

First print



New South Wales

Survey (Geocentric Datum of Australia) Bill 1999

Explanatory note

This explanatory note relates to this Bill as introduced into Parliament.

Overview of Bill

The object of this Bill is to define the Geocentric Datum of Australia (or GDA). GDA is a new mathematical model of the surface of the earth for use in computing co-ordinates of latitude and longitude and in map projections.

The mathematical model in use at present in Australia (the Australian Geodetic Datum, or AGD) was designed to fit the Australian region. GDA is designed to fit the whole Earth.

Outline of provisions

Part 1 Preliminary

Clause 1 sets out the name (also called the short title) of the proposed Act.

Clause 2 provides for the commencement of the proposed Act on a day or days to be appointed by proclamation.

Clause 3 makes it clear that notes in the text of the proposed Act do not form part of the Act.

Part 2 Geocentric Datum of Australia

Clause 4 defines the Geocentric Datum of Australia. The clause also empowers the Surveyor-General to amend or replace the Datum from time to time, and to specify (and amend or replace) systems to be used in map projections in connection with the Datum.

Part 3 Miscellaneous

Clause 5 sets out the general regulation-making power under the proposed Act.

Clause 6 gives effect to the Schedule of savings, transitional and other provisions.

Clause 7 gives effect to the Schedule of amendments to other Acts.

Schedules

Schedule 1 permits the making of regulations of a savings and transitional nature consequent on the enactment of the proposed Act and the amendment or replacement of the Geocentric Datum of Australia and associated map projection systems.

Schedule 2 amends the *Mining Act 1992*, the *Petroleum (Onshore) Act 1991*, the *Petroleum (Submerged Lands) Act 1982* and the *Survey Co-ordination Act 1949* in relation to the Geocentric Datum of Australia.

The *Mining Act 1992*, the *Petroleum (Onshore) Act 1991* and the *Petroleum (Submerged Lands) Act 1982* all currently require the position on the surface of the Earth of a point, line or area to be determined by reference to the Australian Geodetic Datum. Those Acts are amended to require, instead, that the position be determined by reference to the Geocentric Datum of Australia.

The proposed savings and transitional provisions specify that certain licences, leases and permits granted under those Acts (and applications for those licences, leases and permits) apply to areas of land determined by reference to the Geocentric Datum of Australia rather than the Australian Geodetic Datum (which was used to determine the land at the time of the grant of (or application for) the licence, lease or permit concerned). The effect of those provisions is to "move" the land the subject of the licences, leases, permits and applications by about 150 to 200 metres to the south-west. However, provision is made for the restoration of land lost from the area to which the licence, lease or permit previously applied if the holder satisfies the Minister for Mineral Resources that, before the loss of that land, significant evidence of valuable mineral or petroleum deposits (as the case may be) existed in relation to it.

The *Survey Co-ordination Act 1949* is amended so as to require surveys carried out on behalf of public authorities (other than those carried out in accordance with the *Surveyors Act 1929*) to be carried out by reference to the Geocentric Datum of Australia.



New South Wales

Survey (Geocentric Datum of Australia) Bill 1999

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New South Wales

Survey (Geocentric Datum of Australia) Bill 1999

No. , 1999

A Bill for

An Act to define the Geocentric Datum of Australia; to amend certain other Acts in relation to that Datum; and for other purposes.

Clause 1 Survey (Geocentric Datum of Australia) Bill 1999

Part 1 Preliminary

The Legislature of New South Wales enacts:	1
Part 1 Preliminary	2
1 Name of Act	3
This Act is the <i>Survey (Geocentric Datum of Australia) Act 1999</i> .	4
2 Commencement	5
This Act commences on a day or days to be appointed by proclamation.	6 7
3 Notes	8
Notes included in this Act are explanatory notes and do not form part of this Act.	9 10

Part 2 Geocentric Datum of Australia

4 What is the Geocentric Datum of Australia?

- (1) The Geocentric Datum of Australia is the datum contained in the notice of the Office of Surveyor General published in Gazette No 88 of 8 August 1997 at pages 6127 and 6128 and designated "The Geocentric Datum of Australia (GDA)", as amended or replaced from time to time in accordance with this section.
- (2) The Surveyor-General may, from time to time, by notice published in the Gazette:
 - (a) amend or replace the Geocentric Datum of Australia, and
 - (b) specify, and amend or replace, systems that may be used in map projections in connection with that Datum.
- (3) Any such notice takes effect on the date of its publication or, if a later date is specified in the notice, on the later date.

