Produce survey data for a cadastral dataset

Level 6
Credits 10

Purpose
This unit standard is for people who are working, in the surveying profession as a survey technician.

People credited with this unit standard are able to: prepare for cadastral surveys; survey a site for cadastral surveying; process field observations from the cadastral survey; and develop information for a cadastral dataset.

Subfield Surveying
Domain Survey Practice
Status Registered
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Entry information Open.

Replacement information This unit standard replaced unit standard 8765.

Accreditation Evaluation of documentation and visit by NZQA and industry.

Standard setting body (SSB) Infrastructure ITO

Accreditation and Moderation Action Plan (AMAP) reference 0101
This AMAP can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Special notes
1 The following legislation and documentation must be complied with:
Cadastral Survey Act 2002;
Surveyor-General’s Rules for Cadastral Survey 2002/2 (the Surveyor-General’s Rules);
Surveyor-General’s Ruling 2004/1 (for geodetic datum);
job specifications.
2 This unit standard does not qualify people to certify cadastral data. Candidates must work under the direction of a licensed cadastral surveyor as required by the Cadastral Survey Act 2002 and the Surveyor-General’s Rules.

3 Definition

Workplace procedures refer to documented procedures specific to an enterprise which set out the quality management requirements for the business practice and activities of that enterprise.

Elements and performance criteria

Element 1

Prepare for cadastral surveys.

Range  a redefinition survey, a ten lot urban subdivision, a three lot rural subdivision.

Performance criteria

1.1 Survey requirements are determined in accordance with the Surveyor-General’s Rules.

Range  origin, boundaries, witness marks, class of survey.

1.2 Survey methods and equipment are selected and prepared in accordance with the survey requirements.

Range  equipment may include but is not limited to – total station, data logging; evidence is required of two methods.

1.3 The details to be measured and recorded are identified in accordance with the survey requirements.

Range  details may include but are not limited to – appellations, road names, legalities, areas, schedules.

1.4 The physical occupation features to be recorded are identified in accordance with the Surveyor-General’s Rules.

1.5 An analysis of existing survey data identifies origin and relevant witness marks in accordance with workplace procedures.

Element 2

Survey a site for cadastral surveying.

Performance criteria

2.1 Surveying equipment is calibrated in accordance with the Surveyor-General’s Rules.
2.2 Cadastral data is surveyed in accordance with the survey requirements.

Range data – origin, coordinates, traverses; natural boundary, primary parcel, new parcel, easement, area of flat, cross-lease, or unit; may include but is not limited to – surveying for a disturbed or replaced mark.

2.3 Origin of bearings is verified in accordance with the Surveyor-General’s Rules.

2.4 New survey marks are placed in accordance with the survey requirements and the Surveyor-General’s Rules.

2.5 The new survey control is observed, measured, and recorded in accordance with workplace procedures.

2.6 Relevant old survey marks are located, fixed, or included into the new survey control in accordance with workplace procedures.

2.7 The new survey control geometry is closed in accordance with the Surveyor-General’s Rules.

Range connections between – geodetic control, closed loop.

2.8 Physical occupation is fixed and recorded in accordance with the Surveyor-General’s Rules.

2.9 Boundary positions are pegged or marked in accordance with the Surveyor-General’s Rules.

2.10 Independent checks are applied to all hanging lines in accordance with workplace procedures.

Element 3

Process field observations from the cadastral survey.

Range the cadastral survey in element 2.

Performance criteria

3.1 Field observations are reduced and verified in accordance with the Surveyor-General’s Rules.

3.2 Analysis of the data eliminates errors and omissions to specified tolerances for the class of survey in accordance with the Surveyor-General’s Rules and the Surveyor-General’s Ruling 2004/1.

Range projections, bearings.
3.3 Traverses are closed and adjusted in terms of the origin of the survey in accordance with the Surveyor-General’s Rules.

3.4 Witness marks and existing boundaries are confirmed by adoptions from existing survey data under the direction of a Licensed Cadastral Surveyor.

3.5 Boundaries of the site are defined in accordance with the Surveyor-General’s Rules.

3.6 Area calculations are verified to meet tolerances required by the parcel size in accordance with the Surveyor-General’s Rules.

**Element 4**

Develop information for a cadastral dataset.

**Performance criteria**

4.1 A draft dataset is developed in accordance with workplace procedures.

4.2 The reliability of the draft dataset is confirmed by a documented field audit that achieves the class of survey in accordance with job specifications.

4.3 Traverse sheets are completed in accordance with the Surveyor-General’s Rules.

Range coordinates are tabulated; the method of adjustment is shown.

4.4 The dataset is presented to a licensed cadastral surveyor for verification in accordance with workplace procedures.

Range presentation includes but is not limited to – bearing, distance, boundary dimension, traverse dimension, pegging ties, natural boundary fix, linking to existing data, numbering of marks, applying one value to multiple observations, error check.

**Please note**

Providers must be accredited by NZQA, or an inter-institutional body with delegated authority for quality assurance, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be accredited by NZQA before they can register credits from assessment against unit standards.

Accredited providers and Industry Training Organisations assessing against unit standards must engage with the moderation system that applies to those standards.
Accreditation requirements and an outline of the moderation system that applies to this standard are outlined in the Accreditation and Moderation Action Plan (AMAP). The AMAP also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

**Comments on this unit standard**

Please contact Infrastructure ITO askus@infratrain.co.nz if you wish to suggest changes to the content of this unit standard.