

Surveying Alert



Large Scale Land Developments, Plan searches, Connection to datum, EDM Baselines, AUSPOS data

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Large Scale Land Development Surveys procedure

A procedure has been developed for surveys undertaken using the Large Scale Land Development Surveys standard (CSR 3.22). The procedure covers the application, assessment and processing of Large Scale Land Development Surveys for both surveyors and DNRM. The procedure is available from the DNRM policy register [here](#).

- The procedure has been divided into sections for application, approval, initial surround survey, stage plans and the marking identification plans. It lays out the processes to be followed for each section.
- As with all other interactions between external surveyors and DNRM, the point of contact in the first instance for Large Scale Land Development Surveys is the local DNRM office.
- Large scale land development surveys generally involve extension of the datum to permanent marks close to, or within, the development area. The GNSS measurements to extend datum need to achieve a horizontal SU of <15mm. The techniques used should be as per the SP1 Guideline for *Control Surveys by GNSS*, which includes aspects such as the equipment to be used and the need for independent occupations, each with at least 6 hours of GNSS data.
- Note that the initial surround survey (regardless of whether that is done via SP or IS) must be examined fully for reinstatement. There needs to be absolute confidence that these Large Scale Land Development Surveys are correct w.r.t. the surrounding cadastre, and that the surround will not change – i.e. that it can be locked down in the cadastre.
- The digital file required to be lodged with the plan has to be a drawing file, not a plan file (such as Survacad), and the drawing file must be on datum, not an arbitrary coordinate system.

Plan searches including eSurvey plans

A number of survey plans were submitted through the eSurvey portal, prior to the decision to decommission the current eSurvey systems. Under CSR v7 the eSurvey plans were not required to show the full reinstatement information, as a complete visualisation of the digital file would be available through the portal. However, the visualisation service is now no longer available.

Therefore, to ensure that the reinstatement information is publicly available for these eSurvey plans, identification surveys have been compiled from the submitted cadastral infrastructure file (CIF). Notes have been added in CISP for each SP stating "For full survey information see ISxxxxxx" and for each identification survey "Full survey information for SPxxxxxx". Therefore, when completing your searches please ensure that you check the comments for the

existence of such plans.

Connection to datum update

Points to note:

- Connections must be made, not compiled, for each survey that creates 10 or more lots – there have been instances where stage plans have compiled the datum connection. A surveyor has the option of seeking an exemption from the requirement to connect to datum in accordance with Standard 3.28.1.
- Since the release of CSR v7, RTK providers have developed software to enable post-processing of RTK observations on their networks. As a result of this development, where a network solution is used to connect the survey to datum using an RTK providers' post-processing software, then the description in the coordinates table for the method of determining the coordinates on the connection points will be a **new term** 'Network Post-processed'. The next version of the CSR will reflect this new terminology.
- Estate developments (not under Standard 3.22) will necessarily have to commence the estate and possibly a coordinate framework at a point in time. Subsequent stage plans may connect to datum PMs that have different values to the published coordinate values at the start date of the estate. To maintain consistency throughout the development, those subsequent stage plans should use the values that existed at the start of the estate, rather than the current values. In these cases, a statement under the coordinate table is needed to show the adjustment name and date for the datum PMs used. The meridian box can refer to MGA Zone XX 'vide PSMs' or 'vide SPxxxxx' (the first plan).

EDM Baselines – Recertifications and changes

Queensland EDM Baselines are scheduled for recertification in August and September this year. DNRM strongly recommends that no EDME testing be carried out during these months so as not to interfere with the recertification process.

DNRM recommends that where possible, EDME testing be postponed until after the baselines have been recertified and a new version of the Baseline Software is released. This may assist in avoiding potential errors introduced by movement or disturbances to baseline monuments that are occasionally experienced towards the end of the certification period.

In addition to recertification of Queensland EDM Baselines, there are changes to the current operational baselines.

- A new pillared baseline at Eureka (west of Childers) is underway with construction to commence soon. As a result the Bundaberg and Maryborough baselines will not be recertified this year, and will be decommissioned once their current Reg13 certification expires. This will see the last of the ground mark baselines in Queensland decommissioned.
- Maroochy baseline is expected to be destroyed in the near future due to expansion of the Sunshine Coast airport to include an additional runway. Therefore this baseline will not be recertified, but will be decommissioned when the current Reg13 certification expires. A replacement baseline is currently being planned with the Sunshine Coast Regional Council, but is unlikely to be completed this year. An alternate baseline should be sought until the replacement is operational. Alternative baselines recommended are Caboolture or Eureka (once operational).
- The Mica Creek (Mt Isa) baseline is proposed to have works done on the pillars to improve tribrach centring. This will involve fixing a stainless steel plate with 5/8th bolt to the top of the existing pillars. The proposed works will be carried out during August and September as part of the recertification process, to minimise disruptions.

Enquiries relating to the recertification or changes to EDM Baselines should be directed to GeodeticSupport@dnrm.qld.gov.au.

AUSPOS data

The Completion of permanent survey mark plans specification has been modified to reflect changes in relation to lodgement of RINEX information when using AUSPOS, and is available [here](#).

These changes address the fact that DNRM has received a lot of AUSPOS data with occupation times that are less than 6 hours; often only 2 or 3 hours. These are usually suitable for achieving horizontal coordinates with a PU of 50mm when

connecting a cadastral survey to Datum. However, for the purposes of adding to the State Control Survey (i.e. becoming part of Datum), ellipsoidal height is important and requires longer observation times in accordance with SP1.

GNSS observations of less than 6 hours are of little value to the definition of Datum and are therefore not required. For these observations of less than 6 hours DNRM only requires lodgement of the AUSPOS processing report, but not the RINEX files. Surveyors should still lodge RINEX files where there is at least 6 hours of data.

Note that this only applies to lodgements associated with AUSPOS processing. The possibility to lodge observations and processed baselines from a "GNSS Project" is a different case and there is no change in relation to such projects.