Clause 5 Survey (Geocentric Datum of Australia) Bill 1999

Part 3 Miscellaneous

Part 3 Miscellaneous

5 Regulations

The Governor may make regulations, not inconsistent with this Act, for or with respect to any matter that by this Act is required or permitted to be prescribed or that is necessary or convenient to be prescribed for carrying out or giving effect to this Act.

6 Savings, transitional and other provisions

Schedule 1 has effect.

7 Amendment of other Acts

The Acts set out in Schedule 2 are amended as specified in that Schedule.

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Schedule 1 Savings, transitional and other provisions

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(Section 6)	3
1 Regulations	4
(1) The regulations may contain provisions of a savings or transitional nature consequent on:	5
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(a) the publication by the Surveyor-General of a notice under section 4 (2), or	7
	8
(b) the enactment of the following Acts:	9
this Act	10
(2) Any such provision may, if the regulations so provide, take effect from the date of publication of the notice under section 4 (2) or the date of assent to the Act concerned (as the case may be), or a later date.	11
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(3) To the extent to which any such provision takes effect from a date that is earlier than the date of its publication in the Gazette, the provision does not operate so as:	14
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(a) to affect, in a manner prejudicial to any person (other than the State or an authority of the State), the rights of that person existing before the date of its publication, or	17
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	19
(b) to impose liabilities on any person (other than the State or an authority of the State) in respect of anything done or omitted to be done before the date of its publication.	20
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Schedule 2	Amendment of other Acts	1
		2
	(Section 7)	3
2.1	Mining Act 1992 No 29	4
		5
[1]	Section 371	6
	Omit the section. Insert instead:	7
		8
	371 Points to be ascertained by reference to Geocentric Datum of Australia	9
		10
	The position on the surface of the Earth of a point, line or area that is necessary to be determined for the purposes of this Act, or of any order, instrument or notification under this Act, is to be determined by reference to the Geocentric Datum of Australia referred to in section 4 of the <i>Survey (Geocentric Datum of Australia) Act 1999</i> .	11
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		16
[2]	Schedule 6 Savings, transitional and other provisions	17
		18
	Insert at the end of clause 1 (1):	19
	<i>Survey (Geocentric Datum of Australia) Act 1999</i>	20
[3]	Schedule 6, clause 1	21
		22
	Insert after clause 1 (1):	23
	(1A) The regulations may also contain provisions of a savings or transitional nature consequent on the publication by the Surveyor-General of a notice under section 4 (2) of the <i>Survey (Geocentric Datum of Australia) Act 1999</i> .	24
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[4]	Schedule 6, clause 1 (2)	28
		29
	Omit the subclause. Insert instead:	30
	(2) Any such provision may, if the regulations so provide, take effect from the date of assent to the Act concerned or the date of publication of the notice under section 4 (2) of the <i>Survey (Geocentric Datum of Australia) Act 1999</i> (as the case may be), or a later date.	31
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[5] Schedule 6	1
Insert in Schedule 6 (with appropriate Part and clause numbers):	2 3
Part Provisions consequent on enactment of Survey (Geocentric Datum of Australia) Act 1999	4 5
Definition	6
In this Part, the <i>amending Act</i> means the <i>Survey (Geocentric Datum of Australia) Act 1999</i> .	7 8
Boundaries of exploration licences	9
(1) On the commencement of this clause, an exploration licence that is in force applies to an area of land (in so far as a graticular section or unit referred to in section 370 is used to specify the area) determined in accordance with section 371 as repealed and re-enacted by the amending Act.	10 11 12 13 14
(2) To the extent that, by the operation of subclause (1), the area to which an exploration licence in force on the commencement of this clause applies would include:	15 16 17
(a) land outside New South Wales, or	18
(b) land the subject of an authority or a mineral claim, or	19
(c) land the subject of an application for an authority or a mineral claim that was made before the commencement of this clause, or	20 21 22
(d) any other land over which, according to the provisions of Part 3 or of any other Act or law, the grant of an exploration licence is prohibited,	23 24 25
that land is excluded from the area.	26
(3) Land that, by operation of subclause (2), is excluded from the area to which an exploration licence applies because it is the subject of an authority or a mineral claim becomes subject to the exploration licence:	27 28 29 30
(a) if the authority or mineral claim ceases to have effect in relation to that land, and	31 32
(b) if, when it does so, the land is not then subject to a further authority or mineral claim.	33 34

