

Natural Resources and Other Legislation (GDA2020) Amendment Regulation 2020

Explanatory notes for SL 2020 No. 94

made under the *Biosecurity Act 2014*, *Chemical Usage (Agricultural and Veterinary) Control Act 1988*, *Forensic Disability Act 2011*, *Mineral and Energy Resources (Common Provisions) Act 2014*, *Mineral Resources Act 1989*, *Nature Conservation Act 1992*, *Queensland Heritage Act 1992*, *Recreation Areas Management Act 2006*, *Transport Infrastructure Act 1994*, *Transport Operations (Marine Pollution) Act 1995*, *Transport Operations (Marine Safety) Act 1994*, *Transport Operations (Road Use Management) Act 1995*, *Vegetation Management Act 1999*

General Outline

Short title

Natural Resources and Other Legislation (GDA2020) Amendment Regulation 2020

Authorising law

Section 503 of the *Biosecurity Act 2014*

Section 38 of the *Chemical Usage (Agricultural and Veterinary) Control Act 1988*

Section 159 of the *Forensic Disability Act 2011*

Section 210 of the *Mineral and Energy Resources (Common Provisions) Act 2014*

Section 417 of the *Mineral Resources Act 1989*

Section 175 of the *Nature Conservation Act 1992*

Section 178 of the *Queensland Heritage Act 1992*

Section 232 of the *Recreation Areas Management Act 2006*

Section 490 of the *Transport Infrastructure Act 1994*

Section 133 of the *Transport Operations (Marine Pollution) Act 1995*

Section 207 of the *Transport Operations (Marine Safety) Act 1994*

Section 171 of the *Transport Operations (Road Use Management) Act 1995* Section 72 of the *Vegetation Management Act 1999*

Policy objectives and the reasons for them

The policy objectives of the *Natural Resources and Other Legislation (GDA2020) Amendment Regulation 2020* (the Amendment Regulation) is to provide amendments to a range of subordinate legislation to:

- support adoption of GDA2020 in Queensland
- ensure Queensland law is responsive to changes in the national measurement standard as it evolves, or a new standard is determined.

A geodetic datum is a tool used to define the shape and size of the earth and provide the reference point for coordinate systems, which map the earth. Datums are used where people rely on location information, for example in surveying, cartography, geology, navigation, and astronomy. Without a datum, the location of points on the earth cannot be identified consistently.

In Australia, the national geodetic datum, the 'Geocentric Datum of Australia (GDA),' is identified as a national standard through the *National Measurement Act 1960* (Cwth) (National Measurement Act). The purpose of having a national measurement system is to enable individuals and organisations to measure and exchange location information consistently and accurately, and to demonstrate the validity of such measurements.

The last iteration of the GDA came into effect in 1994 (GDA94). GDA94 is referenced relative to points on the Australian Tectonic Plate (the Plate) as it was located in 1994. Since 1994, the Plate has shifted about 1.8m in a north-easterly direction and measurement technology has advanced considerably, meaning that GDA94 is now out of date.

In 2017, the Australian Government adopted the Geocentric Datum of Australia 2020 (GDA2020) as the latest national standard for measurement of position by making a determination under the National Measurement Act. GDA2020 replaces the previous standard, GDA94.

To maintain the currency and accuracy of national spatial information, the Australian and New Zealand Spatial Information Council (ANZLIC) has been working with all Australian and New Zealand, State, Territory and Federal jurisdictions to drive unified adoption of GDA2020. ANZLIC agreed for all Australian jurisdictions to adopt GDA2020 by 30 June 2020.

Achievement of policy objectives

The Amendment Regulation achieves its objectives by amending subordinate legislation to:

- Require the definition of position information in a particular format using the latest standard for position (GDA2020) for the collection and provision of position information.
- Establish a consistent method for referencing position descriptions in Queensland law so position references are technically complete and, where appropriate, updated to GDA2020.
- Correct errors identified through the review of location/position references.

Collection and provision of position information

The Amendment Regulation changes relevant regulatory provisions in the *Chemical Usage (Agricultural and Veterinary) Control Regulation 2017*, the *Mineral Resources Regulation 2013* and the *Vegetation Management Regulation 2012* that specify the format position information must be collected or provided in.

The relevant provisions will be amended to require position information to be provided consistent with the latest national standard (GDA2020). The Amendment Regulation applies a single point of truth for the datum used in Queensland, to ensure the relevant provisions remain contemporary and consistently apply the latest standard for position. The point of truth is the *Survey and Mapping Infrastructure Regulation 2014* which defines the datum used for surveying and mapping information in Queensland.

