, but we were not satisfied, although it grew well. We thought lucerne was the best crop. Prairie grass.  
Sorghum.

Many stations here have paid large sums of money during the drought for horse-feed? Yes.

Do you think this experiment of yours in growing your own crop has been successful? Yes; it has saved us £1,000 since we began. Success of irrigation.

You feel justified then in continuing your experiments? Yes.

Do you think it would pay to irrigate for keeping stud sheep alive in times of great drought? That is hard to say.

- Mr. J.C. Paterson. You know many stations have paid large sums for feed; do you not think it has been a saving to you to have grown the feed? For horses most certainly. It has been a great saving. We must feed the horses at any cost.
- 24 Sept., 1886. You know the expense of your irrigation, and that you have kept your horses by means of it; what would have been the difference if you had had to send for chaff as the other stations did? It would have cost us, I dare say, £1000 more than it has done.
- Soil. Which do you think is the best soil to irrigate, the soft black soil or the red? We have never seen the effect of it on the red soil.  
The red soil is better to work for cultivation, is it not? I should say so.  
Are there any depressions on Winbar where any large quantities of Darling flood-water could be conserved? Only small billabongs.  
You have no large channel like the Talyawalka? No.
- Weirs. Do you think it would be possible to construct weirs across the river from 8 to 10 feet high to retain the water in the Darling? I dare say it would.
- Rocky bars. Are there any rocky bars on the river? There are several bars.  
And plenty of stone? There is no stone just on the river, but at no great distance from the river on the upper part of it it may be found.  
Do you think anything ought to be done towards conserving water in the river; would it be a national benefit? I think so.
- Stock. Which do you think would be of most importance to the country, to conserve the water for irrigation purposes or for stock? For stock, I think.
- Irrigation. Do you think if there were plenty of water in the river the residents would utilise it for irrigation? I think they would eventually.  
How is it that you first came to try irrigation? We found the expense of buying the feed was so heavy that we determined to try what we could do ourselves.  
Do you find the locusts and grasshoppers destructive? No; we do not suffer from them here.
- Wells. Have you any wells on the station? We have two.  
What depth are they? One is 220 feet, and the other is 140 feet.  
Have you got good water? Very good water.  
What do you depend on for your water supply out back? Principally tanks.
- Tanks. Of what depth are your tanks? From 12 to 15 feet.
- Boring. Do you think an abundant supply of water could be obtained by boring deep? I think in most places water could be obtained.  
Which do you prefer to depend on, tanks or wells? I think tanks are best. With the wells there is a difficulty in raising the water.
- Cost of irrigation. Can you give us an approximate estimate of the cost of irrigating the six acres, say, for one season, that would be for five crops? I should say it cost £100 a year to keep the paddock going.  
Then there is the cost of the plant? We had the plant on the station.  
You think you can keep it going now for £100 for five crops a year, that is 30 tons of hay a year? Yes.  
That would make it a little over £3 a ton? Yes.  
You cannot get hay delivered here at that price? No.
- Cost of forage during drought. Did you buy any forage during the drought? Yes.  
What did it cost you a ton? Carriage is very high. We paid £16 a ton for carriage from Nyngan.  
Chaff costs about £23 a ton.
- Success of irrigation. Speaking from your experience with irrigation for five years you think it has been a decided success? Yes, a great success. I think it is one of the best improvements on the place.
- Navigation. Do you think if navigation were kept up by means of weirs between the railway points (say) Bourke and Wilcannia, that the wants of the residents on the river would be met, or do you look for through navigation down the river? Through navigation would be more to our advantage.
- Wool to Adelaide. Where do you send your wool to now? To Adelaide.  
Is there any great difference in the cost of transit comparing Adelaide with Sydney? I do not know the cost to Sydney.  
What do you pay to Adelaide? £5 10s. per ton; that covers insurance.  
You have not been able to send your wool to Adelaide for some years? Not for the last five years.
- Wool detained by drought. How long have you had wool on the station waiting for a river? We sent one year's clip away and part of the following year's at the same time.  
If you had a certain river between the railway points you would be enabled to get it away at once, would not that be an advantage? It would be an advantage certainly.
- Rainfall. Mr. Gipps.] What is the average rainfall on the river at this part? About 12 inches.  
Does the rain fall in regular continuous quantities or in heavy storms? Generally in heavy storms.
- Winds. What are the rain winds? The westerly winds.  
What wind brings up continuous rain? West to east.  
Are the winds pretty regular here during summer time? No; they are very irregular.  
Which is the prevailing wind? It changes about all day long. Whirlwinds generally prevail.  
Are they constant enough from any one quarter to permit of the use of windmills? I do not think so.  
They are not constant at all.  
We have been told you have winds all day? It blows all day, but it chops round.
- Windmill. Is there enough wind to keep a mill going? Generally speaking. We had a mill at the station, but it was of very little use.  
What is the horse-power of the windmill? I could not say.  
Do you know the diameter of the wind-sail? No.  
Was the river very low last drought? Very low.  
Did it cease running? Yes.  
Where did you get the water for your irrigation? There was a large hole at the station.  
What is the height of the bank to the surface of the water? About 40 feet.
- Pumping. How many hours a day did you pump the water continuously? About ten hours a day.  
Was that every day in the week? Sometimes we pumped for four days. We have irrigated the paddock in four days.  
Did the pumping seem to affect the level of the water in the hole? I think not.



Do you think there is an under-current in the bed of the river itself? I do not know.

Are there any creeks on the run coming from the hills? There is one fair creek out back called Cameron's Creek. Mr. J. C. Paterson.  
24 Sept., 1886.  
Cameron's Creek

Where does that join the river? I do not think it joins the river at all. It runs out in the sandy country.

What is the length of it? I do not know exactly how far it runs out.

In what locality does it rise? In the range out back.

Have you a dam on the creek? Yes. Dam.

What is the height of it? About 30 feet from the bed of the creek to the top of the dam.

How far does that throw the water back? At the present time it is thrown back for about three-quarters of a mile.

How high is the water now on the dam? I could not say.

How far will the water be thrown back when the dam is full? Over a mile.

Can you not follow the course of the creek after it flows into the swamp? No; there is no channel whatever.

What is the character of the rock you went through in the wells? I do not know; they were put down before I came.

Are you getting fresh water? It is good stock-water, but not exactly fresh.

How high does the water rise in the well? It does not rise high at all. Water in well.

What do you use the water for? For sheep.

Does pumping seem to affect the level at all? One of the wells you can bale out in two or three days' continuous baling with a whim. The other one we have never bailed out.

Did you reduce the level at all? Not to a great extent.

How many gallons do you think you pumped out at a time? I could not say.

*Mr. Donkin.*] You said whirlwinds are very prevalent; is that during drought or during bad seasons? Whirlwinds.

Nearly every summer they are very bad.

Are they destructive at all? Oh, no.

In speaking of the level of the river, what do you gauge it from—do you take it from summer level, or the bed, or the height of any well-known flood? We judge it by a mark on a tree which has the feet noted on it all the way up. Summer level

For instance, in obtaining reports from up the river as to this present flood, what were you guided by; were you able to prepare for the flood from the information you received? From the information we received we knew pretty well what the flood would be here.

What do you think would be best to adopt as a zero by which to read floods from—what would be more generally understood along the river, the bed of the river or some well-known flood-mark? I think navigation level would be the best thing to start from.

What would you call navigation level? I could not say that.

Do you think that is well known and defined? I think anyone who has been on the river would know what is intended by navigation level. Zero for gauge.  
Navigation level.

Do you not think it would be simpler to read from the rocky bars in the river, or else from a well-known flood, and say the river was so much above or so much below that? That would be a good plan.

Navigation level is not trustworthy, because so much depends on what the steamers draw? That is true.

*Mr. Gipps.*] How far do these plains extend back from the left bank of the river? In some places about 5 miles. Plain country.

Then what sort of country follows; is it rolling country? No; it is scrubby, irregular country and sandhills.

Are these spurs from any range? No; the hills are isolated.

*Mr. Donkin.*] Had you to discontinue pumping for irrigation because of the low state of the river? No; we had always enough water. Rise of water for irrigation.

Were there any complaints as to your using the water? I heard that a few people complained, but I do not think our using the water affected anybody.

How many horses and cattle on the station did you keep during the drought with the food grown by irrigation? We kept all the horses we had working. We have not had to buy any food since we took our first crop off. Cattle kept by means of irrigation.

When did you take that off? About the middle of 1884.

You say you saved a thousand pounds through adopting irrigation; that would be since the middle of 1884? Yes. Of course that saving was principally in the first year; since then we would not have had to lay out much money for horse-feed.

You may say you saved a thousand pounds in twelve months? Yes.

Have you had many losses on the station? Yes. Losses in sheep.

Can you give a rough estimate? Over 50,000 sheep.

In what time? In 1884 principally—the end of 1883 and 1884.

Do you think any means could be adopted to avert the frightful loss in stock? I do not think so.

*Mr. Gipps.*] What was the heavy loss due to, to want of water or want of feed? To both.

*Mr. Donkin.*] It has been proverbial on the river that it has been from want of feed especially? Yes.

Have you tried the plan of spelling part of your country? We have spelled some. Spelling country.

Suppose you were to spell a third of the run, would not that overcome the difficulty? The feed does not last. The rainfall is so small here, and we are so long without rain, that the feed dries up.

Whether the country be stocked or not? Yes.

*Mr. Gipps.*] Are there any springs in this part of the country? I do not know.

*Mr. Donkin.*] Have you any minimum depth for your tanks? No. Tanks.

What depth do you find will hold out through a drought? About 12 feet is a fair depth.

Any less depth than that would not be a safeguard? No; that is as low as you can make them.

*Mr. Gipps.*] Have you known any of the creeks to run into the river in heavy floods? The Morbilly Creek. Morbilly Creek

What induced that to run? A very heavy rain. We had 5 inches of rain in a couple of days.

Was there a large volume of water? Yes.

About what width? I could not say; I was not here when it was running.

Is it a deep bank at its entrance to the river? Yes.

What depth are the banks? About 20 feet. What



Mr. J.C. Paterson. What width from bank to bank near the river? About 60 feet.  
 During that flood, did it run over these banks? I could not say; I was not here.  
 24 Sept., 1886. Mr. Donkin.] Do you think it made much difference to the level of the river? No.  
 Mr. Gipps.] If a dam had been thrown across the mouth of the creek, would it have conserved a large quantity of water? It would have backed the water up.  
 Mr. Donkin.] Is it a well-defined channel? Only just over the river.  
 Could you ride over it without knowing it? There are people who would.

*At Curranyalpa.*

Mr. M. H. Seale examined:—

Mr. M. H. Seale. Mr. Gipps.] How long have you been here? Five years.  
 Have you had very dry weather lately? Yes. From January, 1885, till last June we had only partial rain.  
 24 Sept., 1886. What was the condition of the river during that time? Perfectly dry at times.  
 River dry. Were there no waterholes? There was a stretch of 3 miles here without water with the exception of one little drop in a hole just here, about 50 yards long, 6 yards wide, and 2 feet deep. But that water was not fit to use.\*  
 Banks of river. Are there any springs in the bed of the river? None whatever here.  
 What is the character of the banks of the river, rocky or alluvial? On this side of the river it is rocky.  
 What kind of rock? It seems to be a rotten kind of ironstone.  
 Does it appear to cross the river? It goes right across in the beds.  
 You do not see it in the bank? No.  
 Watering stock. How did you water your stock in the interior of the run during the dry season? By wells and tanks.  
 Wells. How many wells have you? Three.  
 How far apart are they? About 8 miles.  
 What strata did you pass through in sinking? Alluvial for about 40 feet, then hard rock.  
 Sand. For what depth? We had about 40 feet of pretty hard rock, and finally we got on to sand-drift.  
 How deep was the sand? After the sand we got on to another kind of stone which was harder.  
 What depth of that was there? It was running in veins.  
 What did you bottom on in the end? Sand.  
 Tight sand? No; drift sand, quite loose.  
 What was the depth of the well? The wells are of different depths; our deepest is 120 feet.  
 Did you get a continuous supply? There is a continuous supply.  
 Any current in the water? None that you can see.  
 How high did the water rise? It did not rise at all.  
 Windmill. Can you pump the well dry? We have not done so; our only power is wind.  
 How many gallons can the windmill raise? About 500 gallons per hour.  
 What is the diameter of the windmill? 16 feet.  
 What horse-power do you reckon it is? I really do not know.  
 Salt water. Is the water clear? Perfectly clear.  
 And pure? No; it is salt. We have no fresh water in any of the wells. There are two that none of the men attempt to drink from. Stock drink the water. There is not fresh water in any of these three wells, but we have one shallow fresh-water well on the Billabong with a very small supply.  
 Is the water changing in its character? In one well it is getting better; it is not so salt. That well is 110 feet deep.  
 Tanks. Can you mark the position of these wells on the map? Yes.  
 How many tanks have you got? Twelve.  
 What is their average capacity? They are from 3,000 to 14,000 cubic yards.  
 And their depth? To 14 feet.  
 Do you batter the sides to keep them up? Only in the first instance.  
 You do not puddle the sides? No.  
 The character of the soil is sufficiently impervious not to need it? We have some that do not need it.  
 What do you do with those? We have done nothing with them. The water comes in, and in a short time goes away. We have three that will not hold water. One of the tanks of 3,000 or 4,000 yards has not held water more than a week.  
 Evaporation. Do you lose much water by evaporation? I do not think so.  
 Rainfall. What is your average rainfall here? About 11 inches a year.  
 Does it fall in storms or in continuous rains? In storms chiefly.  
 Winds. What winds bring these storms? The storms come with west and north-west winds.  
 Windmills. Are these winds sufficiently continuous to allow you to avail yourselves of the windmill? In summer-time they are, that is for six months in the year.  
 Would it not be possible to have windmills on the bank of the river to pump up the water? What would you use it for?  
 For irrigation? No.  
 Is there not enough wind? There is enough wind, but you could not get enough water. We have a small garden, and a windmill always at work on it, but we cannot keep enough water on it in summer-time. As fast as you put it on it goes straight down.  
 Irrigation. Have you tried irrigation at all? Only in the garden.  
 Can you raise any kind of vegetation with the water? Yes; we grow vegetables enough for the station.  
 You have never tried to grow feed for the horses? No.  
 Do you know Winbar Station? I do.  
 Soil at Winbar. Is not the soil here similar to that of Winbar? It is not like it at all. I do not think you could find one place on this station similar to Winbar.  
 The soil from Winbar up river is less permeable than the soil from Winbar down? I believe so.

Have

\* NOTE (on revision):—Referring to this, it was in November and December, 1884, and part of January, 1885.—M.H.S.

Have you any large creeks on the run? We have one; it is called the Billabong; it runs out of the river and enters it again at Nelyambo.

Mr.  
M. H. Seale.  
24 Sept., 1886.  
The Billabong.

What is the distance it covers altogether? Fifty miles frontage by the river. It would be about 80 or 100 miles to follow it round.

What is the depth of its bed? If filled it would hold about 12 feet,

And the width of the channel? An average of 40 yards.

What is the height of the bed above the bed of the river? Twenty-five feet, I should say.

Does there appear to be a good fall? A very good fall.

Do you think it would be possible to conserve much water in this billabong? Yes; it will hold a lot of water.

Have you ever tried damming it? We have a dam on it.

Dam.

What is its height? About 15 feet, I suppose.

And what distance does that throw back the water? I could scarcely tell you, as the country is all under water just now from here to the dam.

How far would that be? Thirteen miles.

*Mr. Donkin.*] Have you tried red soil for cultivation at all? No.

Red soil.

Do you think it would answer for irrigation? I dare say it would; the grass grows on the red soil.

How do you take the height of the river here? We have no gauge at high flood.

Do the floods affect you seriously? Only at shearing time, when we are cut off from our sheep in the paddocks. On our lower station, Budda, which is 35 miles down the river from here, we have not been able to keep any sheep since June, because the country is so low that the greater portion has been under water, also a great portion of Curranyalpa. The frontage is useless to us in flood-time, being all covered with water.

Floods.

What do you gauge the height of the river by? By guess. The river is about 40 feet from the bed to the bank, and we guess the height of the water up the bank.

Height of river.

What do you think should be the zero to read the river by, an old flood-level, or summer-level, or the bed? I should say the bed.

Zero of gauge.

Had you to go to much expense for the horses during the drought? We spent very little, because we could not get the feed here.

Do you not think you could have grown enough if you had had a pump? Not on the white soil. I saw it tried at Winbar. They were pumping for three weeks at the rate of 60,000 gallons an hour, and the water did not go 400 yards from the pump, and it did not spread 200 yards. It was pumped by a 12-horse power engine, with centrifugal pump and 10-inch pipe.

Poorness of white soil.

Do you think the pumping at Winbar made any difference in the river when the river was low? I do not know whether the pumping at Winbar did. The river stopped for a few days, and then commenced to run again.

Pumping at Winbar.

It did not seriously affect you? Oh, no.

Are there any rocky bars in the river on which weirs might be constructed? It is hard for me to say whether weirs could be constructed, but there is a splendid foundation and plenty of material. There is a rocky bed here for a mile and a half along the course of the river.

Rocky bar.

Do you find that these bars affect the river at all by causing the banks to scour away? No.

Is there any soakage from the river? None whatever. We sank a well 40 feet below the bottom of the river and could not get any water. We had to put a tunnel into the river to get water in the well.

Soakage.

If the river were made navigable between the railway termini of Bourke and Wilcannia, which route would you make use of for the conveyance of your produce to market, down to Adelaide or by Bourke to Sydney? We should go up the river.

If the river were weired across and communication retained between the railway termini, that would be sufficient for the residents here? I believe so.

Weirs.

Do you think it would be of benefit to retain the water in the billabong you spoke of, or would the cost be too much? It would be of benefit.

What would be the cost of an earthwork dam on that billabong? I think the greatest cost would be in making the by-wash; making the dam would not be very costly. With the quantity of water running now our by-wash has cut within the last few weeks very nearly equal to another creek, and the get-away was a natural one to begin with. I suppose we have a channel 5 ft. deep and about 50 yards wide.

Dam on the Billabong.

Do you not think it would be better here to adopt overshot dams? Yes, if we could get them to stand.

Overshot dams.

Have they been tried? Not to my knowledge.

If you had always a full river like this, do you not think you would be inclined to try irrigation? No; the soil would never pay for it.

In the drought, does it not mean actual starvation to the horses and stock on the station without feed? You could save your horses, but if you could not save your sheep what is the use of it?

Losses during drought.

Have you tried the plan of spelling part of the run? We cannot afford it. The country is not good enough. If we were to spell part of the run we could not carry enough stock to make it pay. The only way we can work is not to overstock the paddocks, but never to have them empty.

Spelling country

Do you not think you could carry more stock by relieving some of the paddocks? Not any more. In this part of the country if the feed in a paddock is once eaten down it will not grow again till you get a heavy rain. It might be six or twelve months before you would get sufficient rainfall to make more feed. Some have to guard against not eating the paddocks down.

How do you account for the fearful losses in stock, is it through overstocking? Just from the want of rain.

What have the losses been due to—want of grass or want of water? Want of grass.

Want of grass.

Have you had water? We have had water. We can always have sufficient water, but no grass.

FRIDAY, 24 SEPTEMBER, 1886.

At Kallara.

Present: —

MR. DONKIN,

MR. GIPPS.

Captain Thomas Johnston examined:—

- Captain T. Johnston.** *Mr. Donkin.*] How long have you been on the river Darling? About twenty-six years.
- 24 Sept., 1886.** Have you been trading up and down the river? Yes. I first came on the Murray with Captain Cadell. From there I went to the Murrumbidgee, and thence to the Darling, when it was first opened. I started with Captain Cadell in 1854.
- Floods.** Where was he running to then? To Albury.
- How far up the Murrumbidgee did you run? As far as Wagga Wagga.
- And how far up the Darling? Not beyond Brewarrina.
- Floods.** You know pretty well all the floods that have occurred of late years? Yes. I know the floods of 1864, 1870, 1879, and this year.
- Which was the highest? That of 1864.
- Height of flood of 1864.** Do you know what height it registered? I could not say, but I think that flood must have been fully 5 feet higher than the present flood. It was up to the window-sills in Bourke.
- The whole of Bourke was under flood? Yes.
- Were you there at the time? The water commenced to fall when we got there, but we experienced the height of the flood down here.
- Gauge readings.** Does "5 feet" at Bourke read "5 feet" at Wilcannia? I should think so. At that time the water was all level.
- Do you think a 5-foot rise at Bourke now would mean 5 feet here? It would come close to it, I think.
- Have you noticed much difference in travelling up and down? I think it is about the same.
- Does not the river spread more here, near Wilcannia? There is more spread, but the reading on the gauge is the same. I have noticed that when the river is half a banker it runs into the billabongs, and does not reach here.
- How did the 1870 flood compare with that of 1864? It was about 4 feet lower.
- Floods.** And the 1879 flood? That was a foot higher than this one.
- Velocity.** Was the velocity of those floods about the same as that of the present flood? About the same.
- What do you consider it is now? On an average not more than 2 miles. In some places where the water is confined it may be a little more.
- How have you been accustomed to gauge the floods in the river? We know by the stations and townships we discharge at.
- What I mean is, what have you been accustomed to read from; do you take navigation level, summer level, or the bed of the river? We take the top of the flood.
- Summer level.** But the telegraphic news is from summer level? Yes. We hardly know what summer level is, there is such a difference of opinion. What I would call summer level is when the river is snagged and a boat drawing 2 feet 6 inches or 3 feet can go over the bars freely.
- Zero of gauge.** What do you think should be adopted as zero in telegraphing a rise in the river? I would take it at 3 feet from the bed. That would allow a light-draft boat to work.
- But does not the bed shift? There are three or four bars in the Darling higher than the bed. For instance, that at Curranyalpa is fully 4 feet above the bed.
- You think it is about the same as the bar at Brewarrina? About the same.
- Bar at Curranyalpa.** If the water is running over the bar at Curranyalpa, would the river be navigable to Bourke? I think so. I do not think there is another bar from there to Wentworth, except the one at the Coach and Horses, which is just above the Mount Murchison woolshed, about 10 miles this side, and below Cultowa a good distance. There is a difference of 4 feet between there and Wilcannia. They call the place Kennedy Reef.
- Weir.** Supposing a weir were erected 3 or 4 feet above the rocks at Curranyalpa, would that make the river navigable at all times to Bourke? No. There is another bar at O'Shannassy's boundary.
- Gauge readings.** You said that in your opinion the datum to read floods from should be about 3 feet from the bed? I think so.
- Do you not think it would be better to take it from some well-known flood? Perhaps that would be as well. Which point would be best known along the river, a well-known flood-mark or 3 feet from the bed? I think 3 feet from the bed would be best.
- Do you know of any other bars in the river except those you mention? Not on this side of Bourke. There are rocks in the way, but there is a channel between them.
- Foundation for weirs.** Do you think it would be a difficult undertaking to erect weirs or dams across the river to raise it a few feet at these bars? I do not think it would be difficult, because where there are bars you have a good foundation.
- Locks.** Do you think the banks would cut away? If there were locks I believe the banks would cut away in high-water.
- But with an ordinary dam or weir? They might stand. With locks, unless they were strongly built, the weight of water pressing against them would make a fresh channel at the side.
- Fresh channels cut by river.** In your experience of the Darling, have you known it to cut a fresh channel? Yes. We go through channels now where there were none before. When the water is over the banks we go through. In fact there is no channel in the old river in some places.
- Duration of flood.** How long do you calculate it will take this river to run down, saying there is no fresh rise in the river? It depends upon rain. If there is no more rain I think the present river will last three months.
- And what will it go down to? I suppose to summer level.
- Woytchugga Creek.** You know the river well from the Murray to Brewarrina; do you know of any creeks along the whole of that course which empty any water into the river from local rain? A lot of water comes down Woytchugga Creek, below Wilcannia.
- Where does that rise? The junction of it is about 4 miles from Wilcannia.
- Is it not an ana-branch? No.

- Do you think the creeks which empty into the river make any perceptible difference in the height of the water from Brewarrina down? I do not think so, but I think the small rivers do, such as the Culgoa and the Bogan. And I have seen the Cato come down very strong. Captain T. Johnston.
- The Cato is only an ana-branch? I suppose it is. 24 Sept., 1886.
- Do you think a large body of water could be conserved in the Cato Creek by a weir or overshot dam? I could not say. I have not had enough experience there. Cato Creek.
- Do you know of any other billabongs or ana-branches down the river? There is the Great Ana-branch which runs into the Murray. The Great Ana-branch.
- Is that navigable in flood time? There is too much timber in it, I think.
- Is that the largest channel you know down the river? The largest on the Darling.
- Do you know any of the inland lakes? I have been on Lake Menindie. I suppose there are 20 miles of water there now. Lake Menindie.
- What would be the greatest depth? I suppose there are now about 30 feet of water.
- Does the water find its way into the river? Yes. The creek is about 2 miles below Menindie.
- Could not the creek be easily dammed? Very easily.
- Do you think there is much water lost in the river through soakage in the bed? I do not think so.
- You think it would not be advisable for the Government to erect locks in the river, because the banks would fray away? Unless there were plenty of masonry work. There is plenty of good foundation. Danger of locks.
- Do you know the character of the rock; is it ironstone? Above it is ironstone, and so it is down at Weinteriga. Rock.
- Mr. Gipps.*] What was the principal cause of the 1864 flood, was it heavy rains? Yes. Flood of 1864.
- And local rains besides? I do not recollect that we had much local rain.
- Were the Murray and Murrumbidgee in flood? Not so much as the Darling. Those were within their banks.
- They served to back the Darling up a little? At Wentworth.
- They are in flood now? Their banks are not flooded, but I think there is 14 or 15 feet of water.
- That would allow the Darling to get away more quickly now than in 1864? But that does not affect the water up here.
- I suppose you have seen the bed of the river when it has been very low? I have seen it dry. River dry.
- Have you seen any springs along the course of it? No, except a little soakage in the banks. It is a dirty-coloured water.
- Which are the prevailing winds here? The south-west wind, I think. Winds.
- Is that all the year round? I cannot say for this part of the country. I know where I came from it is about nine months in the year.
- Is it a high wind generally; does it blow continuously? In winter the winds are high, but not so much in summer.
- Do you know of any point on the Darling where some of the western ranges cross, they say there is a divide of the Lachlan across the river somewhere near Wilcannia? I have never been out that way. Range crossing the Darling.
- There are no points on the Darling itself where you would fancy a range crosses? No.
- Do you know anything of the Talywalka ana-branch? I know it is a very large one and runs back 20 miles. The Talywalka.
- For what length? It runs in 30 miles below Menindie. Menindie Creek will keep the river for three months, from Menindie to Wentworth.
- What is the width of the channel from the point of off-take of the Talywalka? Quite as wide as the Darling, and very deep.
- What would be the depth? I could not say. I think as deep as the Darling in places.
- It would give you the impression that at one time it may have been the channel itself? It looks as like the river as the river itself in many places. At the back of Murtee it is just as big as the Murrumbidgee.
- Are there any depressions or lakes on its course? I cannot say. I know the boats have gone 20 miles back and loaded wool.
- What is about the fall, is it the same as the Darling? It must fall the same. Fall.
- At the point of discharge into the Darling, is it as wide as the point of off-take? There are two entrances there, both of them pretty wide.
- Do you think there would be any means of conserving water in it by dams? I think so.
- Mr. Donkin.*] How is it the navigation in the river is considered so dangerous, and that so high a rate of insurance is charged; have you had any accidents? I have had none, exception one occasion when a barge made a little water unknown to me. I think the shrimps must have eaten the oakum out of the seams of the vessel. Dangers of navigation.
- Was there not a barge wrecked the other day? A steamer went down, but I do not know the cause of it. She went down at Netley, but no one knows how she sank. Steamer sunk.
- What is the longest time you have known a vessel detained here through the river being too low for navigation? I have been detained eighteen months. Vessel detained through drought.
- In one place? No; I moved five times, but it was eighteen months before I came home. We went from Wentworth, and were stopped at the Rocky Waterholes, then to Tilpa, then to Curranyalpa, then to Louth, then to Bourke. It required five floods to take us through, and my vessel was only drawing 4 feet of water when we started. At the last we were only drawing 3 feet.
- There is no certainty as to navigation in the present state of the river? No.
- Mr. Gipps.*] In the high flood of 1864, was the Paroo running? It must have been running. Paroo.

Mr. David Brown examined:—

- Mr. Donkin.*] You are manager of Kallara Station? Yes. Mr. D. Brown.
- How long have you been here? Since 1878.
- How many floods have you known on the river? There was the flood of 1879, which lasted till 1880, and there is the present flood. 24 Sept. 1886:
- How long did the 1879 flood last before the river came back to summer level? A long time. The highest point of the flood was about November, and the river was navigable till the following March. It went down very fast in November, so fast that we could scarcely get our wool in from the shed 3 miles back. Duration of 1879 flood.

- Mr. D. Brown. back where it was stored. The river fell so rapidly that by the time the flats were dry enough to allow of carting the wool the river was all but too low for navigation.
- 24 Sept., 1886. How did that flood compare in height with the present flood? It was about 9 inches higher here.
- Height. Has the present flood reached its maximum height? It has just reached it to-day.
- Information as to floods. Do you think it is rising? I think it is standing still now.
- How do you receive information as to when a fresh is coming down? By telegraph from Bourke, Walgett, and other stations.
- Is the information reliable? None of the information except from Walgett is reliable.
- Datum. Do you know what datum they take? I do not. I know that at Brewarrina this year the level changed in two days about 10 or 12 feet. It was reported as 35 feet one day, and as 24 feet the next day, according to telegraphic report. I should like to say with regard to Bourke that the information from there this year has been fair enough. There was a change made from summer level to navigation level in the mode of reckoning, and that threw me out 3 feet in my calculations. Consequently the flood was 3 feet higher than I expected.
- Is it of serious importance to you that you should have correct information as to the height of the floods? It is a matter of extreme importance.
- What would you suggest as a datum? I think we should have some gauge relatively fair; that is, a certain height at Walgett would give a certain height at Brewarrina, the height at Brewarrina would represent a certain height at Bourke, and so on down the river to Louth, Tilpa, Wilcannia, Menindie, Pooncairie, and Wentworth. If the highest point of any given flood were taken the best plan would be to mark that as zero on the gauge and reckon downwards.
- Zero of gauge. Do you think that the highest point of the present flood of 1886 would be recognized all along the river? I do. I know the highest point of this flood is relatively fair with regard to Walgett.
- Would a rise of 4 feet at Bourke mean 4 feet here? Not necessarily. The last fall of the river was 3 feet at Bourke, and the corresponding fall was only 5 inches here. The reason is that the water as it flows down the river is caught by the following flood. There has been no fall at all at Wilcannia, but a steady rise. The same thing has occurred here, but not to the same extent. There was a considerable fall at Bourke, but none here.
- Would the Warrego water coming in below Bourke make some difference? No doubt.
- Warrego River. Did the Warrego water join the Darling in 1879? Yes.
- Has it been raining since? Yes, once or twice. It rained in 1882, in January, 1885, and December, 1885.
- Width of flood. What is the average width of the Darling here at Kallara in flood? The steady south-western flow goes out in our direction 3 miles wide north-west from the river bank.
- Is there much current at the back or edge of the flood? A considerable current, about a third of the velocity of the river.
- Cuttaburra Creek. You know the Cuttaburra Creek? I know what is called the Cuttaburra. It is an outflow from the Warrego, and joins the Paroo. The lower portion of the Cuttaburra is often filled with Paroo water.
- Paroo River. You know the Paroo River? Yes.
- Has it been in flood before the present flood? Since 1870 the highest flood previous to this was in 1877. I did not see it, but I know the record of it. The Paroo has run on Goorimpe on an average about once in eighteen months. The next to that of 1877 was in 1882, and this last flood has been the highest of the three. It has been within 2 feet of the 1870 flood, judging by flood-marks.
- Have you been down the course of the Paroo from Goorimpe to Wilcannia? Not to Wilcannia, but as far as Momba.
- Do you know whether the Paroo water ever joined the Darling? I know it has, or rather the Darling water has joined the Paroo.
- Has the present flood-water joined the Paroo? Not yet, but I believe it will. There is a flat on this run where the water goes out between two hills, and if it runs long enough it runs into Peery Lake. I believe that during the heavy rain in January, 1885, Paroo water ran into the Darling.
- As a matter of fact, the height of the Darling is not affected by the Paroo River? No; practically the Paroo never reaches the Darling.
- Lakes on the Paroo. Do you know of any other lakes besides Peery Lake? Yes; there is Tonga Lake, which has a depth of about 6 feet when full; Yantabangie, about 12 feet; and Peery, about 8 feet.
- What is their length and width? Tonga is about 8 miles long with an average width of about 2 or 3 miles; Yantabangie, about 3 or 4 miles; Peery is about 5 or 6 miles each way.
- Is there an outlet from Yantabangie? Yes.
- Would there be any probability of damming it? I do not think so.
- In any of the lakes on the Paroo, could water be conserved? I do not think it.
- Speaking from your knowledge of the Paroo, do you think it is possible to conserve any large body of water in it? I think not, because the Paroo channel, at all events on Goorimpe, is really no channel. It is a mere succession of flats. In high floods the Paroo is only 5 feet at most.
- The Talywalka. Are there any large ana-branches on the run? There is one, the Talywalka.
- Which Talywalka? It runs in on Dunlop and comes out here.
- What is the length of it? 40 miles.
- What is the average depth? 12 to 18 feet.
- Could it be easily dammed? Yes; it has three or four dams on it. There is a dam on our portion of the Talywalka which cost £1,600. This was made for the purpose of forcing the Darling water out to Peery Lake. It was made in 1874, and when the flood of 1879 came the water went round the end of the dam, and a channel deeper than that of the Talywalka, the creek itself, was cut in twenty-four hours.
- Overshot dams. Have you tried overshot dams? No.
- Would they answer? I cannot see that they would be applicable to this part of the country; the country is too flat for them.
- Are the dams in the Talywalka still standing? Yes.
- Failure of dams. Have you any other dams? Not here. There were dams out on the Paroo which were put at the end of natural waterholes previous to 1878, but the silt and dust have filled up the natural waterholes, and the dams prevent the scour. Dams are perfectly useless on that portion of the Paroo.
- Does the wind, by blowing the earth in a dry state into the channel, affect the position of the water-course at all? No.

Do you know of any other large ana-branches of the river? There is one on the other side, Acre's Billabong.

Has that a deep channel? About 16 feet deep.

Could any large body of water be held back there? The water is held back all along it by dams.

How do they answer? They seem to answer pretty well.

Do you know what distance any one dam throws the water back? I do not; perhaps 7 or 8 miles.

You have known water to be in the billabong when the river was actually dry? Yes.

Do you think the billabongs could be made of any great service to the district if the water were con- The Billabong  
served? I think everything has been done by private enterprise that can be done.

With regard to the river itself, you say you have known it to be dry;—was that for any distance? For River dry.  
three-quarters of a mile at a stretch.

Was it dry during the last eighteen months? Yes, twice.

What could be done with the river? I think it would be possible to put locks on the bars in the river Locks.  
for the purpose of navigation.

Do you think it would be sufficient if weirs were erected where the bars cross the river, and naviga- Market for wool.  
tion kept open between the railway points, say Bourke and Wilcannia? It would be a great con-  
venience to the residents. At the same time, if the river were navigable downwards, I believe the wool  
would go down to Adelaide. I do not believe that locking the river or any other process will induce  
people to send their wool by the dearest road: and wool can be taken more cheaply to Adelaide than to  
Sydney by the present system.

What is the difference between the two routes in cost of carriage? The cost is on an average £3 10s. Rates of  
per ton free on board; with the insurance it would be £5 10s. carriage.

What is it from Bourke to Sydney? From Bourke to Sydney, £5 11s. 6d.; agency in Bourke, 5s.;  
river to Bourke, £1 5s.; insurance to Bourke, 12s. 6d. Total, £7 14s. At all events there is a  
difference of from 30s. to £2 10s. per ton in favour of Adelaide.

Do you not think that a weir of a few feet high to preserve navigation between the points of the railway  
would be of much greater advantage to the residents and producers than to allow the river to remain  
in its usual state? Certainly.

At present you have no certainty as to when produce can be sent away? By river there is no certainty;  
and not even locking would make it certain, because the river ceases to run at times. There is another  
point: there are a great many springs along this portion of the river, and my impression is that the Springs in the  
higher you raise the water by locking or damming the more the water will go away in the banks. If you  
sink a well on the banks while the river is up you will find that well will rise and fall with the river until a  
certain point, and then it will not rise and fall; it will give you a large supply below the level of the river.

Our evidence to-day has been that a well put down close to the river bank is not affected by the river? Wells.  
Wells vary. All wells are affected by a high river if they are close to the bank. After the river goes  
down to a certain point it ceases to affect the wells, and they give their own supply. All wells are  
not alike. There are some that depend entirely on the supply from the river, and there are some whose  
supplies are distinct from river water.

What distance is your run back from the Darling? From here to the corner of the run is 90 miles.

What is the area? A million acres.

How do you supply water to the stock in the back parts of the run? By tanks and wells.

Which do you find of the greatest service? Wells, if they can be got. No matter how large tanks are  
made in this part of the country, they are not reliable. One reason is, that you cannot make them deep.

If you go more than 9 feet you reach the salt water. You cannot make some more than 3 or 4 feet deep. Depth.  
Some you may sink 12 feet, but it is at a risk.

Have you not found that after the tanks have been constructed the sheep make the sides of the tank  
almost impervious? I have not found that. Tanks which do not hold at first never hold well. Some  
will hold fairly well from the beginning, and continue to do so.

What size do you make your tanks? From 10,000 to 20,000 cubic yards of excavation; but the capacity  
of the tank is much greater. It varies from 30,000 to 60,000 cubic yards. Capacity.

What time do you reckon to elapse after making a tank before you have it filled? We cannot give an  
average. I have known it to be twenty-three months.

Are they all full? Not now; they are fairly supplied.

What wells have you sunk here? Wells and bores, about 150 holes.

What depths are the wells? They vary from 40 to 720 feet. Wells.

Have you obtained fresh water? In some cases.

What was your experience with the 720-foot well? We sank the shaft 200 feet, and bored from that  
bottom; at 430 feet we got a small supply of fresh water; we continued to 720 feet, but got no more.

We had a succession of accidents, and just now it is impossible to proceed further with the work.

What has been the expense of boring, &c.? The actual expense of sinking the well has been little  
over the mere labour employed; the cost will be about £1,400 or £1,500.

Have you tubed the well? Yes, down to the water at 430 feet.

What means do you adopt for boring? The Chinese method in this well: percussion by drills hung from Means of boring.  
the end of a rope.

What other apparatus have you used? Wright and Edwards' boring machine, and the Pennsylvanian auger.

Have they turned out a success? The American has, as I can do faster work with that than with any  
other instrument.

To what depth have you bored? 600 feet. We do on an average about 50 feet a week. Depth.

Have you succeeded in striking water? Yes, at 600 feet. The supply at 100 feet is 10,000 gallons  
a day. If I pump from 300 feet I can get as much as I want. Water rises to within 7 feet of the surface.

It is almost an artesian well? Almost.

What was the width of the bore? 4 inches.

And the cost? The first cost was the cost of sinking a shaft 100 feet. Then we put 300 feet of the Cost.  
bore down by the old plan, and it cost between £600 and £700. It was nearly all through blue clay  
with layers of solid bluestone, exceedingly hard. When we put the American machine on we started at  
300 and went to 600 feet at a moderate cost.

Which is the machine best adapted to this dry country for tube wells? I use a combination. I use the  
American

- Mr. D. Brown. American with the rods attached as far as I can go. I have not been successful in boring from the surface, the difficulty being to keep the hole straight. I suppose this is due to my want of experience.
- 24 Sept., 1886. Have you had an experienced well-driller? Never.
- Have the Government put down any deep wells? Not in this neighbourhood.
- Do you know of any other wells deeper than the one you speak of? I know of no well as deep in this neighbourhood. We have another bore down to 600 ft. which gives a supply equal to about 3,000 gallons per day, but it is of no use. I am still boring at this place.
- In those wells which are not artesian, how do you raise the water to the surface? As a rule, by whim; I intend to apply steam.
- Windmills. Would not windmills answer the purpose? Windmills do not give a satisfactory result in my opinion unless the depth from which you require to raise the water is very small. Where the depth is not more than 100 ft. they are good. When you have to go lower you require such a heavy wind to drive the mill that you cannot rely upon it.
- Artesian water. Do you think that by boring 1,000 ft. artesian water could be obtained? Probably; that is, water which would rise to the surface. From my observation in the district I do not think it likely that a strong flow could be got at the surface. The flow appears to be fairly good at 200 or 300 ft. down, but decreases as it reaches the surface.
- Tube well-boring. You recommend for a permanent supply tube well-boring? Certainly.
- Do you think the Government should be advised to test the Paroo and western country as to artesian supply? That is a difficult question. For what purpose?
- Boring by Government. To test if there is a supply? If the Government were prepared to go 1,000 or 2,000 ft., and pass the comparative surface supplies which we have already proved, the experiment might be worth while.
- If water were discovered at that great depth, would the expense be too great? Probably too great for any benefit to be derived from it, because there is a limit to the expense to which you can go in order to supply water to stock.
- The Government have numerous tanks at Mount Browne and Silverton? Yes.
- Government tanks. Do you know whether any of them are permanent? The two Government tanks I know are not. They are made on the channel of the Paroo, and I have known both to be dry twice.
- Wells. Do you intend to carry on your well-sinking in preference to making tanks? If I spend any money at all in the way of water conservation I shall spend it on wells.
- Number of stock. What number of stock do you carry on this run? We average 150,000 sheep.
- On how many acres? 1,000,000 acres.
- Loss during drought. Have you any idea of your loss during the last drought? We lost 56,000 sheep in the season of 1883-84.
- The loss was made in 1884.
- Can anything be done to avert the fearful losses in stock? I do not think so, for this reason: if this country is stocked as against a bad season it will never pay to hold it. You must stock it as against an average season, but every now and then you get a bad season, which is so much worse than the average that you cannot avoid losses.
- Grass and herbage. Is it possible to reserve part of the run—are the grasses and herbage of such a character that you could keep a certain area of the country in reserve? There are three classes of feed which grow here. There is the winter herbage, and a grass which grows in October and November, if rain comes, and a grass which grows in March or April, if rain comes. Each of these lasts its own season, but no longer. The winter herbage perishes whether used or not, and then blows away; the October grass goes away in the summer; the March grass lasts till the winter, and disappears with the frost. It would do no good to reserve any country; and the only use in very lightly stocking would be to save the bushes, but the number of sheep which will live on the bushes is exceedingly small.
- Reserving country. What are the edible bushes? Nearly every bush that grows, with the exception of the turpentine.
- Hop-bush. What is your mainstay? Hop-bush. It is not feed for sheep in every part of the country, but it is feed for sheep here. I suppose it depends upon the constituent parts of the soil. Hop-bush will keep the sheep alive here, but will not fatten them.
- Rainfall. Have you kept a rain-gauge since you have been here? I have.
- What has been the average rainfall? From 1877 to 1885 it has been 12.92 inches per annum. The lowest yearly fall was 9.96 inches, and the highest 15.61 inches. This was at Kallara. I keep five gauges on this run; but the gauges away from the river agree nearly with the gauge at Goorimpa on the Paroo. Much more rain falls along the river than out back. I cannot account for the difference. The highest fall at Goorimpa has been 15.36 inches, and the lowest 5.22 inches, the average being 9.69 inches. I notice that the longer I keep the average for the months the more the months assimilate, and in fifteen or twenty years I think each month will have its own inches of rain for an average, or nearly so. (*Appendix to Report on Darling River, No. 9.*)
- You think the rain is being more equally distributed? There is no month in which you can be sure of getting much more than in another.
- Tropical rains. Was it not considered your rains fell after the tropical rains in Queensland? I do not think that will be borne out by statistics.
- Loss of sheep. You have lost 56,000 sheep here, was that through want of grass or want of water? Through both. There was one period here when for nineteen months 8.9 inches was the fall. That was during 1875, 1876, and 1877. This last time we had twenty-three months during which period not one inch of rain fell in twenty-four hours. That was during 1883 and 1884.
- Light rainfall. What do you consider is sufficient rainfall here in the year? It entirely depends on how the rains fall. The general falls are so slight that they do no good. Two hours afterwards you could not see them.
- What register of rain do you consider sufficient at one time? In winter an inch of rain is useful; in summer 2 inches are useful. Anything less than that is of no use if the ground is dry, as it generally is.
- What would be the yearly average that you think sufficient? It depends entirely on how the rain falls, and the season of the year when it falls. If it comes in 20 and 30 points at a time it is perfectly useless, as it is not sufficient to wet the ground or start the bushes or scrub.
- Do you think the seasons here are changing for the better? I do not. So far as I can learn from older residents than myself there is no change, and there is not likely to be any change.
- What is your average elevation here above sea-level? I cannot tell you; I suppose about 350 feet.
- Have



Have you tried any irrigation? No, except in the garden.

Had you to buy feed during the drought? I never bought feed. I could not do it. It would pay better to let the horses die than to buy food for them. None did die, however. We had 120 miles of carriage at £10, £15, or £20 a ton.

Would it not have been practicable to have grown sufficient feed to keep the sheep alive by pumping the water from the river? It would have been; but during the worst of the drought the river was not running; and if we had pumped the water from the river we would have dried our home water-supply.

If there were a permanent supply in the river, would you use the water for irrigation? I would not, because I consider it would cost less to import the feed from those places where it can be grown more cheaply and more favourably than here. If you irrigate and grow crops you must store them, so I consider it wiser to take advantage of such opportunities as present themselves to obtain feed at a reasonable rate and store it. You can do the work cheaper by buying feed than by growing it. That is my opinion.

You have never tried to preserve feed here by ensilage? Never; I do not think it would answer. It might answer to preserve a small quantity of feed for valuable stock, but certainly it would not pay to provide feed in that way for a considerable number of sheep.

But could you not grow feed here by irrigation more cheaply than bringing it here? For what purpose; for a few horses?

For working horses, cattle, &c.? No. It means raising the water 40 or 50 feet, and applying steam. It is more costly to do the work here than elsewhere.

*Mr. Gipps.*] What is the average depth of Peery Lake? I can scarcely answer that question correctly. I can only guess it at 9 feet perhaps.

I see by the map that there are some low ridges marked about 30 miles below Lake Peery; would they allow of the conservation of any water in the channel of the Paroo, towards Wilcannia? I should think not. There is a ridge behind Peery on one side, but the flooded course of the Paroo is on the left-hand side of these ridges. I know there is no considerable ridge within some miles of the ridge behind Peery.

Is there any difference in the strata of the wells sunk near the Darling and those sunk near the Paroo? To some extent. It has never been necessary to go to the same depth on the Darling as on the Paroo. There are no wells on the Darling below 70 or 80 feet that I know of.

What is the nearest well to the Darling? The nearest well is 22 miles, the nearest shaft 9 miles, on this run.

What is the depth of the 22-mile well? It is an artesian well, 140 feet deep.

Is it bored? Sunk and bored.

What depth was it sunk? That is beyond my knowledge, as it was sunk in 1864. I think it was sunk about 100 feet. I began to work at that shaft in 1878; it was filled up to within 70 feet from the surface. I sent a man down to clean it out, and he sent up sand and then big boulders of hard clay. He said the shaft was sound all the way up, which struck me as peculiar, because these lumps weighed several hundredweight when unbroken, and were surrounded by a sound shaft. Evidently this had been sent up the shaft by a burst of water much stronger than anything we were dealing with. The supply was about 500 gallons per day. After sinking as far as possible we started boring and got a considerable supply, equal to about 120,000 gallons per day. But a large quantity of sand came up with the water, and continually choked the bore. Now we have a small flow of clear water equal to 8 gallons a minute.

What was the character of the strata passed through from the surface? Impacted sand.

What was the surface of the soil? Clay-pan. Not far from it there is a mud spring.

Below the first stratum you came on sand, and then on heavy drift? The sand was coarse from the time the flow came. Sand and pebbles came up with the flow. We tried to sink to the rock, but could not, owing to the rush of water. The water ran 16 feet above the surface, and there was no perceptible diminution in the flow.

Is the flow increasing now or decreasing? I can get a strong flow at any time by pumping out the sand, but you cannot use the water until it settles. I have a bore inside the shaft and a bore outside, and I work the two in connection with each other. The bore inside the shaft flows 8 gallons a minute. I require say 20,000 gallons per day. I must supplement the flow, and therefore I bale from the shaft. This baling from the shaft draws the sand towards the bottom of the shaft, and in time the accumulation prevents a free flow of water, and I can no longer bale as much as I require. I then use the bore alongside, and by removing the sand accumulated in the pipe, start the flow in it; that flow draws the sand from the shaft and once more clears it, so by the time the strong artesian flow ceases I can again raise as much water as I require from the well. One acts upon the other. The bore, which is 8 or 10 yards from the well, when it is running draws the water from the well, and the well does the same to the bore.

What diameter is the bore? It is 4 inches.

Do you think by putting down a large bore you could get more water? I do not think it is possible to beat the drift.

How far distant from the Darling is the next well? We have another about 14 miles over. The flow decreases tremendously as you rise. The level does not appear to be the same. Although the flow at the surface is equal to 10 gallons per minute, the flow 3 feet up is less than 9 gallons per minute. It decreases rapidly, and there is no sand in it.

How far do the artesian wells continue from the Darling? These are the only artesian wells I have.

How far distant from the Darling have you tried? I have one bore about 65 miles out.

Is there any water in that? That is, the one down 720 feet.

What strata does the 720-foot well go through? Into black clay, and that black clay underlies the whole of this country. If you go down 150 feet you get into the same strata all through.

What is the rock above it? There is no rock; you may get a bit of ironstone, and in or through the black clay there is a sort of gray or blue rock in layers or in boulders, probably stratified.

What is the thickness of that strata? From an inch to 6 feet.

#### At Tankarooka.

Mr. E. J. Suttor examined:—

*Mr. Donkin.*] How long have you been in this district? Eight years.  
Have you lived here all the time? Here, and at Curranyalpa Station.

Mr.  
D. Brown.  
24 Sept., 1886.  
Feed in drought.  
Pumping.

Objection to  
irrigate.

Ensilage.

Low ridges on  
the Paroo.

Strata of wells.

Flow of well.

Black clay.

Mr.  
E. J. Suttor.  
Have  
24 Sept., 1886.



- Mr. E. J. Suttor. Have you had any experience in well-sinking? Yes, both on the river and out back.  
 Where did you sink the first well? About 10 feet from the bank of the river.  
 To what depth did you go? About 80 feet.  
 24 Sept., 1886. How much is that below the bed of the river? 40 feet. We did not obtain water, so we put a drive  
 Wells. into the river at the 40-foot level.  
 What is your experience here with regard to wells? The one at Tankarooka is about 40 feet deep, and has about 4 feet of water in it. It has no connection with the river. I have seen the river dry; but the same water has remained in the well.  
 Is there a rocky bar there? No.  
 What is your experience of the water out back? It is nearly all salt, hardly drinkable.  
 Is the water in this well near the river good? It is perfectly fresh, splendid water.  
 Is it discoloured in any way? Not in the least, except by the timber in the sides.  
 Flood. What is the difference between this flood and that of 1879? About 8 or 9 inches.  
 Judging from your experience, do you think a rise at Bourke corresponds with the rise here? I think so.  
 Does the river spread out here? It spreads out a good deal, but it is about the same level.  
 Has it been your experience that the wells have anything to do with the river? Yes.  
 Is this well about the same depth as the bed of the river? Yes.  
 How long do you think it will be before this flood goes down to summer level? Not before Christmas time.

WEDNESDAY, 29 SEPTEMBER, 1886.

At Wilcannia.

Present:—

Mr. DONKIN,

Mr. GIPPS.

Mr. Edward Quin, M.P., examined:—

- Mr. E. Quin, M.P. *Mr. Donkin.*] You are the Member of Parliament for the district? Yes.  
 How long have you been on the Darling? Twenty years.  
 29 Sept., 1886. Where was your first experience? Chiefly around Wilcannia and Menindie, and generally moving  
 Floods. about the Darling.  
 How many floods have you known in the Darling? The first flood I remember was in 1870. The flood of 1864-65 had just passed down before my arrival on the Darling. That was the largest flood ever known; but I did not see it.  
 After 1870, when was the next flood? I think the river was high from 1870 to 1873. After that we had the flood of 1879.  
 Was that flood higher than the 1870 flood? Not so high by several feet.  
 After the 1879 flood there comes the present one? Yes.  
 Highest flood. How do these floods compare one with another? The 1864-65 flood was the highest; then the 1870 and the present one. I recollect speaking to Mr. Green, of Menindie, in 1868; he had then been on the Darling nineteen years. He told me the 1864 flood was the largest he had seen, so that would be since 1849. He was a very observant man.  
 Do you know whether any record or permanent bench-mark has been kept showing the height of the 1864 flood? No; but I should imagine Mr. Woore would have more accurate information on that point. He was here then.  
 What height was the 1864 flood above the present? About 2 feet 6 inches. It was over the lower portion of the town of Wilcannia.  
 Had the flood entirely subsided in 1866 when you came? No. The river was in fair flood then, and the January rain of 1865 produced a local flood which rendered the river navigable to this place, but not beyond.  
 Cycle of floods. From your twenty years' experience here, have you come to any conclusion as to whether there is a cycle of floods? I cannot say that I have. I have heard men discussing the subject and speaking of a 3-years' cycle of floods, more or less large. In 1864 there was a fairly large flood; in 1867 there was a flood; in 1870, and in 1873, 1876, and 1879. It was predicted there would be a large flood in 1882, but it did not come, and so that theory was upset.  
 The Darling dry. Have you known the Darling to be dry for any length of time? I have camped in the bed of the Darling, in the Rocky Waterholes, about 45 miles from here.  
 What is the longest stretch of the river you have known to be dry? At that particular point it was dry for nearly half a mile, and then it would break into shallow waterholes, full of weeds.  
 Stoppage of navigation. Has this continued drought in the river impeded navigation to any great extent? Entirely so.  
 For what length of time have you known steamers to be laid up? Something like twenty months.  
 During that time, was it impossible to get produce away from here? Quite so. Twice during my experience here I have seen two clips of wool go down together. The 1868-69 clips went down together, and last year two clips went down.  
 In your knowledge, what has been the longest period that a clip of wool remained at Wilcannia? I should say about sixteen months.  
 Loss to producers. Has that caused loss to the producers? A very serious loss—the loss of a year's interest and deterioration in the character of the wool.  
 Rocky bars. Do you know many of the rocky bars in the river? I do not know very many, because I have not travelled up and down the bed of the river. I have generally travelled by road. I know one at Weinteriga, and one here, one at Murtee, and one at Curranyalpa. There may be others which I do not remember.  
 Is the one at Curranyalpa a natural one? Quite so.  
 Fall. Do you know what the fall is there? I cannot say positively. I should say something considerable.  
 It is reported to us as 3 feet? I should think it was fully that.  
 Are the rocky bars of the same character as the one at Brewarrina? Yes; but much more limited in size.  
 Weirs. From your knowledge of the river, do you think anything could be done in the way of a national undertaking towards locking the river or putting weirs across it? I think a great deal could be done. I think

think it would be very much better to erect weirs, so that they would throw the water back a limited distance. Mr. E. Quin,  
M.P.

What distance on an average would a weir 6 ft. in height throw the river back? I have heard the fall is 80 ft. between here and Menindie; if so, eight weirs would throw the river back to summer level at the extreme end. 29 Sept., 1886.

What is the distance from here to Menindie? 90 miles by land.

How does the river increase compared with the road? It is generally considered  $2\frac{1}{2}$  to 1.

That would make the distance from here to Menindie over 200 miles by river? Yes.

Do you think if a weir were erected on any of these rocky bars, and the water raised from 6 to 10 feet, that erosion of the banks would take place? I think so, unless you could form some artificial piers. I fear that the soil being so friable would completely wash away. Erosion of banks

Have the banks eroded at Curranyalpa and the other places? Not to any considerable extent, but that would not be likely, because they are so low that the river rises quickly.

As a national undertaking, what would you recommend at these places, locks or weirs? Locks, I should say. Locks.

Speaking from your knowledge of the producers on the river, do you think it would be sufficient for all purposes to give water communication between the railway termini, say Bourke and Wilcannia? I think if the people could get access to the termini of the railway that is all that would be required. Railway termini.

What would be the difference, approximately, between the carriage from here to South Australia down the Darling, and from here to Sydney in the event of the construction of a railway to Sydney? I think the difference would be very slight. The difference in the cost by rail would be more than counter-balanced by the great cost of insurance by river. Different rates of freight on wool.

Is there any certainty as to the despatch of wool from here? No certainty, except in a case like the present.

Would it be as expeditious as sending by rail? Not at all. Generally you have to wait until a steamer has 600 or 700 bales on board, but the railway would take away two drayloads in the trucks. There is another disadvantage in sending your wool by steamer. Adelaide is an open roadstead, and unless you put your wool in a small vessel you have to incur the expense of lightering it on board the "Orient" and such big steamers, which only remain in port a few hours. If you send to Sydney you have the best chance. I have known my wool to wait sixty days in Adelaide, and the ship to take 146 days to go home. If I had been able to send it by rail I could have shipped it on board at Sydney at once, and it would have been home in forty days. Advantages of Sydney as the port of shipment.

Do you know the large billabongs in the river? All of them, I think. Billabongs.

Would you enumerate those of the greatest magnitude in which you think any great body of water could be conserved? Of course the Great Ana-branch on the lower river is the largest, but I think the one coming in at Cultowa is almost equally important.

Do you know Lake Poopelloe? I have seen it, but I do not know it very intimately. I have never seen it with water in it.

Do you know the confluence of the Bogan and the Darling? I do, well.

Do you think it would be possible to divert the waters of the Bogan, and bring them down to Louth and the back country? I could not say that. I think it would be very desirable if water could be taken from the head-waters of the Darling and made to go with the Paroo and some of the other dry channels, but as to the cost I could not speak. Diversion into the Paroo.

Do you think the fall of the country would permit it? I think so. Fall of country

And would permit a canal from the Warrego to the Paroo? I think so. You may have a small range to cut through, but I think the water might be led right out into the back country.

Do you think there is any great amount of soakage in the river? Yes. I think there is soakage in all this country. The water percolates into the banks; and the climate has so great an effect on the soil that it opens it into great fissures. Soakage.

Is the Darling fed to any extent by local rains? I have never known an instance except in the 1865 flood. I have seen the Darling rise 17 feet at Menindie in one night from purely local rain. Local rains.

Has local rain had anything to do with the present flood? I do not think so.

Do you know of any large creeks from Brewarrina down running into the Darling? None except the Warrego.

You have had a good deal of experience, have you not, in constructing tanks and wells? Yes. Tanks and wells.

What do you consider the best form of construction for tanks, as to the depth and size? In this climate the larger the tank you can put down the better—say from 12,000 yards upwards. I do not think a tank below 10,000 yards is worth anything. You might have smaller tanks as auxiliaries, but not for supply.

What depth? As deep as you can go—say up to 18 feet. Depth.

Would a tank less than 10 feet last out a drought? It would not last six months with sheep drinking on it. They last longer if the water be pumped into troughing. The undulating character of the country at Tarella causes the water to rush down savagely. We have no source of supply such as a swamp for our tanks. The danger with us is the accumulation of silt. I have tanks 15 feet deep filled 12 feet with silt. The Bunker, which was a very good creek fifteen years ago, is now filled with silt in the larger holes level with the bank, and the water has not cut new holes to compensate for the ones silted up, but has spread over a large area, and formed three or four creeks. Silt.  
Bunker Creek.

From your experience, you consider the putting an embankment round a tank and pumping the water to be the most economical means? Certainly, because you get a very much larger body of water conserved within the banks.

Do you use troughing? I have found black iron troughing the most serviceable. Troughing.

How do you raise the water out of the tanks? I let stock drink direct from the tank, but many of my neighbours raise it by pumps, and in some cases by steam, but mostly by McComas' water-lifts. These are found to be the most serviceable, with the least expense.

What is the effect of evaporation on the tanks? I have observed it only in a rough way. I have noticed a tank go down 8 inches in a month without a sheep on it. Evaporation.

In depositing the spoil out of the tanks around the excavation, does that protect the water from the action of the wind? No doubt. I have seen tanks with an embankment raised 8 or 9 feet, and then a stub fence of 6 feet put on top of the embankment. You

- Mr. E. Quin, M.P. You have never tried the plan of covering in your tanks? No; I have thought of it seriously, but it would be too costly, the area is so large.
- 29 Sept., 1886. Since you have been a resident in this district, have you recorded the rainfall? Yes, most carefully. I think I have the record for fourteen years.
- Covering tanks. Was it generally recorded before that date? No; very little indeed. I have not all the details for the Rainfall. first three years.
- Average at Tarella. How many years is it since the rain-gauge came into general use here? About twelve or fourteen years. What do you make the average? I think ours is a little over 10 inches with last year's record. But last year's was an abnormally high one. It was 19 inches; 11 inches of it we had in three days, and of that 11 inches we had not a drop 30 miles beyond the station.
- Where are you speaking of now? Tarella, which is 50 miles from here.
- From which quarter do you look for the most beneficial rains? Generally east and north-east.
- Was that information you have just stated with regard to the 11 inches communicated to the Government Astronomer? Yes.
- Tropical rains. Do you not look for the southern tropical rains in Queensland to extend down? No. We occasionally get them, but it often rains 200 or 300 miles north of us and we do not get a drop. The general opinion is that we are too far north for the coast rains, and too far south for the tropical rains. We are in fact in the driest patch in Australia.
- Was it possible to occupy this back country before water was conserved? Perfectly impossible, except where there was permanent natural water.
- Extent of water-less country. Taking a line east from Wilcannia, what distance of country is there without natural water? I should say there was no permanent water till you got to the Lachlan, about 200 or 300 miles. What distance west? There are no rivers west until you get to the river Bulloo, in Queensland, over 300 miles. There are one or two very good holes, such as the Yancannia, and some springs on the Paroo and Peery Lake, which are always permanent. There are one or two waterholes which have never been actually dry, such as the Yancannia.
- With the exception of the Lachlan and the Bulloo and, I suppose, the Bogan, there is absolutely no actual water? None, except the Darling.
- Wells. What is your experience with regard to wells? Very peculiar and varied. I have a well 50 feet deep with a fairly good supply. I have another, 400 feet, with only water enough for eight or ten horses. Artesian supply? No.
- Do you know of any artesian water having been found? Nothing lower down than Kallara. I think from Kallara up there is more or less a large number of springs right into Queensland.
- Mud springs. Do you call them mud springs? Mud and other springs. Peery is not a mud spring. There are mud springs round it, but the main spring is not a mud spring. Do you prefer wells or tanks as to certainty? If there is the slightest chance of getting water sufficiently good to use I should prefer wells at a much greater cost.
- Government bores. Have the Government bored to any depth out here? They have a bore at Silverton and one 10 miles from here, down 260 feet. The Government party have removed through want of success. They have not bored to over a depth of 1,000 feet? Not to 500, that I know of. Do you think it would be advisable to test this part of the country with deep bores as to the possibility of an artesian supply? I think it would be very desirable. It would enhance the value of the country considerably.
- Deep borings. You know that in Queensland they are boring to 2,500 feet? Yes. I know that in South Australia they found an artesian supply at over 1,200 feet. I think advantage might be taken of what the squatters have done in this district in putting down bores 400 or 500 feet. Let the Government continue from that depth, and make a sort of open contract, the squatter to pay something towards the expenses if water be found, and if no water be found the Government to pay the cost. Do you think it would make it a greater certainty in carrying on pastoral industry if the Government discovered that artesian water could be found here? I think so.
- Cost of boring. What has been the average expense of boring your deep wells? I have paid up to £3 a foot for boring, and the men have knocked off work because they said it did not pay. Do you know the cost to the Government? I could not say. Something considerable, I should think.
- Diamond drill. The diamond drill is perfectly unworkable here unless you cart water for it. Have you noticed any great surface soakage from the overflow of the Darling? No.
- Underground supply. Do you think there is any body of water which escapes in these floods to supplement an underground supply? I have noticed a great soakage in some creeks, such as the Bunker, but not in the Darling. I have seen the stream half a mile wide empty itself on a plain, and all the water is lost almost immediately.
- Dams and tanks. I think you said that on the creek on your run you had constructed dams. I suppose you mean dams and tanks combined? In some cases. Have you any safeguard in constructing these? You can construct them to stop the water, but in all cases where I have constructed a dam the creek has run round the edge of the dam and formed a greater channel. But we have no safeguard against our neighbours. We are liable to action at any time. Do you know of any case in the district where water conservation has been objected to? Quite recently there was a case in Sydney. A Mr. Parker, of the Buckalow blocks, brought an action against a Mr. M'Gregor. Mr. M'Gregor had to pay the enormous law costs, which amounted to about £1,700, and was told he had no right to stop the water.
- Legal risks in conserving water. Was it a running stream? No; simply a depression which he created into a resting-place for water by making large drains for miles. No water had ever been known to go down this hollow. If he had not done this artificially, would the watercourse have supplied the water? It would not have been of the least benefit to the men below.
- Parker v. M'Gregor. His action did not absolutely deprive the lower run of water? I do not think it did in the least. I do not think water would have run through if he had not drained the country for miles around. I know many similar cases where water has not been known to run until drains were made. That is to be seen where there are roads. The roads have cut into deep ruts which cause a larger body of water to run, and the ruts form into small creeks.
- Surface flow increased. Mr. Gipps.] What is the position of your run as regards its direction and distance from Wilcannia? About 50 miles north-west. It

It is situated on the right bank of the Darling River? Yes.

What distance from the Darling? About 40 miles in a straight line.

And what distance from the left bank of the Paroo? About 40 miles.

What is the general character of the country? Sandstone, volcanic, and quartz.

Rolling country? Yes.

With plains? Yes.

Are there any large creeks on it? There is one creek, called the Bunker.

Any considerable watershed? Yes, a very considerable watershed. The water rises rapidly after rains. It may be dry now and rise quickly.

It has a great fall? Yes.

Where does it empty? Into Copago Lake.

Does it fill Copago Lake? I do not think it adds seriously to Copago Lake, except in high floods. It is much exhausted by soakage before reaching the lake.

What is the character of its bed? About 5 or 6 feet below the ordinary country.

And the depth of its banks? Varying from a foot to 10 feet.

Is it a wide creek? As wide as this room generally. In some cases it spreads a quarter of a mile in little bits of gutters.

Have you any dams on it? I have ten or twelve, and several were washed away.

Do these dams throw back the water to any distance? The dam that throws it the farthest is on the extreme boundary; it throws it back about  $1\frac{1}{2}$  miles, but the dam is useless, being completely silted up.

What is the height of that dam? I suppose 20 feet from the bed of the creek?

When was it constructed? It was commenced about ten years ago, but it has been more or less repaired since.

Was it an earthen bank? Yes, and the water was thrown over the plains.

What is the character of the soil? Almost pure sand.

The bed of the creek has entirely filled in ten years? Not entirely, but within 100 or 150 yards it is quite level with the creek.

Have the other dams been similarly affected? In some cases. One broke in the centre and washed away.

By having flood-gates in the dam you would be able to clear the creek? I think if they could be constructed economically and firmly you would be able to do so, but the soil is so porous there is a great danger of the embankment washing away.

What is the character of the watershed of that creek with regard to its rocks? Volcanic chiefly, I think, and old sandstone.

Are the volcanic rocks exposed? The ranges seem to be broken up into little conical hills of extraordinary and fantastic shapes.

Does each cone seem to be surrounded by volcanic tuff? There is no evidence.

What makes you think it is volcanic? Simply because men who profess to understand it say so. I see no sign of scoriae or lava. The only thing which resembles lava is found 5 or 6 inches under the surface, and we call it cement. It is a conglomerate, having little quartz pebbles in it. That might be lava perhaps.

You have not discovered any fossils? Not here. The nearest fossils I have known of have been at Dunlop. Some fossils were discovered in Peery Spring by Mr. Bonney, but he sent them home to Cambridge.

Do you know where the silurian or old rocks first make their appearance; do they intrude in that country? I could not say; I do not think so.

How many wells have you sunk on your run? Fifteen.

What natural features in the country induced you to sink these wells? What first induced me was my finding a shaft on Tarella, when I first went there, on the bank of the creek. It had been put down by the former proprietor. That is the shallowest well on the ground, water having been obtained at 53 feet. That induced me to sink other wells in the same valley. I sank a well 2 miles below that and got water at 80 feet. At 5 miles above it I sank 270 feet and got a limited supply in hard basalt.

What was the character of the strata in the 53-foot well? Soil for about 12 feet, then white sandstone.

The sand appeared to be like what is called baked sand. We found the water in the solid sandstone.

And the second well, at 80 feet? Not such pure sandstone; more of a rotten slate and sand mixed—very jointy. The water was obtained in a red sort of slate. It is very jointy, and has a gritty feel.

And the third well? It had slate, alluvial, baked sand, and stones for 200 feet, and then bluestone continued till we got to 270 feet. At this stage we found the work too costly to go on with it.

What was the character of the bluestone;—was it in veins? Quartz veins occasionally, from which we got water. That induced me to drive in a northerly and southerly direction, 100 feet each way. It increased our supply, but very slightly.

What is the character of the bluestone—is it slaty? Very hard indeed; very difficult to work except by dynamite or powder.

Did the hardness induce you to give up sinking? Yes, and the costliness. There is sufficient water at that depth to make it troublesome. The only means I have to get the water out is by whim.

Did the water in the creek seem to affect the level of the water in the wells? Not the slightest.

What was the character of the water in the first well? Slightly salt. So salt that if you carried it in a water-bag you would find the salt exuding from the bag.

You can drink it? I have lived on it, but it acts as a strong aperient.

Can you lower the water in the well? Yes; but the well fills again.

Drawing does not affect the character of the water? No; after the first water has been taken out the water is just as good the first day as in six months.

The second well? The water was better, but just a little hard.

Is there a large supply? Yes, but we can reduce it. We once exhausted it so much that we could not water any sheep. We put men in and extended the drive from 80 to 132 feet, and that increased the supply largely.

How do you keep the drives from falling in? We put in head timbers and uprights, but the stone is solid enough to stand without timbering. Where it is shook by the shooting we put in a head-piece of timber to sustain it.

Mr.  
E. Quin, M.P.  
29 Sept., 1886.  
Character of  
country.

Bunker Creek.

Dams.

Soil.

Dams washed  
away.

Flood-gates.

Volcanic rocks.

Cement.

Fossils.

Wells.

Strata.

Costliness of  
sinking.

Character of  
water.

Timbering the  
drives.

What

Mr. E. Quin, M.P. What was the character of the water in the third well? Fairly good. Quite good enough to drink, but very hard to wash with.

29 Sept., 1886. Could you give us a short report on these different wells, showing the position on the map of each well? I could. Mr. Orr has them all plotted out.

Rainfall. Does the rain fall as a general rule in heavy storms, or is it light and continuous? It is very erratic. One year the rainfall is very considerable, perhaps 4 or 5 inches in one month, but that year may not reach the average of the previous year. I recollect from June, 1883, to June, 1884, we had not a fall exceeding 40 points.

Winds. Then it falls lightly? Yes; and it is not of much benefit. In many cases we have 7 or 8 inches of rain, and perhaps not 1 inch in one fall. What are the prevailing winds? Southerly.

Windmills. Summer and winter? Yes. Are they sufficiently strong and continuous to allow of the use of windmills? I think so. Windmills do not seem to be much in favour in this country, because they are such a precarious means of raising the water. They might work for some time, and then perhaps fail you. I think they would be valuable as auxiliaries.

Evaporation. You say the evaporation in one of your tanks was equal to 8 inches a month? Yes. Do you not think that soakage accounted for some of it? Perhaps so, and the waves and the wash. The water went down 8 inches.

Paroo River. Does much silt come down the Paroo River? I could not say. Have you ever seen the Paroo River running through? I have not seen it running through, but I have seen the waters of the two rivers meet.

Silt. Is there any silt in the Darling? I should say there are large quantities of it. It would not be advisable to erect permanent dams? I should say not. My experience is that permanent dams are not advisable anywhere, on account of the silt.

Dews. Are there any dews in your part of the country? Very little indeed. I have seen some very good ones. Did you notice what winds the dews came with? I did not. Did they come at any regular time of the year? No; I have seen all winter pass almost without any dew. Do they appear to be in any way dependent on the rainfall on other parts of the country? I think so. Whenever the Darling is in high flood I have noticed our rains are better, and we are more liable to thunderstorms. This year we have had several thunderstorms; when the Darling was low we had none. Can you give us any information on the lakes on the Paroo? Of course I know these lakes, but there are other persons who could give you better information.

Soil. Is the soil, as a general rule, permeable or impermeable? I should say it is very porous in many cases. Over the whole run? No. Some of the lakes are hard clay-pans, very hard indeed, and glistening, but the outer edge of them becomes very dry and friable, with large cracks.

Irrigation. Have you any large depressions on your run? None on my run, except the ordinary valleys. *Mr. Donkin.*] Have you had any experience in irrigation or seen it carried out? I know an instance at Tapio, near Wentworth. What area is irrigated? They have about 40 acres, and they are supplying the water with a 12-horse-power engine and the usual scheme of canals. Is the lift great? About 25 to 30 feet when I saw it. What year? In 1885. Was that the first year they had it in work? I think they started it previously, but the crop looked very poor; but I think they have had a very good crop since. They would not have had any crop without irrigation, not a blade. Have you seen irrigation carried out at any other station on the river? I know it has been carried out at Winbar, but I have never seen it. They have made it so far a success that they will continue? I could not say that. Of course the lift was very great then? No; the pump would be under water now. You know from your experience that the natural irrigation by flood-waters is a very great boon to the district? Yes; water anywhere is a boon to the district. I think if the water in all the lakes were conserved it would soften the climate exceedingly.

Soil. *Mr. Gipps.*] In regard to the soil, do you think it is sufficiently rich to grow vegetation? I think so, if irrigated. I have seen gardens on all kinds of soil in different positions, and they all grow well if watered freely. I have seen all kinds of vegetables and fruit grown. At Albemarle and Tintinallong you will see a garden on black soil. At Moorara you will see a garden on a sand patch.

Advantages of reaping lakes nil. *Mr. Donkin.*] Speaking of the lakes which are close to the river, which plan, as a national undertaking, would produce the greatest benefit, to retain the water for stock and irrigation, or simply to allow it to run off for the sake of the grass and herbage in the bed? I should say to retain the water. If you do that it is possible for people to live on the banks of the lakes. The little feed that is now got off it is merely temporary. It would die off in three months, but the water might be kept for three years. The balance of the banks could be irrigated from the lake if the water were impounded.

River gauges. With regard to the floods in the Darling, which you have known for the last twenty years, is there any authenticated zero by which flood-level is read;—is it read from the bed of the river, or summer level or navigation level? I recollect a gauge was put up about ten years ago, but up to that time we had no authentic gauge.

Misleading records. You are aware there is a good deal of difference of opinion as to summer level—at Bourke they take it at 6 feet from the bed, and at Louth from the bed;—is not the information wired down the river therefore very misleading? Very misleading. I think the standard level should be the maximum height of the flood, and readings should be taken from below that. I should take the 1864 flood as the highest. Do you not think that the present flood would be better known, as there is a larger population now? I dare say. A great many who were here in 1864 are now away.

Mr.

## EVIDENCE TAKEN ON DARLING RIVER.

Mr. Charles Hebden examined:—

*Mr. Donkin.*] You are manager of Wanaaring Station, on the Paroo? Yes.

Is there a township on your run? Yes, Wanaaring township.

How many years have you been on the Paroo? Five and a half.

Will you enumerate the floods that have occurred in the river since you have been there? I think the river runs every year as a rule, and that there have been three big floods since I have been there. The first flood was in February, 1882.

Which was the highest flood? The beginning of 1882 and the beginning of 1886.

Has the water kept up in the river since the beginning of this year? Oh, no.

The present flood is another one? Yes; the present flood is 6 inches lower than the one in January.

Is the Paroo a defined channel? In some places it is a well-defined channel. It is always well defined between the banks, which are sandhills. As a rule it is a big flat with channels cut in it. Paroo River.Is the fall very slight in the river? I believe it is. Falls.

Is it equal to the Darling? I could not say, but I think it is more than the Darling.

Are there any large permanent deep waterholes on the Paroo? I only know of one by hearsay, and that is up in Queensland. There is one on Nocolleche which is said to be permanent. There are others which have been made permanent by dams. Waterholes.

Was the river considered permanent before dams were erected on it? No. The waterhole in Queensland was perhaps the only permanent waterhole. That is the Caiwarro. The one on Nocolleche might be reckoned permanent without a dam.

What method do they adopt for damming the river? They just look out for a spot where there are two banks, which is sometimes hard to find, and then put a clay bank across. Dams.

They do not use overshot dams? No.

Do the banks cut away in floods? As a rule there are very good by-washes, clay-pans. The Paroo itself is almost a very long clay-pan, and between the banks it will run out about a mile up. By-washes.

The river does not form another channel through the obstruction? Not as a rule.

Do you know the river right down to the Darling? No; I know it right down to where it is not a river.

Where does it run into? Into Lake Tongo, I think.

And one or two other lakes? After that, yes.

Do you think the water of the Paroo, since 1882, has ever joined the Darling? This is the first time it has ever joined, and it is only now running into a lake that the Darling is running into. It has gone into Lake Peery, but there is more Darling water there than Paroo water. Junction of Paroo and Darling waters.

How far is Lake Peery from the Darling? It is about 60 miles from Wilcannia.

From your experience, the flood-waters of the Paroo do not augment the Darling? No; I do not think so. This year a great deal of water has come down the Paroo which is not really Paroo water. A great deal of Warrego water came down it.

Which is the biggest flood on record on the Paroo? I do not know.

You were saying the waters of the Warrego ran into the Paroo;—by what channel was it? By the Cuttaburra. The Cuttaburra runs out from the Warrego in Queensland, and runs into the Paroo at Goorimpe, which is about 120 miles from here. The Cuttaburra is a very good creek where it runs out of the Warrego. The Cuttaburra.

By damming, would it be possible to divert the water right across the back country into the Paroo? Yes, it would.

Is there a large body of water coming down the Cuttaburra? There are a great many channels to it. I crossed it the other day, and it was from 4 to 6 feet deep, running in a slow stream. There is one channel about 200 yards wide, and another 150 yards wide.

What is the distance of the Cuttaburra water? From the time it leaves the Warrego till it goes into the Paroo is about 150 miles.

Do you know any parts of the river or any depressions where a large body of water could be conserved in the Paroo? Not besides those where there are the ordinary dams.

Is there any depth of water in the lakes you spoke of? No depth, but the water lasts a long time. Tongo Lake does not often get filled. Tongo Lake.

What depth of water is there now? 9 or 10 feet, I think.

What is the size of the largest lake, approximately? I think Peery is the largest. Peery Lake.

Have you seen that during the flood? I saw it in the distance. The coach road has been across it for fifteen years, I think. This year the coach had to go round.

Is it 3 or 4 miles across? Quite that, and a great deal longer than that. The coach used to go through it for about 6 miles. The length must be about 10 miles.

Would it be a difficult matter to dam the outlet: I suppose when the Darling falls the water would run out? If it were dammed the water would never go into it.

Would it be an undertaking of any magnitude? I think so.

Does the Paroo in flood extend to any distance over the river banks? Not far anywhere until you come to Nocolleche.

Do you derive any great benefit from the flooding of the country? No. The flood sometimes gets to be about a mile wide with us, but never more than that. We cannot grow anything on the clay-pans; it is not a grass country.

Do you think there is any great amount of soakage from the Paroo? I do not think so; it is very good bottom. Soakage from Paroo

With the exception of impounding water in those large lakes you spoke of, you think nothing more could be done with the Paroo? I do not think you could impound any water in them that does not stay. It only goes to Lake Peery once in ten or fifteen years.

Supposing a weir were put across the mouth of the Tongo Lake, how long would the present supply of water last? Three years very likely. It would only fill up once in five, six, seven, or eight years, because it does not run past Tongo. Weir on Tongo Lake.Have you recorded the rainfall? I have always kept a record of it. Rainfall.

What do you make the average? About 12 or 13 inches.

For pastoral purposes, is an average rainfall of 12 inches sufficient? It depends on how it falls; 12 inches is sufficient if it falls nicely.

- Mr. C. Hebden. What quantity of rain do you consider sufficient at any one time to be of service for the growth of grass and herbage? If the grass is growing half an inch is very good; but if half an inch comes by itself it is no good.
- 29 Sept., 1886. What in time of drought? From 2 to 3 inches.
- Loss of sheep. Any small fall such as 30 or 40 points is no good? It is almost thrown away.
- Have you had many losses in stock during the late drought? We lost about 10,000 sheep in 1883 and the beginning of 1884.
- Was that loss from want of water or want of grass? From both. If there had been plenty of water in the Paroo we would not have lost so many; we had twenty-one men cutting scrub for them.
- Feeding on scrub. With plenty of water, would the stock exist on scrub through a time of drought? If they get plenty of it cut for them they will. They would last six months on no grass at all.
- What sort of scrub? Mulga is the only one that is much good. We cut down emu-bush and white-wood.
- Dams. Have you constructed any dams on the Paroo? There are some on the run.
- What amount of earthwork? One little dam is 1,000 yards. From that they go up to 6,000 or 9,000 yards.
- Legality of dams. Has the legality of constructing these dams ever been questioned? We have had no difficulty.
- Is it generally recognised as a rule that there is sufficient security in constructing dams across the river? Well, I do not know. I have heard of one man down below saying it was a shame that the people up above should stop the water. I have known the water come on to the run above us without coming on to us.
- Has the want of legislation prevented you from carrying out any further improvements? The want of legalising these dams has not.
- Tanks. How do you provide water to the back country? By tanks. We put down one well, but we never completed it.
- What size of tanks do you consider sufficient to carry through droughts? I do not approve of very big tanks. I like them of 6,000 to 8,000 yards, with a depth of 12 feet.
- Will that size stand evaporation and draining by stock? I think so.
- Had you any tanks dry in the last drought of 1884? Yes. I do not mean to say that an 8,000-yard tank is as good as a 16,000-yard tank, but I would rather have two at 8,000 than one at 16,000.
- Wells. You spoke of wells—have you had any success in obtaining fresh water? No; we have one well which we sunk to 200 feet, and then bored for 170.
- Did you obtain water? We got water at about 40 or 50 feet.
- What do you rely upon, wells or tanks? Tanks.
- Advantage of tanks. That is, if you should carry out fresh improvements for water conservation you would prefer tanks? Certainly.
- Have you known any deep wells in the district whereby they obtain an artesian supply? Not an artesian supply.
- Artesian water. Do you think it is possible to obtain artesian water if you bore deep enough? I do not think it is, except where there are springs.
- Have you any mud springs on the run? No.
- Have you recorded the evaporation on the Paroo? No.
- Do you know what effect it has on the tanks? No. The water there being opaque is not affected so much by the sun's rays. The sun does not penetrate to any distance.
- Irrigation. Have you tried irrigation at all? We have only irrigated a cultivation paddock of 6 or 7 acres.
- When did you commence? About three years ago.
- What was the crop? Wheat for hay.
- Has it been successful? We got a crop, but not a very good one.
- Have you a crop this year? Yes. We have not irrigated this year, because we have had sufficient rain.
- From an economical point of view, do you think it is a success in producing feed for station purposes? I do not think it is.
- What was your crop? I have no idea; it was a poor crop.
- Without irrigation, would you have obtained any crop at all? We should not have had any at all; but we could have had the same amount of hay carried to us for less money than the cost of sowing, &c., unless the carriage were very expensive.
- Mr. Gipps.] What distance is your run from the junction of the Paroo and Darling? I do not think they join at all. If they join Peery Lake, we are about 110 miles from there—that is, Peery Lake.
- Nature of country. What are the natural features of the country? It is undulating, sandy country, very scrubby, with some stony high ground.
- What is the general character of the soil? Sand, decidedly.
- Red sand? Yes. There is some hard ground with a good deal of sand in it.
- Any rocks exposed? There are big stones exposed in some parts west of the Paroo.
- What is the nature of the stone? I do not know. A lot of the surface stones are quartz.
- Are there any rocky bars in the Paroo? No.
- Are there any steep banks—is there a confined channel? There is no confined channel anywhere.
- Tongo Lake. What lakes can you give any information on? Tongo is about the only one, and I cannot say much about that, as unfortunately I only saw it when travelling.
- What is the length of the Tongo Lake? I do not know that, it has so many arms to it. Perhaps you would get arms about 10 miles long.
- And the breadth? Two or three miles.
- The depth? Seven or eight feet when it is full.
- And how is it supplied? From the Paroo itself.
- Does the Paroo run in a channel into it? It runs in a channel close to it.
- Does the water run out from it in any direction? Yes, into Yantabangie Lake, and then into Lake Peery.
- Is it a direct channel? It covers a lot of flat ground, and then runs in.
- By a low embankment, could it be conserved in the lake? Yes, except that it is so very few years it can be conserved, because it gets quite filled so very seldom.

What



What is the character of the watershed of the lake—is it low sandhills? The sandhills are round it. Is that the only lake you can give us positive information on? I know Lake Peery from going through it. I have been across Lake Yantabangie in the coach.

Lake Peery is very similar to Tongo? Yes.

Supplied in the same way? Yes. It is supplied by the overflow of the Darling as well.

When the Darling falls, does the water in Peery Lake drain back into it? I do not know.

Are there any creeks on your run? None worthy of the name of creek except the Cuttaburra, which goes through part of the run. This is the first year it has run since I have been there.

Has the Cuttaburra any distinct channel? It has a great many distinct channels.

Does it expose rocks in any part of its channel? No. There are no stones about it at all.

Does the Paroo bring down much silt? No.

You mentioned having constructed dams, do they impound water on the Paroo? Yes, on the channel of the Paroo.

What is the height of the highest dam? The highest we have from the bed of the creek I suppose would be 12 feet.

How far back does that throw the water? When it is full it throws the water back about 2 miles in a straight direction.

What width? About 100 yards.

Does that show any signs of silting up? I do not think it does, but it is hard to tell. We cannot see that it is silting up. The 12-foot dam does not impound 12 feet of water. When the water comes down after flood and goes round the by-wash there is 6 feet of the dam exposed.

How long will the sheet of water last? About eighteen months.

Without any rain? Yes.

What is your rainfall? 12 inches.

Does the rain fall in heavy storms? Storms.

Have you any dews? This last winter we have had.

What do you think they depend on? I think the rain. If it is a wet winter we have plenty of dew; if there is no rain we have no dew.

Do the dews last any time? This time we had pretty heavy dews for about two months.

Are they sufficiently heavy to encourage the growth of grass? Yes. This year they have been very good.

What are the prevailing winds? South-west, I think.

Are they pretty constant summer and winter? I think spring and autumn are about the windiest times.

High winds in spring? Yes.

What waterhole did you pump from? From a billabong that runs out of the Paroo and into it again.

Does that provide a continuous supply? I have known it dry.

What is the character of the pump? A McComas, worked by horse-power.

What is the position of the well you spoke of? It is about 12 miles almost due west of Wanaaring township.

What is the character of the strata? The principal thing was a sort of soft blue slate.

Any veins in the slate? No, very little veins in it.

And the boring, was that the same? About the same. There were stones down below and a few pebbles.

At the bottom of the core, did you get stones? Not at the bottom, but about 200 feet down we got a few stones.

What kind of water? Very good water. The water came in at 40 or 50 feet down in a small supply, and we never got any more after it.

What made you stop boring? Because the machine got fast. There are some wells in the district which go down deep and get pretty good supplies, and some that go deep but do not get supplies. It would be cheaper to sink tanks.

What do the tanks cost you, as a general rule? From £300 to £400.

And they would be sufficient to last you through a drought? If we keep enough of them. As a rule, when there is a good rainfall we pump into them.

What is the ordinary capacity of those tanks? They are 6,000- or 8,000-yard tanks.

What area of ground would they suffice for? I reckon a tank requires about 2 yards to a sheep.

*Mr. Donkin.*] Did you give us the cost of boring per foot? I could not give it very well. We never made up the cost exactly.

Is there any information you could give us that we have omitted to question you on? No. I could tell you about the wells on some of the other stations.

Have they been a success? Some of them. There is one up to 620 feet.

What is the general experience, do the squatters prefer to depend on tanks? They like to have the wells. We suppose the Paroo to be permanent, but out back they have no permanent surface water. On Urisino they have two good wells, but the manager says he will not put down any more.

On Tinapagee Station, which adjoins you, did they not depend last drought on their wells for stock? They have only one well there, and they can only reckon on 4,000 gallons a day from that. I think they have some mud springs out back, but they are no good.

From your experience, could you suggest any scheme which could be carried out as a national undertaking to conserve water? Not on the Paroo. There is not enough water in the first place.

Do you think the Government should test that country for deep wells? They are doing so. They have been trying to get water for us on the road from Bourke to Wanaaring for four years, and have not succeeded.

What depth have they gone to? About 500 feet.

They have obtained no permanent supply? The only supply they have got is at Goonery, where there was a supply before.

Mr. J. W. Brougham examined:—

*Mr. Donkin.*] Your station is Outer Netallie? Yes.  
How far is it from Wilcannia? 9 miles.  
Have you been long in this district? Thirteen years. I have resided here the whole time.

Mr.  
C. Hebden.  
29 Sept., 1886.  
Lake Peery.

The Cuttaburra.

Silt on the Paroo.  
Dams.

Rainfall.

Dews.

Winds.

Pumping.

Strata.

Water.

Cost of tanks.

Wells.

Preference for wells.

National scheme.

Mr. J. W.  
Brougham.  
29 Sept., 1886.



- Mr. J. W. Brougham. Is your country entirely dry? It was when we occupied it. There was no permanent natural water. Does the flood-water of the Darling find its way into Lake Woytchugga? Yes, that is on our run. Is there any outlet from Lake Woytchugga going further south-west? Not that I know of.
- 29 Sept., 1886. Lake Woytchugga. If the water in Lake Woytchugga, were impounded, could it be diverted and taken into the interior? Not south-west, I think. Have you known the lake to be filled in previous years? I think this is the fifth time it has been filled since I have been here.
- Dam. How long does the water last there? It will last there now about twelve months before it is quite dry. I have dammed it once or twice; then it has lasted a good bit longer. I have just put a temporary dam across.
- Cost. What did it cost you? At the outside, £10. What depth of water would that keep in? About 2 feet at the greatest depth. That would last how long? Once it lasted nearly two years. What is the depth in the centre of the lake now? I measured it a week ago and there were just 10 feet. Could that be easily impounded? Very easily.
- Flood-gates. Would it be sufficient to put flood-gates at the bridge to impound it? I think so. Suppose it were impounded now, how long would the water last? About four years if dammed at its present level. Of what use would be the water? For irrigation. You have not tried irrigation? No.
- Diversion to Culpaulin. You do not think it is possible to divert the water from Lake Woytchugga to Culpaulin? Yes; I do think it may be diverted south, but not south-west. Is there a channel there? There is a chain of lakes going down there. What do you think would be the approximate cost of impounding the water by putting flood-gates at the bridge? I could not estimate that, because I have never seen flood-gates.
- Cost of dam. Well, with earthwork? I consider £100 would make a really good dam. I would do it for £100. If the water were impounded, how far could it be taken to the back country down south? I think it would go right past Culpaulin to what they call the Basin.
- The Basin. How far is the Basin from here? It is called 10 miles below Culpaulin, and Culpaulin is 19 miles from here. How far is the Basin from the river? Between 6 and 7 miles. Have you known in any of the high floods the water to have found its way through the lignum channel? Once; that was in 1873. Then it would not be a very expensive work to form a channel? I do not think it would.
- Depth of lake. How much higher have you known the lake than it is at present? About a foot higher. In what flood was that? In 1879 or 1880. How many thousand acres in extent do you roughly gauge the present water in the lake? I could not tell you. We reckon it about  $1\frac{3}{4}$  miles across it. Are there 4,000 acres under water? Fully.
- Wells. How do you supply your stock with water? Chiefly by wells. Do you find them more permanent and economical than tanks? I do. What depth are they? Our shallowest is 80 feet, and the deepest 200. Of course they are bored deeper than that. We have bores in several of them. We have nine wells on Netallie (that is the back country), and four of them are successful.
- Cost of sinking. What does it cost you to sink? They are all alluvial on the frontage block. I should say about £2 5s. a foot on an average, timbering and sinking. Have you tried boring and tubing? Yes.
- Artesian supply. Does that answer? It has answered with me very well. We put a 5-inch bore in both of two wells. Have you discovered a flowing well, an artesian supply? No. How do you raise the water? By whims.
- Tanks. Have you any tanks? Some; the ground is too porous. When we get down about 8 or 9 feet we come to a fine drift. Is there any possibility of your irrigating any amount for cultivation? No; we have not enough water.
- Carting water. Did you suffer in the drought from want of water? No; but I had to cart fresh water from Wilcannia, the water on the station not being fit to drink. How many miles? Nine miles to the head station, and then it had to be carted out back.
- Loss of stock. Have you any idea as to your loss of stock in the drought? We had not much loss. The loss you had, was it from want of water or want of feed? Want of feed.
- Spelling the run. Is it possible to avert the loss by spelling the run? I think it is. If you can spell the run, and had area enough, no doubt it would recover again. In times of drought you have to place so many sheep in one paddock, or on one well, that all the feed is eaten down. If you had plenty of water, do you think you could make pastoral industry a certainty? I think so. What do you look to for pasture, herbage or grass? Herbage and scrub.
- Carting water. None of the water you have obtained has been fit for domestic purposes? None. 12653. What is the greatest distance you have had to cart water for domestic purposes? 25 miles. How often have you had to do that? Three summers. How often, once a week? Sometimes twice a week. Is there any means by which you could prevent that? If I could make my tanks sufficiently deep I could do so, but I cannot get down beyond a certain depth; I come to fine silt. What is the area of your run? 96,000 acres, the one close here. How many acres do you allow to a sheep? About 8 acres. How much would you have to keep in reserve to tide you over a drought? About a quarter of it.
- Herbage and scrub. In this climate, with such a temperature and wind, would the feed remain on the surface? No; it does not remain. If the herbage is not eaten off it will blow away, and then we have to go to the scrub again. If we were to spell the run it would only be as regards scrub. Since your experience of thirteen years, do you think the seasons are improving? This season has improved, but I have not seen any improvement in any of the others. Is the rainfall becoming more regular, or does it remain the same? I think it remains just about the same.

To

To what market do you send your produce from here? Sometimes to Adelaide, sometimes to Melbourne. Mr. J. W. Brougham.  
 That is by river communication? Yes. 29 Sept., 1886.  
 If the railway were constructed to here, and the river weired at different points so as to keep up navigation between the points of the railway, what market would the producers make use of? I think the Sydney Market for produce.

*Mr. Gipps.*] You said your station was situated 9 miles from the right bank of the river, how far does it extend inland? Sixteen miles.

What are the natural features of the country? Sandy, undulating country. Nature of country.  
 Any high ranges? No. There is a rocky hill in front of the house.  
 What is the character of the rocks? Sandstone and a little ironstone.  
 The same as these buildings are constructed of? I do not think it is. It is not such a white sandstone.  
 Have you noticed any volcanic rock? No.  
 Have you noticed those round mounds? No.  
 What is the character of the watershed round Lake Woytchugga? All sandy. Lake Woytchugga.  
 When the river falls, does the lake drain off? Yes, but not completely dry.  
 To what depth? To about a foot.  
 And the area is then reduced to about how many acres? I could not tell you.  
 Does the water soon evaporate? No, not even the foot in depth. The soil is very good for holding.  
 How long would it last when reduced to that depth without further rain? It would last about six months. The lignum protects the water.  
 What number of wells have you put down? We have nine on Netallie, and four of these are successful, Wells.  
 having good stock-water.  
 What character of boring machines have you? Just the ordinary hand-boring rods.  
 What does it cost you? It is very hard to say. I have generally done the boring by weekly work.  
 What kind of water do you get? Mostly salt water, but not too salt for stock. One water is sweet.  
 An unlimited supply? Not an unlimited supply. One well gives about 900 gallons an hour.  
 Do you notice any change in the river by drawing? No.  
 Does the well rise and fall with the river? No.  
 Have you any dams? One. Dam.  
 In what position? That is on the back country, on Booroorangie Creek.  
 What is the height of the dam? Originally it was 15 feet, but that dam was washed away, and now I have made an overshot dam.  
 What height? About 7 feet.  
 What is it constructed of? Loose earth, and stone put over the top—not cemented, but loose.  
 How far does it throw back the water? About three-quarters of a mile, with a breadth of 50 yards.  
 Is it continuously full? No; it has been dry several times. The creek is full of drift.  
 Is it silting up? Very much. It is within about 4 feet of the top of the excavation. I took out 22,000 silt yards, and that is nearly all silted up.  
 The creek has a considerable fall? A very great fall.  
 Where does it empty into? Into Nitre Lake. Nitre Lake.  
 What is the area of that lake? About a mile long, by about 300 yards wide.  
 How deep? When it was measured after the big rain of January, 1885, there were 20 feet in the middle of it. Now there are about 7 feet.  
 How do you account for the loss of water? It is very bad holding ground all around there.  
 What is the nature of the watershed of this creek? Stony country, with quartz and ironstone. Natural state of country.  
 Has that lake any outlet? No.  
*Mr. Donkin.*] Was it possible to have occupied this country before water was conserved on it? No, it was not. We carted out our first water in a cask. There was not a drop of water on the run.  
*Mr. Gipps.*] Is there much scrub on your run? Yes, wire-bush, apple-scrub, and mulga.  
 Have you noticed any dews? Only this winter that I can remember. Dews.  
 What do you attribute them to? To the rain, I think.  
 After these dews, do you get any thunderstorms? Yes.

Mr. M. J. C. Tully examined:—

*Mr. Donkin.*] What is your occupation? I am Inspector of Stock for the Wilcannia District. Mr. M. J. C. Tully.  
 How long have you been here? Nearly twenty years, within less than 100 miles of Wilcannia. 29 Sept., 1886.  
 You are one of the oldest residents here? I believe I am. Floods.  
 How many floods have you known in the river since you have been here? There was a considerable flood in 1867, another in 1870, one in 1873, which might almost be called a continuation of the 1870 flood. In 1879 I was not on the river. Then there is the present flood.  
 Which is the highest flood you have known? The 1870, which was about a foot higher than the present one.  
 Has any record of the floods been marked in the river? There has been no particular gauge kept until the last ten years.  
 Can you go by any marks on trees? We can judge by the distance the waters flow over the banks.  
 What do you think would be the best zero to adopt in order to record the floods? I am of opinion that this present flood would be the best because it is the best known, and more notice has been taken of it than of any previous flood. Zero of floods  
 To take the highest point of this flood would be the best zero? Undoubtedly.  
 And not to take the bed of the river, or summer level, or navigation level? No. The Talywalka.  
 Do you know the Talywalka running out from the river? I know a good portion of it.  
 What is its length approximately? About 200 miles.  
 How far from here does it run out of the river? About Cultowa, about 35 miles direct.  
 Does the Talywalka fill Lake Poopelloe? Yes.  
 Have you seen that lake filled? No.  
 What depth of water do you think there is in it? I could not say.  
 The Talywalka now is about 2 miles wide? Yes. Width of Talywalka.

Would

- Mr. M. J. C. Tully. Would that be for the whole length down? There are places where it would flood a great deal more country than that, and other places where it would come within its banks.
- 29 Sept., 1886. Do you think anything could be done to conserve any large body of water in the Talywalka? I do not know of anything that could be done.
- Does the Talywalka run into the river again? I am not well enough acquainted with the lower portion of the country to say whether it does or not.
- Dams. Are there any dams on the Talywalka? There are dams on it, but I cannot point them out. Without the dams, would the water be retained in the creek? Oh, yes; very much the same. You do not think that damming makes much difference to the body of water? I do not think so. The overflow of the Talywalka irrigates a large area of country? Yes.
- Natural irrigation. Is that of great benefit to the district? Undoubtedly it is, because all the frontage country requires irrigation to make it grow anything. The nature of the soil is such that it requires thoroughly saturating.
- Lake Woytchugga. Have you known Lake Woytchugga to be flooded? Yes; in most of the floods it has been flooded. Would you retain the water there, or allow it simply to flood the bed of the lake for the purpose of irrigation; which is the best as a national undertaking? I should think to let the water flood the bed of the lake as now.
- Benefit of flooding. After flooding, how would that area compare with the ordinary country around for feed? For a certain time after the flood dried up it would carry three times the number of stock that a similar area of outside country would carry. And for what time? The effects of the irrigation would be felt for about three years or more. Does that apply to all flooded land? I think so. It requires a flood in order to produce pasture? Yes.
- Rocky bars. Do you know any rocky bars in the river? I know the rocky bars at Weinteriga, and here and at Curranyalpa. Is there a fall at Curranyalpa? A considerable fall. The bar acts as a natural weir across the river? Yes. Have you noticed whether the banks have washed away at all? I did not notice it. I crossed the river twelve months ago on the bar.
- Erosion of banks. Do you think that an impediment in the river would have a tendency to cut away the banks? I should not think so. The bar at Weinteriga, would it be possible to raise that 3 or 4 feet? I think so. Do you think the banks would erode? A certain height above the rocky bed the banks would cut away. Has the bar there any local name? They call it the Christmas Rocks.
- Fall of river. Supposing the rocks there were raised 3 feet by a weir, what distance would the water be thrown back? I do not know the fall in the river, but it would send the water back an immense distance.
- Dry river. Have you known the river here to be dry for a lengthened period? Yes; early in 1867 it was dry for some months, and it was again dry in many places before the rain of 1885. What is the longest period you have known navigation to be stopped? About four years.
- Uncertain transit. Is there any certainty at present in being able to send produce away from Wilcannia? No certainty. Have you known wool to be detained here for any time? I have known two years' clip to be in the stores here waiting to get away, without any possibility of getting away. That was a loss to the district? An immense loss to the district.
- Railway. If the railway were constructed to Wilcannia, do you think it would be made use of in preference to the river? Undoubtedly it would.
- Locks. From your experience of the river, do you think it would be possible to lock it to any considerable height? I think it would be possible, but the expense would be very great, as the banks would be liable to wash away. Do you think it would be sufficient for all purposes of the residents and producers in this large extent of country if enough water were kept in the river to convey their produce to the points of the railway? I think that would be sufficient for the whole district. Do you know the country between here and Cobar, and here and Louth? I have known it between here and Cobar. Would there be any difficulty in running a railway on that road? There would be no difficulty. Is the country tolerably level? Yes.
- Lakes on lower Paroo. Can you mention any other depressions or ana-branches where a large body of water could be conserved, either on the Darling or the Paroo? There are a great many lakes on the lower Paroo where water can be conserved. What are the names? Peery Lake is the largest; not far distant is Olepoloko and Gulpopo. What would be the extent of water and the depth in this flood in the largest of those lakes? Peery Lake has the largest area; it is about 11 miles long, with an average width of 2 miles, although at the north-east end it is more than 2 miles. What depth of water was there in it before this flood ran into it? About 3 feet. This flood would raise it to about 5 feet. Have any of the other lakes a greater depth of water? Tongo has perhaps 8 feet of water in it. Do you know whether the Paroo water actually ran into the Darling? If sufficient water came down the Paroo it would undoubtedly run into the Darling. Have you ever known it to run in? No, except when the water of the Darling has backed out to meet it. From what you say the flood in the Darling is not affected by the flood in the Paroo? Not in the slightest degree. Would it be possible to divert the Paroo water through those lakes you spoke of, and run it down south-west into the back country towards Gnalta? Not from so low down as those lakes, but I am of opinion that it could be diverted higher up to go westward into some of the large swamps that are fed by the creeks from Yancannia. What distance is it possible it could be diverted? It could go right down to the South Australian border. Towards Silvertown? Yes, down through the country there.
- Diversion of Paroo water towards Silvertown. When you first came to this district, was there any large area unoccupied through want of water? The whole district almost was unoccupied. Was it possible to occupy it without conserving water? Quite impossible. Do

Do you know whether the waters of the Paroo River join the Darling? The water has only joined the Darling when the Darling has been in high flood. Mr.  
M. J. C. Tully.

The Paroo flood is of no service to the Darling? None whatever. 29 Sept., 1886.

Do you think from the trend of the country it would be possible to divert the Paroo down south-west? Only by diverting it from high up. It could not be diverted south-west from about Peery Lake. The Cuttaburra.

From where then do you think? It would have to be as far up as Wanaaring, and then I do not know whether it could be done. I think the country would be found too high to the west and south.

Do you know the Cuttaburra? Only at its junction with the Paroo, near Goorimpe.

Is there a defined junction there? It is not defined; it is known as the Cuttaburra. Peery Lake.

You do not know where it runs out of the Warrego in Queensland? I do not know.

Which is the largest of the Paroo lakes? Peery.

And that is filled by the Darling, Paroo, and Cuttaburra waters? Yes, by the water which leaves the Darling near Kallara, the Cuttaburra from the Warrego, and the Paroo water itself. The three waters have joined near Peery Lake, and are running into it.

Have you ever seen that lake dry? Frequently.

Is it full now? It is not full, but the rains of January, 1885, put a good deal of water in it, and it has not been dry since.

What depth of water is there now? It is a shallow lake. I do not think that at any time there would be more than 6 or 8 feet of water in it.

Are there any other deep depressions you know of where a large body of water could be conserved? I only know Copago Lake, and very little could be done to conserve water in that. Copago Lake.

What depth of water is there in it? When it was gauged last it had just ceased flowing, and there was about 30 feet in it.

How long would that water last? About six years. It was filled in the 1864 flood, and stock could water at it until early in 1870, and then it was not quite dry when, in the high flood of 1870, the river and Paroo water met and ran in for a short time.

Is that the largest depression you know of in the district? The deepest.

And likely to be the most permanent? Yes.

You say nothing could be done artificially to increase the supply in the lake? Not unless there could be some means of conveying the Paroo water through the rotten country at the lower end of the Paroo, so as to bring it into the lake without its being lost.

Could water from Lake Copago be taken down south at all? No; not anywhere from Copago, the sand-hills are too high.

Are there any other large depressions you know of west of the Darling? There are several very large lakes in the north-west, such as Cobham Lake and Yantara Lake. Cobham Lake.  
Yantara Lake.

The Bulloo runs into those lakes? I do not know that the Bulloo has ever been known to find those lakes, but no doubt that is the course the Bulloo would take.

Do you think it is possible to divert the Darling into the back country on the west side? It has already been diverted to a certain extent from Kallara.

But I am speaking of lower down the river, between Kallara and Menindie;—there is no large talywalka on the west side, is there? No.

On the east side of the river, are there any natural depressions where a large body of water could be conserved? Only those I have mentioned, such as Teryaweynya Lake, Pigeon Lake, and Bullabulka. Lakes east o  
Darling.

Have you kept a record of the rainfall since you have been here? I have not.

What is the general average rainfall calculated to be here? From 8 to 9 inches. But the very heavy rain of last year has raised the average considerably. Rainfall.

I think you gave us information, with regard to the flood-waters of the Darling filling up all the depressions and black-soil flats, that greater benefit was derived from irrigation by flooding the land than by conserving water? Yes. Natural  
irrigation.

What depth of water should there be in any of those depressions before means were adopted to impound water? I think that nothing under 15 feet would be of any benefit.

*Mr. Gipps.*] Have you seen the Paroo River itself in flood? Yes, several times. Flood-water  
of Paroo

Without the Darling being in flood? Yes.

What becomes of it? Peery Lake takes a great quantity of the water, and so do Tongo Lake and Yantabangie Lake and the Overflow. After this it loses itself in what is known as the Paroo Channel, which is a wide rotten flat about 2 miles wide, full of immense holes and ruts that you could not ride or drive across. They swallow up the overflow of the water.

And that might be called the sink of the Paroo? It might be so termed.

What becomes of this water;—does it seem to rush down the sink in a large stream? You can hear it running, and no one would attempt to cross the channel within half a mile of where you see the water, because the water might be running underground although the surface might appear dry.

Have any wells been sunk on this sink at all? Yes; several wells have been sunk near it, but at a depth of about 70 feet. Salt water has been struck in every instance, and the wells have had to be abandoned. Wells

There has been no attempt to trace the sink of this river beyond the plain? No.

What do you think becomes of the water? It must find its way down into the earth somehow.

And discharge into the Darling again? I would not advance that theory.

Have you noticed any large springs in the channel of the Darling? A number of them at low water. Springs.

Large springs? I could not say they are very large or discharge a great quantity of water.

Have you ever known the Darling River dry? On two or three occasions.

Was the water good? The water was not good at all; it becomes so bad that it is impossible to use it. Quality of water  
in river.

When the first of this flood came down the water could not be used for nearly a fortnight for domestic purposes, it was so salt and apparently full of mineral properties.

Then after the fortnight? After that the fresh water came on.

What do you think that is due to;—is it caused by the wool-washings being emptied into the river? I was under the impression it was due to the water running in from the springs in the bank.

Does the water produce any disease when the river is so low;—are fevers more prevalent? I have not noticed that, but I should fear it would interfere with the public health.

What are the natural features of the country between the Darling and the Barrier Ranges? Mostly undulating sandy country, and at a certain distance back you get into ranges. Ranges  
At

- Mr. M. J. C. Tully. At about what distance? A little to the north of west the ranges begin at about 50 miles. They are isolated ranges, more like hills. Further on you get into the rangy country right through.
- 29 Sept., 1886. Do these isolated ranges appear to run into the Barrier Range? I have not traced them along.
- Do they show any outcrop of rocks? Yes.
- Rocks. What is the character of the rock? Mostly red sandstone.
- Olepoloko Lake. How is Lake Olepoloko supplied? By the overflow of the Paroo after Tongo and Yantabangee are filled.
- Is it any size? About 2 miles by  $1\frac{1}{2}$  miles.
- What depth? It is only shallow, about 8 or 10 feet deep.
- Has it any outlet? I believe there is an outlet from it into Peery Lake, but I have not seen the water running from one lake into the other. There is a depression, apparently a watercourse, connecting the two lakes.
- I suppose it would be very easily dammed? I do not think so, because it is more like a wide watercourse than a creek.
- Lake Goolpooka. And Lake Goolpooka, how is that supplied? I think it is supplied in the same way.
- Lake Yantabangee. And Yantabangee? It is filled by the overflow of the Paroo after filling Tongo Lake. There is a channel between Tongo Lake and Yantabangee Lake.
- None of these have a watershed of their own? No; they have never been filled by local rains, although on one or two occasions some water has flowed into them.
- Dryer's Creek. Do you know of a creek called Dryer's Creek? Yes.
- Has that a watershed of its own? Yes.
- That creek rises where? On the ranges at the back of Momba Run.
- Has it any large watershed? Yes. The water comes in a considerable distance down that creek.
- Where does that creek empty? Into Tongo Lake.
- What is the length of the creek? About 15 miles.
- Is it a well-defined channel? Yes, when it nears the lake, but, like most of the back-country creeks, it is mostly a chain of waterholes, and then open flat country.
- Does it give the chief supply to Lake Tongo? No; the Paroo gives the chief supply.
- Dams. Are there any dams across Dryer's Creek? There was a very large one.
- What height? It contained over 20 feet of water.
- What was the length of the dam? The length across would be 250 yards.
- How far did it throw the water back? About a mile and a half.
- What width? From 2 chains to 1 chain.
- Did it conserve a permanent water supply? No; it dried up.
- And is the dam there now? The dam was carried away in the flood of 1885.
- Are there any other dams on that creek? None that I am aware of.
- Are there any large flats or depressions that could be fed from that creek? Not from that creek.
- Mr. Donkin.] Have you kept any return of the number of stock that have perished in this district? I have not kept a return.
- Loss of stock. Do you know about the percentage, taking the stations all round? In 1869 I should imagine that at any rate 33 per cent. of the stock in the district perished, and in 1884 about 20 per cent. The loss was not so great in the latter year, because better provision had been made for water storage.
- What would that represent in round numbers in sheep? It is a difficult matter to arrive at. Perhaps 400,000 sheep.
- That would be in your district? Yes, within a radius of 200 miles of Wilcannia.
- Do you know whether anything could have been done to prevent such a disaster? The only thing would have been to have water on the dry country. A great extent of country could not be used for want of water.
- Want of water. The loss of the 400,000 sheep, was it caused by want of water or want of grass? Chiefly by want of water, because stock had to be crowded on to the country that had enough water for a lesser number, but not sufficient for all. There was enough feed on the back country, but not enough water.
- If the country is not stocked, will the grass survive through a drought? The grass will survive through a drought, although it does not keep growing.
- Overstocking. Do you think some plan ought to be adopted of reserving a part of the holdings for time of drought? The pastoralist ought to be careful not to overstock the run, and not to allow the grass to be eaten down.
- Capacity of runs. What is the number of acres to a sheep that should be allowed? To be safe the average number should be not less than 8 acres to a sheep.
- Dam on Paroo. Mr. Gipps.] Do you know of any dams on the Paroo? None, except one at Warramurtie, on Goorimpe Run. It is about 8 or 10 feet high, and throws the water back about 2 miles.
- What width? The channel is rather narrow, not more than 15 yards wide.
- Are the banks exposed? Just near where the dam is erected the banks are defined.
- Is there any rocky bar? No rock showing anywhere.
- What length of dam is it? The dam is only short; the actual length across the creek is not more than 30 yards.

Mr. F. H. Bell examined:—

- Mr. F. H. Bell. Mr. Donkin.] What is your occupation? A licensed surveyor.
- 29 Sept., 1886. How long have you been in this district? Two years.
- Where have you been employed in this district? Within a radius of about 100 miles of Wilcannia, on the western side of the river.
- What work have you been principally engaged on? Surveying improvement purchase applications.
- Have you had experience in the Colony before coming here? Yes, in the Monaro country, and on the Murrumbidgee, and about Deniliquin.
- You have seen a good many water improvements during the time you have been here? Yes.
- What was the character of those improvements chiefly? Tanks and wells, and a few dams.
- Tanks. As a rule, have the tanks been a success for holding water? Yes, with very few exceptions.
- About what size has been the most advantageous? The larger the tank the better as a rule. The small tanks have not been a success.

What

What would you call a small tank? A thousand yards would be a small tank. Then within what range of cubic contents would you consider it advisable to make tanks to be of service in time of drought? I should think at least 6,000 yards.

And what depth? About 12 feet as a general rule, I think.

What is the usual method for stock to obtain water, by access to the tank or by pumping? By access to the tank.

What experience have you had with regard to wells? The wells throughout the district appear to be very useful and regular in their supply. They are better than tanks in the respect that they can always be relied on.

What is the average depth at which they have obtained water? The depths vary a great deal, from 150 to 300 feet.

As a means of permanent supply, then, which do you think is the most advantageous, the construction of tanks and dams, or the sinking of wells? Decidedly the wells if there were a certainty of getting a supply, but frequently wells are put down without getting a supply.

How does the cost of wells compare with that of tanks? The first cost of wells is greatly in excess of that of tanks. In constructing a tank you know what the cost will be, but with a well you do not know.

How are the wells put down? By sinking.

Have you seen any put down by boring? No.

Do you think there is any underground current? There is an underground supply, but no current that I know of. The water is generally found in drift.

Can you enumerate any large depressions where a large body of water could be conserved? There is Copago Lake and Lake Dick.

Have you seen Copago Lake since it has been filled? Yes.

What depth of water is in it? 28 feet when full.

How do you know it is 28 feet? It was measured at the time of the rains of January, 1885.

How is it filled? By an overflow from the Paroo.

What is the length of the lake? It is pear-shaped, and must be about 2 miles long.

What width? It varies in width. At the broadest part it is about  $\frac{3}{4}$  of a mile or a mile.

Do you think it would average 2 miles by 1? Barely that, I think; perhaps 2 miles by  $\frac{3}{4}$  of a mile?

What would be the average depth? Over a greater part of it it would be fairly deep, perhaps 23 feet.

Could that water be retained? Oh, yes.

Would it be a difficult or expensive undertaking? Not at all.

What do you think would be the cost; I suppose an earthen dam and a flood-gate would be sufficient?

It is below the bed of the Paroo. It would scarcely want retaining at all.

Then the water does not run out? No.

How long would the 28 feet of water last;—the lake is almost permanent, is it not? Yes; except for what it loses by evaporation and stock.

Do you know of any other lake in the Colony of that depth? Not about here.

Was that dry before the last flood? I believe so; but that was before my time.

Are there any other large depressions? There is one close to there, Lake Dick, on the opposite side of the Paroo.

Is that somewhat similar? That is a circular lake about a mile and a quarter in diameter.

What depth is there? I do not know. About 12 feet probably.

And that is filled in the same way? Yes, by an overflow of the Paroo.

Would it be possible to divert that water to run further south or south-west? I think not.

Towards the Dry Lake? No. I fancy there are very high hills round Lake Copago and Lake Dick, and in addition to that they are below the level of the river channel itself.

Is there any connection between Lake Copago and Lake Dick? Yes; they both come out of the Paroo.

Does the water run from the Paroo direct into each, or from one into the other? There is no direct channel; there is a depression. They run from the Paroo direct into each, not from each other.

Are there any other large depressions? There are several on Momba Station, but probably it would not be worth conserving water in them.

Do you know any other large depressions where water could be diverted or stored? There is a large depression on Culpaulin Station. It would take very little to run water into it. In fact there are natural channels which if they were deepened would connect it with the river.

Do you know whether it would be possible to divert the water from the Paroo down towards Dry Lake or out west? I do not know sufficient about that to say. I do not think it could be connected with the Dry Lake, as there is some high sandy country between.

Do you know Dry Lake? Yes.

Did you see it before it was filled? No; after it was filled.

Do you know what water there is there? The lake is pear-shaped, is about  $1\frac{1}{4}$  miles long, and about  $\frac{3}{4}$  of a mile wide in the upper part of it. It narrows up to the channel at the end.

What depth of water is there in it now? About 13 feet I should think.

Is it filled entirely from local drainage or overflow? I should think from local drainage.

The Dry Lake is where a house was submerged? Yes; the hotel was originally built in the bed of the lake.

How many years was it there before it was submerged? About thirteen years.

Then the filling of that lake is quite an unusual thing? Yes. It is twenty years since it happened before. In 1864 there was a little water in it, but not so much as now.

Could the water be taken from there and diverted down through the country at all? I think it might. There is a series of lakes connected with it; for example, it could be connected with Nitre Lake.

You do not know whether it is possible in any part of the district to divert the water of the river, and take it out back, except what is done by the ana-branches? No.

Would the fall of the country admit of it? Scarcely, because the Darling requires to be 30 feet high before the water backs up these channels. For instance, the water backs up Copago Lake when the river is 30 feet at Wilcannia.

Is Copago Lake filled partially by the Darling and partially by the Paroo? Yes.

Do you think the Paroo River affects the Darling at all? I think not. There is another lake near

Dry Lake, called Nitre Lake.

Is

- Mr. F. H. Bell. Is that full? Yes.  
 29 Sept., 1886. How far is Dry Lake from Wilcannia? 18 miles north-west.  
 Was it Dry Lake where a team of wool was submerged? I could not say.  
 Is Nitre Lake of any size? Yes; it is about 3 miles from Dry Lake, on the boundary between Netallie and Mena Murtee.  
 Is it full now? Yes. It is filled by Booroorangie Creek and the overflow.  
 What range does it rise in? It rises in the Mootwingie Hills, on the Daubeny Run.  
 Could the lake be made to store any large body of water? Yes.  
 In what way? There is no outlet from it that I know of. It is a natural holding lake.  
 Strata in wells. Mr. Gipps.] What is the character of the strata in the wells? They vary a great deal. In some of them you go down into blue slate. In the tertiary formation you go through copai and gypsum. Some of the wells contain almost pure gypsum.  
 What follows the gypsum? I have no sections of any of the wells, but it is generally limestone granules. I think they get into drift.  
 And then below the drift? Very often there is a second layer of that sort, which they go through if the water supply is not sufficient. They get a supply in some of the wells at 150 feet, very often salt. On going deeper they get a supply of fresh water.  
 Blue slate. Do you get a different top stratum in going through the blue rock? It is generally blue slate from the top.  
 At what distance from the river do the blue-slate wells commence? The first I know of is the Mount Daubeny well, which is about 60 miles from the right bank of the river.  
 Features of country. Is there any difference in the features of the country where you get the blue slate and where you get the alluvial and copai? Yes; where you get the blue slate you are rising up into stony hills; it is all rangy country; where you get the other the country is all level, tertiary flats.  
 Then the surface is of a sandy or gravelly nature over this blue slate? It is, but not for any great depth. When there has been alluvium washed down into the flats it is of that character, but on the side of the hills you go into slate at once.  
 Gopago Lake. Has Copago a watershed of its own? Yes.  
 Any creek? Only gathering ground.  
 Those are sandhills? Yes.  
 Gradually rising to any height? On the western side they rise pretty high, about 70 feet.  
 Have any wells been sunk near these lakes? Not that I am aware of.  
 Dry Lake. Could the flood-water of the river be thrown into Dry Lake? I do not know of any defined channel that would send it out there.  
 But could not a channel be cut to conduct it? I could not say that without knowing the difference of the levels. You can tell the level of Copago Lake by the height of the river water backing up.  
 Is there any outlet to Dry Lake? No.  
 12938. Is there any creek running into Dry Lake? There is a long depression, not a well-defined creek, but I do not know whether it goes over the gathering ground of the lake.  
 What is the character of the gathering ground? On the two sides it is sandhills. There is a marly clay soil, a broken flood-clay, which forms in the creeks.  
 What area do you suppose the watershed to be? I dare say it would be 3 miles by 2.  
 Nitre Lake. What is the area of Nitre Lake? Of the water itself about 4 square miles.  
 And what depth? I could not tell you the depth, but I should think it would be fully 20 feet.  
 How is that filled? It is filled by the Booroorangie Creek, the creek that comes from Mootwingie.  
 Is that a large creek? Yes, a large well-defined creek for about 20 miles.  
 Does that rise in any of the ranges? Yes; it is from the gathering ground of the ranges in storms.  
 Dams. Are there any dams on that creek? Yes; there was one very large dam constructed on Daubeny Run, which was washed away in the rains of January, 1885. It cost about £3,000.  
 Did that throw the water back? It threw the water back about 2½ miles.  
 What width? About 10 chains wide.  
 What was the height of the dam? About 15 feet.  
 What was the reason of its being carried away? Because the heavy downpour caused the water to rush round the end of the dam and gradually break it away.  
 What was the rainfall? About 10 or 11 inches.  
 Mr. Donkin.] In speaking of the Paroo, has its waters ever reached Kalyanka Creek? Not to my knowledge. If a dam were erected on the Kalyanka Creek the Darling water could be forced up to Copago Lake much more quickly than at present.

Mr. E. W. Donnelly examined:—

- Mr. E. W. Donnelly. Mr. Donkin.] How long have you been in this district? About eleven years.  
 29 Sept., 1886. Where do you reside? At Gnalta.  
 How far is that from Wilcannia? About 70 miles by the road, north-west.  
 Where have you also resided? At Langawirra.  
 Did you not reside at Cobham Lake? I go there sometimes; I am one of the partners.  
 You know Cobham Lake Station? I am one of the owners.  
 How far is Cobham Lake from here? 150 miles, a little west of north.  
 What is the nearest township? Tibbooburra.  
 Cobham Lake. What is the extent of Cobham Lake? It is about 8 miles long and 1½ miles wide at the widest part.  
 When it is full it floods about a mile wide.  
 What depth of water is there in it now? There is about 28 feet of water in it now.\*  
 How long will that last? It should last six years.  
 Is it the only large lake in the north-west? It is the deepest lake. Yantara Lake has a larger area, but is not so deep.  
 Could anything be done artificially to supplement the water there now? I do not think so.

What

\* NOTE (on revision):—I find only 22 feet now in Cobham Lake.—E. W. D.



What is Cobham Lake filled by? By several creeks.

Entirely by local rain? Yes. Mount Browne Creek is the principal creek.

How far is Cobham Lake from Mount Browne? About 36 miles.

Is the water good in Cobham Lake? Very good till it gets very low.

Do you depend upon it for water for the stock? It is not a permanent lake; it has been dry.

Could the water be diverted from the lake in any direction, if necessary? Not without making a very deep cutting. There are large sandhills all round it.

Do you know Yantara Lake? Yes.

What is that filled by? By several local creeks, entirely by local rain. I have heard that the Bulloo water has gone into it, but it is only hearsay.

Have you been on the Bulloo? Yes, where it runs out.

Where does it run out? Into swamps and clay-pans.

Can anything be done with Lake Yantara? No; it is very shallow. Nothing can be done to it, and the water cannot get away.

Do you think the Bulloo water or the Paroo water could be taken out into that large extent of dry country if it were possible to divert it? The Bulloo water might, but I have never been on the Paroo.

From Yantara, could it be taken on to Cobham Lake? I am afraid not. There is a salt lake on Yantara.

What is the name of the lake? Salt Lake.

Is it of large extent? About 6 miles square.

What depth? I have seen it full with about 5 feet.

It does not last a great time? Not more than eighteen months.

Is there a large body of water coming down the Bulloo? Yes, a great body of water.

How do you water your stock, by tanks or wells? By both.

Which do you find of the most service? Wells are the most serviceable, because tanks do not last.

At what depth have you obtained water? At different depths, from 150 to 420 feet.

Have you obtained a plentiful supply? In some cases. Many wells have been failures.

At 400 feet? Yes, I have some at 400 feet which failed.

What does it cost per foot to sink wells? About £2 per foot; that is in alluvial. Rock wells cost a good deal more.

Do you think if deep wells were sunk in your part of the country that a good supply could be obtained? Yes; I am in favour of deep wells.

You do not know whether any deep wells have been put down to 1,000 feet or more? I do not. I think the deepest well in our district is 400 feet.

Do you know of any plan by which water could be diverted or conserved to be of benefit to the district? There are some shallow lakes which would hold much more if they were excavated.

If tanks were made in the bed you think the water could be made almost permanent? I think so.

What depth of water do you consider would be permanent? I think tanks require to be at least 18 to 20 feet deep.

Do you know whether tanks have been put in any of the depressions? Yes.

Does the plan answer well? We have one on Pack-saddle, one of our stations.

Where is that from here? It is on Pimpara C block, about 140 miles north-west of Wilcannia.

Is it good holding ground? Very good.

*Mr. Gipps.*] What is the character of the country near these depressions? Principally sandy country, with cotton-bush and salt-bush plains between the hills.

What is the character of the gathering ground near Salt Lake? Principally cotton-bush and salt-bush country.

Any rocks? No.

Any rocks exposed anywhere on the run? No, none on Cobham and Yantara.

What is the depth of the deepest well? 420 feet.

Where is that situated? There are two—one on Cobham, and one on Gnalta.

Is it near a lake? No; it is on Mount Browne Creek, about 15 miles north of the station.

What is the nature of the soil? It is all alluvial.

From top to bottom? There is drift in places.

Coarse drift? No, very fine drift.

No rock at all? No.

What did you bottom on? Blue clay.

You have not gone through the blue clay? No; we got a small quantity of water in it, but we did not try to go through it.

What supply of water did you get? Not sufficient for stock.

You can easily draw it off? Yes.

What is the character of the water? Slightly brackish.

Does it improve by drawing? No.

Does it rise or fall with the rains? The rains have no effect on it.

How often does the Bulloo run? Sometimes it does not run for two years, sometimes it runs twice a year.

Is the channel well defined? Not very well defined. It runs through large cane-grass swamps and flats, which have the same depth right across.

Do you think if a channel were cut for it that these lakes could be supplied more often? I think so; but I am afraid it would be very expensive.

Could not the channels be cut on the surface? Yes.

Why would that be expensive? I think that on Yantara Lake a feeder for it would have to be cut through the sandhills.

Are the sandhills drift or rock? Drift.

Would you have to go through a large extent of these sandhills? I do not know the channel right round from Karyapundy Swamp.

Does the Bulloo ever run in a channel? Higher up.

Have you seen it higher up? No; I have only been 20 miles higher up.

What are the prevailing winds? West and north-west.

Mr. E. W.  
Donnelly.

29 Sept., 1886.

Yantara Lake.

Salt Lake.

Tanks and wells.

Cost of wells.

Permanent tanks.

Character of country.

Deep well

Bulloo River.

Sandhills.

Are Winds.



- Mr. E. W. Donnelly.** Are they pretty constant in summer and winter? Not very constant.  
Are they strong? Very strong, but very irregular. Sometimes we have them for several days, and then we are a month without them.  
**29 Sept., 1886.** Have you any windmills up there? No.  
**Windmills.** What is your average rainfall? Up to January, 1885, our average was a little over 7 inches.  
**Rainfall.** Do you get none of the tropical rains from Queensland? Very seldom.  
What is the character of the rainfall, does it come in heavy storms, or is it light? It is very light; it does not do much good.
- Billia Billia Lake.** Does Cobham Lake connect with any other lake? There is another lake called Billia Billia Lake. It is not quite connected with it, but there is only a sandhill between.  
How is that filled? From its own watershed; it is quite distinct from Cobham Lake.  
Is it good water? Yes.  
What is the length of that lake? It is about 2½ miles, and is nearly square.  
What depth? About 7 feet is the average.  
Have you ever seen it full? Yes; it is nearly full now.  
Does it last long? About two years.  
Do you think the loss of water in these lakes is due to evaporation or to soakage? To both a good deal, but soakage principally, I think.  
The soil is not retentive? No.
- Loss of stock.** *Mr. Donkin.*] Did you lose any quantity of stock in the drought? We lost about 6,000 cattle at Cobham Lake.  
In what year? 1883-1884.  
Within twelve months? About twelve months.
- Want of water.** What was the loss due to? Entirely want of water.  
Had you grass? We had plenty of bushes for feed.  
If you had had plenty of water you could have saved them? Yes, with a few exceptions.  
Did you lose all the cattle on the station? No; we saved about half.  
How many acres to a beast do you calculate on for safety? Eight acres to a sheep, and in proportion for cattle.  
It would take six times as much for cattle as for sheep? Yes; that would be about 50 acres per head for cattle.  
Do you think the great loss in stock has been due to overstocking? It has been due principally to want of water.  
What distance can cattle travel in to water? With safety they can travel 8 or 9 miles, in and out, to feed.  
Have you still cattle on the station? We have sheep on it now.  
Are there any cattle stations in the country? We have cattle at Boolka.  
As a rule, there is not so much loss in a drought with sheep as with cattle? No.
- Dews.** *Mr. Gipps.*] Have you had any dews? This year is an exception. We have had some heavy dews this year. I think they have been due to the heavy rains.
- Well.** What supply did you get in your best well? About 40,000 gallons in twenty-four hours. I think by sinking we would get more.  
Where is that well? At Gnalta, which is about 83 miles north-west from here.  
What depth is that well? 310 feet.  
Is it bored or sunk? 60 feet were bored.  
What is the character of the strata? Sandstone all through from 5 feet from the surface.  
What character of sandstone? White.  
What did you bottom on? Still in stone.  
What is the character of the water? Slightly sweet, but drinkable.

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Mr. W. S. Downie examined:—

- Mr. W. S. Downie.** *Mr. Donkin.*] You reside at Tibbooburra? Yes.  
What distance is that from Wilcannia? 195 miles north-west.  
**29 Sept., 1886.** How long have you been there? About four and a half years.  
Have you been in the district before? No.  
Have you any permanent water there? None.  
What is the nearest permanent natural water? Cobham is the nearest. Wompah Waterhole is about 35 miles away on the Queensland boundary. Cobham is about 65 miles away, but it was dry for three years.  
Is there any permanent water nearer than the Darling? None that I know of.  
How have you managed for water during the drought? We depend principally on flying showers during the summer. Sometimes we have had to carry water 27 to 35 miles at great expense for domestic purposes.
- Carting water.** Where did you cart it from? From Wompah, and from a waterhole called Nockabinrah on the Wirra-binna Creek.  
None of those creeks are permanent there? None.
- Bulloo River.** Do you know the Bulloo River? Yes.  
Where does it empty itself? Into Karyapundy Swamp, about 40 miles from Tibbooburra.  
Is there a large body of water there? A large body of water flows down. The Bulloo is about 20 feet deep. Some of the swamps it runs into are 20 miles wide.  
These swamps are just below the Queensland boundary? Yes, on and below.
- Diversjon towards Yantar** Do you think it would be possible to divert the water towards Tibbooburra? Not towards Tibbooburra, as there is a range between; but I think you could do so towards Yantara at an enormous expense.  
Is it tolerably level country? Very level until you get into the vicinity of Yantara Lake.  
Do you think any scheme could be devised of bringing down the Bulloo to be of more service to the country? I have not travelled over that country enough to know, but I think it could be utilized.  
At present it is of very little service? Very little indeed.  
What do you depend on now for your water supply? On dams and small tanks made by the diggers and other persons living there.
- Government well.** Have you any deep bores there? No. The Government have started a well for us. They have got it down

down 200 feet, but there is only a small supply. It was started about eighteen months ago, and they have left off sinking to construct a whim. Mr. W. S. Downie.

Have you had any deep wells put down to test the water? Nothing over 200 feet. The quality of the water is very fair. 29 Sept., 1886.

Is it your opinion that if deep wells were sunk (say) 1,000 or 2,000 feet water could be obtained? I think so. Deep wells.

What has the rainfall been since you have been at Tibbooburra? Previous to January, 1885, it was about 6 inches. Rainfall.

Is that sufficient to make the herbage grow? Yes. The growth of herbage after rain is wonderful, but it soon parches up and blows away unless rain falls (say) every two or three months to keep it up.

Do they consider 6 inches sufficient for pasture? The country has not been very much stocked so far, and that quantity of rain would not be sufficient if the country were fully stocked.

What amount of rain at one time is sufficient to be of any service? An inch, if it falls rapidly, will cause the water to run into the waterholes, tanks, &c. The rains are very irregular; sometimes they are southerly and sometimes northerly. The heavy rains are from the north.

Are there any large depressions there in which deep tanks could be constructed? Yes. Tanks.

Would that ensure a permanent supply? I think so. The tanks would have to be very deep, say fully 25 feet deep.

*Mr. Gipps.*] Do you ever get the tropical rains from Queensland? About the tail end of them. Tropical rains.

At what season? From January to March. We have had them as late as May.

Do they come in heavy storms? Not at all times. Sometimes they commence with very light rain.

What are the general features of the country, rolling or plain? Some of it is a little hilly. The Grey Ranges run through there.

What is the height of the Grey Ranges? I am not very sure. Grey ranges.

400 or 500 feet? I suppose about that.

Are there any large creeks there? No. There are some small creeks. Small creeks.

Have you tried damming any of them? Some of them have been dammed, and have lasted very well.

What quantity of water do they throw back? Not for any distance—say  $\frac{1}{2}$  mile.

Have you many wells sunk? There are a good few wells in the district. Some are giving a good supply of water. Wells.

Any artesian? None.

What is the position of the principal well you know of? There is one about 4 miles from Tibbooburra, about 200 feet deep. The water in that is very good.

What supply of water do you get from it? About 20,000 gallons a day. It is a station well.

Would it give more? I think it would. The water was hardly more than tapped.

Is it sunk or bored? Sunk.

Did the water rise in the well? It rose 60 feet. There was a small soakage at 150 feet, then they went on and struck a further supply.

What is the character of the strata? Principally blue sediment and blue rock.

And the top stratum? Alluvial.

What did you bottom on? Blue slate.

Any veins in the slate? I think so.

Do you think the supply of water was due to a crevice in the rock or a slip in the rock? I could not say.

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Mr. P. W. Tuxen examined:—

*Mr. Donkin.*] You are a staff licensed surveyor? Yes.

Have you been long in the district? Only twelve months.

What district have you been over since you have been here? Pretty well over the whole of the Wilcannia District. Mr. P. W. Tuxen.

Within what radius? About 200 miles north, 150 miles south, and to the South Australian border on the west. 29 Sept., 1886.

Do you know the Paroo? Part of it.

Have you seen it in flood? No.

Do you know whether the Paroo water joins the Darling? I do not. Paroo water.

Have you been on Lake Copago? I do not know it by that name; I do not think so.

Do you think the Paroo water could be diverted and taken down south-west towards Gnalta, and in that direction? No; there are very high ranges between. Diversion of Paroo.

Could it be diverted higher up from near Queensland? Probably.

And where could it be taken to? It would be from Tongo Station, I think, and would follow a creek that runs easterly into Tongo, close to Tongo Station.

How far could it be taken into the dry country? There is a dividing range about 60 miles from the Paroo. It could be taken into Cobham Lake by the Yancannia Creek.

You think it would be possible from the trend of the country to divert the Paroo into Lake Cobham? It would require a big cutting, but I think it is possible.

Have you any large depressions near the Paroo in which water could be conserved to be of advantage? I have seen so little of the Paroo.

Have you seen where the Bulloo runs out? Yes; into Karyapundy Swamp. Bulloo River.

The water there is not permanent? No.

Do you think the water could be taken down south? I do not know much of the country there and Cobham Lake.

Is there any feed on the clay-pans? There is no vegetation of any kind.

Then the water is absolutely useless? Absolutely. It is not permanent, and produces no feed. Water useless.

Is there soakage from the clay-pans, or does the water entirely disappear through evaporation? There is a channel leading out of the southern end, but I do not know where it runs.

The floods in the Bulloo are as large as those in the Paroo, are they not? Yes.

Then there must be an immense body of water which evaporates or gets away? Yes.

You

- Mr. You do not know of any large depressions coming south from there until you get to the lake on the river? There is the Yantara Lake somewhere between the big clay-pan and Cobham Lake.
- P. W. Tuxen. Can any large body of water be conserved there? It is shallow and perfectly useless.
- 29 Sept., 1886. You know the Darling River and the ana-branches? Yes.
- Yantara Lake. What depth of water is there now in Poopelloe Lake? I have not seen it full, but it must be very shallow.
- Poopelloe Lake. Would it be 12 feet? I should think not; it would be of no use.
- Wangalara Lake. Is there any depth of water in Wangalara Lake? Up to 12 feet.
- Would that be permanent? Yes, if dammed. It has two channels running into it, 15 feet in the centre, and 10 chains wide. I should think they could be dammed across at a cost of about a shilling a yard.
- What body of water would that conserve? The lake is about 6 or 7 miles by about 4.
- Is that the largest depression you know of? It is, there.
- Teryaweynya. Do you know the Teryaweynya? Yes; that is a branch off the Talyawalka.
- What depth of water is there in it now? I have not seen it full; there was only 5 feet of water in it when I saw it.
- Do you think it is possible to conserve a large body of water there? Not in the creek itself.
- Lakes east of Darling. Do you know the lakes on the other side of the river? The principal are Victoria, Teryaweynya, Dry, Eucalyptus, Waterloo, Denny's, Sawyer's, Gum, Bullabulka, and Ratcatcher's Lakes.
- How far are they from the Darling? About 40 miles inland.
- Can a large body of water be conserved there? They would be most suitable for irrigation purposes, as the water is so shallow and the ground round it so boggy that the stock cannot get near it.
- What depth of water is there now? The greatest depth is 10 feet.
- What depth of water do you think is sufficient to justify an expenditure to make the water permanent? I do not think it would keep good for any time. The water in Teryaweynya and Victoria would keep good. Victoria is 60 miles east of the Darling, is 6 miles by 3, and has about 10 feet of water in it when full in flood.
- Teryaweynya. And the Teryaweynya? That has not a great depth.
- What would require to be done to retain the water? It would have to be dammed close to the lake itself in some of the channels.
- Would it be expensive? I think it would be expensive because the country is very shallow on both sides. The upper part of the creek is deep and narrow.
- Could it be led towards the Willandra? Only by cutting through the Dividing Range, which is very high country.
- Suppose the Teryaweynya was not dammed, would the water run back to the river? Yes, the greater part of it.
- Lakes west of Darling. Do you know the lakes on the west side of the river? Yes.
- What are they? Menindie, Tandou, and Kangaroo Lakes.
- Menindie Lake. What is the size of Menindie Lake? It is 10 miles by 8.
- What depth of water? Only 4 feet in a high flood; but there is a lake to the south of it, the Cawndilla Lake, which in high floods would have 15 feet of water in it.
- Would there be 15 feet now? I do not know.
- Cawndilla Lake. Would it be worth while to do anything with Menindie Lake? Not as a reservoir. The Cawndilla would make a splendid reservoir.
- How far is that from the town of Menindie? The top end is about 12 miles south-west of Menindie.
- What are the dimensions of Cawndilla Lake? About 8 miles by 6, but it is egg-shaped.
- Is it lower than Menindie Lake? Yes.
- Could you take the water from Cawndilla Lake down south? No; there are very high banks and very hilly country.
- Natural depressions. As regards these natural depressions, which do you think would be of the greatest national benefit, the natural irrigation by flood-waters as carried on now, or the conservation of the water? Generally the natural irrigation; but I think a lake like Cawndilla could be made use of to irrigate Menindie Lake, and Victoria Lake could be used as a reservoir to flood the lower lakes for irrigation purposes.
- Mr. Gipps.] How is Cawndilla Lake filled? By the Menindie Creek, which runs through Menindie Lake.
- Where does Menindie Creek head? About 4 miles below Menindie.
- From the river? Yes. There is a large waterhole in the Darling just where the creek starts.
- Tandou Lake. This fills Lake Cawndilla first, and then goes into Lake Menindie? Yes.
- How is Lake Tandou filled? By a creek from the south end; by the river.
- What is the size of Tandou Lake? About 15 miles by 10.
- What is the depth? It is very shallow; it is low in the south end and high in the north end. It takes a great time to fill. It is about 4 or 5 feet deep.
- New Lake. What is the area of the New Lake? About half a mile in diameter.
- What is the depth? Of great depth.
- Is it full now? Yes.
- Stephen's Creek. How is it supplied? By Stephen's Creek.
- Where does that head? Near Silvertown.
- Is there any outlet? None at all.
- Are there any dams on that creek? I believe there are several.
- Is the level of New Lake higher than the level of Cawndilla Lake? I do not know.
- Are there any ranges between the two lakes? Only high sandhills.
- Do you think any irrigation could be carried on from New Lake? I believe from the appearance of the country that New Lake is high, but the quantity of water is very limited.
- Does New Lake dry up? Yes.
- Emu Lake. What size is Emu Lake? It is about 3 miles by  $1\frac{1}{2}$ .
- What is the average depth? I could not say, but I think it is of greater depth than the other.
- How is it filled? By a creek of its own from the river.
- Any outlet? It empties into the river when the river falls.
- Overflow from Lachlan. Does the overflow from the Lachlan River come down near this series of lakes supplied by the Talyawalka? No; the dividing range is very distinct and high.

What

What is the nearest point? I was told it was about 40 miles from Sawyer's Lake. There are some small lakes between the head of the Willandra and Victoria Lake, but they are not connected by any system.

What is the average depth of Ratcatcher's Lake? Two feet. The water lasts a long time.

What is the average depth of the Bullabulka Lake? The same as Ratcatcher's.

Does it dry up soon? It dries up at once.

Has Eucalyptus Lake any depth? No.

Waterloo Lake? Waterloo Lake and Victoria Lake are the most suitable for reservoirs.

What difficulty or expense would there be in throwing an embankment across the narrow inlet to Eucalyptus Lake? I do not know the creek there at all.

Would you allow this map to accompany your evidence? Certainly.

*Mr. Donkin.*] During drought the sand is very troublesome? Yes. I saw on the Albemarle Run old dray-tracks leading towards a sandhill 25 feet high, and disappearing under it. This sandhill, which was covered with scrub, had been formed by the wind since the track was made, or probably within the last twenty or thirty years.

Mr.  
P. W. Tuxen.  
29 Sept., 1886.  
Ratcatcher's  
Lake.  
Bullabulka Lake.  
Eucalyptus Lake.  
Waterloo Lake.

Effect of sand  
drifts.

THURSDAY, 30 SEPTEMBER, 1886.

Present:—

MR. DONKIN.

MR. GIPPS.

Mr. Wm. Hogarth examined:—

*Mr. Donkin.*] You are manager of Momba and Mount Murchison stations? Yes.

What is the area of your property? 2,000,100 acres, I think.

How far is it situated from Wilcannia? The head station is about 50 miles distant.

The boundary adjoins Wilcannia? Yes.

How far up the Paroo do you run? About 80 miles from Wilcannia.

What number of sheep do you depasture? At present there are about 340,000, lambs included.

Have you been long in the district? Seven years.

Had you any experience of this part of the country before you came to Momba? Not on the New South Wales side, but in the interior of South Australia.

Is the country in South Australia similar to this? It is in parts, but I do not think the country is as good in South Australia as here.

What is the rainfall in South Australia? Where I was living for fifteen years it was something like 17 inches one year, and down as low as 3 another year, but I think the average would be 5 or 6 inches. That country is north-west of Momba.

Rainfall in South  
Australia.

Is an annual fall of 6 inches sufficient for pastoral purposes? It depends on how it falls. If it fell in two good falls it would be quite sufficient; but if it falls in dribbles of a quarter of an inch at a time it is not sufficient.

Since you have been here, what do you make the average rainfall? A little over 10 inches, I should imagine.

Average rainfall.

Is that ample? It is, provided it falls at the right time.

What fall do you consider sufficient to cause any benefit? In the winter anything less than an inch is of very little use; but in the summer, for the growth of feed, an inch will give a good crop of grass. The grass generally grows here with the summer rains; but of course you get slight herbage with the rains in winter. But the ground being so parched in summer, would not the rain be evaporated? Not if it is a steady rain. You think an inch for the purpose of grass is more valuable in the summer than in the winter? Yes.

Have you noticed the floods in the Darling during your residence here? Yes.

Have you had any experience of floods here before the present one? There was a flood in 1879 when I arrived on the station, but unfortunately I did not see any of the channels where it ran.

Floods.

What is the action of the back-water of the flood with regard to your run? It fills Peery Lake at the present time.

Peery Lake.

How far is that from the river? In a direct line about 35 or 40 miles, but the course the water follows is longer.

Is Peery Lake when full considered permanent? No; the water lasts good about eighteen months, and then it will kill stock that drink it.

What is the reason? The soda and salt and magnesia, or something of that nature. When the lake is dry the bed, which I suppose will cover 6 or 7 square miles, possibly more, is nothing but a white soda pan.

Poisonous  
nature of  
water.

Then the water there is absolutely of no use as a permanent supply for irrigation purposes? I should not think so.

Could anything be done to make the supply permanent? No; the surface is too great.

Paroo in flood.

Have you seen the Paroo in flood? This is the third time within the last seven years that it has entered the Momba Run, but it has not come far on it.

Is there a great body of water brought down the Paroo? In places it is 4 or 5 miles wide, but the depth is not great.

Loss of water.

What becomes of the water? It is all absorbed in the ground. The channel is rotten. After the water dries off there is an immense crop of grass; but three or four years afterwards, unless you have a big fall of rain, the grass dries off, and the ground cracks up.

Do you think any great body of water is lost by percolation? I am certain of it.

In your opinion, would that go to feed an underground supply? Yes.

Copago Lake.

Could anything be done with the Paroo in making any of these creeks permanent? The only lake which could be made permanent by the Paroo would be the Copago Lake, by the cutting of a channel.

It would be expensive, I think, to cut it so that the water would run direct to the lake instead of spreading over the flats.

What depth of water would it have? About 27 feet.

What would be the expense of cutting a channel? I could not say.

What is the depth of water there now? About 20 feet, I should imagine. That

- Mr. W. Hogarth. That will last for a number of years, will it not? I have no experience of my own as to the length of time it lasts, but judging from report it lasts about four years good, and the next year it is unfit for stock.
- 30 Sept., 1880. What depth is the water before it becomes unfit? About 4 feet.
- Lake Peery. When it lowers to that depth it is absolutely unfit for stock? Yes.
- In your own experience, do you know Lake Peery to have been unfit for stock? Yes; at the latter end of 1880.
- Which is the largest of those lakes? Peery Lake has the greatest surface by a long way.
- Diversion of Paroo south-west. Do you think the flood-water of the Paroo could be diverted, and taken down south-west into the dry country? I do not think it could be taken across to the west in any case.
- Have you had any experience in cutting channels to divert the water there? The last twelve months I had a little experience with Bunker's Creek, which runs through Tarella. There is a small lake on the creek, and the water never entered the lake but once, and that was only when we had 13 inches of rain last Christmas. A heavy flood came down the creek, and I took levels; and by cutting through a small sandhill I made a channel over a chain wide and 3 feet deep. Now I have 7 or 8 feet of water in the lake.
- Small cutting. What lake is that? Moorachee Lake. It covers about 2 square miles of country.
- Moorachee Lake. Bunker's Creek is entirely fed by local rains, and runs through Tarella? Yes.
- Before you cut the channel, how was the lake filled? To my knowledge it was only filled after the 13 inches of rain; but the creek ran many a time, and never a drop of water went into it.
- What was the expense of the cutting? £60.
- Advantage of cutting channels. Do you think that principle could be carried out with other lakes and watercourses? I think it could if proper levels were taken. There is a lake not shown on the map which has water in it at the present time, although it is over twenty months since this same creek was thrown back into the lake through a fall of rain. By cutting a channel I fancy the water could be thrown back there if proper levels were taken.
- Natural irrigation. Do you find much advantage from the natural overflow of the Darling or Paroo by the natural irrigation that takes place? For one year after the flood the country is benefited, but after the floods go down the local rains are not of much use.
- Do you think it would be possible to store any body of water in these lakes in order to flood the low lands? Not for irrigation purposes.
- Loss of Paroo water by soakage. Could you give any idea of the percentage, in your estimation, that is lost of the Paroo water by soakage? I could not give you the slightest idea, because the country is so covered that one could not form an estimate. But I have seen the Paroo running about 4 miles wide, and it did not make 200 yards headway in three or four days, and a horse would bog within 200 yards of the water.
- If it were not for soakage would not that great body of water coming down find its way to the Darling? It would have found its way three times within seven years if it were not for the soakage.
- At what rate does the Paroo water generally run? This present flood is travelling about a mile a day, but that is on country that has been heavily stocked. But on country not heavily stocked it took about a fortnight to go 4 miles.
- That slow speed is accounted for by the great soakage? Yes.
- Fissures in the ground. Are there any large cracks on your run? Any quantity of them.
- What depth are they? I have not the slightest idea of the depth, but on looking down some of them appear to be 6 or 7 feet. How much deeper they go I have no idea.
- Is that only in the clay-pans? No; it is on the channel. There is also a channel which runs out from Kallara, and which is about 5 or 6 miles wide. You cannot get on it. There is no solid land on it now. It is just a swamp. When the water dries off you have a splendid crop of grass, but since 1879 the grass has been as black as possible, and nothing green grew on the channel.
- Water lost in fissures. Before the water becomes stationary all these large cracks and crevices have to be filled? Yes.
- Have you remarked the body of water pouring down them? At times you can hear it a hundred yards before you come to it.
- Tanks and wells. What do you depend on principally for your water supply? Tanks and wells.
- How many tanks have you on the run? I think between seventy-five and eighty tanks.
- And what is the average size? They vary from about 5,000 yards to 20,000.
- And the depth? From 12 to 20 feet.
- Best sort of tank. What do you find the most convenient size for watering stock? For this country the larger the tank the better, I find. Not a long narrow tank, but a square tank.
- Do you allow the stock to water at the tank, or do you pump the water out? I allow the stock to water at the tank.
- Evaporation. Have you made any observations as to the evaporation? No.
- Could you state approximately what percentage is lost by evaporation? I should think, judging from tanks which I know hold well, that the evaporation would be about 4 feet in twelve months.
- Have you made any observations as to whether evaporation is greater from clear water than from opaque? I have not.
- You find the evaporation is not so great from the deep tanks as from the shallow tanks? That is so. The evaporation is greater from a long narrow tank than from a square tank. I imagine that is because of the greater amount of water round the shallow edge of the tank where the evaporation takes place.
- Speaking from your experience, you look upon tanks as the most reliable means of providing water? I depend upon wells for my permanent supply.
- Wells. How many wells have you on the run? Twelve. (*Appendix to Report on Darling River, No. 10*)
- What are the depths? They range from 30 feet to 305—that is, wells that have water. I have gone deeper on dry wells.
- Have you any wells flowing over the surface? Not over the surface. They rise very rapidly to within 100 feet of the surface. Some rise from 300 feet to within about 40 feet of the surface. Mount Damper well is 305 feet.
- How far is that from Wilcannia? 35 to 40 miles. The water rises to within 100 feet of the surface—a good supply of fair water for domestic purposes.
- How did you sink that well? With the ordinary slabs.

Did you strike any water before you got to 305 feet? Not in that well.

Or drift? No drift. After about 60 feet we got into a sort of a washed silt, little layers of blue clay and sand, the same as what the river will leave here when the water goes down. There was a boulder or two, but nothing of any importance. The water was got in this silt stuff. Occasionally there were small shells found in it.

Mr. W. Hogarth.  
30 Sept., 1886.  
Silt in well.  
Shells.

*Mr. Gipps.*] What kind of shells? Just small cockle-shells they had the appearance of being. I have a very good specimen of one.

*Mr. Donkin.*] Will you kindly send that to Sydney? Yes.

Was there nothing particular about the sand? It was a fine sand.

Fine sand.

No pebbles? None.

Is there an underground current in that well? I could not say. The water came up the shaft at the rate of over 30 feet an hour.

Does the well become silted up at the bottom? Not that one. There is a well situated about 8 miles south of the one I have just spoken of. It is 258 feet deep, and the water when it was struck rose in the shaft 150 feet in less than ten minutes. The shaft is 6 ft. x 3. The water was struck in sand.

Do you think the drift and the water were the same as in the other well? I think so. I have an idea it is the same water. It rises to within 100 feet of the surface, and I should think the levels are about the same.

If you had had that well tubed from the surface down to where you struck the water, do you think the water would have risen to the surface? I am of opinion it would.

Tubing wells.

The water may now escape through a drift? Yes. If I recollect rightly I believe that just where the water rises to, or perhaps a few feet below, salt water was struck (about 500 gallons in 12 hours), and if salt water was coming in fresh water could flow out.

You have not tried putting down tubing? No. The well at Mena Murtee was sunk before my time, but I have used it for stock-watering purposes. It is about 307 feet deep, and the water rises to within 40 feet of the surface.

From the experience obtained with these wells, have you come to the conclusion that you can obtain water within 200 or 300 feet? I can in this country on the fall south of the local ranges.

Depth to find water.

Is the water soakage from the Paroo River? It is difficult to say where the water comes from, but it is an underground supply; it is not local.

You have nothing to show it is from the Paroo? Nothing. There are artesian springs on Lake Peery, on both sides of the lake.

Artesian springs.

Are they always running? Yes. The water is good, but tastes slightly of soda. There is also another artesian spring here, which we call Peery Well. It is east of Lake Peery. I have put down a well 190 feet, and got stock water; one 460 feet, no water; one 316 feet, no water; and one 350 feet, no water.

*Mr. Gipps.*] In speaking of these wells, could you give us any idea as to the elevation of the surface? No, I could not.

*Mr. Donkin.*] Have your tanks ever failed in drought? As yet they have never failed.

If the tanks have never failed at their depths of from 6 to 20 feet, are they, from an economical point of view, more serviceable and profitable than wells? Yes. Any tanks 20 feet deep have never failed, and are more serviceable than wells; tanks under 20 feet have failed, and are not so serviceable.

Tanks as compared with wells.

But if you had a flowing well at a reasonable depth, would you look upon that as of greater benefit than a tank? Certainly.

Is there any country on your run which has been tried to any depth for artesian water? Not to my knowledge.

You know of no deep wells? 460 feet is the deepest I have gone to, and that was without success.

Do you think it would be advisable to have the country tested for artesian water? I would recommend the country to be tested on the south and west of the range. It would be a benefit to the country to know whether artesian water could be got at a distance away from the mud springs.

Testing of country by boring.

In the country of South Australia, north-west of here, where the climate is somewhat similar, what method do you adopt to obtain water? Wells, as a rule.

Water in South Australia.

Are they deep? No, very shallow. When I left there we had twenty-two wells at work. They were all shallow. The deepest was 150 feet, and some were 60 feet.

Were any of those flowing wells? Not at that time; but since I left my brother got one at 115 feet, the water of which is used for wool-scouring.

The natural feature in South Australia is that you can obtain any quantity of water by sinking? In that region known as Strangway's Springs, on the overland line.

What height were you above the sea? I fancy Lake Eyre is about 30 feet below sea-level, and judging from the flow of the creeks into the lake I should imagine that Strangway's Springs would be a few feet above sea-level. The creek that ran past Strangway's is a very sluggish running creek, and the distance was about 40 miles to the lake. Allowing a foot to the mile, that would bring you pretty nearly on a level with the sea. Not just the Springs, because they are on a mound which is perhaps 100 feet higher than the surrounding country.

Has the idea of bringing the sea in ever been mooted in South Australia? It has been. People have suggested a canal.

Canal from the sea.

Would it be an expensive work? I should think so; but there is a saddle of sand ridges, and I do not know exactly how they would take the water through them.

What extent of country could be submerged? In Lake Eyre, from one point north to south, I should say about 150 miles by 30.

Do you think the bringing in of a large body of water like that would improve the temperature and cause evaporation—would it affect the climate at all or the rainfall? I should not imagine it would. I am judging partly by the heavy rainfall we had in January, 1885. The whole country, you may say, was under water, yet we had a very dry time for six months after that.

Effect on climate.

It is a very dry country there, in South Australia? Yes.

No evaporation? Very little.

But a large inland sea would have some marked effect on the evaporation? Well, this Lake Eyre has generally a surface supply of water in it. I was there fifteen years and never saw it dry.

Lake Eyre.

- Mr. Does Cooper's Creek find its way down? It empties ultimately into Lake Eyre.  
W. Hogarth. Does it find its way to the sea? No.  
30 Sept., 1886. It is lost entirely? Not altogether, because there are chains of waterholes from 8 to 9 miles long. One is almost permanent.
- Loss of stock. During the last seven years, have you lost many stock through want of grass and want of water? I have lost stock through the want of grass more than the want of water.  
What have been your losses here in the drought? Speaking from memory I should imagine they were 24,000.  
In what year was that? The summer of 1883-84.  
You have lost less, proportionately, than anyone in the district? I believe so, from report.
- Want of grass. That was from want of grass? Yes.  
You supplied plenty of water? I had country out back on which I had improvements, but as they had never filled they were of no use for the time.  
In the drought, what did your stock exist upon principally? Mulga, cotton-bush, and salt-bush.
- Spelling country. You say you have lost stock through want of grass;—could any possible means be devised to prevent further losses by spelling portions of the country? I think so.  
Could you possibly have prevented the loss? Not at the time. Possibly I could carry more stock now than then, with the improvements that have been put down lately.  
Have you ever tried the plan of preserving a portion of the run by keeping it unstocked for times of drought? I always reserve the paddocks with the permanent wells in case of emergency. I do not reserve them altogether, but I stock them lightly, so that I could put on a big supply of stock.  
Do you think if that plan were generally adopted throughout the interior it would prevent to a great extent the fearful losses? I imagine so, or I would not do it myself.
- Irrigation. Have you had any experience with regard to irrigation? None whatever.  
Do you think irrigation could be carried on on the banks of those lakes where the water is permanent, or on the river? I believe it can be carried on on the river on a small scale, but even on the river I have seen it fruitless. We had a small garden at the Mount, and because we could not get enough water to irrigate it we had to do without vegetables.  
But if a half-river were kept up, or a navigable stream, you think it could be made use of? I think so, to a small extent. Not for sheep-feeding, but for the working stock.
- Deficient supply of water. Without feed of some sort I suppose the working stock could not have existed during this last drought;—how did you manage? I bought hay and chaff at £50 a ton. But I have been using camels for the dry times, as they can reach the tops of the mulga beyond anything else.
- Hay and chaff £50 a ton. How do the camels answer? Splendidly, in dry times.  
Camels. Have you any on the run now? Thirty odd.  
Are they adapted for this country? There is nothing better for a dry season, but they are no good in wet weather.  
Do they thrive on the scrubs? Yes, they get too fat.  
Do you use them for draught? That is how I use them.  
Do they breed here? Yes.
- National scheme of water conservation. From your long experience here and in South Australia, do you know of any national scheme that could be carried out for the conservation of water, either by the flood-waters or artesian wells? My opinion is that if anything is to be done with irrigation it will have to be done by artesian wells. That is my experience of the country.  
That is, where you could make use of gravitation? Yes.  
You think then that where you have to lift the water or conserve it it would not answer? I imagine that you would not be able to keep a supply for the ground here. The ground takes up so much moisture, and there is the clay subsoil.
- Artesian springs. You think if artesian water were discovered, as in the case of the well in South Australia, that it would be made use of for irrigation? That depends on the quality of it. All round these artesian springs nothing grows except saline plants.
- Saline plants. If that water is exposed to the atmosphere the mineral salts evaporate to a great extent, do they not? The water evaporates and leaves the salt. There is a certain smell in the water, but that goes away, and the sheep drink it better.  
The summary of your experience is that the great feature of the country here would be to discover an artesian supply? Yes.
- Paroo River. Mr. Gipps.] Have you ever seen the Paroo run direct into the Darling? No.  
Does the Paroo run into any sink? The whole bed you may say is a sink. Of course it runs into Peery Lake in a high flood, but I do not know that you could call it a sink.  
When you have no flood, where does it empty? It dies away in the channel, and soaks away.
- Soil. What is the character of the soil in the Paroo channel? It is loam for a certain distance, down about 2 feet, a loose loam. Below that it must be more inclined for clay, but it cracks up. It is similar to the frontage country, only the cracks are greater.
- Kalyanka Creek. What is the appearance of the Paroo channel as it enters the Darling? It enters the Darling through the Kalyanka Creek, the billabong which comes into the township here.  
Is it a shallow channel? About 15 feet deep in places. It is not very deep higher up, perhaps 8 or 9 feet. There is a sort of bar higher up.  
A rocky bar? A stony bar.
- Underground supply. Have you any direct evidence that the percolation from the Paroo River provides for a large underground supply? I have no direct knowledge of such a thing. I imagine it does.
- Bunker's Creek. What is the length of Bunker's Creek? I hardly know. I think it rises higher up than Mr. Quin's country. It runs over about 36 miles of country.  
What is the character of the watershed? The head of it is very hard stony country.  
Distinct ranges? No; they are broken ranges—rolling country.  
What is about the area of its watershed? I have no idea of that.  
Has it a distinct channel? It has a distinct channel before it enters the Momba country, then it spreads out perhaps 2 or 3 miles wide in places, and then forms a channel further on before it runs on to the Paroo channel.  
What is the width of its confined channel? I suppose about 50 feet in places. And



And the depth? From 10 to 12 feet. I am speaking of it off Momba country. It has hardly depth on the Momba country. Mr. W. Hogarth.

Has it a great velocity? After it passes through the Bunker block it goes about 2 or 3 miles an hour. 30 Sept., 1886.

Then it discharges on to plains? It discharges on to the Paroo channel. Velocity.

At present it fills the lake? Yes, at present.

Would it more than fill this lake? It would be more than sufficient to fill it. I only secured about half the supply in putting it into the lake, because I could not carry my drain across the road. Supply.

Do you think it could be thrown into any other depression, such as Lake Peery? It could not go into Lake Peery, but there is a lake at the back into which I think it might be thrown.

Is it a deep lake? Tolerably deep.

What is the name of that lake? We call it Pangora Lake. Pangora Lake.

What is about the length of it? I suppose it would cover about half a mile of country, possibly a little more.

About what depth? It must have been about 15 feet after the big rain. I have not seen the bottom of it. I have not been on it with a boat. There is a good quantity of water in it yet, although it is twenty years since it was filled.

Is Bunker Creek constantly running? Once or twice a year. Bunker Creek.

It runs every year? It has run every year within the last seven years.

For what length of time, as a general rule? About three or four days possibly; but this last winter rain ran continually for about four weeks, I think.

Do you think it would be more beneficial to allow the Paroo to spread out in its present natural condition than to drain it off by a narrow channel? For conserving water bring it into a narrow channel certainly, but whether the cost of doing so would justify it I do not know. Treatment of the Paroo.

Is the bed of Lake Peery good holding ground? Yes.

Do you not think that by taking the Paroo some distance back sufficient elevation might be had to bring it into Lake Peery, and that, by banking Lake Peery, you might have sufficient depth of water to form a permanent lake? Of course the outlet of Lake Peery is the inlet, and the other day the water was going in 4 miles wide. I do not see how the water could be taken in very well at a higher level if this were banked. It could be taken round the hills, perhaps. I do not think much could be done with Peery Lake for irrigation purposes.

Is it too shallow? Yes; and the water is so full of mineral qualities that it would not grow anything after standing a certain time in the lake.

What is the character of the ridges on the south of Lake Peery, about the centre of the run? Rough, broken, stony hills. Stony ridges.

Do they form the gathering ground of Lake Peery? This last 5 inches of rain put about 1 foot into the lake from its own gathering ground.

What is the average height of these hills? From the bed of the lake, I should say from about 200 to 250 feet.

Any rock exposed? Any quantity of rock.

What is the character of the rock? I do not know exactly the proper term. It is a rough, hard, flinty rock; there is very little sandstone. Character of rock.

Any ironstone? Very little. Sandstone is got south of Peery.

Could the waters of the Paroo be spread over a larger area than at present by small narrow channels? I do not think so. Not on the Momba country. The country seems perfectly level.

With regard to Mount Damper well, how far is that from Bunker's Creek? The Bunker channel when in flood comes within about 200 or 300 yards of it. The main channel is not within  $2\frac{1}{2}$  or 3 miles of it. Mount Damper well.

It is on the right bank of Bunker's Creek? Yes; on a sandhill.

What is the character of the water in the well? It is good stock-water; in fact, it is fit for domestic purposes.

Can you reduce the level by pumping? A little. You can take it down about 60 feet by pumping 3,000 gallons an hour.

In what length of time? In about eight or ten hours.

How far is Beefwood well from Bunker's Creek? About 8 miles. Beefwood well.

Can you reduce the level of the water there by pumping? You can reduce the water about 10 feet by pumping 3,000 gallons an hour. But if you let the water stand for two or three months without drawing any a sediment seems to settle on the inlet, and you can take the water down about 20 feet, and it rises up in half a minute, perhaps 20 feet, when the weight is taken off it. By some means or other the inlet seems to get closed.

That seems to be an artesian supply? That is my idea. I know when we put the pump down the well the man working in the shaft let some earth go down the shaft. They started the engine and pump going, and were taking the water out at a great rate. I was looking down the well at the time to see at what rate they were taking it out, and all at once I saw a movement in the water, and it rose 20 feet in a moment. Artesian supply.

Under ordinary conditions you can reduce the level of the well in what time? In about an hour and a half you can reduce it 10 feet.

You never get it lower than that? Not if you are working it regularly.

You have never tried by pumping more than 3,000 gallons an hour? The pump I have would not pump more.

Is the Mena Murtee well situated near Bunker's Creek? You may say it is on a sandhill in the bed of the creek. Mena Murtee well.

Does that give you an unlimited supply? Yes. You can reduce that well about 160 feet. Below that I have not been able to get.

What is the supply? 3,000 gallons an hour.

What are the prevailing winds in summer in that quarter? The wind often gets to the south-east. Winds.

And in winter? There is very little wind in winter.

Is there sufficient wind to keep windmills going? Not sufficient. You cannot rely on them.

Have you any dews at all? Very heavy dews at times. Dews.

In winter or summer? Always in winter.

Every year? Yes. The fore part of this winter there were less dews than I have seen the last seven years.



- Mr. W. Hogarth. years. After the rain started we had very heavy dews. Up to the middle of June there was very little dew.  
30 Sept., 1886. To what do you attribute the dew? I should imagine it is from evaporation after heavy rain.  
Levels of Paroo country. *Mr. Donkin.*] Do you think that any system of surveys to take the levels of the Paroo and the country out there would be of any benefit? I think it would be of service for the Government to know what the levels are if they intend to go in for water conservation, because a person riding over the country is deceived unless he takes levels.  
It is impossible to tell by the naked eye what the fall of the country is? Impossible.  
Have any surveys been made to ascertain the levels? Not that I know of.
- Rain-gauge. Do you keep a rain-gauge on the station? I do.  
Do you supply the Observatory in Sydney with records? Yes, every year.
- Diversion from the Darling. Do you think if legislation allowed for tapping the Darling, say at the Kallara boundary, would it be of any great advantage to the pastoral tenants to divert the water from the Darling right across the country? Provided it were taken into tanks on the solid ground where the stock could water, but stock cannot water in the channel as it is at present, unless it is just at the edge. When the river commences to fall the stock cannot get near it.  
What frontage have you to the river? About 40 miles.  
When the water is low, cannot the stock water? I am speaking of the channel coming in from Kallara—the rotten channel.
- Wool to Adelaide. How many bales of wool do you send off the station? This year we shall send off about 5,500 bales.  
Which port do you send to? Adelaide.
- Railway to Wilcannia. If a railway were constructed to Wilcannia, and the river kept up between the points of the railway, say Bourke and Wilcannia, would the pastoralists make use of Sydney as a port? It would depend on pounds, shillings, and pence, as far as we are concerned. Of course if there were no river down lower they would have to use the railway to Sydney.
- Dams on Paroo. *Mr. Gipps.*] Are there any dams on the Paroo? I believe so; higher up than we are.  
Do you know the height? I do not know. They are on Nocolche and Wanaaring, but I have not seen them.  
*Mr. Donkin.*] Would there not be a great advantage in shipping at Sydney on account of the greater convenience of the port there, as compared with Adelaide? I have had no experience as regards shipping at Sydney.
- Shipping wool from Adelaide. But are there not difficulties at Adelaide? I know we had 800 bales of wool landed at Morgan at 6 o'clock one evening, and the next day it had left Adelaide in the mail steamer at 6 o'clock in the evening. That shows there cannot be much difficulty in sending by Adelaide. The wool occupies twelve or thirteen days in reaching Adelaide from here.  
But it could be at the ship's side in Sydney in two days from here? By rail, I have no doubt.
- Conservation of water by Government. Have the Government done anything towards the conservation of water in this district;—is there sufficient water conserved? There is sufficient conserved by the Government through Momba. There is a dam on the leasehold which throws the water up the creek on to the Government reserve, and the public get the use of the water. With reference to the springs, the Government have done nothing with them.
- Folly in selecting Government tank sites. Have they opened them up? There has never been a spade put into them, but the Government have put a tank, at the cost of about £2,000, within a quarter of a mile of a running stream that would water about 20,000 sheep a day by a little trough. Then, at Copago Lake, which holds about 20 feet of water, there is a Government tank nearly completed, but the contract was stopped through the getting of salt water at 14 feet. A flood would wash the bank of the creek into that tank. A Government tank which cost £1,500 has now silted up.  
In putting a tank down close to the springs, could not information have been obtained from the manager? They could have obtained it if they had applied for it.  
Perhaps they were not aware the spring existed so near? They were well aware of it, because the spring has existed for years. I do not know of any travelling stock that water at the tank; they water at the springs.  
The conservation of water by the Government has not been altogether a success? Not in those cases I speak of. I believe they have a good tank in the 9-mile lake.  
Do you not think such errors would be avoided by a local Government? I certainly think so.  
The case you speak of meant actually £2,000 thrown away? Yes, wasted. Another tank is silted up at Copago Lake.  
Have you known Copago Lake to be dry? It was dry for five years after I arrived here.
- Tanks silted up. Then, without some expenditure by Government or private enterprise, it could not be considered permanent water? No. Still, at the same time, if they had looked for a proper site to put a tank down, their tank would not have silted up.

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Mr. A. Munro examined:—

- Mr. A. Munro. *Mr. Donkin.*] Where do you reside? At Mount Murchison, on the Darling, about 18 miles by land above Wilcannia.  
30 Sept., 1886. You are manager of the station? Yes.  
Flood of 1885. How long have you been in this district? Nearly twenty years about Wilcannia.  
Is there any particular feature about this flood as compared with others? The flood caused by local rain in January, 1885, was different from the ordinary floods.  
Had you ever known a flood before from local rain? No; I have known it rise 2 or 3 feet.  
Did the Paroo run into the Darling? Not from the head of the Paroo.
- Darling and Paroo. You have never known the Paroo to run into the Darling? No; the Darling water came round into the Paroo.  
How did the local rain find its way into the Darling? By the lower Paroo channel.  
Did you say there was a flood in the Darling from local rain? The rain fell about Momba.
- Heavy rain. Did that cause a flood in the Darling? That made the river rise about 28 feet. We had 12.60 inches of rain at Copago Lake in four or five days. One of the effects of that flood was that there must have been millions of yards of silt washed into the Darling, forming banks and filling up holes that were free before. All the creeks cut away. Where

Where did that rain come from? I was not here the time the rain fell.

Where do you look for your heavy rains here? Nearly north-west.

Do you catch the tropical rains from Queensland? Very seldom. Thunderstorms are not as frequent as they were about sixteen or seventeen years ago.

Since your experience here, have you recorded the height of the floods in the river? I have not.

What do you generally gauge the height of the river by? Generally by the Wilcannia reading.

Does a rise of 2 or 3 feet in the river affect you at the station to any extent? When the river is dry it keeps the stock from crossing.

In high flood, is much of the run submerged? Most of the frontage.

What do you depend on to guide you as to the height of the river? The height as from up above.

What have you been accustomed to read by—the bed level, or summer level, or navigation level, or what? Summer level.

What do you call summer level? Say about 2 feet of water, when the river is not navigable.

That is rather misleading, is it not? Yes.

To adopt a zero right through, what would you recommend;—would you take some well-known flood-mark and read from that? I should say 3 feet of water, and call that summer level.

Three feet of water over the bars? Yes.

Are there any rocky bars at Mount Murchison? Two or three. Rocky bars.

Is there any fall in the river there? Very little.

Does it back the water at all? One bar, the Kennedy reef, backs the water up about 3 miles.

How far is that from Wilcannia? About 23 miles by land.

What proportion does the river bear to the road in length, taking in all the bends? About two and a half to one.

Do you think it would be difficult to raise Kennedy bar 2 or 3 more feet? I do not think there would be any difficulty at all.

Do you think any erosion would take place in the banks? I do not think so, because there are rocks to act as a by-wash.

It is only a matter of masonry and labour to raise the water 2 or 3 feet? That is all. Last year I Small dam. built a dam 4 feet high on the Darling, close to the house, and conducted the water over the rocks. It was an embankment about 3 feet wide on top and 4 feet high, and it backed the water up about 1½ miles.

How long did that stand? Until the big flood came—that is, for nearly two months.

Was the water running round? Running round on the rocks. A few sandbags were placed on the wing, and the water did not cut away.

You think there is no difficulty in raising the river where the natural bars are? I do not think so.

Do you know any large depressions where a great body of water could be conserved? On the run Copago Lake. the only place is Copago Lake.

That is filled from the Paroo? Yes, and from the Darling backed up. The present flood-water is backed up within 5 miles of Copago.