- (4) Land that, by operation of subclause (2), is excluded from the area to which an exploration licence applies because it is subject to a pending application for an authority or a mineral claim becomes subject to the exploration licence: 1
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3
4
- (a) if the application is subsequently refused or withdrawn, 5
 or 6
- (b) if, when the authority or a mineral claim is granted, the 7
 land does not become subject to the authority or claim. 8
- (5) On application made in writing, within 90 days after the commencement of this clause, by the holder of an exploration licence applying to an area from which any land has been excluded by the operation of subclause (1), the Minister, on being satisfied that, before the commencement of this clause, significant evidence of valuable mineral deposits existed in relation to the excluded land, may by order amend the licence so as to restore the whole or a specified part of the land excluded. 9
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- (6) An order may be made under subclause (5) even though the land restored would, but for the order, have been subject to another exploration licence. 18
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- (7) A person dissatisfied with the decision of the Minister on an application under this clause may appeal to a Warden's Court. In determining the appeal, the Court has all the functions of the Minister under this clause. 21
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- (8) No compensation is payable to any person for loss or damage arising from the operation of this clause. 25
26
- Applications for exploration licences** 27
- On the commencement of this clause, a pending application for an exploration licence applies to an area of land (in so far as a graticular section or unit referred to in section 370 is used to specify the area) determined in accordance with section 371 as repealed and re-enacted by the amending Act. 28
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Boundaries of assessment leases	1
(1) On the commencement of this clause, an assessment lease that is on foot applies to an area of land (in so far as a graticular section or unit referred to in section 370 is used to specify the area) determined in accordance with section 371 as repealed and re-enacted by the amending Act.	2 3 4 5 6
(2) To the extent that, by the operation of subclause (1), the area to which an assessment lease that is on foot applies would include:	7 8 9
(a) land outside New South Wales, or	10
(b) land the subject of an authority or a mineral claim, or	11
(c) land the subject of an application for an authority or a mineral claim that was made before the commencement of this clause, or	12 13 14
(d) any other land over which, according to the provisions of Part 4 or of any other Act or law, the grant of an assessment lease is prohibited,	15 16 17
that land is excluded from the area.	18
(3) On application made in writing, within 90 days after the commencement of this clause, by the holder of an assessment lease applying to an area from which any land has been excluded by the operation of subclause (1), the Minister, on being satisfied that, before the commencement of this clause, significant evidence of valuable mineral deposits existed in relation to the excluded land, may by order amend the lease so as to restore the whole or a specified part of the land excluded.	19 20 21 22 23 24 25 26
(4) An order may be made under subclause (3) even though the land restored would, but for the order, have been subject to another assessment lease.	27 28 29
(5) A person dissatisfied with the decision of the Minister on an application under this clause may appeal to a Warden's Court. In determining the appeal, the Court has all the functions of the Minister under this clause.	30 31 32 33
(6) No compensation is payable to any person for loss or damage arising from the operation of this clause.	34 35

