

# Surveying Alert



## Connection to Datum, Exemptions, Reference Marks, Encroachments, Forms & Water Identification Map

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### Issues with connection to datum

A number of issues have surfaced surrounding connection to datum, particularly on staged developments that are not utilising *CSR 3.22 Large scale land development surveys*. The following points should be noted.

- The underlying principle for the requirement to connect surveys of 10 or more lots to datum is to facilitate survey integration. By enabling cadastral surveys to be positioned with an uncertainty of better than 50mm relative to the datum, survey datasets become more reliable and more useful. This will improve the accuracy of the DCDB and provide more seamless integration between cadastral surveys and other authorities' data, such as data within utilities and councils, eg direct correlation between survey plans and 'as constructed' surveys.
- *CSR 3.28.3 Coordinates for marks on a survey* and [Surveying Alert 20](#) provide guidance and clarification surrounding determining coordinates for marks within the survey. The following considerations should guide the selection of marks to be coordinated:
  - the spanning geometry of the marks that are connected to datum, relative to the survey (i.e. at diagonally opposite ends of the survey);
  - it is preferred, but not mandatory, that permanent marks are the points from which the survey is connected to datum;
  - permanent marks can be outside the subject parcel, within a range where the mark could be used to reinstate the connected corner of the subject land (see Alert 20), which suggests a range of tens of metres rather than hundreds of metres.
- An 'ideal' scenario that reflects these points would be
  - for a staged development where a surround survey is done, the survey connects to existing datum PMs, or establishes new PMs with derived coordinates, that are located near the extremities on opposite ends of the overall development.
  - for a staged development where a surround survey of the overall development is not done, the survey connects to existing datum PMs, or establishes new PMs with derived coordinates, that are located near the extremities on opposite ends of the individual stage.

Practices that don't provide the required outcome include:

- showing connections to datum PMs hundreds of metres away from the survey;
- having one or both of the points from which the survey is connected to datum being hundreds of metres from the subject land;
- having both points from which the survey is connected to datum hanging out from the same side of the survey (like a pan handle);
- having both points from which the survey is connected to datum being close together relative to the overall survey;
- showing a mixture of marks with derived coordinates from Network RTK methodology and datum PMs;
- showing derived coordinates on datum PMs;
- compiling connection to datum information from another survey plan.

Where new PMs are installed from which the survey is connected to datum, local authorities' requirements may dictate PM type. However, mini mark type PMs may be acceptable if they are

placed in stable foundations, e.g. utility pit surrounds, footpaths or kerbs that will not be disturbed by tree roots or driven over by vehicles.

### **Seeking exemptions from CSR**

Under section 18 of the *Surveying and Mapping Infrastructure Act 2003*, a surveyor who reasonably believes that it is impractical to comply with a survey standard for a particular survey may seek an exemption from all or part of that standard. Such exemptions are assessed on a case by case basis.

As previously advised through departmental seminars, exemptions from *CSR 3.24 Meridian* are being granted on staged plans within multi-stage developments where disclosure plans on another meridian already exist. These plans are still required to connect to datum, but if they are being exempted from using the MGA meridian, it is generally on the condition that they show a swing to the MGA meridian.

Exemptions from *CSR 3.28 Permanent survey marks - connecting to datum* are limited to where it is impractical to connect the survey to datum. The objective of the connection to datum standard is to position the survey with a PU of < 50mm. If exemptions are sought from *CSR 3.28* for staged plans within multi-stage developments, the case of why it is impractical to comply with the requirement to connect to datum will determine if the exemption is granted. However, consideration will be given to plans where the underlying survey plan or identification plan is already connected to datum, similar to the situation for developments conducted under *CSR 3.22 Large scale land development surveys*.

### **Reference marks on subdivision surveys after registration**

*CSR 3.21.1 Placement of additional marks on subdivision surveys* explains the process for recording additional reference marks that are placed after a plan of subdivision is registered. This process ensures that there is sufficient survey infrastructure in place following the completion of works on the site, and applies also to surveys conducted under Standard 3.22.

Surveyors are encouraged to submit these identification survey plans in a timely manner, so that other surveys that are conducted on the land have the information available to them. Standard 3.21.1 requires the identification survey plan to be deposited within 60 business days of the registration of the plan. However, it would be reasonable to expect that the plan is deposited by the time the subdivision is 'on maintenance'.

Surveyors should ensure that reference marks are placed in locations that provide long-standing evidence of the survey (see Standard 3.23.2 and Guideline 3.23.7.4) – i.e. stable locations and a variety of mark types.

### **Improvements on, near or over boundaries**

All permanent improvements on, near or over the boundary must be shown on the plan (*CSR 3.20 Encroachment and improvements on or near a boundary*). This includes encroachments by awnings onto road which exist for the public benefit, e.g. shop awnings. However, notification is only required whenever an owner is adversely affected by a reinstatement (s.18 of SMI Regulations). In the situation where the awning of a commercial property encroaches over the footpath of a local government controlled road, it is likely that the local authority has already accepted that the awning is for a public benefit and is not adversely affected by the encroachment. Therefore, notification to the local authority is not required in these instances.

### **Cadastral Survey Requirements reprint**

A reprint (Reprint 1) has been released for the Cadastral Survey Requirements v7.1 which included a number of footnotes containing updated reference information, such as updated legislative references. The reprint is available from the website [www.business.qld.gov.au/industry/titles-property-construction/surveying/standards-forms](http://www.business.qld.gov.au/industry/titles-property-construction/surveying/standards-forms).

### **Plan forms**

The Form 21B and Form 38B, being the plan administration sheet of a survey plan and eSurvey plan, have been modified to include the sheet numbering.

The amended forms are available from the website [www.business.qld.gov.au/industry/titles-property-construction/titles-property/titles-registry-forms](http://www.business.qld.gov.au/industry/titles-property-construction/titles-property/titles-registry-forms).

### **Form 10 (v6)**

A new version (v6) of the Form 10 (plan registration compliance checklist) has been released for use from 1 July 2016.

The changes incorporate amendments resulting from the separation of the Form 21 and Form 21B. The items that have been amended are – 3.3, 3.4, 3.5, 4.4.2, 11.1.2, 12.4, 12.5, 13.3 reference, 13.25, 13.29, 15.3 and 15.4.

The new version of the form is available from the website [www.business.qld.gov.au/industry/titles-property-construction/surveying/standards-forms](http://www.business.qld.gov.au/industry/titles-property-construction/surveying/standards-forms).

### **Water Identification Map**

Section 4.12 of the CSR deals with downstream limits of non-tidal watercourses. The section refers to downstream limits being declared under the *Water Act 2000* and those limits being described in Schedule 8 of the *Water Regulations 2002*.

Following amendments to the Water Act, Schedule 8 of the Water Regulations has been removed. Schedule 8 has been replaced by the Watercourse Identification Map (WIM). The Watercourse Identification Map shows the known extent of watercourses and drainage features that are managed under the *Water Act 2000*. Lakes and springs may be added in future map updates.

The Water Identification Map can be viewed on the Queensland globe and accessed through the

Inland Waters category globe. Further information is provided on the website, [www.business.qld.gov.au/industry/water/managing-accessing/accessing-water/authorisations/watercourse-map](http://www.business.qld.gov.au/industry/water/managing-accessing/accessing-water/authorisations/watercourse-map).

**Presentation from SBQ seminar**

For those who were unable to attend the Surveyors Board seminar in June, the PowerPoint presentation delivered by Matt Higgins and Mark Cleary on GNSS for cadastral surveying and connection to datum is available [here](#).