Have you known the water in the Darling, from being low, to be unfit for domestic use or for stock? I have known it to be very bad. Some of the waterholes have been quite salt from salt springs.

Have you seen any irrigation on the river? None.

*Mr. Gipps.*] Are there many rocky bars in the river? From Wilcannia to the Marra boundary I think Rocky bars. there are four or five.

What distance is that? Over 100 miles by river.

You think it would be advisable to construct a series of movable weirs on these rocky bars, so as Movable weirs. to provide for a kind of lock system to enable navigation to be carried on between Wilcannia and Menindie and Wilcannia and Bourke? I do not think there would be any difficulty at all, but I believe the river above would silt up. I do not think there is sufficient scour in the river to clear the silt away.

These movable weirs would be about 12 feet high;—what distance do you think they would throw the water back? Perhaps 40 or 50 miles.

Do the flood-waters of the Darling deposit much silt? No; the local rains send the silt into the silt river.

Have you known any large waterholes filled up by silt? Several, but not from flood-water of the Darling, only from local rain.

Do you know of any dams on the Paroo? I do not know the Paroo, except the lower part.

What is the average height of the banks of the Darling River? I think about 38 or 40 feet.

Is your country well timbered? No; some of it is badly timbered.

What is the kind of timber? Gum and box.

Is there much scrub on it? Not much on the frontage.

*Mr. Donkin.*] After your long experience here, is there any large national scheme you have thought of by which a large body of water could be conserved? There is a place about 9 miles from Wilcannia where, by means of a drain 2 or 3 feet deep, the present flood would give from 15 to 20 feet of water. That is on the Paroo Road.

Where would the water run to? It would fill the Nine-mile Lake. Nine-mile Lake

What distance would the cutting be? About 2½ miles at present, from the fall into the lake to the flood-water.

And what depth? About 3 feet.

What body of water would there be at the Nine-mile Lake? About 12 or 15 feet deep, and about 1½ miles across. After the rain of January, 1885, I measured the water in Copago; there was a depth of 27 ft. 6 in. in March.

What depth is there now? I think about 20 feet.

Is the water running in now? No.

That is much larger than the Nine-mile Lake? Much larger.

Could the supply in Copago be augmented? The present flood could not put over 8 or 9 feet more into it.

Does the water run out? A certain amount, as the flood-waters go down. It could be prevented by an embankment about 200 yards long, and about 8 or 9 feet more water would be sent in.

What depth would that give? Over 30 feet.

What would be the height of the embankment? About 8 feet. What

Mr.  
A. Munro.  
30 Sept., 1886.

River-gauge.

Rocky bars.

Small dam.

Copago Lake.

Rocky bars.

Movable weirs.

Nine-mile Lake

Mr. A. Munro. What is the length and breadth of Copago Lake? It is about  $2\frac{1}{4}$  miles by  $1\frac{1}{4}$ .  
 The supply would be absolutely permanent? I would consider it so.  
 What would it be used for? For stock only.  
 30 Sept., 1886. Mr. Gipps.] What is the general width of these rocky bars across the Darling? Some of them go Rocky bars. a long way back under water, from 20 to 100 feet, and some of them go a quarter of a mile from where the water flows over to where the rock disappears.  
 What is the character of the rock? A sort of rotten sandstone of a clayey description. Some of the rocks are very hard and close like ironstone.  
 Do you know this bar close to the township? Yes.  
 Is it right opposite the township? Yes.  
 What width is the bar? It must be about 20 or 30 feet I should say.  
 What is the character of the rock there? A hard sort of ironstone. Some of the bars are porous rock.  
 Mr. Donkin.] These bars run right into the banks? Right into the banks.

Mr. William Orr examined:—

Mr. W. Orr. Mr. Donkin.] You are the District Surveyor? Yes.  
 How long have you been in the district? Three years in all—eighteen months on one occasion, twenty-two years ago; and eighteen months during my second visit up to the present time.  
 Have you had any experience of country similar to this? I have had experience in Riverina. I have been there for the last twenty-two years, occasionally visiting the hills.  
 Where does your district extend to? Northerly to the Queensland border, westerly to the South Australian border, easterly about 120 miles from the Darling, southerly about 120 miles from Wilcannia.  
 Have you been over your district since you have been here? Not since I have been here this time.  
 Irrigation in Deniliquin District. During your experience in similar country, have you seen works carried on for water conservation? I have seen irrigation work carried on at Coonong; I have seen it in the Deniliquin District, and along the Murray; and I have tried a little irrigation myself.  
 Have you seen any irrigation in this district? There is none on a large scale.  
 Irrigation practicable. From your experience in Riverina, is it a success there? Yes.  
 Do you see any reason why it should not be carried on here? I see no reason. I am convinced it could be made a success along the river if water were supplied.  
 What do you mean by a supply of water? If it is possible to obtain water, irrigation is a matter of no difficulty whatever.  
 Would it be too expensive to pump it from the river when low? No; it would not be too expensive.  
 From my observation of what it costs the Municipal Council here to lift the water I am convinced irrigation could be carried on successfully.  
 Losses in stock. Are the losses from stock in this district in time of drought very great? I do not profess to say anything about that. I have seen at various places immense losses, but yet the people themselves have not acknowledged heavy losses. It seems to be the policy of each manager to state his losses are nothing, and that his neighbours' losses are very great. So when I want to find out what a man has lost I generally go to the man's neighbour, and he gives me a pretty good account. But this is simply a matter of curiosity on my part.  
 Would irrigation avert to any extent the great losses in stock? I think it would. I am sure if the question were set at rest as to whether water was obtainable it would save immense numbers of stock.  
 Artesian supply. Do you think it is possible to obtain artesian water for irrigation? I think artesian water could be supplied here much more cheaply than any other. I think artesian water is the water supplied by nature for the purpose. For instance, evaporation here is so fearful that water should be conserved under cover if possible, and of course that cannot be done. But nature has done that already by having the water in the bowels of the earth.  
 Underground supply. Do you think the great soakage which occurs in these rivers, the Paroo for instance, supplement an underground supply? I have an idea that such is the case from having seen the Paroo country, and having heard the evidence of Mr. Hogarth. It is my opinion that a great deal of water is absorbed by the soil. I think there must be some connection between the surface and the subterranean waters down the valley of the Paroo.  
 In speaking of irrigation from artesian wells, what crop would you recommend to raise? I think lucerne would pay here, for the reason that it could be cropped so frequently, but I have had some success myself with wheaten hay. I have watched others growing lucerne, but I have experimented with wheat myself, and have always had a very good crop.  
 Grasses. Are there any natural grasses or herbage here that it would pay to irrigate without cultivation? There is a grass, but I could not give you the scientific name. It is a long tussocky or bunchy grass which seems to stand the drought well.  
 Is this naturally a grass country or a herbage? Herbage.  
 Successful cultivation. Do you think, as a commercial enterprise, it would pay to irrigate to save stock? Not in the present state of the labour market. There is not sufficient population here, but I anticipate it would be successful in years to come, as it has been in the Deniliquin District. A man there with a large family of daughters cultivated land. He had 5,000 acres. He himself was a blacksmith by trade, and did not understand much about stock. He put in about 70 acres of crop, and got a very good return. That summer and the next he was enabled to carry his stock through the drought by giving them the crop in small quantities. He made ample provision for water for them in the shape of tanks.  
 What water did he use to irrigate? He did not irrigate at all. I mean to say, if he could have irrigated he could have carried double the number of sheep. The great want of stock in the summer is water. They can exist with comparatively little herbage if they have water.  
 We have been told by the Stock Inspector here that the losses in one drought were at least 400,000, ---do you think they could have been prevented? I think so, chiefly by conserving water. I think water would have reduced the losses. It is hard to kill stock if they have water.  
 Stock living on water alone. What do they live on? They seem to live on what is in the water.  
 You think that if water conservation is extended these frightful losses might be lessened? I am certain of it, from what I have seen of runs in the Urana and Deniliquin Districts,

was

Was it not impossible to occupy this country before private enterprise had conserved water? It was impossible to occupy it; this shows the necessity for water supply. Besides the Darling, is there any permanent water in your district? I look on Bencanya Lake as permanent. That is on the western boundary of the Colony. Mr. W. Orr.  
30 Sept., 1886.  
Bencanya Lake.

What is the position of it? It is on the direct line from Silverton to Cobham, and about north-west of here, approximately over 100 miles in a direct line from here.

What is it filled by? By local drainage. Apparently it has a system of its own. It was filled in January, 1885.

What depth of water is there in it now? That has not been ascertained. I am merely giving you the information I have gathered from others, but not from personal observation. I look upon all these lakes that are so deep, such as Copago, Cobham, and a small lake down at Menindie, as permanent. Have you ever known the water in the river to be unfit for domestic or stock purposes? Not in my experience. Permanent lakes.

In a time of prolonged drought this would be an utterly waterless district? Yes. I have reason to think that in a long drought the country would be quite untenable.

How long would stock exist without feed in these back runs if plenty of water were conserved? I think until the cold weather sets in. I think they would exist fully six weeks or two months with scarcely anything to eat, in fact three months. I have seen them pawing the ground up and eating the roots fully that period before they died. And some of them would exist through the drought and live until the weather turned, but they seemed to lose their wool, and were as bare as the palm of your hand. I think the best thing to do would be to conserve the water in every hollow throughout the country if possible. If the January rains were conserved in large bodies it might be to the injury of certain individuals who would be deprived of the use of the pasturage within the lakes, but I think it would be a benefit to the country as a whole, because, if the water were there to act upon, Providence would find means for raising it and letting it fall on the earth. Stock existing without feed.

If evaporation were increased in this country, you think it would moderate the climate? I think so. If we had the material to act upon, nature provides the engine in the shape of heat.

Do you think anything could be done on the runs by keeping in reserve a part of them for times of drought? I think very little can be done that way. I think the squatters here are quite alive to their own interest. They just want some assistance in legislation to back them up. For instance, if one squatter had a nice clay-pan, or a nice lake, and more than sufficient water in it, it would be to his interest to dry up the lake. And I think, for the benefit of his neighbours, he should be prevented from doing that. It would be to his interest to dry up the lake for the sake of the fodder, and such a course would not be desirable. Reserving runs.

Is there any national scheme you would recommend for the conservation of water? No. I have read your report, and I agree with it on the whole. But I think that no depression of any kind should be sold; that no frontages should be sold—that is to say, that no land should be sold within 2 chains of the frontage of any creek or river; and that all lands which hold water, such as lakes, should not be sold.

From your experience, the difficulty in occupying this country and the losses have originated through want of water? Entirely through want of water.

Have you had much experience in wells and tanks for conserving water? Only from observation, and in measuring and inspecting them, and so on during the course of my experience. I have seen and measured a good many. I have a well of my own, but it is only a small one. Wells.

Do you think the Government should be advised to test this country for an artesian supply? I strongly advocate that; I think it is well worthy of consideration. The Government should take advantage of some of the shafts already sunk by others. Test sinking for artesian water.

You have heard the evidence about the Paroo;—do you think that river augments an underground supply? I do.

Are you of opinion that the Paroo waters never join the Darling? No; I am not. I am of opinion that they do join them, from the fact that my predecessor was particular in pointing that out to me on my arrival. He mentioned the fact that the Paroo water flowed into the Darling, and he took me to the channels and pointed them out. That water came in in January, 1885. Mr. Munro, in his evidence, bore that out, I think. Paroo waters flowing into Darling.

Do you think the country as a whole has been overstocked? Judging from the appearance of it, I should say not. I think that so far as herbage is concerned they do not know what a drought is here yet. Overstocking.

How many acres do you allow to a sheep in this district? I think with the present water supply that eight is a fair thing.

There have been great complaints throughout the country generally about overstocking;—you think they are not justified? I think they are not. At Wanganella, in the Deniliquin District, where they grow some of the best sheep in the country, the sheep are obliged to eat roley-poley, but here they say the sheep will not eat it.

Will they eat roley-poley when it is dry? When it is not actually dry like sticks.

You think all the bushes that are grown here are edible? Not all, but there is a good deal of herbage here which is edible.

Do you know the lakes of South Australia? Not from personal observation, although I have been in South Australia.

You say you think that by filling up the depressions in this district evaporation would take place, and possibly an alteration in the climate; do you think it would have an effect on our territory if those lakes in South Australia were filled? I do. How far it would affect the rainfall of South Australia I could not say. I think if South Australia allowed the ocean to run into the lakes it would have a beneficial effect through the increase of evaporation. South Australian lakes.

Have you noticed that after heavy floods, when the country is submerged, the seasons continue fairly good;—is there a greater rainfall? There was a very heavy flood prior to my coming here in 1865, and that was succeeded by a very severe drought. The river fell very low, and was dry in places. The country was very bare, although there had been heavy floods the previous year.

What does the State derive the greatest benefit from, the flooding of these black-soil flats, as in the talywalkas, by which means natural irrigation takes place, or the conserving of the water? I think it would be better for the State to distribute the water, that is to say, by means of works to conserve it, and let it be distributed as required. Water distribution preferable to natural irrigation.

Are

- Mr. W. Orr.** Are there any places where that plan could be carried out? I think so, in the vicinity of Menindie.
- 30 Sept., 1886.** But does not a great benefit accrue to these black lands through the natural irrigation? No. By keeping the water a length of time on the land it is made useless. All the vegetation is killed on it. But after the water dries up, does not the land recover? Not quickly; the vegetation seems to be killed. With regard to Lake Woytchugga, we have evidence that after it is flooded, as it is now, the feed would be sufficient to keep all the stock on the town reserve here;—is that correct? I do not agree with that at all. I am sure the little feed there is on the bed of the lake is insignificant. It was quite dry at the end of last year, but I never saw any stock on it.
- Weirs on Darling.** You have heard the evidence with regard to the River Darling, and the possibility of erecting weirs across;—do you think it is feasible to erect weirs on these bars? I certainly do. What is the average fall of the river from Wilcannia to Wentworth? I have it here in a document, showing the fall in 20-mile stages. (*Appendix to Report on Darling River, No. 11.*)
- Locks and railways.** Which would you advise as a State scheme, to keep up a system of locks in the river, or to construct a railway to the metropolis? I think both should be carried out. By means of locks the river would act in unison with the railway, and be a source of great revenue. Do you not think that weirs in between points on the river would be sufficient? I think the lock system would be more desirable. Would not the construction of locks be expensive? I think it would be expensive to erect locks, and they would involve a great waste of water.
- Grey Range and Barrier Range.** *Mr. Gipps.*] Is there any connection between the Grey Range and the Barrier Range? I think not; there is no evidence of it. Is there a distinct gap between? Quite a distinct gap, and the trend of the country is quite different. The Barrier Ranges and the Grey Ranges have different axes altogether. What is the character of the natural features of the Grey Range? I have not seen the range, but from what I hear it is a sort of conglomerate, with nothing special to denote its character. And the character of the Barrier Ranges? Somewhat similar, showing they are probably a primary formation. And the height of the Grey Range? I have been told up to as high as 500 feet. And the Barrier Ranges? About the same. And what width is there between them? There are two gaps;—one is about 18 miles, and the other is nearly 18 also. Are these gaps crossed by any watercourses from Queensland? Yes. The Bulloo water passes between the first gap I spoke of and the ranges, and discharges into Cooper's Creek; or rather, it is supposed to discharge there; probably it did discharge in former times into Strzlecki Creek.
- Diversion of Bulloo River.** Would there be any means of diverting the Bulloo River before it crosses that range? I think it could be diverted with comparative ease, but I believe it serves its purpose better by following the course nature has given it. At the present time I believe it is continuous into Yantara, Yancannia, and Cobham Lakes. Have you examined this country yourself? Not personally. Can you give us any information as to the Wangalara Lake? Not from any personal knowledge at the present time, but probably a few months hence I may be able to give you some evidence, as I intend to see it. I have not had time to visit all such places.
- Artesian supply.** You say you consider nature has supplied a system of underground drainage which would provide an artesian supply;—what reason have you for such a supposition? The fact of seeing the water passing away. At what level? Passing away in the Paroo and other parts. I feel confident there must be an underground channel. How could it be an artesian supply if it passes away under the Paroo;—you could not get it up there? Not there, but at some lower point. What is the character of the rocks in the Paroo basin generally? I have not seen any. There are rocks in the vicinity of the town, but there are no organic relics or specimens of any kind in them. You have no actual reasons for supposing there will be a large artesian supply at any time? My only reason is that I have heard people state they have obtained it in other places, and I have heard of springs in other parts of the country. I also judge by the configuration of the country. Is there any proof whatever of what may be termed an artesian basin—that is to say, a basin flanked by a large deposit of tertiary rocks, which you can see at any time outcropping? You might compare the form of Australia to a saucer of which the border forms the edge or lip, and knowing that the tertiary strata is in the centre, I presume the other would find its way underneath.
- Soft sandstone.** Have you any reason to think there is a thick bed of permeable rocks anywhere within this basin of the Darling? I have not sufficient knowledge of that. I have not come across any permeable rocks here. There is a soft sandstone in the quarry here which I believe to be permeable. What is the character of that sandstone? Eolian, I think. Is it very hard? No; it is comparatively soft and water-worn grit. Is it close-grained? Very close. Is there a thick bed of it? That has not been tested. Has it any inclination? No; it is eolian. You do not know the extent of it? I cannot say. You say you know something of the Urana District? I do.
- Urana Lake.** What is the length and breadth of the Urana Lake? 8 miles by 6. What is the source of the supply? Coonong and Urangeline Creeks, but they never fill it. I have seen Coonong pouring into the lake and disappearing. Is there any outlet? There is one, but it acts sometimes as an outlet and sometimes as an inlet. It is called Cocketjedong Creek. What is the average depth of the pan? Roughly, it is about on an average 20 odd feet, but the cliffs on the bank of the creek are about 90 feet. They show a Devonian formation. Is that the character of the whole gathering grounds of the lake? I think so. You said the outlet of the creek was also at times an inlet of the creek? Yes; it is so flat that when the lake is full and there is no local rain the flood-waters pass away through the creek. I have seen the water flowing into the Cocketjedong Creek, and sometimes out of it.

We have had evidence that Lake Urana has filled from the Murray? Not from the Murray, but from the Murrumbidgee. Mr. W. Orr.

Do you know the Billabong Creek? I do.

Has it a well-defined channel? It has at the higher part, but lower down it bears the usual characteristic of creeks in Riverina. Where it is in the mountains it is well defined; but on the plains it becomes tortuous and ill-defined. 30 Sept., 1886.  
Billabong Creek.

Is it a permanent stream? I should say it was.

Does it bring down a large volume of water in flood-time? I have seen it well filled in flood-time.

Do you know of any sites on it that would make large impounding basins? There is one place which would be very good, I think, on the upper Billabong; but no doubt the basin has been alienated since my time.

Would you advise examination of the Billabong? I would strongly advise the examination of the head of the Billabong, and the head of Urangeline Creek, too.

Do you know anything of the Tumberumba Creeks? No.

What was the quality of the water supplied to Wilcannia during the late drought? It was very inferior. The water obtained from the river seemed to be full of salts of some kind.

Was it drinkable? I certainly thought it was not fit to use.

Do you think it would be advisable to back up the water for the purpose of water supply? I do. I think it would be an excellent thing to store a large body of water, if possible, for the sake of keeping the water pure.

Mr. Donkin.] You were a resident of Deniliquin? I was.

Do you know the Edward River well? I do, well. Edward River.

Is it an ana-branch of the Murray, or has it a separate drainage area of its own? I am certain it is an ana-branch of the Murray. I have known the Edward to be dry when the Murray was nearly dry also.

You think the flow of water in the Edward depends entirely on the Murray River? Entirely.

MONDAY, 4 OCTOBER, 1886.

At Menindie.

Present:—

MR. DONKIN,

MR. GIPPS.

Mr. Nicholas Sadleir examined:—

Mr. Donkin.] How long have you been in the district? Since 1858.

Have you been in this lower part of the Darling the whole time? Between here and Wilcannia, in fact from Wentworth to Wilcannia. We had a station at Tarcoola, near Pooncairie. Mr.  
N. Sadleir.

What is the name of your station here? Albemarle; and I am the manager. 4 Oct., 1886.

What is the extent of it? About 700,000 acres.

Will you please enumerate the floods you have seen in the Darling? They are described in this statement. Floods.

(Appendix to Report on Darling River, No. 12.)

What is the lowest rainfall you have known? It was in 1883, 5.74 inches. Rainfall.

And the greatest? 15 inches, in 1870.

Do you remember the first year the river was navigable? In March, 1858. When I came up the country was unoccupied from Tintinallong to Bourke, on the east bank, a distance of 200 odd miles. Early navigation.

Who is the oldest resident on the Darling—which is the first station formed here? I think Dr. Fletcher was the oldest.

Had the Darling been occupied many years when you came? About four years.

How far did navigation extend up the river in 1858? Some steamers went to Bourke.

From your experience since 1858, what is the average of years that the river has been open for navigation? It has been open for navigation for about thirteen or fourteen years in that time. For five years we have had wool in the shed for twelve months before sending it away.

What is the longest time you have known steamers to be stuck through a low river? Two years, I believe. Steamers stuck.

Is the river here affected by the flood-waters of the Murray? I do not think so, further than the Murray backs up some 60 or 70 miles. Without a flood in the Darling we could feel no direct influence from the backing up of the Murray. If there is a big flood in the Murray the Darling rises much higher, because it does not run off. Murray backing up.

Do you know of any rocky bars in the river? Yes; there is one at Weinteriga, one at the Rocky Waterholes, and there are the Christmas Rocks at Wilcannia. Rocky bars.

Are there any lower down the river from here? That I cannot tell you.

Do you know whether there is a fall at these bars? There is a fall at the bars, or a series of rapids, which must throw the water back.

Do you think it would be possible to raise the rocky bars 3 or 4 feet? Quite possible. I think captains of steamers dread these bars because they interfere with navigation. The river is perfectly safe between the bars, but unsafe over the bars.

If the bars were removed, would it not have the effect of levelling the bed of the river all through? If the bars were removed navigation would not last so long.

Has there not been some agitation to have them removed? I do not know; it would be a serious and foolish thing if it were done. The bars have the appearance of sluice-gates, the water rushes through so fast. This is particularly the case with the one at Weinteriga.

Is that the most noted instance you know of? That is about the only one I know of. It is a rapid there.

You know the ana-branches of the Darling, near Menindie, the Talywalka and the Lakes? Very well. Ana-branches.

Which is the principal ana-branch between here and Wilcannia? That is not a fair question to ask, because they come in above Wilcannia.

Well, up the river, there is no other ana-branch between here and Wilcannia? Many.

Which is the principal one? On the east bank of the river the first of any importance is Three-mile Creek. Three-mile  
Creek.

- Mr. N. Sadleir. Could any large storage of water be made there? The whole lot is a most valuable storage, if the land is any good to irrigate, but I question whether the land is any good. It runs through plain country, and could be easily irrigated.
- 4 Oct., 1886. You know the Talywalka? Yes.
- The Talywalka. Can you give us an idea of the total length of it? It is about 300 miles in length.
- Dam. Is there any large ana-branch running out from the Talywalka again? Yes; an artificial one.
- How is that formed? It is forced out on the east bank of the Talywalka by the erection of a dam across the Talywalka Creek about half a mile west of where the artificial channel leaves the Talywalka Creek.
- How far is that from Menindie? 54 miles.
- By whom was the dam erected? By Mr. Phelps, the owner of Albemarle.
- Do you know at what cost? The dam cost about £3,000.
- Was that work carried out entirely by Mr. Phelps? No. It was conceived by him, and the first work was done by him. Then the lessees of the adjoining stations, Tintinallogy, Teryaweynya, and Tolarno, joined with Albemarle, and paid their proportion.
- Success of dam. Was it carried out in any way under the authority of the Government, or were the Government consulted? After we showed the result of our labours we had it inspected by the Commissioner, Mr. Lockhart, and he considered the work of so much importance to the country, and thought the lessees deserved so much credit for having conceived and carried it out, that he recommended a mile to be reserved all round the system of water. This represented, I think, 444 miles.
- What was the object gained in carrying out this work of diverting the water? It increased the capacity of the country, and enabled it to be improved.
- Filling lakes. What was the object of diverting the water? To fill the lakes and send the water into the back country. There were a series of depressions, some of which showed indications of lakes, and some did not. There was timber—oak, for instance—in some of the depressions, which looked as if it had never been felled.
- In what year was the dam erected? In 1867.
- Had you ever known the depressions to be filled before? No.
- Was there any water in them? Only in those near the creek.
- Would they have been filled if you had not carried out the work? No. The 1864 flood forced out water there, but not a tenth part of it went out, and that flood was  $2\frac{1}{2}$  feet higher than any flood before or since.
- Was the 1864 flood the highest you have known on the Darling? Yes.
- Area of water. Can you tell us the area covered by water in those lakes? About 160,000 acres.
- The perimeter of the water is about 444 miles? That is what we paid for in surveying.
- How far into the south-east country did the water reach through the action of the dam? In a direct line from where it leaves the creek to its extreme southerly point it would be about 50 miles.
- When was the first flood after the erection of the dam in 1867? In 1870.
- And were all the lakes in this series filled? Yes; 10 feet higher than they had been before.
- How many lakes are there in the series? Twenty-two, I think.
- Which is the largest lake? Bullabulka, I think, or perhaps Ratcatcher's.
- How long is that? 9 miles long by  $2\frac{1}{2}$  broad.
- What is the size of the smallest of the series? Pinchgut is about the smallest, and it is about a mile by half a mile.
- Duration of water in lakes. Has the water from the 1870 flood been permanent? No. The 1870 water, which was supplemented by the 1873 flood, lasted till 1878. The lake was dry in the spring of 1878. The flood of 1864 lasted till 1867.
- When were these lakes dry last? They were dry a month ago, and have been dry since 1883.
- You cannot look upon any of them as being absolutely permanent? Not at all.
- In the ordinary course of seasons, how long will they last without being filled? They vary. They afford about three years good stock-water.
- Which do you consider the greatest benefit you derive from the flood: the water supply, or the irrigation of the country? The greatest benefit we derived from the flooding was that it enabled us to improve surrounding country. The increased capacity by irrigation is nil, scarcely worth calculating, because it is not flat country.
- Are the banks of the lakes steep? Rather steep; steeper than the banks of the river.
- Do you look upon the lakes as your water supply? Oh, no. We look upon them as nothing. We have a water system entirely independent of the lakes, but they supply the ground with fresh water underneath.
- Is there great soakage? It is the only place where we can get fresh water. It is within the flood-mark system.
- You say the lakes were dry a month ago;—how many of the series now are filled? I suppose about half the series.
- Do you consider this flood will be sufficient to fill the whole of them? I know it will not be sufficient. I understaud the series of lakes forms a sort of horseshoe, and that the flood enters at one end and gradually fills the lakes right round;—do you think anything could be done to bring the waters of the Darling into the other end of the horseshoe, that is, Ratcatcher's Lake? Nothing could be done.
- Ten-mile Creek. Could anything more be done than has been done by private enterprise to divert the water into these lakes? You could have a larger supply by making a cutting on the Ten-mile Creek, on Billilla Run 20 miles lower down than Wilcannia. By cutting a bar for about a mile in the Ten-mile Creek—the connection between the Darling and the Talywalka—you will get your supply of water in 2 miles into the Talywalka. We had a survey made of the bar, and found a 6-foot cutting would give us a 6-foot lower level, and we would get our supply 60 miles nearer from the river. Besides it would not come through rotten country. It would enable the people who hold the country up above to store water that they are not allowed to do now. Anything they do now cuts off our supply.
- Have any objections been made to the dam erected by the lessees on the Talywalka Creek? None whatever.
- Does it injure any interest? I have never heard of its doing so.
- Water supply into Murrumbidgee River from Darling River. Do you think it would be possible to carry water into the dry country below Bullabulka Lake? I do. I believe it is possible to have a water supply into the Murrumbidgee.
- Whereabouts



Whereabouts in the Murrumbidgee? I can only judge from the indications of the Gundagai flood. I think it is possible for the water to be carried on from the series of lakes down to Waldaira Lake, near Balranald.

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Is it very dry country between the lakes and Waldaira Lake? Very dry. It is very difficult country to get fresh water in. I do not know of any fresh water there fit for human beings.

Do you know whether levels have ever been taken of the Big Talywalka or these other depressions? The only levels taken that I know of were from the Teryaweynya Lake to White-water Lake.

What is the fall between those lakes? I can supply you with the papers. The fall is considerable between those two points. It is about 5 feet in a mile and a half.

You know the fall in the river is about  $3\frac{1}{2}$  inches to the mile? Yes.

Do you know the lakes on the west side of the Darling, near Menindie? Yes.

Which is the principal? I think Menindie and Cawndilla Lakes are; they are the same lake to all intents and purposes. Menindie and Cawndilla Lakes.

What distance is there between the two? There is no distance; they are continuous.

Really you could call it Menindie Lake? Yes. When they are dry they form two lakes, but they are within the same bank.

How does Menindie Lake compare with the lakes on the eastern side of the river for size and permanency? It is not so permanent as the lakes on the eastern side, but the size is infinitely greater.

What is the length, approximately? I could not say.

Do you know the distance round? Over 50 miles.

And about what depth of water? I am not sure, but there may perhaps be 15 feet.

What is the action of Menindie Lake with regard to the river? I believe it keeps the river navigable from Menindie to Wentworth for a year after it ceases to be navigable from Menindie up stream.

When the river goes down below navigation level above Menindie the action of Menindie Lake is to keep it up for another year? Yes.

That is, without Menindie Lake the river would be altogether unnavigable from here? I think so. Steamer captains have told me that the lake has kept the river navigable from here to Morgan, as the Murray was not navigable above the Wentworth Junction.

Do you think it is advisable to carry out any work to impound the water in Menindie Lake? I think it is very desirable to make scientific inquiry first, as the work would necessarily be very expensive.

Do you know Tandou Lake? I have no information about it.

Are there any other large depressions we have not referred to that you could give evidence upon? Not that I could give evidence on. I know there are others, but I am not sufficiently informed about them.

Have you recorded evaporation since you have been here? Yes, and the waste. Evaporation.

What do you consider it is from these depressions? Five feet a year.

Do you know what proportion would be lost in evaporation? I have no idea. The waste from wind is greater than the soakage. The wind blows the water on to the shallows, and the water never comes back again.

Does the dry surface on the banks of the lake crack to any great extent? Not very much so.

When the water is lost by waste, is there a good growth left behind? If followed by rain there is, otherwise there is not. The ground parches.

Would it be possible to irrigate the country surrounding these depressions? Not to any extent. The bank is too high, and the country is too lumpy. Irrigation around lakes.

Have you recorded the evaporation from tanks? Yes. Evaporation.

Is it about the same as from the depressions? Exactly the same—5 ft.

Do you find it makes any difference to have deep water? Yes.

What size of tanks do you consider the best to give a permanent supply? I do not think any tanks in this district will give a permanent supply. Tanks.

What size do you generally adopt? That depends on the catchment. Our largest tanks are from 12,000 to 17,000 yards, with a depth of from 15 to 17 ft. We find less waste when the water gets below the surface than when it is above the surface.

Have you had many losses through the drought? Very heavy losses. Losses in stock

Which was the most severe year? We lost most in 1883-84. We lost all our lambs in that year except 5,000. We ought to have had 80,000 lambs. We cut 50,000, and they all died.

What were your losses in grown sheep? Our actual losses were 156,000 in two years. And besides we got no lambing for one year.

Could anything have been done to prevent these fearful losses? Nothing whatever.

What were the losses due to? Utter starvation. We had sufficient water for the sheep everywhere on all our paddocks. Their loss was due entirely to want of vegetation. Cause of losses

Do you carry out any principle of spelling a portion of the run? Now we do; and I used to do it for the sixteen years from 1861 to 1876. When such was done there was no loss. We only occupied the country for six months in twelve. While we adopted that plan we had no losses, and our returns came in regularly. During those sixteen years we never stocked more than a sheep to 20 acres. Reserving portion of run.

What do you allow now? 10 acres to a sheep.

You have plenty of water now to meet any season? We have had for years.

Is it possible for you to lose again as you lost before? Of course. A small rainfall would bring on the same loss. We have had more than thirty-five men cutting scrub for our sheep during the drought.

Are you spelling any of the country now? Yes; we are spelling half of it.

You think that is the only plan to adopt? It is the only plan to adopt in this part of the country. We have had very severe seasons before. For instance, in 1858 there was only 8.50 inches of rain, which is equal to nothing.

What do you consider to be a sufficient fall at one time to be of any good during a drought? Any-thing less than 4 inches is no good. Rainfall.

And in ordinary seasons? 2 inches is a nice fall.

Have you tried irrigation at all? In a small way. Irrigation.

Have you tried it for crops? For lucerne it succeeds admirably. In fact I could not estimate the results of irrigation if you had the water.

But in the Talywalka and the big dam you spoke of, have you not plenty of water? Over a year after a flood. Results: flood



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flood you have. I have seen irrigation tried by nature on Billilla and Albermarle, and other stations, and it increases the capacity of the country a hundredfold.

One acre irrigated during the dry time would be equal to what area of dry country? It would be improved a hundredfold. I have landed 8,000 sheep on an irrigated patch of 3 miles square in the middle of summer, and had a good lambing; but the very same land, if it had not been irrigated, would not have carried 1,200 sheep.

Do you think anything could be done to assist private enterprise on the river in carrying out irrigation? I do.

What is wanted? To make the dams of a more permanent nature and higher. The wings are not sufficiently extended to keep the overflow from running back into the Darling. We have succeeded in keeping the outer Talywalka back, but quite as large supplies as that run into the river. All this lost water could be retained, and after every flood I think you could irrigate from the date of the arrival of the flood for a year and a half afterwards, and that would influence the growth of the country for at least two years.

Have you ever tried storing the food in good seasons by ensilage? Never by ensilage. Our food here is not of sufficient quantity to collect except in very exceptional cases.

What is the herbage generally grown by natural irrigation? There is grass and crow-foot, marsh-mallows, and the saline plants. Crow-foot is a grand thing.

Have you the blue grass or Mitchell grass here? No.

Which would be the most profitable to grow by irrigation to any extent, lucerne or the natural grass? Lucerne decidedly if it would grow. It is the most profitable grass I know of. We have lucerne on other properties, and it beats everything else.

Is there any great difficulty in preparing the soil for lucerne? I do not think so; but I do not think the soil is entirely applicable. I think it is too clayey. If I had plenty of water I would have no hesitation in planting it.

You think an extended system of irrigation is only held back on account of want of water? That is all.

And that could be obtained by making large reservoirs in the creeks? I do not think you could get a permanent supply by doing it, but you could increase the capacity of the country.

*Mr. Gipps.*] What is the character of the rock forming the bars in the river? Sandstone, I fancy.

Do these floods seem to wear the bars away? Not at all. They never touch the hard bars, but they sometimes scour the sand out. The sand accumulates at the bar while the river is high, and as the river becomes low the scour cleans it out.

Have you much wind in this part? I do not think we get an undue quantity of wind.

What is the prevailing wind in summer? West. Nine months in the year we have south-west wind.

What is the character of the timber? Stunted, useless box and eucalyptus.

Is there much scrub? It is not a scrubby country from here up the river.

Do you consider that timber influences the rain at all? I do, most decidedly. I have seen the result.

Where? Along the river. The summer rains always follow the river timber, and seldom extend more than half a mile back. Clumps of pines attract the rain in the back country. I have seen storms follow the pine ridges, and seem to gather there, where we would not have had rain in country in which the timber is not so well defined.

Would you advise planting of trees? I do not think they would grow without irrigation. Where possible I would consider it advisable.

What is the character of the banks of the Talywalka, are they steep? Very much like the river, but not so steep.

Is the bed as deep as the river? No. The Talywalka is 16 feet deep on an average.

Do you think a larger supply of water might be thrown into the lakes by straightening the Talywalka? I do, but I do not think it would be worth the labour and cost. A cutting at the Ten-mile Creek would improve the supply.

Would you advise the locking of the river at all? If possible. I think low weirs would be very valuable. I do not think it is possible to lock the river.

Movable weirs or fixed? Low-level weirs, that could be raised a few feet. I should think that anyone who would attempt to lock the river as it is at present would be mad. New channels would be formed, because the banks would scour away.

How much water a day do you consider is required for a sheep? A gallon a day.

And for every head of cattle? About 15, I think.

Were many stock lost here for want of water? I do not think many were lost through want of water, but chiefly through want of feed.

Have you constructed any dams across any of the creeks or talywalkas? Yes.

What is the character of the dams? All earthen dams. We like a clay heart and a sand conc.

Do you construct by-washes? In some cases.

Have you any gates to them? Yes.

What is the character of the gates? Sluice-gates. They are lifted up by screws.

Are the sluice-gates in the dam itself? The sluice is in the centre of the dam, on the lowest level of the creeks. So we allow the water to go on its natural level and fill all the creek below us. Then we put our sluice down. When the men below are not satisfied with the supply we lift the gates up. It takes about half an hour.

Do you think if that were done as a general rule that there would be any objection to damming the creek? There could be no objection, because you give everybody what nature would give them, and do not interfere with the supply at all.

Do the sluice-gates cost much? In some instances they do. Large works cost perhaps £2,000; you get a sluice-gate, a bridge, and the command of the water.

Do you use masonry? No, only timber and iron.

Have you any wings to the embankments? No. I can give you a sketch of the works if you like. In every case you increase the section of the creek and the approach to the dam? Yes.

What was the height of the 1879 flood? 39 feet.

According to that the floods of 1870 and 1873 were higher? The flood of 1864 was the highest, then those of 1870 and 1873. The present flood is about 36 feet.

Mr.

*Mr. Donkin.*] What is that read from? Bourke. We always record from there. And what do they record it from there? I do not know. I consider that a 34-foot flood at Bourke flows into the Talywalka.

*Mr. Gipps.*] Do you mean by that that the river has to be 34 feet high before it will flow into the Talywalka? Before the Talywalka will reach us.

*Mr. Donkin.*] What do you think would be the best zero to adopt to read the flood-levels from;— at Bourke they take 6 feet as summer level, at Louth the bed of the river, and somewhere else navigation level? We take summer level to be when the water is running over the bars.

Do you think it would be best to read from a well-known flood level, or from the bars? I should read from the bars, and call that summer level. I should propose the record should be taken as it has been taken this year. The effect of the rise as recorded at Bourke we can gauge.

You think they understand what the rise is at Bourke this year? I think so.

*Mr. Gipps.*] Do you know the Willandra? Yes.

Where does it cease running? I think it goes as far as Clare Run.

Does it ever run into Victoria Lake? No; it is impossible.

On what account? Because of a distinct ridge of high land in between.

If it does join any river, what river is it? The Murrumbidgee, about Waldaira Lake, I should think.

I consider it would be a public advantage if the Willandra were sent down into the back country.

*Mr. N. Sadleir.*  
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The Willandra

Mr. G. W. Moore examined:—

*Mr. Gipps.*] What is your occupation? I am one of the Inspectors of Runs for the Western Division. Have you been long in this district? I have been backwards and forwards in the Darling District for the last seven years, and in the country between the Darling and the Lachlan for five years longer.

Can you give any information as to the country on the right bank of the Darling? Yes.

Over what extent? From here to Netley Run, and Buckalow and Burta, on the South Australian border.

Do you know anything of Cawndilla Lake? No.

Tandou Lake? Yes.

How is it supplied? By an ana-branch of the river. It runs out of the river, and runs in at Polio, I think.

What is the length of the Tandou Lake? About 10 miles; and it is about 3 or 4 miles broad. The average depth is about 25 feet, I should think.

What is the character of the gathering grounds;—are they high? Very high banks. The red scrub country breaks off abruptly on the edge of the lake, almost in cliffs on the southern side.

And on the northern side? Not quite so abrupt.

What is the height of them? The actual banks are about 30 feet, and in some places higher. Behind them run high sandhills.

Has the lake any watershed of its own? No.

Are there no creeks supplying it? There are gutters, but they do not put water into it to any appreciable extent when it is dry. It is full of immense cracks when dry.

Are there any other depressions towards the Barrier Range? There is Nettlegoe Lake, but it is not very large. It is about 2 miles by 1, and of about the same depth as Tandou Lake.

And the overflow from Tandou supplies Nettlegoe? Yes.

Has Nettlegoe steep banks all round it? Yes.

Then it would be easy to prevent the water from going back again? Very easy.

Do you think it would be advisable to impound the water in Nettlegoe Lake? I do not think it would be of any use to that part of the country. It would be of use to the lessee of Netley Run, but not of public utility.

Do you know of any large depressions to the west of that again? There is Waneba Lake, on Wanebah block.

What is about the area of that lake? It is nearly circular, and a little over 3 miles in circumference.

What creek supplies it? Pine Creek.

Is that a permanent lake? No; it will hold water for about three years after being filled by Pine Creek.

It was dry about two years ago, I think.

What is its depth? About 15 feet.

Has it any outlet? None. Pine Creek ends there. The creek runs from Thakaringa Ranges.

What is the character of its watershed? Pine Creek is a narrow gutter through plains. It is about 4 or 5 feet deep, with a sandy bottom, and perhaps 60 yards wide. It gains no water from the country through which it passes. It is simply a gutter from the Thakaringa Ranges.

Is that a permanent creek? It very rarely runs; only once in two or three years.

Does it bring down any heavy floods? Yes; very heavy floods, and runs very fast.

Are there any dams on that creek? No; it is too sandy.

Are there any wells? All along its course water can be got by sinking at various depths, from 190 to 240 feet, I think.

Is it fresh water? Very good water.

What is the general character of the strata sunk through? Firstly alluvial, then they have great difficulty with very fine quicksand.

Is the water in the quicksand? They find it on a bottom below the quicksand. They call it chalk, but I think it is really pipeclay.

Does the water rise in the wells? Not to any great extent.

Is there an unlimited supply? As a rule, a 7ft. by 4ft. 6in. shaft would give a supply of from 20,000 to 24,000 gallons per diem. In one well on that creek they had very good fresh water at a depth of 240 feet, but not a very large supply. Then they bored to a further depth of 40 feet, and were flooded out by an immense rush of intensely salt water, but through the pipe becoming choked they were able to put a cap on the pipe and stop the salt water.

To what level did the salt water rise? The pipe became choked before the water filled the shaft, and the man at work had to run for his life. The water appeared to be artesian, but it was intensely salt.

Do you know of any other depressions? There is a swamp or lake on Buckalow Run, known as Ryan's Lake,

*Mr. G. W. Moore.*  
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Lakes.

Lakes near Darling.

Wells on Pine Creek.

Salt water.

- Mr. G. W. Moore. Lake, which also fills by a creek from the Barrier Ranges, and holds water for nearly twelve months. It is about a mile in diameter.
- 4 Oct., 1886. Are the gathering grounds of the same character? Very similar.  
 What is the general character of that country? Rolling downs, and very dry, as a rule.  
 And the character of the rock? On the ridge there are ironstone, sandstone, and large bodies of reefs of quartz generally running north and south. There is a large quartz-reef there.  
 Where is that? On West Dhoon. On the alluvial level plain I saw an outcrop of quartz, which in the distance I thought was a tent. It is an enormous outcrop. There is a main reef with thousands of tons of quartz in it.  
 Have there been any wells sunk in that country? I do not think there have been any on West Dhoon.
- Wells. On Coultra a well was sunk to a depth of 320 feet, and it gave a small supply of very indifferent water. Do you know the strata they passed through? No; but it was pretty hard sinking, I believe. You may get the information from Mr. J. S. Armstrong, Burta Station, Silverton. He is the lessee of the run.  
 Are there any tanks in that district? The runs are principally watered by tanks.
- Tanks. What is the average capacity of the tanks? They vary from 2,000 or 3,000 yards up to 22,000 yards. As a rule, embankments are put round them, and the water is pumped up to the level of the top of the embankment. I should say the tanks average 10,000 yards, with a depth of from 12 to 16 feet.  
 What is the character of the ground;—is it retentive soil? They are generally placed in clay-pans and cane-grass flats. It is very retentive soil and quick catchment.
- Silt. Does it silt much? There is a good deal of stuff precipitated from the water by the action of copai (sulphate of lime) after the water gets into the tanks. The silt is not actually washed in, because they have silt-tanks to guard against that. But they cannot guard against the precipitation of the water which goes in in a muddy form. The water is, as a rule, very good. On most of the runs they have wells, and they reserve their well paddocks and wells for the excessively dry times, so that when they are pinched in their tank paddocks they fall back on the well paddocks.  
 What is the average depth of the wells? From 90 to 240 feet.  
 Does the water rise in them? Sometimes 20 or 30 feet.  
 What is the average supply? It is from say 12,000 gallons per day to practically an unlimited supply. It is a strange thing that in almost every case in this district where there is a very large supply the water is seldom so good as where there is a moderate supply. A supply of fresh water is rarely over 15,000 gallons.
- Salt and fresh wells. Is there any apparent difference in the natural features of the country where you find the salt water and where you find the fresh water in sinking wells? To a certain extent there is. As a rule, as far as my experience goes, you can always trace the fresh-water wells to soakage, either soakage from the immediate neighbourhood or from some creek that has run into the soil at a moderate distance. Where it becomes like an artesian supply it appears to be more saline.  
 To what extent on the left-hand bank of the Darling can you give us any information? I know the whole of the left bank moderately well from Bourke to south of Tolarno.
- Sandy Creek. Where does Sandy Creek rise? The highest part I have been on is between Condobolin and Cobar, near Moothumbel.  
 What is the character of that country? It is box-forest country, and scrub, and yarran forest. The creek there has a sandy bed, and it runs from there a distance of 200 or 300 miles to Baden Park.  
 Has it a distinct watershed of its own the whole distance? Wherever I have seen it it has. I think it is a distinct valley.  
 Have you seen any exposed rocks along its bed? Yes.  
 What is the character of the rocks? A kind of light sandstone, coarse-grained. It seems to be a kind of aqueous rock, and in many instances is water-worn as if by the action of a sea beating against its cliffs, undermining it, and making caves.  
 Is it of any thickness? I have never seen it tested. It is flag sandstone. On Mount Manarah, Fulham, and Tiltagara there are immense masses of sandstone and conglomerate fully 100 feet thick. There are immense crags of rock of two distinct kinds. There is the conglomerate and the sandstone. You get a mass of conglomerate, and then a mass of sandstone abutting on to it.  
 Are there any dams on Sandy Creek? I believe not. It is too sandy.  
 Is it a permanent creek? It hardly ever runs. It has not been known to run through for many years until it ran at the end of last year.  
 Is there any under-current in it? I do not think there is an under-current exactly, but you can get a supply for domestic purposes by sinking.  
 Are there any wells along it? On the upper portion they have small wells.  
 Are there any large depressions in the basins at all? It is one large depression, but there is nothing of the nature of a lake.  
 No swamps? None of any size. There is a lake filled by a small creek from the channel. I have heard it holds a supply for years. It is on Neckarbo.  
 In about what position on that run? I am not certain on which bank of the creek. It is not very far from the creek.  
 What is the area of that lake? About  $\frac{3}{4}$  of a mile across, and it holds water from two to three years.  
 Where does Sandy Creek discharge? It never ran at the southern end until it filled the lake a short time ago. Then it ran into some box flats. It runs into Baden Park, near Moira Plains; into box flats, a sandhill running right across the bed of the creek.  
 Can it be traced beyond that? I believe there are signs of depressions running south from that towards Mount Manarah.  
 There is no distinct evidence of any channel beyond Mount Manarah? Not that I know of.
- Talywalka Creek. Do you know the Talywalka Creek? Very well.  
 What is the character of the banks of the Talywalka on the east? In some places it has hardly any banks, but in other places there are high abrupt sandbanks that come to the edge of the creek. Where there is a high bank on one side there is a low flat on the other.
- Range. Is there not a range continuing from Mount Manarah which skirts this series of lakes on the Talywalka? There is high ground and belar ridges, which run from Mount Manarah, on the eastern side of Teryaweynya block, and come round by the boundary of Teryaweynya and Billilla, to M'Culloch's Range.

And

And that forms the divide between the Lachlan and the Darling? Yes. The fall from the top of that ridge is all to the Darling on this side, and on the other side it seems to spread to the Lachlan.

Mr.  
G. W. Moore.  
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How does that divide continue past the M'Culloch Range? It continues easterly on the boundary of Fulham and Cultowa runs, forming the divide between Sandy Creek and the Darling River, as far as the Cobar Range.

How far does the range continue south of Mount Manarah? I only followed it down for about 5 or 6 miles. I could not speak for anything further south than that. It is the largest range in this part of the country. It is fully 200 or 300 feet above the surrounding country.

Are there any large depressions besides the series of lakes? There is a number of box-flat depressions running in a north and south line though Teryaweynya and a portion of the eastern part of Albemarle which appear to have been the waterholes of an old watercourse. They have the characteristics of waterholes of an old river.

Box-flat  
depressions.

Are any of them large? From half a mile to a mile in length, a quarter to half a mile in breadth, and about 20 feet deep.

Could they be filled from the Darling when in flood? It is hard to say. If a channel could be cut through that country they would afford magnificent places for storing water. The question is as to whether the levels would suit.

What distance would they be from Lake Victoria? About 4 or 5 miles.

What is the character of the intervening country? Rather lumpy ground and red-soil plains, but no high ridges. The lake bottom is at one level, and the banks are abrupt into it.

Would the filling of these depressions be of any benefit to the surrounding country? It would be of immense benefit. They would water a great deal of country if water could be taken to them. On the edges of these depressions, as a rule, well water can be obtained at a depth of about 100 feet.

Are there any deep wells in that district? The box well is about 190 feet. The best wells I saw on the wells lakes were about from 80 to 100 feet.

Is it good water in the 190-foot well? Fair stock-water.

Does the water rise in the well? About 10 feet, I think.

Is there an unlimited supply? No; a supply of about 2,000 gallons an hour.

Is it good water in the wells on the other lakes? It varies very much. Even on the same lake you may get one well brackish and another perfectly fresh.

What is the average depth you sink the wells on the Teryaweynya Lakes? On Albemarle the average depth would be about 60 feet.

Does the water rise in the wells? You can hardly say it rises. They keep the wells dry, and sink below the water level.

Can they get an unlimited supply? In some places they get a good supply. In some places it is scanty. On Brummy's Lake they get good stock-water, a little saline, but an almost unlimited supply. On Victoria Lake, from two shafts they get about 30,000 gallons a day of good fresh water. On Eucalyptus they can only get about 7,000 gallons a day. On Sayer's they get about 12,000 gallons a day of fresh water. They had to sink two shafts, and work them simultaneously by the same whim. At Ratecatcher's, at a depth of 58 feet, they get a supply of about 16,000 gallons a day. On Bullabulka the depth is 75 to 100 feet. They get good stock-water in two shafts, about 30,000 gallons a day. In another shaft, supplying about 18,000 gallons a day, and one close to it, the water is very brackish, and they could hardly use it.

What is the general character of the strata these wells are sunk through? Soft alluvial, and a great deal of sand-drift.

Is the drift sand at the bottom? Yes. I think they are soakage wells.

Do you think there were many sheep or stock lost during the late drought from want of water? I would have to explain my answer to that. I think an immense number of stock were lost through want of water, but it was in this way: There were so few watering-places that the sheep were massed round the water instead of being evenly distributed over large areas. They destroyed and ate all the vegetation within easy reach of the water, and were then obliged to go long distances out back to get feed. They became weaker and weaker, and sometimes would get out to such a distance that they were too weak to walk back to the water. Thus they died from want of water. There was a certain amount of vegetation, and if they had had water within easy distance of it there would not have been anything like the loss there was.

Losses of stock.

You think every effort should be made to spread these floods over as large an extent of country as possible? I am convinced that would be the best thing to do. Tolarno, Albemarle, and Teryaweynya runs had the heaviest losses during the late drought. If they had had water they would have had comparatively few losses. On Teryaweynya they were bringing in cotton-bush for their horses, but the sheep could not get it. They had 110 trial shafts put down on Teryaweynya, but in every case they struck salt water, but they did not bore below 160 feet.

Mr. Donkin.] Do you think this country ought to be tested as to the feasibility of discovering an artesian supply? Yes, and I have very little doubt that artesian water could be found here.

Artesian water.

Do you know of any wells put down here 2,000 feet? Not in this neighbourhood. I think 320 feet is the deepest I know of in this vicinity.

What would you recommend in order to lessen the great losses in stock, some provision for water, or the keeping of a part of the run in reserve? I think that people who have well paddocks should, as far as they possibly can, keep them as a stand-by for a time of trouble. They should work on their tank paddocks, and when the tanks dry up they would have some vegetation. But where they have overstocked they have been compelled to continue the use of all their paddocks.

Reserving  
paddocks.

You spoke of three stations where they had losses; what would those amount to in the aggregate? The actual death of sheep on three stations was about a quarter of a million in two years, exclusive of the death of lambs.

Losses.

Which are the best for conserving water, wells or tanks? I think more good can be done by tanks than by wells, if the tanks are made large enough with embankments round them, and the water be promptly pumped into them after rains. One tank on Teryaweynya is the Limekilns Tank. There were about 12,000 yards of excavation. It is 16 feet deep, and there is an embankment around it of 8 feet high. It holds 22 feet of water. That tank never went dry during the drought, although there were

were

Tanks.

- Mr. G. W. Moore. were 10,000 sheep constantly watering on it. Cowie's Flat Tank on Teryaweynya is a very similar one. That never went dry. In times of extremity, when water is scarce, a great deal could be saved by making arrangements to water the sheep from troughs. They take away in their wool nearly as much water as they drink. I have seen old ewes go into the tanks till the water was half way up their sides. That was on Burta Station, in the month of May.
- 4 Oct., 1886.
- Natural state of back country. In the back country here, away from the frontage to the river, would it have been possible to occupy it without improvements? No. You can hardly get on to the country to-day without artificial water.
- Natural irrigation on lakes. What is the effect of the flood-waters on the lakes when they subside? As they subside there is very rich vegetation on the margin of the lakes. There is always a fringe where the water blows up on the edge of the lakes. On Teryaweynya Lake and Long Lake there is the finest grass. In the Western Division you can mow hay from the bed of the lake. It is close, fine, even sward, as fine as any lawn. That is divided into small paddocks for stud sheep.
- Worthlessness of lakes. Would you advise the impounding of the water in these natural depressions, 3 or 4 feet deep, for the purpose of water supply, or would it do more good in being used for irrigation? In my opinion, if the lakes had never existed the lessees would have been better off. The lakes have been a curse instead of a benefit, because the lessees have depended on the lakes instead of making water improvements, and when the lakes dried up they had heavy losses. If they had not depended on the lakes the lessees would have put further improvements on their country. I am speaking particularly of Tolarno. The heaviest losses were on Bullabulka Lake, where the sheep bogged and died in thousands. There are now wells on the lake, but very few tanks.
- Scheme for water conservation. Could the water impounded in these lakes be used more extensively for irrigation of the natural grasses? The water in Brennan's and Denny's Lakes could be used if a sluice-gate were put on the channel. Instead of allowing the water to run to waste you would have magnificent results. You have travelled over this district for some hundreds of miles;—what conclusion have you come to as to any comprehensive scheme that could be carried out for the conservation of water? I have travelled some thousands of miles in this district, and, as far as my experience goes, the only scheme that would be of any use would be to keep the water in the river by weirs or any other means that engineers could devise, and to force the water that goes into the Talywalka out as far as possible on the eastern bank. At present, by the action of private individuals on the Talywalka, the water has been forced out 50 miles? Yes.
- Irrigation. Do you think that plan could be extended? I think if larger works were made into the Talywalka, and a better system adopted, water could be forced into the dry country to the south of Bullabulka. There are marks of old watercourses there. At some time or other there must have been a creek through that country. The water could never back up the Talywalka again. You have a report to hand in? Yes, I have it here. (*Appendix to Report on Darling River, No. 13.*) This information has been obtained from about a dozen people, and I have checked one person's information by that obtained from another, and I find the main figures all agree. You have seen the sample of lucerne produced;—could that be grown by irrigation? I have seen lucerne growing in several places in this district by means of irrigation. I have seen it at Tolarno head station.
- Have you seen irrigation carried out? To a small extent. At Albemarle they have a small pump which they use for the garden. They have a windmill at Netley, and a steam-engine at Tolarno. At Tintinallogy they use a whim.
- When irrigation is better known throughout the district, do you think it will be more used? Yes. Any person who studies the gardens on this river will be convinced of the benefits of irrigation. Almost anything would grow in the gardens and orchards of Tintinallogy, Albemarle, and Tolarno. The oranges and lemons are magnificent, and I never saw finer vines in my life. I am certain that with irrigation almost anything could be grown here.
- You think then it is only a matter of experience and education? Yes, but there is another thing. There could be no system of irrigation unless there were conservation of the water of the river. When I came up here a few months ago the river was dry for stretches. When the river gets very low the water becomes salt and hard, because of the salt springs in the bank.
- Lucerne. What would be the most profitable crop to raise by irrigation? I think lucerne is about as good as anything. It is more permanent than anything else. In Victoria I have seen the roots go down 16 or 18 feet to the level of the water in very similar soil to this, but the climate was much more humid. Are these red sand ridges prevalent all throughout the district? In every direction, and as a rule they run east and west.
- Are they affected by the wind? To a great extent; there is a great deal of shifting sand.
- Talywalka dam. Is there any point on which we have omitted to question you? I may say that I heard Mr. Sadleir's evidence about the dam on the Talywalka. I have seen the lakes when full and when dry. I quite agree with Mr. Sadleir that the fact of these lakes being now full is due principally to the dam across the Talywalka at the intersection of the Teryaweynya Creek, which has been erected by private enterprise. This dam has stood for about ten years in the Talywalka? About nine years, I think. There was another dam before, which was a great cause of war. The Albemarle people put it up, and the other people used to cut it down. Then the four people interested came to the present agreement. The work carried out there shows conclusively that other works of a similar nature could be carried out? Yes.
- Weirs. Do you think it is possible to raise the rocky bars in the river 4 or 5 feet? I should think weirs could be put on them. Without erosion of the banks taking place? Decidedly. If there had been a tendency towards erosion it would have shown itself in the case of the natural weirs in the river. If these bars were removed the river would run right away.

Mr. W. J. Faust called in and examined :—

*Mr. Donkin.*] How long have you been here? About twenty years.  
 What have you been engaged in? As a blacksmith and wheelright.  
 You have noticed the floods in the river? Yes.  
 Which was the largest flood? The 1870 flood in my time.  
 How much higher was that than this? 3 feet 6 inches higher.  
 You know Menindie Lake? Yes.  
 Is there a large body of water stored there? A very large body.  
 Does that act in any way in keeping up the river? When the river falls it does to a certain extent, but not very much.  
 Do you think anything could be done to impound a large body of water in Menindie Lake? I think it would be a pity to do so, because it would destroy many thousands of acres of grass country.  
 Is the pasture very rich when the water recedes? Yes, very good. The lignum bush sustains the cattle for many years when the water goes down. Thousands of cattle have been saved on this run through having the lignum bushes to fall back on.  
 How long will this flood keep sufficient water in the river for navigation? It depends. If there be no more supply the river will fall very rapidly. Steamers would not be able to get here beyond six months.  
 Is there much alteration in the township of Menindie through the shifting of the sand ridges? The sand is a great nuisance in backing up against the fences. It has covered several fences completely.  
 Are the residents compelled to remove the sand? No; there is no Municipal Council. If the sand interferes with the houses we must remove it.  
 What do you do for water in the dry times? We have wells, which are fed from the river.  
 Have you known the water to be unfit for domestic purposes? Yes.  
 You are satisfied the water can be applied more beneficially to the growing of grasses than by storing it. Yes.  
*Mr. Gipps.*] What are the prevailing winds? Usually northerly in the summer and westerly in the winter.  
 Are they continuous enough for windmills? I think so. We have wind almost every day, some time in the twenty-four hours.  
 Have you any dew here at all? Very little. We have a little in spring, about July; it is a sort of frost.  
 How long does it last? Not beyond the end of July and the first week of August.  
 Do you know anything of the bars of rock? There is no rock immediately near here. There are sand bars in the river. The nearest rocks are at Weinteriga.  
 Have they been worn much by the action of the floods? I do not see any difference.

Mr.  
W. J. Faust,  
4 Oct., 1886.

Menindie Lake.

Mr. J. R. Holding called in and examined :—

*Mr. Donkin.*] How long have you been at Menindie? I have been here six years. I am post and telegraph master. I have been on and know the Darling River since 1866, off and on.  
 You know the river from Wentworth to Menindie? Yes, since that time.  
 In what state was the river when you came here? In 1866 it was very low, and had been for some time. It was the end of a very bad drought.  
 Was there water in the river? There was little or no water throughout the river. If I remember rightly steamers were high and dry in it.  
 What is the longest time you have known steamers to be stuck through waiting for a flood? From four to seven months.  
 Of course there is often a river here from the back-water of the Murray? No; the back-water of the Murray does not come up further than 60 miles at the most.  
 Is the river navigable here before it is navigable at Wilcannia? No; the water must come down.  
 Do you know any of the rocky bars in the river? Yes.  
 Where are they? I can hardly give you the exact localities, but I know there are two or three on each side of Menindie.  
 Is there one near Menindie? No; but there is a deposit of sandstone, where there may be a bar, about 4 or 5 miles from here. When it is low water you can see the stone in the banks.  
 What was the next flood after 1880? There was a fair river in 1881.  
 How long was the river nearly dry before the present flood? For six or eight months, with fine grass and wattles 10 feet high growing in the bed.  
 You know Menindie Lake? Yes.  
 You described that to the Commission before as in its dry state? Yes.  
 When dry, after the waters had receded, was there rich feed upon it? I have seen very good feed in it.  
 Will the pasture and herbage grow there, after the water has completely gone, without further rainfall? Yes; as fast as the water recedes the herbage grows. The water does not go off all at once, but remains in pools, the surface being uneven.  
 What height here has the river to rise before it overflows into the lake? The water commences to run up the Menindie Creek when it rises about 8 feet in the river.  
 Above summer level or the bed? Above summer level.  
 How much above the bed? I take summer level from the bars, just about when the river becomes stationary, that is to say, when it can fall no more without leaving the bed dry.  
 What depth is there in the river now? 26 feet 4 inches above summer level.  
 That would give about 18 feet flowing into the lake through the creek? Yes.  
 How long has the water been flowing into the lake from the river? For the last four months. There are two separate creeks. The water has to rise about 15 feet before it begins to run into the lake through the first creek or inlet from the river. These creeks appear to me to be lower at the discharges into the lake, and higher at the mouth, where the river runs into them, and the water has to rise a considerable height at the mouth before it begins to flow over into them from the river.

Mr.  
J. R. Holding,  
4 Oct., 1886.

Steamers stuck.

Rocky bars.

River dry.

Menindie Lake.



- Mr. J. R. Holding. You saw the water running in to-day; about what rate, in miles, per hour has it been running? The water in First Creek is running at the rate of  $3\frac{1}{2}$  to 4 miles an hour, and in the other creek I gauged it, and it went 160 yards in three minutes.
- 4 Oct., 1886. Have you seen it running into the lake any previous year? Not in the volume it is now running.\*  
Have you seen it running out? Yes, after the flood of 1879-80.  
Does it run out as rapidly as it fills? Yes, at a tremendous rate, but dependent on the rate the the river falls and releases it.  
What does the lake go down to? It gradually runs out, not dry, but leaves a good body of water in the far end of it.
- Damming the lake. Would it be possible to dam the creeks to prevent the water from going out? Yes.  
Could it be done in the present state of the creeks? Yes.
- Cost. What do you think the cost would be? If it were done by a sandbag dam my idea is it could be done for about £600 or £800; that is, the two main inlets only.  
What depth of water would be retained in the lake? It would average 6 feet at its present level.
- Depth. What was the deepest sounding made by you to-day? Ten feet some inches. To-day we only sounded about one-eighth of the actual area of the lake.
- Circumference. Do you know the circumference of the lake? It is about 60 miles.  
Has any inspection been made of those creeks as to the possibility of damming the waters? There has lately by the Department of Roads and Bridges.
- Instructions to dam lake. Has any action been taken? Instructions have been issued by the Commissioner for Roads and Bridges to dam Menindie Lake.
- Use of the water. If this body of water were conserved, of what use would it be to the district? It would be of immense use in saving stock from having to come to the river for water; it would give water so much further on the road to Silverton, as it would enable Speculation Lake to be filled and kept full. This lake is beyond it again, and gives permanent water for six years when once filled.  
Could any extent of country be irrigated from it? I believe the country all around it could be irrigated. The banks are not as high all round as they are on this side.
- Advantage to navigation. Have you known navigation to be kept up in the Darling through the water from the lake receding and flowing back into the river? I have known it to keep the river open for three or four months for steamers of a draught of 3 feet 6 inches.  
If the water were conserved in the lake, could it be made use of to augment the river supply for navigation? Yes. Of course the question as to how long a body of water running from the lake into the river would affect the river would depend upon the Murray at Wentworth; but my idea is to utilize the water in enhancing the value of the country adjacent by irrigation.  
What distance from here is the river affected by the Murray water? About 120 to 130 miles from here by road.  
What proportion does the length of the river bear to the road? About 3 to 1.  
Do you think the soil here and around the lake is of such a nature that irrigation could be profitably engaged in? I do.
- River-gauge. What gauge do you read the height of the river from here? From summer level, that is when the water is just trickling over the sand-bars.  
But the sand-bars shift, do they not? Yes; but they always maintain a comparatively equal level throughout.  
What would you recommend as the best zero to read from? Summer level, just when the water is awash over the bars.  
Do you think the level as now taken at Bourke is sufficiently well-known to be adopted? I think it is. Navigation level there has been done away with. I pointed out to Mr. Russell, in Sydney, some time ago, the confusion caused by having differences in the gauges. From my gauge all the captains of steamers know exactly when the river is at summer level, that if it then rises 1 foot they have 1 foot of water on the bars.
- Local rains. Have you ever known any local rain between here and Wentworth to have materially affected the height of the river? Yes. Last December the heavy rain that fell—about 4 inches here and about 6 inches at Tolarno—put a series of waves in the river varying from 2 feet to 3 feet 6 inches high; and in 1885, 8 inches of rain in this district caused the river to rise half a banker in the form of a large wave, a similar rain to that just mentioned.  
As a general thing, is it considered that the local rains throughout the course of the Darling augment the river to any extent? It is not considered they do, and they should not be considered as so doing.  
Then where do you depend on the flood-waters? From Queensland and New England. In fact, as far as rain goes, if we depended on what falls from Bourke downwards we would never have a river.  
You exhibited to-day a fine sample of lucerne grown by yourself, was that grown on the red sandy soil? Yes. Entirely by rain? Yes.
- Irrigation. You are satisfied, then, that irrigation could be applied with good results? I believe so, with very good results, because the climate and soil are evidently suited to grow anything.
- Menindie Lake. Mr. Gipps.] How many channels divert the Darling into Lake Menindie? Two. The two main channels are the two creeks; the others are only shallows.  
What is the character of the first channel at the point of off-take from the river? A wide open mouth, about 50 yards across, with a depth of about 11 feet, and the height of the bed above the river channel is about 14 feet.  
What is the character of that channel at its point of discharge into the lake? It runs off into a lot of fingers and smaller channels, and loses itself altogether. What

\* NOTE (on revision):—I have seen it going in several times, in fact every time the river rises 10 feet above summer level the water goes up the creek for a greater or lesser distance, though it may not actually go into the lake proper. I do not think a lesser rise than 12 feet in the river above summer-level reaches the lake bed in any part—that is to say, it does not by the Menindie Creek, nor by Cawndilla Creek, which is very deep from end to end in its course through Menindie Lake, but every foot rise after that would make a great difference. A great spread follows even a few inches rise over a certain level the depth depending on height of river and time it keeps up. On one occasion, in 1882, I think, the creek was then about 15 feet deep, and going in pretty fast, I followed Menindie Creek, from the junction with Cawndilla, in its course through the lake, till it finally ran out in the bed of the lake, where the water was spreading and running into chasms in the ground in all directions. After passing a certain point the current increased to probably 2 miles per hour, and I had great difficulty in getting back with the boat. I should say I followed this feeder from 6 to 8 miles through all its windings in the lake bed.—J.R.H.

What is the depth of the deepest part of it at the point of discharge? It would not be above 4 feet at the present time, but would deepen as the river rose.

Where do you propose the dam should be located in that creek for impounding the lake? Just a short distance back from the mouth.

What would be the sectional area of the channel where you propose to locate the dam? Between 30 and 40 yards in length, and about 10 feet deep. The width would be a technical matter, depending on the pressure.

What is the character of the dam you would propose? Under the present circumstances, now that the water is there, sandbags.

What width of sandbags would you propose to put down? My idea was that the channel should be filled with layers of sandbags, and, as the water went down, if it were found there were any leakage, to strengthen it. Earth should be run along the top, and thrown down on the waterside, so that the water might wash it through and fill the crevices. The dam could also be strengthened on the lower side as the water fell away. How would you propose to fill the channel with sandbags? I should think it might be done by rigging a cradle on wire ropes, and dropping the bags down from the cradle.

What width of dam would you propose? About 30 or 35 yards of dam would answer all purposes.

What is the character of the second channel at its point of off-take from the river? Similar to the first. It is very wide and very deep; about equal in capacity to one-sixth that of the river.

What is its greatest depth? About 25 feet at the mouth.

What is the character of that channel at its point of discharge into the lake? To answer that question directly would be a difficult matter. That creek, after going up about  $1\frac{1}{2}$  miles, has a large branch, which goes into Menindie Lake. At this branch-off the main creek ceases to be called Menindie Creek, and is called Cawndilla Creek. Then it goes right on to Cawndilla Lake, running through the bed of Menindie Lake all the time. As the water rises it spreads out, still continuing its course to Cawndilla Lake. After filling Cawndilla the water ebbs back again, and distributes itself over Menindie Lake.

In what position do you propose the dam should be located in that creek? About three-quarters of a mile from the mouth. It is at a good point, where the banks are high and hard.

What is the character of the banks? Very steep, and of stiff, hard clay, that does not wear away.

What is the depth of the creek at the point of discharge into the lake? That is similar to the first, because it runs off to nothing at all. You could not give a depth to it. The channels lose themselves in the lake.

What is the character of the dam you would propose? Similar to the first.

How much do you think the two dams would cost? I should think the one in the main creek would cost perhaps £600 or £700, and the other perhaps £150, but it is a difficult matter to say. I have not made any calculation as to the actual cost. I merely base my estimate on the supposition that the quantity of earth required would be about the capacity of a station tank of fair size, and to the cost of taking the earth out there should be added the cost of the filling, fastening, and carrying the bags. Tank work averages about a shilling a square yard.

Do you know anything of Pine Creek? Not personally, only from repute.

Why is called Pine Creek? On account of the pines growing in its bed.

Have you ever heard anything relative to the floods in that creek? Very heavy floods come down it, and there is a peculiar feature in connection with it which seems to show that, although it is a drainage creek from the ranges, and runs into a good-sized lake, which it fills, yet there must have been very great droughts in years gone-by, because there are full-grown pine trees in the very bed of the creek. Since the country has been taken up and turned into station property there have been heavy floods in the creek, the drift being left high up in the branches of the pines.

At what height? Considerably over the head of a man on horseback, I am given to understand.

You think, judging from that, that the rainfall is increasing? I fancy it would point to the conclusion that the rainfalls are better than they used to be, or that stocking the country has induced more drainage.

What are the prevailing winds here in summer? North, north-west, west, and south.

And in winter? Principally west and south.

Are the winds continuous, so as to admit of the use of windmills? I know from experience that wind power in summer is quite unreliable. When you want the water most there is no wind. Frequently we go over a week with little or no wind. As a rule, the hotter the weather the less wind we have.

*Mr. Donkin.*] What instruments does Mr. Russell supply you with? Two barometers, three thermometers, and a rain-gauge.

What are the thermometers? A maximum, a minimum, and a mean. The mean thermometer is attached to the barometer.

You are not supplied with hygrometers? No.

You do not know what the moisture is? No. Some years ago, at Wentworth, I was in the habit of taking the evaporation every morning. The system was to put out 14 pounds of water and weigh it every twenty-four hours until it evaporated to 8 pounds, when it was replenished to 14 again, and on the hottest days the evaporation would be about 9 oz. in the twenty-four hours. I now put in statement of rainfall for the present year. (*Appendix to Report on Darling River, No. 14.*)

Mr. W. J. Hanna, C.E., called in and examined:—

*Mr. Donkin.*] You have been already examined before the Commissioners in Sydney, I think? Yes, in July, 1885.

That was during the drought? Yes; one of the worst seasons that this district has ever experienced.

You are Road Superintendent? Yes.

Is Menindie in your district? Yes; it is now the south boundary.

How far does your district extend around Wilcannia? It extends to the Queensland border on the north, the South Australian border on the west, Menindie on the south, and half way to Cobar and Bourke on the east.

How many years have you been here? Three and a half years.

You have seen the river at a very dry time? Yes, when it was a chain of waterholes.

And now at the present flood? Yes.

Mr.  
J. R. Holding.  
4 Oct., 1886.

Pine Creek.

Winds.

Windmills.

Evaporation.

Mr. W. J.  
Hanna, C.E.  
4 Oct., 1886.



- Mr. W. J. Hanna, C.E.  
4 Oct., 1886.  
Rocky bars.
- Do you know of any bars in the river? The following are some of the principal reefs between Wentworth and Wilcannia, together with the approximate distance from the former town:—Avoca Reef, 35 miles; Burtundy Rocks, 80 miles; Ten-mile Point, 125 miles; Christmas Rocks, 400 miles; Wilcannia, 505 miles. There are several bars between Wilcannia and Bourke, but I am unable to state their position.
- Is there any fall at Wilcannia? There is a fall of about a foot.
- Is the water backed up perceptibly? It is backed up about 5 miles.
- Would it be possible, in your opinion, to build a weir on the bar there? Yes; I think it is quite practicable.
- Weirs.
- To what height could you raise it without erosion of the banks taking place? A weir that would interfere with the natural flow of the water would be expensive, owing to the difficulty of protecting the banks against erosion in time of flood. I think weirs in the Darling should be movable, or constructed in such a way that in time of flood the water would be allowed its free flow.
- Does the one foot of bar affect it now? It is scarcely perceptible in an 8-foot rise. The bar is not more than 9 inches or a foot above water level on the lower side.
- Navigation stopped.
- For what length of time have you known navigation to be stopped? About eighteen months to my knowledge, but I believe it has been stopped for longer periods.
- Have you known produce to be detained waiting for a river? I believe two clips of wool have been stored in Wilcannia awaiting a navigable river.
- What do you think should be done with the river to ensure communication? Either locks or movable weirs should be constructed.
- Would movable weirs answer for navigation? I believe they answer for this purpose in other places, but cannot speak from experience. I have not seen them. The reason I mention them in preference to fixed weirs is because they would interfere to a very small extent with the natural flow of the river when in flood.
- Prices of provisions.
- Have you known grain and other necessaries of life to rise in price through communication being cut off? Yes, almost to famine prices. Chaff has been 25s. a bag, that would be £50 per ton; oats, 15s. per bushel; flour was £4 per bag, or £40 per ton; potatoes, when procurable only by coach, 9d. per pound.
- Do you know the country between Wilcannia and the Lachlan and Cobar? I have not been out to Cobar or the Lachlan from Wilcannia.
- Railway from Cobar.
- Would there be much difficulty in constructing a railway to Cobar? I know sufficient of the country between Wilcannia and Cobar to justify me in stating that a railway could be cheaply constructed.
- Which would be most profitable to the State: to construct locks or movable weirs, or to construct a railway to Wilcannia? Without both I consider the Western Division can never be fully developed.
- Locks.
- You think it would be sufficient to keep the river navigable between the points of the railway? That would certainly be a step in the right direction, but I think the river ought to be locked down to Pooncairie at least, because the further it is locked the greater will be the amount of trade kept within the Colony, and an immense advantage would also be derived from the increased storage and distribution of water in lakes, billabongs, &c.
- Filling lakes.
- Will you name any of the lakes or large depressions within your district where you think a large body of water might be stored? There are the lakes on the east and west sides of the river, in all of which water could be stored, and in some cases drained off for irrigation. Several of these are filled from the Talywalka Creek, and from this source the water could by a small expenditure, I think, be taken further back to fill other lakes and depressions.
- Could any of these lakes be considered as permanent supplies if they were dammed? Some of them could.
- What do you think would be most advantageous to the country: to store the water for stock or for irrigation? Where the lakes and soil are suitable, irrigation would undoubtedly be more beneficial. A sufficient supply of water for stock purposes can always be obtained from wells or by excavating tanks.
- Losses in stock.
- You know there have been large losses in stock;—has that been due to want of grass or want of water? To both. In some places where they had water there was very little feed, and inland where feed was sufficient to keep stock alive there was no water.
- Lake Woytchugga.
- Could a large body of water be stored in Lake Woytchugga at Wilcannia? Yes.
- For what purpose would you recommend its storage? If the water could be conveyed from Lake Woytchugga further back, or even parallel with the river, it would be a great advantage, and by a comparatively small expense this could be done; but in this instance it becomes a question as to whether the water impounded in the lake would be more valuable than the rich feed that springs up after it recedes. The latter, I think, would be more beneficial.
- It would be a matter of no very great expense, as you have an embankment and a bridge across the lake? The impounding of the water could be very easily accomplished.
- At about what cost, approximately? About £400.
- How many square miles of water would be impounded? Between 4 and 5 square miles.
- Is it not a noticeable fact in connection with all these depressions and lakes that when the river goes down the water runs again into the river? The water in these lakes having direct communication with the river rises and falls with it. In some lakes, where the bed is lower than the inlet, water is left behind, but in most cases the depth is shallow.
- Growth of feed on bed of lakes.
- Then if the water is not impounded it is lost? At present the water simply irrigates the bed of the lakes, which for some time afterwards will produce excellent feed.
- There is a large area of country now covered by the talywalkas and these depressions;—is there a growth of herbage when the water recedes? Grass and herbage grow up rapidly, but the latter will not, as a rule, stand dry weather for any length of time.
- That is really the result of natural irrigation? Yes.
- Menindie Lake.
- What do you think Lake Menindie would average when full? Roughly estimated, the lake contains about 50,000 acres.
- About what depth? I think the average would now be about 8 feet. If the river kept up to its present level the lake would rise about a foot higher, as the water is about a foot below the present level of the river at its entrance to the lake.

If the water were stored in Lake Menindie, would it augment the supply in the river? It would keep the river navigable for perhaps two months longer.

Do you think the water could be taken from Lake Menindie further south-west to irrigate country? I do not think it could be taken beyond Cawndilla Lake.

Would it be a matter of great expense to impound that water? I think it could be impounded in a temporary way to surface level at the old bridge for about £700.

How would you propose to impound the water? The only way practicable at present would be by sand-bags, and that course I consider would be somewhat uncertain.

When the river ceases to flow into the lake, and they are both at the same level, would there be any rush of water? No; the water would then be still, but would only remain in that state for a short time. As the river falls the outward current from the lake increases to such an extent that it would be impossible to do work under water. The cause of this rapid flow is due to the comparatively small outlet through which an immense body of water has to pass. Instead of converting Menindie Lake into a basin, merely for the purpose of impounding water, I am strongly of opinion that it would be much better to use the bed of the lake for cultivation, &c., irrigating it from Menindie Creek and Cawndilla Lake, which would act well as reservoirs if the river supply failed, as it probably would occasionally for short intervals. The course of Menindie Creek from the river through Menindie Lake and into Cawndilla Lake is very tortuous, the actual length being over 20 miles, with an average depth of from 15 to 18 feet, and about 120 feet wide from bank to bank. It will therefore be seen that in this creek and Cawndilla Lake, containing an approximate area of 15,000 acres, a great natural storage is already provided. From this source the water could be raised and distributed over the whole surface of what is now the lake bed. Before this, or a similar scheme, could be carried out, it would be necessary to construct a lock or weir in the river at the nearest suitable place. But as it is only a question of time until the river, or the greater portion of it, is made permanently navigable, this expense should not be taken into account.

Is Cawndilla Lake filling now? It is nearly full.

Could the water be impounded there? I have not been to the entrance to Cawndilla Lake, but I believe it could be easily done,

You recommend the storage of water there for the irrigation of the 50,000 acres in Menindie Lake? Yes; to supplement the supply from the river when necessary. Regulating works would be required in Menindie Creek and between Menindie Lake and Cawndilla Lake, so that advantage could be taken of all floods and freshes in the river.

*Mr. Gipps.*] What is the character of Menindie Creek as it leaves Menindie Lake? I have not seen it when dry, but believe it is black soil. The channel is well defined.

Is Cawndilla Lake deeper than Menindie Lake? I have not taken levels, but am informed on good authority that it is deeper.

What would be the average depth? I could not say.

And the extreme depth? When full, about 20 feet in the deepest part.

Do you supervise the laying out and construction of tanks? Yes.

What size of tank do you recommend? 16,000 to 20,000 yards, according to the nature and area of catchments.

And what depth? 18 feet at least.

Do you know the amount of evaporation which occurs here in summer-time? Five feet I consider is ample to allow for evaporation and absorption for the whole year.

As a general rule, is the soil of this part of the country retentive? As a rule, it is. After getting down in some cases to 14 and 16 feet, occasionally a drift is met with, but by altering the site a little one way or another this can, generally speaking, be avoided.

Do you supervise the repairs of the tanks? Yes.

Do they silt up much? Not very much. A good deal depends upon the nature of the country.

A tank at Copago, on the Paroo Road, has only been excavated about seven years, and before the flood of January, 1885, it was silted up to within 2 feet of the surface. But that was chiefly owing to its position and the nature of the surrounding country. The site was selected in an off-take from the Paroo, the excavated material being formed into an embankment across the channel. The wind, especially from the N.E. and S.W., acting on the loose sandy soil of the high ground on each side, always carried a certain amount into the channel, which was washed down by the first rainfall. As an instance of the opposite kind, I may mention Boonoona tank, on the road Wilcannia to Hay, constructed in 1870. The silt accumulated to date does not exceed 9 feet.

Do you know anything of the ana-branch leaving the Darling on its right bank some distance below Menindie? I do not.

*Mr. Donkin.*] You are a civil engineer by profession? Yes.

During your experience here as Superintendent of Roads and Bridges you have paid some attention to the question of water conservation, have you not? I have.

What do you think could be adopted by the Government as a national scheme with regard to the Darling? I am of opinion that without the construction of locks or movable weirs in the Darling this Western Division can never be fully developed. For such works the natural facilities are exceptionally favourable. From Bourke to Wentworth, a distance of 896 miles by river, the fall does not exceed 3 inches per mile. Good foundations, I believe, can be found, and in most cases partly, if not wholly, on rock. Besides making the river almost permanently navigable, large bodies of water would be conserved in lakes, creeks, billabongs, and natural depressions, providing a permanent supply for hundreds of square miles of country that in a dry season is little better than a desert. I am convinced that the result of such work would be highly satisfactory and beneficial alike to the district and Colony.

From your experience of the country and the soil, do you think irrigation could be profitably undertaken? I am satisfied that, with sufficient water and proper management, the soil will grow almost any crop, and perhaps two or three crops in a year. There is ample proof of this in the district, but of necessity, on a small scale.

With regard to the back lands in the interior, was the country of any benefit to the State, or could it have been utilised or made productive unless water had been conserved upon it? No. If water had not been artificially conserved the back country must have remained unoccupied, as the rainfall is too light and uncertain to be relied upon. The largest natural reservoirs I have seen perfectly dry.

Mr. W. J. Hanna, C.E.  
4 Oct., 1886.  
Damming lake.

Best means of using the water.

Tanks.

Evaporation.

Silting of tanks.

Necessity for locking the Darling.

Irrigation.

Dry natural state of back country.

Are

Mr. W. J. Hanna, C.E.  
4 Oct., 1886.

Are there any questions we have omitted to ask you? I do not think so. Menindie Lake is about the most important on the river that has come under my notice, and it is the easiest to deal with. Do you think the Commissioners have visited the river at a time when they would obtain the most information? This is undoubtedly the best time for obtaining information, and from personal observation some idea can be formed of the immense advantages to be derived from the construction of a few simple and comparatively inexpensive works.

WEDNESDAY, 6 OCTOBER, 1886.

At Moorara Station.

Mr. C. H. Wreford examined:—

Mr. C.H. Wreford.  
6 Oct., 1886.

Mr. Donkin.] How long have you been here? Sixteen years, within a few days.  
Have you been the whole time on Moorara? Yes.  
What distance is it by the road from Wentworth? 100 miles.  
How often has the river been dry since you have been here? Only once.  
When was that? In 1885.

Dry river. What do you mean by being dry? You could walk across the river in lots of places without wetting the soles of your boots. Of course there was a great deal more of the bed of the river covered with water than there was quite dry, but still the river had stopped running.  
How long was it dry? I could hardly say.  
Have you been unable at any time to send your wool away? No; but I have carted a portion of the clip of four seasons to Wentworth, and the whole of last year's clip.

Rocky bars. Are there any rocky bars that you know of in the river? There are what they call the Christmas Rocks and the Burtundy Rocks.  
Are there any rocks between those two places? Not that I know of. The Burtundy Rocks are about 50 miles above Wentworth.  
Is the river backed up by the rocks there;—is there any fall in the river? I do not think so.  
Do you think it would be possible to erect a weir or locks on the bar at Burtundy;—suppose the river were raised 6 or 8 feet, would that cause the banks to wash away? I should think not, if it were properly done.  
Have you noticed the effect of any impediments put in the river? I do not understand locking rivers, but I should think it would be quite possible to lock this river.

Banks do not erode. You think the banks would stand? I should think you might pick out places that would stand.  
You have seen some places where the river has cut across bends? Oh, yes. There is one place near Polio Station, about 6 miles by land from here.  
Has that been cut away since you have been here? No; it had the name of Polio Island fourteen years ago. But the tendency of this river is not to cut fresh channels? The tendency is certainly not to cut fresh channels, but of course the river cuts away going round bends.  
From your experience, the course of the river has been the same, as far as you know? Yes.  
How does the length of the river compare with the road? In the proportion of about  $2\frac{1}{2}$  to 1.  
What is the area of your country? A little over 1,000,000 acres.  
Is there any natural permanent water at the back of the run? No.  
Are there any depressions or creeks? Depressions, but not creeks.  
How did you occupy that back country in the first instance if there was no permanent water? If we had a wet winter we occupied it for about three or four months, and sent the sheep back there for that time; but if it was a dry winter we could not send them back at all.

Wells. What have you done out back in the way of conserving water? We have wells and tanks now.  
Which do you find answer best for a permanent supply? Wells; we have one good well which has been better to us than all the tanks.  
What depth is it? 100 feet.  
Does the water flow to the surface? We have to raise the water by a whim.  
You do not use windmills? No.  
Would they not answer at these well? They would not be reliable.  
Do you think there is any possibility of obtaining an artesian supply in this part of the country by going deeper? I could not give an opinion.  
You do not know of any wells that have been put down 1,000 feet? No. We have two wells that are worked by steam.  
What depth are they? One is about 80 feet, and the other about 70 feet.  
Do they give you a continuous supply? No.  
What I mean is, have you sufficient for all the purposes of watering stock? No. One of them would water about 8,000 sheep. It is fair stock-water, but a little brackish.  
Is it fit for domestic use? No. As to the other well, we found the water to be too salt even for the use of stock.

Different waters on same level. Whereabouts is that well you speak of now? Somewhere about 60 miles north-east from here. In the first place we put down a trial shaft, and got moderately fresh water, almost good enough for the use of man. Then we went perhaps 70 feet away and sank the main shaft, and got the same water. We applied an engine to the pump, and found there was only a small supply. So we put a bore down, and up came salt water. Then the difficulty was to stop the salt water back and get a supply of the fresh water. So we had a lot of clay rammed down the bore in little bags. We believed we had shut off the salt water and had got back the fresh. We then started a drive from the main shaft to the trial shaft, the drive being 3 feet wide and 5 feet high clear inside the timber. We did this for about 50 feet, and at the end of the drive we made three bores—onestraight east, one south-east, and onenorth-east. From these bores we had three different waters,—one comparatively good for stock, another slightly salt, another very salt.  
Were they on the same level? Yes.  
How do you account for the difference? I cannot account for it at all.  
Was there any difference in the formation—was it all drift? The drives were on a perfect level. The water was got in drift.  
Was it a coarse drift? Yes.

You

You did not have the waters analysed? I think we did send some down, but it was lost on the road.

What are you doing with the well now? We are not doing anything with it.

You had to abandon it? We had to water sheep with it at the time because we could not water them anywhere else, and the consequence was a few hundreds died.

In carrying out the work 60 miles away in the dry country, how do you provide for the men and horses? At that time we had to cart the water in a tank to them.

What is the process in making a tank? If we get a wet winter we take advantage of it, and put down a few small tanks; but we may have to wait two or three years for the rain. The largest tank which we have put down is of about 50,000 yards capacity. Tanks.

And what depth? This tank is what is called a high-level tank. The depth of the excavation is about 13 feet 6 inches, but the water runs in from the top, and we make use of the dirt. So you can put in about 18 or 19 feet of water.

What do these tanks cost, say a tank of 50,000 yards? 1s. a yard at the very least.

Is that tank permanent? No.

Was it dry in any of the droughts? It has been dry.

From your experience, what do you consider is the best means of obtaining water for stock in these long droughts, deep tanks or wells? Wells, if you can get them. But my experience is that we have got only one well really good on the run after at least fifty trial shafts.

Did you lose many stock in the drought? Yes.

Losses in stock.

Can you give an idea of the loss? It would be very difficult for me to tell.

Say in one year, in 1884? I should say we lost about 25,000 sheep, besides not having any lambs.

What would the lambs amount to in ordinary seasons? We should have had 25,000 lambs.

In a good season you might have been 40,000 or 50,000 to the good? Yes.

Were the deaths caused by want of water or want of grass? I think I may say by both. They died from want of grass where we had water, and of course we had some feed where we could not possibly get water.

What feed had you? Natural herbage, salt-bush.

Had you any grass? Certainly not.

Could anything be done in future years to prevent these losses? If you could order us a fair rainfall.

By spelling portions of the run, could these disasters be prevented? I do not think anything could be done to prevent losses like what we have had in the last few years. Increased rainfall is the only remedy.

Have you ever tried spelling portions of the run for bad seasons? I cannot say we have ever overstocked. We have never had more than one sheep to 13 acres on this run.

Had you to buy chaff for the horses in a dry season? Yes, for many seasons.

Where do you obtain it from? We cart it from Wentworth.

What amount for one year have you paid for feed? The worst year we had cost us about £700, but we lost a large number of horses, and had to feed a great many on flour and sugar, and a material we call chaff made from the oak-bush, which we cut. We had not a team fit to carry chaff from Wentworth, so we used flour and sugar, of which we happened to have a good supply, to try to keep them alive. Feeding horses on flour and sugar.

Judging from the look of your garden this soil will apparently grow anything? Yes, with plenty of water it will.

Would it not have paid you to irrigate for a crop? It takes time to start irrigation, and we were not prepared. Irrigation.

Had you sufficient water in the river if you had started irrigation? That would be doubtful, I think.

Suppose all the stations started irrigation, there might have been no water in the river.

I suppose you have kept your garden going entirely by pumping from the river? Yes.

Has the irrigation been a success? Oh, yes, as far as the garden is concerned.

Have you seen irrigation tried on the river? I have seen it at Tapio.

Has it been a success there? I think so, comparatively.

It all depends on the water and the lift? Not entirely. I do not think you could find 10 acres equal to the natural soil of this garden between here and Wentworth.

Is there good soil where the sand ridges abut the bank of the river? Yes; there is a little space between.

Do you find the sand ridges better for production than the black-soil flats? In ordinary seasons.

With water, which would grow the best crop, the sand ridges or the black flats? I have never seen our black flats look so good from rain as this year. But this special spot is on the foot of a sandhill, which is a sort of a mixture of sand and black soil. One runs into the other.

But do you think the black-soil flats all along the river would grow lucerne if you had plenty of water? I have never seen lucerne tried on them.

What is the character of the soil at Tapio? Sandy.

Have you any ana-branches on the run? No. The water goes out about half a mile from the river.

How long will it take this flood in the river to go down without further supplies;—will the river keep up for six months? Oh, no. I should say, without more rain, from ten to twelve weeks.

Is much water taken down the Great Ana-branch;—have you seen it to run? I have just seen it running, but I do not know what water goes down. Of course there is a great deal of water running into the lake.

*Mr. Gipps.*] Are there any large waterholes in the river near here? There is a good waterhole here which I have never seen anything like dry, and 10 miles up there is another large waterhole. Waterholes

What depths are these holes? I have never tried the depths.

What length do they extend? The deep holes are certainly not more than about from 50 to 150 yards.

Do you pump a large quantity of water from them? I suppose this garden is not more than an acre, and we only pump for that.

Does that pumping seem to reduce the level of the water? Not perceptibly.

Do you think there is any under-current in the river? There might be a very little soakage.

What is the character of the water in the waterholes when the river ceases running? It gradually becomes brackish.

Fit for drinking? Some people object to it, but we have to use it; there is nothing else. I have never found it injurious myself.

What is the general character of the country on your side of the river;—is it flat or hilly? It consists of mallee and porcupine sandhills, with small patches of salt-bush.

How far do the river flats extend to these sandhills on your run? Half a mile.

Do these sandhills extend as a regular ridge forming the divide between the Darling and the Murrumbidgee? Sandhills.

Mr. C. H. Wreford.  
6 Oct., 1886.

Murrumbidgee? We have sandhills here within half a mile of the river, and then we may have broken plains between, but we have sandhills out 50 miles from here. There is no doubt there is an irregular ridge. After you get from 50 to 70 miles out from the Darling I do not think you would meet with any more sandhills till you reach the Lachlan.

What is the average height of these sand ridges from the level of the river bank? They are of various heights—I should think about 50 feet.

What is the character of the river bank—is it rocky? It is certainly not rocky. There are a few rocks, but they are the exception.

Is it stiff clay or sand? You can generally get clay on one side, and sand on the other. It is principally clay, I think.

Is it permeable? Not much so.

Wells. With regard to the first well, which was sunk 100 feet, what was the character of the strata? Clay for a certain distance, and then drift sand, so drifts that the man who sank the well could not go below 85 feet. The supply he got for us was not more than 600 or 700 gallons per hour. The consequence was we would have to keep on baling night and day for the sheep. Then we employed another man, who had a patent cylinder, which he put down at great cost through the drift. By using round buckets he got us a good supply, but the drift was so fine that he could not possibly timber the well.

What was the character of the water? It is brackish. Sheep do fairly well on it, but they do not grow good wool. They drink it readily.

Do you draw on it continuously? Not all the year round; only when the dry weather sets in.

To what level did the water rise in the well? In the first place not more than 6 feet until we got the cylinders put down; then we had from 14 to 15 feet of water.

What quantity of water have you pumped from it regularly? We pumped about 16,000 gallons in the twenty-four hours.

Did that reduce the level? Only to a certain point, to about 8 feet.

And you think no amount of pumping would have reduced it lower? I think it might have been reduced lower.

Was the well sunk in a watercourse or clay-pan? It was sunk near a depression on the edge of a cane-grass flat.

What depth have you generally sunk your trial shafts? From 70 to 160 feet.

Never over 160 feet? No; we generally get very salt water from 70 to 100 feet.

What is the general character of the strata you passed through in those wells, drift or sand? Through clay, and then drift and sand.

Coarse drift? Sometimes coarse, but usually very fine when we get the water.

Are there any depressions on the run? Yes.

Are they ever filled with water? They are shallow depressions, and have never been properly filled. Even in 1870 3 feet of water was the greatest depth we had, except in one depression.

Are they filled by local rains? By no other means except local rains.

Are there any long watercourses on these sand-ridges? None.

Winds. What are the prevailing winds in summer-time? I think about south-west.

And in winter? I think north-west.

Do the winds blow strongly and continuously? They blow more in summer than in winter.

More during the night than the day? During the day.

What is your average rainfall for the last fifteen years? About 9 inches, I think.

Does the rain come in heavy storms or continuously? After all my experience I do not know how it comes. We used to get it in storms, but the last few years what we have had has been in drops.

It has not been of much benefit to vegetation? Very little till this year.

Have you any heavy dews? Very few.

At what season? What few dews we get are generally about June and July.

Does not this flooding of the country affect the fall of dews at all? I could not say. We do not derive any advantage from these floods at any distance from the river.

Rainfall. Mr. Donkin.] What is the lowest rainfall you have had? Speaking from memory, about 6 inches.

Do you generally get the rain at one particular time of the year, or is it distributed over the twelve months? At no particular time; we get very little.

Is there any certainty as to when you may expect it? We are never certain of getting any.

Six inches in two falls in the year would be sufficient to keep up herbage, I suppose? It would be better than the way we have been getting it for a few years.

What do you consider would be a sufficient fall in a dry time? We have had so little rain that we are glad to get anything, but I think after a very dry time nothing less than about 2 inches does us much good.

After your experience of these dry times here, do you intend to irrigate for fodder? Well, I intend to clear out the first chance I get. I do not intend to try irrigation.

Mr. Gipps.] What is the area of your largest depression? I think about 3 square miles.

Could it be filled from the river? No; it is not possible, except at an enormous cost.

Is there any creek which feeds it now? No.

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FRIDAY, 8 OCTOBER, 1886.

At Tapio Station.

Mr. A. T. Brooke examined:—

Mr. A. T. Brooke. Mr. Donkin.] How long have you resided on the river? I have been here constantly for ten years.

What is the area of your run? 800,000 acres.

8 Oct., 1886. About what number of stock do you carry on the run? We have shorn 130,000.

Have you known many floods in the Darling? Several, but I could not enumerate them. The 1879 flood was the highest we have had since 1870.

How much higher was that than the present one? I could not tell that without looking, but I should say about 6 feet.

You have a gauge in the river, have you not? Yes.

Back-water of Murray. The rise in the river here depends a great deal on the back-water from the Murray? Yes.

Do

Do you know how far up the Darling the Murray waters affect it? Up to Seaward's selection, about 10 miles from here. That is a regular thing.

Have you any rocky bars in the river? There is only one that I know of; it is about 5 miles up from here.

What do you call that? Mypumby.

What is the description of rock? Sandstone; but I do not know whether that is the real name.

Do you think it would be possible to build a weir on it? I do not know anything about weirs.

You have known the river to be low? I have seen it absolutely dry. That was last year.

Was it dry for any time? The Murray kept it up here. A little water came down the Murray and backed it up here.

If it had not been for the Murray the Darling would have been absolutely dry? Yes, except the water-holes.

What zero do you adopt in reading the gauge here? Our gauge registers a foot when the "Trafalgar" steamer can get up here. River gauge.

What do you understand as summer-level? It does not mean anything; everybody has his own summer-level.

They telegraph from Bourke so much "above summer-level";—do you understand that? Yes; we know what 40 feet above summer-level at Bourke will do here, but everybody seems to speak of summer-level at random.

What do you recommend should be adopted as zero? The height of the 1870 flood, and to read downwards from that.

Is that flood well known? It is marked everywhere, I think.

Would not the present flood be better known throughout by the present settlers on the river? I am not sure; the 1870 flood was in everybody's house, and is marked on the trees.

Has navigation been stopped for any lengthened period here? It is stopped every year from about Christmas to May or June. We are wholly dependent on Murray water for navigation.

Is there any particular season of the year when you look for a rise in the Murray? Yes; it is generally at its highest at the end of October.

What is the rise caused by? Snow-water.

How do you account for the body of water in the river here being so much less than at Wilcannia? I cannot account for that at all.

What I mean is this, the river is over the banks 2 or 3 miles further up, and as we approach to the junction of the Murray it is so much more confined? It may be deeper here.

What is the depth here now? It is about 20 feet.

It is 42 feet at Bourke;—can you account for the difference? Well, the Ana-branch takes off nearly as much as the Darling, and there are other creeks; and there may be an underground soakage. This seems probable, because the river went dry up above a month before it went dry here.

How do the bends of the river compare here with the straight road? As 3 to 1. It is 33 miles to Wentworth by river, and 12 by road.

Since you have known the Darling, have the floods been confined to the large channel, or have any new channels been cut? The floods have cut off one bend of about half a mile. Action of floods.

Is that action going on now? I think so. I think the next big flood will cut off this bend in front of the house. The river is silting up too.

More at present than formerly? I think all the deep holes are being filled up.

Can you account for it? I think it is by the action of the steamers, which are always washing silt in.

In the few years since navigation has increased, have you noticed any difference with regard to the caving-in of the banks? Of course navigation was going on when we came here, but not to the same extent. There was a deep hole in front of the house, which is all filled up.

Do you account for that by the wash of the steamers? I think so, to a certain extent, but of course wind and current have an effect too.

How long do you reckon the present flood will take to fall to summer-level? I think it will take fully two months.

Have you ever, in a low time here, dammed the river? Yes; last year we had it dammed.

Did the dam throw the water back to any distance? It was back-water of the Murray that we dammed with sand, and the dam lasted till another flood came down, in a fortnight. Three men made the dam in a morning. The water was only intended for the garden. Dam in river.

Have you known any dams of any size to be put in the river? No.

You have a considerable area of dry country? Yes, almost all of it.

Before water was conserved on it, was it possible to occupy it? No.

You have no natural water on the run except the river? No; and except two dry lakes, in which there is water occasionally in time of flood. One is called Fletcher's Lake, and is about 1½ miles by 1½ miles. Lakes.

It is about 1,000 acres in extent, and is on Tiltao and Outer Tiltao.

That is filled by the overflow of the Murray? Yes; it was last filled in 1875. We got 3 feet of water in it in 1879.

Do you think it would be possible to conserve any depth of water there? It would conserve about 12 feet.

That would be almost permanent? Well, it lasted from the end of 1875 to the beginning of 1878, without any dam being made.

Which would be the most profitable undertaking: to fill it for watering stock, or for irrigating the country? That would depend altogether on whether you had to pump your water. I should irrigate it and sow it with lucerne.

I mean, to bring the water by gravitation? Then it would be best to use the water for irrigation.

Have you found since you have been here any falling off of late years in the flood-waters of the Murray?

There has been no flood in the Murray worth speaking of since 1879.

Do you think that is accounted for by the draining off of the water? I think it is accounted for by general drought.

How do you supply water for the stock on the back of the run? By tanks.

What description of tank do you find the most serviceable and permanent? 20,000 yards is the largest we have. Tanks.

And

- Mr. A. T. Brooke. And the depth? We only go down 12 feet.
- 8 Oct., 1886. Do you consider that permanent? Well, the water will last as long as the feed will.
- Wells. Do you know approximately the amount you have spent on the run for water improvements? I could find that for you.
- Have you any wells? They are all salt, but we have two in the bottom of Gol Gol Lake. The water in one is brackish, and in the other it is of an iron nature, but they are both good stock-water.
- What depth are they? 12 to 16 feet to the water. They are only soakage wells, and are nearly dry now.
- What is Gol Gol Lake filled by? By the Murray.
- Do you not think you could obtain good water by going deeper? We have been down 250 feet and got salt water.
- Have you tried any greater depth? No.
- Do you know of any other deep wells having been put down? That is the deepest on this side of the river about here.
- Do you know of any artesian wells having been discovered in this district? No.
- What is the deepest well you know of in this district? I think that one of ours.
- Have the Government put down any deep wells? They have not put down a well at all here.
- Have you always had water? Yes, except for a short time in the back country.
- Is there any means by which the losses can be averted? By selling the sheep early.
- Reserving the run. Have you tried the plan of spelling any portions of the run? Some of it we have had to spell because there has been no water on it.
- Do you think it would be possible to secure absolute immunity from losses by adopting the plan of spelling the run? No; but I think the country ought to be spelled half the year. But the dogs that have got at large through rabbiting will prevent any immunity from losses in the future. They are swarming this part of the country now.
- Irrigation. You have tried irrigation? On a small scale. We have 22 acres under lucerne, and about 80 acres under a crop of wheat and oats.
- What year did you first try irrigation? Last year. Then we had about 30 acres of wheat in. We sowed it in May, and only watered it once, and that was as soon as it was sown.
- What was the result? We got a little over a ton of hay to the acre with one watering.
- Was that sufficient watering? It ought to have had another, but we were afraid to wet it too much.
- And when we started to water in September there was an inch of rain.
- Success of experiment. What result had you with the lucerne? The first year a poor result, but we think that was because we sowed it too late. The next year we did better. From February 10 to April 28 we averaged 384 sheep on it fattening; that was a little over eighteen sheep to the acre.
- Have you cropped it since? No; it does not grow in winter. But it was overstocked at that time, which was owing to the fact that we were short of water and could not irrigate it, else it would have carried the sheep easily.
- Do you think if you had plenty of water, and not too great a lift, that you could carry eighteen sheep to the acre throughout the summer? There is no doubt of it.
- Is there any difficulty with lucerne in preparing the soil in the first instance? We only scarified our land with the scarifying machine; we did not plough it.
- Is it not usual in some parts to grow a crop of corn before the lucerne? I see they do that at Gunbower.
- What lift had you in the Darling? Part of the time we were lifting up to 38 feet.
- What size of pump and engine? We had a 10-inch centrifugal pump and an 8-horse power engine.
- What would that lift be capable of irrigating? We could easily water 40 acres if we had a strong enough engine.
- What do you consider a sufficient supply for the land in the first watering? The land must be flooded. If there is a little patch only a foot square that the water does not go over the lucerne on it looks quite small beside the rest.
- Had you sufficient water in the river since you erected the plant to carry on irrigation? No; part of the time we had to stop.
- Was there a waterhole where you worked? Yes; but we pumped that out; it is only half a mile long.
- Do you think, from your experience, that if you had a certainty of plenty of water you would be recouped the expense of the machinery and preparing the land to grow lucerne? Yes; the land would carry from eighteen to twenty sheep to the acre.
- Is there any peculiarity about the soil? No; it is the ordinary red loam.
- Is that the character of the bank all along? No; that is about the only place where we have red loam coming up to the bank of the river, although all the country is red loam at the back of the flooded country, which is stiff black soil.
- How far does it extend? It is not level for any distance there.
- Have you tried what is generally called the stiff black-soil plains for irrigation? No; we have never tried them, except a little piece which is not properly black soil; it is more sandy.
- Do you think the clay flats would grow a crop? I think not. Seeing they were nice and level, we made an experiment. We dug up some inside four hurdles, and had it watered with a bucket. The lucerne came up about a quarter of an inch long, and seemed to stop there. The ground appeared to cake round the root.
- Do you find the stiff ground opens into cracks in summer? Yes; it breaks up into little pieces about 2 inches square.
- In growing lucerne by irrigation, would there be any danger of being infested by rabbits? No; it is easy to keep rabbits down, especially on a small area such as would be under irrigation.
- Local rain.] Mr. Gipps.] Do local rains effect a rise in the river at all? I have seen the river rise a few inches from local rain, but it was only a temporary rise. We had about 6 inches of rain in a fortnight at Christmas, and that made the river run a little.
- What is the character of the strata forming the bed and banks of the river? The bed of the river is white sand, but I think it is lying on the mud or a sort of brown clay.
- And the banks? The bank on one side is nearly always a high bank, and the other one is low. The banks run through this same kind of clay ground.
- Is it porous? Not at all. Do



Do you consider there is any underground drainage? I think that when the river is high the water goes into some underground basin, and afterwards drains into the river again, because when the river is low there are salt-water springs in it. Mr.  
A. T. Brooke.

Are these springs of any size? No; they just trickle a little.

8 Oct., 1886.

Do you not think that the narrowing of the channel here at the lower end might be accounted for by the loss of water in the Talywalka and the Big Ana-branch? I daresay it might to a certain extent. Such lakes as Menindie Lake must take a large quantity of water.

Is there any outlet from Lake Fletcher? No; it has run into two or three little lakes in 1870, but not since.

What distance is the lake from the right bank of the Murray? About 3 miles.

And from the left bank of the Darling? About 6 miles.

Could the lake be supplied by Darling water? It would want a deep cutting, but I think the water would run down there.

Are the banks of the lake high? Yes.

What is the character of the banks? Red loam.

Are they 40 feet high? I suppose they are fully that.

How may the water-level of the lake be distinguished? By the box-trees; but we have seen all the box-trees in water.

What is the height of the Murray when it flows into the lake? About 20 feet at Wentworth. It will commence to run in now at about 18 feet at the present cutting.

Is there any other lake that could be supplied by the Murray or Darling floods? There are Gol Gol Lakes, Lake and Gol Gol Swamp.

What is the position of Gol Gol Lake? At the corner of West Paringa A block and Gol Gol.

What distance is that from the right bank of the Murray? About 3 miles.

What must be the height of the river to supply the lake? 19 feet at Euston.

What is the area of the lake? There are two lakes—one is about 1½ mile by 1 mile, and the other is about a mile square. The swamp is about 6 or 7 miles across each way.

What is the average depth of Gol Gol Lake? About 8 feet.

And the depth of the swamp? I do not know. The water is allowed to run out for the sake of the feed.

Do you think a large quantity of water could be conserved in the swamp? I think so. We had it dammed once, but our neighbors wanted the swamp for feed, and they cut the dam. It is all on their country.

What is the character of the inlet to Gol Gol Lake? Just a well-defined creek.

Is there any outlet to it? No.

Is there any other depression on the run? No, except several billabongs.

Could you divert the river Murray in high flood over any area of country between the Murray and the Darling? No, except on the flooded country.

As you get towards the back of the run, is the inclination of the country towards the Darling or towards the Murray? The country has no inclination in any direction. It falls in all sorts of ways.

How many wells have you sunk? I think we have sunk about nine wells besides shafts and bores.

Wells.

What is the character of the strata in these wells? In the deep well we were in damp sand for the last 200 feet. There was just one small stratum of clay which we came across before we got the water.

Did the water rise in the well? No.

And what was the character of the strata in the other wells? In every case we got down into very fine drift sand. It was so fine we could not get through it. It used to boil up under the boxes and make great holes behind the slabs.

Did you ever try boring through the quicksand? Yes; but we bored through 70 feet in salt water, and, in fact, got jammed.

You never bottomed on rock? No; they did at Paika adjoining us. They bottomed on bluestone rock.

Did they get any water? No. They did not go on with the well, because they understood they might have to go 200 feet through bluestone rock.

Have you bored in any sandstone here at all? We have come across sandstone in the borings.

No water in that? No; we went through it, and it was just the same sandstone as there is here on the river and in the lake. The little wells all along the lake got into sandstone.

What is the average rainfall here? About 10½ inches.

Rainfall.

For what number of years would that be? Excluding the good seasons of 1870 and 1872, that average would be for about fifteen years.

Does the rain fall in heavy storms? No; it is nearly all wasted by falling in small showers.

What is the prevailing direction of the wind? There are several. Whenever it comes in the north we expect rain.

Is it sufficient to allow of the use of windmills continuously? No; it is not steady enough. Every station around here has tried a windmill for its garden, and has given it up. They have nearly all engines.

Windmills.

What is the character of the windmills? We had an immense Empire windmill standing on a sandhill, but we were nearly always without water. Then it met with an accident, and we started an engine.

Have you any dews in this part of the country? Very seldom; occasionally with wet weather we have dews. In the winter there is nearly always dew on the lucerne.

What is the general character of the country at the back—is it rolling country? It is scrubby country, and there are no proper undulations. Every little hill loses itself, and there is no creek or waterhole.

Is there any indication of a watercourse? The Willandra is supposed to have run through part of this country from the Lachlan, but it is all supposition. There are creeks on Arumpo, and some on Turlee.

Are there any other creeks on the run besides the Willandra Billabong? No.

What character of timber have you here? Oak, pine, and mallee.

Is the pine becoming troublesome at all? No.

Have you tried lucerne without irrigation? Yes; we did on the clay flats.

What was the result? Hardly any of it came up, but the trial was not a fair one.

Have you tried other crops without irrigation? No.

Have you known of any crops which have been tried? A lot of selectors have tried crops, and they are getting a good result this year; but they have never had a crop except in 1879. No crops without  
irrigation.

Do



- Mr. A. T. Brooke. 8 Oct., 1886. Do you think you would have had any success with your crops without irrigation? No.  
*Mr. Donkin.*] What is the area of the mallee on your run? More than half the country is mallee,—more than 400,000 acres.  
 Is that useless? Well, something grows in it, but very little.  
 Have you the spinifex? Yes; it grows through it.  
 You put down a well 70 feet;—how long did it take to sink? They were all done by contract.  
 What does it generally take to sink 100 feet? Two men would sink 100 feet trial shaft, without timber, easily in a week.  
 Do you think if the Government tested this country, say to 2,000 feet deep, for artesian water, that private individuals would sink deep wells? As far as we are concerned we have more water than feed.  
 We are not troubled for water.  
 You say you have 40,000 sheep on 800,000 acres—is not that a small quantity of sheep? We should have had to cut scrub for them if it had not been for the January rains.  
 Do you lose much water by evaporation? I do not think so.  
 The Willandra. Do you think it would be possible to divert the Willandra from the Lachlan, or the Darling from the Teryaweynya Lakes, in this direction? I dare say; the Willandra is easily traceable on to Gol Gol station.  
 Do you think a greater body of water could be brought down the Willandra than is obtainable now? Oh, yes; the whole stream could be sent down.  
 Have you been across the Lachlan in a dry time where it runs out? I have seen the mouth of it when it was not running.  
 Is it a well-defined channel? It is; but as soon as there is any sort of a flood the water is all over the banks.  
 Flooding for lucerne. What method do you adopt in flooding your lucerne? The land is all in beds, and we cover it all with water.  
 You have no distributory drains? One or two beds we trickle it over.  
 What area are the beds? 4 acres.  
 Did you try flooding the land as a whole? It is not level enough for that; some of the beds are a foot higher than the others.  
 You have a main drain through the centre of the paddock—how do you check that? By sandbags.  
 Do you think private enterprise is checked to any extent by there being no legislation to empower the erection of dams? I do not know that it is checked, but great annoyance is caused. People generally erect the dams and chance the consequences.  
*Mr. Gipps.*] Do fruit trees grow well here with irrigation? Most fruit will grow here. Oranges, lemons, and grapes grow splendidly, but not cherries.  
 How long after they are planted will the orange trees bear? I think they would bear the second year if allowed. The orange and lemon trees bear prolifically.  
 Do almonds grow well? Yes; in fact, I think cherries are the only fruit that will not grow.  
*Mr. Donkin.*] The pepper trees here, which we see 20 feet in height, how long have they been planted? They were put in in 1880.  
 Would they grow without water? Only badly, I think.  
 After the water in the wells has been exposed to the atmosphere, are the salts absorbed to any extent? No. We tried pumping one well to see if we could improve it, but the water did not get any better. We also tried pumping salt water into fresh for our sheep, but we spoiled good water, and they would not drink the mixture.  
*Mr. Gipps.*] Have you ever observed the overflow water from these wells;—does it leave any deposit on the soil? Yes, a thick white deposit.  
 Is it soda or salt? I do not know.  
 Does it seem to affect the vegetation in its vicinity? I do not know.

SATURDAY, 9 OCTOBER, 1886.

At Tapio Station.

Mr. D. H. Cudmore examined:—

- Mr. D. H. Cudmore. 9 Oct., 1886. Murray water backed up Darling. *Mr. Gipps.*] What is your occupation? Squatter.  
 What is the name of your station? Avoca.  
 How long have you resided in this neighbourhood? Since 1871.  
 Have you had any experience of floods in the Darling River? Yes. The largest I have known was in 1870. It was just subsiding when I came here.  
 Was that flood influenced by the Murray being in flood at the same time? Yes, as far as about 10 miles above our station, Avoca. In the 1870 flood the back-water went up to a place called Bull Camp on the Ana-branch. That would be about 20 miles up the Ana-branch, as the crow flies.  
 How far have you known floods in the Murray back up the Darling, without a flood in the Darling? I have known the water to go 60 miles up the Darling, but the 1870 flood must have gone 100 miles up, following the course of the river.  
 What is the character of the bed and banks of the Darling—are the strata composing them permeable or impermeable? They are just clay with sand veins—a sort of clay which is filled in places with gypsum or copai. At the station I sunk a well for an underground water-tank, and we came to this gypsum and sand veins about every 3 or 4 feet.  
 What was the thickness of the sand veins? From 2 to 6 inches.  
 Did they bring in any water? Salt water invariably.  
 What depth from the surface was that? Only about 20 feet.  
 Do you think the banks of the river itself are permeable or impermeable? With the exception of the veins I speak of, they are impermeable.  
 Can you give any information on the Great Ana-branch of the Darling—does it intersect your run at any point? Yes; it goes through a portion of it, and we have frontage over about half the length of the ana-branch.

What

Mr. D. H.  
Cudmore.  
9 Oct., 1886.

What is the greatest distance at which it runs from the right bank of the Darling? About 50 miles.

What is the character of the bed and banks of the Ana-branch? It is a sort of rotten clay which dissolves in the water. In the beds of the lakes it is not good clay, but like black soil. If you put a piece in water it melts away like sugar. It cracks terribly. It is a sort of clay, and becomes very sticky when slightly damped; but when thoroughly wet it does not stick.

Then the beds are permeable? Oh, yes.

What must be the height of the Darling before it flows into the Ana-branch? About 15 feet above summer level—that is to say, when the river is 18 feet on the Wilcannia gauge it will run into the Ana-branch cutting.

What is the average width of the Ana-branch? It would average about 4 chains, I think; then there are cliffs which generally rise about 100 feet.

What depth is the Ana-branch? About 12 feet—the creek proper.

Are there any rocky bars in it? Yes.

Does the rock cross the Ana-branch? No; it shows only on one side—on the left bank.

What is the character of the rock? A sort of burnt conglomerate, composed of a little quartz pebbles and some reddish-looking stones,—a kind of ironstone. It seems as if it had been all molten together.

Are there any lakes or depressions on your run? A great many.

What are the names of them? I have a description of all the lakes, which I will hand in as an appendix. <sup>Lakes.</sup>  
(*Appendix to Report on Darling River, No. 15, with diagram.*)

Does this description include the length, breadth, area, and depth of each lake? It simply says, “shallow depression,” and so on.

Which is the largest lake? Tandou. Tandou Lake is not on our run.

What is the length of it? About 12 miles long, and it is 7 wide.

And the average depth? That I could not tell you, but I should think it is about 12 feet.

What is the character of its banks? I do not know. I have never seen Tandou Lake myself, but I have reports on it from men whom I sent to inspect it.

What is the largest lake you can actually give information on from your own experience? Traveller's Lake, which is situated on Urntah South Run and Illawla Run.

How far is it up the Ana-branch from the Murray? About 80 miles; it is partly on Polio Run.

What size is it? About 10 miles by 7.

And the average depth? It is hard to gauge the depth. I know the water requires to be 3 feet 6 inches in the Ana-branch before it will spread over the lake at all. It is about 6 feet deep.

What distance is it from the left bank of the Ana-branch? About 2 miles.

How is it supplied? By four creeks from the Ana-branch.

Is there any outlet? No.

What is the character of the banks? They are what you would call very permeable sand and rotten cracked clay.

And the character of the bed? The same rotten cracked clay; I should say it is very permeable.

Have you tried sinking in any of these lakes? Yes; but not in Traveller's Lake. Our predecessors sunk in Traveller's Lake, and got salt water. We sunk in Milkengay Lake, and got both salt and fresh water. Do you throw the water into these lakes by dams? Not into Traveller's Lake, but into several of the others.

What is the height of the dam that throws the water into the four lakes? 14 feet, and the length is 150 yards.

What is it constructed of? It is just a clay bank.

No puddle? No.

Has it ever broken away? Yes.

Have you any by-washes to it? It has three by-washes altogether, but two of them are now washed away and useless.

Are they natural by-washes, or have you constructed them? They are natural by-washes.

What is the approximate cost per cubic yard of constructing these dams? I suppose, everything considered, they would cost about 1s. 6d. a cubic yard. We have had some done for 1s. 2d., and a little has been done for 1s., but there is so much pick-and-shovel work, and topping over with barrows, that if all the items were put down the cost would be about 2s. I think.

How far does that dam throw the stream? Over 40 miles by the creek.

Have you any other dams on the main creek? Eight in the Ana-branch.

Have you ever had any difficulty with your neighbours lower down? A good deal.

Have they destroyed dams at any time? Yes; they destroyed three dams in 1879, and the cutting away of those three destroyed three more below.

For what purpose did they destroy them? They would not wait for the water.

Did the water go down when they cut the dams? The water went down, but they did not keep so much as they otherwise would have had; it all went into the Murray.

By breaking the dams they actually wasted the water? Yes.\*

Have you any other deep depressions on your run which are not filled by the floods of the Darling or Murray? Nothing of any consequence, except what are filled by such floods as that of 1864. There is one hollow about 5 miles from here—a sort of a salt-pan. It is full of that ironstone, and the water is as salt as the ocean, but it is not a salt lake. There are numbers of these salt lakes in this back country, some of which are about 3 miles long.

How far are those salt lakes from the right bank of the Ana-branch? About 10 miles.

Is there a chain of them? Yes.

And how are they filled? Simply by local rain. They are dry a great portion of the time.

Are they of any size? From a mile to 3 miles long, and about a quarter of a mile wide.

What depth? About 4 feet.

How long do they last when they are filled? Just a few weeks. Some of them have nearly always water in them. They are boggy, but whether this is due to rain or to the fact that they are down to the salt spring I do not know. Many of them are never dry enough to cross, and a heavy rain fills them.

What

\* NOTE (on revision):—These dams are now, December 6, 1886, all repaired, and being filled through 3-foot sluice-pipe in 183 dam; three are full. I am managing the water below Pop Lake, and have already conserved a large quantity.—D.H.C.

- Mr. D. H. Cudmore.** What is the character of their bed? I never took much notice of that. It looks like a clay-pan, but it is slimy mud underneath. The banks are all red stuff, worn by the weather into fantastic shapes. It looks like crumbling or decomposed red and yellow sandstone.
- 9 Oct., 1886.** Have you any creeks, independent of the river, on your run? None, excepting the Ana-branch.
- Tanks.** Have you any tanks on your run? Yes.  
What is the average size? They range from 2,000 to 10,000 cubic yards.  
What is the average depth? From 12 to 14 feet.  
How long will they last? A few of them last the season through, but only two or three.  
Does the soil seem retentive? Oh, yes.
- Evaporation.** Do you lose much water by evaporation? A great deal.  
You have not measured it? Not accurately. I know when I have dammed the Ana-branch 17 feet of water will only last twenty months—that is, with stock drinking at it and evaporation. I attribute a great deal of the loss to soakage.
- Wells.** Have you any wells? We have not been able to get any good ones, except in the bed of the Ana-branch.  
What depth have you to go to get water there? From 12 to 25 feet.  
Do you get fresh water? Yes, but no supply; it is easily pumped out.  
Are these wells filled in by the floods? Yes.  
Can you get water anywhere by sinking in the Ana-branch? Oh, no; in nine out of ten trial shafts the water proved saltier than the ocean.  
Have you noticed any difference in the character of the strata where you get the fresh and the salt? There is a kind of yellow and red clay wherever you get the salt water. Wherever you get the ordinary brown clay and then the white sand you come to fresh water.  
What depth is the drift sand you get? It varies. In some wells we have 3 feet of it, and in some places there must be 8 or 10 feet of it. In others we have gone through several feet of it, and have not been able to get through.  
Do you get a large supply when you get into a deep lead like that? A very fair supply, but it is difficult to keep the drift sand out.  
How many gallons a day would these wells supply you? I do not think the best of them would give more than 10,000 gallons a day.  
Does the water rise in the wells when you strike it? No. It will rise in the bore a little way.  
Have you any bores on the run? Bores innumerable, but no artesian wells, or anything of that kind.  
What is the deepest bore you have put down in New South Wales? About 90 feet. We come to such quantities of salt drift that we have given up boring. I hand in this description of the bores on Popiltah Run. (*Appendix to Report on Darling River, No. 16, with diagram.*)  
Did you ever bottom on rock in bores or wells? No; excepting in the wells on the Ana-branch.
- Rainfall.** What was the character of the rock there? A sort of hard sandstone.  
What is the average rainfall in this part? From 8 to 10 inches.  
What are the prevailing winds in summer? North-west.  
And in winter? West and south-west.  
Which winds seem to bring up the most rain? The north-west.  
Does the rain come in heavy storms or lightly? In heavy storms.  
Are the winds so continuous that you could use a windmill? I think not; we do not use any.
- Irrigation.** Have you tried irrigation at all? No, except on a very small scale with the garden, about an acre and a half. I irrigated a little lucerne.  
What is the effect? It grows very well.  
How many cuttings in the year can you get from it? I could hardly say, but I dare say about once every three weeks in summer. In winter it will not grow, because of the frost.  
You do not know what quantity of water you put on it? No; we give it an unlimited supply.  
What is the general character of the country in your district as regards its natural features—is it rolling or flat? Undulating.  
And the character of the rocks? There is no rock, except that iron-stone and conglomerate, and a little sandstone.  
Is there much timber? There is no timber I might say, excepting on the river, and that is not very good.  
There is a little pine.  
Does the ironstone occur in beds? Yes.  
What thickness of beds? About 2 feet.  
Are they tilted at any angle? No; they are almost perfectly flat.  
Does the bed strike north or south? It seems to strike east and west.  
What is the greatest thickness of the whole bed you have seen? At one place where it shows on the bank of the Ana-branch it is a mass of rocks. I suppose there are about 6 or 7 feet showing out of the ground.
- Floods.** *Mr. Donkin.*] In speaking of the floods, which was the highest known here? That of 1864 was the highest in the Darling, speaking from hearsay.  
Then that of 1870 was the highest after 1864? Yes.  
The 1870 flood was quite 6 feet higher than the present flood, was it not? It must have been higher.  
And the 1879 flood? That went up to 21 feet at Wentworth, and the present flood is now 15 feet there.
- River-gauges.** You have a gauge in the river? Yes.  
Does that read from the bed or from summer level? It is a good test of summer level, because when my gauge reads 3 feet a steamer can travel past my place. It is navigation level.  
What zero have you been accustomed to read from, navigation level or summer level, or the bed? From the bottom of this gauge. We keep a record of below navigation level or the bottom of our gauge.  
What do you call summer level? When the river is just running.  
Do you understand the height which is intended when it is telegraphed from Bourke and other places so many feet above summer level? I think the gauges are set at different levels, because we got a report from Pooncairie, and the water had to rise 6 feet before it came to the gauge at all; so when they reported 3 feet of water there was really 9 feet of water there.  
What would you recommend to be taken as a standard? I think the most reliable would be to take the 1870 flood, and read downwards from that.\*

\* NOTE (on revision):—Take summer level, or when the river is just running.—D.H.C.

Would not the present flood, which is well known all through, be a good standard to take? They will not record it at a great many places. I think to take the zero as from the river when it is just running over the bars would meet every purpose. The river has washed deeper here owing to the taking out of the snags. When we put up our gauge we intended it to be on a level with the water when just running; now it goes 3 feet below the level of the water.

Mr. D. H. Cudmore.  
9 Oct., 1886.

What is your gauge reading now? 18 feet 6 inches.

We saw it at Bourke a fortnight ago reading 42 feet;—how do you account for the difference? The water rushes away into the Murray.

You think then that the rush of the water into the Murray, which is lower than the Darling; and into the ana-branches and lakes, makes up for the difference? Yes. In 1864, for instance, the water was nothing like a proportionate height here. The Murray was very low, and the water rushed away. The 1864 flood did not injure Wentworth at all, but that of 1870 did, because the Murray was in flood.

Murray flood.

The flood here, then, greatly depends on the height of the Murray? Altogether.

How many miles an hour do you consider the river is running now? I should think about 3 miles an hour; but of course I am only guessing.

Since you have been on the river, have you noticed any alteration in its course—is it silting up in any way? Nothing worth speaking of. There is one place about 3 miles above here where the channel has altered altogether, but that is what we call a break-through.

Is there much erosion of the banks going on? A good deal.

What is that from? It is owing partly to the steamers, but mostly to the soluble nature of the banks. The water eats in, and more particularly in the little sand veins which run horizontally in the banks.

Does it silt up the waterholes? Not to any appreciable extent.

Do you know any rocky bars in the river? There is one about 3 miles above here.

Is there any fall here? At summer level there is.

Do you think it backs the water at all? Not to any practical extent.

Have you lost any stock in the drought through want of water? The stock died for want of feed; not water; but had we had more water in places where we had feed we should not have lost so many.

Losses of stock.

Speaking of the lakes, if they were filled, would the water be permanent? No; the best of them has only lasted five years, and that was with 18 feet of water in it.

Lakes.

Which one was that? Milkengay Lake.

Can stock water at all those lakes? No; at very few.

How is that? They are too boggy and rotten; stock cannot get near the water.

Then they are useless for water purposes? Yes, except when they are quite full; then the banks are a little more sandy, and the stock can get to them.

That is a peculiar feature of these lakes, is it not? Yes.

Could the lakes be used for irrigation of the natural grasses by flooding their surface? Yes.

Is there good grass in them? Yes. Grass only grows in parts of some of them, and after a flood has gone off.

Have you tried damming the Ana-branch and flooding any of these lakes for the purpose of irrigation? Yes, we have. We did not do it for the purpose of irrigation, but more to conserve water.

Have you seen such rotten lakes in other parts of the country that stock could not water at them? No.

Are there any mud springs in the salt lakes? No.

What is about the total length of the Ana-branch? About 300 miles.

Great Ana-branch.

Suppose the Darling were weired and more water thrown down the Ana-branch, is there any possibility that the Ana-branch would become the main channel? Oh, no; if all the water were sent that way it would become the river then; the soil is so rotten it would wash out and deepen the Ana-branch.

What proportion of water passes down there as compared with the river? Very little.

A fourth of the river? Oh, no. The water does not enter the Ana-branch at all until the river is 15 feet high there. We made a cutting there over 10 miles, more or less, 12 feet wide at the bottom. It is not cut all the way; patches here and there did not require cutting.

Where does the Ana-branch come out? Tandou Creek, which is the main arm of the Ana-branch, also Campbell's Creek, come out above Netley, and are dammed and interfered with, but the Ana-branch cutting on which we have to depend is below Netley.

What is the greatest distance you back the water by a dam on the Ana-branch? 40 miles.

What number of cubic yards? I could not say.

What would the dam cost? You could back the water 40 miles by a dam costing £500.

You say you had six dams destroyed, how were they destroyed? They were blown up by dynamite.

Dams destroyed.

Did you do anything to prevent it? No. The matter was referred to arbitration in Melbourne, and I got a verdict for £800; but that did not pay me, as I took a lot of witnesses down to Melbourne.

But that did not establish the legality of the construction of dams? It did not at all.

You know you have no legal right in the matter? Yes; that is what I wanted to see you about. The large dam backs the water up 40 miles, and would throw the water into any of those lakes. A man takes a homestead lease over a part of that lake, which is a perfectly useless lake, and must be kept dammed in order to get the water in the good lakes and in the Lower Ana-branch to give water for the stock below. Well, if that man insists on opening the lake, the people below will stand a poor chance of getting water.

Are any of the lakes reserved? No.

Ought they not to be? I do not see what benefit that would be; portions of the better ones are reserved. But can the bed of the lakes be taken up? Oh, yes; we have some 40-acre blocks right in the bottom of the lakes.

Then you can prevent anyone from flooding them? Oh, no. Take the Yelto Lake. We have never allowed any water in that since 1872. If we opened that lake we would never get any water below it unless the flood were very high and continuous. We want some legislation about that sort of thing in order to preserve the rights of everyone. I think, too, that water for stock should be considered before irrigation.

If the rights to the water were under a Local Trust, would not that remedy the matter? Oh, yes. In a matter of this kind, if the Trust had power to say that the lake shall be kept shut, that would meet the case. Have you ever known the river or Ana-branch to be made run by local rain? I have known the Ana-branch run for 10 or 12 miles in places.

Do you consider the local rain affects the river? Not at all; the heaviest local rains only make the river rise a few inches.

Where

**Mr. D. H. Cudmore.** Where do you look for the floods? Queensland and up above Narrabri.  
Do you know of any deep wells being put down in the district by private enterprise? No.  
Do you think if you went through the salt drift over 1,000 feet that water could be obtained? I do not know.  
9 Oct., 1886. You know they have discovered artesian water in South Australia? Yes.  
Do you see any reason why they should not obtain water here? Well, we kept the whole of the Ana-branch flooded\* and the water soaked away, so somebody must have got it. It would be well worth trying a deep bore between the boundary of the Colony and the Ana-branch, but there is such a quantity of salt drift that we could never undertake it. In South Australia we went down over 300 feet in these deep bores. (*Appendix to Report on Darling River, No. 17.*)  
You know the lakes on the Murray at Gol Gol,—what are they filled by? From the Murray entirely. The Darling would affect them slightly by backing up.  
What do you think could be carried out as a national scheme of water conservation on the rivers, ana-branches or lakes? I am not in a position to say.  
**Difficult to erect weirs.** Do you think anything could be done? I think it would be extremely difficult to get locks or weirs to stand in the river, from my experience on the Ana-branch, although the Darling is not so bad.  
Did you say there are rocky bars? There are some, but they do not appear on both sides.  
**Mr. Gipps.]** You allude to fixed weirs? Yes; I do not think it is possible to put overshot weirs.  
**Mr. Donkin.]** How is it that you have got dams to stand on the Ana-branch? But I have a by-wash. I have great trouble with the by-washes; they cut back for miles. A by-wash will only last about two floods. But you have dammed the whole bed of the creek, have you not? Yes.  
If you made an overshot dam of half the height that would not have taken place? I do not think it would have ever stood; the banks are not sufficiently solid.  
Not if you allow the water to pass over the centre of the dam? No; I tried that on a small scale, and the water took the foundation out. I find that a certain amount of water goes over all right, but when a heavy body of water goes over it tears up the ground.  
What apron do you construct here for the water to fall on? Just rough timber.  
Is there any other information you have to offer? I think something might be done to divert sufficient water from the Darling through the Ana-branch cutting.  
Is that cutting done by private enterprise? Yes; it was carried out by the lessees on the Ana-branch at an expense of about £5,000.  
**Mr. Gipps.]** What is the length of it? 10 miles.  
And the width of the channel? 12 feet at the bottom.  
And the sides? About 2 to 1.  
And the depth? The deepest part of it is about 11 feet.  
**Mr. Donkin.]** What could be done in diverting the water? If the Darling were locked at the outlet to the Ana-branch cutting the water would be forced down the Ana-branch. (*Appendix to Report on Darling River, No. 18.*)  
Do you think the water might be diverted out towards the South Australian border from the Ana-branch? I think possibly it might. The 1864 flood went out over 20 miles from Popiltah Lake.  
How far would that be from the river itself? About 70 or 80 miles. I may mention that it takes as much water to soak the bottom of a rotten lake as it does to fill it. If the lake is 6 feet deep it requires 12 feet of water to fill it. In these lakes, such as Popiltah, Popio, and others, the water pours down the fissures in enormous streams. The action of the wind is so strong in blowing the water across these lakes that I have had to walk very fast to avoid being overtaken by the water. The wave runs in faster than any ordinary tide. A great deal of the water so blown out on to the dry ground soaks in and is wasted. The lakes are very flat, and when they get low the wind soon wastes the water in this way.

At Wentworth.

Mr. J. O. Edwards examined:—

**Mr. J. O. Edwards.** **Mr. Donkin.]** You are the Mayor of Wentworth? Yes.  
How long have you been here? Twenty years.  
9 Oct., 1886. Have you seen many floods in the Darling? Yes; I saw those of 1867 and 1870, and at various times since. That of 1870 was the highest.  
**Floods.** How did the 1870 flood compare with the present one? It was very much higher, at least 14 feet higher.  
Was Wentworth under water? Yes.  
To what depth? The higher portions would be about an inch under water. The water was just about an inch over the crown of Darling-street.  
How do you record the height of the river here? We have a gauge at the wharf.  
How long has that been erected? The present gauge has been there about six or seven years, but we have always had a gauge.  
What does that gauge read from, the bed of the river or summer level? It reads from summer level.  
I suppose you mean by summer level just when the river is running? Yes, and when it is very low.  
When they telegraph from Bourke, and generally up the river, the height of the gauge at those places, can you tell what river to expect here? Yes; it gives us a very good idea.  
There is a good deal of doubt, is there not, as to what summer level is? Yes.  
What do you think would be the best zero to read from: when the river is just running, or navigation level, or some well-known flood-mark? I should imagine from very low water.  
Are there any rocky bars in the river near Wentworth? Yes; there is one near Avoca and one at Burtundy.  
Since you have known the Darling, has the direction of the bed shifted much? Not here; but there is one place 17 miles from here, near Avoca, where it has shifted.  
Have you a gauge in the Murray? No. Our gauge is for the Darling and Murray.  
Does it give a correct reading for both? Yes.  
How far is this from the junction? A little over half a mile. Is

\* NOTE (on revision):—In 1870-80 we kept an enormous quantity of water in the Ana-branch and lakes, and will do the same this flood.—D.H.C.

Is there the same current in the river here as in the Murray? No. I think the current here is slower than that in the Murray. The reason of its being slower is the height of the Murray. A short time ago the current was running over 4 miles an hour.

Mr. J. O. Edwards.  
9 Oct., 1886.  
Dry river.

You have never known the Darling to be dry at Wentworth? In 1867 it was not quite dry, but there was just a little pool you could stop with your two hands. Six months ago it was dry for miles a little above here.

What is the lowest volume of water you have seen passing down the Murray? It has been very small; I should imagine about 2 feet of water.

You have seen the Murray stopped for navigation? Oh, yes. If we had boats drawing 16 or 18 inches the navigation of the Murray would be permanent, but the boats, as a rule, draw from 3 to 4 feet.

Does the navigation of the Murray depend to any great extent on the waters of the Darling? Not below here. Of course this last rise in the Darling has made the Murray navigable, but as a rule the navigation of the Murray does not depend upon a rise in the Darling.

Does the local rainfall affect either the Murray or the Darling? Not the slightest.

Then both these rivers depend on the rain further up? Yes.

What is about the average rainfall since you have been here? From 7 to 9 inches.

Are there any large depressions in the vicinity of Wentworth where a large body of water could be conserved? There is Fletcher's Lake, about 4 miles from here.

What depth is it? About 15 or 20 feet, I should think.

You know the Great Ana-branch? Yes.

Is there any body of water coming down there? I am given to understand it is stopped by Mr. Cudmore's dam. However, the water is through now, I am told.

Could any large body of water be conserved there? I imagine so.

Have you seen any irrigation tried? Yes, on a small scale. There is a man here who has wheat growing which is over 4 feet high.

It has not been tried unsuccessfully? No.

Do you think the soil is adapted for it? I think it must be.

When the river is not navigable here, by what means do you obtain your supplies? As a rule the stores here have to get in large supplies to make sure they will not be short when the river is low. We have never had to resort to carrying from Morgan, with one exception, I think.

The river is rising now? I think so.

Do you think it will rise any higher? I do not think so—not more than a foot higher here, and that will be from the Murray water.

From your knowledge of the Darling, do you think it is possible to construct weirs or locks in the river? I should imagine it would be rather difficult, because the ground here is so treacherous. It is apt to wash away. In 1870 the streets here were level as a table. We opened a little dam one day in 1870, and in the afternoon we had a river running across the street to a depth of 5 or 6 feet. Three outlets went then from the Darling into the billabong about a mile from here.

From what you say of both the Murray and Darling here there is no certainty of irrigation? No.

Is it a usual thing for the river to stop every summer? As a rule it stops between February and June. We can always depend upon having a rise in the Murray from June to January.

Suppose the Darling to be dry, and a flood comes down the Murray, how far does that affect the Darling? About 40 miles by land, or 100 by water.

Mr. Gipps.] What extent of country did the flood of 1870 cover? There were several places on the Murray where the river would be from 10 to 14 miles wide. We could go in a boat from here to the Oak Ranges, 7 miles in a northerly course, up the Darling.

What distance in a southerly direction? Fully 5 miles on the other side of the Murray.

Is that spread of water due to high floods in both rivers at the same time? Yes.

Do you know what was the height of the flood in the Murray at Albury? No. At Swan Hill it was 13 feet 6 or 7 inches, and at Echuca it was 34 feet.

What was the height of the Darling at Wilcannia? I think it was somewhat similar to the present rise. I think it was 40 feet at Bourke in 1870.

Have you any marks of the flood of 1864? There are several here. In Mr. Holding's garden there is a mark on a tree.

Was that flood higher than the flood of 1870? Not nearly so high here.

What is the character of the bed and banks of the Darling here? As a rule they are clay and sand.

Does the sand let the water through? I think it does, for the simple reason that here on the plains if we sink for water we get very brackish water. I bought a small place once, and sunk a well there, and the water was beautiful and fresh. The Darling was 400 yards away, and as the river rose the water in the well rose. So there must be an under-current from the river.

Were any wells sunk in the bed of the river during the late drought? Not here, but I believe there were some up the Darling.

Have you any reason to think there is any strong under-current in the Darling? No, I do not think so. I think if you sink down 18 inches after a high flood the ground would be as hard as if there had been no water on it.

Can you give us any information on Lake Victoria? It is about 30 miles in circumference.

Lake Victoria.

Is it nearly round? Yes.

And what is about the average depth? I should imagine it would be from 8 to 10 feet.

How is it supplied? From the Murray.

Is there any outlet? The inlet and the outlet are the same.

What is the character of the banks—are they high all round? They are high sand banks all round.

Could the water be extended beyond the lake by means of a canal? I hardly think so.

Is there always water in the lake? Always.

What height must the river be to supply the lake? I could not say.

What is the length of the creek supplying the lake? About 5 miles.

Are there any dams on it? I am not aware of any.

Mr. Donkin.] Is it possible to raise a crop here by the ordinary rainfall? We have had several crops here from the ordinary rainfall, but they are very uncertain. If we have good rains we have a splendid crop.

Do

Mr. J. O. Edwards. Do you not think much more could be done with irrigation than has been done so far? Most decidedly I do.

9 Oct., 1886. Do you think any national scheme could be carried out by the Government with regard to the rivers or lakes? Not unless you have weirs in the river. I do not think anything but movable weirs would do.

Have you noticed whether the bed of the river has had a tendency to silt up of late years? No. If there is any impediment in the way at all the river will soon silt up.

Mr. W. B. Christie examined:—

Mr. W.B. Christie. *Mr. Donkin.*] You are a licensed surveyor of this district? Yes.

You know the Willandra Creek? Yes.

It runs out from the Lachlan? Yes, near Hillston; it is an overflow.

9 Oct., 1886. Have you seen the mouth of it? Yes.

The Willandra. What height is the bed of the Willandra above the Lachlan? It is almost on a level with it. I did not notice it much about there. Where it occupied my attention more was this end of it.

Its course. How far down was that? 150 miles from the off-take. I have made a survey all along it from Garnpung, through Garnpung Lake, which is a dry bed, through Gol Gol Lakes, through Outer Back Bullanmong, Arumpo, North Turlee, Turlee A, Buraguay, Marma, North Mundonah, Back Boomiaricool, Laurie Park, and Lower Lette Runs.

How far would that be from the Murray or the Darling? To Lower Lette Run, that would be about 12 miles from the Murray. My survey left off there. I followed it on then into Manie Creek.

What distance would that be from the off-take? About 250 miles.

Is it a defined channel there? You might pass over it without noticing it till it is pointed out to you, but when once it is pointed out you cannot mistake it. It runs to within 35 miles of the Darling at Garnpung, and then it takes a sudden bend. Manie Creek is a sort of billabong running out from the Murrumbidgee into the Murray, and forming a sort of an island at the junction of the two rivers.

The Willandra Creek passes through a large area of dry country? Yes.

Do you think it would be possible by erecting a weir across the Lachlan to divert the water to the back country? I am sure it would. In 1870 the Willandra flowed into Garnpung Lake, but I do not say that of my own knowledge. A good many wells have been sunk about the creek. There are four wells on the Garnpung Lakes, but they have all salt water.

Wells.

What depth are they? They run from 70 to about 150 feet.

Do you know of any deep wells that have been sunk in the Wentworth District? The deepest that has been sunk in this district is a well on one of the back runs of Tapio; it is 340 feet deep.

Do you think if they went deep enough here there is a possibility of finding an underground supply? I do not think so. I think that the bar near Cobar, running just north of Wilcannia, would prevent it.

MONDAY, 11 OCTOBER, 1886.

On board the s.s. "Gem," from Wentworth to Morgan, S. A.

Captain Hugh King examined:—

Captain H. King. *Mr. Donkin.*] How long have you been on this river? I have been thirty years on the Darling, Murrumbidgee, and Murray.

Have you been navigating the rivers the whole of that time? The most of it.

11 Oct., 1886.

Were you here when the first steamboat came up the river? No.

How long afterwards? Four years.

Who was it first navigated the Murray? Francis Cadell. William Randell was the first to navigate the river, but the steamer was not large enough to claim the bonus.

What was the name of his vessel? The "Lady Augusta."

Do you know the Darling River from Wentworth to Brewarrina? Yes.

Have you navigated the river as far as Brewarrina? Yes.

What year were you there first? In 1868.

Floods.

Have you experienced many floods in the Darling? A good few.

Will you name the important ones? That of 1870 is the greatest I have known.

When was the next after that? In 1874, as nearly as I can remember. In 1870 the river ran for eighteen months.

The next to 1874? That of 1879, and then the present one.

How did the 1870 flood compare with the present one? It must have been 14 or 15 feet higher close to Wentworth. The Murray was in flood at the same time, and the Murrumbidgee too.

What is the average width of the Darling? I should say it is not more than 150 feet on an average.

Rocky bars.

Do you know any bars of rock in the river? Yes. The first one is above Avoca; then there is one at the Middle Yards, above Para; the next one is at Leman's public-house at Tarcoola Station; then you skip all the rocks till you get above Menindie and come on to the Christmas Rocks.

Is there any fall at the Christmas Rocks? There is a very little fall now. The rocks were removed from the bar to build a house at Weinteriga.

You do not know what the fall is? No.

From your knowledge of the Darling, do you think foundations could be got at intervals of 50 or 100 miles for the erection of weirs or locks? Yes. With the exception of that stretch between Leman's and the Christmas Rocks you could get them every 20 miles. There are also rocks about half way between Leman's and Christmas Rocks, at a place called Tolarno Cliffs.

Erosion of banks.

Do you think it is possible that such works could be erected without causing the banks to erode? I do not think the banks would wash away at all as long as the gates were allowed to open in flood-time.

What distance would a 10-foot weir make the river navigable up stream? From experience at the lower end of the Darling it would go 50 miles, but I am not sure about the upper end of the river.

*Mr. Gipps.*] Do you mean to say it will make the river actually navigable, or will throw the water back? It will make it actually navigable. If the river rises 7 feet at Wentworth it allows me to go as far as Tapio, a distance of 36 miles, with a boat drawing 3 feet 6 inches.

*Mr. Donkin.*] What is the draught of the ordinary boats on the river? 3 feet.

What



Captain  
H. King.

11 Oct., 1886.

What is the depth of the river banks at Bourke and Brewarrina? About 42 feet.  
Then how do you account for there being only 16 feet at Wentworth at the present time? By the width of the Murray and the great get-away for the water. A lot of water goes into the back country before it reaches Wentworth. There are Menindie Lake and the Talywarka and the Great Ana-branch.

Have you seen a large body of water in the Talywarka? Miles and miles of it.

Have you navigated the Talywarka? Yes.

How far have you been out from the Darling? 60 miles.

What is the average width of the Murray from Wentworth down to the boundary? As near as I can judge it is 150 yards.

Then it is about three times the width of the Darling? Yes.

And you think that the increased width of the Murray, and the depressions, lakes, and ana-branches account for the great difference in the body of water at Bourke and Wentworth? Yes; I am sure of it.

What proportion of the water at Bourke finds its way to the Murray? Not more than one-half.

Have you known the local rain on the Darling or Murray to influence the height of the river at all? Yes, on the Darling. I have known it to raise the river 10 feet at Weinteriga.

*Mr. Gipps.*] In what year was that? I do not remember.

Do you remember the nature of the rainfall? It came in heavy thunderstorms.

*Mr. Donkin.*] But in ordinary seasons the river is not affected? No, not in ordinary seasons.

How long will this present flood keep the Darling navigable? To Menindie, two months; to Wilcannia, about five or six weeks.

Do you know Lake Menindie? I know the creek.

Lake Menindie.

After the river falls, do you think the lake assists to keep up navigation in the river? At the present time it does.

What influence would it have on the river? The return flow of water would be sufficient to keep it up for a month, I should say.

You know the Murrumbidgee? Yes.

Have you navigated it? Yes, as far as Eli Elwah, above Hay.

What does the Murray depend upon? There are several rivers it depends upon—the Murrumbidgee the Goulburn, the Campaspe, and the Murray proper.

Are there any bars in the Murray about Wentworth, or just above it, where works could be constructed? 9 miles above Wentworth there are rocks right across at Williams' old station, Gol Gol. Rocky bars in the Murray.

Are there any bars between Wentworth and the boundary? There is Cadell's Reef right across, close to Ned's Corner.

How far would that be from the boundary? 75 miles this side of the boundary.

Since you have known the Murray River, has it ceased to be navigable for any length of time? For small boats about three months a year; sometimes it is not navigable at all.

Was the Murray navigation stopped last summer? About three months.

And that is nearly always the case? Always, from one to three months. Then even the light boats cannot go, because of sand-bars and Cadell's Reef.

Do the sand-bars shift as a rule? With every flood; then they remain so until the next flood.

Is it generally agreed as to what summer-level is? No.

What do you think should be adopted as zero to give correct information as to the height of floods?

As regards Wentworth, I should take the rocky bottom nearest the town, and put the gauge there.

You think that would be better understood than some flood-level? I think so.

You would adopt this method at such places as the Christmas Rocks and the other bars? Yes. There is only one place where there are no rocks, and that is on each side of Menindie. All through from Wilcannia to Brewarrina there is a rocky bottom.

You have been for many years connected with navigation on the Darling;—how long have you known steamers leaving Morgan to have been delayed in finding their way up the Darling? Three years. Steamer taking three years to navigate Darling.

Could you quote an instance? It is three years last May since the "Jane Eliza" left for Bourke, and she arrived there last June.

Have you been stuck on the Darling on previous occasions? Once I was stuck for nine months in one waterhole.

There is no certainty in the navigation of the Darling in its present state? Not at any time.

Do the steamers which bring produce down the Darling and Murray tranship at the ship's side in Adelaide? In no instance.

Is there no possibility of transshipping? No, because of the bar at the Murray mouth. Produce has to be transhipped on to the rail, and lightered out again. All the mail-boats have to be lightered.

All the produce coming down the river has to be trucked? That is so; it does not pass out of the Murray mouth.

Which is the principal feeder of the Murray? The hills are the principal, next to them is the Murrumbidgee, and the next is the Goulburn.

Has the Goulburn much influence on the Murray? More than the Murrumbidgee. If we get Murrumbidgee water we get Albury water at the same time. In many instances we run for a month or two with Goulburn water.

Is the Edward River an ana-branch of the Murray, or is it fed by local rain? It is entirely fed by the Murray; it is an ana-branch of the Murray. It leaves the Murray above Lake Moira, at a place close to the Gulpa Creek.

Are there several branches there? There is one main entrance only. The Gulpa Creek goes in below Edward River. it, and joins the Edward before reaching Deniliquin.

If the off-take at the Edward, where it leaves the Murray, were closed, would there be any river?

No, except for the water that goes down the Gulpa Creek.

What is the rainfall at the boundary of New South Wales? I should say about 8 inches.

And what is it at Morgan? About 6 inches.

You know the Great Ana-branch of the Darling? Yes.

Does that take off any body of water from the Darling, as compared with the river at Wentworth? I should say there goes down the Ana-branch a body of water quite equal in volume to a quarter of what passes Wentworth.

Do



Captain  
H. King.  
11 Oct., 1886.

Do you think that the utilising of the flood-waters at the head of the Darling and the Murray will make any difference in the navigation of the river here? Not in flood-time, as long as you do not use the water below a certain height.

Has the river kept up to its ordinary level, or has it fallen off? It has fallen off greatly. There is not more than one-half the water coming down there used to be four years ago. I account for this by the shortness of the rainfall and the deficiency of snow in the hills.

Do you think the water used by Victoria for irrigation has made much difference? I do not think so.

Are there any large ana-branches of the Murray on the Victorian side like the Edward? Only very short ones.

What are they? The Gunbower Creek is the longest; it is about 40 or 50 miles long. We receive all the water back again from it. And there is the Little Murray, below Swan Hill, that is quite as large as the Darling.

Can you say roughly what the length of the Edward is? I could not say; I have never gone right through. It must be considerably over 200 miles.

Is the Murray down from Wentworth a difficult stream to navigate? In low water it is.

Fences in Lower  
Murray.

Has anything been done to improve the navigation? The South Australian Government has improved it as far as the boundary by putting in fences to confine the channel to half the width.

Are the fences put from each side? No, from one side only.

You were saying there were no very large off-takes on the Victorian side of the Murray,—are there any large lakes or depressions near Echuca? Above Echuca there is Lake Moira.

What is the effect of that lake on the river? In an ordinary season it has no effect; in a high flood it holds the water back, and throws it over the country for miles.

What is the action of the water in returning to the river? In a high flood like that of 1870 it comes down from the lake and runs up stream. I have gone against the stream in going down the river for 30 miles.

The country from the New South Wales boundary to Morgan is very poor, is it not? Yes, most of it.

Is there much production? Nothing but sheep, and only a few of them.

How many bales of wool are grown on the left bank? About 200 bales.

Is the nature of the soil such that irrigation could not be applied to it? The water is not used because the lift is too high.

Do you know if they have tried irrigation here? They are about to try it at Morgan; the soil on the bank is poor, but out back it is good enough.

APPENDICES TO EVIDENCE TAKEN ON DARLING RIVER BY COMMISSIONERS DONKIN AND GIPPS.

APPENDIX TO REPORT ON DARLING RIVER, No. 8.

RAINFALL OBSERVATIONS AT LOUTH.

1885.			To 22nd September, 1886		
Month.	No of days' rain	No of inches.	Month.	No of days' rain	No. of inches
January ... .. .	7	7.31	January ... .. .	1	.38
February ... .. .	1	.30	February ... .. .	} Nil.	
March ... .. .	3	2.41	March ... .. .		
April ... .. .	5	1.82	April ... .. .		
May ... .. .	5	.62	May ... .. .	3	1.47
June ... .. .	3	.72	June ... .. .	1	.90
July ... .. .	Nil.	Nil.	July ... .. .	8	4.47
August ... .. .	1	.10	August ... .. .	6	3.82
September ... .. .	3	1.32	To September 22 ... .. .	1	.32
October ... .. .	1	.14			
November ... .. .	2	.63		20	11.36
December ... .. .	4	3.41			
	35	18.78			

A. D. TURNER.

APPENDIX TO REPORT ON DARLING RIVER, No. 9.

RAINFALL AT KALLARA, DARLING FRONTAGE.

Actual fall.	Average for months and years.										
	1877	1877-78	1877-79	1877-80	1877-81	1877-82	1877-83	1877-84	1877-85	1877-86	
1877... .. . 11.99	January ...	83	41	53	46	85	71	86	77	140	127
1878... .. . 14.29	February ...	200	125	184	214	197	198	181	181	163	149
1879... .. . 13.77	March ...	250	295	204	160	173	155	141	135	143	128
1880... .. . 11.25	April ...	82	56	92	207	170	154	137	120	135	123
1881... .. . 14.12	May ...	110	63	100	81	113	118	149	147	133	130
1882... .. . 14.64	June ...	163	122	103	81	89	96	83	92	85	87
1883... .. . 9.96	July ...	131	155	131	100	80	70	61	58	53	87
1884... .. . 10.51	August ...	0	2	29	18	22	56	57	58	54	87
1885... .. . 15.61	September	86	188	159	134	145	120	104	100	105	100
To Sept., 1886 .. 10.16	October ...	41	205	201	172	152	164	163	155	129	...
	November ...	0	14	63	43	60	89	88	88	80	...
	December ..	53	46	31	23	19	41	35	32	58	...
	Year .....	1199	1314	1335	1252	1308	1334	1285	1257	1292	...

From a record of all showers which yielded over ½ an inch in any one 24 hours, it is shown that of the total of about 116 inches, from 1877 to 1885, 37.69 inches fell in showers 1 inch or over, leaving 78.45, or about two-thirds of the total fall, to be accounted for. All that fell in showers lighter than 1 inch, and consequently of little value, unless the ground happened to be previously moistened. 27 inches fell in the period in showers from ½ an inch to 1 inch, so that of the 116 inches about 52, or nearly one-half of the fall, was in absolutely useless quantities.

RAINFALL AT GOORIMPA, PAROO RIVER.

Actual fall.	Average for months and years.												
	1875	1875-76	1875-77	1875-78	1875-79	1875-80	1875-81	1875-82	1875-83	1875-84	1875-85	1875-86	
1875 ... 750	Jan.	0	6	32	24	19	22	37	33	42	38	80	73
1876 ... 522	Feb.	144	72	127	106	128	160	131	152	135	134	132	121
1877 ... 1044	Mar.	0	50	132	196	158	134	133	116	107	104	107	98
1878 ... 1291	April	171	90	60	53	85	123	110	187	98	96	93	86
1879 ... 1065	May	62	75	70	56	58	53	88	87	97	95	90	91
1880 ... 815	June	169	98	90	81	76	66	63	61	54	59	57	58
1881 ... 1118	July	91	53	81	101	98	85	73	64	57	57	52	64
1882 ... 1113	Aug.	47	58	69	52	45	42	39	55	57	54	50	60
1883 ... 664	Sept.	23	17	34	81	87	82	91	79	71	70	75	...
1884 ... 740	Oct.	6	3	5	10	35	48	62	73	78	73	67	...
1885 ... 15.36	Nov.	7	78	52	127	130	109	103	114	104	102	101	...
To Sept.,	Dec.	30	33	22	17	15	11	14	25	22	23	65	...
1886 ... 5.75	Year	750	636	772	902	934	915	944	965	922	912	969	...

Of the total for 11 years, 1875-85, of 106.58 inches, 39.64 fell in quantities equal to an inch or more in 24 hours, leaving 66.94 for showers less than an inch.

DAVID BROWN.

APPENDIX TO REPORT ON DARLING RIVER, No 10

WELLS on Momba and Mount Murchison Runs

No	Locality	Depth of well	Sunk or bored	Permanent or otherwise	Character and depth of strata	Quality of water	Is level of water reduced by pumping?	To what depth?	In what time?	By what quantity of water per hour?	To what level in well does water rise?	Remarks
1	Moorquong	35 feet	Sunk	Permanent	First 25 feet red loam, balance red sandstone	Good	Yes	Dry	4 hours	1,000 gallons	8 feet	This well is just a soakage
2	Charlton	190 "	"	"	30 feet loam, 16 feet granite, balance washed blue clay	Stockwater	"	"	14 "	2,000 "	90 "	Sunk before my time
3	Narrowa	100 "	"	"	Unknown	Good	"	"	4 "	1,000 "	80 "	Soakage
4	Paikung	305 "	"	"	"	"	"	"	Unlimited supply	"	235 "	Sunk before my time
5	Mallambray North	309 "	"	"	"	"	"	100 feet	24 hours	3,000 "	249 "	"
6	Bunker's Creek	306 "	"	"	60 feet concrete, and balance blue clay, intermixed with sand and a few ironstone boulders	"	"	100 "	24 "	3,000 "	206 "	"
7	East Pen	50 "	"	"	Black mud and layers of limestone	"	"	Dry	10 "	1,000 "	48 "	This water is artesian
8	Bunker's Creek	210 "	"	"	First 60 feet red loam, balance blue clay and sand mixed with small shells	"	"	"	7 "	2,000 "	90 "	"
9	Wells	258 "	"	"	" " " "	"	"	10 feet	24 "	3,000 "	148 "	Can only be reduced 10 feet
10	Delkoosha North	280 "	"	"	" " " "	Brackish	"	"	Unlimited supply	"	240 "	"
11	Mount M'Pherson West No 1	180 "	"	"	Soft sand rock	Good	"	Dry	7 hours	3,000 "	80 "	Not worked much
12	Callindra	140 "	"	"	Same as No 8	Stockwater	"	"	10 "	3,000 "	40 "	Water found in drift sand
13	Yungnulgra Plains	260 "	"	Little water	Unknown	Very bad	Nil	Nil	Nil "	Nil "	Nil "	"
14	Rosstevon	311 "	"	"	Same as No 8	Salt	"	"	" "	" "	" "	"
15	"	278 "	"	"	First 200 feet same as No 8, balance blue marble rock	"	"	"	" "	" "	" "	"
16	Charlton West	460 "	"	Nil	Same as No 8	Nil	"	"	" "	" "	" "	"
17	"	316 "	"	"	" " " "	"	"	"	" "	" "	" "	"
18	"	360 "	"	"	" " " "	Little salt	"	"	" "	" "	" "	"
19	Moorquong	100 "	"	"	Unknown	Salt	"	"	" "	" "	" "	"
20	"	60 "	"	"	"	"	"	"	" "	" "	" "	"
21	Mount M'Pherson West	100 "	"	"	"	"	"	"	" "	" "	" "	"
22	Callindra	50 "	"	"	First 40 feet loam, balance coarse drift	"	"	"	Unlimited supply of salt water	"	"	"
23	"	30 "	"	"	" " " "	"	"	"	" "	" "	" "	"
24	Wells	Unknown	"	"	" " " "	"	"	"	" "	" "	" "	This well was sunk before I came on the run
25	Ullollie	300 feet	"	"	Same as No 8	"	"	"	" "	" "	" "	This well was filled up again.
26	Kambula	150 "	"	"	"	"	"	"	" "	" "	" "	Salt water struck, and filled in again.

NOTE.—In some of these wells it is very difficult to tell the strata, but in the bulk of those in which the water was good, blue clay was found mixed with layers of sand, and occasionally shells

WILLIAM HOGARTH,  
Manager.

APPENDICES TO EVIDENCE TAKEN ON DARLING RIVER

APPENDIX TO REPORT ON DARLING RIVER, No. 11.

Levels of Darling River from Wentworth to Menindie.

Miles.	Water Level.	Difference.	Flood Level.	Difference.	Remarks.
0	42·61	2·99	56·10	1·70	Junction with Murray. Murray backed up.
18	45·60	.....	57·80	7·76	
38	45·37	4·03	65·56	4·59	
58	49·40	5·34	70·15	10·50	
78	54·74	6·19	80·65	2·24	
98	60·93	7·03	82·89	.....	
118	67·96	5·34	.....	.....	Flood not known.
138	73·33	.....	.....	.....	
158	.....	.....	.....	.....	Rise in river by flood.
178	90·38	3·12	110·60	3·40	
198	93·50	8·75	114·00	5·33	
218	102·25	1·34	119·33	.....	
238	103·59	2·97	.....	.....	
258	106·56	4·28	126·00	13·25	
278	110·84	4·06	139·25	2·65	
298	114·90	6·90	141·90	5·10	
318	121·80	0·98	147·00	9·04	
338	122·78	2·62	156·04	0·55	
358	125·40	.....	156·59	8·81	
378	.....	.....	165·40		

Datum taken from a point 50 feet below bench mark on Gum Tree at the junction of the Murray and Darling Rivers.  
 Laidley's Pond Creek, at 317 miles 20 chains—Bed of creek, 123·35.  
 Menindie, „ 320 „ 40 „ Bank, 148·7; flood, 147·90.  
 Yartla Lake Creek, „ 201 „ 40 „ Bed of creek, 98·69.  
 Average fall per mile from above 3·47 inches per mile.

30 September, 1886.

WILLIAM ORR,  
 District Surveyor.

APPENDIX TO REPORT ON DARLING RIVER, No. 12.

BILLILLA RUN, DARLING RIVER.

Year.	Rainfall. Inches.	River.	Remarks.
1857.	10		No flood; creeks dry; storage rains.
1858.	8·50	28ft.	Navigation first opened; no creeks; grass rains.
1859.	9	Low	Navigation stopped; storage rains.
1860.	10	34ft.	Navigation open; creeks; floods; no lakes; storage rains; Teryawynia filled; excessively hot year.

ALBEMARLE RUN, DARLING RIVER.

1861.	8	Low	No navigation; grass rains.
1862.	11	35ft.	Navigation; storage rains.
1863.	9	35ft.	Grass rains; navigation.
1864.	10	44ft.	Grass rains; creeks and lake partly filled as far as Ratcatcher's.
1865.	8	Low	No navigation; grass rains.
1866.	14	22ft.	Rise from rain; low river after storage rains.
1867.	9	33ft.	Navigation; creeks; no lakes; grass rains.
1868.	8·50	Nil	No navigation except for light draught boats; grass rains.
1869.	12	Nil	Storage rains.
1870.	15	43ft.	Storage rains; creek filled.
1871.	9		No navigation.
1872.	10		do.
1873.	12	41ft.	Creeks and lakes; storage rains.
1874.	9	Nil	Grass.
1875.	9·50	Low	
1876.	6·75	27ft.	Rain no good.
1877.	8·50	Low	Grass rain.
1878.	9·25	do.	do.

APPENDIX TO REPORT ON DARLING RIVER, No. 12—*continued.*

Year.	Rainfall. Inches.	River.	Remarks.
1879.	11	39ft.	Creeks and lakes filled ; storage rains.
1880.	7.50		
1881.	12		
1882.	10.32		
1883.	5.74		
1884.	6.10		
1885.	9.80		
1886.	3	Till the end of June.	N. SADLEIR.

APPENDIX TO REPORT ON DARLING RIVER, No. 13.

REPORT upon the chain of Lakes on Teryawynia, Albemarle and Tolarno Holdings.

THE chain of lakes on the abovenamed holdings are filled by overflow from the Talyawalka Creek an ana-branch of the Darling, through a channel known as the Teryawynia Creek.

The Talyawalka runs when the river is about 28 feet above summer level, and on it immediately below the point where the Teryawynia Creek runs out of it, is situated the Bywash Dam and flood-gates which were erected jointly by the lessees of Tintinalogy, Teryawynia, Albemarle and Tolarno, at a cost of £2,700, in the year 1877. At that time it was arranged between the lessees that the large flood-gates in the centre of the dam-head should be kept open whenever the Talyawalka was flooded until its water ran through into the river. At the same time a foot-board in the lower part of the opening, regulating the water so that an equal quantity should also flow into the Teryawynia Creek. When the water in the Talyawalka completed its circuit to the river, below Menindee, the flood-gates were to be closed and the whole of the water turned into the Teryawynia Creek, through which it filled the lakes. The channel runs direct into Teryawynia Lake, which is the first to fill. Another channel known as Snake-flat Creek runs out of the main one into Dry Lake, and after Teryawynia and the lakes which back up from it are full the whole body of water follows this course. Another small branch runs into cane-grass swamps on Back Talyawalka, and they drain into Mosey's Lake.

When Teryawynia is nearly full another channel backs up and fills Long, Haystack, and Minden (or Washpen) Lakes, and the lake also backs up into Pinchgut, Maggie's and Swan Lakes.

After filling Dry Lake (through Snake-flat Creek) the water runs in a narrow channel out of that lake and fills in succession: On Albemarle, White water, Pelican, Eucalyptus, Waterloo, Victoria, Brommie's, and from it back up Denny's and Brennan's Lakes.

The main channel continues from the south of Brommie's into Sayer's, the eastern part of which is on this run, and on Tolarno are the western parts of Sayer's, Gum Lake, Boolaboolka and the southern part of Ratcatcher's.

On Albemarle is the northern part of Ratcatcher's, and, as a rule, this completes the chain; but it is stated that in 1870 the overflow from Ratcatcher's filled North Lake. There appears to be a broad shallow channel between the two.

It is not very easy to obtain authentic data as to the filling up of these lakes, or the periods for which they retained water; but, from various sources, the following table has been compiled, which I believe to be fairly accurate as far as it goes back.

	Filled.	Became dry.
Lakes on Teryawynia Holdings—		
Teryawynia Lake* .....	1870-74. Creek stopped running, in 1876, before it was nearly full; did not run into other lakes. Filled in 1879; creek stopped running, 15 July, 1880.	Some time before 1879. Dry, 16 April, 1883. About 3 ft. of rain-water (local) ran into it in 1885, January rain.
Dry Lake .....	1870-74-79, and is now filling .....	Usually holds water about 2 years.
Mosey's Lake .....	" " .....	" " to 2½ years.
Long Lake .....	" " .....	After 1879; in August, 1883. Holds water over 3 years.
Maggie's† .....		
Winden .....	1870-74-79, and now filling .....	Holds water for about 2½ years.
Swan .....	" " .....	" "
Pinchgut .....	" " .....	Not quite so long.
Lakes on Albemarle Holding—		
Mosey's Lake .....	See above.	
Dry Lake .....	See above.	
White Water .....	1870-74-79, and is now filling, or will probably be filled this flood.	Holds water about 2 years.
Pelican .....	" " .....	" 2 "
Eucalyptus .....	" " .....	" 2 "
Waterloo .....	" " .....	" 2½ "
Victoria (filled 5 Oct., 1879; dry, Jan. 1884) .....	" " .....	" 3½ "
Brommie's .....	" " .....	" 3½ "
Denny's .....	" " .....	" 2 "
Brennan's .....	" " .....	" 2 "
Sayer's (E. part) .....	1870-74-79. ....	" 2 "
North part of Ratcatcher's .....	1870-74, and partly filled in 1879. ....	" 2½ "
North part of North Lake .....	1870. ....	No data.
Lakes on Tolarno Holding—		
West part of Sayer's .....	1870-74-79, .....	Holds water about 2 years.
Gum .....	" .....	" 2 "
Boolaboolka .....	" .....	" 4 to 4½ "
Ratcatcher's (southern part) .....	1870-74, and partly filled 1879. ....	" 2½ "
North Lake (southern part) .....	1870. ....	No data.

\* Usually contains water (say) over 3 years, from time Teryawynia Creek runs.

† Water has been dammed out for some years.

The Teryawynia Creek is now running a very strong stream, and there is every reason to believe that the present flood will fill all the lakes.

The lessees state that the "Bywash" has had a very considerable effect upon the lakes, and that since its erection in 1877, the chain would not have filled without its agency, and even with its assistance the flood of 1879 only partly filled Ratcatcher's. They also state that since the Bywash was made polygonum, which used to be found in some of the lakes, has died out in consequence of the greater quantity of water in them.

The Teryawynia Creek has no outlet beyond the lakes (of which, under any circumstances, North Lake is the last) and ran out of the Talyawalka in the years 1870 and 1874—a little only into Teryawynia Lake in 1876, and since the Bywash was made filled in 1879; and in January 1885, from heavy local rain, putting only 3 feet of water into Teryawynia Lake. An immense body of water is now coming down it, and as soon as the Talyawalka water reaches the river, near Menindee, the whole stream will be diverted into the lake channel by closing the flood-gates.

In my opinion Teryawynia, Long Lake, Victoria, Brommie's, and Boolaboolka are the best of the chain, though the latter is extremely boggy for the last year that it contains water, and during the drought thousands of sheep died from being bogged in it.

The depth of the lakes is from 15 feet down to 4 or 5.

On Teryawynia Holding useful wells have been made, varying in depth from 25 to 70 feet. On Teryawynia there are two of fresh water, and one too full of soda to use. Any supply could be obtained in the lakes. A well with small supply of fresh water on Albemarle.

On Long Lake there is a well of very good fresh water, 140 feet deep—will supply 10,000 sheep.

On Albemarle Holding there are wells as follow:—

50 feet deep,	on Mosey's Lake,	fresh,	supply for 24 horses.
60	"	"	Eucalyptus, fresh, supply 4,000 sheep.
65	"	"	Victoria, fresh (two shafts), supply 16,000 sheep.
65	"	"	Brommie's, good stock water, supply unlimited (practically).
58	"	"	Ratcatcher's, good stock water, supply 10,000 sheep.
60	"	"	Sayer's, two shafts, fresh water, supply 7,000 sheep.

On Tolarno Holding, on Boolaboolka Lake, there are two good shafts, very good stock water, supply 20,000 sheep; one, supply 12,000 sheep; one shaft, brackish water, supply 12,000 sheep.

There is great drainage into all the lakes from hard clay-pan ridges, by which most of them are surrounded; and in wet seasons the supply would, to a certain extent, be augmented, or rather kept from falling, by local rain, though not appreciably.

The margins of the lakes, as a rule, are very rich country, and almost all of the bed of Teryawynia Lake grows close fine grass and clover and herbage when the water dries up. Long Lake also grows grass, clover, and herbage in its bed when dry. Victoria grows clover and herbage, as do also most of the other lakes over a large part of their margins.

There are very good catchments for tanks in the clay-pans surrounding the lakes, and if the country was fully improved by tanks and wells, it would, in my opinion, be better to exclude the water from the lakes altogether, as too much of the best of the country is covered by water when they are full, and they are boggy and dangerous when drying up.

It is true that they give splendid lambing paddocks when full, but it is a question whether this compensates for the large area of country rendered useless.

Christmas Well, Teryawynia, 2 Sep., 1886.

G. W. MOORE.

#### APPENDIX TO REPORT ON DARLING RIVER, No. 14.

	RAINFALL AT MENINDIE, 1886.						Points.
January	...	...	...	...	...	...	85
February	...	...	...	...	...	...	0
March	...	...	...	...	...	...	0
April	...	...	...	...	...	...	2
May	...	...	...	...	...	...	110
June	...	...	...	...	...	...	137
July	...	...	...	...	...	...	445
August	...	...	...	...	...	...	201
September	...	...	...	...	...	...	114

10.94 inches.

Maximum height of river, 26ft. 4in. on October 4, 1886.

J. R. HOLDING.

#### APPENDIX TO REPORT ON DARLING RIVER, No. 15.

(See accompanying Diagram for position of Lake.)

MEMO. showing relative depth of water which could be backed into various lakes by 183 dam on the Great Ana-branch of the Darling, near 183 marked tree (compiled in 1880).

When 183 gauge reads 12 ft., that is when there is 12 ft. of water against 183 dam,

	ft.	in.
Milkengay Lake would contain	18	2½
Nearie	15	10
Yeltow	13	0
Nialia	3	0

A dam below Popiltah junction would keep Popiltah, Popio, Traveller's, and Dry Lakes all full.

A strong dam at Duckpool could be made to retain a large body of water, and to keep Warrawenia Lake full.

From the above it appears that by one additional dam and the strengthening of two existing dams, nine lakes could be kept full.

For description of these lakes, see folios 45 to 47, Report Select Committee, Pastoral Dams Bill, 8th May, 1884.

D. H. CUDMORE.

APPENDIX TO REPORT ON DARLING RIVER, No. 16.

(See accompanying diagram for position of bores.)

DESCRIPTION of bores on Popiltah Run up to September 9th, 1876.

