



Taking a strategic approach to GDA2020

Moreton Bay Regional Council

To prepare for the move to Australia's new geographic datum, GDA2020, Moreton Bay Regional Council engaged Esri Australia to provide a high-level implementation plan.

Project overview

Australia's new official datum, GDA2020, will bring the country's national coordinates into line with global satellite positioning systems, enabling smartphones and other location technology devices to accurately identify mapped locations.

Australia currently uses the Geocentric Datum of Australia 1994 (GDA94), which was adopted in January 2000. The country's latitude and longitude coordinates grid moves with the drift of the continent, but satellite positioning systems base their coordinates on a framework fixed to the centre of the Earth.

By 2020, Australia will have moved to the north-east of previously-mapped GDA94 features, leading to potential discrepancies of up to 1.8 metres.

Any organisation using spatial data will need to plan for a GDA2020 data migration. Esri Australia is offering specialised consultation services for clients to develop a strategy for GDA2020 migration.

The purpose of a strategic plan is to support organisations through the move to GDA2020, giving stakeholders at all levels – from directors, managers, shareholders and technical teams – clarity on the planned implementation with a scoped outline, timeframe and proposed budget. This case study looks at the consultation and evaluation process that led to the strategy implemented by Moreton Bay Regional Council.

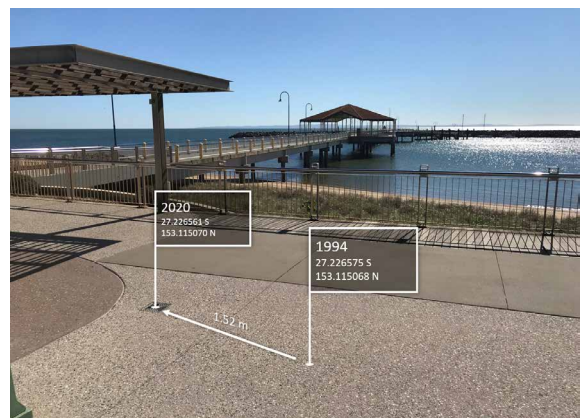


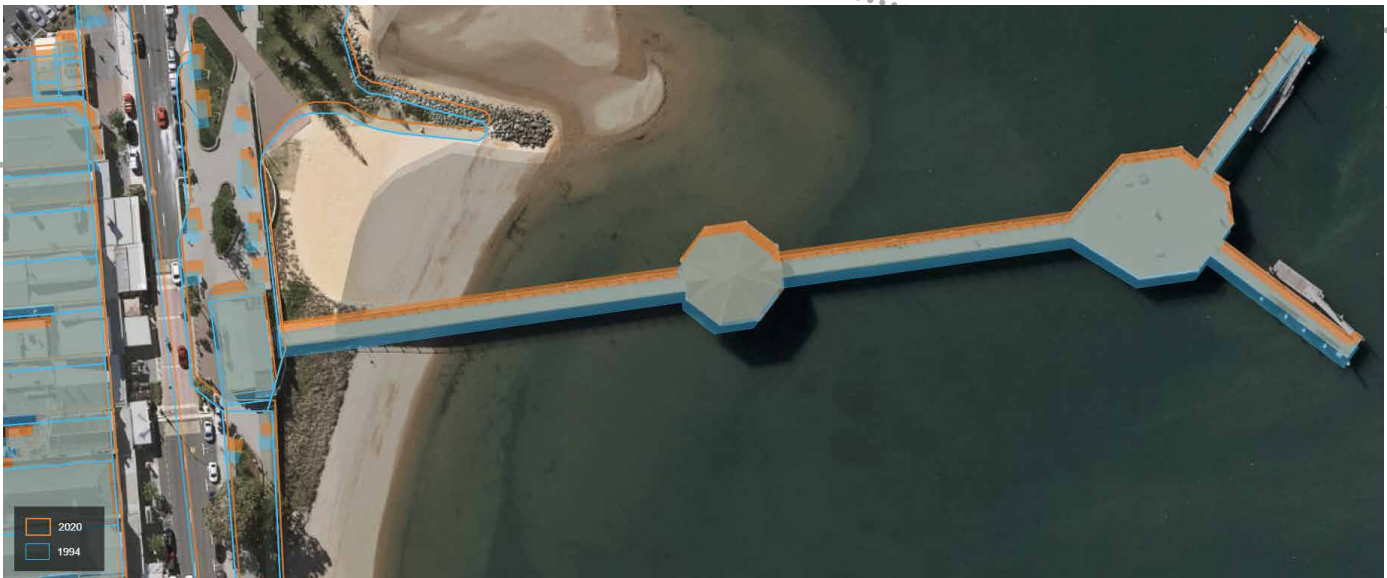
Moreton Bay Regional Council in focus:

Located between Brisbane and the Sunshine Coast, Moreton Bay is one of Australia's fastest-developing regions, with substantial rural, residential, commercial and industrial areas covering 2,037 sq km servicing an estimated population of 434,000.