Applications for assessment leases	1
On the commencement of this clause, a pending application for an assessment lease applies to an area of land (in so far as a graticular section or unit referred to in section 370 is used to specify the area) determined in accordance with section 371 as repealed and re-enacted by the amending Act.	2 3 4 5 6
2.2 Petroleum (Onshore) Act 1991 No 84	7 8
[1] Section 5	9
Omit the section. Insert instead:	10 11
5 Points to be ascertained by reference to Geocentric Datum of Australia	12 13
The position on the surface of the Earth of a point, line or area that is necessary to be determined for the purposes of this Act, or of any order, instrument or notification under this Act, is to be determined by reference to the Geocentric Datum of Australia referred to in section 4 of the <i>Survey (Geocentric Datum of Australia) Act 1999</i> .	14 15 16 17 18 19
[2] Schedule 1 Savings and transitional provisions	20
Omit clause 2 (1) and (2). Insert instead:	21 22
(1) The regulations may contain provisions of a savings or transitional nature consequent on:	23 24
(a) the publication by the Surveyor-General of a notice under section 4 (2) of the <i>Survey (Geocentric Datum of Australia) Act 1999</i> , or	25 26 27
(b) the enactment of the following Acts:	28
this Act	29
<i>Petroleum (Onshore) Amendment Act 1998</i>	30
<i>Native Title (New South Wales) Amendment Act 1998</i>	31
<i>Survey (Geocentric Datum of Australia) Act 1999</i>	32

(2) Any such provision may, if the regulations so provide, take effect from the date of publication of the notice under section 4 (2) of the <i>Survey (Geocentric Datum of Australia) Act 1999</i> or the date of assent to the Act concerned (as the case may be), or a later date.	1 2 3 4 5
[3] Schedule 1, Part 4	6
Insert after Part 3:	7 8
Part 4 Provisions consequent on enactment of Survey (Geocentric Datum of Australia) Act 1999	9 10 11
17 Definition	12
In this Part, the <i>amending Act</i> means the <i>Survey (Geocentric Datum of Australia) Act 1999</i> .	13 14
18 Boundaries of exploration licences	15
(1) On the commencement of this clause, an exploration licence that is in force applies to an area of land (in so far as a graticular section or unit referred to in section 4 is used to specify the area) determined in accordance with section 5 as repealed and re-enacted by the amending Act.	16 17 18 19 20
(2) To the extent that, by the operation of subclause (1), the area to which an exploration licence in force on the commencement of this clause applies would be taken to include:	21 22 23
(a) land outside New South Wales, or	24
(b) any land over which, according to the provisions of Part 3 or of any other Act or law, the grant of an exploration licence is prohibited,	25 26 27
the land is excluded from the area.	28

(3) On application made in writing, within 90 days after the commencement of this clause, by the holder of an exploration licence applying to an area from which any land has been excluded by the operation of subclause (1), the Minister, on being satisfied that, before the commencement of this clause, significant evidence of valuable petroleum deposits existed in relation to the excluded land, may by order amend the licence so as to restore the whole or a specified part of the land excluded.	1 2 3 4 5 6 7 8 9
(4) An order may be made under subclause (3) even though the land restored would, but for the order, have been subject to another exploration licence.	10 11 12
(5) A person dissatisfied with the decision of the Minister on an application under this clause may appeal to a Warden's Court. In determining the appeal, the Court has all the functions of the Minister under this clause.	13 14 15 16
(6) No compensation is payable to any person for loss or damage arising from the operation of this clause.	17 18
19 Applications for exploration licences	19
On the commencement of this clause, a pending application for an exploration licence applies to an area of land (in so far as a graticular section or unit referred to in section 4 is used to specify the area) determined in accordance with section 5 as repealed and re-enacted by the amending Act.	20 21 22 23 24
20 Applications for production leases	25
On the commencement of this clause, a pending application for a production lease applies to an area of land (in so far as a graticular section or unit referred to in section 4 is used to specify the area) determined in accordance with section 5 as repealed and re-enacted by the amending Act.	26 27 28 29 30