		<i>Bore No. 1, July 14.</i>				<i>Bore No. 6, August 9.</i>			
		ft.	in.			ft.	in.		
Box Swamp.	Square Tank.	Sand ... ..	2	0	Square Tank.	Sand ... ..	22	0	
		Copi ... ..	1	6		Mixed clay ... ..	4	0	
		Mixed clay ... ..	7	6		White sand ... ..	2	0	
		Light clay ... ..	7	0		Mixed loam ... ..	8	0	
		Sand or loam ... ..	9	0		Water.	Brown clay ... ..	8	0
		Brown clay ... ..	8	0		Blue clay ... ..	6	0	
		Blue clay ... ..	4	0		Brown clay ... ..	4	0	
		Sand or drift ... ..	2	0		Water.	Sand or drift ... ..	2	0
		Blue clay ... ..	7	0					
		Sand or drift ... ..	8	0		Water.			
Brown clay ... ..	5	0							
Cement ... ..	1	0							
Brown clay ... ..	1	0							
Sand and drift ... ..	8	0	Water bad.						
		71 0 feet.				60 0 feet.			
		<i>Bore No. 2, July 21.</i>				<i>Bore No. 7, August 11.</i>			
		ft.	in.			ft.	in.		
Pine Tank.	Turnback Jimmy.	Sand ... ..	6	0	Sand... ..	5	0		
		Brown clay ... ..	2	0	Marl... ..	17	0		
		Mixed clay ... ..	8	0	Sand... ..	18	0		
		Light clay ... ..	3	0	Clay... ..	3	0		
		Sand and drift ... ..	5	0	Water.	Sand... ..	12	0	
		Blue clay ... ..	4	0	Clay .. ..	1	0		
		Sand and drift ... ..	3	0	Water.	Sand or drift ... ..	3	0	
						Loam ... ..	6	0	
						Dark marl ... ..	6	0	
						Yellow sand... ..	2	0	
				Blue clay ... ..	1	0			
				Drift ... ..	4	0			
		31 0 feet.				78 0 feet.			
		P.S.—Well sunk 26 feet.				<i>Bore No. 8, August 21.</i>			
						ft.	in.		
		<i>Bore No. 3, July 28.</i>				Sand... ..	7	0	
		ft.	in.			Marl... ..	2	0	
Square Tank.	Yellow Waterhole.	Sand... ..	35	0	Sand... ..	2	0		
		Loam ... ..	2	0	Loam ... ..	13	0		
		Clay, mixed... ..	2	0	Mixed clay ... ..	17	0		
		Light clay ... ..	2	0	Light clay ... ..	2	0		
		Light sand ... ..	3	0	Water.	Sand and drift ... ..	1	0	
		Clay, mixed... ..	2	0	Blue clay ... ..	1	0		
		Sand... ..	2	0					
		Red loam ... ..	2	0					
		Mixed loam ... ..	4	0					
		Sand or drift ... ..	2	0	Water.				
Light clay ... ..	3	0							
Loam ... ..	5	0							
Sand or drift ... ..	2	0	Water.						
		66 0 feet.				45 0 feet.			
		<i>Bore No. 4, August 3.</i>				<i>Bore No. 9, August 22.</i>			
		ft.	in.			ft.	in.		
Square Tank.	Yellow Waterhole.	Sand... ..	4	0	Sand... ..	7	0		
		Loam ... ..	6	0	Marl... ..	5	0		
		Red sand ... ..	1	0	Mixed gravel ... ..	3	0		
		Brown loam... ..	10	0	Clay ... ..	7	0		
		Mixed clay ... ..	4	0	Water.	Sand or drift ... ..	3	0	
		Sand and drift ... ..	8	0	Water.	Clay ... ..	4	0	
Blue clay ... ..	4	0		Sand or drift ... ..	2	0			
		47 0 feet.				31 0 feet.			
		<i>Bore No. 5, August 7.</i>				<i>Bore No. 10, August 23.</i>			
		ft.	in.			ft.	in.		
Square Tank.	Yellow Waterhole.	Sand ... ..	7	0	Sand... ..	5	0		
		Loam ... ..	6	0	Copi ... ..	5	0		
		Mixed loam ... ..	6	0	Sand... ..	6	0		
		Blue clay ... ..	5	0	Marl... ..	3	0		
		Red sand ... ..	2	0	Sand... ..	1	0		
		Brown loam... ..	5	0	Light clay ... ..	16	0		
		Blue clay ... ..	8	0	Water.	Sand and drift ... ..	2	0	
Brown clay ... ..	9	0							
Sand or drift ... ..	1	0	Water.						
		49 0 feet.				38 0 feet.			
		<i>Bore No. 11, August 24.</i>				<i>Bore No. 11, August 24.</i>			
						ft.	in.		
Square Tank.	Yellow Waterhole.	Sand... ..	4	0	Sand... ..	4	0		
		Copi ... ..	5	0	Copi ... ..	5	0		
		Light sand .. ..	6	0	Light sand .. ..	6	0		
		Marl... ..	9	0	Marl... ..	9	0		
		Light clay ... ..	4	0	Light clay ... ..	4	0		
		Sand or drift ... ..	6	0	Water.	Sand or drift ... ..	6	0	
		49 0 feet.				34 0 feet.			





## APPENDIX TO REPORT ON DARLING RIVER, No. 18.

SUGGESTION *re* the Great Ana-branch of the Darling River.

If a lock can be constructed below the Ana-branch cutting or below Tandou Creek, it would ensure the permanency of the waters of the Ana-branch.

By a small expenditure flood-gates could be erected below Tandou Lake, and below Popiltah Lake, also at Duckpool dam. By this means the flow of *flood* waters down the Ana-branch could be controlled, and all of the lakes could be filled, and, if required, kept full, thus impounding such an enormous quantity of water that it would beneficially affect our arid climate. With the primitive means now at my command, I filled and kept many of the lakes full after 1879 flood, and this present (1886) flood I hope to do the same.

What is required is some local authority to control the water, for, as the resumed areas are taken up, it will so increase the number of people interested as to cause endless disputes.

I would advise that the Government put down a deep bore near the 66 to 70th mile-posts on the South Australian border, on the road from Pop Lake to Kooringa; water for the work could be obtained from Oakvale well, which is about 6 miles from the 76 mile-post.

I at one time intended to get my neighbours to join and put a pump at the Ana-branch cutting, but a lock would be infinitely better.

Avoca Station, Wentworth, 6th December, 1886.

D. H. CUDMORE.

EVIDENCE TAKEN BY COMMISSIONERS MURRAY, M'MORDIE, AND  
GIPPS ON THE NORTHERN COASTAL RIVERS, &c.

OCTOBER-NOVEMBER, 1886.

THURSDAY, 14 OCTOBER, 1886.

At Glen Innes.

Present:—

Mr. MURRAY,

Mr. M'MORDIE, B.E., M.I.C.E.

Mr. Francis George Finley examined:—

*Mr. F. G. Finley.* *Mr. Murray.* What is your position? I am District Surveyor, stationed at Glen Innes for twelve months past. Previously I was for eight years in the Gwydir and Inverell Districts, particularly on the Western Watershed and the Gwydir District. I have an extensive knowledge of the country, having had considerable experience there. I cannot speak with much authority in this particular district as yet, but during my short stay I have seen a fairly large extent of the country. I know that in this district we are at the head of many waters. What seemed to me to be a wonderful natural reservoir is what is known as the Mother-o'-Ducks, at Guyra, taking into consideration its altitude and other facts. Of course, as the Commission, or many of them, may be aware, water is very general in the Glen Innes District, and there is such a constant and regular rainfall that there is never a necessity for troubling about a water supply. I cannot, however, speak with any certainty as to the existence of any natural reservoirs in the gorges in which suitable sites for water storage might be found. I know the Gwydir country, however, very well.

*Dam site.* Can you inform us of any suitable sites? Well, one particular spot may be found near Gravesend Station; it is a most marvellous place for a dam.

Can you give us any information as to what the size of the requisite dam would be, and what extent of water would be conserved? I hardly can state what size the dam would have to be, but a not very elaborate one would throw back a considerable amount of water. Although there is a pretty rapid stream, I should say the water would be thrown back 15 miles—10 miles at all events. I took particular notice of the river, and it is about 80 yards wide. The dam, perhaps, would have to be 200 or 300 yards wide. The water would be simply confined to the channel of the river. Its banks are at least 50 or 60 feet high there. The stream is tolerably small, although I have never seen the levels. I should reckon that there would be a fall of from 2 to 3 feet in the mile.

Is the position very suitable for a dam? Yes. There are hills with a stony outcrop on both sides.

Would much land be benefited by cutting channels for the utilization of impounded waters in times of drought;—could you carry such waters to advantage on to country which would require it? Certainly. Is there any, or much, agriculture carried on in that district? Yes; there is a good deal between Warialda and Ginneroy. It is only during the past three or four years that agricultural land thereabouts has been taken up in any great quantity. The holders have been chiefly pastoralists and those carrying on small farming occupations.

I suppose that one of the chief drawbacks to them is drought? There is no question about that.

*Irrigation.* Do you think that if water could be supplied from a general reservoir that the settlers and others would avail themselves of it in order to go in more extensively for agriculture? Most decidedly. I know of one place where irrigation is being carried out on the Big River, at Boollooroo. They have irrigated a small portion of country there, and the results have been very extraordinary in the way of crop-growing. I think the best thing I could do would be to refer you to Mr. M'Donald, of Mickubrindi. Personally, I cannot give you the exact statistics, so that I would not care to commit myself. I know, however,

however, that the results were very satisfactory indeed. The locality is just where some great pumping machinery has been erected by Messrs. Robertson and Wagner. About 40 acres are being irrigated. The produce has been used for sheep feed principally, and it kept a very great number alive. Mr. M'Donald was also enabled from the product of those 40 irrigated acres to keep alive a large number of valuable stock during a succession of seasons of drought.

Mr.  
F. G. Finley.  
14 Oct., 1886.

If the system were extended, would any considerable extent of additional country be likely to be utilized similarly? Yes; I certainly believe so.

Do you think that it would induce a larger population, and that agriculture would be increased, with good results? Most decidedly. With irrigation thereabouts they could grow anything.

Have you any information which you can supply us with as to the produce of (say) hay per acre, from that place? I believe the result was something like 4 tons per acre, probably more. I do not know exactly.

Do you think that if the State went to the expense of constructing works of the kind suggested that the people would be satisfied to pay a reasonable interest on the outlay, at a fair rate? That is such a national question that I really do not feel competent to answer it. In dry times they would give anything for water. During the last seven years they have lost immense quantities of stock from drought. They have, in fact, been thrown so much upon their own resources that they have conserved large quantities of water in wells and dams, and they are almost becoming independent of large schemes of conservation.

This is the first wet season for some time? Yes; the first since 1878 or 1879.

You know something about floods, I believe? Yes. I went down from Moree to Walgett immediately after the large flood of 1879, when the rivers were all overflowing, and when an immense quantity of water was running over the flat country in the Gwydir District.

Floods.

Is the soil there a permeable one? No; it is very retentive in its character; it becomes so after having been saturated.

The whole of the water runs into the river then? At early stages of floods the immense chasms in the ground absorb vast quantities of water. The whole of this goes into the Barwon River. I must have driven through between 20 and 30 miles of water, averaging from a foot to 3 feet, from Tyrell Station to Collarindabri. All the surrounding stations were also flooded.

Do you know of any good sites for conserving water in large quantities thereabouts? There is not the slightest difficulty in conserving water on the Mehi anywhere from Pallamelawa to its junction with the Barwon. The fall is very slight, and the banks are very retentive; in point of fact the rivers themselves are simply channels cut through the mud. Dams could be constructed anywhere. Messrs. Robertson and Wagner have erected large pumping machinery at Bullaroo, and they have cut a canal about 4 miles across into the Carore Creek, otherwise known as Midkin Creek. The water is pumped out of the Big River into the canal, and it flows by gravitation down those creeks for about 60 miles. They then have erected large reservoirs in the creeks, which all become filled with water. Subsidiary drains were then cut, to my knowledge in one case 10 miles long, picking up two 7,000 cubic-yard tanks on the way. At the end of 60 miles they started pumping, and next morning the water had been thrown back 5 miles. The next day they had carried it out 10 miles and filled the second tank. Their main pump threw 10,000 gallons per minute, and it was imported from Melbourne at a very great expense. The whole of this outlay is gone to for stock purposes, and as a result of it they were able to occupy country that they could not put a sheep on before for a long time. On Talloona Run, a very valuable conservation was made by Mr. Payne, of Gill and Payne. The creek is a large, black washer, running through the country, and in dry seasons it becomes perfectly dry. In 1881 he erected a dam, at comparatively little cost, across the creek, and it threw the water back 8 miles. There is a great depth of black soil on the banks; and he cut into each bank and carried the dam into the natural surface. It held splendidly, and never leaked at all. Half a mile above it there was a little branch, which acted as a by-wash.

Pumping on  
Bullaroo.

Have you any idea as to its cost? I should think that it did not cost more than £200, and the result was very effectual indeed. It watered several sheep paddocks, and it has never been dry since it was made, that is some five years ago. It is situated on Cropper Creek.

Is there any agriculture in that district? Mr. Payne tried crops without irrigation, but during the drought he could not grow anything. He left the place and sold it to Messrs. Amos Brothers.

Do you know anything of a place called the watercourse country? Yes. It is a very large extent of land known as the reed-bed country. You could conserve any quantity of water there; in fact the district has been taken up of late for sheep and cattle farming. Many valuable dams have been erected, and I know of one case in which a very fine supply of water was obtained by sinking.

Do you think it better for the State to undertake the work, or would you leave it to private enterprise? I think that the interests of the country would be advanced if the Government undertook the work. The proprietors would be able to pay fairly for a good supply of water. It would also lead to an increase in the number of landowners.

You think, then, that an undertaking of that kind by the State would be of great benefit to it, and that it would be largely availed of? I do. In that country there is no difficulty in conserving water anywhere. It is simply a matter of expense. I cannot say whether it could be conserved at a sufficiently high level to provide the whole country. Down the Mehi the water would not be high enough to command the surface. The place I speak of was a dead level, and the water was carried across it by its mere force of current. The canal was a most primitive one, some 3 feet wide and a foot deep. I believe you could conserve it sufficiently high to carry it out, but not sufficiently for irrigation purposes without laying pipes, &c. I think I could show plans of the pumping works, and I will undertake to have the same prepared and forwarded to the Commission.

Do you know of any suitable places on the M'Intyre River? I am afraid that that is a too rapid stream. I know of several places at which a dam could be constructed to conserve large quantities of water if there was any means of securing a by-wash. One place in particular at Arrawatta, about 10 miles north-east of Inverell. Most of the soil is occupied at present by farmers and sheep-breeders, also by a good number of wine-growers. Some of the farmers also grow wheat and cultivate vineyards, and most of them combine pastoral pursuits with farming.

Would the water be thrown back for any great distance? By making a high dam, say 50 feet, it would be thrown back, say, 6 miles. Such water would be confined to the main channel of the river, so that there would be no great expense in reclaiming the land.

The

Mr.  
F. G. Finley.  
14 Oct., 1886.  
Dam sites on  
Barwon.

The water would be conveyed over a great extent of very rich country? Yes.  
*Mr. M' Mordie.*] What is the nature of the bed of the river? Gravelly; but probably beds of rock at no great depth. I believe a rocky bar could be found there on which to construct a dam.  
Have you any suggestions of your own, or any other information which you think would be useful which we have not yet elicited from you? I know of two places on the Barwon River where there are rocky crossings which would make good sites for dams. One is about a mile below Collarendabri, and one just above the township. The former place would make a very fine site for a dam, and it would throw back large quantities of water. In fact, I do not think that there would be any great trouble in locking the Barwon from Goondiwindi down to Collarendabri, even so far as to carry on navigation. That would give over 200 miles, as the river fall is very slight, and the water when in high floods moves very sluggishly. As a matter of fact there is a great scarcity of feed there in dry seasons, and a work of the nature proposed would make it a necessity. At one station, Caidmurra, they have been very badly off for water for years past; not to speak of many other stations. I know the whole of the country through which the Whalan and the Gil Gil pass. It is very subject to droughts. The Whalan is an ana-branch of the Boomi. There are very fine sites for water conservation on all of those creeks. Of course the drainage is very great.  
Do you know to what height the River Barwon rose this year? No; I have not been down there this year.

Mother-o'-  
Ducks.

Have you any idea as to the area and depth of the Mother-o'-Ducks Swamp? I believe the average depth in a season like this is from 5 to 6 feet. The area is 3,360 acres. I believe the depth could be increased at a moderate expense by the construction of dams. I am of opinion that both Glen Innes and Armidale could be supplied with water from it, on account of its elevation, which is considerably above both towns.

Are the physical features of the country between here and Mother-o'-Ducks favourable for conveying the water? Yes. I believe that a scheme could be easily devised for carrying it to both towns. It is not wanted for irrigation in this climate; in fact, draining is rather more requisite, except in dry seasons. We have had 33 inches of rain up to the present time from January 1st this year. The average rainfall here is over 30 inches per annum. I think about 35.

What is the nature of the river-bed at Gravesend? I should think it is a stiff clay, and no doubt you could get rock if you went to a reasonable depth.

What quantity of water would flow in the Gwydir during the recent dry seasons? I am not a sufficient authority to give you that information. I have seen the Big River stop running several times during droughts. The Meei has been dry time after time for miles along its course.

Did it run sometimes during dry years? No. The Meei did not at one time run for about three years.

*Mr. Murray.*] What was the cause of the river stopping running;—was it evaporation or great percolation? Simply a reduced rainfall. The Big River itself did run several times during the drought. By the Big River you will understand, of course, the Gwydir River.

*Mr. M' Mordie.*] When the Big River was dry, was there any under-current going through the sand? My own impression is that there is a very large subterranean flow running through the whole of that district.

Would it be possible to stop that underflow by the erection of dams? I do not know; but I think there must be a very large underflow of water. The Meei River could be made a very valuable water-frontage if the obstruction at its mouth could be removed, and that would not cost very much. The obstruction has been caused by debris accumulating through an eddy at the effluence, and any moderate freshet will not top it, and run into the Meei. If that obstruction was removed any ordinary freshet would flow into the river, and through its whole length. It is simply debris of large logs, &c., and the cost of its removal would be very small in comparison with the great benefits which would result. I believe that there is some idea that a legal difficulty would exist in connection with the matter, as certain riparian rights would probably be affected. It is chiefly a want of funds which prevents its removal. I have read a large amount of correspondence and evidence in connection with it; and it appears to me that from £1,000 to £2,000 would remedy the difficulty; probably less than that would do it.

*Mr. Murray.*] Do you think it would be necessary to construct something to prevent the accumulation repeating? Yes. Steps in that direction could easily be taken. A very large number of people would be benefited, and the town of Moree also; it is a very flourishing town. The Broadwater River used to run before the main Meei.

*Mr. M' Mordie.*] Would the people on the Big River object to the removal of the bar? I believe they would, because the pumping operations I have spoken of would be affected. I believe you could devise a plan by means of which a good supply of water could be got for both rivers. I do not think that the opening of the Meei would interfere with the flow of water down the Big River to any great extent; it would be simply restoring the river to its natural state. There is a large number of residents on the Big River who derive their water supply from it. The major portion of settlement is on the Meei. The population now is about 700 or 800.

Do they avail themselves much of wells in that district? Not so much as of tanks, although there are numerous wells.

Wells.

Where they have gone in for wells, have they been successful? Not always; many of them are brackish, but still give very good stock-water. Some of them are 100 feet deep.

Have you heard of any of them going through the brackish water into fresh? I am not aware of any such cases. I know of one well only 40 feet deep near Moree, which gives a magnificent supply of beautiful water. The owner, Mr. Solling, a surveyor, irrigates slightly from it. I should think that it would supply from 4,000 to 10,000 gallons a day, and I believe that the supply of underground water in that district is almost inexhaustible.

Mr. Edward Gradwell examined:—

Mr.  
E. Gradwell.  
14 Oct., 1886.  
Wells.

*Mr. Murray.*] You are a well-sinker? I am a well-sinker, and I have had four years' experience in this district, and particularly in Glen Innes. During that time I have sunk probably fifty or a hundred wells, inclusive of the deepening of old ones. I have sunk all sorts of wells within a radius of 10 miles of Glen Innes. The deepest depth to which we have gone is 65 feet, but two men sank 110 feet on the Inverell road,

road, some 5 miles from here. We have got water in every instance, and never had any occasion to abandon a hole for want of it. In every case the water which we have struck has been fit for drinking purposes, but in many cases it is very hard. The best quality is got on the north-west side of the town, where it is quite soft and contains no ironstone or minerals; in fact, you could wash yourself in it without soap, as the saying goes. We sometimes get basalt within 3 feet of the surface. There are three bars of basalt or trap-rock running through the town in a north-west to south-east direction, and very often we get water before we come to the basalt. Immediately we get on to the basalt, if no water is struck, we stop sinking. No one has ever sunk through this basalt or trap-rock. The stream is sometimes only slight, but it is never absent. Mr. M'Cormack, of "Tattersall's Hotel," Glen Innes, uses water from his back-yard well to water his garden. I never saw the effects of its water on grass. Mr. M'Crae, of Furracabad, about 2½ or 3 miles away, has had a very deep well sunk at his own private residence, and has had a windmill pump erected, with the object of watering his garden.

Mr. E.  
Gradwell.  
14 Oct., 1886.

*Mr. M'Mordie.*] Did he go to a great depth? You can get water running under every one of the adjacent flats; there is not above 18 feet of a rise, and yet they had to go more than 100 feet. The formation round about is more of a limestone one than anything else. By constantly using pumps I believe you would certainly exhaust the supply, and I only knew of one well to the contrary, namely, one belonging to Mr. Utz. You could take about 1,000 gallons a day from it before exhausting it.

*Mr. Murray.*] Do you think that if you wanted water for stock purposes that the wells would not be sufficient? If you sunk them deep enough they would be. If you don't get the water on the top of the basalt you will not get a drop in a well. Well-sinkers have only gone through the basalt at Vegetable Creek, and there is not the slightest doubt in my mind that there is a drift of tin under the Glen Innes seam of basalt. There is a trial-hole for railway watering purposes near town which is down more than 70 feet. The engineers expected to strike water at 60 feet, and have consequently now given the hole up. I sank the first 20 feet of it. We got on the basalt at 10 feet, and they were still going through basalt when they gave it up. It is a hard blue honeycombed basalt.

What other experience have you had in well-sinking? In no other district. I came from Inverell here. I was digging there.

*Mr. M'Mordie.*] Have you noticed any underground current whilst you were sinking? Only in Mr. Utz's well. It came up to my waist suddenly, and I had to be pulled up and leave the tools below ground. I immediately remarked to my mate, "That is an underground creek; pull me up, for I'm up to my middle in water." The tools are there to the present day, and we could not recover them. This is a grandly-watered country about here, and the whole of the wells are sunk entirely for domestic and stock purposes.

Is there any demand here for water for irrigation purposes, or is the rainfall sufficient for all crop-growing purposes? I have been here five years, and I think that the water is ample for all purposes.

What is the nature of the water-supply for the town? The people all depend on wells and roofs.

Where would be the most convenient place for getting a supply of water for the town? Just at the back of the township, on the flat.

Is that supply high enough to flow into the town and give a service? No; I certainly do not think it would be. You could not get water on any of the neighbouring hills. There is a shaft down 76 feet on the Show Ground, but not a drop of water is to be had in it.

*Mr. Murray.*] If you went back towards Ben Lomond you could get high sites, could you not? Certainly, and at a far less distance. New Zealand is the grandest country for wells that ever I was in. If you sink 10 feet you can get water.

Is the water that you get from the creek everywhere fresh? Yes. Some of the wells in this district are of an artesian character, but I never knew of one being full up to the surface. As a rule we are satisfied with about 4 feet of water in the shafts. The average cost of sinking is about 5s. per 5 feet from the surface to 20 feet for picked ground, but if it comes to honeycomb there is an allowance made. The basalt cutting runs from £2 10s. to £3 per foot. I am sure that you could get a bed-drift under the basalt, and obtain abundance of water; but I cannot say how far down you would have to go.

What are the nearest mining properties from the town of Glen Innes? Vegetable Creek tin-mines, about 30 miles off. I have been working there. In the dry season they are very often stopped for want of water, sometimes for months at a time. There is not the slightest doubt that water could be conserved on some of the adjacent hills, sufficient to accommodate the whole of the miners. I should think that they would be willing to pay a fair share of the cost. I know that if I had a claim there I should be only too happy to do so.

*Mr. M'Mordie.*] The sinking of a well about 60 feet deep here would cost about £60, I gather from your remarks? That is if it was on picked ground. On the other side of the hospital we sunk 56 feet. It is our custom to brick the shafts when in bad ground. The owners found the bricks, and we put them in, and sunk the well at 5s. per foot. That was because we knew that the ground was good sinking. It is beautiful, soft water—the softest in this district. It contains no hard metal or stone of any kind. We had just touched some quartz, but having plenty of water we left off. We put in a curve on getting into bad ground, and bricked up then. That was found necessary in only two cases. I have known three or four wells fall in altogether through not being properly attended to during the sinking, and leaving them neglected for a single night until the following morning.

FRIDAY, 15 OCTOBER, 1886.

Present:—

MR. MURRAY,

MR. M'MORDIE, B.E., M.I.C.E.

Mr. Archibald Wellesley Chapman examined:—

*Mr. Murray.*] What is your occupation? I am a Government staff surveyor, and I have been stationed in this district between seven and eight years, and I have a good knowledge also of the surrounding district, and in fact of the whole of the New England District, and as far west as Canonbar and Bourke. The largest lagoon near Glen Innes is 7 miles from here. It contains 193 acres, and there is a narrow channel leading from it. If this were dammed up a very considerable amount of water could be stored.

Mr. A. W.  
Chapman.  
15 Oct., 1886.  
Lagoon.

It

Mr. A. W.  
Chapman.  
15 Oct., 1886.

It has no particular name that I know of, but it is on the Clairvaulx Run, parish of Wellington, county of Gough, about 8 miles west from Glen Innes. The area I have mentioned is the area over which the water spreads at present. Of course it would spread over a larger area if dammed up. It was dry about two years ago, but then we had not had heavy rain for a month previously. After heavy rain there is usually an average of about 4 feet of water in it.

Could the capacity of the water be increased by diverting water from other streams? It could. The country is pretty level about there, and I suppose about 2 miles to the west there is a good catchment from which the water could be diverted into the lagoon. The spots are on ridges between here and Emmaville.

To what extent might water be conserved by diverting it into that lagoon? By making a dam to the mouth where it leads out you could get, probably, a uniform depth of 10 feet of water all over it.

Where does it run into? Into Clairvaulx Creek. I think that is the name, or Reddiston Creek, which is identical with Clairvaulx, which is close to Beardy Creek, near its confluence with the Severn River.

What size would the dam require to be? About 20 chains long for a not very high dam, and (say) perhaps about 10 feet in height. There are about 4 feet of water in the lagoon at the present time, and the dam in question would store a uniform depth of 10 feet. I have not made any calculation as to the amount of water that would be thereby caught.

Could that water be subsequently distributed to advantage over the surrounding land? The land adjoining it is, as a rule, poor until reaching Ranger's Valley, about 10 miles away. There are farms surrounding it at a radius of 3 miles, which would doubtless be benefited. At Ranger's Valley the land could be watered by the Severn River, which passes through the centre of the run.

*Mr. M'Mordie.*] If a dam were constructed at that lagoon, would it not fill from its present drainage area? Heavy rain fills the lagoon, but a soaking rain has not much effect on it; still, it is very seldom that it is dry. The Llangothlan Lagoon, on Ben Lomond, 25 miles from here, is only 100 acres smaller than the Mother-o'-Ducks, viz., 1,065 acres is at present covered with water. That amount could be extended very considerably. There is another lagoon of 300 acres a mile south-east of it. It contains beautiful water, and no reeds at all.

Llangothlan  
Lagoon.

What size would the dam require to be? Mr. Bagot dug a race down to the head station, carrying the water about 2 miles from the lagoon. You could carry water from it over perhaps half the tableland. By making a dam you could raise the water another 6 or 10 feet. Ten chains across would do the whole thing;—the ridges crop in admirably all round. I could not say where you could still further enclose water by adding to the dam. In all you might put an additional 10 feet into the water.

Could the Clairvaulx dam be still more enclosed? I do not think so. The country is very level thereabouts. Have you any idea of the amount of water which would be held with a 10-foot dam there? It would not take long to work it out, but I have not calculated. It would probably cover about 200 acres more all round with a 10-foot dam, or 1,260 acres with a depth of 15 feet of water.

After conservation, could the water be easily distributed on to the lands that require it? Yes, very readily, because the lagoon is 1,000 feet higher than Glen Innes. There are a great many farms all the way from Ben Lomond to Glen Innes, along Beardy Plain.

Do you think the dam superior to the Mother-o'-Ducks? Certainly, for this district. The Mother-o'-Ducks is filled with weeds, and this is clear water.

The capacity, I find, would be about 5,000,000,000 gallons? Yes.

*Mr. Murray.*] Could that be conveyed at a moderate cost on to the farms which would require it during dry seasons? Yes. The descent is very gradual.

I am aware that there is not so much necessity in this district for water, but do you think it would be advisable and requisite to construct works of this nature? I do, most certainly. The district suffers more for want of water, especially in connection with crops, than people think is the case. We generally get a good supply of rain about September, and in summer-time we always have storms. By irrigation we would anticipate the storms, and could thus save our crops. I think it would make a wonderful difference in our farming industry. The population in the district is rather thin at present, although there is ample room for an extended population, and a work of the kind which is now proposed would have the effect of increasing it. The farming industry is absolutely in its infancy hereabouts just now, and hundreds of thousands of acres are still undeveloped.

*Mr. M'Mordie.*] Would this lagoon command good land immediately below it, or would the water have to be conveyed any considerable distance? It would not have to be conveyed any great distance. There is good land right from the lagoon down. The Mother-o'-Ducks would also water a good deal of land in this direction.

Have you any knowledge of any other lagoons in this district? No. Only smaller ones, of a rather insignificant character, only about 10 chains across. There is one at Glencoe, about 10 chains square, which could be considerably increased by damming. There is another about the same size not more than 2½ miles from here, but there is very little catchment for it, and it could hardly be increased by damming. It is on the main road to Tenterfield. The first-mentioned one is about 1 mile north from Glen Innes. Those are about the most important ones.

*Mr. Murray.*] Outside of the lagoons, can you tell us of any places where, by making dams, good reservoirs could be made on creeks or rivers—say, where the mountains crop up close to the creeks? There is one place in the Clairvaulx Creek which is pretty wide in places down past Furracabad, and it is hemmed in by the mountains. The water could be thrown back a tremendous distance there. If a dam, say 50 feet high, was constructed, it would throw the water back probably 2 miles. Its width would be about a mile.

Would the water in the reservoir have to be gathered upon freehold properties? Yes; I think it would cover parts of the Haymarket Estate, the land of which is worth about £7 to £10 per acre, or more.

Do you think that some of the other places could be utilized without incurring the great cost of purchasing the freehold? On Beardy Plain and towards the Mann River I think that could be done. I have not taken particular notice of it, however.

Do you think it would be advisable to have an instrumental examination of all the places spoken of to ascertain? I think the information could be had at very little expense. For instance, an aneroid would give you all that would be required.

Is there anything else that strikes you that the Commission have not asked by way of irrigating

or conserving water which might to your thinking be useful? I have no doubt there are numbers of places where water could be conserved, where there is a good catchment, and where there are flats which would hold large areas of water. Especially to the west of the town out towards Clairvaux there is a large amount of agricultural land which would be benefited by irrigation.

Mr. A. W. Chapman.  
15 Oct., 1886.

Have you any knowledge of the average production of corn and wheat in the Glen Innes District? Wheat would average about 30 bushels per acre; but of course there are many heavier crops. The corn average would be about 50 bushels. These yields would be materially increased by irrigation, inasmuch as people could put their corn in to suit the climate better.

Mr. M' Mordie.] Could you give any reliable information as to what irrigation would be worth per acre per annum;—would it be worth (say) £1 per acre? I should think it would. Especially would it be valuable for potato growing.

Mr. Murray.] How many tons of potatoes per acre do you average in the district? From 4 to 6 tons. I think that could be largely increased by irrigating, and by a system of under-drains more could be made of the land. For instance, if you turn up your land after very wet weather it is apt to be cakey; but if you water it properly you can turn it up so as to have it mellow.

In what proportion of years do you suffer from insufficient rainfall in this district;—when does it not fall at the proper time? I think for about four years past it has been considered dry weather in New England. Our last season was a wet one, and taking it on the whole I think we have a very fair rainfall here. We are nearly always sure of rain, but if we had it at the proper time we could regulate our crops. Frost is another serious thing which we have to contend with.

Do you know anything about the springs or the wells here? There are numerous springs in the locality. Only the other day a spring at Stonehenge was analysed at Sydney, and was found to be as nearly perfectly pure as could be wished.

What is the value of land hereabouts? The value of land in the immediate vicinity of Glen Innes is £25 per acre, and farm land adjacent is worth £10 per acre, say a few miles from town.

Mr. James Martin examined:—

Mr. Murray.] How long have you been in the district? I have resided in New England since 1850. For many years I was a storekeeper in Glen Innes—for about twenty years or more,—and I have a thorough knowledge of the surrounding district. Probably no one has a better knowledge of it than myself, except, perhaps, Mr. Colin Fletcher. I was here before Glen Innes was inhabited, and long before farmers sat down on it. I have seen a great many floods, but never any droughts. We have had dry seasons, certainly. The driest was probably 1878, when the Beardy River was dry in places for stretches of a quarter of a mile. I have never seen such a thing before, and never since, and even then we had fair crops. I think I know all the natural reservoirs in the district. I have heard Mr. Chapman's evidence, and it is perfectly correct, as far as the water is concerned. I can add nothing further than that at Ben Lomond, where the immense lagoon is, there are numerous springs, and there is no necessity for taking the water to the farms under Ben Lomond. The fact is that we have too much water to contend against. Excess o water.

Mr. J. Martin.  
15 Oct., 1886.

In my own case, I lost hundreds of sheep from fluke and other diseases.

Do you know of places at which, at a reasonable outlay, water could be conserved for distribution? No; I know of no place where there is a necessity for water conservation on the adjacent hills. I am speaking of the district as far as Swanbrook, on the western fall.

Could it be conserved on the New England tableland to serve the other districts? It certainly could; but it would be very expensive. The fact is that we could conserve enough water in New England to serve the whole of Australia. Our great trouble is to get rid of it. Unfortunately it comes at the wrong time occasionally. At harvest time thunderstorms do us an immense amount of damage. The Beardy is a shallow river, but the Mann River is different. I have, however, seldom heard of damage to any extensive degree from that source. I do not think that it would be necessary for us to conserve water more than once during ten years, and I very much question whether the people would guarantee to pay for what was given to them in the shape of water conservation here, because it would be very seldom required. Oats are our standard crop, but in some parts we have wheat. In the Clairvaux District wheat thrives remarkably well. On the black-soil plains it does not do well, unless we have a good season, when it occasionally is a success. On the hilly or red soil we sometimes get 40 bushels to the acre, but our average for wheat is 22 bushels, and for oats 50 bushels per acre. That is a rather low, and certainly not an exaggerated average. Only a certain portion of the district is fitted for corn-growing. As a rule, corn is put into newly-ploughed ground, because the land is too mellow. Our corn crop would not average more than 20 bushels, but I have known instances of perhaps 60 or 70 bushels per acre.

Do you think that on the slopes the corn could be increased considerably in average by irrigation? I certainly think that it could be, on the western slopes.

Nothing could be done, in your opinion, to benefit the potato crop? No, except on the western slopes. The locality of Swanbrook, in the west, is looked upon as the limit of the tableland. That is about 22 miles from Glen Innes. On all other sides we have an unlimited supply of water—north, south, east, and west. We do not pretend to grow grapes, but occasionally we do grow them. The late Captain Williamson grew them profitably at Swanbrook. I have only once known the local creek—i.e., the Rocky Ponds—to be dry. That was in 1852. I was the first Returning Officer for the district, and I take a very deep interest in it. I certainly think that an unlimited supply of water could be provided for the town from the lagoons referred to, but we have really no need for it in Glen Innes. When population demands it, a system of gravitation could be readily carried into effect. There are any number of springs in the immediate vicinity. I am not aware that an officer of the Works Department (Mr. Hickson) is at present making inquiries with respect to a water supply for Glen Innes. Almost every house in the town is supplied from wells. It would not be possible to utilise the creek, inasmuch as it is full of dead dogs, &c. Our municipal roll contains within 120 of 3,000 electors, but I cannot say the amount of ratable property in the borough. It has increased about a third during the last couple of years. In future times I have no doubt it would be a grand thing to have a pure-water supply for the town, for unless the Municipal Council take very extraordinary precautions indeed the future supply will be anything but pure. English fruits grow here to perfection, and frosts are prevalent. We grow almost every fruit here, including some of the finest cherries in the world. I speak from experience, having grown them for years. As I have



Mr. J. Martin. have said, grapes are not worth troubling about on the tableland. The people in the district have a very primitive style of farming, and only during the last few years have they made use of any modern appliances such as double ploughs, reaping machinery, &c. They are now, in some instances, making arrangements to house their cattle. Some new people have imported new ideas, and things are bidding fair to be largely improved in the immediate future. We have the ground, and it only needs enterprise to make the district one of the most important in the Colony.

15 Oct., 1886.

Wheat growing. *Mr. M' Mordie.*] Could water be profitably used to a distance of (say) 40 miles, assuming that it be conveyed for that distance? I do not think so. The land is not there. We are looking for a market for our produce to Queensland. We could get a suitable market at Newcastle and elsewhere if the Government would allow us to take our goods at a reasonable rate to those markets. At the present railway rates we are virtually shut out from everything; and if no reduction is made, or in the event of our failing to get a market in Queensland, we may as well shut up altogether. Oats can be grown very profitably at 1s. 9d. or 2s. per bushel, and other things in proportion. We must either send our produce south or to Queensland. If both of these quarters fail we must stop farming, and live upon each other as well as we can. I have never been engaged in milling, so that I have no direct personal knowledge of it, nor am I personally interested in it. At present we have no special inducements to grow more than we require for our own consumption. I know as a matter of fact that we have been importing Californian wheat here, which is explainable by the reasons I have mentioned. This is the first year that flour has ever been sent away from Glen Innes. Mr. Utz has this year sent locally-grown flour to Newcastle, Narrabri, Tenterfield, and Armidale. It costs about a pound per ton to truck it to Newcastle. Do you think that if sufficient inducement was given to the people in these districts they could supply all the deficiency of Queensland for breadstuffs? Yes. Some of the finest wheat I ever saw in the country was grown at Tenterfield. I have been judging wheat there for some years past, and it is quite equal to the Adelaide. Inverell and Tenterfield wheat seems to produce a little more flour. Our average is, I know, infinitely larger than that of Adelaide—in fact, it is fully four times as much.

Mr. Lewis Schwenke examined:—

Mr. L. Schwenke. *Mr. Murray.*] What is your occupation? I am at the present time a publican, residing at Yarrowford, but I have been for about thirty years in Glen Innes, and I know a good deal about the district. I have heard the evidence of the last two witnesses, and I don't see anything in it from which I can differ, nor have I anything to say in opposition to their remarks. I am the proprietor of a saw-mill on the Beardy River, which is worked by water. About fourteen or fifteen years ago, when I started it, I worked it for three years successfully, but subsequently we had droughts, and for two or three years I was without water. If I had a constant supply from the Government it would be a great advantage to me, and I would be perfectly prepared and willing to pay a fair price for the accommodation, so long as it was not more costly than steam. I know that there are plenty of places on the Beardy River beyond me where such a supply could be conserved at a small cost.

15 Oct., 1886.

Can you tell us of any places? Near my own place is one spot, but I cannot say the extent. I think that if water was conserved it would be availed of for manufacturing and for other purposes. At the present time my water-wheel is 31 feet 6 inches in diameter, but it is not sunk in a pit. I think I had to blast a few rocks out here and there. I do not at all see what is to hinder a water supply being utilized for irrigation in this district, particularly in some parts, at Clairvaux Creek especially. On the whole I think a system of water conservation in the district would be beneficial to the people, and that they would be prepared to pay a fair price for it. In some instances I have seen our creeks perfectly dry, with not sufficient water anywhere to water cattle. Clairvaux Creek and the Furracabad Creek I have seen dry, whereas years ago I had to swim my horses across them.

Mr. John Frederick Utz examined:—

Mr. J. F. Utz. *Mr. Murray.*] What is your occupation? I am a storekeeper and miller, residing in Glen Innes, and I have resided here for twenty-four years, consequently I have a knowledge of the whole district and of its capabilities.

15 Oct., 1886.

Rainfall plentiful.

Can you give us any information that you think would be of service to the Commission in connection with its present inquiry? There is abundance of water running to waste. The Beardy, Severn, and Mann Rivers are each running to waste, any of which would doubtless be useful for storage and irrigation. As far as my knowledge goes, irrigation in New England would not be required in one season out of any ten or fifteen. The fall of rain, as a rule, is plentiful, as far as this part of the district is concerned. I have not the shadow of a doubt that abundance of water could be conserved here which might be utilized in the western slopes. I am well acquainted with green produce in the district. Within a reasonable radius of the town of Glen Innes I should say about five to six thousand acres are under cultivation, the produce of which goes into the town. We have a great tract of good agricultural country which is not under cultivation. The great drawback, up to the present, has been that there is no local market. If we grow more grain than we could consume here it would simply go to waste. They would not be able to send it away for lack of convenience. If markets were opened up by railway communication there would be, undoubtedly a large quantity—probably from five to ten times as much—of land cultivated in the district. The population would increase, and irrigation would undoubtedly assist the population. Bad seasons are not very frequent in this part of New England. As a matter of fact, I have purchased Californian wheat and ground it at my own mill, and I am actually doing so at the present time. I could not get wheat in our own district. I could get it from Inverell, but the carriage for the distance, only 44 miles, is as high, sometimes, as £7 a ton, on account of the bad roads; and, consequently, I am able to buy Californian-grown wheat far cheaper. This year I purchased from Mr. Gindan, of Inverell, 5,000 bushels. I got 2,000 of them delivered here at from 2s. 6d. to 3s. per cwt., by the carriers. The remaining 3,000 bushels I was forced to resell at Inverell, because it was almost impossible to get it to Glen Innes at any price. That undoubtedly accounts for, at the least, ten times as much more wheat not being grown in the district. The actual fact of the matter is that farmers are afraid to sow for fear that they will lose everything.

Obstacles to wheat growing.

*Mr. M' Mordie.*] Would it, under the circumstances, be advisable to spend money in making a good road hence to Inverell, assuming that a necessity exists for a railway? Certainly not. A good road would

would be only temporary, whereas a railway would be everlasting. Apart altogether from that, even if we had no road at all to Inverell, I fail to see how a good road would do us any particular good, because the means of transit are so slow that it would not suit us in any way. The great difficulty is not the badness of the road.

Mr.  
J. F. Utz.  
15 Oct., 1886.

Within what distance west from Glen Innes would there be a demand for water for irrigation? I should say the whole of the western districts would require water more than our district. When once you leave Glen Innes and travel 12 miles you get into the high districts. The change is very great after you cross the Waterloo Range; and water conserved here could be profitably used at a distance of 12 miles, there as I have mentioned.

Can you give any reliable information as to what the value of water would be there per acre per annum? That just entirely depends. If the land was cultivated it would be very valuable, but not so much for grazing land. In some instances it might be worth 6d. or 1s. per acre for grazing, and for agricultural probably from 5s. to half a sovereign. On looking into the matter, I should say that it might improve the land probably 20 per cent. or more. Every common sensible man knows there would be some benefit, but to what extent I really could not say without calculating.

Do you think that it would be possible, under the most favourable conditions, to conserve water and distribute it at the rate of 1s. per acre irrigated? I certainly do, for the whole year.

*Mr. Murray.*] Do you think that the water could be conserved here for the township's purposes with advantage? Yes. I have been an Alderman and also the Mayor of the town. The ratable property returns an annual sum of £1,200 at 5 per cent., or £24,000 in all. The population inside the municipal boundary is about 1,800. The number of houses is probably about £500, with about an average of five rooms in each, making some 2,500 rooms in all. These, at 2s. 6d. per room, would give a revenue of over £300 per annum. I don't think that amount would be sufficient to pay a revenue, or the interest on such an expenditure as would be involved. The selling price of land within a distance of say 2 miles from the town is from £5 to £10 per acre. Land has been sold at £10 per acre within that distance.

If we were enabled to increase the product of the land, where would be the market for the increase? Queensland—as soon as the line is opened.

Is there an ample market there? I should say they will take a very large quantity of produce. I am not very well personally acquainted with Queensland, except from hearing and reading. I know that the Queenslanders import nearly all their breadstuffs, and when once a market is opened I have not the slightest doubt that an increase of production will follow. Without that, irrigation or anything else that would increase the production would be utterly useless.

SATURDAY, 16 OCTOBER, 1886.

Present:—

MR. MURRAY,

MR. M'MORDIE, B.E., M.I.C.E.

Mr. John Henry M'Creery examined:—

*Mr. Murray.*] What is your occupation? I have been a station manager for a long time in this district I was for some seven years on Myall Creek as assistant manager, and four years on Stonehenge I have also travelled all through this part of the country as far as the Barwon River, and I have a good general knowledge of the whole district. I have served my time as a farmer in Tasmania in my younger days, and I understand the growing of grasses. I sowed a hundred acres of English rye grass, cocksfoot, prairie, and red clover at Stonehenge. These did remarkably well, the climate being thoroughly adapted for them. I did not try irrigation at all for them, and I think that in this climate it is hardly required, as it is so moist. It is two years since I sowed the first lot. We mowed some of it and made about 10 tons of English grass hay, which ran about 10 tons to the acre. I think that on the whole the seasons here are sufficiently moist for the general growth of English grasses, and only in exceptional seasons would, in my opinion, irrigation assist in making an increase.

Mr. J. H.  
M'Creery.  
16 Oct., 1886.  
English grasses.

Do you know of anything that you could inform the Commissioners of with respect to irrigation? I really do not think it is necessary in this district; the streams are always running. At Myall Creek it is very much drier, and I believe that irrigation there would be a very great benefit—and in that direction away towards the Barwon.

*Mr. M'Mordie.*] Do you consider 1 ton to the acre a fair yield from English grasses? Hardly; but this was the first crop. It has only been a few months in the ground, and no doubt it will yield better hereafter. The ground was properly prepared, but the grass had hardly taken hold. The second year will probably yield much more. Sheep have been fattened all through the winter on the English grasses, whereas if fed on the natural grasses they would have been poor. I believe that the roots would hold eight or ten years in the ground. I doubt very much whether they would answer at Myall Creek without irrigation, but with it they undoubtedly would. This is a climate adapted for them, and in which they can be produced with advantage.

What would be the cost about per acre of preparing the ground for the grass? It would cost £2 an acre for ploughing, seeding, harrowing, and rolling.

*Mr. Murray.*] What do you value grass hay at per ton grown here? Really it is very hard to put a value on it, because it has never been used. It ought to be worth fully £2 a ton. If you put it into the local market you might not get that much for it, because the people do not know anything about it yet. They have yet to be educated in connection with it. In Tasmania thousands of tons are stacked every year with great advantage. They adopt irrigation there in places privately, the country is so well adapted for it, there being numerous streams running through valleys which they can easily dam up. Some of the very best dairy farms I have seen irrigated there. About Moree and that district, with irrigation they would grow any kind of hay.

Irrigation.

*Mr. M'Mordie.*] Have you found that the class of grass you have mentioned grows equally well here? Yes; every one of them has flourished. Mr. Simpson, who has bought the station I have mentioned, is so pleased with it that he is going in for it extensively. One acre of English grass is worth at the very least 5 acres of bush grass. I believe that with irrigation English grasses would grow anywhere in



Mr. J. H. M'Creery. in the Colony. Some years ago in the Moree District it was extremely dear. I have seen it weighed out by the pound at a shilling a pound, and so careful were they of it that I have seen them pulling a few straws out of the scale. Grass has been so scarce that I have often had occasion to feed our horses on bread. Mr. Murray.] To my recollection, Dr. Seigol had a special bakery for feeding his horses here? Yes.

MONDAY, 18 OCTOBER, 1886.

At Tenterfield.

Present:—

MR. MURRAY,

MR. M'MORDIE, B.E., M.I.C.E.

Mr. Thomas Arden Lewis examined:—

Mr. T. A. Lewis. Mr. M'Mordie.] How long have you been in this district? I have been eight years in the neighbourhood, but I do not know the district. I know the town, and occasionally I have gone through the district, but I cannot give very reliable information with respect to it.

18 Oct., 1886. Could you give us any information as to suitable places for storing water in large quantities? Yes. There is a place called Hawker's Gully, on the top of the hill. We were thinking of storing water there, but on account of the expense the work was not started.

Hawker's Gully. What quantity of water could you store there? We could not store much without making dams—it would need an engineer. We would at all events have a nice fall to the town.

Could you give any information as to the area of a reservoir which might be made there? I could not. The position is what I speak of. It is about 2 miles from the post office. There would be a constant supply of very good water there.

Is it about the head of Tenterfield Creek? It is one of the heads.

Wells. How is the town supplied with water now? By the creek and watercourse. The water is all hard in the wells, except at the court-house and gaol, and Corney's Well, and in one other. We get a water supply in the wells, according to their position. The best quality is at the court-house, where the well is between 28 and 30 feet deep. Then, again, 50 yards further off the water is bad, and very brackish. It is an imperative necessity that we should get a water supply laid on. The Hawker's Gully supply would cost from £6,000 to £8,000. The pipes could, however, be now carried by railway cheaper than before. The carriage of the pipes would need to be reckoned up, and the material has to be brought so far from Sydney.

Sit on for water supply. What is the ratable value of property in the municipality? I will procure the exact information for you. The population of the town is about 2,000. I would like to mention, by the way, that we sank a well here alongside the creek which was about 40 feet deep; but these wells are not reliable. For instance, when the well was first sunk the water was good, but after the first month it turned quite brackish. Another thing, where population exists the nature of the soil in Tenterfield causes the drainage to percolate nearer the surface than it does in most other places. You get down to clay very quickly; from 12 inches to 2 feet in the town, the water will not sink any lower, so that if there is a fall in the ground, the water is even seen oozing out, as can be exemplified in the main street opposite the bank. That interferes with the water, and where there is any bad drainage it must interfere with the wells. With regard to the creek, I have formed one of three committees to inspect various places for a water supply, and at one time we were thinking of damming up the creek above 30 yards south of the bridge (I mean the traffic bridge). We found when viewing the place that there is an accumulation of sand, and if we placed a dam there we should have more sand than water. Another time we went to a log crossing, and thought of making an overshot dam there, but the same objection happened. The Hawker's Gully site would be sufficiently high to feed the town by gravitation, but the creek would not be. The water in the creek above the town would be the best to get for the town, but it would require a pumping apparatus. At one time we asked the Government to put on a large engine here to pump for the use of the town, as the engine would not be continually required for the railway station. We were then told that arrangements had been made already with regard to the engine, and that the plans could not be altered. If water could be stored here there would be a demand for water-power. It might not be of any great extent during wet weather, but in dry times I have seen some 300 loads of water leave the creek in one day for various households. I think that a water-power, if offered, would be accepted, especially for sanitary purposes. There is a large supply of good timber in the district of a good many kinds—cedar and all other hardwoods; and also soft ones, such as sassafras, blackbut, willibut, &c. I should fancy, however, that a water supply would not be very suitable for a flour-mill. They have never proved a success. You can get the exact desired power better by the use of steam. Probably the power derived from a water supply might be regulated, but in all places where machinery can be got the people prefer it. I should fancy it would be much cheaper to have water than steam, but why the system is not adopted I do not know, except for the reason given. The water-power could be regulated by turbines, if properly constructed; but I am speaking simply of my experience with regard to creeks and gullies for a water supply where water is not constant. I could not say exactly what the town could afford to pay for a water supply, but our present rate is 1s. in the £1. The people would be willing to pay a good deal more than that for a water supply. The better plan would be to use meters, as one man might use twenty times as much as another. At the present time we are paying 1s. per cask of about 120 gallons. They are called casks, but they are made of galvanized iron. The water they are filled with comes from the creek. For an average family, of five or six persons, that would be about £5 per annum, and it would be a very small supply. A minimum would be, probably, from £5 to £6 per annum, and we would be decidedly glad to pay something more than half that for the supply the Commission have indicated. In the one case it would be good water, and in the other we are never certain. In dry weather our creek water is green slimy stuff, containing drainage, and several cases of disease have occurred through drinking it. It is our wish to have a water supply laid into the town, and to be supplied by gravitation, and at the present time I cannot advise any other place but Hunter's Gully, although there might be other places that I don't know of. I should fancy there would be a demand for irrigation. There are many gardeners here who would be only too glad to get it. It would, of course, be possible to utilize stored water twice—once for working a mill, and subsequently for irrigation, or for the supply of the town. It is my opinion that creeks should not

not be used for the water supply of towns. Our own creeks are nothing but sewers at the present time. The time has arrived when there are actually more sewers than conveyers of pure water. We have had typhoid fever, which was clearly attributable to the creek last summer. The present time is a very awkward one in which to elicit evidence, as people are busy in connection with the railway demonstration. It is not that they do not take an interest in the matter which keeps them away to-day. There have been a great many agitations in the town for a supply. Some time ago the people used brackish water from wells in preference to the stagnant stuff in the creek, and the Municipal Council pumped it up gratis.

*Mr. Murray.*] Would a water supply pay a maximum interest on the sum referred to? I should think so. It is a very poor family which does not use more than two casks per week. At Brown's Hotel the landlord uses something like twenty casks every week, which would be equivalent to £300 per annum.

That would pay the interest on the cost for the whole town nearly? I should estimate that every family averages £5 per annum for their water—that is a reasonable minimum rate.

Why is it that a move has not yet been made towards effecting that very desirable object? The people here do not like to go into debt. It was thought that if we could borrow the money from the Government it would be far preferable to borrowing it from private individuals.

*Mr. Murray.*] It can be done under the Country Water Supply Act, or by Private Bill, on Debentures.

*Mr. Lewis.*] I do not know of any cases of irrigation in this district. It is a country that very much requires it, however, and it would increase the crops to a great extent. There are any number of places which might store the water, and admit of its being carried on to the land. For instance, near Mr. Walker's station, Vinelands, which is suitable for vines, or for anything else. It will grow anything, provided there is plenty of water. A Mr. Thomas Miller, a farmer, 3 miles out of town, has a windmill, and follows out irrigation on a small scale for his garden, orchard, &c. Since he got his windmill in working order he has grown the greatest crop of potatoes he ever did in his life. He had about 20 tons this season, for which he got a better price, on account of other people not being able to grow them.

Mr. James B. Graham examined:—

*Mr. M'Mordie.*] How long have you been in this district? I shall have been in the district for sixteen years next January, and I have travelled about it very largely in my capacity of Police Magistrate, Mining Warden, and in other ways. Consequently I know the district and the watershed country well. I have just heard the last witness' evidence. I admit the supply of water would be a very advantageous thing to the town, but I fancy that he is mistaken in one point. The whole of the water supply which could be utilised from Hawker's Gully would be very small indeed, and if it could be used even for domestic or drinking purposes it would be as much as could be expected from the place, or from any other of the head waters. Tenterfield is situated very near to the dividing ranges, and consequently the waters running by the town are very small. The mere fact of Tenterfield Creek being sometimes dry is evidence of that fact. The irrigation of any portion of the town would be most difficult, as there is not sufficient water lower down, on the Mole. Large conservations of water could be made in consequence of the ranges coming in close to the river, and extending above that into large flats, where immense lakes could be made, and vast quantities of water could be stored for use lower down on the river. Lower on the Dumaresq River similar conservations could be made, especially below the junction of all the creeks, such as Pye's Creek, Tenterfield Creek, the Mole River, and the watersheds from Stanthorpe, &c., where there is a very large watershed. That river is the boundary of the two Colonies, and of course it would require (if ever used) some arrangement with the Queensland Government. As you get down the river it opens into wide alluvial flats, in some cases extending 5 miles from mountain to mountain. All of that is of a very rich soil, which with irrigation could be made most productive. Without irrigation, from its nature of a shingly sub-soil, it drains quickly, and the rainfall there is much less than on the tableland. At Maidenhead the level would be about a thousand or fifteen hundred feet below Tenterfield, and enormous quantities of water could be conserved on account of the nature of the country. Occasionally bars of rock cross the river, especially where the mountains come close in towards it. The formation is trap rock and slate. Where the Dumaresq River enters the plains it opens widely. The water backed up on the moles could scarcely be used for irrigation on the lower country in consequence of the roughness of the country. Fluming and races would be of enormous expense. The water would have to be taken down by the old channel. Almost anything could be grown. Tobacco, for instance, could be cultivated to immense advantage. The "Texas" tobacco, which is grown thereabouts, is supposed to be the best that is grown in the Colonies. It is fragrant, and perfectly free from saltpetre. I think that with irrigation almost anything would flourish. There are no mining industries on the western slopes, except on the Mole tableland, where tin-mining is carried on. Silver-mining is also carried on. Below Mungoolah, I believe the Dumaresq to be a constantly flowing river—at any rate the waterholes are always full. There is an underground flow at all times. Years of drought have dried some of the springs up, but after the recent supply of rain the river will probably run for years and years. On the west the application of water could be made almost immediately to rich flats, as in contradistinction to the east. There is a river called the Timbarra, which junctions the Clarence just below Tabulam, which is constantly running, and water could be conserved in it. The Timbarra takes in a rather large shed of water, and after going through comparatively open country gets dammed in the high ranges, where it could be utilized for the Clarence River flats. The mining town there is Fairfield or Drake, as it is known, situated on Plumbago or Fairfield Creek. The watershed there is very small—simply head waters from large mountains, but there is quite sufficient at the present time for mining purposes, although it has to be pumped. The mining is chiefly crushing, not alluvial. It is too high for gravitation purposes, and owing to the peculiar nature of the local mining, water is not much required. Irrigation is not nearly as necessary for the Richmond and the Clarence as for the western slopes. There is a heavy rainfall, and it comes there, as a rule, at the proper time. In ordinary seasons there is more than sufficient water. The rainfall on the eastern slope would be almost 35 inches per annum, and on the western side probably not more than 20. To sum up my opinion, I consider this is a very suitable place in which to form subsidiary reservoirs for conserving waters. The question of cost I am scarcely engineer

Mr.  
T. A. Lewis.  
18 Oct., 1886.  
Bad water.

Mr. J. B.  
Graham.  
18 Oct. 1886.

Site for water  
conservation.

Tobacco.

enough

Mr. J. B. Graham. enough to go into. I do not know how the dams are constructed. It would take very substantial works in the way of dams to hold heavy flood-waters. In many places, if they were properly chosen, where the rivers narrow in—if the water were put back, you could form very large and extensive lakes. The nearest place to Tenterfield that could be advantageously irrigated I should take to be Mingoolah, about 35 or 40 miles radius distant, near Aitken's Flat. That is a flat between high precipitous mountains, and in places it is as much as 4 or 5 miles across. It is formed of particularly good soil on the river-flats, and grapes and trefoil grow luxuriantly. The only irrigation that I know of thereabouts is on the Condamine, in Queensland, where it is wonderfully successfully applied for growing lucerne. It is near Warwick, and I believe that a 10-horse-power engine and pump is used. Lucerne and grass paddocks are irrigated, and used for the purpose of fattening cattle and sheep for the butchers. I have heard, and I have every reason to believe it has paid remarkably well. From the river to the highest part of the land on which the water is thrown would not be more than 50 or 60 feet, if as much. It is simply used for lucerne and grasses for stock purposes. I think that the wheat crops are too subject to rust to be a very safe crop. A great deal of wheat certainly is grown, but it is not a very safe thing. The Beardy River would be a splendid one from which to water the flats to Maidenhead, and even as far as Bonshaw. It is a really excellent river for that purpose. The mountains rise almost precipitously. The trefoil in anything like a good season grows to such an extent that it is impossible to eat it down, or even to ride through it. All the adjacent river banks are good tobacco-growing ground. There is very little of purchased land—the country consists chiefly of squatrages thereabouts. Farming is not carried on to any great extent, and much of the land is Crown land. Irrigation would, in my opinion, certainly lead to increased farming. The first start towards showing what the country could do has already been made at Texas, where they had a tobacco manufactory on the Dumaresq River. The Beardy River is the last river of any importance until you make to the M'Intyre.

18 Oct., 1886.  
Mingoolah

Successful  
irrigation.

Mr. William Henry Walker examined:—

Mr. M'Ordie.] How long have you been in this district? I shall have resided here about ten years next January, and I am acquainted with the country from here to about 50 miles below Goondiwindi. I also know the M'Intyre River from (say) Coolati down to Yetman and on to Goondiwindi. In usual seasons the supply of water in Tenterfield Creek is wonderfully good. Last year it was drier than ever I knew it before. The soil here is not very rich; it is of granite formation. I have never heard of stock dying from want of water here. The losses from death in winter are more from the rigour of the climate than from anything else. I have not sold a store beast for some years in this district, and we have all our stock in capital fat condition. There is no necessity for constructing dams on the Tenterfield Creek, from a stock point of view. Of course the town requires water very badly. I could not say whether Hawker's Gully or Curry's Creek was the best site, for I really do not know, but I am rather in favour of the latter place. I understand that Hawker's Gully is a very rough place, but Curry's is freer from population. Despite the fact of the railway passing on to the Queensland Border, I expect that the town of Tenterfield will continue to go ahead. It has progressed steadily during the last thirty years, and I don't think it is likely to suffer from depression after the line passes away from it, as has been the case with some other towns. I have sold a great deal of land on the plain for £20 per acre, a mile from the town, and for £13 per acre 3 miles hence. That was some six years ago. Since then land has risen in value to about £13 per acre 3 miles from town, and up to £30 per acre within a mile. I recently sold a quantity for £23 per acre. Some people have made as much as £20 per acre from their land all round. The first year they bought it they made £17 cash, supplied their household with crops, and fed one pig. The second year they got £16 cash, all their produce, and two pigs. They go in generally for growing sweet-potatoes and corn. In another instance, off 1½ acres, a man has raised £30 worth of corn, worth about 6s. a bushel. I do not think that any large quantity of water could be conserved on Tenterfield Creek; it is a very rapid mountain stream. I have myself had dams made for sheep-washing purposes, but eventually they have all been washed away. There is no doubt that the flats do commence on Moongoola Run, but they are very small. The country is of trap formation, and the very rich portion of the flats are very close to the river. As you get lower down the river the good soil is more extensive, and further from the river; but beyond a mile from the river the land gets much poorer. At Texas Station there are a number of flats, and the soil is very suitable for growing tobacco and corn. I do not know of any basaltic country on the Dumaresq River until it junctions with the M'Intyre. There might be a little of it below the junction, but not much. The chief basalt is near Yetman, Tucka Tucka, Merriwa, &c., and there may be a little black soil just about the junction. There are places both at Moongoola and Maidenhead where to run between two very high ridges close together, where it would be possible to store large quantities of water at a considerable expense. The watersheds on Glen Lyon, not 3 miles from the river, are possibly 1,500 or 2,000 feet higher, and consequently the water in the gullies runs down at a tremendous rate. The length of a dam 50 feet high would be on the top, a little more than a quarter of a mile there. I think that I know one spur where it would be possible to erect such a dam. A 50-foot high dam would throw the water back 3 miles, and up two or three streams, viz., up the Mole, Petie's Creek, and Broadwater. The site I refer to is just below the junction of Moongoola and the Maidenhead stations, near the gate. Doubtless there are other places. Another one, for instance, is the top station, about 4 miles distant. There the water would be probably thrown back a greater distance. The low ridges possibly come in close to the river. The rainfall gets tremendously less as the course of the Dumaresq is followed down. I have often ridden out 6 or 7 miles and found that there had not been a drop of rain for ten days, whereas it had been pouring at Tenterfield. I should think that at Glen Lyon the rainfall does not average 20 inches a year, while it is about 30 at Tenterfield. Neither is it nearly so regular as ours. I do not consider there is sufficient good ground at Moongoola to justify irrigation; a greater portion of the flats are poor. Without irrigation the crops would be very risky. The tobacco at Texas is grown without irrigation, but doubtless with it the increase would be very large. With irrigation they could grow all sorts of things. There are large stretches of land, with plenty of limestone in it, which would tend to strengthen the wheat, and to make it more rust-proof. I do not know of any irrigation at present on the Dumaresq River. The lime country I refer to is not of any extreme extent; but 3 miles from Moongoola there are large limestone caves and mountainous masses of nothing but limestone. At Glen Lyon

Agriculture.

Poor soil.

Mr. W. H. Walker.  
18 Oct., 1886.

Lyon there are about 6 miles of extremely limestone country. There is also a small quantity at Clifton; and probably more down the Dumaresq. The outcrop of it at Glen Lyon is the most wonderful thing of the sort that I ever saw in my life. The absence of settlement along the Dumaresq is due to want of water, and nothing else. On most of the ridges there is not 2 inches of soil away from the river; the country is all used for pastoral purposes. Three weeks only of thoroughly dry weather make a drought on the ridges, and much stock are occasionally lost. My partner, who bought me out from Glen Lyon, was subsequently very nearly ruined from drought. Even if the hill country was under cultivation it would be of very small extent. With irrigation they certainly could get sufficient feed to save the stock in dry country. There is no comparison between the McIntyre and the Dumaresq as regards richness. Irrigation on the McIntyre would do vastly more good than on the Dumaresq. The former country is flat black soil for miles away from the river. I have not followed the McIntyre down in the same manner in which I have followed down the Dumaresq, but from (say) Wallangara to 50 miles below Goondiwindi. At Wallangara the soil is very good indeed, and there is limestone about 6 miles distant. There are also falls at Wallangara. You could get a number of sites for storing water below Yetman, owing to the general formation of the country. Between Wallangara and Yetman the country is very rough. I think there are places at, above, and below Yetman, particularly Trigaman, at which water could be conserved which would irrigate a large area of very rich country lower down. The valley below Yetman consists of basaltic plains, averaging about 6 to 10 miles wide. The good country is on the eastern side. At Yetman very beautiful trefoil grows. There is a road from Tucka Tucka to the west, which must be pretty flat, some 20 miles in extent. There is beautiful black soil from Blue Nobley to Yetman, on to Boornor. I certainly think that irrigation is greatly needed along the McIntyre; also that there is good water and that it could be easily conserved. I cannot say what rate farmers would be willing to pay for it. Probably the most money would be made out of the grasses which irrigation would induce. It should be worth certainly 10s. per acre to improve the grass land, and I should think that irrigation would treble the supply, and probably you might make as much as £1 increase per acre on stock. The value per acre of the present crops of lucerne at Yetman to the junction of the Dumaresq is about £3 to £4 net. If you had large quantities of it it would not be worth anything like that sum. A few years ago hay, in the time of drought, at Yetman, was worth probably £10 or £12 a ton. I think the McIntyre is like the Dumaresq, and that there is always an underground supply of water running down—possibly not more than 10 feet from the surface at any place. You would find it above Yetman in the one case, and above Bengoola in the other district. There is, by the way, a windmill at Tucka Tucka; also several sawmills on the McIntyre.

Mr. W. H. Walker.  
18 Oct., 1886.

Irrigation  
needed on  
McIntyre.

Mr. William Drummond examined:—

*Mr. M. Mordie.*] You are a licensed surveyor? Yes.

How long have you been in this district? I have resided in this district fourteen years, and I know more particularly the country between Pareelah Creek down to Mungoolah in the south-west. I also know a good bit of the country at the head of the Rocky River (counties Clive and Buller). The whole of the Buller district drains to the east. Tenterfield Creek is the natural western water, and that is in the county of Clive. The whole county of Buller and one-third of the county of Clive is western water. The whole of that country is very abundantly and permanently supplied with water. I have never known it to fail in any season. In Buller, especially, the country is nothing more than a mass of granite sand saturated with water. The ridges that intervene between the various creeks are so steep and precipitous that you could not carry water except by following the watercourses themselves. I don't think that irrigation would be required for any purpose in that part of the country. Conserved water could not be carried into the county of Drake and utilized there. That county is well enough supplied with water itself. Irrigation would be of service in the neighbourhood of Tabulam, and where the country opens out into flats. In heavy floods the water goes over the banks and spreads over large areas of land. The only sites for damming water back that I know of would be in the neighbourhood of Tabulam. If once raised by a dam it could be spread over a considerable distance. The heights of the banks are never less than 20 to 25 feet, and the water-holes themselves often go down 10 or 15 feet, and contain permanent water. The fall of the river is very great. The valley is from 2 to 3 miles on each side of the river Clarence, when you get into the level country. Very often there is a fall from the banks, so that when the river is in flood it leaves plenty of water behind in the by-channels which have been made in flood-times. There is plenty of first-class agricultural land there, but it is all in the hands of a few persons. That was what blocked agriculture; otherwise there would be heavy crops of corn grown. There are actually no settlers. If water was supplied for irrigation it would raise the value of the land considerably, and doubtless the present owners would sell considerable quantities of it. Railway construction would also lead to the same result. I could not put any exact value as to what the people would be prepared to pay for a system of irrigation; it would depend principally upon the facilities which they got for taking their produce away. The soil at the heads of the creeks is basaltic. With regard to the western side, the Mole river has an abundant and permanent supply of water, and so has Tenterfield Creek. Both of them have a continuous flow throughout the year. They both pass through very barren country after leaving Tenterfield. The upper portion is formed of granite and also trap. The ridges close in at intervals, and other flats begin again. Dams would certainly throw back a large quantity of water, because the river generally runs pretty level in the reaches. The difficulty of using the country is that of getting into it. It is very nearly 1,800 feet below Tenterfield, and only about 10 miles away, so that you have to go down very abruptly. At Tenterfield Creek there is nothing available for irrigation below the town, and there would be no advantage in conserving water there. Even the Mole flats are simply the wash from the higher banks, and I do not think that the area is sufficient to encourage people to irrigate for simply grass purposes. You cannot get any land on a large scale to irrigate before travelling down the river. My opinion is that Hawker's Gully, or Groombridge Swamp, and Carrier's Gap Reef, which joins about half a mile outside the town, would be about the best sources for a water supply for Tenterfield. Hawker's Gully and another creek, which converge, might possibly supply the town in its main parts, but not the outskirts and higher portions. They would, at all events, supply the surveyed portion of the town. The water is all good, and the country is of granite formation.

Mr. W. Drummond.  
18 Oct., 1886.

Dam sites near  
Tabulam.

Hawker's Gully.

FRIDAY,

FRIDAY, 22 OCTOBER, 1886.

At Grafton.

Present:—

MR. MURRAY,

| MR. M' MORDIE, B.E., M.I.C.E.

Mr. Edwin Joseph Statham, Assistant Engineer for Roads, examined:—

Mr. E. J.  
Statham.

22 Oct., 1886.

*Mr. M' Mordie.*] How long have you been here? I have been fourteen years here.

What are the boundaries of your district? I have a certain amount of the district under my immediate charge, and I have to inspect the surrounding districts. I am acquainted with the district from the Macleay River to the Queensland border, and west to Inverell.

Can you give us any information as to the levels of the roads, and the heights of river floods? I can give you some information as to river floods and their levels.

What is the extreme range of the flood-level at Grafton? 23 feet 8 inches above high water, and summer level down to tidal level as tested tidal level. At Ramorney, above Copmanhurst, the level of the highest flood would be about 77 feet.

What extent of country would a flood of that height cover below Copmanhurst? The whole of the level lands of the Clarence. Its width at Copmanhurst would be fully 2 miles. Grafton would be left an island.

What width of the low-lying lands would be covered north and south of the river? About 1½ miles. The valley thereabouts is very narrow. In flood-time it would be 5 miles wide across the bend. The level of the river bank at Grafton is about 22 feet, and at Copmanhurst about 40 feet. The rise of flood is 62 feet at the junction of the Orara River, and 34 feet at Moleville, *i.e.*, during the 1876 flood.

Have you any other information about the Clarence which you think would be of interest to the Commission? I can give you information about the tributaries of the Clarence, namely, the Nimboi and the Orara, and possibly of places for storage reservoirs if required.

Is there any public demand for water for irrigation purposes in the vicinity of the Clarence Valley? No one appears to have thought of it.

Would it be of any service, or does the rainfall come at suitable times? They have a very good rainfall here.

Irrigation.

Would there be any demand for irrigation if water was provided by storage for that purpose? I think people would have to be educated up to it.

Do you think it is required; would it improve the land? It certainly would improve the yield. There is a good deal of irrigation done by the Chinese in the Clarence Valley. They put down wells and raise the water by windlasses, with two buckets, one up and the other down. This water is used for gardening and growing fruit and vegetables. They raise vegetables here when they won't grow otherwise. Is irrigation by the Chinese carried on to any great extent, or is it merely confined to small patches? Some of the gardens are about 3 acres large. You could get water anywhere about Grafton at a depth of about 20 feet, suitable for watering gardens, from an underground supply.

Soil.

What is the nature of the ground passed through in well-sinking? It varies a good deal. For instance, clay and sandy loam, but mostly a thick bed of dark-coloured clay.

What kind of stratum is the water found in? On this side of Alumny Creek, which divides the town, it is chiefly found in sand. That creek is an ana-branch of the river running right through the centre of the town. There is a different character of soil on the eastern side, where it is more of a level. On the west side it is more clayey and very loamy.

What is the water-bearing strata on the side you are now speaking of? On the east clayey, and the west gravelly.

And is there what might be called an inexhaustible supply? There is a very good supply in the gravel on the west side. It has never run short during the dry weather. It is also much better water on the western side. On the eastern side there is very little good drinking water; it is brackish and hard.

Do you know anything of the water, as to its suitability for irrigation? It seems to answer very well in the Chinamen's gardens from either side of the creek.

Will you name the principal tributaries of the river Clarence in the order of their size? There are two main branches, Nimboi and Tabulam. The river divides above Gordon Brook, and goes north and south in opposite directions.

What is the nature of the valleys? The water runs through metamorphic rocks, slates, and granite. From Tabulam down the northern branch there is a good deal of granite, and in the southern branch it is chiefly metamorphic rocks and slate.

Is the land there of any considerable value? It is chiefly grazing land—not much agricultural land—and very broken country.

What is the nature of the contours of the valley—are the river beds precipitous, or what? Extremely broken country, with steep banks.

Do the valleys narrow? Yes, they narrow a good deal. It is very high country on the western side. These rivers mark the base of the tableland.

Sites for water  
conservation.

Are there any places in those valleys where water could be conserved in quantities at a moderate cost? Yes; I certainly think so.

Could you name any place in particular? Above Nimboi, on the south branch.

Any other places on that branch? There are places on the tableland where you could store considerable quantities. On the head of St. Cloud's Creek, for instance, at an elevation of about 1,000 feet over the Nimboi.

Can you name any places on the northern tributary? There is Fort's Creek, a tributary of the Whiteman. There is a good height for a storage reservoir there.

What size of reservoir could be formed there by a dam of moderate height, say 50 feet? A dam of 40 feet would throw back a large quantity of water there.

Can you state the approximate quantity? I have never made any measurements, but I should say about 500 acres, with an average depth of say 20 feet.

You think that large quantities of water could be stored on these tributaries of the main branches?

Yes; at moderate cost, too.

Would

Would there be any demand for water so stored for water-power or for irrigation, or for both? There might be on the Whiteman, which is partially level, with light, sandy, loamy soil, suitable for irrigation. That is the only place where I know that irrigation could be carried out with any chance of success.

Mr. E. J. Statham.  
22 Oct., 1886.

What area of land do you think might be irrigated there with advantage? About 9 or 10 miles down the Whiteman, to its junction with the Clarence.

By what width? It varies. In some places it is narrow, and in others it extends a considerable distance. There are a number of farms there under cultivation at present.

Could you state what the water would be worth there for irrigation per acre per annum? I really have no idea.

Would there be any demand for water-power? I should think so.

On the Little River, could there be large quantities of water stored? I think the fall is too rapid.

Is there any mining in the Little River District? Yes.

Have the miners ample supplies of water? No. Some of their best mines are away in on the back gullies, and they very often run dry for lack of water.

Could water be stored with advantage for any of those mines? The gullies are very steep, and I don't think you could store any large quantities.

You don't think that anything could be done to assist mining in that district by storing water? I do not think so.

Does anything else occur to you which you would like to state with reference to the Clarence River or its tributaries—anything which the Commission have not asked you? I shall be happy to give you information with respect to the various flood discharges from the several rivers. I do not clearly understand what nature of information the Commission would require.

We want to know how much water could be conserved, and to what purpose it can be put, whether for irrigation, mining purposes, water-power, or otherwise? The south branch of the Clarence is at a considerably higher level than this part of the river. The Nimboi, at Buckurumbah, is 387 feet above Grafton summer level.

What is the nature of the Nimboi Valley;—have you any reason to suppose there is any gold in it? Mining. Yes; there is gold in every tributary of the Nimboi River.

Can that gold be obtained at present with advantage;—is it just now being worked? The reefs have been worked, but only one or two are now being worked.

Would water stored for sluicing be of advantage? Yes, undoubtedly it would.

Will you give us any information you can on this subject? At St. Cloud's Creek water could be readily stored, and there is a considerable quantity of ground there suitable for sluicing. Large quantities of water could be stored at the upper portion of that creek, which I know is gold-bearing all the way down.

Do you think that water could be there stored to advantage? Yes, I think so.

Do you think that people would pay a fair rate for the advantages which would be reaped by the storage of water? There are gold deposits which might pay for working there if there only was water.

Yes; but would miners pay a rate which would give a fair interest on the cost of the storage, and also recoup the capital? I am not prepared to say that. Very little has been done in that way for a long time. I think mainly because the natural supplies of water at a high level having been availed of on account of dry seasons. A good deal of sluicing has been done in the district for a great time; but they have had no water for some years past to work with.

Can you mention any places where water could be stored with advantage for water-power? Yes; either in Blick's River or St. Cloud's Creek, where it would be available for timber. There are large forests of timber, and also considerable reserves.

Will you kindly give us some particulars as to the way in which water could be stored there, and how it could be utilised? In St. Cloud's Creek there is a tableland at an elevation of about 1,000 feet over the creek, and there is very little fall for some miles. A considerable quantity of water could be stored there, which could be made available for timber-cutting.

Where could you get the power for using the water-power you speak of? There is a fall of from 800 to 1,000 feet in about 15 miles.

Do you think that sawmills could be erected there with great advantage, and this water used for working them? Yes. It is the centre of a large timber reserve, containing cedar, tallow-wood, blackbutt, &c., and there is actually some of the finest timber in the district there.

How could this timber be got to market if sawn at the place described? It is at present brought down by the Armidale road. Some comes here and a good deal goes to Armidale.

Do you know of any cases where water could be stored in one valley and diverted to another valley at a lower level, so as to obtain great water-power? Yes; at the Nimboi.

Could you give us any particulars about that? The elevation of the Nimboi at Nimboida would be about 500 feet above high water at Grafton, and at Nimboi Gap, dividing the waters of the Clarence and the Nimboi Rivers, it is within half a mile of the river. About 2 miles of a tunnel would bring that water to command the Clarence District for cultivation purposes. There is a rapid fall all the way down, and water coming through the tunnel would be immediately available for use after flowing into Blaxland's Creek. It would serve for the agricultural land round Blaxland's Creek, Skinner's Swamp, Kangaroo Creek, &c., which are all good grazing creeks; also for all down the Orara River, which has splendid light sandy soil which requires water. The best maize is grown on the Orara and Kangaroo Creek.

Could that water be used for other purposes, as well as for irrigation? It might be used for water-power.

For water-power for what purposes? For pine-cutting, for instance. There is a large quantity of pine there in sufficient quantity to induce people to put up saw-mills. That is where they will have to get the supply of pine very soon, as all the nearer supplies are now exhausted. Hence stored water could be used twice over, viz., once for water-power, and afterwards for irrigation.

What are the ranges of the tide-levels at the Clarence and Richmond Heads? About the same—about 2 feet 6 inches. They are about the same in all these coastal rivers, with the exception of the Brunswick. The Richmond, Clarence, and Tweed are each about the same.

What are the levels of the banks of the Richmond at Woodburn, Lismore, and Casino? Woodburn is about 7 feet above high-water level; Lismore about 35 feet; and I think Casino fully 50.

Could you describe the valley of the Richmond as to the necessity for irrigation, the practicability of irrigation, and the extent and fertility of the valley, as compared with the Clarence? The level land of the Richmond.



**Mr. E. J. Statham.** the Richmond is much less than the Clarence; but the back lands are very rich. All the hill country there is rich volcanic soil; but of course irrigation there would be out of the question. Then the extent of land available for irrigation on the Richmond is much less than on the Clarence? I should say so. They have a better rainfall on the Richmond. I should therefore think there was not any great necessity for irrigation. On the Clarence, I think there are places where it could be applied with advantage.

**Delta of Clarence.** With your intimate knowledge of the district, does anything suggest itself to you which might be of interest to the Commission about which I have not asked you? I dare say it would be of interest to you to know what the nature of the delta of the Clarence is. I have information from well-sinkers and others, collected from them at various time. You find timber under the clay nearly all over Grafton, and we found the same in sinking the cylinders down the river. It is a very stiff clay, ranging from 8 to 20 feet thick. When you get through that you are into quicksand, leaves, and also timber.

**Mr. Murray.]** How far is it from the Heads to the city of Grafton? About 48 miles. At full tide, for what sized vessels is the river navigable up towards Grafton? For vessels of about 200 tons.

Is it available for vessels of that tonnage higher up the river? Not very well.

How far is the river navigable for vessels of smaller size? Up to Moleville, for vessels drawing 5 feet; that is about 15 miles further up. It is navigable for droghers up to Copmanhurst, which is 30 miles up beyond Grafton.

What is the point where you first get pure fresh water not affected by the tide? Above Copmanhurst, beyond Tyndall's Falls.

I believe that down the banks the land is very rich and mostly all taken up? Yes.

Is nearly all the soil taken up? Yes, almost all of it.

**Crops.** What are the principal crops grown? Maize, bananas, and sugar-cane.

Do they ever suffer from drought? Yes; they have felt the recent droughts considerably.

For how long—one year or more? Last year the maize especially suffered greatly. I think the rainfall was less then.

As a rule, is there much uncertainty with respect to the crops from want of rain? No; I do not think so, as a rule.

What are the average crops of maize in the district? About 30 bushels to the acre.

What is considered the maximum, or a very heavy crop? I have heard of 90 bushels.

How many tons of sugar-cane? I cannot say for certain; but probably about 40 tons per acre.

Is that very profitable to the growers? It has been until the depression of the present year.

Could that crop be increased if they had a certainty of water every year to put on at the proper time?

It is only on the lower portion of the river where they can make sure of their sugar-canes, chiefly on account of the frosts than from a want of rain. Sugar-cane does not do very well above Ulmarra.

They frequently lose it there by frosts. It is grown successfully on Carr's Island, close to Grafton.

Have you any idea of the acreage of cane or corn under cultivation on the Clarence? No. I have not taken any particular notice. There are said to be 60 mills on the river.

What is the value of sugar-growing land per acre on the Clarence? The best lands are worth £40 an acre. I have known even higher prices than that.

MONDAY, 25 OCTOBER, 1886.

At Grafton.

Present:—

Mr. GIPPS, C.E. | Mr. MURRAY.

Mr. Edwin Joseph Statham further examined:—

**Mr. E. J. Statham.** **Mr. Murray.]** In addition to the information you gave us on Friday last, I should like to obtain further information—Is there an abundance of water running from the Little River and its tributaries in time of rain? Yes; there is a rise of flood of something like 30 feet in the Little River. It comes down very rapidly.

**Mining.** Could any reservoir be established where the ridges crop in close to the watercourse, notwithstanding the flow is so rapid? Reservoirs could be made on some of the tributaries.

Could mining be carried on to a great extent if a permanent water supply were ensured in that locality? There would be a good deal of mining.

Do you think that by surveying places could be found suitable for the storage of water? No doubt places could be found.

Do you know that valuable gold-mines have been abandoned for want of a water supply in that locality? There have been valuable reefs abandoned for want of water.

Could you tell us what was the yield from some of those reefs before they were abandoned? Some were said to have gone an ounce and a half to the ton. They were out of the way, and they could not get water for the machine, and it was too far to haul the stuff to the river.

Do you think that those gold-mines were abandoned simply because there was no supply of water? They were abandoned for the want of facilities in drawing the stone. Water would have been a very essential part of the consideration which determined the working of them.

Do you think that these claims would be payable at one and a half ounce to the ton if a supply of water were afforded? There are many payable reefs there if there were facilities for working.

You have been a long time in the district, and have an intimate knowledge of it;—I would like to ascertain from you what the flood discharges of the tributaries of the Clarence have been, as far as you know? I have not computed the discharges. I have the elements from which they can be found. The Nymboi River at Buccarumbi has, roughly, a flood discharge of 271,212 cubic feet a second.

**Discharge of Nymboi River.**

Have you gauged it at different times, and struck an average of the flood discharges? That is the flood discharge.

**Mr. Gipps.]** What was the section of the river at flood-time? The flood area was 22,601 superficial feet.

What was the velocity? About 8 miles an hour. Is

Is that surface velocity? Velocity due to the fall, computed from the declivity of the river. These calculations were made at the bridge site on the Nymboi River, below the junction of the Little River with the Nymboi. Mr. E. J. Statham.

Have you a section of the river? These are the sectional areas. I have not gone to any great degree of accuracy to get out the discharges, but I have got it approximately. I have the elements from which you can compute it. 25 Oct., 1886.

*Mr. Murray.*] Can you give us the discharges of any other tributaries? Blick's River, one of the main tributaries of the Nymboi, off the tableland, is a rapid mountain torrent. The flood area of that is 1,965 feet; the discharge per second, 37,177 cubic feet. Blick's River.

*Mr. Gipps.*] Where does it join the Clarence? It rises at Tryringham Run, and discharges into the Nymboi a few miles above Nymboidia. The elevation of the section is 2,000 feet above sea-level, and the source is fully 4,000 feet. It rises in the most lofty part of the tableland, up towards Mount Mitchell. It is a permanent running stream. I never saw it dry in the driest season.

Could you give the sectional area at the lowest level? 191 square feet is the minimum summer level.

What is the declivity per mile? It is very rapid; I should think 50 feet in a mile.

Are there any other calculations you could give us? There is the Whiteman, on the north side of the river. It rises in the Coal Range, about 800 feet above sea-level, and it discharges into the Clarence River at Eatonsville. Whiteman River.

Have you a section of that? The sectional flood area of that is 4,766 superficial feet, the velocity about 5 miles an hour, the discharge 35,055 cubic feet per second.

At what point was that section taken? At the bridge site on the Smith's Flat road, before its junction.

What is the length of that river from its source to the entrance? It is a network of rivers. The main branch of it, I suppose, would be 30 miles long.

What is the section of that stream when it is running at its lowest? It runs dry on a sandy bed.

Is there no underground flow in it? No doubt. There is a deep bed of sand in it.

Do you know what depth of sand there is;—did you try the depth when sinking for the bridge? We bottomed it. I could ascertain from the records of pile-driving what the depth is. We bottomed on the rock.

*Mr. Murray.*] Are there any gauges on the river? No.

Do you not think it would be a good thing to fix gauges on all the bridges you build in the district? I think it would. Gauges.

Will you suggest that to the head of your department? Yes, but I think it would be better to come from you.

Have you any other sections of tributaries? These are all that I have.

Will you hand in tracings? Yes.

Do you know if there is any means by which water could be supplied to the farmers on the Clarence River, Kangaroo Creek, and other tributaries of the Clarence? There is a very fine water supply in the Nymboi, at a good elevation—at an elevation of fully 500 feet.

Are there suitable places for reservoirs? There would be no occasion for them. There is a permanent supply if you can get it out. You can bring it down now to Grafton.

Can you point out any particular place at which it could be diverted to Grafton? It could be diverted by a tunnel at the Nymboi Gap. Probably 2 miles of tunnel would be required, but that could be very easily ascertained. That is the only point, I think, at which it could be diverted.

Would that command a large extent of country? You could take it anywhere down the Clarence you liked from there. It would command Grafton. There are several localities where nearly all the land is taken up for cultivation at the present which would be commanded by the water from this source.

*Mr. Gipps.*] What is the character of the rock through which the tunnel would pass? It would have to be made through sandstone rock.

What kind of sandstone would it be—similar to the Hawkesbury, or of finer grain? Mostly coarse grain. Sandstone.

Hard? Some of it is very hard.

Micaceous? No, siliceous mostly.

That diversion would affect all the south side of the Clarence River? Yes.

Have you made any examination of the north side? Yes; there is Fortis Creek, the main tributary of the Whiteman. Fortis Creek.

Do you know of any good position for a reservoir for the supply of the city of Grafton for domestic purposes? The only place I can suggest is Fortis Creek, but I would not suggest that as a source for the city's supply—there is not sufficient elevation.

Do you not think a sufficient examination of the district should be made to ascertain where the proper supply could be found? There has been an examination made. Mr. Darley made an examination, and proposed the Orara.

What elevation is that above the city? I think it is only about 50 feet above here. It was for a pumping system.

Do you think there would be any possibility of getting a gravitation scheme here? I suppose the tunnel would be too costly to be carried out.

*Mr. Murray.*] How far is it from the city of Grafton? Nymboi is 30 miles.

*Mr. Gipps.*] After piercing this range by a tunnel, would you propose to lead the water by an open conduit over the plains? I do not feel called upon to go into that. I simply point out this as a possible site for works of that sort. I would not make any suggestion as to how the work should be carried out.

*Mr. Murray.*] In your opinion, in the absence of instrumental examination, what would be the best course to adopt?—

*Mr. Gipps.*] Could that water be brought on by gravitation to Grafton? It could.

And it would also be available to supply irrigation over a large area of country? Yes.

*Mr. Murray.*] You gave us some information with regard to the Richmond River last Friday. I should like to ask you, further, is it not possible to store water in positions to command the back lands on the Richmond, which you described as rich volcanic soils? The country on the Richmond is very much broken, especially the volcanic portion. Possibly storage reservoirs might be found on the south side, where there is a great deal of flat land with a very gentle declivity, and there might be sites for storage reservoirs at the foot of the Richmond Range, on the north side. Reservoir sites.

Are you acquainted with some of the tributaries of the Richmond? Yes.

Can



Mr. E. J. Statham. Can you name some of them, and state the elevation at which they rise above the Richmond? There is Wilson's Creek. It rises at an elevation of 800 or 900 feet up towards Cape Byron; that is one of the principal tributaries. There is Terrania Creek, which rises in very high land at an elevation of say 3,000 feet.

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Are there any other tributaries? There is Back Creek. That rises in very high land, at an elevation of fully 1,500 feet. That discharges into the Leicester Creek, and into the Richmond north of Lismore.

Mr. Gipps.] What is the length of Back Creek? Over 20 miles.

What is the character of its bed? Mostly very black soil. The hills are very black soil.

Is it a continuous stream? It runs dry sometimes, but there is mostly water in it.

Does it bring down a large quantity of water in flood-time? Yes; but it would be very difficult to store water in that volcanic country because of the permeable nature of the soil.

Mr. Murray.] That would be a difficulty in regard to the irrigation of these volcanic soils on the Richmond? Yes, it would be a difficulty.

At what depth would you come upon clay, or an impermeable stratum? I do not know; it is not a clay country.

What is the sub-soil? It is all volcanic until, I suppose, you come to the rock.

Mr. Gipps.] What is the character of the rock? We have never got down to it. There are sandstone ranges in the Nightcap Range.

Are you not aware of any position on any of these tributaries, where the hills crop in close to the water, where reservoirs could be made independent of the permeable nature of the soils? I have not seen any place on the north side of the Richmond that struck me as a suitable place for a reservoir.

Is the range that divides the waters of the Richmond from those of the Tweed a high range? Very high, running up to 3,000 feet.

Is there any position in that range in which water might be stored for distribution on the lower lands? I do not know of any from my own knowledge.

Are not all these tributaries of the Richmond permanent streams? They are nearly always running. During the last dry season some of them have been dry, but usually it is a very well-watered district.

Would any of them afford a sufficient quantity of water for irrigation on a very large scale? Wilson's Creek might. There is a place on Wilson's Creek where a small quantity might be stored. You could not make a very large reservoir there.

Is Wilson's Creek at a sufficient elevation to command any very large area of the Richmond flats? No. The banks are very high, and the fall of the creek very gradual.

If you wish to supply water from Wilson's Creek, would you have to pump it? Yes.

What supply could you depend upon from Wilson's Creek? I have never gauged it.

What is the highest source of the Richmond River? The Macpherson Range.

What creek does that supply? The Casino branch of the river.

Is that a large stream? Yes.

Is it a permanent stream? Yes.

What is the character of its bed? Sandstone

Are the banks high? Very high.

What is the character of the banks? Loam.

Could water be diverted from it at any point, do you think? No; the banks are too high.

What is the height of the river at its source? It rises in mountains between 3,000 and 4,000 feet high.

Has it a rocky bottom? It has a rocky bottom at Casino. There is a succession of rocky falls.

From its source, how far does the rock in its bed extend? I have not examined it. It is very sandy above Casino.

Are there any positions whatever for conservation reservoirs? I do not know of any on the north side.

What is about the sectional area of the stream near Casino? I have never taken it. It can be ascertained from the bridge section.

Generally, you think it would be advisable to have an examination of the sources of the Richmond to see if water could be conserved? Yes.

Mr. Murray.] To come back to the Clarence District—are the seasons pretty regular in the Clarence District? We have had a continuance of dry seasons for some years.

As a rule, do the rains come at any particular season? You get thunderstorms mostly in November.

Is that a favourable time for agricultural purposes? I do not know.

Is the rain generally well distributed over the district when it does come? It is very patchy. During the last season they had an abundance of rain about the Little River country, and very little over the Richmond. Ordinarily it is the other way about. They get most rain on the Richmond. They have had a succession of dry seasons on the Little River until the last year, and this has been an exceptionally good season.

Are these rain-storms frequent when they come? Yes; we usually get them all through November.

Has the district not suffered from want of rain for some years past? Yes; we have had dry seasons now for ten years until this season.

Do you think that a system of conservation of water which would give a certain supply to farmers at the proper season would be of great benefit to the district? Yes.

Have you seen many floods in this district? Yes; I have seen several floods.

In what years? I could not tell you the years, except the big flood of 1876.

At what height above high-water level was the water in 1876? 23 feet 8 inches at Grafton.

At high-water? Yes.

Have these floods, as a rule, been beneficial to the district or otherwise? They have deposited silt on the flat land, or they have deposited sand, or have washed away soil; but on the whole they are decidedly beneficial.

In any cases where they have washed away soil or deposited silt, have they been injurious? Yes; they have washed away the banks in places along the river.

As a rule, do the banks scour much? They are beginning to scour very badly.

Do you think it is necessary that precautions should be taken to prevent the scouring of the banks and the washing away of rich alluvial soil? It would be very desirable.

Mr.

*Mr. Gipps.*] Do you not think the growth of osiers would prevent it? I do not think they would grow. Have they ever been tried? They would grow on the Richmond, but here the water is too brackish.

Mr.  
E. J. Statham.  
25 Oct., 1886.

*Mr. Murray.*] The sub-soil in this district is, as a rule, clayey, and is therefore impermeable, and suitable for reservoirs away from the river? Yes; all through the Clarence series the soil is clayey; you find clay a foot or 9 inches below sand or sandy loam.

On the whole, do you think that this is a district in which the conservation of water might be carried out with advantage to the State, and with profit to landholders;—what I mean by advantage to the State is by increasing the productiveness of the soil, and inducing a larger settlement of population? With an abundant water supply this district would grow enough to supply the whole Colony.

At what elevation would the site of the proposed Nymboi tunnel be above the river at Grafton? 500 feet. Does the range continue towards Grafton? It divides. The junction of the South River cuts the South River off from the Clarence.

If there is anything that suggests itself to you we should be glad if you would put it in writing and supply it as an appendix? Very good. (*Appendix 1.*)

Mr. Thomas Page examined:—

*Mr. Murray.*] How many years have you resided in this district? Since 1855.

Mr. T. Page.  
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Then you are well acquainted with it? With Grafton and down the river. You have had ample opportunity of obtaining information respecting Grafton and the surrounding districts during that time? Yes.

Have you noticed if the agricultural produce of the district has been diminished in quantity in consequence of the dry seasons? I can hardly say that it has diminished. It has increased largely every year, and it is still increasing.

That, I presume, is in consequence of the larger population? Yes; and more land being brought under tillage.

Taking the produce in connection with the area of land under tillage, has the production been diminished by dry seasons? In dry seasons the crops are lighter.

Do you think that during average seasons the rainfall is sufficient for agricultural purposes? During the wet seasons it is. We have periodical changes—so many years of dry weather, and so many years of wet.

How many of each have you observed? I should say that the dry seasons have been the most numerous during the years from 1855. Dry seasons.

Could you say how many dry seasons there have been, and how many wet ones? I should say that there have been three dry periods previous to this since the year 1855, namely, from 1857, 1861, and 1874.

Have the dry seasons been injurious to the pastoral as well as to the agricultural interest? More so, I believe.

*Mr. Gipps.*] Have you ever lost your crops altogether? Not as a whole throughout the district; only in particular localities have they failed.

What crops do you generally cultivate? Maize is the staple product.

In the worst season you have known, what has been the return of maize per acre? In some cases they have had to cut it up altogether. The lower river portion of the district gets much more rain than the upper portion.

*Mr. Murray.*] Taking one year with another, what is your average crop of maize? On good land it would be from 60 to 70 bushels per acre. It has been more than 120 bushels to the acre on new lands on the river-bank farms.

Do you know of any place where irrigation has been carried out on the Clarence? I do not know of any case where it has been tried.

Do the Chinamen irrigate? Yes, by water from wells.

With what result, do you know? They appear to be able to grow a crop when other people are not successful.

*Mr. Gipps.*] What is the average depth of the wells? From 16 to 20 feet.

Wells.

Do they give you an unfailing supply of water? No.

What is the average supply that they give? I do not know of one which has ever been tested sufficiently long to see how the supply would hold out.

How do you draw the supply, by steam? No, by hand-pumps. In some places what are called unlimited supplies have been proved to be insufficient when more than ordinary pressure has been brought to bear upon them.

Is the water fresh or salt? Fresh; but not of the best quality.

Have they sunk to a deeper than the ordinary depth to ascertain if there is a better supply lower down? There was a trial made in Grafton. They went down much lower than usual, but they only succeeded in getting salt water. The water-auger was used.

*Mr. Murray.*] Have the Chinese, as a rule, been successful in irrigating their small patches? In some seasons they have lost their crops the same as Europeans have. Chinese irrigation.

Then you do not think that any supply dependent upon wells would be of great benefit to the district? I do not think it would be of the slightest use where Grafton is situated.

Do the Chinese irrigate exclusively from wells? They do, unless they are alongside a creek.

Can you give us any information as to the other crops grown in the district and their average produce? The only other crops which are grown to any extent are sugar-cane and potatoes.

What are the average crops? The potato crop is really very unreliable in this district. It is generally injured by the frost or suffers from want of rain at the proper time. The rains often come too late.

Would water laid on at the proper time prevent a failure of the crop? I should say it would.

Do you think that a system of irrigation could be adopted with benefit to your district? I think that it would be beneficial.

Do you think that the farmers and residents of the district would be willing to pay a fair rate of interest on the outlay for irrigation works? No. I think that they would require to see that they were successful before they would avail themselves of the advantages of such works. They would require to be educated up to it.

What is the population of Grafton? Five thousand, including South Grafton.

The

**Mr. T. Page.** The town on both sides of the river is all in one municipality? Yes. The number of houses in North and South Grafton at the end of this year was 840, exclusive of churches, public buildings, schools, and parsonages. Possibly it would be 900 in round numbers at the present time. The ratable value of the property liable to assessment, exclusive of all Government lands, is about £34,700.

**25 Oct., 1886.** How do you get your supply of water at present? By the catchment of rain water in tanks above ground and from wells, the water from the latter being used for purposes other than drinking.

**Water rate.** What do you think the residents would be inclined to pay per room if they got a good supply laid on to the town? I think the bulk of the people would be inclined to contribute a rate equal to that contributed by the people of any other town; but there is a very strong feeling amongst a section of the community against paying any rate at all. The difficulty about a water-rate here would arise from the extensive area of the town. There are 48½ miles of streets, and the buildings—with the exception of the central part of the town—are very much scattered. The cost of reticulation would be very great, and the rate would have to be a heavy one.

Those not supplied would not be rated? They would not be rated for the water, but they would be for the cost of the works.

Mr. Thomas Bawden examined:—

**Mr. T. Bawden.** *Mr. Murray.*] To what extent have you had an opportunity of becoming acquainted with the Clarence District? I have resided in the district for upwards of forty-six years, and I have travelled over a great portion of it during that time.

**25 Oct., 1886.** You represented the district in Parliament at one time, I believe? Yes.

Can you tell us up to what point on the Clarence River the tidal water flows in ordinary seasons? To Copmanhurst.

Up to that point the river is salt? In dry seasons.

And in wet seasons? It is fresh below Grafton for some months in very wet seasons.

Then if any supply for the city of Grafton or the lower Clarence were to be taken from the river it would have to be from some point above Copmanhurst? Quite so.

**Rainfall.** Are the rains partial, or do they fall generally over the district? During the late series of dry years which we have had there has been a belt of some 14 miles below Grafton that has been more favoured with rain than any other part of the district. At Woodward Island and the Coldstream, towards Sportsman's Creek, they have been more favoured with rain. The crops have been better there than in any other part of the district.

**Dry seasons.** How often during your experience has the rainfall been insufficient for agricultural purposes in this district? We have had remarkably dry seasons during the past seven years—it may be said almost since the great flood of 1876. The seasons were very dry from 1848 to 1857, and from 1841 to 1848 they were moderately dry, but there was very little agriculture in the district during those years—none properly speaking until after 1857. I think the district has suffered more from dry seasons during the past ten years than at any previous time.

The pastoralists have suffered equally with the agriculturists? I think they have suffered more during the past three or four years than previously. As the country has become stocked it has been better drained. In primitive times there was more water retained in the soil.

During dry years, when the rainfall proved insufficient, do you know what was the depth and width of the Ourara, the Clarence, and the other rivers? The water did not run on the surface of the bed of the Ourara at many points during the past year. Just about where it was intended to take the water supply for Grafton from, there was no water running on the surface; and I think that during last year the water in the Clarence was quite as low as I have ever known it to be. I have no measurements I could give you, but I do not think that I ever saw it lower than last year.

If the whole of the water had been available for irrigation purposes, would it have been sufficient? Ample, because the water might have been saved previous to the dry seasons.

For the extent of land under cultivation? I think so. To my mind, not being a professional man, there appears to be a difficulty in providing a scheme that would meet the wants of the whole district. A number of smaller schemes suitable to certain localities would, as it appears to me, be more desirable than one large scheme.

*Mr. Gipps.*] I suppose you would suggest diversion of the waters of the northern and southern tributaries for the supply of those districts respectively? Quite so.

*Mr. Murray.*] If water could be stored in large quantities, and at a moderate expense, on the Upper Clarence, and allowed to flow down through the lower ground, would it be an advantage to the district, do you think? Certainly.

**Storage sites.** Do you know of any place on the Upper Clarence where water could be stored for that purpose? I think that might be done at the heads of most of our watercourses and creeks. It would be very difficult to do it in the main river, and exceedingly expensive. There are points upon the Nymboi and upon the main Clarence River above Tabulam where water could be stored, but that would be a great distance from Grafton.

*Mr. Gipps.*] What value do you think irrigation would place upon the land per acre? It is very difficult to say. I have never gone into a calculation of that kind, but I should think that land which is now worth £1 an acre rent would be worth double that if there were a regular supply of water for irrigation purposes.

Do you think the farmers would be willing to pay 10s. an acre for it? I do not know that our present farmers would. I do not think that they are sufficiently educated up to appreciate the importance of that system of agriculture.

Do you not think that if they saw there was a certainty of losing their crops in some seasons under the present system, and that by irrigation they would certainly save them, they would avail themselves of the water? They would no doubt follow the example of their neighbours; but I do not think that it could be expected that, as a general rule, they would take hold of it at once. Eventually they no doubt would.

*Mr. Murray.*] You do not think there is any great supply of water to be found underground? No, excepting what is to be found in the Clarence basin.

**Swamps.** Are swamps of common occurrence in the valley of the Clarence? They are; and they are a source of

of considerable trouble to our farmers. They are anxious to get rid of the water when there is too much of it, and to get a supply when the rainfall is short.

*Mr. Gipps.*] Could not the swamps be made basins for conserving reservoirs? Some of them might, perhaps.

Mr.  
T. Bawden.  
25 Oct., 1886.

Could you name any? I cannot say that I could.

Would they be of large extent? Mr. Donaldson, the district surveyor, would give you better information than I can. He has a better knowledge of them.

*Mr. Murray.*] Do you think it would be an advantage to drain these swamps? They make very good feeding paddocks when they are drained.

Have you any suggestions you could make to the Commission? No; I do not know that I have. It might be of service to you to have some information as to the floods which have occurred in the district. There is a sort of legend that the whole of Grafton was at one time under water, with the exception of the hill above South Grafton; but I think it is only a legend, except in so far as it was approached in 1876. In 1841 we had the first flood known here by white people, and that just came level with the banks of South Grafton. In 1848 we had a flood which overflowed the banks there. In 1857 we had a much higher flood than in 1848. In 1863 we had a higher flood still. On that occasion all the branches of the Clarence were flooded; but the southern branches were not flooded so high as they were in the following years. In 1864 we had a flood in the river; but it was not so high at Grafton as the flood of 1863 by 18 inches, and the northern branches were not so much in flood as they were the previous year. In 1876 we had the highest flood ever known here, and on that occasion I believe the branches on both sides were in flood much higher than was ever known before. On that occasion some damage was done from the scouring away of the alluvial soil of the banks, and the deposit of sand in its place; but most of the floods have had a beneficial effect in enriching the land by the deposit of alluvial matter. Our farmers prefer two floods to one drought. The yield of maize immediately after a flood is very much greater than at other times.

What is the average yield? The present season's average is somewhat below 60 bushels to the acre. Last year it was very low. I knew a man who only got seven bags off 5 acres of land. I suppose that the average may now be put at 60 bushels to the acre. That is in a great measure owing to the fact that the farmers do not manure the land. They go on ploughing and sowing the same ground year after year with the same crop.

Could you give us the acreage under cultivation in the district? No; but you can get it from the Statistical Register. The information is collected by the police. People do not give all the particulars they are expected to give, and therefore it may not be quite correct.

*Mr. Gipps.*] Do you know of any springs in the district? Of some small ones; but not of any which are permanent.

None have been opened? Not that I am aware of.

Are any of the springs strong? I do not think so. About the Richmond River there is a good place for the storage of water, between Roseberry and Unumbgar. That is on the main Richmond River, heading at Mount Lindsay.

Can you name any particular point? The ranges close in there to the river, forming a sort of gorge.

What is the character of the bed? Rocky there. A spur of the Macpherson Range closes in on one side.

What is the character of the main basin? A number of small tributaries flow in at the head of the Richmond. If the water was conserved there there would be ample for irrigation purposes down the main river. I could not give you the exact area. It would take in the whole of the Unumbgar Run and portion of the Roseberry.

Is there much silt there? Not much.

Not enough to silt up the stream? I do not think so.

How far do you think an 80-foot dam would throw the water back? That I could hardly say; but it would conserve an immense quantity of water.

What would be about the width of the river at that point? Not more, I think, than 300 yards between the two spurs.

What is the character of the rock? I hardly know what kind of rock it is.

How many miles above Casino might it be? About 40 miles, I think.

Would it command any of the new gold-field at Fairfield? No; it is in the Clarence waters.

Could that water be used for the supply of Casino? Yes.

Do you think it would irrigate a very large area of country? I think it would.

Is the stream there permanent? I have never known the Richmond cease running from its source.

The land between Casino and the head of the Richmond up that valley is very good land. Most of it is used at present for pastoral purposes; but the time will come, and that very speedily, when it will be given up for agricultural purposes.

Mr. Patrick Riddle Donaldson examined:—

*Mr. Murray.*] You are the district surveyor stationed at Grafton? Yes.

You have an intimate acquaintance with the district? I have.

You have heard Mr. Bawden refer in his evidence to some swamps in the district? Yes.

Do you think that those swamps could be converted into reservoirs, or would it be more beneficial to the district to drain them? To drain them. One of them, the Great Marlowe Swamp, was placed under a drainage union some years ago, but nothing ever came of it. It can be drained. It has a fall of about 5 feet to low-water.

Mr. P. R.  
Donaldson.  
25 Oct., 1886.  
Great Marlowe  
Swamp.

What area does it cover? 1,500 acres.

*Mr. Gipps.*] Would that be from the bottom of the swamp to low-water? Yes; except, perhaps, in one or two small deep undulations which may occur. When I say it can be drained, I speak of the general surface of the swamp.

Is it fed by any creeks? No; it is between the ana-branch and Alumny Creek.

How is it filled? Generally by floods, and the water lies there until it evaporates.

From which creek? Over the banks of the river or from Alumny Creek. There are some large swamps on the other side of the river called the Coldstream Swamps, and they are filled in the same way, by the overflowing of flood-waters from the river, and also from Glenugie Creek.

What

Mr. P. R.  
Donaldson.  
25 Oct., 1886.

What is the character of the bed of those swamps? There is a deposit of decayed vegetable matter of from 1 to 2 feet, and then a bluish clay. It is only some parts of the Coldstream Swamps which have been penetrated during the last two or three years. A large waterhole has been discovered in the centre, which was not known until two years ago. It is very deep, and the tall reeds prevented people from getting to it; but owing to the dry seasons and the bush fires, the cattle gradually encroached upon it.

Do you not think that a large body of water might be conserved in those swamps by embanking the sides, and draining the water into the centre of the swamp? There is a large quantity conserved in them after every flood.

In the reed beds of the Lachlan they manage to half irrigate a very large area of ground by cutting drains into the centre. Could not the same thing be done here by having embankments constructed with the material taken out of the drains? It is quite possible that something of that kind could be done; but I think that the cost would be far greater than the benefit in areas of that extent. The cost of drainage would be comparatively small, and when drained they become immensely valuable, as in the late dry seasons, when the water has been drawn off by evaporation.

Would the drains have to be cut through any one else's property? Yes, through various properties. Then compensation would have to be paid? There seems to be a doubt whether the Act is workable. It provides for cutting drains through other people's property, and also for each person paying a share for the advantage which he derives. Any one who derives an advantage is supposed to be rated according to the interest he has in the land benefited by the work carried out.

Are portions of these swamps owned by different people? Yes; in the case of the Great Marlowe Swamp there are more than twenty people interested in it.

What is the area of it? 1,500 acres. In some cases it extends very close to the river, within 5 chains. Farms measured 30 chains deep, many of them have 25 chains of it in the swamp. In other cases the whole of the block is in the swamp, and some people have not seen their land for four or five years at a time.

What drain would you advise? An open drain covered near the bank, and well protected with rubble work. Where the drain cuts a property in two, what would you do? Protect it by a fence.

And pay for any damage by severance? That would be very slight. As a matter of fact, where I proposed to drain this swamp it was only 5 or 6 chains from the edge of the swamp to the river. The drain would be all in one man's farm.

Coldstream  
Swamps.

Are there any other swamps? There are the Coldstream Swamps.

What area do they cover? Between two and three thousand acres.

Have they a similar bed? Very similar. An attempt has been made to drain one property. The man has cut into the river bank and made almost a canal.

The water has opened a considerable gutter drain? Yes. The same thing has occurred on the Richmond, where they have attempted to drain without protecting the soil.

When the river is high, would it not flood these drains up again, if they are open drains? I think not.

Would not the water run up the drains in flood-time, and deposit silt in them? It might a little; flood-gates could be put in at the outlet.

Are there any more swamps in the district? Not of any consequence. Those are the principal ones.

Storage basins.

Do you know of any storage basins in the valley of the Clarence? At the gorge above Gordon Brook it is quite possible that storage might be effected.

What distance is that above Grafton? About 57 miles, just below the junction of the Clarence with the south branch of the Mitchell, as it is called on the map.

What would be the width of the river at that point? From 5 to 7 chains.

What is the character of the bottom? Slaty rock.

And of the banks? Slaty rocks come right in.

Are they tilted? Very much.

Hard? Very hard.

Would a weir there impound water over a large area? There are 150 miles of creeks beyond that, besides two or three other arms of nearly the same extent.

Is the declivity of the river above that point very steep? It has a fall of, I think, about 4 feet to the mile.

Then an 80-foot dam would throw the water back for nearly 20 miles? For a considerable distance.

Would it throw it back in a large valley? The valley is narrow there. The hills come in and form the gorge.

Does it open out behind? Yes; as you get near Yulgilbar the country opens.

To any great width? In places where tributaries come in.

Do you think that water stored there would be available for irrigation on any large scale? If the cost were not too great to bring it to Grafton, it would be a great boon to all this low country in dry seasons. I believe the plan suggested by Mr. Statham would be the best for the south side.

This would be for the north side? The difficulty of crossing the river is why I suggest the possibility of this.

What would be the character of the country the conduit would have to cross to irrigate the north side of the Clarence? Gordon Brook Creek would first have to be crossed.

Would it be undulating country? Generally.

What is the character of the soil? Rather impermeable, if anything. The formation is generally granite and sandstone on this side.

There would be no difficulty in constructing a conduit? It is more a matter of cost.

Do you know of any other position for a conserving reservoir? Not for a large scheme; but I think that water could be stored in the heads of nearly all the large watercourses in the district, which would very much enhance the value of the land all along below—under the Richmond Range, for instance.

Are there any sites on the tableland where these streams take their rise where you could conserve water? They do not rise very rapidly until close under their sources.

They rise in very steep ranges? Yes.

Mr. Murray.] Have any sites suitable for conserving water on a large scale been reserved from alienation? None; there are none of particular note.

Do

Do you know of any at all? I reserved one the other day in the Richmond, but I doubt if it will ever be required.

Mr. P. R. Donaldson.

Do you think it would be a good thing to reserve every place suitable for reservoirs? I have a number on the Richmond which have been reserved for purposes of public recreation, and they might be valuable possibly for water conservation. I refer to places where there are falls of from 100 to 200 or 300 feet—having a direct perpendicular fall into creeks, and so on.

25 Oct., 1886.

Do you think it would be a good instruction from the head of your department to all the surveyors in the Colony to reserve sites suitable for water conservation? Yes, if they were not made use of in the same way as the reserves for timber have been. In view of our recent instructions to cut down every possible reservation not absolutely necessary, it might be a good thing.

Reserved sites for water conservation.

But you think it might be abused? That is my fear. As a rule such sites are in places not likely to be selected—well, up in parts of the country not suitable for agriculture. I think that our present instructions give us all the authority needed.

Do you think it has been generally carried out? It has not been specifically carried out, from the fact that no specially favourable sites have presented themselves. I am aware that surveyors have the power to recommend for reservation sites which they deem suitable for schools, purposes of recreation, and forest reserves; but I do not remember if conservation of water is specially mentioned. It is not specially mentioned.

Do you not think that it would be a good thing in the interests of the public that reserves should be made for the conservation of water wherever suitable places can be found? It would be beneficial. In the case of the falls on the Richmond River, of which I spoke, some of them would be available for such a purpose. There is one near Lismore would be, if it is not too far away. It is about 20 miles away; but I think that they have some scheme under consideration—that some survey has been made. Is there anything you would like to suggest to the Commission? No.

TUESDAY, 26 OCTOBER, 1886.

At Grafton.

Present:—

Mr. MURRAY,

Mr. GIPPS, C.E.

Mr. William Goodyer examined:—

Mr. Gipps.] Where do you reside? At Ulmarra,

What is your occupation? I am an agent and a grazier.

Mr. W. Goodyer.

What part of the district can you give us special information on? It all depends upon what information you desire. Any question you may ask me I will answer to the best of my information and ability.

26 Oct., 1886.

We wish to know where there are any large depressions on the course of permanent creeks, and to have any information we can obtain in regard to wells, and also a general description of the climate and country? That is at Ulmarra? There is one large creek there called Harrington Creek. Mr. McDougall, the Police Magistrate, knows it well.

Where is the source of the Harrington Creek? It rises in the hills near Glenougie. The stream discharges into the Harrington, and when this overflows it runs into Seven Creek, a tributary of the Clarence. Creeks.

What is the height of that source of that creek? Not above 200 or 300 feet. That is the highest point. The country is in ridges something like South Grafton. I believe they could get enough good water there to supply Grafton without going to the Ourara.

What distance does it run? Somewhere about 10 miles.

Are there any valleys in its course where the water could be conserved in large quantities? At Glenougie Creek, which has a large watershed.

Can you suggest any particular point for a dam? At Glenougie Crossing—that is, where the coach road crosses the creek—the road leading to the coast.

What is the character of the bed of the creek? I believe it is rocky at bottom and sandy on top.

What is the width of the creek? I should judge it is about 200 feet wide.

What is the character of the banks? At this point there are two spurs which nearly meet each other.

Are they rocky spurs? I believe they are.

What is the character of the rock? Sandstone.

Do you think that would be a good point from which to supply Grafton? I do; that and the Harrington.

Would a dam 80 feet high conserve any large quantity of water? Yes; there is not a great fall, and the water would back up a long way.

Is the valley wide? In some parts it is.

What would be the average width? In some parts it would be 500 or 600 feet, or more than that. In some parts along that creek there is land fit for agricultural purposes—alluvial flats; and they are cultivating them in places.

What height would it be above Grafton? I could scarcely give you good information on that point; but it is above Grafton.

What distance from Grafton? 8 miles.

Do you think the water could be brought by gravitation to Grafton? You might require to raise it a little to get the fall, but it would be an easy matter from Harrington.

Is it a permanent creek? Yes.

Is there always a good stream running there? Last season and the season before there was not; but in the Harrington I tell you about there has been water all through. I have never seen it dry during twenty-eight years. It has a depth of 20 feet or more, a shingly bottom, and the water is good.

Do you know of any other creek running into Ulmarra? There is what is called the Coldstream and Pillar Valley. The Coldstream is the boundary of Ulmarra, and the Pillar Valley runs into it near the head. All the tributaries are in the same watershed. Some flow from the east and some from the south.

What is the extent of the watershed? 25 or 30 square miles.

- Mr. W. Goodyer. At what point does the Ulmarra Creek discharge into the river? It comes into Swan Creek. It is swampy country outside the Harrington, and the Council has cut a drain to take the surplus water from the swamps; but still there is always a permanent supply in the Harrington.
- 26 Oct, 1886. Do you know of any other permanent creeks in Ulmarra? Not fresh water.
- Do you know of any position for impounding reservoirs besides the one you have described? No. Ulmarra is all flat country.
- Do you know of any large depressions in which water could be conserved in Ulmarra? No—not to any depth. It is nearly all level country.
- Wells. Are there any wells in the district? We have wells all along the river frontage and at the back from which you can draw good water, but I do not think you would obtain a sufficient supply in a dry time.
- What is the average depth at which the water is struck? About 18 feet.
- Is it good water? Very good.
- What is the character of the strata? On the surface it is alluvial, then clay, then a kind of shingle something like you see on the Upper Clarence. Then you come into pure white sand, in which you find water.
- What thickness is there of these different strata? On the bank there is a greater depth of alluvial, which varies from 5 to 10 feet or 12 feet. In some particular spots you get alluvial nearly all the way down until you come to the sand. The soil varies a good deal. If you notice the banks of the river from the steamer coming up it will give you a better idea of it than any description of mine. When you go back from the river for about a mile you come into stiffer soil.
- Then you get on to the gravel? Yes.
- What thickness? It varies.
- What thickness of sand do you get? In some places it is thicker than in others.
- You invariably get water in the sand? Yes.
- Have you ever had to get through the sand? I do not think it has been tried in Ulmarra; it has been tried in Grafton.
- With what results? I can scarcely tell you. Mr. Hewitt knows all about that. At the market reserve they went down between 200 and 300 feet.
- How do they draw the water from the wells—by steam-pumps? No; hand-pumps.
- Are there any windmills? I had one, but I took it down. I did not require the supply from it.
- Windmills would answer for pumping purposes? Yes.
- The wind is sufficiently constant throughout the year to use them? Yes; nearly every evening we have a north-westerly breeze blowing.
- Could you give us the average rainfall during the twenty-eight years you have been in the district? I do not think you can get that. Some gentlemen on Chatsworth Island have been recording the rainfall there during the last few years.
- Have you suffered very much from the effect of drought during the last few years? Yes.
- Not before? Not before.
- What was the effect of the drought? Loss of crops and loss of stock.
- Irrigation. Do you think that irrigation would be beneficial to the district? I do.
- And you think there is sufficient water in the district to carry it out systematically? Yes; from the Harrington and by storing the water. For eight or ten years there was too much water. There has been a lot of drainage done during the last eight or ten years, and swamps which used to be full for years are now dry. I had a swamp in one of my paddocks which I had not seen dry for twenty-three years, and I have dug 18 feet down in the lowest part of this swamp and have not been able to get water. The soil is impermeable, as a rule? Yes.
- Mr. Murray.] I think you said you were an agent? At present I am.
- What kind of an agent? A commission agent for agricultural produce.
- Then I presume you have an intimate knowledge of the products of the Clarence? I should have. I have been dealing in it for the last nine years.
- Can you give us any information as to the quantity of agricultural land on the Clarence? I could not; I could have done it in my own parish.
- Can you supply us with that information afterwards? I can get you the area of land settled on and the area unsettled on.
- Can you tell us what is the average crop of corn? The yield per acre in fair seasons is from 50 to 60 bushels. There are exceptional cases where you will get 100 bushels to the acre, but taking the seasons all through 50 bushels or 60 bushels would be about the average.
- What is the highest you have ever heard of? 120 bushels.
- Sugar growing. And for sugar-cane? I should say about 40 tons. I have seen over 100 tons taken off an acre; but 40 tons would be the average of mature cane. Mr. Hayley, the manager of the sugar-mill, could give you the information.
- What is sugar-cane worth a ton? If you cut it yourself and deliver it at the mill you get 15s. The company give 10s. and find their own cutters.
- Is sugar-growing a very profitable industry? Yes.
- Do you think that the produce could be increased by irrigation? I feel sure it could.
- Do you know of any instance in which irrigation has been attempted? No; not further than in gardens where things have been regularly watered. I have seen cane grow to great perfection. I had it growing some years before the Sugar Company started, and it was wonderful to see the size to which it grew when watered. I grew just a few plants as an ornament, and they were watered like other plants in the garden.
- If a system of irrigation were adopted, do you not think that great quantities could be produced on a large scale in the same manner as you produced the remarkable growth of your small quantity? I am sure of it.
- Is it possible to get an underground supply of water for that purpose? I do not think it would last. The wells have gone dry merely by watering stock from them.
- If you went deeper you might perhaps get a permanent supply? That I do not know.
- What is the average width of the valley of the Clarence settled for agricultural purposes? I could scarcely



scarcely say. At Ulmarra it is about 7 miles from the river to the Coldstream Ridge on the other side. On the other side, directly opposite Ulmarra, I suppose it would be about 2 or 3 miles.

Are there any watercourses on these ridges bounding the valley in which water could be conserved for distribution down the valley? At different points I think you could do it. As it is now there are waterholes where a large quantity of water is conserved naturally; if it was artificially done you could store a great deal more.

Is the country pretty well taken up all along the course of the Clarence? Yes, and for miles out.

What is the average value of land per acre under cultivation? I should say a fair estimate would be £20 an acre; in fact, I believe it would bring more; that is a low estimate.

What is the highest price you have seen paid for land for agricultural purposes? £50 5s.

That was purchased originally from the Crown? Yes, for £1 an acre. Mr. Munro sold the land, and that is what it fetched at public auction. It was river-bank land.

Do you know the sources of the Coldstream? It ends in the South Arm, and the watershed is out in the Ourara, from which it is divided by the range. There are tributary creeks running into it.

Is there any good timber up near the sources of that stream? Yes; ironbark, a little pine, tallow-wood, blackbutt, and gum—in fact, all the hardwoods which grow in the district. It is being sent to New Zealand as fast as possible for the Harbour Trust works there.

What is the elevation of the Coldstream? The tidal water flows up for 16 miles or 20 miles; then there is a gradual rise up into the hills.

Would it be possible to utilise the water from the head of the Coldstream for water-power or saw-mills? Yes. I have a place there that would do well for that. It has a fall about the depth of this table, but it could be increased by storing the water for a water-wheel. Mr. Campbell, the gentleman who was up here in connection with the proposed model farm, said it could be utilised for the purpose of water-power. Has the rainfall been regular and sufficient for the sugar-cane? It was up to the last three or four years.

It has been insufficient since 1882? Yes. We have a promising season this year; but for the three previous years we had not a sufficient rainfall, and the crops were light in consequence.

What is the average of light crops in dry seasons? About 15 tons to the acre, on land where they used to get from 60 tons to 100 tons to the acre.

Have you seen any irrigation carried out? No; but I have seen where the tidal water has flowed up a drain cut in a low piece of ground, and I noticed that the crop was better there than where there was no water.

Was not that salt water? Yes; but it seemed to keep the land cool, and the cane grew better.

Then you think that the percolation of salt water through the soil was better than none at all? Yes.

Do you think that salt water applied through perforated pipes laid under the soil would be of advantage to the cane? I believe it would in these very dry times.

Not on the surface? No; it would kill any vegetation. At Mr. Rankine's place, in the North Arm, I noticed that where the salt water had run up the drains the cane looked fresher and better than it did where there was no water at all.

Have you any other information which you think would be of advantage to the Commission? No; but I should like you to visit the localities I have referred to, as you would then be able to judge of the matter better.

Mr. Thomas George Hewitt examined:—

*Mr. Gipps.*] How long have you been in the district? Since childhood—about forty years.

What has been your occupation? I have followed various occupations—squatting, purchasing cattle, and latterly I have acted as a newspaper editor.

What particular part of the district can you give us information about with regard to water conservation? The country between Grafton and the tableland and the Newton-Boyd District, and from Grafton to the Richmond, and from Grafton to the Upper Clarence as far as Tabulam.

Then you have had experience not only of the Clarence, but of all its principal tributaries? Almost all of them.

Which do you consider the principal tributary of the Clarence? The main Clarence, or the water-course which passes Tabulam. It is generally called the Clarence, in contradistinction to the other, which is called the south branch.

Where does the main branch takes its rise? In the Macpherson Ranges, on the Queensland Border.

What is the character of the country at its source? Very broken. Near Tabulam there is a little tableland, because one of the tributaries rises near Ben Lomond, and the same again from Aberfoyle on the south, and again from Mount Mitchell there is another important stream flows there. I have no knowledge of the country above the tableland.

It rises in mountainous country, and rushes down gorges until it comes to the bottom land? It passes through the Tabulam Run, Bunalbo Run, and Sandilands Run. I do not know anything of the country beyond those localities.

Where does the river leave the gorges? Above Bunalbo.

Can you suggest any site for storage reservoirs on that branch? I have no experience of reservoirs, but I should think the volume of the water is too great to admit of its being checked in the main river.

There is always a large stream coming down the main river? Yes, always. There is no necessity for any reservoir, as the water supply is so abundant and permanent.

Can you suggest any point at which the stream can be diverted in order to throw water over the northern district of the Clarence? No. The country there would not admit of any dam that would throw the water back for any considerable distance.

Is there any point from which the water from the stream might be conducted by a canal for the purpose of irrigating the country below? I could not suggest any place on the Upper Clarence where that might be done to any extent that would be appreciable. It is all rich country immediately you leave the river, and in my opinion I do not think you could put a dam anywhere that would throw the water back to be available.

Can you suggest any point in the lower part of the stream at which water might be diverted? I think

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think it might possibly be done on some of the creeks. There is a scarcity of water on the Bunalbo Run in dry seasons, and possibly something might be done there to conserve water. It is only a pastoral country at the present time.

Can you give us any information with reference to the Mitchell or Little River? Before going into that, I may say, that when you get below Tabulam there is a good extent of rich land on Yulgilbar Run, immediately below the confluence with the Rocky or Timbarra River. There is a place where water might be very easily stored from the floods. When the flood is at its highest level, water would run into channels there for irrigation purposes.

By constructing locks in those channels you could keep the water in them in large quantities? It would scarcely need a lock if the channel, which appears to me to have been the old channel of the river, was excavated; it would store a large quantity of water. The place of which I speak is about 10 or 12 miles above the confluence of the Rocky River.

Would the storage of water there benefit any large area of country below? I cannot say that it would be of any great benefit, because the supply of water from the main river is so ample. Streams run from one year's end to another.

What I want to get at is, if water can be diverted from the main stream so as to irrigate the country? In the place of which I speak it could be diverted to a short distance where there is an extent of agricultural land.

Is there a large extent of agricultural land? Perhaps not more than 3,000 or 4,000 acres.

Can you give any more information on that branch? I do not think there is any place in which water might be utilised until you get on the lower branch of the river.

With regard to the southern branch of the Clarence, on what is known as Mitchell's River;—are there any sites on that branch in which water could be conserved in large quantities? I am afraid not. It is such a rapid running stream, and so subject to high and sweeping floods, that work there would have to be of a very extensive character.

Are there any large lateral valleys into which flood-waters could be drained? There are a few, but not of very great extent. A little might be done in that way. In those cases, however, these valleys almost invariably convey enough water from their own watersheds that it would almost be better to erect works at the head of these valleys, and conserve the water which flows from their own watershed.

Can you suggest any particular valley where the water could be conserved in that way? None of the valleys that I am acquainted with have any great extent of country in them suitable for agricultural purposes.

Irrigation.

Would you recommend that these valleys should be examined by an engineer for the purpose of seeing whether water could be conserved in large quantities for irrigation; or, in other words, do you think that irrigation would be a benefit to the district? I think irrigation would be a benefit to the district. I have tried to induce people to try it on an experimental scale, but without success. Perhaps an inspection or report on the valleys of these rivers on the part of the district surveyor would be of use at the present time, with a view to reservations being made for the purpose of water conservation hereafter. Does the country in the upper district suffer much from drought? It does suffer from what we call a drought, but nothing as compared with what is known in the Western country. Such a thing as that is not known here.

What would be the average fall of rain in the upper district? I do not think that any records have been kept from year to year. It would probably average as much as at Grafton, perhaps rather more, because there they get thunderstorms which we do not get here. Our heaviest rains come from the south-east. The clouds, heavily charged with moisture, immediately they meet the high broken land between this and the tableland discharge their contents there.

What is the character of the land;—is it generally fertile? In the river bottoms splendid land. Although small in area, it is quite equal to our rich land.

Is there a large area of bottom land? On the main river the best land is found there. On the south river it is more limited.

Is there much timber there? Good timber is found in all parts of the district. You can scarcely go many miles without finding good timber. In the mountain brushes you find scrub timbers, such as cedar and pine, and at the ranges you find tallow-wood and ironbark, and in the lower country you have a species of gum which is called grey-gum, although I believe it is not the true grey-gum. Stringy-bark also occurs on the ranges.

Wells.

Do you know of any deep wells which have been sunk in the district? No. The deepest attempt was that which was carried on by the Government here close to Princes-street, in the town.

What depth was the bore? I am not very sure of the depth. You will find it in the last report of the Minister for Mines. I think it was about 150 feet.

What results were obtained? The water was brackish. Immediately they touched the coal measures they gave it up.

Have you tried irrigation, or have you known it to be applied at all? Only by the Chinese gardeners. They grow vegetables when no one else can grow them.

Corn crop.

Mr. Murray.] You have had ample opportunities of seeing the district and knowing its products. What is the average corn crop here? I should estimate the average maize crop, with the exception of the late seasons, which have been the poorest yields we have ever had, at about 50 or 60 bushels an acre.

How many bad seasons have you had lately? They would extend back about three years.

Then what would you estimate a full crop to be? I do not think it would be less than about 80 bushels per acre. That would be called a good crop.

Sugar-cane crop.

And as to sugar-cane? Sugar-cane is a crop that is rather misleading to give returns for the land, because up to very recently the cane that had been grown took two years to mature, and now there is a disposition to grow cane which may be cut every year. Of the ribbon cane, which usually takes two years to come to maturity, as high as 100 tons to the acre has been recorded, and I believe accurately so. It was an exceptional case, but I have satisfied myself that the return was correctly stated.

How much per ton is that cane worth delivered in the mill? I believe the price at the present time is 13s.

Effect of irrigation.

Do you think that the yield of corn and sugar-cane could be increased materially by irrigation?

I

I am satisfied of it. I am convinced of it from observation. I would mention a case. Last season, when it was said that the blight prevailed so much in the district, a man within the town showed me the effects of three or four rows of corn growing in a slight depression of the ground, which was filled from the water flowing from the street in Grafton. These three or four rows, he told me, produced as good maize as a man could grow. There was not a trace of disease on these particular rows, while on the adjoining rows the corn was scarcely worth pulling, it was so blighted.

Then you gather from that that one of the causes of blight is insufficiency of moisture? I think so. I think the scientific view of it is correct also, because an impoverished plant becomes an easy prey to the attack of parasites.

Do you think, as a rule, that it would be beneficial to conserve water on the ridges adjoining the Clarence with a view to its being distributed on the sugar and maize-growing land? I certainly do.

Do you think the people would be prepared to pay a fair rate of interest on the outlay for works of that kind? When they were used to it. As in most other things, the people would be slow to avail themselves of it at first, but when it was shown to be valuable they would gladly accept it. They would see that it was profitable for them to do so.

Does anything occur to you that would be of interest to the Commission about which we have not yet asked you? Yes. I would say, in connection with the sugar crop, that it was my duty a few years ago, when the district was suffering from a slight scarcity of rain, to visit the sugar plantations for the purpose of describing the mills, and generally to elicit information from the growers that would be of use to other growers. These were seasons in which the frost had been very severe, and the injury to the crops was then generally attributed to the frost. Amongst the men who were the most observant, and, as I believe, the best farmers, the injurious effects of the frost were attributed more to the want of a proper rainfall—to the want of moisture in the land—than to the frost itself, and they called my attention to such facts that I thought I could clearly see that their view was correct. I noticed that where the plants had a vigorous growth, and the leaves spread well out, overshadowing the stalk, the cane was protected from the frost. The frost on the leaves does not hurt the cane for sugar-growing purposes. It is when the upper part of the stalk becomes frosted that it strikes down, particularly when rain follows.

Where there had been a vigorous growth, and there were plenty of leaves, the frost did not hurt the cane, and if they could ensure the growth of the cane, as they might easily do if they had command of water, to a certain extent before the frost came, very little damage would be done by the frost. I am satisfied that this is the true theory. As to Alumny Creek, which runs through Grafton, water might be conserved in it to the advantage of the people of Great Marlowe. The creek, as it is, is of no use, except as a means of providing water to the stock. In dry seasons it becomes very bad. I think that if some means were taken to conserve the water, which might be obtained from the freshets in the river, it might be useful for stock purposes, and for irrigation as well.

Is not the water salt? It would not be salt if you impounded the water in times of flood. The water then is fresh.

At what height above high-water does water run into Alumny Creek? There is a local work which confines the tidal water as far as the boundary of the town, but it does not go beyond that.

We have had information from other witnesses that the tidal waters affected the water as far as Copmanhurst? But in this ana-branch, Alumny Creek, the bed has been raised in places so that it acts as a natural dam, but when the river attains a certain height it flows over that. The same thing occurs at either end. The water is not conserved, but it remains until it evaporates or is consumed. The creek is almost dry at the present time. When the water in the creek falls very low it becomes alumny, but if a body of water were kept in it it would be perfectly fresh.

*Mr. Gipps.*] What depth of water do you think might be impounded there? An average depth of 10 or 12 feet, without inconveniencing anyone or damaging any private property.

What is the character of the banks, good hard impermeable clay? I should think so.

Is the bed the same? The bottom I do not think is so good, but it is possible it will be found to be generally of clay.

I suppose you do not know the average section of the creek? No.

What would be the average depth? It would probably be about 10 feet. I should think it might average 4 chains, probably 5, in width.

Then you think water could be impounded at a slight cost, and would be of very great benefit to the town? I do.

Mr. Alfred Lardner examined:—

*Mr. Gipps.*] How long have you resided in the district? Forty-six years, continuously.

What is your occupation? For the first ten years I was engaged in grazing pursuits; since then I have lived in Grafton.

What particular part of the district can you give us information upon with regard to water conservation? It is a subject which has not been much considered. I know the district pretty thoroughly except about the mountains, about 40 or 50 miles from Grafton. The question of water conservation has never been spoken about here, only with reference to supplying the wants of Grafton.

Have you ever taken any observation with reference to the sites of reservoirs? I have been in the habit of observing a great many things, but not of putting them to any practical use.

Could you suggest any sites for impounding reservoirs? I am not sufficiently acquainted with the subject to know what is required in the way of elevations and so on. I have read Mr. Statham's evidence as reported in the Press, and I agree pretty well with what he says. But there is one place where I think a considerable quantity of water might be stored cheaply, which he has not mentioned, that is at the mouth of Whiteman's Creek.

Where does Whiteman's Creek rise? It drains the coal ridge, and it discharges into the Clarence River about 10 or 11 miles above Grafton.

What is the length of it? There are a great number of creeks—at least four creeks—that would be 9 or 10 miles long, but the whole of that branch is at least 15 miles.

At what point would you propose to conserve the water? The mouth, for this reason: The banks are very high, and would, I think, retain the water for about a mile in considerable depth; and if it could be impounded only 6 feet, that would throw it back at least 3 miles.

What

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Whiteman's  
Creek.

- Mr. A. Lardner. What is the character of the banks at the mouth? Sandstone ridges principally. On one side there is a little alluvial soil.
- 26 Oct., 1886. What would be the width of the river at the point you propose for the dam? It might be 150 feet perhaps. There is a large deep bed there for about a mile.
- Exports. What is the character of the bed of the creek at that particular point? Most likely rocky. I should judge so from the ridges which come out.
- Is there a large waterhole there? It is all a waterhole.
- What is the depth of the valley about the point of the dam? The depth is very little; the ridges come in close on one side and the other.
- The water would be conserved in the bed of the creek? In the bed of the creek, which would contain a great deal of water without excavation.
- What would be the average width of the creek? It is very wide on the top; perhaps 50 or 150 feet at the bottom. It is a place which would hold a very large quantity of water.
- Do you know of any other site for impounding reservoirs? Not in the immediate vicinity. Until lately the only outcry for water has been in the town. The graziers have not suffered, because their stock have had access to water almost everywhere.
- Water would be required to be conserved chiefly for irrigation, as you have quite enough for stock purposes? Stock has not suffered to any very serious extent, except on the alluvial flats, where it is owned by the farmers.
- Has the produce suffered much from drought? Yes; during the last year very considerably, to the extent of nearly one-half. I gave your engineer a table showing the extent of exports, and that will illustrate the effects of the deficient rainfall better than anything else I can give. (*Appendix 2.*) Maize is the principal crop, and during the whole of this period the average quantity of land under cultivation for export has been virtually about the same. This paper which I hand you is an abstract giving information as to the crops from the year 1857 to the year 1886. I have named a few flood years; 1857 was a flood year; there was no cultivation then.
- Will you hand this in as an appendix? Yes. Water for irrigation might be obtained 3 miles above Smith's Flat. There is a large area of agricultural land there, but I very much question whether the farmers would pay for it. For many years after I came to the country the country was lightly stocked. It was after the termination of the drought then in the same state as it is now. Round the large swamps there were flooded gum-trees 50 to 60 feet high, which had been killed with water, and the ground was quite dry. This has happened again since I have been here. It shows that the water was off the land sufficiently to allow the trees to grow, and then the land was flooded again sufficiently to kill them. The great drought of 1837 and 1839 had terminated when this river was first settled. The land four years ago was as dry 20 feet under the surface as it was on the surface, simply because we have not had a flood since 1876, and it is only a very large flood that will fill the depressions. I should think there are 4,000 acres within 5 miles of Grafton that were covered with water for fifteen or twenty years. They are perfectly dry now.
- Do you think it is better to retain water in these waterholes? Certainly. Instead of draining the water off I think it would be better to retain it.
- Wells. Have you had any experience in irrigation? None.
- Do you know of anyone in this district who has tried irrigation? No one, except the Chinamen in their gardens. I have been reading a great deal on the subject of irrigation in Victoria, and it seems to me that one thing is lost sight of. If land is made to bear double and treble crops it will soon exhaust itself unless manure is supplied, but there is little chance of obtaining manure.
- What is the character of the soil in the Clarence Valley? The lower part is all alluvial, and that is settled upon. Many of the farmers have grown over 100 bushels to the acre on scrub lands. I know farms that bore three heavy crops of maize, probably not less than 200 bushels per acre, in three years, without ploughing any portion of it.
- During your experience, has there been any failure of crops? No; this year is the principal exception. The average crop for some years is over 60 bushels to the acre, and of sugar-cane the yield has been as high as 72 tons to the acre, but the average probably is from 35 to 40 tons.
- Have you had any experience in wells in this district? Only on these level flats. In these cases the water always stands at the level of the river. You may come on a patch of clay, and after going through that water always comes up to the level of the river.
- Have you obtained an unlimited supply? No; I have had sufficient for my own use, but I have never had more than 2 feet.
- What average supply would these wells give you per diem? Sufficient for an ordinary family; very little more.
- Is there much fruit cultivation in this district? There is no sale for fruit.
- What kind of fruit can they cultivate? I have thrown away some thousands of dozens of oranges this year. You can grow almost any of the fruits which have been acclimatized. I do not think the plains are so well adapted for fruit-growing as the ridges are. Nearly all our ridges are fully equal to the land cultivated for fruit in the county of Cumberland, and in other parts of the Colony. The same carboniferous formation occurs here.
- Do the dry seasons appear to affect the trade much? Not very much, except this year. There are so many people out of employment consequent upon the opening of the Northern Railway, which has taken away the traffic which used to come here. We paid on our wharf nearly £15,000 for the carriage of tin down. That traffic does not come this way now. The result is that from 70 to 100 horse-teams have been knocked off, and that has affected trade pretty considerably. If each of these workmen receive £30 a year for carriage, trade must be affected by the loss of that sum.
- Is the settlement of the country increasing or decreasing? Slightly increasing, but very slightly. I think at the present time there is no increase.
- What are the principal products of the district? Maize and sugar. On many of these alluvial farms maize has been grown for twenty years.
- Is there any other information you can give that we have not asked you? I do not like to advance opinions of my own, but I am willing to answer any questions.

Mr. Samuel See examined :—

*Mr. Gipps.*] How long have you been in the district? About sixteen years.

What occupation have you followed? The first five years I was a farmer. I came here as a farmer. Since then I have been in business.

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At present you are the Mayor of Grafton? Yes.

What particular part of the district are you acquainted with that you can give us information upon? I am acquainted locally with the river parts of the district. From Copmanhurst down I have a fair general knowledge of the river.

Are you acquainted with any of the tributaries higher up? I have been to the Ourara.

Could you suggest any sites for large impounding reservoirs? I think you would get one on the Ourara at a place known as Coutts' Crossing, on the road from Armidale.

Coutts' Crossing

What would be the character of the valley there,—does it open out into a large basin? I believe there are basins to be had above that. The banks are very abrupt there. There are some steep spurs which nearly meet.

Is the character of the spurs rocky? Yes. My mission there was about a water supply to the town of Grafton.

Do you think that would be a good position for impounding water for supplying the town of Grafton? I do, most certainly.

Could water be brought to the town by gravitation? We have reports to that effect.

I suppose you do not know the height of the reservoir site above the town? I could get it for you from the Council Chambers. We were advised that the water could be pumped out of the creek there through to a reservoir 3 miles nearer the town, from which point the whole route would be on an incline.

It would require pumping in the first instance? Yes.

Has it a permanent stream? It would be a permanent supply, I believe. The catchment area is very considerable. It drains all the southern side into the Nymboi, and the northern side into the Ourara.

What is the general character of the rock? I think it is sandstone.

Is that the only position suggested for an impounding reservoir? There is another place, Glenougie Creek, Harrington; that is on the boundary of Ulmarra. From my knowledge of the place I would suggest that, but I would prefer the Ourara. I think the water would flow by gravitation from there, and that it would be less expensive. If it were a matter of catchment area, the locality first mentioned would have the advantage.

Would the Ourara reservoir contain a very large quantity of water? We have had an estimate, but I cannot tell you from my own personal knowledge.

Does your estimate include the works required for the town supply? It is about £20,000, and includes crossing the river and the reticulation of a certain portion of the town.

Could you let us have the general scheme with regard to the height of the dam, so that we may add it as an appendix? If we have the particulars you shall have a copy of them.

Is there any other site you can suggest? There is none other that I know of.

Do you think that irrigation would be beneficial to the district? I do.

Irrigation.

Have you tried it yourself? I have tried it on a small scale in my own garden in growing fruit and vegetables. I have had vegetables all through the three last dry seasons sufficient for my own consumption.

With regard to fruit? It seems to be affected more by blight. I have not been so successful with regard to fruit. I have not experimented much on fruit, but as to vegetables I can speak with great certainty.

What area have you under cultivation? Only sufficient for my own family's consumption.

How do you apply the water? Sometimes over the surface, sometimes by drains.

Have you known many dry seasons in your experience? Yes; the last three seasons have been particularly dry. Dry seasons.

Any previous to that? None so disastrous to the district. None that we felt so badly.

Have the last three seasons affected trade at all? They have.

To a serious degree? Very.

Has the amount of produce been reduced very considerably? It has.

Has it amounted to a total failure of the crops? I cannot say that it has been a total failure, but I estimate that with an ordinary season, having regard to the acreage under maize, the output of produce would be I am certain 300 per cent. more than it was during the last year. Men have told me that from 12 to 20 acres of land they have only pulled from 2½ to 3 bushels per acre. When men come into me with the results of 12 acres of good land—with their whole produce—on a cart, it is obvious that the season has been very bad.

What is the ordinary produce per acre? Upon good land it would be 50 bushels, if not more. You will get exceptional pieces of new land that resist the drought very much more than land which has been used up, but the last two years have been most disastrous.

Has it caused actual ruin to any farmers? To the smaller proprietors it has.

Has it obliged them to leave the district? To leave their farms. It has rendered lots of men absolutely poor, who, if they had had a fair season, would have been in a fair way of doing. It has placed them under a compliment to people who are in business, and I look upon that as something disastrous.

Have there been any large freshes in the river during this season of drought? None.

So that it would have been impossible to have irrigated from the river itself? Yes, quite impossible during these seasons.

Do you think that in ordinary seasons irrigation could be supplied from the river? In the ordinary seasons you may count upon having fresh water (say) 4 to 5 miles above Grafton.

Is it actually so salt below Grafton that it could not be applied? Every year that I have been on the river the water has been more or less salt at Ulmarra, 8 or 9 miles below Grafton.

So salt that cattle could not drink it? Cattle do drink it, because when the streams become empty I have seen them drink salt water, but they would not drink it if they could get fresh.

Do you think, if the water of the river was applied to the ground by what they call the seepage system, that is, by means of perforated pipes at a depth of 3 feet below the surface, it would be very advantageous? I do.

The effect of that would be that the salts would be deposited, and that the moisture would be drawn up

Mr. S. See. up by capillary attraction through the soil, so that the top soil would get all the benefit of fresh-water irrigation? Yes.

26 Oct., 1886. Then you think a great deal of benefit might result from the use of centrifugal pumps and windmills along the river? I do.

Are the winds constant here? They are. There is seldom a day passes without which we get wind. I have had a mill erected two years, and I do not think there has been a day upon which it has not been working. I have never been short of water.

What is the average height to the top of the banks? I should think the average height between high-water level between here and Lawrence would be about 14 feet. I do not think that on an average we have had one-quarter of an ordinary crop of maize during the last dry seasons, and I have had fair opportunities of ascertaining that. It must be remembered that the acreage has been greater every year, but notwithstanding that our exports have been decreasing. My knowledge is gained from the farmers coming in with their produce.

Is the rainfall sufficient in ordinary seasons for the growth of crops? It varies considerably. It would be a great advantage to the district if we had artificial means of supplying water. I certainly believe in irrigation. Sometimes we might not require to use the water, sometimes we might require to drain the soil; but there are other seasons, particularly such as we have had during the last five or eight years, during which we could certainly do with irrigation.

In fact, irrigation would make settlement certain? I think so.

And make settlers prosperous? Yes.

Wells. Could you give any further information? I may say that I do not think the well supply would be of any service. The water in the wells seems to be affected by the ebb and flow of the tide, and there is not more than 18 inches or 2 feet of water in the well, and if you empty it you have to wait the next tidal effect. I get sufficient from my well, but I do not think I could give my neighbour any—in fact, the probability is that I draw from my neighbour.

What is the character of the well water? It is hard.

Do salts accumulate in the ground after irrigation? No; I do not think there is salt in it. You can get salt streams on the hills.

Do you know of any large springs in the district? No.

Do you know of any borings in the district? There was a bore put down at Rocky Mouth for coal, and a bore at Grafton.

What strata did you go through? I think they came on to a gravel bed. They struck salt water, and then left it.

Did the water rise in the bore to the surface? Up to about 20 feet of it, and stopped there. It was a hand bore. The bore at Rocky Mouth was by a diamond drill. I think they struck indications of coal.

Mr. Rush could give you information. He is a shareholder and one of the promoters.

Mr. John H. Munro examined:—

Mr. J. H. Munro. Mr. Gipps.] How long have you been resident in the district? Between twelve and thirteen years.

What has been your occupation? Stock and station agent and auctioneer.

26 Oct., 1886. You have a general knowledge of the district? Yes.

Could you suggest any site for large impounding reservoirs? I do not know that I could. There are valleys perhaps where water could be stored, but I never had occasion to notice particularly.

Is the water sufficient for stock purposes here? As a rule the country is well watered. The owners of stock have been in that position that if they required to construct a few dams they could do so, but none of them have thought it necessary. When the watercourses have been dried up the dams would have been dried also.

Do you know of any large depressions in the district—any swamps? There are swamps on both sides of the river from here towards the Heads.

Would it pay best to drain those swamps or to conserve water in them? As a rule they are shallow. If you conserve the water you spoil a good deal of country. It would be better to drain them if you could supply water to the stock. They would carry a considerable quantity.

Is the river too brackish for stock? From Copmanhurst down the stock drink the water, but they do not thrive on it.

How low down do they drink the water? I have known them to drink it nearly to Brush Grove, 18 to 20 miles down. After a fresh they can drink it below that.

Are the stock increasing in this district? Yes.

Owing to what? To more country being ringbarked. The country has been made capable of carrying a greater quantity of cattle than it was before. I do not think the number of stock in the district has increased during the last two or three years, in consequence of the drought.

What is the character of the pasturage? In some cases very good; in others very bad.

Is it herbage or grass? Mostly grass.

Of what character? Some of it is very good fattening grass, especially in the valleys. When you get near the coast it is sour and rank. Ringbarking improves it very much.

What are the chief stock of the district? Cattle and horses. The district was opened up with sheep; sheep did not succeed, and we now carry no sheep at all.

How many acres are required to feed a bullock? In the back country, in the fattening paddocks, where the country has been improved, 4 to 5 acres to a beast. In the poor country probably 20 acres would not be sufficient to keep one in good condition, according to the season of the year. They do better on the higher ground, but the grass there is scanty.

Is agriculture increasing? Very fast.

What do men mostly plant? Dry seasons affect the crops very much indeed.

Would it be beneficial to irrigate them? There is no question of that.

Are there many small proprietors in the district? A great many, perhaps more than anywhere else in the Colony.

Have the last droughts affected settlement at all? They have stopped it a good deal.

As a general rule, are the small settlers prosperous? I suppose more than in any other part of the Colony. Are

Are most of them independent? Yes. I have known that after each season's crop has been gathered in many have been in a position to lend money out on mortgage, and have done it.

Has dairy-farming been tried here? Not to any great extent as far as the Clarence is concerned. It has not been tried, systematically and properly. I am satisfied that it would answer. A dairy is being started at Ulmarra now. Someone from Illawarra has made an arrangement with Mr. Goodyer for the establishment of a cheese factory, and that will be the first real test. I visit the Richmond every month or six weeks. Nearly all the land we have sold there lately we have sold to farmers from the south coast districts. It has been chiefly in the Big Scrub. They are all going in for dairying, and are making it a great success.

Mr.  
J. H. Munro.  
26 Oct., 1886.

What are the larger proprietors doing with their land? Farming and renting it.

What farms do they rent? The river-bank farms. They get as much in cases as £2 per acre, and from £2 10s. to £3. £2 is a fair rent.

Do they let their farms on a long lease? Three and five years; that is all. I have made a calculation, and I consider that the rentals are equal to about from 5 to 6 per cent. on the value of the farms.

Not more? If anything, less. I have seen land sold at over £90 an acre, and I have sold land at £50 myself. That is river-bank land.

Were there any improvements to speak of? The value was in the land itself, not in anything that was put upon it.

Had the land you speak of been cropped? Yes, probably for twelve or fifteen years—with maize and sugar-cane.

Alternate crops? No. They work the land as long as they can get anything out of it.

Does not the land work out at all? It must do so in time, but we have not seen it yet. We see that in new scrub land the first crop is the richest, but it has been under cultivation for twenty years, and is still profitable.

Do floods bring down much silt? It is ten years since we have had one over the banks.

What was the character of the silt? Very fine deposit, but in places where the current was strong it swept the surface off.

Have you known any lucerne tried here? Yes; it grows very well.

Lucerne.

How many cuttings in the year? I have a little patch in the town, and I am cutting it every three or four weeks.

What height does it grow in three weeks? It comes into flower after about three or four weeks' growth, and it grows very thick.

How long have you been growing it? One patch I have had in since the season before last. They have been bad seasons.

Have you not irrigated it at all? No.

How many tons per acre? I could scarcely tell you; there is very little in on the river.

Do you think it would be a profitable crop? I am certain it would. It has only been put in for feed for draught horses and stock, but latterly there are two or three people who have put in large quantities as an experiment. There is one farm all under lucerne, and doing wonderfully well, I believe. The owner has 80 or 100 acres, most of which is under lucerne. He is growing and selling it.

What is the price of lucerne hay? The price here is ruled by the price of Hunter River hay—£3 6s. to £6, according to Sydney prices.

Have you had to import hay? Yes, when feed is bad.

Have you been feeding stock on hay? Yes, but not in large quantities—working stock, and on stations the pure-bred stock.

Can you give any estimate of the area of valuable land brought under cultivation? No, I could not. There is a large area on the south. I should think that not one-half has been brought under cultivation, more especially on the Richmond and the Tweed. Nine-tenths of the scrub land there has not been brought under cultivation.

Has nearly all the country been taken up? All that is valuable is pretty well taken up, but there are large reserves which are still Government property.

What has been the effect of the recent dry seasons upon stock? It has reduced them very much. This year we have less sale for stock in the district than ever.

Have you lost many? A good many, and the increase has not been anything like what it ought to have been. During the last three years of dry weather the increase has been nominal.

Do you think irrigation would benefit the district generally? For dairy purposes, on the flats, not on the high grounds.

Mr. Murray.] What is the average produce in corn and sugar-cane? The value of maize depends upon the prices in the Sydney market. It has sometimes gone up to 5s., and now it is 3s. 3d.

I mean the number of bushels to the acre? I have known them to get from 70 to 80 bushels. 50 bushels I consider as a good yield. Sometimes it is as low as 35.

What would be a fair yield? 40 bushels; but during the last season, what with the blight and dry weather, some of them did not get 4 bushels to the acre.

If they had had command of water, would they have got more? There is no doubt about that.

Do you think the farmers in the district would be ready to pay a fair interest on the outlay for irrigation? I think the subject would have to be carefully handled to get them to do it. There is not much inclination on their part to pay anything that they can possibly help paying.

Irrigation.

What is the average corn crop? It is a hard thing to give you an average. There are so many different kinds of cane, yearly cane and cane that they cut every alternate year. I have heard that it is 70 tons per acre, but it is very seldom that they get that. Where they are exposed to the frost it tells very much on the cane.

Does anything occur to you that would be of advantage to the Commission that has not been asked? No; I do not think of any other information that I could give you. We have a very plentiful supply of water in the rivers. In the Nymboi and the Little River there is a grand supply of good water. The Ourara runs mostly through rich soil, and there is more vegetable matter in it. Where the rivers run through rocky country the water is purer.

FRIDAY, 29 OCTOBER, 1886.

At Lismore.

Present:—

MR. GIPPS, C.E.

Mr. Frederick Verdon Hunter examined:—

Mr.  
F. V. Hunter.  
29 Oct., 1886.

Mr. Gipps.] What is your profession? I am a licensed surveyor.

Where do you reside? At Lismore.

How long have you been a resident in the district? Nearly nine years.

I suppose you have had a large experience with regard to the whole of the river system of the Richmond? I have.

Taking the river from its mouth to its source, what is the name of the first creek that runs into the Richmond on the northern side? The north creek.

And what distance from the mouth does it discharge into the river? You may say at the mouth.

Where does it rise? From the head of a large swamp—Newrybar Swamp, on the eastern side of the coast range. It runs parallel with the coast. On one side the hills are steep, and on the other the country is swampy. It ends in a sandy beach. It runs parallel with the coast, and not far from it.

Is it fed by the swamp? No; it drains the high land, and is fed by numerous creeks.

At what height above the level of the sea do these creeks rise? They are mountain torrents, not exceeding 500 feet.

Do they rise in springs? No; they come from drainage.

What watershed does this creek drain? 20,000 acres.

Is it a permanent stream? It is tidal.

For what distance? It is navigable for boats 9 miles.

Is it permanent beyond that? It loses itself in an immense swamp.

Has the swamp always water in it? Yes, except in times of drought.

What is the area of the swamp? About 3,500 acres.

Do you think it would be beneficial to drain that swamp or to convert it into a reservoir? To drain it.

Would it afford good pasturage? It is magnificent pastoral soil—alluvial washed from the hills.

What is the length from the source to the outlet? Say 11 miles.

What is the next creek, on the north bank, falling into the Richmond? Emigrant Creek.

Where does that rise? That drains what I may term the central tableland.

What is the character of the watershed? Basalt country, dying off into undulating tableland.

What is the area of the watershed, including its tributaries? I should say from 35,000 to 40,000 acres.

And is its source permanent? Yes.

Where does it enter into the Richmond? About 2 miles above the entrance to the ocean.

How far is it navigable? On one branch there are 14 miles suitable for navigation? It is suitable for steam launches for 7 miles up each of its two arms.

Is it a broad creek up to the head of navigation? It would average 3 chains wide.

And its depth? I believe that at the entrance it would average 12 to 14 feet, in places deeper.

What is the character of its banks? The lower part swampy, tree flooded; good soil if drained.

And the higher part, beyond navigation? Undulating country.

Are the banks steep? Not generally. Undulating in places.

What is the character of the surrounding country with regard to soil? It is all rich alluvial soil.

Do you think it would be possible to divert the tributaries for irrigation from the tableland? Yes, I do.

Do you think it would be advisable? It may be in time to come, but it is not necessary at present.

Is all that country taken up? It is all alienated.

In small holdings? Yes, and well settled.

What is the next creek running in to the Richmond on the northern side? Dungarraba Creek.

What is Broadwater? A great number of large creeks die into an immense swamp at Broadwater. There is no outlet for it, but when the creeks run into this immense swamp they lose themselves, and there is no defined course to the river.

What is Broadwater? It is a sort of bight, an outlet formed by a number of small creeks.

Is it navigable for its whole distance? It is navigable for boats for a distance of about 5 miles.

What is its length? 5 miles. The next creek is Dungarraba Creek, which is suitable for boat navigation.

Where does it rise? At the head of Broadwater Swamp.

What is the area of that swamp? 30,000 acres, I should think.

What is the area of the gathering ground of the watershed? Exclusive of the swamp, I should think about 7,000 acres.

What is the character of it? Basalt.

Hilly? Undulating, generally.

What is the height of the range that the sources of the tributaries are in? About 500 feet.

The same range that extends from close to Lismore down to Ballina? Yes.

That is about the average height of that range? Yes, say 500 feet.

Where does this Dungarraba Creek discharge into the river? At Broadwater.

What distance from the mouth of the Richmond? 18 miles.

What is the next tributary on the northern bank? Wilson's Creek. There are other minor creeks, but they are not of any importance.

Where does Wilson's Creek rise? At the head of the Brunswick or Nightcap ranges.

At what distance from the coast? It rises in many branches. That which rises about 5 miles from the coast is, I think, the principal source.

In what direction does it flow? From its source south, southerly, westing, easting, and northing. Almost in a circle till it joins the main river at Coraki.

What is the character of the country at the source? Steep broken basalt ranges, good soil.

What is the height at the source? I think about 700 feet above the level of the sea.

Does it flow in torrents? At the source.

For what distance? That particular branch is worse than the other. Byron Creek is not in broken country

Creeks flowing  
into the Rich-  
mond River.



country at the source. Wilson's Creek would be about 10 miles from the gorges and precipitous country, then it enters into undulating basalt country for about 10 miles, and opens out into wide level flats and valleys.

Mr. F. V. Hunter  
29 Oct., 1886.

Does it lose its fall quickly as it reaches the lower country? Yes, very quickly.

For what distance is it navigable, that is, from Coraki? 40 miles for boat navigation.

Are there any tributaries running into it? Numerous tributaries.

All permanent creeks? All permanent creeks.

Where does Byron's Creek enter Wilson's Creek? About 15 miles above Lismore.

Is that navigable? No.

Is it permanent water? Yes.

What is the character of the soil of all this country? Rich alluvial soil.

Do you think it would be advantageous to irrigate any portion of it? Not at present.

Is much of it improved? A great deal of it is.

What is the character of that which is unimproved? Dense brush.

What is the cost of clearing this brush? For grass, £5 an acre.

And for other crops? For the purposes of ploughing, £10 an acre.

What crops are generally grown? Sugar-cane and corn, but principally grass at present.

Is most of it alienated? Nearly all, except necessary reserves.

In small holdings? Nothing exceeding 640 acres.

What is the value of improved property ready for sugar-cane? It depends upon the position. Abutting upon deep water an acre of sugar-cane is worth £30.

What is the length of Wilson's Creek from the source you mentioned to its junction at Coraki? Seventy miles—that is, the main line. It is one of the most crooked creeks in the world. In one 150-acre portion there were 7 miles traversing to be done for frontage.

What is the character of the banks above navigation? For a good distance loamy soil.

And of the bed? Rock in places only.

What is the width of it above navigation? One and a half chains from bank to bank.

What is the depth? It is a chain of waterholes in dry weather, and a small running stream in ordinary seasons.

Are there any other streams entering the river on the northern bank? Cooper's Creek enters Wilson's Creek above Lismore.

What gathering ground is there to the main Wilson's Creek above Lismore? I should say about 500,000 acres.

Are there any other large branches? There is Leycester Creek.

Would you name the principal tributaries of the Wilson? The Leycester, the Coolmangar, the Turrannia, the Boore, the Hanging Rock, Cooper's, Gigi, and Back Creek.

Do all these creeks drain rich country? Yes.

It is capable of dense settlement of agricultural occupation? Yes.

Where is Lismore situated? At the junction of Lismore and Leycester Creeks.

Is Leycester Creek navigable for any distance? Six miles above Lismore; Wilson's Creek for about an equal distance.

What is the width of these creeks at Lismore? From bank to bank, say 4 chains.

And the depth? I forget.

Is the water brackish? Never.

Always fresh? Yes.

Of sufficient depth to allow large steamers to come up? To allow ocean navigation, say vessels drawing 16 feet.

Returning to the mouth of the river and taking the southern branches, what is the first southern branch of the Richmond River? German Creek; it is a salt-water creek. Rocky Mouth Creek is the first creek. In speaking of this side of the river I am now out of my district. You would get better information from Mr. Richard Barling. I know it casually, but not professionally.

Where does it join the Richmond? At Woodburn.

Is it navigable? Yes, for about 6 miles.

The next creek is what? Bungawalban Creek.

It discharges into the Richmond River, where? About 5 miles above Woodburn. It is navigable for about 30 miles, passing through rich alluvial plain country.

Is most of it alienated? Nearly all, in small holdings.

Do you think it would be advisable to irrigate any portion of that? Not at present. It is sufficiently well supplied with water.

You come then to the south arm? Yes; it joins the river at Coraki.

At what distance above the mouth? Thirty miles.

What is the width of the main river at Coraki? Eight or 9 chains.

Is that the average width from that point to Woodburn? Yes.

And then it gets gradually wider to the Heads? Yes.

Has it a deep channel all through? Yes, except at Wardell; it is shallow there.

What is the character of the banks? From the mouth of the Richmond to Coraki, level.

And the height? Four feet at the Heads. As you come up the river they pinch in more.

What is the average depth of the main river up to Coraki? 18 feet.

What distance is the south arm navigable? 30 miles.

The navigation is to within 3 miles of Casino? Say a mile and a half.

What is the general stratum of your district? Basalt.

Any other rock? The general run is basalt, and on the coast sandstone.

Does that basalt appear to you to be a flow or a dyke? A flow, I imagine.

Does it cover a sandstone or a conglomerate? On the coast is the only place where I have noticed that.

You have seen no appearance of a basaltic dyke? No.

But you have seen conglomerate and sandstone underneath? Yes.

What is the character of the well supply of this district? The surface water is so plentiful that in most cases in the upper river it is unnecessary to conserve water in any other way or to make any provision for it. In the lower part Abyssinian tubes have been used with great success.

What



Mr. F. V. Hunter.  
29 Oct., 1886.

What depth from the surface do you sink before you reach water? From 10 to 16 feet.  
Do you invariably get water at that depth? In every instance that has been tried.  
What is the character of the strata? Loamy on top, pure sand underneath.  
At what distance does it reach the sand? We have driven 40 feet and found sand all through.  
Do you get an unlimited supply? Yes.  
Have you tried the pump on it? Only in supplying stock and steam engines. I think it is inexhaustible.  
Is it fresh? It is purely fresh, soft, and wholesome, at Lismore.  
Are there any windmills in this district? Yes; there is one on the hill there, and one at Lismore, and one at Ballina.  
Is the wind sufficiently constant to drive them all the year round? To supply stock, yes.  
Irrigation. Have they been tried for irrigation? Yes, for garden irrigation at Ballina.  
Does it answer? Admirably, I have been told.  
Could you give us information upon any other point upon which I have not asked you questions? As to timber.  
What is the character of the timber in your district? Splendid throughout the district. Cedar and hardwoods of all descriptions, rosewood, sycamore, pine, beech, and many other useful timbers.  
Are there many timber mills on the river? A good few.  
Is it an increasing industry? Yes.  
I suppose you do not know the value of the whole industry to the district? No; it must be something enormous. It has been the chief support of the district until sugar-cane commenced. Millions of feet of timber have every year been sent away from here.  
Do you think that, as a general rule, irrigation would be beneficial to the district? I do in time to come, but at present it would be premature, and I further think that all the irrigation that would be necessary could be carried out by private enterprise.  
Water is so plentiful? Yes. At the same time I would submit that it would be very desirable for the Government to make reserves in suitable places for water conservation.  
Are there any reserves at the present time? There are, but we do not know how soon they may be alienated.  
Do you know any of these reserves? I could not exactly mention them without looking over the maps.  
Could you mention any sites for large conservation reservoirs that we could apply to have reserved? I do not think I could at the moment, but I would like to look into it.  
Would you let the Commission have that information at some future time? Yes.

Mr. Ludwig Bornstein, M.D., examined:—

Mr. L. Bernstein, M.D.  
29 Oct., 1886.

Mr. Gipps.] You reside at Lismore? Yes.  
You are Mayor of Lismore? Yes.  
How long have you been residing here? Eight years.  
What was the population when you first came? It was not a municipality then. Within the present municipality, between 500 and 600.  
What is the present population? Over 3,000.  
Is it increasing? Yes; at the rate I should say of more than 20 per cent. a year.  
How many houses are there at the present time? There are 380 ratepayers. There ought to be between 400 and 500 now.  
When was Lismore formed into a municipality? In 1879.  
What provision is there at the present time for water supply? None, except tanks to conserve the rainfall.  
Is there any scheme proposed for supplying the town? Yes.  
What is the character of it? A pumping scheme.  
Where is the pumping station situated? On the left bank of Wilson's Creek. Two alternative schemes have been proposed—one 3 miles from the Post Office, and the other about a mile from the Post Office.  
Which scheme is most recommended? For the sake of having the water pure it would be better to have that which is further away from the town, so as to prevent pollution.  
Where is this conserving reservoir situated? At Gerality's ridge.  
At what distance from the pumping station? About 3,000 feet.  
What is the elevation of the reservoir? About 350 feet.  
The town would be supplied by gravitation? Yes.  
What is the capacity of the pumps? Working half-time, I think they are to supply 30,000 gallons a day. Two pumps with a minimum capacity each of 6,000 gallons per hour.  
What is the estimated cost? The longer scheme, £9,800; the lower one, £6,600.  
Is there much settlement above the site of the pumping station on the creek? Not very much.  
Are there any mills above that site? No; and no sugar-mills on this part of the river.  
Have any precautions been taken to prevent the drainage into the river of fecal matter above that point? There is none possible at the present time.  
What is the estimated working expense per annum of that scheme? I think £600.  
Is there any provision for the drainage of the town? No special provision; the town can be very easily drained.  
Does the drainage flow into the river? Part of it.  
Could it be diverted into any large swamp in the neighbourhood? I do not think so—not drainage from storm-waters. Most of the closets here are earth closets; there are very few cesspits, and none of them drain to the river. We intend gradually to do away with all cesspits within the municipality.  
Where do you remove the earth? To a special place, into pits.  
Have you got any sewage farm? No.  
What are the rates of this town at the present time? The general rate, about £1,100. One-third of it, about £300, is the lighting rate. Together the two would be about £1,400 or £1,500.  
So you propose to construct this water scheme yourselves? No; the Government will do it.  
Do you think the population would submit to a special water-rate? Yes. We made application to the Government for the work, and gave an undertaking to pay whatever it cost—the usual interest and the sinking fund.  
What

What is the price of land per foot at the present time? It ranges as high as about £27 a foot in some places, and in others it is perhaps £1 a foot. It is increasing from 10 to 15 per cent. a year.

What is the value of ratable property? I have not got the information with me.

What is the value of property per acre beyond the municipal boundary? I should say from £15 to £25 an acre.

Is that increasing? Yes.

At what rate? At the rate of 10 per cent. at the very least.

What has been the increase since you first came? Land was very nearly unsaleable then.

Can you tell me what acreage there is under crop in the district at the present time? No.

What is the principal industry in the district at the present time? Dairying and corn-growing.

Has dairying been commenced for any length of time? A large scheme has been commenced within the last twelve months for the manufacture of cheese and butter.

Do you think many farmers will go in for it? As far as I have information, which is derived from the produce taken away by the steamers, I may say that during the last fortnight I happened to see the manifest of the steamer going to Sydney, and there were seventy-eight different names of farmers on it who were sending butter in that week.

You think dairying will be the main industry of the district? I have no doubt of it.

Do you think it will take the place of sugar? Yes, I think it will.

What is the average rainfall? Speaking from my personal knowledge during the last three years, the average rainfall would be between 33 and 35 inches.

The last three years have been very dry? Last year was. The rainfall was 29 or 30 inches, but this year up to the present time the rainfall has been 39.42 inches.

What is the maximum rainfall in the Richmond River District? At the Tweed Heads and on the Byron or Brunswick it is over 60 inches a year—sometimes as much as 18 inches a month.

What is the character of the rainfall,—does it come in heavy showers or moderately? In heavy showers. Does it come at a seasonable time for crops? Last year it was not so much so. The year before it was; this year it has been.

What are the prevailing winds of the district? South and south-west mostly.

What winds bring up most rain? Southerly and south-south-west.

Is the wind sufficiently constant for windmills? Yes, except on some stations. As a rule, with very few exceptions, the winds are very light here.

Do you think irrigation would be beneficial to the district? I think that in the Big Scrub it would be of the greatest importance.

What I understand by the Big Scrub is the tableland between Lismore, Ballina, Brunswick, and the Tweed? Yes.

Do you know of any site for conserving water on a large scale there? No, except about Meerum Creek. There may be a great number of other places, but I do not know them.

What are the advantages of Meerum Creek;—is there an extensive fall? There is a large area, and a large area of catchment.

Is there a good site for a dam? Yes; there is a very nice reserve there that would answer—320 acres.

Is it a water reserve? I do not know what the land is specially reserved for.

Would you recommend it to be applied to that purpose in case it is not? It would make a nice reserve.

What is the character of the banks of the creek there;—are they rocky? Partly.

What would be the length of the dam required at that point? Not more than 250 or 300 feet, including wings.

To about what height would the dam have to be to impound a large quantity of water—30 or 40 feet? I think 20 or 25. There is not much fall; but there is a large area.

Is it good water? Splendid water.

A permanent stream? Yes.

Are there any wells sunk in Lismore? There are a few.

What depth? In some cases the formation is peculiar; it takes about 30 or 40 feet to get water; in other places, under the bottoms of the ridge, you can get permanent springs at 6 or 8 feet.

Have any borings been made? No; all by sinking.

Do you know the character of the strata? It consists mostly of decomposed granite and clay.

Fresh water? Yes.

In unlimited quantity? Sufficient has never been used to test it. The well opposite the Court-house is 66 feet—splendid water.

Is there any other information you can give upon subjects that I have not touched on? I think not.

Mr. George Larkin examined:—

Mr. Gipps.] What is your occupation? I am a storekeeper.

How long have you been residing here? Fourteen years.

What particular part of the district can you give information about? I have been through the whole of this district up to the Tweed and Byron Bay, across the Big Scrub.

Have you tried farming? Yes; I am doing a bit of amateur farming.

What is the character of the crops? Fruit. Pineapple is my biggest crop.

Do pineapples pay to grow? The return has been very good. I am right on the top of the hill opposite here, about a mile and a half north-west of the town, at an elevation of 300 feet.

What has been the average yield of pineapples? I have scarcely an acre in. They are constantly coming in at the different ages. Some portion has not borne, and some has. I suppose I shall have 500 dozen off the portion in bearing this year.

What is the value per dozen? I sell them at 4s.

Off less than an acre? Far less than an acre; not more than half is in bearing.

Do you think it would pay to grow pineapples? I do not, as a general crop for the district. You would grow too much for the market.

Do you grow these without any irrigation? Yes.

What is the character of the soil? The little piece where they are growing is rich soil, similar to the Big Scrub; it is all volcanic soil.

What

Mr.  
L. Bernstein,  
M.D.

29 Oct., 1886.

Wells.

Mr.  
G. Larkin.

29 Oct., 1886.

Mr.  
G. Larkin.  
29 Oct., 1886  
Maize.

What different kinds of fruit have you grown here? The mango, Chinese date, plums (two varieties), paw paw, oranges, lemons, strawberries, peaches, loquats, and Brazilian cherries. All do well on the hills, and I do not see why that could not be made an industry of.

What is the principal crop grown at the present time in the district? Maize.

What is the average yield of that? From 40 to 50 bushels. You hear of 80 or 100 bushels being grown occasionally, but I do not think the average is much more than from 40 to 50 bushels.

Would that be the general return from the flat country as well as the hilly? I think so.

