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STANDING COMMITTEE ON STATE DEVELOPMENT

Water NSW Amendment (Warragamba Dam) Bill 2018



Report 45

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Standing Committee on State Development

Water NSW Amendment (Warragamba Dam) Bill 2018

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Table of contents

	Terms of reference	iv
	Committee details	v
	Chair’s foreword	vi
	Recommendations	vii
	Conduct of inquiry	viii
Chapter 1	Overview	1
	Reference	1
	Background and purpose of the bill	1
	Overview of the bill’s provisions	2
Chapter 2	Key issues	5
	The Warragamba Dam project	5
	Development issues	9
	Cost benefit analysis	12
	Raising the dam wall as a flood mitigation strategy and alternative approaches	14
	Support for the Warragamba Dam project	17
	Impact on Aboriginal heritage	18
	Impact on the environment	22
	Committee comment	30
Appendix 1	Submissions	33
Appendix 2	Witnesses at hearing	37
Appendix 3	Minutes	39
Appendix 4	Dissenting statement	50

Terms of reference

1. That the Standing Committee on State Development inquire into and report on the Water NSW Amendment (Warragamba Dam) Bill 2018.
2. That the committee report by 10 October 2018.

The terms of reference were referred to the committee by the Legislative Council 26 September 2018 on recommendation of the Selection of Bills Committee.¹

¹ *Minutes*, NSW Legislative Council, 25 September 2018, pp 2960-2961 and 26 September 2018, p 2987.

Committee details

Committee members

The Hon Taylor Martin MLC	Liberal Party	<i>Chair</i>
The Hon Mick Veitch MLC	Australian Labor Party	<i>Deputy Chair</i>
The Hon Rick Colless MLC	The Nationals	
Mr Justin Field MLC*	The Greens	
The Hon John Graham MLC	Australian Labor Party	
The Hon Paul Green MLC	Christian Democratic Party	
The Hon Natasha Maclaren-Jones MLC	Liberal Party	
The Hon Shayne Mallard MLC*	Liberal Party	
The Hon Penny Sharpe MLC*	Australian Labor Party	

* Mr Justin Field MLC, the Hon Shayne Mallard MLC and the Hon Penny Sharpe MLC participated for the duration of the inquiry.

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Chair's foreword

The Water NSW Amendment (Warragamba Dam) Bill 2018 is the third bill to be referred from the Legislative Council's trial Selection of Bills Committee.

This bill amends the *Water NSW Act 2014* to overcome a technical barrier, relating to the temporary inundation of national park land, that exists under the *National Parks and Wildlife Act 1974* to allow for the consideration of a proposal to raise the Warragamba Dam wall, it is not an approval for raising the dam wall.

Should the bill be passed by the Parliament, the Warragamba Dam project still requires planning and environmental approvals before the NSW Government will make an investment decision based on the final business case for the project, which is planned for 2020.

During the short inquiry, the committee considered a number of concerns that were raised by stakeholders. The committee acknowledges the stakeholder concerns raised in this inquiry and notes that the concerns predominantly related to the proposed project to raise the Warragamba Dam wall and were not confined to the provisions of the bill.

The committee recommends that the Legislative Council proceed with debate on the Water NSW Amendment (Warragamba Dam) Bill 2018. The committee also recommends that the NSW Government address stakeholder concerns raised in this inquiry relating to consultation on the Environmental Impact Statement to be released in 2019, the Environmental Management Plan and, in particular, Aboriginal heritage matters.

In addition, the committee has made recommendations relating to procedural aspects of the Legislative Council's trial of a Selection of Bills Committee.

On behalf of the committee, I would like to thank all who participated in the inquiry, and who provided submissions and attended the public hearing at such short notice. I would also like to thank the secretariat for their assistance, including Rebecca Main, Ben Foxe, Helen Hong and Elise Williamson.

Finally, I commend the government for its ongoing commitment to mitigating the flood risk in the Hawkesbury-Nepean Valley.



Hon Taylor Martin MLC
Committee Chair

Recommendations

- Recommendation 1** **31**
 That the Legislative Council proceed with debate on the Water NSW Amendment (Warragamba Dam) Bill 2018.
- Recommendation 2** **31**
 That the NSW Government address the committee comments and recommendations contained in this report.
- Recommendation 3** **31**
 That the NSW Government:
- review the consultation processes incorporated in any planning approvals for the Warragamba Dam project and for the remainder of the Environmental Impact Statement process; and
 - allow for adequate time to conduct survey mapping for Aboriginal heritage in the impacted areas.
- Recommendation 4** **32**
 That, in order to inform the current legislative debate, Infrastructure NSW should now release on a confidential basis to members of the Standing Committee on State Development, the source documents that sit behind the 'Resilient Valley, Resilient Communities' strategy and the Cost Benefit Analysis of the alternative measures that have been examined.
- Recommendation 5** **32**
 That the draft bill be amended to require the draft Environmental Management Plan to be put on public exhibition for 45 days, noting that this is required for any amendment to a Plan of Management under Part 5 of the *National Parks and Wildlife Act*.
- Recommendation 6** **32**
 That, in future, the Legislative Council consider referring bills prior to the conclusion of the second reading debate reply.
- Recommendation 7** **32**
 That the Legislative Council facilitate amendments to the Standing Orders and the operation of committees to allow members to submit 'Additional Comments' rather than a 'Dissenting statement', noting that this is an option available under the current Senate practice.

Conduct of inquiry

The terms of reference for the inquiry were referred to the committee by the Legislative Council on 26 September 2018, on recommendation from the Selection of Bills Committee.

The committee received 110 submissions.

The committee held one public hearing at Parliament House in Sydney.

Inquiry related documents are available on the committee's website, including submissions and the hearing transcript.

Chapter 1 Overview

This chapter provides an overview of the Water NSW Amendment (Warragamba Dam) Bill 2018.

Reference

- 1.1 The Water NSW Amendment (Warragamba Dam) Bill 2018 was introduced into the Legislative Council on 19 September 2018 by the Hon Niall Blair MLC, Minister for Primary Industries, Regional Water, Trade and Industry.
- 1.2 The Legislative Council Selection of Bills Committee recommended on 25 September 2018 that the Water NSW Amendment (Warragamba Dam) Bill 2018 be referred to the Standing Committee on State Development for inquiry and report upon the conclusion of the second reading debate but before the question is put; and that the committee report by 10 October 2018.²
- 1.3 On 26 September 2018, the Legislative Council referred the bill to the Standing Committee on State Development on the motion of the Hon Natasha Maclaren-Jones MLC, Chair of the Selection of Bills Committee, of 25 September 2018.³

Background and purpose of the bill

- 1.4 This bill amends the *Water NSW Act 2014* to make provision with respect to the temporary inundation of national park land resulting from the raising of the wall of Warragamba Dam and the operation of the dam for downstream flood mitigation purposes.⁴
- 1.5 The Minister for Primary Industries, Regional Water, Trade and Industry indicated in his second reading speech that the purpose of the bill is to overcome a 'technical barrier' that exists under the *National Parks and Wildlife Act 1974* to the proposal to raise the Warragamba Dam wall:

Under current legislation, the Minister for the Environment is prevented from granting any lease or easement on national park land that would enable the impoundment of water, even if that impoundment is temporary. The bill amends the Water NSW Act by stipulating that the lease, licence, easement or right of way, which otherwise would be required under the National Parks and Wildlife Act 1974, will not be required for the temporary inundation of land upstream of the Warragamba Dam wall when operated for flood mitigation purposes. The bill is clear that it applies to this specific case, and only this case, to allow for managed temporary inundation during flood mitigation.⁵

² Selection of Bills Committee, NSW Legislative Council, *Report No. 13 – 25 September 2018* (2018), p 2.

³ *Hansard*, NSW Legislative Council, 26 September 2018, pp 56-57 and 25 September 2018, p 9.

⁴ Water NSW Amendment (Warragamba Dam) Bill 2018.

⁵ The Hon Niall Blair MLC, Minister for Primary Industries, Regional Water, Trade and Industry Second Reading Speech: Water NSW (Warragamba Dam) Bill 2018, 19 September 2018, p 4.

1.6 The Minister advised in his second reading speech that this bill 'is not an approval for raising the dam. The environmental impact statement and the required State Government and Australian Government planning approvals will still be necessary. The proposal will be subject to all the normal merit-based assessments.'⁶

1.7 The Minister stated that the amendment to the *Water NSW Act 2014* needs to be made now as:

The impediment is a complexity that detracts from the planning and assessment process. For that reason, it must be removed to allow the Minister for the Planning to continue carrying out functions under the Environmental Planning and Assessment Act 1979, including the assessment of the planning application for the Warragamba Dam raising proposal. The bill honours the Government's longstanding commitment to reduce the significant risk to life and damage from flooding in the Hawkesbury-Nepean Valley.⁷

Overview of the bill's provisions

1.8 The objects of the bill, as set out in the explanatory note, are to amend the *Water NSW Act 2014* (the principal Act) to provide:

- a) that a lease, licence, easement or right of way under the *National Parks and Wildlife Act 1974* (the NPW Act) is not required for or in respect of the temporary inundation of national park land resulting from the Warragamba Dam project, and
- b) that the temporary inundation of national park land resulting from the Warragamba Dam project is not subject to any plan of management under the NPW Act.

The relevant provisions will apply in relation to the temporary inundation of national park land resulting from the Warragamba Dam project only if an environmental management plan, prepared by Water NSW and approved by the Minister administering the NPW Act with the concurrence of the Minister administering the principal Act, is in force.

The Warragamba Dam project is defined as development that is approved under the *Environmental Planning and Assessment Act 1979* to raise the wall of Warragamba Dam and to operate the dam for the purposes of facilitating flood mitigation downstream of the dam.⁸

1.9 Schedule 1 amends the *Water NSW Act 2014* by inserting a new proposed Part 5A. The specific proposed sections set out in the new proposed Part include:

⁶ The Hon Niall Blair MLC, Minister for Primary Industries, Regional Water, Trade and Industry Second Reading Speech: Water NSW (Warragamba Dam) Bill 2018, 19 September 2018, p 4.

⁷ The Hon Niall Blair MLC, Minister for Primary Industries, Regional Water, Trade and Industry Second Reading Speech: Water NSW (Warragamba Dam) Bill 2018, 19 September 2018, p 4.

⁸ Water NSW Amendment (Warragamba Dam) Bill 2018, Explanatory note, p 1.

- proposed section 64A which defines certain terms used in the proposed Part, including the Warragamba Dam project;
- proposed section 64B that provides that the temporary inundation of national park land resulting from the Warragamba Dam project does not require any lease, licence, easement or right of way under the *National Parks and Wildlife Act 1974* and is not subject to any plan of management under that Act. The proposed section applies only if an environmental management plan approved under proposed section 64C is in force;
- proposed section 64C which requires Water NSW to prepare a draft environmental management plan relating to the temporary inundation of national park land resulting from the Warragamba Dam project. The draft plan may be approved by the Minister administering the *National Parks and Wildlife Act 1974* with the concurrence of the Minister administering the *Water NSW Act 2014*;
- proposed section 64D that provides that the Minister administering the *National Parks and Wildlife Act 1974* may, with the concurrence of the Minister administering the principal Act, amend or revoke an approved environmental management plan;
- proposed section 64E that provides that the Minister administering the *National Parks and Wildlife Act 1974* may, with the concurrence of the Minister administering the *Water NSW Act 2014*, give directions to Water NSW, including a direction to take specified action in relation to the temporary inundation of national park land resulting from the Warragamba Dam project;
- proposed section 64F which requires Water NSW to notify the Chief Executive of the Office of Environment and Heritage (or a person nominated by the Chief Executive) of certain matters; and
- proposed section 64G which enables the Minister administering the *National Parks and Wildlife Act 1974* to delegate the Minister's functions under the proposed Part.⁹

⁹ Water NSW Amendment (Warragamba Dam) Bill 2018, Explanatory note, p 2.

Chapter 2 Key issues

This chapter outlines the key issues raised by inquiry participants in relation to the Water NSW Amendment (Warragamba Dam) Bill 2018, including the impact of the proposed raising of the dam wall and the temporary inundation of national park land on Aboriginal heritage sites and on the environment. While the bill is not an approval for the Warragamba Dam project, the merits of the project were also discussed by inquiry participants.

The Warragamba Dam project

2.1 The Warragamba Dam project is defined in the Explanatory note to the bill as:

...development that is approved under the *Environmental Planning and Assessment Act 1979* to raise the wall of Warragamba Dam and to operate the dam for the purposes of facilitating flood mitigation downstream of the dam.¹⁰

2.2 The NSW Government submitted that the Hawkesbury-Nepean Valley area (downstream of the dam) has the highest flood risk in the State, and possibly the country, with the risk arising from the river being confined by narrow sandstone gorges creating rapid, deep flooding over extensive floodplains.¹¹

2.3 The NSW Government submission stated that 'while there hasn't been a significant flood in the valley since the early 1990s, more major floods are inevitable'.¹² Flood inflows come from five main tributaries to the Hawkesbury-Nepean river which impact flood risk in the area, as illustrated in Figure 1 (refer page 8).

2.4 The NSW Government also advised that the high flood risk in the Hawkesbury-Nepean Valley is intensified by the differences in height of potential flood events:

The high flood risk in the valley is exacerbated by the differences in the height and extent between the 1 in 100 chance per year flood (the 'standard' flood planning level) and the more extreme events such as the 1 in 500 chance per year flood (the flood of record), and the worst possible flood. In other valleys there is not a significant difference between these events. In this valley, there are differences of nine metres or more in height between the flood 'standard' flood planning level and more 'extreme' events.¹³

2.5 The NSW Government advised that approximately 134,000 people live on the Hawkesbury-Nepean Valley floodplain, and that currently the Bureau of Meteorology is able to provide 'around eight to 15 hours warning ahead of a flood reaching a certain height, depending on the location in the floodplain'. Current road capacity is insufficient to evacuate all residents impacted by large floods in the area within this warning time, which would force the NSW State Emergency Service to order mass evacuation on uncertain flood forecasts.¹⁴

¹⁰ Water NSW Amendment (Warragamba Dam) Bill 2018, Explanatory note, p 1.

¹¹ Submission 74, NSW Government, p 6.

¹² Submission 74, NSW Government, p 6.

¹³ Submission 74, NSW Government, p 6.

¹⁴ Submission 74, NSW Government, p 7.

