

Surveying Alert



Cadastral Surveying Standards Version 7

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Version 7.0 of the Cadastral Survey Requirements effective 1 July 2015

A new version of the Cadastral Survey Requirements will commence on 1 July 2015.

The Cadastral Survey Requirements contain the standards and guidelines for cadastral surveying in Queensland. The standards support the operation of the *Land Act 1994*, the *Land Title Act 1994* and other land-related legislation.

The department continually monitors changes to legislation and feedback from surveyors regarding the standards. Changes to version 6 were necessary to enable better utilisation of technological advancements in the areas of Global Navigation Satellite Systems (GNSS) and digital lodgement of survey data.

Other changes were necessary to respond to feedback provided by the profession on the consultation draft released in October 2014. The Cadastral Survey Requirements, Version 7.0 updates the standards, guidelines and information contained in version 6.0 of that document.

Two versions of the Cadastral Survey Requirements document are available:

1. The [published version](#)
2. A [tracked changes version](#) highlighting differences from version 6.

In due course, the documents will be available from the department's web site, together with a new version of Form 10.

Rationale for key changes

One of the motives for changes was to respond to the changing context of cadastral surveying, and to ensure that modern cadastral surveying is not inhibited by unnecessarily restrictive regulation. The changes in context include the following:

- ease of use of coordinate-based methods
- ease of use and improved reliability of GNSS, including via Continually Operating Reference Stations (CORS)
- accuracy of measurement equipment
- increased opportunity for electronic exchange of survey information via eSurvey (i.e. Electronic Access to Registry Lodgement (EARL))
- approval of a new and significantly different version of the Intergovernmental Committee on Surveying and Mapping Special Publication 1 (SP1)
- publication of survey control information in the Queensland globe.

Each of the key changes to the standards is described below, with reference to the above context where appropriate.

Explanation of key changes

eSurvey changes

Surveyors using eSurvey (EARL) will submit a validated Cadastral Infrastructure File (CIF) to the department. The CIF will contain all of the information currently required to be shown on paper plans.

A subset of this information will be presented on an EARL plan, using a visualisation service provided by the department. The EARL plan will be used as the legal instrument for titling purposes. It will contain sufficient information to describe the spatial properties of the subject parcels, and the signatures of the relevant parties.

The other information currently shown on paper plans will be submitted electronically. Changes to the standards specify the content of the EARL plan (see section 1.4).

GNSS for cadastral surveys

A new chapter 8 sets out a standard containing five principles for the use of GNSS for cadastral surveying. Each of these principles is supported by a guideline that describes how the principle can be applied. This standard complements the practice direction issued by the Surveyors Board a few years ago, and is based on the revised ICSM [SP1 v2](#).

Connection to datum

The technical capability of GNSS equipment and the publication of survey control information in the Queensland globe provide an opportunity to move away from the requirement to connect to two permanent marks (which has generally been marks without coordinates).

This is replaced with a requirement to connect cadastral surveys of 10 lots or more to the datum (using existing datum marks, CORS networks or AUSPOS) and orient the survey on the Map Grid Australia (MGA). The required accuracy of the connection is expressed in terms of survey uncertainty, as described in [SP1 v2](#), and is designed to support survey integration (i.e. not sufficient to support reinstatement). (see section 3.28)

Large scale land development surveys

It is now possible to establish control networks and use survey techniques such that the location of each cadastral corner and all infrastructure within a development can be surveyed to a high accuracy in relation to the datum. This level of certainty for cadastral corners removes the need for marks to be placed at corners multiple times before the development is complete. A new standard sets conditions when and how this can occur. (see section 3.22)

Reinstatement standard

Ongoing issues with the standard of reinstatement by some surveyors have led to the development of a reinstatement standard, which has three key aspects (see section 3.33):

- A set of high level statements identifying the minimum requirements for reinstating boundaries
- A documented 'hierarchy of evidence' taking into account recent case law and written in terminology relevant to surveying in Queensland
- A requirement to produce a reinstatement report on all plans, except where all boundaries of the subject land have been reinstated directly from existing monuments and dimensions agree with the previous survey within the specified measurement accuracies.

It is recognised that opinions are divided about the reinstatement report. It is correct to state that the report itself will not improve the standard of reinstatement. However, a report is expected to deliver the following benefits:

- It provides a level of transparency for the decision-making process that led to the adopted reinstatement (including, where appropriate, information about rejected alternatives).
- It enables future surveyors to better and more quickly understand the reinstatement rationale.
- It provides a basis for regulatory bodies (the department and the Board) to more readily identify surveys where the standard of reinstatement is inadequate.
- It supports training of less experienced surveyors, recognising that it is common practice for the field component of cadastral surveys to be carried out under supervision by registered persons other than cadastral surveyors.

The standard contains specific provisions about the certification and lodgement dates of plans to which the requirements apply.

Physical feature boundaries

Chapter 4 (formerly Ambulatory Boundaries) has been renamed to better reflect the scope of the chapter.

There have been significant changes to the structure of the chapter, and much supplementary material has been removed or moved to appendices, with a view to simplifying understanding of the standards particularly in relation to water boundaries.

There have been some minor changes to the standards themselves.

Improvements on or near boundaries

Clearly, the intent of the regulations dealing with improvements on or near boundaries is not limited to encroachments. The standards previously dealt with only the encroachment aspect and were silent on other aspects. They now deal with improvements more generally, and the current 'encroachment notice' will become a 'notice under section 18'. (see section 3.20)

Other changes

The rationale for other changes should generally be obvious from the context or from the explanation provided in the amendment table.

The amendment table is contained at the front of the Cadastral Survey Requirements,

Version 7.0. It details all of the amendments made to version 6.0, with a brief explanation of the reason for the changes. Due to the number of changes, the amendment table has been divided into three parts:

- amendments affecting survey practice or plan preparation
- clarification – no change to survey practice or plan preparation
- editorial only.