What is that worth a bushel here? From 2s. 6d. to 2s. 9d. It may be sold at 3s., but, as a rule, that is as much as it is worth here.

Do the seasons affect the crop much? Last year the crop was affected by some species of blight, but otherwise the seasons have been tolerably favourable for growth. We have had a year or two of what we call dry seasons, but it has not caused a failure of the crop.

You do not know a single instance of complete failure of crops? No.

Is there much sugar-cane grown here? Not around here.

Is it increasing? No.

What do you think will be the principal industry of this district in the future? From present appearances it will be dairying. It is a rich country for grass. Settlement is so new that you can scarcely say what will be the principal product. In time much of the country will probably be occupied as paddocks for fattening stock.

What is the character of the grasses here? The natural grass is kangaroo grass. Clover and couch are the predominant grasses.

How many acres do you require to feed a beast on the natural grasses? I scarcely know what the natural grasses are. They are mostly run out, and the couch is taking their place. Where the couch grows on the flats you might allow from 1 to 2 acres. The racecourse is a 100-acre paddock, and they had 100 head of stock on it last year.

Have English grasses been introduced? Yes, rye and white clover; it is getting all over the country here. Does rye grass flourish here? In many places it does very well, but suffers in the great heat of summer. Last summer killed it in many places.

Has prairie been tried? Yes, and with much the same result.

How many beasts to the acre would English rye grass feed? Where they have a growth I think they would feed a beast to the acre.

What is the cost of clearing this Big Scrub land to get it into grass? From £8 to £10 an acre.

Is that clearing it off and burning it? Yes; say £8 to £10.

Irrigation.

Do you think irrigation would be beneficial to any part of the district? Wherever there is rich soil irrigation would be beneficial. They cannot have too much water, the soil is so porous.

Do you know of any large conserving reservoir sites? No, I do not.

Do you think the streams are permanent enough in this district? I am a little doubtful about that, if the scrub were cleared. There is a large catchment area.

If the scrub were cleared, the probabilities are that that would increase the stream? The soil is very porous, but wherever they sink for water they often get it at 5 or 6 feet, but in some places they have to go down 40 feet.

Is the water fresh? Yes; and a good supply. The wells have not been emptied.

Have you kept any record of the rainfall? No.

Are there fogs at any time of the year here? Very heavy in the bottoms; never on the hills.

Do the fogs come in winter and summer? Yes, all the year round. They reach about half-way up the hill.

As a general rule, the rainfall is seasonable for the crops? Yes.

The only place where you think irrigation would be required would be on the high lands? Yes.

If irrigation was applied, do you think the farmers would pay a rate for it? I scarcely know how to answer that question.

Mr. Henry Alfred Garrard examined: —

Mr.  
H.A. Garrard.  
29 Oct., 1886.

Mr. Gipps.] What is your occupation? I am a farmer.

How long have you been resident here? Thirty-nine years. I am about the oldest resident in Lismore.

What crops have you tried? Oats mostly. Oats seem to get rusty; you can only use the crop for garden stuff. Occasionally we get a small crop of oaten hay. Barley does well if put in in time. It requires to be put in fully a month earlier than oats. We are only now getting in a large quantity of winter food here. Our original grasses are gone out, except kangaroo grass. I have a 200-acre paddock with nothing but kangaroo grass and clover just beginning to come where it has never been before. In this 200-acre paddock I winter 150 head of cows. It is generally closed all the summer, and well sheltered from the frost. It is shut up for five months out of the twelve. It is a tableland, and is sheltered by heavy timber from the west.

English grasses.

Have you introduced English grasses at all? I have tried rye and prairie. It does not do on the black soil; it does on the sides of ridges, and in undulating country, and country sheltered from the heat of the sun. It does not stand the heat well.

Do you have to prepare the ground for it? No. In scrub ground we chip it in; in forest land we have to plough.

Have you ever tried taking hay off it? Never.

Do the seasons seem to affect it at all? Last season seemed to affect it more than any other. There were several good patches of grass, I know, which were not worth anything at all until this spring; it came on then.

Then you have not really lost the grass? No.

Have you ever allowed it to go to seed? Yes.

How many bushels an acre do you get? I could not say.

Is it good seed? Yes. I have got better seed from my own growing than that which I bought.

Have you sold any seed? No; I have not had sufficient for my own use. The average price we pay for local grown seed is 10s. a bushel.

Do

Do you not think it would pay to grow for seed? I have a paddock in now for seed. We feed it off the first season. I shall shut it off in a fortnight or three weeks to come in for seed.

Mr.  
H. A. Garrard.  
29 Oct., 1886.  
Lucerne.

Have you tried lucerne at all? Yes. Lucerne will grow, but you only get one crop. The soil seems to be too heavy for it; it does not take root. It requires loose sandy soil, such as on the Hunter and on the Clarence.

Have you tried Indian corn, and if so what is the yield per acre? That I have only tried in small quantities. I should fancy 60 or 70 bushels to the acre.

Have you tried sugar-cane? Yes. I went into that some years ago. My brother and I were the first that went in for cane. We grew a good deal, but we were not in a position to get machinery, so we ploughed it all out. We grew some very fine cane. We had 18 or 20 acres some twenty years ago, but we had to plough it all out.

Which do you consider the most profitable crop in the district? Maize.

Have you tried dairying at all? I have commenced it this season. I have always tried it for my own use and a little over, but I am going in for it rather largely now. I think that will be the principal industry in the district.

Have you lost many stock during the last dry season? Not many stock has been lost in the district except on large stations which have been overstocked.

But none of the small settlers have lost heavily? The stock lost has been principally from being bogged, and not being attended to.

Is stock-raising a profitable industry? Yes.

Sheep or cattle? Cattle. Sheep do not do well here.

Have the heavy sheep been tried? Not in any quantity. We have not had many sheep in the district for thirty years, only a few pet flocks. There were a good many sheep when I came first, but they were all done away with five years after I had arrived.

What do you get for your beef here? I sell to the butcher at £5 5s. on the average, and I sell to my smaller neighbours at the rate of 3d. per lb. all the year round.

What do you do for mutton? They bring it from Sydney principally. Some comes from New Zealand, and some from Queensland. The squatters get a bigger price for their cattle than I do for mine, because I am obliged to sell off.

What would be the average weight of your cattle? 650 to 700 lb. The squatters' cattle are very little heavier, although they have greater age.

Do you think irrigation would be largely used? I do not think it is required generally. There are a great many places that would benefit by irrigation, but, generally speaking, it is not at all required. I may say that last year was the year of greatest drought I have known since 1847.

SATURDAY, 30 OCTOBER, 1886.

At Casino.

Present:—

MR. GIPPS, C.E., | MR. MURRAY.

Mr. Thomas Hyndes Green examined:—

Mr. Murray.] What are you, Mr. Green? I am the forest ranger for this district.

Have you long resided in the district? Since 1875.

Mr.  
T. H. Green.  
30 Oct., 1886.

I presume you are well acquainted with it? Yes. My district extended some three or four years ago up to the Tweed River; but my head-quarters are Casino. I do not go beyond Lismore at the present time.

Is the rainfall of this district copious? It has not been so copious the last five or six years as previously. Rainfall.

The last two or three years there has been a drought.

Does the rain come in suitable seasons for the crops? About December, January, and March we generally look for rain, but it has failed us the last two or three years.

Are those the best seasons for rain—do they suit the crops best? We have the heaviest thunderstorms and rains generally throughout the year, but heavy rains prevail in the early months of the year.

Would other months be more suitable for the growing of crops? Winter time. If the farmers do not get rain they cannot plough very well.

What is the nature of the soil in this district? In parts it is sandy; the rocks are sandstone, but most parts of it are heavy soil.

Is it suitable for cultivation? Very much so; the scrub lands especially are considered as fine as any in the Colony.

Is there much land under cultivation? Yes; on the north and south arm, but of no extent as compared with the area.

Pastoral pursuits are the prevailing pursuits of the district, I presume? No, farming; but still there are a number of stations and a great deal of capital invested in pastoral pursuits. There is also an industry that is new to this district, namely, dairying.

What is the average size of the holdings of settlers in this district? They vary from 40 to 640 acres.

As a rule, are they large? The stations are very large areas.

Could you say how many settlers there are within a radius of about 20 miles of Casino? From 150 to 200.

Is the quality of land in this district good? Very good in most parts of the district. The most inferior, I suppose, is that near the road from Lawrence to Casino, but there is very good land on the northern slopes of the Richmond Range, notwithstanding that I have read in the prints that it is worthless. It is light sandy soil. I have seen at Comina Station excellent crops produced.

What crops? Oaten hay, maize, and vegetable products. On any of the creeks the land is very good; the same may be said of Bungawalban Creek.

Could you say about what quantity of land is under cultivation in this district? I could not tell you with any degree of accuracy.

Could

- Mr. T. H. Green. Could you give the average maize production per acre? It might be estimated at from 60 to 70 bushels per acre. In good seasons it is very much higher than that.
- 30 Oct., 1886. Have they lost much stock in this district during the recent year on account of the insufficiency of the rainfall? Last year, owing to the waterholes shrinking, a great many cattle were lost by bogging. That occurred throughout the district. Probably more cattle were lost last year than ever was known before, at least so I am informed.
- Can you give us any estimate of the number? I cannot. I have heard various statements. I suppose the owners themselves could hardly tell until they came to muster.
- Is the river fresh at Casino? Yes; there are falls here.
- Has any water been pumped from the river to run into lagoons to supply stock? A little lower down I think Mr. Irving, of Tomki, put up an engine about a year ago to pump up water, and has found it a very great advantage.
- Has he conveyed it far inland? Not very far. I do not think more than perhaps a mile.
- Have you heard of any water being conveyed inland for a very great distance by means of canals? Nothing of that kind has been attempted.
- Has what Mr. Irving has done for his stock been profitable? I have not heard from him, but from others I have heard that he is very well satisfied with the result. Some of the Chinese gardeners about Lismore use pumps to water their gardens, but only to a limited extent; but at Leycester Creek there are a few who use pumps.
- Water power. You say that there are falls here—is there a very large water-power from those falls? The river rises (say) at times from 30 to 40 feet, and it has been over the banks, but I have never seen it since 1875. I suppose there is a good deal of flow always? There is an immense quantity of water always flowing. Last year the water was shallower than before.
- Has any use ever been made of this water-power, say in the way of saw-mills? No. I think the engineer of a saw-mill property said that a mill might be put up here and worked with water-power without any great expense, but I do not know of my own knowledge whether it was ever thought of carrying out the idea into practice. Some of the creeks have a very large flow of water only at times. Back Creek rises in the Macpherson Range, down to Leycester Creek, and it brings a great body of water. Bungawalban Creek also contains a large amount of water.
- Timber. I presume you have an extensive knowledge of the timbers of the district;—is there a large quantity of timber in the district? In hardwood and scrub timbers there is a large quantity, but the timber principally sought after now is becoming very limited; I refer to cedar.
- Will you name some of the timbers which occur in great abundance here? Ironbark, red-gum, blue-gum, tallow-wood, stringy-bark, and spotted-gum. Ironbark ridges prevail very much from here to the Clarence.
- Do you think water could be used for the purpose of sawing timber? It could, but the question is, is the demand sufficient to justify the undertaking; that I doubt.
- Do you know anything about the question of the water supply for the town of Casino? There was a Commission some time ago. The gentleman who came up told me that this town could be supplied with water at a very moderate expense. I refer to Mr. Coghlan, of the Harbours and Rivers Department.
- Mr. Gipps.] Is there a large timber trade in the district? It is not so large as it was a few years ago, but I think that about 11 to 12 million feet are sent from the river during the year.
- How many timber mills are there? There are two mills at Coraki, and they principally cut up hardwood; one at Wyrallah, which chiefly works upon pine; one at Wardell, which chiefly cuts up pine; and there are two or three smaller mills at other parts—two at Lismore, one at Codrington, and one at Deep Creek.
- To what cause do you attribute the decline in the supply? The labour is too high to enable us to compete with southern parts.
- Do you think the import of timber from America has something to do with it? That timber is of a different quality altogether. It may be used owing to the difference in price, but it is by no means equal to Colonial timber.
- But that has an influence? Undoubtedly, a very great influence.
- How many men are engaged in the timber trade at the present time? It would be difficult to say. I am hardly in a position to say how many there are; within 2,000 I should say.
- Do you know anything relative to the rainfall of the district? I have never paid sufficient attention to the subject to tell you what it is.
- Creek. Can you give us any information with regard to the south arm of the Richmond River? It takes its rise from creeks about Mount Lindsay. The creek beyond that, Acacia Creek, runs into the Clarence.
- Do you know Myall Creek? It is south of that part. Findon, Congal, and Tuross Creeks, on the Roseberry Run, bring down a large supply of water.
- Where do they discharge? Into the south arm of the river.
- What distance from its junction with the main river is the south arm navigable? No further than Irvington—that is, 2½ miles below Casino.
- When you have been speaking of the south arm, have you been speaking of that branch of the river on which Casino is situated? Exactly.
- Do you know anything of that branch of the river known as Bungawalban Creek? Yes.
- How far is that navigable? From its junction with the river, about 25 or 30 miles, for small steamers.
- What is the character of the country which that runs through? Light sandy soil, very swampy, and extends from that creek to the coast.
- Above the point of navigation, is it a large creek? No.
- It may probably be from 50 to 100 yards wide? Yes.
- What is its depth? Vessels drawing 5 or 6 feet of water will come up 20 or 30 miles.
- Is it a permanent running stream? Yes.
- Can you give us any information with regard to Myall Creek? It takes its rise in the Richmond Range, at Mount March, on the northern slopes of the Richmond River.
- What is the character of its valley from that point downwards? It is rather a narrow creek; it is not always running, still there is always water in it.
- Are there any positions on it for conserving reservoirs? Not that I know of. No doubt there would be one at Camira Station. What

What distance is that from its source? About 17 or 18 miles.  
 Could the water be impounded in that swamp, do you think? I am not competent to say.  
 At the lower end of the swamp, is that country hilly? No; it is a little ridgy beyond that. Pumpkin Swamp is a large open sheet, partly plain and partly swamp.  
 With regard to the swamp, would there be any facility for constructing a dam at the lower end of it? I have not a good knowledge of it.  
 What is the character of the bed of the creek at that point? Rocky.  
 Are the banks rocky? In parts, but as you get down the country opens out and is sandy.  
 Do you know of any sites below that? No.  
 Do you know Myrtle Creek? Yes.  
 Where does that rise? It comes from the Camira Creek, and runs down to the Bungawalban.  
 What ranges does Myrtle Creek rise in? It is in the watershed of the Richmond.  
 Do you know of any sites for impounding reservoirs on that creek? I never had my attention drawn to them.  
 What is the character of the valley in its upper sources? It is ridgy country.  
 Are there any large flats or swamps on it? Yes; in the parish of Gibberagee it is very swampy.  
 Could water be conserved in those swamps? I think it is possible it might. If ever water should be brought to that part of the country, which is now thought to be so barren, it will be found to be as valuable for agricultural purposes as most of the land in the district. The Italians who have taken up their selections in that part of the country have been very much sympathised with and laughed at for preferring to go there to anywhere else. They are farming in a rough and primitive way, but they are looking to grow fruit, and they prefer that locality to grow it on to the richer land.  
 Do they irrigate their land? Not to my knowledge.  
 Where is this Italian settlement? It lies a little way back from the town of Woodburn.  
*Mr. Murray.*] Do you think irrigation would be very beneficial to the district? In part of the district it would be very much so indeed; but whether the people who would be benefited by it would contribute to the cost is a question upon which I think there would be some doubt.  
 To what extent do you think it would increase the productiveness of the soil? I never gave that consideration.  
 You say the average crop is from 70 to 80 bushels;—if you had a certainty of water laid on to the land how much do you think it would produce? From 80 to 90, perhaps.  
 What is the average price of corn in the district? From 2s. 6d. to 4s. The price depends greatly upon the supply.  
 The increase, reckoning corn at 3s. per bushel, would give an increase equal to £3 per acre;—would the farmers under such circumstances be willing to pay £1 an acre to get the water laid on to their land? The farming is done here in such a primitive style that they would not be likely to listen to any projects that would cost them anything. Some men farm well, and others farm very indifferently.  
 Do you know of any case of irrigation except by Chinamen? No. It is impossible to say what the district would not produce if there was a proper supply of water.

Mr.  
T. H. Green.  
30 Oct., 1886.

Mr. Frederick Burgess Gully examined:—

*Mr. Murray.*] You are the Mayor of Casino? I am.  
 You carry on business as a storekeeper, I believe? Yes.  
 Have you been long residing in the district? On and off for the last sixteen years.  
 You have an intimate acquaintance with the neighbourhood? I have.  
 Have you any land in the district? Yes.  
 What do you use it for? Grazing purposes.  
 Have you gone in for agriculture? No.  
 You have heard a good deal of what Mr. Green has stated;—are there any points in which you differ from him? There are one or two points in which I should be inclined to disagree with him. My own opinion is that if the farmers could be induced to irrigate it would have a very beneficial effect, and, instead of their crops being very often a failure in consequence of there being a want of sufficient moisture, it would pay them handsomely to give a yearly contribution for the purpose of conservation.  
 Is the district, as a rule, pastoral or agricultural? It is both.  
 Is the land that you hold suitable for agriculture? A great portion of it is.  
 Can you give us a reason for not bringing any of it under agriculture? One reason is that I only purchased it eighteen months ago, I have it in contemplation to put some portion of it under agriculture.  
 Another reason why I could not attempt agriculture is that the first season I was there, that is last year, was one of the worst that has been known on the Richmond for the last forty years.  
 In that bad season was agriculture a failure? It was to a great extent.  
 What was the average crop of maize last season? There is very little hay grown in the district. There is more hay imported than grown. The principal quantity consumed in the district is imported from Sydney.  
 Why? On account of the drought. The immediate neighbourhood is not suitable for growing hay; it grows too rank. It is more suitable for corn and potatoes.  
 Have you any sugar grown on the Richmond? Not much on the south arm.  
 In your opinion, is the south arm in reality the main river? The portion of the river upon which Lismore is situated is known as the north arm, but the south arm of the Richmond properly is known as Bungawalban Creek.  
 Do you know anything about the rainfall? I have not kept any records.  
 Do you know that for some years past it has been very insufficient? The last two seasons have been two of the worst known for forty years.  
 In your residence of sixteen years, how many bad years have you known? About six.  
 What was the average corn crop in this very bad season last year? About half the usual average crop.  
 Do you know of any system of irrigation having been carried out in the district? None whatever, with the exception of that referred to by the forest ranger, and minor plans such as windmills for irrigating gardens.

Mr.  
F. B. Gully.  
30 Oct., 1886.

- Mr. F. B. Gully. Has water been carried to any distance? Not to any distance.
- 30 Oct., 1886. In any of these cases that you have seen on a small scale, has irrigation been profitable? It has been very profitable; in fact, I may say that it is the one great drawback to the district, as far as agriculture is concerned, that we cannot depend upon a permanent supply of water.
- Irrigation. You think that a system of irrigation would be a great benefit to this district? I do. The soil is of that nature that if properly irrigated the crops would be abundant, and it is suited for growing many other things besides maize. Most of the farmers have no idea of rotation of crops, and their excuse is that they cannot depend on the rainfall.
- Is most of the land of the district alienated from the Crown? As far as my knowledge goes, there is still a large quantity of land available. The greater portion of the land on the river banks has been alienated. Are there large tracts of country that might be settled on yet if there was a system of irrigation or water supply between this and Ballina and the Tweed? Yes; on the Upper Richmond there is a large quantity of land yet available.
- Water power. Is there any suitable place for water-power to be erected on the river or its tributaries? On the river itself.
- Could you name suitable sites? It has been suggested to you more than once that a water-wheel could be erected just above Casino, near the bridge, and made available for a saw-mill or other purposes.
- Where there is a rocky bar? Yes.
- But no machinery for water-power has been erected there? No.
- Do you think there is a good opening for works of that kind, for timber-cutting especially? I do.
- We have heard already that there has been an investigation into the water supply for the town? Yes.
- Do you know if the recommendation made has been such as you agree with? Yes, as far as my knowledge goes.
- Where is the position that has been recommended as a suitable site for a reservoir for the supply of the town? Just above the hospital, on the river bank.
- What is the supply to be from? From the main river.
- By what means, by pumping? Yes.
- Do you know of any system of gravitation which could be adopted by taking some of the tributaries higher up? I do not.
- Would the works be expensive? We had an estimate of the cost, but I am not prepared to say exactly what the figures were; I think about £3,000.
- Is the pumping plant recommended for steam or water power? Steam.
- And yet you have a permanent river with falls in it? The engineer, in his estimate, recommended steam.
- Do you think that a mistake? I do. I think where water-power could be made available, as in that case, it should be adopted.
- What mileage of streets have you? I really forget. We only propose to lay water on to the main street. It is a comparatively new municipality.
- What is the ratable property within the municipal boundary? It is valued at about £2,500. The population of the town is about 1,200.
- Can you give us an estimate of the number of houses within the municipal boundary? I have not that information with me.
- How long has the town existed as a municipality? About seven years.
- What was the population of the town when you first came here? About 300.
- Has the population increased from year to year? It has been increasing for several years past.
- At what rate? 15 or 20 per cent.
- What is the value of land within the municipal boundary, per foot? It ranges from 10s. to £10.
- Is it increasing or decreasing? I cannot say that it is increasing at present.
- What area is included in the municipal boundary? About 10 square miles.
- Is the stream upon which Casino is situated permanent? Yes.
- Have you estimated the capacity of the stream in gallons? I have not.
- What was the lowest flow you have known here? The river was at its lowest some time during the last summer.
- What quantity of water did it give then? It had almost ceased running in one or two places. I could not speak as to its volume.
- Has any provision been made for drainage or disposal of sewage? Some provision has been made for drainage. We have what is known as the main drain, in Barker-street.
- Does that take sewage matter away? No; we have no system of sewerage at present.
- What are the prevailing winds here? South-west and south-east.
- Are they sufficiently constant and strong for the use of windmills? I should think they would be.
- What is the principal industry of the district? Pastoral and agricultural; timber-getting has been a very important industry.
- What is the principal crop grown here? Maize.
- What is the price of land within a radius of 30 miles from town? Farming land has been sold during the last five years at from £10 to £26 per acre; land for pastoral purposes, that is improved land, has been sold at from 30s. to £4 10s. and £5 an acre.
- Is all the land alienated within that radius? Not all.
- Is the land held in small or large holdings? We have both large and small holdings.
- Who has the largest holding? Griffiths, Fanning, & Co. have the largest number of acres in Woorooloolgen.
- What is the largest area? They have the largest area.
- What area is it? I could not positively say; they have a great many miles of frontage, and a great portion of it is freehold.
- Does that firm use the property for agricultural or pastoral purposes? Pastoral purposes.
- How many acres are required for each head of cattle? About three. It depends upon the nature of the country; if the country was good, about 3 acres.
- Do you know if they have tried English grasses at all? I think they have.
- Losses in stock. Did they lose much stock last year? A great number; they were heavy losers.
- Was that from want of grass? Yes; but principally from want of water. The cattle went into the water-holes



holes and got bogged. My own opinion is that the owners of the cattle should be compelled by law to destroy the dead cattle in consequence of their polluting the water.

It materially affects the water supply? Yes.

Does the water from these swamps drain into the river? It does from a great number of them.

And it pollutes the river, I suppose? It does.

Are there any wells in the district? Some. I have one of the few in the town, perhaps the deepest.

What is the depth? 55 feet to the bed rock.

What is the bed rock? Sandstone.

What is the character of the strata you went through? That well was constructed more than twenty years ago by my predecessor; a great deal of blasting had to be done.

You get an unlimited supply from it? No. In very dry seasons the supply has given out. It appears to rise and fall with the river. In flood-time it has been within 10 feet of the top of the well, and in the very dry time it has been nearly empty.

What is the highest flood you have known in the district? I think it has risen something like 22 feet above its ordinary level.

Are there records of any flood levels higher than that? There are.

How much higher? On one occasion, I am told by my predecessor, who lived in the premises where we now carry on business, that the river broke over its banks and came up into the garden. The place of which I speak is situated in one of the highest parts of the town.

What is the height of the banks at the point to which you allude? As well as I can guess, over 30 feet.

Are not most of the buildings in Casino constructed of wood? The majority of them are. My own store is the only stone building in the town.

Have you made any provision in case of fire for water supply? No. We have attempted at different times to start a fire brigade, but we really have no ample provision for that sort of thing.

Do you know the river above Casino towards its source? I know very little about it.

You do not know any position for a conserving reservoir in the district? No. Referring to the question asked of the preceding witness as to the failure to a certain extent of timber-getting in the district, my own opinion is that it is principally caused by the importation of foreign timber.

Mr. Frederick George Crouch examined:—

*Mr. Murray.*] You are an extensive storekeeper, I believe? Yes, the largest, I think.

And you are also largely interested in shipping pursuits? I have two or three small steamers.

You have acted as alderman and mayor of Casino? I have been Mayor for four years, and I have been an alderman of the municipality ever since it was formed.

You have an extensive knowledge of the town and district? I have. I have been through it all, I suppose. Do you consider the district agricultural or pastoral? The upper portion is essentially pastoral. The holdings are large, and in the hands of squatters, who do not turn their attention, except on a very small scale, to other than pastoral pursuits, although there is land above the town of Casino equally as good as that below the town. If you ride through Kyogle or Wyangracie it is like an English park.

Have they secured the freehold to the land? Yes, by purchase, to a large extent; and now that the runs have been divided there is practically a very small portion available for settlement.

What is the value of freehold land for pastoral purposes? I know of a recent purchase where Mr. Donald Campbell gave £8 an acre for land for pastoral purposes. I have known a good deal of land sold for £5 an acre. £8 is an excessive price.

Do you not think that land of that value is more adapted to agriculture than grazing? Undoubtedly, but agriculture does not pay them.

Is it not a great disadvantage to the district that it should be shut up for pastoral purposes? Undoubtedly.

Where free selection has taken place, are the proprietors, as a rule, small or large holders? Lately there have been some fairly large selections taken up with a view to combining grazing with agriculture.

What would you say is the average size of selections in the district? Selectors take up as much as they can get, whether they mean to work it or not. To that I attribute one cause why agricultural pursuits are not carried on as they ought to be. There is too great a desire to get land, both on the part of the free-selector and of the pastoral holder.

Could you say what quantity of land is under cultivation within 20 miles of Casino? I could not give you the number of acres. The land on the south arm—although, properly speaking, it is the main river extending to Coraki, about 40 miles,—the land on the banks of the river cannot be surpassed in any part of the world. It will grow anything in the way of semi-tropical productions, such as sugar-cane, maize, coffee-plant, arrowroot, and tobacco. All would be grown successfully if some provision were made for a system of irrigation. I have known tobacco grown successfully and profitably here. I have known arrowroot grown also. The sugar-cane grown on the lower portion of the river exhibits a higher quality as regards saccharine matter than cane grown on any other portion of the river. I have heard those who are conversant with the operations of the Colonial Sugar Company say that the cane cut on the south arm of the river is of the highest density.

How many tons to the acre does it yield? The cane growing there now, which is principally "Grey Fig," an annual cane, produces a much less quantity. Some varieties have produced as much as 80 or 100 tons per acre, but the average of the ordinary cane would not be more than 30 or 40 tons an acre.

What is that worth a ton? 13s. 6d.

Delivered to the company's punts? Yes.

Do you know about what the average rainfall of the district is? I could not state that with any degree of exactness; for some years we have had 40 inches.

Is it seasonable, that is to say, does it come at a good time for the crops? With the exception of the last two seasons, we have had a very fair rainfall at the proper season for the production of maize, which is the staple product here.

During your experience, what is the average number of years of bad seasons as compared with good seasons? We have had what may be termed very fair seasons for seven or eight years out of the eleven I have been here.

Do you know of any cases in which irrigation has been attempted in the district? Only on a very small Irrigation.

Mr.  
F. B. Gully.  
30 Oct., 1886.

Wells.

Floods.

Mr.  
F. G. Crouch.  
30 Oct., 1886.

Irrigation.

Rainfall.



Mr. F. G. Crouch. small scale. Mr. Irving, of Tomki, placed a small portable engine on the bank, and irrigated the whole of his back paddocks by means of pipes, and he assured me that he was convinced that it paid him splendidly. In such a season as this he would not require to use it.

30 Oct., 1886.

Do you know to what extent he carried his pipes back from the river? The river bank is high, and the pipe had to be a considerable length to surmount it. About a couple of hundred yards there was a fall, and the water ran through drains into the paddocks.

Is it possible by raising the water over the bank to convey it to a great distance by gravitation? In many places for miles.

As a rule the banks are higher than the surrounding country? Yes. Casino is situated not only above navigation, but above the tidal way. We have a number of small falls in the river. It has been suggested that the water supply could be obtained better by gravitation than by pumping. I was Mayor at the time. The officer from the Department of the Engineer for Harbours and Rivers took the levels where it was proposed to make the reservoir, and he told me that although there was a fall sufficient to get water into it by gravitation, it was insufficient to raise it to the height of any reasonably high building. He recommended one of Tangye's engines.

Are you aware that any of the tributaries higher up have been examined and surveyed to ascertain their levels and quantities? I do not think they have.

Is it not possible that some of these may be used for water supply? The distance from the town would more than counterbalance saving of expense. The Council applied to the Government for a vote under the Act to supply water to the town. The necessary steps were taken, the design approved, but when the Government were pressed to go on with the scheme, and the Municipal Council were ready to guarantee the interest on the cost, the reply was received that there were other towns, not nearly so favourably situated, whose requirements must be provided for first, and so the matter dropped. Until the wants of other towns were attended to we were told that Casino could afford to wait; but an excellent site has been selected and reserved.

From what source do you get your supply for domestic purposes? From the rainfall, and the river in dry seasons. I have a 15,000-gallon tank and a windmill to supply my own house, and I have never run short of water in a dry season.

In case of an extensive fire in Casino, how would you be situated? We are lamentably situated. For my own protection I have put down a 15,000-gallon tank at the rear of my store, and imported a manual engine. The tank is now full.

Sites for water conservation.

Do you think there are suitable places on the tributaries of the Richmond for conserving water for irrigation purposes—that is, places where rocky bars are to be found, and the spurs come in close to the banks? Yes, on the Upper Richmond especially.

Can you give us particulars of any of these places which are in your opinion suitable for conserving reservoirs? I could not name the exact spots, although I believe there are a number of them.

If such places were found, do you think the water would command a great extent of country at the back? I think so, but I am not competent to give a pronounced opinion. Most of our stations have numerous running creeks which have never been known to fail, and our pastoralists have not suffered to any appreciable extent. Woorooloolgen did suffer to a serious extent last season. I believe they lost 3,000 head of cattle, but I attribute that to the want of the necessary precautions for making watering-places in the waterholes, that is, by stone flagging. The cattle get bogged, and are too weak to extricate themselves, and then they have to be pulled out, as they were by hundreds, by means of horse-teams. They were too weak to survive, and have died on the bank. There is a small lagoon close to the town, and I counted 120 head there. Taking them at £6 a head, that in itself is a serious loss.

Are there not numerous reed beds and swamps in the district? Yes, which, if drained, the quality of the land is simply inexhaustible. The richest soil is found in the bed of the swamps. Some were drained by evaporation last season, and the crops taken off them gave extraordinary results.

Do you think the outlet of these reed beds could be dammed so as to be made reservoirs for holding water? I think many of them could.

Mr. Gipps.] What is the value of the present export trade from Casino? I could not tell you. The Richmond is fast surpassing the Clarence as to the total value of its exports. We have four steamers trading here regularly, besides a fleet of sailing vessels.

What is the character of the bed of the river between Casino and Navigation Point? Rocky and sandy. What is the width of the river at the head of navigation? It is navigable at Casino for a small drogher at present. Goods are transhipped at Coraki, 40 miles distant by water. Ocean steamers drawing 6 to 7 feet could come up to Tatham and Tomki.

What is the width of the river at the head of navigation? Somewhat less than 100 feet.

What is the character of the bed of the river at that point? At Irvington, the terminal point of the river, it is sand and mud; but about  $1\frac{1}{2}$  or 2 miles below there is a bar of rocks extending across the river, which the department have been engaged in removing, and cutting a channel. The river is admirably adapted for locking.

What is the fall of the river between Casino and the head of navigation? I do not think more than 12 or 15 feet.

Do you think it might be made navigable? I am certain that two locks would bring the steamers right up to the town of Casino. The reason why the water-power in the river has not been used for saw-mills is the liability to floods, and the consequent danger of washing away any works which might be erected.

What is the average depth between Coraki and the head of navigation? At the wharf at Irvington we have about 15 feet, but it would not give that as an average depth.

Does the tide rise beyond Irvington? About  $\frac{1}{2}$  mile above Irvington.

Do you not think that a movable weir from 10 to 12 feet at Irvington would provide for the continuation of navigation to Casino—that is to say, a weir which you could raise or lower as you pleased? I have not seen one. I should think so.

Do you think it would be desirable to have one constructed? Undoubtedly.

Flood of 1867.

Are there any bridges to prevent navigation? No. Casino bridge is a very high one. The highest flood has not been within 12 or 15 feet of the floor of it. The flood of 1867 has been spoken of by old residents as the highest. The highest flood was 12 or 15 feet below the top of the bank at the site for the railway bridge.

What

What is the lowest flow? I have never seen the river cease to flow. At the time of Mr. Coghlan's visit he assured me that there was more water running to waste than would supply the city of Sydney.

Have you known it lower? Yes; but not much lower.

Do you think from your knowledge of the people of the district that they would be content to contribute a fair interest on the outlay for works for irrigation—that is to say, the farming community? It is very difficult to get the farmers out of one groove, and unless they can be satisfied that the result would be extraordinary they would not be inclined to do anything.

Would it be a benefit to the district to try something on a small scale? I think so. Once you show a man that a thing is profitable, hundreds will follow on the same lines.

You think there are places where, on a small scale, experimental irrigation could be carried out? I do, especially on this arm of the river, where farming is carried on at its best—that is, between Casino and Coraki.

You mentioned a rocky bar 2 miles below Irvington? Yes; they are making a channel there by blowing the rocks out. There was no special vote for removing the rocks.

How deep are they going to blow that bar out? About 6 feet.

And for what width? Not more than 20 feet.

Can you give us any information as to the timber of the district? Timber-getting has been the most important industry. At the present time, owing principally to the importation of foreign timber, it is, however, scarcely remunerative, and many of our timber-getters engaged in cutting it at a distance, and having to take it by waggon for 30 or 40 miles from the borders of Queensland, owing to the low rate at which it is sold in Sydney, have had to abandon the occupation; and until some additional duty is placed upon American redwood, which is not nearly as good as the Colonial timber, although brought into Sydney ready-made in the form of architraves, we cannot expect our own timber trade to revive. The industry must languish. Our hardwoods are vastly superior to the soft timbers imported from America; still the difference in the cost of working hardwood and of working pine is so great that carpenters and joiners and builders invariably place oregon and kauri in their specifications. It is supplied in long lengths, and that also has something to do with it. It is impossible to supply hardwood 50 or 60 feet long. You could not handle it then, even if you could get trees to supply it. The price of hardwood has come down to be almost unremunerative. If sent to Sydney in the log it is sold as low as 7s. in the 100, and seeing that the freight is worth 4s. or 4s. 6d., it cannot be remunerative to those engaged in the industry. I suppose I buy as much cedar in this district as anyone else. A large line was sold the other day at 14s. the 100, girth measurement; that is not equal to more than 7s. superficial measurement. The cedar that I refer to had to be brought 50 or 60 miles, and it is impossible that it could be produced at a profit.

Mr.  
F. G. Crouch.  
30 Oct., 1886.

Mr. Malcolm MacIntyre Campbell examined:—

Mr. Murray.] You are the Clerk of Petty Sessions here? Yes, and Crown Lands Agent.

Have you a long acquaintance with the district? Only eleven years. I have had business relations previously—since 1864,—but I came to reside permanently in 1875.

Have you an intimate acquaintance with the stock in the district? Only a partial knowledge; I am a small stockowner myself.

Has the rainfall been sufficient for you, as a rule, for stock purposes? The summer and winter of 1875 were very dry, and the rainfall was short.

About what is the average number of bad seasons as compared with good seasons during your experience for stock purposes? Only about one in ten or one in nine.

Was last year one of those very bad seasons? It was one of them. I have not seen any other season so bad previously.

Did you lose great quantities of stock in the district last year? I should say the total loss, without counting the loss down at Lismore and the Lower Richmond, among the squatters and selectors would be 15,000 to 16,000 head of cattle, which died from want of grass and water.

Could that loss be averted by conservation of water during seasons when you have an abundance? It could be partially, and altogether if the scheme were extensive enough. Perhaps the grass might not be so good, but if the flat lands were irrigated, and the waters conserved near those large flats, the stock could be saved if they could be kept from the bean trees. When they get poor and water gets scarce they go to the waterholes in the creeks and eat the beans, and they very soon die. There is a great loss from bogging. After the top water runs off the lagoons by evaporation, and as the water gets continuously lower, the banks are muddy, and the cattle get bogged there. They are taken out, but they are no use afterwards; they always die.

Has settlement increased very much in this district? Yes, especially on the banks of the creeks and rivers.

As Crown Lands Agent, I suppose you know about the quantity of land alienated last year? There has not been much alienated. Very little has been alienated since the new Land Act came into force.

How is that? There are two or three reasons. In the first place the best of the rivers and creeks was taken up before the new Land Act came into force. Another reason is that we had a very bad season at the beginning of the year, and money was very scarce. The next reason is that most of the land which is accessible was placed in the leasehold area of the runs; only the back country was left available for the selector. Land for agricultural purposes has therefore not been taken up, but the selections have been for land for grazing.

Is there a large quantity of land in your district still available for selection? I think there must be a million of acres, after taking off the leasehold areas. This is a very large district.

Do you think that if a system of irrigation were adopted here it would cause settlement on the land? It is rather difficult to say that, because people have not been educated to the point of understanding irrigation or draining. Draining is necessary in the driest of land for agricultural purposes—that was my experience in Scotland. It improved the land.

Do you know of any case in which irrigation has been adopted on a small scale? I know of none.

Do you think the experiment would be worth trying on a small scale? I am certain it would pay any farmer who would try it.

Mr. M. M.  
Campbell.  
30 Oct., 1886.

Loss of stock.

Irrigation.

Do

Mr. M. M. Campbell. Do you not think that if it was tried, and shown to be a success, others would follow in the same course? Undoubtedly.

30 Oct., 1886. Do you think there are suitable places on the rivers and tributaries for conserving water? I think the lagoons would be the most suitable places for conserving water.

How would you propose to deal with them? Dam the ends of them, and then if the water were required get it taken by drains. On the land where I graze bullocks I have to pump water for them out of a well 40 feet deep, but I am only on a very small scale. I believe in having wells for cattle on hard land, where they can get to the troughs without bogging.

What quantity can you reckon on per diem? Only about 1,200 gallons.

Does that exhaust its supply? I should have to pump twice a day to get that. During the very dry weather I found that my bullocks, although the grass was very bad, did better on the pump water than any other bullocks did, with the exception of those belonging to a namesake of mine, who was getting water from wells also. The well water appeared to be a great deal better for stock that were fattening than water from the lagoons and creeks, and there was no chance of their being bogged. Where I had cattle getting water from the creek, out of 300 I lost 150 through bogging during the drought, and from want of grass.

Is the water at all brackish? Mine has a peculiar taste. I think there is some mineral in it.

Pollution of water by dead cattle.

Do you attribute to that the fact of the cattle liking it? I think it was cooler, and perhaps the mineral quality of the water purifies the blood of the cattle. On swampy ground fluke is more or less common. In connection with water supply, I may say the water in these lagoons is allowed to be very much polluted in times of drought by reason of the fact that the owners of cattle leave them to putrify on the banks of the lagoons. Some measure ought to be brought into operation by which the owners of cattle would be compelled to burn those which die. You may see 100 dead cattle at the side of one lagoon. The population area of Casino extends 2 miles outside the town in each direction. There are close upon 3,000 head of cattle and horses grazing upon that area. As no person in particular seems to be interested in the question, they allow the cattle to die in the waterholes and to pollute the water as well as the air. Within a mile of the Casino town boundary I counted sixty-three head of dead cattle at one lagoon.

TUESDAY, 2 NOVEMBER, 1886.

At Ballina.

Present:—

MR. GIPPS, C.E.,

MR. MURRAY.

Mr. Charles Jarrett examined:—

Mr. C. Jarrett. Mr. Murray.] You are a Magistrate of the Colony? Yes.

2 Nov., 1886. Your former occupation was that of a timber-getter? Farming and timber-getting combined.

You are well acquainted with this district? With this portion of it.

How many years have you been resident here? Thirty-seven.

You remember, I suppose, the years of flood and drought in this district? I could not remember the particular year when the floods occurred, but I remember several of them.

Is there a copious rainfall in this district? I have not paid particular attention to measuring the rainfall. As a rule, is it sufficient for pastoral and agricultural purposes? Yes; it has been with the exception of the last two seasons previous to this year.

These seasons have been the chief years of drought that you recollect during your residence in the district? Yes.

What is the nature of the soil of the surrounding country? It is all very rich, with the exception of the border along the coast, and some swamps.

Is it suitable for agricultural purposes? It is very suitable.

Has much of it been placed under agriculture? Not a large quantity. The chief portion that has been brought under cultivation has been for pastoral purposes and cane-growing.

Do you know if there is more rain on the coast than inland in this district? There is more along the coast than further inland.

In what proportion? I think, according to my experience, the proportion of rain in the district of Ballina is as two-thirds compared with one-third in the district of Casino.

Do the rains as a rule fall at seasonable times here for the crops? Yes; the rainy season commences generally in March, then again in June and July.

Are those rains sufficient for agricultural purposes? Yes; they have been up to the last two or three seasons.

Dry seasons.

Do you remember any droughts like these to have occurred in the district before? Never so continuous. I remember that we have had one dry season, but it has not been followed by other dry seasons.

In those dry seasons I suppose you had not much agriculture in the district, and perhaps you did not feel the effects of it so much? No; but we felt the benefits in this way, because we were certain that if we put our cedar into the creeks it would be floated down during the rainy periods.

If you have sufficient rainfall in this district you do not think there is any necessity for any scheme of irrigation? I do not think that there is at present.

Have you ever seen irrigation carried out? No.

Do you know what the average crop in the district is? Except in cane.

What is the average cane production? About 30 tons to the acre.

Do you think that that could be increased by irrigation? I think it could. A fair crop of cane is about 40 tons to the acre.

What is the highest you have heard of? I have heard of crops being cut over 100 tons to the acre.

To what do you attribute that? To favourable seasons and favourable localities. We have too much rain in the low land for the cane, while in the high land it requires a great quantity of moisture.

Well, then, do you not think that water laid on at the proper season would increase the yield materially? I have no doubt that in a dry season it would be very beneficial.

Have

Mr. C. Jarrett.  
2 Nov., 1886.

Have you seen irrigation carried on even on a small scale? Only in vegetable gardens.

You are well acquainted with the timber trade in the district? Yes.

Has water-power ever been utilised for the sawing of timber here? Not that I am aware of.

Could it be done? I think not beneficially; the water supply is too uncertain.

But if you had large reservoirs and a certain supply of water? I have heard parties remark that the water was not under such command as steam, that there would be a greater or less volume according to the rains.

Do you know of any tributaries to the Richmond which rise in pretty high ground? Yes.

Could not the fall be utilised for water-power, if stored in reservoirs at the head of those creeks, and a certain supply regulated as required? Yes, it could be, very well. They are very well adapted for anything of that kind.

What are the principal kinds of timber you get in the district now? Beech is the principal at the present time. Pine and some other woods, such as rosewood and numerous others, are found in the scrub. The cedar is pretty well all cleared out.

Within what distance of Ballina can you get a supply of these timbers? The supply within a reasonable distance of Ballina is very limited. There is no large supply within less than 10 miles.

In what years have you had heavy floods in the district? We had a very heavy flood on the 7th of May, 1849, and in 1862 we had a very heavy flood, and again in 1870. Somewhere about 1870 was the last of the very high floods. I remember seeing very high floods in particular that did a great deal of damage at the time, considering the population of the river; but since then I have not taken notice of moderate floods, and it is only the higher ones which have impressed themselves on my memory.

Floods, I suppose, would be very beneficial to you for getting timber down? Yes.

As a rule, are they beneficial to the district? They are beneficial as long as they do not come excessively. Floods.

When they leave deposit, is it of sand or of silt? There is very little sand except in certain tributaries coming down from the sandstone country.

Has that done much damage in the country? I never heard of any damage done by the sand. If there has been it has been on the south arm that goes to the westward, and leads into the sandstone ranges.

Have these floods had any perceptible influence on the surrounding district close to the town of Ballina? Very little. The only difference they make is in the bar at times by washing away the spits, and forming spits elsewhere.

Do these floods overflow much land? They do overflow a deal of country for a time, but the water soon falls.

As a rule, are the banks higher than the surrounding country? On the lower parts they are, but there is a fall back towards the foot of the mountains, generally forming swamps.

Do you know any of these swamps which are suitable places for conserving large quantities of water in times of flood, to be used in times of drought? Yes.

Do you think that could be done with benefit to the district? I believe it could.

How—by throwing dams across the outlet? By merely embanking them.

And if such water were conserved, is there suitable land adjacent to them over which the water could be distributed for irrigation purposes? Yes.

Do you think that that would be of great advantage to the district? I believe it would. These places would chiefly be found on the main river.

Has there been a great falling off in your trade in consequence of the late droughts? Yes; I myself have suffered severely from the great drought in not getting timber down to market.

Do you know anything as to what supply of water may be requisite for the town of Ballina? I could not form any estimate of the supply that would be required, but whatever might be the demand it could be satisfied.

There are suitable places for conserving water for the supply of the town? Yes.

And at a reasonable cost? I think so.

Could you name some of the places where reservoirs might be made? Do you mean in the town or at the water sources?

The nearest place to the town to conserve the best water available, on some of the tributaries or inland, that would command the town by gravitation, if possible? The town and the surrounding district is very flat, and there is not much fall by gravitation within several miles.

How many? The nearest high land to the town is, I think, about  $2\frac{1}{2}$  miles.

At what distance could you get some suitable site for a reservoir? It would have to be done by excavation; there are no ponds or lagoons.

Are there any places, where the hills crop in close to the watercourse, that might be dammed across, and so impound a large body of water? Yes, but it is all pastoral land.

What is the value of that land? It is very hard to get at the value of land just now; I suppose about £8 an acre.

Are all the suitable sites on private lands? Yes.

Have you any suggestions to make that you think would be of benefit to the Commission? No, unless with regard to the supply of water to the town. In my opinion the best and most plentiful supply will be got from Emigrant Creek, just above the village of Tintonbar. Emigrant Creek.

At what distance from the town could a reservoir be made sufficiently high to command the town by gravitation? About  $8\frac{1}{4}$  miles.

How would you propose to secure that? I do not think it would require damming.

How would you secure your supply? It is a constant running stream.

In all seasons? Yes.

And of sufficient volume to supply the town at all seasons? Yes.

You think that at a small cost a very large quantity may be conserved there? Yes, at a very small cost.

Have you any idea of the volume of water that passes down that creek? No, I have not.

Could you tell us what the depth and the breadth of the water is, and about what velocity it is running in the lowest seasons? I have seen it stop running above ground in very dry seasons, but there is always an underground soakage going on through the shingle and gravel, but generally it is about 6 inches deep and 8 or 10 feet wide in ordinary seasons.

At

Mr. C. Jarrett. At what velocity do you think it is running? I suppose it would run from 6 to 8 miles an hour. Then you think that at a small cost a dam might be placed to conserve sufficient water for obtaining a permanent supply for the town of Ballina of good pure water? Yes.

2 Nov., 1886.

Mr. Gipps.] What particular swamp would you recommend as a conserving reservoir for irrigation purposes? The swamp is on both sides of the main river, and at the foot of the mountains, and it rises gradually, coming up towards the river bank to the height of the bank.

Is it known by any name? It is a chain of swamps that traverse each side of the river, between the river and the foot of the mountains.

Pimlico Swamp—how would you propose to embank it? I have had no experience; it is for those who would be entrusted with the work to say what embankments would be sufficient.

What length of embankment would be required? There are miles of swamp.

What depth of water would you conserve? According to the height you throw up the bank.

What is the present depth of water in the swamp? There would be an average perhaps of a foot.

Do you not think it would be far better to drain that foot and to convert it into agricultural country than to form it into a shallow evaporating pan? You could take it in sections and embank a portion of it.

What height of embankment would it require to make a conserving reservoir? I suppose that would be determined by the necessity of the case.

What is the area of the swamp? I could not go nearer to that than by telling you that there are miles of it.

Is there very much timber trade in this district? Yes.

What is the value of it per annum? I have no idea.

How many timber mills are there? I think about eight.

How many hands do each of these timber mills employ? They are slack at present on account of the dull condition of the timber trade and the competition of the foreign market. The mills have been working only half-time. I do not suppose there are more than a dozen hands in each mill.

When in full work, how many hands will each mill employ? Twenty in the mill alone.

And how many in cutting the timber? I should say 400 men.

If you had protection, you would be able to employ 400 men in the getting the timber, besides nearly double the men now employed in the mills? Just so.

Mr. George Topfer examined:—

Mr. G. Topfer.

2 Nov., 1886.

Mr. Gipps.] What is your occupation? I am a farmer and mail contractor at present.

How long have you been resident here? About twenty-one years.

What was the principal industry in the district when you first came? When I first came I was engaged in cedar getting, and have been up to the last eight or ten years. When the Colonial Sugar Company commenced operations I started growing sugar-cane.

Where was the principal growth of cedar in those days? All the scrubs were worked at the same time from here up to the Brunswick and Lismore, and up and down the banks of the rivers where any cedar grew. All the district was worked at one and the same time.

Was there cedar all through the scrub? Yes.

What has become of the cedar now? It has all gone.

Do you know anything with regard to the cedar-tree itself—its growth? No, I do not. I have not studied the growth.

Do you think that plantations of cedar could be advantageously grown here? I believe they could.

But you do not know as to the growth? The growth is more rapid than I thought it would be at first. I have seen young cedar-trees start growing after the original trees were felled, and they seemed to me to grow very rapidly.

How many feet a year? About 18 inches a year; but I rather think they grow to a certain height in the first place, and that they then gain in thickness.

At what age do you think they would be fit for cutting? I think it would take thirty years before they were fit for use.

What would be the timber then in the tree? From 18 inches to 2 feet.

Cedar trade.

Where do they bring the timber from now? The principal cedar is got past Casino, over towards Queensland way. I believe there is a lot lying in the creeks cut ten or fifteen years ago, which cannot be got out owing to the selections having been taken up, and the navigable creeks having been blocked by the falling of the timber. We used to depend on freshes to get the timber out; but the timber which has been felled will not allow the cedar to run out, and so it has been lying in the creeks from one fresh to another.

Is there a large supply of cedar in the district you have mentioned? I think there are a good many thousand feet of timber yet.

What quantity of cedar now is used during the year on the river? I could not form any idea. Since the sugar industry started I have not had anything to do with it.

Rainfall.

Do you know anything of the rainfall of the district? During the last two years I have had a Government rain-gauge, and I have sent in a report to the Government Observatory each month. I drew out a copy last night of the rain-gauge returns sent to Sydney during the last two years.

Does the rain seem to be pretty evenly distributed throughout the year? I think so.

For how many years? I have only kept a record of the gauge since November, 1884.

But you have had eighteen years' experience before that? As far as I remember, there are two seasons of the year more wet than at any other time. It would be in June when we have the most rain.

Do the rains generally come at a time which is seasonable for the crops? Very.

Have you known any great droughts? The heaviest drought was two years ago—the year before last.

Did that do much injury to the crops? A great deal.

Were any actually lost? I believe some sugar-cane was actually lost.

Do you think irrigation would be beneficial to the district? I do so.

Irrigation in Germany.

Can you suggest any places where water could be conserved in large quantity? The swamps might be reserved. I have seen some irrigation in my own country, Germany, and I have known very low places made into very good land through irrigation. In fact I have seen places where it was impossible for any

any vehicle to go on it, and after irrigation it was quite firm enough for any 4-horse waggon to go over with a load of hay on it.

Are there any swamps above the level of the river upon the coast? I scarcely think so.

How would you propose to impound water in the swamps? By making great dams—great embankments—6 to 8 feet high.

Then how would you propose to distribute the water? By drain-pipes.

By gravitation? Yes.

Is there a great deal of fall in the country from these swamps towards the river? I think a fall could be got.

Do you think that if you had an embankment 8 feet high you could allow the water to be distributed over an immense extent of country? Yes; I believe 10 feet would be sufficient to send the water for a considerable distance.

Is there plenty of good clay from which to form these embankments? Yes; they generally consider it all clay from 18 inches to 2 feet deep below the surface. Sometimes the layer of clay is 3 feet.

Would not the water percolate through the clay into the sand? I do not think so.

Have embankments been tried? I have tried it myself. I do not think I went deep enough. The water stayed there for a long time.

What depth of water did you impound? 2 or 3 feet; I merely did it for my own cattle.

What area was it? 10 feet by 10; just a water-hole.

Did the soil seem to hold the water well? Yes; I think sand will hold water better than the clay.

Could you suggest any site higher up in the ranges where water could be impounded for the district generally? There are running creeks. Numerous creeks might be utilised for water supply.

Do you think they might be impounded at a high level and the water be brought down by a contour canal, and the water be distributed over the land? If small dams, in different places in these creeks, were made, and the water conserved in them, and then laid on to wherever it was required through pipes, they would have a natural fall anywhere almost through the country. That would be beneficial.

Do you think a large supply of water might be depended upon at the worst seasons? I think it could. Since I have been in the district these creeks seem to be dry in the very driest seasons, but by digging below the surface there is always a natural current.

You think that small dams would force these natural currents above ground? Yes.

What experience have you had in irrigation in Germany? The only experience I have had was in irrigating meadows and grass lands.

What quantity of water was used in irrigating these meadows, were they flooded? They were not flooded in ordinary seasons, only in wet; but there was a continual running of water after irrigation was put on for 10 or 12 miles.

How often was the water applied? I do not know; perhaps once in three months, or less.

Were they used for hay? Yes.

Could they not have got hay without irrigation? No. In fact the ground was useless before.

What is the character of the soil? Black loamy sand. It was half water and half sand. We could not get on to it to do anything with it.

*Mr. Murray.*] Those gullies that you mentioned as having cedar logs lying in them, is there any cedar growing on the banks of them now? Not on the banks. It has all been cut many years ago.

Is there a great quantity lying in the gullies? I believe thousands of feet.

Is there sufficient to justify any works, such as locks to impound the water, to get this cedar down? No; it would not pay to do that.

To what extent do you think the crops in this district might be increased by a sufficient supply of water? 20 per cent.

And you think there is a sufficient quantity of water at higher levels to supply all that is necessary in the district? That is my opinion.

Then you think it would be desirable to make a survey of these creeks to ascertain what quantities could be impounded? I believe it would be of great benefit to the district.

Is there much land not settled on in the district? There is a lot of land not settled on.

What is the cause of that? Capital more than anything else.

If you had a system of irrigation settlement would become rapid, and the land soon be used? I think so. There are a good many men who have swampy land which would grow crops that would not grow on high land, which could be irrigated with the water drained off, and the land would be fit to grow anything on. Men have not the means to irrigate the land themselves, and if they had they would not know how to apply the water. I believe it would be a great benefit to the district if the swamp lands were drained and irrigated.

From your knowledge of the people of the district, do you think they would be prepared to pay a reasonable interest on the outlay incurred for such works? Any reasonable man, I think, would see the force on it.

Mr. James Holden examined:—

*Mr. Murray.*] You are Mayor of the town of Ballina? Yes.

You were formerly captain of vessels? Yes.

Trading to many of the coast rivers? Yes, to every one of them.

With regard to the Richmond—do you know much about it? I have been trading off and on for the last twenty years, but as to the land round about I know very little.

With regard to the Richmond River, for what sized vessels is it navigable, vessels drawing 12 feet of water? In ordinary times, from 8 to 10 feet. You will get vessels of 300 tons coming up the river.

To what distance can they go? To Lismore. Some of our steamers are registered at over 500 tons.

Is there anything to prevent large vessels coming into the river or over the bar? The bar is all.

What sized vessel could you send? An 800-ton ship.

What is the rise and fall of the tide? 3 feet 6 inches spring tides. It is greatly influenced by the winds. A strong southerly wind makes it much higher than at any other time.

What are the prevailing winds? We have more southerly than anything else here.

Is that calculated to increase the bar? Yes; it raises the tide.

714—x

Mr.  
J. Holden.  
2 Nov., 1886.

Bar in river.

Does

Mr.  
J. Holden.  
2 Nov., 1886.

Does the bar scour at any time by the action of the wind? No; the wind blows a constant stream of sand over the spit which fills up the channel, and it has to be swept out by the ebb tide.

Are your spits constantly changing? They are.

To what do you attribute that? To the tides and the winds. A strong southerly wind will cause the tide to flow over to the north, and a north-east wind will have an opposite effect.

You have the pilot station here? Yes.

Do you keep constant soundings? When we can get to it.

And the channel is buoyed? Yes.

Could you suggest anything that would remove this great obstacle? From places which I have seen in Europe and America I think that training walls of ballast inside the river would do it.

Is the mouth of this river similar to the mouth of other rivers on this coast? It is very similar to that of the Manning.

Have you remarked that there is a peculiarity in the course of these coastal rivers, that they come down in a south-easterly direction and go out north-easterly? They all drain south until they get to the sea.

To what do you attribute that? To the natural lay of the country. The Clarence is an exception; it has the sand on the north side of its entrance.

Is the Brunswick navigable? For very small craft. There is not more than 6 or 7 feet of water.

What is that due to, to the bar? To the bar. Inside it is only a basin. There is no distance up the river—not above half a mile.

At high-tide? It is a longer river then, but there are flats just inside the bar. As to the southern rivers, the Manning has flats inside. I have not been there for fifteen years or more, but I recollect that it was very similar to this. It had a long sandy spit on the south side. In most of these rivers if the bar were removed vessels of large tonnage could go up a considerable distance. The Manning, the Macleay, the Richmond, and the Tweed River also could be made navigable for large vessels.

Do floods or droughts affect these rivers much? Floods generally sweep the sand out for a time, but it does not last long after the flood. The floods make new channels through the spits, but the sand moves back again. I have seen the channel at the entrance of the Richmond anywhere you like, from the scrub on the south side to the north head, where there is now a sandbank.

You do not know much about the surrounding district? No; only the main roads. They are mostly in rich valleys. It is a rich country at the back. I know that from the produce which comes down.

Do you know something about the Murrumbidgee District? I have been there years ago.

Are these districts richer? Yes; this is far better in its growing capacity than the Murrumbidgee.

Do you think that a system of irrigation could be adopted here? It would make a lot of difference to the district; there is no doubt about it.

Do you know if there are suitable places for preserving water? Marshall's Falls, at Alstonville, are 400 feet above this level. I should say they would do for a town supply, and perhaps for irrigation too.

Will you tell us where you think there is a suitable place to conserve the water? That is high, and there is much low surrounding country.

Is there any place in which the hills crop in where a dam could be constructed at a reasonable cost to impound a large quantity of water? I have never explored the country, but there is a large natural basin there, 400 feet above the town. In a straight line from here, it is 6 or 7 miles from Ballina.

What quantity of water could be impounded? It is a strong stream. I have never known it to be dry. It would run a foot deep, and 8 to 10 feet wide in dry weather.

What is your present water supply in the town? From the roofs. I have one well that has never gone dry.

What is the depth? 22 feet deep. We pump the water over the surface by a windmill.

In case of a fire in the town of Ballina, what supply have you? We have nothing but the river. Some time ago I advocated driving these pipes down the street.

Many of the buildings are wood? Yes, nearly all.

Then there is no provision against fire? None.

Is it considered unnecessary to have such provision made? There is a great necessity for it. This town would be swept out of existence in a few hours if there was a fire.

Irrigation.

Do you think this is a suitable district for irrigation? Yes, I do. I believe there is any amount of room for water conservation in the ranges, but I do not speak from personal knowledge. The country is all hills and valleys.

Do you know of any irrigation in the district? I do not know of any.

You have a garden of your own? Yes; I pump water into an elevated tank, and it flows all over it.

What is the result? I can grow anything I like at all seasons.

What is the rise and fall of the tide at the Heads? 3 feet 6.

And at Woodburn? I do not know, but I expect it is much the same there.

At Coraki? I expect it is about the same all the way up the river.

What is the depth of the deepest part of the channel between the Heads and Woodburn? There is a place above Broadwater where I do not think anybody knows the depth. I have heard it stated that it is about 60 feet.

What is the average depth between the Heads and Woodburn? I suppose it is about 15 feet.

And from Woodburn to Coraki? It is much about the same again. There are spots that are shallow, but they are easily scoured out.

What are they caused by? Mud flats.

What was the population of Ballina when you first came here? Not above 500.

What is the population now? I suppose 1,000.

What is the value of rateable property here? You cannot buy property in this street, even at the present time, under £12 a foot.

I am talking of the whole of it? I think our municipal income is about £600 a year.

What is the capital value of the property? I am not prepared to say.

Mr. Gipps.] What is land worth now per foot in the town? In this street you cannot buy it under £10 a foot.

What area is included within the municipal boundaries? That I cannot say; it is very large.

When was the township first made a municipality? Three or four years ago.

Are the streets all formed? Not yet.

How



How many streets are there? I could not say. I think we have cleared nine or ten streets from timber, but they are not all cleared yet. We must have cleared between 10 or 12 miles of streets since we have been incorporated, and some of the streets have been partially formed.

What is the character of the natural features of the country? Sand flats, with a slight layer of soil. A few yards away it runs into black soil. There is a clay stratum under that, and sand below that again. What is the value of the land in the vicinity of the town, within a radius (say) of 20 miles? From £5 to £15 per acre.

Is that improved or unimproved land? Very slightly improved, if at all.

What does it cost to improve the land? About £10 an acre to clear it right out.

What is the character of that land in its wild state? Chocolate and black soils mostly, covered with scrub chiefly.

Have you had any scheme for water supply surveyed yet? None.

Have you any plan of draining the town at present? We have an engineer taking levels now.

Have you any arrangement for draining off sewage? None whatever.

Mr.  
J. Holden.  
2 Nov., 1886

Mr. Edmund Ross examined:—

Mr. Gipps.] How long have you been resident in the district? I came to Lismore in March, 1856.

What is your occupation? For years past I have followed the occupation of insurance agent and timber merchant.

At present you are a Justice of the Peace? I have been for sixteen or eighteen years.

Have you a general knowledge of the district? I have been travelling about it ever since I came here—that is, from the Tweed to the Clarence.

Of what particular portion can you give us information? More particularly from Casino to Ballina.

What was the principal industry when you first came here? Almost wholly confined to obtaining cedar, breeding cattle, and boiling them down. We had no market then for cattle, except in the shape of tallow, and we used to boil them down. Every year we used to boil down at the Pelican Tree 2,000 head of cattle. Is there much trade in cattle now? We have ceased boiling down now for many years past. The cattle are devoted to food instead of fat.

To what market are they sent? To Sydney.

What is the value of that trade to this river now? I could not tell you. Many of the cattle are driven over to the Clarence and shipped from there. The shipping of cattle here has ceased on account of the detention at the bar. The cattle we have shipped from here have reached £10 per head in the Sydney market.

How do you send your cattle to market now? By the Clarence, thence to Sydney by steam. They would be shipped from here were the bar permanently improved, as we have been promised for many years that it shall be.

What is the greatest flood that you have known on the river? I was in the blacksmith's shop in Flood, the principal street of Lismore when the flood rose high enough to put out the forge fire.

That would be about 4 feet above the street? About that. There were floods from 1860 every year;—1863, 1864, 1865: In April, 1863; June, 1864; February, 1865. We used to look for floods in February and March every year, and I think we had some floods later in the year than that. In 1880, in March, we had a very big flood. The flood of 1870 was the highest flood, when we could get about the streets in boats.

What is the height of the river banks at Lismore from low-water level? The banks vary very much in height—say about 35 feet.

The height of the highest flood would be about 40 feet above low-water mark in the river? Yes.

Did that flood do much damage? Nothing in comparison to what it would do at the present time. The principal damage then was by timber drifting all over the flooded parts of the river. On both sides of the river, as far as the Heads, the timber came on to the plain, some of it on either side, and at what we call the Devil's Elbow there was a raft of timber came right across the plain.

Was there any loss of life? None that I am aware of.

Suppose such a flood were to occur at the present time, would it do much injury? It would throw the district back for years, sacrificing property, and I am afraid life.

Do you think steps should be taken as soon as possible to prevent such floods? Yes, if it is possible for civil engineering to counteract the damages that might occur.

What was the principal cause of that flood—was it due to the heavy rains on the mountains, and high winds backing up the river? We only feel the effect at Ballina when there is an easterly gale meeting the flood-waters.

One of the reasons for those high floods was that there were strong north-easterly gales? Yes, attended with heavy falls of rain. The fall of rain was heavy and general throughout the whole district, over the Clarence as well as the Richmond, but the floods in the Richmond were higher. There were very high floods at the Brunswick. The Richmond was then the principal dépôt for the getting of cedar, which was valuable at that time, and formed the principal occupation of 75 per cent. of the inhabitants.

Is very much land cleared in the higher parts of the river? I know one selection at Newrybar where there is 25 acres under grass.

Has the country been cleared to such an extent as to increase the danger of these floods? If we had the heavy falls of rain at the present time which we used to have twenty years ago the rush of water would be far swifter than it was formerly, and would reach the river much quicker.

What was the year of greatest drought you have known? The drought which continued up to a few months ago. We had three years of successive drought. We have never had anything before to compare with that. It has been the ruin of our exchequer here.

Then it caused much loss? Yes.

Do you think that irrigation would be advantageous to the district? Yes, the salvation of it.

Can you suggest any sites for large conserving reservoirs? Yes; but I have no doubt that Mr. Jarrett's knowledge of the country is much greater than mine. He has been in the habit of going over the district on foot where there are no roads, and he would be likely to tell you of several places. We can go first to the Midgeon Falls, about  $\frac{3}{4}$  mile from Tintenbar, and if you go a mile beyond that you increase the height of the fall.

Mr. E. Ross.  
2 Nov., 1886.

Irrigation

Would



**Mr. E. Ross.** Would you suggest that these tributaries should be examined to see if they are suitable for conserving water? I think it would be a most valuable assistance to civil engineering if that were done.

**2 Nov., 1886.** Do you know of any wells sunk in the district? Yes; I have a well in my own paddock that I supply my cattle from. I drew from 60 to 80 buckets of water all through the drought.

**Wells.**

Where is that? Seven minutes walk from the court-house.

What distance would it be from the shore? From the back of my house to Deepwater would be about one-third of a mile.

What is the depth of that well? Between 8 and 9 feet.

Does it give you a large supply of water? Yes. I have a 200-gallon iron boiling-down tank placed near the pump, and we keep it full for the use of the cattle.

Do you get the same supply in the dry season? Yes, but it is benefited by high spring tides, when we can take the most water from the well.

What is the quality of the water? Beautiful; it is always cold and clear.

Is it not brackish? It has a little tincture of iron in it, but very slight indeed.

Have you tried that in the garden? Yes.

Has it a good effect on the plants—that is to say, does it encourage growth? I never knew any bad effect from it.

What are the prevailing winds in summer? North-east.

Are they continuous? Almost as a trade wind.

**Windmills.**

Are they sufficiently strong to drive windmills? Yes.

Do you know of any windmills in the district? No.

Do you not think that windmill power would be of great advantage if applied here? Yes; there is sufficient force to drive any windmill, especially upon this North Creek.

Do you not think that irrigation might be carried on, on a moderate scale, by the use of these windmills? Yes; it would be of great assistance to the growth of sugar-cane. I may state that the whole of the cane suffered severely—much of it was ruined—through the drought; but had there been an ordinary water supply that could have been saved.

Do you know of any other wells in the district? Several.

What is their average depth? There is one next to me, of Mr. Jarrett's; the pipe is 22 feet.

Does the water rise above the surface? It is pumped up; there is no flow over the surface. There is another one at Captain Bennett's, opposite my house. They have never been able to pump it dry yet.

Is that a tube well? Yes, a perforated tube at the bottom.

Have any of these tube wells got water? Yes, they are all successful. There is another one at Mr. Holden's.

About what is the average depth to which these tubes are driven for water? 16 to 22 feet. There are other waterfalls as fine as those I have mentioned that would be of equal general service to the district. If you go west of Alstonville, Duck Creek, Marshall's Fall, Neild Sharp's Fall; all lie west from here, and there are others which lie north.

Are these streams permanent? All permanent. Of course after a long drought the force of the stream is very much decreased.

Might they not be used for motive-power to great advantage? They have been tried to drive water-wheels to wash arrowroot.

Turbines? No.

**Falls in river.**

About what is the height of these falls? From 40 to 60 feet at Duck Creek. You go a little further to the northward and you come to Marshall's Falls.

What height are they;—are they in Duck Creek? Yes; they are higher up, close to Alstonville. Then you go 3 miles further on, from one to two points further north, and you come to those falls of Neild Sharp's. He applied a water-wheel for an arrowroot mill.

What height are they? I should say 30 feet.

What height are Midgeon Falls? About 16 feet.

Is there a run of water always in the stream? Yes, always.

What distance is that from Ballina? About 8 miles.

Do you know of any other falls? Further up, as you come to the head of the creek, there are falls, but they do not approach the falls I have mentioned. Most tributaries of the river in the higher parts have these rocky falls.

Are they all rocky falls? Yes, and there are ridges of sand. There are flats in Wilson's Creek that that look like pure marble.

**Mr. Murray.]** Do you consider the agricultural produce of the district would be materially increased by a system of irrigation? It would be greatly benefited, but your question opens up a very wide subject. I consider that the agricultural settlement of the district is prevented owing to the absurdity of allowing such large areas as 640 acres to be taken up in these scrubs. This system is keeping out an immense agricultural population, and there is room enough for six families where only occasionally you now find one. The land is too much in the hands of capitalists. There are men who come up here from the southward who are anxious to get land on the Richmond River, but it has been to a great extent monopolised by capitalists.

In cases where agriculture is carried on, to what extent could produce be increased by irrigation? The sugar industry has been the principal industry until lately. When the drought destroyed the sugar-cane, and the sugar market fell as well, that industry was crushed; therefore a number of people devoted themselves to the growing of grass for the production of butter, which is now manufactured to a large extent in this district. The drought from which we have suffered has had a great effect upon the young grass, but that which was matured was not injured much, owing to the heavy dews.

Where you are getting 40 tons of cane now, how much do you think you would get if you had a certain supply of water? I should say that it would improve the yield at least 10 per cent.

Do artificial grasses grow well here? Yes, splendidly.

What kinds of grass do you grow in the district? The principal grass that I see cultivated just about here is what we call buffalo couch; that keeps the sandy soil together; but further up in the scrub they are growing couch and clover, Italian rye-grass, prairie grass, cock's-foot, and all grasses which are considered good for cattle-feeding. All have been tried, and they are all a success. The soil will produce anything

anything that will grow elsewhere. The sugar industry would be greatly enhanced by a general supply of water; and I believe the whole district on the north side of the river has great advantages for that. I could not speak as to the country on the south side.

Mr. E. Ross.  
2 Nov., 1886.

Mr. George W. Dewdney examined:—

*Mr. Murray.*] What is your occupation? I am a surveyor.

Have you been long resident on the Richmond? Nearly four years.

What part of the Richmond are you best acquainted with? Principally with the district lying between Ballina and Lismore. I have been over the whole district, but only in a very few places about the rest of the district.

Mr. G.  
W. Dewdney.  
2 Nov., 1886.

You are aware that the soil is very rich? Yes.

Especially on the north side? Yes.

Are you acquainted with the tributaries of the Richmond? Fairly well on the north side.

Do you know of any suitable place for storing water for irrigation on those tributaries? I think that in nearly all the small creeks that run off the mountains you could store water, if not in the whole of them, and could bring it down to the level ground.

Could works be constructed at a reasonable cost? I think they could in a great many places, especially bordering the Tucki Tucki swamps and Broadwater swamp.

Are they higher or lower than the river bank? They are a little higher, but very little.

You could not conserve the water in the swamp? Not to be of any use—that is, not to draw it off by gravitation.

Have you any particular place in view which you think would be the most suitable place to give an illustration of what could be done. Are you able to state what would be the size of the dam, what quantity of water it would impound, and what quantity of land the water would command when impounded?

The most suitable place, I think, for a water supply for the town of Ballina would be at Marshall's Falls.

My question has reference just now more especially to conserving water for irrigation purposes in a position which would command a large tract of country by gravitation? I should think that on either side of many of these streams contour canals could be made to bring the water into one body on one of the creeks, so as to join them all together.

Do you think that the storage of water would increase the productiveness of the soil very much? Yes.

To what extent? I have not had very much experience, but I think (say) 30 per cent.

A great many crops suffer very much during the dry weather? Yes, especially of late years.

You think that if there was a large water supply that would be averted? Yes.

Do you know of any instance of irrigation in the district? None, except Mr. Holden's. As to the water supply for the town, I think that Marshall's Falls would be the most suitable place. There could be a good conservation of water made there. You would have to make an embankment 60 or 70 feet high and 150 yards across, and you would get 300 feet of fall in 8 miles.

Is the land at that position alienated? Yes, but it is proposed to resume it.

What is the value per acre? As far as the land itself goes it is not very valuable, but up from the falls it is valuable land; it is worth £10 an acre now.

Do you know any sites, not alienated, for water conservation in the district? Not unless you go very far back. If you like to go to the head of Tucki Creek on the Tweed route there are the Boomerang Falls, 250 feet, and the Minim Falls, 450 feet.

Are those sites reserved? Yes.

Do you know any place suitable for water conservation not reserved? No; I think they are all reserved.

Do you make it a practice in your profession to recommend the reservation of the sites on that account? Yes. I made a feature survey upon these creeks, and recommended all these places for reservation.

Is there any information which you could give the Commission that you think would be of special value to them for the purpose of conservation of water? I do not think there is anything more than I have heard other witnesses state.

Is there any of the evidence you have heard from the other witnesses that you differ from? No, unless it is the advisability of obtaining a water supply for the town from Emigrant Creek. I think it would be better to get it from Marshall's Falls. I do not think you can get a supply by gravitation from Emigrant Creek, and the distance would be much longer.

*Mr. Gipps.*] You think that water could be conserved in sufficiently large quantities at the heads of these tributaries to prevent disastrous consequences from floods? Do you mean to conserve the flood-water?

Yes? I do not think so; it is very little you can conserve in comparison with the vast quantity that comes down.

Are there any large swamps connected with those tributaries in which water could be conserved in the back away from the coast. Which is the best swamp you know of in the district? Tucki Tucki and Broadwater combined.

What is the area? I should think there would be 5,000 or 6,000 acres.

When it overflows, where does it discharge its water? Into the Broadwater.

Do you think an embankment would prevent it from overflowing, and would raise the water in the swamp? Yes; it would raise it 3 or 4 feet perhaps.

Then it would overflow the country? No; I do not think it would benefit much land by raising it only 3 or 4 feet, only just the height of the river-bank.

Suppose you embank it at the river 8 or 10 feet, would it supply water over any large area of ground? I daresay you would be able to irrigate then from the swamp down to Ballina. I do not think the banks would be higher than that.

*Mr. Murray.*] Is not Broadwater open with the river now? It runs up into a wide bay, and the swamp joins on to it.

*Mr. Gipps.*] Do you think the embankment of these large swamps in that way and the diversion of flood-water into it would relieve the river of any flood? It might do that, but I do not think it would lessen the damage. There is never much current comes down from those big swamps; they do not back it up very high.

Impounding

Mr. G. Impounding water there would have no beneficial influence with regard to the flood-waters? I do not think so.  
 W. Dewdney.  
 2 Nov., 1886.

THURSDAY, 4 NOVEMBER, 1886.

At Brunswick.

Present:—

MR. GIPPS, C.E.,

MR. MURRAY.

Mr. Delaney Haines examined:—

Mr. D. Haines. *Mr. Murray.*] You are a storekeeper in Brunswick? Yes.  
 Have you lived here long? About three years.  
 Have you a good knowledge of the district round? I am not well acquainted with it.  
 On what points do you think you could give us information that would be of service to the Commission. The object of the Commission is to see if there are any means of conserving water that will be useful for farmers, for water-power sawmills, or for irrigating? I have very little knowledge of the country.  
 Is there much settlement in the district at present? The best part of the district is selected.  
 Is it in the hands of small owners? It is in the hands of large owners.  
 What do they use it for? The majority of them are holding it; a few have laid down grass paddocks.  
 What industry do the settlers live by mostly? A good few of them are timber-getters; some have a few paddocks for grazing; some are just starting dairying. It is about five years since land was first selected here.  
 Do you think the construction of the jetty at Byron Bay will stimulate industry and cause settlement? I think in time this district will be devoted to dairying. The land is very good.  
 Do you know of any place in the district that would be suitable for the conservation of water? I cannot say that I do.

Mr. Robert Marshall examined:—

Mr. R. Marshall. *Mr. Gipps.*] How long have you been residing in the district? Nearly twenty years.  
 How long on the Brunswick? I have only been four years out of it.  
 Have you a general knowledge of the district? Pretty fair. I have been working all through it.  
 What are the sources of the Brunswick River? It is all scrub land principally, but there are a few barren slate and quartz ridges—gold-bearing ridges.  
 Are there any minerals found in the district? It has never been examined for minerals.  
 What are the names of the principal creeks of the Brunswick? There is the north arm, Wilson's Creek, and Marshall's Creek.  
 Is there a Wilson's Creek here as well as at Lismore? Yes; one is named after the son, and the other after the father.  
 Where does the north creek rise? At Tincogar.  
 Where does it join the river? Just at the mouth.  
 What distance does the north arm flow? You could get up with a boat for about 7 miles. If you follow the windings of the creek the length would be over 30 miles.  
 Is it a permanent stream? In the summer-time there is only a ripple in it.  
 What is the character of the bed above Navigation Point? Stony.  
 Are there any gorges at its head? I never was right up at the very head.  
 Where does Wilson's Creek rise? All the creeks head in the same range to the westward.  
 Where does Wilson's Creek join the main river? About 5 miles from here.  
 How far is that navigable? Seven miles.  
 How long is it from Navigation Point to the source? About 30 miles following the bends of the creek.  
 What is the character of the valley? Heavy scrub land in places that spreads out and closes in again.  
 Do you know any place suitable for a conserving reservoir? There are large waterholes, larger in Wilson's Creek than in the north arm. They have 10 or 12 feet of water in them.  
 Do you know of any position where two spurs almost meet, and would enclose any large area? At Wilson's Creek there is such a place.  
 How far is that from here? Between 6 and 7 miles.  
 Would that be a good position for forming a reservoir? That is on Marshall's Creek. The range on one side is about 200 feet or more; it has a quantity of quartz in it.  
 Could water from that point be distributed over a large area? Yes.  
 Have you had any experience in irrigation? I have been mining chiefly—sluicing.  
 Do you think irrigation would be of any advantage? It might; there is plenty of good water underground here.  
 Have you grown any crops? No.  
 What is the principal industry in this district? The district will grow anything.  
 But what is the principal industry now? The settlers have not gone in for anything in particular. Some have gone in for sugar-cane.  
 Who is the principal owner? Many have large farms—640 acres, 300 acres, down to 40 acres. Some grow maize, some are starting dairying, but they have hardly had time to go in for anything.  
*Mr. Murray.*] Have you any idea of the extent of agricultural land in the valley of the Brunswick and its tributaries? There is a large quantity.  
 How far does it extend in one direction? About 9 miles, and may be more. Nearly all the land here is good, even on the ridges. It will grow anything.  
 Is there an ample supply of fresh water in the tributaries of the Brunswick and creeks? Yes; sometimes they are a little bit slack.  
 Would it be an advantage if water were conserved for cultivation purposes? It might be. There are places in the creeks where water could be backed up.  
 Do the dry seasons affect these creeks much? A good deal. When

When was there a dry season? Last season or the summer before.  
 Was the supply of water very limited? Yes; the water runs underneath. The main river ceased to run.  
 At what depth do you get good water underground? Up the creeks, 2 or 3 feet down.  
 Good water? Yes.  
 What sort of strata? Through gravel principally. We get the water in the gravel. I have got water at 16 feet where we are now. I have a tube well down here.  
 Are such wells much used here? I have one; I am the only person that has one.  
 Do you think the place is well adapted for these wells? Yes.  
 Is the water good and fresh so close to the sea? Yes. On the bank of the river—that is, of the main stream—it is pretty brackish; it is drinkable. The wells here are always good.  
 Have you a plentiful rainfall here? Yes.  
 Have you any reed swamps? Yes.  
 Would it be beneficial to drain them? Yes.  
 Or would you think it would be better to use them for conserving water in? Some of them might perhaps be so used, and it would be better to drain others.  
 Do you know that any of them have been drained? Yes.  
 Is the soil good when drained? Yes, the best land we have.  
 When was it drained? It was drained to draw timber through it; before that nothing would grow. Now there is good grass all over what was a swamp.  
 Is there a good supply of timber in the district? Yes.  
 Could any of these watercourses be made available for working saw-mills? I think they could by damming back the water.  
 What do you think will be the principal production in the district? If sugar rises in price a good many will go in for that, others for corn, and others for dairying.  
 Has the population increased greatly during the last few years? Yes.  
 Has it doubled within the last five years? It has trebled.  
 What is that in consequence of? I think the great drawback to this place is the bar. If a little were done to the bar it would do very much to advance settlement in the district, faster than has hitherto taken place.  
 What made the people come into the place during the last few years? Attention having been drawn to the land.  
 Is there deep water inside the bar? Yes, between 6 and 7 feet of a rise. If the bar was removed vessels would not require to come further than the Heads.  
*Mr. Gipps.*] What is the prevailing wind? In summer-time, northerly. Sometimes it lasts for about a week, and then we get westerly or southerly breezes.  
 Is the wind sufficient for driving windmills? Yes, on the coast.

Mr.  
 R. Marshall.  
 4 Nov., 1886.

Mr. Henry Stone examined:—

*Mr. Murray.*] You are an hotel-keeper on the Brunswick? Yes; I am a timber-getter.  
 Have you any vessels? I charter a vessel.  
 Have you a long experience of this district? I have been working here backwards and forwards seventeen or eighteen years.  
 You are acquainted with the tributary waters of the Brunswick? Yes.  
 How far is the highest water of the Brunswick from here? As the crow flies, about 16 miles, west by north from the Brunswick, in what is called the Dividing Range.  
 Not far from Mount Warning? South-east of it, 8 or 10 miles southerly.  
 Are there a number of tributaries flowing into the Brunswick? All flow into it with the exception of one. The water is charged with minerals in the low land, a short distance from the head of navigation.  
 Do the tributaries of the Brunswick rise at a good elevation? Most of them do.  
 Do you know any suitable places for conserving water? I never took very much notice on that point.  
 During the last dry season most of the tributaries ceased to run, but in any moderate season there is a fair supply of water.  
 Do you think there are suitable places on the Brunswick where large storages of water could be made in rainy seasons, to supply the low-lying country in times of drought? There is an ample supply in moderate seasons without retaining any. Where the storms rise in the mountains the places are pretty rugged and the gullies are sharp and steep.  
 Could water be utilised for water-power in connection with saw-mills? It could be taken for that purpose in moderately rainy seasons, but the last three seasons would not give a sufficient supply.  
 Do you think there is a good deal of water underground? I know of one place where it flows underground. It goes through the creek from the dividing range between the Brunswick and the top of the main range. Coming over the cliffs on to the Brunswick it gets under the rocks. It shoots up again at a distance of 300 or 400 yards and runs into the creek again.  
 Is this a district in which tube wells could be used to advantage, do you think? Yes.  
 For pumping and for irrigating on the low land? It is very stony on the higher lands as a rule.  
 What is going to be the great industry of this district? Dairying.  
 Do English grasses grow well here? Very well.  
 Where are the people coming from who are coming into the district now? Principally people from the Clarence, who are attracted by the richness of the land. They came over about five years ago and selected, but the principal portion of the landowners are simply speculating. The first inducement was to select for the purpose of growing sugar-cane, but since the depression in the sugar market they have turned their attention principally to timber.  
 Then a great many are doing nothing with their land? Nothing at present.  
 What are they waiting for;—do you think the jetty at Byron Bay will be an advantage? I think a great number in the southern portion of this district may be waiting for that, but at this northern end of it the people are looking to have the bar removed, and hoping for a railway.  
*Mr. Gipps.*] What are the general features of the country;—is the district flat as a rule? No, rather mountainous. The hills are not very high, but they are pretty numerous.

Mr. H. Stone.  
 4 Nov., 1886.

Dairying.

At

Mr. H. Stone. At what distance from the seaboard do the hills commence? Immediately on the border—a mile off. The hills commence just at the Heads.  
 4 Nov., 1886. Is there much flat land? About half of the district is flat land.  
 Is the hilly land good for cultivation? The principal part of it is quartz ridges.  
 Have you tried irrigation at all? No; I have never seen it tried. There has been no occasion. Water can be got in 5 or 6 feet sinking at any time.  
 Mr. Murray.] Is there anything we have not asked you that you think would be of interest to the Commission? No, unless it is the question of improving the entrance to the Brunswick for navigation. There are three branches of the Brunswick—one running north, the other south for a distance of 7 or 8 miles. The upper part of the north and south creek as far as the navigation goes is through swampy land.  
 Mr. Gipps.] Is it all alienated? The upper part of it is.  
 Has any of it been drained? Not to my knowledge.  
 What are they doing with it? Putting in residence and improvements, and then allowing it to stay at that.  
 Are they keeping any stock? No stock whatever, with the exception of one holder.  
 Do you think the swamps could be easily drained? Not easily; it is almost level with tidal water. The high-tides almost flow up to some of the swamps.

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Mr. James Mills examined:—

Mr. J. Mills. Mr. Gipps.] How long have you been residing here? Fourteen years.  
 4 Nov., 1886. What is your occupation? A farmer.  
 Have you been farming all that time? No, only for five years.  
 Is your farm in this district? About 2 miles from here.  
 What have you been cultivating? Corn and English grasses.  
 What yield of corn do you get per acre? I got 100 bushels to the acre the year before last.  
 How many acres had you under cultivation? About four that season.  
 How much land have you got under English grass? About 40 acres.  
 For what purpose? For stock-keeping.  
 How many acres do you require for a beast? I think one acre will feed two head on an average—two or three.  
 What grasses have you? Italian rye, prairie, couch, and white clover.  
 English grasses Do the English grasses stand the heat well? They do at my place first-class all the year round.  
 Do you take any seed from it? Yes; I am doing it now.  
 How many bushels per acre? I was away from home when the rye was reaped. I reaped some prairie last Friday that will give 100 bushels of seed to the acre. I got 11 bushels of seed from one-tenth of an acre.  
 Clean seed? Yes.  
 What is it worth? I paid 10s. a bushel for seed when I bought.  
 What is the character of the country, is it low land? I have both flat and ridgy too.  
 Does it grow equally well? I think the ridges grow best.  
 What is the soil? Chocolate. There is the greatest crop of grass on the ridges.  
 What is the soil on the flats? Black sandy loam.  
 Have you tried to grow any fruits? I have peaches, oranges, and apples growing.  
 Do they seem to grow well? The peaches are bearing, but the oranges and apples are not. The trees are healthy.  
 Have you tried irrigation? No.  
 Do you think it would be beneficial? I do not know anything about it.  
 Did you lose any of your crop last year? No.  
 Was last year a dry year? The last year and the year before were the driest.  
 But neither have affected your crop? No.  
 You have a large rainfall here? Yes, about the best in the Colony.  
 Does it come at a seasonable time? Yes.  
 Do you know anything of the creeks or the rivers? I have been on them all.  
 Do you know Marshall's Creek? Yes.  
 Where does that rise? In the ranges. There is no particular name for the range that I am aware of. The waters near that point flow in one way to the Tweed, and the other to the Brunswick.  
 What is the character of that range—is it very rocky? No. The road goes over it from here to the Tweed. On the top it is mostly forest, with belts of scrub running up here and there.  
 Is there much water in the creek? Yes. Sometimes it is low.  
 Did you ever know it to run dry? I was not there in the dry time.  
 What is the principal timber to be found in this district? There are all sorts of scrub timbers. Cedar is to be found in the scrubs, and there are all sorts of forest timbers on the mountains—blackwood, tallow-wood and turpentine.

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Mr. George Simpson examined:—

Mr. G. Simpson. Mr. Murray.] You are the signalman at the station? Yes.  
 4 Nov., 1886. Have you been long stationed here? I have been here twenty-one years—in the Government Service seven.  
 What is the rise and fall of the tide at the mouth of the Brunswick? In a southerly swell 7 feet; at other times from 5 to 5½. The neap-tides about 2½.  
 What depth of water is there on the bar at low-tide? The bar shifts every week. Sometimes there are 7 feet, sometimes 9 feet. At low-water sometimes only 2, and sometimes not that.  
 What is the highest tide you have known on the bar at low-water? Six feet.  
 How far is the river navigable for small vessels? Six or 7 miles.  
 What draught of vessels can get up? Six feet; nothing more.  
 Do you think that any works could be constructed at the bar to allow vessels to come in? A break-water on the north side would enable vessels to come in. There is plenty of rock at hand to do it with, and the distance would be only 350 feet to connect the shore with the end of the rocks. That would make a channel which would scour out the sand, and make a passage through. If

If vessels could be brought in here, would there be more production? I am certain there would.  
*Mr. Gipps.*] Is the north side of the mouth of the river rocky? Yes.  
 Steep rocks? Yes.  
 What height? 10 or 12 feet above low-water; no higher rock than that.  
 What is the character of the south side? A sandy bar, moved every tide.  
 What is the width of the river at the mouth? 150 yards.  
 What is the average width of the river from the mouth to the head of navigation? Much about the same.  
 There is quite room enough for vessels to go up and down.  
 What is the character of the banks? Some are low, and some are high; some as high as 10 feet. The average height is about 5 feet.  
 What is the average depth of the river? In some places it is very deep, in some very shallow. Some 20 feet deep, but there are three or four bars. The average depth at spring-tides is 6 feet up and down.

Mr.  
 G. Simpson.  
 4 Nov., 1886.

SATURDAY, 6 NOVEMBER, 1886.

At Murwillumbah.

Present:—

MR. GIPPS, C.E., | MR. MURRAY.

Mr. James Black examined:—

*Mr. Murray.*] What is your occupation? I am a farmer.  
 How long have you been resident here? About nineteen years in the Tweed District.  
 Have you general information as to the whole district? I know the district pretty well. I have been over the greater part of it; there may be some spots that I am not personally acquainted with.  
 Have you been living here for the whole time? Yes.  
 What has been the character of the farming? Maize-growing at the commencement, and of late years sugar-cane and a little maize.  
 What returns of maize did you get? I never kept an account of the annual return. The maize crops have not been very heavy on the Tweed. Maize does not grow to the same perfection here that it does on the Richmond and the Clarence. The crop is equally good, but you do not get such heavy produce.  
 What has been the average yield? I think 50 bushels to the acre. It might have been more; it depends upon the season.  
 What has been the yield of the sugar-cane? As far as my own crop is concerned, I have got over 60 tons to the acre. In some seasons I have got 40 tons; in the present season I got 44 tons to the acre. On an average two-year old cane will produce from 40 to 50 tons.  
 What will the one-year cane yield? About 25 tons, as far as my experience goes; I have no statistical information.  
 What is the character of the soil? It is all volcanic formation, and along the river banks it is alluvial. The district is almost wholly volcanic.  
 What is the character of the country on which you have been growing these crops? On the river banks.  
 Have you tried any other crops? I have tried arrowroot, which does very well.  
 What was the yield? I have only grown small quantities for home use. I could not really say what it would yield per acre.  
 Have you tried fruit-growing? I have a few orange trees and a few peach trees.  
 Do the orange trees grow well? Certain trees do; but from my experience of the district I should say that the orange tree is subject to blight. They do very well while the trees are young, but a great deal of dead wood gets into them, and they do not do well after they get old.  
 Have you tried lucerne? I have not tried it myself.  
 Do you know any one who has tried it? Several have tried it.  
 With what success? They do not think it does well. It grows well for the first or second crop. I do not know that it is the fault of the soil. I think it is more owing to the rank vegetation which checks it. Has this district suffered much from drought? During the last two seasons it was very dry.  
 Did you lose any crops from it? My crop was damaged. Indeed the crops in the district did suffer from it very considerably.  
 They were not actually lost? No.  
 Do you think irrigation would be beneficial to the district? It certainly would in dry seasons.  
 How many dry seasons have you had in your experience that have affected the crops prejudicially? I cannot remember. There have been some very dry seasons while I have been on the Tweed, but the last two years have been by far the driest.  
 Have you taken any records of the rainfall? No; I have not had any means of doing it.  
 Do you know of any wells sunk in the district? I think almost every settler has his well. Those that are wells not alongside permanent creeks or rivers mostly depend upon wells.  
 What is the average depth the wells are sunk? Near the river bank they do not require to go to a greater depth than from 12 to 20 feet.  
 What is the character of the strata? A sort of clay after they get below the surface soil, and sometimes they get on to gravel bottom, which I think has been a river bed at one time.  
 Is that any depth? I cannot say.  
 Is there a good supply of water in it? We get water on that bottom. There are large swamps which are wet in wet seasons and dry in dry seasons, and in sinking upon them you get into a clay formation—a formation of decayed vegetation on the surface; a few feet below you come upon firm clay.  
 Is the water pure and fresh which you get? In the wells which I have sunk on the river I have got water brackish. Where the gravel bottom is there appears to be a soakage from the river. Back in the swamp the water is fresh.  
 Does the water in wells near the river bank rise and fall with the river? There are wells in which the water does that.

Mr. J. Black.  
 6 Nov., 1886.

**Mr. J. Black.** Have you any experience of the floods which have occurred in the river? Yes; I have seen the river in flood many times.

**6 Nov., 1886.** What is the highest flood you have seen? That of March, 1870.

**Floods.** What height was that above low-water level? I really cannot say. I have seen it running from the top of the bank where the Commercial Bank and Post Office stand—about 14 feet.

You have not known of any higher flood? Not personally.

Have you heard of any higher flood? I have been told by residents that before I came there was a flood in 1863 which was higher than that.

How much higher? I could not say.

Do these high floods seem to affect the bar at the mouth? They alter the position of the bar.

Does the bar improve with these high floods? I have been told that it scours, that the floods scour the sand out at the entrance, and that in 1870 the entrance was shifted. Before 1870 vessels used to come in over the south spit that now is. The flood of 1870 blocked that entrance, and formed a channel right under the pilot station, where it is now. Before that the bank was to the left, and the pilot station was on a sandbank.

How much land has been alienated in this district? I do not know.

Is there much unalienated land? Yes, a considerable quantity, taking the district as a whole.

How many inhabitants are there in the district? I could not say.

What is the principal industry in the district at the present time? Sugar-growing.

Do you know the number of acres under cultivation? I could not give you an estimate.

Has dairy-farming been tried here? On a small scale; not to any extent to my knowledge.

Do you know the principal parts of the river? Yes; I have been up most of the branches of the river above tidal water.

Do you know the source of the south arm—where does it head? Up at what they call Burvell Mountain, and what they call the Nightcap. The watershed that divides Wilson's Creek and Brunswick Creek waters is the watershed between the south arm and Brunswick.

All these creeks flow into the Tweed River? Yes, on the north side of the ridge, north and north-west.

Are the mountains at the head any great height? What they call the Nightcap Mountain is shown by the aneroid to be 3,300 feet. The mountains are very steep and precipitous. The creeks are gorges, as a rule, until they leave the main range.

Then they flow through what? The south arm is confined by mountains. There are flats, but not of any extent.

Do you know of any situation for a large conserving reservoir on that branch? I have had no experience. I have never seen any of that work done, so that I could not give an opinion.

Where does the north branch of the Tweed head? Up in the Macpherson Range.

Is there any particular mountain near its source? There is a mountain called Cogan, a big rock which sticks out on the range.

Are there many tributaries to this arm of the river? There are a few. It has not a large water-shed.

Do all these creeks rise in high land? Yes; they all come out of the Macpherson Range.

What is the character of the upper part of their valleys? The same as the north arm. The tide flows up for a considerable distance. There are very good flats above navigation. I am not so well acquainted with the north arm as with the south branches.

How far does navigation extend up the north arm? The tide flows up about the same length as the south branch.

How far is that above the junction of the two? They call it 25 miles from the Heads to the head of the flow of tidal water.

How far is it from the Heads or mouth of the river to the junction of the two arms? About 12 miles.

Does the water become brackish? As far as the tide goes in dry seasons.

That is for 25 miles? Yes.

Above that point, is the water clear and good? Yes.

Do both of these arms bring down a permanent supply of water? I have never seen them dry. Last year they were very low; there was not very much flowed down then.

Do you know of any position for a conserving reservoir on the north arm? I could not mention any particular spot.

Where is the principal settlement on this river—is it between the two arms? All along the river on both sides.

Is much of the country cleared? Yes, near to navigation.

What is the character of the rest that has not been cleared—forest? No; there is very little of it. It is mostly scrub country and low plains.

**Swamps.**

Are there any deep swamps? There are no lagoons of water; they have all vegetation growing in them. During wet weather water settles there.

Are they easily drained? So far as my experience goes, there is no difficulty in draining them. They have, except in some few instances, sufficient fall to allow of their being drained.

Do they afford good food for cattle? Beautiful, when they are dry.

Do you grow grass on them? Yes, couch and clover.

How many acres to each head of stock? I could not say. The grass in its natural state is very coarse. Cattle will eat it when they have nothing better, but it is coarse from growing in wet land.

Have you any land laid down in English grasses or clover? My son has a selection where he has clover and couch in.

How many acres? The selection comprises 270 acres; he has about 50 acres in grass.

How many cattle will it carry? At the present time over one beast to the acre, and has been carrying that number for the last six months. The grass has not got a good hold of the soil yet. The greater quantity was planted only during the last two years.

How many would it carry in its natural condition? Not any; it was scrub land before.

Do you know of any case in which irrigation has been tried in the district? No, I do not know of any.

Have you ever seen irrigation carried on? Not in this country.

Are there any Chinamen irrigating gardens in this district? None.

**Irrigation.**

Have you seen irrigation in other countries? In England.

From



From what you have seen in England, do you think it would be beneficial in a district like this? I believe it would be highly beneficial in the summer season. Mr. J. Black.

You have not suffered very much? We consider that we have suffered pretty severely from the want of rain during the last two seasons, when water was very scarce and bad in a great many places. The wells all through were low, and the water in many instances was very bad. 6 Nov., 1886.

Are you speaking of water for domestic purposes? For domestic purposes and stock.

What was the diminution in crops during the dry seasons as compared with former years? I consider the crop was diminished from 15 to 20 tons. The same kind of cane grown in the same land in a good season would yield from 60 to 65 tons to the acre. The estimate I give was for the present season, not for former seasons. The crops were much heavier in former years than in the last year.

What has been the average for the last five years? I could not give you an average; the yield fluctuates. I have known instances of 100 tons being got per acre, while others would not get above 40 tons, and some not that.

To what do you attribute that? To the different kinds of cane grown. Cultivation has also a great deal to do with it.

What percentage of crop do you think you have lost on account of dry weather? I think that I lost at least about 15 tons to the acre last season.

What do you get per ton for that cane? 10s.

That is equal to £7 10s per acre loss? Yes.

Do you think that a system of irrigation that would supply water in the proper season would avert that? I do not know how cane would grow under irrigation; I have had no experience of that, but I have no doubt that it would be beneficial to cane as well as to other crops.

Do you know that there has been a falling off in the yield on account of dry weather? I have no doubt of it.

Then it follows that if you had the water laid on you would have a larger crop? Yes; I should say so. Although cane will stand a large amount of dry weather, very wet seasons deteriorate it in quality, the amount of saccharine matter is reduced. The cane is heavier to the farmer, but the weight of water is not equivalent to what is lost in the amount of saccharine matter in the same bulk.

The tributaries to the Tweed are numerous? Yes.

Fresh-water tributaries? Yes, coming over high mountain ranges.

Would it be easy to conserve water in these creeks? I think it would.

Do you know of any place where the hills crop in close which would make a good reservoir at a small expense? Yes.

Is there much room for an increase of population in the district? There is plenty of room for a large increase in population.

Would irrigation help it? I believe it would. Other things being favourable, the district will become very populous in time.

Sugar-growing will be the chief industry, you think? The district is capable of growing almost any semi-tropical produce, and the soil is good.

What average crop of corn do you get? About 50 bushels to the acre used to be the average when I grew corn. I may mention that in dry seasons this town is very badly supplied with water, so also is Tumbulgun. Last season the wells there were very bad. You could not drink the water. It was very muddy and dirty, and this year I think it has been worse.

Mr. Gipps.] What depth of water had you in the last season? The wells all gave out here.

How was the river? It was salt; yet in places cattle would drink it.

What is the character of the river above the tidal point? A running stream over a shingly bottom. There is a good fall above the tidal water.

What would you consider to be the fall per mile? I was about with a civil engineer at one time, and he had an aneroid with him, and at the Commissioner's Creek, on the south arm, 12 miles above tidal water, the aneroid showed 50 feet. The valley is level, and the mountains rise precipitously. There is not much rise to Talgum.

Do you think a low weir across the river would conserve a sufficient supply of water for the supply of the town? It would have to be brought a considerable distance for the supply of the town from the place where it could be conserved in the river.

If the water were raised, say 20 feet, would not that hold back a sufficient quantity for a permanent and good supply during those dry seasons for the town? I think it would become brackish. There is a filtration through the sub-soil. The creek that is flowing up through this farm becomes brackish when the river is salt.

Have you known the water to be thrown back at all in any of these creeks from the river? No, except in time of flood.

Do you think that the falls in the river may be used for motive-power? They could be above the tidal influence.

Are there any rocky bars in the river above the tidal point? Yes.

What is the first? It is about 5 miles away; that is what we call the falls. The tide flows over it at high-water. It has a shingly bar. Above that, about a mile or 2 miles, there are rocky reefs running across. Rocky bars.

Does the tide come up above them? No.

What is the height of the river on these rocky reefs? The mountains come in very close there. There are small flats on each side, perhaps for a few hundred yards wide in both cases.

Would that be a good position for a dam? I believe there would be no difficulty in making dams.

What do you think would be the length of a dam 50 feet high on the top? The banks there are pretty high, and there are places where the river is very narrow.

A hundred yards? More than that; the river is wide there.

What length would a dam require to be where the banks close in? I could not say. The river has a rocky bottom, off which the banks rise 20 or 25 feet. There are level flats for a short distance before you begin to ascend the steep ridges.

What length would a dam 25 feet on the top require to be? I cannot say what is the width of the river from bank to bank. I should say it would be a hundred yards in the narrowest part.

What



Mr. J. Black. What is the smallest stream you have known to flow over that rocky bar? Whenever I have been there there has always been a good stream flowing, but I was not there during the last dry season.

6 Nov., 1886.

Mr. Joshua Bray examined:—

Mr. J. Bray. *Mr. Murray.*] You are Police Magistrate for the district? Yes.

6 Nov., 1886.

Have you been long residing in the district? I have been living here since 1863.

Are you interested in land in the district? I have got a good deal of land in the district.

To what do you devote it? I principally let it to the farmers who grow cane.

May I ask what is the average rent you get? £1 an acre.

Is there a great quantity of good agricultural land in the district? In proportion to the size of the district, I should think that three parts of the land would be good rich land.

And the fourth, what would it be? Forest hills.

Is there a good rainfall in this district? Very good; I believe as much as any in the Colony.

And does it come at proper seasons for the crops? Yes.

You have had drought recently? The last two years have been the driest years that I have known.

What effect had they on the district? There was a great falling off in the yield of crops.

In what proportion? I could not form an estimate, but the crops did not suffer so much; and we did not suffer from want of grass, but from want of water.

Did the stock die in consequence? In some places, but not many. They used to drink the river water perfectly well. In one case we had cattle in a paddock for four months without water, and they got rolling fat, although we had no rain. The flats and the drained swamps had very green grass, and there were heavy dews at night.

On the whole the drought did not affect you very much? Except for the want of water. Everybody suffered from that.

You cannot say whether there was much falling off in the cane crop? I should think about one-third.

They had one-third less than they might have had if we had had more rain.

Floods.

Are you ever troubled with floods? Yes.

In what years have you had floods? The highest flood I have ever known was in March, 1864. That was 3 feet higher than any flood that has ever been in the river since.

What other floods have you had since? We used to have floods pretty well every year for about seven years, but not remarkably high ones. We had a high flood in 1870. That would be perhaps only about 18 inches higher than the floods we had every year for three or four years before.

Are the floods beneficial or otherwise to the district—do they leave a deposit on the land? They are more beneficial than otherwise.

For what reason? They flood the low lands and leave a deposit, and scour out the channel at the Heads, through the flats. The floods have had a beneficial effect in depositing silt.

Have they deposited sand in any case? No.

Have the dry seasons affected the navigation of the Tweed? Yes. The flats have got very shallow and the bar is very bad, and we think that we want some good floods to clear it out.

The entrance to the river has a sand-bar, I believe? Yes.

And there are sand-flats for 4 miles up the river? Yes, from the bar.

If these were cleared away, would there be good navigation for some distance? Yes.

How many miles? It is 25 miles from here to the Heads, and there would be good navigation up to this point.

What draught of vessels could come up here if the flats at the Heads were cleared? The river might be 15 feet deep up to within 3 miles from here. I believe there is a shallow place in the river 3 miles from here, but there would be 6 or 7 feet of water on that.

Do you think it would be possible at a reasonable expense to construct walls to scour out these flats? I think so. There are several rocky points down near the Heads, and if they were to run stone dykes from one point to the other, and thus confine the water to a narrow channel, I think that would have the effect of deepening the river.

Would that be very beneficial to the district? I should think so; it would make a wonderful difference to the prosperity of the district.

Irrigation.

Do you think that irrigation would be useful in this district? I have never seen irrigation anywhere; but from what I have heard and read of it I should think it would be very beneficial.

Do you know that there are plenty of fresh-water tributaries to the Tweed that could be used for the purpose of conserving water? Plenty.

Places from which the water could be distributed on to the low land? Plenty.

Do you think such works would add greatly to the productiveness of the soil? Yes.

In what proportion? I should say it would double the yield of crops, taking one season with another.

If such works were carried out by the Government, do you think the people in the district would pay a fair interest on the outlay for having water laid on to their farms? I do not think the district is sufficiently advanced for that just now.

If it was made plain to the farmers that it would add greatly to the yield of their land, do you think they would be prepared to pay? I have no doubt that they would then, but there is a very small proportion of land in this district under cultivation as yet. The district is comparatively in its infancy.

Is not fresh land being taken up every year? Yes; settlement is increasing every year.

Is the population increasing largely every year? Yes.

In a short time you hope that all this country will be taken up, and to see a large settlement of people here? Yes.

How long is it since this rapid influx of population and cultivation commenced? Since 1880.

Have great results been produced since then—has a great quantity of land been put under cultivation? There has been a great deal of scrub felled and burnt off.

Do they sow grass on it? Yes. When a man takes a farm in a district like this he cannot cultivate it much; he has to grow grass to feed his horses to enable him to work the land. There has been an immense quantity of scrub felled in the district during the last six years, but there would not be much fit to plough yet.

Within

Within the next few years, do you think a good deal of this will be put under cultivation? Yes.  
Then may I gather from what you have said that you think a system of irrigation would be beneficial to the district, as a rule? Yes.

Mr. J. Bray.  
6 Nov., 1886.

Mr. Gipps.] What is the rise and fall of the tide at the Heads? It varies. The spring tides are 7 feet, and neap tides (say) 4 feet.

What is the rise and fall of these tides at the junction of the north and south arm? About 5 feet.

What is it up at this township? About the same.

What is the average width of the river from the mouth to the junction of the north and south arms? I could not say in yards.

What is it approximately? Say about 10 chains from the Heads down to the junction.

What is the character of the banks? Low banks.

Well wooded or cleared? They were all covered with thick scrub, but they have been cleared.

What is the character of the scrub? It is heavily timbered, full of thick trees, some 5 or 6 feet through.

What is the average width of the river from the junction of the two arms up to this township? It is pretty well the same width all the way up—about 6 chains wide.

And of the north arm up to the terminus of navigation? That would be only about 3 chains.

Are those branches known by any other names than the north and south arm? Those are the only names they have.

When do the banks begin to get high on the south arm? From the sand flats up to the junction the banks would be about 6 feet above high-water on an average; from the junction to this township they would be about 12 feet.

The left banks rise from this all the way into the ranges? Yes; the banks here would be about 12 feet, and when you get up to the head of navigation, 5 miles further, they are about 20 feet high.

Is that on both sides? Yes.

What width is the river at that point? It divides into the middle and south arm; for a mile below navigation it keeps the same width up to that, and each arm is half of that.

What is the character of the bed? A shingly bottom.

Below that, what? Below that, from 5 miles it is sandy, and occasionally shingle.

And from that point to the mouth, sandy? Yes.

Is there a large timber trade in this district? There is a good deal of timber sent away, but I would not call the trade very large. It would be large in comparison perhaps with some other rivers. It keeps about five or six schooners employed.

How many saw-mills are there on the river? Only one small one.

Is the timber trade increasing or decreasing? If anything, it is increasing.

Where is the principal timber brought from, the lower or the higher parts? The lower parts.

What is the character of the timber? Beech and cedar, and a very little pine.

Is there much cedar left in the district now? I do not think there can be a very great deal.

Have you had any experience in the growth of the cedar at all? It is a very fast growing tree. I have seen trees about 18 inches in diameter; ten years afterwards they were 2 ft. 6 in. in diameter.

How many years do you suppose it would take from the time the tree was planted to give it a diameter of 18 inches? Twelve to fifteen years.

Would you advise the Government to encourage cedar plantations? Yes.

It is the most valuable timber there is? Yes.

Is corn-growing increasing in this district? No. People who grow crops nearly all grow cane.

Is cane-growing increasing? Yes, greatly increasing.

Can the growers sell all their crops at all times? Yes.

Has there been much land alienated in the district? Yes, a good deal. Taking the police district of the Tweed or the Richmond, I suppose there may be one-eighth alienated, or one-tenth.

What is the average size of the holdings? A great many people have only 40 acres, and a great many 640. Those that have 640 acres do not make use of it as a whole.

Do those having 40 acres cultivate the whole of it? No; perhaps they only have half of it felled. They perhaps cultivate 10 acres.

Who is the largest land proprietor in the district? Mr. S. W. Gray.

How many acres does he hold? I think he must have 5,000 or 6,000 acres.

How many acres under cultivation? He does not live here.

Is the land unimproved? He has it let.

Has much of it been improved? The river banks would be, where it is let to cane-growers.

How much of it is improved? In some places pretty well the whole of it is improved.

Do you know how many stock this swamp land will carry per 100 acres? A beast to the acre when it is drained, but that would not be all the year round. In the wet season you would have to take them off.

Could not the swamps be drained to carry off the rainfall at all seasons? Yes; but swamp land like that would be covered with water from the rise of the river, and the water would lie there for a week and would kill all the grass. If the cattle depended altogether upon the swamp land you would lose them.

You could have gates to prevent the water flowing back into the swamps? I do not think so.

Are the swamps good for agriculture of any kind? They will grow corn, but not sugar-cane.

In keeping them for pastoral purposes you do not get the best returns you could off them? Perhaps not.

Are there any wells sunk in the district? Yes.

What is the deepest well you know of? They are generally about 12 feet deep.

Wells.

What is the character of the strata? Alluvial for say 5 feet, and then clay for the remainder, and then you come on to the water which is found in a sand-drift.

Does the water rise at all? Perhaps 3 or 4 feet.

Can you get an unlimited supply? No; you can empty the well any time you like, and then you have to wait for it to fill again.

What time would you have to wait for a well 4 by 3 to fill again? If you emptied it at 9 o'clock in the morning, by 1 o'clock it would have 2 or 3 feet of water in it.

Is that the invariable experience? I think so.

What are the prevailing winds in this district? Southerly.

Summer

**Mr. J. Bray.** Summer and winter? Yes; we have more southerly winds than anything else.  
**6 Nov., 1886.** Are they pretty constant? We do not have much wind here. We have north-easterly winds now and again, and sometimes a westerly wind, but we have not more than one or two westerlies in a year. Are they sufficiently constant to apply to windmill power? I think so. I was thinking of putting a windmill up.  
 Do you know of any windmills in the district? No.  
**Dam sites.** Could you suggest any information on the subject of water conservation we have not asked you about? You were asking Mr. Black if he knew of any place in these arms where you could conserve water. I know of several. There would be no difficulty in finding places where the hills come in close, and you could dam it across and keep back an immense body of water.  
 Could you name one such place? Yes.  
 Where is it? Up the north arm.  
 What distance from the junction of the north arm with the main river? It would be above navigation.  
 What distance? 16 miles above the junction.  
 What are the natural features of the valley at this point? Narrow flats with ranges on each side. The ranges come in close.  
 What is the width of the river at that point? About 30 yards.  
 And what would be the length of a dam at a height of 50 feet above the bed of the river? A hundred yards.  
 What is the character of the banks at that point? Rocky.  
 What is the rock—is it sandstone? No, basalt.  
 Do you know if the basalt in this district appears as a flow or in dykes? I do not know.  
 What rocks does it cover chiefly—sandstone, gravel, or what? I could not say.  
 What area do you think a dam 50 feet high would cover with water? I think the water might go back 2 miles.  
 And the average width? Three-quarters of a mile.  
 Do you know if any reserves have been made for water conservation in the district? There are plenty which are called water reserves, but they have not been made for the conservation of water. They have been made to give access to cattle to water? Yes, something of that kind.  
 Would it not be well to secure some of the sites you have mentioned for water conservation purposes? Yes; some of them are already alienated.  
**Mr. Gipps.]** Do you know of any swamps in the higher parts of these creeks? No; they are on the low lands, and perhaps not more than 5 feet above high-water. There is scarcely any swamp higher than that.

THURSDAY, 18 NOVEMBER, 1886.

At Inverell.

Present:—

Mr. GIPPS, C.E,

|

Mr. MURRAY.

Rev. Robert Kirkwood Ewing examined:—

**Rev. R. K. Ewing.** **18 Nov., 1886.** **Mr. Murray.]** You are a clergyman? I am a Church of England minister at Inverell.  
 How long have you been in the district? For nearly nine years.  
 You have an intimate knowledge, I daresay, of a large portion of it? During that time I have travelled a diameter one way of 35, and in another way of 75 miles, at the rate of 4,000 miles a year during the whole time.  
 What is the nature of the country in this district, Mr. Ewing? It is generally hilly; in some places undulating, and in some portions large plains, but not perfectly flat. The soil is chiefly exceedingly rich black soil.  
 Is it suitable for agricultural purposes? Highly so; not to be surpassed for agriculture and for other purposes.  
 Is there much done in the way of fruit-growing and vineyards, &c.? Not so much as there might be if there was a means of outlet.  
 Have you got a heavy rainfall in this district? Up to the present year it has been comparatively dry weather.  
 Has the district suffered much on account of late droughts? Nothing like what other districts have suffered, judging from the descriptions which I have read.  
**Floods.** Have there been any great floods? Yes. In 1879. There were four minor floods, called "bankers," and one heavy flood that came up into the town.  
 Do you know the height of the highest one? It came into the Bank of New South Wales 3 feet, and crossed the street to the steps of the Australian Joint Stock Bank, to my knowledge.  
 Have you ever known the Macintyre River to cease running? In places it was dry—a chain of small waterholes, not running.  
 To what do you impute that? To an insufficient rainfall.  
 Does any of the water not get underground? The percolation in that respect would be considerable, but I do not think that would affect the river to any great extent.  
 Is the soil permeable or retaining? Retaining soil as a whole; it is as a rule black soil.  
 You could not say, I suppose, what is the highest flood above the ordinary summer level of the Macintyre River? The ordinary summer level is simply a rippling, and the depths of the banks at the town of Inverell would be about (say) 25 feet, and therefore the flood must have been 4 or 5 feet higher than that to have got into the bank.  
**Sites for water storage.** Do you know of any suitable sites for water storage in the vicinity, for throwing back the water for a considerable distance behind? Below Newstead station there is one.  
 Do you know of any about Broady's Plains? Yes; there are two or three places there, and also towards Ellesmere, where the country is of such a nature that it would aid in throwing the water back.  
 Do you think that a system of conservation of water for irrigation purposes would be of benefit for this district:

district: I mean conserved water in high positions that would water the lower lands? Undoubtedly, in many places, it would be of the greatest benefit; but it would be a very expensive matter, and the water would have to travel long distances. Rev.  
R. K. Ewing.

Have you seen any cases of irrigation? No. I am inclined to think that irrigation would be better carried out by private enterprise in various quarters, subsidised by the Government, because the Government water-works must necessarily be expensive to be on a scale to make them of any benefit, and the water must be carried from the ridges high up considerable distances; but smaller water-works at different parts could be constructed at greater advantage if the local proprietors were subsidised by the Government. You were a resident in Victoria, I believe, for some time: Did you see any irrigation works carried out there? No. It was since my time. 18 Nov., 1886.

Do you think it would be advisable for the Government to take in hand something which would serve as an example and would be instructive to the people, as to what might be done by irrigation? I do think so, most certainly.

Do you think the people would be willing to pay a fair share of the cost? I have not the slightest doubt. The example would be followed, and the advantages would be incalculable. By a system of water-works between Inverell and Bukkullah, about 20 miles away, there could be had a fall of 400 feet, and the land under hands is of the very richest character, every acre being fit for the plough.

What is the reason it is not now under the plough? The secluded nature of the district, and the absence of roads to market. I have known instance after instance where men would have 50 or 100 acres under the plough where they only have from 5 to 50 at present, for want of roads to get to the market.

*Mr. Gipps.*] Don't you think that the whole of the river valley should be first examined and thoroughly surveyed before allowing any such water schemes to be carried out, or before any such schemes were considered? Most undoubtedly, and I would have expected that the Government in selling the land would have reserved water-rights, with a view to that, especially after the experience of Victorian irrigation. It should be undertaken without delay.

What was the population of the town when you first came here? Between six and seven hundred in the municipality. It is now beginning to decrease, although it recently had increased.

Have you ever heard of any schemes for local water supply? I have never heard of them. The only scheme I could suggest would be to fall back on the River Macintyre a few miles further up, and to bring the water back to the town by gravitation. But in order to get that, and to get power, and, in fact, water which comes from the Tingha direction, the same system that obtains in Launceston, in Tasmania, could be carried out. Here it would require to be pumped up to the first filter-bed from the river, and probably from that to another.

How does the town obtain its present supply? From wells and iron tanks; but the water from the wells is very hard, and slightly brackish. Wells<sup>1</sup>

In what strata are the wells sunk? I really do not know, They are, however, generally 20 to 25 feet deep.

Would the ground allow of percolation of drainage into the wells? Yes, and for that account I think the wells are objectionable, especially in the lower parts of the town.

How do the poorer people get their water? In some instances from the river. They pay sometimes 2s. a barrel of about 40 gallons; and that was from the river somewhat polluted after having been met by the Middle Creek, which comes from the tin mines, and by the crossing of stock and vehicles, &c. My experience is that epidemics are not so severe here as elsewhere, but I could not say if that could be in any way attributable to the water supply.

Has any provision been made for the drainage of the town? I believe that Dr. Segol proposed a plan of a rather comprehensive nature. He took everything of the nature of drainage to the river below the town. I think his scheme is still in the hands of the municipal corporation.

Do you think that the corporation would be willing to pay certain rates for a water-supply? I think think that a rate should be imposed; and I do not think that the inhabitants would object to pay one. It is, most undoubtedly, essentially necessary.

Do you know of any springs in the district? I know of several in various parts, but they would not be sufficient unless opened out. I know of many permanent ones, but of late years they have fallen very much.

Do you know what the character of the rock hereabouts is? Basalt and granite chiefly.

Are the winds pretty constant here in summer and in winter? Yes. The prevailing winds are southerly and northerly. During the dry season they were chiefly westerly. Winds.

Do you think they are sufficiently constant to allow of windmills being used to advantage to the district generally? Yes. There is one at Newstead, and also one at Rob Roy. They pump much more than is wanted, and they must be frequently thrown out of gear. The diameter of one of the wings is about 6 feet, and of another probably not more than 3 feet.

Where is the site of the Newstead proposed dam? It would be about a mile below Newstead, on the river Macintyre, about 16 miles from Inverell.

Do two spurs approach one another at that particular point? Yes, sufficiently near. From one side of the range to another would be about 100 yards.

What distance do you think the river would be thrown back by a dam (say) 50 feet high? If it were thrown back more than 1 mile it would be thrown back on to the Newstead Estate. I do not know anywhere where you could throw it back 15 miles; but a dam of 50 feet would throw back sufficient water to destroy the most valuable portion of Newstead Estate. It would cover a large valley fully 5 miles long by 1 mile in width, but it would take the very heart of the estate out, including the homestead.

Could the water be led away from that point easily to the district for irrigation purposes? Yes; but it would be a very expensive undertaking. I have long been convinced that irrigation for this district must be in disjointed, local pieces, and subsidised. Careful engineering and surveying would be necessary before anything.

Could you suggest anything yourself that we have not touched on? Only the supply for the town, and I don't think that would be a very expensive one. It would, however, be an unspeakable boon to all concerned; and as for the rate upon the people, I don't think there would be a dissentient voice in the place.

Mr. George Nott examined:—

Mr. G. Nott. *Mr. Gipps.*] What is your occupation? I have been well-sinking and mining for the last eight or ten years, and I have had large experience all around this particular neighbourhood of Inverell.  
 18 Nov., 1886. In which direction have you sunk the principal number of your wells? Principally within 2 or 3 miles  
 Wells. of the town, mostly for the use of farms and houses.

What is the average depth you have to sink before obtaining water? The average depth on the town flat was 25 feet.

What is the character of the strata you have generally passed through? The whole of it is nothing but drift.

What did you bottom on? Nothing; only common river drift.

How did you secure your wells? By brickwork.

Have you invariably got an unlimited supply of water in your wells? Invariably. I never could pump any of them dry.

Where do you think the water is derived from? I think it comes from springs in the hills, because it is so hard.

What is the greatest depth of any well in which you have sunk? About 70 feet, on Onus's property, about  $2\frac{1}{2}$  miles southward from Inverell.

What strata did you pass through there? It was nothing but a run of drift and sediment in different places. Some of the basalt was very hard.

What was the character of the drift? Chiefly gravel, with 3 or 4 feet of sandstone. It is softer on the bottom than anywhere.

Did you not get water before coming to the 70 feet depth? Only in cutting through a few inches of soft drift we came across. The water I am getting in that well is from the drift soakage in question.

How is that well secured? It is bricked from about 32 feet from the surface downwards. The water stood pretty well for some time, but since that time it has almost all gone away. I take it to be a run of drift that has at some time or another come from the Middle Creek, and the soakage has by degrees gone away.

What is the shallowest well which you have sunk in this district? About 23 feet, near the town. I did sink one 42 feet deep on the Dog Trap at Byron's, about 4 miles from this town, not very long ago.

What strata did you go through? At 25 feet we went through a kind of floating bar of rock, as near as I could make out, and then we came upon basalt, in which we got any quantity of water. The ground is a kind of honeycomb. Some of the water which was taken out, it was alleged, would kill flowers in flower gardens if it was sprinkled over them. I have, however, tested it often, and I have found it a very pure, clear, nice water.

Has the engine ever reduced the depth of the water there? I do not know.

Did the water rise in the well? No; not from where we first struck it.

In any of your wells, has the water ever risen very quickly? Yes. In some instances it has preciously nearly drowned us out. I have seen it rush up like a cannon going off when I was sinking a shaft to try and get tin.

What was the character of the strata of the rock which you were then cutting through? Chiefly hard basalt or granite—a sort of floating drift; in fact, the water rose fully 15 feet in the well, and remained at that height for at least fifteen months. In another well it rose 75 feet, and all the tools are still buried in it. That place was about 7 miles south-east from Inverell, on the Armidale Road. The depth of one shaft was between 150 and 160 feet. The sinking, I believe, was all very good. Basalt, decomposed, is met with all over the district.

Did you strike water before you came down to that depth? No; the water rushed on them as quickly as it possibly could.

Do you know of any springs, large or small, in the district? Very few permanent springs exist that I know of here. There is one on Campbell's ground, but it has never been opened up. In one well which I sank on the Big Plains, 20 miles below Moree, the water rose at a depth of 90 feet in Williams's fattening paddock, within 2 miles of the Gwydir River. The character of the country between that point and the river was that of simply a large plain. The water rose 30 feet in the shaft. A man selected two thousand (2,000) acres there, and watered sheep with the water.

What was the character of the rock in that particular well? There was no rock in it at all. Every now and then there were 6 or 8 feet of black soil, and now and then gravel drift, sand, &c. It was all made ground from top to bottom.

Did the water rise or fall during rainy seasons? I don't know.

Was the mouth of the shaft much above the bed of the Big River? I don't think it was more than 3 feet.

Did you notice if there was any current? I could not notice, the water drank too quickly.

*Mr. Murray.*] Do you know of the existence of any irrigation works hereabouts? No. I know that one person has erected a windmill; but I don't know with what results. The water I spoke of was tested by some clever man or another in Sydney, some gentleman connected with the Government, I think; but all I know of it is that it did splendidly on the barley paddocks. The Chinamen use it for their vegetables with splendid effect.

Do the cattle thrive well on it? Yes, very well indeed.

Have any of the wells a sufficient supply to admit of the use of a windmill, and to supply a large quantity of water for stock? A great many of the wells in this district could not be pumped dry, even with a windmill. I don't think there is any difficulty in getting sufficient water for all the stock in this district. Have wet or dry seasons any particular effect upon the wells? I don't think so. The supply is chiefly a filter bed itself, in underground drifts.

*Mr. Gipps.*] Are the wells sunk on plains, or are they put down on the hills? Almost all of them are put down on the plains, and many of them at long distances from the rivers and the creeks.

About what height above the river level? Some of them would be 15 or 20 feet, but not more.

Mr.

Mr. Joseph Wessey Moore examined:—

*Mr. Murray.*] You reside at Inverell, I believe? Yes; I have lived here during the last fourteen years, and I am a builder and a contractor. Mr.  
J. W. Moore.  
You have also been an alderman and the Mayor of the town? Yes. 18 Nov., 1886.  
You know a good deal of the surrounding district—its watercourses, &c.? Yes; I have travelled it considerably.

Is Inverell a place that suffers much from want of water? No, I think not. The rainfall is pretty regular, and comes at seasonable times, on the whole.

Have you known the crops to suffer from want of a sufficient downfall of rain at any time? No, never. Then you would not think that there was any necessity for a general system of irrigation? I have not the slightest doubt it would improve the fruit crops very much, but I have known an abundant wheat crop in very dry seasons indeed here.

With respect to a water supply for the town of Inverell, do you think that it is a desirable thing? Yes, most decidedly. Our water supply is at present extremely impure. Our population is at present more than 2,000 in the municipality.

Can you tell us the number of houses? I suppose about 400 or 500.

What is the ratable value of the property? Our rate is £800, at 1s. in the £.

Do you think that a cheap supply of water could be afforded to the population from some of the natural reservoirs which exist? Yes; I think so. To make water serviceable to the town you would require to have a reservoir on one of the hills; but I think the water could be conducted to a hill sufficiently high near the town by its own natural gravitation. A very suitable site would be near Dr. Knowles' residence, on a reserve on the Glen Innes Road.

Could any water be taken from Middle Creek, or from any other creek? Yes. The Middle Creek water is purer than any other, if the sludge that comes from the mines was got rid of. The water would also have to be brought from further up than the wool-washing establishment near Inverell.

Do you think that it would be a boon to the people and to the town generally to get such a supply, and do you think the people would be prepared to pay a reasonable sum for the requisite outlay? I don't think that any of the inhabitants would object to pay a reasonable rate for water.

Do you know of any places suitable for water-power to be used in the district, say for sawmills, for factories, or otherwise? No doubt there are several suitable positions for works of that sort. In fact I am quite sure of it, provided that the water were got from reservoirs.

Do you think that it would be desirable to have surveys made for that particular purpose? I have not the slightest doubt but that it would be a service to the district, if the thing could be kept regularly.

The town has suffered occasionally from floods, I believe? Yes, slightly, at times. Floods.

Do you think that reservoirs on the heads of the Macintyre River would, in times of floods, retain a large quantity of water, and prevent damage? Yes. One of our greatest floods was caused by the breaking away of the tannery dam. There is that danger always remaining to the town.

Have you any embankments to prevent such a danger? No. The Government have never considered the question, although their attention has been drawn to it several times.

*Mr. Gipps.*] Has any application been made to the Government relative to the water supply of the town? I think not.

What is the exact position of the reservoir site which you suggest? There is a water reserve on the Glen Innes Road, about  $\frac{3}{4}$  of a mile south-east from Inverell. It is on the S.E. portion of the town proper.

Is the water in Middle Creek sufficiently permanent for a water supply of the town without storage? I don't think so. It very often goes dry.

Is there any position in which water could be conserved? Yes; above the tannery dam, about 3 miles from the township.

What area would a 40-foot dam at that particular point cover? I suppose it would throw the water back for a mile square.

What would be the length of the dam on its top, do you think? 300 or 400 yards, I should imagine.

What is the character of the banks of the creeks at that spot? Granite, also the bed of the creek.

Is that high above the town? Yes. Probably 500 or 600 feet.

Then water conserved there would be of great advantage for motive-power, as well as for a general water supply? Yes. It undoubtedly would be.

What would be the area of the watershed of Middle Creek down to that point? 8 or 9 miles wide by about 25 miles long.

What are the principal crops cultivated in this district? Wheat and hay.

What is the largest field of wheat per acre that you have known here? Forty-five bushels.

And what is a fair average? About 21 bushels, and in dry seasons about 15.

Consequently, if the ground could be irrigated it would be a great benefit? No doubt it would be.

Has lucerne been tried here? Yes, but it does not grow very well. It requires more moisture than Lucerne.  
we can get in the district; still I think it would grow well with irrigation.

How many tons per acre could be cut, do you think? About 3 tons.

And how many times per annum? That would depend upon the seasons. In the best seasons it would be cut about every five or six weeks. It sells readily at from £2 10s. to £6 per ton anywhere here.

Is there much fruit grown in this district? No, not so much as might be grown, or as could be consumed here. I think that a fruit crop would be a very payable one.

Is there much ground under vineyard cultivation? Yes.

What return do the vignerons get per acre? About 350 gallons of wine. That sells at about 5s. a gallon.

What kind of grape do they chiefly grow here and in the neighbourhood? Hermitage, Malbec, Madeira, Shiraz, Reisling, Tokay, &c., are the chief wines.

Have you ever known any loss from blight? Yes; there is always a slight percentage of loss from *oidium*. It is worst in the wet seasons.

Mr. J. W. Moore. Are the grape crops better during dry than in wet seasons? The crop is heavier in the wet seasons, but the quality of the wine is better in dry weather, so that it is equally balanced.

18 Nov., 1886. What is the greatest flood that you have known in the river? The highest that has occurred within the memory of any living inhabitant went fully 20 feet up the branches of a tree in the bed of the river. The water went all over the town in 1872.

What was the average depth that covered the town then? At the foot of the main street I made a mark, showing 2 feet, on a doorway.

What was the width of the river during the height of that flood? Generally speaking it was confined within its banks, and in other places it broke over and rushed into the town. The danger could be easily overcome, but the municipality was not in a financial position to go on with the work.

What is the average width of the river bed? About 100 yards at the top of the respective banks. At the ordinary water level it would be about 20 yards. The height of the banks would average about 20 feet.

What are the characteristics of the banks? Basalt formation.

Does the basalt show on both sides, and also in the river bed? Yes, it does.

Have you ever known the river dry here? Yes, frequently. Sometimes for three months.

Are there any dams on the river? None that I know of.

Dams. Do you know of any dams in the district? Yes; there is one in Middle Creek called the Tannery or Wool-washing. It is about 6 feet high, and it throws the water back about 300 yards. The length of the embankment would be about 40 yards or so.

What is the embankment constructed of? I believe it is logged, and banked with earth. It does not leak at all, and it is used for wool-washing and tanning purposes, &c.

Do you know of any other dams in the district? Yes. There are several dams made in the back away from the river, from natural watersheds. I have a dam at my own vineyard 700 feet above Inverell, 5 miles from the township, upon a gully.

What is the height of its embankment? 6 feet, as nearly as possible.

How far back does it throw the water? It is only a very small dam.

Do you know of any large dams in the district which could conserve any large quantities of water? There is a good sized one on Myall Creek Run, 12 miles distant from Inverell. It is about 6 feet deep, on the average.

How far back does it throw the water? It would probably cover an area of 200 or 300 square yards.

Can you suggest any information for the Commission which we have not elicited? I think that it would be a very good thing if the Macintyre River were properly surveyed. I am quite certain there are many sites at which water could be thrown back into valleys and conserved at a very moderate cost if the place was well examined. Water could also be applied for irrigation. There are many places between the head of the Macintyre and Goondiwindi. That will be the most important part of the country after this district is left altogether.

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Mr. Duncan Sinclair Anderson examined:—

Mr. D. S. Anderson. Mr. Murray.] Your profession, Mr. Anderson? I am a grazier, as we are termed.

18 Nov., 1886. And you reside at, and own, Newstead Station? Yes.

How long have you resided there? For about seventeen or eighteen years.

You know the district pretty well, then? Yes, I certainly do.

In the course of your experience of the district, has the rainfall been on the average sufficient? With some exceptions.

Have you ever suffered much from want of rain on your run? No, not much.

You have never lost many sheep or cattle from want of water? No.

Have floods been frequent in the district? Not to do any harm. The creeks and the river have risen, but it has been nothing to speak of. The recent floods have been the severest for the last ten years.

Have you had sufficient water in the creeks for your stock always? Yes, at all seasons.

Is there much agriculture carried on in your district? No; very little, indeed.

Then you do not think that there is any necessity for the conservation of water, either for pastoral or for agricultural purposes? I think it would be almost impossible to make dams, as the creeks are so steep and the falls so great. There is hardly a hole in the creek now; it is cut into one regular deep channel.

Outside of your district, do you think that it would be possible to conserve the water? Doubtless it would be possible. The country is so ridgy that the water runs off it at such a tremendous pace that heavy rain at once causes floods.

Do you think it would be an advantage to have storage reservoirs which would pick up the flood waters and prevent floods? Of course it would be; but there is no real damage done till the storm-waters get down to Goondiwindi and thereabouts.

Do you know that large quantities of stock have been lost of late through want of sufficient rain? Yes, undoubtedly I do. I am only too well aware of that fact; but for my own particular part of the country I don't think the dams necessary.

Is there anything that strikes you yourself, Mr. Anderson, which you think would be of advantage to the Commission? No, Mr. Murray, I don't know of anything. You see that the storm-waters run down so quickly that floods are hardly ever known here. I scarcely know of any direction in which water conservation could be applied in our direction. I fancy it would be very difficult to do anything with flood-waters when they come down, for they travel at such a rate as to carry away culverts, no matter how strongly they may be built. An immense body of water comes down with every flood. In 15 or 16 miles from our town the fall of the river Macintyre must be something enormous.

How many miles is it from your station to the head of the Macintyre? From the junction of King's Creek to the head of the Macintyre is about 15 miles.

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Mr.



Mr. Peter Colin Campbell examined :—

*Mr. Murray.*] Your occupation, if you please, Mr. Campbell? I am a grazier, residing on the Inverell Station. I was born on the station, and hence I know the whole of the surrounding districts pretty well. As a rule, have you a fair rainfall, sufficient, I mean, for the general requirements of the district? Yes, as a rule we have. Mr. P. C. Campbell.  
18 Nov., 1886.

Have you suffered much from droughts? No. We have had to travel our stock only twice. I think the first occasion was in 1874, or probably before that year; but at all events it was about eight years ago. Did you suffer much then for lack of water? We did not, because we had plenty of it stored. We suffered more from want of grass. Want of grass.

About how often have those dry seasons occurred here? Only twice that I can remember.

Do you think that a supply of water could be conserved to prevent a repetition of occurrences of that kind, and also to irrigate the land? I really do not know; I cannot say.

Have you suffered much from floods in the district? No; we have not suffered much from that cause. Of course the banks of the river have been slightly affected. Floods.

Can you tell us the years in which the heaviest of these floods occurred? The flood a month ago was one of the highest we have had for years. There was a great flood in December, 1873, but I do not remember what height it was above the ordinary summer level.

This is a very large agricultural district, I believe—is it not? Yes, extremely. I think that water could be laid on to it with advantage. I have never seen irrigation carried out. I saw it attempted by Mr. Cruickshank, at Byron Station, but the country thereabouts was not sufficiently level for it.

What are the crops usually grown here? Wheat, maize, oats, but particularly wheat, and a good many vineyards.

Can you tell us what the average crop of wheat is in the district? I think about 20 or 25 bushels to the acre, and on some farms 30 to 40; but probably 25 is a fair average.

What average would you give for hay? About 2 tons per acre.

Do you grow much lucerne in the district? Yes, we grow a good deal. Lucerne.

How many cuttings do you get per year? We simply cut what we require for our stock, and generally one cutting will suffice us. In the showery season we cut it once in about every six weeks. Irrigation would undoubtedly be a grand thing for the lucerne paddocks.

Do you know of any site on the Macintyre River or its tributaries where water could be conserved for irrigation purposes? There are several places, particularly above Ellesmere and at Byron.

*Mr. Gipps.*] How many sheep to the acre can you keep on lucerne all the year round hereabouts? That would entirely depend upon the season. At the present time we could manage about 20 to the acre. We require about an acre of grass land per sheep, as a rule, all round.

What are the principal natural grasses? We have a good deal of blue grass and kangaroo grass, which lasts all the year round.

Any kind of herbs, too? Yes, but I cannot tell you the names or describe them. We have trefoil and carrot, for instance. We also grow a little wheat for our own private use.

What does that generally yield? I have seen, on the average, about 25 bushels to the acre, taking all the seasons round.

What crop would you get in the very dry seasons? Scarcely any.

What wheat crop would you get in a season like the present? About 25 bushels per acre.

Are there many small farm-holdings taken up in the district? Yes, very many—averaging from 40 to 500 acres each. Hard-working men manage to make a living, I think, growing wheat and maize.

Has there been any dairying tried here? Very little that I know of.

Have you any wells on your property? No.

*Mr. Murray.*] Are there any good sites at Swanbrook for reservoirs to be had? No, I think not. The banks are, as a rule, too low. I am aware that there is a great volume of water coming down Swanbrook, but I have seen it cease running for miles last year. It, however, generally runs all through the year. The water is brackish.

Does it injure the vegetation? No; and stock do well on it. There is a good deal of lime-water in it.

Mr. William Wilberforce Fraser examined :—

*Mr. Gipps.*] What are you, Mr. Fraser? I am Police Magistrate and Warden of the district.

How long have you been resident? Since the year 1853.

Do you know anything relative to the tributaries of the Macintyre or Gwydir Rivers—do you know where they rise at all? Yes. I know King's Creek and Waterloo Creek; also the head of Swanbrook, which are each tributaries. They rise in a spur of Ben Lomond. The Waterloo Creek runs into the Beardy Water, which is afterwards called the Severn River, and then it comes into the river Macintyre. What is the general character of the country at the sources of the Waterloo? Broken country, for the most part. Mr. W. W. Fraser  
18 Nov., 1886.

And of the bed of the creek itself? Rocky.

Has it any steep fall in it? I think not. It has a rather steep fall down.

Do you know of any sites on the creek that would be available for use as impounding reservoirs? Yes; but I think that impounded water would spread out and encroach very much on freehold land. There is one site on what is called the Battery or Swanbrook Plain. I do not know so much about Waterloo Creek, but there is one good place near the Sugarloaf. Reservoir sites

What would be the length of a dam, say 50 feet high, at that position, from spur to spur? Probably some 10 or 12 chains.

How far would it throw the water back? It would throw it back a long distance, and, the banks being very low, it would spread over a large area of country.

Then you would recommend that that site should be examined? It might be advantageous. Another place is about 2 miles from the junction of Swanbrook Creek with the Macintyre River, about 3 miles from Inverell.

How far would a dam 50 feet high throw the water back there? Probably more than a mile. It would not spread out very much, but it would be deep all along. On one side it would not keep any water at all, as the hills are very abrupt. Do



Mr. W.W. Fraser. Do you know anything relative to the sources of the Severn River? Not much. There is the Beardy and other creeks. There is one place on the plain, near the Glen Innes racecourse, which would throw water back for a long distance, up to Stonehenge.

18 Nov., 1886. Could water be let away with advantage from that place with the object of irrigating the country? On the left-hand side it could be led down by Furracabad, and it would then irrigate the whole country.

Do you know anything of the sources of the Gwydir or the Bundarra River? There is Booralong Creek, Sandy Creek, George's Creek, Limestone Creek, New Valley Creek, and Cope's Creek.

Do you know of any position for a large impounding reservoir on any of those particular creeks? No; I do not know much about the creeks.

Would not there be sites on the tableland itself? I should certainly think so.

Would a reservoir there be of much importance to the tin-mining industry? Yes. At Tingha an agitation was on foot some time ago for taking a supply of water from Limestone Creek down through the centre of the field. The miners asked the Government to assist them, but nothing was done.

Are there any positions for storage reservoirs on the Limestone Creek? I should think so, but I am not acquainted with the locality.

Would there be a large area of mining land available for sluicing work? Yes.

Would you recommend that the creek be examined with a view to that purpose? A good deal of water could be conserved at the spot spoken of, but I am not prepared to say whether it should be examined officially. There are a large number of tin reefs on the ground there.

Irrigation. During your experience, have you known any droughts which have been actually destructive to the crops? Yes; I have known wheat to go down to (say) 12 bushels to the acre. That was the lowest that I remember. I believe that if irrigation was brought to bear fruit-growing and farming on a larger scale might be carried on, and the crops could be at all times relied upon.

Do you know any position on the Macintyre itself in which water could be conserved in any large quantities? I think a little above Inverell, on Broady's Plains.

How far would a dam of (say) 60 feet throw the water back? Probably 3 or 4 miles—at all events to the foot of Broady's Plains.

Would it cover a large extent of flat country there? Yes.

How far would that be from Inverell? Probably a little more than 3 miles.

What is land worth in this district—say within 5 or 6 miles from Inverell? Unimproved agricultural land is worth about £4 to £5 per acre, and improved from £7 to £8.

Could water be easily diverted from such a dam to cover the plains stretching below? Yes; it could be led away.

Do you know Ottley's Creek at all? No; I only know its name.

What is the principal crop in this district at the present time? Wheat. Maize is also grown very extensively, and the latter averages probably about 30 bushels to the acre. Sometimes on exceptionally good land it has run up to as much as 40 bushels.

What effect had the dry seasons on the maize? The cobs don't fill.

Is much fruit grown in the district? Not so much as the district is adapted for.

Do you think that windmills could be utilized with advantage hereabouts? There are several in the district, but I don't know whether they are being used for irrigation or otherwise. They are supplied with water from wells, the majority of which are permanent ones.

Do you know the style of mill which is used in the district? No.

What are the principal fruits grown here? Principally grapes, but apples are coming into demand. They grow well, and to a large size. A number of people have gone in for them, and have found the venture very successful.

What crops do grapes produce per acre? I cannot give an opinion, but I have been told that a good vineyard is worth from £40 to £50 per acre.

Tin-mining. Mr. Murray.] In dry seasons, have they not had great difficulty in moving the stacks of wash-dirt at the tin mines? Yes. It has sometimes to be carried 2 or 3 miles after having lain for twelve or eighteen months. It had then got extremely hard—almost as hard as before it was first taken from the ground. There are places on Limestone Creek where water could be conserved, but I cannot say what the requisite length of the embankment would be.

Is there usually a good supply of water on Cope's and Nuvally Creeks? I think so. The latter is a tributary of the Barwon River. I should think that the water near Nuvally head station could be diverted to Cope's Creek? If there was a continuous supply of water it would add considerably to tin-mining. As a matter of fact, owing to drought, we have lost the bulk of the European tin-miners.

The farmers could also be supplied? Yes, at one and the same time.

Do you think it would be desirable for the Government to investigate the matter? I most certainly think so. There is a very large revenue to be had from the tin-miners when the mines are in full working order.

Inverell, as a town, has benefited very much by the tin-mines? Yes; and recently tin-mining is being carried on all round the town. If it were not for the tin-miners the farmers would be very badly off, and they certainly would have to export their produce.

Does the granite country contain a great number of springs? Yes; a great deal of water could be conserved also from storms. As Mining Warden of the district, I have a good knowledge of it.

Could you give us any suggestion of interest to the Commission, sir? I think water is the main thing. Of course if that fails the men are able to do nothing at all.

Mr. William Harvey Readett examined:—

Mr. W. H. Readett. Mr. Murray.] You are a grazier? I am a grazier, residing at Bundarra.

18 Nov., 1886. How long have you been acquainted with the Inverell District? I suppose for about eighteen years.

You were formerly a surveyor for the district? Yes, at one time I was.

What is the nature and character of the soil in the surrounding districts? I think it is principally basaltic and black soil.

Is the rainfall sufficient, in your opinion, for the district? I think so, so far as this part of the district is concerned—at all events for pastoral pursuits. Do

Do you know any good sites on the Macintyre or its tributaries where water could be conserved lower down for distribution on the dry country? You could get many good sites on the banks of the Macintyre. There is one place at a spot called Red Cliffs, about 9 miles down the river from Inverell. A dam could be constructed there to advantage. One about 15 or 20 feet high would throw the water back a distance of from 20 to 25 miles.

Mr. W. H. Readett.  
18 Nov., 1886.  
Reservoir sites.

Would that sheet of water be wide in its extent? Of course it would be confined to the river. The outside banks are, as a rule, very good.

If such a reservoir were constructed, could the water be conveyed from it to advantage lower down the Macintyre River? I should think so; in fact, I should most certainly think so. The country falls all the way down, and there would be no ridges or anything of that kind which would have to be got over. Could you name some of the country that might be used to advantage in that way? There are parts of Blue Nobby Run, and Yetman, Tucka Tucka, Bunal, and in fact you could take the water down as far as you liked on the west side of the river. The river's width there would be at the most from 7 to 10 chains. It has very good banks of good sound rock, and the bays could also be formed on rock. These could be put down at a very small expense.

Do you know any other sites like that? The Macintyre then comes down with nothing very remarkable till you get to the falls just near Wallangra Station. A dam similar to the one at Parramatta would dam up enormous floods.

Do you think that would encourage grasses, &c.? Undoubtedly. It would be of immense advantage to the cereal-producing qualities of the whole district.

You have seen all the high floods in the Macintyre—what is the highest that you have seen? I think the one in 1869. There was another shortly afterwards, in 1873, but I was away then. I should say the 1869 flood was from 20 to 30 feet above the high-water level.

Floods.

*Mr. Gipps.*] Does the Macintyre bring down any large quantities of silt? Yes; but it comes down so quickly that the water rolls it away. I have known of several small dams across the river, but these were principally put up for sheep-washing purposes. One was constructed of stone and boulders. It threw the river back only to a perceptible distance; probably not much past the waterhole adjacent to it. I don't know of any dams on any of the creeks running into the Macintyre.

Have you kept any rainfall records? No; but the statistics are very easily got at.

Have you any wells on your property? No; we get our water from the creeks, which are always permanent. Is there any further information that you could adduce? I might point out that the country to the west is a terribly dry one, and irrigation would be of very great advantage, particularly between the towns of Inverell and Warialda.

Can you suggest any scheme for distributing it? The only thing I could suggest would be a very large tank indeed, and then pump the water into a race.

Do you think that the Macintyre could be diverted into Ottley's Creek? It doubtless could be done, but Ottley's Creek, as a rule, is a very bad holding creek. It is in among the limestone country.

Do you know any positions on Ottley's Creek suitable for water conservation? I should not like to say without first making a proper examination.

*Mr. Murray.*] You know that in wet seasons a vast quantity of water runs away from the Macintyre which could be utilized to great advantage? I do. The advantage could not be properly estimated.

#### FRIDAY, 19 NOVEMBER, 1886.

Mr. George Arthur, licensed surveyor, examined:—

*Mr. Gipps.*] How long have you been in this district? For just eight years.

What part of it can you give information upon? In connection with county Arrawatta chiefly.

Then you have a general knowledge of the whole of the watercourses flowing into the Macintyre in that district? Yes; I know almost the whole of them.

What is the general character of the watershed of these tributaries? It is mountainous from Ashford eastward as far as the Dividing Range.

About what distance would that be? About 25 miles or so.

What is the character of the country below? It is level.

Is there no rolling country at all? There is a little undulating country between Wallangra to the west and to the north-west of Ashford, up to Yetman, where it is pretty level.

What are the principal sources of the Severn River? Frazer's Creek is one main tributary.

Where does that creek rise? Up in the King's Plains.

What do those plains consist of? High tablelands, about 2,500 feet above sea-level.

Do you know of any position there at which water might be conserved in large quantities for subsequent use? On a portion of the King's Plains Run there seems to be an almost unlimited supply of water from the surface.

Do you know of any position there where a dam of 50 to 60 feet would throw back a large quantity of stored water? There are a great many such places.

Would you recommend that an examination of King's Plains and of Frazer's Creek should be made? An examination would prove what I say.

Do you know of any position for a reservoir at Frazer's Creek? Not for one of any particular use.

What is the length of Frazer's Creek from its source to its junction with the Severn River? About 60 miles, following the course of the creek.

Is it a permanently watered creek? Yes; it has very rarely stopped running.

What is the width of its bed at the junction of the Severn River? About 100 yards.

What is the height of its banks? About 30 feet on the average.

Where do its banks commence to get hemmed in and confined by the ranges closing on either side? About Bukkullah, or at Nullamana.

Is there any place between Bukkullah and its junction available for the large impounding of water in a reservoir? There is a very suitable place where the main road from Strathbogie to Bukkullah crosses.

Reservoir sites.

Do two spurs approach one another there? Yes, at that particular spot.

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Mr. G. Arthur.  
19 Nov., 1886.

Mr.  
G. Arthur.  
19 Nov., 1886.

What would the length of a 60-foot high dam be at that spot? About 75 yards, I should think.

How far would it throw back the water? Quite a mile, at the least.

About what area do you think that it would cover with water? About 10 acres of land.

What is the character of the Severn River after junctioning with Frazer's Creek? Fairly level on either side for a distance of about 15 miles; then fairly low banks. On the west side it is very precipitous; on the east principally sandy ridges, also on the right, when about opposite Yetman.

Do you know of any position for conserving water between the junction of the Severn River with Frazer's Creek and the junction of the Macintyre with the Severn? No, I don't know of any.

What is the principal source of the Macintyre River of which you could give the Commission special information? Bannockburn.

Is that creek a large one? About a chain across, and water can generally be found in it by sinking a few feet at almost any part.

Where does it take its rise? About 6 miles above Bannockburn Station, in the ranges which run about 6 miles north of Inverell.

What is the character of these ranges? On the east the country is principally level, of granite formation. On the west high basaltic ridges run.

Do you know of any position in Bannockburn Creek for conserving water? It could be conserved at the crossing of the main road from Inverell to Graman, as water is close to the surface.

Could a large reservoir be constructed there? Yes. It is a very good place for one, being the junction of two main roads—one to Reedy Creek, and the other to Queensland. It would be, however, very shallow, because it would not be confined.

Do you know of any position on the Macintyre at which water could be advantageously conserved? I don't know of any place on the river.

Water reserves.

Are there many water reserves in your district? A great many; some, as a matter of fact, where there is no water at all.

Could you describe the position of some of the principal ones of these? There is one at the junction on of Frazer's Creek with the main road running from Inverell to Emmaville.

On what account was that reserved? I can't say. There is always a plentiful supply of permanent water there.

Do you think it would be advisable to construct a reservoir there? No, I don't.

What are the next reserves? There are two in parish Backland, on Frazer's Creek, of 240 acres each. These do not adjoin each other.

Would there be a good position in either of those places for a large conservation of water? I mentioned one of them already. There is permanent water a little below the surface, fed by the high Buckley Mountains of the Dividing Range.

Are there any other large reserves? There is another one, a very large one, at Pindari, consisting of about 1,600 acres, on Frazer's Creek.

Would that be a good position for conserving water? Not to benefit the public, because the creek there is almost inaccessible. If water could be conserved further on it would benefit the public slightly, because there is not far off an almost unlimited supply.

For what purpose was so large a reserve laid out at that place? It was originally made for a water reserve, and was one of the very earliest reserves.

Do you know of any other part? There is a particularly dry part between Wallangra and Yetman Station, where one can hardly get a drink of water.

On what creek is that? There is no creek there; it is open box forest. I would suggest a dam on or near the main road. There are several good positions.

Do you think that water could be diverted from the Macintyre, or from some of its various branches? No. I would propose to supply it from the ordinary watershed on the east.

What would be the area of the watershed that could be availed of? Quite a mile each way.

Do you know of any point on the Macintyre River from which its water could be diverted into Ottley's Creek? No, I don't. Ottley's Creek is a very important creek.

What is the character of the bed and the banks of it? Sandy on either side, with here and there a few basaltic ridges.

Then you do not think it would be advisable to divert the Macintyre River into Ottley's Creek? No, I do not. I have no doubt suitable places could be found in which to store enough water.

Do you know of any position for a dam there? Yes; there is a point near the Highland Plain, about 6 miles from Mr. John Smith's Tucka Tucka main station.

Would a dam at that position throw back a large quantity of water? Not for any great distance, because on the east side it is principally flat, while on the west it is very ridgy; therefore it would be very shallow if thrown back.

What is about the fall of the creek? Very gentle; quite 2 feet to the mile.

Is there a good position for the construction of a 60-foot dam there? A dam certainly could be constructed there, but it would be very shallow, from the reasons which I have stated. The spurs would admit of such a dam, but it would not be a very good position for one.

Do you know of no position at Ottley's Creek where two spurs approach each other suitable for a water-storage reservoir? No; I know of none.

What is the height of the banks of the creek? Only about 4 feet on an average.

And you say they are of a sandy character? Yes; with here and there basaltic ridges.

Do you think it would be possible to divert any portion of the Macintyre along the heads of Ottley's and Cox's Creeks so as to command a large area of country below which might need irrigation? The country would not admit of it, being generally too ridgy and rocky.

Do not the hills gradually give place to rolling country as they go into the plains? From Wallangra they do, but I do not know of any suitable place where their streams could be diverted into Ottley's Creek.

Do you know of any wells in the district? There is one about 3 miles from Highland Plain. It was sunk 100 feet deep without getting water, and on going a few feet further down the water rose over the surface. It was overflowing the surface recently.

Do you think that an artesian supply could be struck there? I do. At the spot I mention it came so fast that the men lost all their tools in the shaft.

You

You do not know whether the level of the water is still permanent? I cannot say. It was far below the actual bed of Ottley's Creek where the water was struck.

You do not think, then, that the surface water can have any connection with it? No; it is not likely. Do you know of any large springs in the district? There is a very important spring close to the main Dumaresq River, in the parish of Gonian and Texas, about 6 miles north-west of Bonshaw.

How far from the left bank of the river Dumaresq? About 4 miles, approximately.

What height above the bed of the river? Not more than 30 feet. They are fed from a lot of sandhills, which are to be found immediately to the west.

Have they been opened up at all? No; just simply scooped out by the squatters; and I think an unlimited quantity of water might be readily conserved from them.

Do you think it might be diverted to play upon the surrounding country? Yes, because there is a gentle slope down from them. It would benefit the country very considerably. I had them reserved some time ago, and they are therefore now on water reserves.

Can you give any information with regard to the upper sources of the Dumaresq River? No.

Have you known irrigation to be tried in any part of the district? No.

Do you think that it would be beneficial? I am sure it would be. It seems to me a pity that right throughout the district selectors, instead of being compelled to erect useless fencing, are not allowed to put improvements on their holdings in the way of water, &c. The internal fences are of no use to themselves or to the country, whereas water conservation would benefit themselves and the Colony at large.

Are the winds pretty general here? Yes; I have seen a few windmills, which are of great utility in pumping water.

*Mr. Murray.*] The tanks and reservoirs you pointed out should be constructed more for the supply of travelling stock than for purposes of irrigation? Yes, with the exception of one.

Do you know the nature of the country that that reservoir would command? Yes; a large tract of country which is at present simply a barren waste. With water it would carry twice as much stock as at present.

Have you seen any irrigation carried out at all? No, not in this country.

Do you carry out any irrigation for garden purposes at King's Plains? No, not up to the present time.

Is there a very distinct dividing range between the Dumaresq and the Macintyre? Principally high sandy ridges.

Would it be possible to divert either of the waters into each other? No; the ridges are too well defined. Is there a well-defined line between the Macintyre and Ottley's Creek? Not particularly so. It seems to be on the whole an undulating country.

From what you know of the district, do you think that a system of irrigation could be carried out in it with great benefit to the population? I do, with the exception of the locality near Texas.

Could water be used for mining purposes with advantage if conserved, say on the neighbouring tin-mines? They are out of my district, and I have not very much to do with them.

Do you think that the Myall Creek country, between Inverell and Warialda, is suitable for water conservation? I really do not know.

Do you know anything about the heads of Myall Creek and Staggy Creek? No; they are out of my district, and I know very little about them.

Have you ever given any attention to the necessity of a water supply for the town of Inverell? No, not in particular.

*Mr. Gipps.*] Could you suggest any further information which would be useful for the purposes of the present investigation? No; I do not think so.

Mr. Thomas Harland, J.P., examined:—

*Mr. Murray.*] What are you, Mr. Harland? I am a wine-grower, and I reside at Inverell. I have lived about twenty years here, but I have not been wine-growing all that time.

Have you a good knowledge of the surrounding district? Not to a great extent.

You have seen all the effects of floods and droughts on the district? Yes, for very many years.

Have you had many floods during your residence here? Only one very heavy one, but we have had very heavy falls of rain. The heaviest flood ever felt here was in the year 1872.

What height was that above the river bed? It would be 8 or 9 feet, I should think, or perhaps more. It was 6 feet above the foundation of Ross's store, and that would be about 20 feet above the river bed.

What other great floods have you had? There was a heavy one about twelve months before I came to the district.

Have you had many droughts? Yes, and very bad ones too.

In what years were they? We have had a whole series of droughts; in fact, we are in a state of chronic drought. My memory would not enable me to particularize the dates, but we have been in a state of chronic drought for the last eight years. The district has suffered chiefly with regard to the stock. The wheat crops have not suffered so much.

Have many head of stock died for the want of enough rain? Yes, a great many; more from that cause than from any other.

Are there any good natural facilities for storing water in the district? Yes; I should think there must be; but I cannot give you any ones in particular. I might mislead the Commission by naming them.

Do you know if irrigation has ever been tried on a small scale in the district? I do not think that it has. Do you think it could be tried beneficially hereabouts? I may have peculiar opinions with regard to irrigation. It might be injurious at the very time that it would be utilized. It might scald the crops, similar to a sudden fall of rain during drought.

What are the principal crops which are grown in the district? Wheat, hay, and wine, principally.

Are pastoral pursuits carried out at all extensively here? Yes, very extensively; also mining. The fact of the matter is the most of the land in this neighbourhood is so valuable that it is a pity to have it simply under natural grasses. It is a national waste. It should be every inch of it under agriculture.

Do

Mr.  
G. Arthur.  
19 Nov., 1886.

Irrigation.

Mr. T.  
Harland, J.P.  
19 Nov., 1886.

Floods.

Droughts.

Mr. T. Harland, J.P.  
19 Nov., 1886.

Do you know of any wells in the district? No; I know of very few good ones.  
How do you derive your own water supply in your elevated position? Just by tanks and the rainfall.  
You think then it would be desirable for the Government to initiate some works to show what could be done in the way of irrigation? I think it would not be desirable for the Government to go to any great expense until the work had been previously tested.

Mr. Frank Langham Burdett, Government Surveyor, examined :—

Mr. Burdett.  
19 Nov., 1886.

*Mr. Gipps.*] How long have you been resident in the district? Only a year permanently.  
What part of the country were you located in before? At Broken Bay, on the Lower Hawkesbury.  
What particular part of the district could you give us any information about? I only received notice this morning, and having been here so short a time I hardly know the district.  
What counties are you acquainted with? I have been a little in the counties of Gough, Hardinge, and Arrawatta.  
Can you give us any information with respect to the sources of the Bundarra River? No; I know the head of the Macintyre.  
Do you know anything of Cope's Creek? Very little, at present.  
Do you know anything of Limestone Creek—I mean of its head? No, nothing.  
Do you know of any position at which it would be available for water conservation? There are some good deep waterholes in it, with hard good crossing-places with waterholes that are never dry; but I cannot mention any places suitable for water conservation; but for all that I know there may be some.  
Do you know Mooredon Creek? I have crossed it; but I repeat I have been only a very short time in the district. I believe that it is a continuous running creek.  
Do you know any good position at which to conserve water there? I cannot say that I do.  
Where does the creek rise? Mooredon, Cope's, and George's Creeks all rise in the spurs of Ben Lomond, and further south-westerly.  
What is the length of Mooredon Creek to its junction with the Bundarra? The best way would be to scale it on the map.  
Can you give any information with regard to the sources of the Macintyre River, such as Paradise Creek, for instance? They rise on the tableland, and there is a kind of swampy plateau some 500 feet above the low lands.  
Do you know Reedy Creek at all? Not much, but I have crossed it. It is generally dry, I think.  
Do you know Paradise Creek? Yes.  
What is the nature of the country which is traversed by that creek? Granite and sandy soil chiefly.  
What are the banks, high or low? Not very high; probably 10 feet.  
What is the average width of the bed of Paradise Creek? I don't know its whole course, but in the part that I do know it is very narrow—probably about 30 feet.  
Do you know of any position on it available for the conservation of water? No, none.  
Do you know Frazer's Creek at all? I have crossed it in one or two places. There is not very much permanent water that I know of there.  
Do you know of any position there available for water conservation? No.  
Can you give any information relative to the sources of the Dumaresq River? No. I cannot say anything about them.  
What is your general opinion with regard to the character of the soil of the district with respect to its cultivation, &c? Speaking roughly, I should think it is more suitable for agriculture.  
Have you had any experience in irrigation? No.  
Do you think from what you have seen of the district that irrigation would be beneficially applied here? I hardly feel qualified to answer that question at present. Near here, on the Bundarra Road, there are two wells with nearly 50 feet of water in each of them. There seems to be a kind of underground river, and you can always get permanent water there. The soil is red, with box timber.  
Are those wells near the Gwydir River? They are only 5 miles from the town of Inverell, west of Gilgai.  
Do you know of any large springs in the district? No.  
Have you any reason to think that there is an underground water supply here? No. I have no special reason. It is, however, very probable that there is.  
What is the character of the banks of the Macintyre River at Inverell? The soil is black, and the banks are high. The bed is stony, sandy, and basaltic. The banks at the town average, probably, 20 to 30 feet.  
Beyond these banks, is there any large extent of flat country? No; not of any great extent. It rises, I think, as a rule, beyond.  
Does the same character of bank extend for a long distance further down below Inverell? No; you get into very poor country, and more sandy soil, about 25 miles from the town.  
Does the river bed get sandy? Not very. I have found it pebbly and stony, and the banks are of loose stone, very porous and permeable.  
Do you think that if water is at any time diverted from the river it ought to be diverted from above west of Ashfield, some 25 miles north of Inverell? I cannot say.  
Do you know anything of Otley's Creek? No; nothing at all.  
Do you know anything of the Warialda District? No; I know little or nothing of it at present.  
Above Inverell, do you think the banks and the bed of the river are permeable or impermeable? It is a black soil for a long distance, as far as Bukkulla.  
Do you think there would be any difficulty in diverting the water from the Macintyre River, or do you think it would be retentive soil from any point above Inverell? I hardly feel called upon to say.

## APPENDIX 1 TO EVIDENCE ON NORTHERN RIVERS.

MEMORANDUM—MR. E. J. STATHAM.

In response to the invitation of the Royal Commission, Conservation of Water, to submit information likely to be of interest to the Commission, I beg to point out that Casino possesses exceptional natural advantages for a water supply.

There is a never failing supply of water in the river at that place. The rocky bed of the river immediately above the bridge forms a natural weir, below which, for a distance of more than a mile, there is a very rapid fall. The stream could be utilized to work a ram, turbine, or water pressure engine, to force water to a reservoir in the high ground at South Casino, which is at sufficient elevation to command the whole town.

## CAMIRA CREEK.

There is a possible site for a large storage reservoir at the head of Camira Creek, county Richmond, parish Marsh; the creek heads in the Richmond Range among spurs from Mount Marsh and Mount Dobie, or Dewy Mount. The creek is some 10 miles long, running out in the Camira Swamp, which discharges into Myall Creek. This extends 10 miles to its junction with Myrtle Creek and along it there are wide flat areas of light loamy soil, which would well repay irrigation.

A reservoir in the position mentioned would command fully 5,000 acres of cultivable land, traversed midway by the proposed Grafton-Tweed line of railway.

## FOUR-MILE CREEK.

Another possible site for a storage reservoir, commanding a large area of irrigable land, exists at Four-mile Creek, county Richmond, parish Wyandah; this is also traversed by the proposed Grafton-Tweed line.

## DEEP CREEK.

The head of Deep Creek will, in all probability, afford storage sites similar to those above mentioned, and are well worth a careful examination, commanding as they do very large areas of flat land which only requires water to make it highly productive. This also is on the Grafton-Tweed line.

## TUCKI SWAMP.

There is an immense swamp known as the Tucki Swamp, near Wyralla in the Richmond River, which might readily be brought under cultivation by a combined system of drainage and irrigation. A conical hill rises out of the centre of the swamp, affording a site for pumping works and sugar mill. The land would grow sugar to perfection.

26 October, 1886.

E. J. STATHAM.

## APPENDIX 2 TO EVIDENCE ON NORTHERN RIVERS.

MEMORANDUM by MR. A. LARDNER.

## CLARENCE RIVER SHIPPING AND PASSENGER REPORTS.

## SHIPPING.

	1857.	1867.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	Half year 1886.
Steamships.....	25	121	176	153	196	243	200	249	241	224	297	122
Sailing ships.....	12	43	55	48	36	23	34	38	24	27	37	38

## PASSENGERS—IN AND OUT.

	1857.	1867.	1872.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	Half-year. 1886.
No report	2,745	4,557	5,595	6,394	6,193	9,280	10,477	10,912	11,284	11,084	9,634	4,544	
	Population, 17,000.												

PRINCIPAL EXPORTS from the Clarence River by Sea in the Years 1857-1867 to July 1, 1886 (from Shipping Reports).

	Floods. 1857.	Floods. 1867.	1868.	1869.	Dry. 1870.	Dry. 1871.	Floods. 1872.	1873.	Dry. 1874.	1875.	Large flood. 1876. 1877.		1878.	1879.	Wet year. 1880.	1881.	1882.	Dry—drought, 3 years. 1883. 1884. 1885.			Half-year only. 1886.	
Maize (sacks) .....	510	202,304	215,963	217,891	145,892	148,459	220,249	173,603	155,051	148,844	158,954	223,142	171,597	190,584	217,115	205,739	178,367	187,859	123,782	167,750	53,219	
Potatoes (sacks).....			462	1,066	580	195	74	138	8	31	120	315	520	630	651	1,015	2,889	7,214	7,576	3,562	547	
Eggs (cases) .....			2,420	1,882	1,260	1,135	1,714	1,098	1,064	1,351	1,387	1,957	1,467	1,724	1,963	2,286	2,715	2,907	3,382	3,484	1,319	
Bananas (bunches) .....		2,969	5,804	8,965	9,813	15,589	23,769	36,702	41,825	45,184	60,711	74,566	56,949	81,881	145,840	124,349	94,434	43,067	36,331	21,236	6,334	
Sugar (tons) .....					524	1,417	979	1,673	4,544	5,096	4,219	5,788	5,534	6,292	5,565	3,703	7,321	6,870	5,165	6,748	335	
Molasses (hogsheads) .....						1,520	238	174	283	154	711	973	1,763	2,435	2,495	2,278	3,403	2,884	2,472	1,497	1,616	
Pumpkins and melons .....																			1,054	5,886	19,778	
Hay (bales) .....																				20	411	95
Poultry (coops) .....		439	786	814	422	413	458	505	393	460	537	838	525	740	1,019	1,066	1,073	1,146	1,103	1,274	540	
Oysters (sacks) .....			1,372			1,414	3,539	3,464	2,774	1,792	2,318	3,066	2,751	2,670	1,424	3,602	2,449	1,774	701	1,847	948	
Pigs .....	120	484	488	1,114	1,397	455	108	181	228	344	577	1,052	1,326	1,388	1,371	1,421	967	976	1,870	2,792	906	
Preserved meat (cases).....		8,140	8,647	11,808	12,876	27,760	30,086	33,077	28,915	7,269	18,105	35,599	9,826	14,456	22,657	21,513	18,884	17,863	13,790	14,126	14,760	
Bones and horns (sacks) .....	24	29	521	697	2,924	1,341	1,767	1,241	2,435	1,912	2,164	3,745	1,757	1,987	3,457	2,924	2,363	1,593	3,667	4,000	1,088	
Wool (bales) .....	2,280	3,020	3,317	4,465	3,556	5,346	2,222	2,769	2,239	1,822	3,255	4,738	4,609	3,356	3,565	2,514	2,871	3,226	1,035	799	313	
Skins (bundles) .....	94	189	70	188	134	172	147	109	219	199	440	395	292	682	394	336	347	243	243	221	155	
Horses .....	38	41	24	38	24	28	35	78	87	56	34	71	56	38	37	60	35	37	124	148	45	
Cattle .....	70	134	548	37	39	96	73	161	299	40	348	22	34	3	12	103	90	101	3,391	3,804	1,567	
Hides .....	7,714	10,584	12,397	13,862	12,935	16,808	16,179	16,128	17,908	10,882	14,129	19,353	10,350	12,079	19,656	17,778	16,941	17,544	15,927	17,092	9,211	
Tallow (hogsheads) .....	1,692	1,668	1,789	1,471	1,099	1,364	1,579	978	1,039	732	989	1,269	408	1,396	1,828	1,088			915	1,134	649	
Beef (quarters) [casks salt meat to 1882] .....		25		918	481	849	65	13					53				Fresh.	Fresh.	Fresh.	Fresh.	Fresh.	
Fish (baskets) .....																	1,494	1,400	4,796	1,316	193	
Calves .....																			707	507	243	
Fruit, butter, bacon, &c., and sundries not classified (packages) .....	150	379	1,469	1,402	693	727	436	708	1,080	1,692	1,688	2,289	3,143	2,963	3,496	2,880	3,302	6,508	5,153	4,434	2,326	
Spokes and staves .....			4,000	8,656	5,800	7,500	5,000		3,000	3,400	13,000	7,670		900	23,176	2,890	14,155	12,078	105,327	68,032	82,292	
Girders and piles .....		130								1,647	1,000	1,152	1,078	308	202	1,002	940	732	1,114	1,559	1,562	
Timber (feet) .....	328,000		38,000		17,000	70,000	157,000	12,285	116,000	37,600	6,000	407,800	832,012	673,000	888,631	178,664	348,781	512,831	323,647	1,009,205	657,000	
Timber (pieces sawn cedar).....																2,835	13,409	35,016	47,125	57,300	19,810	
Bark (sacks) .....																			424	293	62	
Mineral ores (bags tin, quartz, copper, &c.) .....					1,213	361	5,559	30,083	40,193	43,048	51,572	31,053	41,318	34,955	31,005	33,280	26,479	19,084	7,580		183	
Tin (ingots).....														15,509	44,060	60,307	47,906	20,558				
Gold (ounces and parcels reported) .....		3,000	3,018	3,771	2,965	2,683	1,116	2,340	3,711		Not reported.				12	9	29	10	6	6	10	
Spirits (hogsheads) .....									779	1,819	3,013	1,872	1,581	2,178	1,553	966	1,313	1,553	1,674	3,709	1,180	
Beer (casks and cases) .....																					256	

APPENDICES TO EVIDENCE ON NORTHERN RIVERS.



## REPORT ON THE NORTHERN COASTAL RIVERS.

Mr. W. S. Targett to The President of the Royal Commission on Conservation of Water.

Sir,

I have the honor to report to your Commission a few facts gathered from the experience of fifteen years' residence on the Northern Coast, bearing upon the objects that concern the Commission, in the hope of shedding some additional light on the capabilities and resources of a district not generally known, or properly valued. This lack of knowledge arises in a large measure from the inaccessibility of the coast country, traffic to the metropolis being barred overland by mountainous country, impassable to the west, except by one or two difficult passes, and barred by sea by a continuous series of bar-harbours, only to be navigated by small steamers, and even with these often at extreme risk.

The soil on the banks of the rivers, such as the Hunter, the Manning, the Hastings, the Macleay, and the Clarence, is of extreme fertility, and that of the Wallamba, John's River, Nambuccra, and Bellinger, only less fertile by comparison both in quantity and quality. The Richmond, the Brunswick, and the Tweed belong to another series, the highlands and ranges extending miles from the banks of these rivers being covered with chocolate soil, little, if anything, inferior in richness to the river flats.

But to the southward, in the rich delta of the Manning and neighbouring rivers, the limit of cultivation is the river flats, where only maize, the staple crop, can be profitably grown. The chocolate or volcanic soil is not met with, except in isolated patches, until many miles inland; it is encountered upon the lower terraces of the great range that rises into the plateau of New England.

The whole land is well watered. At the head of each tidal river, at distances from 10 to 100 miles from the sea, there exist on all the rivers mentioned, large and permanent supplies of fresh water, which only require utilizing to irrigate, by gravitation simply, large areas of the lower lands. Besides these main channels, innumerable creeks, many of them having a course of several miles, drain the highlands, and supply their quota to the larger streams. On the Manning such feeders are the Barrington and Bowman Rivers, the Cedar Party, Dingo, Bobo, Lansdowne, and Dawson Creeks, some of which are continuous for miles, and in a minor degree navigable. Large quantities of water could, if required, be made available from any and all of these sources for purposes of irrigation.

On the Hastings River the Maria, Wilson, and Ellenborough Rivers are large affluents, and the circumstances identical with the tributaries mentioned of the Manning.

The great maize-growing district of the Macleay is similarly well-watered, and of the northern rivers the Commission are already informed by local evidence.

Up to the period of the last decade, the chief dangers of the coastal rivers were the periodic floods, which, sweeping down the narrow valleys, scoured crops, stock, barns, and fences in one desolation to the sea. Droughts were rare and of secondary consideration to these disasters, for besides the heavy average rainfall of this portion of the colony, the heavy sea mists and accompanying dews preserve vegetation green long after less favoured districts are dry and bare in the summer sun.