- 2.6** According to NSW Government modelling and analysis, 25,000 residential properties and two million square metres of commercial space are currently subject to flood risk in the Hawkesbury-Nepean Valley.¹⁵ The NSW Government submission provided an estimate that if a flood similar to the record 1867 flood had occurred in 2016, over \$5 billion in damage would have been caused and 90,000 people would have needed to evacuate.¹⁶ These numbers would increase further under the planned development of the floodplain. The 'Resilient Valley, Resilient Communities: the Hawkesbury-Nepean Valley Flood Risk Management Strategy' indicates that by 2041, the impacts of an 1867-like flood would be \$7 billion in damages and 158,000-171,000 people needing evacuation.¹⁷
- 2.7** The committee was advised that 'Resilient Valley, Resilient Communities: the Hawkesbury-Nepean Valley Flood Risk Management Strategy' was released by Infrastructure NSW in 2017.¹⁸
- 2.8** The Strategy indicates that 'The Hawkesbury-Nepean Valley is changing from a semi-rural landscape to an urbanised floodplain, and includes parts of Greater Sydney's rapidly growing North West Growth sector. Up to 134,000 people live and work on the floodplain and could require evacuation. This number is forecast to double over the next 30 years.'¹⁹
- 2.9** These forecasts were based on information from the NSW Department of Planning and Environment, Bureau of Transport Statistics (BTS, part of Transport for NSW), local councils, NSW Land and Property Information and the Australian Bureau of Statistics. The Strategy went on to say 'The Taskforce assumed that the identified potential urban development would largely occur by 2041.'²⁰
- 2.10** The Minister for Primary Industries, Regional Water, Trade and Industry advised in his second reading speech that:
- Flood strategy is based on comprehensive analysis and assessments. Work on the Warragamba Dam wall raising proposal started in late 2012 in response to extensive flooding in New South Wales and the 2011 Brisbane floods. The 2013 Hawkesbury-Nepean Valley Flood Management Review reconsidered all options to address flood risk in the Hawkesbury-Nepean Valley and put forward a short list for further investigation. The Government then established a taskforce with an independent chair, which completed detailed investigation of the costs and benefits of the more feasible options. This became the basis of the flood strategy publicly released in 2017.²¹
- 2.11** The Strategy recognised that 'that there is no single or simple solution that can eliminate all flood risk', but identified a number of measures to mitigate flood risk including:

¹⁵ Submission 74, NSW Government, p 9.

¹⁶ Submission 74, NSW Government, p 10.

¹⁷ Infrastructure NSW, 'Resilient Valley, Resilient Communities: Hawkesbury-Nepean Valley Flood Risk Management Strategy', January 2017, p 14 (hereafter referred to as *Resilient Valley, Resilient Communities*).

¹⁸ Submission 74, NSW Government, pp 6-7.

¹⁹ *Resilient Valley, Resilient Communities* p 19.

²⁰ *Resilient Valley, Resilient Communities*, p 9.

²¹ The Hon Niall Blair MLC, Minister for Primary Industries, Regional Water, Trade and Industry Second Reading Speech: Water NSW (Warragamba Dam) Bill 2018, 19 September 2018.

- coordinating flood risk management across the Hawkesbury-Nepean Valley;
- raising the Warragamba Dam wall by approximately 14 metres;
- making flood risk information accessible;
- informing and preparing communities regarding flood risks;
- improving weather and flood predictions;
- improving emergency response and recovery planning;
- upgrading local evacuation roads; and
- implementing strategic and integrated land use and road planning.²²

2.12 The Taskforce, that developed the Strategy, was independently chaired by Mark Bethwaite AM and included senior representatives from Infrastructure NSW, Department of Premier and Cabinet, Department of Primary Industries (Water), Water NSW, NSW State Emergency Service, Office of Emergency Management, Department of Planning and Environment, Office of Environment and Heritage, NSW Treasury, NSW Public Works Advisory (part of Department of Finance, Services and Innovation) and Roads and Maritime Services. A Stakeholder Reference Panel was established to enable collaboration with local councils on the Penrith and Richmond-Windsor floodplains (Penrith City Council, Hawkesbury City Council, The Hills Shire Council and Blacktown City Council), Western Sydney Regional Organisation of Councils (WSROC), Sydney Water Corporation, Floodplain Management Australia and the Insurance Council of Australia.²³

2.13 'Resilient Valley, Resilient Communities: the Hawkesbury-Nepean Valley Flood Risk Management Strategy' states that '[t]o develop the Flood Strategy, the Taskforce conducted a comprehensive evaluation of plausible infrastructure and non-infrastructure options to reduce flood risk in the Valley and protect people, buildings, assets and the economy.' This evaluation included a cost-benefit analysis and an environmental, cultural and social impact assessment for shortlisted options.²⁴

2.14 The evaluation found that, 'raising the dam wall by 14 metres will reduce the overall flood damage by 75%. For a 1 in 100 chance per year flood, similar to the 1867 flood, the 14 metre dam wall raising would reduce the flood damages for urban development from \$5 billion to \$2 billion.'²⁵

2.15 The Taskforce also evaluated the option of lowering the permanent water supply level of Warragamba Dam to create airspace to temporarily store floodwaters. The evaluation found that this option 'would be equivalent to reducing the dam water storage by nearly 40%—or one and a half years of water supply to Sydney. This option was not selected as it has negative net benefits: to maintain water supply security to Sydney, new sources of water supply would need to be built in addition to the continuous operation of the existing Sydney desalination plant.'²⁶

²² *Resilient Valley, Resilient Communities*, pp 37-42.

²³ *Resilient Valley, Resilient Communities*, pp 8-9.

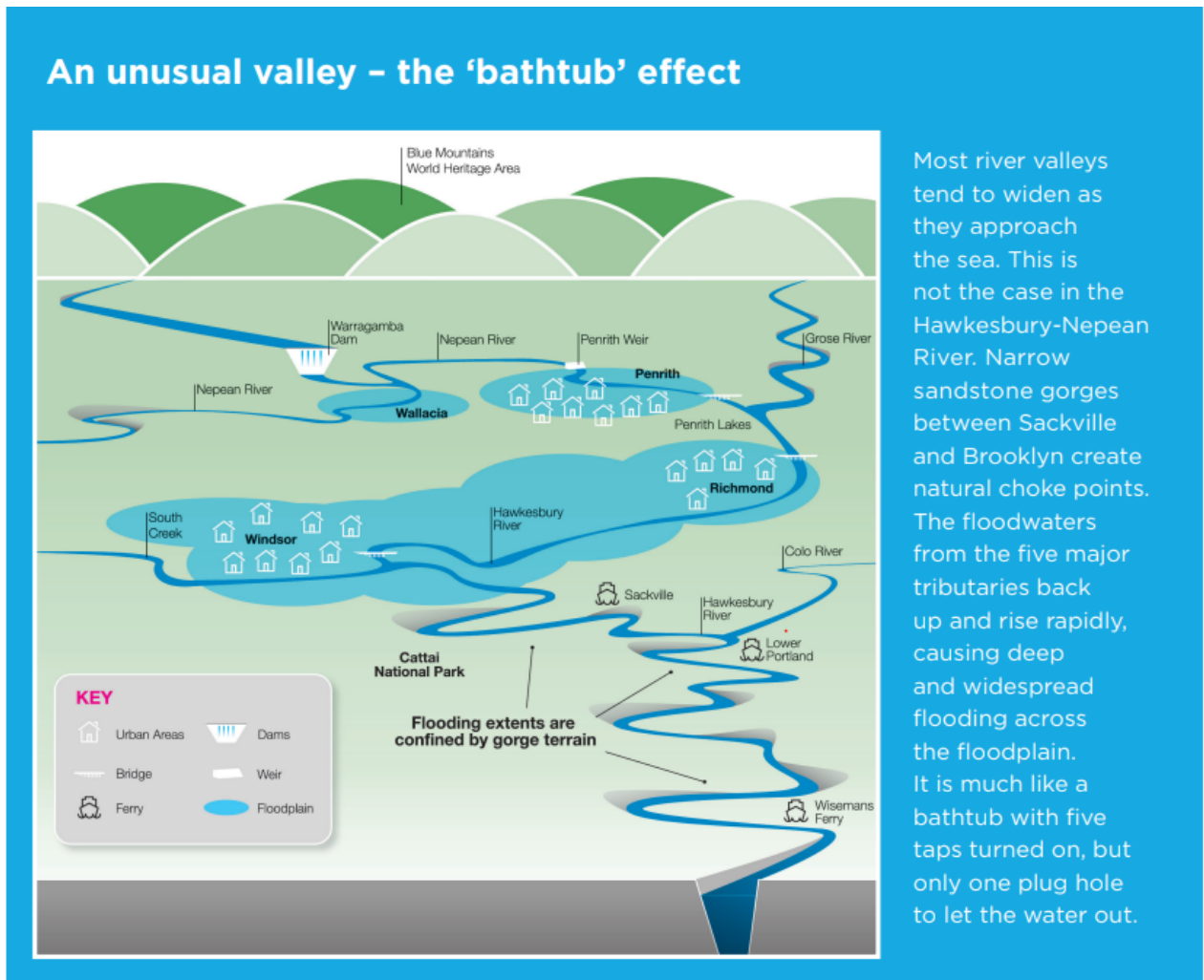
²⁴ *Resilient Valley, Resilient Communities*, pp 26-27.

²⁵ *Resilient Valley, Resilient Communities*, pp 27-28.

²⁶ *Resilient Valley, Resilient Communities*, pp 28-29.

2.16 The NSW Government indicated that while roads are vital for evacuation in flood circumstances, they do not reduce the number of people exposed to flood, and that 'no package of road upgrades was found to be as cost effective as the proposed Warragamba Dam raising for flood mitigation'.²⁷ This is particularly due to controlling flood flows from the Warragamba Catchment being 'the most effective way of reducing the frequency with which roads are cut and properties are flooded – with a corresponding reduction to risk to life as well as property'.¹²⁸

Figure 1 'An unusual valley – the 'bathtub' effect'



NSW Government, 'Flooding in the Hawkesbury-Nepean Valley', February 2018, accessed 3 October 2018, available http://www.infrastructure.nsw.gov.au/media/1525/hmflooding_factsheet_feb2018.pdf

2.17 The NSW Government advised that the raising of the Warragamba Dam by 14 metres would 'delay and reduce the flood peak for downstream communities, reducing risk to life and reducing

²⁷ Submission 74, NSW Government, p 9.

²⁸ Submission 74, NSW Government, p 9.

damages by 75% on average'.²⁹ The raising of Warragamba Dam by 14 metres was estimated to cost approximately \$690 million in 2015, with the final cost estimate dependent on the final design of the project.³⁰

Development issues

2.18 The bill enables the consideration of the proposal to raise the Warragamba Dam wall without a legal impediment under the *National Parks and Wildlife Act 1974* regarding temporary inundation of national park land.³¹ The bill's provisions do not relate to development in the Hawkesbury-Nepean Valley.

2.19 However, a number of submission makers argued that the proposal to raise the Warragamba Dam wall would allow for increased development in the Hawkesbury-Nepean Valley.³²

2.20 The Nature Conservation Council of NSW argued that increased development was a key reason for the Warragamba Dam project:

...we believe the real driver behind the Bill and the proposal to raise the Warragamba Dam wall is the push to increase development on the Hawkesbury-Nepean Valley floodplain.³³

2.21 The Colong Foundation for Wilderness pointed to the NSW Government's 'Resilient Valley, Resilient Communities: Hawkesbury-Nepean Flood Risk Management Strategy' document and its references to a forecast for an additional 130,000 people to reside on the Nepean floodplain in over next 30 years.³⁴ The Strategy states:

Up to 134,000 people live and work on the floodplain and could require evacuation. This number is forecast to double over the next 30 years. Over 25,000 residential properties and two million square metres of commercial space are currently subject to flood risk, and this will increase significantly in the coming years.³⁵

2.22 The Honourable Bob Debus AM commented on the difficulties of increasing development in the Hawkesbury-Nepean Valley due to the potential of floods, and how other jurisdictions are moving populations away from flood plains:

Everywhere in the world people are understanding that one ought to actually withdraw populations from flood plains, not add more to it. Everywhere in the world people are saying now, and I refer to Professor Pittock amongst others in this respect, that a one-in-100-year flood measure is inadequate—it is not an adequate criteria on which to base

²⁹ Submission 74, NSW Government, p 11.

³⁰ Submission 74, NSW Government, p 21.

³¹ Water NSW Amendment (Warragamba Dam) Bill 2018, Explanatory note, p 1.

³² For example see: Submission 93, Blue Mountains Conservation Society; Submission 27, Ms Trish Hill; Submission 36, Mrs Signe Westerberg; Submission 57, Stephanie Knox; Submission 58, Mr Wayne Olling; Submission 94, Ms Elizabeth Cameron; Submission 95, Mrs Marilyn Riedy; Submission 101, Mr Martin O'Reilly.

³³ Submission 37, Nature Conservation Council of NSW, p 2.

³⁴ Submission 33, Colong Foundation for Wilderness, p 5.

³⁵ *Resilient Valley, Resilient Communities*, p 3.

building permissions. In the Netherlands I think they are using one in 1,250 years or something but in the United States, which is possibly a better comparison, it is normal to use a one in 500 year measure.

On top of all that, it is not in any way established that raising the [Warragamba] dam wall will stop major floods. We should be thinking not about putting more settlement on the flood plain; we should be thinking about withdrawing it. Putting more settlement on the flood plain is self-evidently, in my mind, putting more people in harm's way. If it is not, someone ought to prove it. It is most extraordinary that we can be talking on the one hand about such a mammoth potential emergency and disaster and on the other not having an open inquiry about it. I have not had to talk in extreme political terms much in recent years but I must say I truly think it is astonishing that on the one hand the Government can be talking about the need to protect the lives of people on the flood plain and on the other behaving in a way that will actually put more people at risk.³⁶

- 2.23** Dr Jamie Pittock, Associate Professor, Fenner School of Environment and Society, Australian National University, argued that flood risk in the Hawkesbury-Nepean Valley has already been impacted by increases in development approvals in the area:

Flood risk has been exacerbated by local councils and the NSW Government approving housing developments on low lying lands over several decades. Unfortunately, flood risk is likely to worsen given NSW Government plans to dramatically expand the number of people living on the floodplain in north-west Sydney, combined with increased frequency of severe storm events due to climate change.³⁷

Government response

- 2.24** The NSW Government advised that the reference to the population at risk of flood doubling over the next 30 years cited in the 'Resilient Valley, Resilient Communities: the Hawkesbury-Nepean Valley Flood Risk Management Strategy' document was not a target for future development. The NSW Government submission stated that the figure of 134,000 people which was 'forecast to double over the next 30 years' was not dependent on the proposed dam raising and was a forecast used to understand the current and future risk environment without any risk treatment.³⁸

- 2.25** In response to concerns regarding development in the Hawkesbury-Nepean Valley, the NSW Government stated that current planning policy arrangements are to be reviewed:

An action under the Flood Strategy is to review the current planning policy arrangements to account for the high flood risk above the 1 in 100 chance per year flood level in the valley. This review will be consistent with the principles of the Western City District Plan, which includes consideration of the full range of flood risk. The result will be a new Regional Land Use Planning Framework, that will take account of the cumulative impacts of growth and an Evacuation Roads Masterplan being developed by Roads and Maritime Services.