2.3 Petroleum (Submerged Lands) Act 1982 No 23	1
	2
[1] Section 7	3
Omit the section. Insert instead:	4
	5
7 Points and other matters to be ascertained by reference to Geocentric Datum of Australia	6
	7
The position on the surface of the Earth of a point, line or area that is necessary to be determined for the purposes of this Act, or of any order, instrument or notification under this Act, is to be determined by reference to the Geocentric Datum of Australia referred to in section 4 of the <i>Survey (Geocentric Datum of Australia) Act 1999</i> .	8
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	13
[2] Schedule 4 Savings, transitional and other provisions	14
Insert before clause 1:	15
	16
Part 1 Provisions consequent on enactment of Petroleum (Submerged Lands) Amendment Act 1986	17
	18
	19
[3] Schedule 4, Part 2	20
Insert after clause 1:	21
	22
Part 2 Provisions consequent on enactment of Survey (Geocentric Datum of Australia) Act 1999	23
	24
	25
2 Definition	26
In this Part, the <i>amending Act</i> means the <i>Survey (Geocentric Datum of Australia) Act 1999</i> .	27
	28

3 Regulations	1
(1) The regulations may contain provisions of a savings or transitional nature consequent on:	2
	3
(a) the publication by the Surveyor-General of a notice under section 4 (2) of the <i>Survey (Geocentric Datum of Australia) Act 1999</i> , or	4
	5
	6
(b) the enactment of the following Acts:	7
<i>Survey (Geocentric Datum of Australia) Act 1999</i>	8
(2) Any such provision may, if the regulations so provide, take effect from the date of publication of the notice under section 4 (2) of the <i>Survey (Geocentric Datum of Australia) Act 1999</i> or the date of assent to the Act concerned (as the case may be), or a later date.	9
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(3) To the extent to which any such provision takes effect from a date that is earlier than the date of its publication in the Gazette, the provision does not operate so as:	14
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(a) to affect, in a manner prejudicial to any person (other than the State or an authority of the State), the rights of that person existing before the date of its publication, or	17
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(b) to impose liabilities on any person (other than the State or an authority of the State) in respect of anything done or omitted to be done before the date of its publication.	20
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4 Boundaries of exploration permits	23
(1) On the commencement of this clause, an exploration permit that is in force applies to an area of land (in so far as a graticular section or unit referred to in section 18 is used to specify the area) determined in accordance with section 7 as repealed and re-enacted by the amending Act.	24
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(2) To the extent that, by the operation of subclause (1), the area to which an exploration permit in force on the commencement of this clause applies would be taken to include:	29
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(a) land outside New South Wales, or	32
(b) any land over which, according to the provisions of Part 4 or of any other Act or law, the grant of a permit is prohibited,	33
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the land is excluded from the area.	36

(3) On application made in writing, within 90 days after the commencement of this clause, by the holder of a permit applying to an area from which any land has been excluded by the operation of subclause (1), the Minister, on being satisfied that, before the commencement of this clause, significant evidence of valuable petroleum deposits existed in relation to the excluded land, may by order amend the permit so as to restore the whole or a specified part of the land excluded.	1 2 3 4 5 6 7 8
(4) An order may be made under subclause (3) even though the land restored would, but for the order, have been subject to another permit.	9 10 11
(5) A person dissatisfied with the decision of the Minister on an application under this clause may appeal to a Warden's Court. In determining the appeal, the Court has all the functions of the Minister under this clause.	12 13 14 15
(6) No compensation is payable to any person for loss or damage arising from the operation of this clause.	16 17
5 Applications for exploration permits	18
On the commencement of this clause, a pending application for an exploration licence applies to an area of land (in so far as a graticular section or unit referred to in section 18 is used to specify the area) determined in accordance with section 7 as repealed and re-enacted by the amending Act.	19 20 21 22 23
2.4 Survey Co-ordination Act 1949 No 27	24 25
Section 6 Certain powers of Surveyor-General in relation to proposed surveys	26 27
Insert after section 6 (3):	28 29
(4) A survey carried out by or on behalf of a public authority after the commencement of this subsection (other than a survey carried out in accordance with the <i>Surveyors Act 1929</i>) must be carried out by reference to the Geocentric Datum of Australia referred to in section 4 of the <i>Survey (Geocentric Datum of Australia) Act 1999</i> .	30 31 32 33 34 35 36

Survey (Geocentric Datum of Australia) Bill 1999

Notes

Note

The following is a copy of the notice of the Office of the Surveyor-General published in Gazette No 88 of 8 August 1997:

OFFICE OF SURVEYOR GENERAL
Department of Land and Water Conservation
Panorama Avenue (P.O. Box 143), Bathurst, N.S.W. 2795
Phone: (063) 335 204; Fax: (063) 322 320

The following notice supersedes the notice in the *New South Wales Government Gazette* No. 129 of 20 October 1995.