The chief reason why the head waters of the rivers cannot be thoroughly utilized is that a large percentage of the richest farm land, consists of islands lying in the fairway of the rivers, and not to be approached except by crossing a deep and tidal stream. On the Manning fully one-third of the agricultural area is so situated, the chief islands being Dumaresque, Mitchell's, Oxley, and Jones, smaller ones abounding.

These islands present the same characteristics of feature. They are purely alluvial, resting chiefly on clay, and in rare cases on drift. They are highest on the river banks, and slope gradually into swamps, many of which are being drained and devoted to grazing purposes, for which they prove admirably suited. But if irrigation were adopted, it is matter for consideration whether they would not be of more value as natural reservoirs, than when transformed into grazing paddocks.

On all these islands and on the river flats, water can be obtained by sinking wells to the river level, and although in many cases it is too hard and brackish for household purposes, it is never too saline for cattle, who prefer it to sweet water. In most cases, however, the well-water is sweet and wholesome, and little else is used by the residents. From this source, in my opinion, may be obtained all the water required for irrigating the cultivable land now in use on the northern coast rivers. Each farmer could have one or more wells, and with windmills could amply water the rich lands he occupies, and which by this means would be doubled in fertility. For the land is phenomenally fertile. The writer examined a crop of maize growing on a farm near Taree, on the Manning, which this year produced 60 bushels to the acre, and this farm has been under cultivation for thirty-one years, without being manured or fallowed. And the only rotation of crops it has been treated to was that before rust in wheat obliterated the growth of this cereal, a crop of wheat and maize was taken from it in the one season. In 1858, a farmer on Jones' Island took 1,100 bushels and several hundreds of pumpkins from off 10 acres of land, but such an instance was rare enough to be matter of comment.

In connection with the employment of windmills for irrigation purposes it may be here noted that during the greater part of the summer season, when of course the need of irrigation is greatest, north-easterly winds blow regularly each day, the only variations being at periods of electrical disturbance. Furthermore, in drought seasons the north-easters blow with the force and regularity of the monsoons.

In conclusion, it must not be thought that the ridge and forest country is barren or valueless. On the contrary, much of it is admirably suited for vineyards and orchards, producing better wine and finer flavoured fruits than the rich bottom lands. In process of time much of this land will be reclaimed, and it is here that irrigation will be largely required, and no doubt some day utilized. From the Hunter to the Queensland border the foothills of the Dividing Range have the proper exposure for vine-growing, and it would not be hard to discover more land in this scope on which the vine could profitably be grown than all the area at present under cultivation of every kind in New South Wales.

I have, &c.,

W. S. TARGETT.



## IRRIGATION AND WATER CONSERVATION IN RIVERINA.

The Engineer to the Commission to The Secretary, Royal Commission on  
Conservation of Water.

Sir,

Denman Chambers, Phillip-street, Sydney, 28 March, 1887.

In compliance with the Resolution of the Commission, a copy of which was forwarded to me with your letter No. 515, dated 21st May, 1886, I have the honor to submit my report for the information of the President, Vice-President, and members of the Commission.

I have, &amp;c.,

H. G. MCKINNEY,

Engineer to the Commission.

To the President, Vice-President, and Members of the Commission.

## PRELIMINARY.

Gentlemen,

Instructions.

The instructions under which I have inspected and now report on the Southern districts of this Colony were embodied in the following Resolution of the Commission, a copy of it being supplied to me with letter No. 515, dated 21st May, 1886:—

*Resolved*,—That the Engineer be instructed to complete observations at Moama, and then take up similar work at Euston, Wentworth, Tocumwal, and Howlong; to take the discharge of the Darling at Wentworth, and of the Murrumbidgee at Balranald. While obtaining the above information notes should be made as to the best outlets from the river, and on other points connected with diversion of supplies. Having made such observations as are necessary before the river rises, he should take up the examination of the Murray-Murrumbidgee doab with a view of propounding schemes for the utilization of the available water of those rivers."

Works of Inter-colonial interest.

The remainder of the instructions, which related to work to be done conjointly with the Engineer to the Victorian Water Conservation Commission, was subsequently cancelled by letter No. 559, of 14th August, 1886, in which I was requested to confine my attention to works specially affecting this colony. While I acted under this restriction as far as possible, there were points relating to headworks which I necessarily noted, though the concurrence of the Victorian Government will be required in carrying out the works I propose. In fact the Murray cannot be dealt with in a proper and comprehensive manner otherwise than by the conjoint action of the Colonies concerned. It would not therefore in any case be necessary to treat under a separate head the works of conjoint interest in connection with that river.

Nature of inquiry.

It is necessary to explain that I understood clearly at the outset that the investigations which I was required to make were to be of a purely preliminary nature, that I was required to point out the general character of the projects best suited for utilising the available water supply, to estimate the probable extent, cost, and returns of the works proposed, and to indicate the lines which surveys for such works should take. In short, the questions to be dealt with were—(1st) what is the extent of the available supply of water in the South-western districts of this Colony? and (2nd) how can this water be used to confer the greatest benefits on those districts?

Outline of tour. Principal places visited.

In pursuance of the instructions, I left Sydney on the 24th May last, and was engaged on field duties connected with this work till 15th September, when I was recalled to Sydney to proceed, in advance of the Commission, to the coastal rivers, and I did not again leave Sydney to complete my duties in the Southern district till 30th November. These duties I completed and returned to Sydney on 24th December, so that altogether I had only about four months and a half for the field work. During this time I gauged the Murrumbidgee twice at Wagga, twice at Hay, and once at Balranald; and I gauged the Murray twice at Albury, and once at each of the other places selected; namely, Corowa, Tocumwal, Moama, Euston, and Wentworth. At Wentworth I also made a cross-section of the Darling, but as there was no perceptible current there I took the discharge of that river at Tapio, about 12 miles by road from Wentworth. At Deniliquin I made a cross section of the Edward River near the bridge, and as there was no perceptible current there I took an approximate discharge above the place from which the town supply is obtained. In connection with the question of storage of the waters of the Murrumbidgee and its tributaries, I visited the Tantangara Basin and Lob's Hole on the hilly portion of the drainage area, and in the plains I inspected Lake Urana, the Tomboline Swamp, and Lakes Tala, Yanga, Tori, Merimlee, Paika, and Waldaira. In connection with the storage of supplies from the Murray, I visited Lakes Moira and Taila or Benanee. In addition to places of interest specially mentioned in the report, I visited the points of outflow of the Edward River and Gulpa Creek, the confluence of the Goulburn and the Murray, the confluence of the Murrumbidgee and the Murray, the confluence of the Wakool and the Murray, the points of outflow from the Murrumbidgee to Paika Lake, Yanga Lake, and Lake Waldaira, and the points of outflow from the Murray to Benanee Lake.

Visit to office of Water Supply Department, Melbourne.

I also went to Melbourne to obtain information regarding the system of keeping records of the rivers in Victoria, and to ascertain various points regarding the discharge observations on the Murray and its tributaries, which have been made under the directions of the Victorian Government. The records dealing with these matters were most kindly placed at my disposal by Mr. Stuart Murray, now Chief Engineer for Water Supply in Victoria, who also explained the system followed by him in taking river discharges. It is sufficient to mention here that from the records, which are kept in a most complete and elaborate style, I obtained much useful information; but in the case of the method of taking discharges I saw that the system followed, though excellent, would require more time than I could afford.

It

It may be urged in opposition to the conclusions I have arrived at that the time taken was too short; but replying by anticipation to such objections I may state (1) that on a previous occasion (*vide* Appendix to First Report of the Commission) I had made an inspection of the Murray from Dora Dora to Tocumwal, and of the Murrumbidgee from Gundagai to Hay, and taken levels for, and submitted a report regarding the Yanko Creek, which report, it is necessary to add, has been approved by the Harbours and Rivers Department, and adopted in almost every particular; (2) that previous to the preparation of the First Report of the Commission I had made a careful compilation of all levels likely to be useful in connection with possible projects for water conservation in the western plains; (3) that while the gaugings of the rivers were made quickly and with less attention to minute details than in the system followed under the directions of Mr. Stuart Murray, Chief Engineer for Water Supply in Victoria, still all important elements of error were carefully guarded against; and the gaugings were carried out on the same principle as that adopted in Upper India, where it was demonstrated that under fairly favourable circumstances there would not be a total error of more than 7 per cent.; (4) that in all cases I availed myself of the assistance (always most kindly given) of the Government officers in the various districts visited, and of the owners and occupiers of land, and checked as far as possible, by comparison or otherwise, all statements of importance made to me. Hence, so far as discharge observations are concerned, I have made certain that there is no error which can affect my conclusions, and a similar remark applies to information obtained by inquiry.

Sources of information. Explanation of procedure.

As the works which I propose in this report constitute the most important projects yet brought forward in these Colonies in connection with irrigation, I deem it not only right but necessary to mention the experience I have had in connection with similar undertakings. At the outset I may mention that since 1867 I have been employed uninterruptedly on works for irrigation, water supply, and drainage. During my ten and a half years service in the Irrigation Department in India I was fortunate enough to be employed throughout on some of the largest canal works in that country, and, among others, on the Upper and Lower Ganges Canals, which constitute by far the most extensive irrigation works in existence and still more fortunate in the fact that my experience included every variety of canal work, and was acquired under some of the most distinguished officers in that Department. To particularize:—I was employed in turn as the engineer in immediate charge of (1) preliminary surveys, alignment, levelling, and estimating for canals and distributaries; (2) canal construction, including excavation, bridges, weirs, locks, and regulators; (3) management of running canals, for which I qualified by passing an examination on canal law and subjects connected with its administration; and (4) the preparation of large drainage projects which have since been carried out. The officers under whom I was employed included such names as Col. H. A. Brownlow, R.E., late Inspector-General of Irrigation in India, Major F. J. Home, R.E., since Chief Engineer for Irrigation in the Punjab, and Major J. C. Ross, R.E., since Deputy Engineer-in-Chief for Irrigation in Egypt. On my arrival in this Colony, in the beginning of 1880, I was appointed to the first charge of open canal on the Sydney Water Supply Works, under Mr. Moriarty, Engineer-in-Chief for Harbours and Rivers, and remained there till I resigned in November, 1884, on joining the service of this Commission.

Previous experience.

#### GENERAL DESCRIPTION.

An opinion formerly prevailed that there was a distinct watershed line between the Murray and the Murrumbidgee, and such a line has actually been shown in some maps of recent date. I believe I am correct in stating that the true conditions existing were first brought prominently to notice in my report on levels, which was presented to the Commission on 15th January, 1885, and in which it was stated "that the country between the Murray and the Murrumbidgee must be regarded as two main doabs and not one, the Billabong Creek representing the intermediate river;" also "that so far as levels are concerned, the Billabong Creek could be supplied from the Murray as well as from the Murrumbidgee." (*See Appendix to the First Report of the Commission.*) The position thus occupied by the Billabong Creek is most peculiar, there being a fall in the country towards it in a south-westerly direction from the Murrumbidgee, and in a north-westerly direction from the Murray. This peculiarity in the country between these two rivers presents remarkable facilities for irrigation from both. The natural fall of the country and the existence of favourable sites for headworks on the rivers render it easy to divert supplies into canals; and the Billabong Creek will not only afford a ready means for the escape of such water as is not used from the canals, but will also act as a low-level supply channel for the conservation and distribution of this surplus.

Relation of Billabong Creek to Murray and Murrumbidgee Rivers.

In the map of Principal Drainage Areas in New South Wales, which accompanied the First Report of the Commission, the area of the hilly portion of the basin of the Murrumbidgee is given as 11,860 square miles, the corresponding area in the case of the Billabong Creek being 1,330 square miles, and in that of the Murray 2,380 square miles. The latter area includes only the hilly portion of the basin of the Murray in New South Wales. The corresponding area above Albury on the Victorian side is about 4,500 square miles. These may, without material error, be assumed as the effective catchment areas, the remainder of the basins—that is the plain portions—contributing no supply of surface water, except after unusually heavy rains. The catchment area of the Murrumbidgee above Wagga, though greater than that of the Murray above Albury, affords a more uncertain supply of water. This is due to the operation of several causes, the chief being that the fall of rain and snow is greater and more regular on the Upper Murray. But, in addition to this, the mountains are higher on the Murray, the valleys are narrower, and there is a much smaller extent of comparatively level tableland than on the country drained by the Upper Murrumbidgee and its tributaries. In short, the areas on the Murrumbidgee and on the Billabong Creek, which I have classed as "effective," are so in a much less degree than the corresponding area in the Murray basin.

Catchment areas of the Murray and Murrumbidgee Rivers and of Billabong Creek.

While there cannot be any doubt that a considerable proportion of the rainfall which percolates into the ground does not reach the rivers, I do not think there is any reason to believe that the proportion so lost is unusually great. Still, sufficient proof that there is constant underground percolation is afforded by the fact that in a large proportion of the country between the Murrumbidgee and the Murray abundant supplies of fresh water are found, and that in many cases—particularly in the Murrumbidgee-Billabong doab—the water rises to a fairly uniform height in the wells. The available information on the subject points to the conclusion that the water in these wells has no connection with the Murrumbidgee. But in the case of the Murray there are two facts which tend to prove that some water is lost from that river by percolation in a north-westerly direction in the portion between Mulwala and Lake

Underground percolation from the rivers.

Moira

Moira. The first of these facts is that there is a slight flow in the Edward River, near Deniliquin, when there is no apparent flow near its source, and the second is that Mr. Brown, of Tuppall, found by experiment that in his wells there is a perceptible current from south-east to north-west. Judging from my partial inspection of the Victorian side of the Murray, and from inquiries which I made in the district between Echuca and Kerang, I have little doubt that from the portion of the river extending from Echuca to near Swan Hill there is percolation from the Murray into Victoria in a westerly direction. This opinion is corroborated by the discharge observations made at the instance of the Victorian Royal Commission on Water Supply, which show conclusively that there is an important loss of water from this portion of the river. Mr. Stuart Murray stated on this subject, in a memorandum to the Victorian Commission, that the mean discharge for the whole year at Tooleybuc is less than two-thirds of what it is at Echuca, and that too notwithstanding the fact that in the length between these places the discharge of the Murray is augmented by the Campaspe and the Loddon.

Nature of the district between the Murray and Murrumbidgee.

The non-effective drainage areas of the Murrumbidgee, of the Billabong Creek and Edward River, and of the Murray (exclusive of the portion in Victoria), amount to over 19,500 square miles. To this may be added about one-fourth of the tract of country which I have classed under the heading of "Drainage Areas of the Mirool and other Creeks" in the First Report of the Commissioners, but which can be reached by the waters of the Murrumbidgee. This area, amounting to 3,500 square miles, as well as the 19,500 square miles mentioned above—that is 23,000 square miles in all—consists almost entirely of fertile plains, as remarkable in their uniformity as in their productiveness. The chief exception to this description is the tract of high land covered with mallee scrub and situated in the angle between the Murray and the Murrumbidgee. The approximate outline of this land is shown in the accompanying plan. (*See Appendix*). It consists of reddish, sandy soil underlain in many places by deposits of nodular limestone, and it is as a rule densely covered with a stunted variety of eucalyptus (*eucalyptus dumosa*); but it is sometimes traversed by pine (*frenela robusta*) ridges, and occasionally it is interspersed with small patches of open ground. At the junction of the Murray and the Murrumbidgee the mallee land is from 40 to 60 feet above the ordinary level of the river, from which it is here separated by a narrow strip of grey alluvium. Near Wendomal, on the Murray, some miles above the junction, the river impinges against the high land which is there 80 feet above the ordinary water-level.

Rainfall.

In the effective portions of the drainage areas of the Murrumbidgee, the Billabong, and the Murray, the respective mean rainfalls, so far as can be judged from the available returns, are 21.54 inches, 21.35 inches, and 26.17 inches. In the plains the rainfall diminishes from 21 inches at the foot of the hills to 12 inches near the junction of the Murrumbidgee and Murray. From this place to the Darling there is a further slight decrease, the average fall at Wentworth being about 11 inches and at Tapio 10 inches.

District bordering on the Lower Murray.

With regard to the nature of the country from the Murray-Murrumbidgee junction to Wentworth it will be readily seen on inspection of the accompanying plan that there is comparatively little scope for the utilization of the Murray waters there except by pumping. The boundary of the mallee is also the boundary of the high land, and in many places this land is at such a height above the water that pumping would be very expensive. In connection with this district it will be observed that the course of the Willandra Billabong is shown complete on the plan. For the information which enabled this to be done, I am indebted to Mr. Bertram, of Euston, who knows the district thoroughly, and who, in 1870, traced the courses shown.

#### NECESSITY AND OBJECTS FOR WATER CONSERVATION AND DISTRIBUTION IN SOUTHERN RIVERINA.

Necessity for water conservation not appreciated.

To any person intimately acquainted with Riverina and its requirements explanations regarding the necessity for water conservation there will appear superfluous. Owing, however, to the surprising apathy and want of information which exists on this subject outside the circle of those who have learned by experience to appreciate its importance, it is necessary to give a few details to show the enormous loss which this colony sustains through neglect to utilize the available water supply in Riverina. To place the matter in a clear light I cannot do better than state a few simple facts which are beyond dispute.

Mr. Tyson's works for conserving the Lachlan flood waters.

It is well known that, compared to the Murray and the Murrumbidgee, the Lachlan is small in its discharge and uncertain in its periods of flow. While the flow in the Murray has never been known to stop, and the Murrumbidgee has very seldom failed to contribute to the Murray, the periods during which the Lachlan contributes any supply to the Murrumbidgee are the exception and not the rule. Notwithstanding the uncertainty of obtaining any supply from the Lachlan, and notwithstanding the risk attendant on taking any action under the present absence of any definite law or regulation on the subject, Mr. James Tyson, senr., has constructed many miles of channels and several intercepting dams, one series of work alone having cost £14,000. (*See Mr. Tyson's evidence appended to First Report of Commissioners*). Now it is widely known that not one of our pioneer graziers has a more thorough knowledge of the requirements and capabilities of the centre and west of the colony than Mr. Tyson. That he is well satisfied with the returns from these works is shown, not only by his evidence before the Commission, but by the fact that he has lately been constructing other works of a similar description in the same district. The requirements and conditions of that district are precisely similar to those of the lower part of the country between the Murray and the Murrumbidgee.

Private enterprise on the Yanko and Colombo Creeks.

Another point to which I desire to call attention in regard to the wish and the necessity for water conservation in southern Riverina is the offer made and the action taken by the graziers who hold the lands along the Yanko and Colombo Creeks. About three years ago these landholders, including owners of both large and small holdings, submitted to the Government, in writing, an offer to pay pound for pound with the Government up to a total sum of £7,000 for the improvement of Yanko Creek. This offer speaks for itself, when it is considered that the Yanko Creek conveys a small, and hitherto very uncertain, supply during periods when the Murrumbidgee is high, and that the graziers have on previous occasions spent considerable sums with the object of improving the creek, but not with very satisfactory results.

Spirited action of landholders on the Yanko and Colombo Creeks.

In pursuance of this offer, Mr. James Cochrane, of Widgiewa, and Mr. S. M'Caughy, of Coonong, gave a joint guarantee for £3,500 to Government. After the subject of the improvement of Yanko Creek had been dealt with by the Commission, and tenders had been called for the first section of the improvement works, a sum of more than £2,700 was collected within a very short time among the residents of the district through which pass the Yanko and Colombo Creeks. Mr. Cochrane, to whom I am indebted for these particulars, showed me the subscription list which included the names not only of wealthy pastoralists but of selectors of moderate means. It would be difficult to decide whether the two subscriptions of £500 each at the head, or the small sums at the foot, of the list bear more eloquent testimony to the value of water in the Riverina Plains and the demand which exists for its distribution. X

without

Without reference to the corroborating evidence of many competent witnesses, the two facts stated above show sufficiently clearly the necessity for water conservation, and the genuineness of the desire for it on the part of those most interested. Necessity for water conservation inferred.

The objects for which water conservation is required have been practically demonstrated by a number of the most enterprising graziers, so that there is no longer any room for doubt or surmise. The great object of water conservation in Riverina is unquestionably to afford supplies for irrigation, which is an absolute necessity to provide (1) for horses, cattle, and stud sheep; (2) for fodder for tiding over bad seasons; and (3) for miscellaneous crops and for fruit and vegetable gardens. Objects of water conservation.

In connection with this subject, I am indebted to Mr. Bruce, the Chief Inspector of Stock, for the following table showing the number of horses, cattle, and sheep in the district bounded on the east by the railway line from Wagga to Albury, and extending on the west to the junction of the Murrumbidgee with the Murray:— List of stock in the districts now dealt with.

Stock District.	Horses.	Cattle.	Sheep.
Albury .....	4,218	8,829	397,170
Balranald .....	1,014	1,093	583,570
Corowa .....	3,265	3,798	764,906
Deniliquin .....	4,716	6,173	1,323,700
Hay .....	1,360	1,745	650,000
Narrandera .....	950	3,700	339,600
Urana .....	2,341	3,023	835,899
Wagga .....	491	902	166,900
Total .....	18,355	29,263	5,061,745

The figures given in this table show that every 1,000 acres of the rich alluvial land of Riverina supports only about 416 sheep, and that the horses and cattle are in the proportion of only three of the former and five of the latter to every 2,000 acres. Yet we continually hear reports of over-stocking, and, more surprising still, these reports, under present circumstances, are well founded. In good seasons it is difficult to obtain sufficient stock to eat off the grass. In a bad season it is in many cases practically impossible to dispose of the surplus stock which the land cannot support, and it is at such times that the complaint of overstocking can be brought forward with effect. The neglect to make proper and adequate provision for deficient rainfall occasions loss in two different ways. First, as the number of stock is necessarily reduced when grass is scarcer, an important proportion of the grass is lost through want of stock when a good season is experienced. The second, and much more serious loss, takes place in bad seasons through death and deterioration among the stock of all kinds, and also through diminution in quantity and deterioration in quality of the wool. There can be no doubt that the best, as well as the only complete remedy for this uncertain state of affairs is irrigation. This fact is well known and fully admitted in Northern Victoria by those who have had practical experience of the question. (See Report on Victorian Irrigation, appended to *Second Report of the Commissioners*.) Fortunately, however, it is not necessary to go outside New South Wales to find men who have sufficient enterprise and forethought to make themselves independent to some extent of the failure of the rainfall. Though the case of Mr. Tyson's work is the only one I have met with in this Colony where irrigation is carried out by gravitation alone, I have seen irrigation practised in a number of cases by pumping from the river. As such works are increasing rapidly in number, and their operations are being extended, it may safely be inferred that they are found to be profitable. I have endeavoured, but without success, to obtain a clear statement of the cost of pumping in such cases; but I have no doubt that this cost can be arrived at by reasoning from similar cases elsewhere. In the Second Report of the Commissioners it is stated, on the authority of Mr. Stuart Murray, then Engineer to the Victorian Water Commission, and now Chief Engineer for Water Supply in Victoria, that the cost of pumping from the Goulburn, near Murchison, was at the rate of 13,824 cubic feet for 1s. The lift there is greater than in most cases where pumping is done by graziers in this Colony; but everything else there was in favour of cheapness. The quantity pumped was very large, the works were easily accessible and near a railway station, and pumping was carried on almost continuously. On pastoral runs pumping is, as a rule, done intermittently, and on a comparatively small scale, and the cost of bringing the plant to the ground and of keeping it in repair is relatively high. Under these circumstances there can be no doubt that the gross cost of pumping on pastoral runs in this Colony is, as a rule, considerably higher than at the Goulburn in Victoria. Taking it, however, at the same rate, we may safely conclude that water obtained at the rate of 13,824 cubic feet for a shilling gives a good return. When the occupiers of land along the river frontage are of this opinion, it is evident that the occupiers of the back country would place a considerably higher value on the water if arrangements were made to convey it to them. We are, therefore, much within the mark in estimating from known facts that the value of the available supply in the Murrumbidgee and Murray may be taken at 1s. for 13,824 cubic feet. Resources of Riverina not developed on account of want of water conservation.

As will presently be shown, the available supply in the Murray at Albury for four months in the year may be taken at 2,000 cubic feet per second, for two other months at 1,500 cubic feet per second, and for the remainder of the year at 1,000 cubic feet per second. It will also be shown that the supply in the Murrumbidgee, which is proposed to be diverted near Wagga, averages over 2,000 cubic feet per second for eight months in the year, and that for a further period of three months 400 cubic feet per second can be used. Although it will very rarely happen that no supply will be available, still in exceptionally good years there may be several months during which little demand will exist, and there may be periods during which no supply can be spared from the river. To allow for such periods it will be safe to assume that the supplies mentioned will be utilized only during eight months in the year. This will give 1,625 cubic feet per second as a mean for the eight months from the Murray, and 2,000 cubic feet per second for the corresponding mean from the Murrumbidgee, or a total supply of 3,625—or (say) 3,600—cubic feet per second from the two rivers. It has already been shown that at a very low valuation the water is worth 1s. for every 13,824 cubic feet. Taking it at this rate and allowing for the utilization of the supply abovementioned during a period of 240 days annually, we come to the startling result that on a very low estimate the value of the available supply in the Murray at Albury, together with that in the Murrumbidgee at Wagga, is £270,000 per annum. But the Cost of water.

estimated Value of the available supply in the Murray and Murrumbidgee.

estimated available supply at Albury and Wagga is not by any means the total supply available from the Murray and the Murrumbidgee. When these rivers are in flood the total supply intended to be drawn off at the places named is a small fraction of the discharge, so that the effect of its withdrawal will be scarcely noticeable. Only a small proportion of the flood-water of the Murray is now proposed to be used—namely, 1,000 cubic feet per second—which is to be diverted at Tocumwal. In the case of the Murrumbidgee, the construction of weirs for diverting flood-water is proposed, but the works for distributing the water are to be left to the landholders. It will be well under the mark to assume that that the weirs will divert 3,000 cubic feet per second for one month in every year, on an average. These together account for a further available supply equivalent in quantity to a flow of 7,000 cubic feet per second for one month. The value of this supply, reckoned for a period of thirty days at the same rate as before, is £65,625. Hence it can safely be stated that the available supply in the Murray and the Murrumbidgee is on a low estimate worth over £335,000 per annum. In other words, the neglect to carry out a comprehensive system of irrigation and water conservation in Southern Riverina entails a direct loss, the amount of which, estimated on a very low basis, and allowing 7 per cent. for waste in distribution, is nearly £312,000 per annum.

National loss through neglect to utilize the waters of the Murray and Murrumbidgee.

Another valuation of water. Areas which could be irrigated by the available supply from the Murray and Murrumbidgee.

There is another way in which the supply now proposed to be utilized may be valued, and that is by estimating the extent of land which the supply would irrigate. In the First Report of the Commission it is mentioned that on the Eastern Jumna Canal a flow of 1 cubic foot per second irrigates 250 acres, and that the same quantity of water from the Ganges Canal irrigates 240 acres. In these cases the management of the distribution of the water is conducted on systematic and economical principles. I may here remark, and it cannot be too often repeated, that it is to India, and not to America, that we must look for information regarding the details of irrigation management. As the table on this subject in the First Report of the Commission clearly shows, India is greatly in advance of other countries, and after it comes Spain, Italy, France, and America, in the order named. It is not probable that in this country we shall, for some time at least, attain to the Indian standard in economy of water; but as there will be no crops in Riverina which will require such a large proportion of water as sugar-cane and rice, which are common crops in Upper India, I think it may safely be assumed that here 1 cubic foot per second will irrigate 200 acres. Hence in the case of the Murray, I estimated that in the spring months the available supply is capable of irrigating 600,000 acres, and during the remainder of the year 200,000 acres in addition. In the case of the Murrumbidgee the question is complicated by the short duration of the high supply, and by the use of Lake Urana as a storage reservoir. It will, however, be safe, under any circumstances, to take the average irrigating capacity of the available supply at 400,000 acres during the spring, and at 150,000 acres during the remainder of the year. These figures give 1,350,000 acres as the area which the available supply in the two rivers is capable of irrigating. But a portion of the supply will be used for filling tanks and for other purposes besides irrigation, and another portion will be lost or wasted. A deduction of 20 per cent. will make ample allowance for these items, and will leave the net area of irrigation at 1,080,000 acres. The rates which landholders in this Colony have stated their willingness to pay for water for irrigation vary from 10s. to £1 per acre. Judging from the known increase due to irrigation of various crops even the higher rate would be very favourable to the landholder. But assuming the lower rate—that is, 10s. per acre—we find that, after allowing a large supply for filling tanks, the value of the remainder for purposes of irrigation is £540,000 per annum. This value of the rivers is an amount which, I believe, will yet be obtained, as it is an estimate founded firstly on the irrigating capabilities of a known quantity of water, and secondly on statements of the value of the water made by many of those who would use it. In the more detailed estimates later on, which show the amounts of revenue that may fairly be expected from the time when the works are brought into complete operation, I have made large allowances for the want of experience of the irrigators and for the practise of partial instead of complete irrigation. These estimates show that, exclusive of the value of the flood-water of the Murrumbidgee, the anticipated gross revenue from the proposed works in connection with the Murrumbidgee and the Murray is £392,500 per annum. The difference between the estimated revenue here stated and the estimated irrigating value of the water given above, represents the value of the flood-water in the Murrumbidgee, plus the sum which can be saved by the economical use of the water supply on which the estimate of revenue is based. The value of the water calculated from its irrigating capability is considerably more than the result obtained on the basis of the cost of pumping. Under the circumstances in which pumping is carried on by pastoralists and others for irrigation, I consider it very improbable that its gross cost is less than double that at the pumping station on the Goulburn. In a number of cases I found that it was considered very good work to flood an acre in an hour. As 13,824 cubic feet—the quantity pumped from the Goulburn for 1s.—would be just sufficient to afford a fair watering to an acre, it is out of the question to suppose that this is pumped for 1s., for it need scarcely be stated that more than that sum would be required in wages alone for the working of an engine for an hour. Reasoning from the fact that in several known instances working an engine for an hour gave a watering to only 1 acre, it is evident that whether the engine was of 40- or 10- horse power the cost of giving an acre one watering could scarcely be under, and might be much over, 2s. per acre. As four or five waterings are frequently required, we find the total cost at 8s. to 10s. per acre. This brings us up to the last estimate, that is £540,000 per annum, as the value of that portion of the national inheritance in Southern Riverina which passes unheeded to the ocean. Summarising the two estimates given, we find (1) that, taking a very low rate for the cost of pumping as the value of the water, the minimum value of the water going to waste is £300,000 per annum; and (2) that taking as the value of the water the rate which landowners say they are willing to pay, and which it would appear that it costs them, a fair market value for the water lost is £540,000 per annum. These figures relate only to the direct loss which the Colony sustains. It is not necessary to enter here on any calculation of the indirect loss, but it will not be out of place to furnish a starting-point for such an estimate. [At present the owners of land throughout Riverina cannot, as a rule, obtain more than £1 5s. to £1 10s. per acre for the best class of land. The value of precisely similar land subject to irrigation in Victoria is estimated at £10 per acre. In addition to this, it has been found by experience that the mere fact of a good supply of permanent water being within easy distance in a dry country—the Wimmera Plains, for example—is sufficient to double or even treble the selling value of the land so situated. Taking these points in conjunction with the fact that the area directly and indirectly affected by the proposed works will be about 23,000 square miles, the question, "What is the annual cost of doing nothing towards water conservation in Riverina?" presents itself in a much more startling light than before.]

Effect of irrigation in raising the value of land.

## AVAILABLE SUPPLY OF WATER.

The discharges of the Murray at Albury, and that of the Murrumbidgee at Wagga, during the past eight years are clearly shown in the accompanying diagrams. In the case of the Murray at Albury, I gauged the river at three different heights, namely, 8.58, 11.92, and 12.90, these being the readings on the new gauge, on which 8.0 corresponds to what has been known as "summer level." I hoped to obtain the results of observations at Albury taken by the Victorian Government, but found on application that none had been made at that place. The discharges for intermediate heights on the gauge have therefore been arrived at by calculation. In doing this I was met by the difficulty that the discharges do not increase in anything like the theoretical ratio. This is easily explained by the presence of snags and other obstructions, which, when the river is low, concentrate the surface fall, and cause a series of rapids alternating with pools of comparatively still water. As the river increases in height, and the obstructions become more completely covered, the surface of the stream becomes more uniform, till at length the effect of the obstructions entirely disappears from view. From the observations made, and from the calculations based on them, I have obtained the following results:—

Height on gauge.	Discharge in cubic feet per second.	Remarks.
7.0	896.6	Calculated.
8.0	1,074.6	do
8.58	1,178.85	Gauged.
9.0	1,576.0	Calculated.
10.0	2,560.6	do
11.0	3,545.6	do
11.92	4,509.25	Gauged.
12.0	4,582.5	Calculated.
12.90	5,773.09	Gauged.

In the resolutions of the joint conference of the Water Commissions of New South Wales and Victoria it was recommended that "the whole of the waters of the Upper Murray and its tributaries, and the whole of the waters of the Lower Murray to the boundary of South Australia, shall be deemed to be the common property of the colonies of New South Wales and Victoria. And, subject to the reservation of such compensation water as the Trust may from time to time determine, each of the said colonies shall have the right to take and divert one-half of such water at such point or points as may, with the sanction of the Trust, be fixed on as most suitable for the requirements of such Colony." The Trust here referred to is a Joint Trust proposed to be elected from the two Colonies for the administration of the Murray. (See *Second Report of the Commissioners.*)

Proposed agreement with Victoria regarding the Murray waters.

The arrangements proposed by the Victorian Government to utilize the Murray waters are:—(1) To divert a portion of the supply in the Mitta Mitta and Kiewa Rivers; (2) to pump a supply from the Murray at Koonoomoo near Tocumwal; (3) to pump a supply from the Murray near the head of the Gunbower Creek; (4) to divert an increased supply through Deep Creek. Some other projects of minor importance have been suggested, but no decision appears to have been arrived at regarding them.

Victorian projects for utilizing supplies from the Murray.

With reference to the first project, it would appear unlikely that any large supply will be drawn from the Mitta Mitta or the Kiewa, as the rainfall is fairly sufficient, and as works for irrigation from these rivers would necessarily be very costly. In the second project it is proposed to pump 242 cubic feet per second from the Murray near Koonoomoo. Under the third scheme the quantity proposed to be drawn from the Murray for the irrigation of high land in the Gunbower District is 200 cubic feet per second in the winter months, and 100 cubic feet per second in the summer months. The fourth project is to improve Deep Creek to such an extent as to make it capable of discharging 1,050 cubic feet per second when the river is in flood. It will be seen from these projects that only a very limited portion of the Murray waters is proposed to be used when the river is low; but that it is intended to divert large quantities of flood-water. It should be observed also that the first place at which it is proposed to draw off a supply on the Victorian side of the river is below the confluence with the Ovens, where the discharge is considerably greater than at Albury.

Quantities proposed to be drawn from the Murray by Victoria.

The points to be attended to on the part of this Colony, in accordance with the understanding arrived at, are:—(1) That sufficient water should be left in the Murray at all times to meet Victorian demands so long as these are within the limits agreed on; and (2) that the total quantity abstracted from the river for the use of this Colony should not exceed one-half the total discharge. The proposals which I have now the honor to make are much within these conditions.

Effect of the understanding arrived at.

The accompanying table (*See Appendix*), giving the heights on the gauge at Albury during the past eight years, shows that on an average of 121 days per annum during that period the height on the gauge has exceeded 12 feet. Comparing this fact with the table of discharges already given, it appears that during four months per annum, on an average, the discharge exceeds 4,580 cubic feet per second. In the same manner, comparing other gauge readings with the corresponding discharges, we find that on an average of 156 days per annum during the same period of years the discharge exceeded 3,545 cubic feet per second; that on an average of 204 days the discharge exceeded 2,560 cubic feet per second; and that on an average of 283 days it exceeded 1,576 cubic feet per second. In proposing, as will presently be explained, to divert 2,000 cubic feet per second during four months in the year, 1,500 cubic feet per second during two other months, and 1,000 cubic feet per second for the remaining months during which it may be required, it will be readily seen that the quantity thus withdrawn will be much under the limit allowed. It will make this point clearer to state that in the four or five months during which the Murray is usually in flood the 2,000 cubic feet per second which I propose to divert near Albury will frequently be less than one-fifth of the total discharge at that place. Regarding the diversion of a flow of 1,000 cubic feet per second at Tocumwal during a minimum period of four months annually, I regret that I had no opportunity of gauging the flood discharge at that place; but fortunately in this case I was able to obtain important information from the Victorian Government to supplement what I had compiled from my own observations. When I gauged the discharge at Tocumwal on 29th July last, the gauge for the corresponding period at Albury was under 9 feet—that is less than a foot above

Supply in the Murray available for use in New South Wales.



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"summer level"—and the gauge in the Ovens at Wangaratta showed only 1 foot 2 inches. Both rivers were most unusually low for that period of the year, and yet the discharge at Tocumwal was almost exactly 2,000 cubic feet per second. This represents a period when a partial supply would be withdrawn near Albury and none at Tocumwal. Within a few days after this discharge was taken the river rose rapidly, so that when I measured the discharge at Corowa, on 7th August, I found that it had reached 5,172 cubic feet per second. This may be taken as an example of the state of the river when the full supply would be flowing in both canals. The following statement, based on the approximate mean discharge of the Murray below the junction with the Ovens, as estimated by the Chief Engineer for Water Supply in Victoria, affords very satisfactory information on this point. It will be observed that while my estimate of the results which can be obtained by utilizing a portion of the waters of the Murray are on the hypothesis that the upper canal would be running for eight months annually, and the lower canal only for four, this table shows that a very large supply would be left in the river if the upper canal were maintained in constant use and the lower for six months in the year.

Month.	Mean discharge for month in cubic feet per second.	Supplies diverted into canals.	Supply left in river.	Remarks.
		c. f. per sec.	c. f. per sec.	
January .....	2,372	1,000 (U)	1,372	Quantities marked "(U)" are those which might be diverted into the upper canal; those marked "(L)" the quantities for the lower canal.
February .....	1,876	500 (U)	1,376	
March .....	1,555	500 (U)	1,055	
April .....	1,308	500 (U)	808	
May .....	2,082	1,000 (U)	1,082	
June .....	2,332	1,000 (U)	1,332	
July .....	4,577	{ 1,500 (U) 500 (L) }	2,577	
August .....	5,622	{ 2,000 (U) 1,000 (L) }	2,622	
September .....	8,277	{ 2,000 (U) 1,000 (L) }	5,277	
October .....	8,236	{ 2,000 (U) 1,000 (L) }	5,236	
November .....	5,142	{ 2,000 (U) 1,000 (L) }	2,142	
December .....	3,565	{ 1,500 (U) 500 (L) }	1,565	

Comparison of Victorian discharge observations with quantities proposed to be utilized in New South Wales.

It is necessary to note that the discharges here given for the various months are given only as approximations, and that, judging from the observations I have taken, I believe them to be considerably under the mark. Not only so, but it is evident from other returns, prepared for the Victorian Government, that the discharges above given for the Murray below its junction with the Ovens are under-stated. In support of this conclusion I have prepared the following table by combining the approximate discharge of the Ovens at its junction with the Murray with the approximate discharge of the Murray below the Mitta Mitta, and with the Kiewa at Kiewa.

Month.	Mean Monthly Discharge in cubic feet per second.				Supply to be diverted into N.S.W. Canals.	Supplies left in River.	Remarks.
	Murray below Mitta.	Kiewa at Kiewa.	Ovens at the Murray.	Total for Murray below Ovens.			
January .....	2,376	200	1,231	3,807	1,000 (U)	2,807	“(U)”, as before, indicates “Upper,” and “(L)” “Lower,” the former referring to the supply to be taken off near Albury, and the latter to the supply diverted at Tocumwal.
February .....	1,639	131	745	2,515	500 (U)	2,015	
March .....	1,202	96	546	1,844	500 (U)	1,344	
April .....	1,145	68	384	1,597	500 (U)	1,097	
May .....	1,963	82	468	2,513	1,000 (U)	1,513	
June .....	2,019	112	637	2,768	1,000 (U)	1,768	
July .....	3,754	359	2,040	6,153	{ 1,500 (U) 500 (L) }	4,153	
August .....	5,460	546	2,482	8,488	{ 2,000 (U) 1,000 (L) }	5,488	
September .....	7,182	1,024	3,878	12,084	{ 2,000 (U) 1,000 (L) }	9,084	
October .....	7,216	912	3,886	12,014	{ 2,000 (U) 1,000 (L) }	9,014	
November .....	4,677	468	2,126	7,271	{ 2,000 (U) 1,000 (L) }	4,271	
December .....	3,494	279	1,588	5,361	{ 1,500 (U) 500 (L) }	3,361	

Conclusions regarding Victorian discharge observations.

As the gaugings for the Mitta, the Kiewa, and the Ovens were made for various heights of those rivers, and at different periods, the discharges obtained for them are no doubt accurate, and as in the computations for the Murray below its junction with the Mitta the discharges of the latter were available as a check, I have no doubt the above table is fairly correct. The former table was based on only one discharge observation on the Murray, and my own experience of that river has abundantly demonstrated that a series of discharges based on one set of observations—no matter how carefully these observations may have been taken—is likely to be misleading. In the latter table, too, the discharges are much more nearly in harmony with my results than those previously given, as will be seen by comparing them with the diagram appended. On account of my not having had an opportunity of gauging the Murray during a high flood, I have not attempted to calculate the discharges for heights of more than 13 feet on the Albury gauge—that is, for more than 5 feet above “summer level.” I could not, therefore, prepare a complete statement of average discharges; but judging from the observations I have made, I feel confident that the latter statement of discharges, based on the results arrived

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arrived at by the Victorian Government, are under rather than over the mark. I am well aware that short periods have occurred when little or no supply could be spared from the Murray. For instance, I was informed by the Hon. J. Graham, M.L.C. of Victoria, that in the early part of 1839 he was able to walk across the Murray near Albury on stepping stones, there being only a small stream trickling among the pebbles. With reference to this, it should be mentioned that several hundred cubic feet per second might be flowing among and under the pebbles and boulders which, in some places, cover the bed of the Murray, whilst it would be possible to walk across in the manner stated. Severe droughts such as that at the period mentioned very rarely occur on the Upper Murray, and it is so far satisfactory that the low discharge of the Murray due to them almost invariably corresponds with the period when there would be least demand for a supply from canals. Notwithstanding the occasional partial failure of the supply, there is, as already stated, reason to believe that the second statement of average discharges is under rather than over the correct quantities. Under these circumstances, the list of average quantities left after deducting the total supplies which are proposed to be drawn off for the use of this Colony speaks for itself. There is, in fact, very much less ground for intercolonial misunderstanding regarding the Murray waters than is generally supposed. New South Wales is the only Colony favourably situated for utilizing the available supply when the river is low; and when the Murray is in flood all the works proposed, or ever likely to be proposed, will utilize but a small portion of the total discharge.

Groundlessness of intercolonial misunderstandings regarding the Murray waters.

In dealing with the waters of the Murrumbidgee the case is much simplified by the fact that no intercolonial questions are involved. But in considering the means by which the supply can be utilized, it will on several grounds be necessary to take the river as a whole, and to point out the methods of conferring the greatest benefit on the entire district through which it flows. The following table shows the discharge at Wagga for various heights on the gauge from 1 foot up to 9.69 feet, and also the discharge for 21 feet on the gauge:—

Discharge of the Murrumbidgee.

Height on gauge.	Discharges in cubic feet per second.		Remarks.
1	621.46		Gauged at Gundagai.
2	1,063.4		Calculated.
3	1,457.7		do
4	1,949.9		do
5	2,524.6		do
6	3,235.7		do
7	4,064.4		do
8	5,006.3		do
9	6,068.7		do
9.69	6,869.82		Gauged at Wagga
*	* * *		* * *
21	24,136.49		Gauged at Wagga

From the table appended it will be seen that during an average of ninety-five days annually the river stands above 6 feet on the gauge, that on an average of 128 days annually it is over 5 feet, that on an average of 158 days it is over 4 feet, that on an average of 202 days it is over 3 feet, and that on an average of 247 days it is over 2 feet. Comparing the table of discharges with this abstract of the gauge readings, it appears that while the discharge of the Murrumbidgee during flood is very great, the high state of the river is not so regular and does not last so long as in the case of the Murray. Fortunately the presence of Lake Urana will go far towards equalizing the two cases by affording storage space for flood-waters, which can be used afterwards as occasion may require.

Great range in the discharge of the Murrumbidgee.

In the projects now brought forward it is intended that the supply in the Murrumbidgee should be utilized to the fullest extent practicable. The following tabular statement shows the supply available for division at the proposed weir site at Pomingalarna, near Wagga, and the approximate quantity allotted to each division of the work:—

Proposals for utilizing the waters of the Murrumbidgee.

available discharge in cubic feet per second.	Number of days for which available.	Approximate quantity in cubic feet per second allotted to			Remarks.
		Lake Urana.	Southern Canal system.	Northern Canal system.	
4,000	72	2,000	1,000	1,000	It is assumed that the canal will be empty for one month in the year for silt clearance and repairs.
3,000	23	1,000	1,000	1,000	
2,000	33	.....	1,000	1,000	
1,500	30	300	600	600	
1,250	44	250	500	500	
750	45	250	250	250	
400	88	.....	200	200	

PROPOSED CANALS FROM THE UPPER MURRAY.

When I made the somewhat hurried inspection of the Murray, the results of which were given in my report of 8th April, 1885 (*See Appendix to First Report of the Commissioners*), the only suggestion of a definite nature which had been made, so far as I am aware, on the subject of diverting supplies of water from the Murray into New South Wales, was that of Mr. George Gordon, as stated in his evidence before this Commission. (*See Mr. Gordon's evidence in Appendix to First Report of the Commissioners.*) Mr. Gordon's opinion then given was that water could be diverted from the Murray for irrigation purposes at Tocumwal, and, as will be seen later on, this opinion is confirmed by my inquiries. Although no definite scheme besides this was proposed, various suggestions have been thrown out that there is a probability that a canal could be constructed to conduct the water from some part of the Upper Murray across the dividing range and into the catchment area of the Billabong Creek. From the examination of the Upper Murray which I have made, it is not difficult to understand how such an impression could be obtained. Above Albury the course of the Murray lies among hills, and as a rule the river valley is narrow, the hills steep, and occasionally there are rapids. Under these circumstances it might be inferred that there is a high rate of fall in the river, and that in consequence of this the river above Jingellic reaches as great an elevation as some of the lower passes on the dividing ridge.

Previous suggestions regarding canals from the Murray.

Before



Economic principles to be attended to in canal construction.

Before entering on this question of diverting supplies from the Upper Murray for irrigation purposes, it is necessary to call attention to an important guiding point in connection with the question of cost of work. It will readily be admitted that the first question which will be asked by the public about any great irrigation project will be, "Will it pay?" Replying to this question, I have no hesitation in stating that, while irrigation canals properly constructed in the plains of Riverina will give a splendid return on their cost, such canals, if carried to any considerable distance through the mountainous district bordering on the Murray, will be a commercial failure. In the former case the canals will be cut in deep alluvial soil, and will require no lining. In the latter case a canal would pass along hill sides which are in many places precipitous; it would have to cross numerous ravines; and its channel, where it was not in rock-cutting or in tunnels, would as a rule require to be lined with masonry or concrete. As will be shown presently, if a canal from the Upper Murray be a possibility, only a very low rate of fall would be available. Let it be supposed, however, that a rate of fall of 6 feet per mile could be allowed through tunnels. The cost of a tunnel without lining of any kind, having the rate of fall mentioned, and capable of discharging 1,000 cubic feet per second, would be at least £12 per lineal yard, and if lining were required the cost would not be under £40 per lineal yard. Open cutting in rock for a canal of the same discharging capacity, and with a fall of a foot and a half to a mile, would vary in cost from £8 to £12 per lineal yard, and where lining of masonry or concrete was required the amount would be higher in nearly the proportion which the cost of lined bears to that of unlined tunnel. On the other hand, the cost of an open canal in Riverina capable of carrying the same quantity of water, and with a fall of a foot and a half per mile, would not exceed £2 per lineal yard. Works such as would be required in connection with a canal in the Upper Murray district are frequently constructed for the purpose of supplying towns with water. As 1s. per 1,000 gallons is a fair rate for water in such cases, the returns justify works of such a costly description. But if the water were used for irrigation purposes, a fair rate would then be 10s. per acre. As the complete irrigation of a crop during one season would require on an average at least 40,000 cubic feet of water per acre, it would be necessary to accept 1s. for 4,000 cubic feet (or 25,000 gallons). In other words, a fair rate for water for irrigation would be only 1-25th part of a fair rate for water supplied for domestic purposes in a town. This explains how a certain class of works would be a great financial success if used for the purposes of water supply to a town, while similar works applied to the purposes of irrigation would prove a disastrous failure.

Question of tapping the Murray above Albury.

On my first inspection of the Murray, I found (1) that it was quite impracticable to bring a canal down the Murray Valley with an increasing height above the river; and (2) that there was no place between Albury and the 7-mile Creek from which a supply could be taken across the dividing ridge. As the distance between the Murray River and the catchment area of the Billabong Creek increases rapidly beyond the 7-mile Creek, I inferred that it would be impracticable to tap the Murray further up than that place. As there still remained some who thought that a canal might be constructed from some point above Jingellic, either from the Murray or from one of its principal tributaries, I visited the Tumbarumba Creek, Paddy's River, Tooma River (locally known as Possum Point Creek), also inspected the Murray from some miles above its junction with the Tooma to Jingellic and crossed the Jingellic Pass. At all the important points on this tour I made observations with the aneroid barometer, and I checked the working of the aneroid on the railway both before and after my tour. As I fully anticipated, I found that for a series of observations extending over a number of days this instrument is of very little value for such purposes as I required it; but that for observations taken on the same day, and under similar conditions of weather, the results were very fairly accurate. The difference in height between Tumbarumba and the junction of Tumbarumba Creek and Paddy's River, and also the difference between Tumbarumba and the Tooma Hotel, near the junction of Tumbarumba and Maracle Creeks, were measured under favourable circumstances, and are, I believe, fairly accurate. The point from which I started at Tumbarumba was found by the Railway Department to be 2,188 feet above Sydney high-water mark. Proceeding from this, I found that the elevation of the junction of Tumbarumba Creek and Paddy's River is 1,178 feet, and that of the Tooma Hotel which is situated at a short distance below the junction of these with Mannus Creek, 963 feet. From the latter place to the bank of the Murray, about 3 miles above its junction with the Tooma, I took barometer readings both going and returning, and found that the bank of the Murray at the place stated is 65 feet below the Tooma Hotel, so that its reduced level is almost exactly 900 feet. These levels may be depended on as fairly correct; but I am not in a position to make a similar statement in favour of the series from Tooma to Culcairn, via Jingellic and Germanton, though the first day's observations, which gave a fall of 85 feet from Tooma to Jingellic are probably not very wide of the mark. Working forward with my observations on the basis of the known level at Tumbarumba, I found the elevation of Jingellic Pass to be 1,763 feet, while, reducing back from the known level at Culcairn, the aneroid readings give 1,425 feet for the same place. One of the members of the Commission (Mr. F. B. Gipps, C.E.), made the elevation of that pass 1,670 feet, while another observer lately informed me that after taking every care in his arrangements he had found the height of the same point to be 1,900 feet. There is little doubt that the correct height is between the highest and the lowest of these results; but for my present purpose it will be sufficient to assume that the elevation of the Jingellic Pass above the sea is at least 1,425 feet. Granting this, the utter impracticability of conducting any supply from the Upper Murray or its tributaries across the dividing range by way of the Jingellic Pass is at once evident. The Jingellic Pass is admitted to be the lowest and the most favourable place at which it would be possible to conduct a supply of water from the basin of the Murray to that of the Billabong Creek, and yet we find that this pass is, on a very low estimate, 525 feet higher than the Murray is at a point 30 miles distant up the river in a direct line. It is useless to think of tapping the river further up than the latter place, as its general direction is almost straight away from the pass, and the country through which it flows becomes more difficult to deal with. Tunneling through the dividing ridges has been suggested, but examination of the northern slope of the ridge shows that this is not to be thought of. On the side of the ridge towards the Murray the hillsides are steep and the glens narrow; but on the northern side the country may fairly be described as an undulating table-land, with a moderate general slope towards the north-west. I found that in a distance of 2 miles from the Pass towards Germanton there is a fall of only 250 feet, although the place where I took the observation was the bed of a creek.

Question of drawing supplies from the mountain tributaries of the Murray.

While admitting that the idea of constructing a canal from the Upper Murray is not worth further consideration, it may be stated by some that the case is different with the tributaries of that river. From inspection of these tributaries, and from inquiries regarding them, I have no doubt that the

Tooma

Tooma River, or Possum Point Creek, is the only one which can be depended on to afford a permanent supply. I forded this river below the place where it is joined by the waters of Paddy's River, and of Tumarumba, Mannus, and Maracle Creeks, and found that the river there had a surface width of 80 feet, a mean depth of about 2½ feet, and a surface velocity of about 3 feet per second. The mean velocity under these circumstances would be about 2½ feet per second, and, taking it at this rate, the discharge was 450 cubic feet per second. This was the state of the river on 12th December last, when the snow-water was still passing down, and the supply was above the average. The discharge of the united creeks which flowed into the Tooma a few miles above the place where I forded it was at the same time about 130 cubic feet per second. Any supply drawn from the Tooma would, on account of the level already mentioned, require to be taken off at some place many miles above the junction with the united waters of Paddy's River and Tumarumba, Mannus, and Maracle Creeks. The catchment area of the Tooma at Mount Manjar, near which it would be necessary to divert any such supply, is under 300 square miles—that is, about one-fortieth part of the catchment area of the Murrumbidgee at Wagga, and one-twenty-third part of that of the Murray at Albury, and even about 16 per cent. less than the area which is to supply Sydney with water. From the result of my observation of the discharge it is evident that under favourable circumstances the quantity of water available will not as a rule exceed 300 cubic feet per second, and, judging from the dimensions of the catchment area, it is certain that the mean available supply must be much less than this. Again, supposing it were possible to divert the available supply into the basin of the Billabong Creek, the channel conveying the supply would have to pass round the valleys of Maracle Creek, Paddy's River, and Tumarumba and Mannus Creeks, and cross the intervening ridges. I believe that this would involve a length of at least 100 miles of conduit before Jingellié Pass would be reached, and the country through which this conduit would extend is incomparably more difficult than that through which the Sydney water-supply canal has been constructed. We are sometimes told that in America irrigation canals are constructed under difficulties such as these, and as this statement is believed by many it is necessary to point out here the very small foundation on which it rests. Two of the canals which are often referred to as being among the boldest of American irrigation works are the North Poudre Canal and the Northern Colorado or Platte Canal. In both cases the supply for irrigation flows through a series of tunnels and flumes before reaching the land to be irrigated. But, as is shown by the following table, the length of these works is quite insignificant compared to the length of conduit of a similar description on a canal from the Tooma:—

Comparison with American canals.

Nature of Conduit.	North Poudre Canal.			Northern Colorado or Platte Canal.		
	Dimensions.	Gradient per Mile.	Length.	Dimensions.	Gradient per Mile.	Length.
Tunnel .....	Feet. 6 × 6	Feet. 15·84	Feet. 920	Feet. 20 × 12	Feet. 5·28	Feet. 625
Flumes .....	8 × 6	10·56	3,400	28 × 7	5·28	2,700
„ .....	12 × 4½	10·56	750	.....	.....	.....
Canal in Pick and Shovel Work.	12 base, 4 deep, slopes 1 to 1	5·28	Miles. 2	.....	.....	.....
Canal in earthwork .....	20 base, 3½ deep, slopes 1½ to 1	2·11	5	40 base, 6 deep, slopes 1 and 2 to 1.	1·76	Miles. 47
„ .....	10 base, 3½ deep, slopes 1½ to 1	2·11 to 3·17	40	30 base, 6 deep, slopes 1 and 2 to 1.	·76	5
„ .....	.....	.....	.....	25 base, 4½ deep, slopes 1 and 2 to 1.	2·00	23

From the above may be deduced the following points:—

- Distance which North Poudre Canal flows in tunnels, flumes, and hard ground before reaching the land to be irrigated. .... Nearly 3 miles.
- Corresponding distance for Northern Colorado or Platte Canal ..... Two-thirds of a mile.
- Corresponding distance for a canal from the Tooma ..... At least 100 miles.

Summary of comparison with American canals.

It will also be remarked that the rate of fall through the tunnels is high, namely, from 1 in 1,000 to 3 in 1,000. Owing to this increased rate of fall in these parts of the conduits, much smaller sections suffice for the discharge; but in the case of a canal from the Tooma no such economy could be exercised; for not only could such high rates of fall not be given, but it is extremely doubtful whether even 1 foot per mile could be allowed.

Among those who favoured the idea of constructing a canal from the Upper Murray there was an impression that once the water reached the northern side of the dividing ridge all difficulties would have disappeared, but this also was a serious mistake. In the first place the creeks which flow into the Billabong are as a rule wide and shallow, and are choked up with sand. It is not surprising, therefore, that the water which flows in these creeks rarely reaches the Billabong. Besides, the district through which these creeks flow is high and undulating. Hence to turn a supply of water into these creeks would be sheer waste, and to construct a canal would involve serious expense, owing to the unfavourable nature of the country. The instructions of the Commission necessitated the setting at rest of the question regarding canals from the Upper Murray and its tributaries. I think the points now brought forward are sufficient to show that such canals are impracticable, if not impossible, and that even if practicable they would labour under unusual disadvantages, and would afford a comparatively insignificant supply.

Further difficulties in the way of canals from the Murray above Albury.

In my report on the river Murray, dated 8th April, 1885, I informed the Commission that I had discovered at Bungownah or Bungowannah, about 7 miles from Albury, a site for the headworks of a canal possessing the following advantages:—“1st. It is at the last range of hills with only open plain country beyond, so that there would be no rock excavation and no difficult country to pass through. 2nd. The river valley is at this place moderate in width and bounded by hills. 3rd. The depth of cutting, so far as can be judged without a survey, would be comparatively slight from the outset.” To these advantages are

Best site for an offtake from the Murray.

are to be added the following, which I reported to the Commission on 19th August last :—“4th. That the greatest depth of cutting likely to be encountered will be under 20 feet, and that this will not extend to a distance of more than three-quarters of a mile. 5th. That the maximum height of weir required to divert a permanent supply into the proposed canal will not be more than 10 or 11 feet—that is, about one-fourth of the height of the weir which is proposed to divert the supply for the Goulburn irrigation project in Victoria. 6th. That the natural advantages possessed by the proposed site are decidedly superior to those of the position of the headworks of any one of the three great irrigation canals on which I was employed during the period of my service in the Indian Irrigation Department.

Position of proposed offtake.

The position of the proposed site is close to the boundary of the counties of Hume and Goulburn, and is about 300 feet down stream from the 12-mile mark of the survey of the Murray River which was made under the direction of Mr. Moriarty, Engineer-in-Chief of the Harbours and Rivers Department. This survey commenced at Union Bridge, Albury, so that the site is 12 miles and 300 feet by river from that place. The normal width of the river there is about 300 feet—that at the surface of the water at the time of my inspection being 294 feet—while the width from edge to edge of bank was 305 feet. A spur from the Jindera Range of Hills is at this place impinged on by the river, and forms an effective barrier to the construction of a remunerative canal from any point above it. The rock of which this spur is chiefly composed is granite of an inferior description, at least so far as can be judged by that exposed; but near the top of the hill, and facing towards the Murray, I found rock of a hard and durable description, and of a distinctly basaltic appearance. Its colour is of a dark-bluish grey, and its fracture compact and crystalline. The highest point of the spur is within 1,000 feet of the river, and attains an elevation of 500 or 600 feet above it.

Necessity for adopting the site selected.

Immediately below the point where the Jindera Hills touch on the Murray the valley rapidly widens out, the hills becoming lower and more distant till they disappear altogether, and the river assuming a much more tortuous course. This great irregularity in the course of the river, together with the widening out of the valley, are almost as effective obstacles to taking a supply for a canal from the Murray below the Jindera Hills as these hills are to drawing off a supply from above them. These considerations bring the question of the best site for a canal head on the Murray within very narrow limits; in fact, the best site for this purpose must be within 50 yards of the place I have described.

Advantages of site confirmed by Victorian investigation

The conclusions at which I have arrived on this point are strongly confirmed by the result of inquiries made on behalf of the Victorian Government. It is well known that in Victoria the question of irrigation and of water conservation and supply throughout the country has received much more attention than in this Colony, and that there is a department there the sole duties of which are the construction and administration of works for those purposes. It is not surprising, therefore, that when my report of 8th April, 1885, proposing the construction of a canal from the Murray at Bungowannah, came to the notice of the Department of Water Supply of Victoria, the Hon. A. Deakin, the Minister of that Department, caused inquiry to be made regarding the proposals I had put forward. The objects of this inquiry were to ascertain, first, whether the site is as favourable as I believed it to be, and, second, if so, whether it could be utilized for the diversion of a portion of the Murray waters into Victoria also. I had the honor of being informed by Mr. Deakin that the result of his inquiries confirmed the opinions I had given regarding the favourable character of the weir site which I suggested, but that the site was not favourable for the Victorian side of the river.

Additional advantages of proposed site.

In addition to the advantages of this site which have been pointed out, there are others of a very important nature. In the first place, stone for building purposes and for crib work is at the site, and in practically unlimited quantities. In the second place, timber suitable for almost all purposes required can be obtained in abundance in the immediate neighbourhood. In the third place, the Albury railway station is little more than 7 miles distant, and is reached by a good metalled road, which passes within half a mile of the site. These are important advantages in connection with the cost of the weir. There is still another point in favour of the site, and that is, that the Murray there is exceptionally shallow; but this might be inferred from what is stated above regarding the small height of weir required.

Design of weir.

With regard to the design of the weir, it would now be impossible to do more than describe this in general terms. My recent inspection of the site showed that the length of the weir proper will be greater than I at first anticipated; but I found no reason to modify the opinion expressed in my report of 8th April, 1885, that the weir proper should be movable. This part of the work would require to be altogether about 350 feet in length; but in addition to this it will be necessary to carry a line of crib work across to the high land on the Victorian side of the river. This crib work would not require to be continuous, as there are strips of high land, the apple-trees on which show that they are not within the reach of floods. The line of the proposed weir from the southern bank of the Murray to the high land near the Victorian railway crosses a series of gum and apple flats and shallow lagoons. The object of the crib work will be to prevent the river from changing its course during high floods, and this object can be attained by carrying the line of crib work across all the lagoons and depressions. The weir proper should be designed so as to afford at least as much water-way as at present for the passage of floods; and the crib work should be so arranged that while it will prevent the formation of any new channels, it will not interfere with the flow of water over the low lands during high floods. The total distance on the line of weir from the Murray to the high land on the Victorian side is almost exactly a mile; but judging from levels which I took I do not think that the crib work will be required throughout more than one-third of that length.

Probable cost of weir.

With regard to the total cost of the weir, I find that Wiswall's tilting weir, which has been adopted with satisfactory results in several cases on the Irwell and the Mersey in England, and a modification of which might be adopted here, has not in any case cost more than £50 per lineal foot. So far as I have been able to ascertain, the circumstances under which those weirs were constructed differed in no material point from that of the proposed weir except in regard to the cost of labour. The object of the weirs on the Irwell and the Mersey was to facilitate navigation; but this does not affect the question of the cost or suitability of a similar weir for the purposes of irrigation and water supply. The effect of the weir is the same in both cases, namely, to raise the normal level of the surface of the river above them, and to allow of the free flow of the river in times of flood. I believe that an allowance of 50 per cent. on the English cost would meet the difference in circumstances of the two cases. This would give a rate of £75 per lineal foot for the Bungowannah weir, or a sum of £26,250 for the cost of the

the entire weir proper. Throughout the 440 lineal yards which would require a protection of crib work, I believe a fair average for the cross-section of such work would be 12 square yards. This gives a total of 5,280 cubic yards of stone, to which has to be added the cost of excavation and of the timber cribs. I estimate that a rate of 10s. per cubic yard would cover all these items; so that the total cost of the protective work across the low land would be £2,640. This gives the gross cost of the weir as £28,890, or (say) £29,000.

According to the levels taken by the Department of Harbours and Rivers, the fall in the surface of the river from Albury to Bungowannah is 13.24 feet. What has been termed "summer level" at Albury is 489.63 feet above Sydney high-water mark; so that the corresponding level of the river at Bungowannah is 476.39 feet. As it would be desirable to have the bed of the canal at the off-take considerably above the bed of the river, I propose 475 as the Reduced Level of the former. At about 20 miles from its head the canal will cross the surveyed line of the proposed railway from Culcairn to Corowa, the crossing-place being about 36 miles from the former place and 13½ miles from the latter. The reduced level of the ground there is 464; and as the fall from the canal head to the off-take of the Jerilderie Branch will be at the rate of 1 in 5,000, the canal at this railway crossing will be in 10 feet of cutting. On the accompanying map (*see Appendix*) the main canal and its branches are shown; the known levels also are marked, and the directions of surface water and of creek are indicated by arrow-heads. It need scarcely be stated that the detailed surveys and levels will show that in some cases it will be advantageous to deviate more or less from the lines shown; but I have little doubt that the general arrangement proposed for the distribution of the water will be found the most suitable. While I think that in any case it will be necessary for the Government to construct the main canal and its principal branches, the minor channels for the distribution of the water should be constructed under fixed regulations, and subject to Government approval by the persons using them. The approximate details of the main canal and its principal branches are as follows:—

Description	Slope of bed.	Bed width.	Side slopes.	Maximum depth of water.	Calculated discharge in cubic feet per second.	Reduced Levels		Lengths.
						Beginning of length.	End of length.	
Main Canal from head to Jerilderie Branch	1 in 5,000	feet 84	1½ to 1	feet 8	2,003	475	422	miles 50
Jerilderie Branch	1 in 2,750	15	1½ to 1	6	342	422	359	33
Main Canal from Jerilderie Branch to Tuppal Branch	1 in 3,333.3	64	1½ to 1	7	1,489	422	396	16
Tuppal Branch	1 in 2,500	12	1½ to 1	6	303	396	331	31
Main Canal from Tuppal Branch to end, near Moulamein	1 in 3,333.3	42	1½ to 1	7	1,002	396	222	110

The Reduced Levels in the foregoing table are based on (1) the known levels along the course of the River Murray; (2) the levels on the line surveyed for a railway from Culcairn to Corowa; (3) the levels at Jerilderie obtained by the railway survey to that place; (4) the levels at Deniliquin, as ascertained from the Deniliquin and Moama Railway Company; (5) the regularity in the slope of the country; and (6) the direction of flow of surface water. Taking all these points into consideration, there can be no doubt that the practicability of the project is assured, though it is only to be expected that in matters of detail alterations will be necessary. For instance, a more complete examination of the soil through which the canal will pass may show that in some cases it will be advisable to reduce the rates of fall by the introduction of vertical drops at intervals. There are several other points which suggest themselves, but it is sufficient to state that a complete network of levels will be required throughout the whole district which the canal and its branches will affect. These levels will be required in connection with the proper alignment of distributaries—a most important matter in connection with any irrigation project.

I have already described the position and the advantages of the proposed weir site at Bungowannah, and may now explain some of the leading principles of the canal system which I propose to take off from that place. For a distance of about two-thirds of a mile from the headworks the main canal will skirt the base of the Jindera Hills, and the excavation will be light on account of the presence of a lagoon extending for some distance along the proposed line of canal. At about the distance named, and within a quarter of a mile of Bungowannah Park, the canal will enter a short length of deep cutting—probably the only deep cutting which will be required. Beyond this cutting the line will follow the margin of the land subject to floods, but keeping just outside it, till the canal finally emerges on the open plains within a few miles of Howlong. From the latter place to Coreen the direction of flow of surface water shows that a good rate of fall is available; and from Coreen westward the uniformity of the country is all that could be desired.

So far as I was able to ascertain, the proposed lines are those from which the adjacent country can be best irrigated by gravitation—in other words, the lines shown are intended to be, and are believed to be, the main ridge lines of the district. I anticipate that the country through which the canal lines are shown will be covered with a network of distributaries which will carry the water to all parts of the district bounded on the south by the Murray and the Edward River, and on the north by the Billabong Creek. The proposed work will also, if necessary, supplement the present supply to the town of Deniliquin, and afford abundant supply to Jerilderie and Moulamein.

In addition to the Main Canal and Branches shown, I believe it will be necessary to construct a channel from the former to the Murray. This channel will leave the Main Canal at about 4 or 5 miles from Bungowannah. Its objects will be, first, to provide for the escape of any flood or surface water which may find its way into the canal; and, second, to provide the means of scouring out the silt which will be deposited in the canal near its head. This channel is not shown on the plan, as its position cannot be defined within narrow limits till surveys are made.

The

Levels and general description of proposed canal and branches.

Data on which project is based.

Explanation and details regarding Main Canal.

Principle of distribution.

Scouring channel and escape.

Detail of estimated quantities and cost.

The estimated approximate quantity and cost of the earthwork in the main canal and its branches is shown in the following table:—

Description.	Length in Miles.	Estimated Mean Depth of Excavation.	Estimated Quantities in Cubic Yards.	Rate per Cubic Yard.	Cost.	Remark.
		feet.			£	
Main Canal (1st length) ...	20	12	4,787,200	1/6	359,040	The depths of excavation assumed are considerably more than will be required to afford material for the banks.
Main Canal (2nd length) ...	30	8	4,505,600	1/4	300,373	
Jerilderie Branch ...	33	5	726,000	1/0	36,300	
Main Canal (3rd length) ...	16	6	1,370,500	1/3	85,656	
Tuppall Branch ...	31	5	591,100	1/0	29,555	
Main Canal (4th length) ...	110	6	6,582,400	1/2	383,973	
Totals .....	240	.....	18,562,800	.....	1,194,897	

Summary of cost.

In addition to the excavation, the principal works required will be the regulators at the heads of the various branches, as well as at the head of the Main Canal, the outlets to distributaries, and the bridges to provide for cross traffic. As the canals will, as far as possible, follow ridge lines, there will be very little cross drainage to provide for. I believe it will be found that the only places where any such provision will be required will be in the first 10 miles of the Main Canal. Taking all these items and also the escape channel into account, the approximate cost will be as follows:—

Excavation of Canal and Branches ... ..	£1,195,000
Weir at Bungowannah ... ..	29,000
Regulator at Main Canal head ... ..	5,000
Three other regulators at £5,000 ... ..	15,000
Bridges—40 averaging £300 ... ..	12,000
Distributary heads—30 at £500 ... ..	15,000
Drainage culverts—2 at £1,500 ... ..	3,000
Excavation of escape channel—say 450,000 cubic yards ... ..	30,000
Cost of surveys ... ..	16,000
Compensation for land ... ..	25,000
<b>Total ... ..</b>	<b>£1,345,000</b>
Add 5 per cent. for contingencies ... ..	67,250
<b>Total estimated cost ... ..</b>	<b>£1,412,250</b>

Explanations regarding estimate.

While I fully anticipate that there will be items which are here overlooked, I believe that the cost of such items will be more than balanced by the savings which can be effected. There is one item in particular which I am confident will be shown to be capable of reduction to an important extent, and this item is canal excavation. In calculating the quantities of excavation in the Main Canal and Branches, I have taken the cross section as being the same throughout in every case; whereas an irrigation canal diminishes in section as the supply is drawn off by the distributaries. As it would not be possible now to estimate for this decrease in the cross section of the canal, I deemed it the best as well as the safest course to base the calculation on the maximum quantities in each case. On another ground also, I believe, it will be found that the estimates for excavation lean to the side of caution. While the most economical conditions for a canal would be those under which the quantity excavated would be just sufficient to make up the banks, the quantity allowed in the estimates is in every case greatly in excess of this. The rates too are higher than those paid for similar classes of work in Victoria.

Estimate of returns.

With regard to the returns which may be expected from the Upper Murray Canal System described, although I anticipate that the water will be used extensively for stock purposes, and that it will also afford a supply to some of the townships which can be reached by it, still the returns will in the main depend on irrigation. In short, the former items will be so small compared to the latter, that in estimating the revenue they may here be omitted altogether. Of the gross discharge, amounting to 2,000 cubic feet per second, which the canal will carry during the spring months, a portion will be lost by percolation, absorption, and evaporation, and a further portion will be wasted or will remain unused. If 10 per cent. be allowed for these losses, we have an effective discharge of 1,800 cubic feet per second. Under proper management each cubic foot per second will irrigate at least 200 acres, but as the majority of those using the water will require several years' experience before they understand how to use the supply to the best advantage, it will be safer to assume that one cubic foot per second will irrigate only 150 acres. The total area irrigated in one season will therefore be 270,000 acres. It will frequently happen that only partial irrigation will be carried out, and to meet such cases, I think that something like the Indian practice of charging half-rate when only one good flooding is given to the land might be followed with advantage. Taking one-third of the irrigated area as included under this description, we have for the spring season 180,000 acres of fully irrigated land at 10s. per acre, and 90,000 acres partially irrigated, at 5s. per acre. This gives the gross annual revenue from spring irrigation as £112,500. During the second irrigating season, the net mean flow in the canal for a period of four months can be taken at 1,000 cubic feet per second, and for the remaining four months of the year at 500 cubic feet per second. For such crops as lucerne, which derive benefit from artificial watering at all seasons, the quantity available throughout would be that last named. A portion of the supply would be used throughout the second season for summer crops, and a portion would be expended on partial irrigation. On the whole, it might safely be assumed that of the 150,000 acres irrigated in the second season, about 110,000 would be completely, and 40,000 partially, irrigated. Reckoning at the same rate as before, we obtain the sum of £65,000 as the return during the second season. This added to that previously arrived at for the spring season, gives a gross revenue of £177,500 per annum. We have already seen that a liberal estimate of the gross cost of the project is £1,412,250. The interest on this at 4½ per cent. is £63,549, which leaves for maintenance, management, and profit, the sum of £113,951 per annum. Under these circumstances, I consider that it may safely be stated that the proposed work will return a clear profit of £100,000 per annum, besides paying

paying  $4\frac{1}{2}$  per cent. on the capital invested. In making this statement, I desire to call attention to the fact that while the cost of the various items estimated for has been taken at liberal rates, and the maximum probable quantities are allowed for,—in the case of revenue, reasonable, not to say low, rates for the water are assumed, and an over-sanguine view of the economical use of the water is avoided. I have dealt only with the direct revenue from the works, but this, though highly satisfactory, would be altogether overshadowed by the indirect gain to the Colony. The estimation of the value of the indirect results, I leave to others who understand what are the present capabilities of Riverina, and what its capabilities would be if the works proposed were carried out.

#### WATER CONSERVATION AND IRRIGATION ON THE LOWER MURRAY.

I have already mentioned that the only suggestion regarding offtakes for irrigation purposes from the River Murray which proved useful to me in my recent investigations was one made by Mr. George Gordon, formerly Chief Engineer for Water Supply in Victoria. Mr. Gordon's statement to which I refer is to be found in his evidence before this Commission (*see Appendix to First Report of the Commissioners*), and reads as follows:—"From near Tocumwal to the Wakool River a large extent of country could be irrigated by gravitation, and the water could be taken off the Murray at a trifling cost. The Murray rises there about 13 or 14 feet, as against 35 feet at Echuca, and I think the valley of the Edward and the Wakool admirably suited to an irrigation scheme." At an interview which I had with Mr. Gordon some time after this evidence was given, he repeated his opinion, and added that he believed the best place for drawing off a supply would be at some point near the head of the Tuppal Creek. This question was briefly dealt with in my report of 8th April, 1885 (*see Appendix to First Report of the Commissioners*); and the result of my inquiries then, and of my more extended investigations recently, has been to confirm the suggestions made by Mr. Gordon.

Previous suggestions regarding irrigation canals from the Murray.

In my report referred to, the following brief description of the condition of the Murray near Tocumwal is given:—"Beginning at Mr. MacFarlane's Baruga Station, and about 8 miles upstream from Tocumwal, there is a series of creeks into which the flood-water of the Murray occasionally flows. It is not unlikely that the levels and surveys will show that several of these creeks can be utilized with advantage; but so far as I could ascertain in the limited time at my disposal, the Tuppal Creek will be the most easily dealt with in proportion to the benefits it will confer. Commencing as an ill-defined depression in the ground at the bank of the Murray, about  $2\frac{1}{2}$  miles down stream from Tocumwal, the Tuppal Creek becomes deeper and better defined, till at 12 miles from Tocumwal its depth is about 12 feet, and its top width about 35 feet. This creek is here very similar to the Yanko, to which it is in other respects a counterpart, as its relation to the Murray corresponds exactly to the relation which the Yanko Creek bears to the Murrumbidgee. There is, however, a difference in regard to the manner in which the Tuppal receives the flood-water. When the surface of the Murray at Albury is 9 or 10 feet above what is there termed 'summer level' no supply is received into the Tuppal Creek at its head, but the flood-water passes into it through several small creeks near Wopperana. The most important of these small creeks are the Narangi Tuppal, and the Native Dog Creeks. Before the flood-water will pass into the Tuppal Creek at the head, the height on the gauge at Albury must be 12 feet, or more—that is, the reduced level of the surface of the river at Albury must be 502." I repeat these particulars, as my recent investigations have shown no reason to modify them. In addition to the creek mentioned there is a series of outlets for flood-water from the Murray between Tocumwal and Lake Moira. The most important of these outlets are the Edward River and the Gulpa Creek. It was pointed out in my previous report that beyond Corowa the rate of slope of the land is greater than that of the surface of the river, and these conditions continue as far as Lake Moira. The result of this is that from Tocumwal to the latter place extensive tracts of land are inundated during floods, and it is a noteworthy point that the low-lying land near the head of the Edward River, subject as it is to be under water from three to five months every year, produces the best red gum timber found in this colony. I was considered fortunate in being able to reach the head of the Edward by land at the end of July last, as at that period of the year it is generally impossible to go within some miles of that place excepting in a boat. The Edward River leaves the Murray at only about a third of a mile above the Gulpa Creek, and like the latter it takes off at an acute angle with the Murray. At its head the Edward is from 50 to 60 feet wide, and at the time of my inspection the banks and the lands adjoining were from 5 to 6 feet above the standing water in the river. The gauge at Albury corresponding to that date was about 1 foot above "summer level," and that at Moama slightly over 3 feet above "summer level." The channel of the Edward gradually shallows out to a distance of about  $1\frac{1}{2}$  miles from the Murray, where it divides into a network of small creeks. These unite in extensive reed beds, so that at about 3 miles from its head the Edward returns to its original section. Beyond this place as the country rises, the cross section of the Edward enlarges till at 9 miles it is very similar to what it is at Deniliquin.

Overflow in times of flood at and below Tocumwal.

At its head the Gulpa Creek is about 30 feet wide. The standing water there at the time of my inspection was about 6 feet below the level of the banks, and the depth of water was 8 feet. As in the case of the Edward River, the creek channel shallows out to a distance of about  $1\frac{1}{2}$  miles where it disappears in the reed beds. Beyond these reed beds the Gulpa Creek re-forms, and at this place it is joined by Warwick Creek, which flows from Lake Moira. The latter creek flows almost as soon as the Gulpa. When the reading on the gauge at Albury was 1 foot 3 inches above "summer level," and that at Moama about 4 feet 3 inches above "summer level," I was informed that a rise of 1 foot at the head of the Gulpa Creek would cause it to run to the reed beds, and that a rise of about 2 feet would be required to cause the Gulpa to run to its junction with the Edward. This is the first water which would flow in the Edward, as a slightly higher rise in the Murray would be required to make that river run from its head. Residents at Deniliquin reckon that they should have a flow in the Edward when the Murray stands at 6 feet on the Echuca gauge. This rule cannot, however, be general, as in a case when a rise takes place in the Goulburn, whilst the Murray is low, the gauge at Echuca will show the rise, but the Murray at the head of the Edward will remain comparatively unaffected. Besides the gauge returns show that in some cases, even when the Murray is high and the gauge at Echuca is over 6 feet, the Edward at Deniliquin fails to rise. Two points are, however, clear; namely, that in the first place no flow takes place in the Edward till what may fairly be termed "a moderate flood," occurs in the Murray, and in the second place, that the quantity which passes down the Edward is a very small proportion of the total discharge of the Murray—probably not more than one-fortieth at the outside.

Gulpa Creek and Edward River.



Project for water supply to the district between the Murray and the Edward.

It may at first sight appear strange that the greatest obstacle to a complete solution of the question of water supply and irrigation in the district between the Edward and the Murray, arises from the remarkable facilities which exist there for the distribution of water. The explanation of this apparent paradox is that this part of the country is intersected in almost all directions by creeks and ana-branches, which in some cases rival the Murray in the dimensions of their channels. The latter feature is particularly noticeable in the case of the Wakool near its junction with the Murray. These channels are not, as a rule, well adapted for the conveyance of a supply for purposes of irrigation, as it would in many cases be difficult if not impracticable to draw the water from them by gravitation. On the other hand the construction of a system of high level canals is rendered difficult and expensive owing to the number of aqueducts which would be required across the various creeks and flood channels. The most complete method of dealing with the case would be to have an artificial high level canal combined with a low level supply in the Edward River, the water to be drawn from the former by gravitation, and from the latter either by pumping or by raising the surface level at intervals to such an extent as to enable supplies to flow off. This would make effective provision for the entire district between the Edward and the Murray, as the high level canal would follow the course sketched on the plan from Tocumwal across the Deniliquin and Moama Railway at a few miles north of Mathoura; and thence along the boundary of the counties of Cadell and Townsend and through the centre of the land lying between the Wakool River and Niemur Creek, while the low level supply would be carried by the Edward River, the Wakool River, and the creeks connected with both. The high level canal would cross the Edward River and the Gulpa Creek, and also the Wakool River, expensive works being involved in both cases, and it would also cross several minor flood channels. Under these circumstances it would be impossible to give even an approximate estimate of the canal here suggested; but as the work is one which would afford a supply of water by gravitation to all parts of the county of Cadell, except some high ridges, and also to the southern part of the county of Townsend and to the strip of land between the Niemur and the Wakool, the question is well worthy of full investigation. The practicability of supplying the Edward River and the numerous creeks and flood channels connected with it, has already been proved by nature, and all that is required in this matter is to make such arrangements as will ensure a more regular and prolonged supply of water when the Murray is high. The principal works required to effect this object are: 1st, a weir across the Murray; 2nd, a channel leading from the Murray at this weir to the Edward; 3rd, a regulator on the Edward to prevent a back flow to the Murray; and 4th, a regulator on the Wakool near its junction with the Murray.

Proposed weir at Tocumwal.

In Mr. Gordon's evidence, already mentioned, a weir is not referred to, though it seems probable that its use was intended. The circumstances under which a weir would be constructed at Tocumwal are in several respects favourable. In the first place it seems not improbable that the Government of Victoria would be willing to join in bearing the cost of such a work, as a proposal has actually been made in that Colony to establish a pumping station at about 8 miles up the Murray from Tocumwal. I have had no communication with the Victorian Water Supply Department on this subject, but a plan showing ground and flood levels on both sides of the Murray near Tocumwal was very kindly supplied to me by Mr. Watson, Engineer-in-Chief for Railways in Victoria, and I noticed on examining this plan that there is a strong probability that a supply can be taken off in a south-westerly as well as in a north-westerly direction from the site which I propose for a weir. The advantages of a weir over pumping machinery in such a case will be at once admitted, and if my surmise as to the suitability of the proposed site for the purpose of Victoria prove correct, I have little doubt of the co-operation of that Colony. Another point which may have an important effect in connection with the construction of the proposed weir is the possibility of combining it with a road bridge. The question of the necessity for a bridge across the Murray at Tocumwal is one which has been repeatedly raised by residents of that neighbourhood, and it is one which will require to be dealt with sooner or later. As it would be an easy matter to combine a road-bridge with a weir, the cost could be divided with advantage to both interests. Taking all points into consideration, I believe that the best site for a weir near Tocumwal is on the straight reach below the punt, and near the line surveyed for a railway by the Victorian Government. A cross section of the Murray at this place is appended. To meet all possible objections it will be necessary to design the weir so that the waterway during very high floods will remain undiminished.

Canal from Tocumwal to the Edward River.

In the construction of the canal, to conduct the diverted supply to the Edward, I propose to utilize Tuppal Creek as far as practicable. As the course of this creek is tortuous, I assume as the rate of fall one foot per mile, though the natural slope of the country in a direct line to the junction of the Tuppal Creek with the Edward must be considerably greater than this. Although I have no doubt that an important saving can be effected by pursuing the course stated, still it would be impossible at present to estimate the extent of this saving. To allow a safe margin for all contingencies, I have prepared the estimate for quantities of excavation for an artificial canal throughout the whole distance from the Murray to the Edward. The full estimated cost of the weir on the Murray is also given, and the cost of the regulator on the Edward is estimated from the section of that river which I took at Deniliquin. With regard to the dimensions of the canal required to carry the proposed supply, I find that one with a bed-width of 56 feet, side-slopes of  $1\frac{1}{2}$  to 1, a fall of 1 in 5,000, and a depth of 7 feet of water, will discharge 1,076 cubic feet per second. These are, therefore, the dimensions of the channel which I propose to adopt. Allowing for a length of 36 miles of canal, with a mean depth of 9 feet of cutting, the estimate for the proposed work will stand as follows:—

Estimated dimensions and cost.

Weir across the Murray at Tocumwal	...	...	...	£30,000
Canal excavation—3,277,120 cubic yards at 1s. 4d.	...	...	...	218,475
Regulating weir on the Edward	...	...	...	20,000
Do. Wakool	...	...	...	15,000
				£288,475
Total for work	...	...	...	£288,475
Cost of survey	...	...	...	3,000
Compensation for land	...	...	...	2,000
				£288,475
Add 5 per cent. for contingencies	...	...	...	19,423
				£307,898

or, say, £308,000.

It

It has already been shown that during the months of August, September, October, and November, a supply of 1,000 cubic feet per second for the work can be depended on, and that during July and December a supply of 500 cubic feet per second is available. It need scarcely be added that throughout the remainder of the year a supply can frequently be obtained; but I take no account of this in the estimate of returns. While I believe that in many places irrigation from these works by gravitation will be practicable, I have deemed it best to assume that pumping will in every case be resorted to, and that in consequence of this a rate of only 5s. per acre will be levied for the use of the water. As the supply will flow almost entirely in old channels, the sides of which are almost impermeable, the loss of water will be very slight. Besides, as it will have to be lifted by pumping, those using it will naturally endeavour in every way to prevent waste. Under these circumstances, I have no doubt that I am within the mark in assuming that the proposed supply will irrigate at least 150,000 acres. Taking this area at 5s. per acre, which is only half of a reasonable rate when the water is delivered by gravitation, the gross return amounts to £37,500 per annum. 4½ per cent. on the outlay would amount to only £13,860, and as the length of artificial canal will be very small, the annual cost of maintenance and management will be comparatively insignificant.

Estimated revenue from the Lower Murray Canal.

I wish to call attention to the fact that in every item of these works I have purposely adopted liberal if not high rates for the cost, and maximum measurements for the computation of quantities, and have on the other hand assumed low rates in estimating the return. Notwithstanding this, the estimates show that this project, as in the case of the Upper Murray Canal System, will be highly remunerative.

Estimates based on maximum quantities and moderate returns.

In connection with the surveys for the Upper and Lower Murray Canal Systems, a point which will call for attention is the survey of the lands on the Lower Murray which are subject to inundation. Fortunately a large proportion of these lands is reserved by Government as State Forests. The following statement, for which I am indebted to the Mines Department, shows approximately the extent of the red gum forest reserves on the southern rivers :—

Land subject to inundation from the rivers.

River.	Approximate area of red gum Forest Reserves.	Remarks.
	Acres.	
Murray .....	202,110	These reserves are in some cases being reduced in area, but about two-thirds of the present total may be taken as liable to flood in ordinary seasons.
Wakool .....	39,542	
Edward .....	73,236	
Niemur .....	31,499	
Total for Murray and Ana-branches.	346,437	
Murrumbidgee .....	44,565	

From this statement it appears, that over 230,000 acres of gum forest are inundated in ordinary seasons by the Murray and its ana-branches. While I have little doubt that the division of the full supplies proposed will have no appreciable effect on these forests, claims might arise in connection with alienated lands which are benefited by floods. The record of the river gauges which have been supplied to the Government Astronomer and those which are being obtained by the Commission, will furnish most valuable evidence in connection with this question. But in addition, I think that a complete statement should be made out, showing in detail the extent, nature, and ownership of lands subject to inundation, and the dimensions and capacity of all important lakes and lagoons which are periodically filled by flood water. The readings of the river gauges, corresponding to the period when such lakes or lagoons are filled from the rivers, should also be carefully noted, and the uses (if any) to which the supplies of water thus stored are devoted.

Necessity for full information about land liable to inundation.

For some distance on both sides of Lake Moira, the land near the Murray is so low, and is inundated for such lengthened periods, that any effect which the proposed works may have on the river will be beneficial in this neighbourhood. The first place, west of the proposed works, at which any large quantity of flood-water from the Murray is stored is Taila or Benanee Lake. This is a fine natural reservoir about 2¼ miles in length by 1½ in width, and I was informed on excellent authority that during the thirty years previous to 1884 there was not a single year during which a supply failed to flow into it from the Murray. In that year alone the supply in the lake was not replenished. Mr. Bertram, of Euston, has informed me that the Murray has to rise to 10 feet on the present gauge at Euston before any water flows into the lake, and that a further rise of 3 feet would be required before any considerable extent of the low land, near the lake, would be inundated. Benanee Lake is a deep, well-defined, natural reservoir, and though there was a good supply in it at the time of my inspection, it was then 10 feet lower than it is after ordinary floods. Taila Creek, through which the lake receives its supply, is tortuous in its course and varies greatly in its cross section. At one place it widens out, and its position is almost lost in a large lake bed covered with polygonum. This large depression has to be filled before the flood-water can reach Benanee Lake.

Moira and Benanee Lakes.

Though I am confident that the effect of the works already proposed will be scarcely perceptible in time of flood, I have no doubt that the most satisfactory method of dealing with the Murray water is to take up the question in the most comprehensive manner,—that is, to deal with the entire river as far as the boundary of South Australia. In the case of Benanee Lake, a very moderate expenditure would suffice for the improvement of Taila Creek, and for the construction of a weir and stop-gate for the retention of the flood-water in the lake. I believe it will be found that by making such improvements it will be possible to increase largely the supply ordinarily stored in the lake, and also to provide for a more regular and more extensive flooding of the land between it and the river.

Necessity for dealing with the Murray as a whole.

Beyond Benanee Lake the only other important natural reservoir is Lake Victoria. This I had not an opportunity of inspecting; but the following particulars, for which I have to thank Mr. Robert Tully, of the Lake Victoria pastoral station, give a fair idea of its nature:—1st.—The lake is filled from the Murray every year through a creek called the Rufus. 2nd.—The reading on the gauge at Wentworth when the supply begins to flow in through Rufus Creek is 3 feet. 3rd.—The approximate maximum depth of the lake is 25 feet. 4th.—The banks of the lake are of white sand like that on the sea shore; the hills around it are also of shifting sand with nothing growing on them but a little barley grass in spring. 5th.—There is no record or tradition that the lake was ever dry. To these points I may add that the approximate dimensions of Lake Victoria are 9 miles by 5 miles.

Lake Victoria.

In



Opinions and evidence in support of irrigation projects.

In concluding the portion of my report relating to the River Murray I may state that, while from my first visit to Riverina I was confident that irrigation works there, on an extensive scale, would be both practicable and remunerative, I have found that my most favourable anticipations can be far more than realized. It is ground for much satisfaction to me that I am well supported in the opinions I have advanced. As already mentioned, the practicability of tapping the Murray at Bungowannah, near Albury, is endorsed by the present Water Supply Department of Victoria; whilst Mr. George Gordon, one of the foremost engineering authorities in the Colonies, and formerly Chief Engineer for Water Supply in Victoria, has given a decided opinion in favour of irrigation from the Murray by means of an offtake at Tocumwal, and he thinks that the water drawn off there can be used by gravitation. Mr. W. C. Bennett, Commissioner and Engineer-in-Chief for Roads and Bridges, has at every opportunity during the last thirty years advocated the construction of irrigation canals from the Murray, and has given the opinion that such works would not only confer enormous benefits on the country, but would, if properly carried out, afford handsome returns on the capital expended on them—for instance, see (*in Appendix to First Report of the Commissioners*) Mr. Bennett's examination before a Board of Inquiry at Deniliquin in 1866. It seems surprising that such opinions, repeatedly given by the head of an important Department, should not have led long ago to a full consideration of the important question of water conservation. It is equally surprising to observe the comparative apathy of the public—especially if we compare the almost complete absence of interest in such questions here with the enthusiastic manner in which irrigation is dealt with under very similar conditions in California. If the landowners and merchants of this Colony were to read the resolutions adopted at the recent State Irrigation Convention in San Francisco, they might at first be disposed to conclude that the persons who framed and passed those resolutions were theorists and enthusiasts, and it would no doubt be difficult for them to realize that those persons were leading representatives of agriculture and commerce in California. It must, however, be borne in mind that whilst this Colony hesitates to take any step towards a comprehensive irrigation scheme, our neighbours in Victoria display a spirit of enterprise which is well worth imitation. One thing is certain in regard to this question, and that is, that the longer we defer dealing with the question of the utilization of our rivers, and particularly of the Murray, the greater will be the difficulties which we must encounter. On the other hand, by entering at once on a complete and comprehensive system of management of our rivers, and proceeding without delay to carry out the surveys for the works which I propose in Riverina, we shall anticipate difficulties, paralyze interested opposition, and lay the foundation of a system of water conservation, without which permanent prosperity in the interior of the Colony cannot be attained.

Necessity for action.

#### THE MURRUMBIDGEE RIVER AS A SOURCE FOR CANALS.

Best site for an offtake from the Murrumbidgee.

From its junction with the Tumut River to the place where it falls into the Murray at the township of Weimby, the Murrumbidgee has a length of about 700 miles, and throughout all this distance not a single tributary of any consequence flows into it. Between the Tumut and Narrandera several creeks do contribute considerable supplies to the Murrumbidgee in times of flood; but as sources of permanent supply their value is purely local. The river also is very tortuous, and flows in an everchanging course through alluvial plains from a few miles west of Wagga to the Murray—a distance of about 580 miles. Under these conditions the loss of water from the river is naturally great, so that the discharge perceptibly diminishes as the Murray is approached—a fact which is borne out by my discharge observations, though these are not sufficient to enable me to state the proportion of this decrease. These considerations make it clear that in order to be able to draw the largest available supply as well as to command the greatest area, the river should be tapped before it enters the plains; whilst on the other hand considerations of economy in canal construction dictate the placing of the canal head as near the plains as possible. Reasoning in this manner, and after inspecting the Murrumbidgee from a considerable distance above Gundagai down to 6 miles below Wagga, I came to the conclusion that the best site on the Murrumbidgee for the head works of a canal is at the foot of the Malibo Range, and almost in a line with the boundary between the Counties of Clarendon and Bourke; and I reported to this effect on 8th April, 1885. (*See Appendix to First Report of the Commissioners.*) My recent investigations fully confirmed the favourable opinion I had formed regarding this site, and a suggestion for which I am indebted to Mr. C. W. Bolton, District Surveyor, of Wagga, has been the means of enabling me to add greatly to the proposal, which I brought forward in the report referred to. In the report of 8th April, 1885, I pointed out the possibility of diverting a supply of water from the Murrumbidgee at the site mentioned, and of conducting it through the centre of the country lying between that river on the north, and the Billabong Creek and Edward River on the south. Recently, when I was dealing more fully with the question, Mr. Bolton, in the course of a consultation which I had with him regarding the nature of the Murrumbidgee District, threw out a suggestion that a supply might be diverted at my proposed weir site along the north side of the river as well as along the south side; Mr. Bayliss, L.S., gave a similar opinion, and, as will be shown, further on, all the evidence I have collected goes to confirm their ideas on this subject.

Position of proposed site.

On my recent inspection, I found that the strip of alluvial land near Wagga through which the Murrumbidgee pursues a more or less tortuous course, runs out on the south side of the river at the Pomingalarna home station, and on the north side about half-a-mile further down. At the latter place the river impinges on a rocky ridge—the end of the Malibo Range,—and runs beside this ridge for a distance of about 300 yards. The boundary between the Counties of Clarendon and Bourke follows the summit of the Malibo Range; and the site which I propose for a weir across the Murrumbidgee is about 5 chains downstream from the point at which the county boundary meets the river. The flank of the range in the line of the proposed weir site rises to a height of 75 to 80 feet above the ordinary level of the river; but the summit of the range at the place where it approaches nearest the river has a height of at least 150 feet. On the south side of the river the low alluvial flat which begins at Pomingalarna is succeeded near the proposed weir site by a high alluvial flat, close beside which a lagoon strikes off from the river. A portion of this lagoon can be utilized for a canal, which would therefore require little excavation near its head. The edge of the high ground would in this place serve as one bank of the canal, while the other bank would have to be made up. There are few trees on this high flat, but as those found on it are gum trees, this land is probably subject to flood, and a small bank would therefore be required along the high ground as well as on the other side of the canal. In order to have the head works in solid ground throughout, it would be best to carry the southern outlet for a short distance through the high flat, and beyond this length the lagoon should be utilized. By the construction of a weir in the site shown on the accompanying plan, the following results would be gained:—

(A)

## (A) NORTH CANAL—

- (1.) This canal would start in rock cutting, and would be easily protected against influx of flood water.
- (2.) It would pass through high sidelong ground for about a third of a mile, and after that its course would lie through alluvial plains.
- (3.) The average depth of cutting in the first third of a mile would be about 20 to 25 feet.
- (4.) Rock foundations would be obtained for the canal head, and for at least the north end of the weir.

Conditions under which canals would take off.

## (B) SOUTH CANAL—

- (1.) Starting in about 17 feet of excavation, the canal would pass into the lagoon at about 200 feet from its head, and it would then have solid ground only on its right side down to the most westerly part of the lagoon.
- (2.) With the exception of the short length of cutting near its head, this canal would require very little excavation in the first half-mile of its length; but a bank would have to be made up along its left side.
- (3.) At the most westerly part of the lagoon where it begins to turn towards the river, the canal would enter cutting of about 16 feet in depth.
- (4.) The exclusion of flood-water from the southern canal would require to be very carefully dealt with, and it would probably be advisable to have a set of floodgates at the place where the canal finally enters firm ground—that is at a little over half a mile from the headworks.

For the Murrumbidgee as for the Murray, I believe that the best style of weir would be one of a similar description to those lately adopted on some of the English rivers, and it should be so designed that there will be no diminution of the present waterway in times of flood. The total length of weir required is about 300 feet, which, at the same rate as already estimated in the case of the Murray, will cost £22,500; and I do not anticipate that the cost of protection works in conjunction with the weir will add more than £500 to this amount. I therefore estimate the gross cost of headworks at £23,000.

## MURRUMBIDGEE SOUTHERN CANAL SYSTEM.

The "summer level" of the Murrumbidgee at Wagga is 562 feet above Sydney high-water mark, and that at the proposed weir site, which is about  $12\frac{1}{2}$  miles by river below Wagga Wagga, may safely be taken at 550. The best Reduced Level for the bed of the canal at the offtake would depend on several circumstances; but it must be about 548—so near that level in fact, that no difference which can occur in regard to it will affect my conclusions.

Taking 1 foot 6 inches per mile, the Reduced Level of the canal bed at 32 miles, where the Urana Branch will take off, will be 500. At 56 miles the main canal will cross the line of the Narrandera-Jerilderie Railway, and if the same rate of fall be continued, its Reduced Level at the crossing will be 464; which is a suitable level for crossing under the railway, at about 14 miles from Narrandera. From 56 miles to the head of the Conargo Branch at 77 miles, the fall would continue at the rate of 18 inches per mile, and the Reduced Level at the latter place would be 432.5. From the head of the Conargo Branch to the head of the Wangonilla Branch at 105 miles, the fall would be at the rate of 2 feet per mile, and the Reduced Level at the latter distance would be 376.5. From the head of the Wangonilla Branch, at 105 miles, to 129 miles, the fall will be at the rate of 2 feet per mile, and the height at the latter place will be 328.5. From 129 miles to the end of the canal at 186 miles, the fall will be at the rate of 18 inches per mile, giving 243 as the Reduced Level of the canal bed at the tail.

Comparing these levels with others actually known, we find (1) that a suitable place can easily be found for crossing the Narrandera-Jerilderie Railway; (2) that at 80 miles the Reduced Level of the canal bed would be 428 feet, while that of the ground on the railway line on the opposite side of the Murrumbidgee is 431 feet; (3) that the Reduced Level at 115 miles will be 358, while that at a point much nearer the river on the opposite side is 351; and (4) that at 150 miles, which is nearly opposite to Hay, the proposed Reduced Level is 298, while that of the ground at Hay is 304. While, therefore, the positions of the various canals and branches are given only as good approximations, it is evident both from the figures given and from a study of the configuration of the country, that both the positions shown for the canals, and the rates of slope stated, can in the main be adhered to.

The length of the Urana Branch will be about 35 miles, and taking the rate of fall at 18 inches per mile, the Reduced Level at Lake Urana will be 447.5 feet, that is  $87\frac{1}{2}$  feet higher than the ground level at Jerilderie. The distance in a direct line from Lake Urana to Jerilderie is only 23 miles. It is at once evident from these figures and from the known uniformity of the district, that the practicability of irrigating the plains between Lake Urana and Jerilderie direct from the Urana Branch of the Murrumbidgee Southern Canal is beyond question; but an important point to be determined is whether this can be effected indirectly by using Lake Urana as a storage reservoir, and irrigating from it. Although I have not been able to obtain any record of levels of Lake Urana, still there is important evidence available on this subject; namely, that afforded by the action of the Cocketjedong and Colombo Creeks.

So far as I have been able to ascertain, the depth of water in Lake Urana in 1870 did not exceed 12 feet, and it is doubtful whether it reached that limit. Yet the Cocketjedong Creek flowed from the lake to the Billabong Creek for several months. It will be safe, therefore, to assume that a depth of 10 feet of water in the lake will cause a flow to the Billabong Creek, as the depth in the lake was certainly under 10 feet before the flow ceased. The length of the Cocketjedong Creek is about 14 miles, and the distance from its confluence with the Billabong to Jerilderie is 22 miles—altogether 36 miles. Reasoning from the analogous cases of the Yanko and Billabong Creeks, the rate of fall in the distance mentioned must be about a foot and a half per mile, which would give the Reduced Level of the outlet from the lake as 397 feet, and the bed-level of the lake as about 387 feet. Hence if we take such measures as will enable the lake to contain water to a depth of 25 feet, its surface when full would be at a Reduced Level of 412. As already shown, the height at which, with a liberal rate of fall, a supply of water can be delivered from the Murrumbidgee at Lake Urana is 446 feet; so that even if the lake be at a height of 34 feet above that estimated, the supply from the Murrumbidgee can be delivered by the system of canals proposed. That the level of the lake-bed arrived at as above—that is 387 feet—cannot be in any important degree different to the actual elevation is evident from the following facts:—

- (1) That the country extending from Lake Urana to Jerilderie on the south-west, and to the Yanko and Colombo Creeks on the west and north-west is remarkably uniform.

(2)

- (2) That in a high flood there is a steady flow from the lake to Jerilderie through the Cocketjedong and Billabong Creeks, and that the Reduced Level of the bed of the latter creek at Jerilderie is 343, and its distance from the lake, as the creeks flow, 36 miles.
- (3.) That the Reduced Level of the land along the railway line at the part nearest Lake Urana varies from 374 to 398.
- (4.) That the Colombo Creek, at a place where its flood level has a reduced level of about 400, has been known to overflow into Coonong Creek and through it on to Urana Lake.

Practicability of filling Lake Urana from the Murrumbidgee.

These facts merit careful consideration, as in the first place they put the practicability of filling Lake Urana from the Murrumbidgee beyond all doubt; and in the second place they reduce the question of the actual level of the lake down to very narrow limits. From the second statement there can be little doubt that the Reduced Level of the bed of the lake is not less than 380; and from the fourth statement it is absolutely certain that the bed of the lake is at an elevation of less than 400 feet and that it is probably under 390. Besides establishing absolutely that the lake can be filled from the Murrumbidgee, these facts show that the fall from the river is so great that water-power on an extensive scale will be rendered available. On the other hand, the levels do not show whether the water stored in the lake can be used to irrigate the plains near Jerilderie by gravitation, though both the levels available and the height of the lake bank compared with the land adjacent lead to the belief that a considerable portion of the water stored can be so used.

Lake Urana.

Lake Urana (*see* accompanying plan) is a natural reservoir 15,000 acres in extent. After heavy rains it receives a supply of water from the Urana and Coonong Creeks, but this supply is small and precarious, so that the lake is generally dry except in a tract of swampy land which represents the deepest part of the basin. Near Coonong the bank of the lake is only 12 feet high, but it gradually increases towards the township of Urana till it reaches a height of fully 40 feet. The top of the bank here is sandy, but the bed of the lake and the slope of the bank are of heavy loam and clay. The lake bed is lightly timbered with stunted gum trees, many of which are dead. The latter furnish interesting evidence regarding the heights and duration of past floods. The height of the last great flood in the lake is clearly shown by a fringe of young gum trees, the contour traced by which touches in some places the foot of the lake bank, while at others it is 300 to 400 feet distant from it. It is evident from this that the last flood occupied but a very small portion of the capacity of the lake.

Proposed increase to the capacity of Lake Urana.

The extreme northern and extreme southern portions of the bank of the lake are lowest. That near the place where the Coonong Creek flows in has already been described as about 12 feet high, but the bed of the lake is much raised at that place. The lowest land bordering on the lake is generally considered to be that on the extreme south, and this is 14 or 15 feet above the level of the lake bed. Mr. J. J. Crowe, Appraiser of Runs, informed me that if dams were constructed at the two places mentioned, the lake could easily be rendered capable of containing water to a depth of 30 feet. The same gentleman estimated that the maximum length of dam required would be 2 miles. Taking the average height of bank required as 12 feet, which I believe is in excess of what the average will be, the quantity of earthwork required will be 183,000 cubic yards. But assuming it at 200,000 cubic yards, and taking a through rate of 1s. 6d. per cubic yard, we obtain a total cost of £15,000. On the other hand, taking an average depth of 25 feet over the total area of 15,000 acres, we find that the total capacity of the lake is 16,335 millions of cubic feet. Comparing the capacity with the cost, we find that the water will be stored at a rate of 54,450 cubic feet, or 340,300 gallons for one shilling. It will perhaps, give a clearer idea of the storage capacity thus provided, at an estimated cost of £15,000, if it is added that the quantity of water mentioned above is more than 14 times the available capacity of the Prospect Reservoir in this Colony, and nearly twenty times the available capacity of the Yan Yean Reservoir in Victoria. Considering that in a dry season the great expanse of fertile plains surrounding Lake Urana bears the appearance of a desert, and that the rising township near its margin is badly supplied with water, the fact that not only has no attempt been made to use the lake, but that attention has not even been called to its advantages, is most surprising. It is only right, however, to mention that much credit is due to the Surveyor-General and to Mr. Bolton, District Surveyor of Wagga, for their action in recommending that the lake should be reserved from sale and from lease.

Details of the Southern Main Canal system.

As a flow of 2,000 cubic feet per second will require 94½ days to fill the lake, I think the Urana branch should have not less than this discharging capacity. As I propose to have the southern system of canals on such a scale as to admit of the utilization of 1,000 cubic feet per second in addition to the supply contributed to Lake Urana, the details regarding the Main Southern Canal and Branches will be as follows:—

Description.	Length.	Rate of Fall.	Side Slopes.	Depth of Water.	Calculated Discharge.	Nature of Section.
Main Canal from head to Urana Branch .....	32 miles.	1½ feet per mile.	1½ to 1	8 feet.	3,019·4	Double trapezoid Bed, width=100' Berm width=144' Bed ..... = 62' Berm width=106'
Urana Branch .....	35 "	"	"	"	2,004·6	
Main Canal from Urana Branch to Conargo Branch .....	45 "	"	"	7 "	996·2	Bed ..... = 43'
Conargo Branch.....	61 "	"	1 to 1	6 "	218·4	" ..... = 21'
Main Canal from Conargo Branch to Wangonilla Branch .....	28 "	2 "	"	7 "	825·6	" ..... = 32'
Wangonilla Branch .....	56 "	1½ "	1½ to 1	6 "	302·4	Trapezoidal. " ..... = 15
Main Canal from Wangonilla Branch to 129 miles .....	24 "	2 "	"	6 "	354·6	" ..... = 15
Main Canal from 129 miles to 156 miles.....	27 "	1½ "	1 to 1	5 "	199	" ..... = 14'
Main Canal from 156 miles to end.....	30 "	1½ "	1 to 1	5 "	110·4	" ..... = 8'

The

The approximate estimate for the quantity and cost of the works in this system is as follows:—

Estimated cost of the Murrumbidgee Southern Canal System.

Description.	Excavation.			Cost of regulating works.	Cost of Distributary Heads.	Cost of Bridges.	Total cost.
	Quantity.	Rate per cubic yard.	Cost.				
		s. d.	£	£	£	£	£
Headworks—half-share .....		...	.....	11,500	.....	.....	11,500
Main Canal—1st part as above	6,408,000	1 3	400,500	11,000	4,000	12,000	427,500
Urana branch .....	4,928,000	1 2	287,467	16,000	8,000	10,000	321,467
Urana Lake .....	200,000	1 6	15,000	12,000	5,000	.....	32,000
Main Canal—2nd part .....	3,295,600	1 2	192,243	10,000	8,000	5,500	215,743
Conargo Branch .....	1,288,320	1 0	64,416	2,000	6,000	4,000	76,416
Main Canal—3rd part .....	1,494,830	1 2	87,198	.....	2,000	2,500	91,698
Wangonilla branch .....	1,576,960	1 2	91,989	2,500	5,000	4,000	103,489
Main Canal—4th part .....	675,840	1 2	39,424	.....	1,500	1,500	42,424
Main Canal—5th part .....	501,600	1 0	25,080	.....	2,000	2,000	53,375
Main Canal—6th part .....	381,300	1 0	19,067	.....	1,000	1,000	29,080
Total for work .....							£1,372,384
Cost of works, as above	...	...	...	...	...	£1,372,384	
Surveys	...	...	...	...	...	10,000	
Contingencies (say)...	...	...	...	...	...	69,616	
Grand total							£1,452,000

As in the case of the Murray canals, I have taken the cross-sections of each canal, or portion of canal, as uniform throughout the whole length, though a diminution will be made in almost every case. I have also assumed that the canal will be in excavation in every case to the full depth of water provided for, though it will, in many places, be easy to arrange the level so as to have the quantity in embankments nearly equal to the excavation. In the first section of the Main Canal and the Urana Branch I have adopted a double trapezoid, as that will be the most economical as well as the most suitable style for the conditions to be fulfilled. If on examination of the subsoil it is found that a higher rate of fall can be adopted without danger to the banks and bed in these portions of the works, this should be done, as a smaller section would then suffice for the proposed discharge. I have included in the estimate the cost of carrying the Main Canal across the Yanko Creek in an aqueduct. The most economical aqueduct for this purpose will probably be an open galvanized iron flume resting on red gum trestles. With the aqueduct should be combined an escape into the creek, so that surplus water could be passed into the latter when necessary.

Probability of reducing the estimated cost.

A method has been suggested above by which the earthwork in the Urana Branch, and probably also in the Main Canal to the head of that Branch, might be reduced in an important degree. It is probable that in addition to this a large reduction might be effected in the excavation for the Wangonilla and Conargo Branches by omitting their connection with the Billabong Creek. This connection is intended to provide for carrying off water which may remain unused; but there can scarcely be a doubt that it will be easy in both cases to make arrangements by which all surplus water will be disposed of. When I was in charge of the last 56 miles of the Baree Doab Canal in the Punjab, in 1875-76, a large proportion of the surplus water was used for the irrigation of a state forest. This forest was planted shortly after the construction of the canal, on the recommendation of the engineer in principal charge, as he foresaw that years would elapse before the supply would be fully utilized, and that a large quantity of water would in the meantime run uselessly to the River Raree unless some measures were taken such as he proposed. As the system of distributaries there has since been extended, and the area of the state forest has been increased, I have no doubt that unused surplus water is now almost a thing of the past. I have every reason to believe that in Riverina a permanent arrangement of an analogous nature could easily be made.

Utilization of surplus water.

With regard to the returns which may be expected from the Murrumbidgee Southern Canal System, the first item to be considered is the value of the water stored in Lake Urana. As already shown, this lake can, on a low estimate, be made to contain a supply of over 16,000 millions of cubic feet of water. With the arrangement which I propose for filling it, I estimate that a quantity equal to the total capacity, together with the quantity lost by evaporation, will be supplied to the lake every year. This will be effected by keeping the Urana Branch running to its full discharging capacity when the river is in flood, and by diverting into that Branch all the water which can be spared from the other canals during the remainder of the year. Of the supply diverted into Lake Urana, I believe that it will be found practicable to use a large proportion by gravitation; but as the information on this point is incomplete, I shall assume only half the value which water supplied by gravitation would possess. The value then which I place on the water for the purposes of this estimate is one shilling for 10,000 cubic feet. At this rate, and taking the capacity of the lake in round numbers, as 16,000 millions of cubic feet, we find that the annual selling value of the water stored in the lake will be £80,000. The Main Canal is designed to carry 1,000 cubic feet per second, from which I allow 100 cubic feet per second for loss and waste. This leaves a net quantity of 900 cubic feet per second, and as this can be depended on for three months only on an average, I estimate that 600 cubic feet per second will be used for what may be termed

Estimate of returns.

termed complete irrigation, and 300 cubic feet per second for partial irrigation. The former quantity will irrigate an area of 90,000 acres at 10s. per acre, and the latter 45,000 acres at 5s. per acre. The return from the former will therefore be £45,000, and from the latter £11,250, making a total of £56,250 for the irrigation done in spring. But partial flooding will be carried on during the remainder of the year, so far as the supply will allow, and I believe that a moderate estimate of the returns from this will be another sum of £11,250. The gross revenue of the Murrumbidgee Southern Canal System, including Lake Urana, will thus be £147,500 per annum, or nearly 10½ per cent. on the gross outlay. 4½ per cent. on the latter would amount to £65,340, so that the annual amount left for maintenance, repairs, and profit would be £82,160, and it need scarcely be stated that the cost of maintenance and repairs would be a very small proportion of this amount.

As in the case of the Murray Canal, I have taken no credit here for the filling of dams and tanks, nor for the supply of townships with water, nor for occasional supplies to the Billabong and Yanko Creeks. In short, I have purposely estimated the work on a liberal scale and the revenue on a low basis.

#### THE MURRUMBIDGEE NORTHERN CANAL SYSTEM.

I have already mentioned that to Mr. Bolton, District Surveyor of Wagga, is due the credit of suggesting the practicability of carrying a canal along the north side of the Murrumbidgee, as well as of pointing out approximately the line which it should take. I need scarcely add, however, that as in the case of the other works proposed, I have worked out all details unaided.

Taking the Reduced Level of the bed of the Northern Murrumbidgee Canal at the head as 548, the line of canal will have to cross the railway about 37 miles from its head, about 45½ miles from Junee, and 15½ miles from Narrandera. Allowing a fall of 1 foot per mile, the reduced level of the bed of the canal at that place will be 511, and it will therefore be in about 8 feet of cutting, the reduced level of the ground at that place being 519. Continuing the same rate of fall to 60 miles, which is near Mount Bunganbil, the Reduced Level there will be 488 feet. After crossing the railway, the line of canal will pass parallel to the drainage line, at the bottom of which flows the Long Plain Creek, and will at last cross this drainage line near the source of the creek. From 60 miles to 100 miles a fall of at least 2 feet per mile can be allowed, as at this rate the Reduced Level of the canal bed at the latter distance would be 408, while that of the ground on the railway line about 4 miles distant is 401. From 100 miles to 123 miles, where the Nicholson Branch strikes off, a fall of at least 2 feet per mile may still be allowed, as the level at the latter place would be 362, while the level at the corresponding point on the railway line is 351. From the Nicholson Branch bifurcation to the end of the canal at 181 miles, the rate of fall, judging from the elevation of Hay, would be at the rate of 1 foot 6 inches per mile.

The only part of the canal regarding which doubts can be raised as to its practicability, is the portion extending from the railway to Mount Bunganbil. I am aware that the Long Plain Creek flows from north to south, and crosses the railway near the point at which I propose to take the canal across in the opposite direction, and I have also ascertained that in the flood of 1870, the waters of the Mirool Creek inundated the plains on its southern side and reached Mejum Swamp. Notwithstanding this I believe this part of the project to be practicable for the following reasons:—

- (1.) The place at which I propose to carry the canal across the railway is a low ridge running north and south, and the ground level there is 28 feet higher than the plains immediately west of Narrandera, and 17 feet higher than the bed of the Long Plain Creek.
- (2.) While there is but a very slight fall near this place from the Mirool towards the Murrumbidgee there is a very considerable fall in a westerly direction. This point tells strongly in favour of the opinion that the requisite fall can be obtained in a north-westerly direction such as that proposed for the canal.
- (3.) Supposing that it were proved that a slight increase in the elevation of the canal would be necessary or advantageous, it would be easy to design the canal so as to give it a fall of 9 inches instead of 1 foot per mile, and this would raise the bed 9½ feet at the railway crossing and 15 feet at the 60 miles distance.
- (4.) If the plains near Mount Bunganbil be so high as to necessitate a fall of only 9 inches per mile to that place, it follows that the westerly fall in the plains through which the proposed Main Canal will pass is much over 2 feet per mile, and much greater than the corresponding fall along the railway line from Narrandera to Hay. But there is no reason whatever to believe that there is any such increased rate of fall in the country along the line of the proposed canal. On the contrary, just as the Mirool Creek in flood is a very sluggish stream compared to the Murrumbidgee, thereby indicating a greater slope in the latter case, so it is natural to infer that the westerly fall in the plains near the Murrumbidgee is greater than the corresponding fall in the plains near the Mirool Creek.

On the grounds above stated, I believe it may safely be concluded not only that a canal can be constructed from the proposed railway-crossing to the plains, near Mount Bunganbil, but that a fall at the proposed rate of 1 foot per mile can be obtained. With regard to the remaining length of the Main Canal, there is no room for doubt; the Mirool Creek and the railway line afford ample evidence as to the direction and rate of fall of the unbroken plains through which the proposed canal will flow. The Mirool Creek is an excellent guide so far as it goes, but it ceases entirely at the Barren Box Swamp, near Groongal. Mr. Baylis, L.S., who surveyed the land near the end of the creek, informed me that on careful examination of the swamp referred to, he found not only that there was no outlet, but that the bank or side of the swamp was low only at and near where the Mirool enters it. Mr. Baylis ascertained that in 1870, a stream about a chain wide and 1 foot deep was flowing into this swamp for eight months. At a distance of some miles in a north-westerly direction from the Barren Box Swamp, the surface water gradually collects and flows towards the Lachlan in a creek called the Mea Mea. The manner in which this creek has been formed by the surface water is precisely similar to the case of the Coonong Creek, which flows into Lake Urana. It is probable that the Mea Mea Creek has sometimes being mistaken for the Mirool, and that this has given rise to the statements which have been made that the Mirool flows to the Lachlan.

As the information bearing on the best positions for branches from the Main Northern Canal is very meagre, and as it seems not unlikely that a large proportion of the water supply will be drawn off the Main Canal by distributaries, I have suggested two branches only—namely, the Cooper Branch, taken off at

Suggestion  
by Mr. Bolton,  
District  
Surveyor.

Levels and  
details of  
Northern  
Murrumbidgee  
Canal system.

Possible  
difficulty regard-  
ing levels of  
main canal.

Mirool Creek.

Branch canals.

## IRRIGATION AND WATER CONSERVATION IN RIVERINA.

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at 66 miles, and the Nicholson Branch at 123 miles. The proposed details regarding length and sections of the Main Canal and Branches are as follows:—

Details and estimated cost of the Northern Murrumbidgee canal system.

Description.	Length in miles.	Rate of fall.	Bed width.	Side slopes.	Depth of water.	Calculated discharge in cubic feet per second.	Quantity of excavation in cubic yards.	Rate per cubic yard.	Cost.
Main Canal from head to 60 miles ...	60	1 ft. per mile.	ft. 54	1½ to 1	ft. 7	1,012·2	7,128,000	s. d. 1 6	£. 534,600
Main Canal from 60 miles to 66 miles...	6	2 ft. per mile.	36	1½ to 1	7	990·2	381,920	1 2	22,279
Cooper Branch .....	20	do ...	10	1 to 1	5	155·8	293,400	1 0	14,670
Main Canal from Cooper Branch to Nicholson Branch.	57	do ...	30	1½ to 1	7	841·4	3,160,080	1 2	184,338
Nicholson Branch.....	20	do ...	10	1 to 1	5	155·8	293,400	1 0	14,670
Main Canal from Nicholson Branch to end.	58	1 ft. 6 in. per mile.	20	1 to 1	6	344·6	1,464,320	1 2	85,419
Total cost for excavation.....									£ 855,976
Add half cost of weir on Murrumbidgee .....									11,500
Bridges for cross traffic .....									20,000
Regulators for Main Canal and Branches .....									12,000
Distributary heads .....									10,000
Surveys .....									8,000
Total .....									£ 917,476
Add 5 per cent. for contingencies .....									45,874
GRAND TOTAL .....									£ 963,350

The quantity of water which I propose to distribute by means of the Murrumbidgee Northern Canal System is the same as that estimated for the Southern System, exclusive of that for Lake Urana. The returns for the Northern System, estimated on the same low scale of rates as in the latter case, amount to £67,500 per annum; whilst  $4\frac{1}{2}$  per cent. on the estimated expended capital would be only £43,348 per annum.

Estimated revenue.

In preparing the estimate of cost in this case, I have assumed that there would be an average depth of 9 feet of cutting in the first 60 miles of the Main Canal, and for the remainder of the Main Canal and for the branches I have taken the excavation as being equal to the full depth of water in every case. I need scarcely state that it will be possible in many, if not most, places to make a more economical arrangement than this. Besides, as in the other cases already dealt with, the quantity of excavation is calculated from the cross-section at the head of each branch and at the beginning of each division of the main canal; whereas the rule will be that the cross-sections will be diminished as the supply is drawn off.

Basis of estimates.

## LOWER MURRUMBIDGEE INUNDATION CANALS.

Perusal of the evidence given before the Commission by some of the lessees of land on the Lower Murrumbidgee convinced me that no project for the utilization of the waters of the Murrumbidgee would be complete unless the claims of the land subject to inundation were provided for. On this account during my tour of inspection, I gave special attention to the nature and extent of the overflow from the Murrumbidgee in times of flood, and made careful examinations of the principal channels through which the overflow takes place, as well as of the lakes, which afford extensive storage for the flood-water.

Land subject to inundation to be provided for.

In the course of this inspection I found that there are extensive tracts of land which derive benefit to an important extent from the occasional floods to which they are liable; and that a number of lakes, the most permanent and important of which are Tala, Yanga, Paika, and Waldaira, depend almost entirely on the flood-water of the Murrumbidgee for their supply. The rise of the Murrumbidgee to a sufficient height to flood the low land and to fill the lakes is always a matter of great uncertainty, and seems to have been exceptionally uncertain in recent years. Removal of this uncertainty, and provision of means by which the low land could be flooded during even a moderate rise in the Murrumbidgee, would be of immense benefit to the owners and occupiers of the land along its banks, and would place them in an incomparably better position than they are in now even in the best season in regard to water supply. Mr. James Tyson, jun., of Tupra, in reply to inquiries which I made, informed me that the height of the gauge at Hay requires to be 13 feet, before any considerable overflow takes place on the west side of the Murrumbidgee south of its junction with the Lachlan. Mr. J. H. Morphett, of Yanga, gave 14 to 15 feet on the gauge at Hay as the height at which a good supply overflows on the east side of the river between the Lachlan and Balranald. From Balranald to the Murray the information I was able to obtain was not conclusive, as the question there is complicated by the action of back-water from the Murray. Judging from my inspection of the outlet to Lake Waldaira and of other places between Balranald and the Murray, I believe that a much smaller rise at Hay would cause an overflow at those places than would be required to produce a similar effect between Balranald and the Lachlan. Mr. A. Lawrence, of Canally, informed me that the Murrumbidgee water commenced to flow into Lake Waldaira on 23rd August last, when the height on the Hay gauge was only 5 feet. Comparing these facts with the river records, I find that a great proportion of the low lands which depend so largely on the Murrumbidgee floods can have derived no benefit whatever from that source during the years 1883, 1884, and 1885. In 1882 when the river rose to over 22 feet on the gauge at Wagga, the corresponding rise at Hay was only 16 feet and the height at the latter place remained over 13 feet for eight days only. Under the system which I now propose, a supply of flood-water would have been obtained on the Lower Murrumbidgee during that year for at least 19 days; during 1883, for 18 days; during 1884, for 6 days; and during 1885 for 11 days; and that, too, after allowing for the maximum supply which I propose to draw from the river near Wagga. It may be here pointed out that the discharge corresponding to a height of 21 feet on the gauge at Wagga is over 24,000 cubic feet per second, that is more than six times the total quantity which I propose to divert near that

Lands benefited and lakes filled by flood-water.

Uncertainty of overflows.



that place. During the eight days corresponding to those on which the gauge at Hay was over 8 feet in 1882, the mean discharge passing Wagga must have been about 20,000 cubic feet per second. If we deduct 4,000 cubic feet per second from this as the quantity to be diverted into the proposed canals, and an equal quantity for loss from the river between Wagga and Hay—and the latter is certainly a high allowance—the quantity available for flooding purposes below Hay, was 12,000 cubic feet per second. This volume of water flowing for eight days only, was sufficient to flood 571,240 acres to a depth of 4 inches; but I have no doubt that the useful work done by that flood was only a small fraction of this.

Importance of flood-waters.

Proposed method of ensuring the distribution of flood-waters.

The method by which I propose to ensure the distribution of a proportion of every ordinary flood over the low-lying land on the Lower Murrumbidgee is to construct a series of weirs in the river, leaving the various owners and occupiers of the land to distribute the waters according to their requirements. I have not the slightest doubt that with the supply of water thus assured, those benefiting by the weirs would gladly pay the interest on the cost of their construction. I have not had the opportunity of deciding on all the sites at which weirs will be required, but have, however, inspected those which would, I believe, be found the most suitable.

Yanko Creek.

The possible necessity for a weir in the Murrumbidgee below the head of the Yanko Creek is a question which it is better to allow to stand over pending further observation of the effect of the work now being done for the improvement of that creek. As the work already done has been of great service, and as further important improvements are in progress, I do not anticipate that there will be any necessity for a weir. In past years the creek flowed only during high flood, and on such occasions the entire supply which I propose to draw off near Wagga will produce very little perceptible effect on the river. Besides, the Southern Canal System will carry a high level supply every year through the district in which the Yanko Creek affords a much smaller supply at a low level at the uncertain intervals when there are high floods in the Murrumbidgee.

First site for weir below Hay.

At a distance of about 12 miles west from Hay, and at the boundary of the Pevensy Run, there is a short lagoon of the common horseshoe type, on the south side of the Murrumbidgee. The west side of this lagoon is the first place, after the Yanko Creek, at which the Murrumbidgee overflows in any great quantity in ordinary high floods. In extraordinary floods the river overflows its southern bank in many places; but these occurrences are very rare, and need not be taken into account. Hence Pevensy on the Murrumbidgee corresponds closely with Tocumwal on the Murray, and, as at Tocumwal, the banks here are of about the same height on both sides of the river. At the time of my inspection the river gauge at Hay showed a height of 11ft. 2in., and the banks at Pevensy were from 10 to 12 feet above the surface of the water. A rise of 9 feet in the surface level would have been required before the water would begin to flow over in a south-westerly direction. The width of the Murrumbidgee here at the surface level is scarcely 170 feet, that is, slightly less than at Hay.

Nature of weir proposed.

Immediately below the lagoon a weir could be constructed without any difficulty. The highest land there on both sides of the river is timbered with box, and the distance between the box land on the two sides of the river is about 500 feet, of which about 250 feet would be on the river proper, and the remainder on a gum flat on the north side. The height of the box land above the surface of the river at the time of my visit was about 13 feet, while the gum flat referred to was from 5 to 7 feet above the surface level. The style of weir which I propose for this place is one similar in its general description to those which are now commonly adopted in Victoria—that is, a weir fixed for the greater part of its height, but at the top provided with moveable panels. A suitable weir of this description could, I believe, be constructed for £6,000. The line of canal and the branches show the directions in which the flood-water could be diverted most easily, so far as the available information shows; but this is a point which, as already stated, I propose to leave to the landholders to deal with.

Other weirs proposed.

Below Pevensy a series of weirs will be required, the first probably near Maude, and the second below the junction of the Murrumbidgee and the Lachlan. Regarding the site for the latter weir, Mr. James Tyson, jun., suggested a place called Coliegunyah, about 3 miles below the junction of the two rivers; but I ascertained that that site would labour under the disadvantage of being of little use to the land on the east side of the river. It is doubtful, however, whether a site which will suit the requirements of both sides of the river can be found in this neighbourhood. I followed up the course of the Murrumbidgee on its east side to a place called Redbank, within a few miles of Coliegunyah, and failed to find such a place. It may, therefore, be necessary to have two weirs within a few miles, below the junction with the Lachlan—one for the benefit of each side of the river.

Proposed weir at Yarrowal.

The next place where a weir will be required is about 10 miles up stream from Balranald, where there is an excellent site at the parish of Yarrowal, in the Paika Lake run. In this case also the site is more favourable for the west than for the east side of the river, as the flood-water will fill Paika and several other lakes. The width of the river here is only about 140 feet between the tops of the banks, and the foundation of the weir will be in soft rock. A substantial weir can be constructed here for £2,500.

Proposed weir near Balranald.

A weir on the Murrumbidgee, at a short distance down stream from Balranald, would have the double advantage of benefiting the town and the low-lying land on both sides of the river. Levels would, however, be required to determine the most suitable site to serve both purposes. The question of providing for navigation has also to be borne in mind. I estimate that a suitable weir, fixed throughout the greater part of its length, but having a moveable portion of sufficient length to permit of navigation, could be constructed for £7,000.

Proposed weir near Lake Waldaira.

About 10 miles above the junction of the Murrumbidgee with the Murray, is the outlet through which the flood water from the former river fills up the Waldaira and other lakes. The mean width of the Murrumbidgee at that place is about 135 feet. About 500 feet down stream from the main outlet creek which fills Lake Waldaira, is a smaller outlet, 10 to 11 feet above the surface of the river at the time of my inspection. This flows into the main outlet, which is called Manie Creek. This creek, at a distance of about  $1\frac{1}{2}$  miles from the Murrumbidgee, divides into two, one part going to Lake Waldaira, and the other back to the Murrumbidgee. A dam has been thrown across the latter part so as to direct the whole of the overflow to the lake. Beyond Lake Waldaira, and connected with it by a creek, is a large lake bed which is filled only during very high floods. This lake is known to have received flood-water from the Lachlan through the Willandra Billabong. A weir constructed on the down stream side of the smaller outlet to Lake Waldaira would have the effect of keeping that lake permanently supplied, besides flooding low lands on both sides of the river. I estimate that the cost of a weir which would fulfil these purposes and provide for navigation would be £6,000.

The

The total probable cost of weirs for the Lower Murrumbidgee would thus stand as follows:—

Pevensey Weir	... ..	£6,000	Estimated cost of weirs.
Maude	... ..	5,000	
Two near Lachlan Junction at	£4,000	8,000	
Paika Weir	... ..	2,500	
Balranald Weir and Navigable Pass	... ..	7,000	
Waldaira	... ..	6,000	
Total		£34,500	

Interest on this sum at  $4\frac{1}{2}$  per cent. amounts to £1,552 10s. per annum. In other words, this is the sum which the landholders from Pevensey to the junction of the Murrumbidgee would have to pay annually to the Government, in return for a full river permanently, and an overflow at least once a year.

#### STORAGE OF WATER ON THE MURRAY AND MURRUMBIDGEE.

In dealing with the question of storage of water in Riverina, the points which first call for consideration are (1) the necessity for such storage, and (2) the use for which the water so stored is required. Regarding the former point, the result of my inquiries showed that in the case of the Murray, the supply in the river has on the whole been so regular that the necessity for supplementing it in dry seasons by means of reservoirs in the upper part of the basin has never been felt; but that in the case of the Murrumbidgee, the great range of the river from low supply to high floods has frequently raised the question of storing a portion of the flood-waters, so as, to some extent, to equalize the flow. In both cases all the evidence tends to show that abundance of water is always available for stock; but that if water were supplied for irrigation purposes to provide hay, &c., for tiding over bad seasons, and increasing the productive capabilities of the land, there would be a strong demand for it, particularly in dry seasons. The conclusion at which I arrived in regard to the Murray was, that while there is no immediate necessity for storing flood-water on the upper parts of that river, such necessity will arise when the value of water becomes better understood; and therefore, that if reservoir sites are to be found in which water can be stored at a reasonable cost, they should be reserved or resumed by Government. In the case of the Murrumbidgee, the greater uncertainty of the supply, and the enormous volume of the flood-water which flows to waste, taken into consideration with the demand which exists for it, would warrant immediate steps towards carrying out storage reservoirs.

Necessity and  
objects for  
storing flood-  
waters.

Although I made inquiries on the subject, I heard of no sites for reservoirs on the Upper Murray, which, with the limited time at my disposal, would have justified a visit. On the Upper Murrumbidgee the question stood in a different position, as a site was actually surveyed there for the Commission by the late Mr. C. Haylock, L.S., and at the request of the Commission I had examined and reported on the plan and sections which Mr. Haylock submitted (*see Appendix to First Report of the Commissioners*). Lob's Hole, at the junction of the Tumut and Yarrangobilly Rivers was also mentioned in evidence before the Commission as a favourable place for storing flood-water to augment the supply in the Murrumbidgee. Under these circumstances, I deemed it necessary to include these proposed reservoir sites in my tour of inspection. Lob's Hole I found to be altogether unsuitable as a site for a reservoir, as the valleys of both the Tumut and the Yarrangobilly are narrow, and the inclination of both rivers comparatively steep. The case of the Tantangara Basin is quite different, as a very large body of water could certainly be stored there by the construction of a dam at The Gulf. On examination of Mr. Haylock's plan and section I reported that, judging from them, a dam having a mean length of 300 feet, and a maximum height of 84 feet, would impound 2,416 millions of cubic feet of water. The impression which I received on inspection of the site was that the storage capacity is even greater than that indicated by the plan, as the dam would throw back the water to a considerable distance up the course of Little Nungar Creek in addition to covering the area surveyed. One important disadvantage of the Tantangara Basin is its great distance from the Riverina plains, owing to which the water stored would be diminished considerably in quantity before it could reach the district in which it is required. The whole question of the utilization of the Tantangara Basin depends on the cost of storage. In connection with this I found that stone suitable for concrete or masonry can be obtained in abundance at the proposed site of the dam, and that no difficulty would be experienced in carting cement to that place. The dam would require to be of solid masonry or concrete, it would have a rock foundation and would abut on rock at both ends. As the capacity of the reservoir has, I believe, been under estimated owing to incompleteness of the survey, and as, even with the storage estimated, the reservoir could contribute over 300 cubic feet per second for three months when the river is low, I strongly recommend that a complete contour survey of the basin should be made.

Possible sites for  
reservoirs.

Tantangara  
Basin.

The natural storage reservoirs in the Riverina plains are much greater in number and importance than is generally known. Tala and Yanga contain large permanent supplies and Paika is almost permanent, so that it seems surprising that more use has not been made of them. Lake Urana which has already been dealt with is the only one which, in my opinion, is well situated for use in connection with a great irrigation project benefiting a large number of persons. But there is a series of lakes besides Tala, Yanga, and Paika, all of which are of large storage capacity, and which will be filled annually when the proposed weirs are carried out. In these cases the diverted flood-water will be distributed by the landholders, and the filling of the lakes as well as the flooding of the land will have to be a matter of mutual understanding and agreement on the part of those interested.

Lakes in the  
plains of  
Riverina.

#### NAVIGATION.

On the Murray, navigation above Tocumwal has all but ceased, as will be seen from the table in the Appendix, for the figures in which I am indebted to Mr. C. C. Pope, of the Customs Department, Moama. The only river traffic of any importance above Echuca is in timber, which is chiefly obtained between Tocumwal and Bama. The table also shows the amount of traffic on the Edward and the Murrumbidgee, the figures in the latter case illustrating the rapid fall in the number of steamers since the railway to Hay was opened. As there is every reason to anticipate a continued decrease in the river traffic above Balranald, I have not, in the estimates already given, provided for navigation above that place.

Decline of river  
navigation.

In connection with the subject of river navigation there is a point which was mentioned to me by Mr. J. H. Morphett, of Yanga, which is worthy of note. Mr. Morphett informed me that he had observed that

Damage caused  
to the river banks  
by steamers.



that the wash from the river steamers had carried away the banks of the Lower Murrumbidgee to such an extent as to affect the height to which the flood-water rises. The channel has, in his opinion, been enlarged, and the increased waterway allows the flood-water to escape more freely, so that the flood cannot rise to such a height as formerly.

The most important use of our rivers.

On the whole, the navigation of our south-western rivers is beset with so many difficulties and uncertainties, that its decline is not surprising. Already the generally accepted opinion among those who have studied the question, is the same as that given in his evidence before the Commission by Mr. Bennett, Commissioner and Engineer-in-Chief for Roads and Bridges, namely, that "in future the rivers will be utilized for the purpose of water supply, and in producing something to transport rather than in transporting it."

#### SUMMARY AND CONCLUSIONS.

Action required.

In the foregoing report I have endeavoured to show what can be done with the waters of the Murray and Murrumbidgee, and have indicated the best places for drawing off the supplies, and the methods by which the water can be distributed. We have now to consider the important question: What steps should first be taken towards carrying out the proposed works? In reference to this there are two matters which must be attended to before the works are initiated, but which call for attention without delay, whether the proposed works are carried out or not. These branches of the question are—(1) The systematic gauging of the rivers, and (2) legislation regarding water rights.

Necessity for systematic gauging of the rivers.

The gauging of the rivers is a work which urgently demands attention. In the case of the Murray, a knowledge of the volume of water corresponding to all heights on the gauges is an absolute necessity, in view of questions which are arising on the subject of intercolonial rights. But in addition to this, the gauging of both the Murray and Murrumbidgee, and indeed of all our rivers, is a primary step towards the utilization of the available supply and the protection of the rights of the State and of individuals. In their relation to the subject of irrigation, our landholders may be divided into three classes:—1st, those who believe in the benefits of irrigation, and who make the most of their opportunities to practise it; 2nd, those who from want of information or experience on the subject have no settled opinion regarding it; and 3rd, those who are directly opposed to irrigation, either because they think it is impracticable, or because they think it is not required, or because they know it would promote settlement on the land. The numbers of the first class, who, it is almost needless to state, include the most enterprising settlers, are making use of the opportunity afforded by the inaction of the others. It behoves the Government, both in its own interests and in those of the persons immediately concerned, to make itself acquainted with the extent to which the natural supply of water is utilized, and, while protecting both its own interest and those of private individuals, to avoid placing any check on legitimate enterprise. The systematic observation of the discharge of the rivers is the first step towards placing the Government in a proper position in regard to these questions.

Necessity for legislation.

The necessity for legislation in regard to water rights is admitted on all hands; but only the few who have had an opportunity of making a practical study of the question are aware of the urgency for action. As a means of stifling enterprise, by preventing the utilization of the natural water supply of the country, the British Law of Riparian Rights could scarcely be excelled. For instances of the operation of this monstrous law we have only to look back on the records of dams which have been constructed and guarded by armed men; of other dams which, after construction in this way by one armed mob, have been cut through by another; of many cases where dams were needful but were not built through fear of litigation, and of the purchase of extensive pumping plant which frequently lies idle for the same reason. The evils arising from the British law of Riparian Rights were brought prominently to public notice in California about a year ago in an important lawsuit, the immediate result of which was to temporarily stop the progress of irrigation in that State and cause serious losses to some of the irrigators. "Anti-riparian leagues" were promptly formed throughout the State, and no doubt legislation of a remedial character will be passed, if it has not been passed already. In this case proper legislation appears not to have been thought of till the public indignation was aroused by the stoppage of agricultural enterprise, and by the losses to individual irrigators. This mistake has been avoided by our neighbours in Victoria, who have anticipated difficulties by passing a comprehensive bill, limiting and defining riparian rights after the manner proposed in the draft bill contained in the First Report of the New South Wales Water Commission.

Necessity for complete surveys.

In the statement descriptive of the projects which I have here brought forward for systems of canals from the Murray and the Murrumbidgee, I believe that I have shown ample ground to warrant the commencement of surveys for the proposed works. On the manner in which these surveys are carried out will depend largely, not only the first cost, but the efficiency of the proposed canals. In Mr. Deakin's very instructive report on irrigation in America, the evils arising from the neglect to make proper surveys as well as from the want of engineers acquainted with canal construction are clearly set forth. As an instance of this, Mr. Deakin says "There are thirty-two canals taken out of the Kern River where eight would have been abundant; and at Fresno, half-a-dozen where two would have sufficed. What loss this involves may be estimated from a calculation of the State engineer, who, after a careful examination of two of these canals, finds that their combined stream could have been carried in one channel, at a saving of 20 per cent. of the water conveyed. The engineering defects of such works are palpable, and are not disputed or disguised." This state of affairs is readily explained by Mr. Deakin's remark "These works have been built often without engineers, almost always without plans." No doubt he might have added "without surveys". Facts such as these show that the first step towards the preparation of the most suitable designs for canal works is a comprehensive survey carried out under experienced supervision. I may add, also, that while works such as those now proposed cannot be constructed without legislation, I am not aware that there exists any such bar to the prosecution of the surveys. If my estimate be correct regarding the annual loss which the Colony sustains through neglect to utilize the waters of the Murrumbidgee and the Murray, the figures I have given will recommend the commencement of the surveys more forcibly than would any words which I can use.

I have the honor to be,

Gentlemen,

Your obedient servant,

H. G. M'KINNEY, M.E., M.I.C.E.,

Engineer to the Commission.

LIST

LIST OF APPENDICES TO IRRIGATION AND WATER CONSERVATION  
IN RIVERINA.

(A) *Printed Matter.*

1. Tabular statement showing abstract of readings of the river gauge at Albury from 1879 till 1886.
2. Tabular statement showing abstract of readings of the river gauge at Wagga from 1879 till 1886.
3. Statement showing the dates and heights of the most important floods in the Murrumbidgee since 1853.
4. Gaugings of the River Murray at Echuca since 1865, as made by the Victorian Department of Water Supply, and kindly supplied to me by Mr. Stuart Murray, Chief Engineer.
5. Tabular statement regarding the Murray River trade prepared by Mr. C. C. Pope, of the Customs Department, Moama.
6. Tabular statement regarding the Murray River trade prepared by Mr. D. J. M'Kinnery, of the Customs Department, Wentworth.

(B) *Plans.*

1. Map of the Murray and Murrumbidgee Districts, showing the proposed canals on a scale of 4 miles to an inch.
2. The same map as above on a scale of 16 miles to the inch.
3. Diagram showing discharge of the Murray at Albury from 1879 to 1886.
4. Diagram showing discharge of the Murrumbidgee at Wagga Wagga from 1879 to 1886.
5. Cross-section of the Murray at Albury.
6. Cross-section of the Murray at Tocumwal.
7. Cross-section of the Edward at Deniliquin.
8. Cross-section of the Murrumbidgee at Wagga.
9. Diagram showing heights of the Murray at Albury, Echuca, and Swan Hill, kindly supplied by Mr. George Gordon, late Chief Engineer for Water Supply in Victoria.

28th March, 1887.





IRRIGATION AND WATER CONSERVATION IN RIVERINA—APPENDIX No. 3.

MURRUMBIDGEE FLOOD-LEVELS.

	Gundagai		...	Wagga	
	ft	ins		ft	ins
1853 .....	38	10	...	35	9
1867 .....	28	9	...	30	7
1869 (second flood) .....	26	4	..	29	10
1870 (April 26) .....	38	0	..	35	0
1870 (May 14) .....	32	0	..	32	6
1870 (June 4) .....	28	6	.	30	3
1878 (Nov 5) .....	27	6	...	29	6
1879 (Sept. 18) .....	33	6	(Sept 20)	30	8

IRRIGATION AND WATER CONSERVATION IN RIVERINA.—APPENDIX No. 4.

VICTORIAN WATER SUPPLY.

GAUGINGS OF THE MURRAY RIVER AT ECHUCA

1865.

	Discharge in cubic feet per minute			Mean discharge in gallons per 24 hours
	Maximum	Minimum	Mean	
January				
February				
March				
April				
May				
June				
July				
August				
September*	782,508	518,557	673,963	6,065,667,000
October	580,610	351,984	461,558	4,154,022,000
November	344,835	211,200	267,019	2,403,171,000
December†	207,806	100,725	156,120	1,405,080,000

\* The gaugings commence on the 7th The discharges given are for the last 24 days only  
 † The gaugings cease on the 22nd The discharges given are for the last 22 days only

1866.

	Discharge in cubic feet per minute			Mean discharge in gallons per 24 hours
	Maximum	Minimum	Mean	
January*				
February				
March				
April				
May†	212,231	190,836	206,367	1,857,303,000
June	297,677	183,186	232,662	2,094,255,000
July	473,944	225,229	335,406	3,018,654,000
August	988,340	423,003	714,668	6,432,012,000
September	1,005,455	595,470	726,591	6,539,319,000
October	895,898	736,659	814,375	7,329,375,000
November	778,401	348,410	549,377	4,944,393,000
December . . .	407,329	274,407	324,628	2,921,652,000

\* On the 17th the discharge was 56,649 cubic feet per minute  
 † The discharges given are for the last 4 days only

1867.

	Discharge in cubic feet per minute			Mean discharge in gallons per 24 hours
	Maximum	Minimum	Mean	
January	264,435	100,725	178,642	1,607,778,000
February	97,310	68,441	84,023	756,207,000
March	88,772	51,284	67,838	610,542,000
April	133,883	47,707	76,096	684,864,000
May	213,263	95,602	140,479	1,264,311,000
June	214,810	167,886	202,832	1,825,488,000
July	1,016,865	216,357	586,628	5,279,652,000
August	1,207,849	1,033,980	1,120,332	10,082,988,000
September	1,633,227	879,016	1,198,301	10,784,709,000
October	2,113,975	1,617,222	1,850,377	16,653,393,000
November	1,554,156	778,401	1,178,404	10,605,636,000
December . . . . .	766,080	225,229	432,407	3,891,663,000

IRRIGATION AND WATER CONSERVATION IN RIVERINA.

1868.

	Discharge in cubic feet per minute.			Mean discharge in gallons per 24 hours.
	Maximum.	Minimum.	Mean.	
January .....	217,388	97,310	159,239	1,433,151,000
February .....	195,927	56,649	74,203	667,827,000
March .....	202,715	62,545	112,072	1,008,648,000
April .....	201,018	56,649	117,824	1,060,416,000
May .....	148,761	85,357	102,288	920,592,000
June .....	256,594	119,146	153,299	1,379,691,000
July .....	522,643	281,056	378,723	3,408,507,000
August .....	555,528	248,753	373,141	3,358,269,000
September .....	660,752	240,912	384,186	3,457,674,000
October .....	794,829	548,468	698,722	6,288,498,000
November .....	530,816	214,294	321,864	2,896,776,000
December .....	213,778	99,017	159,286	1,433,574,000

1869.

	Discharge in cubic feet per minute.			Mean discharge in gallons per 24 hours.
	Maximum.	Minimum.	Mean.	
January .....	90,479	51,284	68,592	617,328,000
February .....	62,545	38,765	49,661	446,949,000
March* .....				
April† .....	277,732	122,830	189,685	1,707,165,000
May .....	156,411	115,462	136,442	1,227,978,000
June .....	387,730	171,711	302,099	2,718,891,000
July .....	541,407	338,083	456,507	4,108,563,000
August .....	454,356	264,435	361,344	3,252,096,000
September .....	304,325	252,673	269,063	2,421,567,000
October .....	957,669	311,077	651,737	5,865,633,000
November .....	957,669	294,352	638,454	5,746,086,000
December .....	304,325	152,586	233,340	2,100,060,000

\* The discharges on the 1st and 2nd were 58,614 and 60,580 cubic feet per minute respectively.

† The discharges given are for the last 15 days only.

1870.

	Discharge in cubic feet per minute.			Mean discharge in gallons per 24 hours.
	Maximum.	Minimum.	Mean.	
January .....	202,715	100,725	163,632	1,472,688,000
February .....	137,567	49,495	82,282	740,538,000
March .....	49,495	32,248	40,713	366,417,000
April .....	264,435	45,918	134,911	1,214,199,000
May .....	377,006	217,388	263,852	2,374,668,000
June .....	1,292,534	395,569	722,464	6,502,176,000
July .....	1,732,186	1,258,314	1,502,520	13,522,680,000
August .....	1,740,677	1,241,492	1,521,242	13,691,178,000
September .....	2,094,938	1,617,222	1,802,370	16,221,330,000
October .....	2,234,171	1,379,378	1,539,371	13,854,339,000
November .....	2,579,756	1,180,897	1,827,741	16,449,669,000
December .....	1,180,897	502,212	792,818	7,135,362,000

1871.

	Discharge in cubic feet per minute.			Mean discharge in gallons per 24 hours.
	Maximum.	Minimum.	Mean.	
January .....	477,862	359,133	400,037	3,600,333,000
February .....	544,937	304,325	420,390	3,783,510,000
March .....	555,528	233,070	389,259	3,503,331,000
April .....	240,912	202,715	214,401	1,929,609,000
May .....	334,707	201,018	233,922	2,105,298,000
June .....	317,828	213,263	246,164	2,215,476,000
July .....	606,615	359,133	538,823	4,849,407,000
August .....	782,508	551,998	690,591	6,215,319,000
September .....	1,028,275	639,256	727,545	6,547,905,000
October .....	1,448,867	948,631	1,238,316	11,144,844,000
November .....	944,112	707,928	838,132	7,543,188,000
December .....	807,150	537,877	704,644	6,341,796,000

## 1872.

	Discharge in cubic feet per minute.			Mean discharge in gallons per 24 hours.
	Maximum.	Minimum.	Mean.	
January .....	530,816	204,412	313,150	2,818,350,000
February .....	264,435	190,836	212,925	1,916,325,000
March .....	201,018	93,895	134,925	1,214,325,000
April .....	202,715	87,064	138,727	1,248,543,000
May .....	355,559	115,462	189,879	1,708,911,000
June .....	866,355	311,077	479,170	4,312,530,000
July .....	1,507,573	908,559	1,280,650	11,525,850,000
August .....	1,392,534	1,130,250	1,259,448	11,335,032,000
September .....	1,140,379	766,080	934,973	8,414,757,000
October .....	1,538,628	766,080	1,168,000	10,512,000,000
November .....	1,463,260	815,364	1,054,593	9,491,337,000
December .....	957,668	617,760	747,943	6,731,487,000

## 1873.

	Discharge in cubic feet per minute.			Mean discharge in gallons per 24 hours.
	Maximum.	Minimum.	Mean.	
January .....	617,760	204,412	419,785	3,778,065,000
February .....	271,083	204,412	226,528	2,038,752,000
March .....	240,912	164,061	209,108	1,881,972,000
April .....	204,412	144,936	163,719	1,473,471,000
May .....	359,133	213,263	274,701	2,472,309,000
June .....	639,256	233,070	370,835	3,337,515,000
July .....	862,106	588,040	742,975	6,686,775,000
August .....	1,160,638	823,862	1,002,648	9,023,832,000
September .....	1,241,492	1,100,062	1,189,568	10,706,112,000
October .....	1,180,897	707,928	910,463	8,194,167,000
November .....	715,644	562,589	628,497	5,656,473,000
December .....	688,639	277,732	506,441	4,557,969,000

## 1874.

	Discharge in cubic feet per minute.			Mean discharge in gallons per 24 hours.
	Maximum.	Minimum.	Mean.	
January .....	304,325	215,325	244,364	2,199,276,000
February .....	304,325	144,936	210,626	1,895,634,000
March .....	204,412	137,567	174,988	1,574,892,000
April .....	591,755	207,806	404,860	3,643,740,000
May .....	544,937	213,263	266,543	2,398,887,000
June .....	853,607	530,816	627,960	5,651,640,000
July .....	1,292,534	874,796	1,150,992	10,358,928,000
August .....	1,269,721	819,613	1,041,316	9,371,844,000
September .....	1,196,634	908,559	1,076,240	9,686,160,000
October .....	1,247,099	988,340	1,135,891	10,223,019,000
November .....	1,039,685	630,657	855,241	7,697,169,000
December .....	630,657	217,388	351,299	3,161,691,000

## 1875.

	Discharge in cubic feet per minute.			Mean discharge in gallons per 24 hours.
	Maximum.	Minimum.	Mean.	
January .....	217,388	126,515	195,993	1,763,937,000
February .....	217,388	108,093	158,432	1,434,888,000
March .....	212,747	108,093	149,740	1,347,660,000
April .....	119,146	93,895	101,917	917,253,000
May .....	494,039	119,146	291,563	2,624,067,000
June .....	1,448,867	362,708	885,157	7,966,413,000
July .....	1,585,212	1,224,670	1,422,947	12,806,523,000
August .....	1,392,534	1,202,241	1,263,247	11,369,223,000
September .....	1,641,229	1,224,670	1,495,216	13,456,944,000
October .....	1,484,849	962,187	1,180,586	10,625,274,000
November .....	1,292,534	845,109	915,780	8,242,020,000
December .....	840,859	595,470	677,303	6,095,727,000

## IRRIGATION AND WATER CONSERVATION IN RIVERINA.

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1876.

	Discharge in cubic feet per minute.			Mean discharge in gallons per 24 hours.
	Maximum.	Minimum	Mean.	
January ...	617,760	344,835	467,810	4,210,290,000
February .....	344,835	190,836	247,091	2,223,819,000
March .....	190,836	144,936	155,671	1,401,039,000
April .....	211,200	144,936	181,387	1,632,483,000
May .....	307,701	144,936	207,412	1,866,708,000
June .....	442,602	215,325	344,198	3,097,782,000
July .....	311,077	212,747	267,975	2,411,775,000
August .....	656,452	213,263	500,113	4,501,017,000
September .....	696,355	419,088	497,975	4,481,775,000
October .....	819,613	526,730	715,838	6,442,542,000
November .....	634,957	359,133	477,074	4,293,666,000
December .....	485,866	194,230	352,780	3,175,020,000

1877.

	Discharge in cubic feet per minute			Mean discharge in gallons per 24 hours.
	Maximum	Minimum	Mean.	
January .....	206,109	97,310	154,937	1,394,433,000
February .....	95,602	80,234	84,564	761,076,000
March .....	100,725	76,303	90,476	814,284,000
April .....	130,199	72,372	82,913	746,217,000
May .....	473,944	81,942	178,853	1,609,677,000
June .....	782,508	518,557	667,833	6,010,497,000
July .....	782,508	403,409	554,603	4,991,427,000
August .....	434,767	284,380	354,264	3,188,376,000
September .....	530,816	217,388	335,678	3,021,102,000
October .....	704,070	380,581	556,542	5,008,878,000
November .....	426,927	271,083	347,153	3,124,377,000
December .....	264,435	190,836	210,638	1,895,742,000

1878.

	[Discharge in cubic feet per minute.			Mean discharge in gallons per 24 hours.
	Maximum	Minimum.	Mean	
January .....	179,361	64,545	109,881	988,929,000
February .....	190,836	60,580	108,674	978,066,000
March .....	506,298	167,886	300,617	2,705,553,000
April .....	656,452	264,435	398,329	3,584,961,000
May .....	669,350	317,828	517,758	4,659,822,000
June .....	1,115,156	217,388	565,835	5,092,515,000
July .....	1,155,574	732,456	933,089	8,397,801,000
August .....	1,180,897	948,631	1,101,044	9,909,396,000
September .....	1,180,897	908,559	1,046,730	9,420,570,000
October .....	1,180,897	912,780	1,043,096	9,387,864,000
November .....	1,185,962	944,112	1,106,937	9,962,433,000
December .....	926,037	206,109	568,951	5,120,559,000

1879.

	Discharge in cubic feet per minute.			Mean discharge in gallons per 24 hours.
	Maximum.	Minimum.	Mean	
January .....	201,018	100,725	137,771	1,239,939,000
February .....	144,936	100,725	109,409	984,681,000
March .....	195,927	90,479	137,442	1,236,978,000
April .....	190,836	80,234	113,505	1,021,545,000
May .....	156,411	83,772	109,518	985,662,000
June .....	344,835	179,361	275,623	2,480,607,000
July .....	454,356	267,759	366,781	3,301,029,000
August .....	580,610	334,707	415,516	3,739,644,000
September .....	660,752	573,180	611,746	5,505,714,000
October .....	1,062,326	617,760	881,256	7,931,304,000
November .....	1,170,768	669,350	942,590	8,483,310,000
December .....	794,829	304,325	611,894	5,507,046,000



## 1880.

	Discharge in cubic feet per minute.			Mean discharge in gallons per 24 hours.
	Maximum.	Minimum.	Mean.	
January .....	338,083	215,841	262,003	2,358,027,000
February .....	221,309	90,479	137,301	1,235,709,000
March .....	202,715	97,310	166,530	1,498,770,000
April .....	462,191	201,018	269,027	2,421,243,000
May .....	790,722	450,438	641,930	5,777,370,000
June .....	1,185,962	656,452	794,594	7,151,346,000
July .....	1,281,127	883,237	1,116,820	10,051,380,000
August .....	1,047,232	757,674	890,350	8,013,150,000
September .....	1,346,488	994,045	1,161,451	10,453,059,000
October .....	1,333,332	715,644	983,625	8,852,625,000
November .....	766,080	458,273	609,406	5,484,654,000
December .....	438,685	197,624	315,906	2,843,154,000

## 1881.

	Discharge in cubic feet per minute.			Mean discharge in gallons per 24 hours.
	Maximum.	Minimum.	Mean.	
January .....	213,778	133,883	172,712	1,554,408,000
February .....	195,927	90,479	128,392	1,155,528,000
March .....	97,310	78,269	89,314	803,826,000
April .....	217,388	80,234	176,209	1,585,881,000
May .....	415,168	156,411	273,532	2,461,788,000
June .....	724,050	277,732	418,688	3,768,192,000
July .....	669,350	426,927	516,049	4,644,441,000
August .....	774,294	344,835	514,712	4,632,408,000
September .....	740,862	473,944	568,385	5,115,465,000
October .....	569,650	419,088	476,227	4,286,653,000
November .....	555,528	314,452	400,794	3,607,146,000
December .....	438,685	217,388	342,539	3,082,851,000

## 1882.

	Discharge in cubic feet per minute.			Mean discharge in gallons per 24 hours.
	Maximum.	Minimum.	Mean.	
January .....	217,388	99,017	157,823	1,420,407,000
February .....	97,310	68,441	77,793	700,137,000
March .....	68,441	27,839	36,646	329,814,000
April .....	72,372	33,718	50,406	453,654,000
May .....	201,018	60,580	122,129	1,099,161,000
June .....	307,701	190,836	242,038	2,178,342,000
July .....	643,555	284,380	454,170	4,087,530,000
August .....	840,859	669,350	766,552	6,898,968,000
September .....	953,150	724,050	869,499	7,825,491,000
October .....	807,150	715,644	757,725	6,819,525,000
November .....	790,722	314,452	543,204	4,888,836,000
December .....	470,027	287,704	383,561	3,452,049,000

## 1883.

	Discharge in cubic feet per minute.			Mean discharge in gallons per 24 hours.
	Maximum.	Minimum.	Mean.	
January .....	277,732	74,338	186,691	1,680,219,000
February .....	90,479	72,372	77,394	696,546,000
March .....	90,479	66,476	78,229	704,061,000
April .....	133,883	74,338	91,207	820,863,000
May .....	104,409	80,234	90,340	813,060,000
June .....	454,356	104,409	210,111	1,890,999,000
July .....	634,957	415,168	534,002	4,806,018,000
August .....	1,084,967	489,953	758,178	6,823,602,000
September .....	1,219,063	988,340	1,109,224	9,983,016,000
October .....	1,100,062	832,361	982,611	8,843,499,000
November .....	1,016,865	891,677	959,551	8,635,959,000
December .....	935,075	264,435	523,691	4,713,219,000

1884.

	Discharge in cubic feet per minute.			Mean discharge in gallons per 24 hours.
	Maximum.	Minimum.	Mean.	
January .....	264,435	144,936	199,650	1,796,850,000
February .....	271,083	99,017	186,816	1,681,344,000
March .....	108,093	81,942	94,756	852,804,000
April .....	90,479	72,372	79,979	719,811,000
May .....	213,778	81,942	133,680	1,203,120,000
June .....	411,248	148,761	213,758	1,923,822,000
July .....	331,332	216,357	251,558	2,264,022,000
August .....	477,862	201,018	286,119	2,575,071,000
September .....	411,248	355,559	381,875	3,436,875,000
October .....	411,248	344,835	377,437	3,396,933,000
November .....	384,155	311,077	349,835	3,148,515,000
December .....	327,956	229,150	281,337	2,532,033,000

1885.

	Discharge in cubic feet per minute.			Mean discharge in gallons per 24 hours.
	Maximum.	Minimum.	Mean.	
January .....	252,673	99,017	161,612	1,454,508,000
February .....	144,936	88,772	106,867	961,803,000
March .....	100,725	72,372	84,863	763,767,000
April .....	137,567	68,441	105,403	948,627,000
May .....	108,093	78,269	87,807	790,263,000
June .....	551,998	111,778	266,577	2,399,193,000
July .....	555,528	217,388	400,200	3,601,800,000
August .....	559,059	212,231	359,212	3,232,908,000
September .....	1,039,685	366,282	623,512	5,611,608,000
October .....	1,191,027	669,350	1,003,500	9,031,500,000
November .....	677,066	240,912	414,451	3,730,059,000
December .....	321,204	167,886	214,843	1,933,587,000

1886.

	Discharge in cubic feet per minute.			Mean discharge in gallons per 24 hours.
	Maximum.	Minimum.	Mean.	
January .....	321,204	115,462	211,822	1,906,398,000
February .....	216,357	115,462	168,879	1,519,911,000
March .....	111,778	78,269	95,857	862,713,000
April .....	78,269	58,614	65,559	590,031,000
May .....	160,236	68,441	88,793	799,137,000
June .....	179,361	92,187	130,902	1,178,118,000
July .....	179,361	97,310	130,900	1,178,100,000
August .....	819,613	137,567	447,433	4,026,897,000
September .....	891,677	724,050	806,223	7,256,007,000
October .....	807,150	634,957	690,469	6,214,221,000
November .....	828,112	458,273	671,744	6,045,696,000
December .....	470,027	359,133	449,238	4,043,142,000

MEAN monthly discharge, in cubic feet per minute, for 20 years, ending 31st December, 1886 :—

January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December
218,307	147,612	134,272	157,803	217,571	406,007	679,346	751,340	854,488	942,089	754,072	443,043

TABLE showing rainfall, and proportion of total rainfall discharged during the years 1883, 1884, 1885, and 1886 :—

Drainage area.	Rainfall in inches and proportion of total rainfall discharged.			
	1883.	1884.	1885.	1886.
Ranges, 13,200 square miles .....	37 inches.	34 inches.	33·5 inches.	41 inches.
Undulating country, 3,120 square miles...	22 inches.	21·5 inches.	25 inches.	25 inches.
Plains, 3,080 square miles .....	17 inches.	13·5 inches.	21 inches.	19 inches.
Proportion of total rainfall discharged. ...	17·4 per cent.	9·6 per cent.	12·4 per cent.	11 per cent.

## GAUGINGS OF THE MURRAY RIVER AT ECHUCA.—MEMORANDUM.

*Site.*—These gaugings of the Murray have been taken at the railway bridge which crosses the river from Echuca to Moama; the bridge being about 25 chains above the site of the gauge-staff. A section, by levelling and soundings, has been made of the waterway at the downstream face of the bridge, and of its continuation by the timber viaduct across the low ground on the New South Wales side of the river.

*Current Velocities.*—Velocities of the current have been measured by current-meter (Révy's pattern) similar to that previously used for obtaining velocities in the Goulburn, Loddon, Mitta, Kiewa, and Campaspe Rivers. Such measurements were obtained for the following river levels, viz.:—18ft. 6in., 15ft. 6½in., 11ft. 7in., 7ft. 3in., 3ft. 11in., 2ft. 9in., and 1ft. 9in. on the gauge at the Echuca Wharf. As the water-level in no case remained quite constant throughout the operation of gauging, the recorded velocities in each set have been reduced, where necessary, to the level at which the greatest discharge was actually measured in that set; so as to obtain final results dependent, as far as possible, on actual measurements rather than on measurements amended by equation. Where reductions had to be made, the velocities throughout a vertical were reduced in the ratio, ascertained by direct measurement, of the variation of surface velocity at that vertical. At 15ft. 6½in. on the gauge, surface velocities only were measured; but at all the other levels complete sub-surface velocities were obtained. These were taken in verticals, 10ft. apart across the stream, at 4in. under the surface of the water, at 8in. above the river bed, and at intermediate points not exceeding 5ft. apart. The method employed for measuring the sub-surface velocities was that described in Révy's "Hydraulics of Great Rivers." The instrument was allowed to record for about 3 minutes at each immersion, the exact time being noted by chronograph. At each point of measurement two readings at least were taken; if these were discrepant, further trials were made until satisfactory agreement was obtained. A difference of about 5 per cent. in the number of revolutions per minute was allowed; and, although this margin was sometimes slightly exceeded, usually the difference was much less. The means of the adopted readings were employed in the computations. The greatest depth at which velocities were obtained was 37ft. 4in. The measurements were taken on a line drawn across the river channel, 17ft. below the downstream face of the bridge; except in the case of those corresponding to 3ft. 11in. on the gauge, which were taken some distance down the river, applied to the section at that point, and the resultant volume divided by the area of the cross-section at the bridge to obtain the mean velocity there.

*Computations.*—The mean velocity in each vertical is computed from a diagram, constructed by plotting a curve of velocities from surface to bottom; the depths being drawn to a scale of 4ft. to an inch, and the velocities plotted as ordinates to a scale of 40ft. per minute to an inch. The mean velocity in the vertical was then obtained by dividing the area of the figure, contained between the vertical and its corresponding curve, by the depth. With these mean velocities in verticals, as ordinates to a horizontal line representing the water-level, a curve of mean velocity was plotted on a diagram of the cross-section of the river for each gauging. The discharge was then computed by multiplying each portion of the area of the cross-section, contained between adjacent verticals in which velocities were measured, by the mean ordinate for that area, and adding the products. At 15ft. 6½in. on the gauge mean velocity was reduced from surface velocity by comparison of surface with mean velocity at 18ft. 6in., and at 11ft. 7in. At 18ft. 6in., this ratio was 1 : 0.966, and at 11ft. 7in. it was 1 : 0.901; at 15ft. 6½in. it was taken as 1 : 0.938. Finally, a curve of mean velocities for all levels of the river was plotted as follows:—the work being similar to that already described in the case of the Goulburn. The total volume of discharge at each level divided by the cross-sectional area of the flowing water was used to obtain mean velocity at that level. These were plotted as ordinates to a curve, the abscissæ representing the corresponding values of the hydraulic radius. The curve thus plotted passes through the extremities of all the ordinates except those at 2ft. 9in. and 1ft. 9in., one of which falls a little without and the other within the curve. At these levels there were contrary currents, whose velocities had to be treated as negative quantities, and apparently still water, giving no velocity ordinates. The discrepant character of the final velocity ordinates at 2ft. 9in., and at 1ft. 9in., may be in some way related to these facts. The mean velocity curve was produced to find the velocity of the river at higher levels than those at which gaugings were made. The discharges on the flat banks extending back from the main river channel have been computed separately. On the Victorian bank, which is comparatively clear, the velocity was taken as bearing the same ratio to that in the main channel, as the square root of the hydraulic radius of the waterway on the bank does to the square root of the hydraulic radius in the main channel, for the same surface level. On the New South Wales bank, which is covered with thick scrub, a much lower velocity was arbitrarily assumed.

*Staff-readings.*—The daily levels of the river down to March, 1886, used in computing the tabulated discharges, have been obtained from a file of the Melbourne *Argus*, in which newspaper they have been published since September, 1865. For the years 1866 and 1869 the records are incomplete, the heights being omitted for some months when the river was low. The staff-readings for Sundays, and for other occasional days for which no records have been published, are interpolated as intermediate between those of the preceding and succeeding days. Some obvious typographical errors were similarly corrected. In March, 1886, a gauge-staff was erected by the Victorian Water Supply Department at the Echuca Wharf, from which daily readings are now being taken. The zero of this gauge was set at the same level as that of the gauge from which the readings published in the *Argus* were taken, viz.:—276.83 feet above L.W.M. Hobson's Bay, to Echuca Railway datum. The highest recorded flood occurred on the 4th November, 1870, when the reading was 38ft. 9in. To ascertain whether the readings given in the *Argus* were reliable, full inquiry was made; when it was found that they had been taken daily by the Wharf Master, telegraphed to Melbourne, and posted at the General Post Office for public information. There is no reason to doubt their accuracy.

*Drainage Area and Rainfall.*—The drainage area of the Murray at Echuca consists of 13,200 square miles of ranges and mountainous country, 3,120 square miles of undulating country, and 3,080 square miles of plains, or a total of 19,400 square miles. Of this area, 16,400 square miles are in Victoria, and 3,000 square miles in New South Wales. The rainfall and proportion of total rainfall discharged are given in a table for the years 1883, 1884, 1885, and 1886. The rainfall has been obtained from the yearly rainfall maps published at the Observatory. The records prior to 1883 are insufficient to enable it to be ascertained, especially for the Upper Murray basin. The proportion of total rainfall discharged by the Murray at Echuca is about one-half of that for the Goulburn at Murchison, for the four years for which it is given.

No opportunity occurred during last year of gauging high flood discharges at Echuca, but as the velocity readings extend from 1ft. 9in. to 18ft. 6in. on the gauge-staff, and are well distributed, and the level at which the river would cease to flow has been ascertained, and used as the point of origin of the final velocity curve, and as that curve passes through the extremities of all the ordinates, with the comparatively unimportant exceptions before noted, there is no doubt that the velocities used, and therefore the resultant volumes of discharge, are accurate, within practical limits, up to about 24ft. on the gauge-staff. The computed discharge of the river, when at this level, is 1,130,250 cubic feet per minute, and all discharges not exceeding this may be taken as quite reliable. Higher discharges can only be looked on as approximations, and more subject to error the more they exceed those obtained by actual measurements. It is believed, however, that even the highest tabulated discharges may be taken as fair approximations.

To enable some idea to be formed of the flood discharge of the Murray River at Echuca, it may be pointed out that, during the months of July, August, and October, 1870, the mean discharge was equal to rather more than twice the capacity of the Yan Yean reservoir in every twenty-four hours; whilst for the months of October and November in the same year it was equal to nearly three times the capacity of that basin in every twenty-four hours.

STUART MURRAY,  
Chief Engineer of Water Supply.

### IRRIGATION AND WATER CONSERVATION IN RIVERINA.—APPENDIX No. 5.

TABLE showing the Number of Steamers cleared at the Port of Moama, also the Value of the River Trade to Ports on the Murray, Edward, and Murrumbidgee. (Compiled from information supplied by Mr. C. C. Pope, Customs Department, Moama.)

Year.	Murray.								Murrumbidgee.				Edward River.	
	Albury.		Howlong.		Corowa.		Tocumwal.		Balranald.		Above Balranald.		No. of Steamers and Barges.	Value of Trade.
	No. of Steamers and Barges.	Value of Trade.	No. of Steamers and Barges.	Value of Trade.	No. of Steamers and Barges.	Value of Trade.	No. of Steamers and Barges.	Value of Trade.	No. of Steamers and Barges.	Value of Trade.	No. of Steamers and Barges.	Value of Trade.		
1881 ...	2	£ 350	...	...	4	£ 230	13	£ 1,480	53	£ ...	168	£ ...	18	£ ...
1882 ...	...	...	...	...	2	...	7	£ 343	21	...	119	...	13	...
1883 ...	...	...	...	...	2	204	10	£ 467	39	...	78	...	16	...
1884 ...	2	£ 400	...	...	...	...	4	£ 415	51	£ 34,406	36	£ 29,183	19	£ 3,174
1885 ...	...	...	...	...	...	...	12	£ 243	59	£ 30,194	54	£ 32,083	18	£ 1,761

If the gauges at Albury and Wentworth each stand at 6 feet, there will be sufficient water for through navigation. The heights required for through navigation on the Murrumbidgee are 8 feet at Narrandera, 6 feet at Hay, and 4 feet at Balranald. By the term "value of trade" is here meant only the value of the cargoes taken up the rivers from Moama.

### IRRIGATION AND WATER CONSERVATION IN RIVERINA.—APPENDIX No. 6.

RETURN showing value of Imports and Exports, Arrivals and Departures of Steamers (with barges in tow), with their net tonnage, for the past five years, at Wentworth.

#### INWARD.

Year.	South Australia.			Victoria.		
	Value of Imports.	Arrivals.	Tonnage.	Value of Imports.	Arrivals.	Tonnage.
1881	£ 234,897	140	17,118	£ 90,459	52	10,630
1882	410,127	191	28,055	89,085	43	11,297
1883	404,322	199	32,005	54,241	51	13,093
1884	218,937	157	17,781	39,732	36	8,389
1885	141,929	143	17,058	14,084	26	5,908

#### OUTWARD.

Year.	South Australia.			Victoria.		
	Value of Exports.	Departures.	Tonnage.	Value of Exports.	Departures.	Tonnage.
1881	£ 298,004	130	16,133	£ 111,453	54	10,155
1882	921,427	189	27,947	150,021	43	10,003
1883	771,010	192	30,417	71,122	50	12,309
1884	1,029,134	167	21,665	330,652	56	12,969
1885	268,608	151	18,654	11,425	33	7,905

Number of Steamers and Barges trading to and from Wentworth.

Steamers, 103; average tonnage of each about 80 tons.

Barges, 131; average tonnage of each about 150 tons.

Custom House, Wentworth, 26 June, 1886.

D. J. M'KINNERY,  
Sub-Collector of Customs.

REPORT

## REPORT ON THE PROPOSAL TO DIVERT WATER FROM THE SNOWY RIVER INTO THE MURRUMBIDGEE AND LAKE GEORGE.

To the President and Members of the Commission,—

Gentlemen,

Consequent upon Mr. Surveyor-General Adams' evidence taken by the Commissioners as to the possibility of diverting the waters of the Snowy River into the Murrumbidgee River, Mr. Licensed-Surveyor Haylock was instructed two years ago to carry out a contour survey between a point on the Dividing Range 10 miles above Cooma and the proposed point of diversion on the Snowy River.