³⁶ The Honourable Bob Debus, Evidence, 4 October 2018, uncorrected transcript, p 26.

³⁷ Submission 8, Dr Jamie Pittock, attachment 1, p 3.

³⁸ Submission 74, NSW Government, p 14.

The areas subject to flood-related development controls - based on the current 1 in 100 chance per year flood level - will continue to be subject to current controls should the Warragamba Dam Raising proposal be approved. In other words, even though the flood risk at the current 1 in 100 chance per year flood level will be reduced to less than 1 in 400 years with the proposed dam raising, development will still be restricted to the current 1 in 100 chance per year flood level to preserve the flood mitigation benefits of the dam raising.

In the case of new developments, land use planning decisions are being taken on the basis of the cumulative impact of growth on evacuation capacity. In past five years, the NSW Department of Planning and Environment has refused multiple proposals for rezonings to allow new developments on flood grounds because evacuation capacity did not match the likely development potential.³⁹

2.26 Mr Peter Cinque, Manager, Business Support Services, NSW State Emergency Service, Metro Zone gave the following evidence:

I think it would be fair to say that we would rather see not more people exposed to risk. That is a community-government decision to balance up all the risks in the area. It is true that as the evacuation problem increases, the complexity will increase. It will be harder to execute.⁴⁰

2.27 In response to concerns about possible intended development in the Hawkesbury-Nepean Valley, Mr Brett Whitworth, Acting Deputy Secretary, Planning and Design, Department of Planning and Environment, explained that the Department had already refused proposals for increased development at Penrith Lakes:

We have ruled out with Penrith Lakes Development Corporation their proposal for 4,900. Penrith Lakes Development Corporation are still seeking development, trying to bring it down to numbers such as 1,800 and 1,500 and 800. We have said to them that our modelling does not support that. Our modelling that Mr Langford has just described only supports a handful more dwellings of a similar nature to what has already been approved under that SEPP on that site.⁴¹

2.28 When asked to confirm if the Department would likely refuse similar developments on the flood plain into the future, Mr Whitworth advised 'based on the evidence that we have, yes'.⁴²

2.29 Mr Jim Betts, Chief Executive Officer, Infrastructure NSW, also commented that one of the non-infrastructure responses to flood risk to be implemented by the NSW Government was a 'more risk-based approach to land use planning':

What the strategy has done, as you rightly pointed out, has combined infrastructure and non-infrastructure responses. One of the key non-infrastructure responses is what Mr Whitworth has just described, which is a much more risk-based approach to land use

³⁹ Submission 74, NSW Government, pp 25-26.

⁴⁰ Mr Peter Cinque, Manager, Business Support Services, NSW State Emergency Service, Metro Zone, Evidence, 4 October 2018, uncorrected transcript, p 39.

⁴¹ Mr Brett Whitworth, Acting Deputy Secretary, Planning and Design, Department of Planning and Environment, Evidence, 4 October 2018, uncorrected transcript, p 48.

⁴² Mr Brett Whitworth, Acting Deputy Secretary, Planning and Design, Department of Planning and Environment, Evidence, 4 October 2018, uncorrected transcript, p 49.

planning which will ensure that that kind of open slather development does not occur for precisely the reasons that the strategy has identified around flood risk.⁴³

2.30 In response to a question at the hearing about possible assumptions made regarding population growth on the flood plain, Mr Betts informed the committee:

When we were undertaking the analysis for the strategy we started off with an analysis of what population growth could occur in the valley under land use settings as they currently existed with a view to testing out the exposures that created and the risks that created for the community. The upshot was a combination of infrastructure responses, like the road upgrades that Mr Langford has described and like the raising of the Warragamba Dam, and non-infrastructure responses, critical among them being the tightening of the planning controls that Mr Whitworth has described. For the first time, because of the work that Ms Abood and her team have done, we have a proper understanding of flood risk in the valley and are able to build that into land use planning decisions. Successive governments on both sides of politics have allowed development to occur in the valley without taking account of the significant life and property risks associated with flooding and we are now dealing with that.⁴⁴

2.31 In response to a question about whether he was comfortable for the population in the Hawkesbury-Nepean Valley to potentially double, Mr Betts replied:

I think Mr Whitworth has adequately answered that question. Clearly, growth on that scale cannot occur given what we now know about the flood risks in the valley and the planning system will be adapted to reflect that flood risk information...⁴⁵

2.32 Mr Betts also stated at the hearing:

This is not about facilitating additional development in the valley. This is about protecting human life... It does not purport to solve all the flooding issues, but it very significantly reduces the flood damage by an estimated 75 per cent.⁴⁶

Cost benefit analysis

2.33 Dr Margaret Moussa, Lecturer in Economics, School of Business, Western Sydney University, submitted that the proposal to increase the height of the Warragamba Dam wall arose from a cost-benefit analysis (CBA) conducted by Infrastructure NSW of flood mitigation infrastructure projects for the Hawkesbury-Nepean Valley that has not been made publically available.

2.34 Dr Moussa advised the committee that, based on the information available, the CBA lacked credibility in three respects:

⁴³ Mr Jim Betts, Chief Executive Officer, Infrastructure NSW, Evidence, 4 October 2018, uncorrected transcript, p 40.

⁴⁴ Mr Jim Betts, Chief Executive Officer, Infrastructure NSW, Evidence, 4 October 2018, uncorrected transcript, p 49.

⁴⁵ Mr Jim Betts, Chief Executive Officer, Infrastructure NSW, Evidence, 4 October 2018, uncorrected transcript, p 49.

⁴⁶ Mr Jim Betts, Chief Executive Officer, Infrastructure NSW, Evidence, 4 October 2018, uncorrected transcript, p 36.

Firstly, the analysis has not adequately considered the likely impacts of a proposed major urban development on its estimation of various flood mitigation costs and benefits. Secondly, the inconsistency between the methods used to analyse the various infrastructure options suggests a pre-analysis bias towards raising the crest of the dam wall. Thirdly, the analysis lacks credibility since it fails to consider policy options for this region recommended by leading experts in engineering, economics and environmental science.⁴⁷

- 2.35** At the hearing Dr Moussa advised that it was extraordinary for the CBA to have not been made public:

The reason this is extraordinary is that one of the essential purposes of conducting a CBA is that you lay out explicitly for all rational persons to see how you have arrived at your conclusions. So the idea of a CBA being secret when there are no commercial-in-confidence issues or other issues—because if there were, surely they would have told us—is extraordinary, to say the least.⁴⁸

Government response

- 2.36** With regard to criticisms made of the cost-benefit analysis conducted by the NSW Government when assessing flood mitigation options, Mr Betts stated:

...to this point we have collectively undertaken four years' worth of work to understand flood risks in the valley, to understand probabilities and to understand the impacts of potential flood events. That has involved a rigorous analysis of possible mitigation measures—measures which involve infrastructure, measures which do not involve infrastructure—and you will note on page 17 of our submission the wide range of options that has been considered to date. That analysis has led us to the conclusion that, on the face of it, raising the Warragamba Dam by 14 metres strikes the right balance between costs and benefits and between safety considerations and environmental considerations.⁴⁹

- 2.37** Ms Maree Abood, Executive Director, Strategic Water Planning and Infrastructure, Infrastructure NSW, indicated during the hearing that the information and source documents that sit behind the 'Resilient Valley, Resilient Communities: the Hawkesbury-Nepean Valley Flood Risk Management Strategy' document would be released as part of the Environmental Impact Statement process.⁵⁰

- 2.38** Mr Betts advised that a complete Environmental Impact Statement would be finalised by mid-2019 and would be placed on exhibition:

What we have been anxious to avoid is pre-empting decisions around what goes into the EIS, putting information out there which is incomplete or partial. A much cleaner process and a better informed community debate will flow if we have the opportunity

⁴⁷ Submission 31, Dr Margaret Moussa, p 3.

⁴⁸ Dr Margaret Moussa, Lecturer in Economics, School of Business, Western Sydney University, Evidence, 4 October 2018, uncorrected transcript, p 26.

⁴⁹ Mr Jim Betts, Chief Executive Officer, Infrastructure NSW, Evidence, 4 October 2018, uncorrected transcript, p 34.

⁵⁰ Ms Maree Abood, Executive Director, Strategic Water Planning and Infrastructure, Infrastructure NSW, Evidence, 4 October 2018, uncorrected transcript, p 36.

to pull together a coherent EIS, which we intend to do by the mid part of next year. Then that will be put on exhibition and will be subject to full consultation. To the extent that there is any alleged secrecy about this, it is simply about the timing of putting information out in a balanced fashion, rather than dribbling it out into the public domain in a way which simply confuses the community.⁵¹

Raising the dam wall as a flood mitigation strategy and alternative approaches

2.39 The bill enables the consideration of the proposal to raise the Warragamba Dam wall without a legal impediment under the *National Parks and Wildlife Act 1974* regarding temporary inundation of national park land.⁵² The bill only relates to the proposal to raise the Warragamba Dam wall and does not relate to alternative approaches for flood mitigation.

2.40 Regardless of this, some submission makers highlighted concerns that raising the dam wall would not sufficiently protect downstream areas in order to justify the cost of the project and its environmental impacts. Submission makers indicated that the raising of Warragamba Dam would not definitively flood proof the Hawkesbury-Nepean Valley.⁵³ The Colong Foundation for Wilderness argued:

The dam proposal is only a half measure. The recent flooding associated with the upper Nepean which inundated Picton, as well as any floods coming down the Grose, Colo and Macdonald rivers or South Creek are not mitigated by the proposed dam wall raising.⁵⁴

2.41 Dr Pittock submitted that an average of 45 per cent of floodwaters in the area originate from catchment areas that are not upstream of Warragamba Dam, and that even if a raised Warragamba Dam was to hold back some flood waters, other catchments could still cause significant flooding in the valley. Dr Pittock stated that flood mitigation dams tend to ‘control’ only small and medium sized floods from upstream catchments. Dr Pittock advised that once a dam is full during a large flood event operators would have no choice but to spill the water from the dam, and while larger flood control airspace in a dam may delay a flood peak, captured water takes longer to release from the dam which could prolong flood durations in downstream areas.⁵⁵

2.42 Other submission makers argued there are better alternative ways to reduce flood, including through developing effective flood evacuation plans, routes and training and by conducting flood mapping.⁵⁶ Dr Pittock indicated that the NSW Government could impose a safer planning standard on local governments that uses a higher threshold than the 1:100 flood level currently

⁵¹ Mr Jim Betts, Chief Executive Officer, Infrastructure NSW, Evidence, 4 October 2018, uncorrected transcript, p 37.

⁵² Water NSW Amendment (Warragamba Dam) Bill 2018, Explanatory note, p 1.

⁵³ For example see Submission 2, Ms Fiona Bullivant, p 1; Submission 26, Mr Robert Anderson, p 1; Submission 94, Ms Elizabeth Cameron, p 1.

⁵⁴ Submission 33, Colong Foundation for Wilderness, p 4

⁵⁵ Submission 8, Dr Jamie Pittock, attachment 1, p 6.

⁵⁶ For example see: Submission 27, Ms Trish Hill; Submission 39, Dr Jennifer Gill; Submission 42, Mr Joshua Gowers; Submission 48, Mr Lachlan Penninkilampi; Submission 51, Mr Joel Anderson; Submission 77, Ms Lynette Sinclair; Submission 101, Mr Martin O'Reilly.

permitted. Dr Pittock noted that in the United States, a minimum 1:500 year threshold is widely used and in the Netherlands a 1:1,250 year flood return threshold is used.⁵⁷

2.43 Dr Pittock noted that a large number of people on the Hawkesbury-Nepean floodplain live in houses that are flooded regularly: 5,000 houses lie under the 1:100 year flood level, and a further 7,000 lie under the 1:500 year flood level. Dr Pittock indicated that the relocation of the most flood prone residents could be an option for Government to consider which would significantly reduce potential flood damages.⁵⁸

2.44 A number of submissions argued that an alternative to increasing the Warragamba dam wall height could be to lower the current full supply level within the dam to provide increased 'airspace' and assist with flood mitigation.⁵⁹ For example, Dr Pittock submitted that:

Lowering the full storage level of Warragamba Dam by 12 metres would free 795 billion litres of airspace for flood control. Further, lowering the full storage level would have no upstream environmental impacts and can be implemented immediately.⁶⁰

2.45 Professor Stuart Khan, School of Civil and Environmental Engineering, University of New South Wales, indicated that while a reduction of the current full supply level could reduce available drinking water capacity, alternative sources of water including the Sydney Desalination Plant could fill that water supply gap.⁶¹

2.46 The Insurance Council of Australia however argued that the flood mitigation benefits of reducing the holding capacity of the dam are negligible. The Council argued that it would significantly impact Sydney's water supply, and that 'at the time' process based mitigation can lead to significant uncertainty for insurers.⁶²

Government response

2.47 The NSW Government advised that the proposal to raise the dam wall by 14 metres is the most effective and the preferred option because it would provide a single point of control for the catchment with the 'largest contribution to regional floods above the flood planning level'.⁶³ The NSW Government advised that the project is intended to delay and lower downstream flood levels to:

- reduce risk to life by reducing the number of floods that trigger evacuations;
- reduce the certainty of time for evacuation for floods that require evacuation; and
- reduce flood damage to homes and businesses by 75 per cent on average.⁶⁴

⁵⁷ Submission 8, Dr Jamie Pittock, attachment 1, p 7.

⁵⁸ Submission 8, Dr Jamie Pittock, attachment 1, p 9.

⁵⁹ For example see: Submission 37, Nature Conservation Council of NSW, p 2 and Submission 2, Ms Fiona Bullivant.

⁶⁰ Submission 8, Dr Jamie Pittock, attachment 1, p 7.

⁶¹ Submission 5, Professor Stuart Khan, School of Civil and Environmental Engineering, University of New South Wales, p 3.

⁶² Submission 75, Insurance Council of Australia, p 5.

⁶³ Submission 74, NSW Government, p 18.

⁶⁴ Submission 74, NSW Government, p 19.

- 2.48** It was also indicated by the NSW Government that the Warragamba Dam project would be effective because flows from the Warragamba Dam catchment significantly contribute to all floods in the Hawkesbury-Nepean Valley that pose a significant risk to life, homes and businesses. The NSW Government stated:

The current flood planning level, which is based on the 1 in 100 chance per year flood, is 17.3 metres Australian Height Datum (AHD) at Windsor. This is the level above which residential development is currently permitted. Without flows from the Warragamba Dam catchment, flooding downstream is extremely unlikely to reach the flood planning level.