NEW GEODETIC DATUM FOR AUSTRALIA

The meeting of the Inter-governmental Committee on Surveying and Mapping held in Canberra on 28–29 November 1994, adopted the following new geodetic datum for Australia and recommended its progressive implementation Australia-wide by 1 January 2000:

Designation: The Geocentric Datum of Australia (GDA).

Reference Ellipsoid: Geodetic Reference System 1980 (GRS80) ellipsoid with a semi-major axis (a) of 6 378 137 metres exactly and an inverse flattening (1/f) of 298.257 222 101.

Reference Frame: The GDA is realised by the co-ordinates of the following Australian Fiducial Network (AFN) geodetic stations referred to the GRS80 ellipsoid determined within the International Earth Rotation Service Terrestrial Reference Frame 1992 (ITRF92) at the epoch of 1994.0:

No.	Name	Mark	South Latitude	East Longitude	Ellipsoidal Height
AU 012	Alice Springs	Pillar	23° 40' 12.44592''	133° 53' 07.84757''	603.358 metres
AU 013	Karratha	Pillar	20° 58' 53.17004''	117° 05' 49.87255''	109.246 metres
AU 014	Darwin	Pillar	12° 50' 37.35839''	131° 07' 57.84838''	125.197 metres
AU 015	Townsville	Pillar	19° 20' 50.42839''	146° 46' 30.79057''	587.077 metres
AU 016	Hobart	Pillar	42° 48' 16.98506''	147° 26' 19.43548''	41.126 metres
AU 017	Tidbinbilla	Pillar	35° 23' 57.15627''	148° 58' 47.98425''	665.440 metres
AU 019	Ceduna	Pillar	31° 52' 00.01664''	133° 48' 35.37527''	144.802 metres
AU 029	Yaragadee	Pillar	29° 02' 47.61687''	115° 20' 49.10049''	241.291 metres

The new datum was proclaimed in the *Commonwealth Gazette* No. GN 35 of 6 September 1995.

Notes

NEW SOUTH WALES

Within New South Wales, GDA is realised by the (GDA94) co-ordinates of the above AFN stations and the co-ordinates of the following Australian National Network (ANN) geodetic stations:

No.	Name	Mark	South Latitude	East Longitude	Ellipsoidal Height
7329	Barrington Zero Obelisk	Monument	28° 59' 56.69551''	145° 40' 07.63275''	172.774 metres
5933	Brunswick	Pillar	28° 31' 29.59007''	153° 32' 17.30597''	135.627 metres
6924	Bullanginya	Pillar	35° 47' 51.10212''	145° 33' 13.55344''	171.743 metres
5821	Crowdy	Pillar	31° 50' 36.58469''	152° 45' 12.34357''	84.270 metres
7273	Eden Breakwater	Pillar	37° 04' 27.40104''	149° 54' 28.50180''	17.326 metres
7374	Flag	PM	34° 27' 57.57857''	150° 51' 05.54610''	73.832 metres
2191	Gilgunnia	Pillar	32° 21' 35.60370''	145° 59' 27.58343''	544.369 metres
7235	Lake Littra	Monument	33° 55' 45.90840''	141° 00' 09.90541''	34.484 metres
5517	Mulley	Pillar	33° 25' 46.83164''	149° 34' 01.46525''	756.615 metres
3618	Olive NMC24	Trig Plug	29° 05' 16.66830''	141° 49' 02.71231''	323.838 metres
4224	Sundown	Pillar	31° 53' 57.29431''	141° 26' 59.62844''	408.792 metres
5196-4	Texas	Pillar	28° 51' 19.62316''	151° 12' 38.54610''	538.267 metres

The existing Australian Geodetic Datum (AGD), realised by the (AGD66) co-ordinates of the Johnston Geodetic Station and the national geodetic adjustment 1966 (referred to the Australian National Spheroid), will be maintained in parallel with the GDA until its full implementation on 1st January 2000.