Consistent position description references

Updating to GDA2020 position references and correcting errors

The Amendment Regulation ensures position descriptions that regulate activities at a specific location/position or within an administrative area are referenced correctly and, where appropriate, updated to GDA2020. The regulations where location descriptions are being updated to GDA2020 location descriptions are the:

- *Biosecurity Regulation 2016*
- *Forensic Disability Regulation 2011*
- *Nature Conservation (Protected Areas Management) Regulation 2017*
- *Queensland Heritage Regulation 2015*
- *Recreation Areas Management Regulation 2017*
- *Traffic Regulation 1962*
- *Transport Infrastructure (Ports) Regulation 2016*
- *Transport Infrastructure (Waterways Management) Regulation 2012*
- *Transport Operations (Marine Pollution) Regulation 2018*
- *Transport Operations (Marine Safety) Regulation 2016*.

The amendments update these location references from GDA94 to GDA2020. While a position/location may have different coordinate values when expressed in GDA94 or GDA2020, both coordinate values refer to the same position or location in Queensland.

In reviewing position references within regulation, some coordinates were incorrectly documented and did not correctly refer to the location intended to be regulated. The Amendment Regulation corrects an error in the *Recreation Areas Management Regulation 2017* to identify the correct southern limit of the area where a person may take, drive or ride a motor vehicle into the Main Beach section of the Minjerribah Recreation Area if it is authorised by a vehicle access permit, commercial activity permit or commercial activity agreement.

There will be no impact on clients of the Forensic Disability Service as a result of the amendments to the *Forensic Disability Regulation 2011*.

Position description technically complete

Some position references in Queensland legislation are not technically complete, for example where coordinates are provided without stating the associated datum. As

coordinates for a given position are different depending on the datum used, failure to include a datum reference with coordinates can render the coordinate information ambiguous.

For the *Mineral and Energy Resources (Common Provisions) Regulation 2016*, it is not feasible to update position descriptions related to a transitional area in the Surat Basin to GDA2020. It is important for these position descriptions to retain clarity about which datum applied at the time of drafting the regulation. The Amendment Regulation clarifies the datum as GDA94, this does not change the position or location in Queensland. The amendment ensures legal traceability, and accurate transformation of the position description to GDA2020 if necessary, for example for operational convenience.

Consistency with policy objectives of authorising law

The Amendment Regulation is consistent with the policy objectives of the authorising law.

Inconsistency with policy objectives of other legislation

The Amendment Regulation is not inconsistent with the policy objectives of other legislation.

Benefits and costs of implementation

The Amendment Regulation implements adoption of GDA2020 in Queensland, providing benefits to industries and professions that rely on spatial position information, both in the mapping and surveying community and other areas of our technologically advanced society e.g. automated vehicles, remote controlled industrial equipment (e.g. in the mining/agriculture sectors) and drone technology.

There are costs associated with adopting GDA2020. The Department of Natural Resources, Mines and Energy (DNRME) have been working with Queensland's surveying and spatial profession and other spatial data custodians across state and local government to implement changes and minimise any costs.

The Queensland Government's spatial infrastructure is being upgraded as part of the adoption of GDA2020. The long lead-time for implementation of the new geodetic reference framework, including the development of products and educational materials, coupled with early engagement with systems owners has allowed for costs of necessary changes to be absorbed into departmental budget allocations.

If no changes were made, there would be potential for significant costs to arise for systems owners and end users in managing the disparity between outdated GDA94 spatial data references and updated GDA2020 spatial datasets, or spatial data available through Global Navigation Satellite Systems technology (e.g. GPS).

Consistency with fundamental legislative principles

The Amendment Regulation is consistent with fundamental legislative principles.

It might be argued that in providing for a definition to be set by reference to a determination made under a Commonwealth Act, the Amendment Regulation does not have sufficient regard to the sovereignty and the institution of the Queensland Parliament. To mitigate possible undermining of the sovereignty of the Queensland Parliament, the definition is set by reference to the GDA2020 determination as it stands at a specific date. This means should there be a change to the GDA2020 determination under the *National Measurement Act*, Queensland's legislation remains unaffected. For example, it would be necessary to amend the Survey and *Mapping Infrastructure Regulation 2014* to apply a new datum for future collection and provision of position information.

Consultation

Since 2015, the GDA Modernisation Implementation Working Group, a technical subcommittee coordinated by ANZLIC has consulted widely with users and has developed tools and technical resources needed to assist with the datum transition.

Since 2017, DNRME has worked with Queensland's surveying and spatial profession and other spatial data custodians across state and local governments to identify the steps required to ensure the State's spatial datasets become consistent with GDA2020. During this consultation, officers from DNRME met with more than 1000 surveying, engineering and spatial professionals from across the state focussing on the technical and operational matters associated with the transition to GDA2020.

DNRME continues to work with Queensland's surveying and spatial profession and other spatial data custodians across state and local government on the technical implementation of GDA2020. No public consultation has been undertaken with regards to the Amendment Regulation, as the amendments are of a machinery nature and the adoption date for GDA2020 in Queensland has been widely communicated.

The Office of Best Practice Regulation, Queensland Productivity Commission has advised that the Amendment Regulation appeared to reduce the burden of regulation, with no apparent significant adverse impacts. As such the amendments were excluded from further Regulatory Impact Assessment under category (k) of the *Queensland Government Guide to Better Regulation*.