In other words, floods resulting from flows only generated by the Nepean and Grose rivers and all other tributaries do not pose as significant risk to life, homes and businesses compared to floods that involve the large Warragamba Dam catchment.⁶⁵

- 2.49** Ms Abood commented on the costs that would result if a one in 100 flood event occurred in the Hawkesbury-Nepean Valley:

If we had a flood similar to Brisbane, which is like a one in 100 flood event, that would require about 64,000 people needing to be evacuated, about 5,000 houses would be impacted and it would cost around \$2 billion.⁶⁶

- 2.50** The NSW Government submission also responded to the argument made by some stakeholders that lowering the dam's current water supply level would provide a similar amount of 'air space' which could be used for downstream flood mitigation. The NSW Government stated that this proposal was not as effective as raising the dam wall and created further water quality, supply and environmental issues:

Warragamba Dam is a water supply dam and currently holds approximately 80% of Sydney's stored water capacity. Options to change the way the existing Warragamba Dam is operated are either not cost effective, or do not sufficiently mitigate the floods that pose the greatest risk to life or property...

A five metre lowering was found to have relatively limited benefits for the larger floods that pose the most risk to lives and property - reducing flood damages by only 27 percent and the dam's capacity by around 18 percent or 360 billion litres of water.

A 12 metre lowering provides moderate flood mitigation capacity, reducing flood damages by around 60 percent on average. However, due to the deep 'V' shape of the reservoir, it would reduce the dam's capacity by around 40 percent or 795 billion litres of water. To make up for the forgone water, new sources of water would need to be built and the existing desalination plant would need to be operated at its maximum effective capacity, at a cost of well over \$1 billion.

Reducing water storage would have a significant impact on water security for greater Sydney and on water bills for Sydneysiders. In addition, lowering the dam storage by 12 metres would have its own environmental and water quality costs, and would have serious implications for the release of environmental flows from Warragamba Dam.⁶⁷

⁶⁵ Submission 74, NSW Government, p 20.

⁶⁶ Ms Maree Abood, Executive Director, Strategic Water Planning and Infrastructure, Infrastructure NSW, Evidence, 4 October 2018, uncorrected transcript, p 47.

⁶⁷ Submission 74, NSW Government, p 18.

2.51 As noted earlier, the NSW Government advised that the Warragamba Dam project would not be an isolated flood mitigation effort and that other steps are being taken under the Flood Strategy, including:

- over \$2 million being allocated to the Bureau of Meteorology to enhance flood forecasting capability for the Hawkesbury-Nepean Valley;
- a review of current planning policy arrangements to account for the high flood risk above the 1 in 100 chance per year flood level in the valley;
- investigation of a package of small scale road upgrades to assess flood evacuation benefits; and
- a new Regional Flood Study for the Hawkesbury-Nepean Valley to help plan for and manage flood risk.⁶⁸

2.52 Mr Cinque advised the committee that in most floods there will be an increased warning time by about 10 hours.⁶⁹

2.53 Mr Cinque reflected on how the intended flood mitigation measures would work together:

It is critical for evacuation to provide more capacity for the existing population. The other effect of the dam is to reduce the probability, so we will have to do evacuations less often. For any particular height, the flood will reach the same height, but reaching that height will be less probable. So they are the two main benefits for us: less frequent evacuations and more forecasting time in most floods, but then in some floods there may not be more forecasting time...

As part of the suite of options, this is an important one to reduce that frequency of evacuation, give us more time, and if we do that in conjunction with the non-infrastructure options—land use planning, increased warning time and community engagement—all of those factors together can help to dramatically reduce the risk of loss of life.⁷⁰

Support for the Warragamba Dam project

2.54 While a number of submissions opposed the raising of the Warragamba Dam wall, a number of inquiry participants indicated support for the project. The Hawkesbury Nepean Flood Mitigation Action Committee argued that the bill would protect life and property in the Hawkesbury-Nepean Valley and that it was not an attack on national parks or on World Heritage.⁷¹ The Hills Shire Council indicated that it supported the NSW Government's efforts to find the best possible solution to minimising flood risk in the Hawkesbury-Nepean Valley.⁷²

⁶⁸ Submission 74, NSW Government, pp 25-27.

⁶⁹ Mr Peter Cinque, Manager, Business Support Services, NSW State Emergency Service, Metro Zone, Evidence, 4 October 2018, uncorrected transcript, p 46.

⁷⁰ Mr Peter Cinque, Manager, Business Support Services, NSW State Emergency Service, Metro Zone, Evidence, 4 October 2018, uncorrected transcript, p 46.

⁷¹ Submission 68, Hawkesbury Nepean Flood Mitigation Action Committee, pp 1-3.

⁷² Submission 110, The Hills Shire Council, p 1.

2.55 Floodplain Management Australia stated:

At present over 60,000 people occupy the floodplain downstream of Warragamba Dam, and whilst there are some actions which can be taken to marginally reduce the risks, it does appear that the only viable strategy for providing an acceptable level of flood risk by raising the wall of Warragamba Dam.⁷³

2.56 The Insurance Council of Australia put to the committee that the bill is 'an unavoidable but necessary step that will enable the government to balance the communities need to be protected from the acute level of flood risk on the Hawkesbury Nepean floodplain'.⁷⁴ The Council noted that the lack of mitigation for populated sections of the floodplain is a tangible community safety risk, and stated that mitigation should be accompanied by policies to not increase exposure through additional inappropriate development on the floodplain.⁷⁵

2.57 The Council's submission indicated that flood mitigation efforts could lead to potential insurance premium savings for residents who may have their flood risk reassessed.⁷⁶ The NSW Government submission also indicated that the Insurance Council had advised that reduced insurance premiums could result from mitigation efforts:

The Insurance Council of Australia has indicated that any reduction in flood risk at individual properties will be considered by insurers, and will typically result in reduced premiums.

The Council also notes that, where effective flood mitigation has been implemented in other states, there have been significant reductions in insurance premiums.

Reductions in flood insurance premiums will make this insurance more affordable. This may lead to an increase in the take up rates for flood insurance resulting in more households and businesses being better able to financially recover from the devastating impacts of future flood events.⁷⁷

Impact on Aboriginal heritage

2.58 The bill enables the consideration of the proposal to raise the Warragamba Dam wall without a legal impediment under the *National Parks and Wildlife Act 1974* regarding temporary inundation of national park land.⁷⁸ A number of submission makers expressed concerns that unique and significant Aboriginal cultural heritage sites are located in areas which could be temporarily inundated as a result of the bill.⁷⁹

⁷³ Submission 87, Floodplain Management Australia, p 2.

⁷⁴ Submission 75, Insurance Council of Australia, p 1.

⁷⁵ Submission 75, Insurance Council of Australia, pp 1-2.

⁷⁶ Submission 75, Insurance Council of Australia, p 4.

⁷⁷ Submission 74, NSW Government, p 20.

⁷⁸ Water NSW Amendment (Warragamba Dam) Bill 2018, Explanatory note, p 1.

⁷⁹ For example see: Submission 1, Mrs Doreen Lyon, p 1; Submission 30, Mr John Berry; Submission 37, Nature Conservation Council of NSW, p 1; Submission 39 Dr Jennifer Gill; Submission 44, Mr Peter Clark; Submission 48, Mr Lachlan Penninkilampi; Submission 69, Ms Fiona Radford; Submission 77, Ms Lynette Sinclair; Submission 79, Mr Gregory Bell; Submission 96, Mr John Boyle; Submission 101, Mr Martin O'Reilly.

2.59 The National Parks Association of NSW put to the committee that the area proposed to be inundated contains 'crucial artwork, eucalypt scar trees, creation story waterholes and other significant cultural sites' that are part of the cultural heritage of the Gundungurra people.⁸⁰

2.60 Traditional owner Ms Taylor Clarke stated at the public hearing that a temporary inundation of national park land in the Burratorang Valley would significantly impact Aboriginal sites and rock art:

Even if we are not talking about the complete inundation of the 14 metres, as you said, that is a very rare event. Even if the water comes up to half of that distance, the spray from the floodwaters onto the art, for example, can be as devastating as a complete inundation. And it only takes that small amount of moisture, as Mr Jackson said, to start to dissolve what is holding these really already very fragile artworks on the wall. Even if we are not talking about the complete wash through, there is still a damaging impact even if there is only a temporary inundation of that small amount.⁸¹

2.61 The Gundungurra Aboriginal Heritage Association Inc. advised that the Gundungurra people have an Indigenous Land Use Agreement (ILUA) over the area that is proposed to be inundated due to the raising of the Warragamba Dam wall. The Association advised that the bill 'will go against the intent of the ILUA given the likely inundation of our Country and damage to our cultural heritage if the dam wall is raised'.⁸²

2.62 Wollondilly Shire Council noted its concern that many Aboriginal sites would be severely impacted as a result of the raising of the Warragamba Dam. The Council also noted that Aboriginal sites in the Burratorang Valley are particularly precious because Aboriginal heritage has already been severely impacted in the area, including places mapping the creation story of the Gundungurra people.⁸³

2.63 Ms Clarke described what the loss of cultural sites in the Burratorang Valley would mean to her personally and to the community:

We are talking about losing a history that is significant to all Australians, not just the Gundungurra people. This is an issue that we all have a stake in.

The valley is home to the only intact painting of a waratah connected to the Dreaming. There are many burial sites, including non-Indigenous, and paintings, meeting places, the Jooriland homestead and more that I would draw your attention to, but, to be frank, this is very personal for me. We are talking about losing some of the places that are my only connection to my ancestors. If this amendment to the Act goes ahead it will be like they were never there. That is very difficult for us as Aboriginal people to fathom, as we believe our ancestors walk this sacred land beside us. If this proposal goes ahead, so much more of our history will be lost to time and the next generation of Gundungurra people will never even know what is gone.⁸⁴

⁸⁰ Submission 34, National Parks Association of NSW, p 3.

⁸¹ Ms Taylor Clarke, Traditional Owner, Evidence, 4 October 2018, uncorrected transcript, p 9.

⁸² Submission 72, Gundungurra Aboriginal Heritage Association Inc., p 1.

⁸³ Submission 65, Wollondilly Shire Council, p 1.

⁸⁴ Ms Taylor Clarke, Traditional Owner, Evidence, 4 October 2018, uncorrected transcript, p 2.

- 2.64** Concerns were raised that when the Burratorang Valley was originally flooded in order to create Warragamba Dam very little archaeological analysis was conducted and significant Aboriginal heritage was lost.⁸⁵ Gundungurra Aboriginal Heritage Association Inc. stated in their submission:

With the European colonisation of the Burratorang Valley, then the Warragamba Dam a number of generations back, Gundungurra people feel significant loss of our homelands, our Country and our culture which is deeply entwined in this significant place. Gundungurra people also experienced dispossession from Burratorang and subsequent disbursement to distant places.⁸⁶

- 2.65** The Gundungurra Aboriginal Heritage Association Inc. put to the committee that 'the proposal to raise the Warragamba Dam wall will destroy what remains of the [Gundungurra] culture in the Valley that has existed since time immemorial.'⁸⁷ Archaeologist Mr Michael Jackson submitted:

The proposed (Amendment Bill) will allow for inundation and destruction of hundreds of kilometres of Gundungurra Country and culture. In particular, the proposal will have a significant impact on one of the largest Aboriginal Creation stories close to a major city in Australia, 'The Journey of Gurangatch and Mirrigan'...

At least 90% of the area which would be impacted through inundation of flood water as a result of raising Warragamba Dam relates directly to the creation story.⁸⁸

- 2.66** Concerns were also raised regarding the adequacy of the land surveys conducted by Water NSW to assess Aboriginal heritage sites that could be impacted by the Warragamba Dam project. Aunty Sharyn Halls, Gundungurra Elder, Gundungurra Aboriginal Heritage Association Inc., indicated that not enough time had been allocated to conduct a heritage survey of Burratorang Valley, and that surveying work was still ongoing as at 4 October 2018.⁸⁹

- 2.67** At the hearing, Mr Jackson advised the committee that an appropriate land survey to document Aboriginal sites in the area would take a significant amount of time:

My estimation all along has been between 800 to 900 kilometres of foot survey would be required. I always thought that with a crack team and no delays, the ability to camp in the area, set up base camps and do the work, you would probably be able to do that in 90 to 100 days.⁹⁰

- 2.68** Aunty Sharyn recommended that the Water NSW proposed 25 day long survey of the land be extended to provide more time for the analysis of Aboriginal heritage in the area and that more consultation should also occur during the process:

⁸⁵ Submission 1, Mrs Doreen Lyon, p 1.

⁸⁶ Submission 72, Gundungurra Aboriginal Heritage Association Inc., p 2.

⁸⁷ Submission 72, Gundungurra Aboriginal Heritage Association Inc., p 2.

⁸⁸ Submission 73, Mr Michael Jackson, pp 1-2.

⁸⁹ Aunty Sharyn Halls, Gundungurra Elder, Gundungurra Aboriginal Heritage Association Incorporated, Evidence, 4 October 2018, uncorrected transcript, p 8.

⁹⁰ Mr Michael Jackson, Archaeologist, Evidence, 4 October 2018, uncorrected transcript, p 6.

We need to actually do the survey properly. We need to then collate everything that has been there. At the moment we are working under too much time restraint, not enough time to do what we are supposed to do to gather more information. Because at the moment, 25 days for that many areas is impossible. And there are other people you have to talk to. Obviously the land council has not been spoken to, and there must be people in that area who belong to a land council who might have stories that need to be recognised as well to form part of the EIS. But at this stage, as far as I can see or have seen, that has not happened yet, from what Charles Mundine has been saying here today. Because he is in the same boat as our organisation.

The start of the process was done wrong. We are in a catch-up situation now for our heritage and how we are going to work out the right plan to actually protect it.⁹¹

- 2.69** Wollondilly Shire Council supported a comprehensive study to identify any remaining Aboriginal sites in the area, assess their cultural significance, and assess any potential impacts from the dam wall raising.⁹²

Government response

- 2.70** The NSW Government has advised that Aboriginal Cultural Heritage assessments are ongoing, and that 'there is ongoing consultation with Aboriginal communities that have a connection to the land upstream of the Warragamba Dam that would be affected by the proposal'.⁹³
- 2.71** The NSW Government indicated that Water NSW is currently conducting field surveys to inform a Aboriginal Cultural Heritage assessment, and that Registered Aboriginal Parties were also provided with an opportunity to express interest in taking part in site surveys.⁹⁴ The NSW Government submitted that once the surveys are complete a report will be drafted and provided to the Registered Aboriginal Parties for comment, with the final results of the assessment to be analysed and presented as part of the Environmental Impact Statement to be published in 2019.⁹⁵
- 2.72** Mr Betts advised that the analysis of Aboriginal heritage in the area would assist to inform the Environment Impact Statement and the final advice to be provided to the NSW Government regarding the raising of the Warragamba Dam:

In this case we recognise that the environmental sensitivities are such, and the questions of Aboriginal heritage are sufficiently sensitive, that we will undertake a full public EIS process before we then put advice to government on the raising of the Warragamba Dam, and invite government to take an investment decision.⁹⁶

⁹¹ Aunty Sharyn Halls, Gundungurra Elder, Gundungurra Aboriginal Heritage Association Incorporated, Evidence, 4 October 2018, uncorrected transcript, pp 11-12.

