

Remake of Surveying and Spatial Information Regulation 2011



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Introduction

Under the Subordinate Legislation Act 1989 all statutory rules (including regulations, by-laws, rules and ordinances) are remade every 5 years to ensure they remain relevant to government, community and industry needs. During 2011 the Surveying & Spatial Information Regulation (S&SI) 2006 will be remade. The following discussion briefly addresses the main issues identified since the Surveying Regulation commenced in September 2006 and emerging technology and community needs of surveying and spatial information.

Main Issues for the Remake

The following points outline the main issues and changes identified from monitoring of the S&SI Regulation since 2006 and survey industry consultation during 2010-11 for the Remake of the Surveying & Spatial Information Regulation. The responses to some questions presented to the industry are shown in some instances. The main issues and changes identified to date are summarized below;

- Proposed new Definitions
 - Benchmarks – New definition.
 - Candidates – Refer to a Board of Surveying and Spatial Information (BOSSI) Determination for a person to be eligible to become a registered surveyor.
 - Coordinate and Projections. This is the “Surveying & **Spatial Information** Regulation” and reliance is placed upon external sources to define a point of truth for coordinate and projections parameters.
 - Candidate practical experience – should be BOSSI Determination.
 - Refer to the Survey Control Information Management System (SCIMS) as the point of truth for information relating to the State control survey.
- Supervision
 - Amendments in December 2009 to Section 36k of the Surveying & Spatial Information Act 2002 enabled provisions to be made in the Surveying & Spatial Information Regulation regarding supervision.

“(k) prescribing what constitutes immediate supervision or general supervision for the purposes of all or any of the provisions of this Act (including authorising a person or body to determine what constitutes such supervision).”

The Board of Surveying and Spatial Information (BOSSI) in July 2010 published “Determination – Supervision of Persons by Registered Surveyors”. As the Board has published this Determination, the need to specify an outcome for “supervision” in the Remake of the Regulation is no longer required. Therefore it will not be included in the remake of the Regulation.

- Basis of Datum Line.
 - ALL surveys will **not** be based upon MGA? (*no change there*)
 - Urban Survey will use Class “2A” to “C” when adopting MGA (*no change here*)
 - Rural surveys will use Class “2A” to “D” when adopting MGA? (*change here*)
 - Will use Mark Status **and** Class recorded in SCIMS to define the datum line. Will only require survey marks with mark status or “Null” (*assumed OK*), “F” (*Found*) or “N” (*Not Found*) to be used to define the datum line of a survey. The following Mark Status will be excluded; “D” (*Destroyed*), “S” (*Subsided*), “R” (*Restricted*) or “U” (*Uncertain*).
 - Small easements (i.e. easements shorter than 200metres) will connect from established survey marks if the established marks are located within 300 metres of the land in a urban survey or 1000 metres of the land in a rural survey. If there are no marks available, then new permanent survey marks are not required to be placed.

- Bench Marks.
 - New Schedule outlining all different forms and styles of Bench Marks.
 - Bench Marks will be identified by MGA coordinates to an accuracy equal to or better than hand held GNSS to describe their location.

- Area of Easements.
 - The area of all easements created under Clause 18 must be shown.

- Accuracy of Angle and Distances
 - The angular misclose must not exceed 10 seconds plus $10\sqrt{n}$ (where “n” is the number of traverse stations (it is currently $20'' + 10\sqrt{n}$)).
 - All lengths must achieve an accuracy of 6mm + 50 parts per million or better at a confidence interval of 95% (it is currently 10mm + 15ppm @ 67%).
 - The Misclose tolerance will remain at 15mm + 100ppm.
 - Many surveyors have expressed a need to specify the accuracy of each position if using GNSS. However, specifying the outcome is very difficult. At this stage no accuracy of position has been defined. The accuracy of each length shown on a plan must satisfy 6mm + 50ppm.