This survey was left uncompleted when only about one-half the necessary distance had been traversed ; consequently Mr. Haylock's investigation was rendered of no material value to the Commission.

The question as to the possibility of the scheme being still in abeyance, it was decided to set it at rest before closing the Commission, as far as could be determined, by a reconnaissance of the country and the taking of barometric levels.

I was therefore deputed by the Commission to make a cursory examination of the country, and to connect by barometer readings the terminal point of Mr. Haylock's survey with the proposed offtake on the Snowy.

I have now the honor to submit the result of my investigations.

The lowest gap in the main divide between the Snowy and Murrumbidgee Rivers is situated near the main road from Cooma to Jindabyne, and at the head of Slack's Creek, a tributary of the Murrumbidgee, also distant about 11 miles in a south-west direction from the town of Cooma, and about 300 feet higher in altitude. This position in the range was ascertained by Mr. District-Surveyor Betts, and in his deduction I concur.

The trend of the divide is from N.W. to S.E., and the country is exceedingly open, gently undulating, and of trap and granitic formation alternating.

The bench-mark at this initial point in the range I observed as being approximately 3,000 feet above sea-level, and for reference as a datum it will be designated as being of that altitude, and through this gap the Snowy River waters must be conducted for the purpose of augmenting the supply in the Murrumbidgee, and for the irrigation of the rich plains of Monaro, extending towards Myalla and Bombala on the south, and Micilago on the north.

Mr. Haylock ran a contour line from this gap in the divide for a distance about 31 miles westerly towards the Snowy River, following approximately the course which the proposed conduit would take. Over this distance the country is rolling, and of trap and granite formation, with a considerable depth of subsoil. Although Mr. Haylock's contour appears exceedingly sinuous, in consequence of the number of small creeks around the heads of which his traverse was conducted, yet there are no engineering difficulties in the way of excavating a canal to conduct the water ; and in many instances a short tunnel or aqueduct would materially shorten the distance. The main obstruction in the way of the scheme is a high range known as the Jindabyne Range, and a spur from it called Varney's Range, which intercept the direct course the conduit would take between the Snowy River and the terminal point of Mr. Haylock's survey.

The Jindabyne Range rises with considerable acclivity from the bed of the Eucumbene and Snowy Rivers to a height of 700 or 800 feet, and as far as I could ascertain there exists no possible gap in this range through which the waters could be conducted.

It would be necessary to contour round the southern extremity of Jindabyne and Varney's Ranges, thereby increasing the length of excavation very considerably, as shown on the accompanying plan. This, however, I believe, could be materially reduced by tunnelling from the Eucumbene to the Wullwye Creek, as will appear from the same plan.

From simultaneous readings of the aneroid barometer, I found that the junction of the Eucumbene and Snowy Rivers was 153 feet below the gap in the divide between the Murrumbidgee and Snowy ; the junction of the Crackenback and Snowy, about a mile above the point where the Eucumbene joins the Snowy, is practically of the same elevation.

The Eucumbene River takes its rise on the Kiandra Plains, and drains a large extent of country in its flow to the junction of the Snowy, the length of the river from its source to this junction being about 50 miles, and the watershed area 520 square miles.

I observed that the Snowy River, about 5 miles above its junction with the Crackenback River, showed a greatly increasing grade for every mile traversed up stream, flowing over granite boulders of considerable size. No reach of water exists, such as is to be found near its junction with the Eucumbene, and the ranges on each side rise to a height of a thousand feet above the bed of the river.

I noted the height at the junction of the Gungarlin and Snowy Rivers to be about 3,350 feet above sea-level, or 350 feet above the point where it is proposed to cross the divide at the head of Slack's Creek.

The discharge of the Snowy River at a very short distance below this junction, at a time when the river was abnormally low, was estimated by Mr. District-Surveyor Betts, and subsequently by myself, as 8,000,000 gallons per hour ; and it is estimated that the combined waters of the Crackenback, Snowy, and Eucumbene would ensure a minimum supply of 16,000,000 gallons per hour.

Indications on the bank of the Snowy showed that the river was fully 10 feet higher during the melting of the snow than at the time of my visit in February ; and within my own observation, after 1 inch of rainfall being registered on the gauge, the river rose 2 feet higher. The action of wind upon the snow-drifts has been known to cause a rise of 2 feet in the height of the river. According to Mr. Betts, the river is in flood during the melting of snow from the middle of September to the end of December. Roughly speaking, he estimates that the section would be 100 feet wide, 8 feet deep, with a velocity of 3 to 4 miles per hour—equivalent to a discharge of about 90,000,000 gallons per hour.

The Snowy and Gungarlin Rivers drain 32 miles along the course of the Australian Alps from Mount Kosciusko (the highest peak in Australia, 7,260 feet) to Bull's Peak and Clear Hill, embracing the principal snow-fed tributaries.

I propose that the canal should tap the Snowy River at a point about 2 miles below the Gungarlin junction, and at 3,180 ft. elevation, or 180 ft. level above the gap in the divide at Slack's Creek; the Crackenback, if necessary, being deflected into the Snowy to meet the point of offtake. The proposed canal would cross the Eucumbene near Burn's Creek, at 3,170 feet level, or, according to Mr. Surveyor Pennefather's recent observations, at 170 feet above the gap at Slack's Creek. The Eucumbene above this junction has a drainage of 495 square miles, and is largely augmented by snow-waters, the mean rainfall alone at Kiandra being 61 inches.

I consider there are no engineering difficulties to prevent the construction of a canal from the Snowy to the Gap over the course as proposed on the plan. The nature of the country is entirely granitic, with occasional outcrops of trap formation, and where rock is met with it is chiefly of decomposed granite, and not difficult of excavation.

There are so many permanent feeders to the Snowy River below the proposed canal that I consider no private or public requirements would suffer by the diversion.

The approximate length of the canal to the Gap, as taken from the accompanying map, would be 79 miles, but if  $6\frac{1}{2}$  miles of tunnel and fluming were substituted its length would possibly be reduced to 38 miles.

The water in the Snowy River is particularly pure and wholesome, but that in the Eucumbene is impregnated to a considerable extent by the clay-washings from the sluicing operations at Kiandra Gold-field.

Should it be possible to construct the proposed canal, the diverted Snowy waters would not only give the largest augmentation to the volume of the Murrumbidgee at a time of year when but little supply would be available, but they would command the whole of the Monaro Plains, from Micilago on the north to Bombala on the south, the greater part of which land is admirably adapted to the growth of cereals.

I may point out that the Snowy River, below the Eucumbene junction and at Buckley's Crossing, runs through many miles of fine open country, which is to a large extent cultivated; but near its point of discharge, in Gippsland, its course lies through rugged country, which, apparently, could not be used for any purpose whatever.

At Snow Plain, on the Gungarlin River, at a height of about 4,500 feet above the sea, an oaten crop of 30 or 40 acres was the most luxuriant that came under my notice. On the open plains adjacent to the Snowy River the last wheat crop was very good, averaging about 25 bushels to the acre.

I am of opinion that the vastness of the Monaro plains, their richness of soil and salubrity of climate, are not, as a whole, widely or sufficiently understood and recognised. Water supply and railway communication are required to more fully make manifest its ample resources.

In the Cooma District the rainfall is very meagre. In 1884 there were only 14 inches, and for the last five years it did not average more than 17 inches per year. And it is a noticeable fact that this rich district suffered severely in the late drought, and perhaps to a more protracted period than any other in the Colony. From this fact it is evident that a canal such as is proposed would be of immense advantage.

At the proposed offtake from the Snowy large quantities of fine timber exist, especially mountain ash, which could be made use of for fluming, &c. A large saw-mill, driven by water-power, is now being worked on the Gungarlin River. It turns out mountain ash principally, which can be supplied in any quantity at the mill at 10s. per 100 ft.

#### FURTHER PROPOSED EXTENSION TO LAKE GEORGE, AND LACHLAN-MURRUMBIDGEE DIVIDE.

Judging from the respective levels between Slack's Creek, 3,000 feet elevation, and the bed of Lake George, 2,206 feet, it seems feasible to suppose that the project now shadowed forth might be extended to include a diversion from the main canal above proposed into the lake, drawing supplies from the Umaralla and Big Badja Rivers in the course of the canal. Although it would be possible to tap the Murrumbidgee near Cooma to afford a supply to the lake, yet such a course would not be advisable, as the supply in that river is not more than adequate to meet the demands below, seeing that provision has to be made for canals through Riverina; whereas the enormous supply obtainable from the melting of the vast snow-drifts on the eastern slopes of the Australian Alps now runs absolutely to waste.

The consequent development of such a scheme would be the construction of a canal from Lake George along the divide between the Lachlan and Murrumbidgee Rivers. By means of such a canal a large extent of arable land would be placed within the reach of irrigation, and the auriferous districts of Temora, Young, Wombat, and Grenfell, where the miners, whose industry depends on a supply of water for hydraulic and ground-sluicing, would be placed in a position to an extent now scarcely realizable, possibly leading to the development of a future Sandhurst. Mr. C. S. Wilkinson, Geological Surveyor, informs me that with water for hydraulic sluicing it would take fifteen years to exhaust the deep leads below the town of Young. The accompanying plan exemplifies the proposed scheme, giving levels and all other data obtainable.

Mr. Betts, who made the surveys in the neighbourhood of Lake George some years ago, asserts that it would impound a depth of water of 120 feet, with an area of 300 square miles, without overflow. But it must be borne in mind that the bed of the lake being 2,206 feet, and the railway station at Bungendore 2,291 feet, 85 feet of water in Lake George would entirely submerge the town, unless dammed back.

According to Mr. Russell, Government Astronomer, both in 1823 and 1874 the depth in the lake was 24 feet 6 inches, and he believes that at some far distant period the lake has been very much deeper. The area of the lake is estimated at present at 38,000 acres, and the greatest depth 9 feet. In 1838-39 the lake, according to information supplied by Mr. Russell, was dry; and again, for the last time, during the period 1846-50.

In January, 1876, the capacity of Lake George for a mean depth of 18 feet was equal to eighteen times the gross contents of the Prospect Reservoir, or 18,621,900,000 gallons.

The waters of the lake are slightly brackish for domestic use, but for stock and irrigation purposes there seems to be no doubt as to their adaptability. The mineral salt now held in solution would possibly be entirely dissipated by the forming of an outlet, and by the lake being replenished from the pure waters of the Snowy.

The relative heights above sea-level of important points in connection with the whole scheme are enumerated below. The levels of the Snowy River and the main divide between this river and the Murrumbidgee are from barometer observations only, all other levels being fixed by railway survey.

Snowy River (offtake of canal) ... ..	about 3,180 feet.
Gap (in main divide, Slack's Creek) ... ..	about 3,000 "
Cooma ... ..	2,707 "
Bombala ... ..	2,339 "
Umaralla River (crossing railway)... ..	2,348 "
Micilago ... ..	2,278 "
Queanbeyan ... ..	1,870 "
Bungendore ... ..	2,291 "
Lake George (bed of) ... ..	2,206 "
Goulburn ... ..	2,071 "
Gunning ... ..	1,893 "
Main divide (between Lachlan and the Murrumbidgee, 13½ miles from Gunning)... ..	2,254 "
Yass ... ..	1,657 "
Bowning ... ..	1,804 "
Binalong ... ..	1,568 "
Main divide, Lachlan and Murrumbidgee, between Galong and Burrowa ... ..	1,798 "
Burrowa (flood level) ... ..	1,597 "
Murrumburrah ... ..	1,268 "
Main divide, Lachlan and Murrumbidgee, between Murrumburrah and Young ... ..	1,842 "
Young ... ..	1,416 "
Grenfell ... ..	1,339 "
Cootamundra ... ..	1,079 "
Temora ... ..	—

In the preparation of this report I have received valuable information, otherwise unobtainable, from Mr. P. F. Adams, Surveyor-General; Mr. A. C. Betts, District Surveyor; and Mr. H. C. Russell, Government Astronomer.

In conclusion, I am fully cognisant of the magnitude of the proposed schemes, but great national necessities warrant correspondingly bold measures of relief. The levels and general configuration of the country from the Snowy River to Lake George demand instrumental examination, as they apparently point to an endowment from Nature for the express purpose of conducting water from an enormous snow-fed reservoir to the rich plains of Monaro, and thence, after being stored in Lake George, to be distributed over thousands of square miles of arable land lying in the doab of the Lachlan and Murrumbidgee Rivers, now subject to long periods of disastrous droughts which render futile the labour of husbandry, cripple all mining industry, and surround with dread uncertainty every form of pastoral enterprise.

I attach appendices as follows:—

Map showing line of proposed canal.

Plan and sections of Lake George, reproduced from Mr. H. C. Russell's pamphlet.

I have, &c.,

JOHN B. DONKIN, L.S.

Sydney, 30 April, 1887.

CATALOGUE OF WORKS ON WATER CONSERVATION AND  
IRRIGATION COLLECTED BY THE COMMISSION.

Name.	Author.
ENGLAND.	
Report of the Indian Famine Commission. Part 2. Measures of Protection and Prevention.	
East India Famine Commission. Appendix 2.	
Do do do 5.	
Correspondence <i>re</i> Panama Canal.	
Report of Commissioners on the best means of preventing the pollution of the rivers Mersey and Ribble. Vols. 1 and 2.	
Italian Irrigation. 2 vols. ... ..	Baird Smith.
Report on the Irrigation of Egypt ... ..	Greig and Eyth.
Report of Select Committee on pollution of River Lee.	
FRANCE.	
Commission Supérieure pour l'aménagement et utilisation des eaux. Première Session, 1878-79.	
Hydraulique Agricole. Des canaux d'irrigation de l'Italie Septentrionale.	
Vols. 1 and 2 ... ..	Nadault de Buffon.
Do do do Atlas to same ...	do
Do do do Alluvions modernes ...	do
Renseignements relatifs à des citernes et réservoirs d'eau de la Belgique.	
Bulletin des lois. Various numbers.	
Cours de navigation intérieure, 1876-1877 ... ..	Malézieux.
Do do 1882-1883 ... ..	Guillemain.
GERMANY.	
Das Wasserwerk der Stadt Dresden. Vols. 1 and 3 ... ..	B. Salbach.
Do do Plans to Vol 2, 1st portion ... ..	do
Do do do 2nd do ... ..	do
Do do General Plans ... ..	do
ITALY.	
Piano tecnico di Massima	
Sulle opere di bonificazione, Agro Romano ... ..	G. Amenduni.
Do do Plans ... ..	do
Maremma Toscane: Opere di bonificazione ... ..	A. Baccarini.
Sul Brenta e sul Novissimo, relazione alla Commissione, porti e lagune Venete	F. Lanciani.
Fiume Lamone ... ..	do
Canale Marittimo di Suez	
Fiume Mosa, lavori nel Belgio ... ..	T. Maganzini.
Inalveazione del Tevere	
Maremma Toscane: Operazione idrauliche	
Do bonificamento dellé .. ...	G. Giorgini.
Basso-Po: Memorie idrauliche ... ..	G. Scotini.
La rotta dell'argine del Po: Inchiesta amministrativa	
Progetto Merighi-Chizzolini: Basso Po	
Lo stato degli argini di Po ... ..	A. Ferretti.
Progetto di Legge sulle bonificazioni delle Paludi	
Sulle bonificazioni delle Paludi	
Esame istituito dall'Ingegnere Gedeone Scotini	
Delle Maremma Toscane ... ..	A. S. Marchetti.
Per l'ufficio dei fiumi e fossi	
Acque di Valdichiana ... ..	A. Manetti.
L'ingrandimento della città e porto-franco di Livorno	
Livellazione del Fiume Reno	
Atti della Commissione: di rendere le piene del Tevere innocue	
Do do do Plans	
Profilo di livellazione della chiana dell'Arno, &c.	
Rilievi, osservazione sul Fiume Tevere	
Sulle opere idrauliche dei Paesi Bassi	
Do do Plans	
Sulle bonificazioni ed irrigazioni del regno d'Italia	
Della laguna di Venezia	
Relazione sui servizi idraulici, 1875-76.	
Do do 1879-80.	
Do do 1881-82.	
Cenni monografici sui suigoli servizi, 1881.	
Do do 1884.	
Della natura de fiumi. Vols. 1 and 2 ... ..	D. Guglielmini.
Del modo di regolare i fiumi e i torrenti... ..	P. Frisi.



## INDIA.

- A short account of the Ganges Canal\*
- Papers of Thomason C. E. College: Irrigation Works. No. X\* ... .. Major J. G. Medley.
- Notes of Eastern Jumna Canal\* ... .. Col. P. F. Cantley.
- Thomason C. E. College Manuals: Irrigation Works. No. X\* ... .. Lieut.-Col. J. G. Medley.
- Financial Results of Madras Canals ... .. Lieut. T. C. Anderson.
- Canal Distributories ... .. Capt. W. Jeffreys.
- Head Works, Ganges Canal
- General Report on Irrigation of Madras Presidency
- Distribution of Canal Water
- Corporation of Calcutta: Engineer's Report
- Madras Irrigation Systems
- Srivaikuntham Anicut System
- Madras Public Works Department—Financial Results.
- Do do Selected Standing Orders.
- Do do Selected Professional Circulars.
- Do do Project Estimates.
- Administration Report of Irrigation Branch, Madras Presidency. 1882-83.
- Note on High Masonry Dams ... .. G. L. Molesworth.
- Suggestions on Forest Administration ... .. D. Brandis.
- Man and Nature, with some Notes on Forests and Rainfall in Madras ... .. G. P. Marsh and A. J. Stuart.
- Sketch Map of Madras Presidency, showing works and canals.

## AUSTRIA.

- Anleitung zur Errichtung guter Wazzerbehälter ... .. T. Witschel.
- Type für gewöhnliche Cisternenanlagen
- Descrizione di una Vasca
- Cisterns for Drinking Water in Dalmatia
- Cisterns on Dalmatian Railways
- Zeitschrift: Part 5.
- Do Parts 6 and 7.

## CALIFORNIA.

- Report of State Engineer, Session of 1880 ... .. W. H. Hall.
- Do do Second Report, Session of 1881 ... .. do.
- Do do Third Report, Session of 1883 ... .. do.
- First Biennial Message of Governor Stoneman.

## RUSSIA.

- Description of the State of Irrigation in the Transcaucasus in the Year 1882. M. Gersevanoff.

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\* Presented to the Commission by Captain G. S. Beckett.

[Maps, Diagrams, &c.]

## MEMO.

The Diagrams and Plans connected with the Third and Final Report from the Royal Commission on the Conservation of Water will be found in a Supplementary volume.



1887.  
(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

ROYAL COMMISSION ON CONSERVATION OF WATER.

(CORRESPONDENCE IN REFERENCE TO DISSENT OF MR. F. B. GIPPS, C.E., FROM FINAL REPORT.)

*Ordered by the Legislative Assembly to be printed, 31 May, 1887.*

*[Laid upon the Table of the Honorable the Legislative Assembly of New South Wales by the Honorable the Minister for Mines,—Copies of correspondence and papers in connection with the dissent of Mr. F. B. Gipps, C.E., to the Final Report of the Royal Commission on Conservation of Water.]*

F. B. Gipps, Esq., C.E., to The Secretary of the Royal Commission on Conservation of Water.

Sir,

Sydney, 10 May, 1887.

Hearing that my dissent to the final report of the Royal Commission of Conservation of Water, as signed by me yesterday morning, has not been forwarded with the Commissioners' report, I have to request that you will herewith hand me, or forward immediately to my address, 84, Elizabeth-street, Sydney, a copy of such dissent, as handed you by the Government Printer yesterday, in order that it may be laid on the Table of the House of General Assembly this evening, as I refuse to acknowledge any other document.

I am, &c.,

FREDK. B. GIPPS, C.E.,  
Member of the Royal Commission on Conservation of Water.

Forwarded through the Chief Inspector of Public Watering Places to the Honorable the Minister for Mines, for his information.—J. S. RAMSAY, 11/5/87.

F. B. Gipps, Esq., C.E., to The Minister for Mines.

Sir,

84, Elizabeth-street, Sydney, 10 May, 1887.

I have the honor to address you in order to protest against a certain document, which I learn from the Assistant Secretary of the Water Conservation Commission has been attached to the Final Report of the Commission, and forwarded you for presentation to Parliament, and which purports to be my dissent, being received as such, and I have to request that you will be good enough to substitute the enclosed amended paper of dissent in its place.

My dissent to their report was read at a meeting of the Commission on Friday last, and as it appeared to give umbrage to certain members I offered to modify any statement that might appear to reflect in any way disparagingly on my colleagues, but it was at once ruled that the Commission could not interfere with my personal opinion, and that it should be attached to the Final Report, whilst the meeting was adjourned to Saturday morning to determine what action should be taken relative to my dissent. I would here remark that hitherto any report from a Commissioner has invariably been criticised and generally modified by the Commission in some form before being adopted, and that therefore in conceding to the Commission the same right in their consideration of my dissent, I evinced only a courteous desire to comply in any possible way with any modification of it they might wish, but they abruptly refused to entertain my offer.

Owing to an important business appointment on Saturday I could not attend the adjourned meeting of the Commission, but previous to it I left a few slight alterations in the wording and figures of my dissent that I considered advisable after a more careful reading of the printed proof, and after checking the figures of certain tables in it on Friday night.

On attending the meeting of the Commission yesterday morning I learned that the meeting on Saturday, including Commissioners Donkin, Kidd, M'Mordie (Roads Department), Gilliat (Mines Department), and Townsend (Railway Department), had ruled that my alterations should not be allowed.

At the close of yesterday's meeting I had the alterations in my dissent initialled by the Assistant Secretary as to their correctness, and waited at once on you for authority to have the amended paper printed, but was informed you were engaged.

Knowing that the Final Report was to be signed that afternoon, and that therefore no time was to be lost, I called at once on the head of the Government Printing Office, and in an official memorandum requested him to print my alterations in time for the amended dissent to accompany the Final Report that afternoon.

Shortly after it appears that the Assistant Secretary called, and directed him, on the authority of the Commission, not to alter the dissent.

With all due submission I contend that I had a perfect right to alter the first proof of my dissent at any time before it was attached to the report, and as long as such alteration related only to simple verbal and figure amendments which did not involve any material change of opinion, especially after the Commission had affirmed on Friday that they could not interfere in any way with my dissent, and I contend that the document which the Assistant Secretary informs me has been attached to the Final Report of the Commission is not my dissent as desired by me to be attached to such report, and I have to request that you will receive the enclosed amended dissent and substitute it in its place.

I have, &c.,

FREDK. B. GIPPS, C.E.

[Enclosure.]

DISSENT ON CERTAIN POINTS FROM THE COMMISSIONERS' REPORT.

I REGRET to be compelled to differ from the rest of the Commissioners relative to the treatment proposed for the irrigation of the districts included in the lower portion of the Murray and Murrumbidgee valleys, or what are termed by our Engineer as the south-western districts of the Colony. The reasons for my objections may be stated as follows:—

1. Because I consider that the examination and survey of these rivers should comprise the whole area of their basins, instead of the limited portion recommended by the Commissioners.
2. Because I consider that the storage and distribution of the Murray and Murrumbidgee Rivers should commence at a much higher point on their streams than the above recommendation contemplates.
3. Because I consider the permanent canals proposed, with the exception of the Lower Murray Canal, are impracticable under present conditions, and, for many reasons, are inadvisable.
4. Because I consider that by erecting a series of movable weirs across these rivers, and by pumping with the horse-power available from the fall of water over the crest of such weirs, a large volume of water could be thrown into surface or inundation canals, which would irrigate different sections of the country far more economically than would be possible by the proposed permanent canals. It is evident that no correct estimate of the water supply to be derived from any river basin can be properly gauged unless its rainfall records are accompanied by a faithful representation of its topographical features. For in some parts the rain falls into swampy flats, where it quickly evaporates and soaks into the soil; whilst in other parts, where steep ridges prevail, it serves at once to swell mountain torrents, and to produce floods. In order, therefore, to derive the highest value from rainfall it is absolutely necessary to initiate such a system of examination and survey as will ensure the fullest advantage being taken of the physical features of the country, so that each section of a watershed may be made to contribute its largest capacity of water supply. Especial attention should, however, be directed to the storage of water in the high lands of a river basin, because when it is known in what position and quantity water can be stored at such an elevation it is easy to determine how it can be distributed to the best advantage. In fact there should be one continuous chain of evidence from the top to the bottom of every valley as to its water-supply, and as to the best means of conserving and distributing such supply, otherwise its value can never be justly appreciated.

By simply surveying detached portions of a river basin, in order to provide only for their requirements, great and lasting injury may be done to the basin as a whole. Such a course might seriously interfere with, and perhaps altogether prevent, the due development of its powers for water-supply, thus prohibiting the promotion of different industries which could have been maintained by a more efficient and systematic treatment of the basin. In this country, unfortunately so liable to continuous droughts, we cannot afford to lose any opportunity in connection with increasing the water-supply, when and where most available; therefore it is the more necessary that there should be an exact examination and survey of the Murray and Murrumbidgee valleys before the country is committed to the expensive irrigation canals proposed.

With regard to the storage and distribution of the Murray and Murrumbidgee waters, it seems to me that the Commissioners in their support of the above canals have been too much influenced by the figures of the Engineer, who, in his proposals for such capacious permanent canals, without any provision for storage of water above their point of off-take, appears to have been guided ~~entirely~~ by his experience on the Barse Doab Canal in India. But in that country the constant streams of some of the largest rivers in the world contribute a fraction of their supply to feed the canals, whereas in this country the longest rivers are often reduced to mere brooks. Their flow is so irregular that no dependence can be placed on them for a constant supply of even the smallest volume, whilst just at the time their streams are lowest the country suffers most from drought. Hence the positive necessity for some provision for storage reservoirs before constructing canals.

In my Report on the Upper Murray, included in the Appendix of the First Report of the Commission, I have drawn attention to several sites for impounding lakes, of so great capacity that not only would they serve largely to diminish the evil consequences of high floods, but they would conserve sufficient water to maintain a constant navigable stream from Welaregang to Albury—over 150 miles—and it would then be available for irrigation canals below. Besides these sites, I am convinced, after an examination and partial instrumental survey of the country at the head of the Tooma River (one of the chief tributaries of the Upper Murray), that the large swamps and flats at the foot of some of the highest

highest peaks offer excellent opportunities for the conservation of immense sheets of water, which could be conducted by an economical canal along the divide of the Murray and Murrumbidgee Rivers so as to command the Marracle, Tumberumba, Ouranne, and Jingellie Gold-fields, after which it would provide for the irrigation of a large tract of the rich agricultural lands in the Billabong Valley from Germanton downward.

Our Engineer, Mr. McKinney, M.I.C.E., after a ~~hurried ride through the district on beaten tracks,~~ has instructed the Commission that such a canal would be a commercial failure, in comparison with his proposed low-level canals, on account of the difficulties attending its construction, and its consequent great expense. He also ridicules the accepted idea that American canals are constructed under similar difficulties, although he has never visited that country, and has consequently had no experience in the construction of such canals. Actual observation and experience, both in America and this country, compel me to differ entirely from his opinion relative to the cost of such a canal; and in support of my contention I append a list of American canals, some of which have been constructed through the roughest portions of the Sierra Nevada Mountains.

**hasty visit  
to the**

Name of <del>Land-</del> Canal.	Length in Miles.	Discharge in cubic feet per second.	Discharge in 24 hours in gallons.	Total Cost.	Cost per Mile.
				£ s. d.	£ s. d.
North Blomfield ... ..	157	800	432,000,000	141,768 0 0	903 0 0
Milton ... ..	80	750	405,000,000	78,315 0 0	978 0 0
Eureka Lake... ..	163	<del>625</del>	<del>337,500,000</del>	144,668 0 0	887 0 0
		<b>1449'4</b>	<b>782,676,000</b>		
South Yuba ... ..	123	{ 1,750	{ 945,000,000	112,337 0 0	913 0 0
		{ 750	{ 405,000,000	160,000 0 0	1,300 0 0
San Juan ... ..	32	325	175,000,000	58,618 0 0	1,832 0 0
La Grange ... ..	20	<del>750</del>	<del>405,000,000</del>	<del>90,000 0 0</del>	<del>4,500 0 0</del>
		<b>672'3</b>	<b>363,642,000</b>	100,000 0 0	5,000 0 0

The greater portion of the La Grange Canal is cut in granite, and in places it is supported by solid stone walls from 50 to 70 feet high. Thus it is evident to any unprejudiced mind that canals can be constructed in a mountainous country at a much lower estimate than those inexperienced in their construction can possibly imagine; and this is chiefly due to the great fall or steep declivity that can be given them, owing to their elevation, which largely reduces their sectional area. By actual survey of over 30 miles of the rough precipitous ridges near the head of the Tooma and Tumut Rivers, and by the construction of a large ~~running~~ ditch, 6 miles in length, I have proved that canals could be constructed as economically in our mountain ranges as in the Sierra Nevadas, as an equal fall is available. The ~~actual-population~~ that would be served by the high-level canal proposed by me would be over 1,000, exclusive of towns; and this, owing to the inducement offered by a large permanent water-supply for hydraulic sluicing, would rapidly increase, whilst the settlers served by the proposed low-level canals from the Murray would not exceed 500. Therefore, by assuming (after a hasty inspection, and without a more careful examination) that there is no possibility of irrigating or improving the water-supply of the Upper Murray District, a very great injury may be inflicted on its principal industries, and its settlement thereby retarded.

**mining  
numbers of  
settlers  
and miners**

My reasons for objecting to the proposed permanent canals are as follows:—1. Insufficiency of water-supply. 2. Great cost of construction. 3. Cost of maintenance. 4. Small returns, and consequent heavy loss to the State, which would increase annually. 5. Possibility of changing the course of both rivers connected with them during a heavy flood.

In the first place it must be assumed that a constant stream will have to be allowed to flow down the Murray and Murrumbidgee Rivers for the supply of settlers on both banks, and to satisfy claims on account of riparian rights. For this purpose I would allocate 1,500 cubic feet a second, which would represent a flow in the river Murray of 1 foot above summer level at Albury, and a flow of 3 feet in the Murrumbidgee above summer level at Wagga Wagga. On this hypothesis, and by taking as a basis of calculation the Government Astronomer's records of the mean height above summer level of the western rivers, it appears that the supply available for the proposed Murray River Canal below Albury in 1885 would have been almost nil for January, February, March, April, May, and December; for July, 800 cubic feet per second; for June, August, and November, about 2,000 cubic feet per second; and for September and October, over 2,000 cubic feet per second. For six months, therefore, during the driest period, there would have been only a small uncertain and intermittent supply for the canal, barely sufficient to account for leakage and evaporation, whilst its service for the rest of the year would have been greatly neutralised on account of the abundant rainfall in June, August, and September. According to the records of the Murrumbidgee flow for 1884, the supply available for the proposed permanent canals would have been almost nil for January, February, March, April, May, June, August, and December; for July, 300 cubic feet per second; for September, 2,300 cubic feet per second; for October, 800 cubic feet per second; and for November, 1,000 cubic feet per second. Consequently, there would only have been a scanty intermittent supply for eight months in that year, whilst the copious rainfall in June and October would have largely neutralised the benefits of the canal's supply in July and September. From this it is apparent that neither the Murray nor Murrumbidgee canals can be termed permanent, nor can they be made so without very extensive storage provision above their points of off-take.

The cost of the proposed Murray Canal just below Albury is estimated at £1,412,250, but this provides for no lining, for no interest during construction, and for only £25,000 for land resumption. In comparison with the cost of similar works in Europe this estimate is decidedly low. The average cost of French canals, only 5 feet deep, is £11,600 a mile. The Cavour Canal in Italy cost £80,470 a mile. The Caluso Canal, Italy, with a supply of only 366'26 cubic feet a second, and the steep declivity of 17 feet per mile, cost £1,700 a mile. But supposing this Murray Canal could be constructed for £1,412,250,

it

it is still questionable whether it would prove a profitable work. The interest on the cost, at  $4\frac{1}{2}$  per cent., would amount to £63,549 a year, and the working expenses are estimated at about £13,951 per annum, whilst the gross revenue is estimated at £177,500 per annum. This estimate evidently assumes that the whole irrigable area commanded by the canal will be irrigated immediately after its completion, which is hardly probable, considering that there are not more than 500 settlers dwelling on it, and their homesteads are scattered, whilst a few large landholders own most of the rest of it. Even if the district were densely populated, on comparing the prospective returns of such a work with those actually obtained in India, where labour costs only £3 a year for an ordinary workman, it will be seen by the following table that very different results might be anticipated than those suggested in the estimate of our Engineer.

Name of Canal.	Year.	Outlay to end of year.	Interest at $4\frac{1}{2}$ per cent.	Working expenses.	Receipts from water-rates.	Irrigab area in acres.	Irrigated area in acres.
		£	£	£	£		
Baree Doab .....	1877-78	1,537,990	67,955	50,240	93,876	.....	266,995
Agra .....	1877-78	818,472	32,215	8,319	3,709	.....	163,634
Orissa .....	1876-77	1,728,400	76,300	18,050	4,049	100,000	100,000
Midnapore .....	1876-77	683,500	29,790	9,570	6,150	80,000	54,000
Sone .....	1876-77	1,908,504	73,660	18,620	5,090	500,000	300,000
*North Behar .....	1884-85	1,100,000	45,000	10,000	7,500	100,000	50,000

\* Estimated.

there It is evident, therefore, that even under exceptionally favourable circumstances, when there is a very extensive area under cultivation supporting a dense population, and when labour is very cheap, both for cultivation, for the construction of the canal, and its maintenance, that even then large irrigation canals are rarely profitable.

In the above table it will be seen that the lowest working expenses are noted opposite the Agra Canal, which has a capacity of 2,000 cubic feet a second, being equal to that proposed for the Murray Canal. If, with labour at £3 a man per annum, it cost £8,300 to maintain and serve the distribution of the supply of the canal, it must surely be assumed that similar services in this country would cost more than double that sum.

At the same time I fear many generations would pass away before the returns of the Murray and Murrumbidgee Canals would realise sufficient to cover even the interest on their cost of construction.

According to the valuable report on the state of the Public Lands by Messrs. Morris and Rankin, in 1883, it appears that there were only 244 settlers in the Deniliquin District, including the counties of Townsend, Cadell, and Wakool, and embracing 4 million acres at the lower end of the Edwards and Billabong Rivers, whilst  $2\frac{1}{2}$  million acres were aggregated in large estates. The Counties of Denison and Hume were little better, the selectors having chiefly sold out to pastoralists; consequently less than 500 *bona fide* settlers would be benefited by the proposed Murray Canals. Nor does the prospect of profitable canals improve with the Murrumbidgee Canals, for most of the country traversed by them is in the hands of pastoralists, whilst in the instance of Waradgery County, having an area of 1,836,160 acres, the land is almost entirely included in twelve pastoral holdings. There is no doubt that these canals would greatly increase the value of alienated land in the districts they would traverse, but unless the Government resumed it, the State would reap no advantage from such enhancement.

were Bearing in mind that the slope of the Murray Canal from the point of off-take at Bungowanna is 1 foot in 5,000 feet, whilst that of the river itself averages only 9 inches a mile from that point downward, it appears possible that, unless the headworks are very substantial, and of sufficient height to resist the entrance of any flood, the river—such a flood as 1867, which was 27 feet above summer level, and 10 feet above the right bank below the site of weir—might force its way into the canal, and pouring down it with overwhelming force, might form an entirely new channel for itself. Such a disaster has actually happened in the Mississippi River from the cutting of a channel of less than one-quarter the area of the proposed canal. The same danger threatens the Murrumbidgee Canal, which has a fall of  $1\frac{1}{2}$  feet towards the Urana Lake, in comparison with a fall of only 10 inches a mile in the river bed. Thus there would be a possibility of these two rivers reuniting their streams near Jerilderie, and following the course of the Billabong River.

In consideration of the many and serious defects I have alluded to, it is evident that the proposed canals, under present conditions, would be injudicious and impracticable.

As an instance of the stimulus to manufacturing as well as agricultural industries that might be anticipated from the erection of movable weirs in favourable positions across the Murray and Murrumbidgee Rivers, I would briefly refer to the experience of a similar structure across the Kansas River at Lawrence. The river bed at the point of its location is 600 feet wide, and is composed partially of rock, sand, fine gravel, and strata of blue clay. The length of the weir is 700 feet; its height is 8 feet. It provides a supply to two canals 60 feet wide on one bank and 50 feet on the other. The available horse-power from these canals is estimated at 2,500, which it is anticipated might be increased to 4,000 horse-power by adding 2 feet to the height of the weir. The canals are each  $\frac{1}{2}$  mile long, and their frontages are divided into water-power allotments from 150 to 450 feet in length. The water-power not only provides motive-power for several large mills, but also raises several million gallons of water a day, 150 feet high, for the supply of the town.

13,200 The value of this power on the Murray and Murrumbidgee Rivers at each point of location of weirs, estimating only on the small average flow of 500 cubic feet a second, with a fall of 10 feet, would be equal to 567 theoretical and 400 effective horse-power with turbines. No less than 14,076 cubic feet of water could be raised 16 feet high a minute by 400 horse-power, which is far more than that proposed by the largest pumping scheme on the Victorian side of the Murray. This height of 16 feet would be sufficient for the discharge of the water supply into surface or inundation canals, which would cost infinitely less in construction and maintenance than the proposed permanent canals, whilst the supply could be distributed with much greater facility. The

The cost of the movable weirs, if constructed on the Poiree Needle system, would not exceed £40 a foot,—so that it may be estimated that they could be thrown across the above rivers at a cost of £20,000 each, including headworks for canal. This estimate is based on the average width of the rivers not exceeding 400 feet.

The rent of the available horse-power at each station, at £10 per horse-power per annum, would probably return over £1,000 a year, supposing Water Boards to rent it for the supply of surface canals constructed under their authority. Supposing Government constructed the canals from each station, the supply of 14,976 cubic feet a minute would be sufficient to irrigate 60,000 acres in winter and 25,000 acres in summer. With a charge of 5s. per acre a revenue of £21,250 would be realized, which would allow of 5 per cent. on an outlay of £200,000 for the construction of the canal and weir works, and £11,250 per annum for maintenance expenses.

13,200

The advantage of such a system is at once apparent. It could be expanded gradually to meet the requirements of the country; it would stimulate all classes of industry, because the same water-supply would be available for a large number of weirs on each river flowing from one pond to another, and on its course distributing the great benefit of 400 horse-power at each weir location, and it would cost far less than permanent canals. With all due deference, therefore, to the opinions of my colleagues, and with much regret at being called on to differ from them, I would submit that the system of impounding the Murray and Murrumbidgee Rivers by movable weirs would, on account of the above reasons, be of far greater advantage to the country than the proposed permanent canals.

FRED. B. GIPPS, C.E.

F. B. Gipps, Esq., C.E., to The Minister for Mines.

Sir,

84, Elizabeth-street, Sydney, 11 May, 1887.

I have the honor to inform you that I have, this morning, received a copy of the final report of the Royal Commission Water Conservation, including, and for the first time apprising me of, the remarks of the Commissioners on my dissent to it.

The Commissioners, in these remarks, assert that I have made a series of statements, some of which are at variance with facts, and others very misleading, and they throw doubt on my list of American canals, though I declared the report of the State Mineralogist of California as my authority.

In consideration of the grave imputations asserted in these remarks impugning both the truth of my word and the rectitude of my intentions, I have to request that you will be good enough to attach my protest, handed you yesterday, to the final report of the Commission, including the alterations I required in my dissent, and further that you will grant me an inquiry by an impartial Board open to the public to investigate the truth or otherwise of the statements made by me which are declared to be false and misleading by the Commissioners.

I was quite unaware of the nature of these remarks till now, as at the last meeting of the Commission that I attended, on Monday morning, they were not brought up, and I would request to be informed when these remarks were written and printed, and who was the author of them.

I have, &amp;c.,

FRED. B. GIPPS, C.E.

The Assistant Secretary Royal Commission on Conservation of Water  
to Mr. H. A. Gilliat.

Sydney, 11 May, 1887.

In compliance with your verbal instructions, I have the honor to submit the following statement in reference to Mr. F. B. Gipps' dissent to the Third and Final Report of the Royal Commission on Conservation of Water:—

1. The dissent of Mr. Gipps, in his own handwriting and signed by him, was handed to me by him, on May 4th. I still retain this document.
2. At the meeting of the Commission, on Friday, May 6th, I distributed printed copies of the dissent to the members of the Commission then present.
3. Mr. Gipps formally submitted his dissent to the Commission, and it was read by me.
4. Mr. Gipps suggested several typographical corrections; and these having been admitted by the Commissioners the dissent was received by unanimous resolution.

Appended A is the dissent in its amended form as received.

I beg to submit extracts from the Minute Book of the Commission which will explain the proceedings in connection with the dissent:—

*Extract from Minute of Friday, May 6.*

Mr. Gipps submitted a dissent to the final report, which was read.

On the motion of Mr. Townsend, seconded by Mr. M'Mordie, the dissent, with several typographical corrections, was received.

Debate ensued.

In connection with paragraph 2, page 2, Mr. M'Mordie expressed a wish for information as to the length of Mr. Gipps' experience in America, and as to the works which he had observed.

Mr. Gipps stated that he had had no experience on waterworks in America, and had observed only one or two of the canals referred to in the table.

On the motion of Mr. Townsend, seconded by Mr. M'Mordie, it was resolved that a special meeting of the Commission should be held to-morrow (Saturday) morning, at 10 o'clock, to consider Mr. Gipps' dissent.

W. S. TARGETT,

Chairman.

*Extract from Minutes of Saturday, May 7.*

Resolved, that Mr. Gipps be asked to attend this meeting of the Commission.

The consideration of Mr. Gipps' dissent was proceeded with.

A memorandum in reply to the dissent was submitted, and was read by the assistant secretary.

Resolved, that the dissent as printed and received at yesterday's meeting be attached to the final report, and that the memorandum, as representing the reply of the Commissioners, follow the dissent.

Mr. Gipps to be informed that the dissent having been already received, the Commissioners decline to consent to its being altered as desired by him, and have resolved that it be published with the final report as received.

RUSS. BARTON, Chairman.

*Extract*



*Extract from Minutes of Monday, May 9.*

At Mr. Gipps' request the assistant secretary read the alterations which Mr. Gipps desired should be made in his dissent, and which the Commissioners at their meeting on Saturday had declined to accept.

Mr. Targett moved, and Mr. Franklin seconded,—“That so much of the resolution passed at Saturday's meeting as affects the figures in the tables be rescinded, and that Mr. Gipps be permitted to amend the tables as he may desire.”

Mr. Gipps intimated that he would not accept such resolution, whereupon the motion was withdrawn.

The meeting adjourned till 3 p.m. same day, at which hour the Government Printer had promised to send two copies of final report.

At the meeting in the afternoon Mr. Gipps was not present.

The President, W. J. Lyne, Esq., M.P., was present, and took the chair.

The assistant secretary informed the Commissioners that he had not yet received the two copies of the final report from the Government Printer, and proceeded to make a statement as follows:—After the meeting in the morning had risen Mr. Gipps came to the desk of the assistant secretary, and asked him in the presence of Mr. Donkin, to mark on a copy of the dissent the alterations which Mr. Gipps desired to make, and which the Commissioners had disallowed. Mr. Gipps asked the assistant secretary to initial the dissent as being a true copy of the alterations, and stated he desired the paper for the purpose of showing it to the Hon. the Minister for Mines. At 1 o'clock the assistant secretary called on the Government Printer to ascertain what progress was being made with the final report, when the Printer informed him it would be delayed in consequence of the fact that Mr. Gipps had called on him with a copy of the dissent, altered and initialled by the assistant secretary, and had requested that the final report should be so altered. The assistant secretary informed the Government Printer that the Commissioners had declined to sanction these alterations, and he requested the Printer to issue the final report in accordance with the proof furnished by the assistant secretary.

The Commissioners resolved that, having heard the statement of the assistant secretary, they desire to express their strong sense of disapproval of the action of Mr. Gipps.

Appendix B is the copy of the dissent referred to in the foregoing as having been obtained from me by Mr. Gipps for the purpose of showing it to the Hon. the Minister for Mines. It will be observed that Mr. Gipps' signature to it appears on page 4, the dissent in full extended to page 5.

J. S. RAMSAY,

Late Assistant Secretary to the Commission.

## APPENDIX A.

## DISSSENT ON CERTAIN POINTS FROM THE COMMISSIONERS' REPORT.

I REGRET to be compelled to differ from the rest of the Commissioners relative to the treatment proposed for the irrigation of the districts included in the lower portion of the Murray and Murrumbidgee valleys, or what are termed by our Engineer as the south-western districts of the Colony. The reasons for my objections may be stated as follows:—

1. Because I consider that the examination and survey of these rivers should comprise the whole area of their basins, instead of the limited portion recommended by the Commissioners.
2. Because I consider that the storage and distribution of the Murray and Murrumbidgee Rivers should commence at a much higher point on their streams than the above recommendation contemplates.
3. Because I consider the permanent canals proposed, with the exception of the Lower Murray Canal, are impracticable under present conditions, and, for many reasons, are inadvisable.
4. Because I consider that by erecting a series of movable weirs across these rivers, and by pumping with the horse-power available from the fall of water over the crest of such weirs, a large volume of water could be thrown into surface or inundation canals, which would irrigate different sections of the country far more economically than would be possible by the proposed permanent canals.

It is evident that no correct estimate of the water-supply to be derived from any river basin can be properly gauged unless its rainfall records are accompanied by a faithful representation of its topographical features. For in some parts the rain falls into swampy flats, where it quickly evaporates and soaks into the soil; whilst in other parts, where steep ridges prevail, it serves at once to swell mountain torrents, and to produce floods. In order, therefore, to derive the highest value from rainfall it is absolutely necessary to initiate such a system of examination and survey as will ensure the fullest advantage being taken of the physical features of the country, so that each section of a watershed may be made to contribute its largest capacity of water-supply. Especial attention should, however, be directed to the storage of water in the high-lands of a river basin, because when it is known in what position and quantity water can be stored at such an elevation it is easy to determine how it can be distributed to the best advantage. In fact there should be one continuous chain of evidence from the top to the bottom of every valley as to its water-supply, and as to the best means of conserving and distributing such supply, otherwise its value can never be justly appreciated.

By simply surveying detached portions of a river basin, in order to provide only for their requirements, great and lasting injury may be done to the basin as a whole. Such a course might seriously interfere with, and perhaps altogether prevent, the due development of its powers for water supply, thus prohibiting the promotion of different industries which could have been maintained by a more efficient and systematic treatment of the basin. In this country, unfortunately so liable to continuous droughts, we cannot afford to lose any opportunity in connection with increasing the water-supply, when and where most available; therefore it is the more necessary that there should be an exact examination and survey of the Murray and Murrumbidgee valleys before the country is committed to the expensive irrigation canals proposed.

With regard to the storage and distribution of the Murray and Murrumbidgee waters, it seems to me that the Commissioners in their support of the above canals have been too much influenced by the figures of the Engineer, who, in his proposals for such capacious permanent canals, without any provision for storage of water above their point of off-take, appears to have been guided entirely by his experience

on the Baree Doab Canal in India. But in that country the constant streams of some of the largest rivers in the world contribute a fraction of their supply to feed the canals, whereas in this country the longest rivers are often reduced to mere brooks. Their flow is so irregular that no dependence can be placed on them for a constant supply of even the smallest volume, whilst just at the time their streams are lowest the country suffers most from drought. Hence the positive necessity for some provision for storage reservoirs before constructing canals.

In my report on the Upper Murray, included in the appendix of the first report of the Commission, I have drawn attention to several sites for impounding lakes, of so great capacity that not only would they serve largely to diminish the evil consequences of high floods, but they would conserve sufficient water to maintain a constant navigable stream from Welaregang to Albury—over 150 miles—and it would then be available for irrigation canals below. Besides these sites, I am convinced, after an examination and partial instrumental survey of the country at the head of the Tooma River (one of the chief tributaries of the Upper Murray), that the large swamps and flats at the foot of some of the highest peaks offer excellent opportunities for the conservation of immense sheets of water, which could be conducted by an economical canal along the divide of the Murray and Murrumbidgee Rivers, so as to command the Marracle, Tumberamba, Ouranie, and Jingellic Gold-fields after which it would provide for the irrigation of a large tract of the rich agricultural lands in the Billabong Valley from Germanton downward.

Our Engineer, Mr. McKinney, M.I.C.E., after a hurried ride through the district on beaten tracks, has instructed the Commission that such a canal would be a commercial failure, in comparison with his proposed low-level canals, on account of the difficulties attending its construction, and its consequent great expense. He also ridicules the accepted idea that American canals are constructed under similar difficulties, although he has never visited that country, and has consequently had no experience in the construction of such canals. Actual observation and experience, both in America and this country, compel me to differ entirely from his opinion relative to the cost of such a canal; and in support of my contention I append a list of American canals, some of which have been constructed through the roughest portions of the Sierra Nevada Mountains.

Name of Canal.	Length in Miles.	Discharge in cubic feet per second.	Discharge in 24 hours in gallons.	Total Cost.			Cost per mile.		
				£	s.	d.	£	s.	d.
North Blomfield ... ..	157	800	432,000,000	141,768	0	0	903	0	0
Milton ... ..	80	750	405,000,000	78,315	0	0	978	0	0
Eureka Lake ... ..	163	625	337,500,000	144,668	0	0	887	0	0
South Yuba ... ..	123	{ 1,750 750	{ 945,000,000 405,000,000	112,337	0	0	913	0	0
San Juan ... ..	32	325	175,000,000	58,618	0	0	1,832	0	0
La Grange ... ..	20	750	405,000,000	90,000	0	0	4,500	0	0

The greater portion of the La Grange Canal is cut in granite, and in places it is supported by solid stone walls from 50 to 70 ft. high. Thus it is evident to any unprejudiced mind that canals can be constructed in a mountainous country at a much lower estimate than those inexperienced in their construction can possibly imagine; and this is chiefly due to the great fall or steep declivity that can be given them, owing to their elevation, which largely reduces their sectional area. By actual survey of over 30 miles of the rough precipitous ridges near the head of the Tooma and Tumut Rivers, and by the construction of a large mining ditch, 6 miles in length, I have proved that canals could be constructed as economically in our mountain ranges as in the Sierra Nevadas, as an equal fall is available. The number of settlers and miners that would be served by the high-level canal proposed by me would be over 1,000, exclusive of towns; and this, owing to the inducement offered by a large permanent water-supply for hydraulic sluicing, would rapidly increase, whilst the settlers served by the proposed low-level canals from the Murray would not exceed 500. Therefore, by assuming (after a hasty inspection and without a more careful examination) that there is no possibility of irrigating or improving the water-supply of the Upper Murray district, a very great injury may be inflicted on its principal industries, and its settlement thereby retarded.

My reasons for objecting to the proposed permanent canals are as follows:—1. Insufficiency of water-supply. 2. Great cost of construction. 3. Cost of maintenance. 4. Small returns, and consequent heavy loss to the State, which would increase annually. 5. Possibility of changing the course of both rivers connected with them during a heavy flood.

In the first place it must be assumed that a constant stream will have to be allowed to flow down the Murray and Murrumbidgee Rivers for the supply of settlers on both banks, and to satisfy claims on account of riparian rights. For this purpose I would allocate 1,500 cubic feet a second, which would represent a flow in the river Murray of 1 foot above summer level at Albury, and a flow of 3 feet in the Murrumbidgee above summer level at Wagga Wagga. On this hypothesis, and by taking as a basis of calculation the Government Astronomer's records of the mean height above summer level of the western rivers, it appears that the supply available for the proposed Murray River Canal below Albury in 1885 would have been almost nil for January, February, March, April, May, and December; for July, 800 cubic feet per second; for June, August, and November, about 2,000 cubic feet per second; and for September and October, over 2,000 cubic feet per second. For six months, therefore, during the driest period, there would have been only a small uncertain and intermittent supply for the canal, barely sufficient to account for leakage and evaporation, whilst its service for the rest of the year would have been greatly neutralised on account of the abundant rainfall in June, August, and September. According to the records of the Murrumbidgee flow for 1884, the supply available for the proposed permanent canals would have been almost nil for January, February, March, April, May, June, August, and December; for July, 300 cubic feet per second; for September, 2,300 cubic feet per second; for October, 800 cubic feet per second; and for November, 1,000 cubic feet per second. Consequently, there would only have been a scanty intermittent supply for eight months in that year, whilst the copious rainfall in June—

and October would have largely neutralised the benefits of the canal's supply in July and September. From this it is apparent that neither the Murray nor Murrumbidgee canals can be termed permanent, nor can they be made so without very extensive storage provision above their points of off-take.

The cost of the proposed Murray Canal, just below Albury, is estimated at £1,412,250, but this provides for no lining, for no interest during construction, and for only £25,000 for land resumption. In comparison with the cost of similar works in Europe this estimate is decidedly low. The average cost of French canals, only 5 feet deep, is £11,600 a mile. The Cavour Canal in Italy cost £80,470 a mile. The Caluso Canal, Italy, with a supply of only 366·26 cubic feet a second, and the steep declivity of 17 feet per mile, cost £1,700 a mile. But supposing this Murray Canal could be constructed for £1,412,250, it is still questionable whether it would prove a profitable work. The interest on the cost, at 4½ per cent., would amount to £63,549 a year, and the working expenses are estimated at about £13,951 per annum, whilst the gross revenue is estimated at £177,500 per annum. This estimate evidently assumes that the whole irrigable area commanded by the canal will be irrigated immediately after its completion, which is hardly probable, considering that there are not more than 500 settlers dwelling on it, and their homesteads are scattered, whilst a few large landholders own most of the rest of it. Even if the district were densely populated, on comparing the prospective returns of such a work with those actually obtained in India, where labour costs only £3 a year for an ordinary workman, it will be seen by the following table that very different results might be anticipated than those suggested in the estimate of our Engineer.

Name of Canal.	Year.	Outlay to end of year.	Interest at 4½ per cent.	Working expenses.	Receipts from water-rates.	Irrigable area in acres.	Irrigated area in acres.
		£	£	£	£		
Baree Doab.....	1877-78	1,537,990	67,955	50,240	93,876	... ..	266,995
Agra.....	1877-78	808,479	32,215	8,319	3,709	.....	163,634
Orissa .....	1876-77	1,728,400	76,300	18,050	4,049	100,000	100,000
Midnapore .....	1876-77	683,500	29,790	9,570	6,150	80,000	54,000
Sone .....	1876-77	1,908,504	73,660	18,620	5,090	500,000	300,000
North Behar .....	1884-85	1,100,000	45,000	10,000	7,500	100,000	50,000

It is evident, therefore, that even under exceptionally favourable circumstances, when there is a very extensive area under cultivation supporting a dense population, and when labour is very cheap, both for cultivation, for the construction of the canal, and its maintenance, even then large irrigation canals are rarely profitable.

In the above table it will be seen that the lowest working expenses are noted opposite the Agra Canal, which has a capacity of 2,000 cubic feet a second, being equal to that proposed for the Murray Canal. If, with labour at £3 a man per annum, it cost £8,300 to maintain and serve the distribution of the supply of the canal, it must surely be assumed that similar services in this country would cost more than double that sum.

At the same time I fear many generations would pass away before the returns of the Murray and Murrumbidgee Canals would realise sufficient to cover even the interest on their cost of construction.

According to the valuable report on the state of the Public Lands by Messrs. Morris and Rankin, in 1883, it appears that there were only 244 settlers in the Deniliquin District, including the counties of Townsend, Cadell, and Wakool, and embracing 4 million acres at the lower end of the Edward and Billabong Rivers, whilst 2½ million acres were aggregated in large estates. The Counties of Denison and Hume were little better, the selectors having chiefly sold out to pastoralists; consequently less than 500 *bonâ fide* settlers would be benefited by the proposed Murray Canals. Nor does the prospect of profitable canals improve with the Murrumbidgee Canals, for most of the country traversed by them is in the hands of pastoralists, whilst in the instance of Waradgery County, having an area of 1,336,160 acres, the land is almost entirely included in twelve pastoral holdings. There is no doubt that these canals would greatly increase the value of alienated land in the districts they would traverse, but unless the Government resumed it, the State would reap no advantage from such enhancement.

Bearing in mind that the slope of the Murray Canal from the point of off-take at Bungowanna is 1 foot in 5,000 feet, whilst that of the river itself averages only 9 inches a mile from that point downward, it appears possible that, unless the head works are very substantial, and of sufficient height to resist the entrance of any flood, the river—in such a flood as 1867, which was 27 feet above summer level, and 10 feet above the right bank below the site of weir—might force its way into the canal, and pouring down it with overwhelming force, might form an entirely new channel for itself. Such a disaster has actually happened in the Mississippi River from the cutting of a channel of less than one-quarter the area of the proposed canal. The same danger threatens the Murrumbidgee Canal, which has a fall of 1½ feet towards the Urana Lake, in comparison with a fall of only 10 inches a mile in the river bed. Thus there would be a possibility of these two rivers reuniting their streams near Jerilderie, and following the course of the Billabong River.

In consideration of the many and serious defects I have alluded to, it is evident that the proposed canals, under present conditions, would be injudicious and impracticable.

As an instance of the stimulus to manufacturing as well as agricultural industries that might be anticipated from the erection of movable weirs in favourable positions across the Murray and Murrumbidgee Rivers, I would briefly refer to the existence of a similar structure across the Kansas River at Lawrence. The river bed at the point of its location is 600 feet wide, and is composed partially of rock, sand, fine gravel, and strata of blue clay. The length of the weir is 700 feet; its height is 8 feet. It provides a supply to two canals 60 feet wide on one bank and 50 feet on the other. The available horse-power from these canals is estimated at 2,500, which it is anticipated might be increased to 4,000 horse-power by adding 2 feet to the height of the weir. The canals are each ½ mile long, and their frontages are divided into water-power allotments from 150 to 450 feet in length. The water-power not only provides motive-power for several large mills, but also raises several million gallons of water a day, 150 feet high, for the supply of the town.

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The value of this power on the Murray and Murrumbidgee Rivers at each point of location of weirs estimating only on the small average flow of 500 cubic feet a second, with a fall of 10 feet, would be equal to 567 theoretical and 400 effective horse-power with turbines. No less than 13,200 cubic feet of water could be raised 16 feet high a minute by 400 horse-power, which is far more than that proposed by the largest pumping scheme on the Victorian side of the Murray. This height of 16 feet would be sufficient for the discharge of the water-supply into surface or inundation canals, which would cost infinitely less in construction and maintenance than the proposed permanent canals, whilst the supply could be distributed with much greater facility.

The cost of the movable weirs, if constructed on the Poiree Needle system, would not exceed £40 a foot,—so that it may be estimated that they could be thrown across the above rivers at a cost of £20,000 each including headworks for canal. This estimate is based on the average width of the rivers not exceeding 400 feet.

The rent of the available horse-power at each station, at £10 per horse-power per annum, would probably return over £1,000 a year, supposing Water Boards to rent it for the supply of surface canals constructed under their authority, or—Supposing Government constructed the canals from each station, the supply of 13,200 cubic feet a minute would be sufficient to irrigate 60,000 acres in winter and 25,000 acres in summer. With a charge of 5s. per acre a revenue of £21,250 would be realized, which would allow of 5 per cent. on an outlay of £200,000 for the construction of the canal and weir works, and £11,250 per annum for maintenance expenses.

The advantage of such a system is at once apparent. It could be expanded gradually to meet the requirements of the country; it would stimulate all classes of industry, because the same water-supply would be available for a large number of weirs on each river flowing from one pond to another, and on its course distributing the great benefit of 400 horse-power at each weir location, and it would cost far less than permanent canals. With all due deference, therefore, to the opinions of my colleagues, and with much regret at being called on to differ from them, I would submit that the system of impounding the Murray and Murrumbidgee Rivers by movable weirs would, on account of the above reasons, be of far greater advantage to the country than the proposed permanent canals.

FRED. B. GIPPS, C.E.

#### APPENDIX B.

##### DISSENT ON CERTAIN POINTS FROM THE COMMISSIONERS' REPORT.

I REGRET to be compelled to differ from the rest of the Commissioners relative to the treatment proposed for the irrigation of the districts included in the lower portion of the Murray and Murrumbidgee valleys, or what are termed by our Engineer as the south-western districts of the Colony. The reasons for my objections may be stated as follows:—

1. Because I consider that the examination and survey of these rivers should comprise the whole area of their basins, instead of the limited portion recommended by the Commissioners.
2. Because I consider that the storage and distribution of the Murray and Murrumbidgee Rivers should commence at a much higher point on their streams than the above recommendation contemplates.
3. Because I consider the permanent canals proposed, with the exception of the Lower Murray Canal, are impracticable under present conditions, and, for many reasons, are inadvisable.
4. Because I consider that by erecting a series of movable weirs across these rivers, and by pumping with the horse-power available from the fall of water over the crest of such weirs, a large volume of water could be thrown into surface or inundation canals, which would irrigate different sections of the country far more economically than would be possible by the proposed permanent canals. It is evident that no correct estimate of the water-supply to be derived from any river basin can be properly gauged unless its rainfall records are accompanied by a faithful representation of its topographical features. For in some parts the rain falls into swampy flats, where it quickly evaporates and soaks into the soil; whilst in other parts, where steep ridges prevail, it serves at once to swell mountain torrents and to produce floods. In order, therefore, to derive the highest value from rainfall, it is absolutely necessary to initiate such a system of examination and survey as will ensure the fullest advantage being taken of the physical features of the country, so that each section of a water-shed may be made to contribute its largest capacity of water-supply. Especial attention should, however, be directed to the storage of water in the high lands of a river basin, because when it is known in what position and quantity water can be stored at such an elevation it is easy to determine how it can be distributed to the best advantage. In fact there should be one continuous chain of evidence from the top to the bottom of every valley as to its water-supply, and as to the best means of conserving and distributing such supply, otherwise its value can never be justly appreciated.

By simply surveying detached portions of a river basin, in order to provide only for their requirements, great and lasting injury may be done to the basin as a whole. Such a course might seriously interfere with, and perhaps altogether prevent, the due development of its powers for water-supply, thus prohibiting the promotion of different industries, which could have been maintained by a more efficient and systematic treatment of the basin. In this country, unfortunately so liable to continuous droughts, we cannot afford to lose any opportunity in connection with increasing the water-supply, when and where most available; therefore it is the more necessary that there should be an exact examination and survey of the Murray and Murrumbidgee valleys before the country is committed to the expensive irrigation canals proposed.

With regard to the storage and distribution of the Murray and Murrumbidgee waters, it seems to me that the Commissioners in their support of the above canals have been too much influenced by the figures of the Engineer, who, in his proposals for such capacious permanent canals, without any provision for storage of water above their point of off-take, appears to have been guided entirely by his experience on the Baree Doab Canal in India. But in that country the constant streams of some of the largest rivers in the world contribute a fraction of their supply to feed the canals, whereas in this country the longest rivers are often reduced to mere brooks. Their flow is so irregular that no dependence can be placed on them for a constant supply of even the smallest volume, whilst just at the time their streams are lowest the country suffers most from drought. Hence the positive necessity for some provision for storage reservoirs before constructing canals.

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visit to

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Name of <del>Land</del> Canal.	Length in Miles.	Discharge in cubic feet per second.	Discharge in 24 hours in gallons.	Total cost.			Cost per Mile.		
				£	s.	d.	£	s.	d.
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La Grange .....	20	750	405,000,000	90,000	0	0	4,500	0	0
		672.3	363,642,000	100,000	0	0	5,000	0	0

The greater portion of the La Grange Canal is cut in granite, and in places it is supported by solid stone walls from 50 to 70 feet high. Thus it is evident to any unprejudiced mind that canals can be constructed in a mountainous country at a much lower estimate than those inexperienced in their construction can possibly imagine; and this is chiefly due to the great fall or steep declivity that can be given them, owing to their elevation, which largely reduces their sectional area. By actual survey of over 30 miles of the rough precipitous ridges near the head of the Tooma and Tumut Rivers, and by the construction of a large running ditch, 6 miles in length, I have proved that canals could be constructed as economically in our mountain ranges as in the Sierra Nevadas, as an equal fall is available. The actual population that would be served by the high-level canal proposed by me would be over 1,000, exclusive of towns; and this, owing to the inducement offered by a large permanent water-supply for hydraulic sluicing, would rapidly increase, whilst the settlers served by the proposed low-level canals from the Murray would not exceed 500. Therefore, by assuming (after a hasty inspection, and without a more careful examination) that there is no possibility of irrigating or improving the water-supply of the Upper Murray District, a very great injury may be inflicted on its principal industries, and its settlement thereby retarded.

My reasons for objecting to the proposed permanent canals are as follows:—1. Insufficiency of water-supply. 2. Great cost of construction. 3. Cost of maintenance. 4. Small returns, and consequent heavy loss to the State, which would increase annually. 5. Possibility of changing the course of both rivers connected with them during a heavy flood.

In the first place it must be assumed that a constant stream will have to be allowed to flow down the Murray and Murrumbidgee Rivers for the supply of settlers on both banks, and to satisfy claims on account of riparian rights. For this purpose I would allocate 1,500 cubic feet a second, which would represent a flow in the river Murray of 1 foot above summer level at Albury, and a flow of 3 feet in the Murrumbidgee above summer level at Wagga Wagga. On this hypothesis, and by taking as a basis of calculation the Government Astronomer's records of the mean height above summer level of the western rivers, it appears that the supply available for the proposed Murray River Canal below Albury in 1885 would have been almost nil for January, February, March, April, May, and December; for July, 800 cubic feet per second; for June, August, and November, about 2,000 cubic feet per second; and for September and October, over 2,000 cubic feet per second. For six months, therefore, during the driest period, there would have been only a small uncertain and intermittent supply for the canal, barely sufficient to account for leakage and evaporation, whilst its service for the rest of the year would have been greatly neutralised on account of the abundant rainfall in June, August, and September. According to the records of the Murrumbidgee flow for 1884, the supply available for the proposed permanent canals would

would have been almost nil for January, February, March, April, May, June, August, and December; for July, 300 cubic feet per second; for September, 2,300 cubic feet per second; for October, 800 cubic feet per second; and for November, 1,000 cubic feet per second. Consequently, there would only have been a scanty intermittent supply for eight months in that year, whilst the copious rainfall in June and October would have largely neutralised the benefits of the canal's supply in July and September. From this it is apparent that neither the Murray nor Murrumbidgee canals can be termed permanent, nor can they be made so without very extensive storage provision above their points of off-take.

The cost of the proposed Murray Canal just below Albury is estimated at £1,412,250, but this provides for no lining, for no interest during construction, and for only £25,000 for land resumption. In comparison with the cost of similar works in Europe this estimate is decidedly low. The average cost of French canals, only 5 feet deep, is £11,600 a mile. The Cavour Canal in Italy cost £80,470 a mile. The Caluso Canal, Italy, with a supply of only 366·26 cubic feet a second, and the steep declivity of 17 feet per mile, cost £1,700 a mile. But supposing this Murray Canal could be constructed for £1,412,250, it is still questionable whether it would prove a profitable work. The interest on the cost, at  $4\frac{1}{2}$  per cent., would amount to £63,549 a year, and the working expenses are estimated at about £13,951 per annum, whilst the gross revenue is estimated at £177,500 per annum. This estimate evidently assumes that the whole irrigable area commanded by the canal will be irrigated immediately after its completion, which is hardly probable, considering that there are not more than 500 settlers dwelling on it, and their homesteads are scattered, whilst a few large landholders own most of the rest of it. Even if the district were densely populated, on comparing the prospective returns of such a work with those actually obtained in India, where labour costs only £3 a year for an ordinary workman, it will be seen by the following table that very different results might be anticipated than those suggested in the estimate of our Engineer.

Name of Canal.	Year.	Outlay to end of year.	Interest at $4\frac{1}{2}$ per cent.	Working expenses.	Receipts from water-rates.	Irrigable area in acres.	Irrigated area in acres.
		£	£	£	£		
Baree Doab .....	1877-78	1,537,990	67,955	50,240	93,876	.....	266,995
Agra .....	1877-78	808,479	32,215	8,319	3,709	.....	163,634
Orissa .....	1876-77	1,728,400	76,300	18,050	4,049	100,000	100,000
Midnapore .....	1876-77	683,500	29,790	9,570	6,150	80,000	54,000
Sone .....	1876-77	1,908,504	73,660	18,620	5,090	500,000	300,000
*North Behar .....	1884-85	1,100,000	45,000	10,000	7,500	100,000	50,000

\* Estimated.

It is evident, therefore, that even under exceptionally favourable circumstances, when there is a very extensive area under cultivation supporting a dense population, and when labour is very cheap, both for cultivation, for the construction of the canal and its maintenance, that even then large irrigation canals are rarely profitable.

In the above table it will be seen that the lowest working expenses are noted opposite the Agra Canal, which has a capacity of 2,000 cubic feet a second, being equal to that proposed for the Murray Canal. If, with labour at £3 a man per annum, it costs £8,300 to maintain and serve the distribution of the supply of the canal, it must surely be assumed that similar services in this country would cost more than double that sum.

At the same time I fear many generations would pass away before the returns of the Murray and Murrumbidgee Canals would realize sufficient to cover even the interest on their cost of construction.

According to the valuable report on the state of the public lands by Messrs. Morris and Rankin, in 1883, it appears that there were only 244 settlers in the Deniliquin District, including the counties of Townsend, Cadell, and Wakool, and embracing 4 million acres at the lower end of the Edwards and Billabong Rivers, whilst  $2\frac{1}{2}$  million acres were aggregated in large estates. The counties of Denison and Hume were little better, the selectors having chiefly sold out to pastoralists; consequently less than 500 *bona fide* settlers would be benefited by the proposed Murray Canals. Nor does the prospect of profitable canals improve with the Murrumbidgee Canals, for most of the country traversed by them is in the hands of pastoralists, whilst in the instance of Waradgery County, having an area of 1,836,160 acres, the land is almost entirely included in twelve pastoral holdings. There is no doubt that these canals would greatly increase the value of alienated land in the districts they would traverse, but, unless the Government resumed it, the State would reap no advantage from such enhancement.

Bearing in mind that the slope of the Murray Canal from the point of off-take at Bungowanna is 1 foot in 5,000 feet, whilst that of the river itself averages only 9 inches a mile from that point downward, it appears possible that, unless the headworks are very substantial, and of sufficient height to resist the entrance of any flood, the river—such a flood as 1867, which was 27 feet above summer level, and 10 feet above the right bank below the site of weir—might force its way into the canal, and pouring down it with overwhelming force, might form an entirely new channel for itself. Such a disaster has actually happened in the Mississippi River from the cutting of a channel of less than one-quarter the area of the proposed canal. The same danger threatens the Murrumbidgee Canal, which has a fall of  $1\frac{1}{2}$  feet towards the Urana Lake, in comparison with a fall of only 10 inches a mile in the river bed. Thus there would be a possibility of these two rivers reuniting their streams near Jerilderie, and following the course of the Billabong River.

In consideration of the many and serious defects I have alluded to, it is evident that the proposed canals, under present conditions, would be injudicious and impracticable.

FREDK. B. GIPPS, C.E.



1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

## PROSPECT RESERVOIR.

(RETURN RESPECTING.)

*Ordered by the Legislative Assembly to be printed, 17 May, 1887.**Questions—*

5. MR. WALKER to ask THE SECRETARY FOR PUBLIC WORKS,—

- (1.) How much brickwork was done for the Prospect Reservoir contract between 1st June, 1886, and 1st February, 1887?
- (2.) How much (if any) yet remains to be done?
- (3.) What has been the cost for supervising the work done in the period mentioned?
- (4.) Is it the intention of the Government to complete the remainder of the work at a like cost?
- (5.) What is the total amount paid yearly to Government officials on the Prospect Reservoir contract?
- (6.) What are the duties of the officials?
- (7.) What is the salary of each?
- (8.) Does the Prospect Sanitation Association obtain a free water right from the temporary supply for baths, &c., and for supplying the inhabitants with water at a fixed charge?
- (9.) Are any Government officials on the Directorate of the Prospect Sanitation Association?
- (10.) Is the Government aware that the first dividend of the above Association was at the rate of 20 per cent. for three months?
- (11.) What has been the cost of repairing leakages, &c., in the canal, from the Reservoir Basin to the Pipe-head Basin (some 4 miles in extent) since it has been taken off the contractor's hands, and passed by Government officials?
- (12.) What have been the duties of Mr. Hackett since his special work of Pipe Inspector has ceased?

*Replies—*

- (1.) 114 cubic yards.
- (2.) About 140 cubic yards.
- (3.) The Inspector who looks after the brickwork has also the supervision of the masonry and concrete. It is not possible, therefore, to say exactly what the inspection of the first mentioned work has cost; his salary during the period mentioned amounted to £156.
- (4.) Yes.
- (5.) £2,621 3s.
- (6.) To direct and superintend the constructions in all their parts.
- (7.) District Engineer—R. H. Ryan, £600; assistant—A. H. Jacob, £260; timekeeper—T. W. Lackey, £311; inspectors—E. Jackson, £233 5s.; E. Hackett, £233 5s.; G. Davies, £233 5s.; W. Nicholas, £186 12s.; J. Davies, £186 12s.; chairman—J. Jekyll, £108 17s.; maintenance man—F. Edwards, £108 17s.
- (8, 9, and 10.) With regard to these questions the inquiry promised has elicited the following explanation from the engineer in charge of the Works (Mr. Ryan):—  
“Yes; the water is given free to the baths and now is, and always has been, given free from the 30-inch main pipe below the dam for the use of the people of the encampment everywhere along its line where tapped. If the supply in this pipe failed at any time the Reservoir has always been opened to the people to get water from. I am informed a small sum is charged to any one getting a supply at the baths in the camp to save carriage I presume, and for the convenience of procuring it there, not for the water itself, which can always be got free as above mentioned.”
- “(9.) Yes; Edward Jackson and Ernest Hackett, Inspectors.
- “(10.) From inquiries I find that for the first three months after the baths were opened they paid a dividend at the rate of 20 per cent.; since then it has paid nothing, and at present it is not paying its working expenses. I am informed the promoters or proprietors of the baths with one exception are men engaged on the works, and the Doctor in charge of the camp states that the sickness at present is much below the average of other places equally populated, evidently an improvement on former times.”

The



The following additional explanation is also given :—

“The precaution has always been taken to see that the water was open to the people of the camp, where it had always been open; if they preferred to pay for the water instead of coming for it to the main pipe to get it free, that was their own affair not mine; I suppose they paid simply for the convenience of getting it close to their houses. If the meaning of the Engineer-in-Chief's memo. was that the Bathing Association were to provide pipes, taps, and other appliances, together with the necessary supervision at their own expense for the use of the public, I must admit that I did not interpret his meaning correctly. I only tried to take a practical view of the matter. Nothing has been taken from the people that they enjoyed previous to the starting of the baths; on the contrary the facilities for getting a supply of water free from the main pipe are greater now than then.”

I am not at all satisfied, neither is Mr. Moriarty, with the position occupied by the officers, referred to in Mr. Ryan's report, and I have accordingly directed that they are at once to resign their position as Directors, or leave the works.

(11.) £1,976 12s. 6d.

(12.) E. Hackett's duties since the pipe laying proper was finished have been of a general character, such as looking after the erection of barbed wire boundary-fences, constructions at siphon outlet, erection of a portion of valve gear, erection of gauge-house, telephone line, and any works that he is competent to superintend and may be useful on. He also has charge of the pipes and valves, supplying the water to Sydney at present, which constantly require looking after.

1887.

(SECOND SESSION.)

## NEW SOUTH WALES.

## COUNTRY TOWNS WATER AND SEWERAGE ACT OF 1880.

(BOROUGH OF NEWCASTLE—AMENDED BY-LAWS.)

Presented to Parliament, pursuant to Act 44 Vic. No. 14, sec. 13.

Colonial Secretary's Office,  
Sydney, 10th March, 1887.

## BOROUGH OF NEWCASTLE.—AMENDED BY-LAWS.

THE following Amended By-laws, made by the Council of the Borough of Newcastle, under the "Country Towns Water and Sewerage Act of 1880," having been confirmed by His Excellency the Governor, with the advice of the Executive Council, are published in accordance with the requirements of the above-cited Act.

HENRY PARKES.

BY-LAWS under the "Country Towns Water and Sewerage Act of 1880."

THE Council of the Municipality of Newcastle do, by virtue of the authority vested in them by the Country Towns Water and Sewerage Act, 44 Victoria No. 14, hereby make and establish the following By-laws for carrying into effect the purposes and provisions of the said Act, and declare that the same shall stand in the place of and instead of all By-laws heretofore in force, which By-laws heretofore made are hereby repealed.

By-laws to enable the Council of the Borough of Newcastle to establish a rate for water supply purposes, and for fixing the scale of charges for water supplied by meter, under the powers conferred by the Country Towns Water and Sewerage Act, 44 Victoria No. 14.

The Council of the Borough of Newcastle doth hereby, pursuant to and in exercise and execution of the powers and authorities conferred by the "Country Towns Water and Sewerage Act of 1880," make the following rate, to take effect from the first day of January and the first day of July in each year, upon all lands and tenements within the area of any Water District within which water is authorized to be supplied:—

1. The rates and charges hereinafter specified are those which the owners and occupiers of lands and tenements shall pay in respect of water supplied otherwise than by meter for domestic purposes.

2. On every house, tenement, or land there shall be paid to the Council the annual minimum sum of ten shillings, and in no case shall water be supplied at less than that sum.

3. On every house or tenement there shall be paid the rate of five shillings per room for each and every room in such tenement, all out-houses to be excluded except bath-houses.

4. The charge for water supplied by meter for steam-boiler purposes shall be at the rate of two shillings per thousand gallons. The minimum quantity to be charged for water supplied to any such boiler shall be ten thousand gallons per month.

5. The charge for water supplied by meter for manufacturing and other purposes, unless otherwise specified, shall be at the rate of two shillings per thousand gallons. The minimum quantity to be charged for water supplied shall be ten thousand gallons per month.

6. The charge for water supplied by meter to ships and vessels in the port shall be at the rate of four shillings per thousand gallons, and each party taking water for use of ships, &c., shall provide their own meter.

7. The charge for water supplied by meter to charitable institutions for all domestic purposes shall be at the rate of two shillings per thousand gallons.

8. The charge for water supplied by meter to cricket and bowling clubs shall be at the rate of two shillings per thousand gallons. The minimum quantity to be charged for shall be two thousand gallons per month.

9. The charge for water supplied by meter for irrigation, gardens, nurseries, and private fountains shall be at the rate of two shillings per thousand gallons. The minimum quantity to be charged for shall be two thousand gallons per month.

10. The charge for a temporary supply of water during the erection of new buildings shall be ten shillings per centum on the amount of contract for stonework, brickwork, and plastering; or the Council may require a meter to be fixed, and the charge shall be two shillings per thousand gallons.

11. The charge for warehouses and wholesale stores, not being domiciles, shall be four shillings per thousand gallons. The minimum quantity to be charged for water supplied shall be two thousand gallons per month.

12. The charge for water supplied for motive power, public baths, and troughs in streets shall be at the rate of two shillings per thousand gallons. The minimum to be charged for shall be two thousand gallons per month.

13. All accounts for water supplied under special agreement or by meter shall be paid monthly.

Made and passed by the Council of the Borough of Newcastle, this twenty-seventh day of September, in the year of our Lord one thousand eight hundred and eighty-six.

EDWARD S. HOLLAND,  
Town Clerk.

(L.S.) JOHN THORN,  
Mayor.



1887.

(SECOND SESSION.)

## NEW SOUTH WALES.

## COUNTRY TOWNS WATER AND SEWERAGE ACT OF 1880.

(BOROUGH OF ALBURY—BY-LAWS.)

Presented to Parliament, pursuant to Act 44 Vic. No. 14, sec. 13.

Colonial Secretary's Office,  
Sydney, 6th April, 1887.

## BOROUGH OF ALBURY.—BY-LAWS.

THE following By-laws, made by the Council of the Borough of Albury, under the "Country Towns Water and Sewerage Act of 1880," for the management and regulation of the Water Supply of that Municipality, having been confirmed by His Excellency the Governor, with the advice of the Executive Council, are published in accordance with the requirements of the above-cited Act.

HENRY PARKES.

## BOROUGH OF ALBURY.

BY-LAWS FOR THE MANAGEMENT AND REGULATION OF  
WATER SUPPLY.

THE Council of the Borough of Albury, subject to and in exercise and execution of the powers and authorities conferred on such Council by the "Country Towns Water and Sewerage Act of 1880," make the following By-laws :—

1. No person shall be supplied with water by measure until he shall have signed a contract with the said Council in the form or to the effect contained in the Schedule hereto.

2. The following charges are those which owners and occupiers of land and tenements, or other persons, shall pay in respect of water supplied by the said Council by measure, that is to say, for water supplied (except in cases hereinafter mentioned or in cases of special agreement with the said Council), at the rate of 1s. 6d. per 1,000 gallons.

3. The minimum quantity of water to be charged for, where water is supplied by measure, shall be, if for domestic and other than domestic purposes, the quantity of which the charge at 1s. 6d. per 1,000 gallons would be equal to the amount of the assessed rate which would be payable for lands, tenements, or premises so supplied, if supplied otherwise than by measure, and if for other than domestic purposes only, 25,000 gallons per quarter.

4. A supply of water for domestic purposes shall not include a supply of water for livery or carriers' stables or a supply for any manufacturing purposes or for irrigation or for water power or for fountains or for any ornamental purposes, and the supply of water for other than domestic purposes solely shall in all cases be by measure.

5. For water supplied for public-house troughs, 20s. per annum for each trough; and for steam boilers, 15s. per annum for each horse-power of such steam boiler; for water-carts supplied from the stand pipes, 1s. per load of 500 gallons or less.

6. For water supplied temporarily to buildings in course of progress, 20s. per centum on the amount of contract price for stonework, brickwork, and plastering, or the said Council may require a meter to be fixed, and make the ordinary charge fixed for water supplied by measure, or may make a special agreement in respect of the charge for such water.

7. Water required for market gardens, nurseries cultivated for trade or for purely agricultural purposes, and cricket and bowling clubs and public baths, may be supplied by measure at the rate of 1s. per 1,000 gallons.

8. Water supplied to hospitals or other charitable institutions for all purposes shall be at the rate of 6d. per 1,000 gallons.

9. For water supplied to any lands, tenements, or premises not before specified and not chargeable with or paying Borough rates, shall be supplied by measure at the rate of 1s. 6d. per 1,000 gallons, or by special agreement with the said Council.

10. No person shall use a hose attached to any tap or pipe used for the purpose of supplying the water of the said Council for domestic purposes to any tenement or premises for watering any garden, laying dust, or for any other purpose whatsoever, unless where a water-meter is fixed and the water supplied by measure; and any person offending against this By-law shall be liable to a penalty not exceeding £5.

11. No screw-tap shall be placed on any garden or yard at the outside of any tenement or premises supplied with water of the said Council to which a hose could be attached, unless a water-meter is fixed and the water supplied by measure; and any person offending against this By-law shall be liable to a penalty not exceeding £5.

12. No meter shall be allowed to be affixed unless the dial of the same is capable of registering 1,000,000 gallons, except by special consent in writing of the said Council.

13. If any meter shall cease registering, or be reported as out of repair or registering inaccurately, the said Council shall estimate the charge for water consumed during the period such meter was not in working order and until it is repaired and refixed, either by taking an average of the quantity used during the previous quarter or during the corresponding period of the previous year, or the said Council may insert a check-meter on the service-pipe.

14. The following rates and charges are those which the owners and occupiers of lands and tenements shall pay in respect of lands and tenements to be supplied with water by the said Council for domestic purposes other than by

measure :—(1) On every house or tenement of £10 assessed annual valuation by the said Borough, or under, 10s. per annum. (2) On every house or tenement above the annual assessed value of £10, a rate of 1s. for each £ sterling on the amount of the annual assessed valuation by the said Borough. (3) Unimproved town lots and suburban lands shall be charged a minimum rate of 2s. 6d. per lot up to £50 annual assessed capital valuation by said Borough, and all in excess of this, £5 per centum on said annual assessed capital valuation.

15. Before any person shall affix any service-pipe to any pipe of the said Council, or alter, repair, or in any manner interfere with any pipe of the said Council, or any service-pipe, cock, or fitting connected with the pipes of the said Council, he shall obtain from the said Council a license in that behalf to execute such works; and any unlicensed person affixing, altering, repairing, or in any manner interfering with such pipe, service-pipe, cock, or fitting as aforesaid, shall be liable to a penalty not exceeding £10.

16. Before any such license shall be granted by the said Council, the person applying for the same shall satisfy the said Council that he is a competent plumber.

17. Any person, whether licensed as aforesaid or not, who shall offend by opening any ground so as to uncover any pipe or pipes, the property of the said Council, without giving two days' notice to the said Council of his intention so to do, or who shall in any way tamper with or alter any pipe, the property of the said Council, without the permission in writing of the said Council being first obtained, or who shall wilfully or carelessly break, injure, or open any lock, cock, valve, pipe, work, or engine, the property of the said Council, shall be liable for each such offence to a penalty not exceeding £20.

18. Any person, whether licensed or not, as aforesaid, who shall lay any pipe to communicate with the pipes of the said Council without giving two days' notice of the day and hour when such pipe is intended to be made to communicate with the pipes of the said Council, or who shall make such communication except under the superintendence and according to the directions of some officer of the said Council, or shall lay any leaden or other pipe to communicate with the pipe of the said Council, of a strength and material not sanctioned by the said Council, shall be liable for each such offence to a penalty not exceeding £5; and in the event of continuing the offence, to a further penalty of £2 for each day after the notice of the offence from the said Council.

19. Lead piping of the following weights :—

Diameter of Pipe.	Weight of Pipe per yard.
$\frac{1}{2}$ in.....	5 lb.
$\frac{3}{4}$ in.....	6 lb.
$\frac{1}{2}$ in.....	7 $\frac{1}{2}$ lb.
$\frac{3}{4}$ in.....	9 lb.
1 in.....	12 lb.
$1\frac{1}{4}$ in.....	16 lb.
$1\frac{1}{2}$ in.....	20 lb.

And galvanized iron piping of approved quality only will be allowed for external and internal services. Ordinary connections with sub-mains must be made with proper ferrules, to which, for iron service, a length of not less than 3ft. of lead pipe must be attached. One service-pipe only to each tenement will be permitted, and for houses rated at £20 per annum and under, the bore of such service-pipe must not exceed  $\frac{1}{2}$  in.

20. If any person shall neglect to repair any service-pipe conveying water from the pipes of the said Council into the premises of such person, after having received notice from any officer of the said Council that such service-pipe requires repairing, the said Council may stop the water from flowing into such premises, either by cutting off the service-pipe, or otherwise, as to the said Council may seem fit, until the necessary repairs shall have been effected. The service-pipes

from the main being the property of the owners or occupiers of the tenements supplied by such service-pipes, the occupier (if any), and if none, the owner, shall in every instance in which any damage shall be caused by reason of such service pipe being leaky or otherwise out of repair or broken, be liable to a penalty not exceeding £5; and in the event of continuing the offence, to a further penalty of £2 for each day after notice of the offence from the said Council.

21. Any person supplied with water by the said Council who shall wilfully or negligently allow the same to run to waste shall be liable for each offence to a penalty not exceeding £5; and in the event of continuing the offence, to a further penalty of £2 for each day after notice of the offence from the said Council.

22. Any person, whether licensed as aforesaid or not, connecting any service-pipe or branch service-pipe with any steam boiler for the purpose of supplying the same with water without first affixing a self-acting valve for preventing the pressure of the steam reversing or affecting the dial of the meter, shall be liable to a penalty not exceeding £5; and in the event of continuing the offence, to a further penalty of £2 for each day after notice of the offence from the said Council.

23. Any person receiving water from the said Council who shall take or carry away any such water from his premises, or who shall allow any person to take or carry away any such water, or who shall sell the same to any other person, shall be liable to a penalty not exceeding £5.

24. Any person, not having agreed to be supplied with water by the said Council, who shall take or carry away any water from any drinking tap through a private or public service pipe, shall be liable to a penalty not exceeding £5.

25. All charges for water supplied by measure or under special agreement shall be paid on the first days of January, April, July, and October in each year, or as may be agreed on by the said Council.

26. In the construction of these By-laws, the word "person" shall be deemed to extend to and include a corporation whether aggregate or sole, and the words "said Council" shall mean the Council of the Borough of Albury.

THE SCHEDULE HEREINBEFORE REFERRED TO.

MEMORANDUM of Agreement this \_\_\_\_\_ day of 188 \_\_\_\_\_, between \_\_\_\_\_ of Albury, \_\_\_\_\_ of the one part, and the Council of the Borough of Albury of the other part, whereby the said \_\_\_\_\_ agrees to take water by measure supplied by the said Council, at the rate of \_\_\_\_\_ per 1,000 gallons, to be used in or upon the land, tenements, or premises in the occupation of the said \_\_\_\_\_ situated in \_\_\_\_\_ street; and such water shall be used for the purposes of \_\_\_\_\_ only; and the said \_\_\_\_\_ agrees to pay the said Council for the water so supplied, on the first days of January, April, July, and October in each year; and the said Council agrees to supply such water at the rate aforesaid, provided always and it is hereby agreed that the said Council shall not be liable to any penalty or damages for not supplying such water, if the want of such supply arises from drought or other unavoidable cause or accident; and the said Council may terminate this agreement at any time by giving the said \_\_\_\_\_ three weeks' notice in writing to that effect.—As witness the hands and Common Seal of the said parties hereto.

Given under our Common Seal, this \_\_\_\_\_ day of \_\_\_\_\_, 188 \_\_\_\_\_.

The foregoing By-laws were made and passed by the Borough Council of Albury, and the seal of the said Council was hereunto affixed, the twenty-third day of December, 1886.

JNO. H. PAINE, (L.S.) G. H. BILLSON, Mayor  
Council Clerk.

1887.

(SECOND SESSION.)

## NEW SOUTH WALES.

COUNTRY TOWNS WATER AND SEWERAGE ACT OF 1880.  
(BOROUGH OF BATHURST—BY-LAWS.)

Presented to Parliament, pursuant to Act 44 Vic. No. 14, sec. 13.

Colonial Secretary's Office,  
Sydney, 17th June, 1887.

## BOROUGH OF BATHURST.—BY-LAWS.

THE following By-laws, made by the Council of the Borough of Bathurst, under the "Country Towns Water and Sewerage Act of 1880," having been confirmed by His Excellency the Governor, with the advice of the Executive Council, are published in accordance with the requirements of the above cited Act.

HENRY PARKES.

BY-LAWS made in pursuance of the powers contained in the "Country Towns Water and Sewerage Act" 44 Vic. No. 14, section 13, for the supply and distribution of water, and determining the rate or charges to be made therefor.

1. The rate to be paid in respect of lands and tenements to be supplied with water for domestic purposes, otherwise than by meter, or in respect of lands and tenements distant not more than fifty yards from any main constructed by or vested in the Council, shall be, and it is hereby fixed at, one shilling in the pound on the value of such lands and tenements as assessed in each year for the purpose of the ordinary Municipal rates, the payments to be made in advance in two equal payments, on the first day of January and the first day of July in each year, but the minimum payment shall be ten shillings per annum.

2. In the case of any lands or tenements becoming liable to be rated for water during the currency of a half-year, the rate shall be immediately payable, but so much thereof only as is proportionate to the unexpired portion of the half-year.

3. The bore of any service pipe, shall not exceed  $\frac{3}{4}$  of an inch, unless with the consent of the Council, in which case the rate to be paid shall be fixed by special agreement between the Borough Council and the owner or occupier requiring such pipe; and any such agreement shall be binding upon any subsequent owner or occupier so long as the said service pipe is in use.

4. The charge for water to be supplied by meter to any lands or tenements for domestic purposes, as defined as aforesaid, shall be at the rate of one shilling per thousand gallons, but the minimum payment in respect of any house, land, or tenements for which a meter is supplied shall be at the rate of one shilling per month.

5. The charge for water supplied by meter for irrigation, gardens, nurseries, private fountains, or other purposes of a like nature, and not otherwise herein provided for, shall be at the rate of one shilling per thousand gallons; or where the water is used for domestic purposes also, at the rate of one shilling per thousand gallons.

6. The charge for water supplied by meter for steam-boiler purposes, or for manufacturing or other similar purposes, shall

be one shilling per thousand gallons, and the minimum quantity chargeable in such cases shall be five thousand gallons per month.

7. The charge for water supplied by meter to any cricket, racing, or bowling club, or any club or institution of a similar nature, shall be at the rate of one shilling per thousand gallons.

8. Where water is required for a temporary supply during the erection of new buildings, the charge shall (if no meter be used) be ten shillings per cent. on the amount of the contract work for stonework, brickwork, or plastering, or if a meter be fixed, the charge shall be at the rate of one shilling per thousand gallons.

9. The charge for warehouses and wholesale stores shall be at the rate of one shilling per thousand gallons, and the minimum to be charged therefor shall be two thousand gallons per month.

10. The charge for all buildings or institutions of a public or semi-public nature not coming within the exceptions in section 35 shall be at the rate of one shilling per thousand gallons.

11. The charge for water supplied for motive power, public baths, or wash-houses, not coming within the exceptions in section 35, shall be at the rate of sixpence per thousand gallons, and the minimum quantity to be charged for shall be ten thousand gallons per month.

12. The Borough Council may in any case insist upon water being supplied per meter.

13. All accounts for water supplied per meter, or under special agreement, shall be paid monthly.

Made and passed by the Council of the Borough of Bathurst, this sixteenth day of May, in the year of our Lord one thousand eight hundred and eighty-seven.

(L.S.) THOS. A. MACHATTIE,  
DAVID C. WILLIAMSON,  
Town Clerk.

Mayor.



1887.

(SECOND SESSION.)

## NEW SOUTH WALES.

COUNTRY TOWNS WATER AND SEWERAGE ACT OF 1880.  
(BOROUGH OF GOULBURN—BY-LAWS.)

Presented to Parliament, pursuant to Act 44 Vic. No. 14, sec. 13.

Colonial Secretary's Office,  
Sydney, 22nd June, 1887.

## BOROUGH OF GOULBURN.—BY-LAWS.

THE following By-laws, made by the Council of the Borough of Goulburn under the "Country Towns Water and Sewerage Act of 1880," having been confirmed by His Excellency the Governor, with the advice of the Executive Council, are published in accordance with the requirements of the above-cited Act.

HENRY PARKES.

## MUNICIPAL COUNCIL OF THE BOROUGH OF GOULBURN.

REGULATIONS for the guidance of licensed plumbers in supplying water to houses, in the Borough of Goulburn and Suburbs.

1. Notice of intention to connect service-pipes or water-meters to the mains, or to any other service-pipe in each case to be lodged with the Town Clerk, and for the correct information in such notice the plumber will be strictly responsible. The premises will then be inspected, and when the agreement is signed and rate paid, the plumber will receive a printed authority to proceed with the work. The ground is not to be opened, or pipe connected, until he has such authority. Printed forms of the notice to be obtained from the Town Clerk.
2. In all cases where it is intended to connect a service-pipe to the service-pipe of any other premises a written permission from the owner or occupier of such premises must be sent to the Town Clerk before the authority to connect will be granted.
3. In every case of repairs to service-pipe, or where it may be wished to transfer service-pipes from one main to another, or to connect with other service-pipes, or where any change or alteration to them may be required, in any way, notice of such repair or alteration, &c., must be given in writing to the Town Clerk at least twenty-four hours before any such work shall be commenced, except in cases of great waste of water, when immediate steps must be taken to stop the leak, and notice given to the town Clerk of the same forthwith.
4. All service-pipes must be laid 18 inches below the surface of roadway and gutters and meters, where required, fixed in accordance with the direction of the Town Clerk or other authorized officer of the Municipal Council; and on each service-pipe connected with the mains must be fixed two stop-cocks, one at the junction of the main, and other on the footpath, 1 foot 6 inches from the building lines, enclosed in an iron box with proper lid. All service-pipes, taps, stop-cocks, ball cocks, valves, &c., shall be equal in quality to samples kept in the Town Clerk's office or be approved of by the Town Clerk, or other authorized officer of the Municipal Council.
5. All service-pipes connected with the water mains are to have a length of at least 2 feet of  $\frac{3}{4}$ -inch lead pipe, weighing

9 lbs. per lineal yard, or where a 1 inch service is authorized, the lead pipe to weigh 12 lbs. per lineal yard, between the stop-cock in the main and the galvanized iron service-pipe; and where the service-pipes are entirely of lead, the weights for respective sizes are to be as follows, viz. :— $\frac{1}{2}$  inch, 4 lbs.;  $\frac{3}{4}$  inch, 9 lbs.; 1 inch, 12 lbs.; all joints throughout the service are to be of the kind known as wiped joints. The lead pipe above referred to is to be joined to the stop-cock at the main, and to the galvanized iron service-pipe by means of a barrel union, similar to that on view in the Town Clerk's Office, or other approved fittings.

6. No service-pipe will be allowed to communicate with any cistern, tank, or vessel intended or used for the reception of rain-water.

7. All water meters to be enclosed in a strong wooden box; all keys of both meters and boxes to be lodged at the Town Clerk's Office, immediately after the meters are fixed. The Municipal Council reserves the right of affixing their own locks to the meters and boxes; twenty-four hours' notice to be given of the day on which it is intended to connect meters, in order that the proper officer may attend and see them fixed correctly. On no account are plumbers or other persons to take off, alter, or otherwise interfere with meters or pipes connecting the same, unless by permission of the Town Clerk, and in the presence of an authorized officer of the Corporation.

8. The officers connected with the Water Service are strictly enjoined to report every case of infringement of these Regulations, and the plumber offending against any of them will have to show cause why his license should not be suspended or cancelled, as may be thought proper in the circumstances of the case, besides being held responsible for any damages occasioned by his so transgressing any of the Regulations.

9. All licensed plumbers to attend at the Town Clerk's Office, on or before the 10th January, in each year to have their names and licenses registered and the latter endorsed. Only such plumbers as comply with this Regulation will be deemed "Licensed Plumbers," and allowed to work as such.

10. In each ward certain days in each week will be set apart upon which connections with the mains may be made. Upon those days the Council's officers will be in attendance in those



districts, in order to attend plumbers, and plumbers must in all cases give two days' notice at the Town Clerk's office of their intention to make connections, and indicate on the wall or kerb by a temporary mark (w) where they propose to cross the footpath.

11. The Council's workmen are to open the trench, bore the mains, and insert the stop-cock within the city boundaries, the stop-cock being of the kind, a sample of which is on view at the Town Clerk's office, the same being left at the Town Clerk's office along with the notice to connect.

12. By the time these operations are completed, the plumber who has been employed to lay on the service must have taken all his measurements, prepared all the pipes to the exact length, complete with lead connections of approved length and weight per yard, properly jointed to cap linings, barrel union, &c., ready for attachment to the stopcock, so as to avert any delay in the refilling of the trench.

13. In the event of the articles abovenamed not being ready for fixing at the period named, the trench may be filled in again by the Council's workmen, and the re-opening and filling of the same shall be paid for by the plumber, in addition to whatever other payments which may accrue under these Regulations.

14. All expenses of labour in drilling, inserting stop-cock, opening and filling trenches, shall be borne by the plumber; the account for the same to be delivered without delay, and paid by him to the Town Clerk immediately on receipt of the account. Failing due attention to the latter directions, the Council may forfeit the license of the said plumber.

15. All service-pipes within the city boundaries are to be 1½-inch galvanised iron pipes, or, if of lead, may be ¾ inch from the end of the lead connection to the building line, but the stop-cocks are to be ¾ inch.

A printed copy of the above Regulations will be given to each licensed plumber.

An annual fee of twenty shillings will be charged for each license; but for every quarter of a year that elapses a rebate of five shillings will be allowed.

Made and passed by the Council of the Borough of Goulburn, this eighteenth day of April, in the year of our Lord one thousand eight hundred and eighty-seven.

(L.S.) FRANCIS TAIT,  
Mayor.

J. B. SALMON,  
Town Clerk.

BY-LAWS under the "Country Towns Water and Sewerage Act of 1880."

The Council of the Municipality of Goulburn do, by virtue of the authority vested in them by the Country Towns Water and Sewerage Act, 44 Victoria No. 14, hereby make and establish the following By-laws for carrying into effect the purposes and provisions of the said Act.

By-laws to enable the Council of the Borough of Goulburn to establish a rate for water supply purposes, and for fixing the scale of charges for water supplied by meter, under the powers conferred by the Country Towns Water and Sewerage Act, 44 Victoria No. 14.

The Council of the Borough of Goulburn doth hereby, pursuant to and in exercise and execution of the powers and authorities conferred by the Country Towns Water and Sewerage Act of 1880, make the following rate, to take effect from the first day of January and the first day of July in each year, upon all lands and tenements within the area of any water district within which water is authorized to be supplied.

1. The rates and charges hereinafter specified are those which the owners and occupiers of lands and tenements shall pay in respect of water supplied otherwise than by meter for domestic purposes.

2. On every house, tenement, or land there shall be paid to the Council the annual minimum sum of ten shillings, and in no case shall water be supplied at less than that sum.

3. On every house or tenement there shall be paid the rate of five shillings per room for each and every room in such tenement, all out-houses to be included except water-closets, in all stables every two stalls to be rated as one room.

4. The charge for water supplied by meter for steam-boiler purposes shall be at the rate of two shillings per thousand gallons, the minimum quantity to be charged for water supplied to any such boiler shall be five thousand gallons per month.

5. The charge for water supplied by meter for manufacturing and other purposes, unless otherwise specified, shall be at the rate of two shillings per thousand gallons; the minimum quantity to be charged for water supplied shall be five thousand gallons per month.

6. The charge for water supplied by meter to charitable institutions (hospitals excepted) for all domestic purposes shall be at the rate of two shillings per thousand gallons; the minimum quantity to be charged for water supplied shall be five thousand gallons per month.

7. The charge for water supplied by meter to cricket and bowling clubs, and all other pleasure or show grounds whatsoever, shall be at the rate of two shillings per thousand gallons; the minimum quantity to be charged for shall be two thousand gallons per month.

8. The charge for water supplied by meter for irrigation, gardens, nurseries, and private fountains, shall be at the rate of two shillings per thousand gallons; the minimum quantity to be charged for shall be at the rate of two thousand gallons per month.

9. The charge for a temporary supply of water during the erection of new buildings shall be ten shillings per centum on the amount of contract for stonework, brickwork, and plastering, or the Council may require the meter to be fixed, and the charge shall be two shillings per thousand gallons.

10. The charge for warehouses and wholesale stores not being domiciles shall be four shillings per thousand gallons; the minimum quantity to be charged for water supplied shall be two thousand gallons per month.

11. The charge for water supplied for motive power, public baths, and troughs in streets, shall be at the rate of two shillings per thousand gallons; the minimum to be charged for shall be two thousand gallons per month.

12. All accounts for water supplied under special agreement or by meter shall be paid monthly.

13. Upon receiving a petition signed by two thirds of the ratepayers in any public way in the said City, or in any part of such way, the Council may cause the same to be watered; or they may in their discretion cause any public way to be watered, and may impose on the tenants or owners of buildings in such public way a uniform rate sufficient to cover the expense, which rate shall be assessed upon and according to the amount for which such buildings are assessed for the purposes of the City rate, in addition to every other rate hereby authorized and made payable; and every such rate may be made, levied, enforced, and recovered in like manner as any City rate.

Made and passed by the Council of the Borough of Goulburn, this twenty-eighth day of March, in the year of our Lord one thousand eight hundred and eighty-seven.

(L.S.) FRANCIS TAIT,  
Mayor.  
J. B. SALMON,  
Town Clerk.

1887.

(SECOND SESSION.)

## NEW SOUTH WALES.

## COUNTRY TOWNS WATER AND SEWERAGE ACT.

(NOTIFICATIONS UNDER, FOR WATER SUPPLY WORKS AT WAGGA WAGGA, GOULBURN, ALBURY, AND BATHURST.

Presented to Parliament, pursuant to Act 44 Vic. No. 14, sec. 125.

## WAGGA WAGGA WATER-WORKS.

In accordance with the provisions of the Country Towns Water and Sewerage Act 44 Vic. No. 14, section 125, I, John Sutherland, the Minister for Public Works of the Colony of New South Wales, have the honor to report, for the information of His Excellency the Governor and Executive Council, that the works for the supply of water for the Borough of Wagga Wagga, in the said Colony, which, under the provisions of the before-recited Act, and at the request of the Council thereof, have been constructed under the direction of the Minister for Public Works of the said Colony, have been completed.

Given under my hand this sixteenth day of February, 1887.

JOHN SUTHERLAND.

COPY Resolution submitted to and passed unanimously by the Council of the Municipality of Wagga Wagga at a special meeting of the Council held on the 18th day of May, A.D. 1882.

"That the Council of the Municipality of Wagga Wagga, having taken into consideration the question of water supply for the town of Wagga Wagga, do hereby request His Excellency the Governor, with the advice of the Executive Council, to take all such steps and cause such works to be executed and completed as may be necessary to provide a water supply for the town of Wagga Wagga, and the said Council, on behalf of the Municipality of Wagga Wagga, hereby agree to do and undertake all the liabilities and obligations mentioned in section 125 of the Act 44 Vic. No. 14, and it is hereby expressly agreed that such liability is accepted for the total amount to be expended on such works whatever such amount may be."

A. F. BOLTON,  
Mayor.

## NOTIFICATION OF COMPLETION OF WATER-WORKS FOR THE BOROUGH OF WAGGA WAGGA, UNDER 44 VICTORIA, NO. 14.

NEW SOUTH WALES, } Proclamation by His Excellency The Right Honorable CHARLES ROBERT, BARON  
to wit. } CARRINGTON, a Member of Her Majesty's Most Honorable Privy Council,  
(L.S.) } Knight Grand Cross of the Most Distinguished Order of Saint Michael and  
CARRINGTON, } Saint George, Governor and Commander-in-Chief of the Colony of New  
Governor. } South Wales and its Dependencies.

WHEREAS I, the Governor aforesaid, with the advice of the Executive Council of the said Colony, having duly sanctioned the carrying out of certain works for and in connection with the supply of water to the Borough of Wagga Wagga in the said Colony, for and towards the completion of which said works public funds were provided by Parliament; and whereas the said works have been reported to me as complete by the Minister for Works, in accordance with the provisions of the 125th section of the before-recited Act: Now, I, the Governor aforesaid, with the advice of the Executive Council, hereby declare by this notification that such works are complete, to the intent that the Council of the said Borough of Wagga Wagga, within and for the purposes of which the said works have been constructed, shall take over the same and the administration and management thereof, upon the terms and conditions prescribed by the before-recited Act.

In witness whereof, I have hereunto set my Hand and caused the Great Seal of the Colony to be hereto affixed, at Government House, Sydney, this sixteenth day of February, in the year of our Lord one thousand eight hundred and eighty-seven, and in the fiftieth year of Her Majesty's Reign.

By His Excellency's Command,  
JOHN SUTHERLAND.

GOD SAVE THE QUEEN!

## GOULBURN WATER-WORKS.

IN accordance with the provisions of the Country Towns Water and Sewerage Act 44 Vic. No. 14, section 125, I, John Sutherland, the Minister for Public Works, of the Colony of New South Wales, have the honor to report, for the information of His Excellency the Governor and Executive Council, that the works for the supply of water for the Borough of Goulburn, in the said Colony, which under the provisions of the before-recited Act, and at the request of the Council thereof, have been constructed under the direction of the Minister for Public Works of the said Colony, have been completed.

Given under my hand, this sixteenth day of February, 1887.

JOHN SUTHERLAND.

COPY Resolution submitted to and passed by the Council of the Municipality of Goulburn at a special meeting of the Council held on the 5th day of May, A.D. 1881.

Present:—His Worship the Mayor (in the Chair), and Aldermen M'Connell, Taylor, Caldwell, Wardle, and Osborne.

Moved by Alderman Caldwell, seconded by Alderman Osborne, and carried, "that the Council of the Municipality of Goulburn, having taken into consideration the question of water supply for the City of Goulburn, do hereby request His Excellency the Governor with the advice of the Executive Council, to take all such steps and cause such works to be executed and completed as may be necessary to provide a water supply (without reticulation) for the city of Goulburn, and the said Council, on behalf of the Municipality of Goulburn, hereby agree to do and undertake all the liabilities and obligations mentioned in section 125 of the Act 44 Vic. No. 14, and it is hereby expressly agreed that such liability is accepted for the total amount to be expended on such works whatever such amount may be."

## NOTIFICATION OF COMPLETION OF WATER-WORKS FOR THE BOROUGH OF GOULBURN, UNDER 44 VICTORIA, No. 14.

NEW SOUTH WALES, } Proclamation by His Excellency The Right Honorable CHARLES ROBERT, BARON  
to wit. } CARRINGTON, a Member of Her Majesty's Most Honorable Privy Council,  
(L.S.) } Knight Grand Cross of the Most Distinguished Order of Saint Michael and  
CARRINGTON, } Saint George, Governor and Commander-in-Chief of the Colony of New  
Governor. } South Wales and its Dependencies.

WHEREAS I, the Governor aforesaid, with the advice of the Executive Council of the said Colony, having duly sanctioned the carrying out of certain works for and in connection with the supply of water to the Borough of Goulburn, in the said Colony, for and towards the completion of which said works public funds were provided by Parliament, and whereas the said works have been reported to me as complete, by the Minister for Works, in accordance with the provisions of the 125th section of the before-recited Act: Now, I the Governor, aforesaid, with the advice of the Executive Council, hereby declare by this notification that such works are complete, to the intent that the Council of the said Borough of Goulburn within and for the purposes of which the said works have been constructed, shall take over the same, and the administration and management, thereof, upon the terms and conditions prescribed by the before-recited Act.

In witness whereof, I have hereunto set my hand and caused the Great Seal of the Colony to be hereto affixed, at Government House, Sydney, this sixteenth day of February, in the year of our Lord one thousand eight hundred and eighty-seven and in the fiftieth year of Her Majesty's Reign.

By His Excellency's Command,  
JOHN SUTHERLAND.

GOD SAVE THE QUEEN !

## ALBURY WATER-WORKS.

IN accordance with the provisions of the Country Towns Water and Sewerage Act 44 Vic. No. 14, section 125, I, John Sutherland, the Minister for Public Works, of the Colony of New South Wales, have the honor to report for the information of His Excellency the Governor and Executive Council, that the works for the supply of water for the Borough of Albury, in the said Colony, which under the provisions of the before-recited Act, and at the request of the Council thereof, have been constructed under the direction of the Minister for Public Works of the said Colony, have been completed.

Given under my hand, this fifteenth day of February, 1887.

JOHN SUTHERLAND.

COPY Resolution submitted to and passed by the Council of the Municipality of Albury at a special meeting of the Council held on the 30th day of January, A.D. 1882.

Present:—His Worship the Mayor (in the Chair), and Aldermen Thorold, Edmonson, Frew, Lamport, Gulson, Walder, Billson, and Hunter.

Moved by Alderman Thorold, seconded by Alderman Frew, and carried, "that the Council of the Municipality of Albury, having taken into consideration the question of water supply for the town of Albury, do hereby request His Excellency the Governor, with the advice of the Executive Council, to take all such steps and cause all such works to be executed and completed as may be necessary to provide a water supply (without reticulation) for the said town, and the said Council on behalf of the Municipality of Albury, hereby agree to do and undertake all liabilities and obligations mentioned in section 125 of the Act 44 Vic. No. 14, and it is hereby expressly agreed that such liability is accepted for the total amount to be expended on such works whatever such amount may be."

JOHN H. PAYNE,  
Council Clerk.

NOTIFICATION

NOTIFICATION OF COMPLETION OF WATER-WORKS FOR THE BOROUGH OF  
ALBURY, UNDER 44 VICTORIA, No. 14.

NEW SOUTH WALES, } Proclamation by His Excellency The Right Honorable CHARLES ROBERT, BARON  
to wit. } CARRINGTON, a Member of Her Majesty's Most Honorable Privy Council,  
(L.S.) Knight Grand Cross of the Most Distinguished Order of Saint Michael and  
CARRINGTON, Saint George, Governor and Commander-in-Chief of the Colony of New  
Governor. South Wales and its Dependencies.

WHEREAS I, the Governor aforesaid, with the advice of the Executive Council, of the said Colony, having duly sanctioned the carrying out of certain works for and in connection with the supply of water to the Borough of Albury in the said Colony, for and towards the completion of which said works public funds were provided by Parliament; and whereas the said works have been reported to me as complete by the Minister for Works, in accordance with the provisions of the 125th section of the before-recited Act: Now, I, the Governor aforesaid with the advice of the Executive Council, hereby declare by this notification that such works are complete, to the intent that the Council of the said Borough of Albury, within and for the purposes of which the said works have been constructed, shall take over the same, and the administration and management thereof, upon the terms and conditions prescribed by the before-recited Act.

In witness whereof, I have hereunto set my Hand and caused the Great Seal of the Colony to be hereto affixed, at Government House, Sydney, this fifteenth day of February, in the year of our Lord one thousand eight hundred and eighty-seven, and in the fiftieth year of Her Majesty's Reign.  
By His Excellency's Command,

JOHN SUTHERLAND.

GOD SAVE THE QUEEN!

BATHURST WATER-WORKS.

In accordance with the provisions of the Country Towns Water and Sewerage Act 44 Vic. No. 14, section 125, I, John Sutherland, the Minister for Public Works of the Colony of New South Wales, have the honor to report for the information of His Excellency the Governor and Executive Council, that the works for the supply of water for the Borough of Bathurst, in the said Colony, which under the provisions of the before-recited Act, and at the request of the Council thereof, have been constructed under the direction of the Minister for Public Works of the said Colony, have been completed.

Given under my hand, this sixteenth day of February, 1887.

JOHN SUTHERLAND.

The following Resolution was passed at a meeting of the Council held on Wednesday, April 20th, 1881:—"That the Bathurst Borough Council acknowledge the receipt of letter from the Department of Public Works enclosing copy of minute from the Engineer-in-Chief for Harbours and Rivers, *re* water-works. And, being desirous of at once securing a permanent water supply for Bathurst, is willing to accept from the Government the terms mentioned therein, and to comply with the 125th clause of the Country Towns Water Supply and Sewerage Act of 1880, and that the required statement of the revenue of the Borough for the past year be at once prepared and forwarded to the Government."

EXTRACT from Minute of Engineer-in-Chief for Harbours and Rivers, referred to in the Resolution of the Bathurst Municipal Council.

"The Minister having at the urgent representations of the Municipalities interested, viz, Albury, Wagga Wagga, Goulburn, and Bathurst, sanctioned calling for tenders for the pumping engine, &c., in connection with the above water supplies, it now becomes desirable, I think, that the coporate bodies referred to should be officially communicated with on the subject.

"The 124th section of the Country Towns Water and Sewerage Act of 1880 gives the Governor power to construct and complete works for water supplies under certain conditions.

"But inasmuch as the 125th section of the Act imposes upon the Corporations benefited the burden of paying for the works when completed, I think the implication is clear that before we accept any tender or incur any expense, the express consent of the Corporations liable should be first formally obtained.

"I would, therefore, beg to suggest that the Corporations herein named be informed that the Government are prepared to carry out their respective water supplies—excluding the reticulation of the towns, which must be left to themselves to arrange—under the provisions of the 124th clause of the Act, and that tenders have already been received for the engines, boilers, and pumps; but that no tender can be accepted or other obligation incurred until, by an express resolution of their Councils respectively, they intimate to the Government their willingness to come under the obligations of the Act, more particularly those referred to in the 125th clause as to the repayment of the cost of such works.

"When such resolutions have been received, the authority of the Governor-in-Council, under the 124th clause, should be obtained for carrying out the works.

\* \* \* \* \*  
"But in each case the Council must understand that the Government does not bind itself to the exact amount, and that they must be prepared to pay whatever the cost may be. The Government will of course use every economy; but the point I have mentioned should be expressly and unmistakably referred to in the resolutions of the Councils to prevent any misunderstanding hereafter."  
\* \* \* \* \*

NOTIFICATION OF COMPLETION OF WATER-WORKS FOR THE BOROUGH OF  
BATHURST, UNDER 44 VICTORIA, No. 14.

NEW SOUTH WALES, } Proclamation by His Excellency The Right Honorable CHARLES ROBERT, BARON  
to wit. } CARRINGTON, a Member of Her Majesty's Most Honorable Privy Council,  
(L.S.) Knight Grand Cross of the Most Distinguished Order of Saint Michael and  
CARRINGTON, Saint George, Governor and Commander-in-Chief of the Colony of New  
Governor. South Wales and its Dependencies. WHEREAS

WHEREAS I, the Governor aforesaid, with the advice of the Executive Council of the said Colony, having duly sanctioned the carrying out of certain works for and in connection with the supply of water to the Borough of Bathurst, in the said Colony for, and towards the completion of which said works public funds were provided by Parliament, and whereas the said works have been reported to me as complete by the Minister for Works, in accordance with the provisions of the 125th section of the before-recited Act: Now I, the Governor aforesaid, with the advice of the Executive Council, hereby declare by this notification that such works are complete, to the intent that the Council of the said Borough of Bathurst, within and for the purposes of which the said works have been constructed, shall take over the same, and the administration and management thereof, upon the terms and conditions prescribed by the before-recited Act.

In witness whereof I have hereunto set my Hand and caused the Great Seal of the Colony to be hereto affixed, at Government House, Sydney, this sixteenth day of February, in the year of our Lord one thousand eight hundred and eighty-seven, and in the fiftieth year of Her Majesty's Reign.

By His Excellency's Command,

JOHN SUTHERLAND.

GOD SAVE THE QUEEN!

1887.

(SECOND SESSION.)

NEW SOUTH WALES.

## COUNTRY TOWNS WATER AND SEWERAGE ACT OF 1880.

(NOTIFICATION OF CONSTRUCTION OF WORKS FOR WATER SUPPLY TO LISMORE.)

Presented to Parliament, pursuant to Act 44 Vic. No. 14.

Department of Public Works,  
Sydney, 28th June, 1887.

NOTICE is hereby given that His Excellency the Governor, with the advice of the Executive Council, has been pleased, under the powers conferred upon him in that behalf by the 124th section of the Country Towns Water and Sewerage Act of 1880, 44 Vic. No. 14, to authorize the construction, under the direction of the Minister of Public Works, of the necessary works for water supply for the town of Lismore, at the request and pursuant to the resolution of the Municipal Council of the said town of Lismore, copy of which resolution is appended hereto for general information.—Dated at Sydney, this 28th day of June, 1887.

JOHN SUTHERLAND,  
Minister for Works.

CORP Resolution submitted to and passed by the Council of the Municipality of Lismore, at a meeting of the Council held on the 5th day of July, A.D. 1886:—

“That the Council of the Municipality of Lismore having taken into consideration the question of Water Supply for the town of Lismore, do hereby request His Excellency the Governor, with the advice of the Executive Council, to take all such steps, and cause such works to be executed and completed as may be necessary to provide a water supply for Lismore, and the said Council, on behalf of the said Municipality, hereby agree to do and undertake all the liabilities and obligations mentioned in section 125 of Act 44 Vic. No. 14; and it is hereby expressly agreed that such liability is accepted for the total to be expended in such works whatever such amount may be.”

LUD. BERNSTEIN,  
Mayor.



1887.  
(SECOND SESSION.)

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LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

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COUNTRY TOWNS WATER AND SEWERAGE  
ACT EXTENSION BILL.

(MESSAGE No. 37.)

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*Ordered by the Legislative Assembly to be printed, 7 July, 1887.*

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CARRINGTON,  
*Governor.*

*Message No. 37.*

In accordance with the provisions contained in the 54th section of the Constitution Act, the Governor recommends for the consideration of the Legislative Assembly the expediency of making provision to meet the requisite expenses in connection with a Bill to define and extend the operation of certain provisions of the "Country Towns Water and Sewerage Act of 1880" and to amend the said Act in other respects.

*Government House, Sydney,*  
*6th July, 1887.*

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1887.

(SECOND SESSION.)

## NEW SOUTH WALES.

## LANDS FOR PUBLIC PURPOSES ACQUISITION ACT.

(RESUMPTIONS FOR SEWERAGE PURPOSES, PARISH OF BOTANY.)

Presented to Parliament, pursuant to Act 44 Vic. No. 16, sec. 6.

NOTIFICATION OF RESUMPTION OF LAND UNDER  
44 VICTORIA No. 16.

NEW SOUTH WALES, } By His Excellency The Right Honourable  
to wit } CHARLES ROBERT, BARON CARRINGTON,  
a Member of Her Majesty's Most  
(L.S.) } Honourable Privy Council, Knight  
CARRINGTON, } Grand Cross of the Most Distinguished  
Governor. } Order of Saint Michael and Saint  
George, Governor and Commander-in-  
Chief of the Colony of New South  
Wales and its Dependencies.

WHEREAS I, the Governor aforesaid, with the advice of the Executive Council of the said Colony, have duly sanctioned the carrying out of certain works for and in connection with the sewerage of the City of Sydney and its suburbs in the said Colony, for and towards the completion of which said works public funds are available under the provisions of the Acts to apply sums out of Consolidated Revenue Fund of New South Wales towards services of 1886, and for services to be hereinafter provided for by loan, and whereas the land hereinafter described is required for the construction of the said works: Now I, the Governor of the said Colony, with the advice of the Executive Council of the said Colony, in pursuance of the powers in this behalf given to or vested in me by the "Lands for Public Purposes Acquisition Act," do, by this notification published in the Gazette and in a newspaper, that is to say, in the "Sydney Morning Herald," circulated in the Police District wherein the said land is situated, declare that the land hereinafter described has been resumed for the public purposes hereinafter mentioned, that is to say, for and in connection with the sewerage of the said City of Sydney and its suburbs, to the intent that upon the publication of this notification in the Gazette, the legal estate in the said land shall forthwith be vested in the Minister for Public Works and his successors, on behalf of Her Majesty, for the purpose of the said last-mentioned Act, for an estate of inheritance in fee simple in possession, freed and discharged from all trusts, obligations, estate, interests, contracts, charges, rates, rights-of-way, or other encumbrances whatsoever; and to the intent, further, that the legal estate therein, together with all powers incident thereto or conferred by the said Act, shall be vested in the said Minister as a trustee, with the powers stated in the said last-mentioned Act: And I declare that the following is the description of the land hereinbefore referred to, that is to say:—

All that piece or parcel of land situate in the parish of Botany, county of Cumberland, Colony of New South Wales: Commencing at the south-west corner of the first portion of land described in the resumption of land notified in the Gazette of the 21st July, 1882, No. 293; and bounded thence by the southern boundary of said resumption of land bearing south 80° 57' east 105 6 links; thence by a line bearing south 27° 44' west 795 8 links to Gardener's Road; thence along the north

side of said road by a line bearing north 80° 45' west 105 2 links; and thence by a line bearing north 27° 44' east 796 links, to the point of commencement,—being a strip of land 100 links wide throughout, containing 3 roods and 7 3 perches, and being the property of William Cooper.

In witness whereof I have hereunto set my hand, and caused the Great Seal of the Colony to be hereto affixed, at Government House, Sydney, this twenty-fifth day of October, in the year of our Lord one thousand eight hundred and eighty-six, and in the fiftieth year of Her Majesty's Reign.

By His Excellency's Command,  
WILLIAM JOHN LYNE.

GOD SAVE THE QUEEN!

NOTIFICATION OF RESUMPTION OF LAND UNDER  
44 VICTORIA No. 16.

NEW SOUTH WALES, } By His Excellency The Right Honourable  
to wit. } CHARLES ROBERT, BARON CARRINGTON,  
a Member of Her Majesty's Most  
(L.S.) } Honourable Privy Council, Knight  
CARRINGTON, } Grand Cross of the Most Distinguished  
Governor. } Order of Saint Michael and Saint  
George, Governor and Commander-in-  
Chief of the Colony of New South  
Wales and its Dependencies.

WHEREAS I, the Governor aforesaid, with the advice of the Executive Council of the said Colony, have duly sanctioned the carrying out of certain works for and in connection with the sewerage of the City of Sydney and its suburbs, in the said Colony, for and towards the completion of which said works public funds are available under the provisions of the "Public Works Loan Act of 1879," and whereas the lands hereinafter described are required for the construction of the said works: Now I, the Governor of the said Colony, with the advice of the Executive Council of the said Colony, in pursuance of the powers in this behalf given to or vested in me by the "Lands for Public Purposes Acquisition Act," do, by this notification published in the Gazette and in a newspaper, that is to say, in the "Sydney Morning Herald," circulated in the Police District wherein the said lands are situated, declare that the lands hereinafter described have been resumed for the public purposes hereinafter mentioned, that is to say, for and in connection with the sewerage of the said City of Sydney and its suburbs, to the intent that upon the publication of this notification in the Gazette, the legal estate in the said lands shall forthwith be vested in the Minister for Public Works and his successors on behalf of Her Majesty for the purpose of the said last-mentioned Act, for an estate of

inheritance in fee simple in possession, freed and discharged from all trusts, obligations, estate, interests, contracts, charges, rates, rights-of-way or other easements whatsoever, and to the intent further that the legal estate therein, together with all powers incident thereto or conferred by the said Act, shall be vested in the said Minister as a trustee with the powers stated in the said last-mentioned Act: And I declare that the following is a description of the lands hereinbefore referred to, that is to say:—

All that piece or parcel of land situate in the parish of Botany, county of Cumberland, Colony of New South Wales: Commencing at a point bearing north 79 degrees 56 minutes west 1,075·8 links from the north-west corner of the intersection of Annabels Lane and Mudbank Road; bounded thence on the south by the northern boundary of Annabels Lane, being a line bearing north 79 degrees 56 minutes west 45·4 links; thence on the west by a line bearing north 10 degrees 4 minutes east 327·2 links; thence on the north by the southern boundary of St. John-street, being a line bearing south 79

degrees 56 minutes east 45·4 links; thence on the east by a line bearing south 10 degrees 4 minutes west 327·2 links, to the point of commencement, containing 23·7 perches, being portion of allotments 43 and 44 of a subdivision of 15½ acres by J. R. Hatfield, the owners of which are supposed to be William, Joseph, Samuel, and George Clift.

In witness whereof I have hereunto set my hand, and caused the Great Seal of the Colony to be hereto affixed, at Government House, Sydney, this sixteenth day of April, in the year of our Lord one thousand eight hundred and eighty-six, and in the forty-ninth year of Her Majesty's Reign.

By His Excellency's Command,

W. J. LYNE.

GOD SAVE THE QUEEN!

1887.

(SECOND SESSION.)

## NEW SOUTH WALES.

## POLICE DEPARTMENT.

(REPORT FOR 1886.)

Presented to Parliament by Command.

## The Inspector-General of Police to The Principal Under Secretary.

Sir, Police Department, Inspector-General's Office, Sydney, 13 January, 1887.

I do myself the honor to submit, for the Colonial Secretary's information, the following Report, respecting the Police Service, for the year 1886.

Appended will be found a table exhibiting the names of the Police Stations in each district and the strength of the Force at each.

During the year new Stations were established at the undermentioned places:—

District.	Station.
Northern ... ..	Harwood Island.
Southern ... ..	Captain's Flat. Reid's Flat.
Eastern ... ..	Otford. Fig-tree.
Western ... ..	Nevertire.
North-eastern ... ..	Ballast Pit (Homebush to Waratah Railway). The Glebe, Newcastle. Lake Road, " "
South-western ... ..	Hatfield.
Murray ... ..	Yarrangobilly.

With the approval of the Government I have readjusted the boundaries of several of the Departmental Police Districts, taking some Stations from the western division, which was too extensive for supervision by one superintendent, and forming a new district with head-quarters at Bourke, to comprise the stations detached from the west and including some of the Namoi District (which latter has been discontinued as a separate command), the remainder of the stations therein being retransferred to the North-western District, where the officer in charge had not sufficient work. These changes entailed no additional expenditure.

The increase in the Force, provided by the Estimates, consisted of sixty-eight officers and men, all ranks, but this addition has not been adequate to meet the demands for police protection, which are admittedly reasonable. The increase in the population in Sydney and suburbs during the year has been very considerable, probably about 13,000, whilst not more than a dozen additional constables could be provided.

A considerable augmentation of the Metropolitan Police Force is certainly requisite; 100 additional men would not be in excess of the requirements. In the subjoined statement is shown the number of miles of streets in the city and suburbs laid out in beats, or having to be patrolled by constables, also the present Force available for duty.

Return showing the mileage of streets in the Metropolitan District, and the maximum number of constables available for duty at one time:—

Stations.	Mileage of Streets.	Maximum number of Constables on duty at one time.	Total strength of each Division.	Remarks.
No. 1 ... ..	23 $\frac{3}{4}$	23	89	In the suburbs and some portions of the city during the early part of the night both the day and night reliefs are on duty. This accounts for the difference in the maximum number on duty in proportion to the total strength in the various divisions.
2 and suburbs...	61	22	79	
3 " ... ..	160	36	92	
4 " ... ..	97	20	69	
5 " ... ..	865	40	67	
North Shore ... ..	130 $\frac{1}{2}$	9	21	
Redfern ... ..	64 $\frac{1}{4}$	5	22	
Total ... ..	1,401 $\frac{1}{2}$	155	439	

The suburbs have so rapidly increased in extent that the number of constables now employed is wholly insufficient to afford the necessary protection, and complaints are consequently frequent. It occupies several hours to patrol some of the beats through, and as the movements of the constables are of course watched by evil-doers, crimes and disorderly acts can be committed with a full knowledge that the Police cannot arrive in time to prevent them.

There are also many settlements in the interior where Police Stations are required, which I am not in a position at present to establish.

216 appointments have been made during the year to make up the complement as voted, and to fill the vacancies occasioned as under:—

Resignations	...	...	...	...	...	...	...	96
Discharges	...	...	...	...	...	...	...	34
Dismissals	...	...	...	...	...	...	...	18
Superannuations	...	...	...	...	...	...	...	24
Deaths	...	...	...	...	...	...	...	11

The proportion of voluntary retirements from the Service is nearly the same as the two previous years, and large enough to prove that more remunerative employment is still to be found.

One officer died during the year, Inspector George Waters, who had served thirty-one years in this Colony, and previously in the London Metropolitan Force. He was universally respected as an upright intelligent officer.

Five police pensioners died, who had been in receipt of pensions varying from £26 to £116 per annum, aggregating in the total to £390 per annum.

Twenty-three members of the Force were superannuated during the year, sixteen upon pensions of from £68 to £325 per annum, amounting in all to £1,949 per annum, besides seven members of the Force who received gratuities upon their discharge, which formed a charge of £593 upon the fund.

Eight widows of members of the Police Force were awarded gratuities amounting to £2,204 in all, and one widow has received a pension of £40 per annum.

Notwithstanding these heavy additional charges the income for the year was more than sufficient to cover the expenditure, though I still consider that legislation is urgently necessary to place the funds upon a more satisfactory basis, on the lines suggested in my special report on the subject, dated the 16th December, 1885.

Unfortunately it is again necessary to refer to the recurrence of outrages upon females, and the prevalence of other offences against the person committed by a disorderly class, which ordinary punishment appears inefficacious to repress.

To whatever causes it may be attributed it is impossible to ignore the existence of a large and increasing number of criminal youths in the community, apparently devoid of all moral principle, wanting indeed in industry, honesty, morality, sobriety, and manly feeling, who must develop into a highly dangerous criminal class.

The records afford irrefragable proof that education must not be relied upon alone, or indeed to any appreciable extent, to overcome criminal tendencies, or to cure habits of idleness and vice.

In advance of the usual yearly publication of Criminal Statistics, now in course of preparation, I have caused the following figures to be extracted from the watch-house records in the Metropolitan District for the year 1886:—

Year.	Total apprehensions.	Total for drunkenness or forming part of charge.
1881	22,657	13,949
1882	19,639	11,842
1883	21,831	13,312
1884	23,458	13,925
1885	2,4713	14,946
1886	26,621	15,741

It will be observed that the apprehensions have increased to the very large total of 26,621 persons, being 1,908 more than the previous year, a very unfavorable record, even allowing for the increase in the population. It will also be noticed with concern that the number of drunkards incarcerated has increased by 795.

The arrests for assault (aggravated, common, or resisting police) have also been very numerous, the total being 1,320 cases.

I have further ascertained from special police reports that out of 1,263 inquests held during the past year, in no less than 224 cases violent or sudden deaths have been caused either directly or indirectly by intemperance.

With regard to crime in the Colony generally it is gratifying to find that other serious offences are certainly decreasing.

Though the beneficial effects of legislation may be over-estimated yet it might prove a powerful auxiliary in regulating matters which at present in their uncontrolled state contribute both directly and indirectly to swell the criminal ranks.

The following may be enumerated as objects towards which legislation might be directed to the advantage of the community:—

For the better protection of girls from outrage, immorality, and vice.

For the regulation of dancing saloons, and other places of amusement for the young.

For the inspection, regulation, and control of factories and workshops in which the young of both sexes are employed.

For the regulation of common lodging-houses.

For ensuring decent accommodation in the dwellings of the poorer classes.

For extending the operation of that most valuable measure—"The Industrial Schools Act,"—

1. To admit of neglected children likely to lapse into criminal or immoral habits being brought under its provisions; and
2. To extend the age of girls, liable to be dealt with under the Act, to eighteen.

The

The increasing duties devolving upon me in Sydney have prevented me from being long absent from town inspecting, but with the increased facilities for travelling I have been able to visit a good many districts where I have almost invariably found the barracks, horses, arms, and other equipment in a highly creditable condition; and what is of greater importance, the police of all ranks in a state of efficiency, and held in favorable estimation by the magistracy and all respectable citizens.

I have inspected all the head-quarters stations and examined the books thereat.

The work devolving upon the police, outside their ordinary duties, is still increasing, and absorbs a large portion of their time. They are also about to undertake the work hitherto performed by Forest Rangers.

As an example of extra duty thrown on the Department, I may mention that 663 missing friends inquiries have been instituted during the year, many of which emanated from England, and involved considerable correspondence and research. In 367 instances the inquiries were successful.

The conduct of the members of the Police Force during the year has been, with few exceptions, very good, the number of dismissals for misconduct being considerably below the average.

I have, &c.,

EDMUND FOSBERY,  
Inspector-General of Police.

RETURN showing Strength and Distribution of the Police Force on the 31st December, 1886.

DISTRICT.	STATION.	MOUNTED.							FOOT.			
		Super-intendents.	Inspectors.	Sub-Inspectors.	Senior-Sergeants.	Ser-geants.	Senior-Con-stables.	Ordinary Con-stables.	Senior Ser-geants.	Ser-geants.	Senior Con-stables.	Ordinary Con-stables.
Metropolitan..	Head Station No. 1	1	1	3	...	...	...	...	2	3	12	51
	Pymont .....	...	...	...	...	...	...	...	...	1	1	3
	Glebe Island .....	...	...	...	...	...	...	...	...	...	...	1
	General Post Office..	...	...	...	...	...	...	...	...	...	...	2
	Mint.....	...	...	...	...	...	...	...	1	...	...	2
	Head Station No. 2	...	1	1	...	...	...	...	2	2	11	53
	Glebe .....	...	...	...	...	...	...	...	...	1	2	10
	Redfern and Darling-ton	...	...	1	...	...	...	...	1	3	1	14
	Waterloo and Alex-andria .....	...	...	...	...	...	...	...	...	...	1	6
	Beaconsfield Estate	...	...	...	...	...	...	...	...	...	...	1
	Head Station No. 3	...	...	2	...	...	...	...	4	4	9	45
	Watson's Bay .....	...	...	...	...	...	...	...	...	...	2	1
	Waverley and Bondi	...	...	...	...	...	...	...	...	...	1	2
	Paddington.....	...	...	...	...	...	...	...	...	...	1	2
	Botany .....	...	...	...	...	...	...	...	...	...	1	1
	Double Bay .....	...	...	...	...	...	...	...	...	...	...	1
	Rushcutters' Bay ...	...	...	...	...	...	...	...	...	...	...	1
	Randwick & Coogee Bay	...	...	...	...	...	...	...	...	1	...	2
	Woollahra .....	...	...	1	...	...	...	...	...	...	4	9
	Irish Town.....	...	...	...	...	...	...	...	...	...	...	1
	Head Station No. 4	...	...	1	...	...	...	...	2	4	7	30
	Colonial Secretary's Office	...	...	...	...	...	...	...	...	...	...	3
	Lands Office .....	...	...	...	...	...	...	...	...	...	...	3
	Free Public Library	...	...	...	...	...	...	...	...	...	...	1
	Balmain .....	...	...	...	...	...	...	...	1	1	4	9
	Manly Beach .....	...	...	...	...	...	...	...	...	1	...	3
	Head Station No. 5	...	...	1	...	...	...	...	1	3	7	13
	Cook's River .....	...	...	...	...	...	...	...	...	...	...	1
	Concord .....	...	...	...	...	...	...	...	...	1	...	...
	Petersham .....	...	...	...	...	...	...	...	...	...	1	3
	Leichhardt .....	...	...	...	...	...	...	...	...	...	1	2
	Camperdown .....	...	...	...	...	...	...	...	...	...	...	3
	Ashfield .....	...	...	...	...	...	...	...	...	...	1	1
	Enfield .....	...	...	...	...	...	...	...	...	...	...	1
	Canterbury.....	...	...	...	...	...	...	...	...	...	...	1
	Marrickville .....	...	...	...	...	...	...	...	...	...	1	3
	Burwood.....	...	...	...	...	...	...	...	...	...	...	3
	Macdonald Town ...	...	...	...	...	...	...	...	...	...	...	2
	Kogarah .....	...	...	...	...	...	...	...	...	...	1	...
	Five Dock .....	...	...	...	...	...	...	...	...	...	...	1
	Stanmore .....	...	...	...	...	...	...	...	...	...	1	...
	Summer Hill .....	...	...	...	...	...	...	...	...	...	...	2
	Homebush .....	...	...	...	...	...	...	...	...	...	...	1
	Strathfield .....	...	...	...	...	...	...	...	...	...	...	1
	Hurstville .....	...	...	...	...	...	...	...	...	...	...	1
	Belmore .....	...	...	...	...	...	...	...	...	...	...	1
	Croydon .....	...	...	...	...	...	...	...	...	...	...	1
	Mortlake.....	...	...	...	...	...	...	...	...	...	...	2
	Annandale .....	...	...	...	...	...	...	...	...	...	...	1
	Birkenhead .....	...	...	...	...	...	...	...	...	...	...	1
	St. Peter's .....	...	...	...	...	...	...	...	...	...	...	2
	Rockdale .....	...	...	...	...	...	...	...	...	...	...	1
	North Shore .....	...	...	1	...	...	...	...	1	...	3	10
	North Willoughby..	...	...	...	...	...	...	...	...	...	1	1
	Neutral Bay .....	...	...	...	...	...	...	...	...	...	...	1
	Lane Cove .....	...	...	...	...	...	...	...	...	...	...	2
	Mossman's Bay .....	...	...	...	...	...	...	...	...	...	...	1
	Water Police .....	...	1	...	...	...	...	...	...	1	7	19

DISTRICT.	STATION.	MOUNTED.							FOOT.			
		Super-intendents.	Inspectors.	Sub-Inspectors.	Senior Sergeants.	Sergeants.	Senior Constables.	Ordinary Constables.	Senior Sergeants.	Sergeants.	Senior Constables.	Ordinary Constables.
Northern .....	Armidale .....	1	...	...	1	...	...	6	1	...	...	4
	Do West .....	...	...	...	...	...	...	...	...	...	...	1
	Uralla .....	...	...	...	...	...	1	1	...	...	...	...
	Bendemeer .....	...	...	...	...	1	...	1	...	...	...	1
	Walcha .....	...	...	...	...	...	...	1	...	...	...	...
	Guyra .....	...	...	...	...	...	...	1	...	...	...	...
	Deepwater .....	...	...	...	...	...	...	1	...	...	...	3
	Tenterfield .....	...	...	...	...	1	...	1	...	...	...	...
	Wilson's Downfall .....	...	...	...	...	...	1	1	...	...	...	...
	Drake .....	...	...	...	...	...	...	1	...	...	...	...
	Inverell .....	...	...	1	...	1	...	1	...	...	...	3
	Tingha .....	...	...	...	...	...	...	2	...	...	...	...
	Bundarra .....	...	...	...	...	...	...	2	...	...	...	...
	Ashford .....	...	...	...	...	...	...	1	...	...	...	...
	Glen Innes .....	...	...	...	1	...	...	2	...	...	...	3
	Emmaville .....	...	...	...	...	...	1	1	...	...	...	1
	Grafton .....	...	1	...	...	...	...	2	1	...	...	5
	Do South .....	...	...	...	...	...	...	1	...	...	...	1
	Ulmara .....	...	...	...	...	...	...	1	...	...	...	...
	Brushgrove .....	...	...	...	...	...	...	1	...	...	...	...
	Lawrence .....	...	...	...	...	...	...	...	...	...	...	1
	Maclean .....	...	...	...	...	...	...	...	1	...	...	1
	Chatsworth Island .....	...	...	...	...	...	...	...	...	...	...	1
	Palmer's Island .....	...	...	...	...	...	...	...	...	...	...	1
	Yamba .....	...	...	...	...	...	...	...	...	...	...	1
	Harwood Island .....	...	...	...	...	...	...	...	...	...	...	1
	Copmanhurst .....	...	...	...	...	...	...	1	...	...	...	...
	Dalmorton .....	...	...	...	...	...	...	1	...	...	...	...
	Blick's River .....	...	...	...	...	...	...	1	...	...	...	...
	Mirwillumbah .....	...	...	...	...	...	1	1	...	...	...	...
	Cudgen .....	...	...	...	...	...	...	1	...	...	...	...
	Tumbulgum .....	...	...	...	...	...	...	1	...	...	...	1
	Casino .....	...	...	...	...	1	...	1	...	...	...	...
	Woodburn .....	...	...	...	...	...	1	...	...	...	...	2
	Broadwater .....	...	...	...	...	...	...	...	...	...	...	...
	Wardell .....	...	...	...	...	...	1	...	...	...	...	...
	Ballina .....	...	...	...	...	...	1	1	...	...	...	...
	Brunswick .....	...	...	...	...	...	...	1	...	...	...	2
	Lismore .....	...	...	...	...	1	...	1	...	...	...	2
	Coraki .....	...	...	...	...	...	...	1	...	...	...	...
Southern .....	Goulburn .....	1	...	1	1	...	1	2	...	1	1	13
	Collector .....	...	...	...	...	...	...	1	...	...	...	...
	Marulan .....	...	...	...	...	...	...	1	...	...	...	...
	Bungonia .....	...	...	...	...	...	1	...	...	...	...	...
	Tarago .....	...	...	...	...	...	1	1	...	...	...	...
	Crookwell .....	...	...	...	1	...	...	1	...	...	...	...
	Binda .....	...	...	...	...	...	...	1	...	...	...	...
	Tuena .....	...	...	...	...	...	1	1	...	...	...	...
	Wheeo .....	...	...	...	...	...	...	1	...	...	...	...
	Taralga .....	...	...	...	...	...	...	2	...	...	...	...
	Cootamundra .....	...	...	...	1	...	...	2	...	...	1	3
	Bethungra .....	...	...	...	...	...	1	...	...	...	...	1
	Gunning .....	...	...	...	...	...	1	...	...	...	...	1
	Dalton .....	...	...	...	...	...	...	1	...	...	...	...
	Gundaroo .....	...	...	...	...	...	1	...	...	...	...	...
	Ginninderra .....	...	...	...	...	...	1	...	...	...	...	...
	Queanbeyan .....	...	...	...	1	...	...	1	...	...	...	3
	Bungendore .....	...	...	...	...	...	1	1	...	...	...	...
	Captain's Flat .....	...	...	...	...	...	...	...	...	...	...	1
	Yass .....	...	1	...	...	...	...	2	...	...	1	2
	Bowning .....	...	...	...	...	...	...	...	...	...	...	1
	Wee Jasper .....	...	...	...	...	...	...	1	...	...	...	...
	Binalong .....	...	...	...	...	...	1	...	...	...	...	...
	Burrowa .....	...	...	...	1	...	...	1	...	...	...	1
	Reid's Flat .....	...	...	...	...	...	...	1	...	...	...	...
	Frogmore .....	...	...	...	...	...	1	...	...	...	...	...
	Pudman Creek .....	...	...	...	...	...	...	1	...	...	...	1
	Murrumburrah .....	...	...	...	...	1	...	1	...	...	...	1
	Harden .....	...	...	...	...	...	...	...	1	...	...	1
	Wallendbeen .....	...	...	...	...	...	...	1	...	...	...	...
	Wombat .....	...	...	...	...	...	...	1	...	...	...	3
	Young .....	...	...	1	...	...	...	1	...	...	1	3
	Marengo .....	...	...	...	...	...	1	1	...	...	...	...
	Morangarell .....	...	...	...	...	...	1	1	...	...	...	2
	Temora .....	...	...	...	...	...	1	1	...	...	...	2
	Barmedman .....	...	...	...	...	...	1	1	...	...	...	2
	Braidwood .....	...	...	1	...	...	1	2	...	...	...	2
	Mongarlowe .....	...	...	...	...	...	...	1	...	...	...	...
	Major's Creek .....	...	...	...	...	...	...	1	...	...	...	...
	Emu Flat .....	...	...	...	...	...	1	...	...	...	...	1
Araluen .....	...	...	...	...	...	1	1	...	...	...	...	
Moruya .....	...	...	...	...	1	...	1	...	...	...	...	
Bateman's Bay .....	...	...	...	...	...	...	...	...	...	1	...	
Nelligen .....	...	...	...	...	...	...	...	...	...	1	...	
Eurobodalla .....	...	...	...	...	...	...	1	...	...	...	...	
Animbo .....	...	...	...	...	...	...	1	...	...	...	...	
Cobargo .....	...	...	...	...	...	...	1	...	...	...	...	
Michelago .....	...	...	...	...	...	1	1	...	...	...	...	

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Southern— <i>continued.</i>	Cooma .....	...	...	1	...	1	...	2	...	...	...	4
	Nimitybelle .....	...	...	...	...	...	...	1	...	...	...	1
	Buckley's Crossing .....	...	...	...	...	...	...	2	...	...	...	...
	Jindabyne .....	...	...	...	...	...	...	1	...	...	...	...
	Adaminaby .....	...	...	...	...	...	...	2	...	...	...	...
	Kiandra .....	...	...	...	...	...	...	1	...	...	...	...
	Bombala .....	...	...	...	...	1	...	1	...	...	...	1
	Delegate .....	...	...	...	...	...	...	2	...	...	...	...
	Wyndham .....	...	...	...	...	...	1	...	...	...	...	...
	Panbula .....	...	...	...	...	...	1	...	...	...	...	...
	Merimbula .....	...	...	...	...	...	...	...	...	...	...	1
	Eden .....	...	...	...	...	...	1	1	...	...	...	...
	Bega .....	...	...	...	...	1	...	1	...	...	...	3
	Wolumla .....	...	...	...	...	...	...	...	...	...	...	1
	Candelo .....	...	...	...	...	...	1	1	...	...	...	...
Colombo .....	...	...	...	...	...	...	1	...	...	...	...	
Eastern.....	Depôt .....	1	...	...	...	...	...	...	1	...	...	...
	Parramatta .....	...	...	1	...	...	...	2	...	1	...	12
	Rookwood .....	...	...	...	...	...	...	...	...	...	...	1
	Granville .....	...	...	...	...	...	...	...	...	...	...	2
	Prospect .....	...	...	...	...	...	...	...	...	...	...	2
	Ryde .....	...	...	...	...	1	...	1	...	...	...	1
	Hunter's Hill .....	...	...	...	...	...	...	...	...	...	...	1
	Peat's Ferry .....	...	...	...	...	...	1	...	...	...	...	1
	Windsor .....	...	...	...	1	...	...	1	...	...	...	3
	Richmond .....	...	...	...	...	...	1	1	...	...	...	...
	Rouse Hill .....	...	...	...	...	...	...	1	...	...	...	1
	Wilberforce .....	...	...	...	...	...	...	1	...	...	...	...
	St. Alban's .....	...	...	...	...	...	...	1	...	...	...	...
	Penrith .....	...	...	...	...	1	...	1	...	...	...	1
	St. Mary's .....	...	...	...	...	...	...	...	...	...	...	1
	Emu Plains .....	...	...	...	...	...	...	...	...	...	...	1
	Springwood .....	...	...	...	...	...	...	...	...	...	...	1
	Katoomba .....	...	...	...	...	...	...	...	...	...	...	1
	Liverpool .....	...	...	...	...	...	1	1	...	...	...	1
	Smithfield .....	...	...	...	...	...	...	1	...	...	...	...
	Campbelltown .....	...	...	...	...	1	...	...	...	...	...	2
	Appin .....	...	...	...	...	...	...	1	...	...	...	...
	Camden .....	...	...	...	...	1	...	1	...	...	...	1
	Picton .....	...	...	...	...	...	1	1	...	...	...	...
	Berrima .....	...	...	...	1	...	...	1	...	...	...	...
	Bowral .....	...	...	...	...	...	...	...	...	...	...	1
	Mittagong .....	...	...	...	...	...	...	1	...	...	...	...
	Moss Vale .....	...	...	...	...	...	...	1	...	...	...	1
	Robertson .....	...	...	...	...	...	...	1	...	...	...	...
	Wollongong .....	...	...	...	1	...	1	...	...	...	...	3
	Dapto .....	...	...	...	...	...	...	1	...	...	...	...
	Bulli .....	...	...	...	...	...	1	...	...	...	...	1
	Clifton .....	...	...	...	...	...	...	1	...	...	...	1
26-mile Camp .....	...	...	...	...	...	...	1	...	...	...	...	
Oxford .....	...	...	...	...	...	...	...	...	...	...	1	
Fig-tree .....	...	...	...	1	...	...	1	...	...	...	1	
Kiama .....	...	...	...	...	...	...	1	...	...	...	1	
Shellharbour .....	...	...	...	...	...	...	...	...	...	...	1	
Jamberoo .....	...	...	...	...	...	...	...	...	...	...	1	
Gerringong .....	...	...	...	...	...	...	...	...	...	...	1	
Albion Park .....	...	...	...	...	...	...	1	...	...	...	...	
Nowra .....	...	...	...	...	1	...	...	...	...	...	...	
Terrara .....	...	...	...	...	...	...	1	...	...	...	...	
Broughton Creek .....	...	...	...	...	...	...	1	...	...	...	...	
Milton .....	...	...	...	...	...	...	1	...	...	...	...	
Kangaroo Valley .....	...	...	...	...	...	...	1	...	...	...	...	
Western .....	Bathurst .....	1	...	...	1	...	2	3	1	...	2	9
	Kelso .....	...	...	...	...	...	...	...	...	...	...	1
	Milltown .....	...	...	...	...	...	...	1	...	...	...	1
	Oberon .....	...	...	...	...	...	1	1	...	...	...	2
	Mitchell .....	...	...	...	...	...	1	1	...	...	...	...
	Wallerawang .....	...	...	...	...	...	1	...	...	...	...	...
	Rydal .....	...	...	...	...	...	...	1	...	...	...	...
	Lithgow .....	...	...	...	1	...	...	1	...	...	...	2
	Hartley Vale .....	...	...	...	...	...	...	1	...	...	...	...
	Hartley .....	...	...	...	...	...	...	...	...	...	...	1
	Mount Victoria .....	...	...	...	...	...	...	1	...	...	...	...
	Hill End .....	...	...	...	...	...	1	1	...	...	...	1
	Sofala .....	...	...	...	...	...	1	1	...	...	...	1
	Wyagdon .....	...	...	...	...	...	...	1	...	...	...	...
	Rockley .....	...	...	...	...	1	...	1	...	...	...	...
	Burruga .....	...	...	...	...	...	...	1	...	...	...	...
	O'Connell .....	...	...	...	...	...	...	1	...	...	...	...
	Forbes .....	...	...	1	...	1	...	2	...	...	1	3
	Condobolin .....	...	...	...	...	1	...	1	...	...	...	1
Eugowra .....	...	...	...	...	...	...	1	...	...	...	...	
Parke .....	...	...	...	...	...	...	1	...	...	...	2	
Grenfell .....	...	...	...	...	...	1	...	1	...	...	...	2
	Marsden .....	...	...	...	...	...	1	1	...	...	...	...
	Wollongough .....	...	...	...	...	...	...	1	...	...	...	...



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Western—con- tinued.	Orange .....	...	...	1	...	...	1	2	...	1	...	5
	Stuart Town .....	...	...	...	...	...	...	1	...	...	...	1
	Molong .....	...	...	...	...	1	...	1	...	...	...	2
	Cowra .....	...	...	...	1	...	...	1	...	...	...	1
	Blayney .....	...	...	...	...	1	...	1	...	...	...	3
	Carcoar .....	...	...	...	...	1	...	1	...	...	...	1
	Canowindra .....	...	...	...	...	...	...	1	...	...	...	...
	Cudal .....	...	...	...	...	...	...	1	...	...	...	...
	Toogong .....	...	...	...	...	...	...	1	...	...	...	...
	Mount McDonald .....	...	...	...	...	...	...	1	...	...	...	...
	Goolagong .....	...	...	...	...	...	...	1	...	...	...	...
	Trunkay .....	...	...	...	...	...	...	1	...	...	...	...
	Meranburn .....	...	...	...	...	...	...	1	2	...	1	5
	Dubbo .....	...	1	...	1	...	...	1	1	...	...	2
	Wellington .....	...	...	...	...	...	...	1	1	...	...	...
	Obley .....	...	...	...	...	...	...	1	1	...	...	...
	Tomingley .....	...	...	...	...	...	...	1	1	...	...	...
	Dandaloo .....	...	...	...	...	...	...	1	1	...	...	1
	Warren .....	...	...	...	...	...	...	1	...	...	...	1
	Timbreeongie .....	...	...	...	...	...	...	1	1	...	...	...
	Gilgandra .....	...	...	...	...	...	...	1	1	...	...	...
	Collie .....	...	...	...	...	...	...	1	1	...	...	3
	Coonamble .....	...	...	...	...	...	...	1	1	...	...	...
	Quambone .....	...	...	...	...	...	...	1	1	...	...	...
	Nevertire .....	...	...	...	...	...	...	1	2	...	1	3
	Mudgee .....	...	1	...	...	...	...	1	2	...	...	1
	Gulgong .....	...	...	...	...	...	...	1	1	...	...	...
	Coolah .....	...	...	...	...	...	...	1	1	...	...	...
	Mundooran .....	...	...	...	...	...	...	1	1	...	...	...
	Talbragar .....	...	...	...	...	...	...	1	1	...	...	1
	Rylstone .....	...	...	...	1	...	...	1	1	...	...	...
	Ilford .....	...	...	...	...	...	...	1	1	...	...	...
	Hargraves .....	...	...	...	...	...	...	1	1	...	...	1
	Windeyer .....	...	...	...	...	...	...	1	1	...	...	...
	Wollar .....	...	...	...	...	...	...	1	1	...	...	...
	Cobborah .....	...	...	...	...	...	...	1	3	1	1	4
	Bourke .....	...	1	...	...	...	...	1	1	...	...	1
	Brewarrina .....	...	...	...	...	...	...	1	2	...	...	2
	Cobar .....	...	...	...	...	...	...	1	1	...	...	...
	Byerock .....	...	...	...	...	...	...	1	1	...	...	...
	Gongolgan .....	...	...	...	...	...	...	1	1	...	...	...
	Louth .....	...	...	...	...	...	...	1	1	...	...	...
	Barrington .....	...	...	...	...	...	...	1	1	...	...	...
	Wanaaring .....	...	...	...	...	...	...	1	1	...	...	...
	Currinyulpah .....	...	...	...	...	...	...	1	1	...	...	...
	Eringonia .....	...	...	...	...	...	...	1	1	...	...	1
	Nymagee .....	...	...	...	...	...	...	1	1	...	...	2
	Nyngan .....	...	...	...	...	...	...	1	1	...	...	...
	Girilambone .....	...	...	...	...	...	...	1	1	...	...	...
	Cannonbar .....	...	...	...	...	...	...	1	2	...	...	2
Walgett .....	...	...	1	...	...	...	1	1	...	...	...	
Collarendabri .....	...	...	...	...	...	...	1	1	...	...	...	
Mogil Mogil .....	...	...	...	...	...	...	1	1	...	...	...	
Mungindi .....	...	...	...	...	...	...	1	1	...	...	...	
Angledool .....	...	...	...	...	...	...	1	2	...	...	...	
Goodooga .....	...	...	...	...	...	...	1	1	...	...	...	
Grawin .....	...	...	...	...	...	...	1	2	...	...	...	
Tatalla .....	...	...	...	...	...	...	1	2	...	...	...	
Pilliga .....	...	...	...	...	...	...	1	2	...	...	...	
North-eastern	Maitland West .....	1	...	1	1	...	...	2	...	1	2	10
	Branxton .....	...	...	...	...	...	...	1	...	...	...	1
	Lochinvar .....	...	...	...	...	...	...	1	...	...	...	1
	Greta .....	...	...	...	...	...	...	1	...	...	...	3
	Cessnock .....	...	...	...	...	...	1	2	...	...	...	3
	Maitland East .....	...	...	...	...	...	1	1	...	...	...	...
	Mulbring .....	...	...	...	...	...	1	1	...	...	...	...
	Cooranbong .....	...	...	...	...	...	1	1	...	...	...	...
	Pelican Flat .....	...	...	...	...	...	1	1	...	...	...	1
	Largs .....	...	...	...	...	...	...	...	...	1	...	2
	Morpeth .....	...	...	...	...	...	...	...	...	1	...	1
	Hinton .....	...	...	...	...	...	1	1	...	...	...	...
	Paterson .....	...	...	...	...	...	1	1	...	...	...	...
	Gresford .....	...	...	...	...	...	1	1	...	...	...	1
	Raymond Terrace .....	...	...	...	1	...	...	1	...	...	...	1
	Clarence Town .....	...	...	...	...	...	1	1	...	...	...	1
	Dungog .....	...	...	...	...	...	1	1	...	...	...	...
	Stroud .....	...	...	...	...	...	1	1	...	...	...	...
	Gloucester .....	...	...	...	...	...	1	1	...	...	...	...
	Copeland .....	...	...	...	...	...	1	1	...	...	...	...
	Bullah Delah .....	...	...	...	...	...	1	1	...	...	...	...
	Bungwall Flat .....	...	...	...	...	...	1	1	...	...	...	...
	Tea Gardens .....	...	...	...	...	...	1	1	...	...	...	...
	Forster .....	...	...	...	...	...	1	1	...	2	1	5
	Newcastle .....	...	1	1	...	...	...	1	...	...	...	14
	Charlestown .....	...	...	...	...	...	...	1	...	...	...	1
	Honeysuckle .....	...	...	...	...	...	...	1	...	...	...	1
Lake Road .....	...	...	...	...	...	...	1	...	...	...	1	
The Glebe .....	...	...	...	...	...	...	1	...	...	...	1	

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North-eastern —continued.	Ballast Pit .....	...	...	...	...	...	...	...	...	...	...	2
	Hamilton .....	...	...	...	...	...	...	...	...	...	...	1
	Adamstown .....	...	...	...	...	...	...	...	...	...	...	1
	Waratah .....	...	...	...	...	...	...	...	...	...	...	1
	Bullock Island .....	...	...	...	...	...	...	...	...	...	...	2
	Lambton .....	...	...	...	...	1	...	...	...	...	...	2
	New Lambton .....	...	...	...	...	...	...	...	...	...	...	1
	Wallsend .....	...	...	...	...	...	...	...	1	...	...	2
	Stockton .....	...	...	...	...	...	...	...	...	...	...	1
	Wickham .....	...	...	...	...	...	...	...	...	...	...	1
	Islington .....	...	...	...	...	...	...	...	...	...	...	1
	Tighe's Hill .....	...	...	...	...	...	...	...	...	...	...	1
	Minmi .....	...	...	...	...	...	...	...	...	...	...	1
	Gosford .....	...	...	...	...	...	1	1	...	...	...	1
	Woy Woy .....	...	...	...	...	...	...	...	...	...	...	2
	Wollombi .....	...	...	...	...	...	1	1	...	...	...	...
	Ellalong .....	...	...	...	...	...	...	1	...	...	...	...
	Howe's Valley .....	...	...	...	...	...	...	1	...	...	...	...
	Singleton .....	...	...	...	1	...	...	2	...	...	1	2
	Goorangoola .....	...	...	...	...	...	...	1	...	...	...	...
	Broke .....	...	...	...	...	...	...	1	...	...	...	...
	Jerry's Plains .....	...	...	...	...	...	...	1	...	...	...	...
	Muswellbrook .....	...	...	...	1	...	...	1	...	...	...	1
	Denman .....	...	...	...	...	...	...	1	...	...	...	...
	Merriwa .....	...	...	...	...	1	...	1	...	...	...	1
	Kerrabee .....	...	...	...	...	...	...	1	...	...	...	...
	Cassilis .....	...	...	...	...	...	1	2	...	...	...	...
	Scone .....	...	...	...	1	1	...	1	...	...	...	1
	Kempsey .....	...	...	1	...	1	...	1	...	...	...	2
	Gladstone .....	...	...	...	...	...	...	1	...	...	...	...
	Frederickton .....	...	...	...	...	...	...	1	...	...	...	...
	Arakoon .....	...	...	...	...	...	...	1	...	...	...	...
	Nambuccra .....	...	...	...	...	...	...	1	...	...	...	...
	Bowraville .....	...	...	...	...	...	...	1	...	...	...	...
	Taree .....	...	...	...	...	...	...	1	...	...	...	2
	Cundletown .....	...	...	...	...	...	...	1	...	...	...	...
	Wingham .....	...	...	...	...	...	...	1	...	...	...	...
	Tinonee .....	...	...	...	...	...	...	1	...	...	...	...
	Cooperook .....	...	...	...	...	...	...	1	...	...	...	...
	Port Macquarie .....	...	...	...	...	...	1	1	...	...	...	1
Camden Haven .....	...	...	...	...	...	...	1	...	...	...	...	
Boat Harbour .....	...	...	...	...	...	...	1	...	...	...	...	
Fernmount .....	...	...	...	...	...	...	1	...	...	...	...	
Smithtown .....	...	...	...	...	...	...	...	...	...	...	1	
North-western	Tamworth .....	...	1	...	...	...	...	3	1	1	...	4
	Do West .....	...	...	...	...	...	...	...	...	...	...	1
	Murrurundi .....	...	...	...	...	1	...	1	...	...	...	1
	Blackville .....	...	...	...	...	...	1	1	...	...	...	...
	Gunnedah .....	...	...	...	1	...	...	1	...	...	...	2
	Barraba .....	...	...	...	...	...	1	1	...	...	...	...
	Manilla .....	...	...	...	...	...	1	1	...	...	...	...
	Wallabadah .....	...	...	...	...	...	1	1	...	...	...	...
	Nundle .....	...	...	...	1	...	...	1	...	...	...	...
	Quirindi .....	...	...	...	...	...	1	1	...	...	...	1
	Somerton .....	...	...	...	...	...	...	1	...	...	...	...
	Moonbi .....	...	...	...	...	...	...	1	...	...	...	...
	Carroll .....	...	...	...	...	...	...	1	...	...	...	...
	Werris Creek .....	...	...	...	...	...	...	1	...	...	...	...
	Boggabri .....	...	...	...	...	...	...	2	...	...	...	...
	Tambar Springs .....	...	...	...	...	...	1	...	...	...	...	...
	Baradine .....	...	...	...	...	...	...	1	...	...	...	2
	Coonabarabran .....	...	...	...	...	1	...	1	...	...	...	2
	Narrabri .....	...	...	1	...	1	...	2	...	...	...	3
	Do West .....	...	...	...	...	...	...	...	...	...	...	1
	Wee Waa .....	...	...	...	...	...	...	1	...	...	...	...
	Keramingly .....	...	...	...	...	...	...	1	...	...	...	...
	Meroe .....	...	...	...	...	...	...	1	...	...	...	...
	Moree .....	...	...	...	...	1	...	1	...	...	...	2
	Eulowie .....	...	...	...	...	...	...	1	...	...	...	...
	Bingera .....	...	...	...	...	1	...	1	...	...	...	1
Warialda .....	...	...	...	...	1	...	1	...	...	...	1	
Yetman .....	...	...	...	...	...	...	1	...	...	...	...	
Boggabilla .....	...	...	...	...	...	...	2	...	...	...	...	
South-western	Demiliquin .....	1	...	...	...	1	...	2	1	...	...	5
	Mathoura .....	...	...	...	...	...	1	...	...	...	...	1
	Moama .....	...	...	...	...	...	1	1	...	...	...	...
	Jerilderie .....	...	...	...	...	...	1	1	...	...	...	...
	Tocunwal .....	...	...	...	...	...	1	1	...	...	...	...
	Hay .....	...	...	1	...	1	...	1	...	...	...	3
	Maude .....	...	...	...	...	...	1	...	...	...	...	...
	Oxley .....	...	...	...	...	...	1	1	...	...	...	...
	Carathool .....	...	...	...	...	...	1	1	...	...	...	...
	Darlington Point .....	...	...	...	...	...	1	...	...	...	...	...
	Whitton .....	...	...	...	...	...	...	1	...	...	...	...
	Booligal .....	...	...	...	...	...	...	1	1	...	...	...
	Mossgiel .....	...	...	...	...	...	...	1	1	...	...	...
Ivanhoe .....	...	...	...	...	...	...	1	...	...	...	...	

DISTRICT.	STATION.	MOUNTED.						FOOT.					
		Super-intendents.	Inspec-tors.	Sub-Inspec-tors.	Senior Ser-geants.	Ser-geants.	Senior Con-stables.	Or-dinary Con-stables.	Senior Ser-geants.	Ser-geants.	Senior Con-stables.	Or-dinary Con-stables.	
South-western —continued.	Hillston .....	...	...	...	...	1	...	1	...	...	...	1	
	Euabalong .....	...	...	...	...	...	...	1	...	...	...	...	
	Gilgunnia .....	...	...	...	...	...	...	1	...	...	...	...	
	Mount Hope .....	...	...	...	...	...	...	1	...	...	...	...	
	Lake Cudgellico .....	...	...	...	...	...	...	1	...	...	...	...	
	Moulamein .....	...	...	...	...	...	...	1	...	...	...	...	
	Balranald .....	...	...	...	...	1	...	1	...	...	...	1	
	Hatfield .....	...	...	...	...	...	...	1	...	...	...	...	
	Clare .....	...	...	...	...	...	...	1	...	...	...	...	
	Euston .....	...	...	...	...	...	...	1	...	...	...	...	
	Wentworth.....	...	...	...	1	...	...	1	...	...	...	2	
	Salt Creek .....	...	...	...	...	...	...	1	...	...	...	...	
	Pooncarie .....	...	...	...	...	...	...	2	...	...	...	...	
	Menindie.....	...	...	...	...	...	...	2	...	...	...	...	
	Silverton.....	...	...	...	...	...	...	1	...	...	...	1	
	Broken Hill .....	...	...	...	...	1	...	1	...	...	...	...	
	Purnamoota .....	...	...	...	...	...	...	1	...	...	...	...	
Wilcannia .....	...	...	1	...	...	...	3	...	...	...	3		
Milperinka .....	...	...	...	...	...	...	1	...	...	...	...		
Tibooburra .....	...	...	...	...	...	...	1	...	...	...	...		
Murray.....	Albury .....	1	...	...	1	...	...	3	1	1	1	6	
	Bowna.....	...	...	...	...	...	...	1	...	...	...	...	
	Germanton .....	...	...	...	...	...	...	1	...	...	...	...	
	Walbundrie .....	...	...	...	...	...	...	2	...	...	...	...	
	Corowa .....	...	...	...	...	1	...	1	...	...	...	1	
	Howlong.....	...	...	...	...	...	...	1	...	...	...	...	
	Mulwala .....	...	...	...	...	...	...	1	...	...	...	...	
	Tumberumba.....	...	...	...	...	...	...	1	...	...	...	1	
	Ournie.....	...	...	...	...	...	...	1	...	...	...	...	
	Gerogery.....	...	...	...	...	...	...	1	...	...	...	...	
	Gundagai .....	...	...	1	...	...	...	2	...	...	2	2	
	Tumut.....	...	...	...	...	1	...	1	...	...	...	1	
	Yarrangobilly.....	...	...	...	...	...	...	1	...	...	...	...	
	Adelong .....	...	...	...	1	...	...	2	...	...	...	1	
	Shepherds' Town .....	...	...	...	...	...	...	1	...	...	...	1	
	Reedy Flat.....	...	...	...	...	...	...	1	...	...	...	...	
	Jugiong .....	...	...	...	...	...	...	1	...	...	...	...	
	Coolac.....	...	...	...	...	...	...	1	...	...	...	...	
	Wagga Wagga .....	...	...	1	...	...	...	1	1	...	2	6	
	Junee .....	...	...	...	...	...	...	1	1	...	...	1	
Urana .....	...	...	...	...	1	...	1	...	...	...	1		
Narrandera.....	...	...	...	1	...	...	2	...	...	...	2		
Tarcutta .....	...	...	...	...	...	...	1	...	...	...	...		
Kyamba .....	...	...	...	...	...	...	1	...	...	...	...		
Hanging Rock .....	...	...	...	...	...	...	1	...	...	...	...		
Coolaman .....	...	...	...	...	...	...	1	...	...	...	...		
DEPÔT, BELMORE BARRACKS.													
Constables in course of instruction, under orders for transfer .....		...	...	1	...	2	1	24	...	1	1	12	
Gold Escort conductor .....		...	...	...	1	...	...	...	...	...	...	...	
Orderlies to His Excellency the Governor .....		...	...	...	1	...	1	2	...	...	...	...	
Armourer.....		...	...	...	1	...	...	...	...	...	...	...	
DETECTIVE BRANCH.													
Inspector in charge of Detectives.....		...	1	...	...	...	...	...	...	...	...	...	
First-class Detectives.....		5	...	...	...	...	...	...	...	...	...	...	
Second-class do. ....		3	...	...	...	...	...	...	...	...	...	...	
Third-class do. ....		6	...	...	...	...	...	...	...	...	...	...	
TOTAL.....		14	9	10	29	30	50	120	359	26	37	106	672
Total of all grades.....								1,462.					

1886-7.

(SECOND SESSION.)

NEW SOUTH WALES.

## PRISONS.

(REPORT FOR 1886.)

Presented to Parliament by Command.

The Comptroller-General of Prisons to The Minister of Justice.

Department of Prisons, N.S.W., Comptroller-General's Office,  
Sydney, 28 April, 1887.

Sir,

I have the honor to render my Departmental Report for the year 1886.

From the usual tabulated statistics attached, it will be seen that the number of prisoners in confinement on the 31st December, 1886, was 2,500 as against 2,562 at the same date of the previous year, while, in the meantime, the population had advanced from 980,573 to 1,030,762, thus showing a decrease of 62, notwithstanding the augmented numbers of the population.

The entries and discharges for the year show respectively 20,614 and 20,676 as against 20,740 and 20,644 for 1885. Of these there were of distinct persons 14,085 as against 14,328.

The labour returns give a total value of the application of labour—inclusive of £32,389 16s. 10d. for the internal purposes of the prisons—of £40,235 4s. 10d. as compared with £39,742 17s. 7d.

The hospital returns show—as treated in hospitals, 1,839 as against 2,167; out of hospital, 21,435 and 22,671; deaths, 48 and 49.

The reconvictions stand:—For the 1st class, or more serious offenders, sentenced to five years and upwards, 2nd, 3rd, and 4th, or more frequent, 23, 10, 23 as against 20, 19, 29. 2nd class, being under sentences of less than five years, other than those sentenced to “imprisonment only,” without hard labour; and drunkards and petty offenders, 108, 43, 115, as against 133, 81, 72. Third class (imprisonment only), 93, 31, 51, 101, 38, 35; drunkards and petty offenders, 1,325, 552, 814, 1,337, 579, 911.

The education returns show a diminution in instruction, consequent upon the closing, temporarily, of the school in Darlinghurst Prison, because of a pressure for accommodation.

As regards progress in buildings. While the building of the important Central Western Prison at Bathurst has made much progress towards completion, the Public Works Prison at Trial Bay has been advanced to a stage admitting of preliminary occupation, the surrounding wall and necessary internal and external buildings have been so far completed. There are, however, only 62 cells in the one wing yet constructed. These are occupied singly by prisoners. It is my hope not to be compelled to resort to the associated system in this prison, which is constructed and proposed to be conducted on the lines of English Public Works Prisons.

The Trial Bay Prison is, in my view, destined to fill an exceptionally important place in the prison system of the Colony.

As is almost generally known, its purpose is the construction of a breakwater to form a harbour of refuge. This work of construction gives room for the unlimited application of labour, the most material provision in furtherance of prison administration.

Parliament has, in the Criminal Law Amendment Act, provided for the granting to prisoners under sentences of sufficient length of “Licenses for Public Works,” which means an amelioration towards the expiration of their time of the conditions of imprisonment, in the direction of partial freedom from restraint, and other advantages, accustoming the men to some self-guidance in preparation for final liberation, and enabling them to earn, at limited rates of wages, some means for a new start in life.

To give effect to this design of Parliament, the Government has assented to a code of regulations, which will come into operation so soon as the necessary arrangements may be completed.

Under these Regulations a prisoner under sentences of ten years and upwards may, on certain conditions, obtain a license eighteen months previous to liberation—those under sentences of five years and upwards, one year, and those of three years and upwards, six months.

I have estimated that under these conditions about 100 men will become eligible for licenses.

There was naturally a serious doubt whether these men, or rather some of them, would be content to remain on the Peninsula, if there huttet, with the temptation to abscond. And so it has been determined to hut them inside the space enclosed by the prison walls, thus obviating that risk.

They will be treated differently, and worked separately from the ordinary prisoners, with whom they will not be allowed communication, but still will be in security and in complete control.

The timber for the huts, which will be erected by the prisoners now there, has been ordered, and it may be anticipated that the regulations will soon be in operation.

When this time arrives there will be available for work on the breakwater somewhere towards 150 men, which number will in the progress of time be materially increased.

The contemplated working out of the license system is partly on the lines of the well-known Intermediate Prison at Lusk in Ireland, which was examined by myself, but is a large advance upon that prison, which only held from 25 to 30 men employed on farm ground. It will be in fact the most important departure in the direction indicated that has been made by any country, and it is to be hoped will have a corresponding success.

Exception has been taken to the scale of the new Central Prisons at Goulburn and Bathurst, which have been constructed on complete modern principles, with adaptations to the circumstances of the country.

These two prisons were projected so far back as 1867, with the full approval of the present Prime Minister, under whom I was then directly acting. At the present time there are confined in Goulburn Prison 330 prisoners, I regret to say in a great measure under the associated system. Had it not been for this relief the prisons, consequent on the increased numbers incarcerated by the operation of the Criminal Law Amendment Act with its extended sentences, would have been absolutely congested. With the completion of the Bathurst prison, which provides 320 cells, and the occupation of Biloela for petty habitual offenders, I begin to see the way to the improved system of criminal treatment for which I have for years been striving. The two important prisons first-named will give a far more valuable return for their cost than will any expenditure of a cognate character of which I have knowledge.