⁹² Submission 65, Wollondilly Shire Council, p 1.

⁹³ Submission 74, NSW Government, p 23.

⁹⁴ Submission 74, NSW Government, p 23.

⁹⁵ Submission 74, NSW Government, p 23.

⁹⁶ Mr Jim Betts, Chief Executive Officer, Infrastructure NSW, Evidence, 4 October 2018, uncorrected transcript, p 38.

Impact on the environment

2.73 The bill enables the consideration of the proposal to raise the Warragamba Dam wall without a legal impediment under the *National Parks and Wildlife Act 1974* regarding temporary inundation of national park land. The bill requires that an environmental management plan, prepared by Water NSW and approved by the relevant Ministers, be in force.⁹⁷

2.74 A number of submission makers expressed concerns that the temporary inundation of land would negatively impact the World Heritage listed status of the Greater Blue Mountains area, local ecology and biodiversity, and drinking water quality.

2.75 The Nature Conservation Council of NSW argued that raising the Warragamba Dam wall would lead to the inundation of 4,700 hectares of national park land and 65 kilometres of wilderness streams upstream of the dam.⁹⁸

2.76 The National Parks Association of NSW submission stated:

The area of land proposed for inundation is World Heritage-listed, gazetted as a National Park, declared as wilderness, contains a declared wild river and has National Heritage status.⁹⁹

2.77 The Nature Conservation Council of NSW also argued that the prohibition of inundation of national park land without a lease, licence, or right of way was a specific and intentional protection of national park land included in the *National Parks and Wildlife Act 1974*:

In his second reading speech, Minister Blair states that the Bill is needed to "overcome a technical barrier that exists at present under the National Parks and Wildlife Act 1974 to the proposal to raise the Warragamba Dam wall". We would hardly describe the provisions of the NPW as "a technical barrier". Those provisions are there for the very reason of protecting National Parks. Introducing legislation to specifically overcome protections in the NPW Act deliberately undermines those protections and threatens the environmental and cultural values of the National Parks and the World Heritage values of the Greater Blue Mountains.¹⁰⁰

2.78 Ecologist Mr Roger Lembit submitted to the committee that:

This project would result in inundation within the World Heritage Area of temperate eucalypt forest and rainforest, habitat for a range of threatened flora and fauna, including at least two eucalypt species and significant cultural heritage sites. The period of inundation would extend for periods of long enough to impact on plant species and other organisms existing within the temporary inundation area. It is also likely that inundation would facilitate weed invasion.¹⁰¹

⁹⁷ Water NSW Amendment (Warragamba Dam) Bill 2018, Explanatory note, p 1 and Schedule 1, proposed sections 64C, 64D and 64E of the bill.

⁹⁸ Submission 37, Nature Conservation Council of NSW, p 1.

⁹⁹ Submission 34, National Parks Association of NSW, p 1.

¹⁰⁰ Submission 37, Nature Conservation Council of NSW, p 2.

¹⁰¹ Submission 15, Mr Roger Lembit, p 1.

World Heritage Status

2.79 The Greater Blue Mountains Area, incorporating over one million hectares spread over eight adjacent conservation reserves, was added to the World Heritage List in 2000.¹⁰² The United Nations Educational, Scientific and Cultural Organisation (UNESCO) describes the area as follows:

The Greater Blue Mountains Area consists of 1.03 million ha of sandstone plateaux, escarpments and gorges dominated by temperate eucalypt forest. The site, comprised of eight protected areas, is noted for its representation of the evolutionary adaptation and diversification of the eucalypts in post-Gondwana isolation on the Australian continent. Ninety-one eucalypt taxa occur within the Greater Blue Mountains Area which is also outstanding for its exceptional expression of the structural and ecological diversity of the eucalypts associated with its wide range of habitats. The site provides significant representation of Australia's biodiversity with ten percent of the vascular flora as well as significant numbers of rare or threatened species, including endemic and evolutionary relict species, such as the Wollemi pine, which have persisted in highly-restricted microsites.¹⁰³

2.80 A number of submission makers expressed concerns that the temporary inundation of national park land as a consequence of raising the Warragamba Dam wall would impact an internationally important and significant World Heritage listed site.¹⁰⁴ Blue Mountains City Council expressed its concerns to the committee:

This Council's submission to the Inquiry expresses our serious concerns with the negative impacts that any future raising of the Warragamba Dam wall will have on the Blue Mountains World Heritage Area, including the Aboriginal heritage values of the affected area. Council continues to engage with the Traditional Owners in relation to Aboriginal culture and heritage implications of the proposal.¹⁰⁵

2.81 The National Parks Association of NSW argued that the bill and the proposed inundation of national park land in the Blue Mountains would put the Australian Government at risk of contravening the World Heritage Convention requiring the protection and management of World Heritage areas.¹⁰⁶

2.82 The National Parks Association of NSW submission stated:

The amendments put the Australian Government at risk of contravening the World Heritage Convention which requires the protection and management of their values sustained or enhanced over time. The amendments allow actions that are likely to see

¹⁰² NSW Office of Environment and Heritage, Greater Blue Mountains <https://www.environment.nsw.gov.au/topics/parks-reserves-and-protected-areas/types-of-protected-areas/world-heritage-listed-areas/greater-blue-mountains>, accessed 3 October 2018.

¹⁰³ United Nations Educational, Scientific and Cultural Organisation, Greater Blue Mountains Area, <https://whc.unesco.org/en/list/917/>, accessed 3 October 2018.

¹⁰⁴ For example see: Submission 40, Maria Dunne; Submission 42, Joshua Gowers; Submission 51, Joel Anderson; Submission 77, Ms Lynette Sinclair; Submission 89, Ms Kerry Hewson; Submission 101, Mr Martin O'Reilly.

¹⁰⁵ Submission 32, Blue Mountains City Council, p 1.

¹⁰⁶ Submission 34, National Parks Association of NSW, p 4.

the Greater Blue Mountains World Heritage Area placed on the World Heritage in Danger List.¹⁰⁷

- 2.83** Mr Lembit contended that the impact of the temporary inundation of national park land could endanger the area's World Heritage listing:

It [the ecological consequences of even a temporary inundation] is of such a level that it puts the status of world heritage at risk. The inundation might be temporary but the effects are permanent.¹⁰⁸

Ecology and biodiversity

- 2.84** A number of submission makers discussed the threatened species that inhabit the national park area at risk of inundation as a result of the Warragamba Dam project.¹⁰⁹ At risk species identified to the committee during the inquiry included the Camden White Gum and the Regent Honeyeater.

- 2.85** Mr Keith Muir, Executive Director of the Colong Foundation for Wilderness, stated that the bill would remove protections for national park land around Warragamba Dam:

The legislation that this committee hearing is examining will overturn legislation which prevents the damage which would arise from the raising of the Warragamba Dam wall. The legislation effectively removes National Parks protection and the parks would then be in name only. There would be no management plan for the area. The management through the objects and the management principles of the Act are removed, so damage could occur which is not compatible with the conservation of the natural and cultural heritage values.¹¹⁰

- 2.86** Mr Lembit informed the committee that 'the total number of threatened species, including plants and animals, which may be affected is at least 26 and may be much higher'.¹¹¹ Mr Lembit also advised that the Warragamba Dam project would affect a range of unique habitats throughout the Blue Mountains World Heritage Area including Dry Rainforests, Douglas Scarp Woodland, Box-Gum Woodland, Coss Granite Woodland and old growth forests of the Wollondilly Valley.¹¹²

- 2.87** The Colong Foundation for Wilderness submitted:

Raising Warragamba Dam's wall will flood and degrade the Lower Kowmung Gorge and a considerable section of the Coss River. Most of the threatened Camden White Gums in the Kedumba Valley will be drowned, the breeding habitat of the critically endangered Regent Honeyeater in the Burratorang Valley will be inundated and Koala

¹⁰⁷ Submission 34, National Parks Association of NSW, p 3.

¹⁰⁸ Mr Roger Lembit, Principal Ecologist, Gingra Ecological Surveys, Evidence, 4 October 2018, p 17.

¹⁰⁹ For example see: Submission 27, Ms Trish Hall; Submission 30, Mr John Berry; Submission 39, Dr Jennifer Gill; Submission 57, Stephanie Knox.

¹¹⁰ Mr Keith Muir, Executive Director, Colong Foundation for Wilderness, Evidence, 4 October 2018, uncorrected transcript, p 13.

¹¹¹ Submission 15, Roger Lembit, p 2.

¹¹² Submission 15, Roger Lembit, p 2.

habitat in the Little and Nattai river valleys will be impacted, along with the habitat of many other threatened species.¹¹³

- 2.88** The National Parks Association of NSW argued that the inundation proposed as a result of the raising of the Warragamba Dam wall would exacerbate flora and fauna extinction through the destruction of habitats supporting at least 26 threatened species that will potentially be driven closer to extinction.¹¹⁴ A submission from several ecologists and conservation biologists with expertise regarding threatened bird species in Australia specified:

Temporary inundation of the World Heritage Area as proposed under the Water NSW Amendment (Warragamba) Bill 2018 (hereafter "The Bill") will destroy the majority of known Regent Honeyeater breeding habitat within the Burratorang Valley... loss of known breeding habitat is very unlikely to be offset by protecting alternative habitat elsewhere because Regent Honeyeater breeding habitat does not exist at a comparable scale in other areas.¹¹⁵

- 2.89** At the hearing, Mr Ross Crates, Postdoctoral Researcher, Fenner School of Environment and Society, Australian National University, further discussed the potential impacts of the Warragamba Dam project on the Regent Honeyeater population:

Given my experience of the habitats within the Burratorang Valley and throughout the species range, it is my opinion that the raising of the Warragamba Dam will lead to the loss of the vast majority of breeding regent honeyeater habitat within the Burratorang Valley. Key vegetation communities inundated would include yellow box, red gum, rough barked-apple, grassy woodland and tens of kilometres of river oak forest. Regent honeyeaters are well known to nest in all of these vegetation communities. It is my opinion that raising the Warragamba Dam fulfils at least six of the nine criteria for defining significant impacts under the Environment Protection and Biodiversity Conservation [EPBC] Act. The available evidence suggests that that dam raising will seriously jeopardise the persistence of the wild regent honeyeater population and is likely to contribute to the extinction of the species in the wild.¹¹⁶

- 2.90** The Public Service Association NSW indicated that many species of fauna in the Burratorang Valley area could be effected, with the impact of temporary inundation on some species (such as the platypus) being unknown. The Association also highlighted potential negative consequences for pest control efforts in the area, and concerns for bushwalkers within the area being cut off and isolated due to rising water levels during temporary inundation.¹¹⁷

- 2.91** In response to questions about whether land that would be temporarily inundated in the future should be required to be offset in some way, Mr Lembit responded:

In terms of some of the vegetation communities, they are unique, so those cannot be directly offset like for like. Under the Biodiversity Conservation Act there are requirements for offsetting, and presumably this project needs to comply with the normal requirements under the Biodiversity Conservation Act and the Environmental

¹¹³ Submission 33, Colong Foundation for Wilderness, p 4

¹¹⁴ Submission 34, National Parks Association of NSW, p 2.

¹¹⁵ Submission 71, Ross Crates et al, p 1.

¹¹⁶ Mr Ross Crates, Postdoctoral Researcher, Fenner School of Environment and Society, Australian National University, Evidence, 4 October 2018, uncorrected transcript, p 25.

¹¹⁷ Submission 108, Public Service Association NSW, p 1.

Planning and Assessment Act. That would mean that they would have to use the biodiversity assessment method which is provided for under that legislation, and that would require offsets consistent with the requirements of those Acts.¹¹⁸

Impact on drinking water

- 2.92** The NSW Government specified that the raising of the Warragamba Dam wall is not intended to increase Sydney's drinking water supply levels:

Raising Warragamba Dam proposal does not involve increased water storage. The flood mitigation zone created by the raised dam would only be used to temporarily store floodwaters during floods.

Increased water storage at Warragamba Dam was considered as part of the development of the 2017 Metropolitan Water Plan for greater Sydney, but not taken forward. The main reasons for not progressing this option were that it would further increase the reliance on Warragamba Dam, which already holds 80% of Sydney's stored water capacity, and the larger and more permanent upstream impacts associated with permanently increasing the level of stored water behind the dam wall.¹¹⁹

- 2.93** Professor Khan submitted that the proposed raising of the dam wall and the consequent temporary inundation of national park land could impact the quality of Sydney's drinking water and public health:

If the proposed new flood mitigation capacity were ever to be used, this would present significant water quality risks, including risks to public health, for Sydney Water drinking water customers. The likely impacts to water quality should be very carefully assessed before such a project is progressed.¹²⁰

- 2.94** At the hearing Professor Khan acknowledged that heavy rainfall causes water quality issues, but said that intentionally inundating land can escalate the risk of such issues:

I agree with your general point that a big heavy rainfall event causes water quality risks regardless and they are unavoidable. However, I think that intentionally leading to areas which are going to be inundated for some period of time escalates that risk considerably.¹²¹

Value of the environmental management plan

- 2.95** The Nature Conservation Council of NSW suggested that the environmental management plan required under the bill would be less rigorous and transparent compared to a Plan of Management under the *National Parks and Wildlife Act 1974*, including a lack of public consultation requirements. The Council also noted that the bill does not clearly define 'temporary inundation'.¹²²

¹¹⁸ Mr Roger Lembit, Principal Ecologist, Gingra Ecological Surveys, Evidence, 4 October 2018, p 18.

¹¹⁹ Submission 74, NSW Government, p 21.

¹²⁰ Submission 5, Professor Stuart Khan, School of Civil and Environmental Engineering, University of New South Wales, p 1.

¹²¹ Professor Stuart Khan, School of Civil and Environmental Engineering, University of New South Wales, Evidence, 4 October 2018, uncorrected transcript, p 31.

¹²² Submission 37, Nature Conservation Council of NSW, p 3.