- Residue Lots.
 - All Lots must be described by Bearings and Distances (where available).
 - The accuracy of the misclose of the residue Lot(s) must be better than four times (4x) the original misclose tolerance, otherwise the survey must resolve the discrepancy by further measurements or outline the problem in a comprehensive report.

- Line Types
 - The method of determining the line will **not** be disclosed. i.e. measured, computed, traversed, derived, deduced, etc. This issue was canvassed during industry consultation. If each boundary line or measurement satisfies the accuracy requirement, then the benefits from specifying additional attributes of each line may be limited.
 - The need to define different types of lines, i.e. road frontage, boundary line, connection line, occupation, easement, administration line, etc will not be prescribed, however, this will be an attribute within a LandXML file.
- Survey marking
 - Roads – Exclude Footpaths from road definition for marking requirements.
 - Place Reference Marks in rural surveys at every extremity fronting a road
 - RM's every side boundary of large river frontage – i.e. stream frontage ≥ 500 metres.
 - RM placed if total length of boundaries > 2400 metres.
 - RM at either end of cut off corners at road intersections or at intersection,
 - Mark boundaries at safe distance for stream bank if bank liable to erosion.
 - Place PM's & RM's in position to preserve the mark.
- Traceability of AHD on stratum surveys
 - New bench marks must show an AHD value with an accuracy equal to or better than "LD" or "B".
- Connection to survey control network for small easements
 - Small easements (i.e. <200 metres) will adopt MGA if established marks are within 300m (urban)/1000m (rural).
 - Small easements (i.e. <200 metres) will connect from 2 Permanent Survey Marks if they are available within 500 metres. No placement of Permanent Survey Marks.
 - Only show connection from one terminal of the easement to Permanent Survey Mark.
- MHWB & Banks
 - MHWB should be approved by Minister if not previously approved.
 - Landward boundaries of stipulated fronting streams previously not surveyed need not be marked with boundary marks. RM every 1000 metres is required.
- Spatial Information
 - The street address for each Lot must be shown. The format and content of the street address shall be in the form "as approved". i.e. a new schedule.
 - Library and symbol to standardise plan preparation – Surveyor General's Direction.
 - Showing occupations.
 - Complete dimensions of each parcel.
- Reporting.
 - If a surveyor discloses a difference of 40mm + 200ppm or greater, then the surveyor must report the difference or difficulty in a comprehensive report.

- Survey Marks
 - New PM for CORS marks
 - New BM specifications
 - Refinement of a few reference marks.

- 3D Cadastre & Strata Surveys
 - Many Emergency Services and the modern community require accurate spatial description and street addressing of all parcels. Current practices for Strata Plans do not support an accurate description of land owner interests. i.e. the thick line describing walls shown on the strata plan have limited spatial integrity. The vertical arrangement of strata title interests are poorly described on survey plans and in spatial data sets. The Digital Cadastral Data Base (DCDB) operated by the Land & Property Management Authority is a 2 Dimensional representation of land interests. Only land titles/interests at “Ground Level” are shown and maintained in the DCDB. If systems supporting the management and visualisation land interests were 3 Dimensional, then there would be a compelling argument for all surveys to show heights or depths if they are so limited by measurements or by a structure (i.e. a building in a strata plan). To enable the complete description of strata titles, the position of the walls, floors and ceilings are be required. The accuracy of measurements used to describe walls and floors need clarification. Industry consultation for the remake of the S&SI Regulation addressed this issued and most sectors indicated that surveyors not willing to provide AHD floor levels or accurate descriptions of walls in Strata Plans.
 - There will be **no** AHD Floor Levels shown in Strata plans.

The draft Surveying & Spatial Information Regulation 2011 with a Regulatory Impact Statement that assesses the cost, benefit and alternatives to the proposal will be circulated throughout the community and surveying industry requesting comments and submissions. Following consideration of comments and submissions, a proposal of final amendments will be forwarded to BOSSI for final approval prior to the formal submission by the Minister to the Governor to remake the Surveying & Spatial Information Regulation 2011. The Remake of the Surveying & Spatial Information Regulation 2011 must be made before 1 September 2011.