Established in 2008, Moreton Bay Regional Council (MBRC) replaced three local government areas: City of Redcliffe and the Shires of Pine Rivers and Caboolture. While traditionally MBRC has provided services like local roads, waste services and animal control, the council is now more involved in the social, economic and cultural development of the community and in improving local living environments.

Ensuring effective migration to GDA2020 ensures the council effectively maintains and manages data accuracy both within the organisation, with external agencies and the wider community.





The challenge:

The need for data clarity required MBRC to outline a strategy for GDA2020 data migration and its relation to all levels of the council and external organisations.

MBRC captures and maintains datasets with a positional accuracy of less than 2m.

Council datasets include:

- + Property boundaries
- + Council assets
- + Utility assets
- + Transport assets
- + Open space recreation areas
- + Roads, footpaths

MBRC consumes data from other government agencies and external organisations, while also producing GIS data which it shares with other entities, such as utility companies and citizens.

The council also creates GIS data to support its Asset Management, Town Planning, Engineering and Environmental Services departments, enabling organisation-wide decision making and information sharing through an enterprise mapping portal and app.

Where data is shared between organisations there is a risk that data in different projections may be viewed together with an offset, misrepresenting the actual position which currently is 1.5 metres.

For example, a large-scale map of stormwater drains may show assets in the wrong property boundary. If this information was used for excavation, there is the risk of damaging adjacent assets. Maintenance crews being dispatched to a particular area or asset may receive incorrect location information on the item requiring attention.

The difference between the GDA2020 and GDA94 datums for MBRC assets is about 1.52 metres. The images above and below left show the positional difference between the two datums.

The solution:

The first step in the strategy planning process was a phone consultation between Esri Australia consultants and MBRC staff to determine the council's specific requirements.

To follow up, Esri Australia hosted a series of on-site workshops with GIS stakeholders to prepare a workable plan for updating location data to the GDA2020 datum.

The workshop aimed to:

- + Confirm how MBRC uses GIS and their understanding of GDA2020
- + Understand key workflows likely to be affected by GDA2020
- + Identify key data and dataflows
- + Identify key systems and integrations
- + Answer initial questions the team or MBRC stakeholders may have had

The innovation:

+ Structured workshop

Pre-prepared questionnaire documents to fast-track the deep dive strategy, drilling down into the key issues affecting the client.

+ Tailored strategy

The strategy document takes into account the needs of the agency being assessed, covering all aspects of data, devices, technology and departments that will be affected by GDA2020 migration.

+ Industry support

Esri Australia works closely with Geoscience Australia and Esri Inc. to ensure inbuilt support for the ArcGIS platform for the GDA2020 datum. Esri provided mathematical support for GDA2020 in the 10.5.1 release and has full NTV2.0 support with the release of ArcGIS 10.6.

+ GDA2020 community access

An ongoing outcome of the strategy workshop includes regular updates on the latest GDA2020 recommendations and learnings, strategy tips and tools, technical support and knowledge sharing.

The outcomes:

The consultation process delivered a detailed strategy to Moreton Bay Regional Council outlining the potential impediments and considerations in the migration of data to the GDA2020 datum while identifying core business impacts.

The strategy outlined:

- + The council's GIS landscape
- + Translation requirements
- + Translation strategy
- + Skillsets required
- + Quality assurance processes
- + Constraints and assumptions
- + Risks to consider
- + Implementation timeframes

With a recommended strategy and high-level communication plan for the transformation process, MBRC's project teams can ensure that GDA2020 data migration will be sufficiently accounted for in future budgets, enabling greater awareness and understanding by council executives and the whole organisation more broadly.

The consultation and strategy process had identified the key steps involved, and the main issues that will need to be addressed in the transition to the GDA2020 datum.



To find out more about Esri Australia's GDA2020 services, or to start planning a GDA2020 migration strategy for your organisation, call **1800 870 750** or email **GDA2020@esriaustralia.com.au**

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