- 2.96** The Colong Foundation for Wilderness stated that the bill would make the area impacted by the inundation 'Australia's first World Heritage listed national park area without a proper management plan', as the bill's proposed environmental management plan has no room for public consultation.¹²³
- 2.97** During the hearing, Ms Alix Goodwin, Chief Executive Officer, National Parks Association of NSW, discussed the absence of community consultation in the management plan referred to in the bill:

The bill as it stands at the moment certainly sets a lower bar in terms of transparency for the development of any plan of management because it does not require community consultation and it does not go through any advisory processes. If we were operating under the National Parks and Wildlife Act we would have two tiers of review and public consultation, public consultation which has legislatively prescribed time frames and involves community and experts from a regional and then a State perspective assessing and reviewing and commenting on the resulting plan.¹²⁴

Environmental Impact Statement

- 2.98** Separate to the environmental management plan provided for in the bill, an Environmental Impact Statement is currently being prepared by the NSW Government for the proposal to raise the Warragamba Dam wall, and will be released next year for consultation.¹²⁵
- 2.99** Some inquiry participants noted that the Environmental Impact Statement for the Warragamba Dam project had not been completed and released before the bill was introduced into the Parliament.¹²⁶ Hawkesbury City Council recommended to the committee that a more considered assessment of the amendments made by the bill could occur after the completion of the Environmental Impact Statement and the Regional Flood Study.¹²⁷ Ecologist Mr Roger Lembit argued that allowing the bill to proceed now would be premature, as the environmental impacts of the Warragamba Dam project need to be properly, adequately and rigorously assessed.¹²⁸

Government response

- 2.100** The NSW Government advised that, based on a preliminary assessment of the Warragamba Dam Raising proposal, 'in a 1 in 100 chance per year flood up to an additional six hundredth of one percent (0.06 per cent) of the World Heritage Area would be temporarily inundated above the area that would be flooded now'. The NSW Government stated that 'the increase in the time of inundation, over and above what would happen now, would be from hours to a number of days - up to around two weeks'.¹²⁹

¹²³ Submission 33, Colong Foundation for Wilderness, p 2.

¹²⁴ Ms Alix Goodwin, Chief Executive Officer, National Parks Association of NSW, Evidence, 4 October 2018, uncorrected transcript, p 18.

¹²⁵ Submission 74, NSW Government, pp 4, 12 and 22.

¹²⁶ For example see: Submission 15, Mr Roger Lembit; Submission 91, Aboriginal Cultural Heritage Advisory Committee, p 1; Submission 109, Hawkesbury City Council.

¹²⁷ Submission 109, Hawkesbury City Council, p 1.

¹²⁸ Submission 15, Roger Lembit, p 4.

¹²⁹ Submission 74, NSW Government, p 11.

- 2.101** In response to concerns regarding the World Heritage listed site, Mr Betts advised that a lot of work has been done 'to date' on the Environmental Impact Statement:

The upstream inundation associated on a temporary basis with raising the dam wall is a serious environmental matter that will be seriously addressed in the EIS. But I would say that word "to date" suggests that needs to be seen in the context of the fact that there is already a 142-metre dam wall in place, which causes permanent and temporary inundation. The temporary nature of the inundation for a maximum of two weeks and the fact that the area affected by that temporary inundation, which is depicted on page 12 of the submission in figure 4, is equivalent to 0.06 per cent of the world heritage area in terms of the incremental inundation on a temporary basis associated with a one-in-100-year flood event, which is by definition a relatively infrequent event.¹³⁰

- 2.102** In addition, the NSW Government indicated that surveys for all species are currently being conducted and 'all relevant threatened and listed species, including the endangered Regent Honeyeater, have been included in the scope of the surveys and the biodiversity assessment'.¹³¹ The results of the biodiversity assessment will be presented as part of the Environmental Impact Statement to be published in 2019. The NSW Government stated that 'where impacts cannot be avoided or mitigated, biodiversity offsets will be developed' and these would be detailed in the 2019 Environmental Impact Statement.¹³²

- 2.103** In its submission the NSW Government highlighted the bill's requirement for an environmental management plan as a built-in safeguard. The submission stated:

The Environmental Management Plan will need to balance the management of the upstream environmental impacts with the operation and management of a raised Warragamba Dam and its upstream Special Areas. This must be achieved in a way that is consistent with the proposal's planning approval.¹³³

- 2.104** Ms Abood discussed the need for an environmental management plan should the Warragamba Dam project be approved:

...in terms of the environmental management plan, that will be informed by the outcomes of the environmental impact assessment and the planning approval. So the conditions of the planning approval will inform the environmental management plan.

... for a flood mitigation function, if we get the planning approvals from the State, the Commonwealth and the Government says yes, an environmental management plan will have to be in place. It would be informed by the conditions that come out of the EIS process and the conditions for approval.¹³⁴

¹³⁰ Mr Jim Betts, Chief Executive Officer, Infrastructure NSW, Evidence, 4 October 2018, uncorrected transcript, p 34.

¹³¹ Submission 74, NSW Government, p 24.

¹³² Submission 74, NSW Government, p 24.

¹³³ Submission 74, NSW Government, p 13.

¹³⁴ Ms Maree Abood, Executive Director, Strategic Water Planning and Infrastructure, Infrastructure NSW, Evidence, 4 October 2018, uncorrected transcript, p 42.

2.105 Mr Betts then elaborated on how the environmental management plan would be produced:

The environmental management plan will be a product of the statutory planning process enacted by this Parliament being applied to this particular project and the conditions which are placed on the approval by the planning Minister acting independently under the relevant legislation, including the Commonwealth environment Minister.¹³⁵

2.106 Mr Betts clarified in correspondence to the committee that the Minister for Water and the Minister for the Environment are 'already jointly responsible for managing, under Part 4 of *Water NSW Act 2014*, the Warragamba Special Areas to protect the drinking water catchments upstream of Warragamba Dam.' Mr Betts further advised:

The Environment[al] Management Plan contemplated in the Bill will need to include all matters to be specified by the Minister for the Environment, and must be consistent with any statutory planning approval. The land will continue to be National Parks land, and its environmental and conservation values must continue to be monitored and managed in accordance with the Environment[al] Management Plan.¹³⁶

2.107 Mr Betts outlined to the committee the reasons why the bill had been introduced into Parliament in September 2018, and the perspective that the amendments contained in the bill would assist with completion of the Environmental Impact Statement and consideration of planning approval:

Finally, in terms of the legislation itself, the legislation is designed to enable us to proceed to the EIS and focus on the lifesaving function of a raised flood mitigation dam. The National Parks and Wildlife Act currently prevents use of the dam for flood mitigation and we feel as public servants that it will be difficult to put forward an EIS and seek planning approval from the planning Minister at State level and from the environment Minister at Commonwealth level until the legal question about the operation of the dam for flood mitigation purposes has been resolved by the Parliament. There is nothing about the amendment which locks any future government into an investment decision around the raising of the dam, that remains open. But it will enable debate to occur publicly with a clear statutory framework.¹³⁷

2.108 When questioned about whether the bill was required for an Environmental Impact Statement to proceed, the Government witnesses gave the below responses. Mr Betts indicated:

No, the bill is not strictly required for an EIS to proceed. However, it would be very difficult for the planning process to reach a culmination if the planning Minister were confronted with a decision which involved approving a project to raise the dam where the dam could not be operated because a statutory bar was in place. My understanding is it would significantly complicate the process.¹³⁸

¹³⁵ Mr Jim Betts, Chief Executive Officer, Infrastructure NSW, Evidence, 4 October 2018, uncorrected transcript, p 43.

¹³⁶ Mr Jim Betts, Chief Executive Officer, Infrastructure NSW, correspondence to the committee dated 5 October 2018.

¹³⁷ Mr Jim Betts, Chief Executive Officer, Infrastructure NSW, Evidence, 4 October 2018, uncorrected transcript, p 35.

¹³⁸ Mr Jim Betts, Chief Executive Officer, Infrastructure NSW, Evidence, 4 October 2018, uncorrected transcript, p 35.

2.109 Ms Abood added:

The EIS can proceed but this is about being very clear about the mechanism of how we would deal with that. Rather than having the EIS focus on the impediment we would like the EIS to focus on the merits of the proposal.¹³⁹

2.110 Mr Betts further indicated that, should the bill not proceed through the Parliament now, it would 'add significantly to the timeframe associated with the investment decision and delivery of the project and the flood mitigation benefit'.¹⁴⁰

2.111 Mr Betts stated to the committee that, due to the environmental sensitivities, a full public Environmental Impact Statement process will be undertaken before advice is put to government on the raising of the Warragamba Dam and an investment decision is made.¹⁴¹

Committee comment

2.112 The committee notes that the Water NSW Amendment (Warragamba Dam) Bill 2018 on its own does not provide the authority or the approval for the raising of the dam wall. Should the bill be passed by the Parliament, the Warragamba Dam project still requires planning and environmental approvals (both State and Commonwealth) before the NSW Government will make an investment decision based on the final business case for the project, which is planned for 2020.

2.113 The bill is a relatively small part of the preparations for the proposed Warragamba Dam project. It is also important to highlight that the proposed project does not involve permanent increased water storage and the temporary inundation of national park land is only intended to be used for flood mitigation purposes to increase evacuation times and save lives.

2.114 The committee understands the need for the bill to be considered by Parliament at this stage in the process, to enable decisions to be made on the project without there being a statutory bar in place therefore allowing the planning and environmental assessment processes to be appropriately considered. We note that if the bill was not to be passed this year there is the potential for significant delays, if the project was to proceed, in realising the flood mitigation benefits to the Hawkesbury-Nepean Valley community.

2.115 The committee therefore recommends that the Legislative Council proceed with debate on the Water NSW Amendment (Warragamba Dam) Bill 2018.

¹³⁹ Ms Maree Abood, Executive Director, Strategic Water Planning and Infrastructure, Infrastructure NSW, Evidence, 4 October 2018, uncorrected transcript, p 35.

¹⁴⁰ Mr Jim Betts, Chief Executive Officer, Infrastructure NSW, Evidence, 4 October 2018, uncorrected transcript, p 35.

¹⁴¹ Mr Jim Betts, Chief Executive Officer, Infrastructure NSW, Evidence, 4 October 2018, uncorrected transcript, p 38.

Recommendation 1

That the Legislative Council proceed with debate on the Water NSW Amendment (Warragamba Dam) Bill 2018.

Recommendation 2

That the NSW Government address the committee comments and recommendations contained in this report.

- 2.116** The committee acknowledges the stakeholder concerns raised in this inquiry. We note that the concerns predominantly related to the proposed project to raise the Warragamba Dam wall and were not confined to the provisions of the bill. However, it is clear that the bill is an important step in the consideration of the Warragamba Dam project.
- 2.117** The committee encourages the NSW Government to review the consultation processes incorporated in any planning approvals for the Warragamba Dam project and for the remainder of the Environmental Impact Statement process.
- 2.118** The committee also strongly encourages the NSW Government to allow for adequate time to be spent conducting survey mapping for Aboriginal heritage in the impacted areas. The committee heard that a significantly larger amount of time would be required to adequately survey the area in order for all Aboriginal heritage sites to be recorded. A more thorough and substantial heritage survey would benefit the Environmental Impact Statement and would provide more information for consideration during the later Warragamba Dam project approval assessment processes.
- 2.119** The committee also recommends that the NSW Government:
- review the consultation processes incorporated in any planning approvals for the Warragamba Dam project and for the remainder of the Environmental Impact Statement process; and
 - allow for adequate time to conduct survey mapping for Aboriginal heritage in the impacted areas.
-

Recommendation 3

That the NSW Government:

- review the consultation processes incorporated in any planning approvals for the Warragamba Dam project and for the remainder of the Environmental Impact Statement process; and
 - allow for adequate time to conduct survey mapping for Aboriginal heritage in the impacted areas.
-

Recommendation 4

That, in order to inform the current legislative debate, Infrastructure NSW should now release on a confidential basis to members of the Standing Committee on State Development, the source documents that sit behind the 'Resilient Valley, Resilient Communities' strategy and the Cost Benefit Analysis of the alternative measures that have been examined.

Recommendation 5

That the draft bill be amended to require the draft Environmental Management Plan to be put on public exhibition for 45 days, noting that this is required for any amendment to a Plan of Management under Part 5 of the *National Parks and Wildlife Act*.

Recommendation 6

That, in future, the Legislative Council consider referring bills prior to the conclusion of the second reading debate reply.

Recommendation 7

That the Legislative Council facilitate amendments to the Standing Orders and the operation of committees to allow members to submit 'Additional Comments' rather than a 'Dissenting statement', noting that this is an option available under the current Senate practice.

Appendix 1 Submissions

No.	Author
1	Mrs Doreen Lyon
2	Ms Fiona Bullivant
3	Ms Deborah Nash
4	Name suppressed
5	Professor Stuart Khan
6	Ms Joann Copeman
7	Mr John Ross
8	Dr Jamie Pittock
9	Greater Blue Mountains World Heritage Area Advisory Committee
10	Kazan and Taylor Brown
11	Name suppressed
12	Name suppressed
13	Name suppressed
14	Name suppressed
15	Mr Roger Lembit
16	Mrs Sharlene Smith
17	Mr Callan Lawrence
18	Mr Simon Gollan
19	Name suppressed
20	Name suppressed
21	Name suppressed
22	Name suppressed
23	Mr Thomas Madigan
24	Mr Stephen Curtain
25	Mrs Sue Gay
26	Mr Robert Anderson
27	Ms Trish Hill
28	Mrs Yvonne Fessler
29	Name suppressed
30	Mr John Berry
31	Dr Margaret Moussa

No.	Author
32	Blue Mountains City Council
33	Colong Foundation for Wilderness
34	National Parks Association of NSW
35	Name suppressed
36	Mrs Signe Westerberg
37	Nature Conservation Council of NSW
38	Confidential
39	Dr Jennifer Gill
40	Ms Maria Dunne
41	Ms Libby Hyett
42	Mr Joshua Gowers
43	Mr Peter Morris
44	Mr Peter Clark
45	Mr Bruce Grimston
46	Ms Shauna Pollard
47	Mr Roger Grealy
48	Mr Lachlan Penninkilampi
49	Name suppressed
50	Luise Gordon
51	Mr Joel Anderson
52	Ms Breanne McClafferty
53	Ms Sonia Bennett
54	Name suppressed
55	Mr Michael Daley
56	Mr Paul McCann
57	Ms Stephanie Knox
58	Mr Antony Lewis
59	Name suppressed
60	Name suppressed
61	Name suppressed
62	Name suppressed
63	Mrs Deborah Hallam
64	Name suppressed
65	Wollondilly Shire Council
66	Name suppressed