During the year the "overcrowding" of Darlinghurst Gaol attracted much public concern and comment upon data (although a serious evil did exist), which induced conclusions much in advance of the facts, and which I attribute to exaggerated and sensational forms of expression, possibly used inadvertently, in the correspondence laid before Parliament. The subject was in fact incomplete, inasmuch as the report which my responsibility required me to make followed the comments, and was not laid before Parliament.

The movement, however, had the effect of again calling attention to the necessity for providing for petty town offenders. A site was selected for a penitentiary, but difficulties arose. The large cost had to be considered in present circumstances, and a more immediate relief presented itself in the occupation of the old prison buildings at Biloela, leaving the question of a proper penitentiary in abeyance.

The occupation of these buildings by the Industrial School will shortly cease, and then they will be occupied by this Department.

Not only will Darlinghurst Prison be thus relieved of the class of prisoners mentioned, but a means will be obtained for an entirely different treatment of the younger offenders, popularly known as the "Larrikin" class, under conditions which will give a salutary weight to the deterrent element of imprisonment, and at the same time breaking up their association within the prison walls, it being borne in mind that association outside is the main-spring of the evil tendencies and actions of the class mentioned.

The treatment referred to, and for the introduction of which I will submit regulations for approval, will consist of separate treatment throughout all sentences of prisoners between the ages of 16 and 25, under sentences up to six months.

They will be worked and fed in their cells, have no communication with other prisoners or among themselves, and will have as low a diet as is consistent with health, with due provision for exercise.

Such a system I recently saw in work in Victoria where it has been partly established. I am informed by the Inspector-General of Penal Establishments there that out of 200 who have been so treated only 10 have returned. If it should have equal success in this Colony it cannot fail to be of equal benefit to the younger offenders and to the State. It may be found to be practicable to extend the system in a modified form to young female offenders. Under it the evil effects of prison association at an early stage of crime will be arrested.

The treatment will chiefly be carried out on young metropolitan offenders, and in Darlinghurst, wherein I can see my way to the necessary arrangements.

The advantages of treatment by separation are in a great degree lost in the cases of habitual criminals. Habit of crime is too strong for any mode of dealing with, and but few can in any conditions be redeemed from its power.

Turning to the statistical information given at the commencement of this report, it will be seen that under all the headings by which progress or retrogression are measured, there is a decided improvement upon the previous year, which is in itself satisfactory irrespectively of the expectation of additional advantages held out by the preceding paragraphs.

The officers of the staff have continued efficiently to discharge their duties; and I may remind you that their appearance and smartness have commended themselves to your own favourable comment.

The general behaviour of the prisoners has been satisfactory.

With regard to reformatories, I can only, in respect of the Female Reformatory at Shaftesbury, report its continued good working under the able management of the Matron-Superintendent.

The time has come when I feel called upon, being the Officer charged with the control of such institutions, to offer some remarks upon the long-vexed question of a Male Reformatory.

In 1882 I was entrusted with a mission by the present Attorney-General, then Minister of Justice, to examine into the working of the Male Reformatory of Victoria at Ballarat.

I was confirmed by my examination in my previous idea that a male reformatory should be of the character of an agricultural institution.

I am aware that the marked success of the Industrial School-ship "Vernon" has led many to prefer a vessel and marine training, but I attribute much of that success to the personal administration of the commander, and still hold to the agricultural plan.

The boys, further, although of the same class, could hardly, in view of the distinction drawn, be treated in a precisely similar way.

Under date 30th August, 1882, I reported fully on the question, giving my reasons in favour of a land reformatory, and I believe that it was on my report that the vote which has been expended at Rookwood was obtained. It is due to myself to mention that I was in no way consulted as to the Rookwood design, which circumstance I attribute to the late Sir Alexander Stuart having projected legislation to separate the reformatories from the charge of my office.

I have, &c.,

HAROLD MACLEAN,

Comptroller-General.

(A.)



(B.)  
VALUE OF LABOUR, 1886.

Gaol.	Value of all Labour.			Cost of Material.			Work done for the Prison, buildings, extension and repairs, manufacturing, cleaning, and other daily work.			Net Value.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Sydney .....	21,156	17	1	7,635	13	2	6,694	18	5	13,521	3	11
Parramatta .....	13,527	15	4	4,489	14	2	11,002	16	1	9,038	1	2
Berrima .....	3,436	2	8	1,195	15	4	2,519	4	4	2,240	7	4
Maitland .....	4,377	17	0	1,092	13	8	4,122	6	4	3,285	3	4
Bathurst .....	3,012	19	10	376	10	4	2,134	9	2	2,636	9	6
Goulburn .....	10,073	12	8	3,683	18	10	3,570	1	10	6,333	13	10
Mudgee .....	840	4	8	218	1	7	656	3	8	622	3	1
Young .....	1,115	18	9	158	1	8	1,005	1	7	957	17	1
Armidale .....	850	2	7	46	7	4	673	6	0	803	15	3
Albury .....	924	3	4	183	13	0	721	19	11	740	10	4
<b>Total .....</b>	<b>£ 59,315</b>	<b>13</b>	<b>11</b>	<b>19,080</b>	<b>9</b>	<b>1</b>	<b>33,100</b>	<b>7</b>	<b>4</b>	<b>40,235</b>	<b>4</b>	<b>10</b>

(C.)  
HOSPITAL RETURNS.

Gaol.	Treated in Hospital.	Treated out of Hospital.	Deaths.
Sydney .....	1,066	9,914	20
Parramatta .....	232	2,712	2
Berrima .....	34	986	..
Maitland .....	21	1,614	3
Bathurst .....	84	788	2
Goulburn .....	241	1,909	7
Albury .....	25	314	1
Armidale .....	6	99	1
Deniliquin .....	14	46	..
Grafton .....	..	555	1
Tamworth .....	4	117	2
Mudgee .....	19	18	1
Yass .....	10	89	3
Young .....	..	295	..
Wagga Wagga .....	..	187	..
Wollongong .....	25	402	..
Hay .....	..	613	..
Trial Bay Prison .....	..	50	..
Police Gaols .....	58	777	5
<b>Total .....</b>	<b>£ 1,839</b>	<b>21,435</b>	<b>48</b>

(D.)  
EDUCATION.

Particulars.	Gaol.	Number of Prisoners		Read, write, and cypher.		Read and write		Read only.		Commencing	
		Male.	Female	Male.	Female	Male	Female	Male	Female	Male	Female
Number now attending school, and those who have passed through during the year .....	Parramatta .....	93	..	77	..	..	..	2	..	14	..
	Berrima .....	55	..	12	..	31	..	8	..	4	..
	Maitland .....	39	..	16	..	7	..	6	..	10	..
	Goulburn .....	93	..	48	..	21	..	16	..	8	..
	Bathurst .....	88	..	36	..	17	..	5	..	30	..
	<b>Totals .....</b>	<b>£ 368</b>	<b>..</b>	<b>189</b>	<b>..</b>	<b>76</b>	<b>..</b>	<b>37</b>	<b>..</b>	<b>66</b>	<b>..</b>
Number of above uneducated, showing progress made .....	Parramatta .....	14	..	5	..	..	..	2	..	7	..
	Berrima .....	12	..	2	..	7	..	2	..	1	..
	Maitland .....	9	..	2	..	6	..	1	..	..	..
	Goulburn .....	49	..	34	..	9	..	6	..	..	..
	Bathurst .....	45	..	32	..	9	..	4	..	..	..
	<b>Totals .....</b>	<b>£ 129</b>	<b>..</b>	<b>75</b>	<b>..</b>	<b>31</b>	<b>..</b>	<b>15</b>	<b>..</b>	<b>8</b>	<b>..</b>

(E.)  
RECONVICTIONS, 1886.

1st Class. Five years and upwards.			2nd Class. Less than five years			3rd Class Imprisonment only.			Drunkards and petty offenders omitted from the foregoing.		
2nd conviction.	3rd conviction.	4th or more.	2nd conviction.	3rd conviction.	4th or more.	2nd conviction.	3rd conviction.	4th or more.	2nd conviction.	3rd conviction.	4th or more.
23	10	23	108	43	115	93	31	51	1,325	552	814

1887.

(SECOND SESSION.)

NEW SOUTH WALES.

**PRISONS REGULATION ACT.**

(ADDITIONAL REGULATIONS UNDER.)

Presented to Parliament, in accordance with the Act 4 Vic. No. 29, sec. 5.

Department of Justice, Sydney, 10 December, 1886.

His Excellency the Governor, with the advice of the Executive Council, has been pleased, under the Act of Council, 4 Victoria No. 29, to make the following additional Gaol Regulations.

JAMES P. GARVAN.

**ADDITIONAL PRISON REGULATIONS.****DIVINE SERVICE.**

1. Regulations Nos. 24 and 25 are cancelled, and the following are substituted therefor:—
2. All prisoners will, on admission into prison, be entered for the services of the denomination which they may respectively select, and will be required to attend the services of such denomination.
3. The denominations recognized shall be the Church of England, Church of Rome, Presbyterian, Wesleyan, and Hebrew, and also any duly authorized alien missions in connection therewith.
4. In the case of prisoners objecting to be entered for any one of the denominations named, and to attend the services thereof, such prisoners shall not be required to attend, but shall remain in their cells during the time of service, if there be one service only on any one day, or if there be more services, during the period of the first service taking place. But any prisoner who may have so objected will be permitted at his own desire, subsequently, to attend any service that he may select.
5. No sectarian influence shall be brought to bear upon any prisoner. If a prisoner duly entered for a denomination shall desire to change to another, he may make application to the Gaoler, who will call upon him to state whether he is impelled by conscientious conviction, or is moved by any other motive. The Gaoler shall then notify to the Chaplain of the denomination from which the prisoner desires to secede the fact of the application, and forward to the Comptroller-General therewith any remarks that the Chaplain may desire to offer, together with his own report thereon.
6. If it be made to appear to the Comptroller-General that the motive of the prisoner is obviously other than the impulse of conscientious conviction, he may refuse to accede to the application, otherwise he will notify his approval to the Chaplains respectively concerned.
7. Any prisoner after having been entered for any one denomination, and refused permission to pass to another, will only be exempted from attendance at the service of the denomination from which he has seceded on the like condition as in the case of prisoners exempted as above provided of remaining in their cells during Divine Service.





1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

## PRISONERS FLOGGED IN GAOLS.

(RETURN SHOWING NUMBER OF.)

*Ordered by the Legislative Assembly to be printed, 23 June, 1887.*

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 2nd June, 1887, That there be laid upon the Table of this House,—

“ A Return showing the number of Prisoners flogged in the various gaols of the Colony for infraction of discipline, during the five years ending the 31st of May, 1887; also, showing the offences for which such punishments were inflicted, such Return not to include the names of the Prisoners on whom such punishments were inflicted.”

*(Mr. Wall.)*

A RETURN showing the number of Prisoners flogged in the various Gaols of the Colony for infraction of discipline, during the five years ending the 31st of May, 1887.

Gaol.	Number flogged.	Offence.
Sydney ... ..	2	Persistently mutinous and defiant conduct, beyond the suppression by cell punishment, in shouting aloud and endeavouring to induce other prisoners to join in misconduct.
Do ... ..	2	The like mutinous and defiant conduct, accompanied by smearing the walls of his cell with ordure.
Do ... ..	1	The like misconduct, with use of abusive and obscene language to his warders; also making use of abusive and insulting language to the Visiting Surgeon while undergoing dark cells punishment.
Do ... ..	1	Mutinous conduct and creating disturbance in chapel during religious instructions; also threatening language and resisting his warders, and wilfully destroying property.
Parramatta ... ..	4	Leading part in serious general mutiny.
Do ... ..	1	Gross insubordinate conduct and threatening the officers.
Do ... ..	1	Violent assault on a fellow prisoner.
Do ... ..	1	Assault on officers.
Do ... ..	4	Defiant insubordination in a crowded yard, with the object of creating a general disturbance.
Bathurst ... ..	1	Continued insubordinate conduct in cell while undergoing punishment, and burning his clothes.
Goulburn ... ..	1	Disobedience, resisting and assaulting warders, using insulting language to Visiting Surgeon.
Do ... ..	1	Malingering, continued insubordination, assaulting his warder, and destroying cell furniture.
Do ... ..	1	Continued insubordinate conduct and violent language, attempting to assault warder, with use of threats.
Albury ... ..	2	Disobedience of orders, gross insubordination, continued disorder in cells when locked up, shouting, whistling, and inciting other prisoners to do so.
Deniliquin ... ..	1	Continued refractory and defiant conduct from May to December, 1883, including fighting, with threat to murder his warder, and insulting and defiant language when before the Magistrate's Court.
Total number flogged...	24	

HAROLD MACLEAN,  
Comptroller-General.

[3d.]

426—

[805 copies—Approximate Cost of Printing (labour and material), £1 9s. 4d.]



1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

**BRITISH NEW GUINEA.**

(REPORT FOR THE YEAR 1886, BY HER MAJESTY'S SPECIAL COMMISSIONER FOR THE PROTECTED TERRITORY.)

*Ordered by the Legislative Assembly to be printed, 24 March, 1887.*

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MAP.

Port Moresby and the Road to the Laloki.

## BRITISH NEW GUINEA.

## Mr. H. O. Forbes' Report.

To His Excellency the Honorable John Douglas, C.M.G., Her Majesty's Special Commissioner for British New Guinea.

Sir,

Dinner Island, South-eastern New Guinea, December, 1886.

I have the honor to forward to your Excellency the following *résumé* of the chief events that have occurred in this district during the period I have had the honor of acting as Deputy Commissioner, with some observations and suggestions thereon.

Accompanied by Mrs. Forbes, I arrived here by H.M.S. "Swinger" from Suao on the 21st June last, and took up my quarters in the Mission House rented by the Government from the London Missionary Society.

Samarai, or Dinner Island, occupies a charming situation within a circle of high wooded islands and a bay of the mainland whose elevated blue peaks shut in the view northward. The Rev. S. McFarlane had planted a large number of cocoa-nut palms, and laid out a long avenue which affords a shady promenade, while numerous handsome-leaved crotons and scarlet hibiscus are planted everywhere about, giving quite a garden aspect to what would otherwise have been a rather barren shingly foreshore. A short examination of the island, however, revealed several serious defects. The water supply was in a most unsatisfactory condition. There is no running water in the island, and the whole of the drinking water had to be obtained from one hole of a filthy description. Then a large swamp was found to occupy several acres of the north-west portion, which at the close of the wet season cannot but be very detrimental to the salubrity of the island. The Mission buildings were in a very dilapidated state, and required many additions and repairs to render them habitable; nor are they situated on the best site, being all on the low flats, and not exposed enough to the sea winds, which here ought to be fully courted.

When it was announced to the natives that I had been sent to Dinner Island to represent the Government, I was looked on by them with the greatest suspicion. They declared that they would have nothing to do with "the Government," and that they did not want "the Government" among them at all. For some time they gave myself and my residence a wide berth. They placed the Government in the same category as the man-of-war, of which, though they visit every vessel with perfect freedom when anchored here, they have an undercurrent of wholesome dread. It was many weeks before they could be persuaded to undertake any work for us.

A few days after our arrival, Lieutenant Commander Marx kindly permitted a few of his men to aid in cutting a trench through the sand from the swamp to the sea, to try how far it might be possible to drain off the water. A large quantity was thus removed, but not nearly all, as there was evidently percolation through the coral floor. It continued to discharge a vigorous stream till the next spring tide, which silted up the mouth completely, as well as flowed into the swamp in abundance. It became evident that it was impossible to effect our purpose by draining. A greater probability of success, as I have already proposed to your Excellency, lies in filling it up by degrees with shingle from the shore and with earth from the surrounding hills. When once accomplished, almost the only objection to Dinner Island as a residence would be removed.

On the 17th August, the "Coral Sea," the schooner under Captain Colin Thompson, placed at my disposal, arrived at Dinner Island, and she has been employed by me in visiting the safer portions of the region under my jurisdiction. Following your Excellency's instructions, I visited Doini (Blanchard), Rogea (Heath), Sariba (Hayter), Middle, and Coast Islands, with a view to selecting the best site for the Government residency. Doini presents good positions, as far as regards outlook, at its south-western end; but there is a deal of swampy ground in the vicinity, while there is no good water near enough to the site best suited for a residence. Rogea offers a good site for a house on its narrow isthmus, near a fine tumbling stream of water; there is a general absence of swampy ground, while there could be obtained a beautiful outlook Dinner Island-wards, with a fine sandy beach on the other side convenient and accessible. In Stanley Bay, in Sariba, a grassy shoulder of a hill, between 200 and 300 feet above the sea level, offers a delightful spot for a dwelling. No swamp land is close enough to interfere with the health of the locality. There is (at some distance) plenty of running water. Coast and Middle Islands are both unsuitable for the desired purpose.

The objection, however, to all these islands is that the anchorage they afford for men-of-war or of large vessels is either too small (as in Stanley Bay) for more than one vessel, or in all of them too exposed in certain winds. The Dinner Island anchorage is commodious enough for all purposes, and, according to the testimony of the officers of the various ships of war that have been stationed in these waters, is in all seasons the safest one in the China Straits. As this anchorage has been chosen by the Admiralty for its head-quarters in South-eastern New Guinea, it is advisable that Dinner Island should be retained as the head-quarters also of the New Guinea Government. It is centrally situated in the Straits; while there are several eminences, about 190 feet above the sea level, suitable for residency site, commanding a beautiful and cheerful outlook, and open to the sea breeze from all sides. A small portion of a reef on the south-west corner is uncovered at low spring tides, but as it is chiefly a rocky spit without much live coral on it, little or no harm can come from it.

The temperature of Dinner Island has been throughout the past six months too high to make a zinc-roofed house a healthy or agreeable abode; a house of native materials, palm-leaf or grass thatched, with plank floors and sides, if desired, a structure on wood piles 7 to 8 feet high, surrounded by a wide verandah, would be far the most salubrious dwelling here, even for a permanent Government residence. The thatch would require renewing not oftener than once in two or three years; and it can be changed in a few days' time. The collecting of rain water will always be a necessity in whatever island the residency is placed, as even where there is perennial water, the streams in the height of the dry season are always very low. The outbuildings, such as the store-room, &c., could be all zinc-roofed, and could without difficulty, with the necessary size of tanks, supply the season to season's water.

Soon

Soon after the arrival of the "Coral Sea," I employed her crew to sink a couple of wells, one of which now I am glad to say, affords a moderately abundant supply of fairly good water.

The chief centres from which the trade of the district is worked are South Cape, Dinner Island, Teste Island, Killerton Island, Milne Gulf, and Nuakata (Lydia) Island, stations now or formerly occupied by missionary teachers, where safe contact with the natives can be more depended on than elsewhere. On the 23rd August, Kissack and Co. (a firm comprising three European partners), removed their headquarters from Teste Island to Dinner Island, and established on a portion of land leased to them on this island, the nucleus, I hope, of a future colony. With the exception of one Chinaman, who has a residence at South Cape, the rest of the traders in these waters have no residential quarters, but peregrinate the Archipelago, living on their vessels and bartering therefrom with the natives for such products as they are in quest of.

The commercially valuable products of the region are at present few in number. The chief are bêche-de-mer, copra, tortoise-shell, and pearl-shell of several sorts, of which the white shells are large and valuable, averaging about 4 lbs. each, and obtained mostly below 16 fathoms of water. Two kinds of dammar, not of the best sorts, but of some value, which is found in Sariba, St. Aignan, and on the mainland in abundance, has not been much collected. Possible products in the future are sago, pine, ebony, and various minerals reported from some of the islands, but as yet without sufficient evidence to warrant one in describing them more definitely.

The past six months shows a sadly dark catalogue of crimes perpetrated by the natives of this region on white men, as I have communicated to your Excellency from time to time. Now, reporting as an unbiassed witness, I feel convinced from my own observations, that a great deal of this hostility has been inaugurated by the white man himself. The accounts given to me by natives who have been labouring in Australia, wherever I have met them—in the Louisiades, in Lydia Island, and along the north-east coast—have been the same, a tale of hardship and injustice bitterly expressed. From information given to myself, it is evident that nearly every native taken from the Louisiades was either kidnapped or entrapped into consent by false statements. Apart from this, the infamous crimes and injustices committed by one such man—and there have been others since—as MacCort (or MacCortie), who was murdered in the Louisiades, are enough to inflame the natives of the Archipelago against any white man for a whole generation. Many who have deserved only well of their murderers have fallen victims to the crimes of such predecessors. Nor can it be denied that several traders have lost their lives by natives actuated by the desire of loot. When once this terrible duel has been commenced in which every forfeit of a life on the native side at the hands of a white man, or through his direct or indirect instrumentality, demands, at whatever length of time after, from his nearest relative or his heirs, the head of a murdered white man in satisfaction, it is difficult to foresee in what crowd or on what shore, distant perhaps from the scene of any former outrage, the avenger may find a victim whose death concludes his feud and inaugurates another; nor is it easy to suggest how it may be stayed.

The natives of the Louisiades and of the neighbouring islands are a very intelligent people, capable, I believe, of being made good friends of. They appear to be quite as amenable and capable of instruction as the Malays. See them in management of a European vessel for instance; they have mastered all the details, can furl sails, steer, or obey an order with all the precision and competency of a Malay crew. They have taken appreciatively to such new products as have been given them; pineapples are becoming every year more common; tomatos and different sorts of melons that have been given to them have been cultivated by them, and under proper direction they would soon, I am sure, by raising crops of maize and rice larger than they could consume, be able to offer them in barter for other necessaries.

The island belt stretching eastward from Milne Gulf and China Straits may be roughly divided into three portions; the first, comprising the islands nearly adjoining the mainland as far east as Teste Island, are well populated, all are high and composed of stratified or volcanic rocks, covered with cultivated patches. In the second portion, from Teste Island eastward to the Loumard entrance to the Sunken Barrier (including the Conflict Group), the islands are quite low and flat, and are entirely of coral formation. They are covered with little or no soil for the sustenance of any vegetable products of much value except cocoanuts. The third portion is the Calvados chain (including the extra reef groups of St. Aignan, Redlich, and Deboyne), commencing with Real Island (where the land again attains a considerable elevation), and terminating with Rossel Island. These islands are composed of stratified or metamorphic rock, and many of them are of value. The larger of them are inhabited. Of the larger islands of the first group, such as Moresby, and especially Fergusson Island (Goschen Straits), few have been explored owing to the supposed hostility of the inhabitants, but judged from the shore they appear to be capable of being largely cultivated if the natives were once shown how to cultivate such remunerative products as maize and hill rice. Along the shores of the islands of the second group abundance of most excellent kinds of edible fishes are to be had, which might be profitably cured by bêche-de-mer fishers and copra collectors, in addition to their usual work. Coconut planting might be largely resorted to on these islands, with great future advantage to leaseholders. The third group contains many islands, such as St. Aignan, which ought yet to yield a large revenue. The large island of Sud Est has most favourably impressed me. It contains many grassy plains and large patches of gently undulating land and much less steep country than New Guinea territory generally, maize and rice, and if it were nearer civilization sugar-cane also, might be largely grown. Portions of Joannet Island, and Kaluma—which is also sparsely wooded—are capable of producing crops of the same cereals. But with only the long-shore acquaintance which has yet alone been possible to obtain, it is not safe to give any decided opinions for the guidance of the general public.

On the 13th November, H.M.S. "Dart," (Lieutenant Commander Field), which had been engaged for fully six months in the triangulation of the area between South Cape, Teste Island, and East Cape, left for Australia, having completed the survey. When the charts are published these intricate waters will be one of the easiest and safest ocean bye-ways to navigate, owing to the extreme care and minuteness with which all the operations have been conducted.

On the 10th November, H.M.S. "Diamond" arrived at Dinner Island, and, after a few days' stay, proceeded to St. Aignan, where such punishment as was possible was inflicted on the natives there for the attempted assassination of Lieutenant Commander Marx. Thence she proceeded to Joannet Island, but Captain Clayton, finding it impossible to accomplish any retribution by a white force, returned to Dinner Island, where he met and reported the circumstances to your Excellency.

Very

Very little of the work which your Excellency's representative ought to have been able to do has been possible to be accomplished, owing chiefly to the very disturbed state of native feeling in the Archipelago. A much more comprehensive account might be given by him six or eight months hence as to the mineral wealth and likely productions of the Louisiades and of a good wide margin of the mainland, if an armed guard of seven or eight trusty South Sea Islanders were given him. Such force would be sufficient to enable him to penetrate anywhere with absolute safety. Until his duties have increased so as to occupy his whole time—which is far from being the case at present—at head quarters at Dinner Island, he can be employed in no service more beneficial to the Protectorate than constantly moving round—one subordinate European, competent to look after the Residency and to clear and otherwise adjust matters with vessels calling at the port, being sufficient for some time yet to come to act in his absence—his district with such a force, slowly accustoming the natives everywhere to the presence among them of a representative of the Government fearlessly able to penetrate where he wishes, exercising authority over all classes wherever he arrives, punishing petty cases summarily and removing for trial more serious offenders; gradually and patiently subverting by his influence, while suggesting and commending the reverse of their obnoxious customs (which are, it is too often forgotten, perfectly moral and right in their eyes, and imperative on them as sanctified by generations of unbroken use and wont); distributing seeds and introducing the knowledge among them of the cultivation of such products as tobacco, maize, and rice, all of which could be the most remuneratively cultivated in the islands of the eastern portion of the Louisiade Group and on the shores and back lands north of Milne Gulf.

The "Coral Sea" is far from a suitable vessel for doing any efficient work in these seas. Without comfort, and having no accommodation, it offers no refuge from the tropical sun, one twelve hours' exposure to which renders any work of brain or hand out of the question for days. I should recommend to your Excellency that the vessel placed at the disposal of the Deputy Commissioner here should be fitted with accommodation which will enable him to utilize the many hours of his voyages, otherwise wasted during calms and contrary winds, in accomplishing the clerical work, which inevitably accumulates during these journeys. There should be room also for the guard proposed above.

The movement throughout the district of your Excellency's representative has not been without a beneficial effect on the natives. At first repudiating the Government as anything but beneficial to them, they are beginning to recognize that it is not "all gammon," that Government "all same father belong New Guinea man," and also that it has more power, and they less ability to evade that power, than they at first believed. For this reason alone, I would submit that it would be very disadvantageous to the interests of the Protectorate here, especially at the present juncture, if the representative of the Government at Dinner Island were permanently removed. The east end of New Guinea is daily becoming of more importance; the number of vessels making Dinner Island their port of entry is largely on the increase, and the continued accession of Europeans to our numbers, whose doings require official supervision, and between whom questions, constantly arise for settlement, make it almost imperative that there should henceforth be a representative of the Government here.

Considering that one of the causes assigned for the recent Joannet massacres was a quarrel *re* a rifle, it might be well for your Excellency to draw renewed attention in the *Gazette* to the laws in force with regard to the carriage and introduction of firearms into the Protectorate waters; those also with reference to spirituous liquors—which I have some reason to believe are often given to the natives; and I should recommend that opium be included in the list of prescribed articles, as Chinamen are now frequenting the region.

At the change of the monsoons the natives seem to suffer greatly. Numbers of sufferers have applied to me for medicine without my being able always to supply them. I would suggest to your Excellency that a fairly stocked medicine chest and some nutritive medical comforts should be placed in charge of the Deputy Commissioners on the coast.

On the 31st December, died here Dick Kiake, the L.M.S. Teacher, who has exerted a powerful and beneficial influence on the natives over a wide area, and to whom not only every man-of-war vessel and trader visiting in these waters for many years has been indebted in varying degree for good services, but also the Government, which has oftener than once publicly acknowledged his courageous and worthy conduct.

I have, &c.,

HENRY O. FORBES,

Acting Deputy Commissioner.

## Report of Special Commissioner.

### BRITISH NEW GUINEA.

GENERAL Sir Peter Scratchley [died on the 2nd of December, 1885. Mr. Deputy Commissioner Romilly, in virtue of the provisions of the Commission appointing General Scratchley, assumed office, and administered it until the 27th of February, when I received a Commission from Her Majesty appointing me Special Commissioner for the Protected Territory of British New Guinea. Mr. Romilly left on sick leave for England.

It became necessary for me to proceed to Brisbane, Sydney, and Melbourne, in order to wind up affairs in connection with the administration of Sir Peter Scratchley, and to confer with the Australasian Governments contributing to the maintenance of the Protectorate. After communicating by telegram with Her Majesty's Secretary of State for the Colonies, I terminated the charter of the steamship "Governor Blackall" from the Australasian Steam Navigation Company, and received some of the contributions of the Australasian Colonies for the year ending the 1st of June, 1886, in accordance with the conditions laid down in Lord Derby's despatch of the 9th May, 1884.

#### *Mr. Fort's Report.*

General Scratchley's papers were, soon after his death, collated by Mr. G. S. Fort, his private secretary, and a report was published which contains a large amount of most valuable information connected with the Protectorate. My experience on the coast of British New Guinea during the last six months entitles me to say that I can confirm the general tenor of Mr. Fort's report, which may be accepted as a faithful account of conclusions arrived at after the cruise of the "Governor Blackall." I regard it as, on the whole, a safe guide for those who have to consult for the future of British New Guinea.

*Mail*

*Mail and trading services.*

While in Sydney I arranged the terms of a contract with Messrs. Burns, Philp, & Co. for a service along the coast of New Guinea, from Thursday Island to Port Moresby and Dinner Island. A copy of this contract (*Appendix A*) is herewith attached. The s.s. "Victory," 80 tons burden, has been placed on this line, and has kept up her monthly trips regularly since the commencement of the contract. She will soon be replaced, I hope, by a larger and more suitable vessel. I am at present in communication with Messrs. Burns, Philp, & Co. on this subject.

*Charter of the schooner "Governor Cairns."*

On my return to Brisbane on the 19th of April, I arranged with the Government of Queensland for the charter of the "Governor Cairns," schooner of 68 tons. (*Appendix B*.) She has answered her purpose well.

From the 8th May, when she left Brisbane, until the 6th December, she has been under weigh eighty-three days, has sailed 6,053 miles, and has conveyed me and my staff to many of the principal points on the southern shores of British New Guinea. She is now laid up at Cooktown, and will be available for service next year on the same terms, after the north-west season has passed over. On the 17th September she grounded on a reef in surveyed waters, and sustained some damages, which were made good at Cooktown, involving some considerable expenditure, and a detention in port of five weeks.

*Steamer "Albatross."*

The Queensland Government having lately purchased the s.s. "Albatross," 84 tons burden, for service in Torres Straits, have considerably placed her at my disposal for the purpose of visiting the adjacent coasts of New Guinea. I have authorized Mr. Milman, the Resident Magistrate at Thursday Island, to act on my behalf in this respect, and he has permission from his Government to do so. When engaged in duties connected with the protectorate his expenses will be paid by me.

*The "Coral Sea."*

It was necessary to make some temporary provision for the service of the Protectorate in China Straits. For this purpose I chartered the lugger "Coral Sea," 18 tons burden, engaging with her master, Colin Thompson, that he was to sail her and find her, for a monthly payment of £40. She has been at the disposal of Mr. H. O. Forbes at Samarai (Dinner Island), and is still there. She is manned by Malays, and has done good service.

*South Cape, China Straits, and Samarai.*

On my first visit to the eastern portion of the Protectorate I was accompanied by Mr. and Mrs. H. O. Forbes, Dr. Clarkson, the Medical Superintendent of the Polynesian Hospital at Mackay, and by General McIver. I had made an arrangement with Mr. Forbes, after his return from Sogari, that he should represent me in China Straits, at any rate until the end of the year, leaving it to be an open question whether or not he should then enter on the resumption of his exploration work.

I rented the Mission premises at Samarai, and I placed at Mr. Forbes's disposal the "Coral Sea." Dr. Clarkson, who had obtained leave of absence from the Government of Queensland, was attached to my staff in his professional capacity, and I was also accompanied by Brigadier-General McIver, who had "placed his sword at my disposal." This happily was not required. He had taken a considerable interest in the proclamation of the Protectorate, and though I did not feel justified in granting him permission to reside in New Guinea, I was able to afford him an opportunity of visiting many points on the coast between Samarai and Thursday Island. My generous consideration for him was, however, insufficiently appreciated, I fear.

The prevailing character of the mainland at South Cape, and of the islands in China Straits, is that of a mountainous region covered with dense tropical vegetation. The climate is exceedingly humid, and though the scenery is very beautiful it is not a country which is likely to attract European settlement. I should not regard it as an exceptionally unhealthy region if reasonable precautions are taken to avoid living under insanitary conditions. Its capacity for the growth of coconuts and the manufacture of copra is practically unlimited; but the supply of coconuts is not large at present, and does not much exceed the requirements of the native population. As a central point from which to direct administration, I prefer Samarai (Dinner Island) to South Cape. I am not, however, satisfied with the sanitary conditions of Samarai. There is a swamp in the centre of the island, and there is an exposed reef to windward. The former may be got rid of; the latter cannot. As a site for a settlement I should prefer either Stanley Harbour on Zareba (Heath Island), or the neck of an isthmus on Logia (Heath Island), opposite to Stanley Harbour. At both of these places there is good anchorage and an abundant supply of running water. As an anchorage, however, Her Majesty's ships of war prefer Samarai, and this consideration dominates at present.

I think, however, that on better acquaintance the anchorage at Stanley Harbour might be found to be quite as good as at Samarai, and as a site for a settlement it is, in my opinion, superior to any I examined in China Straits. Zareba (Hayter Island) is a large island, abounding in rich soil, fine forest, and running water. The natives also are perfectly friendly, and, being tolerably numerous, could soon be made to influence the neighbouring tribes on Basilaki and Moresby Island, who at present have rather an evil reputation. Mr. H. O. Forbes has in the meantime consented to remain at Samarai until the end of March. He proposes then to visit Australia in order to ascertain if he is likely to receive support in his explorations in the vicinity of Mount Owen Stanley and the Great Dividing Range. Mr. Kissack has, with my permission, established a store and trading station at Samarai.

It will be necessary, when authority is fully constituted, to appoint some one permanently to represent the Government of the Protectorate in China Straits. The Resident there should have under his orders a sufficient force to make his authority respected. He should have a smart lugger, and a force of not less than ten men. Eight Fijian policemen, under the command of a European officer who could handle a sailing craft, would suffice, I think, for the purpose of maintaining and protecting both the natives and Europeans in China Straits and the neighbouring islands. Her Majesty's ships of war will occasionally visit the group, as they do at present, but they cannot be expected to undertake police duties, and should not be asked to do so.

Port



*Port Moresby and the Valley of the Laloki.*

Port Moresby, as the head-quarters of the London Missionary Society, is the best known and the most important point on the coast of British New Guinea. It is a magnificent harbour, though a good deal cut up by coral patches, and it will require to be well buoyed and beacons before it can take rank as a first-class port. The inner or Fairfax Harbour is completely land-locked, with very fairly even soundings giving 4 and 5 fathoms. The surrounding hills do not leave much level ground on the shores of the harbour, and the country has often been spoken of by visitors as dry and comparatively barren. The past season has been an exceptionally moist one, and I have only known it under this favourable aspect; but in the valleys and on the slopes of the hills there are many fine specimens of forest trees; and the enclosed plantations of the natives lead me to conclude that the climatic conditions of Port Moresby are not so unfavourable to cultivation as they have sometimes been represented to be. The native village of Hanuapata, built in the shallow water between the island of Elevara and the rising ground on which the Mission premises are situated, is a collection of somewhat fragile tenements built on piles. The native population numbers about 800 men, women, and children, the children being pretty numerous. There are some small villages at the head of the harbour and on the hills lying to the north-west of the Mission Station. The native population thus indicated, including those occupying the littoral of the bay and the detached villages on the hill-sides, does not exceed 1,200. A road passing up a valley at the back of the Mission Station crosses the surrounding range of hills at a summit of about 400 feet, and thence descends to level country, which it traverses for some 8 miles, until the Laloki River is reached. The whole of this country, and indeed almost the whole valley of the Laloki, is unoccupied by the natives, and is only used occasionally by them as hunting-ground, which they beat for wallaby and kangaroo. It is well grassed and abundantly watered. Port Moresby, I think, must be regarded as the future centre of British administration in New Guinea. It is true that there are other equally fine harbours on the coast, and there are districts more fertile and populous; but is it there that the influences which now prevail have taken most deep root, and I regard it as the present seat of such government as has been established.

*Surveys at Port Moresby.*

The late Special Commissioner authorized Mr. Assistant Deputy Commissioner Musgrave to purchase certain portions of land from the natives. These instructions were somewhat enlarged by me, and have resulted in the acquisition of a continuous block of land amounting to some 900 acres, which will be quite sufficient at present for purposes of immediate settlement, whenever it is deemed expedient to authorize it. It seemed to me to be very desirable that the land thus acquired should be defined by survey, and for this purpose I secured the services of Mr. Cuthbertson, a gentleman who had carried out similar work in British North Borneo and in Northern Australia at Port Darwin. The surveys have been carried out by an efficient party of six Europeans at a cost of £787. Mr. Cuthbertson has now completed the plans, which are well executed, and include a feature survey of the country for 8 miles out of Port Moresby on the road to the Laloki crossing. Mr. Cuthbertson's report is attached (*Appendix C*), as also a paper by Mr. Musgrave on this subject. In connection with the survey of the new township of Granville, I have arranged that Mr. Goldie shall receive, in exchange for the site he at present occupies near the Mission Station, certain allotments in lieu of those surrendered by him for the use of the natives. I have purchased his store, which I propose to convert into a school for the natives, and he is now erecting a new store on the new site, which is more healthily situated.

*Native Policy at Port Moresby.*

I am able to report that the officers of the Protectorate resident at Port Moresby have acquired a very considerable influence over the neighbouring native population, and that this has been exercised with very beneficial results in repressing the intertribal atrocities which are the normal incidents of New Guinea life in its savage state. During the short period of little more than twelve months since Mr. Assistant Deputy Commissioner Musgrave has resided at Port Moresby, he has extended his controlling influence to the Hula district eastward, and to the Manu Manu and Kabadi districts westward. He has been faithfully and intelligently aided in this policy by the Messrs. George and Robert Hunter, who were appointed as Native Protectors by the late Special Commissioner. They are both of them familiar with the native language, and have been constantly employed in moving about, both along the coast and inland, acting in every case under the instructions of Mr. Musgrave, who has certainly acquired a decided ascendancy over the native tribes within the area described. In order to further their work I thought it desirable to purchase a small cutter of 10 tons, which is now constantly employed on the coast. This influence has now extended even as far as Aroma and Kerefunu, which places I have myself visited several times. On the last occasion of my visit I arranged terms of pacification between these powerful tribes, and I had the satisfaction of ascertaining that they were anxious to extend this compact to the Anamarupu tribe, with which they have been constantly at variance. I am anxious, however, to consolidate our influence over the area we already command without extending it too rapidly. I attach Mr. Musgrave's report on native affairs. (*Appendix D*.) It is of considerable importance as indicating his method, and in this matter he has displayed a zeal which deserves the success which has already attended his efforts in his most useful work. The present force at the disposal of Mr. Musgrave at Port Moresby consists of Messrs. George and Robert Hunter, who are acting as Government Agents and Native Protectors; Maka; three South Sea Islanders; and a scratch lot of young natives who act as the crew of the whaleboat in Port Moresby. In addition to these I have appointed Mr. George Kerr, master of the "Maino" cutter, and he has two Malays under him. In the event of any exceptional circumstance arising requiring an increased force, volunteers for the purpose can generally be found. It will be desirable, I think, to obtain some trained men from Fiji, and with a force of twelve men, six afloat and six ashore, I can guarantee that order shall be maintained and intertribal atrocities prevented for at least 60 miles along the coast.

*Land Policy.*

The land question is no doubt the cardinal one upon which almost everything connected with British policy within the Protectorate will turn. It is the primary consideration, both as regards the present native inhabitants and those schemes of colonization which have at various times been suggested.

Even so far back as 1875 Lord Carnarvon was approached by solicitations from a proposed association of persons styled "The New Guinea Colonizing Association." The reply which was then addressed by the Secretary of State to the applicants seems to me to be so apposite that I think it well to reproduce it now. (*Appendix E*.) It lays down a standard of policy which is equally applicable at the present moment.

On

On the other hand, a charter has of late years been granted to an association in British North Borneo, where the conditions of settlement must be somewhat similar to those in British New Guinea, and were so regarded by the late Special Commissioner, who appears to have been not unfavourably disposed to some such similar concessions. (*Vide Mr. Fort's Report.*)

For my own part, I think that the true interests of the natives and their advancement in the scale of life are not inconsistent with some encouragement being given to European settlement. In further illustration of this subject I beg to attach a correspondence (*Appendix F*), which throws some light upon this complex subject.

#### *Missionary Enterprise.*

In Mr. Fort's report a sufficiently ample statement has been made of the facts of the case to render it unnecessary for me to recapitulate them. A great and noble enterprise has been conducted by a set of most self-sacrificing men, who have carried the message of Christ to a savage race of inhuman murderers. The first stages of this transmutation have been effected at the cost of a great sacrifice of life among the devoted South Sea Island teachers, who have, under the guidance of the London Missionary Society, been the chief instruments in the partial conversion of these interesting though bloodthirsty savages. I regret to say that I cannot regard the work of the society as progressive. The brave and earnest men who devoted the best years of their lives to the work of evangelisation on an unknown coast cannot renew their youth, as we might wish that they could. They are not succeeded by men competent to follow up the task they commenced, and the work of the Mission languishes just now from the lack of new men who are prepared to devote their lives to an efficient attack upon the deep incrustation of barbarism which still prevails. Mr. McFarlane has retired permanently, I understand, from the Mission. Mr. Chalmers is now in England, and Mr. Lawes is left almost alone. I hope that new and efficient workers will be found, for a work so well commenced should be carried to a successful completion.

The French Catholic missionaries of the Order of the Sacred Heart have commenced work at Yule Island. I trust that the humanising influences which they will doubtless bring to bear on the natives will be productive of much benefit to the Protectorate. Under British administration, I have no dread of any seriously prejudicial rivalry between missions acting under different directions, but animated, I hope, by the same spirit.

A correspondence I have had with the Rev. W. Lawes on this subject (*Appendix G*) will serve to indicate the course of events in connection with the French mission. As a matter of ecclesiastical discipline, the brothers of the Sacred Heart will probably affirm their right to establish missions where they choose. As a matter of practical administration, I have no doubt that they will find it most convenient to occupy unappropriated ground. The field of operation is so large that there ought to be no difficulty in establishing a fair understanding on this point.

It is not improbable that an Anglo-Australian mission may be established in the Louisiade Group. The South Sea Island teachers require sometimes to be controlled. I found it necessary to administer a severe caution in the case of a native lad who was killed by being pushed from the platform of the teacher's house at Kappa Kappa. In another case, that of the teachers at Rigo and Sarowa, they had offered rather serious obstruction to Dr. Clarkson and Mr. Hunter while on a journey to the head of the Kemp-Welsh. One of them had also spoken very disrespectfully of me and my officers. I felt it necessary to send for those teachers, and the result of the lengthy investigation which took place was a suspension of their residence in their respective districts for three months.

#### *Exploration.*

Mr. H. O. Forbes conducted, during the latter months of 1885, an exploratory expedition in the direction of the summits of the Mount Owen Stanley Range. He established a camp at Sogari, and besides making an extensive botanical collection, he effected a good deal of valuable triangulation. The wet season, however, having set in, and the funds at his disposal being exhausted, he was obliged to abandon his enterprise at that time. On meeting Mr. Forbes at Cooktown in May last, I ascertained from him that he would require £2,000 in order to follow up his explorations over a period of six months from June to December. I offered for this purpose to appropriate £500 from the funds of the Protectorate, if the rest of the amount required could be subscribed from the Australian Governments. It did not, however, at the time appear to be probable that this amount would be forthcoming, and Mr. Forbes in the meantime undertook to reside in China Straits, where he has been most useful. I attach to this report one of Mr. Forbes's letters to me in order to show the sort of work he has had to do in China Straits. (*Appendix IV.*) He hopes still to resume his scientific exploratory work in the vicinity of Mount Owen Stanley, and if the Australian Colonies should be willing to find £1,500 for this purpose I should feel justified in recommending a grant of £500 from the funds of the Protectorate towards his expenses. I have lately received an offer from some experienced Queensland colonists to conduct an exploration party by way of the heads of the Kemp-Welsh River across the Dividing Range to Dyke Ackland Bay, and if Mr. Forbes's proposed expedition is not carried out I may be able to avail myself of their offer.

#### *Trade and Revenue.*

I find it difficult to speak with any certainty on these points. Everything depends upon the land policy adopted. If settlement, even in a modified and restricted form, is authorized, trade will grow and revenue will come in. The limitations which have resulted from the system of permits established since the proclamation of the Protectorate has caused trade, small as it even then was, to diminish rather than to increase. During the period I have held office about 400,000 feet of timber has been exported. There is plenty of bêche-de-mer on the coast, and there are valuable pearl-shell beds, but the repeated massacres of the men engaged in these occupations have acted as a great discouragement to enterprise of this kind, and it practically does not exist at the present time. Nor have I felt justified, under present circumstances, in giving any encouragement to the development of these industries, when it was not in my power to afford the people engaged in them any protection, or to place them under any satisfactory regulated system. As regards the collection of revenue, I have not thought it desirable, with my present inchoate legislative powers, to attempt to levy any duties on imported goods. I have issued a regulation under which I propose to collect a royalty of a 1s. per 100 feet on all cedar exported from the Protectorate, and I propose to collect this at the ports of entry, with the assistance of the Customs authorities in Australia. In the event of any refusal to pay this duty I should withhold the permit (*Appendix H*) or passport which is at present issued to those who are employed in this industry.

*Financial.*

I entered upon the duties of administration in entire ignorance of the requirements of the situation and an overdraft at the bank of £2,319 2s. 10d. I have endeavoured to shape my expenditure in accordance with immediate necessities. It was necessary to maintain the establishment at Port Moresby, and to carry out some improvements there. Houses had to be built for the accommodation of the officers of the Government. It was necessary to provide a lockup. (*Appendix V.*) Surveys had to be made, water was laid on, and a variety of improvements incidental to first settlement had to be carried out. A list of these improvements will be found attached to this report. (*Appendix II.*) They are really the assets of the administration and are not inconsiderable. It was necessary also to provide for my own locomotion along the coast, and some provision had to be made for supervision, both at Thursday Island and in China Straits.

A statement is attached of receipts and expenditure for the half-years ending, respectively, the 1st June and the 1st December. (*Appendix IA and IB.*) The date of the first financial year—the year ending 1st June, 1885—was fixed by Lord Derby in his despatch of the 9th May, 1884. It would be convenient, I think, if an alteration could be made in this respect, and that the financial year should be made to terminate on the 30th June.

I have had some difficulty in coming to an understanding with the Government of New Zealand as to the period on account of which their payments have been made. Two payments respectively of £2,668 18s. 9d. have been made by that Government; the first was for the year ending 1st June, 1885, and the second, according to intimation, was for the year commencing 1st June, 1886; this leaves an interval for the year ending 1st June, 1886. I trust, however, that this may be regarded merely as a difference as to dates, and that an arrangement may be arrived at.

*Estimates for the Year ending 1st June, 1888.*

I shall be prepared shortly to submit an estimate of expenditure for the year ending 1st June, 1888, though I trust that in the meantime some arrangement for a permanent provision may be arrived at by Her Majesty's Government acting in concert with the Governments of the Australasian Colonies.

*Requisition for Contributions on Account of the Year ending 1st June, 1887.*

I have requisitioned the contributing Governments for the current financial year ending 1st June, 1887. On account of that year, I have as yet received no payments, except from New Zealand.

It would be more convenient, and a more equitable arrangement, I think, if, in future, payments were made in advance. The difficulties of administration in British New Guinea are sufficiently great without adding to these the difficulties of possible financial embarrassment.

*The Necessity for a Steamer.*

I wish, in conclusion, to say that it is exceedingly desirable, for the purpose of maintaining order along the coast, and for the purpose of protecting life and property both native and European, that the Commissioner or Administrator should, without further delay, be provided with a steam-vessel. Her Majesty's Government have offered to do so; and I trust that this proposal will soon be carried into effect. H.M.S. "Dart" has been spoken of as the type of a vessel suitable for this purpose. She was, I believe, a steam yacht, which was originally owned by Lord Eglinton. Some similar vessel could probably be purchased in England for a sum of money well within the £18,000 which has been spoken of for this purpose. She ought to have good sailing qualities, combined with steaming capacity worked at a minimum of expenditure. Captain Cyprian Bridge, R.N., supplied General Scratchley with an estimate of expenditure suitable for such a vessel (*Appendix III*), and I have no doubt that this probable expenditure is one which will serve as a useful guide.

JOHN DOUGLAS,

Her Majesty's Special Commissioner for British New Guinea.

Brisbane, 31st December, 1886.

## APPENDIX A.

MEMORANDUM of agreement entered into this thirtieth day of April, eighteen hundred and eighty-six, between the Honorable John Douglas, C.M.G., Her Majesty's Special Commissioner for the Protected Territory in New Guinea, and Messrs. Burns, Philp, & Co., Limited, of Brisbane, Townsville, &c. (Queensland), and Sydney (New South Wales).

It being essential to the proper development of New Guinea that steam communication should be established between Thursday Island and Port Moresby, and whereas Messrs. Burns, Philp, & Co., Limited, are already engaged in trading between and with these ports, the following arrangements are herewith agreed upon between the Honorable John Douglas, C.M.G., and the said firm.

Messrs. Burns, Philp, & Co., Limited, agree to run a monthly steam service between Thursday Island and Point Moresby (and to extend the service if required by the development of trade from Port Moresby along the south-east coast to East Cape), carrying the public mails and despatches for the Honorable John Douglas without charge other than hereafter specified.

Messrs. Burns, Philp, & Co., Limited, undertake to gradually establish trading stations along the coast at various points, under the management of good and reliable men, who shall be approved by Her Majesty's Commissioner. These stations shall be formed for the purposes of collecting copra, bêche-de-mer, and other products, and offering inducements to the natives to engage in industry and in the development of the natural resources of the country.

The sites for such stations shall be selected, or, if not selected, approved by Her Majesty's Special Commissioner or public officer appointed by him. It is understood that the land upon which the stations are built, and any water frontages upon which wharves are erected or other improvements made, will be held by Her Majesty's Special Commissioner for the sole use\* of Messrs. Burns, Philp, & Co., Limited, unless and when required for public purposes; and should such lands or water frontages, in consequence of being so required, be resumed or sold by Her Majesty's Special Commissioner, then the improvements shall be valued at the time of resumption or sale, and the amount of such valuation shall be paid to Messrs. Burns, Philp, & Co., Limited.

Her

\* "Sole use" to be interpreted in accordance with the telegrams interchanged on this point.—  
JOHN DOUGLAS.

Her Majesty's Special Commissioner shall allow Messrs. Burns, Philp, and Co., Limited, to take passengers (within limits as to number, to be specified by himself from time to time) from Australia to New Guinea, always provided that the said firm guarantee that such passengers shall not become a burden upon the Government, and that they comply with the regulations and sign the usual "Memorandum of Conditions" required from approved travellers or immigrants, copy of which is hereunto annexed.

In the event of the steamship employed breaking down or requiring to proceed to Townsville or elsewhere for repairs, then Messrs. Burns, Philp, and Co., Limited, shall be allowed to substitute a sailing vessel until repairs are effected, and thus obviate the necessity of keeping a second steamship ready for emergencies.

In consideration of the due fulfilment of the terms of the steam service named, Her Majesty's Special Commissioner agrees to pay to Messrs. Burns, Philp, and Co., Limited, and Messrs. Burns, Philp, and Co., Limited, agree to accept in full settlement, the sum of fifty pounds sterling per month. The said steam service will date from the 1st day of July next, and terminate on the 30th day of June, eighteen hundred and eighty-nine. Should the steamer be detained for repairs longer than two months in one year, then the payment for such excess of time shall be only at one-half the rate per month stated.

It is finally understood that this agreement may be terminated on either side subject to six months' notice being given from one side to the other, in so far as the mail service and subsidy are concerned, and that the provisions of this agreement are subject to confirmation by Her Majesty's Secretary of State for the Colonies, although acted upon by Her Majesty's Special Commissioner.

JOHN DOUGLAS,  
Special Commissioner.

BURNS, PHILP, & CO., LIMITED,  
Per JAMES BURNS,  
Managing Director.

Telegram from Her Majesty's Special Commissioner, Brisbane, to Messrs. Burns, Philp, and Co., Sydney.  
26 April, 1886.

I PROPOSE to insert in agreement *re* tenure of station sites a few words stating that actual tenure shall be similar to that of the pearl-fishing stations at Thursday Island. Do you agree. This will not interfere with valuation clause. Contract to date from 1st July.

JOHN DOUGLAS.

Telegram from Messrs. Burns, Philp, and Co., Sydney, to Her Majesty's Special Commissioner, Brisbane.  
28 April, 1886.

AGREE alteration *re* tenure trading stations, also commencing 1st July, unless you think dates should assimilate with Australian Company fortnightly service. Make alterations and return corrected copy signed.

BURNS, PHILP, & CO.

#### APPENDIX B.

##### CHARTER "GOVERNOR CAIRNS."

THE following are the conditions of charter of the schooner "Governor Cairns," now lying at the Port Office Wharf, Brisbane, between the Honorable the Colonial Treasurer of Queensland on the one part, and Her Majesty's Special Commissioner for New Guinea on the other hand.

The Honorable the Colonial Treasurer of Queensland undertakes to put the said schooner in good and seaworthy condition, to fit her out with sufficient sails and standing and running gear, anchors, chains, awnings, and two boats, to deliver her at Brisbane to whomsoever the said Special Commissioner may appoint for that purpose.

Her Majesty's Special Commissioner for New Guinea undertakes on his part to take every reasonable care of the said vessel and equipments, to keep the vessel insured against total loss for the sum of £2,000 in the name of the Honorable the Colonial Treasurer of Queensland, in any respectable marine insurance office in Brisbane, and to do nothing that will vitiate that insurance.

He further undertakes at the expiration of this charter party to give the vessel up, with all her equipments, in Brisbane, to the Queensland Government, or such officer as the Honorable the Colonial Treasurer may appoint, in as good condition as when received, fair wear and tear excepted; that in order to ascertain if any injury has been received, he undertakes to dock her for survey, and any injury she may be found to have received, to make good, before being taken over by the Queensland Government. The said Special Commissioner undertakes to pay to the said Honorable the Colonial Treasurer, at the expiration of each calendar month, the sum of £25 as rent for the said schooner.

The said Special Commissioner further undertakes to pay all wages and expenses of crew, stores, and supplies of all kinds, and to make good and replace anything that may be lost or injured, and to keep the vessel clean, thoroughly painted, and protected as far as possible from the weather; to have the spars and blocks regularly attended to, the former kept greased or varnished, and the pins of the latter taken out, and their position shifted, and the sheaves blackleaded at proper intervals. The chains are also to be got on deck and overhauled at least every two months.

This charter party is to continue in force from the 1st May, 1886, to the 1st January, 1887, from which first-mentioned date the rent as aforesaid is to accrue.

It is also agreed that the said Special Commissioner has the option of purchasing the said schooner "Governor Cairns" at any time during the currency of this charter for the sum of £2,000, to be paid by the said Commissioner to the Honorable the Colonial Treasurer of Queensland, and upon such purchase being made and completed, the conditions of this charter party to cease and determine.

Signed on the 1st day of May, 1886, by Her Majesty's Special Commissioner for New Guinea, and by the Colonial Treasurer of Queensland, in the presence of	}	JOHN DOUGLAS, Special Commissioner for New Guinea. JAMES R. DICKSON, Colonial Treasurer.
E. B. CULLEN.		

## APPENDIX C.

## No. 1.

Sir,

Survey Camp, Port Moresby, 21 September, 1886.

I have the honor to make the following report in connection with the surveys that I have completed—viz., the townships of Granville East and West, public reserves, native and mission reserves, cemetery, etc. Firstly, I would state that I have carried out the whole work as nearly as I can, according to the instructions in the Queensland Survey Regulations, which differ considerably from those I have always been used to—viz., South Australia; Queensland work being all carried on from magnetic north, that of South Australia from true meridian.

The first work in connection with a survey such as I have just completed in a new country under Queensland Regulations is to lay down a true meridian line, and then ascertain the variation of the compass, and carry on the work on whole degrees of magnetic bearings, no odd minutes. However, the nights were so very cloudy for some four to five weeks after my arrival that I was unable to obtain sufficiently good observations to start my survey from; so, in order to lose no more time than possible, I commenced the work as I should have done under similar circumstances in South Australia, and ran my beach traverse and other work, on contained and subtended angles. From one of these lines I eventually fixed my true meridian and variation, and have calculated the magnetic bearings as shown on my plans throughout the work. In my field-book, besides the bearings, will be found the contained and subtended angles for reference if necessary. The grass and rough nature of the hills, and the swarms of green ants and hornets which infest the scrubs, I have found a very great drawback to the progress of my work. My party also have suffered considerably from sickness, owing, I should think, to the exceptionally wet season we have had during my residence here.

The township of Granville West, situated near Paga Point, or, I should say, between Paġa Hill and Goldie Law, and extending from the Port Moresby Beach to Ila Beach, comprises about 50 acres of land. There are, including the beach roads, seven streets, the inner ones being 2 chains wide, the beach frontages averaging about 3 chains. The blocks are all cut up into  $\frac{1}{4}$ -acre allotments and classed in sections according to Queensland Regulations—viz., Sections I. to VI.—and contain 107 lots, numbered as per plan. All corners, etc., are marked with hardwood pegs, and numbers cut on sides, and mostly trenched with good stone trenches indicating direction of lines. When the ground would allow, trenches are cut in the soil. The most part of the town consists of rough flint boulders, excepting in the Gap, where the soil is a blue clay. I should think a gang of coolies would soon make a good clearance of these boulders, which, if placed on the main roads and broken up, would serve well for metal, but would require good blinding. Water is at present scarce, but I feel satisfied that with suitable appliances there would be no great difficulty in obtaining a good well. The most suitable way of connecting the two townships, in my opinion, will be by a road running along the beach, skirting Goldie Law on the northern side, by quarrying out that hill along the foot. The road at the back, along Ila Beach and across the Gap, would, I think, cut up considerably with any heavy traffic, and is much longer, and its approach to the Gap would require considerable amount of metal before it could be much used.

The township of Granville East lies about 80 chains north-easterly from Granville West, and is, so far, cut up into eight sections. The outside roads are 2 chains, the inner ones being 1 chain. The allotments are all  $\frac{1}{4}$  acre and are marked with hardwood pegs, the ground being mostly of a blue clay character; the trenches are cut in the soil. Here there are only two sections—Nos. III. and IV.—cut up into allotments. The others can easily be done with the chain should they be required, and no surveyor here. The 2-chain road named Lawes-street, on the western boundary of the town, will be the main thoroughfare until such time as a road can be made facing the beach as surveyed through the mangroves, where there is a firm bottom, and will eventually make a first-class road, but at a considerable expense. This town is well supplied with water, there being beautiful springs at the north-eastern corner, where I have surveyed a considerable road deviation which takes in the springs and allows a good roadway on either side of them. The hills on this side are mostly of limestone formation, whilst at Granville West they are mostly flintstone. Granville East to the northward is bounded by the reserve for public purposes, botanic gardens, &c., and for the latter I consider an admirable site is chosen. This public reserve extends northerly for about 31 chains and average depth about 16 chains. It comes down to the beach traverse on the western side, and is bounded on the eastern side by a 2-chain road skirting the hills at the back of Government bungalows connecting the north-east corner of Granville East with the Laloki road. This road also bounds the native reserve on the eastern side, which lies immediately north of the public reserve and runs in that direction for 27 chains, where the Laloki road, which separates it from the Mission block, joins the beach traverse; the 2-chain road bounding it on the east joins the Laloki road 10 chains 35 links from this point easterly. The native village immediately faces it to seaward. In the south-eastern corner of this block there are also some valuable springs. Northerly from here is the Mission block, which takes in all their dwellings, huts, and church, situated on a good rise and facing the coast traverse. For 21 chains north-westerly and westerly from this point, it leaves the hill and runs along the coast traverse for 17 chains 50 links, thence easterly for about 20 chains to a bend in the Laloki road. About 20 chains from its intersection with the beach traverse the most part of this land is of a swampy nature, and covered with long reeds and jungles. It would, I think, if cleared be suitable for the growth of rice. This block contains an area of rather more than 31 acres. At 8 chains from this junction with the Laloki road easterly, is a 1-chain road running in a north-north-westerly direction for 13 chains about to the cemetery, which contains 3 acres of land; it is also approached by a road skirting the hills to the northward of the Mission.

The timber on all this portion contained in these surveys is a stunted bastard gum of no use. There are a few acacia, likewise useless. The grass is spear-grass, and is very abundant. The Laloki road is run to the Gap, when it reaches the hills; I considered it unnecessary to offset it on the hill-side, as they are useless to anything but road purposes, and it will, I think, be many years before the full width of 2 chains will be required on the hill-sides. There will be considerable cutting necessary to make this road, owing to the steep sides of the hills, but the grade is very little, and when made will be found to be an easy approach. I have always avoided doing more damage to bananas or garden fences than actually necessary for the work, and in every case have avoided cutting down coconuts and sago palms, &c.

I have laid out townships, roads, &c., as nearly as possible according to instructions received from either yourself or Mr. Douglas. In some cases I have deviated a little, where in my opinion there has been a more suitable course.

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The difference in length of the two roads connecting the two townships from centre of Granville West to junction with main road is round Goldie Law to northward about 90 chains, round Ila Beach about 120 chains.

Plans of the two townships and a general plan of the whole survey completed I forward herewith, which I trust will meet with satisfaction.

My field-book, which will take in the road to junction of the Goldie and Laloki, together with plans and report on same, I will send in as soon as possible after its completion.

I have, &c.,

WALTER R. CUTHBERTSON,  
Surveyor.

To the Deputy Commissioner, Port Moresby.

No. 2.

Sir,

Survey Camp, Granville, 27 October, 1886.

I have the honor to furnish the following report on the road recently surveyed by me to the Laloki River.

I found that the present native track was as good a road as it was possible to find, so that I have almost followed that the whole course, straightening it up as much as possible. The distances are as follow:—From traverse at beach, near native village, to gap in range, 91 chains 30 links; to first water, 225 chains; to Vaigana Creek, 439 chains; to Laloki River, 632 chains; along river-bank to crossing, 56 chains; making a total of 688 chains from beach traverse to Laloki River crossing, or  $8\frac{1}{2}$  miles. The road is offset as a 2-chain road; the whole distance excepting crossing the range, where I considered an offset unnecessary, being only suitable for road purposes.

After striking the river I have surveyed a road of an average width of 3 chains along the river-bank as far as the crossing. This is, I think, necessary as a travelling stock reserve and approach to water for all public purposes. This should, I think, be continued along the river as the survey of the country progresses; my two-chain road of course runs into this. It is useless surveying a road immediately down to a crossing, as that continually changes in a river subject to any freshes; for instance, where the water is shoal this season it may probably be deep next, and so on. The three-chain road along the river bank, therefore, gives access to a crossing, wherever it may be, at any particular season.

The same should be done on the opposite bank, and the two-chain road commenced cutting out from it wherever the country may prove most suitable for the purpose. During the whole time I was working on this road we had heavy rains daily, which caused floods in the river. I was therefore unable to give any opinion on the crossing itself, as I could not get up to it; but from Mr. George Hunter's report who has crossed there, I should think it would easily be made a convenient ford.

The country for about 2 miles on either side of the road I have sketched with prismatic compass, and in my plan will, I think, have given a very good idea of the surrounding country. I would not have it taken that this sketching is even supposed to be precisely accurate, but quite sufficiently so for the guidance of anyone either travelling the country or to take up selections from. Of course before any accurate fixing of hills, &c., can be made, "trig." stations must be built on their highest points, and tops cleared so as to get reliable bearings to the same point. This would entail considerable time and expense. However, with the short time at my command, and the very unfavourable state of the weather, I have managed to map in a good portion of the country behind the range, which I trust will prove serviceable until such time as a more minute and accurate survey can be made. During the whole of the distance of the road-line surveyed by me there was not more than 5,000 [links?] of burnt country; the remainder was covered with grass between 4 and 5 feet high, which would not burn, being too green, and if started there was no wind to carry the fire any distance. This grass I had to cut down the whole distance, which very much lengthened my work. The country throughout is of a limestone formation and I came across no signs of any mineral. For the most part it is a pastoral country, if not wholly so; in the flats there is some good soil, but of no great extent, suitable for growth of maize and such-like produce. The timber is mostly stunted gum (poor), excepting on the banks of watercourses and surrounding the lakes at Vaigana, or what in Northern Australia we should term "tea-tree swamps." Here is found abundance of Leichhardt pine, a very useful timber in all countries where the white ant is to be found (it will not touch this pine); and from it, splendid flooring-boards and so forth can be cut. It is a timber easy to work, and very pretty; it is a yellow colour, well adapted for tables, chairs, &c., in these countries. On the country surrounding these lakes, horses and cattle should, I think, thrive well, if not too much molested by leaches and alligators. The latter are numerous in a deep waterhole leading into these lakes, and would, I fancy, be capable of doing considerable destruction to young stock. During my camping term in the vicinity, the absence of game on these lakes makes me think they would most probably be plentiful in them as well as the waterholes where we saw them ourselves.

The country northward of these lakes, as far as the eye can span, is low-lying, apparently swampy lands, timbered with low scrub.

To the westward for about a mile low ranges are passed over, all well grassed, which would give good high feeding-ground for stock in the wet when the flats are boggy. I should have liked to have run a line from the junction of the two native tracks this side of Vaigana to the junction of the Goldie and Laloki, which it was my intention to have done; but owing to the heavy rains which fall daily, and with the amount of sickness in my camp, I did not think I should be doing my duty either to my party or myself by staying out to complete that work, so, at your suggestion, struck camp.

Myself I suffered considerably with scrub-itch, which, together with worry of my men being sick, and long hours in the sun during the day, in a stifling atmosphere, with no wind and heavy rains, and no sleep at nights, completely knocked me up. I used quarts of kerosene to destroy this itch, but without effect; the best remedy I found was to rub myself all over with Holloway's ointment. Painkiller and St. Jacobs oil had no effect, and for over a week could not get a wink of sleep, so spent most nights walking about keeping the mosquitoes company, which also were somewhat numerous night and day. The water in the creek at Vaigana I do not consider fit for drinking purposes, but by sinking in a gravelly bed can secure first-class water, the holes being choked with decomposing vegetable matter. There was nothing that I met with in any way differing much from the surrounding country on which to write a lengthy report, more than to say it is all evidently a good pastoral country, and trusting this, together with the plan I shall send in as soon as completed, may prove serviceable,

I have, &c.,

WALTER R. CUTHBERTSON,

Surveyor.

To the Assistant Deputy Commissioner.

No.



Memorandum by Assistant Deputy Commissioner Musgrave respecting Acquisition of certain Government Lands.

Government Bungalow, Granville, British New Guinea, 9 November, 1886.

In compliance with your Excellency's verbally expressed wish, I have the honor to report upon the acquisition of Government lands in British New Guinea up to this date.

The first acquisitions on the part of Protectorate officers were the sites of the Government bungalow, comprising about an acre, and a strip extending in a southerly direction from the Argus Villa for about 20 chains along the harbour, and about 4 chains in width. These plots were secured from the Motu and Koitapu people of the villages adjacent to the London Mission Station, in the same manner that the representatives of that Mission originally obtained sites for their buildings and gardens. This is by giving to the claimants of the ground desired certain articles in barter, such as hatchets, gaudy cloth, tobacco, &c. I beg to enclose copies of the authority I received from the late Special Commissioner (Sir Peter H. Scratchley) for making this and other land purchases for the Government. He also intimated to me verbally his desire to take over other lands wherever it was practicable and convenient. His Excellency was not an eye-witness of this first transaction, as his plans obliged him to leave for Redscar Bay on the same day, the 8th September, 1885. A copy of some notes which I made at the time of this purchase is also annexed.

Minute. 3 Sept.,  
1885.

Notes. 8 Sept.,  
1885.

No form of "Memorandum of Land Purchase" has ever been supplied to me, nor did I receive any written instructions other than the authority mentioned.

While referring to this first Government purchase, it will doubtless interest your Excellency to see the accompanying copy of probably the first record of a land transaction in Port Moresby, if not in British New Guinea. This paper was placed in my keeping by the Rev. Mr. Lawes about a year ago. The strip of land along the harbour was secured in order to assign positions for stations to certain traders who had applied for them. The late Special Commissioner was, however, in a doubtful and difficult position with regard to his powers either to acquire or alienate lands. According to a regulation in force on his arrival, and which has never been formally rescinded, Commodore Erskine, at the date of the Protectorate, had enacted that "No settlement or acquisition of land is on any account to be permitted." On the other hand, clause 9 of the Special Commissioner's instructions seems distinctly to imply that land purchases may be made, and apparently at the discretion of the Special Commissioner. He is also given instructions as to his responsibilities and duties, as the clause states, "in the event of any such purchases being made." Further, in clause 10, he is directed "to give all proper encouragement to peaceful and legitimate trade between the natives and persons who may visit the Protectorate." It was so obvious that one of the first essential requisites for trading is a site upon which to put buildings, that I understand the late Special Commissioner held that his commission and instructions gave him sufficient discretionary power to act for the general good, and upon well-approved principles of settlement, and in this sense to relax Regulation No. 4. He therefore determined that Government officers should first treat with the natives in all cases for the acquisition of lands the latter wished to sell, and that a subsequent grant of a provisional right of occupation might be allowed to the foreign settler. This was the course followed in the cases of Mr. Theodore Bevan and Messrs. Davis and Anderson, who both began business here last year, but have since abandoned the settlement. A register book of such licenses for provisional occupation was opened, as I have previously mentioned to your Excellency. No fees were charged, as no power seemed to be conferred for their collection, and on account of the insecurity of tenure allowed.

Memo., Rev. W.  
G. Lawes.  
11 Jan., 1875.

3. On the day following (9th September, 1885), a narrow strip of land was purchased to connect the bungalow site already described in my despatch to Her Majesty's Secretary of State of the , 1885, with the beach purchases.

4. On the 14th September Sir Peter Scratchley settled with Mr. Andrew Goldie for the purchase of the Argus Camp building, and relinquishment of any rights to the site of about an acre of ground, for £30. The purchase of the land from Mr. Goldie was expressly repudiated, as that would have implied a right to sell, and therefore a right of possession on his part. Any such admission would have created a precedent with regard to other land he occupied, and other claimants of the same class.

5. On the 7th day of October it would appear that Sir Peter Scratchley bought a piece of ground at Suau (South Cape). A copy of the memorandum of this purchase is to be found on page 50 (No. 31) of Mr. G. S. Fort's report on the cruise of the "Governor Blackall." The amount paid for this position was about £3 7s. 6d. in trade, but the approximate area is not stated.

6. On the 14th and 15th of October, Mr. Robert Hunter and Ruatoka the Mission teacher bought from the Koitapuan natives of the village of Verentu or Badili certain lands now known in the local surveys as the Badili lands. I did not perambulate the boundaries myself, but I was present, and the Rev. Mr. Lawes also kindly attended at the payment of the claimants. We were assured of their being satisfied with the completion of their sale. One hundred and twenty-eight vendors had to be paid for 333 acres of land. These are the contents of the block as fixed by a recent theodolite survey, of which your Excellency has inspected the plan. The main object in securing this block was to be able, in the event of Port Moresby natives proper being reluctant to sell or making excessive demands for lands urgently needed for settlement, to substitute other holdings equally suited for cultivation, but not equally monopolising wharf frontages, &c. There was risk of these positions being taken by the natives on the advice of certain Malays and South Sea Islanders who have taken Motu women as "wives," and who use some influence over the aboriginal villagers.

The Badili lands lie well within 3 miles of the Government bungalow, cost less than £30 in trade, and are estimated by some persons of Australian experience to be worth £10 per acre, or £3,250. I consider them myself to be in a very important and valuable position as settlement extends. There are numerous fine villa sites upon them, giving fine views along the south coast.

7. The next purchase was also a valuable one to the Government. It consisted of a large block of land on the Vei Mauri and other rivers, about 30 miles west of Port Moresby, in the sub-district of Dora. The Doran tribe have been nearly exterminated by their neighbours, and were willing to sell with the understanding that the Government should grant them such a measure of protection as was possible. The presence of Mr. C. H. Page's timber-getting party on the Vei Mauri River has been, and will continue to be, a sufficient safeguard against hostilities while timber is being obtained. Should the party abandon the spot, however, it will be desirable for many reasons that a Government station be placed in the

the district, which is very fertile and well watered, and in a very accessible position south of the foot-hills of Mount Owen Stanley. The surrounding tribes are on friendly terms also with foreigners. The area is difficult to compute, but may be about 40 square miles. This land purchase was the last made during the late Special Commissioner's term, and during last year.

8. In January two more small plots of uncultivated land were bought at Port Moresby, namely, about  $\frac{1}{2}$  an acre to the south of and adjoining the bungalow site, and a piece of about the same size for a boatman's cottage site. This last was a continuation of the beach lands. The price paid was £4 2s. 10d. for these plots.

9. No further purchases of land were made until after your Excellency's arrival here in June last. Acting upon your memorandum of instructions with regard to the acquisition of lands in conjunction with the surveys at Port Moresby, which it was most important to have effected, Mr. Robert Hunter, as an agent for the Government, accompanied by the Government interpreter and the present chief of the local village, Ah-oo-doo, made purchases from time to time, as other duties permitted, to the extent of about 222 acres. All the cultivated grounds that interrupted the road reserves have been bought at a full price, but the natives have had it explained to them that in future, when the Government make roads for their benefit as well as for the foreigners' convenience, they ought to grant land free for that and other public purposes.

Mr. Hunter began purchasing on the 8th July, and ceased by my direction on the 8th October, having secured all the lands required within the surveyed portion of the settlement, newly entitled "Granville." The recent acquisitions may therefore be summarised as follows:—

*Purchased lands.*

	Acres.
Government domain and bungalow, site, &c., of 9 acres ... ..	52
Granville East, township ... ..	95
Ila Beach, suburban lands ... ..	22
Granville West, township ... ..	50
Badili lands ... ..	333
	552

*Unpurchased lands.*

Paga Hill Reserve ... ..	50
Goldie Law Reserve ... ..	236 $\frac{1}{2}$
Cemetery (assumed for public purposes, within Native Reserve) ...	3
Government Station (late Mr. A. Goldie's holding) ... ..	2 $\frac{1}{2}$
	844

Total acreage ... .. 844

The purchased lands have cost £339 19s. 1d. from the first transaction in 1885 to date, at Port Moresby, and inclusive of the block at Badili. The country lands in Dora and Suau cost £7. 0s. 10d.

With reference to the unpurchased portions, Goldie Law and Paga Hill, the natives themselves ridiculed the idea of the Britanis buying "rocks and stones," as they said. The elevations are very rugged and somewhat steep, and are not cultivated by the natives. They are in fact practically useless to the latter, and it seemed unnecessary (at any rate at present) to buy them.

Your Excellency was an interested eye-witness of the purchase of a portion of garden ground, and is fully aware of the exceptionally troublesome and tedious nature of acquiring land by the present method. The lands purchased at Port Moresby, already stated at 552 acres, involved twenty-seven different transactions on as many different days, and compelled negotiation with and payment of 1,258 different vendors, or rather more than half-an-acre from each native. It seems evident, therefore, that any such process as has been adopted during this season would be too expensive and cumbrous to continue, and it is most desirable that another and more convenient mode of adjusting the relative positions of foreigners and aborigines in respect of land may be settled shortly.

No. 4.

Memorandum by Assistant Deputy Commissioner on the first purchase of Government Lands in British New Guinea.

Government Bungalow, Granville, British New Guinea, 8 September, 1885.

MR. George Hunter, Government Assistant, with the co-operation of the London Missionary Society's teacher, Ruatoka, whose services were kindly allowed by the Revs. Messrs. Lawes and Chalmers, negotiated for the purchase of certain instalments of land in the proposed Government and commercial division of the settlement with twenty-eight Motu and Koitapu natives.

2. The teacher, Ruatoka, having been here since 1873 (twelve years), and being thoroughly conversant with the local natives and their customs (especially in their dealings with foreigners, for the sale of land), was a most valuable agent. Mr. G. Hunter also possessed considerable experience of natives.

3. The portions of land bought from each individual varied in size, but were all small. For each portion, 1 tomahawk, 1 handkerchief, and  $\frac{1}{2}$ -lb. tobacco were given. This appears an almost unfairly low price. The total area bought, however, is not more than 8 acres, and the value of the trade expended amounted to £18 2s. 4d. Thus an acre is worth about £2 5s. None of this land was in cultivation, the natives declining then to sell even a small plantation which intervened between the Government bungalow and the sea. Nor is any of the land at Port Moresby of a fertile character, although several gardens exist. Although it also seems unfair that an individual should receive as much for one square perch as another does for two or three, they are accustomed to this settlement (since they have no areal measure), and the gain to the community is the same as if the total were exactly subdivided amongst the vendors.

4. At 2 p.m. the native vendors gathered at the teacher's house, and their names having been called over and noted carefully, the Rev. Mr. Lawes addressed them at my request. He informed them that I was an officer of the Beretani Government, was allowed to buy land, and had been directed to do so by the Kavana, or great chief. He said, at my request, that "I would buy both the bad land and the good



good land when they were inclined to sell, and that I intended to try and lead the water into their village by-and-by, and save them trouble in the dry season." Each landowner then received his payment and left quite satisfied, and with the intention of selling more land to Mr. Hunter for the Government.

5. In the afternoon fifty-four more natives sold land and were paid in my presence, departing quite satisfied.

The chief Boi Vagai was present throughout the proceedings, from the perambulation of the boundaries to the final payments.

New Guinea Minute Paper.

Received 3rd September, 1885—Answered 9th September, 1885.

To Captain Anthony Musgrave, Acting Deputy Commissioner, Port Moresby.

*Subject.*—Sundry matters to be reported on.

1. Herewith a memo. of certain matters I wish you to inquire into and consider.—1. *Received.*
  2. Reports to be sent when convenient. Some of the points are not ripe for settlement.—2. *Noted.*
  3. I authorize you to incur necessary expenditure in connection with them should you deem it advisable not to wait for my authority.—3. *Noted.*
  4. If there are any other matters you wish to bring up to my notice please do so. I shall be glad at all times to hear from you.—4. *Noted.*
- P. H. SCRATCHLEY.
- Port Moresby, 3rd September, 1885.

Port Moresby.

Matters to be inquired into and considered by Captain Musgrave, Assistant Deputy Commissioner.

1. Tidal gauge automatic. Communicate Captain Pullen's letter herewith to Professor Russell at Sydney, and make preliminary inquiries as to cost, &c.—*Letter drafted for ensuing mail.*
  2. Cleaning boat channel.—*Suggest postponement.*
  3. Purchase of land; all desirable sites to be purchased at a moderate cost; if any reluctance shown, defer.—*Several bought; continue to do so gradually.*
  4. Site for official quarters to be purchased, together with garden, &c., road leading to, and paths.—*Done.*
  5. Site for Government farm.—*Suggest postponement.*
  6. Erection of official quarters. The materials and carpenter may be here on 10th or 11th September. We have to unload vessel. Steam-launch will help, and ship's boats.—*Site purchased. Being cleared. Quarters and board fixed for carpenter. Shed and store ready for materials. Canoes engaged, and Hunter specially to attend to unloading vessel.*
  7. Accommodation for carpenter on shore—*see contract with Aplin, Brown, & Co., herewith.—(See above.)*
  8. Water supply generally.
    - a. For farm.—*Postponed.*
    - b. For quarters, )
    - c. For village, ) *Settled for present.*
    - d. For shipping. )
  9. Boatshed.
  10. Jetty.
  11. Site for native boatmen's quarters—married men; gardens.—*Sites provisionally selected.*
- \* \* \* \* \*

Copies letters received.

Memorandum.

Port Moresby, New Guinea, 11 January, 1875.

THE Rev. W. G. Lawes, of the London Missionary Society, and resident at Port Moresby, having bought the undermentioned plots of ground, Nos. 1, 2, 3, 4, and 5, the former owners in our presence declared the purchase effected, and the land transferred to said W. G. Lawes and his heirs absolutely, which was also ratified by the chiefs Ila, Kupa, Iko, Poe, and Heni. The owners and chiefs expressed themselves perfectly satisfied with the payment.

*Plot No. 1.*—Ground on which dwelling house stands, extending in front about 12 yards, at the back about 16 yards, and bounded at each end by road. Purchased from Mavaraiko for shirt, hatchet, knife, and pocket-handkerchief.

*Plot No. 2.*—Ground in front of house extending down to the sea, bounded by road on eastern side, by Plot No. 3 on western. Purchased from Kupatele for hatchet, shirt, knife, and handkerchief.

*Plot No. 3.*—Ground on west of Kupatele's, bounded on west side by Elivara road extending to the sea at the bottom and to dwelling house at top. Bought of Putitai for a woman's dress, a hatchet, and knife.

*Plot No. 4.*—Ground on which Niue, teacher's, house stands, extending to the sea at bottom, to house and about yards beyond at back, extending as far as cocoanuts on east side and to road on west side. Bought of Touakavera for two shirts, two hatchets, and four pocket-handkerchiefs.

*Plot No. 5.*—Ground on west side of dwelling house extending nearly to top of hill, forward as far as Elivara road, and inland as far as boundary mark. Bought of Huakonia for a shirt, woman's dress, hatchet, and knife.

THOS. SUCKLING, Lieutenant-Commander, H.M.S. "Renard."  
 LESLIE C. STEWART, Sub-Lieutenant, H.M.S. "Renard."  
 S. MCFARLANE.  
 J. THURSTON, Master, s.s. "Ellengowan."  
 HENRY SMITHURST, Engineer, s.s. "Ellengowan."  
 RUATOKA, Rarotongan Teacher."

## APPENDIX D.

## Memorandum on Native Policy in Her Majesty's Protected Territory of New Guinea.

In compliance with your Excellency's wish, I have the honor to state as follows respecting the native policy and events in this Protectorate from June of last year to this date (October, 1886).

In the above period of sixteen months (for three of which—March, April, and May last—I was engaged on official duty with your Excellency in Australia) the late Special Commissioner spent three months (31st August to 29th November, 1885), in cruising in these waters, visiting various points, and collecting information as to the existing state of the country.

His untimely illness and death on the 2nd December prevented his writing a general report as he had intended, and the compilation and printing of his notes and memoranda were subsequently effected by his private Secretary, Mr. G. Seymour Fort. This account of the cruise of the s.s. "Governor Blackall" was published by the courtesy of the Government of Victoria in March last, and it has been read with interest, as I am aware, by your Excellency. It describes the villages visited, and other native matters with which Sir Peter Scratchley dealt.

There is no occasion for me to comment especially on the views expressed in the above report. The late Special Commissioner's opinions and projects regarding British New Guinea were avowedly of a tentative character, and some of those referring to a future native policy and control would, I believe, have been widely modified, if not abandoned, had he lived to gain a closer and larger experience of our aboriginal population.

To endeavour to frame and pursue such a policy, for instance, as that signified in the statement, "New Guinea must be governed for the natives and by the natives," would, I consider, be a costly and chimerical experiment in colonial organization, inevitably resulting in failure. It could not retard indefinitely the natural and progressive influences of civilization. Our aborigines are savages in the first stages of barbarism, swayed by intense and degrading superstitions which involve them in ceaseless intertribal feuds and bloodshed, and the first really important protection that the natives require in British New Guinea is from each other. From one end of our territory to the other a chronic state of intertribal hostility prevails, and I much doubt if a day passes in the year without a murder or massacre (often of women and children) taking place in some district. No real tribal discipline or organisation exists, and to "govern by the natives" is a sheer impossibility; but I propose to treat this point more fully hereafter.

I regret that there are also some other points in Mr. Fort's compilation with which my own views do not agree.

2. Mr. Deputy Commissioner Romilly visited this coast in the s.s. "Victoria" (17th June to 12th July, 1885), when the Queensland Government returned the islanders held to be kidnapped from our Eastern Archipelago. He returned to Queensland on the latter date, and accompanied the late Special Commissioner on the arrival of the latter here on the 28th August last. Compelled to leave again for the Australian coast in the middle of October, owing to severe fever, he has not since been in these waters.

Neither from the late Special Commissioner nor from Mr. Romilly (while Acting Special Commissioner for three months) did I receive any instructions or suggestions whatever as to a native policy or my own position in relation to the natives. Such measures as I was constrained, in the interests of peace and security to life and property, to adopt were undertaken with the gravest sense of responsibility for want of proper authority. It was so important for future administrative control, however, that the natives should at once begin to look towards a central authority for advice and friendly dictation, that I felt bound to interest myself and take action in several matters not, strictly speaking, within my powers. I was fortunate, nevertheless, in receiving the full approval of Sir Peter Scratchley for the opinions and actions which I brought to his notice.

3. On my arrival here, on the 17th June last year, in the s.s. "Victoria," I held a commission as Assistant Deputy Commissioner. The powers it conferred were limited to action upon instructions to be given from time to time by the late Special Commissioner. No discretionary legal or administrative authority was thus allowed, and the only instructions furnished to me were to stay at Port Moresby and make a local collection for the Indian and Colonial Exhibition.

Commission  
as Assistant  
Deputy Com-  
missioner,  
26th May, 1885.

These facts I did not think it expedient to make generally known, as I was the only British official representing to a certain extent Her Majesty's authority in the Protectorate.

Without embarking on any important or questionable step, however, I guided myself by the spirit and intention of the general instructions from Her Majesty's Secretary of State for the Colonies to the late Special Commissioner himself. They were similar to those of a later date received by your Excellency, and served in some measure to direct my relations with the natives. Certain previous experience of barbarous tribes in Canada and South Africa, likewise, I felt would enable me to begin the introduction of a native policy after acquiring proper local knowledge.

Two and a half months of this position passed, and then Sir Peter Scratchley arrived at the end of August. He expressed himself fully satisfied and pleased with what little had been done, and agreed in some suggestions for future measures. These were comparatively few, and merely verbal on my part, as I did not then feel assured on several points under my observation.

In addition to seeing what I could for myself, I gathered all the information obtainable from persons of any local experience, such as bêche-de-mer fishers, collectors, &c.; and I must express my obligation to all classes alike for the ready and courteous way in which numerous inquiries were met with, the access also kindly afforded to printed and other matter accumulated for more than ten years at the Mission, and similar facilities from Mr. A. Goldie, collector, explorer, resident, and trader of ten years' experience, who placed his notes, extracts, and time, &c., freely at my disposal. I gained a great deal of useful material for framing a future policy.

With the Rev. Mr. Lawes, the representative of this branch of the London Missionary Society, I was in close communication, as I have stated, for four and a half months, and learned much of his local experience and views with regard to the natives. For his considerate help on many points of interest and value I owe him sincere acknowledgments.

In September, a few days after the arrival of the "Governor Blackall," a further commission was handed to me by Sir Peter Scratchley, creating me a Deputy Commissioner for the portion of the the Western Pacific included in the Protectorate and the Solomon Islands. This Commission was subsequently recalled, owing to a presumable informality in its preparation. That sent in substitution only takes effect in this Protectorate, the Solomons Islands being excluded.

Commission as  
Deputy Commis-  
sioner for  
Western Pacific.

As

As your Excellency is aware, these commissions are limited to British subjects, and give no authority for dealing with cases in which foreigners—*i.e.*, Germans, Chinese, French escapees, &c., and alien natives, Malays, Polynesians, &c.—are included; yet all these are found on this coast.

Had I adhered, therefore, strictly to my increased but still utterly inadequate legal powers under the Western Pacific commission, much valuable time would have been lost in creating proper impressions of discipline and control in the minds of the natives, and those most intimately associated with them by marriage, *bêche-de-mer* fishing, &c.

According to John Stuart Mill, the "true criteria of good government are order and progress." To effect these objects will doubtless take some little time and trouble in this territory, but they are not impossible with firm and consistent management, and could not possibly be promoted by a policy of "masterly inactivity." Confusion would have arisen in the native mind also, since they were led to expect at the date of the protectorate (two years ago) a more decided influence over their conduct and affairs.

After several conversations with him, I received an assurance privately from the late Special Commissioner that I could count upon his support in the case of action I considered it desirable to take. Where I could do so conveniently, therefore, I encouraged the so-called chiefs to appeal to Government authority, and to regard the Resident here as the proper adviser and arbitrator in all difficulties and disputes.

On the departure of the late Special Commissioner from these waters on the 29th November, last year, I received a special warrant or supplementary commission from him, empowering me "to administer the affairs of British New Guinea" during his absence. I regarded this as conferring the fullest authority which he could delegate to act for the maintenance of law and order, and the promotion of civilisation and improvement in respect of all classes. This warrant is dated only four days before Sir P. H. Scratchley's death, after I had been for six months in the local service under his supervision, and I held it conveyed increased confidence in my conduct and views.

Such were the powers with which I was entrusted. I will now state, as briefly as I can, the chief events in which natives were concerned since my association with the Protectorate.

4. One of the first most valuable steps towards adjusting government relations with our natives was the return by the Queensland Government of more than 400 obtained from the Eastern Archipelago and mainland in 1883 and 1884 for the labour trade in that Colony.

At the time it was decided to return these men, Mr. Deputy Commissioner Romilly suffered from ill-health, and it seemed doubtful whether he could superintend, as an officer of the Protectorate, their return, and the compensation provided for relatives who had died in Queensland. It was held important that such an officer should be identified with the duty in order to increase confidence in local authority and its influence amongst the natives. Sir Peter Scratchley therefore proposed to send me in the s.s. "Victoria" to represent the Protectorate. Your Excellency has seen the late Special Commissioner's despatch and instructions to me on this subject, and as they were subsequently overruled I do not annex copies.

Mr. Romilly, having improved in health by the date of the departure of the "Victoria," undertook to accompany her, and reported upon her cruise on his return to Queensland in July. All papers relative to this voyage were printed, and, I believe, are in your possession.

I have already had the honor to draw your Excellency's attention to the fact that there are several New Guinea natives in Queensland, whose term of service expires shortly; and that there are probably a large number of cases of non-compensation for deceased natives. As this principle of compensation was not only admitted, but put in practice to a great extent, it is likely that aboriginals who have gone without a present, besides losing a relative, will be doubly incensed, and prove a dangerous element in the future, unless they realise that a firm and undeviating control is intended.

From records at command, I find that 648 natives have been recruited for the Queensland labour trade, and 404 returned on the voyage of the "Victoria." Not more than 30 of those remaining will probably be returned finally; thus 194 relatives of deceased islanders became entitled to compensation. The Queensland allowance for this object was exceedingly liberal, from a native point of view, and included the following articles and values, *viz.* :—

	£	s.	d.
1 axe	0	4	7
1 double blanket	0	9	0
12 yards turkey red	0	5	4
12 H.K.Fs'	0	3	3
2 hatchets	0	6	0
1 long knife	0	2	0
1 short do	0	1	6
2 lbs. tobacco	0	3	0
1 Water-proof bag	0	3	0
	£1	17	8

I am unaware of the exact number of the above "bundles of trade," as they were called, which were given away on the cruise, but I feel morally sure from reading the printed reports that not half of 194 were so presented.

It was, I venture to think, an unfortunate omission that all our natives were not returned here at the same time. The Queensland Government had strictly prohibited further "recruiting" in New Guinea and adjacent islands. All recruits from New Guinea were understood to have been regularly obtained in the first instance, and consistently with a fair and humane policy it was decided to replace them in their homes. The mortality, according to the report of the Commissioners, had already been great, and it was likely that considerable further loss by death would occur amongst those left behind. Nor would survivors finally be returned under the same favourable conditions. To return four-fifths of the number and leave one-fifth therefore looks like a failure to complete a public action otherwise most salutary to the native impressions in the Protectorate. I accompanied the s.s. "Victoria" to this place, landing at Port Moresby on the 17th of June last year.

Despatch, Sir P.  
H. Scratchley,  
25th May, 1885.  
Instructions,  
28th May, 1886.  
Queensland,  
Parliamentary  
Paper, 1885.  
Assistant  
Deputy  
Commissioner,  
10th Sept., 1886.

Notices Queens-  
land Govern-  
ment Gazette,  
1886.

5. A few days after my arrival the Rev. Mr. Lawes called my notice to a case of dispute and assault upon a native of Tatana, a village situated in the upper part of the harbour. The assault was by a Malay, a bêche-de-mer fisher. The latter urged theft of a piece of his boat-fittings, and that the native resisted its return when claimed.

The native explained that he found the piece of wood floating about and took possession, or it might have been lost by the tide. The Malay had been living for some time at the village, being married to one of the women, and he owned the only boat at the village. There was no doubt, therefore, that the native knew thoroughly well that he was appropriating the Malay's property.

I cautioned the native against interfering with anything which he had not bought or which had not been given to him, and I warned the Malay against taking the law into his own hands for the future, but to refer to Government authority.

This is a trifling incident in itself, but it illustrates a class of cases likely to become numerous on the coast. Hitherto petty thefts have been dealt with rather summarily by the wronged individual. Shooting pigs and pulling down native cottages have been the means resorted to by missionary teachers, as well as small traders on the coast, while there are also instances of the rifle being used in this district of Moresby for the same reasons.

6. From the 17th June to 31st October I was a guest at the Mission head-quarters here, and received great kindness and hospitality from the Rev. W. G. Lawes and Mrs. Lawes, and I thus had ample opportunities for studying the relations of this branch of the London Missionary Society with the natives, the class of South Sea Island teachers employed by them, and of forming an estimate of the civilizing and evangelising results alleged to have been achieved at their centre of influence and effort.

I also visited villages within a day's ride of the Mission Station, was present at some of the large hunting parties, and interested myself generally in the habits and customs of our aboriginal population.

At the end of July I accompanied the Rev. J. Chalmers on a trip in a whaleboat with a native crew to the sub-districts of Dora and Kabadi, touching at all the principal intermediate coast villages. I received a distinct impression from this journey—namely, that the influence of the Mission in checking intertribal robberies and feuds, even in their oldest sphere of action, Redscar Bay, has been greatly exaggerated, and that Government intervention was indispensable to effect any real and permanent reform.

The village of Manu Manu in Redscar Bay, at the mouth of Galley Reach, occupies a somewhat important, although most unhealthy, position. It was the first point at which an L.M.S. teacher (of this branch of the Mission) was placed in 1872, or fourteen years ago. Its people formerly owned and occupied another village, gardens, and a coconut grove 4 or 5 miles further to the west. A blood-feud with the neighbouring Kabadians compelled flight, and they squatted on the foul and miserable sandbank where they live nearly surrounded by dense and pestilential mangroves. The advantage in the present position is the water boundary of Galley Reach, which, as the Kabadians have no large canoes, affords security. Separated from their garden ground, which they are afraid to cultivate, they have led a wretched existence for some time past, eked out by thefts from the remnant of the Dora tribe next to them inland.

The latter are reduced to a few survivors, chiefly women and children, after a joint massacre a few years ago by the Manu Manu people and a number of Koitapuans, who tenant a strip of the shores to the eastward along Caution Bay.

We took one of the so-called chiefs, "Daira," from Manu Manu to Kabadi with us, and Mr. Chalmers did his best to "patch up a peace." Although, however, the Kabadians professed themselves quite ready for the restoration of the former good understanding, the Manu Manuans have never to this date felt enough confidence in them to return to their original position at Morabi.

I spent a day in walking through the Kabadi country, visiting the different villages and making acquaintance with their leading men or chiefs. Their gardens are fertile and the soil very easily tilled, being a rich friable brown loam. Amongst their banana plantations they seem to cultivate crotons and coleuses, etc. They possess a large breed of pigs, which seemed numerous, but are an inert group of natives. Complaints are made that they are too lazy to reap or sell the surplus produce from their prolific gardens, and from the number I saw lounging in hammocks hung below their huts I have no doubt the statements are true.

In the sub-district of Dora the people complained of the rifling of their gardens by Koitapuans of a coast village of Lea Lea, and we promised to touch there and make inquiries on our return journey. This was accordingly done a few days later, and a vigorous speech made to the Lea Leans by Mr. Chalmers, who speaks the Motuan language (understood for some distance on both sides of Port Moresby) with considerable fluency. It was explained to them that I was a Britani chief sent here to protect their rights, but not to allow thefts and murders, and that they would be punished if they continued to molest the Dorans. These unfortunates would have been exterminated within the last three or four years were it not that Mr. C. H. Page and his timber-cutting party of South Sea Islanders have ensured them protection.

On this expedition I made presents to the chiefs I met, and visited all the villages I could in the time at disposal.

On the 19th August, after my return to Port Moresby, the old chief Gaeta from Lea Lea came to me to explain away the complaints as to his people by Sisikao the chief of the Dorans. I promised, therefore, if Sisikao would forget what passed I would do the same on this occasion.

On the 24th August Daniel Rowan appeared before me to complain of an audacious robbery by natives of Contance Island, about 76 miles east of Port Moresby, where he had been collecting bêche-de-mer. A dispute arose as to the payment for a few fish brought by them for sale, and they then pinioned him and robbed him of a considerable quantity of "trade" on the spot. It is not unlikely that he would have been killed as well, but a Kerepunu woman who was associated with him vociferously warned them of "Man-o'-war." I took a written statement from the two witnesses and referred them to the late Special Commissioner, as I had no means at my command of dealing with the case.

28th August.—His Excellency the late Special Commissioner arrived in Port Moresby.

On the 1st September, Sir P. H. Scratchley received chiefs and leading men of local villages, made them each a small present, and advised them to refer to himself or myself in case of any difficulty. The Rev. Mr. Lawes acted as interpreter.

Assistant  
Deputy  
Commissioner.  
November, 1886.

8th September.—Agreeably to directions from the late Special Commissioner, conveyed in a minute of the 3rd instant, I accompanied Mr. George Hunter and Rualoka, the London Missionary Society's teacher—who has resided here since 1873, and is thoroughly familiar with the native language and customs—to settle the purchase of a site for a Government residence. As I have lately reported separately and fully on the acquisition of lands by the Government to date, it is not necessary to enlarge on this subject.

Feud between  
Kaile and Garia.

20th September.—The local Motuan chief, Boi Vagi, waited on the Special Commissioner with Mr. R. Hunter, and described to him the state of hostility existing between the coast village of Kaile and the hill village of Garia. Kaile village is built on piles on the fringing reef, and is thus tolerably well defended from attack by inland tribes unprovided with canoes, except at "low-water springs." The Kaile women, however, are obliged to resort to the mainland daily for supplies of fresh water and vegetables from gardens on the banks of a creek. In consequence of a former massacre in which Kaile was much, if not entirely, to blame, the Garia people had been stirred up to revenge, and were known to lurk about in the bush to kill any weak party or stragglers. Accordingly, about the 18th or 19th of August, three women of Kaile were surprised and speared in their gardens by Garia men. This, together with threats from Garia chiefs, received through an intermediate friendly village, Mangawarra, created great alarm, and the women would not visit their gardens without a large party of men or the L.M.S. teacher stationed at Kaile accompanying them with his gun. The Mission teacher resides in Garia village. The latter is on a commanding and rugged eminence, partly covered by forest growth and difficult of access.

This harassing attitude continued, and during September the Garia men again surprised a party from Kaile; but the latter, with the assistance of a friendly village, Vaboori, turned on the attacking party and killed them—six in all. The successful natives savagely mutilated the bodies, and the Garians were more incensed than ever. Their object has been for months past (according to New Guinea custom) to "get even"—*i.e.*, to obtain as many lives as have been taken by the Kaileans. It does not matter whose they are, and women and children are preferred because they are less able to defend themselves. A more cowardly, mean, and treacherous rascal than a local native intent on revenge, it would be hard, I believe, to find.

The danger to the weaker villages of Kaile and Vaboori claimed Sir Peter Scratchley's attention. The Garians had declared through Mangawarra that they would descend to the coast in strong force, kill everyone in Kaile, and burn down the village. His Excellency then sent a cutter, with Mr. R. Hunter and the local chief Boi Vagi on board, and left himself for Kaile on the 21st September. On the 23rd the cutter returned with Mr. Hunter, but Sir Peter continued his voyage to the eastward. He stopped at Kappa Kappa, and through Mission teachers of Kappa Kappa and Rigo endeavoured to impress upon the Garians the necessity for avoiding further bloodshed. They were very sullen, however. Only one minor chief came to the "palaver," and they took a peace offering, or "maino," virtually under protest.

By an unfortunate omission, on this occasion, the Garians, although warned off Kaile, were not cautioned as to Vaboori. On this flimsy pretext, therefore, a few days after Sir Peter had left Kappa Kappa, the Vaboorians were attacked, and, according to Mr. Hunter's subsequent report, "I found the village completely deserted, but the women, girls, and boys lately massacred were laid out on platforms about four or five feet high. I counted them—two middle-aged women, six young girls, and two boys between six and seven years old. I also saw the remains of twenty houses burned down."

On the 20th October the news of this massacre reached me, and on the following day I despatched Mr. Robert Hunter to the village of Tupusclei, near to Vaboori, to make inquiries and exercise any useful influence he could in restraining further bloodshed.

From his inquiries it seemed likely that Mr. George Hunter, who had had more experience among the inland people, might produce an effect by visiting the large hill village of Rigo, and he accordingly received instructions from me to proceed there on the 25th October.

The efforts of the Messrs. Hunter at this time were, on the whole, satisfactory; but in December the Garia people recommenced threats, and I was compelled to send Mr. R. Hunter again to Kaile. The Garians at this time wished to wipe out the rest of the Vaboori villagers, and were making preparations to do so.

Mr. Hunter once more succeeded in quieting the hostile feeling for the time, and frequently visited Kaile and the neighbouring villages, by my direction, afterwards. The Garia people still menaced Kaile, however. The latter almost ceased to cultivate their gardens, and were on the verge of starvation. On the 14th of June I had a deputation of chiefs and natives from Kaile asking for protection in cultivating their plantations, as they were all very hungry. I told them that I would once more warn the Garia people, and that they could go on making their gardens. If they were interfered with they were to let me know directly. The party left me then quite satisfied.

Matters went on without any interruption to mention, until Mr. G. Hunter reported on the 14th October that the Garia people had been down to the Kaile limits and returned to their village for a large feast. After this, they intended to descend in force, rob the gardens, kill the villagers, and burn down the village.

[Mr. Musgrave handed this unfinished report to me at Port Moresby on the 2nd December. Up to date I have not received the concluding portion.—J.D. 31st December, 1886.]

#### APPENDIX E.

The Colonial Office to Edward Schubert, Esquire.

Sir,

Dowling-street, 30 October, 1875.

I am directed by the Earl of Carnarvon to acknowledge the receipt of your letter of the 9th instant, transmitting the prospectus of a proposed association, to be styled "The New Guinea Colonizing Association," with a draft of proposed rules and regulations for the guidance of an expeditionary force, and requesting that this project may receive the moral support of Her Majesty's Government, and such legal recognition as the promoters conceive could be given to it by the enrolment of the expeditionary force under the Volunteer Act, and the appointment of certain members of it as Justices of the Peace for the Island of New Guinea.

2. His Lordship has attentively examined the scheme laid before him by you, and regrets that he is obliged to consider it one to which he can in no way give the approval which you seek. Even if the information at present possessed by any persons in this country were such as to afford any assurance, or even any confident expectation, that an expedition such as is projected would not result in commercial failure, in loss of health and life to its members, and in serious disturbances among the native tribes of the island (the probability of any of which consequences would impose a heavy responsibility on a Government which would lend it the weight of an official recommendation), it would be Lord Carnarvon's imperative duty to object very strongly to the leading features of the proposal, on public and constitutional grounds.

3. Even if New Guinea were a part of the Queen's dominions, it would be impossible to entertain the suggestion that a number of persons, brought together by the love of adventure or the desire of profit, should indiscriminately, and without a searching scrutiny into the personal fitness of each, be enrolled or commissioned as members of a military or quasi-military force, whose services within this island could be accepted by, and whose proceedings would be invested with the high sanction of Her Majesty. For service in an unknown country, abounding, as far as has been ascertained, in the gravest physical difficulties, and inhabited by a numerous, powerful, and warlike population, a force would need to be very differently constituted.

4. So, also, with regard to the appointment of magistrates, Her Majesty's Government could on no account accept, as suitable persons to discharge the duties of magistrate in any part of the Queen's Dominions, the unknown conditions of which demand experience and special attainments, such persons as a company might select as its leaders, chaplains, or medical officers.

5. His Lordship directs me to add that he would be glad if, consistently with his duty, he could conclude with this expression of his inability to give to the association that support and recognition which are desired, and leave the members of it to undertake, on their own responsibility, the risks of an enterprise which they appear to think likely to prove remunerative. The position, however, in which Her Majesty's Government now stand with regard to New Guinea is not such as to leave them free to sanction, even tacitly, the acquisition of land within the island by British subject.

6. As you are no doubt aware, the Governments of the Australian Colonies have addressed to Her Majesty's Government strong and formal representations in favour of the annexation of New Guinea by this country. Those representations are now being carefully considered, and, pending such consideration, it is not open to any unauthorized and independent association of Englishmen to take possession of, or to purport to acquire from the savages of the island that land with respect to the acquisition of which, on behalf of her subjects generally, the Queen is now being advised.

7. In the prospectus it is suggested that the association should purchase land from the natives, but in the rules and regulations there is no mention of purchase; the not unreasonable inference from which seems to be that it is now proposed to take by force the very large tracts of land required in order to make a grant of 4 (in some cases 5) square miles to each person joining the expedition. There is no evidence whatever respecting the power of the natives to enter into contracts which would be intelligible to them or binding upon them, or of their willingness to allow private settlers to occupy their country. But if there were no objections from the native point of view to so extensive an appropriation of territory, it would be impossible that any such acquisitions, or ostensible acquisitions, of land could be sanctioned and confirmed in the event of the territory hereafter becoming British. It is clear that, without the funds arising from the sale and lease of lands, it would be impossible to provide for the government of the country; and any persons who may now settle in the country, knowing that Her Majesty's Government is considering the question of annexing it, must distinctly understand that no acquisitions of land made previous to a decision on this subject can be recognised to the prejudice of the Crown.

8. With reference to the concluding paragraph of your letter, I am desired by Lord Carnarvon to point out to you that although, as has already been observed, her Majesty's Government could not permit the exercise of magisterial functions by persons connected with the expedition, there exists, under the provisions of "The Pacific Islanders Protection Act, 1875," a sufficient means of preventing and punishing abuses or outrages committed by British subjects upon the natives of New Guinea.

I am, &c.,

W. R. MALCOLM.

#### APPENDIX F.

##### No. 1.

Dear Mr. Lawes,

Residency, Port Morseby, 7 July, 1886.

It is desirable, I think, that I should state to you in writing some of the points of our conversation yesterday afternoon, in order that we may the more clearly understand the aspects in which we mutually regard the acquisition of land from the New Guinea natives.

2. Finding it necessary to set apart a portion of ground for the interment of the dead, I proceeded in the company of yourself, Mr. Musgrave, and Dr. Clarkson, to select a suitable site. We chose an area estimated at about 4 acres, in a valley a short distance from the Mission Station. The next step will be to ascertain the owners of the ground. We shall have no difficulty, I presume, in doing this. I propose then to offer them a fair price in accordance with prices previously given. It is possible that the owners may refuse to sell, as has been done in the case of some portions of land in the vicinity of the Government buildings. In that event, the land being required for public purposes, I propose to nominate yourself and Mr. Goldie as assessors of its value; to pay that value, when adjudicated, to the owners; and to occupy the ground by enclosing it with a substantial fence. Regulations will then be issued for the interment of the dead. The practice of the natives in this respect is so defective, and so pregnant with danger to all who live in the vicinity of the village, that I am anxious as soon as possible to effect a change in this respect.

3. In reference to the further acquisition of land for the purpose of settlement, and in accordance with my instructions, it will be necessary that I should, on behalf of Her Majesty's Government in this Protectorate, acquire land from time to time from the natives, and in doing so I shall hope to make the most careful provision for their interests in the future. I feel bound, however, to add that, having due regard to the interests of Her Majesty's subjects who may settle in New Guinea when the contemplated sovereignty is proclaimed, it will be necessary to survey and set apart considerable areas of land, the acquisition of such land from the natives being made a matter either of treaty or purchase, or by such other means as may be approved of by the representatives of Her Majesty's authority.



4. It is the more necessary that I should make this statement to you, because, if I am not mistaken, I gather from the expressions of your opinion to me yesterday that you would regard any attempt made in the form of a settlement by the survey and sale of land as the first step towards an infraction of the proclamation made by Commodore Erskine on the 6th November, 1884. I cannot regard it as such, and it is my duty to inform you accordingly.

I am, &amp;c.,

JOHN DOUGLAS.

No. 2.

Dear Mr. Douglas,

Mission House, 7 July, 1886.

I beg to acknowledge the receipt of your letter of this morning *re* land purchases, and thank you for so kindly stating to me your views on the subject. The accompanying letter I had written previous to the receipt of yours; and as it treats only on the subject at issue I take the liberty of sending it, accompanied by a few words of more direct reply to your courteous letter.

The purchase of the land selected for a cemetery would, I think, be justified even if the owners object; because it is directly for the benefit of the natives, and not to be transferred to anyone else. I do, however, think that to compel a native to sell land which he objects to part with would be a direct contravention of the terms on which the Protectorate was proclaimed and accepted by the people on the 6th November, 1884.

I was the translator of the documents into the language, and the interpreter in this and several other dialects. Every line was gone over by the Commodore and myself with Mr. Chalmers, that we might explain it thoroughly to the people. No intimation was given either that Her Majesty would require them to part with large tracts of land to the Government, nor yet that a large influx of white men was likely to spread over the land. On the contrary, they were led to expect that the Protectorate would save them from these. If the case had been put to them as it now appears, I don't think the natives would have accepted the Protectorate.

You will remember, sir, the chiefs this morning said the people were afraid of a number of white men coming.

I am sorry that we should differ in our views on this subject. Practically, I do not think we are far apart. I need not assure your Excellency that I do not wish to see the white man excluded, even if it were possible. I am only anxious that the confidence of the natives should not be shaken, and that the inevitable contact of the races should be for their mutual advantage. In this I know we are at one.

I am, &amp;c.,

W. G. LAWES.

No. 3.

Mission House, Port Moresby, 7 July, 1886.

Sir,

In the conversation which I had with your Excellency yesterday on the land question, I fear I may not have made sufficiently clear to you one or two points to which I attach great importance. The scheme, as I understand it, for the acquisition of land sufficient for the demands of the large number expected, implies compulsory purchase where it may be thought necessary, always reserving a certain area for the indigenes of the soil. For if the acquisition of the land is so essential, I cannot suppose that the plans of the Government would be thwarted by the unwillingness of a few natives to sell their lands. If the proclamation of sovereignty will involve such acquisition of land, then it seems to me that the Government will begin by breaking faith with the people, and the assurance of Her Majesty will be of no more value than the word of a "beach-comber."

The natives were solemnly told, with all the emphasis which a grand naval demonstration could give to the assurance, "Your lands will be secured to you." The whole tenor, again, of both proclamation and address, was to impress upon the natives the belief that no large influx of foreigners would be permitted, and only those allowed to reside in the country for whose personal good behaviour Her Majesty would be responsible.

If thousands, or even hundreds, come to New Guinea, what test can any Government employ to distinguish between the evil and well disposed? "Evil-disposed men will not be allowed to occupy your land" (Commodore's address). If it was the intention of the Imperial Government to throw open the country for settlement, I think the people should have been told of that intention, that they might have had the opportunity of protesting and objecting.

A New Guinean may, in our children's time, complain of deceit and treachery and say, "The first official document printed in our language bore the Queen's name, and assured us that our lands would be secured to us, and before the paper had rotted Her Majesty's Government acquired our lands from us."

I fail to see how the Australian Colonies can utter one word of complaint, when combined Australia, from the Convention in Sydney, advised the Imperial Government that no acquisition of land should be permitted except through the Crown; then *only for missionary or trading purposes*. I go no further, sir, than the Australian Convention went, and only recommend that the resolution be adhered to.

I had the honour of submitting a letter expressing my views on this subject to the late Sir Peter Scratchley, who expressed his cordial approval, but feared they would be very unpalatable to Australia. The letter appeared in the *Times* of 12th February last. If your Excellency has not seen it, and would like to do so, I shall be happy to send it up for your perusal.

In conclusion may I say that I quite believe the commingling of the two races to be possible, and for their mutual advantage, but it must be gradual and by degrees: a stream will fertilise, but a flood will devastate.

I have, &amp;c.,

W. G. LAWES.

To the Honorable John Douglas, C.M.G.,

Special Commissioner for British New Guinea.

No. 4.

Dear Mr. Lawes,

Residency, Port Moresby, 8 July, 1886.

I have received your letters of the 7th instant, and have to thank you for so clearly stating your case.

The matter is one of such importance that I shall certainly submit the correspondence to Her Majesty's Secretary of State for the Colonies.

I have, &amp;c.,

JOHN DOUGLAS.

No. 5.

The Special Commissioner to Mr. Assistant Deputy Commissioner Musgrave.

8 July, 1886.

MR. MUSGRAVE will please to state his views on Mr. Lawes's letters, especially in connection with the existing tribal relationships in which he has lately acquired some experience.

J. DOUGLAS.

No.

Memo. respecting Letters from Rev. W. G. Lawes on 7th July, 1886.

Government Bungalow, 10 July, 1886.

I HAVE the honor to state that I have read the above-mentioned letters with close attention, and now return them to your Excellency.

It is quite impossible for me, however, to accept the interpretation of Mr. Lawes of the views or position assumed by the Imperial Government, or of the pledges given by its representatives at the time of the proclamation of the Protectorate in 1884.

All official documents relative to the occasion are, so far as I am aware, published in the Parliamentary Papers noted in the margin, and I can find no remarks recorded from Commodore Erskine or his deputies which even implied that this country (*i.e.*, British New Guinea) should not become a field for settlement in the future, nor can I discover any hint, on the part of the Imperial Government or its representatives, of the idea that the territory should be held as an almost unbroken native reserve upon which only missionaries and traders are to be allowed a footing—this state of things apparently to last for an indefinite period. The Imperial Government alone had power in regard to the affairs of British New Guinea, and I cannot find any trace of such a policy, either implied or expressed, before the date of the proclamation or afterwards. If Mr. Lawes or Mr. Chalmers conveyed such an impression to the coast natives of the S.E. Peninsula\* of British New Guinea, it seems to me, on existing evidence, that they were neither officially authorised to do so nor in any way justified in so doing. Whatever personal reluctance to settlement of the Protectorate may be felt by Mr. Lawes and Mr. Chalmers, they had no right, if they have done so, to use their position of trust as interpreters to give a stamp of official approval to their individual views, however intense these may be and are believed to be. Mr. Lawes writes that “no intimation was given either that Her Majesty would require them (the natives) to part with large tracts of land to the Government, nor yet that a large influx of white men was likely to spread over the land.” This, although negative evidence, is very likely to be correct; on the other hand, I cannot detect that any intimation was given by the Commodore or his deputies that lands *might* not be so wanted, nor that a large influx of white men *might* not be attracted hither by gold or other objects. No such promises could have been reasonably given by any Government. They appear also in direct opposition to the original line of policy laid down in a letter from the Colonial Office to which I have previously had occasion to invite your Excellency’s attention. There can be no doubt, from this important document, of the original views of Her Majesty’s Government, which contemplate the acquisition from the natives and the sale and lease of local lands by the local Administration. The paragraph to which I refer is as follows:—

“There is no evidence whatever of the power of the natives to enter into contracts which would be intelligible to them or binding upon them, or of their willingness to allow private settlers to occupy their country. But if there were no objections from the native point of view to so extensive an appropriation of territory, it would be impossible that any acquisitions, or ostensible acquisitions, of land could be sanctioned and confirmed in the event of the territory hereafter becoming British. It is clear that without the funds arising from the sale and lease of lands it would be impossible to provide for the government of the country; and any persons who may now settle in the country, knowing that Her Majesty’s Government is considering the question of annexing it, must distinctly understand that no acquisition of land made previous to a decision on this subject can be recognised to the prejudice of the Crown.”

I am unaware of any departure from the policy proposed in the despatch to Mr. Schubert, while recent communications sanction the belief that the inevitable course of settlement which has begun to take place here is expected by Her Majesty’s Government, and is about to be arranged for accordingly on a judicious and humane basis for all classes. As to the pledge quoted by Mr. Lawes—“Your lands shall be secured to you”—unless it be meaningless, it must involve the adoption of some system by which quiet possession shall be ensured to the natives under authority. This in turn necessarily involves the exercise of discretionary power on the part of that authority in organising such a mode and in dealing generally with territorial questions. I need not dwell on the insecurity of land tenure and of the products of the soil among the aborigines themselves of this territory; constantly recurring intertribal feuds disturb the limits of districts, in some cases depopulating them altogether. Besides such lawless acquisitions of the land by native tribes, there is an intermediate harassing state of affairs where a considerable proportion of growing crops are stolen from time to time by stronger neighbours. Thefts of this kind are far from infrequent even here in Port Moresby, among the Motuan people, within the longest settled sphere of Mission influence, and under the wing of the Mission head-quarters.

There are known to be large tracts and spaces of country also unoccupied, and apparently unclaimed by any indigenous population. Under these circumstances it is plain that the phrase, “Your lands will be secured to you,” cannot possibly imply the rigid preservation of agrarian discord and pillage in one part of the territory, and the exclusion of settlers from waste portions of the other.

The local Government will therefore have to interfere, as in all colonies and communities under British rule, subject to the approval of the Colonial Office, to determine and adjust the territorial relations existing between various tribes, in order that certain lands and their products may be secured to them in their true sense. And it is equally impossible to believe that a paternal Government could suffer the plans for the general good to be thwarted through the prejudice and obstinacy of a tribe or some of its members, influenced very possibly by a “beach-comber” who has married one of their women, or by any other equally obstructive person who has gained undue ascendancy over them. The fact is that all the public actions and expressions of those charged with establishing the Protectorate show that they simply and solely intended to guard the aborigines against unscrupulous adventurers. In this connection Commodore Erskine left the Regulation 4—“No settlement or acquisition of land is on any account to be permitted.” Why does Mr. Lawes not quote this statement? Purely, I believe, because he is aware that it could not possibly be construed as applying to a local Government in any literal sense. If he wishes, however, to treat Regulation No. 4 in this inflexible spirit, it would be satisfactory to know whether the Mission have been careful, in obtaining their stores since November, 1884, to abide by the stringent Regulations Nos. 2 and 3, in respect of the landing of spirituous liquors, firearms, gunpowder, &c. It is noteworthy that the Rev. Mr. McFarlane holds diametrically opposite views on the subject of settlement to those of Mr. Lawes, and his opinion is entitled to more weight. He founded the Mission in British New Guinea, and has resided here considerably longer. His knowledge of the portions of Eastern New Guinea and the islands is co-extensive with that of Mr. Lawes, while he has travelled much

Parliamentary Papers C. 4273. Feb., 1885.

\* No. notification at all, I believe, was made to the natives of the N.E. Coast, in the S.E. Islands, or west of the Aird River, as to the Protectorate or directly to any inland tribes.

Parliamentary Papers C. 1566. No. 24, 1. 56; also Appendix E.

in



Extracts.  
Lecture of Rev.  
Mr. McFarlane

in the western division, with which part of the territory Mr. Lawes is unfamiliar. In a lecture given in Brisbane in January last, prior to his final retirement from mission work, he summarises his experience gained during 15 years, and encourages strongly the idea of settlement and the development of local natural resources. I append copies of some interesting extracts from the lecture as reported in the *Brisbane Courier* of the 30th January last. The expression, "He would like to see the country thrown open to-morrow," is remarkable, as signifying the abolition of all checks upon the indiscriminate intercourse between aliens and indigenes, and appears to discredit the system of permits to aliens, which the late Special Commissioner introduced as a wise temporary measure of precaution in the interests of both foreigners and aborigines.

Finally, in respect of the acquisition of lands in the district of Port Moresby, to which this correspondence more particularly applies. As the friendly dictation or compulsion of a paternal Government towards its "wards of the Crown" ought not easily to be confounded with the callous and selfish greed and action of the "evil-disposed persons" mentioned in the Queen's proclamation, I cannot see the fairness or the force of the objections of Mr. Lawes to what he defines as "compulsory sale," more especially as he knows that other lands of equal value are in the hands of the local Government for substitution, in lieu of a usual payment in "trade," should the native landowners, whose property is in question, express a preference in the matter. What Mr. Lawes describes as a "compulsory sale" is precisely what it is now proposed to do in Ireland, in order to set agrarian matters on a stable and equitable basis. Sacrifice of individual interests on a reasonably assessed value for public purposes and the general good is an admitted principle, as I understand it, in all forms of administration, and I see no hardship in applying it to British New Guinea, either in the case of European immigrants or a barbarous population who could not understand or forecast the advantages they must necessarily derive from contact with higher grades of civilisation and various public improvements. Mr. Lawes, indeed, admits the principle in the case of land urgently required for a cemetery, nor would he probably urge a serious protest against a road being provided to that point, whether or not the natives suffered some temporary dissatisfaction on the subject.

I have dealt thus at length with the subject, because I desire that your Excellency should not think I have avoided any difficulty which presents itself. This Protectorate, I need hardly say, is no exceptional point of the globe worthy to be jealously guarded in its primitive state. It is no scene where an innocent and united people dwell in condition of Arcadian simplicity and peace and plenty, which should be sympathised with and respected. I believe the natives to be susceptible of improvement, but they have all the vices and customs of savages, and will require an extraordinary union of firmness and consideration in their management. Perpetual murders and intertribal butcheries of the most revolting nature, arising from frivolous or superstitious pretences, are of almost daily occurrence within the Protectorate. Were Mr. Lawes and his teachers all disarmed to-morrow, and Her Majesty's ships withdrawn from the coast for a year or two, it is hardly doubtful, to my mind, what the fate of the Mission would be, even after its 15 years of association with the coast tribes at various points.

A. MUSGRAVE, Junr.,  
Assistant Deputy Commissioner.

Extracts from Lecture by the Rev. S. McFarlane, 29th January, 1886.

\* \* \* \* \*  
"He would tell them something that they did not write about at the time, and that was that the missionaries discovered gold there\* in 1875. He was not such a fool as to write about the matter, or there would have been a rush of people there, many of whom would probably have lost their lives, and the gold-field might have been 500 miles distant. He knew a place where a nugget had been picked up on the beach, but he did not know where it came from. Gold was the most widely distributed of all metals, and the fact of their finding grains of gold did not prove that the field from which it came was within hundreds of miles. \* \* \* \* \*

\* On the Maicassa  
River

"If they wanted land they would have to arrange with the natives for it, and in the vicinity of Port Moresby they would frequently find as many as twenty different natives laying claim to one piece of land. He predicted that, as far as the Peninsula itself was concerned, the land question would in the future prove to be a difficult one. *In the interior, however, they might take up as much land as they liked.* Speaking of the question of the government of New Guinea, he said it could even now be made self-supporting. They had for products pearl-shell, bêche-de-mer, and cedar, and a royalty on these would recoup the cost of governing the island. \* \* \* \* \*

"As for produce, there was such land as he had described. They had about fifty teachers all along the coast, and these had informed him of the large quantities of cedar grown in that portion of the island. He would not be much surprised to find that if gold was ever discovered in New Guinea it would be on the Gulf. There was in that vicinity a spot, about two days' journey from Katou, which had never yet been visited by white men, in which it was possible there might be gold. There was no doubt plenty of mineral wealth in New Guinea, but apart from that there was no doubt the Government could be supported by revenue in the manner mentioned. \* \* \* \* \*

"Mr. McFarlane, in returning thanks, said there was only one thing he could add. There was a feeling abroad that the missionaries would like to keep the island and its belongings to themselves, but such was not the case. He would like to see New Guinea thrown open to-morrow, but he would make it hot for the murderers, black or white, if he were Governor of the country." \* \* \* \* \*  
—From *Brisbane Courier*, 30th January, 1886.

## APPENDIX G.

### No. 1.

Dear Mr. Lawes,

"Governor Cairns," Hall Sound, 3 August, 1886.

We picked up Father Vergus on board a small lugger, on his way from Yule Island to Port Moresby, in order to see me. He returned with me to Yule Island, which I visited yesterday, and his intention is to go on to Port Moresby in order to see you, and in order to come to some understanding with you as to the respective spheres of work which it may be found convenient to adopt as regards himself and yourself as representing, respectively, the mission of the Order of the Sacred Heart and the London Missionary Society.

In this I hope that he will be successful, as it is manifestly undesirable that you should both occupy the same ground, and thus come into unnecessary rivalry where there is such a wide scope for usefulness in humanising and Christianising the natives.

A wholesome rule to adopt would be that the Catholic and Protestant Missions should occupy stations not too closely approximate to one another.

As regards Yule Island, I understand the case to stand thus:—The London Missionary Society undoubtedly occupied Yule Island first; they, however, abandoned it, and formed stations on the mainland. There was no station on the island, and there had been no station on it for some years—four at least, I am informed—when it was occupied on behalf of the Catholic Mission in June, 1885, by Father Vergus and two lay brothers. They were stricken with fever, and in August following they returned to Thursday Island in order to recruit. They handed over the buildings they had erected to the natives, telling them to take care of them during their temporary absence. They returned in January of this year, and they then found that a teacher of the London Missionary Society had been placed on the island. Since then they have erected some buildings, and a house is in course of erection for your teacher, though I understand that he is still resident on the mainland. This, in broad outline, is the present state of affairs.

There can be no doubt that there was, and that there is, a *bonâ fide* intention to occupy the island for mission purposes by the Catholic order, and I cannot but think that it had, for such purposes, been abandoned by the London Missionary Society.

Under such circumstances it seems to me to be a matter of regret that it should now be occupied by the London Missionary Society.

Could you not come to some understanding with one another that you should not occupy stations in too close proximity to one another? And could not I help you to arrive at such a conclusion? Where there is such a wide field there certainly ought not to be any great difficulty in coming to some friendly conclusion so as to avoid the possible contingency of unprofitable rivalry in the winning over of these wild creatures of nature to the gracious influences which you both seek to impart.

I have no more doubt of the genuine desire of the Catholic Mission to do this than I have that it is equally the aim of your great Society. You are both equally engaged in the same noble endeavour, and I should be loath indeed to suppose that there should be any unworthy rivalry, or indeed any waste of strength in bringing to bear the principles of Christianity on the benighted race which occupies this magnificent country.

Protestants and Catholics alike are fighting under the same banner. They are both of them willing to lay down their lives in the same cause, and I am extremely anxious that, so far as my influence is concerned, it should be exercised in the direction of securing a good understanding between yourself as representing the London Missionary Society, and Father Vergus as representing the mission of the Order of the Sacred Heart. The shores of New Guinea ought, I feel, to be as open to them as they are to you.

There have sometimes, in matters of this kind, been contentions, as we know, which did not redound to the credit of those most intimately concerned. It will be my duty, in the position which I at present occupy, to see that no occasion for unnecessary differences should arise, and it is in this hope that I now address you. I have requested Mr. Musgrave to call on you, and to advance by every means in his power the friendly understanding which I hope will be arrived at.

The Rev. W. G. Lawes.

I am, &c.,

JOHN DOUGLAS.

No. 2.

Dear Mr. Douglas,

Port Moresby, 6 August, 1886.

I thank you for your letter of the 3rd, brought by the Rev. Father Verjus, and delivered to me yesterday by Mr. Musgrave. It is a very clear expression of the views which I and my colleagues hold respecting the relations of the two missions. There is not a sentiment in it at variance with my own ideas on the subject. The rule you suggest I accept cordially without any hesitation; it is wise and just, and the only one that will prevent complications and waste of strength.

But a rule of this kind to be effective must be accepted by both parties. In the very friendly conference I had to-day with Father Verjus, I found that their orders from Rome override every rule. I contended that their occupation of Yule Island was a thorough infringement of the rule you suggest for our guidance; that it was much too close to our station at Delena; that the people being one and the same, speaking the same language, coming and going constantly, living sometimes at Delena and sometimes at Yule Island, it was like occupying part of the same village; and that wherever such close proximity exists there is a danger of the evils you deprecate. To this the Father replied that their orders from Rome to occupy Yule Island were definite and explicit, and that they must under any circumstances obey them. That being the case, discussion is useless, and no rule, however good and wise, can be binding. I am quite sure no one who is acquainted with the history of the case can question the fact that the R.C. Station, just opposite Henere's house at Delena, is far too close for peace and comfort.

But while they state the impossibility of even considering the question of removal from Yule, they ask us to remove our teacher from Yule Island.

I think you are aware, sir, that the directors of our Society leave the details of work and the entire management of the Mission to the resident missionaries, who form a committee. The directors do not impose upon us any orders or instructions that may fetter us in the slightest degree. But at the present time I am quite alone, and I could not take upon myself the responsibility of such an important step without first consulting my colleague, who is in England, and the directors of our Society.

At the same time the request seems to me unfair and unreasonable. We do not consider that Yule Island has been abandoned by our Mission. The information you have received respecting the history of our connection with Yule Island is quite correct, but not quite complete. Will you allow me, sir, to supply the missing link?

After the removal of our teachers in 1876, we had no means of re-occupying it until 1882. In 1881, my colleague, Mr. Chalmers, visited the whole of that district to select sites for houses for teachers who were expected early in 1882. He found Yule Island was deserted by the people; that the chief, Lavao, and many of the people had gone to live at Delena. He put up the teacher's house there, and a few months later Mr. Chalmers, Mrs. Lawes, and myself went to Delena and stayed some time. We visited Yule Island, but with the exception of one old man named Rabiei and his family it was uninhabited.

uninhabited. In 1882, Henere came and we placed him at Delena. He was the Yule Island teacher, and would have been placed there if there had been any people left to work among. Rabiei was hurt that they should be neglected. He had been very kind to the first teachers. We promised him that when the people came back to Yule he should have a teacher. I have never been to Delena since, but the old man has come across to know when he was to have a teacher. The island remained uninhabited until the end of 1884 or early in 1885, when the people began to come back to the island. In March, 1885, I wrote on behalf of the Mission for the teacher who is now appointed to Yule, and some time in the course of that year the wood was cut for the teacher's house. It was in fulfilment of an oft-repeated *bona fide* promise. The people gladly built the house, and when I took Ratu the other day they received him most cordially. They told me that they had not quite finished the house, because they were afraid we should deceive them and not keep our promise.

We look upon Yule Island and Delena as being most intimately connected. The chief and owner of the island, whose name it bears, is one of our people, a baptised Christian. The majority of the people at Delena may return to Yule Island at any time. The connection is much closer than between Jane Island, here in Fairfax Harbour, and the village of Port Moresby.

Our Roman Catholic friends at Yule are building their house on our piles; they owe the safety and peacefulness of their lives to our Mission, which Father Verjus frankly admitted. I can but think that if Father Navarre had been acquainted with all the facts of the case his sense of honor would have prevented his occupying Yule Island until he had represented the matter to the authorities at Rome. I expressed to Father Verjus my regret that the interview which he has sought now was not held before they occupied Yule Island.

We recognise fully the right of the Roman Catholic brethren to reside on Yule Island if they deem it honorable and right, and should not think, sir, of appealing to you on the subject or making any complaint whatever.

Pending an answer from England on the subject, I do not think there is any fear of complication. I have given the strictest injunctions to the teachers to avoid everything that may be a cause of offence, and the relations between myself and Father Verjus are quite friendly. Thanking you for the interest you have taken in the matter, and for the suggestions so kindly given.

The Honorable J. Douglas, C.M.G., Thursday Island.

I am, &c.,  
W. G. LAWES.

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#### APPENDIX H.

##### No. 1.—FORM OF CONDITIONS.

###### *British New Guinea.*

Memorandum of Conditions under which permission is granted to \_\_\_\_\_ to proceed to New Guinea for the purpose of \_\_\_\_\_

1. I undertake faithfully to inform Her Majesty's Special Commissioner, or such public officer as may be specified by him, as to my proceedings at all times within the limits of British New Guinea; to conduct my operations entirely at my own risk, and on the understanding that neither Her Majesty's Special Commissioner nor any public officer of British New Guinea assumes any responsibility whatever, except in the case of official intervention which may be considered necessary.

2. I agree to abide by "*The Arms Regulations Act of 1884*," and all other Regulations now in force in the Protected Territory of British New Guinea, as well as all such Regulations as may be passed from time to time, and to pay to Her Majesty's Special Commissioner such license fees, duties, &c., as may hereafter be levied from time to time within the limits of British New Guinea.

This permission is only to apply to the above stated object, viz. :—

and subject to the fair treatment and payment of the natives in respect to the same.

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##### No. 2.—FORM OF PERMIT.

###### *British New Guinea.*

Permission is herewith granted to \_\_\_\_\_ to \_\_\_\_\_ in the District of \_\_\_\_\_, in British New Guinea, in accordance with the conditions agreed to by him.

Her Majesty's Special Commissioner reserves to himself the right to cancel this permission, and to call upon the said \_\_\_\_\_ to leave the territory, should he or his agents at any time perform any act which the Special Commissioner may consider detrimental to the maintenance of good order and government within the limits thereof.

Special Commissioner.

## APPENDIX IA.

## Protectorate of British New Guinea.

STATEMENT showing the total Receipts and Expenditure from the 1st of March, 1886, to the 1st of June, 1886.

		<i>Dr.</i>		£ s. d.		£ s. d.	
To Grants in aid for twelve months, ending the 31st May, 1886, viz. :—							
38	Western Australia .....	(a)	323	13	6		
39	New South Wales .....		4,084	14	4		
40	Victoria .....		4,693	8	8		
42	South Australia .....		1,524	11	7		
43	Queensland .....	(b)	826	7	6		
44	Tasmania .....	(c)	632	5	0		
						12,085	0 7
26	To proceeds of sale of stores—						
	Sale of boat, stores, &c. ....		159	18	9		
						159	18 9
						12,244	19 4
		<i>Cr.</i>					
By Balance from last Statement .....						2,349	2 10
By Establishments—							
Salaries, fixed—							
2	Special Commissioner.....		625	0	0		
3	Deputy Commissioner .....		16	13	4		
5	Assistant Deputy Commissioner .....		175	0	0		
6	Accountant .....		50	0	0		
						866	13 4
Allowances—							
48	Travelling expenses of Commissioner and Staff, &c. ....		275	17	0		
						275	17 0
						1,142	10 4
By Services (exclusive of establishments)—							
Steamer "Governor Blackall"—							
25	Charter money .....		175	0	0		
26	Restoration .....		500	0	0		
						675	0 0
Schooner "Governor Cairns"—							
52	Stores .....		315	1	0		
53	Clothing .....		23	18	10		
50	Wages of master and crew .....		34	5	0		
58	Incidentals .....		4	10	10		
						377	15 8
Contingent expenditure—							
17	Clerical assistance .....		10	0	0		
22	Arms and ammunition .....		84	6	2		
49	Cablegrams, &c., &c. ....		46	11	8		
?	Gratuity to G. S. Fort .....		30	11	5		
51	Incidental expenses .....		73	16	6		
						245	5 9
						1,298	1 5
By Balance .....						4,789	14 7
						7,455	4 9
						12,244	19 4

NOTES.—(a) Two years' contribution. (b) After allowing for an over-payment of £336 16s. 3d. in 1885. (c) Allowing for a further contribution of £30 6s. 2d. received in June, Tasmania has actually over-contributed the sum of £1 18s. 10d.

Cooktown, 29th September, 1886.

JOHN DOUGLAS,  
Special Commissioner.

## CERTIFICATE OF AUDIT.

I hereby certify that I have examined the accounts of the Protectorate of British New Guinea for the period between the 1st March and the 31st May, 1886—amounting on the Credit side (including the sum of £2,349 2s. 10d., balance brought forward) to £4,789 14s. 7d., and on the Debit side to £12,244 19s. 4d., and find—

1. That all sums received have been duly brought to account, and that the several payments made have been correctly computed, and are supported by proper vouchers.
2. That, assuming the population, as ascertained by the census of 1881, to be the basis of assessment, each of the several colonies (with the exception of Fiji) has contributed its full quota. The contribution of New Zealand, however—viz., 2,668 18s. 9d.—and a balance of £30 6s. 2d. paid by Tasmania, did not reach the bank until July and June last respectively, and are therefore not included in the present account. Fiji has not contributed; Tasmania has overpaid £1 18s. 10d.
3. That, in order to enable the Assistant Deputy Commissioner at Port Moresby to make payments in New Guinea without unnecessary delay, a cash credit has been established in his favour with the Queensland National Bank at Brisbane. Accounts and vouchers in support of cheques drawn against this credit should be rendered at least once a month, so as to enable the necessary adjustment entries to be regularly and promptly made in the Commissioner's books. No such entries are, however, included in the three months' accounts now under examination, whilst the bank pass-book shows that considerable sums have been drawn by the Assistant Deputy Commissioner.
4. That, in order to comply with the terms of a despatch from Lord Derby, dated the 9th May, 1884, the financial year of New Guinea has been recently altered, and made to terminate on the 1st instead of the 30th June. The 30th June is, I think, a more convenient period for the termination of the financial year; and as the majority of the Colonies consider that the payments made by them are to the 30th June, 1886, complications are likely to arise if the recent change of date is adhered to.

Department of Audit, Queensland,  
Brisbane, 16th November, 1886.W. L. G. DREW,  
Auditor-General.



## APPENDIX IB—continued.

## Protectorate of British New Guinea—continued.

STATEMENT showing the total Receipts and Expenditure from the 1st June to the 30th November, 1886—continued.

		£	s.	d.	£	s.	d.	£	s.	d.
Ledger	Brought forward.....				6,903	12	11	1,963	13	0
Folio	By Services (exclusive of establishments)—continued.									
	General Contingent Expenditure—									
72	Provisions and Trade.....	886	1	1						
65	Audit Fee.....	50	0	0						
61	Medical attendance .....	54	13	0						
51	Incidental expenditure .....	157	6	2						
49	Cablegrams, &c. ....	35	15	2						
34	Naturalist's salary from 1st November, 1885, to 1st February, 1886 .....	30	0	0						
27	Insurance on cargo, &c. ....	45	10	0						
60	Purchase of cattle .....	15	0	0						
100	Agency fees, &c. ....	15	17	0						
					1,290	2	5			
								8,193	15	4
								10,157	8	4
11.	By Balance .....							15	1	4
								£10,172	9	8

Brisbane, 11th January, 1887.

JOHN DOUGLAS,  
Special Commissioner.

## CERTIFICATE OF AUDIT.

I hereby certify that the accounts of the Protectorate of British New Guinea for the six months ended 30th November, 1886—amounting on the credit side to £10,157 8s. 4d., and on the debit side to £2,717 4s. 11d. (which includes a sum of £18 collected as export duty on cedar) have been audited; and I find:—

1. All sums received have been duly brought to account, the several payments made have been correctly computed and are supported by proper and duly certified vouchers.
2. The operations by the Assistant Deputy Commissioner at Port Moresby upon the cash credit granted him for the purpose of making necessary payments in New Guinea, are included in these accounts, the vouchers necessary to enable the Accountant to make the required adjustments in the books of the Special Commissioner having been duly rendered by Captain Musgrave.
3. Accounts representing in the aggregate a considerable sum expended at Port Moresby prior to the 1st June last not having reached the Special Commissioner in time to enable him to embody them in the previous Statement, the effect has been to correspondingly swell the apparent expenditure for the six months now under review.
4. I am glad to be able to certify that the several books submitted for examination, and the vouchers in support of the entries therein, exhibit considerable care on the part of the Accountant.

Audit Department,  
Brisbane, 14th January, 1887.W. L. G. DREW,  
Auditor-General.

## APPENDIX II.

## British New Guinea Protectorate.

## Assets and property of the Government at Port Moresby.

	Value.
Government bungalow (total cost) ... ..	£1,088 16 0
Furniture ... ..	230 4 4
Government store ... ..	73 3 6
Gaol ... ..	975 0 0
Surveys ... ..	787 0 0
Fencing (cemetery, &c.) ... ..	100 0 0
Stockyard ... ..	35 0 0
Men's quarters ... ..	174 6 8
7 Horses, £10 per head ... ..	70 0 0
6 Calves, £2 10s. " ... ..	15 0 0
Whaleboat and fittings... ..	100 0 0
Cutter "Maino," <i>née</i> "Daisy" ... ..	300 0 0
50 tons of coal, £2 15s. per ton ... ..	137 10 0
Various tools and forge ... ..	60 0 0
Saddlery and tackling ... ..	44 14 0
Chief's house ... ..	15 0 0
Survey instruments ... ..	37 0 0
Meteorological instruments ... ..	40 2 0
Dingy ... ..	20 0 0
Gaoler's cottage... ..	40 0 0
Moorings and buoys ... ..	20 0 0
Water tanks and piping ... ..	94 18 3
Various rifles and revolvers ... ..	80 0 0
Roads, clearing mangroves, &c. ... ..	200 0 0
Purchase of land ... ..	347 0 0
Argus Villa and improvements ... ..	100 0 0
Gatling gun and ammunition ... ..	350 0 0
Thompson's deep-sounding apparatus ... ..	70 0 0
Photographic apparatus ... ..	50 0 0
Piping, additional ... ..	160 0 0
Wells at Granville West ... ..	100 0 0
Stores and trade on hand, about ... ..	300 0 0
Total ... ..	£6,209 14 9

## APPENDIX III.

## APPENDIX III.

Estimated annual expenses for the maintenance of a steamer for use on the New Guinea coast.

Captain ... ..	£360
First officer ... ..	200
Second officer ... ..	160
Third officer ... ..	140
Chief engineer ... ..	240
Second „ ... ..	200
Third „ ... ..	160
4 Quartermasters, at £9 per month ... ..	432
4 Leading firemen ... ..	432
1 Carpenter, at £10 per month ... ..	120
1 Steward at £9 per month ... ..	108
1 Cook, „ „ ... ..	108
8 Native deck hands, at 10s. per month ... ..	48
6 Native fireman, at 12s. per month ... ..	44
4 Native servants, at 10s. „ ... ..	24
Rations for 18 white men, at £3 per month... ..	648
Rations for 18 natives ... ..	100
Coal for 8,000 miles, 250 tons at 50s.... ..	650
Insurance or sinking fund, 7 per cent. ... ..	840
Repairs and refits (average) ... ..	300
Stores (average) ... ..	300
Extra coal, incidentals, clothing, &c. ... ..	500
	£6,114

## APPENDIX IV.

Sir, Samarai (Dinner) Island, S. E. New Guinea, 10 September, 1886.

I have the honor to report to your Excellency the progress of events in the district under my jurisdiction.

Following my intention indicated in my letter of 6th August last, I proceeded next day on board the s.s. "Victory" to Giligili, Milne Gulf, where I inspected Messrs. Kissack & Co.'s thriving copra station. I then investigated the question of threatened hostilities on the part of the natives referred to in my last letter. I found that Messrs. Kissack & Co.'s Maltese in charge had been guilty of acts offensive to the natives. After some discussion, the matter was arranged between all parties in an amicable manner. I could not help, however, observing that the natives from the surrounding districts, who had come in as spectators of what was going on, exhibited only a very latent friendliness. On my return from this rather malarious district I was laid up for several days by a severe attack of fever.

I have to report to your Excellency a breach of the regulations in force regarding the importation of spirituous liquors. Furey Augustin, a Mauritius half-caste (at one time my servant, but dismissed for bad conduct), imported from the "Victory" spirituous liquors on her arrival. I warned him that it was illegal so to do without a permit, but he repeated the act on the return of the vessel here both from Teste Island and from Milne Gulf. During my absence in Milne Gulf he appears to have had an attack of *delirium tremens*, in which his conduct was so violent that the teacher's family, in whose house he was living, were compelled to take refuge in the bush. Owing to my own illness, it was some days before I could investigate the matter. He fully admitted his offence; but as it is difficult to enforce here any punishment I may desire or find necessary to inflict, I considered it best to take his retribution *ad avizandum*. Meanwhile, I offered him a chance of retrieving his character by good conduct in employment about my house, promising him a fair wage. Only a few days did he conduct himself creditably. He not only refused to recognise, but even tried to resist, before the natives, my authority. I at once held an inquiry on his previous conduct, and took down in his presence the evidence of those who actually saw him with spirituous liquors ashore, drunk, or misconducting himself, and placed him in arrest on board the "Coral Sea," away from intercourse with the natives, till further orders. At the moment of writing, it is my intention to send him to Cooktown by H.M.S. "Harrier," about the 15th instant, if this can be done. This will get rid of an objectionable character out of the Protectorate. On the 16th August last, the "Coral Sea" arrived, after a rough passage, from Port Moresby. On the 18th I considered it my duty to despatch her to examine (*via* Teste Island, owing to the wind) the islands to leeward of the probable route taken by Dick's missing boat. On her arrival at Teste Island, however (where she landed a Raratongan missionary of the London Missionary Society, who is to labour there), she found that canoes from the islands intended to be visited had recently arrived at Teste Island, and reported that none of the missing men had reached their islands. It is now beyond doubt, I fear, that all have perished. Until the 24th August, the "Coral Sea" was occupied in transferring surplus stores on shore, fixing new sails, and getting thoroughly cleaned out (of which she was very much in need). I employed, meanwhile, a couple of the men for two or three days in sinking shafts in search of fresh water. The flat land bore has produced only brackish water; the higher one will, I hope, yet afford us a better supply, but from a depth of 11 feet. Meantime, rain-water is more abundant than desired.

On the 20th August a large canoe-load of Milne Gulf natives—relatives of one of the lads drowned in Dick's boat—arrived in Dinner Island (the place of the boat's starting) to wail. They were mostly armed, and their movements about the island were so suspicious that it was considered advisable to keep a very sharp night-watch on them, lest they should secure someone's head in payment, according to their custom, for the death of their relative. On Sunday, the 22nd, they intimated that they would be satisfied with an exchange of gifts in token of friendship. This was arranged, at my request, by Dick and other residents on the island, when they quietly took their departure.

On the 21st August Mr. Kissack arrived from Teste Island, to select, on behalf of his firm, a site for his house and store, agreeably to your Excellency's permission and terms. Enclosed are copies of the documents relating to this transaction, which I trust may meet with your Excellency's approval.

Enclosed,

Enclosed, also, is my own bank draft for £5, the annual license fee paid me by Mr. Kissack in notes. As the firm is anxious for the completion of the buildings before the arrival of the s.s. "Victory" in October next, operations were begun at once, and are progressing rapidly.

On the 25th August H.M.S. "Dart" arrived from Townsville, after a stormy passage, bringing the mail. The weather experienced by her and the "Coral Sea" supervened here, and continued, accompanied by heavy squalls of wind and rain (detaining the "Dart" at the anchorage here), till the 30th, since when calms and uncertain winds have prevailed.

On the 30th I proceeded to Heath Island, to examine it, in accordance with your Excellency's instructions, for a site for a Government residence (which will be absolutely necessary for your Excellency's representative during the heavy winds and rains of next monsoon, as the edifice of the London Missionary Society is everywhere leaky, and in an insecure condition). I shall make a report on my visit on a future occasion, when I have seen all the other likely localities.

On the 2nd September I proceeded to the Killerton Islands, in consequence of the unfriendly relations between the people of Milne Gulf and Dien, the London Missionary Society's teacher there, and their threats and attack on him. After a long conversation with Dien—whose statements at different times were much at variance and unconfirmable, owing to my having no interpreter through whom to examine the natives—I found it very difficult to discover where the blame lay. I imagine both sides are at fault. I have warned Dien to keep strictly to his missionary duties (he admits he has been hunting "by his boys" for paradise birds in the lands of the tribes of the Gulf, and that he has been making gardens—very probably not illegally—there also), and that if, on further trouble arising, it should be found that he has been encroaching on their rights, he will have to bear the consequences. I warned the natives, also, that if they molest Dien without cause, Government will protect him and punish them. Having on our return journey been becalmed for a whole day under a fierce sun, I was on arrival laid down with a relapse of fever which prostrated me till the 8th instant. On the 9th I proceeded to Blanchard Island, to examine it for a probable site for Government residence; and I shall on a future opportunity report on its suitability.

The following extracts from my diary since date of last writing will afford your Excellency some idea of the rather disaffected attitude of our neighbours, and will probably give good ground for drawing the attention of the Admiral commanding the Australian station to the desirability of their being, now that a considerable colony of whites is establishing itself whose commercial prospects depend on some degree, at least, of security, a man-of-war, other than a surveying ship, more constantly here. Moreover, Messrs. Kissack have (unofficially) drawn my attention to the increased difficulties now to be encountered in Milne Gulf—one of their stations is at Maivara—since the occurrences related below.

"September 4th.—Captain Mullens, of Kissack and Co., called here and reported as follows:—'I have just returned from the Louisiades. Visited Pig Island on the 13th July, and found that the native lad whom I had left there in charge of our station had been murdered, about (as near as I could discover) the 4th of July last, by the Low Woody Islanders. These people had asked me recently to make a station on their island. As the reefs are not productive enough in that vicinity, I told them I would not make one at present. This had evidently offended the Low Woody Island natives. They, about the 4th July, therefore, had proceeded to Pig Island (Low Woody Island is to the north of Joannet Island, and Pig Island, is to the south-east of it) in two canoes with twelve to fifteen men, beheading the lad, taking away the head and all the trade belonging to Messrs. Kissack and Co. The head they traded to the St. Aignan people (who attacked Lieut.-Commander Marx). My boys, who were working on Wooded Islet Reef, about 25 miles to the north-west, when they learned of the outrage—they are Renard Island natives—at once set out for Low Woody Island. I accompanied them in the schooner. I neither prevented nor persuaded them in the matter further than warning them that they should kill nobody. I anchored at Low Woody Island in my usual place. The Renard natives went on shore—where one half of the people, who number in all about 100, are at war with the other half—and burned two houses, and destroyed two canoes.'

"I told Captain Mullens that I would report the whole matter to His Excellency, the Special Commissioner, for instructions.

"Captain Mullens further reports:—'I visited Conde Point, Sudest Island; I found the natives very disaffected, dangerous, and threatening, because a lad belonging to one of the villages there who had been taken away by the 'Elsa,' a vessel belonging to Messrs. Burns, Philp, and Co. (Hovell, master), in the month of January last, under promise of being returned in a month, has not yet been sent back, and he is supposed to be dead. I passed what I believe to have been the 'Elsa,' near South Cape, about the 18th (the exact date I am not quite certain of) of January. She was, I understand, on a voyage from Thursday Island to Brisbane.'

The ancient custom of the natives is absolute and inexorable—a head for every death; so that actions such as this, and Minister's taking away Bari—they are mourning his death now, I hear—have been the cause of too many of the murders in this region. I hope by the end of the following week Bari's people will be rejoicing over his return. Captain Colin Thomson, "Coral Sea," tells me he saw the boy taken by the "Elsa" in March, in Townsville. Hovell meant, he says, to take him to Sydney.

"September 4th, evening.—Ah Pow, a Chinaman in the employ of Ah Gim, schooner 'Pride of the Logan,' came and reported that while lying at anchor off Samoma village, Moresby Island, on Friday night last, the 3rd, with Ah Gim's schooner, the South Cape boys, whom they had employed on board, stole the dingy in the night and made away. These boys had warned Ah Pow that the natives were hostile. They evidently left under fear of the natives."

On Moresby Island (Hoop-iron Bay), Captain Fryer and his mate were murdered. Mr. Kissack tells me that the murderer—such by common repute as well as by his own confession—often visits Teste Island and has boasted to him, as well as to the Teste Islanders, that he killed Fryer, and "he no afraid man-a-war."

"Monday, 6th August.—Charles Berlin (whom I had repeatedly warned against going to Milne Gulf) came to me and reported:—'I have just returned from Maivara, at the top of Milne Gulf, and have had a narrow escape of my life. I reached Maivara on Friday morning, about 5 p.m. Six canoes came off with about fifteen men. I saw they had no spears or weapons on board, so I allowed two old men to come aboard my boat. I was sitting on the hatch with my feet dangling into hold. One of the old men slipped down into the hold and caught hold of my legs before I was aware; the other caught me by the chest and threw me overboard. I, however, managed to catch hold again of part of the rigging and slung myself



myself on board. These men and others from the canoes again seized me, struck me with spars and oars found in the boat, but could not get at my head for the mast, about which I dodged, nor could they get me to loose my hold of the ropes, which I held for my life. Getting one hand free for a moment I knocked one man down with my fist, but could not get at my revolver, which was in its case at my side, because of the men holding me behind. With a kick out behind I knocked first one and then a second over the side into the water. I then got hold of my revolver. I then shot one man through the heart and he fell overboard and sank. I fired at two others but missed, my hand shaking from the contusions from the strokes dealt on it by the natives. I kept two remaining shots for extremities. One old man still continued in the hold trying to get out the tobacco box, every now and then stopping to throw spears at me. I fired one more shot at him but missed. At last those in the canoes alongside called out, "Come away, there is a man killed." The old man then got over the side. I got out my snider and fired several shots after them. I gave the gun then to one of my boys, who also fired, while I got up sail and got away."

"Wednesday, 8th September.—Dick, the London Missionary Society teacher here, came to me and reported:—'Last night I received word from the old chief on Basilisk Island, near Goodman Point, who is a true friend of the white man, that there is some talk of doing something to Whitten, of the cutter 'Albatross,' and his fellows, but that he, the chief, is keeping a good look-out. My son was last week on the 'Dart' as interpreter. Captain Field landed about this same place to take the sun. My boy overheard them, as he believes, talking about 'doing something' to Captain Field. Then the old man—the chief referred to above—said, 'Why, what you going to do that for; don't you see son of missionary in boat?' The other men then ashamed, and all ran away.' Dick further tells me—'I hear the natives of Milne Gulf, Basilaki, and other islands, who come here talking amongst themselves, 'No more frightened man-of-war; man-of-war never pay; Fryer no pay; Fryer's mate he no pay; St. Aignan he cut man-of-war captain; he no pay; man-of-war he no pay no more.' They think, Mr. Forbes, the man-of-war no come no more; and round about them islands it now no more safe.'"

How far these statements of the teacher may be imaginative or exaggerated it is difficult to tell, but there is not a little truth at bottom, and taken with what I have recorded above, I believe they are not unworthy of serious consideration. From this stage of unquiet and hostility in the Louisiades it will be evident that your Excellency's representative can but imperfectly profit by the opportunities at his command. Landing from a vessel like the "Coral Sea," without a protecting company, can be accomplished at very few of these interesting and little known islands, and no exploration or examination of the ultra-shore land can be even attempted at any of them. I hear of what appear to be valuable mineral veins in St. Aignan, and of gums from other islands, which I am most anxious to examine, but it can be done, under present circumstances, only in the face of your Excellency's fatherly caution, for the risks are undeniably great. The dangers would be vastly minimised by the presence of a vessel of war on the station.

On the arrival of H.M.S. "Harrier" on the 14th, I intend, unless I hear of your Excellency's, or of a man-of-war's, early arrival, to proceed to the Louisiades about the 18th instant, and may probably be absent about a month or six weeks.

I have, &c.,

HENRY O. FORBES.

P.S., October 12th, 1886:

Since writing the above a great delay has taken place in obtaining an opportunity for despatch of our mails. Messrs. Kissack and Thompson have this evening announced their intention of sending the "Pioneer" to Cooktown to-morrow morning, so I have hastily to add this postscript.

H.M.S. "Harrier" did not arrive with the mail until the 24th of September, and only then *en route* for the Solomon Islands. Before her arrival Dinner Island became nightly infested with natives from the surrounding islands fully armed, prowling about in quest of some of the people here. As yet none of the moonlighters have been captured or killed, though they have been both fired upon and attacked at close quarters; and none of the Dinner Islanders have been harmed. A guard has had to be kept nightly for several weeks now.

Immediately on the departure of the "Harrier," and just as I was ready to leave for the Louisiades, a report was brought me from Teste Island of a plot to murder the London Missionary Society teacher there. (Later intelligence shows that they have not carried out their intentions, if really formed.) As after Lydia Island Teste Island was one of the Islands I specially intended to examine, I decided, considering the disaffection existing all round, to defer my visit to the Louisiades till the arrival of H.M.S. "Diamond," which will arrive here, as I am informed by the "Harrier," about the end of this month. Even had the state of the natives not caused me to change my plans, it became impossible for me to leave owing to an attack of dysentery and fever, accompanied by an aggravated relapse of inflammation of the ear, from which I am only now just recovering.

I have to report to your Excellency the sad news brought to-day from the Louisiades (whither the "Coral Sea" proceeded a week ago to return the native Bari, sent by your Excellency to me, to his home at Low Woody Island, close to Joannet Island) by Captain Mullens of the "Alice Meade," of the murder of J. A. Craig, master of the ketch "Emily," together with the three Europeans and the five Malays composing his crew. Full particulars are wanting, but it would appear that they were fallen upon at the critical moment of one of the divers emerging from the water, when no one was prepared. The vessel was entirely looted of goods, stores, and weapons, and then completely burned. One boat has been brought here by Mullens, who visited the scene of the murder a few days since, viz., Joannet Island. The 14th September last appears to be about the date of the murders.

This news only serves to confirm more fully the reports and suspicions of native disaffection which I have recorded in the earlier part of this letter.

I have to report to your Excellency that almost all the vessels coming to this portion of New Guinea commit a breach of the regulations which declare Port Moresby the sole port of entry and clearance for the Protectorate waters, as they not only refrain from going to Port Moresby but they fail to call here. Their calling at one or the other port is the only protection the Queensland Government has against the stores shipped out of bond being distributed illegally to ships along the Barrier Reef, and the Protectorate of checking the illicit landing of prohibited articles and of preventing the in-bringing of infectious diseases.

I have to report that a Chinaman, Ah Gim, a bêche-de-mer collector, who held a Protectorate permit from Sir Peter Scratchley, has lost that document; I have refused to give him a new one till after referring

referring the matter to your Excellency, under the following circumstances:—Being known to the Customs authorities at Cooktown as the holder of a permit, and having a Queensland master's certificate, he cleared as master in the schooner "Pride of the Logan," from Cooktown, for Dinner Island. He arrived here with his bonded stores broached, and declared that the portion not on board was landed at South Cape. He further, after giving me false information, deserted his vessel, which proceeded to the Engineer Group without her having any one of the crew (who are all Chinese) with a certificate of any description. Ah Gim has declared that he is nominal master, but that he has nothing to do with the vessel besides to bring her from and take her back to Cooktown. H.M.S. "Harrier," when on her voyage to the Solomon Islands, encountered and boarded this schooner, and ordered her to Dinner Island. I ordered that the vessel could not be in the Protectorate waters without a master on board. As Ah Gim promised to remain on board in future, I gave permission to remove the vessel to prosecute her trade. I consider the offence of acting as nurse-master so serious that I have not considered it right to grant a new permit without reference to your Excellency.

I beg to suggest to your Excellency that Dinner Island should be constituted a port of entry and clearance for the Protectorate, as it is evidently a hardship for vessels from Queensland to have to proceed to Port Moresby only to enter, and then to have to beat up against the monsoon to the Louisiades.

H.O.F.

To His Excellency the Honorable John Douglas, C.M.G.,  
H.M. Special Commissioner for British New Guinea.

I only received this letter on the 6th December. In the meantime I had seen Mr. Forbes at Samarai, and had concerted with him to take action in connection with the Craig massacre.—J.D.

#### APPENDIX V.

##### GENERAL ORDER AS TO PLACES OF IMPRISONMENT WITHIN THE WESTERN PACIFIC.

By His Excellency John Bates Thurston, Companion of the Most Distinguished Order of Saint Michael and Saint George, Her Britannic Majesty's Assistant High Commissioner for the Western Pacific, &c., &c., &c.

[L.S.] JOHN B. THURSTON.

WHEREAS, by the Western Pacific Order in Council of 1877, it is provided that Her Britannic Majesty's High Commissioner for the Western Pacific may, from time to time, by general order under his hand and official seal, prescribe the places within the Western Pacific Islands at which sentences of imprisonment of Her Britannic Majesty's High Commission Court for the Western Pacific are to be carried into execution: Now I, John Bates Thurston, Her Britannic Majesty's Assistant High Commissioner aforesaid, under and by virtue of the power conferred upon me by the said Order in Council and all other power and authority in me vested, do hereby prescribe and appoint Port Moresby, in British New Guinea, to be a place at which sentences of imprisonment of the said Court are to be carried into execution, subject and according to the provisions of the said Order in Council.

Given at Suva, Fiji, this fifth day of February, in the year of our Lord one thousand eight hundred and eighty-six.

By His Excellency's Command,  
WILFRED COLLET,  
Secretary to the High Commissioner.

[One Map.]





1887.  
(SECOND SESSION.)

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LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

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CENTENARY OF THE COLONY.

(MESSAGE No. 30.)

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*Ordered by the Legislative Assembly to be printed, 24 June, 1887.*

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CARRINGTON,  
*Governor.*

*Message No. 30.*

In accordance with the provisions contained in the 54th section of the Constitution Act, the Governor recommends for the consideration of the Legislative Assembly the expediency of making provision to meet the requisite expenses in connection with a Bill to make provision for the fitting celebration of the Hundredth Anniversary of the Foundation of the Colony, and for other purposes connected therewith.

*Government House, Sydney,  
24th June, 1887.*

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1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

**CLOCKS IN PUBLIC BUILDINGS.**

(ERECTION AND WINDING OF DURING LAST FIFTEEN YEARS.)

*Ordered by the Legislative Assembly to be printed, 11 May, 1887.*

RETURN setting forth the information asked for in the following Questions (Votes No. 30, 10th May, 1887):—

4. MR. SYDNEY SMITH asked THE SECRETARY FOR PUBLIC WORKS,—

- (1.) The total amount paid to each person for the supply, erection, and winding of clocks in all public buildings throughout the Colony during the last fifteen years?
- (2.) Who prepared the specification submitted by the Colonial Architect for the clock for the new General Post Office?
- (3.) Were tenders publicly invited for the clock intended for Post Office, Balmain; if so, the names of tenderers, and amount of successful tender?
- (4.) How many tenders were received for the supply of public clocks at Bathurst, Maitland, and Goulburn, the name of the successful tenderer, and the total amount paid for the supply and erection of each respectively?
- (5.) Were tenders invited for the supply of turret-clocks in connection with the Bathurst and Goulburn Gaols; the name of the successful tenderer, and the price of each?

*Mr. Burns* answered,—The information asked for by the Honorable Member will be supplied in the shape of a Return.

No. 1.—Statement of Expenditure on Supply, Erection, Winding, &c., of Clocks, during the last 15 years.

Name.	Amount paid for Winding.			Amount paid for Supply.			Amount paid for Erection of Turret Clocks.			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
A. Tornaghi	1,203	16	9	5,570	17	0	6,289	0	0	13,063	13	9
Forster Bros.	633	1	2	512	14	0				1,145	15	2
H. Forster	76	0	0							76	0	0
Jones and Son				8	13	0				8	13	0
Hardie Bros.				132	10	0				132	10	0
S. Hoffnung and Co.				19	10	0				19	10	0
J. Petersen	1	10	0							1	10	0
J. Baxter				2	10	0				2	10	0
C. E. Nesbitt				5	0	0				5	0	0
Holdsworth and Co.				9	0	0				9	0	0
Allerding and Son				14	10	0				14	10	0
W. McDonnell and Co.				17	10	0				17	10	0
A. Blau				26	5	0				26	5	0
A. Boekemann				20	0	0				20	0	0
Finckh and Boekemann				7	5	0				7	5	0
Sydney and London Fine Art Co.				14	0	0				14	0	0
Flavelle Bros. and Roberts				37	0	0				37	0	0
A. Ballantyne				5	0	0				5	0	0
J. E. Pearce				2	0	0				2	0	0
E. Beckman				2	0	0				2	0	0
T. E. Barnes				2	0	0				2	0	0
Hunt Bros.	22	1	0							22	1	0

No. 2.—The Acting Colonial Architect.

No. 3.—No. The tender of A. Tornaghi; £430 including fixing, was accepted.

No. 4.—One. A. Tornaghi; £1,395 for the three clocks, including fixing, winding, regulating, and keeping in order for two years. Buildings,—Court-house, Bathurst; Post and Telegraph Offices, Goulburn and West Maitland.

No. 5.—No. Clock supplied only to Gaol, Goulburn. A. Tornaghi, £190, including fixing.





1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

## CONSUMPTION OF OIL IN GOVERNMENT SERVICE.

(DEPARTMENT OF PUBLIC WORKS.)

*Ordered by the Legislative Assembly to be printed, 7 June, 1887.*

RETURN (*in part*) to an *Order* of the Honorable the Legislative Assembly, dated 29th April, 1887, That there be laid upon the Table of this House,—

“An approximate Return of the total number of gallons of oil of all kinds (black, cocoanut, and sperm excepted) consumed annually in the various Government Services—Railways, Trams, other public works, Marine Board, the Mines, Military, &c.”

*(Mr. McMillan.)*

RETURN showing quantity of Oil used annually by the Department of Public Works.

Description of Oil.	Railways.	Harbours and Rivers.	Roads.	Total.
	Gallons.	Gallons.	Gallons.	Gallons.
Castor ... ..	121,132 $\frac{1}{2}$	1,213 $\frac{3}{4}$	277	122,622 $\frac{3}{4}$
Colza ... ..	31,366 $\frac{1}{2}$	10 $\frac{1}{2}$	70	31,447
Kerosene ... ..	69,023	1,331 $\frac{1}{2}$	405	70,759 $\frac{1}{2}$
Salad ... ..	476	.....	.....	476
Boiled ... ..	6,991	.....	.....	6,991
Raw ... ..	6,384	.....	.....	6,384
Neatsfoot ... ..	10	48	.....	58
Axle Oil—Colonial ... ..	113,268	.....	.....	113,268
Do American ... ..	10,982	.....	.....	10,982
Kerosene cleaning Oil .. ..	800	.....	.....	800
Lubricating—Colonial for Machinery ... ..	376	.....	.....	376
Do de Dynamo ... ..	104	.....	.....	104
Do do Air Brakes ... ..	48	.....	.....	48
Teil... ..	.....	1,098 $\frac{1}{2}$	.....	1,098 $\frac{1}{2}$
Linseed ... ..	.....	1,069 $\frac{1}{2}$	158	1,227 $\frac{1}{2}$
Cylinder ... ..	.....	270 $\frac{1}{4}$	.....	270 $\frac{1}{4}$
Olive ... ..	.....	22	.....	22
Lard ... ..	.....	35	.....	35
Turpentine ... ..	.....	.....	74	74
China ... ..	.....	.....	90	90
Gasoline ... ..	.....	.....	104	104
Kerosene (crude)... ..	.....	.....	38	38
Total... ..	360,961	5,098 $\frac{1}{2}$	1,216	367,275 $\frac{1}{2}$



1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

## CONSUMPTION OF OIL IN GOVERNMENT SERVICE.

(MARINE BOARD AND STORES DEPARTMENTS.)

*Ordered by the Legislative Assembly to be printed, 8 June, 1887.*

FURTHER RETURN (*in part*) to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 29th April, 1887, That there be laid upon the Table of this House,—

“An approximate Return of the total number of gallons of oil of all kinds (black, cocoanut, and sperm excepted) consumed annually in the various Government Services—Railways, Trams, other public works, Marine Board, the Mines, Military, &c.”

*(Mr. McMillan.)*

Branch.	Oil.	Oil consumed annually.
		Gallons.
Marine Board ... ..	Teil ... ..	7,073
	Kerosene ... ..	1,970
	Linseed ... ..	244
	Castor ... ..	178
Stores Department ... ..	Teil ... ..	145
	Kerosene ... ..	6,910
	Linseed ... ..	533
	Castor ... ..	287
	Colza ... ..	312

The Treasury,  
8th June, 1887.



1887.  
(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

## CREMATION BILL.

(PETITION IN FAVOUR OF—DAVID BUCHANAN, BARRISTER-AT-LAW.)

*Received by the Legislative Assembly, 18 May, 1887.*

To the Honorable the Speaker and Members of the Legislative Assembly, in Parliament assembled.

The Petition of David Buchanan, Barrister-at-law, praying that the Cremation Bill now before your Honorable House may be passed,—

HUMBLY SHOWETH:—

That the Cremation Bill now before your Honorable House should be passed in the interests of the public health.

That the present practice of disposing of the dead by burial poisons the air, the water, and the land, and is prejudicial to the health and wellbeing of the community, disseminating disease and death silently and unperceived, and is consequently a source of constant and continually increasing danger to the living.

That the process of cremation, as it may be seen at the present time in operation in England and other countries, brings about the same result as burial, namely, consumption of the body to ashes, with this difference, that while cremation consumes the body to ashes in about half-an-hour, thereby destroying every germ of disease and every possibility of infection, the process of burial leaves the body to go through all the stages of loathsome corruption, sending up poisonous gases from the earth, and thus endangering, in a serious degree, the health of the living.

That the possibility of crime escaping detection through the operation of cremation is most stringently and carefully prevented by the wholesome clauses, for that purpose embodied in the Bill now before your honorable House, which clauses preclude the possibility of such a thing; while under the process of burial there is the far more terrible and appalling danger of burial alive, which has not unfrequently happened, proved by the fact that, on disinterring bodies, many of them have been found turned right round in their coffins, and lying on their faces, with distinct evidence of a struggle, the bare thought of which out-horrors horror.

That under the Bill before your Honorable House cremation is not compulsory but optional, so that those who approve of burial may still practice that process without let or hinderance; while the thousands that would take advantage of the crematory process would relieve our burial-grounds of a frightful and dangerous overcrowding that could not but have a beneficial effect upon the general health of the people.

That although the evils of those crowded burial-grounds may not be at once seen as directly traceable to that source; still we have the testimony of high medical authority that many virulent epidemic diseases have had their origin in the poisoned air from burial-grounds, and hence the unanimity amongst medical and scientific men in recommending cremation as preferable from its cleanness, speediness, and safety to the dangerous process of allowing an innumerable crowd of dead bodies to lie in the earth, going through the slow process of corruption and decay, and unquestionably endangering the health and lives of the living.

That on the grounds stated, your petitioner humbly prays that your Honorable House will pass the Cremation Bill as a large contribution to the health, safety, and wellbeing of the community.

And your petitioner, as in duty bound, will ever pray.

DAVID BUCHANAN.



1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

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**DIVORCE EXTENSION BILL.**

(PETITION IN FAVOUR OF GENERAL ASSEMBLY OF THE PRESBYTERIAN CHURCH OF  
NEW SOUTH WALES.)

*Received by the Legislative Assembly, 24 March, 1887.*

To the Honorable the Legislative Assembly in Parliament Assembled.

The Petition of the General Assembly of the Presbyterian Church of New South Wales,—

HUMBLY SHOWETH:—

That your Petitioners regard Wilful Desertion, as well as Adultery, to be a valid ground of Divorce, in accordance with the teaching of Holy Scripture and the Confession of Faith held by the Church and many other Presbyterian Churches throughout the world.

Your Petitioners therefore pray your Honorable House to pass a measure providing for extension of Divorce to cases of Wilful Desertion within the Colony of New South Wales.

And your Petitioners, as in duty bound, will ever pray.

Signed in name and by authority of the General Assembly—

WILLIAM BAIN, Moderator.  
JAMES S. LAING, Clerk.

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1887.

(SECOND SESSION.)

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LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

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## FOREIGN CRIMINALS BILL.

(MESSAGE No. 6.)

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*Ordered by the Legislative Assembly to be printed, 29 March, 1887.*

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CARRINGTON,  
*Governor.*

*Message No. 6.*

In accordance with the provisions contained in the 54th section of the Constitution Act the Governor recommends for the consideration of the Legislative Assembly the expediency of making provision to meet the requisite expenses in connection with a Bill to prevent the introduction of Foreign Criminals into New South Wales.

*Government House,*

*Sydney, 29 March, 1887.*

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1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

**IMPERIAL CONFERENCE.**  
(CORRESPONDENCE RESPECTING.)

*Ordered by the Legislative Assembly to be printed, 14 April, 1887.*

Telegram from the Premier, Queensland, to The Colonial Treasurer, New South  
Wales.

Brisbane, 21 October, 1886.

I SUGGEST that each of the Australian Governments should request Governor to telegraph to Secretary of State asking whether, in view of threatened European complications, and of the delay likely to arise in giving effect to Admiral Tryon's proposals, the Imperial Government can take any steps to strengthen Australian Squadron. Gillies concurs.

The Colonial Treasurer, New South Wales, to The Premier, Queensland.

Sydney, 21 October, 1886.

HOPE to reply to-morrow to your message with reference to proposed application to Imperial Government to strengthen Australian Squadron.

The Colonial Treasurer, New South Wales, to The Premier, Victoria.

Sydney, 21 October, 1886.

AM in receipt of your telegram from Premier of Queensland with reference to proposed application, in view of probable European complications, and the likelihood of considerable delay in finally arranging naval defences of these Colonies, to the Imperial Government, to strengthen squadron on this station. Hope to reply to-morrow, when I will also advise you of the views of this Government.

Minute by The Colonial Treasurer.

The Treasury, New South Wales, Sydney, 22 October, 1886.

*Subject:* As to suggested application to Imperial Government to strengthen Australian Squadron.

A TELEGRAM was yesterday received by me from Sir Samuel Griffiths, Premier of Queensland, suggesting that, in view of threatened European complications, and of the likelihood of there being yet considerable delay in placing the Naval defences of these Colonies on a good basis, application by cable should be made to the Imperial Government, through His Excellency the Governor, to strengthen the squadron on this station.

2. I have informed Sir Samuel Griffiths, that I hope to communicate to-day the views of this Government upon the subject.

3. Having in view the almost continual apprehension of an European conflict which has existed for some time past, it seems to me that, pending the making of definite arrangements on the basis of the proposals submitted to Imperial Government, as the outcome of the meeting of His Excellency Admiral Tryon and the Premiers of Victoria, Queensland, and New South Wales, on board H.M.S. "Nelson," on the 26th and 27th April last, an application might, as suggested by Sir Samuel Griffiths, be made for the placing on this station of additional ships of war.

4. Of course, while pressing upon the Imperial Government the necessity for this step, care would be taken, as far at least as this Colony is concerned, that nothing would be done which would be calculated to in any way embarrass the Admiralty in the disposition of its vessels.

5. I am of opinion that, if the Imperial Government accede to the proposed application, a *pro rata* contribution should be made by all these Colonies towards defraying the cost of the maintenance of the additional vessels while on this station. This contribution could not possibly be viewed as anything out of the way, as the proposals before referred to, as the outcome of the meeting on board H.M.S. "Nelson," provided that each Colony should make a proportionate contribution towards the maintenance of an increase in the Squadron on this station.

6.

6. The following documents are attached hereto :—

1. Copy telegram from Sir Samuel Griffiths, dated 21st October.
2. Copy of my reply, dated 21st October.
3. Copy telegram addressed to Premier of Victoria, and
- \*4. Copy memorandum, dated 15th May last, containing the views of this Government as to the joint naval defence of Australasia; submitted by me to His Excellency.

