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Using GDA2020 with CORS

Continuously Operating Reference Stations (CORS) in Australia can be used to define coordinates that are directly referenced to the Geocentric Datum of Australia 2020 (GDA2020) from the 9th of February 2019.

This means that on 9 February 2019, the coordinates used to fix CORS base stations across Australia will be changed from the existing GDA94 referenced coordinates to GDA2020 coordinates.

The coordinates define the station position of the CORS Global Navigation Satellite System (GNSS) monument with respect to the Geocentric Datum of Australia 2020, referred to the Geodetic Reference System 1980 ellipsoid being in the International Terrestrial Reference Frame 2014 at the epoch 2020.0 (00:00:00 on 1 January 2020).

CORS services are provided in Australia by NSW Spatial Services (CORSnet-NSW), Hexagon Geosystems (SmartNet), Position Partners (AllDayRTK), Surveyor-General Victoria (GPSnet), Trimble (VRS Now Australia), and Geoscience Australia (AUSCORS). CORS can also be accessed via authorised resellers.

Connection Details

After the changeover, all streams from Geoscience Australia via the AUSCORS caster that lie within the extents of GDA2020, will have GDA2020 mountpoints. CORSnet-NSW and GPSnet will provide both GDA2020 and GDA94 mountpoints for single basestations and/or network Real-Time Kinematic (RTK/NRTK) services. SmartNet, AllDayRTK and VRS Now Australia will provide GDA2020 and GDA94 mountpoints.

Within the RTCM 1006 Message Types, all CORS basestations will have GDA2020 coordinates, certified



Figure 1. The new CORS basestation near Nullarbor, South Australia.

under Regulation 13 under the National Measurement Act 1960.

What do you need to do?

On 9 February 2019 you will need to ensure that your GNSS receiver is set to the correct mountpoint for the service you are connecting to and for the datum you wish to use to reference your coordinates; either to continue with GDA94 or switch to GDA2020.

Further information

For further information on CORS services in Australia, please refer to the list below:

AUSCORS: www.auscors.ga.gov.au/

CORSnet-NSW: spatialservices.finance.nsw.gov.au/corsnet-nsw

GPSnet: gnss.vicpos.com.au/

SmartNet: hxgnsmartnet.com

AllDayRTK: www.alldayrtk.com.au

VRS Now Australia: vrsnow.com.au/

Information about the datum modernisation – including a simple explanatory animation, frequently asked questions, fact sheets, technical guidance and progress updates – is available on the ICSM website: www.icsm.gov.au

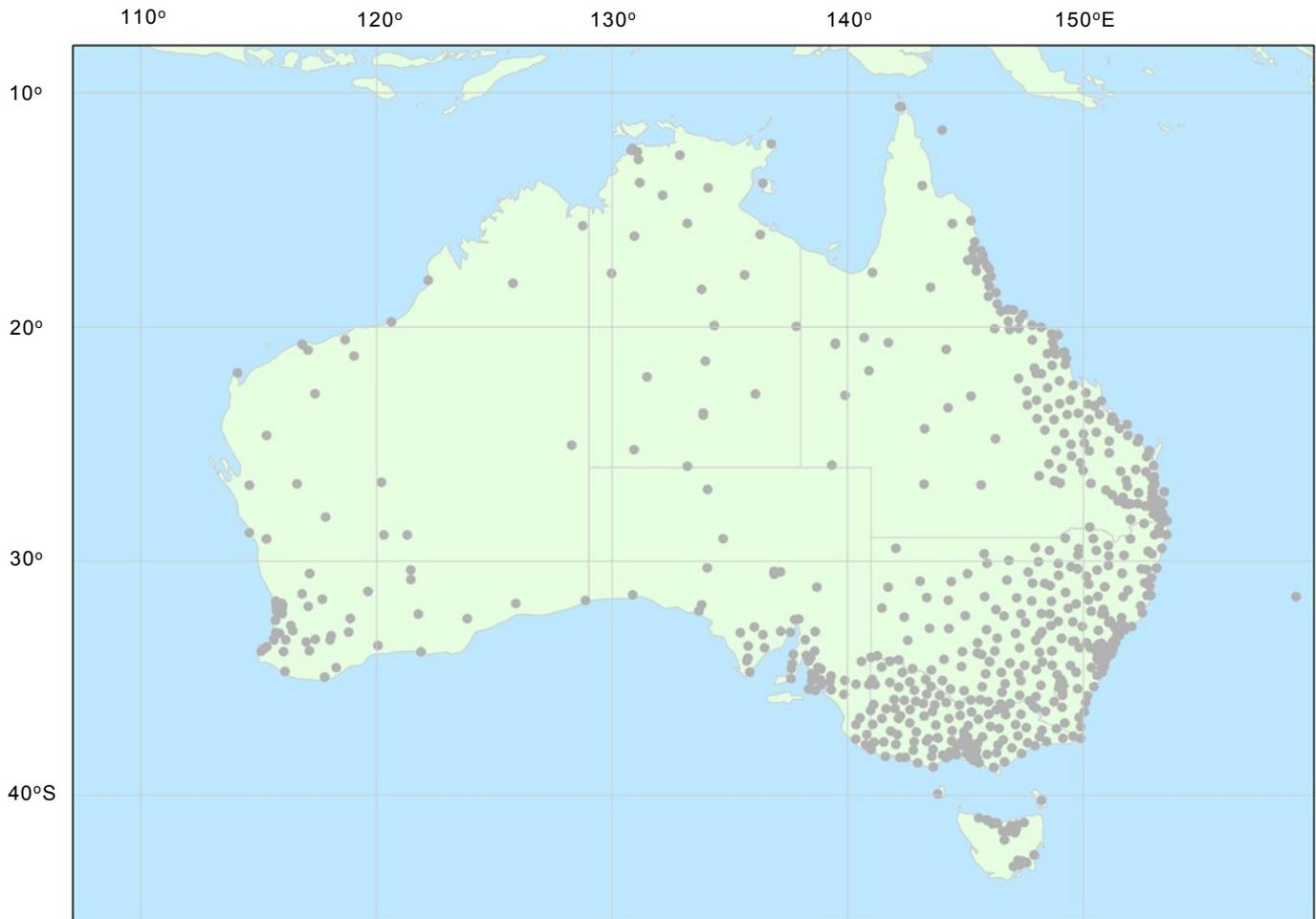


Figure 2. The location of Continuously Operating Reference Stations in Australia as at January 2019.