No.	Author
67	Name suppressed
68	Hawkesbury Nepean Flood Mitigation Action Committee
69	Ms Fiona Radford
70	Name suppressed
71	Mr Ross Crates et al
72	Gundungurra Aboriginal Heritage Association
73	Mr Michael Jackson
74	NSW Government
75	Insurance Council of Australia
76	Name suppressed
77	Ms Lynette Sinclair
78	Mr Timothy Overland
79	Mr Gregory Bell
80	Mr David Noble
81	Turf Producers Australia Limited (trading as Turf Australia)
82	Mr Julian Leatherdale
83	Mr John Inshaw
84	Name suppressed
85	Mr Ian Dinham
86	Mr Wayne Olling
87	Floodplain Management Australia
88	Name suppressed
89	Ms Kerry Hewson
90	Mr Maurice Smith
91	Aboriginal Cultural Heritage Advisory Committee (ACHAC)
92	Mr Alan James
93	Blue Mountains Conservation Society
94	Ms Elizabeth Cameron
95	Mrs Marilyn Riedy
96	Mr John Boyle
97	Mr Graham Fry
98	Name suppressed
99	Mr Nick Baldas
100	Name suppressed
101	Mr Martin O'Reilly

No.	Author
102	Name suppressed
103	Name suppressed
104	Name suppressed
105	Name suppressed
106	Mr Rodney Edwards
107	Mrs Ilmiye Uluc
108	Public Service Association NSW
109	Hawkesbury City Council
110	The Hills Shire Council

Appendix 2 Witnesses at hearing

Date	Name	Position and Organisation
4 October 2018 Jubilee Room, Parliament House, Sydney	Mr Charles Mundine	Chairman, Tharawal Local Aboriginal Land Council
	Aunty Sharyn Halls	Gundungurra Elder, Gundungurra Aboriginal Heritage Association Incorporated
	Ms Kazan Brown	Traditional owner
	Ms Taylor Clarke	Traditional owner
	Mr Michael Jackson	Archaeologist
	Mr Keith Muir	Executive Director, Colong Foundation
	Ms Alix Goodwin	Chief Executive Officer, National Parks Association
	Mr Roger Lembit	Principal Ecologist, Gingra Ecological Surveys
	Mr Kim De Govrik	Former Kanangra-Boyd National Park Area Manager
	Hon Bob Debus AM	
	Professor Stuart Khan	Professor, School of Civil & Environmental Engineering, University of New South Wales
	Mr Ross Crates	Postdoctoral researcher, Fenner School, Australian National University
	Dr Margaret Moussa	Lecturer, School of Business, Western Sydney University
	Mr Jim Betts	Chief Executive Officer, Infrastructure NSW
Ms Maree Abood	Executive Director, Strategic Water Planning & Infrastructure, Infrastructure NSW	
Mr Peter Cinque	Manager Business Support Services, NSW SES Metro Zone	

Date	Name	Position and Organisation
	Mr Brett Whitworth	A/Deputy Secretary Planning & Design, Department of Planning and Environment
	Mr Colin Langford	Director North West Precinct, Sydney Division, Roads and Maritime Services
	Mr Andrew George	Executive Manager Asset Solutions and Delivery, Water NSW

Appendix 3 Minutes

Minutes no. 43

Wednesday 26 September 2018

Standing Committee on State Development

Members' Lounge, Parliament House, Sydney, 2.17 pm

1. Members present

Mr Martin, *Chair*

Mr Veitch, *Deputy Chair*

Mr Colless

Mr Graham

Mrs Maclaren-Jones

2. Apologies

Mr Green

3. Previous minutes

Resolved, on the motion of Mrs Maclaren-Jones: That draft minutes no. 42 be confirmed.

4. Correspondence

The committee noted the following items of correspondence:

Received

- 19 June 2018 – Letter from Mr Stephen Targett, Vice President, NSW Apiarists' Association, to secretariat, in relation to a clarification of the transcript of 1 June 2018 for the inquiry into the Provisions of the Forestry Legislation Bill 2018
- 26 September 2018 – Email from Mr Justin Field MLC to Chair, requesting to be a participating member for the inquiry into the Water NSW Amendment (Warragamba Dam) Amendment Bill 2018.

5. Inquiry into the Water NSW Amendment (Warragamba Dam) Bill 2018

5.1 Terms of reference

The committee noted that the potential referral on 26 September 2018 of the following terms of reference:

- That the Standing Committee on State Development inquire into and report on the Water NSW Amendment (Warragamba Dam) Bill 2018.
- That the committee report by 10 October 2018.

5.2 Proposed timeline

Resolved, on the motion of Mr Colless: That, on the House referring the bill to the committee, the committee commence this inquiry and adopt the following timeline for the administration of the inquiry:

- Thursday 4 October 2018 – hearing from 12.00 pm – 5.00 pm
- Monday 8 October 2018 – Chair's report circulated to committee
- Monday 8 October 2018 – report deliberative at 2.00 pm
- Wednesday 10 October 2018 – table report in accordance with resolution of the House.

5.3 Closing date for submissions

Resolved, on the motion of Mr Colless: That the closing date for submissions be 4.00 pm, Wednesday 3 October 2018.

5.4 Stakeholder and witness list

Resolved, on the motion of Mr Colless: That the following list of stakeholders be invited to make a submission and be invited to appear as witnesses at the hearing on Thursday 4 October 2018, and that members have until 4.00pm today to provide additional stakeholders:

- Gundungurra Traditional Owners
- Deerubbin Local Aboriginal Land Council
- Tharawal Local Aboriginal Land Council
- Colong Foundation
- Nature Conservation Council
- Penrith City Council,
- Hawkesbury City Council
- Hills Shire Council
- Office of Environment and Heritage
- Water NSW
- Infrastructure NSW.

5.5 Advertising

The committee noted that this inquiry will be advertised via Twitter, Facebook, stakeholder letters and a media release distributed to all media outlets in New South Wales.

5.6 Conduct of the inquiry

Resolved, on the motion of Mr Graham: That there be no questions on notice taken at the public hearing to be held on 4 October 2018 or supplementary questions from members.

The committee noted that due to the short time frame of the inquiry, the report consist of a few pages outlining stakeholder views, the government's response to these views and a brief committee comment.

5.7 Participating members

Resolved on the motion of Mr Veitch: That Mr Field, who has advised the committee that he intends to participate for the duration of the inquiry into Water NSW Amendment (Warragamba Dam) Bill, and Mr Shayne Mallard, be provided with copies of meeting papers and unpublished submissions.

6. Adjournment

The committee adjourned at 2.28 pm until Thursday 4 October 2018, Jubilee Room, Parliament House (Water NSW Amendment (Warragamba Dam) Bill 2018 public hearing).

Rebecca Main
Committee Clerk

Minutes no. 44

Thursday 4 October 2018

Standing Committee on State Development

Jubilee Room, Parliament House, Sydney, 12.30 pm

1. Members presentMr Martin, *Chair*Mr Veitch, *Deputy Chair*

Mr Colless

Mr Graham

Mr Field (participating from 12.31 pm)

Mrs Maclaren-Jones (from 12.31 pm to 4.44 pm)

Mr Mallard (participating from 12.32 pm to 1.32 pm)

Ms Sharpe (participating)

2. Apologies

Mr Green

3. Inquiry into the Water NSW Amendment (Warragamba Dam) Bill 2018**3.1 Partially confidential submissions*****Submission to be considered for partial confidentiality (at the author's request)***

Resolved, on the motion of Mr Veitch: That the committee authorise the publication of submission no. 73 with the exception of sensitive information, which is to remain confidential, as per the request of the author.

3.2 Public hearing

Witnesses, the public and the media were admitted.

The Chair made an opening statement regarding the broadcasting of proceedings and other matters.

The following witnesses were sworn and examined:

- Mr Charles Mundine, Chairman, Tharawal Local Aboriginal Land Council
- Aunty Sharyn Halls, Gundungurra Elder, Gundungurra Aboriginal Heritage Association Incorporated
- Ms Kazan Brown, Traditional owner
- Ms Taylor Clarke, Traditional owner
- Mr Michael Jackson, Archaeologist.

The evidence concluded and the witnesses withdrew.

The following witnesses were sworn and examined:

- Mr Keith Muir, Executive Director, Colong Foundation
- Ms Alix Goodwin, Chief Executive Officer, National Parks Association
- Mr Roger Lembit, Principal Ecologist, Gingra Ecological Surveys
- Mr Kim De Govrik, Former Kanangra-Boyd National Park Area Manager.

The evidence concluded and the witnesses withdrew.

Mr Mallard left the meeting.

The following witnesses were sworn and examined:

- Hon Bob Debus AM
- Prof Stuart Khan, Professor, School of Civil & Environmental Engineering, University of New South Wales

- Mr Ross Crates, Postdoctoral researcher, Fenner School, Australian National University
- Dr Margaret Moussa, Lecturer, School of Business, Western Sydney University.

The evidence concluded and the witnesses withdrew.

The following witnesses were sworn and examined:

- Mr Jim Betts, Chief Executive Officer, Infrastructure NSW
- Ms Maree Abood, Executive Director, Strategic Water Planning & Infrastructure, Infrastructure NSW
- Mr Peter Cinque, Manager Business Support Services, NSW SES Metro Zone
- Mr Brett Whitworth, A/Deputy Secretary Planning & Design, Department of Planning and Environment
- Mr Colin Langford, Director North West Precinct, Sydney Division, Roads and Maritime Services
- Mr Andrew George, Executive Manager Asset Solutions and Delivery, Water NSW.

Mrs Maclaren-Jones left the meeting.

The evidence concluded and the witnesses withdrew.

The public hearing concluded at 5.01 pm.

4. **Draft minutes**

Resolved, on the motion of Mr Veitch: That draft minutes no. 43 be confirmed.

5. **Correspondence**

The committee noted the following items of correspondence:

Received

- 26 September 2018 – Email from the Hon Shayne Mallard MLC, to secretariat, requesting to participate in the inquiry into the Water NSW Amendment (Warragamba Dam) Bill 2018
- 27 September 2018 – Email from Mr Wayne Mitchell, Executive Manager Environment & City Development, Penrith City Council, to the secretariat, declining invitation to appear as witness at hearing on 4 October 2018
- 27 September 2018 – Email from Dr Jamie Pittock, to the secretariat, declining invitation to appear as witness at hearing on 4 October 2018
- 28 September 2018 – Email from Mr Sam Kidman, Director Ministerial Services, Office of Environment and Heritage, to the secretariat, declining invitation to appear as a witness at the hearing on 4 October 2018
- 28 September 2018 – Email from Ms Cerin Loane, Policy and Research Coordinator, Natura Conservation Council of NSW, to the secretariat, declining invitation to appear as a witness at the hearing on 4 October 2018
- 28 September 2018 – Email from Mr Tim Meaker, Principal Coordinator - Stormwater & Waterways, Hills Shire Council, to the secretariat, declining invitation to appear as a witness at the hearing on 4 October 2018
- 28 September 2018 – Email from Dr Margaret Moussa, Lecturer, School of Business, Western Sydney University, to the secretariat, requesting to appear as a witness at the hearing on 4 October 2018
- 1 October 2018 – Email from Mr Michael Jackson, archaeologist, to secretariat, requesting to appear as a witness at the hearing on 4 October 2018
- 3 October 2018 – Email from Ms Robyn Felsch, Hawkesbury Shire Council, to the secretariat, declining the invitation to appear as a witness at the hearing on 4 October 2018
- 3 October 2018 – Email from Gary Caganoff, independent filmmaker, to the secretariat, requesting to film the 4 October hearing
- 3 October 2018 – Email from the Hon Penny Sharpe's office requesting to attend the hearing as a participating member.

- 4 October 2018 – Email from Mr Michael Jackson, to the secretariat, requesting parts of his submission be kept confidential.

6. Submissions for inquiry Water NSW Amendment (Warragamba Dam) Bill 2018

6.1 Public submissions

The committee noted that the following submissions were published by the committee clerk under the authorisation of the resolution appointing the committee: submission nos. 1-3, 5-10, 15-18, 23-28, 30-34, 36-48, 50-53, 55-58, 63, 65, 68-69, 71-75, 77-83, 85-87, 89-97, 99, 101 and 106-110.

6.2 Partially confidential submissions

Name suppressed submissions

Resolved, on the motion of Mr Colless: That the committee authorise the publication of submission nos. 4, 11-14, 19-22, 29, 35, 49, 54, 59-62, 64, 66-67, 70, 76, 84, 88, 98, 100 and 102-105 with the exception of the author's name, which is to remain confidential, as per the request of the author.

6.3 Confidential submissions

Resolved, on the motion of Mr Veitch: That the committee keep submission no. 38 confidential, as per the request of the author.

7. Participating members

Resolved, on the motion of Mr Veitch: That, Mr Field, Ms Sharpe and Mr Mallard be provided with a copy of the confidential Chair's draft report for participation in the report deliberative.

8. Adjournment

The committee adjourned at 5.04 pm until Monday 8 October 2018, McKell Room, Parliament House (Water NSW Amendment (Warragamba Dam) Bill 2018 Inquiry report deliberative).

Rebecca Main
Committee Clerk

Draft minutes no. 45

Monday 8 October 2018
Standing Committee on State Development
McKell Room, Parliament House, Sydney, 2.02 pm

1. Members present

Mr Martin, Chair
Mr Veitch, Deputy Chair
Mr Colless
Mr Graham
Mr Green
Mrs Maclaren-Jones
Ms Sharpe (participating)

2. Apologies

Mr Field (participating)
Mr Mallard (participating)

3. Draft minutes

Resolved, on the motion of Mr Veitch: That draft minutes no. 44 be confirmed.

4. Correspondence

The committee noted the following item of correspondence:

Received:

- 5 October 2018 – Letter from Mr Jim Betts, CEO of Infrastructure NSW, to the Chair, clarifying a point made at the hearing on the Environmental Management Plan provisions in the Bill.

5. Inquiry into the Water NSW Amendment (Warragamba Dam) Bill 2018

5.1 Consideration of Chair's draft report

The Chair submitted his draft report entitled *Water NSW Amendment (Warragamba Dam) Bill 2018*, which having been previously circulated, was taken as being read.

Resolved, on the motion of Mr Graham: That the following sentence and footnote be inserted at the end of paragraph 2.6:

'These numbers would increase further under the planned development of the floodplain. The Strategy indicates that by 2041, the impacts of an 1867-like flood would be \$7 billion in damages and 158,000-171,000 people needing evacuation.

[FOOTNOTE: 'Resilient Valley, Resilient Communities: the Hawkesbury Nepean Valley Flood Risk Management Strategy', Infrastructure NSW, 2017, p.14.]'

Resolved, on the motion of Mr Graham: That the following paragraph and footnote be inserted after paragraph 2.7:

'The Strategy indicates that 'The Hawkesbury-Nepean Valley is changing from a semi-rural landscape to an urbanised floodplain, and includes parts of Greater Sydney's rapidly growing North West Growth sector. Up to 134,000 people live and work on the floodplain and could require evacuation. This number is forecast to double over the next 30 years.'