P. A. JENNINGS.

\* Laid upon the Table of the Legislative Assembly on 20th May, 1886.

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Telegram from The Agent-General to The Colonial Treasurer.

London, 2 November, 1886.

INQUIRIES being made respecting naval defence; will report shortly.

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Telegram from The Agent-General to The Colonial Treasurer.

London, 5 November, 1886.

At an interview with Secretary of State for the Colonies assured no cause for alarm. Admiralty will protect British Colonies in case of need.

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Telegram from His Excellency the Governor to The Principal Secretary of State for the Colonies.

Government House, 1 November, 1886.

GOVERNMENT of N.S.W. being anxious in view of delay necessary to take place in carrying into effect proposals for outer Naval Defence of Australasian Colonies discussed with Admiral of the Fleet by Premiers of Queensland, Victoria, and N.S.W., and substantially agreed in by all other Colonies for the squadron here to be strengthened in anticipation of European operations of war, my Government informs me N.S.W. and other Colonies are alarmed at matter, and owing to serious attention excited thereby and feeling of insecurity there exists much agitation may be expected shortly to be set on foot for immediate increase of strength of the squadron—they therefore request that I inform you that while they do not wish to appear to be anxious to interfere with the strategic arrangements respecting the forces of H.M. Government, they would be glad to know whether in case of declaration of war such arrangement could be made so as to afford facilities for increased naval protection.

CARRINGTON.

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The Principal Secretary of State for the Colonies to His Excellency the Governor.

London, 2 November, 1886.

REFERRING to your telegram of 1st November, transmit following telegram to Victoria and Queensland:—  
“Her Majesty’s Government are not aware of any ground for the apprehension entertained in the Australasian Colonies, and have no reason to anticipate (any difficulty in) warlike operations. Should the necessity unfortunately arise the steps necessary for efficient protection would be at once communicated to you.”

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The Principal Secretary of State for the Colonies to His Excellency the Governor.

My Lord, Sir,

Downing-street, 25 November, 1886.

You will no doubt have remarked that in the Queen’s Speech on the prorogation of Parliament, Her Majesty was pleased to refer to Her Colonial and Indian Possessions in the following terms:—  
“I have observed with much satisfaction the interest which, in an increasing degree, is evinced by the people of this country in the welfare of their Colonial and Indian fellow subjects; and I am led to the conviction that there is on all sides a growing desire to draw closer in every practicable way the bonds which unite the various portions of the Empire. I have authorized communications to be entered into with the principal Colonial Governments with a view to the fuller consideration of matters of common interest.”

2. The communications thus promised with the Colonies have engaged the careful consideration of Her Majesty’s Government, and they have come to the conclusion that the Queen should be advised to summon a Conference, to meet in London in the early part of next year, at which representatives of the principal Colonial Governments will be invited to attend for the discussion of those questions which appear more particularly to demand attention at the present time. I request you to inform your Ministers of this proposal, which I am confident will be very satisfactory to them, and to express the hope which I entertain of their cordial co-operation.

3. In the opinion of Her Majesty’s Government, the question which is at once urgent and capable of useful consideration at the present time is that of organization for military defence. The patriotic action of the Colonies in offering contingents of troops to take part in the Egyptian campaign made a deep and lasting impression on the public mind, and was the first practical result of much careful work during recent years. It is a necessity of the case that the measures which have been taken in each Colony, as well for the organization of the local forces as for the construction of local defensive works, are, to a great extent, not yet fully understood and appreciated in other parts of the Empire. The close and thorough examination of the whole subject of Imperial Defence, which was completed by the Royal Commission presided over by the Earl of Carnarvon, has led to the execution of extensive and important defensive

defensive works in various parts of the Empire; and the cordial co-operation offered to Her Majesty's Government by the Colonies in carrying out this policy indicates their desire to arrive, so far as may at present be practicable, at a common basis of action. This work is still being actively pressed on with the assistance of a Standing Committee, which is continuously occupied with matters relating to Colonial Defence.

4. Much yet remains to be done; and it is of course unavoidable that secrecy should continue to be observed with regard to many of the defensive measures in progress or in contemplation. The time has, however, now arrived when an attempt may fairly be made to attain to a better understanding as to the system of defence which may be established throughout the Empire. For this purpose an interchange of knowledge as to the state of preparation, or as to the capabilities of organization in each Colony, would lead to a more thorough understanding of their wants and wishes; but whilst Her Majesty's Government would thus be prepared to recommend for the consideration of the Conference certain principles calculated to promote the general defence of the Empire, it is not our intention in calling the Conference to commit either the Imperial Government or any Colony to new projects entailing heavy expenditure, but rather to secure that the sums which may be devoted to this purpose may be utilized to the fullest extent, with complete knowledge of all the conditions of the problem.

5. Second only in importance to this great question is one concerning in a special degree the interests of the Empire in time of peace. The promotion of commercial and social relations by the development of our postal and telegraphic communications could be considered with much advantage by the proposed Conference. It is a subject the conditions of which are constantly changing. New requirements come into existence, and new projects are formulated every year. It is obviously desirable that the question of Imperial intercommunication should be considered as a whole, in order that the needs of every part of the Empire may, as far as practicable, be provided for, and that suggestions may be obtained from all quarters as to the best means of establishing a complete system of communication without that increased expenditure which necessarily results from isolated action.

6. Two leading subjects for consideration have been referred to, but it is not impossible that there may be some other important question which, in the general opinion of the Colonial Governments, might properly and usefully be brought under consideration. But I should deprecate the discussion at the present time of any of the subjects falling within the range of what is known as Political Federation. There has been no expression of Colonial opinion in favour of any steps in that direction; and Her Majesty's Government are of opinion that there would be no advantage in the informal discussion of a very difficult problem before any basis has been accepted by the Governments concerned. It might, indeed, be detrimental to the ultimate attainment of a more developed system of united action if a question not yet ripe for practical decision were now to be brought to the test of a formal examination.

7. The Conference will necessarily be purely consultative, and it will therefore not be material that the Colonies should have equal or proportional representation upon it. The desire of Her Majesty's Government would rather be that its constitution should be sufficiently comprehensive to include, in addition to the Agent-General or other specially deputed representative of each Government, any leading public man who may be at liberty to come to England next year, and may be specially qualified to take a useful part in the deliberations. It will, I think, be convenient that I should preside at the Conference, and I need not say that I anticipate much advantage to myself and to Her Majesty's Government from the opportunities of acquiring information which will thus be afforded to me.

8. I will only add, in conclusion, that I am confident that your Government will, as I do, feel deep interest in this first attempt to bring all parts of Her Majesty's Empire into joint deliberation. However modest the commencement may be, results may grow out of it affecting, in a degree which it is at present difficult to appreciate, the interests of the Empire and of the civilized world.

I have, &c.,

EDWARD STANHOPE.

P.S.—My own opinion is that the best time for meeting would be the month of April or May, but I should be glad in this matter to be guided by the general opinion of the Colonial Governments.

Seen.—P.A.J. Cabinet. Recommended that member of Government and Agent-General in London be appointed to represent colony at Conference.—P. A. J. Agent-General informed by cablegram.

### Telegram from The Principal Secretary of State for the Colonies to His Excellency the Governor.

London, 6 December, 1886.

REFERRING to Queen's speech proroguing Parliament, Her Majesty's Government propose Conference in London early next year with Colonial representatives to discuss coastal defence of colonies, telegraphic communication with colonies, and other important questions, exclusive, however, of political federation, which question is not yet ripe. Conference should be consultative, and number of representatives to each colony not material. Suggested Conference should include, in addition to Agent-General, a specially deputed representative man and any leading public man with special qualifications who may be here. Secretary for the Colonies will preside. Conference probably April or May. Despatch sent 25th November explaining fully.

### Telegram from The Premier, Queensland, to The Colonial Treasurer, New South Wales.

Brisbane, 13 December, 1886.

Do you propose to be represented at Conference in London next year? Agent-General informs me that all Colonies should be specially represented.

Telegram

Telegram from The Colonial Treasurer, New South Wales, to The Premier,  
Queensland.

Sydney, 14 December, 1886.

IN answer to your telegram of yesterday's date (received this morning) as to the proposed Conference in London next year, we purpose waiting the receipt of Mr. Stanhope despatch of 25th ultimo before taking any decisive step in relation to the matter.

The Agent-General, to The Colonial Secretary.

Sir,

5 Westminster Chambers, Westminster, S. W., 17 December, 1886.

I have the honor to forward herewith, a print of a circular letter from The Secretary of State for the Colonies, to the Governors of Colonies under responsible Government, a copy of which you will doubtless have received ere this reaches you.

I have no comment to make upon the proposal, except to state that Mr. Stanhope desires, if possible, that the conference should take place in April.

I have, &c.,

SAUL SAMUEL.

Telegram from The Premier, Queensland, to The Colonial Treasurer, New South  
Wales.

Brisbane, 23 December, 1886.

WE have determined that I shall attend the London Conference as Special Representative with the Agent-General. We thought the importance of the matter, as well as the occasion of Her Majesty's Jubilee, demanded special action.

Telegram from The Principal Secretary of State for the Colonies to His  
Excellency the Governor.

As at present advised I think about 1st April may be convenient time for opening the Colonial Conference here.

Seen, Cabinet.—P.A.J.

Telegram from The Premier, South Australia, to The Colonial Treasurer, New  
South Wales.

[Confidential.]

Adelaide, 5 January, 1887.

GOVERNMENT have decided that I shall attend Conference in London proposed by Secretary of State for Colonies.

Do you intend to go yourself or send one of your Ministers?

As your Parliament meets in June, shall be glad if Conference held early in April.

Telegram from The Colonial Treasurer, New South Wales, to The Premier, South  
Australia.

[Confidential.]

Sydney, 6 January, 1887.

IN reply to your telegram of yesterday, Despatch from Secretary of Colonies respecting proposed Conference in London not yet received, and matter of representation of this Colony at such Conference will not be considered and decided upon until that document is before Cabinet. As soon as our determination is arrived at will inform you of it.

Telegram from The Premier, Victoria, to The Colonial Treasurer, New South Wales.

Melbourne, 8 January, 1887.

LONDON Conference.—Agent-General telegraphs in reply to inquiry. Herbert expects meeting not later than commencement of April—probably week before. We propose at least to send a Minister. Shall be glad to hear your intentions.

Telegram from The Premier, South Australia, to The Colonial Treasurer,  
New South Wales.

Adelaide, 10 January, 1887.

SHALL be glad to hear if you have decided as to sending delegate to Conference.

Telegram from The Colonial Secretary, Western Australia, to The Colonial Secretary,  
New South Wales.

Perth, 17 January, 1887.

THIS Colony will be represented at London Conference by Honorable John Forrest, C.M.G., Surveyor-General, Commissioner of Crown Lands, and Member of Executive and Legislative Councils.

Telegram from The Agent-General to The Colonial Secretary.

London, 24 January, 1887.

SECRETARY of State for the Colonies desires open Conference on 17th March, if that time will suit Colonial Minister. Reply.

[3d.]

1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

**IMPERIAL CONFERENCE.**

(FURTHER CORRESPONDENCE RESPECTING.)

*Ordered by the Legislative Assembly to be printed, 22 April, 1887.***Telegram from The Agent-General to The Colonial Secretary.**

18 April, 1887.

At meeting Conference to-day Imperial Government submitted amended proposal for Naval Defence; total cost not exceeding £120,000 a year on peace footing, extra cost in time of war to be entirely borne by Imperial Government. Offer includes improved class of ships. Delegates agreed submit proposal for decision of their Governments. Victoria, however, objected to apportionment of contribution on basis of population only, and urged that it should be based upon population, trade, and tonnage. Do you approve of these proposals? Secretary of State for the Colonies anxious for immediate reply. Please telegraph reply as soon as possible.

S. SAMUEL.

**Telegram from The Colonial Secretary to The Representatives at Imperial Conference.**

Sydney, 21 April, 1887.

THIS Government is deeply sensible of the careful consideration which has been given by Her Majesty's Government and the Colonial Representatives to the question of Naval Defence at the Imperial Conference, but it does not feel that it should be called upon to express any approval at this stage of the proposals submitted. The initial Despatch of 25th November says expressly that it was not the intention in calling the Conference to commit either the Imperial Government or any Colony to new projects entailing heavy expenditure, and that the Conference was necessarily to be purely consultative; and, moreover, the Despatch is silent respecting the naval branch of defence, as distinguished from the general question. This Colony is represented on the basis of the conditions laid down in Mr. Stanhope's Despatch. We shall be anxious to act in consultation with the other Australian Colonies with a view to secure united concurrence in any scheme of naval defence which has been maturely considered by the Imperial Conference; but we desire to express the opinion that any such agreement, to be of a lasting character, must receive the sanction of the respective Australian Parliaments.

Cabinet (all Ministers present) approve.

HENRY PARKES.

**Telegram from The Colonial Secretary, New South Wales, to The Honorable Duncan Gillies, Victoria.**

Sydney, 21 April, 1887.

I SEND by to-night's mail copy of our reply to Delegates at Imperial Conference respecting Scheme for Naval Defence. I presume you will receive this by noon to-morrow.

HENRY PARKES.

**The Colonial Secretary, New South Wales, to The Honorable Duncan Gillies, Victoria.**

Sir,

New South Wales, Colonial Secretary's Office, Sydney, 21 April, 1887.

Referring to my telegram of this date, I have now the honor to transmit herewith a copy of the reply from this Government to the Delegates at the Imperial Conference respecting the Scheme of Naval Defence.

I have, &amp;c.,

HENRY PARKES.





1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

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**IMPERIAL CONFERENCE.**

(FURTHER CORRESPONDENCE RESPECTING.)

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*Ordered by the Legislative Assembly to be printed, 27 April, 1887.*

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**Telegram from The Agent-General to the Colonial Secretary.**

London, 20 April, 1887.

GOVERNMENTS Victoria, Queensland, New Zealand, South Australia have announced acceptance of Imperial Government proposal for Naval Defence, subject approval by their Parliaments.

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**Telegram from The Agent-General to The Colonial Secretary.**

London, 21 April, 1887.

It is clearly understood that proceedings are purely consultative; and in course of construction of the question of Naval Defence, Imperial Government were induced to reduce largely the contribution proposed originally by Admiral Tryon, and offer to furnish improved class of ships—project not new. Military Defence mentioned in Mr. Stanhope's Despatch intended to include Naval Colonial Governments having substantially approved Tryon's proposal. It was agreed delegates should submit modified proposal for the decision of their Governments, particularly as Imperial Government are anxious that the question of Naval Defence should be decided as quickly as possible. It has been suggested that the apportionment of contribution of Colonies might be fixed by arbitration of Board of Trade.

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**Telegram from The Colonial Secretary to The Representatives at Imperial Conference.**

26 April, 1887.

WE are prepared to submit Naval Defence proposals of Imperial Conference to Parliament. Fail to see the advantage of conditional approval, and should prefer having full text of proceedings before us. Does not appear to us specially urgent.

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1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

**IMPERIAL CONFERENCE.**

(APPOINTMENT OF DELEGATES.)

*Ordered by the Legislative Assembly to be printed, 14 April, 1887.*

The Colonial Secretary to Sir Patrick Jennings, K.C.M.G.

Dear Sir Patrick,

Sydney, 27 January, 1887.

I have been informed that you had some thought before you retired from office of going to London as one of the representatives of the Colony at the Imperial Conference.

I wish to say that if this was so I shall be happy to give effect to your intention by recommending your appointment.

I understand from the Secretary of State's Despatch that the Conference will be purely of a consultative character, and I think it has been wisely decided to keep its proceedings within such limits; still its deliberations must have a valuable effect in promoting a good understanding between England and her Colonies.

Yours, &amp;c.,

HENRY PARKES.

Sir Patrick Jennings, K.C.M.G., to The Colonial Secretary.

Dear Sir Henry,

Reform Club, 28/1/87.

I delayed my reply to your kind note of yesterday until I made inquiries as to how far it would be practicable for me to reach London in time for the Conference, the date of which seems to have been altered several times.

I find I can be in London on the 29th March at furthest, and possibly by the 21st March. I thank you very much for your offer to recommend my appointment as a Representative of the Colony at the Conference, and, if appointed, I will give my best services and assistance on the consultation of that body, and I altogether agree with you in hoping and believing that very valuable results will accrue from its deliberation.

Believe me, &amp;c.,

P. A. JENNINGS.

**Minute for The Executive Council.**

Appointment of Representatives to Imperial Conference.

Colonial Secretary's Office, Sydney, 2 February, 1887.

I RECOMMEND the appointment of Sir Saul Samuel, K.C.M.G., C.B., Agent-General, Sir Patrick Alfred Jennings, K.C.M.G., and the Honorable Robert Wisdom, Q.C., M.L.C., to represent the Colony at the forthcoming Conference, to be held in London, upon Imperial and Colonial Defence, and other subjects, during the present year.

HENRY PARKES.

**Minute of The Executive Council.**

HIS Excellency the Governor lays before the Council a Minute Paper by the Honorable the Colonial Secretary, recommending that Sir Saul Samuel, K.C.M.G., C.B., Agent-General, Sir Patrick Alfred Jennings, K.C.M.G., and the Honorable Robert Wisdom, Q.C., M.L.C., be appointed to represent the Colony at the forthcoming Conference, to be held in London, upon Imperial and Colonial Defence, and other subjects, during the present year.

2. The Council advise that the gentlemen referred to be appointed Representatives of the Colony at the said Conference.

ALEX. C. BUDGE,

Clerk of the Council.

The

The Principal Under Secretary to The Secretary to the Post Office.

Sir, Colonial Secretary's Office, Sydney, 10 February, 1887.  
I am directed by the Colonial Secretary to request that you will invite the Postmaster-General to be so good as to cause me to be furnished with information regarding Post and Telegraph Communication since 1885, for the use of the Representatives of the Colony at the forthcoming Conference, to be held in London, upon Imperial and Colonial Defence, and other subjects, during the present year.

I have, &c.,  
CRITCHETT WALKER,  
Principal Under Secretary.

The Colonial Secretary to the Agent-General.

Sir, Colonial Secretary's Office, New South Wales, 11 February, 1887.  
His Excellency the Governor, with the advice of the Executive Council, has deemed it expedient to appoint you to be one of the Representatives of this Colony at the Imperial Conference to assemble in London in April next.

2. It is expressly stated by the Secretary of State that the Conference is to be of a consultative character, and that it is the desire of Her Majesty's Government that questions relating to political federation be excluded from its deliberations. In the views so expressed this Government entirely concurs.

3. In joining in the deliberations of the Conference the Government depends upon your intimate knowledge of the Colony and your experience gained in Parliament and in the conduct of public affairs for your guidance; and it is felt that you will studiously protect the interests of the Colony, and not even by implication commit the Colony to any new line of policy until any such question as may arise shall have been submitted by cable to this Government, and you shall have been specifically instructed on the subject.

4. It appears to me that much good to the Colonies generally must result from the proceedings of the Conference in promoting a fuller and more correct knowledge of Intercolonial as well as Imperial questions, and in strengthening a cordial feeling of attachment between the different parts of the Empire.

I have, &c.,  
HENRY PARKES.

Similar letters were addressed to Sir Patrick A. Jennings, K.C.M.G., and the Hon. Robert Wisdom, Q.C., M.L.C.

Commission appointing Sir Saul Samuel, K.C.M.G., C.B.

BY His Excellency the Right Honourable CHARLES ROBERT, BARON CARRINGTON, a Member of Her Majesty's Most Honourable Privy Council, Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies.

To Sir SAUL SAMUEL, K.C.M.G., C.B., Agent-General for the Colony of New South Wales, London,—  
Greeting:

WHEREAS it has been determined by Her Majesty's Imperial Government to hold a Conference in London, at which Representatives of the principal Colonial Governments have been invited to attend, to consider matters relating to Imperial and Colonial defence, the promotion of commercial and social relations by the development of postal and telegraphic communications, and other subjects of common interest: Now, therefore, I, CHARLES ROBERT, BARON CARRINGTON, the Governor aforesaid, do, with the advice of the Executive Council of the said Colony, hereby appoint you the said Sir SAUL SAMUEL to represent and act in behalf of the Government of New South Wales in and at the said Conference in association with Sir PATRICK JENNINGS, K.C.M.G., and the Honourable ROBERT WISDOM, Q.C., M.L.C., to confer and deliberate with the other Representatives thereat assembling, and to report from time to time, should occasion arise, to seek fresh instructions, and finally to report fully the proceedings of such Conference,

Given under my Hand and the Seal of the Colony, at Government House, Sydney, in New South Wales aforesaid, this eleventh day of February, in the year of our Lord one thousand eight hundred and eighty-seven, and in the fiftieth year of the Reign of Her Majesty Queen Victoria.

(L.S.)

CARRINGTON.  
By His Excellency's Command,  
HENRY PARKES.

Entered on record by me, in REGISTER OF PATENTS, No. 12, pages 511-512, this eleventh day of February, one thousand eight hundred and eighty-seven.

For the Colonial Secretary and Registrar of Records,  
CRITCHETT WALKER,  
Principal Under Secretary.

Commission appointing Sir Patrick Jennings, K.C.M.G., and the Hon. Robert Wisdom, Q.C., M.L.C.

BY His Excellency the Right Honourable CHARLES ROBERT, BARON CARRINGTON, a Member of Her Majesty's Most Honourable Privy Council, Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies.

To

To Sir PATRICK JENNINGS, K.C.M.G., and the Honourable ROBERT WISDOM, Q.C., M.L.C.,—

Greeting :

WHEREAS it has been determined by Her Majesty's Imperial Government to hold a Conference in London, at which Representatives of the principal Colonial Governments have been invited to attend, to consider matters relating to Imperial and Colonial defence, the promotion of commercial and social relations by the development of postal and telegraphic communications, and other subjects of common interest: Now, therefore, I, CHARLES ROBERT, BARON CARRINGTON, the Governor aforesaid, do, with the advice of the Executive Council of the said Colony, hereby appoint you the said SIR PATRICK JENNINGS and the said ROBERT WISDOM to represent and act in behalf of the Government of New South Wales in and at the said Conference in association with the Agent-General resident in London, SIR SAUL SAMUEL, K.C.M.G., C.B., to confer and deliberate with the other Representatives thereat assembling, and to report from time to time, should occasion arise, to seek fresh instructions, and finally to report fully the proceedings of such Conference.

Given under my Hand and the Seal of the Colony, at Government House, Sydney, in New South Wales aforesaid, this eleventh day of February, in the year of our Lord one thousand eight hundred and eighty-seven, and in the fiftieth year of the Reign of Her Majesty Queen Victoria.

(L.S.)

CARRINGTON.  
By His Excellency's Command,  
HENRY PARKES.

Entered on record by me, in REGISTER OF PATENTS, No. 12, pages 513-14, this eleventh day of February, one thousand eight hundred and eighty-seven.

For the Colonial Secretary and Registrar of Records,  
CRITCHETT WALKER,  
Principal Under Secretary.

The Colonial Secretary to Sir Patrick Jennings, K.C.M.G.

NEW SOUTH WALES.

Sir,

Colonial Secretary's Office, 11 February, 1887.  
Referring to my letter of the present date, I have now the honor to transmit to you herewith the papers specified in the accompanying schedule for use at the forthcoming Conference, to be held in London, upon Imperial and Colonial Defences and other subjects.

I have, &c.,  
HENRY PARKES.

A similar letter was also addressed to the Hon. Robert Wisdom, Q.C., M.L.C.

*Papers referred to.*

1. Imperial and Colonial Defences.
2. New Guinea.
3. New Hebrides.
4. Postal and Telegraphic Communication.

The Colonial Secretary to Sir Patrick Jennings, K.C.M.G.

New South Wales, Colonial Secretary's Office,  
Sydney, 25 March, 1887.

Sir,

I have the honor to inform you that His Excellency the Governor, with the advice of the Executive Council, has been pleased to approve of your being allowed a bonus of £1,000 to defray the cost of your passage to and from England, and to cover all your other expenses in connection with your appointment as a representative of this Colony at the Conference to be held in London upon Imperial and Colonial Defence and other subjects during the present year.

I have, &c.,  
HENRY PARKES.

A similar letter was also addressed to the Hon. Robert Wisdom, Q.C., M.L.C.

The Principal Under Secretary to The Under Secretary for Finance and Trade.

Sir,

Colonial Secretary's Office, Sydney, 25 March, 1887.

I am directed by the Colonial Secretary to state, for the information of the Colonial Treasurer, that His Excellency the Governor with the advice of the Executive Council has been pleased to approve of the gentlemen named in the margin being allowed a bonus of £1,000 each to defray the cost of their passages to and from England and to cover all their other expenses in connection with their appointment as representatives of this Colony at the Conference to be held in London upon Imperial and Colonial Defence and other subjects during the present year.

I have, &c.,

CRITCHETT WALKER,  
Principal Under Secretary.

Sir Patrick  
Alfred Jennings,  
K.C.M.G., and  
The Honourable  
Robert Wisdom,  
Q.C., M.L.C.

Telegram from The Agent-General to The Colonial Secretary.

London, 30 March, 1887.

JENNINGS and Wisdom arrived.

Telegram

Telegram from the Agent-General to The Colonial Secretary.

London, 1 April, 1887.

JENNINGS, Wisdom, and self, had interview with the Secretary of State for the Colonies,—has no intention of permitting discussion of Imperial Federation at Conference.—We shall resist any such proposal.

Telegram to The Agent-General and other Representatives at Imperial Conference.

Sydney, 1 April, 1887.

TELEGRAM in papers that Sir Henry Holland proposes to bring question of Imperial Federation under discussion at Imperial Conference. This appears directly opposed to paragraph six of Colonel Stanhope despatch of 25th November, to which your attention is called. I doubt if you should take part in any such discussion.

Telegram from the Premier of Victoria to The Colonial Secretary, New South Wales.

Melbourne, 4 April, 1887.

THE following telegram is published in a Melbourne paper to-day; thinking you might not see it, I forward a copy:—"London, 3rd April. It has been arranged that, in addition to the matters already notified, the Imperial Conference will give consideration to the question of the administration of New Guinea, the New Hebrides dispute, and the deportation of recidivistes to the Pacific. It is understood that Sir Patrick Jennings, as one of the representatives of New South Wales, will take an antagonistic stand against the delegates of the other Australian Colonies on these questions, and especially with regard to the New Hebrides."

Telegram from The Colonial Secretary to Delegates to Imperial Conference.

Sydney, 5 April, 1887.

IF questions of administration of New Guinea, or occupation of New Hebrides, or deportation of French recidivistes to Pacific come before Conference I hope you will be able to co-operate with Victoria and Queensland and other Colonies. Any impolitic course in treatment of questions should be carefully avoided, but united action between the chief Colonies desirable in view of future interests of Australasia.

Telegram from Agent-General to the Colonial Secretary.

London, 5 April, 1887.

MEETING of Conference to-day satisfactory. Jennings spoke on behalf of New South Wales. Note subjects to be discussed as communicated press, and let us have your views.

Colonial Secretary to The Honorable Duncan Gillies, Victoria.

Sir,

Colonial Secretary's Office, Sydney, 6 April, 1887.

In acknowledging the receipt of your telegram of the 4th instant, I have the honor to transmit herewith for the information of your Government a copy of a telegram that I have forwarded to the representatives of this Colony at the Imperial Conference, London, stating that I hope they will be able to co-operate with Victoria and the other Colonies in the event of the questions of administration of New Guinea, or the occupation of New Hebrides, or deportation of French Récidivistes to the Pacific, coming under the consideration of the Conference.

I have, &c.,  
HENRY PARKES.

Telegram from the Agent-General to the Colonial Secretary.

London, 6 April, 1887.

CONFERENCE yesterday considered question of Naval Defence, further consideration postponed to 18th April. To-day discussed enforcement of Colonial judgments in United Kingdom and the resealing of probates, also the preservation of life at sea, and then adjourned until 14th April.

1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

LAND AT CORNER OF PITT AND BRIDGE STREETS.

(JOHN GARSE'S LETTER OF 15 JUNE, 1887, AND TREASURY MEMORANDA.)

*Ordered by the Legislative Assembly to be printed, 13 July, 1887.*

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 11th July, 1887, That there be laid upon the Table of this House,—

“ A copy of Mr. John Garsed's letter, dated 15th June, 1887, giving the information relative to the payment of rents for land at the corner of Pitt and Bridge Streets, together with the Treasury Memoranda on the subject.”

(*Mr. Hurley.*)

No. 1.

J. Garsed, Esq., to The Secretary for Lands.

[O.H.M.S.]

Sir,

Helsarmel, Leichhardt, 15 June, 1887:

The following is copied from the Votes and Proceedings of the Legislative Assembly:—

*Friday, 10 June, 1887.*

Land at corner of Pitt and Bridge Streets:—Mr. HUGH TAYLOR (for Mr. HURLEY) asked the SECRETARY FOR LANDS,—Having regard to the replies given by him on Friday last, 3 June, in respect to the Crown land at the corner of Pitt and Bridge Streets,—

- (1.) Will he inform the House who received the rents upon the same from the time the Crown took possession under a Writ of Intrusion, issued 23 December, 1862?
- (2.) Have these rents been paid from the time the Crown took possession?
- (3.) Will he produce an attested copy of the Conditional Grant of date 23rd December, 1839; also, an attested copy of any other referring to same land (if any).

Mr. GARRETT answered:—The records of the Treasury do not disclose the information sought as regards the payment of rent. On page 11 of the Progress Report of the Select Committee, ordered by this House on the 17th May, 1878, to be printed, will be found a copy of the grant referred to.

Truth cannot be destroyed,—One Mr. Thomas Gale, who resides at Petersham, has for many years past received the Crown rents, but cannot say if he received the rents from date, the Crown under a Writ of Intrusion, issued 23rd December, 1862,—but to my knowledge Mr. Thomas Gale never erected the buildings or paid one shilling towards the cost of the buildings.

I have before me—(Progress Report, and I now turn to page 11)—the substance of Conditional Grant, executed by His Excellency the Governor, at Government House, Sydney, on the 23rd December, 1839.—Signed, Geo. Gipps.

520—

At a public auction held in conformity with the regulations made for the sale of Crown lands, one John Terry Hughes, on the 15th August, 1839, conditionally purchased an allotment of Crown land, area 6 perches, bounded on one side by the then Pitt-street, and on the other side by a lane  $11\frac{1}{2}$  feet in width.

*The Conditions.*

- (1.) Upon the express condition that the said John Terry Hughes should construct an archway over the Tank Stream, according to a plan deposited in the office of the Town Surveyor.
- (2.) Condition : That John Terry Hughes should erect a first-class building on the said land within two years from 15th August, 1839, the day of sale thereof.

Provided always if the said conditions, or any part thereof, be not duly observed and performed, the said land shall be forfeited.

No attempt was made, either by John Terry Hughes or John Jobbins, or John Jobbins' trustees, to carry out either condition, therefore the land was absolutely forfeited to the Crown on the 15th August, 1841.

The said land,  $11\frac{1}{2}$  feet in width, was reserved by the Government for access to the back of eleven allotments, formerly the old lumber-yard. Those eleven allotments were sold by the Government, subject to a building condition, but His Excellency the Governor, on the 20th November, 1848, was pleased to release the said eleven allotments of land having a frontage to Bridge-street from the building condition attached to them.

The particulars of allotment conditionally sold to John Terry Hughes on 15th August, 1839:—This allotment is no portion of the old lumber-yard; it was an ugly allotment owing to the Tank Stream, an open stream, flowing through the same.

The records in your department merely go back to date 9th August, 1856, and not to 15th August, 1839. The Surveyor-General to Mr. Assistant-Surveyor Burrowes:—This letter refers to Mr. Randle's account for covering in a portion of the Tank Stream.

In September, 1856, the Surveyor-General was most anxious to widen the said  $11\frac{1}{2}$  feet reserved lane to 25 feet wide, and was under the impression the trustees in Jobbins' estate were the legal owners of said allotment of Crown land conditionally purchased by John Terry Hughes on the 15th August, 1839, and forfeited to the Crown on 15th August, 1841.

Read Conditional Grant dated 23rd December, 1839, and you cannot travel outside of the grant.

Mr. Burrowes' duty to have read the present grant. It is evident from last answer to questions no other, with the exception of said Conditional Grant, existed.

On record:—Mr. Assistant-Surveyor Burrowes received a letter dated 31st March, 1857, from Messrs. Nichols & Williams, solicitors, in which Mr. Burrowes is informed that the trustees of the will of the late Mr. Jobbins have no power or authority to surrender the present grant and accept another grant of other land, however beneficial, as no doubt it will be, to the estate. It appears the only course will be to obtain an Act of Council to enable the Government and trustees to do what is required, to which we can see no possible objection.

The said conditional grant was merely waste paper after the allotment was forfeited to the Crown, for non-fulfilment of said conditions.

The said reserved lane was widened, which left a piece of Crown land between Old and New Pitt Streets.

Early in 1857 I instructed Mr. W. R. Smart to purchase, on my account, an allotment of land, corner of Bridge and New Pitt Streets. Mr. Smart shortly after informed me in substance:—The trustees in Jobbins' estate had no power at that date to sell me the land, but if I would lease the land for a short term (if so) the trustees would have the power to sell me the land before the expiration of lease; but in the event I did not purchase the land, I was to have the power to sell any building that I might erect upon the land.

Mr. Assistant-Surveyor Burrowes marked out the boundary of the land, upon which I erected my Commercial Chambers at a cost of about £1,500. I had no idea Mr. Surveyor Burrowes had marked out an allotment of Crown land, and the trustees did not obtain an "Act of Council."

I admit that I have no legal right to the rents of my Commercial Chambers from date the Crown took possession of the land, neither can any other person have a legal right to the rents.

I trust the department will take immediate action to recover the rents dating from the time the Crown took possession.

In your department you will read my letter to the Surveyor-General dated Willow Lodge, Glebe, 28th March, 1857, in which I inform the Surveyor-General I have leased the allotment of land (late Jobbins'), and the officers in your department on reading will learn that at the date of my letter the Tank Stream was an open stream. I made it my business yesterday to learn from a person in occupation of a portion of my buildings, who received the rents.

To arrive at the facts, another Select Committee should be appointed to bring up a final report (after the Crown Solicitor and myself are examined). Owing to the advanced period of the session on the 17th May, 1878, the chairman, John Hurley, Esq., had not time to bring up a final report.

It is never too late to inquire into facts.

I have, &c.,

JOHN GARSED.



No. 2.  
Question.

LEGISLATIVE ASSEMBLY.—FRIDAY, 10TH JUNE, 1887.

No. 3. Mr. Hurley to ask the Secretary for Lands, having regard to the replies given by him on Friday last, 3 June, in respect to the Crown land at the corner of Pitt and Bridge Streets:—

- (1.) Will he inform the House who received the rents for the same from the time the Crown took possession under a Writ of Intrusion, issued 23 December, 1862?
- (2.) Have these rents been paid, and is it his intention to cause the Department to take immediate action to recover the same, dating from the time the Crown took possession?
- (3.) Will he produce an attested copy of the conditional grant of date of 23 December, 1839; also an attested copy of any other grant referring to same land?

Copy of Memoranda furnishing particulars for Mr. Secretary Garrett's reply to above.

Will the Under-Secretary for Finance and Trade be good enough to say if any rents were paid, and if so from whom were they received by the Treasury and the amount.—R.H.D. (for the U.S.). 9 June, 1887. Very urgent. Mr. Walford,—Register and let me know if there are any papers in the records of the Treasury on this subject.—J.T., 9/6/87. I cannot find trace of any papers.—J.S.W., 9/6/87. The Under-Secretary. Mr. Newcombe,—Are you aware of any rents having been paid into the Treasury on account of the property referred to.—J.T., 9/6/87. I am not able to trace any payments on this account.—W.N., 9/6/87. The Under-Secretary for Lands. B.C., 9/6/87.—J.T. (for U.S.).



1887.

(SECOND SESSION.)

NEW SOUTH WALES.

**NITRO-GLYCERINE EXPLOSIVES.**

(AMENDED RATES FOR LIGHTERING, DELIVERING, AND STORING.)

Presented to Parliament, pursuant to Act 40 Vic. No. 1, sec. 41.

The Treasury, New South Wales,  
15th January, 1887.

AMENDED RATES AND CHARGES FOR LIGHTERING, DELIVERING, AND STORING OF NITRO-GLYCERINE EXPLOSIVES.

It is hereby notified, for general information, that in virtue of the provisions contained in clause 1 of the "Gunpowder and Explosives Rates Act of 1884," His Excellency the Governor, with the advice of the Executive Council, has been pleased to prescribe the following rates and charges for Lightering, Delivering, and Storing any Explosive within the meaning of the Act 40 Victoria No. 1, in substitution for the rates and charges prescribed in the third, fourth, and fifth Schedules to such last-mentioned Act,—such rates and charges to be levied and paid on all Nitro-glycerine compounds on and from 1st February, 1887.

P. A. JENNINGS.

**Schedule of Amended Rates for Lightering, Delivering, and Storing of Nitro-glycerine Compounds, made in virtue of the provisions of the "Gunpowder and Explosives Rates Act of 1884."**

**RATES OF LIGHTERAGE FROM SHIP OR VESSEL BY WHICH NITRO-GLYCERINE COMPOUNDS ARE IMPORTED.**

	£	s.	d.
For each barrel or package containing fifty-one pounds of any nitro-glycerine compound and upwards to one hundred pounds .....	0	0	6
For each barrel or package containing fifty pounds of any nitro-glycerine compound and under.....	0	0	4

Any explosive other than gunpowder to be liable to similar charges.

But if the rates shall in any case not amount to ten shillings, the minimum charge instead of the above rates shall be ten shillings.

**RATES OF CHARGES FOR DELIVERY OF NITRO-GLYCERINE EXPLOSIVES FROM MAGAZINES BY LAND AND WATER TRANSPORT, OR SEPARATELY, AS THE CASE MAY BE.**

	£	s.	d.
For one or any number up to ten barrels or packages each containing not more than fifty pounds of any Nitro-glycerine compound but not exceeding ten packages, to be conveyed by land and water at one time on each person's order, the minimum charge to be.....	0	10	0
For every barrel or package each containing not more than fifty pounds of any Nitro-glycerine compound in excess of ten packages conveyed by land and water—at per package.....	0	0	6
For one or any number up to ten barrels or packages each containing fifty-one pounds of any Nitro-glycerine compound and up to one hundred pounds, but not exceeding ten packages to be conveyed by land and water at one time on each person's order, the minimum charge to be .....	1	0	0

	£	s.
For every barrel or package, each containing fifty-one pounds of any Nitro-glycerine compound and up to one hundred pounds in excess of ten packages, to be conveyed by land and water at—per package .....	0	1 0
And in cases of land carriage (exclusive of railway carriage) and water transport being separately done in either of the foregoing cases the charges shall be at half the rates hereinbefore stated.		
For each delivery to places more than two miles distant from the Magazines in Sydney or Newcastle harbours respectively, an extra charge per mile or portion of a mile by land and water to and from such place of delivery to be made for every fifty packages or portion thereof, say .....	0	2 6
For each delivery from any Magazine, other than those of Sydney and Newcastle aforesaid, for every fifty packages or portion thereof, a charge of—per mile to and from such Magazine .....	0	0 2
And for every hour or portion of an hour exceeding thirty minutes, during which the boats or vans may be detained .....	0	5 0
Any explosive other than gunpowder to be liable to similar charges.		

**RATES OF STORAGE.**

For each barrel or package containing upwards of fifty pounds of any nitro-glycerine compound for any period not exceeding six weeks .....	0	3 0
For each barrel or package containing upwards of fifty pounds of any nitro-glycerine compound for any period above six weeks—per week.....	0	0 6
For each barrel or package containing fifty pounds and under of any nitro-glycerine compound for any period not exceeding six weeks .....	0	1 6
For each barrel or package containing fifty pounds and under of any nitro-glycerine compound for any period above six weeks—per week .....	0	0 3
Any explosive other than gunpowder to be liable to similar charges.		



1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

## PATENTS LAW FURTHER AMENDMENT BILL.

(MESSAGE No. 15.)

*Ordered by the Legislative Assembly to be printed, 27 April, 1887.*

CARRINGTON,

*Governor.**Message No. 15.*

In accordance with the provisions contained in the 54th section of the Constitution Act, the Governor recommends for the consideration of the Legislative Assembly the expediency of making provision to meet the requisite expenses in connection with a Bill to further amend the law relating to Patents for Inventions and Improvements in Arts or Manufactures, and to authorize the appointment of an Examiner of Patents.

*Government House,**Sydney, 26th April, 1887.*

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1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

PREMISES RENTED BY THE GOVERNMENT.  
(FOR PUBLIC WORKS DEPARTMENT.)

*Ordered by the Legislative Assembly to be printed, 28 April, 1887.*

RETURN (*in part*) to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 22nd March, 1887, That there be laid upon the Table of this House,—

“ A Return showing the number of houses rented by the various Ministerial Departments, showing the rent paid for each house, with the landlord’s name in each case, and total rent paid by each Department, and the total rental paid by all the Departments, and the period for which each has been rented.”

(*Mr. McElhone.*)

PREMISES rented by the Department of Public Works.

Branch.	Premises.	Owner.	Annual rental.	Total amount paid by Department.	Period for which rented.
Commissioner for Railways.	Pitt-street(upperrooms)	Australian Mutual Provident Society.	£ 600 0 0	£ .....	Five years' lease, which will expire in March, 1888, when rooms will be vacated. Yearly tenancy. do do { 3 years' lease, which will expire 24th April, 1887.
	Phillip-street .....	W. Andrews .....	250 0 0	.....	
	do .....	E. Jones .....	325 0 0	.....	
	do .....	W. Long .....	250 0 0	.....	
	Bridge-street .....	J. Brown's Estate .....	260 0 0	.....	
	do .....	do .....	260 0 0	.....	
Engineer-in-Chief for Railways.	Pitt-street .....	Australian Mutual Provident Society.	* .....	.....	
Engineer-in-Chief for Harbours and Rivers.	Henrietta Terrace, Phillip-street North.	Hon. Richard Hill .....	250 0 0	.....	Yearly tenancy.
	Queen's Chambers, Queen's Place, off George-street North.	Randolph Nott .....	78 0 0	.....	Weekly tenancy (30s.)
Commissioner for Roads.	Nil.....	Nil.....	.....	.....	Nil.
Colonial Architect ...	Nil.....	Nil.....	.....	2,273 0 0	Nil.

\* Rent paid by Commissioner (included in the amount £600 noted above).

[3d.]

247—

[805 copies—Approximate Cost of Printing (labour and material), £1 13s. 10d.]





1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

## PREMISES RENTED BY THE GOVERNMENT.

(FOR TREASURY DEPARTMENT.)

*Ordered by the Legislative Assembly to be printed, 1 June, 1887.*

FURTHER RETURN (*in part*) to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 22nd March, 1887, That there be laid upon the Table of this House,—

“ A Return showing the number of houses rented by the various Ministerial Departments, showing the rent paid for each house, with the landlord’s name in each case, and total rent paid by each Department, and the total rental paid by all the Departments, and the period for which each has been rented.”

*(Mr. McElhone.)*

## PREMISES rented by the Treasury Department.

Branch.	Premises.	Landlord.	Annual rental.	Total amount paid by Department.	Period for which rented.
Collector of Customs..	Silverton .....	Geo. M. Matheson .....	£ s. d. 65 0 0	£ s. d. .....	Yearly tenancy.
Commissioner of Stamps.	Phillip-street .....	R. T. Carter.....	350 0 0	.....	Five years’ lease.
Chief Inspector of Distilleries.	Bridge-street* .....	Thomas Brown .....	120 0 0	.....	Yearly tenancy.
Government Printer...	Circular Quay .....	Mason Bros.....	500 0 0	.....	do
	Begg-street,Paddington	J. Rolinson .....	39 0 0	.....	Monthly tenancy.
	Bligh-street .....	J. Turner .....	115 0 0	.....	do
Ordnance Storekeeper	18, Macquarie Place†...	Wall & Molesworth ...	275 0 0	.....	Yearly tenancy.
Health Officer .....	127, Macquarie-street *	Michael Metcalfe .....	250 0 0	.....	Lease expires November, 1887.
	Watson’s Bay .....	Mrs. E. Castles .....	60 0 0	.....	Yearly tenancy.
	Do .....	Lady Robertson .....	36 8 0	.....	Weekly tenancy (14s.)
	Do .....	do .....	36 8 0	.....	do (14s.)
	Do .....	Joseph Francis .....	52 0 0	.....	do (20s.)
	Do .....	Mrs. A. E. Killick.....	31 4 0	.....	do (12s.)
President, Marine Board.	Macquarie Place‡ .....	Land Company of Australia.	100 0 0	.....	Monthly tenancy.
				2,080 0 0	

\* Portion of house only occupied by this branch.

† Two flats only rented.

‡ Three rooms only rented.



1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

## PRESBYTERIAN CEMETERY AT MACLEAN.

(PETITION FROM PRESBYTERIAN RESIDENTS OF THE LOWER CLARENCE.)

*Received by the Legislative Assembly, 11 May, 1887.*

To the Honorable the Speaker and the Honorable the Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned Presbyterian residents of the Lower Clarence,—

HUMBLY SHOWETH:—

That the General Assembly of the Presbyterian Assembly of the Presbyterian Church of New South Wales has taken steps and removed the names of Messrs. James M'Donald, Donald Shearer, and Francis M'Kenzie, the surviving Trustees of the Presbyterian Cemetery at Maclean, who were elected in public meeting assembled, and appointed and gazetted by the Government, thereby depriving your Petitioners of their legal rights to the said Cemetery, a privilege they have enjoyed for the last twenty-two (22) years; and your Petitioners would point out that at the aforesaid public meeting it was unanimously agreed that the aforesaid Trustees, together with Messrs. Alexander Cameron and John M'Lachlan, since deceased, should represent the entire Presbyterian body on the Lower Clarence then existing.

Your Petitioners would point out to your Honorable House that the aforesaid Cemetery was granted by the Government about the year 1863 or 1864, A.D., a period at which the said United Presbyterian Church of New South Wales, now claiming exclusive right to the said Cemetery, was not then in existence.

Therefore your Petitioners contend that the Presbyterian Assembly, which embodies within itself but a small portion of the Presbyterians in the district, and which continues to enjoy a common right with your Petitioners to the use of the Cemetery, were not justified in adopting the course they did.

And your Petitioners humbly pray that your Honorable House will restore to them the aforesaid Presbyterian Cemetery, Maclean, as their legal rights, and reinstate Messrs. James M'Donald, Donald Shearer, and Francis M'Kenzie, as Trustees, their number to be completed in the regular and legal way, there being no grounds of complaint against them by the General Presbyterian body on the river.

And your Petitioners humbly pray that your Honorable House will take these premises into favourable consideration and grant their request; and your Petitioners, as in duty bound, will ever pray.

[Here follow 307 signatures.]



1887.  
(SECOND SESSION.)

NEW SOUTH WALES.

**PUBLIC ABATTOIR, GLEBE ISLAND.**  
(AMENDED ORDERS AND REGULATIONS)

Presented to Parliament, pursuant to Act 14 Vic. No. 36, sec. 4.

The Treasury, New South Wales,  
8th June, 1887.

**PUBLIC ABATTOIR, GLEBE ISLAND.**

His Excellency the Governor having been pleased, with the advice of the Executive Council, further to amend the "Orders and Regulations" concerning the Public Abattoir at Glebe Island, as published in Government Gazette of 3rd December, 1886, it is hereby notified that, in lieu thereof, the following shall be enforced, on and after the 1st day of July, 1887.

J. F. BURNS.

**ORDERS AND REGULATIONS.**

1. The Abattoir shall, during the period from 1st October to 31st March, be open daily (Sundays excepted) for the despatch of business, from the hours of 5 o'clock a.m. to 6 o'clock p.m. (except on Mondays, on which day the Abattoir will be open from 2 o'clock a.m. to 6 o'clock p.m., and on Saturdays from 2 o'clock a.m. to 3 o'clock p.m.), and during the period from the 1st of April to the 30th September, from 6 o'clock a.m. to 6 o'clock p.m. (excepting on Fridays, when the hours will be from 5 o'clock a.m. to 6 o'clock p.m., and on Saturdays, from 5 o'clock a.m. to 3 o'clock p.m.); and no slaughtering of cattle will be permitted during any other hour or day than the hours and days above mentioned, nor shall any person be allowed to come within the enclosures of the Abattoir except at such times as they are open for business. Pigs, lambs, and calves may, however, be slaughtered and dressed at the Abattoir during the nights of Friday, between the 1st of October and the 31st of March in each year.

2. The slaughter-houses shall, with the exception of six beef, six mutton, and two pig slaughter-houses, be retained in the hands of the Government for the use of the public.

3. Six beef, six mutton, and two pig slaughter-houses may be submitted to public competition, by lease, at an upset price to be announced at the time of sale, should it be decided to submit the same to auction.

4. A fee of threepence for inspecting brands shall be charged upon every head of horned cattle slaughtered in the leased houses.

5. Parties desirous of using the slaughter-houses reserved by the Government shall be permitted to do so on payment of the following fees:—

	s.	d.
For every ox, cow, bull, or heifer, or steer (including inspection fee of 3d.).....	1	0
For every calf not exceeding six months old (including an inspection fee) .....	0	6
For every sheep or lamb .....	0	1½
For every head of swine.....	0	6

6. All fees shall be paid at the office of the Inspector of the Abattoir, on demand, to such officer, or to his Assistant, and shall thereafter be paid into the Colonial Treasury under such directions as shall from time to time be given by the Secretary for Finance and Trade.

7. Printed receipts shall be given to all parties paying fees.

8. No person or persons shall yard or slaughter, or cause to be yarded or slaughtered, any animal at the reserved slaughter-houses without the sanction of the Inspector or Assistant Inspector.

9. The hours during which cattle may be driven in and yarded for slaughter shall be from 5 o'clock a.m. to 8 o'clock a.m., between the 1st October and the 31st March, and from 6 o'clock a.m. to 8 o'clock a.m., between the 1st April to the 30th September in each year, daily, including Sundays; and cattle shall in all cases be inspected before being slaughtered. Milch cows and stall-fed cattle may be driven in between the hours of 12 noon and 3 o'clock p.m., during week days only.

10. No person or persons shall slaughter, or cause to be slaughtered, any animal in any of the slaughtering-houses on Glebe Island, without the sanction of the Inspector or Assistant Inspector. And in all cases when carcasses are brought to the Abattoir dressed or to be dressed, notice shall be given to the Inspector or the Assistant Inspector on the arrival of the same; but no animal slaughtered outside the Abattoir and brought there with the head detached from the body will be allowed to be dressed there. In no case shall the body be brought into the Abattoir until seen by the Inspector or Assistant Inspector. In all cases the owner thereof, or the persons occupying a slaughter-house, shall be held liable for any breach of this Regulation.

11. Any animal brought to the Abattoir for slaughter, which appears to the Inspector or Assistant Inspector to be diseased, shall be disposed of in such manner as the Inspector or Assistant Inspector may direct, to secure the slaughtering, examination, and final disposal of the same. If the owner shall object to such direction, he may require the animal to be

inspected by an officer of the Board of Health, whose decision shall be final. In all such cases the owner of the animal, or the person occupying the slaughter-house, shall be held liable for any breach of this Regulation.

12. The Inspector and Assistant Inspector are hereby empowered to control and direct the traffic, wheeled or otherwise, for the safety and convenience of business at the Abattoir.

13. Should any animal die while in the pens connected with the Abattoir, the owner of the animal, or person occupying the pen at such time, shall immediately remove the whole carcase from the island, and destroy the same forthwith.

14. All animals on which fees are charged shall be reported to the Inspector or Assistant Inspector without delay, and the fees paid forthwith; failing such payment either of the said officers may close and lock the doors leading from the pens to the pithing or slaughtering floors, until the said fees are paid.

15. Sheep and cattle will not be permitted to remain in the Abattoir pens for more than forty-eight hours from the time of being brought in.

16. No lessee or occupier of any slaughter-house connected with the Abattoir shall expose for sale any meat which has been condemned by the Inspector or Assistant Inspector; and any such lessee or occupier shall, when ordered to do so by the Inspectors aforesaid, immediately remove such meat from the Abattoir, and cause the same to be destroyed by fire or boiled down for the purpose only of extracting tallow. The Inspector or Assistant Inspector is hereby empowered, in the event of non-compliance with his order for the removal of the said meat, to destroy the same at the cost of such lessee or occupier.

17. The lessee or occupier of any slaughter-house shall thoroughly cleanse the same, to the satisfaction of the Inspector or Assistant Inspector, immediately after slaughtering has been carried on, and with respect to the offal and blood, may select and shall immediately remove, each day, at such time during the day as may be appointed by the Inspector or Assistant Inspector for the purpose, such portions, not being the whole of such offal and blood, as the said lessee or occupier may require for disposal for human food; and failing such removal at the time so appointed, the whole of such offal and blood may be removed by the Government.

18. The premises attached to, and the roadways in front and rear of, each slaughter-house shall be kept clean by the lessee or person occupying or using the same, to the satisfaction of the Inspector or Assistant Inspector of the Abattoir.

19. The lessees of sheep and pig slaughtering-houses shall severally furnish to the Inspector or Assistant Inspector, at their respective offices, on or before the 4th day of each month, a monthly return of all such animals as shall have been slaughtered at such houses.

20. No hide, carcase, or spleen of any horned cattle (not having been previously inspected) shall be removed from any slaughter-house until after the same has been inspected by the Inspector or Assistant Inspector of Abattoir.

21. Any meat found blown at the Abattoir may be condemned by the Inspector or Assistant Inspector, and the owner or person found blowing the same will be held liable.

22. The lessee or occupier of any slaughter-house shall cause the vessels and water used in dressing carcases therein to be kept clean to the satisfaction of the Inspector or Assistant Inspector.

23. Cattle, as they are brought in for slaughter, shall be kept separate from those already in the yards, until the brands of those so brought in shall have been inspected.

24. All hides, skins, heads, feet, and offal shall be removed from the Abattoir only by way of the road at the rear of the buildings.

25. The hours fixed for driving animals into the pens of the reserved mutton slaughter-houses shall be from 6 o'clock a.m. to 6 o'clock p.m., between the 1st of October and the 31st of March in each year, and between the 1st of April and the 30th of September the hours shall be from 7 o'clock a.m. to 4 o'clock p.m. in each year.

26. It is strictly prohibited to place candles or lights of any description upon or against the walls, or upon or against any portion of the woodwork of the Abattoir or stables, or any other building or buildings in connection therewith; and the lessee or person occupying the Abattoir or stable where such prohibited candle or light is found will be held responsible for the same.

27. In cases where water is found running to waste in any Abattoir, the lessee or occupant will be held responsible for such waste.

28. Gaming is prohibited at the Abattoir, also the tossing up or pitching of coin, throwing of dice, or playing of cards, under any pretext whatever.

29. Any person wilfully or negligently causing injury to any Government property of any description whatever at the Abattoir will be held responsible for the same.

30. The use of obscene or offensive language, the throwing of missiles, filth, or muck of any kind, or riotous conduct, or disorderly noise, is strictly prohibited within the enclosure of the Abattoir.

31. The lessee or occupier of any slaughter-house is prohibited from using, or causing to be used, any instrument for driving in cattle to the Abattoir, other than such as may be approved of by the Inspector or Assistant Inspector.

32. The Inspector or Assistant Inspector, or any other officer connected with the Glebe Island Abattoir, may at any time enter to view any of the slaughter-houses connected with the Abattoir, whether leased or otherwise; and no person or persons shall obstruct, molest, or assail with abusive or offensive language, either the Inspector, Assistant Inspector, or any other officer connected with the Abattoir while in the execution of his official duties.

33. It shall be competent for the Inspector of the Abattoir at any time, should any person or persons occupying any of the slaughter-houses reserved by the Government be found breaking or continuing to break any one or more of the Regulations made concerning the Public Abattoir at Glebe Island, to refuse to allow such person or persons to use any of the slaughter-houses reserved by the Government.

34. The owner or driver of any vehicle used for the transmission of meat from the Abattoir shall keep the same and the awnings used therewith in clean and proper condition to the satisfaction of the Inspector or Assistant Inspector of the Abattoir; and further, the driver of any such vehicle during the transmission of such meat shall keep himself and clothing in clean and proper condition to the satisfaction of the Inspector or Assistant Inspector, and shall wear, while loading meat, a garment formed with a hood for covering the head, the garment to extend below the hips, and to be made of strong oilskin.

35. The lessee or occupier of any beef slaughter-house shall cause the contents of the paunches and intestines to be deposited on the manure pit at the rear of the Abattoir; and the lessee or occupier of any sheep or pig slaughter-house shall cause the contents of the paunches and intestines to be deposited in the shoot erected for that purpose.

36. The lessee of any beef slaughter-house or houses shall not slaughter, or cause to be slaughtered therein, any sheep, lambs, or pigs.

37. Persons are prohibited from bringing to and depositing at the Abattoir offal or other offensive matter.

38. The lessees or occupants of the slaughter-houses shall limewash the walls of their respective houses inside every month, between the dates of the 1st and 7th inclusive of each month, to the satisfaction of the Inspector or Assistant Inspector. The Department to supply, free of cost, the necessary quantity of lime for such purpose.

39. Any person or persons offending against or failing to comply with any of the orders and regulations contained in paragraphs 1, 8, 9, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 34, 35, 36, 37, and 38 shall for each and every offence forfeit and pay a sum not exceeding five pounds.

40. Any person or persons offending against any of the orders or regulations contained in paragraphs 10 and 11 shall for each and every offence forfeit and pay a sum not exceeding five pounds nor less than fifty shillings.

1887.

(SECOND SESSION.)

## NEW SOUTH WALES.

## REAL PROPERTY ACT.

(RETURNS UNDER, FOR 1886.)

Presented to Parliament by Command.

RETURN of the Number of Applications, with amount of Fees, &amp;c., under the Real Property Act, from 1st January to 31st December, 1886.

Months.	No. of Applications.	No. of Properties.	Area.						Fees.														
			Town and Suburban.			Country.			Value.		Assurance.	Com- missioners.	Certificates and other Dealings.	Total.									
			a.	r.	p.	a.	r.	p.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.			
January .....	12	15	53	1	12½	1,153	0	0	26,594	0	0	55	6	4	27	10	0	1,370	15	0	1,453	11	4
February .....	21	29	129	2	18	334	1	10	44,739	0	0	93	4	2	38	15	0	1,393	14	8	1,525	13	10
March .....	29	49	136	3	21½	842	1	4	94,605	0	0	197	1	11	54	0	0	1,824	0	0	2,075	1	11
April .....	17	21	65	3	0¾	519	0	25	42,502	0	0	88	10	11	39	0	0	1,568	17	0	1,696	7	11
May .....	22	24	87	2	32½	486	3	16	42,132	0	0	87	15	7	36	0	0	1,780	17	4	1,904	12	11
June .....	23	31	59	3	15	286	2	19¾	33,687	0	0	174	7	0	38	5	0	1,663	7	0	1,875	19	0
July .....	30	45	58	1	37¾	1,540	1	24	131,463	0	0	273	17	8	56	10	0	1,797	18	8	2,128	6	4
August .....	27	31	259	1	1¼	484	2	7	61,372	0	0	127	17	2	49	10	0	1,639	3	0	1,816	10	2
September .....	24	31	112	0	3	831	1	36	47,226	0	0	98	7	9	46	10	0	1,551	6	0	1,696	3	9
October .....	22	30	279	2	21½	894	2	22	40,205	0	0	83	15	3	44	10	0	1,448	4	0	1,576	9	3
November .....	24	30	103	2	24¼	1,768	2	6¾	71,959	0	0	149	18	4	50	0	0	1,394	2	0	1,594	0	4
December .....	19	26	24	1	17¾	3,553	0	1¼	37,202	0	0	77	10	2	33	10	0	1,364	13	4	1,475	13	6
Totals .....	270	362	1,370	2	5¼	12,694	3	12¼	723,641	0	0	1,507	12	3	514	0	0	18,796	18	0	20,818	10	3

The above Return is exclusive of eight applications which have been withdrawn.

RETURN of the Number of Crown Grants registered under the Real Property Act, from 1st January to 31st December, 1886.

Months.	No. of Grants.	Area.						Total.	Value.	Assurance.						
		Town and Suburban.			Country.											
		a.	r.	p.	a.	r.	p.	£	s.	d.	£	s.	d.			
January .....	140	43	1	0½	16,867	0	15	16,910	1	15½	25,228	11	6	52	12	0
February .....	498	590	2	27	22,500	2	32	23,091	1	19	79,241	17	9	165	4	10
March .....	384	56	2	28½	44,277	1	12	44,334	0	0½	58,602	19	1	122	3	1
April .....	245	15	1	9½	33,196	2	2	33,211	3	11½	44,917	12	9	93	13	2
May .....	282	158	2	15	8,356	3	19	8,515	1	34	13,855	8	1	28	19	11
June .....	655	254	1	37¼	65,235	0	32	65,489	2	29¼	85,980	10	3	179	7	0
July .....	525	49	0	17¾	57,783	0	8	57,832	0	25¾	69,273	10	11	144	9	1
August .....	263	181	0	28¾	19,200	0	12	19,381	1	0¾	24,145	15	6	50	7	7
September .....	461	257	3	25¼	33,448	3	31	33,706	3	16¼	41,597	7	5	86	14	7
October .....	313	46	1	39½	30,718	2	4	30,765	0	3½	38,105	11	5	79	9	6
November .....	379	73	3	26¼	32,640	1	10	32,714	0	36¼	40,268	18	10	83	19	4
December .....	302	145	1	20½	33,189	3	30	33,335	1	10½	41,740	16	3	87	1	8
Totals .....	4,447	1,872	3	35½	397,414	2	7	399,287	2	2½	562,958	19	9	1,174	1	9

NOTE.—Amount of consideration-money for Transfers under the Act for the year .. . . . £3,060,244  
Amount secured by Mortgage under the Act for the year .. . . . 5,975,898  
Total area under the Act at end of 1886—14,198,427 acres 1 rood 12½ perches.  
Total declared value of land under the Act at end of 1886 .. . . . 24,113,825

Land Titles Office, Registrar-General's Department,  
Sydney, 28th April, 1887.E. G. WARD,  
Registrar-General.

RETURN of Memorials registered under the Real Property Act, for the year ending 31st December, 1886.

Months.	Transfers.	Consideration of Transfers.	Mortgages.	Consideration of Mortgages.	Discharges.	Consideration of Discharges.	Transfers of Mortgage.	Foreclosures of Mortgage.	Encumbrances.	Consideration of Encumbrances.	Transfers of Encumbrance.	Leases.	Transfers of Lease.	Surrenders of Lease.	Re-entry of Lease.	Caveat.	Withdrawal of Caveat.	Writs or Warrants.	Satisfaction of Writs or Warrants.	Notices of Death.	Notices of Marriage.	Notices of Resumption.	Vesting Orders.	Powers of Attorney.	Registered Proprietor (Official Assignee).	Transmissions by Indorsement.	Surrender of Registration Abstract.	Total.
January .....	702	£ 258,593	259	£ 385,626	156	£ 308,089	10	1	1	...	...	10	6	4	...	22	12	2	...	13	...	1	1	1	3	18	...	1,222
February .....	769	260,539	336	562,789	184	170,652	9	...	3	...	...	8	8	2	...	23	16	3	...	2	...	5	...	...	3	20	...	1,391
March .....	840	284,221	374	559,789	226	277,658	20	...	...	...	...	9	7	1	1	40	26	9	...	6	1	3	1	1	2	20	...	1,587
April .....	786	232,375	437	642,280	182	126,596	26	...	...	...	...	11	5	2	...	26	11	9	1	7	...	1	...	1	...	22	1	1,528
May .....	823	293,858	355	465,823	161	166,541	12	...	...	...	...	51	10	...	7	30	17	5	...	5	2	5	1	...	2	19	...	1,505
June .....	835	263,729	396	458,615	179	121,590	17	...	...	...	1	20	10	1	...	32	22	6	...	6	2	2	1	...	3	11	...	1,544
July .....	909	226,323	378	478,417	177	239,061	11	...	2	...	...	16	4	1	...	39	22	7	1	12	...	2	2	...	2	7	...	1,592
August .....	816	344,927	403	545,850	193	171,386	15	1	1	...	...	25	5	...	1	23	18	9	1	4	2	4	3	1	12	26	...	1,563
September .....	728	171,320	382	622,694	179	160,657	15	1	1	...	...	12	2	3	...	39	21	1	1	9	1	...	2	1	4	54	...	1,456
October .....	674	170,098	362	387,659	155	164,445	13	...	...	...	...	11	1	1	...	36	27	6	...	8	1	3	2	...	2	34	...	1,336
November .....	728	250,510	306	352,998	145	117,990	9	...	...	...	...	25	7	1	...	40	23	7	1	10	2	1	1	1	3	37	...	1,347
December .....	632	303,751	307	513,358	145	139,589	9	...	...	...	...	14	7	1	1	34	18	9	1	5	...	2	2	1	7	16	...	1,211
Totals .....	9,242	3,060,244	4,295	5,975,898	2,082	2,164,254	166	3	8	...	1	212	72	17	10	384	233	73	6	87	11	29	16	7	43	284	1	17,282

NOTE.—Total number of Indorsements .. .. . 18,115  
 Total number of New Certificates .. .. . 7,239

Land Titles Office, Registrar-General's Department,  
 Sydney, 23rd April, 1887.

E. G. WARD,  
 Registrar-General.



1887.  
(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

REGISTERED NEWSPAPERS.

(INFORMATION SUPPLIED BY THE PROTHONOTARY OF THE SUPREME COURT RESPECTING.)

*Ordered by the Legislative Assembly to be printed, 21 April, 1887.*

[Laid upon the Table in accordance with promise made in answer to Question No. 13, Friday, 1 April, 1887.]

REGISTERED NEWSPAPERS.

SCHEDULE.

Title of Newspaper.	Sureties.
"The Commercial Times".....	Joseph Sheridan Moore, Francis Mason.
"Illustrated Sydney News".....	William E. Langley, Alfred Jones.
"The Australian Journal".....	Same.
"The Testimony".....	David Mason, Alfred Jones.
"The Temperance Advocate".....	Alex. Miffin, John Thos. Flynn.
"The Sydney Sporting Life".....	William Dind, Lord John Tylour.
"The Sydney Times".....	George R. Smee, Alfred O. Jackson.
"The Journal of Commerce of New South Wales".....	John M'Ney Baird, Edward Greville.
"The Empire".....	Christopher Bennett, James Powell.
"The Australian Churchman".....	John Campbell, Shepherd Smith.
"The Observer and Licensed Victuallers Advocate".....	Frederick Riley, Edward Byrne.
"The Australian Protestant Banner".....	Robert Campbell, Thomas Jones.
"The Christian Herald and Presbyterian Record for New South Wales".....	Ludolf Theodore Mellin, William Downing.
"The Protectionist".....	Phillip R. Holdsworth, Wm. J. Clements.
"Colonial Society".....	John Brierley, Walter J. Greenup.
"The Abstainer or Organ of the Sons of Temperance".....	John Roseby, Joseph Wearne.
"The Lictor".....	Mat M. Smith, William Tatton.
"The Protestant Banner".....	Richard Cowan, Edward Goggin.
"Illustrated Australian Police News".....	Henry James Ireland, James Greig.
"The Australian Journal of Education".....	Lewis G. Madby, David T. Hicks.
"The Afternoon Telegram".....	Alfred Fairfax, Jos. G. Ross.
"The Australian Free Religious Press".....	Hugh Gilchrist, Chas. Pearce.
"The Australian Churchman".....	Matthew Henry Stephen, William Barker.
"Bell's Life in Sydney and Sporting Chronicle".....	Stephen Lemon, Charles Hardy.
"The Sydney Mercantile Advertiser".....	Edward Grevelle, Thos. T. Harwood.
"The Australian Advocate".....	Jno. B. O'Connor, Francis Mason.
"The Co-operative Advertiser".....	Francis Street, Thomas Street.
"The Social Reformer".....	John Roseby, John Hurley.
"The Protestant Standard".....	George Ferguson, Edward Raynes.
"The Revue Australienne".....	George Pile, Alexander Loise.
"Fun for the Million".....	David A. Smith, William Grant.
"The Witness and Australian Presbyterian".....	William Martin, Joseph Knox.
"The Australian Witness and Presbyterian Herald".....	William Matchett, William Henry Clark.
"The New South Wales Primitive Methodist".....	John Kenworthy, Joseph Geary.
"The Evening Post".....	Edward J. Rubie, Jas. A. G. M'Hale.
"The Australian Freemason".....	John Mason, John Hurst.
"Sydney Import and Export Price Current and Mercantile Gazette".....	Michael M'Mahon, Henry P. Palser.
"The Sportsman and Licensed Victuallers' Gazette".....	Charles R. Darton, Frederick Bonfield.
"The Exchange News".....	Michael M'Mahon, Alex. J. Gray.
"The New South Wales Good Templar".....	Evan H. Williams, J. S. M'Coy.
"The Sunday Newsmen".....	James Punch, John Bennett.
"The Representative".....	Nil.
"The New South Wales Independent".....	Robert Scott Ross, Josiah Mullens.
"Workman".....	William T. Lewis, William F. Hinchy.
"The Australian Agriculturist".....	John Alcock, John B. Hillier.
"The Literary Review".....	John E. Kelly, Thomas Brown.
"The Orangeman and Protestant Catholic".....	William Robison, Joseph M'Neilly.
"The Weekly Advocate".....	Benjamin James, junr., Peter P. Fletcher.
"The Illustrated Figaro".....	William Cooper, Samuel Smith.
"The Sydney Magazine".....	John J. Horan, James Greenaway.
"The Freemason".....	Richard Chandler, Robert Booth.
"The Australian Town and Country Journal".....	John Hugh Davies, Alfred E. Jaques.

Title of Newspaper.	Sureties.
"The Evening News"	John Hugh Davies, Alfred E. Jaques.
"The Australian"	Edwin C. Haveland, Geo. Ranken.
"The Presbyterian and Australian Witness"	Alexander Dean, David L. Waugh.
"The Sydney Courier and General Advertiser"	David Mackey, John Lutton.
"The Living Age"	John Walker, David Davies.
"Words of Grace"	George Ardill, Thomas Corbett.
"The Australasian Sketcher" (New South Wales edition)	Joseph Elliott, William Solomons.
"The Express"	Thomas Donovan, Edward J. Rubie.
"The Pacific Weekly"	William R. Gullick, T. T. Wilton.
"The Church of England Record"	Edmund W. Molesworth, James A. Read.
"The Freemason"	James Hunt, Henry James Phillips.
"Monthly Notes"	John Kent, Henry Perdrian.
"The Redfern and Suburban Times"	John Geddes, William T. Poole.
"The Australian Engineering and Building News"	William R. Gullick, John Sands.
"The Balmain Independent"	Henry W. Harper, Goodman L. Goodman.
"Batt, Rodd, and Purves Monthly List of Properties for Sale"	Henry M. Faithfull, Alfred E. Jaques.
"The Term Reports"	Francis Joseph M'Carthy, Hy. M. Makinson.
"Lands Sales Times"	John Y. Mills, George Pile.
"The Sea News"	Alfred Talbot, John G. Nixon.
"Trobeck's Pastoral Circular"	Duncan M' Rae, William M. Orr.
"Australasian Medical Gazette"	Frederick Milford, George Fortescue.
"The Colonial Printers' Art Journal"	Frederick T. Wimble, Frank W. Sim.
"The Commercial Gazette"	William Shaw, Charles Hampson.
"John Bridges Weekly Producers Guide"	Michael M. M'Girr, Thomas J. Murray.
"Society"	Theodore Argles, Henry Hodges.
"The Pastoral Gazette"	Henry T. Badgery, William H. Giddy.
"The New South Wales Farmer and Dealer"	William Fleming, Charles Kahlo.
"The Glebe, Ultimo, and Forest Lodge Advocate and Darlingtong Observer."	William C. Charlesworth, William Jones.
"The Licensed Victualler Gazette and Sportsman's Guide"	Frederick P. Pines, Charles O. Michel.
"The Tribune and News of the Week"	Alfred W. Gilles, William G. Cameron.
"The Sydney Daily Telegraph"	John Sands, Alfred W. Gilles.
"The Bulletin"	Joseph Haynes, John Nobbs.
"The St. Leonards Recorder"	Thomas Teasdale, Edward Benson.
"The Argus"	Francis B. Read, William Shaw.
"The Sydney Quarterly Magazine"	Frank M. Bladen, Alfred Bourne.
"The Freeman's Journal"	August H. Huenerbein, William MacLeod.
"The Democrat"	Andrew Kelly, E. W. O'Sullivan.
"The Liberal"	Robert White, John G. Griffin.
"The Echo"	Samuel Cook, Hugh George.
"The Sydney Morning Herald"	Same.
"The Sydney Mail"	Same.
"The Weekly Notes and Law Times of New South Wales"	Aston J. Watkins, A. H. M'ulloch, junr.
"The Mercantile Mail"	Benjamin F. Marks, David Marks.
"The Sydney Trade Review and Prices Current"	George T. Somerville, John C. Cattell.
"Martin's Home and Farm"	Harry Franks, George Wyndon.
"The New South Wales Farmer and Grazier"	John W. Edy, George Nicoll.
"The Australian Cyclist"	Robert Duncan Gray, David H. Parry.
"The Matrimonial News"	William Shaw, Tom Godden.
"The Sunday Times"	Henry Walker.
"The Australian Christian World"	Thomas Lockwood, John S. Dunlop.
"The Holy Trinity Church Magazine"	Robert Bone, George Gibson.
"The Freemasons' Chronicle"	Henry Harper, George L. Goodman.
"The Sydney Jester"	Edward Armstrong, Anjelo J. Smith.
"The Australian Graphic"	Herbert Surri, Rev. S. Hungerford.
"Sydney News"	Frederick Tidswell, Thos. W. Garrett.
"The World"	Howard J. Moffat, William B. Smith.
"New South Wales Loyal Templar"	Simeon Brown, James Hicks.
"Glad Tidings"	Charles Fuke, George Coffey.
"The Australian Record"	Joseph Barnier, Robert Chadwick.
"The Sydney Post"	James T. Inglis, John E. M. Russell.
"The Referee"	Benjamin Hart, Herbert A. Ridsdale.
"The Atlas"	Same.
"The Record"	Joseph Blow, William Macpherson.
"The Daily Gazette"	Frederick C. Jarrett, John B. Forde.
"The Globe"	Henry Walker, William Gallagher.

### Observations.

#### Question 1.

Whether or not these newspapers at the present time are registered according to the requirements of the Newspaper Acts it is impossible for me to say. The Acts require a registration of all newspapers on every change of ownership, &c. Some of these newspapers, therefore, may have changed ownership several times since their last registration. See sections 2, 3, and 16, 8 Geo. 4 No. 2; see also section 6, 5 Vic. No. 19.

I believe a great many of these 117 newspapers have ceased being published; which of them I am unable to state.

#### Question 2.

Nearly the same observation will apply to this question. Again, some of the recognizances, &c., may not be in strict conformity with the requirements of the Acts. To examine each set of papers in reference to each newspaper critically, would involve time, which it is impossible for me, consistently with the due performance of my regular duties, to bestow.

#### Question 3.

In addition to these 117 newspapers properly registered, so far as I know, there are several newspapers registered, but not in compliance with the Acts.

FRED. CHAPMAN,

Prothonotary.

15/4/87.

1887.

(SECOND SESSION.)

—  
LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

SUNDAY LECTURES, &c., IN THEATRES.

(OPINIONS OF VARIOUS ATTORNEYS-GENERAL UPON.)

*Ordered by the Legislative Assembly to be printed, 15 June, 1887.*

Opinion of Mr. Attorney-General Wisdom.

The Crown Law Offices, Sydney, 3 September, 1880.

It is very doubtful whether the Lecture advertised to be delivered by Mr. Proctor on Sunday evening next is an "entertainment" within the meaning of the Act 21 Geo. III c. 49. Taking into consideration the preamble and purview of that statute, I am inclined to think that it is not, but even if it be, the Police have no power summarily to interfere with it. If the delivery of the lecture be an offence against the statute the proper course will be to proceed against the parties offending, either for the penalties, or by way of prosecution as prescribed in the Act. This, however, may form a subject for consideration hereafter.

I do not think either, that this is such a case as is contemplated in section 5 of the Public Exhibitions Act (14 Victoria, No. 23). That section authorizes the Colonial Secretary, whenever he shall be of opinion "that it is fitting for the preservation of good manners, decorum, or of the public peace, so to do, to forbid by writing under his hand the acting or presenting any stage-play, or any act, scene, or entertainment of the stage, as hereinbefore mentioned, or part thereof, or any prologue or epilogue, or any part thereof in such theatres, &c." Now Mr. Proctor's proposed lecture does not come within the class of entertainments which may be forbidden under the above, nor can it be said to be necessary to prohibit, in order to the preservation of good manners, decorum, or the public peace.

ROBERT WISDOM, A.-G.

Opinion of Mr. Attorney-General Dalley.

I AM of opinion that the Colonial Secretary may, if he deems it expedient, embody in the license issued by him the condition which is contained in the Victorian license, as to Sunday openings of the theatre being subject to his consent.

W.B.D., 6/8/84.

Opinion of Mr. Attorney-General Want.

I HAVE read Mr. Dalley's opinion with regard to this matter, and fully concur with it.

I cannot see how in any way this entertainment can be held to come under the designation of a theatrical representation, or a theatrical performance. The license granted in this case contains a prohibition against performances authorized, yet being performed, on Sunday, Good Friday, or Christmas Day; but there is nothing in section 2 of the principal Act, 14 Vic. No. 23, to prevent a person receiving payment for the use of a building for any purpose which is not referred to by the 2nd section of that Act. It also seems to me that a concert is not an entertainment, which, under section 5 of the 14 Vic. No. 23, could be forbidden, on the grounds that such prohibition is necessary, on the grounds of good manners, decorum, or public peace. I must therefore concur in the opinion expressed by Mr. Attorney-General Wisdom and Mr. Attorney-General Dalley.

J. H. WANT.



1887.  
(SECOND SESSION.)

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LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

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**SUNDAY LECTURES AND ENTERTAINMENTS.**  
(PETITION FROM INHABITANTS OF NEW SOUTH WALES.)

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*Received by the Legislative Assembly, 5 July, 1887.*

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To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned inhabitants of New South Wales,—

HUMBLY SHOWETH:—

That your Petitioners regard with much satisfaction the action of the Government in prohibiting the use of licensed buildings for lectures and entertainments on the Lord's Day, for which a fixed charge is made, as they consider that such lectures and entertainments are an infringement of statute law at present in force in the Colony, and subversive of good government and morality.

They therefore pray that your Honorable House will be pleased to uphold the decision of the Government, and refuse to allow any such lectures or entertainments on the Lord's Day.

And your Petitioners, as in duty bound, will ever pray.

[*Here follow 36,200 signatures.*]

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Faint, illegible text, possibly bleed-through from the reverse side of the page.

1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

THE OPIUM TRADE.

(PETITION—MODERATOR OF THE FEDERAL ASSEMBLY OF THE PRESBYTERIAN CHURCHES OF AUSTRALIA AND TASMANIA.)

*Received by the Legislative Assembly, 5 April, 1887.*

To the Honorable the Speaker and the Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The Petitioner of the undersigned the Moderator of the Federal Assembly of the Presbyterian Churches of Australia and Tasmania, in common with his fellow Ministers and Elders, who constitute the said Federal Assembly of the Presbyterian Churches of Australia and Tasmania, and whom, *ex officio*, he is appointed to represent,—

HUMBLY SHOWETH:—

1. That your Petitioner, having in view the well-being of this community, regards with feelings of alarm the largely increasing consumption of opium by Chinese residents of the Colony.
2. That the use of opium is exceedingly hurtful to all persons who habitually indulge in that narcotic, and also to the general population, for the following reasons:—
  - a. That the constant use of opium is calculated to impair the moral and physical systems, and consequently to induce habits of indolence.
  - b. That by reason of the indolence so induced the persons so affected are unfitted for and undesirous of pursuing any mechanical or other useful occupation, and that to this cause are to be attributed the gambling and criminal propensities of Chinese opium-eaters.
  - c. That the conditions under which opium is consumed in this community cause large numbers of Chinese to assemble in ill-ventilated and crowded apartments, whereby, in addition to the obvious evils arising from the use of the opium, these resorts are turned into hot-beds for the generation of fevers and cognate diseases.
  - d. That many European girls and women, after being induced to use the narcotic, become *habitués* of the same resorts, and that scenes of the grossest immorality ensue.
3. Your Petitioner accordingly desires to point out—
  - (1.) That the use of opium in China is confined to the very lowest orders of Chinese society, and that those using it are regarded unfavourably by their fellow-countrymen.
  - (2.) That in the event of the introduction of opium into New South Wales being prohibited by law, there will be very little inducement for its consumers to come to this Colony, while, on the other hand, Chinese of a superior class, recognizing that under the altered conditions their presence on these shores would be more favourably regarded, will, in all probability, be led to cast in their lot among us.

Your Petitioner therefore humbly prayeth—

1. That at an early date a measure may be framed and laid before the Parliament prohibiting the importation of opium into this Colony, excepting for medicinal purposes, and that such measure may also provide against the sale of opium, excepting for medicinal purposes, and where the purchaser can produce a satisfactory prescription or certificate from a duly and legally qualified practitioner asking or recommending that the same may be supplied.

2. That the said measure may be so framed as to come into operation at the expiration of six months from the passing thereof.

Signed at Sydney, in the name and on behalf of the Federal Assembly of the Presbyterian Churches of Australia and Tasmania, this twenty-eighth day of July, one thousand eight hundred and eighty-six.

JAMES NISH, D.D.,  
Moderator.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author outlines the various methods used to collect and analyze the data. These include direct observation, interviews with key personnel, and the use of specialized software tools. Each method is described in detail, highlighting its strengths and potential limitations.

The third section presents the results of the study. It shows a clear trend of increasing activity over the period observed. The data indicates that the most significant changes occurred in the latter half of the study period.

Finally, the document concludes with a series of recommendations based on the findings. It suggests that further research should be conducted to explore the underlying causes of the observed trends. Additionally, it provides practical advice for how the information can be used to improve operational efficiency.



1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY,  
NEW SOUTH WALES.

**THE UNEMPLOYED.**

(PAYMENTS ON ACCOUNT OF RELIEF WORKS FOR.)

*Ordered by the Legislative Assembly to be printed, 28 June, 1887.*

PARTICULARS of Sundry Payments on account of Relief Works.

Particulars.	Late Government.	Present Government.	Total.
	£ s. d.	£ s. d.	£ s. d.
John Keep & Son, tools, rope, &c. ... ..	202 8 7	0 14 11	203 3 6
McLean Bros. & Rigg, cooking utensils ... ..	262 2 10	.....	262 2 10
Do tools ... ..	228 6 6	.....	228 6 6
F. Payne, meals, &c. ... ..	316 5 2	.....	316 5 2
James Kidman, provisions ... ..	5,435 0 11	396 0 3	5,831 1 2
Lee & McAlister, trainage ... ..	197 11 0	.....	197 11 0
C. A. Goodchap, conveyance of passengers ... ..	16 16 0	.....	16 16 0
W. Henderson & Co., tents ... ..	24 11 4	.....	24 11 4
J. L. Castner, refreshments ... ..	7 11 6	.....	7 11 6
E. B. Price, damming Menindie Lake ... ..	8 9 0	.....	8 9 0
Holdsworth & Co., filter ... ..	0 10 6	.....	0 10 6
Farmer & Co., blankets ... ..	162 10 0	.....	162 10 0
T. F. Waller, 42,600 bags ... ..	400 15 7	.....	400 15 7
D. Chappelon, purchase of steam launch ... ..	.....	600 0 0	600 0 0
R. L. Scrutton, tools, &c. ... ..	.....	31 1 4	31 1 4
F. A. Wright, travelling expenses ... ..	.....	7 13 9	7 13 9
P. & O. Company, wharfage on tents ... ..	.....	398 5 3	398 5 3
J. Blackwood & Son, tools, &c. ... ..	.....	2 1 8	2 1 8
R. Arnott & Co., use of trolleys ... ..	.....	14 0 0	14 0 0
Batty & Sheehy, wagons ... ..	.....	348 15 3	618 5 3
Allan & Walker, timber ... ..	.....	269 10 0	59 6 6
Store issues ... ..	.....	59 6 6	2 9 9
G. Haynes, wharfage ... ..	.....	2 9 9	24 10 0
Mayor of Bourke, assistance to unemployed ... ..	.....	24 10 0	50 0 0
C. J. Byrnes and Hugh Taylor, advance ... ..	.....	50 0 0	200 0 0
John Booth & Co., timber ... ..	.....	200 0 0	35 10 11
H. H. Byrne, coach fares ... ..	.....	35 10 11	12 0 0
J. Young, rent of wagons ... ..	.....	12 0 0	298 10 0
J. H. Brown, freight ... ..	.....	298 10 0	62 8 1
Burton Bros., coach fares ... ..	.....	62 8 1	7 15 0
Briscoe Drysdale & Co., tools, &c. ... ..	.....	7 15 0	14 6 2
Shortland & Sons, carriage ... ..	.....	14 6 2	3 5 0
	£ 7,262 18 11	2,838 3 10	10,101 2 9

The Treasury, New South Wales,  
27th June, 1887.

J. N. OATLEY,  
Sub-Accountant.



1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

## THE UNEMPLOYED.

(AMOUNT EXPENDED FOR RELIEF WORKS, AND RELIEF TO.)

*Ordered by the Legislative Assembly to be printed, 28 June, 1887.*

STATEMENT showing the amount expended in connection with Relief Works for and Relief to the Unemployed, to 22nd instant.

Name of Officer.	Late Government.	Present Government.	Total.
	£ s. d.	£ s. d.	£ s. d.
W. C. Bennett ... ..	21,873 17 11	1,202 16 9	23,076 14 8
E. O. Moriarty ... ..	1,032 13 7	6,324 3 5	7,356 17 0
F. B. Treatt ... ..	5,074 17 4	.....	5,074 17 4
G. F. Wise... ..	35,399 9 5	.....	35,399 9 5
J. W. Deering ... ..	.....	26,500 0 0	26,500 0 0
Casual Labour Board (J. Davies, C.M.G., Chairman) ... ..	.....	30,000 0 0	30,000 0 0
C. Moore ... ..	.....	196 0 0	196 0 0
S. See (Grafton) ... ..	.....	500 0 0	500 0 0
C. J. Byrnes and H. Taylor, M.P. ... ..	.....	100 0 0	100 0 0
Molong Municipal Council ... ..	.....	100 0 0	100 0 0
Sundry Payments (Tools and other Imple- ments, Provisions, Trainage, &c.) ... ..	7,262 18 11	2,838 3 10	10,101 2 9
	£70,643 17 2	£67,761 4 0	
Total Payments ... ..			£138,405 1 2

The Treasury, New South Wales,  
23rd June, 1887.

J. N. OATLEY,  
Sub. Accountant.



1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

**THE UNEMPLOYED.**

(PETITION FROM, TO BE HEARD AT BAR OF THE HOUSE.)

*Received by the Legislative Assembly, 5 April, 1887.*

To the Honorable the Speaker and Members of the Legislative Assembly of New South Wales, in  
Parliament assembled.

The humble Petition of the undersigned Unemployed Artisan and Labouring Classes of Sydney,—

HUMBLY SHOWETH :—

That for the period of the last eighteen months, and more particularly during the last six, the want of continuous and remunerative employment has been keenly felt by a large section of the industrial classes, entailing a large amount of deprivation and suffering upon themselves and families, which is so extremely opposite to the former conditions of Australian life.

That your Petitioners who have entered into engagements to provide themselves with a freehold home for the better bringing up of a family are now sorely troubled with the fear of losing the hard-earned savings of the past in being unable to meet the periodical payments required to accomplish that object through this long-pressing want of continuous and remunerative employment.

Your Petitioners therefore humbly pray,—

That a representative or representatives of the unemployed artisan and labouring classes appointed in public meeting assembled may be heard at the Bar of your Honorable House, with the object of bringing more directly before your Honorable House the hardship and distress caused by this lengthened want of employment, and devise such means as will give relief and open up avenues for permanent and profitable employment, so as to restore the favourable conditions of the Australian labour market of former times.

And your Petitioners, as in duty bound, will ever pray.

Signed on behalf of the above Petitioners,—

E. J. EDWARDS, Chairman.

THOMAS SYMONS, Secretary.



1887.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

## UNFINISHED GOVERNMENT CONTRACTS.

(AMOUNTS REQUIRED FOR COMPLETION OF.)

*Ordered by the Legislative Assembly to be printed, 18 March, 1887.*

[*Reply to Question asked in the Legislative Assembly by Dr. Ross, M.P., on 28th April, 1886.*]

### SCHEDULE.

No.	PAGE.
1. Commissioner for Railways .....	1
2. Engineer-in-Chief for Railways .....	2
3. Commissioner for Roads .....	3
4. Commissioner for Sewerage .....	12
5. Engineer-in-Chief for Harbours and Rivers .....	12
6. Colonial Architect .....	14

### No. 1.

#### Commissioner for Railways.

##### UNFINISHED GOVERNMENT CONTRACTS.—LOCOMOTIVE BRANCH, RAILWAYS.

1. Probable amount of money required ... .. £375,580
2. Nature of each contract and probable amount required for same:—

	£	s.	d.
Rolling Stock, Great Southern and Western Railway Lines ... ..	254,380	0	0
Engines .....	43,900	0	0
Coal Cartage to pumping engines, "Great Southern" and "Western" Lines ... ..	300	0	0
Rolling Stock, Great Northern Line ... ..	77,000	0	0
Total ... ..	£375,580	0	0

##### UNFINISHED GOVERNMENT CONTRACTS.—LOCOMOTIVE BRANCH, TRAMWAYS.

Name.	Nature of Contract.	Amount.	Remarks.
Stansfield & Carey .....	Contract for tram-cars, 4 cars to deliver at £320	£ 1,280	
Bastings and Duncan .....	Transferred contract of Stansfield and Carey, 10 cars to deliver at £320.	3,200	
Thos. Wearne .....	Contract for cars for North Shore Cable Tramway, 4 cars to deliver at £240.	960	
J. G. Gatty .....	Contract for basement of chimney, smith and boiler-shop.	65	
M'Lean Brothers & Rigg...	Contract to cover boilers of engines, cable line North Shore with Asbestos.	50	
Thos. Wearne .....	Contract for smoke flues, smith and boiler-shops	195	
			Total amount of contract, £370 Paid on account, £175.

## UNFINISHED GOVERNMENT CONTRACTS—EXISTING LINES BRANCH, RAILWAYS.

Description of Work	Amount required to complete Work		
	£	s	d
Duplication of Line Parramatta to Penrith	10,218	0	3
Erection of new boiler shop, Honeysuckle Point	515	19	7
Construction and supply of roofs, girders, and columns, shops Nos 5 to 15, Eveleigh	4,208	19	6
Additions to refreshment and accommodation rooms, Harden	147	3	1
Bridge over William Henry street, Darling Harbour—Contract for ironwork	4,965	11	8
Erection of alterations and additions to passengers' station, Mount Victoria	869	14	10
Bridge over Railway, Argyle street, Moss Vale—Contract for ironwork	912	10	0
Erection of passenger station, Werri Creek	1,347	4	11
Erection of engine shed and pits, Wellington	1,150	0	5
Duplication of line, Goulburn to Toppa Junction—Supply of iron bridges	1,212	1	9
Erection of station master's house, Blayney	490	14	11
Erection of passenger station, Petersham	2,846	17	6
Erection of refreshment and accommodation rooms, Wellington	2,355	2	7
Erection of fencing, Great Southern Railway, between Glenfield and Picton	1,161	9	9
Erection of smoke shaft and annexes to shops Nos 1 to 4, Eveleigh	4,321	0	0
Erection of refreshment rooms and offices, Singleton	1,160	19	10
Bridge over Railway, William Henry street Darling Harbour—Contract for brickwork, masonry, piling, and superstructure	6,315	3	4
Construction and supply of roofs, girders, and columns, shops Nos 16 to 25, Eveleigh	35,285	0	0
Erection of passenger station on up platform, and waiting shed and offices on down platform, Stanmore	1,372	3	7
Erection of passenger station, Milthoipe	1,079	19	3
Construction of walls, superstructure, finishing trades, and annexes, shops Nos 5 to 15, Eveleigh	22,474	8	9
Erection of drivers' quarters, Eveleigh	1,594	12	1
Erection of pumper's house, Granville	491	13	8
Erection of residence for porter in charge, Mount Druitt	468	1	5
Erection of station master's residence, Riverstone	615	1	10
	£107,579	14	6

## UNFINISHED GOVERNMENT CONTRACTS—EXISTING LINES BRANCH, TRAMWAYS

Description of Work	Amount required to complete Work		
	£	s	d
Construction of bridge over Sydney Water Supply Canal, Campbelltown to Camden Tramway	451	2	6
Laying wooden pavement in Crown street	23,158	6	8
Construction of Cable Tramway, North Shore	5,312	5	2
Construction of Tramway—Newcastle to Wallsend and Plattsburg	29,360	4	7
	£58,281	18	11

## No. 2.

## Engineer-in-Chief for Railways.

## UNFINISHED OR CURRENT CONTRACTS SHOWING ESTIMATED AMOUNTS REQUIRED TO COMPLETE.

Contractor	Contract	Amount
Cobb & Co	Glen Innes to Tenterfield	£ 30,786
A & R Amos	Homebush to Hawkesbury	80,081
Union Bridge Co	Hawkesbury Bridge	327,000
George Blunt	Hawkesbury to Gosford	74,934
A & R Amos	* Gosford to Waratah	
C & E. Millar	Illawarra Railway, Contract No 1	253
Rowe & Smith	do do No 2	250,622
Proudfoot & Logan	do do No 3	90,223
Monie & Co	do do No 4	77,783
O'Rourke & M'Sharry	* Murrumburrah to Young	
M'Sharry & Co	Cootamundra to Gundagai	21,071
A Johnston & Co	Bungendore to Michelago	85,049
Walker & Swan	Michelago to Cooma	260,624
G. Fishburn & Co	Young to Cowra	65,677
Jas F Robertson	Blayney to Cowra	77,199
Atlas Engineering Co	Supplying cylinders, &c, for 7 iron bridges on the Homebush line	4,157
John Danks	Supplying 2,000,000 spikes	1,848
A H Scouller	Clifton and Bull station buildings	820
Do	Wollongong do do	1,870
Wm Murray	Tenterfield do do	9,171
T. M'Beath	Brawlin do do	121
J H. Bell	Gundagai do do	2,603
Harrison Brothers	Robinsville do do	598
H Kendrick	Bolivia do do	1,168
Wm. Robinson	Ryde & Eastwood do do	2,337
		£1,465,995

\* Information re these contracts will be furnished at a future date

W H QUODLING,  
(For the Engineer-in-Chief).

E.E.—Office of the Engineer-in-Chief for Railways, Sydney, 20th October, 1886.



## No. 3.

## Commissioner for Roads.

## ROADS AND BRIDGES DEPARTMENT.

STATEMENT of probable amount of money required to defray the expense of contracts that have been entered into for Public Works which are at present unfinished

No	Name of Road or Work	No of Task or Contract	Abbreviated Statement of Nature of Work or Contract	Balance due on Task or Contract after deducting Vouchers sent in for Payment, but including all extras
1	Manly and Pittwater Road	16 O.	Cutting down hill and forming 100 chains (1 in ) of road and contact pipe culverts	£ s. d 300 0 0
2	Lanc Cove to Pittwater Road	20 O	Clearing road about 160 chains	60 0 0
3	Do do	25 O	Cutting down hill and forming road	60 0 0
	Wollombi to Wiseman s Feiry	124 N	Reconstruction	6 6 3
	Do do	135 N	Supplying maintenance	19 11 9
	St Albans to Mt M'Donald	148 N	Forming and stoning and blinding	10 16 4
	Do do	149 N	do do do	13 7 11
	Do do	150 N	do do do	12 5 10
	Wollombi to Millfield	143 N	Construction	40 0 0
	Wollombi to Wiseman's Ferry	144 N	Road widening	33 0 0
	Wollombi to Yango	145 N	Road construction	21 6 8
	Bullock Wharf to Upper Mangrove	146 N	do	33 0 0
	Wollombi to Wiseman s Ferry	142 N	Construction of 1st class culvert and ap proaches to road	107 0 0
	Mulbring to Millfield	1 O	Construction	10 11 6
	Kincumber to Lloyd s Wharf	26 O	330 lineal yards of road, constructing and draining	62 0 0
	Wallsend to Gosford Road, Coorabong	3 P	6 chains of side drain	3 0 0
	Gosford to Kincumber	33 O	3rd class culvert and 10 chains of approaches	52 10 0
	Wallsend to Lake Macquarie	18 O	Road construction	67 0 0
	Gosford and Maitland Road to Govern ment Reserve at head of Ourimbah Creek	28 O	Logging	57 0 0
	Gosford to the Blood Tree	20 O	Road clearing	81 0 0
	Erina Creek to Tuggerah Beach Lake	22 O	Road construction	36 0 0
	Do do	31 O	Re-decking two culverts	12 0 0
	Do do	32 O	Culvert and metalled approaches	45 0 0
	Bumble Hill to Upper Wyong	1 O	3rd class culvert	24 18 0
	Mandalong to Coorabong	19 O	Road construction	61 2 8
	Broken Back Gap to Wyong Creek	1 P	Two culverts and approaches	90 15 0
	Do do	2 P	2nd class culverts and approaches	30 0 0
	Wyong Creek to Gosford	24 O	Culvert and approaches and clearing	119 17 6
	Do do	25 O	Road construction	50 0 0
	Do do	30 O	Culverts and approaches	49 0 0
	Wyong Creek to Mangrove Creek	29 O	Road construction	80 0 0
	Upper Wattagan to Coorabong	84 N	Side cutting, &c	104 18 4
	Do do	85 N	do	40 15 0
	Do do	86 N	do	24 16 8
	Do do	87 N	do	32 16 8
	Do do	88 N	do	34 13 4
	Do do	89 N	do	43 0 0
	Stroud, &c , to Tinonee	6 P	Building 2nd class culvert and approaches	30 0 0
	Tinonee, &c , to Clarkson's Crossing	1 P	Forming, culverting, &c	124 0 0
	Stroud, &c , to Tinonee	7 P	Metalling, &c	35 8 0
	Burril Creek, &c , Black Flat		Stone crossing	4 0 0
	Bullock Wharf to Larry's Flat	1 P	Forming, metalling, &c	41 2 0
	Gloster to Copeland	4 P	Repairing and building culverts	67 10 0
	Gloster to Nowendoc	1 O, 3 P	Side cutting, forming, &c	150 2 0
	Dungog &c , to Weismantels	1 O	Reforming, giavelling, &c	15 6 10
	Do do	10 P	do do	96 13 4
	Dungog to Underbank	12 P	Forming and gravelling	16 3 6
	Do do	13 P	Re decking culverts, &c	31 10 0
	Do do	3 O	Culverting, giavelling, &c	25 14 7
	Chichester Reserve Road		Gravelling	7 7 0
	Bulladelah to Stroud, &c	11 P	Re clearing, draining, &c.	28 0 0
	Do do	14 P	Culverting and metalling	24 14 0
	Do do	2 P	Draining and forming	5 18 0
	Bulladelah, &c , to Foster	5 O	Forming, culverting, and draining	45 10 11
	Do do		Tarhuck bridge approaches	12 1 9
	Bulladelah to Upper Myall	Bridge.	Flyers Creek Bridge and approaches	106 3 0
	Flyer's Creek to Dorney s		Supplying stone	4 5 6
	Raymond Terrace to Stroud	9 P	Giavelling and culverting	44 0 0
	Clarkson's Crossing to Coolongolook	2 O	Side cutting, clearing, &c	23 15 6
	Sawyer's Point to Seal Gardens	1 O	Culverting, &c	10 19 9
	Wingham, &c , to Nowendoc	8 P	Cleaning, forming, and culverts	77 12 0
	Oxley Island Road	10 P	do do do	115 15 6
	Cundle, &c , to Jones' Island	11 P	do do do	257 16 6
	Tinonee to Port Macquarie	12 P	Clearing and giavelling	366 0 0
	Do do	13 P	Clearing	103 0 0
	Wingham and Taree	15 P	Culverts	132 16 0
	Tinonee to Port Macquarie	23 P	Forming and giavelling	20 0 0
	Do do	24 P	Forming and culverts	15 5 0
	Cooperbrook to Harrington	26 P	Clearing culvert and approaches	38 14 0
	Ennis to Glen Esk U Plains	28 P	Culvert	70 0 0
	Tinonee to Wingham	33 P	Culverts and formation	16 11 0
	Tinonee to Port Macquarie	30 P	Cleaning, forming culverts	61 0 0
	Do do	31 P	do do	125 11 3

No.	Name of Road or Work.	No. of Task or Contract.	Abbreviated Statement of Nature of Work or Contract.	Balance due on Task or Contract after deducting Vouchers sent in for payment, but including all extras.
				£ s. d.
	Tinonee to Port Macquarie .....	32 P.	Clearing and forming culverts.....	148 4 0
	Wingham, &c. to Nowendoc .....	32 O.	Formation, &c., &c. ....	34 12 0
	Kempsey to Armidale .....	36 O.	Side cutting and culvert . . . . .	25 12 6
	Do do .....	59 O.	Formation, pipes and metal.....	187 6 0
	Green Hills to Nelsons, Warneton, &c.	60 O.	do and culvert .....	89 2 0
	Congarini to Boat Harbour, Taylor's Arm	50 O.	Bridge .....	20 0 0
	Do do do .....	61 O.	Clearing side cutting, culverts .....	244 0 0
	Nambucca to Macleay Heads .....	1 P.	do do .....	270 0 0
	Do do .....	2 P.	do do .....	151 19 0
	Kinchela to Spencer's Creek .....	5 P.	Formation .....	46 10 0
	Main North Road .....	17 P.	Construction .....	101 19 2
	East Maitland to B. Back Gap .....	8 & 9 P.	Maintenance, metal .....	265 14 2
	Waratah to Maitland .....	13 & 45 P.	do .....	55 3 4
	Lambton to Charlestown .....	21 P.	Gravelling .....	50 0 0
	Do do .....	116 O.	Forming .....	45 4 2
	Rayd Tree to Strood .....	10 P.	Maintenance, metal .....	315 0 0
	Rayd Tree to Stocton .....	32 N.	} Construction and metal .....	197 13 6
	Do do .....	82 O.		
	Do do .....	51 N.		
	Rayd Tree to Morpeth .....	7 & 40 P.	Metal and embankment .....	280 14 8
	Maitland to Dunmore .....	11 P.	Metal .....	164 0 0
	Clarencetown to Dungog .....	4, 5, & 6 P.	Metal and construction.....	473 4 7
	Rayd Tree to Telighery Creek .....	23 P.	Planking .....	10 8 0
	Colliery Townships to Lake.....	12, 43, and 44 P.	Construction and metal.....	523 0 0
	Mount Vincent to Meat Works .....	21 P.	Construction .....	144 17 6
	Pokolbin Hills to Millfield .....	16 P.	Clearing, &c. ....	40 10 0
	Phoenix Park Road .....	32 P.	Construction .....	51 16 3
	Glebe to Adamstown .....	41 P.	do .....	286 13 4
	Adamstown to Lake.....	35 P.	Gravelling .....	161 13 4
	Clarencetown to Lime B. Creek .....	38 P.	Ballasting .....	100 0 0
	Main North Road .....	3 P.	} Taking up metal and stacking up supply } of maintenance gravel.....	46 2 8 45 0 0
	Main North Road, Munnimba to Jerry's Plains .....	13 P.		
	Doyle's Creek to Jerry's Plains .....	14 P.	Forming and gravelling .....	56 19 6
	Jerry's Plains to Denman.....	15 P.	do do .....	50 8 4
	Do do .....	4 P.	Gravelling .....	17 17 6
	Muswellbrook and Mudjee Road to Merrowa .....	7 P.	Four second-class culverts .....	36 0 0
	Muswellbrook Iron Bridge to Denman and Cassilis Road .....	8 P.	Forming and gravelling.....	93 6 8
	Approach to Kyuga Watering Place.....	9 P.	Gravelling .....	176 0 0
	Scone up Middlebrook .....	22-85	Forming and gravelling .....	31 5 0
	Quirindi up Borah Creek .....	23-85	Gravelling .....	45 0 0
	Quirindi up Jacob and Joseph Creek.....	25-85	Clearing .....	25 10 0
	Wallabadah to Nundle.....	31-85	Clearing, &c. ....	33 15 4
	Main Road up Dry Creek .....	32-85	Side cutting.....	11 10 0
	Main Northern .....	2-86	do .....	50 0 0
	Do .....	3-86	Culvert.....	49 0 0
	Blandford to Isis .....	4-86	Fencing .....	15 0 0
	Willow Tree to Gunnedah .....	10 P.	Side cutting and drain .....	53 16 0
	Do do .....	9 P.	do culvert .....	40 15 0
	Wallabadah to Quirindi .....	8 P.	Stone causeway .....	12 0 0
	Main Northern .....	6 P.	Stone causeways.....	20 0 0
	Do .....	5 P.	Drain pipes .....	65 8 0
	Quirindi to Tambar Springs.....	16 O.	Blinding .....	22 0 0
	Do do .....	17 O.	Road construction .....	489 0 4
	Narrabri to Bingera, Rocky Creek Gap... Do do do .....	3 3 A. 4 5 6 7	do .....	430 4 9
	Narrabri via Moree to Mungundi .....	Task	Side cutting, Mountain Road .....	371 18 0
	Gunnedah to Narrabri .....	Task 1	do do .....	79 6 0
	Narrabri to Walgett .....	Task for metal and culvts	do do .....	52 0 0
	Manilla via Barraba to Bingera .....	3	do do .....	388 0 0
	Do do .....	Contract	do do .....	482 0 0
	Main Northern Road.....	Contract	do do .....	367 0 0
	Tamworth to Gunnedah .....	46 O.	Flood repairs to culverts .....	5 0 0
	Manilla, via Barraba, to Bingera .....	43 O.	Altering Fence, Narrabri Creek Bridge.....	23 0 0
	Barraba to Mount Lindsay .....	2 P.	Culverts, metal, &c. ....	120 8 0
	Attunga to Dead Horse Gully.....	3 P.	Gravelling Main Road through Manilla .....	31 19 2
	Dungowan to Head of Ogumbil .....	49 O.	Fencing Manilla Bridge approaches .....	353 10 3
	Great North Road.....	36-86, and 37-86	Drainage, Brisbane-street, Tamworth .....	476 14 6
	Uralla, via Bundarra, to Inverell .....	32-86	Ridge gravel, for blending .....	42 3 9
	Walcha to Great Northern Railway .....	19-86	Maintenance metal, Bell's Mountain.....	45 0 0
	Armidale to Grafton .....	28, 14-86	Bank cutting and gravelling .....	10 2 2
	Armidale to Yarrowycke .....	33-86	Retaining wall to bridge .....	13 0 5
	Armidale to Kangaroo Hills .....	37-86	Fencing at Ahern's Hill .....	36 10 0
	Armidale to Eastern Plains .....	29-86	Repairing and erecting culverts .....	65 0 0
	Armidale to Gostwyck .....	24-86	Construction .....	160 0 0
	Armidale, via Mihi Creek, to Walcha .....	34-86	do .....	285 0 0
	Guyra, via E.P. and Tingha and Inverell	13-12, 11-86	Clearing, cutting drains, &c. ....	620 0 0
			Side cuttings, clearing, &c. ....	150 0 0
			Side cutting, &c. ....	60 0 0
			Through cuttings, &c. ....	180 0 0
			Clearing, &c. ....	40 0 0
			Side cutting, construction .....	40 0 0
			Construction .....	540 0 0

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				£ s. d.
	Walcha to Port Macquarie .....	31-86, 30-86	Side cutting, culverts, &c. ....	360 0 0
	Grafton via Glen Innes to Inverell.....	2 P.	Clearing .....	17 0 0
	Do do .....	4 P.	do .....	20 0 0
	Do do .....	5 P.	Blinding .....	54 0 0
	Do do .....	7 P.	Construction .....	70 12 6
	Do do .....	20 P., task	Supplying 2½ metal .....	40 0 0
	Do do .....	21 P., "	do do .....	12 10 0
	Do do .....	22 P., "	Gravelling .....	17 10 0
	Do do .....	27 P., "	Draining .....	6 6 0
	Do do .....	23 P., "	Supply of 2½ metal .....	27 10 0
	Inverell to Kangaroo Camp .....	9 P., Con.	Gravelling .....	44 15 0
	Do do .....	23 P., task.	do .....	52 10 0
	Do do .....	26 P., "	Causeway.....	10 0 0
	Inverell to Warialda .....	1 P. con.	Construction .....	158 13 0
	Inverell to Ashford .....	17 P. task.	Draining .....	9 0 0
	Do do .....	18 P., "	do .....	5 0 0
	Do do .....	8 P., con.	Construction .....	70 0 0
	Do do .....	24 P., task	Causeway.....	7 0 0
	Do do .....	5 P., "	do .....	6 0 0
	Warialda to Inverell .....		White Oaks Well .....	320 0 6
	Do do .....	12 P.	5 miles of clearing, &c. ....	72 2 0
	Warialda to Moree .....	1 P.	Approaches to Mosquito Creek .....	49 2 0
	Bingera to Moree .....	5 P.	Screwing up and repainting bridges, and tarring Slaughter House Creek and Mia Mia bridges .....	35 0 0
	Warialda to Yetman .....	6 P.	Screwing up and repainting and tarring Reedy Creek and Blythe's bridges .....	79 0 0
	Warialda to Bingera .....	4 P.	Screwing up and repainting and tarring Myall Creek and Ti-tree Creek bridges .....	95 0 0
	Do do .....	10 P.	1 stone causeway .....	55 0 0
	Do do .....	11 P.	375 l. yards road construction.....	171 8 11
	Warialda and Gunynwarialda .....	13 P.	42 chains side cutting, 50 chains drains, and 90 chains clearing.....	116 0 0
	Grafton, via Glen Innes to Inverell .....	7 P.	Pipe culverts, Big Hill .....	70 0 0
	Do do do .....	14 P.	Forming, &c., Big Hill.....	20 10 0
	Do do do .....	9 P.	Repairs to bridges, &c. ....	156 9 0
	Newton Boyd Road to Vegetable Creek..	4 P.	Blinding, &c., near Ranger's Valley .....	57 6 0
	Do do .....	15 P.	Repairs to culverts and maintenance metal ..	28 0 0
	Glen Innes to Vegetable Creek .....	8 P.	Metal construction.....	215 17 4
	Glen Innes to Red Range .....	5 P.	do .....	100 12 10
	Vegetable Creek to Tableland.....	6 P.	Forming, Wallaroo Mount .....	221 12 0
	Yarrowford to Ranger's Valley .....	12 P.	Metal construction.....	40 18 0
	Glen Innes to Red Range .....	13 P.	Spreading metal, &c. ....	26 5 3
	Lawrence to Tenterfield .....	Con. 1	Bridge approaches .....	254 10 6
	Do do .....	" 2	Re-decking culverts .....	250 0 0
	Do do .....	" 3	do bridge.....	63 0 0
	Do do .....	" 7	Forming metal and drains.....	155 7 6
	Do do .....	" 8	do do .....	239 18 6
	Do do .....	Task 16	Repairs to culverts .....	17 12 0
	Armidale to Maryland .....	Con. 4	Road construction .....	108 1 8
	Do do .....	" 5	do .....	90 0 0
	Do do .....	" 6	Maintenance metal.....	30 4 0
	Do do .....	Task 15	Repairs to culverts.....	17 2 0
	Tenterfield to Border.....	" 17	Road construction .....	43 0 0
	Do do .....	" 18	Draining road .....	34 13 0
	Armidale to Maryland .....	Con. 4 O.	Road construction .....	16 0 0
	Tenterfield to Bonshaw.....	" 26 O.	do .....	40 0 0
	Narrabri to Walgett and Brenda.....	Various.	Clearing, and Bridge-work .....	1,200 0 0
	Walgett to Coonamble .....	"	Culverts and clearing .....	600 0 0
	Main Road through Walgett .....	Streets.	Forming streets .....	1,000 0 0
	Fernmount to Armidale Road.....	1 P.	Rock cuttings, causeways, &c. ....	214 0 0
	Do do .....	2 P.	Clearing 190 chains, 5 cuttings 300 L. yards..	136 5 0
	Fernmount to Grafton .....	4 P.	One 3rd class culvert, fencing five and T. cuttings.....	45 4 0
	Fernmount to Kempsey .....	5 P.	Repairs, &c., Deep Creek bridge.....	25 0 0
	Do do .....	8 P.	Clearing through cuttings and embankments ..	39 5 0
	Do do .....	9 P.	do do .....	77 15 0
	Bowra to Congarini .....	12 P.	Clearing formation cutting, &c. ....	105 17 10
	Bowra to Brokers .....	13 P.	Side formations, draining culvert &c.....	14 0 0
	Bowra to the Missabbotti Road .....	14 P.	Clearing culverts and through cuttings, &c....	111 7 6
	Do do .....	15 P.	Fencing road through Sullivan's farms .....	4 16 0
	Kempsey to Fernmount .....	16 P.	Repairs, Deep Creek Bridge .....	122 4 0
	Fernmount to Armidale .....	20 P.	Drain, 80 chains, culverts, pipe drains .....	90 15 0
	Do do .....	19 P.	Clearing and forming cutting, &c. ....	104 9 0
	Lawrence to Tenterfield .....	5 P.	Forming cutting, metal, and culvert.....	130 0 0
	Do do .....	4 P.	Spreading metal and blinding .....	6 13 6
	Do do .....	3 P.	Cutting, metal, culvert, &c. ....	134 10 8
	Do do .....	6 P.	Forming, metal, culverts, &c. ....	85 8 0
	Do do .....	23 O.	do do .....	1 8 9
	North Grafton to Broadwater .....	2 P.	Forming, pipes, &c. ....	2 11 8
	South Grafton to Yamba .....	27 O.	do do .....	27 6 0
	Do do .....	29 O.	Fencing.....	26 12 6
	Woodburn to Selmans .....	30 O.	Forming, pipes, &c. ....	1 10 10
	Grafton, via Glen Innes to Inverell .....	4 P.	Timber, Nymbri bridge approaches .....	60 0 0
	Do do .....	16 P.	3 box-drains, Cary's Pond .....	30 0 0
	Do do .....	17 P.	50 C. maintenance metal .....	17 10 0

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	Grafton, <i>via</i> Glen Innes to Inverell	18 P.	50 C maintenance metal	£ 18 15 0
	Do do do	19 P	Timber for repair of bridges	63 0 0
	Do do do	1 P.	Cutting W. of Buchannah Bridge	89 0 0
	Do do do	4 P.	Timber for repairs of bridges	59 12 10
	Armidale to Grafton	42 O	Re forming, Bibby's Hill	59 0 0
	Do do	13 P	Metalling Aitkens Lane	199 11 0
	Do do	20 P	Repairs culverts	15 18 8
	Do do	2 P	330 l yds forming and metalling	128 3 9
	Do do	3 P	Do do	131 6 3
	Grafton to Solferino	5 P	400 l yds iron construction	91 10 0
	Do do	14 P	88 l yds do	53 6 0
	Grafton to Cross Roads towards Casino	15 P	80 chs clearing	28 10 0
	Do do do		Repairs, Saltwater Bridge	147 16 4
	Pence's Creek to Cowlong	19 O	Clearing	93 0 0
	Elsmore to Woodburn	21 O	Forming and metalling	184 0 0
	Lismore and Brunswick Road to Duraby Grass	22 O	Clearing and sideling	165 0 0
	Toohey's Mill Road	1 P	Do do	288 12 0
	Casino to Gunderimba	115 N.	Side cutting, forming, and clearing	67 15 0
	Cross Roads to Ballina	16 O	Formation and metal	50 0 0
	Wardell to Beach	19 O	2nd culvert and approaches	119 18 0
	Woodburn to Wardell	20 O	Approaches, Wardell Punt	21 17 6
	Lawrence to Tenterfield	31 O	Formation and metal	86 16 6
	Do do	34 O	Do do	128 14 0
	Lismore to Nimbin	35 O	Formation and gravel	11 18 4
	Do do	36 O	Do do	71 3 4
	Do do	15 O	Leyster Bridge approaches	55 5 0
	Lawrence to Tenterfield	2 P	Matt metal	120 0 0
	Woodmans to Selmans	3 P	Clearing	200 0 0
	Casino to Woodburn	4 P	Approaches to Punt, Coraki	10 0 0
	Do do	5 P	Do do	10 0 0
	Woodburn to Wardell	6 P	Do do Woodburn	60 0 0
	Lismore to Queensland Border	25 O	Repair to culverts	42 18 2
	Do do do	13 P	Murwillumbah wharf approaches	45 17 9
	Main Western Road	18 P	Supply of blue metal and maintenance	921 8 5
	Sydney and Cook's River Road	1 P	Do do	1,100 0 0
	Wentworth Park Road	18 P	Supply of old and new blue metal	800 0 0
	Pymont Bridge Road	3 O	Kerbing and guttering	760 0 0
	Deviation to Glebe Island	7 P	Making road, kerbing, guttering, &c	530 0 0
	Abattoirs to White Bay	5 P	Widening road, retaining wall, &c	550 0 0
	Maroubra Bay Quarry	6 P	Quarrying white metal, breaking	460 0 0
	Rocky Point and Forest Roads	13 P	Providing white metal	380 0 0
	Maroubra Bay Quarry	9 P	Carting white metal	250 0 0
	Deviation to Abattoirs	18 P	Metalling new deviation	960 0 0
	Pymont Bridge Road	18 P	Do road through Glebe, &c	400 0 0
	Main Southern, Western, & other Roads	21 P	Carting blue metal	560 0 0
	Petersham to Abattoirs	18 P.	Supplying blue metal	500 0 0
	Do do	16 P	Do hard ballast from dvtn	80 0 0
	Do do	21 & 22 P	Carting blue metal	110 0 0
	Rocky Point to George's River, Forest Rd	14 P	Supplying ballast	80 0 0
	Gardner's, and Road to Glassworks, Botany.	23 P	Do do	80 0 0
	Main Western Road	Task 8 P	Repairs to Haslem's Creek Bridge	152 8 0
	Do do	Cont 1 P	Supplying maintenance metal	176 8 0
	Main Western Road, Old Mill	Task 12 P	Carting metal from Prospect	86 5 0
	Main Southern Road, Campbelltown	Task 1 P	Erecting ordinary fence on approaches to bridges	39 0 0
	Ryde to Parramatta	Cont 1 P	Supplying and spreading blue metal	456 1 8
	Cutting, Colo Rock	1 O	Side cutting, 1 mile 72 chains	1,302 12 6
	Rouse Hill to Schofields	1 P	Forming	121 5 0
	Do do	2 P	Cutting, filling, and shaling	246 15 0
	Blacktown Road to Box Hill	1 P	Cutting and filling	84 4 8
	Clarence to Cornwallis	1 O	Do do	64 5 6
	Richmond Bridge to King's Road	1 P	Road construction	548 17 0
	Bells Lane to Hennessy	1 P	Cutting John's Hill	147 7 6
	Churchill's Wharf to West Portland	1 P	Side cutting	64 0 0
	Sackville to East Portland	1 P	Widening cutting, Lowe's Hill	162 3 9
	Windsor, &c, to Wiseman's Ferry	1 P	Road construction	1,041 0 0
	Do do	2 P		144 0 0
	O'Connell to Swatchfield	3 P	Construction and gravelling	42 0 0
	Do do	4 P	Do pipes	54 0 0
	Springwood to Quarry	6 P	Do do	96 0 0
	Blackheath to Hat Hill	7 P	Do and clearing	25 6 0
	Rydal to Lowther	9 P	Construction and drain	53 2 0
	Springwood to Sassafras Gully	14 P.	Clearing	75 6 8
	Rockley <i>via</i> Campbell's Road and Dog Rocks	Exten of Task 41 O	Supplying metal	20 17 6
	Newbridge to Arthur Town	Task 94 O	Forming and metalling road	37 19 0
	Do do	Do 95	Do do	41 3 0
	Road to Lagoon and Campbell's Road	Do 97	Clearing, draining, and forming road	118 6 9
	Bsht and Ophr Road	Do 79	Forming, draining, and gravelling road	68 7 0
	Kelloshiel and Lower Forest Road	Task 106 O	Grading road as per section 85	71 12 11
		Cont No 1		125 3 11
	Lamekilns to Palmers Oakey and Upper Turon	Task 101 O	Clearing and draining road	52 18 6
	Lamekilns to Palmers Oakey and Upper Turon	Task 107 O	Constructing road as per section	280 18 6
		Cont No 2	Do do	236 16 0

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	Bsht. and O'Connell Plains Road	Task 106	Blinding gravel, spreading metal	£ 71 s. 5 d.
	Bsht. via Kellosiel and Monkey Hill	100 P.	Screwing up, tarring, and painting Parker's Bridge.	133 0 0
	Peel and Duramana Road	113 O.	Building bridge over Winburndale Creek	646 8 0
	Rockley and Isabella River Road	103	Constructing road and culverts	48 1 0
	Meadow Flat to Sunny Corner	Cont. 1 P.	Surplus maintenance metal	40 0 0
	Do do	Do 2 P.	Do do	36 0 0
	Do do	Task P.	Do balance 1885	22 9 8
	Main Western Road	Task 104 P.	Measuring and iron culverts, 1886	140 0 4
	Do	Task 107 P.	Supplying metal	178 10 0
	Do	Cont. No. 1.	Do	144 3 4
	Do	Cont. 2 P.	Do	90 0 0
	Do	Cont. 4 P.	Do	165 0 0
	Main Western Road	Cont. 5 P.	Supplying metal	198 6 8
	Do	6 P.	do	188 0 0
	Tabrabucca, via Crudine, to Monkey Hill	37 O.	Clearing, forming, draining, and culverts	260 14 0
	Cudgegong Village to Rylstone Village	5 P.	Extension of the approaches to Carwell Creek	120 0 0
	Cudgegong to Hill End	Bond.	Metalling	605 9 6
	Do do	10 P.	Grattai culverts, including approaches	75 0 0
	Gulgong to Berriwa	7 P.	Repairs, Tallewang bridge	18 18 0
	Denman and Cassilis to Mudgee	9 P.	Clearing deviation	20 0 0
	Do do	14 O.	Maintenance metal	20 10 0
	Blayney to Grenfell	33 O.	Through cuttings and culverts	46 10 4
	Cowra to Canowindra	34 O.	Drains, causeways, &c.	56 2 0
	Canowindra to Eugowra	39 O.	Clearing drains, cuttings, &c.	95 0 0
	Cowra to Forbes	2 P.	Construction	46 1 3
	Mandurama to Canowindra	3 P.	do	107 7 6
	Do do	4 P.	Rock cutting and construction	28 16 0
	Cowra to Canowindra	5 P.	do do	38 10 0
	Blayney to Grenfell	6 P.	Clearing, draining, cuttings, &c.	137 0 0
	Lyndhurst to Abercrombie	7 P.	Draining and forming	27 5 0
	Do do	9 P.	Repairs to Lyndhurst bridge	35 0 0
	Blayney to Grenfell	26 O.	Timber for do	24 0 0
	Forbes to Parkes	6 P.	500 l. yards construction, and 1,000 l. yards draining, &c.	94 10 0
	Do do	5 P.	230 l. yards 2½ metal	57 10 0
	Do do	7 P.	550 do do	110 0 0
	Do do	8 P.	180 do do	43 10 0
	Do do	3 P.	310 do do	73 12 6
	Orange to Forbes	4 P.	450 do do	129 10 0
	Forbes to Parkes	1 P.	Stone causeway and approaches	8 0 0
	Boree to Parkes	2 P.	250 c. yards 2½ metal	62 10 0
	Orange to Forbes	1 P.	510 do do	160 0 0
	Do do	2 P.	195 do do	63 7 6
	Boree to Parkes	19 O.	J. W. Phillips	100 3 8
	Parkes to Condobolin	25 O.	J. Cashman	133 0 0
	Main Western Road	6 P.	Painting and tarring bridges	201 10 0
	Do	19 P.	Metalling at Brien's	122 8 8
	Do	18 P.	Clearing drains	20 0 0
	Do	15 P.	Repairs, Gosling Creek Bridge	10 0 0
	Orange to Forbes	1 P.	Maintenance metal	137 10 0
	Do	2 P.	do do	68 16 8
	Do	3 P.	do do	137 10 0
	Do	5 P.	Tarring, painting, &c., Toogong and Cual bridges	158 6 0
	Do	13 P.	Road construction	57 0 0
	Do	1 and 2 O.	Maintenance metal	156 9 0
	Blayney to Grenfell	8 O.	do do	185 12 6
	Bathurst and Ophir	11 O.	Clearing, forming, &c.	158 8 0
	Teapot Swamp to No. 1 Swamp	14 O.	Culvert and approaches	154 10 0
	Cargo to Cudal	16 O.	Supplying ballast	4 11 0
	Do	17 O.	do do	5 0 0
	Orange to Cadia	12 O.	Forming and draining	122 10 0
	Orange and Cadia Road to Four-mile Creek	2 O.	Forming and clearing	45 13 0
	Matthews' to Brown's Creek	2 O.	Clearing and draining	88 0 0
	Forest Reefs to Blayney	2 O.	Culvert and approaches	60 0 0
	Molong to Warne	9 P.	Tarring, painting bridges	78 10 0
	Icely to Spring Grove	3 O.	Forming and draining	130 0 0
	Do do	2 O.	do clearing	38 0 0
	Molong to Toogong	1 O.	do do	144 15 0
	Stoney Creek to Burrendong	1 O.	Clearing and draining	150 0 0
	Springs to Newrea	1 O.	Construction	35 0 0
	Railway approach Borenore	7 P.	do	233 0 0
	Do do	20	do	225 0 0
	Main Western Road	9 P.	150 c. yards maintenance metal	48 10 0
	Obley to Dubbo		Nil.	Nil.
	Faulkner's, &c. to Gilgandra		Nil.	Nil.
	Dubbo to Coonamble		Clearing road	34 0 0
	Cullenbone to Dubbo	2 P. to 6 P.	Road construction, &c.	285 0 0
	Wellington to Cobborah	7 P. & 8 P.	Clearing and road construction	270 0 0
	Wellington to Burrendong	(1885)	Erecting culverts, &c.	310 0 0
	Gunnedah to Black Stump	T. 9 P.	Metalling	155 0 9
	Spring Creek to Birriwa	C. 3 P.	do	197 16 0
	Do do	T. 4 P.	Blinding	120 0 0
	Do do	T. 8 P.	Forming	162 7 6

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	Coonabarabran to Merrygoen . . . . .	T. 5 P.	Cutting approaches . . . . .	150 0 0
	Do do . . . . .	T. 6 P.	do . . . . .	150 0 0
	Denison Town to Merrygoen . . . . .	T. 7 P.	Forming . . . . .	49 10 0
	Boohgal to Wilcannia . . . . .		Clearing . . . . .	76 0 0
	Wilcannia to Tibooburna . . . . .	Agt. 29	Clearing and approaches to creek . . . . .	70 0 0
	Wilcannia to Thackaringa . . . . .	Agt. 7	Approaches to creek in Silverton . . . . .	18 15 0
	Wilcannia to Wentworth . . . . .	Agt. 21	Approaches to Bolocco Creek . . . . .	10 0 0
	Wentworth to South Australian Border. . . . .	3 O.	Clearing, &c. . . . .	50-0 0
	Wilcannia to Wentworth . . . . .	12 P.	do . . . . .	176 16 0
	Do do . . . . .	13 P.	do . . . . .	92 16 0
	Mount Hope to Merrin . . . . .	Task 1 E.	Road clearing, 505 chains . . . . .	126 7 0
	Road Bourke to Barrington . . . . .	J. Davis	Formation of road approach to Lagoon Bridge . . . . .	15 0 0
	Do do . . . . .	J.T.Turner	Formation of road between Iron and Polygonum bridges . . . . .	60 10 0
	Do do . . . . .		do . . . . .	36 0 0
	Main South Road . . . . .	16-86	Re-decking bridge . . . . .	31 10 0
	Do do . . . . .	18-86	Construction of pipe culverts . . . . .	15 0 0
	Moss Vale, <i>via</i> Kangaroo Vale, to Nowra . . . . .	13-86	Forming and metalling . . . . .	130 15 6
	Do do . . . . .		do . . . . .	170 7 6
	Moss Vale and Jamberoa . . . . .	12-86	do . . . . .	158 5 0
	Do do . . . . .	3 P.	Forming, metalling, and culverts . . . . .	339 5 0
	Do do . . . . .	10 P.	do do . . . . .	230 16 0
	O. S. Road and Roads to Little Forest . . . . .	22-86	Forming and metalling . . . . .	115 12 6
	Bowral, <i>via</i> Alcon's, to Robertson . . . . .	23-86	do . . . . .	110 12 6
	Do do . . . . .	75-85	do . . . . .	42 16 3
	M. S. Road, Berrima to Bowral . . . . .	15-86	Cutting and embankment and metal . . . . .	119 0 0
	Berrima to Railway Station, Moss Vale . . . . .	11-86	Forming and metalling . . . . .	108 15 0
	Kangaroo Ground, Byrnes, to O. S. Road . . . . .	25-86	do . . . . .	85 3 0
	Cross Roads, towards Taralga . . . . .	20-86	Forming . . . . .	26 10 0
	Kangaroo Road, at Robertson Park, to Mt. Murray. . . . .	5-86	Culverts and approaches . . . . .	32 10 0
	Road near Wallaby Creek, <i>via</i> Macquaries, to Central Illawarra Mt. . . . .	74-85	Spreading metal . . . . .	5 8 0
	Kiama Road, Blenkinsop's to Bairengary Road. . . . .	72-85	Clearing, forming, and ballasting . . . . .	47 11 0
	Wild Meadows to Robertson Road . . . . .	61-85	Culvert, clearing, and forming . . . . .	47 0 0
	Approach to Robertson Cemetery . . . . .	40-85	Cutting and embankment. . . . .	64 0 0
	Mittagong Station to Joadja Creek . . . . .	10-86	Repairs . . . . .	23 8 0
	Do do . . . . .	21-86	Clearing and forming . . . . .	76 12 0
	Main South Road . . . . .	11 P.	Timber culvert, Paddy's River Reserve . . . . .	50 0 0
	Do . . . . .	12 P.	Pipes and culverts, alterations near Bredalbane . . . . .	40 0 0
	Goulburn to Cooma . . . . .	5 P.	Supply of maintenance metal . . . . .	170 12 6
	Do do . . . . .	25 P.	Repairs to Queanbeyan Bridge . . . . .	289 16 0
	Goulburn, <i>via</i> Tarlga, to Curraweela . . . . .	14 P.	Metal, construction, deviations, near Bates's. . . . .	190 14 0
	Do do . . . . .	15 P.	Metal, construction, near Mrs. Martin's . . . . .	99 0 0
	Goulburn, <i>via</i> Crookwell, to Binda. . . . .	8 P.	Supply of maintenance metal . . . . .	61 19 7
	Do do . . . . .	16 P.	Metal, construction at 9 miles. . . . .	233 17 2
	Goulburn, <i>via</i> Gullen, to Wheeo . . . . .	9 P.	Supply of maintenance metal . . . . .	27 17 6
	Do do . . . . .	26 P.	Repairs to Rossi's Bridge . . . . .	45 6 4
	Do do . . . . .	17 P.	Gravel, construction near M'Alcer's . . . . .	155 12 10
	Goulburn to Windellama . . . . .	18 P.	do near Bronte . . . . .	87 16 8
	Marulan to Windellama . . . . .	19 P.	(T. & J. Guthrie) gravel construction . . . . .	84 4 8
	Bungonia to Inverary Park . . . . .	20 P.	Gravel, construction, near Bungonia, &c. . . . .	41 14 2
	Goulburn to Upper Tarlo and Roslyn . . . . .	21 P.	do near the Briars . . . . .	119 2 6
	Do do . . . . .	22 P.	Forming Stumpy hill deviation . . . . .	53 14 0
	Mount Wayo to Abercrombie . . . . .	35-85	Metal construction . . . . .	84 4 3
	Do do . . . . .	39-85	do . . . . .	59 3 6
	Do do . . . . .	43-85	do . . . . .	185 0 0
	Laggan and Binda . . . . .	40-85	Gravel, construction, and clearing. . . . .	41 0 0
	Goulburn and Binda . . . . .	41-85	Culvert and approaches, &c. . . . .	95 14 6
	Wheeo, towards Crookwell . . . . .	38-85	Gravel, construction . . . . .	40 6 8
	Goulburn and Tuena Roads, <i>via</i> Fullerton, to Sherwood. . . . .	37-85	Metal, construction . . . . .	4 9 4
	Goulburn and Tuena Boads, <i>via</i> Fullerton, to Sherwood. . . . .	2-86	do . . . . .	57 1 0
	Goulburn and Tuena Roads, <i>via</i> Fullerton, to Sherwood. . . . .	5 86	Forming and draining . . . . .	32 10 0
	Gullen to Laggan . . . . .	1-86	Gravel, construction . . . . .	35 0 0
	Do do . . . . .	7-86	do . . . . .	70 0 0
	Taralga, towards Swallow Tail . . . . .	6-86	Clearing, forming, and draining . . . . .	139 2 0
	Crookwell to Gunning . . . . .	36-85	Forming and draining . . . . .	26 7 6
	Do do . . . . .	3-86	do . . . . .	80 0 0
	Do do . . . . .	4-86	Gravelling . . . . .	75 0 0
	Bull to Blue Gum Forrest . . . . .	7 P.	Fencing at Coal Cliff, about (Schedule rates) . . . . .	100 0 0
	Do do . . . . .	3 P.	Cutting deviation O . . . . .	185 10 0
	Do do . . . . .	6 P.	Gravelling and forming . . . . .	187 5 6
	Do do . . . . .	5 P.	do . . . . .	58 10 0
	Bottle F. to Westmacott's P. . . . .	4 P.	do near Waterfall . . . . .	75 15 0
	Culverts—Bull to Coalcliff . . . . .	23 O.	Culvert, Flanagan's Creek . . . . .	198 10 0
	Bull Pass to Cataract Reservoir . . . . .	22 O.	Cutting, Wilson's Gully . . . . .	46 0 0
	Do do . . . . .	19 O.	Culvert, do . . . . .	15 0 0
	Culverts—Bull to Coal Cliff . . . . .	17 O.	Culvert, Heck's Flat . . . . .	159 10 0
	Moss Vale to Shoalhaven . . . . .	28 O.	Fencing . . . . .	140 8 0
	Do do . . . . .	27 O.	Do . . . . .	173 0 0
	Main South Coast Road . . . . .	35 O.	Ballasting . . . . .	73 2 6
	Burrier Camberwarra . . . . .	36 O.	Clearing . . . . .	116 5 0

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				£ s. d.
	Broughton Creek to Woodhill.....	34 O.	Cutting, forming, &c. ....	388 8 0
	Moss Vale and Shoalhaven Road to head of Kangaroo River.	37 O.	Side cutting and culverting.....	100 0 0
	Nowra to Yalwal .....	38 O.	do do .....	85 3 0
	Nowra, &c., to Milton ..	1 P.	Fencing .....	30 0 0
	Do do .....	2 P.	do .....	25 0 0
	Bloomfield to Cooradigbee .....	Task 7-85	Clearing, draining, and forming .....	4 13 0
	Gunning to Dalton .....	„ 10-85	Road construction, with gravel metal .....	28 19 9
	Walls to Bowring .....	„ 21-85	Draining 2 pipes and 2 causeways .....	21 0 0
	Dalton to Burrowa .....	Con. 23-85	Forming, clearing, draining, &c. ....	50 0 0
	Dalton to Narrawa .....	„ 25-83	Clearing, forming, construction, &c. ....	128 12 2
	Dalton to Jerrawa Platform .....	Task 26-85	Clearing and drain.....	29 8 8
	G. and B. Road to Yass .....	„ 27-85	1st. class culvert and construction.....	10 16 9
	Yass to Bungendore .....	Con. 30-85	do gravel construction.....	158 13 4
	Yass to Woolgarlo .....	Task 33-85	Forming drain and pipe drains .....	30 11 0
	Yass to Bloomfield.....	„ 35-85	Clearing and drain .....	51 3 6
	Roches to Pudman .....	„ 36-85	Clearing drain and forming .....	25 17 6
	M'bateman to Queanbeyan .....	Con. 37-85	Construction, forming, and drain .....	116 0 0
	Canberra to Junction Rivers .....	Task 39-85	Clearing and forming.....	26 8 4
	Waroo to Mullion .....	„ 40-85	Clearing drain, forming culvert .....	46 11 10
	King Street, Wallendbeen .....	2 P.	4 chains cutting, metalling, and pipe drain ..	12 0 0
	Pump and Gear at Wallendbeen.....	4 P.	Erecting service tank, &c. ....	48 15 0
	Cunningar Road .....	5 P.	Re-decking culvert .....	6 0 0
	Tumba, via Munderoo, to Jingellic.....	1-86	Approaches, Mann's Bridge.....	345 10 0
	Do do .....	2-85	Cutting, Mann's Hill .....	377 18 0
	Bowna to Welaregang .....	8-86 Task.	Construction .....	108 14 0
	Do do .....	9-86	do .....	85 2 0
	M. S. Road at Billabong to Timba.....	8-6	do .....	37 7 6
	Do do .....	9-86	do .....	68 10 0
	Clyde Road .....	38 O.	Dinner Creek Deviation .....	118 11 1
	Braidwood to Elrington .....	60 O.	Honeysuckle Bridge .....	198 19 11
	Milton to Bodalla .....	63 O.	Polwamon Cutting.....	48 17 10
	Braidwood to Sergeant's Point .....	76 O.	Tanbulan Deviation .....	40 0 0
	Milton and Bodalla Road, near Brooman to Nelligen.	69 O.	Side-cutting 3 to 4 mile .....	30 0 0
	Araluen to Moruya .....	1 P.	Maintenance .....	13 4 9
	Bodalla to Punkatly Creek .....	2 P.	Culvert and cutting .....	30 0 0
	Larbert to Lower Boro .....	4 P.	Repairs.....	21 0 0
	Bodalla to Punkatly Creek .....	12 P.	Cutting.....	2 1 9
	Wagonga Heads to Bodalla .....	13 P.	Construction with gravel .....	33 5 0
	Milton to Bodalla .....	14 P.	Maintenance metal .....	25 0 0
	Clyde Road to Bodalla .....	24 P.	Construction at M'Rae's .....	110 12 0
	Do do .....	25 P.	Construction at Mr. Weber's .....	85 16 0
	Nelligen to Bateman's Bay .....	26 P.	Cutting.....	54 10 0
	Bungendore to Doughboy Hill .....	15 P.	Formation sand .....	34 6 2
	Streets of Bungendore .....	16 P.	Construction Malbon-street .....	258 10 0
	Do do .....	17 P.	do Gibraltar-street .....	40 0 0
	Milton to Bodalla .....		Metalling streets .....	13 16 0
	Araluen to Braidwood .....	27 P.	Maintenance .....	18 17 0
	Tarago to Braidwood.....	28 P.	Maintenance metal.....	57 0 0
	Do do .....	29 P.	do .....	42 10 0
	Milton to Bodalla .....	31 P.	Cutting at Cookwye .....	41 5 0
	Do do .....	32 P.	do Ryan's .....	168 13 4
	Do do .....	33 P.	Deep Creek approaches.....	53 10 0
	Do do .....	34 P.	Cutting at Mogo and metal .....	74 15 0
	Braidwood to Tarago.....	35 P.	Maintenance metal.....	17 10 0
	Milton to Bodalla .....		do .....	67 16 3
	Bungendore via Molonglo to Queanbeyan .....	38 P.	Construction Molonglo Plain .....	93 0 0
	Do do .....	39 P.	do Bungendore Lanes.....	94 15 0
	Wagonga Heads to Bodalla .....	40 P.	Through cutting .....	27 0 0
	Milton via Brooman to Nelligen .....	44 P.	Culvert.....	20 0 0
	Braidwood to Tarago.....	54 P.	Construction at 31-Mile .....	34 2 6
	Do do .....	55 P.	do 36-Mile .....	69 3 9
	Braidwood to Molonglo .....	56 P.	Repairs, Hoskingtown .....	25 13 6
	Bombala-Merimbula Road .....	12 P.	Metalling .....	396 3 3
	Do .....	16 P.	Cutting and felling, Wolumla.....	103 15 0
	Do .....	18 P.	Metalling .....	305 6 0
	Do .....	19 P.	do .....	150 0 0
	Do .....	20 P.	do .....	187 10 0
	Do .....	21 P.	Maintenance metal.....	362 10 0
	Do .....	22 P.	Forming and metalling Greendale Bridge.....	119 2 0
	Candelo Brown Mountain Road .....	31 P.	Side-cutting, culverting .....	296 0 0
	Candelo to Wyndham Road.....	3 P.	Culverts .....	14 8 0
	Towamba to New Buildings .....	14 P.	Side-cutting.....	42 4 6
	Cathcart to Panbula .....	2 P.	Re-decking culverts .....	65 15 4
	Do do .....	13 P.	1st class culvert side-cutting .....	264 10 0
	Wolumla Junction to Cross Roads.....	28 P.	Culverting, side-cutting, &c. ....	104 0 0
	Brianderry to Bega .....	94 O.	1st class culvert approaches.....	62 0 0
	Bega-Bodalla Road .....	9 P.	Approach to bridges .....	69 10 0
	Cobargo to Bermagui .....	6 P.	1st class culvert approaches.....	114 0 0
	Cobargo to Wadbelliga.....	24 P.	do .....	187 0 0
	Bega Bembooka .....	10 P.	Side-cutting clearing.....	51 12 0
	Eden to Panbula .....	17 P.	Gravelling, &c. ....	140 0 0
	Do do .....	15 P.	Metalling.....	148 3 7
	Cathcart to Panbula .....	30 P.	Painting New Building Bridge .....	66 0 0
	Goulburn and Cooma.....	4-86	Construction .....	201 17 6
	Do do .....	6-86	do .....	190 0 0

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				£ s. d.
	Goulburn and Cooma . . . . .	7-86	Construction . . . . .	69 14 0
	Do do . . . . .	9-86	do . . . . .	48 15 0
	Do do . . . . .	10-86	do . . . . .	82 0 6
	Do do . . . . .	11-86	do . . . . .	75 1 3
	Do do . . . . .	12-86	Maintenance material . . . . .	152 10 0
	Do do . . . . .	13-86	do . . . . .	166 5 0
	Do do . . . . .	17-86	do . . . . .	32 10 0
	Cooma and Bombala . . . . .	14-86	do . . . . .	39 0 0
	Do do . . . . .	15-86	do . . . . .	44 7 6
	Do do . . . . .	62-85	do . . . . .	85 2 10
	Cooma and Jindabyne . . . . .	16-86	Construction . . . . .	22 10 0
	Cooma, &c., to Middling Brook . . . . .	18-86	Maintenance material . . . . .	92 1 9
	Seymore to Bobundarra . . . . .	19-86	Drain and causeways . . . . .	28 0 0
	Jindabyne to Long Point . . . . .	58-85	Side-cutting and drain . . . . .	50 0 0
	Bibbenluke and Bobundarra . . . . .	61-85	Side-cutting, drain, and causeways . . . . .	233 2 4
	Cooma and Kiandra . . . . .	8-85	Clearing side-cutting, &c. . . . .	177 7 6
	Albury and Corowa Road to Urana . . . . .	68-85	Metal construction . . . . .	42 0 2
	Howlong to Walbundry . . . . .	72-85	do . . . . .	60 0 0
	Gerogery via Bethel to Howlong . . . . .	77-85	do . . . . .	20 0 0
	Albury to Wagga . . . . .	85-85	do . . . . .	50 15 0
	Albury to Tocumwall . . . . .	3-86	do . . . . .	160 0 0
	Do do . . . . .	5-86	Maintenance metal . . . . .	47 10 0
	Albury to Urana . . . . .	13-86	Road construction . . . . .	10 0 0
	Do do . . . . .	20-86	Metal construction . . . . .	419 10 0
	Do do . . . . .	21-86	do . . . . .	78 10 6
	Albury to Tocumwall . . . . .	22-86	do . . . . .	197 5 0
	Do do . . . . .	24-86	do . . . . .	50 0 0
	Albury and Corowa to Urana . . . . .	25-86	Maintenance metal . . . . .	70 0 0
	Albury to Tocumwall . . . . .	26-86	do . . . . .	92 10 0
	Culcairn to Germanton . . . . .	27-86	do . . . . .	58 10 0
	Bowna to Welaregang . . . . .	28-86	Metal construction . . . . .	151 12 0
	Howlong approaches . . . . .	32-86	Earthwork, &c. . . . .	1,705 17 0
	Howlong to Walbundry . . . . .	40-86	Metal construction . . . . .	145 3 0
	Streets of Albury . . . . .	41-86	Maintenance metal . . . . .	65 0 0
	Main South Road . . . . .	42-86	Metal construction . . . . .	88 0 0
	Jerilderie to Tocumwall . . . . .	32 O.	Clearing one chain wide . . . . .	17 10 0
	Denilquin to Urana . . . . .	33 O.	Repairs, bridges north of Jerilderie . . . . .	11 13 6
	Denilquin to Hay . . . . .	1 P.	Fencing t.l. area Pretty Pine . . . . .	32 0 0
	Coonong Railway Station to Urana . . . . .	2 P.	Earthen filling Two-tree swamp . . . . .	620 0 0
	Moama to Moulamein . . . . .	7 P.	Construction Yarran Creek Bridge . . . . .	170 16 8
	Do do . . . . .	10 P.	Earthen approaches Yarran Creek Bridge . . . . .	230 7 6
	Do do . . . . .	A12 P.	Completion Murvan, Yarran Creek Bridges . . . . .	229 0 4
	Denilquin to Hay . . . . .	14 P.	Three caretakers' residences at three tanks south from Hay . . . . .	273 12 0
	Denilquin to Balranald . . . . .	24 P.	Earthen filling . . . . .	30 0 0
	Denilquin to Hay . . . . .	29 P.	Supply metal and timber . . . . .	10 0 0
	Do . . . . .	35 P.	Repairs, &c. . . . .	4 0 0
	Denilquin to Mathoura . . . . .	33 P.	Repairs in earthenware . . . . .	9 0 0
	Denilquin to Urana . . . . .	34 P.	Repairs to earthen bank, &c. . . . .	15 0 0
	Jerilderie streets . . . . .			
	Coonong Station to Urana . . . . .		Railway contract. Supply metal . . . . .	1,700 0 0
	Colombo Creek Railway Station . . . . .			
	Carrathoul to Hillston . . . . .	36 O.	Metal supply . . . . .	130 0 0
	Hulong to Cudgellico . . . . .	40 O.	Formation and drains . . . . .	130 0 0
	Balranald to Hay . . . . .	42 O.	Metal supply . . . . .	160 0 0
	BRIDGES.			
	Paterson Bridge . . . . .		Construction, section I. . . . .	3,418 14 6
	Parramatta Bridge . . . . .		Painting 12 feet cylinders . . . . .	50 0 0
	Iron Cove Bridge . . . . .		Painting, labour, and material . . . . .	1,006 0 0
	Do . . . . .		Repairs to caretaker's house . . . . .	33 2 6
	St. Albans Bridge approaches . . . . .	141 N.	Approach construction . . . . .	200 0 0
	King Creek Bridge . . . . .	47 O.	Bridge . . . . .	650 0 0
	Paterson Bridge . . . . .		do . . . . .	3,941 2 0
	Throsby's Creek Bridge . . . . .	71 O.	Approaches . . . . .	796 0 4
	Anvil Creek Bridge . . . . .	27 P.	Widening . . . . .	114 10 0
	Elderslee Bridge . . . . .	29 P.	Ballast, logs . . . . .	43 0 0
	Alleyne River Bridge . . . . .	28 P.	Screwing up and painting . . . . .	49 0 0
	Repairs to Terriaro Bridge . . . . .		Fencing from traffic . . . . .	15 0 0
	Telleraga Bridge . . . . .		Timber bridge . . . . .	1,558 1 3
	Bridge over Gwyder River . . . . .		Including extras, &c., but leaving out of consideration altogether £1,000 advanced on account of Manilla Bridge . . . . .	5,690 0 0
	Bridge over Bingera Creek . . . . .		do do do . . . . .	1,792 8 4
	Bridge, Hunimbah . . . . .		Bridge and approaches . . . . .	3,800 0 0
	Bridge, Lower Barwon . . . . .		do do . . . . .	900 0 0
	Bridge, Bungle Gully . . . . .		do do . . . . .	1,100 0 0
	Bridge, Coonamble Creek . . . . .		do do . . . . .	1,610 0 0
	Dobie-street Bridge . . . . .	12 P.	Repairs . . . . .	38 14 6
	Repairs Cook's River Bridge . . . . .		do . . . . .	70 0 0
	Bridge, Blackman's Creek . . . . .	8 P.	Erection of bridge . . . . .	125 0 0
	School-house Bridge, Bridgewater . . . . .	10 P.	Repairs . . . . .	401 17 6
	Dandaloo Bridge and approaches . . . . .		do . . . . .	990 0 0
	Bridge, Howlong . . . . .		Approaches . . . . .	748 17 6
	Sprink Creek Bridge . . . . .	T3 P.	Repairing . . . . .	30 0 0
	Menindie Bridge . . . . .	Agt & Bond.	Constructing bridge and approaches . . . . .	100 0 0
	Bourke Bridges . . . . .	W. Clark	Supplying timber . . . . .	40 0 0



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				£ s. d.
	Cato Creek Bridge	G. Burrows	Constructing bridge	1,518 2 2
	Billabong Bridge, Bourke	T. Kline	Carting gravel for approaches	7 10 0
	Re-erection Demondrille Creek Bridge	3 P.	Reconstructing bridges	209 10 1
	Main Alfred Bridge	Cont. 1 O.	Flooring and girders	629 3 6
	Main Bridge and approaches	„ 3 P.	do do	188 10 0
	Deep Creek Bridge		Repairs	275 17 11
	Bridge over Greg Greg River	No. 1.	A. S. Levingstone Greg Greg Bridge	705 13 0
	Bridge on Holt's Flat		Construction	439 0 0
	Howlong Bridge	71-84	Murray Bridge	220 9 0
	Pappinbura Creek Bridge	18 P.	Bridge	800 0 0
	Bridge, Bogree Creek		Erection	1,000 0 0
	Bourke Bridge		Relief works	350 0 0
	Do		do	410 0 0
	Do		do	225 0 0
	Do		do	100 0 0
	TANKS AND WELLS.			
	Erection of pumps, cottages, &c.		Erecting pumper's cottages	1,200 0 0
	Munnin Well	T1 P.	Fencing	47 1 3
	Tiboaburra Well	Bonds	Sinking well and appurtenances	540 0 0
	Waratta Tank	Agt. 23	Constructing shoot	20 0 0
	Milparinka Well	Bonds	Sinking well and appurtenances	250 0 0
	Milparinka Waterhole	Agt. 16	Cleaning out, and pump shaft	165 0 0
	Coalley Dam	Bond	Constructing dam	1,500 0 0
	Maxwell's Tank	Agt. 5	Constructing wing embankment	45 0 0
	J. K. Well	Bond	Sinking well	350 0 0
	The Peak Tank	Bond and Agt. 13	Excavating tank and fencing	70 0 0
	Yarella Tank	Agt. 14	Constructing shoot	50 0 0
	Mena Murtie Well	Bonds	Sinking well and appurtenances	100 0 0
	Beefwood Well	Agt. 11	Erecting whin and headframe	140 0 0
	Mulgoa Valley Well	„ 27	Boring	150 0 0
	Forty-eight Mile Tank	„ 4	Cleaning out silt tank and fencing	50 0 0
	Thirty-five Mile Tank	„ 4	do do	56 0 0
	Twenty-six Mile Tank	„ 9	Fencing spl. lease	400 0 0
	Twelve Mile Tank	„ 8	do	313 0 0
	Silverton Well	5 O.	Well, troughing, &c.	28 0 0
	Tackaringa Tank	7 O. 8-10 P.	Tank, troughing, &c.	188 0 0
	Silverton Tank	12 O.	Inlet shoot	65 0 0
	Rat-hole Tank	4-5 P.	Erecting s. pump, troughing, &c.	36 10 0
	Purnamoota Tank		Erecting troughing, shoot, pumps	203 0 0
	Wilson Dam		Erecting troughing and pump, &c.	187 0 0
	Bileura Tank		Fencing tenants lease	76 10 0
	Mombil Tank		do	10 0 0
	Tinda Tank		do	10 0 0
	Boona Tank		do	10 0 0
	Mowabla Tank		do	20 0 0
	Babinda Tank		do	10 0 0
	Rock Holes Tank		do	91 7 0
	Merrimeriwa Tank		do	93 0 0
	Wagga Tank		do	413 10 0
	Roto North Well		do	29 5 0
	Beleura Tank		Clearing around tank	18 9 0
	Wicklown Tank		do	16 0 0
	Mombil Tank		do	5 7 0
	Mowabla Tank		do	3 12 6
	Meadows Tank		Sinking trial holes	25 4 0
	Nerrie's Paddock Tank	H. Eart	Erecting service tank, engine, troughing, &c.	200 0 0
	Mulga No. 5 Tank	Mr. Lucas	Completing excavation of tank	385 0 0
	Sixty-four Mile Tank	T. Ryan	Excavating tank, erecting fittings	604 18 10
	Kerigundah Tank	E. Ramsay	Filling in earthwork around troughing	80 0 0
	Lowesdale Tank	71-84	Puddling tank	108 12 6
	Sixty-seven Mile Tank	17 O.	Tank construction	52 12 0
	Ivanhoe Tank	22 O.	Constructing appliances	65 0 0
	Tanks and Wells, Wilcannia Road	27 O.	Fencing t. l. areas	1,400 0 0
	Do Hillston Road	29 O.	do	320 0 0
	Nine-mile Swamp Tank	32 O.	Tank construction	123 0 0
	Monahra Tank	35 O.	Construction of appliances	90 0 0
	One Tree and Quandong Tank	2 P.	Fencing t. l. areas	778 0 0
	Wooloondool Well	3 P.	do do	274 0 0
	One Tree and Quandongs Tanks	5 P.	Removing silt, &c.	88 0 0
	Tanks and wells Balranald Road	6 P.	Fencing t. l. areas	1,575 0 0
	Pulletop Tank			30 0 0
	Tom Lake	8 P.	Repairing shoot, &c.	15 0 0
	Ivanhoe Tank	11 P.	Silt tank and shoot	105 10 0
	PUNTS AND FERRIES.			
	Approaches to Ferry	36 N.	Resetting stonework of approach	31 10 0
	Do	28 O.	Framework and stone cutting	20 0 0
	Approach to Bowra Wharf	22 P.	Side cutting, clearing, formation, &c.	17 12 0
	Repairing Lismore punt		Repairing old punt	100 0 0
	Bateman's Bay punt	53 P.	Approaches to Ferry	48 0 0
	Maintaining Lismore punt			173 11 0
				£ 124,802 2 5

## No. 4.

## Commissioner for Sewerage.

## ROADS AND BRIDGES DEPARTMENT.—SEWERAGE BRANCH.

STATEMENT of probable amount of money required to defray the expense of Contracts that have been entered into for Public Works which are at present unfinished.

No	Name of Work.	No. of Task or Contract.	Abbreviated statement of nature of Work or Contract.	Balance due on Task or Contract, after deducting Vouchers sent in for Payment, including all entries.
1.	Main Bondi Sewer (Double Bay section) .....	4	Brick and concrete sewer .....	£ s. d. 6,165 0 3
2.	Main Bondi Sewer (Rose Bay or Bondi section)..	7	do do .....	28,743 5 0
3.	Main Bondi Sewer (Deep Dene section) .....	8	do do .....	22,074 13 9
4.	Main Botany Sewer (Cook's River section) .....	11	Syphon across Cook's River and main carrier Webb's grant.	19,484 8 10
5.	Dowling-street Stormwater Sewer .....	19	Brick and concrete stormwater sewer.....	771 9 1
				£77,238 16 11

## No. 5.

## Engineer-in-Chief for Harbours and Rivers.

RETURN showing the contracts being carried out under the Harbours and Rivers Branch, and the amounts required respectively to complete same.

Question No. 2.						Question No. 1.
Name.	Nature of Contract.	Loan or Revenue.	Amount as per Contract or Schedule.	Amount paid.	Amount unpaid at 30 June, 1886.	Probable amount required to complete Contracts unfinished.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
MISCELLANEOUS WORKS—						
Atlas Engineering Co.	Erection of 10-ton crane, Garden Island.	Loan ...	1,050 0 0	525 0 0	525 0 0	
Do .....	Dredging plant, Richmond River Wharf, Swan Bay .....	„ .....	17,940 0 0	12,242 0 0	5,698 0 0	
D. Rankin .....	Wentworth Wharf .....	Revenue	295 0 0	226 0 0	69 0 0	
H. West .....	Market Wharf extension .....	Loan ...	1,109 5 0	887 8 0	221 17 0	
Callen Brothers... Do .....	Bullock Island Wharf .....	„ .....	4,032 0 4	3,628 16 4	403 4 0	
Do .....	Bullock Island Jetties .....	„ .....	6,900 0 0	5,286 19 10	1,613 0 2	
F. J. Appleby ...	Two 15-ton steam-cranes, Stockton.	„ .....	900 0 0	369 11 9	530 8 3	
A. Whetton .....	Wharf approach, Field of Mars.	Revenue	2,236 0 0	1,518 16 0	717 4 0	
W. Hendry .....	Cutting canal from Murrumbidgee to Yanko Creek.	„ .....	354 0 0	.....	354 0 0	
L. Samuel .....	New Dock, Biloela .....	„ .....	1,191 13 4	206 14 11	984 18 5	
D. Rankin .....	Four wharves, Tweed River ...	Loan ...	220,769 0 0	71,150 11 10	149,618 8 2	
J. Blackwood ..	Engine for tug "Achilles" .....	Revenue	930 0 0	899 2 0	30 18 0	
J. Walton .....	Jetty at Byron Bay .....	„ .....	1,250 0 0	600 0 0	650 0 0	
Batty & Sheehy... C. Dundas .....	Wharf, &c., Garden Island .....	Loan ...	7,032 0 0	.....	7,032 0 0	
J. Walsh .....	Bourke Wharf .....	„ .....	20,358 18 9	18,287 3 0	2,071 15 9	
Morris Brothers..	Wharf, Great Marlow, Clarence River.	Revenue	4,000 0 0	1,027 16 3	2,972 3 9	
D. Rankin .....	12-ton steam crane, Well's Bay	„ .....	232 1 6	140 2 0	82 19 6	
J. W. Smythe ...	Wharf at Woodhill .....	Revenue	890 0 0	.....	890 0 0	
Clayton & Bell ...	Wharf at Huskisson .....	„ .....	359 0 0	.....	359 0 0	
Denning & Atkinson.	Wharf at Woodhill .....	Revenue	508 7 4	412 17 0	95 10 0	
J. Watt & Co. ...	Wood pavement blocks, Circular Quay.	Loan ...	8,858 15 0	1,067 0 10	7,791 14 2	
R. Hughes .....	Erection of shed, widening approaches, Woodburn, Richmond River.	Revenue	153 17 6	.....	153 17 6	
Anderson & Taylor.	Pumping machinery, new works, Biloela.	Loan ...	12,600 0 0	3,780 0 0	8,820 0 0	
W. Simms .....	Wharf at Balranald .....	Revenue	535 16 0	.....	535 16 0	
Foster & Minton.	Light-house, light-keeper's cottage, Kiama.	Loan ...	1,082 10 0	201 13 8	880 16 4	
H. Perdriau .....	Wharf at Wauchope .....	Revenue	535 15 0	.....	535 15 0	
Barrington & Co.	Construction of hopper barge, dredge service.	Loan ...	1,573 11 0	.....	1,573 11 0	
	50-ton hopper barge for dredge Service.	„ .....	878 10 0	.....	878 10 0	
	Supply of cylinders, crane foundation, Newcastle.	„ .....	1,975 0 0	.....	1,975 0 0	
	Total, miscellaneous works ...	.....	320,531 0 9	122,466 13 5	198,064 7 4	198,064 7 4

Name.	Nature of Contract.	Loan or Revenue.	Amount as per Contract or Schedule.	Amount paid.	Amount unpaid at 30th June, 1886.	Probable amount required to Complete Contracts unfinished.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward .....						198,064 7 4
<b>SYDNEY WATER SUPPLY WORKS.</b>						
J. M'Mahon & Co.	Carriage of pipes.....	Loan ...	11,422 3 9	8,521 4 4	2,900 19 5	
Shaw & Merrie ...	Pipe-laying, No. 27 .....	" ...	22,269 11 7	5,396 6 3	16,873 5 4	
Morris Brothers..	Bench flume for canal at Prospect.	" ...	30 0 0		30 0 0	
Horsley Co. ....	Wrought-iron pipes, 6 feet diameter.	" ...	40,569 16 9	15,942 13 1	24,627 3 8	
Potts & Metcalf..	Aqueduct, pier, and abutments	" ...	14,317 10 0	8,501 10 0	5,816 0 0	
Wright, Heaton & Co.	Carrying of plates for aqueducts	" ...	361 5 0	28 18 0	332 7 0	
Topham, Angus & Co.	Nepean tunnel.....	" ...	75,940 10 7	75,369 3 7	571 7 0	
Ferris, Wilson & Co.	Canal, Contract 21 .....	" ...	12,376 1 10	11,871 13 4	504 8 6	
J. Y. Mills.....	Prospect dam .....	" ...	479,320 12 10	251,812 10 6	227,508 2 4	
C. Mayes .....	Petersham reservoir .....	" ...	11,550 0 0	9,238 14 4	2,311 5 8	
M'Farlane, Strang, & Co.	Delivery, main line, wrought-iron pipes.	" ...	125,000 0 0	109,559 13 7	15,440 6 5	
Hudson Brothers	Temporary Water Supply.....	" ...	67,000 0 0	50,250 0 0	16,750 0 0	
T. Pigott & Co...	Wrought-iron flumes.....	" ...	9,423 0 0	3,876 1 5	5,546 18 7	
Ahearn, M'Ardle, & Co.	Riveting and erecting wrought-iron aqueducts.	" ...	7,208 0 0		7,208 0 0	
W. E. Leareyd ...	Cleaning pipe line .....	" ...	94 0 0		94 0 0	
King & Spounser	Screen tank, Pott's Hill, iron-work.	" ...	4,059 0 0		4,059 0 0	
Lackey & Co.....	Screen tank, Potts' Hill, excavation.	" ...	1,795 18 10		1,975 18 10	
Arnott & Co.....	Riveting up wrought-iron pipes	" ...	11,102 10 0		11,102 10 0	
Total Sydney Water Supply Works.....			£ 893,840 1 2	550,368 8 5	343,471 12 9	343,471 12 9
<b>COUNTRY TOWNS WATER SUPPLY.</b>						
J. Russell .....	Engine-house and pumping station, Walka.	Loan ...	16,520 0 0	8,935 14 0	7,584 6 0	
Appleby Bros. ...	Engines and boilers .....	" ...	26,212 19 10	24,528 18 0	1,684 1 10	
D. Y. Stewart & Co.	Supply cast-iron pipes .....	" ...	20,490 6 9	18,418 4 6	2,072 2 3	
J. Donohoe .....	Pipe laying, Goulburn .....	" ...	3,043 4 4	1,863 14 11	1,179 9 5	
Fox & Co. ....	Hamilton Reservoir .....	" ...	3,248 5 6	2,474 18 5	773 7 1	
do .....	Wallsend Reservoir .....	" ...	3,202 1 5	2,561 13 2	640 8 3	
Cate & Parker ...	Pipe laying, Wagga .....	" ...	1,816 8 7	1,373 10 9	442 17 10	
R. James .....	Caretakers' Cottages, Hunter River.	" ...	1,365 0 0	221 12 0	1,143 8 0	
Ross & Colham ...	Settling tanks, Albury .....	" ...	3,035 19 0	1,954 0 9	1,081 18 3	
J. Watt & Co. ...	Pumping engine, Walka .....	" ...	29,500 0 0	25,710 2 6	3,789 17 6	
Milne Bros. ....	Radial pipe and Great Hunter River.	" ...	105 10 0		105 10 0	
J. H. Mills.....	Dwelling-houses, engineer and fireman, Bathurst.	" ...	1,555 1 7	1,026 13 3	528 8 4	
Evans & Son .....	Engine-house, Wagga .....	" ...	5,200 0 0	4,965 11 5	234 8 7	
do .....	Engine-house, Albury .....	" ...	5,100 0 0	4,429 6 0	670 14 0	
do .....	Engine-house, Goulburn .....	" ...	3,153 13 8	2,903 17 1	460 0 5	
do .....	Fireman's cottage, Wagga.....	" ...	210 3 10	502 12 11	197 7 1	
Total Country Water Supply Works.			£ 124,458 14 6	101,870 9 8	22,588 4 10	22,588 4 10
						£ 564,124 4 11

## Colonial Architect.

RETURN showing the probable amount required to defray the expense of contracts entered into for Public Works at present unfinished; also the nature of such Contracts and the amounts required respectively in each case, under the Colonial Architect's Department, asked for by Dr. Ross, M.P.

Building.	Nature of Contract.	Amount required to finish.
		£ s. d.
Newcastle Fortifications.....	Construction .....	2,500 0 0
Lambton Police Station .....	Erection .....	895 0 0
Euston Court-house .....	Underground tank.....	13 0 0
Bare Island Fortifications .....	Construction .....	950 0 0
General Post Office .....	Ironwork .....	8,500 0 0
Do .....	Extension .....	6,400 0 0
Do .....	Finishing trades.....	20,458 0 0
Gladesville Lunatic Asylum .....	Gas service, &c. ....	65 0 0
Moree Court-house .....	Fencing, &c. ....	34 9 6
Moree Post and Telegraph Office .....	" .....	65 9 6
Port Jackson Fortifications .....	Construction .....	1,500 0 0
Cobargo Police Buildings .....	Erection .....	25 0 0
Public Works Office.....	Statue of "Art" .....	40 0 0
Newington Benevolent Asylum.....	Erection, &c. ....	1,600 0 0
Sydney Custom-house.....	Additions.....	23,221 0 0
Forbes Gaol .....	Erection .....	800 0 0
Bathurst .....	" .....	47,053 0 0
Deniliquin Court-house .....	" .....	3,224 16 9
Goulburn .....	" .....	13,909 0 0
Darlinghurst .....	" .....	5,020 0 0
Mudgee Gaol.....	Gaoler's residence .....	320 2 0
Wentworth Custom-house .....	Tank, &c. ....	43 0 0
Gladesville Hospital for Insane.....	Fencing reserve .....	100 0 0
Kiama Post and Telegraph Office.....	Additions to clock tower .....	84 0 0
Inverell Court-house .....	Erection .....	2,274 0 0
Young Police Buildings .....	" .....	625 0 0
Young Gaol .....	Cells .....	25 0 0
Tarcutta Post and Telegraph Office .....	Erection .....	44 10 0
Condoblin .....	" .....	776 0 0
Glen Innes Gaol .....	" .....	2,480 0 0
Wentworth Post and Telegraph Office.....	Tank, drainage, &c. ....	130 0 0
University .....	Erection of medical school .....	34,338 0 0
Walgett Police Quarters.....	Erection .....	1,269 0 0
Forbes .....	" .....	146 10 0
Walcha Crossing Lockup .....	" .....	975 0 0
Lochinvar .....	" .....	790 0 0
Gosford Court and Watch-house .....	Additions.....	372 0 0
Newcastle Fortifications.....	Erection of barracks .....	2,273 0 0
Redbank Court and Watch-house .....	Erection .....	1,134 0 0
Hay Post and Telegraph Office .....	Gates and railings .....	86 15 0
Moulamein .....	Tank, &c. ....	90 0 0
Hillston Police buildings .....	Erection .....	1,900 0 0
Carcoar Lockup.....	Additions.....	424 10 0
Balmain Courthouse and Post and Telegraph Office .....	Erection .....	10,328 0 0
Dubbo Post and Telegraph Office .....	do .....	4,155 0 0
Newcastle Shipping Master's Office .....	Erection of shed.....	50 0 0
Walgett Gaol.....	Completion .....	232 0 0
Rookwood Reformatory .....	Erection .....	2,693 15 4
Registrar-General's Office .....	Additions.....	3,000 0 4
Brunswick Heads Police buildings .....	Erection .....	192 0 0
Cobar Courthouse and Lockup .....	do .....	3,427 0 0
Adelong Post and Telegraph Office .....	do .....	1,183 16 8
Wilcannia Police quarters .....	Additions.....	650 4 8
Nymagee Post and Telegraph Office.....	Erection .....	876 0 0
Dubbo Courthouse .....	do .....	10,500 0 0
Balranald Lockup.....	do .....	1,305 0 0
Coonamble Gaol .....	Additions.....	36 10 0
Coonamble Court-house .....	Fencing, &c. ....	17 10 0
Armidale Land Office .....	Erection .....	2,249 0 0
Milparinka Court-house and Lockup .....	do .....	799 10 4
Mount Hope Police station, &c. ....	do .....	127 0 0
Cudgellico Police buildings.....	do .....	258 10 0
Young Lockup .....	Additions.....	35 0 0
Armidale Lockup .....	Erection .....	403 0 0
Coonamble Police barracks.....	do .....	1,565 0 0
Broughton Creek Post and Telegraph Office .....	do .....	1,150 0 0
Lambton Court-house .....	Additions.....	146 0 0
Victoria barracks .....	Erection of store shed .....	30 0 0
Wallsend Court-house .....	Additions.....	120 0 0
Parramatta Park .....	Building dwarf wall, &c. ....	100 0 0
Murrurundi Telegraph station .....	Repairs, &c. ....	134 7 0
Garden Island .....	Erection of cottages .....	370 10 0
Moruya Post and Telegraph Office .....	Erection .....	1,554 0 0
Cooma Court-house .....	do .....	7,463 4 0
Oxley Police buildings .....	do .....	962 1 0
Shaftesbury Reformatory .....	Additions, &c. ....	398 0 0
Darlinghurst Court-house .....	Dwarf wall, &c. ....	807 5 0
Byerock Police buildings .....	Erection .....	361 0 0
Wollongong Post and Telegraph Office .....	Repairs, &c. ....	10 0 0
Quirindi Court-house .....	Tank, &c. ....	100 10 6
Water Police Court .....	Additions.....	660 0 0
Newcastle Lighthouse.....	Building retaining wall.....	395 0 0

Building.	Nature of Contract.	Amount required to finish.
		£ s. d.
Wallsend Watchhouse	Additions	120 0 0
Oberon Post and Telegraph Office	Erection	1,140 0 0
Public Instruction Department	Alterations and additions	1,027 0 0
Newcastle Morgue	Erection	1,087 0 0
St. Leonards Post and Telegraph Office and Court-house	do	11,500 0 0
Corowa Court-house	do	1,980 4 0
Bookhara Post and Telegraph Office	do	1,418 18 6
Rookwood Reformatory	Residence for Superintendent	2,198 0 0
Do	Kitchen, dining hall, &c.	3,130 0 0
Cowra Lockup	Alterations and additions	847 10 0
Walgett Police barracks	do do	424 15 0
Spectacle Island Magazine	Additions, &c.	6,775 0 0
Albury Gaol	Lay on water	25 0 0
Mines Office	Alterations	15 0 0
Wilcannia Public Buildings	Fencing	309 0 0
Dandaloo Court-house	Repairs	130 0 0
Inverell Post and Telegraph Office	W.C., fencing, &c.	232 0 0
Deniliquin Telegraph Office	Repairs, &c.	242 10 0
Forbes Gaol	Tank, drainage, &c.	416 14 6
Tamworth Gaol	Water supply	34 10 0
Murrumburrah Police Station	Kitchen, &c.	108 10 0
Gladesville Hospital	Verandahs	214 4 0
General Post Office	Hydraulic elevators	4,963 15 0
Fire Brigade Station	Erection	13,150 0 0
Yantabulla Police Buildings	do	1,050 0 0
Campbelltown Court-house, Lockup, and Police Quarters	do	10,300 0 0
Sutton Forest Post and Telegraph Office	Additions	568 14 0
Grafton Post and Telegraph Office	do	617 0 0
Newington Asylum	Tank, &c.	865 0 0
Garden Island	Rigging house	14,138 0 0
Armidale Police Barracks and Quarters	Lay on gas	85 0 0
Bowral Post and Telegraph Office	Erection	1,764 10 0
Mulwalá Police Quarters	Additions	490 13 6
Denisontown Police Buildings	Erection	580 0 0
Tamworth Post and Telegraph Office	Turret clock	490 0 0
Goulburn Police Buildings	Additions	730 0 0
Coonamble Post and Telegraph Office	Repairs	115 0 0
Morpeth Court-house	do	293 0 0
Wilcannia Custom-house	Erection	1,069 10 4
Admiral's residence	Tennis court	191 18 6
Goulburn Court-house	Lay on gas	369 0 0
Glen Innes Court-house	Repairs	149 0 0
Raymond Terrace Police Barracks	do	125 0 0
Wollongong Court-house	Lay on gas	205 0 0
Braidwood Post and Telegraph Office	Repairs	245 0 0
Newcastle Lockup	Storeroom	180 0 0
Wilcannia Custom-house	Erection	1,011 16 6
Tinonee Post and Telegraph Office	do	1,125 0 0
Newcastle Fortifications	Repairs	110 0 0
Cootamundra Court-house	Stable, &c.	140 0 0
Newcastle Asylum	Painting and repairs	156 0 0
Grafton Post and Telegraph Office	Drainage	53 0 0
Sydney Custom-house	Temporary fittings, &c.	267 0 0
Parramatta Benevolent Asylum	Covered way	193 12 0
Bowral Lockup	Erection	1,306 6 4
Gladesville Hospital for Insane	Baths, &c.	289 17 6
Collector Police Station	Stable	89 19 0
Balranald Police Station	Repairs	10 10 0
Public Instruction Offices	Additions, &c.	2,641 6 8
Callan Park Asylum	Clothes-line, posts, &c.	48 2 0
Rydal Police Station	Repairs, stables, &c.	90 0 0
Mudgee Court-house	Lay on gas, &c.	103 0 0
Dubbo Post and Telegraph Office	Furniture	111 0 0
Moree Lockup	Additions	38 8 0
Berrima Post and Telegraph Office	Erection	777 0 0
Young Court-house	Wall and railing	650 0 0
Dubbo Post and Telegraph Office	Lay on gas	91 14 0
Newcastle Lockup	Painting	56 10 0
Moree Gaol	Alterations to closets	40 0 0
Young Post and Telegraph Office	Battery room	68 10 0
	Total probable amount	340,399 5 11

Colonial Architect's Office,  
Sydney, 20th May, 1886.

JAMES BARNET,  
Colonial Architect.