

# COMMONWEALTH OF AUSTRALIA

*National Measurement Act 1960 (Cth)*

## **Recognized-value standard of measurement of position 2012 (No.1)**

I, Dr Peter Thomas Holbrook FISK, Chief Metrologist, National Measurement Institute, make the following determination under paragraph 8A(1)(a) and revocation under subsection 8A(2) of the *National Measurement Act 1960 (Cth)* (the Act).

Dated 4 April 2012

**Peter Fisk.**

Dr P T H FISK, Chief Metrologist

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### **1. Revocation and Determination**

1.1. Under subsection 8A(2) of the Act, the determination *Recognized-value standard of measurement of position* made by the former National Standards Commission and dated 14 January 1998 is revoked.

1.2. Under paragraph 8A(1)(a) of the Act, the positions of the Australian Fiducial Network locations listed below and in the stated reference ellipsoid and reference frame, are recognized-value standards of measurement of the physical quantity position:

- 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 Geocentric Datum of Australia is realised by the coordinates of the following Australian Fiducial Network geodetic stations referred to the GRS80 ellipsoid determined within the International Earth Rotation Service Reference Frame 1992 (ITRF1992) at the epoch 1994.0:

Location (Identifier)	East Longitude			South Latitude			Elevation (from ellipsoid)
	°	'	''	°	'	''	
Adelaide (ADE1)	138°	38'	50.43453''	34°	43'	44.41404''	38.1293 m
Alice Springs (ALIC)	133°	53'	7.84785''	23°	40'	12.44602''	603.3466 m
Burnie (BUR1)	145°	54'	53.4412''	41°	3'	0.24611''	3.1531 m
Ceduna (CEDU)	133°	48'	35.37558''	31°	52'	0.01657''	144.8196 m
Cocos Island (COCO)	96°	50'	2.27360''	12°	11'	18.06739''	-35.2309 m
Darwin (DARW)	131°	7'	57.8479''	12°	50'	37.35864''	125.2124 m
Hobart (HOB2)	147°	26'	19.43574''	42°	48'	16.98538''	41.1389 m
Karratha (KARR)	117°	5'	49.87277''	20°	58'	53.16983''	109.2269 m
Macquarie Island (MAC1)	158°	56'	8.99643''	54°	29'	58.32845''	-6.7231 m
Melbourne (MOBS)	144°	58'	31.20646''	37°	49'	45.89904''	40.6710 m
New Norcia (NNOR)	116°	11'	33.76803''	31°	2'	55.46714''	234.8939 m
Parkes (PARK)	148°	15'	52.58905''	32°	59'	55.58175''	397.4436 m
Perth (PERT)	115°	53'	6.88639''	31°	48'	7.09686''	12.7697 m
Mount Stromlo (STR1)	149°	0'	36.17971''	35°	18'	55.93958''	800.0226 m
Mount Stromlo (STR2)	149°	0'	36.54756''	35°	18'	58.1991''	802.5632 m
Sydney (SYDN)	151°	9'	1.35691''	33°	46'	51.18426''	85.6781 m
Tidbinbilla (TIDB)	148°	58'	47.98444''	35°	23'	57.15619''	665.4232 m
Townsville (TOW2)	147°	3'	20.46531''	19°	16'	9.42824''	88.2292 m
Christmas Island (XMIS)	105°	41'	18.58058''	10°	26'	59.89868''	261.5892 m
Yarragadee (YAR1)	115°	20'	49.10002''	29°	2'	47.61682''	241.3533 m
Yarragadee (YARR)	115°	20'	49.08938''	29°	2'	47.74264''	241.4231 m

## **2. Name of determination**

This determination is the *Recognized-value standard of measurement of position 2012 (No.1)*.

## **3. Commencement**

This determination commences on the day after it is registered on the Federal Register of Legislative Instruments.

## **4. National Measurement Institute**

The National Measurement Institute is a Division of the Department of Industry, Innovation, Science, Research and Tertiary Education, established under section 17 of the Act, and located in Bradfield Road, West Lindfield, in the State of New South Wales.