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| GDA2020: the official datum |
| Information to assist with transition to the new datum | | |

## GDA2020 background

The Geocentric Datum of Australia 2020 (GDA2020) and the Map Grid of Australia 2020 (MGA2020) are now the official datum and map projection for Australia. Surveyor-General Victoria (SGV) has led the implementation of GDA2020 in Victoria and is actively encouraging and supporting organisations in the transition of their spatial data and applications to the new national datum.

Since the implementation of the former Geocentric Datum of Australia 1994 (GDA94), the Australian tectonic plate has moved approximately 1.6m.  Consequently, the coordinates of features on maps based on GDA94 are no longer aligned with Global Navigation Satellite Systems (GNSS), such as GPS.  Differences of this magnitude become significant when it comes to applications that rely on accurate satellite positioning such as intelligent transport, precision agriculture and surveying.  To address this, Australia is modernising its national coordinate datum, which will ensure the nation benefits from advances in satellite positioning technology now and into the future.

GDA2020 was defined in Commonwealth legislation on 11 October 2017 as the Recognised Value-Standard of Measurement of Position for Australia, replacing the Geocentric Datum of Australia 1994 (GDA94).  This determination was by the Chief Metrologist, National Measurement Institute, under the *National Measurement Act 1960*, and is accessible from <https://www.legislation.gov.au/details/F2017L01352>.

On 1 November 2018, amendments to the Victorian surveying regulations took effect, specifying the requirement for cadastral surveys to align with GDA2020. The Survey Co-ordination Regulations 2014 and the Surveying (Cadastral Surveys) Regulations 2015 were both amended. The updated regulations are available from [http://www.legislation.vic.gov.au](http://www.legislation.vic.gov.au/).

Accordingly, the [*Victorian Cadastral Surveys Practice Directives*](https://www.propertyandlandtitles.vic.gov.au/surveying/advice-and-guidelines-for-surveyors/victorian-cadastral-surveys-practice-directives)were updated to reflect that MGA2020 is the new bearing datum for cadastral surveys. These are at: [www.propertyandlandtitles.vic.gov.au/surveying](http://www.propertyandlandtitles.vic.gov.au/surveying) > Advice and guidelines for surveyors > Victorian Cadastral Surveys Practice Directives.

The new practice directives state that any new cadastral surveys commenced after 1 January 2019 must connect to MGA2020 as is reasonable in the circumstances.  The practical implication of this is that all horizontal bearings on plans and abstracts of field records lodged with the Surveyor-General or the Registrar of Titles must be oriented relative to MGA2020.

The Australian and New Zealand Spatial Information Council (ANZLIC) and its standing committee, the Intergovernmental Committee on Surveying and Mapping (ICSM), are leading the datum modernisation program in Australia. The priority of this program is the transition to GDA2020, and 30 June 2020 has been specified as the date by which all ANZLIC and ICSM member agencies in Australian states and territories will be fully ready to deliver and receive foundation spatial data on the GDA2020 datum.

## Useful resources

To support the transition to GDA2020 in Victoria, several DELWP-based systems have been updated. These include the Spatial Datamart, Survey Marks Enquiry Service (SMES) GPSnet and ePlan services.

The ICSM GDA2020 website, [www.icsm.gov.au](http://www.icsm.gov.au/)/gda2020, is the authoritative online reference for the datum modernisation program.  The website includes informative webinars and videos, relevant resources, fact sheets, online forums and Frequently Asked Questions.  The website also contains links to the GDA2020 Technical Manual, transformation grids, transformation software, an online transformation service and other technical products and explanatory documents.

## Support contact

The Geodesy section of Surveyor-General Victoria has led the technical development and offers support to organisations in the transition of their spatial data and applications to the new datum. Please contact SGV Geodesy for advice or to arrange an information session or workshop for your organisation.

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