[FOOTNOTE: 'Resilient Valley, Resilient Communities: the Hawkesbury Nepean Valley Flood Risk Management Strategy', Infrastructure NSW, 2017, p.19.]'

Resolved, on the motion of Mr Graham: That the following paragraph and footnote be inserted after the new paragraph above:

'These forecasts were based on information from the NSW Department of Planning and Environment, Bureau of Transport Statistics (BTS, part of Transport for NSW), local councils, NSW Land and Property Information and the Australian Bureau of Statistics. The Strategy went on to say 'The Taskforce assumed that the identified potential urban development would largely occur by 2041.'

[FOOTNOTE: 'Resilient Valley, Resilient Communities: the Hawkesbury Nepean Valley Flood Risk Management Strategy', Infrastructure NSW, 2017, p.9.]'

Resolved, on the motion of Mr Graham: That the following paragraph and footnote be inserted after paragraph 2.23:

'Mr Peter Cinque, Manager, Business Support Services, NSW State Emergency Service, Metro Zone gave the following evidence:

I think it would be fair to say that we would rather see not more people exposed to risk. That is a community-government decision to balance up all the risks in the area. It is true that as the evacuation problem increases, the complexity will increase. It will be harder to execute.

[FOOTNOTE: Mr Peter Cinque, Manager, Business Support Services, NSW State Emergency Service, Metro Zone, Evidence, 4 October 2018, uncorrected transcript, p 39.]'

Resolved, on the motion of Mr Graham: That the following paragraph and footnote be inserted after paragraph 2.70:

'The National Parks Association of NSW submission stated:

The area of land proposed for inundation is World Heritage-listed, gazetted as a National Park, declared as wilderness, contains a declared wild river and has National Heritage status.

[FOOTNOTE: Submission 34, National Parks Association of NSW, p 1.]

Resolved, on the motion of Mr Graham: That the following paragraph and footnote be inserted after paragraph 2.75:

'The National Parks Association of NSW submission stated:

The amendments put the Australian Government at risk of contravening the World Heritage Convention which requires the protection and management of their values sustained or enhanced over time. The amendments allow actions that are likely to see the Greater Blue Mountains World Heritage Area placed on the World Heritage in Danger List.

[FOOTNOTE: Submission 34, National Parks Association of NSW, p 3.]

Mr Graham moved: That the following paragraph be inserted after paragraph 2.60:

'Mr Jackson added:

If you raise the body of water up into proximity of some of these places, you are increasing the evaporation of water onto them. You only have to walk around Warragamba Dam and see the sandstone in that area that is close to the water, rock shelters that should have rock art. The rock has just been eaten up by the proximity of the water. It is not even water coming through the rock; it is the evaporation. In a 14-metre flood, that is actually what you are increasing.

[FOOTNOTE: Mr Michael Jackson, Evidence, 4 October 2018, uncorrected transcript, p11.]

Question put.

The committee divided.

Ayes: Mr Graham, Mr Veitch.

Noes: Mr Colless, Mr Green, Mrs Maclaren-Jones, Mr Martin.

Question resolved in the negative.

Resolved, on the motion of Mr Graham: That the following paragraph and footnotes be inserted after paragraph 2.100:

'When questioned about whether the bill was required for an Environmental Impact Statement to proceed, the Government witnesses gave the following response Mr Betts indicated:

No, the bill is not strictly required for an EIS to proceed. However, it would be very difficult for the planning process to reach a culmination if the planning Minister were confronted with a decision which involved approving a project to raise the dam where the dam could not be operated because a statutory bar was in place. My understanding is it would significantly complicate the process.

Ms Abood added:

The EIS can proceed but this is about being very clear about the mechanism of how we would deal with that. Rather than having the EIS focus on the impediment we would like the EIS to focus on the merits of the proposal.'

[FOOTNOTES: Mr Jim Betts, Evidence, 4 October 2018, uncorrected transcript, p35 and Ms Maree Abood, Evidence, 4 October 2018, uncorrected transcript, p35.]

Mr Graham moved: That paragraph 2.105 be omitted and the following paragraph be inserted instead:

'The committee notes that the CEO of Infrastructure NSW gave evidence that the bill was not required to progress that EIS but that it was the preference of the agencies and it would be easier for the Planning Minister.'

Question put.

The committee divided.

Ayes: Mr Graham, Mr Veitch.

Noes: Mr Colless, Mr Green, Mrs Maclaren-Jones, Mr Martin.

Question resolved in the negative.

Mr Graham moved: That the paragraph 2.104 be amended by omitting the second sentence:

'It is also important to highlight that the proposed project does not involve permanent increased water storage and the temporary inundation of national park land is only intended to be used for flood mitigation purposes to increase evacuation times and save lives.'

Question put.

The committee divided.

Ayes: Mr Graham, Mr Veitch.

Noes: Mr Colless, Mr Green, Mrs Maclaren-Jones, Mr Martin.

Question resolved in the negative.

Mr Graham moved: That paragraph 2.105 be omitted:

'The committee understands the need for the bill to be considered by Parliament at this stage in the process, to enable decisions to be made on the project without there being a statutory bar in place therefore allowing the planning and environmental assessment processes to be appropriately considered. We note that if the bill was not to be passed this year there is the potential for significant delays, if the project was to proceed, in realising the flood mitigation benefits to the Hawkesbury-Nepean Valley community.'

Question put.

The committee divided.

Ayes: Mr Graham, Mr Veitch.

Noes: Mr Colless, Mr Green, Mrs Maclaren-Jones, Mr Martin.

Question resolved in the negative.

Resolved, on the motion of Mrs Maclaren-Jones: That Recommendation 1 be amended by omitting the word 'pass' and inserting instead 'proceed with debate on'.

Mr Graham moved: That Recommendation 1 be omitted and inserting instead:

'Recommendation 1

That the Legislative Council not proceed to debate the Water NSW Amendment (Warragamba Dam) Bill 2018.'

Question put.

The committee divided.

Ayes: Mr Graham, Mr Veitch.

Noes: Mr Colless, Mr Green, Mrs Maclaren-Jones, Mr Martin.

Question resolved in the negative.

Resolved, on the motion of Mr Graham: That the following new recommendation be inserted after Recommendation 1:

'Recommendation X

That the NSW Government address the committee comments and recommendations contained in this report.'

Resolved, on the motion of Mr Graham: That paragraphs 2.108, 2.110 and Recommendation 2 be amended by omitting the words 'consider reviewing' and inserting instead 'review'.

Resolved, on the motion of Mr Graham: That paragraphs 2.109, 2.110 and Recommendation 2 be amended by omitting the words 'more time' and inserting instead 'adequate time'.

Resolved, on the motion of Mr Graham: That the following new Recommendation be inserted after Recommendation 2:

'Recommendation X

That, in order to inform the current legislative debate, Infrastructure NSW should now release on a confidential basis to members of the Standing Committee on State Development, the source documents that sit behind the 'Resilient Valley, Resilient Communities' strategy and the Cost Benefit Analysis of the alternative measures that have been examined.'

Mr Veitch moved: That a new Recommendation be inserted after Recommendation 2:

'Recommendation X

That prior to the bill proceeding the source documents used for the modelling in 'Resilient Valley, Resilient Communities' be released publicly.'

Question put.

The committee divided.

Ayes: Mr Graham, Mr Veitch.

Noes: Mr Colless, Mr Green, Mrs Maclaren-Jones, Mr Martin.

Question resolved in the negative.

Resolved, on the motion of Mr Veitch: That the following paragraph and footnotes be inserted after paragraph 2.26:

'In response to a question at the hearing about possible assumptions made regarding population growth on the flood plain, Mr Jim Betts, Chief Executive Officer, Infrastructure NSW, informed the committee:

When we were undertaking the analysis for the strategy we started off with an analysis of what population growth could occur in the valley under land use settings as they currently existed with a view to testing out the exposures that created and the risks that created for the community. The upshot was a combination of infrastructure responses, like the road upgrades that Mr Langford has described and like the raising of the Warragamba Dam, and non-infrastructure responses, critical among them being the tightening of the planning controls that Mr Whitworth has described. For the first time, because of the work that Ms Abood and her team have done, we have a proper understanding of flood risk in the valley and are able to build that into land use planning decisions. Successive governments on both sides of politics have allowed development to occur in the valley without taking account of the significant life and property risks associated with flooding and we are now dealing with that.

In response to a question about whether he was comfortable for the population in the Hawkesbury-Nepean Valley to potentially double, Mr Betts replied:

I think Mr Whitworth has adequately answered that question. Clearly, growth on that scale cannot occur given what we now know about the flood risks in the valley and the planning system will be adapted to reflect that flood risk information...

[FOOTNOTE: Mr Jim Betts, Evidence, 4 October 2018, uncorrected transcript, p 49.]'

Mr Graham, moved: That the following paragraph be inserted in the Committee comment section:

'Accordingly the committee expresses its concern with the assumption in the 'Resilient Valleys, Resilient Communities' Strategy that population on the floodplain will double, and emphasises the importance of Outcome 3 of the Strategy 'Strategic and Integrated land use and road planning' being directed to decrease that development.'

Question put.

The committee divided.

Ayes: Mr Graham, Mr Veitch.

Noes: Mr Colless, Mr Green, Mrs Maclaren-Jones, Mr Martin.

Question resolved in the negative.

Mr Graham, moved: That a new Recommendation be inserted after Recommendation 2:

'Recommendation X

That Outcome 3 of the Strategy 'Strategic and Integrated land use and road planning' is directed to ensure that the population living and working on the floodplain is not permitted to double.'

Question put.

The committee divided.

Ayes: Mr Graham, Mr Veitch.

Noes: Mr Colless, Mr Green, Mrs Maclaren-Jones, Mr Martin.

Question resolved in the negative.

Resolved, on the motion of Mr Veitch: That the following new recommendation be inserted after Recommendation 2:

'Recommendation X

That the draft bill be amended to require the draft Environmental Management Plan to be put on public exhibition for 45 days, noting that this is required for any amendment to a Plan of Management under Part 5 of the *National Parks and Wildlife Act*.'

Mr Veitch, moved: That a new Recommendation be inserted after Recommendation 2:

'Recommendation X

That the draft Bill be amended to require the draft Environmental Management Plan to define 'temporary inundation'.'

Question put.

The committee divided.

Ayes: Mr Graham, Mr Veitch.

Noes: Mr Colless, Mr Green, Mrs Maclaren-Jones, Mr Martin.

Question resolved in the negative.

Mr Veitch, moved: That a new Recommendation be inserted after Recommendation 2:

'Recommendation X

That the bill be amended to ensure that the preparation, consultation and operation of the Environment Management Plan by Water NSW is to be consistent with principles outlined in section 30E of the *National Parks and Wildlife Act*.'

Question put.

The committee divided.

Ayes: Mr Graham, Mr Veitch.

Noes: Mr Colless, Mr Green, Mrs Maclaren-Jones, Mr Martin.

Question resolved in the negative.

Resolved, on the motion of Mr Graham: That the following new Recommendation be inserted after Recommendation 2:

'Recommendation X

That, in future, the Legislative Council consider referring bills prior to the conclusion of the Second Reading debate reply.'

Resolved, on the motion of Mr Graham: That the following new Recommendation be inserted after the new Recommendation above:

'Recommendation X

That the Legislative Council facilitate amendments to the Standing Orders and the operation of committees to allow members to submit 'Additional Comments' rather than a 'Dissenting statement', noting that this is an option available under the current Senate practice.'

Resolved, on the motion of Mr Green: That:

- a) The draft report as amended be the report of the committee and that the committee present the report to the House;
- b) The transcripts of evidence, submissions and correspondence relating to the inquiry be tabled in the House with the report;
- c) Upon tabling, all unpublished attachments to submissions be kept confidential by the committee;
- d) Upon tabling, all unpublished transcripts of evidence, submissions and correspondence relating to the inquiry, be published by the committee, except for those documents kept confidential by resolution of the committee;
- e) Dissenting statements be provided to the secretariat by 12.00pm Tuesday 9 October 2018;
- f) The committee secretariat correct any typographical, grammatical and formatting errors prior to tabling;
- g) The committee secretariat be authorised to update any committee comments where necessary to reflect changes to recommendations or new recommendations resolved by the committee;
- h) That the report be tabled on Wednesday 10 October 2018.

6. Adjournment

The committee adjourned at 3.10 pm, *sine die*.

Rebecca Main
Committee Clerk

Appendix 4 Dissenting statement

The Hon Mick Veitch MLC, and the Hon John Graham MLC, Australian Labor Party

We welcome the opportunity to provide scrutiny for this Bill, along with our colleague the Hon Penny Sharpe MLC.

We note this scrutiny has occurred through the new Legislative Council process for the examination of bills. Once again, the committee process has shed new light on aspects of the Bill. We commend this process to the House.

When it comes to the detail of the Bill, we make the following observations.

Firstly, we are opposed to the urgency with which this Bill has proceeded. We do not support the recommendation to proceed to debate at this time. We do so following evidence to the Committee from the NSW Government agencies that this legislation is not required for the Environmental Impact Statement process to proceed. We accept that the Government agencies would prefer that the provisions of this Bill were in place, but we do not believe that the case has been made for urgent passage.

Secondly, we believe that the information on which the Government's strategy is based should be made public. We are supportive of the Committee recommendation that such information be released confidentially to members of the Committee. Such a step is fundamental to our confidence that we can acquit our roles as legislators. We would also support the public release of the source documents that sit behind the "Resilient Valley, Resilient Communities" Strategy and the Cost Benefit Analysis of the alternative measures that have been examined. We believe these would inform this important public debate.

Thirdly, the Committee received strong evidence of community concerns about overdevelopment on the floodplain. We remain concerned that the Government Flood Risk Management Strategy in 2017 leaves unchallenged the assumption that the population living and working on the flood plain will double. We believe it is crucial that Outcome 3 of the Strategy, "Strategic and Integrated land use and road planning" is directed to reducing that overdevelopment as a priority.

While we accept that this Bill is a small step in the significant approvals that would be needed to raise the Warragamba Dam wall, the Committee took evidence on the impact such a decision would have on Aboriginal cultural heritage and the environment. The evidence underlined the risk of permanent cultural and environmental damage from temporary inundation.

Finally, we would like to express our support on the two procedural matters on which the Committee reached agreement. In our view allowing members to submit 'Additional Comments' rather than a 'Dissenting statement' and ensuring that in future the Legislative Council consider referring bills prior to the conclusion of the Second Reading debate reply are measures that would strengthen this process. We commend the Committee's recommendations to the House.

While we do not support the passage of the Bill at this time, in our view this short inquiry process has strengthened the ability of the House to fulfil its obligations as a House of review.

