

ISNSW Cadastral Workshops: 2006 to 2014 and Beyond

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ABSTRACT

Currently there is a shortage of registered surveyors in NSW. A recent report by BIS Shrapnel entitled 'Determining the Future Demand, Supply and Skills Gap for Surveying and Geospatial Professionals' predicts that there will be an acute shortage of surveyors in NSW and Australia by 2019. The problem is twofold: the number of undergraduates in surveying is low and there are insufficient graduates continuing on to registration. The Board of Surveying and Spatial Information (BOSSI) has encouraged the Institution of Surveyors NSW (ISNSW) to offer programs and initiatives to assist graduate surveyors to become registered. ISNSW offers instructional and assessment cadastral workshops to financially enrolled BOSSI candidates undertaking registration. The Victorian and Queensland surveyors boards, in conjunction with professional surveying associations in each state, are developing their own cadastral workshop models. The genesis of what they are developing is based on the ISNSW cadastral workshops. This paper presents a history of the development of the workshops that started with a letter of request in 2006 from the then NSW Surveyor General Warwick Watkins. Development and improvement of the workshops to the present are outlined along with a summary of the content of the Queensland and Victorian models. The paper concludes with an evaluation of the worth of these workshops.

KEYWORDS: *Cadastral, workshops, graduates, registered surveyors, ISNSW.*

1 INTRODUCTION: THE START OF CANDIDATE WORKSHOPS

Currently there is a shortage of registered surveyors in NSW. For instance, a recent report investigating future demand, supply and the skills gap for surveying and geospatial professionals predicts that there will be an acute shortage of surveyors in NSW and Australia by 2019 (BIS Shrapnel, 2013). The problem is twofold: the number of undergraduates in surveying is low and there are insufficient graduates continuing on to registration.

In NSW, the principal functions of the Board of Surveying and Spatial Information (BOSSI) are the registration of land and mining surveyors and ongoing administration of the register, the investigation of complaints against registered land and mining surveyors (and implementing disciplinary action which may arise as a result of these investigations), and the provision of advice to the Minister for Finance and Services on the practice of surveying, spatial information and all other matters in connection with the administration of the Surveying and Spatial Information Act 2002 (BOSSI, 2014).

In April 2006, the then NSW Surveyor General, Warwick Watkins, wrote to the Institution of Surveyors NSW (ISNSW) and suggested that ISNSW may like to provide seminars for graduates seeking registration. The seminars were to cover urban, strata and rural boundary definition and to be of an applied practical nature.

The Survey Practice & Legislative Committee of ISNSW undertook the task of organising these workshops. The first workshop was held in September 2006. It was an assessment workshop with 15 candidates presenting their cadastral BOSSI projects for a preliminary appraisal before going to the Board's assessments.

2 THE WORKSHOPS PROGRESS

The first instructional workshop was held on 3 February 2007. Six presenters and four guest speakers presented 26 candidates with a range of urban, rural and strata information over one full day. Another plan checking assessment session was held prior to the March 2007 BOSSI examinations. This was also a one-day session.

Candidates were asked to provide a critique of the workshops. Their replies indicated that more in depth material was needed, particularly in regards to rural surveys. The next instructional workshop was held on two consecutive Saturdays and included expanded rural and urban material. In addition, a session on calibration of instruments and good drafting practice was included. For the first time, the mentors' presentations were made available to candidates via a CD ROM. The CD ROM also included a wide range of hard-to-find reference material including articles from professional surveying publications.

Feedback from BOSSI, the candidates and the mentors continued to be positive. Many candidates were travelling long distances to attend the workshops and as a result suggested a weekend format (rather than consecutive Saturdays) to assist in economy of travel. Further improvements were implemented as a result of this feedback.

3 THE WORKSHOPS NOW

3.1 Overview

The process has now evolved to the stage where an instructional workshop is held on a Saturday/Sunday weekend and an assessment workshop is held on a Saturday in the 6-week period preceding the BOSSI exams in March and September each year. Periodic briefings of 'pre-examiners' are held by BOSSI members to ensure that all assessors are on the same page. In addition, several pre-examiners have sat in as observers on BOSSI examinations. Board members do not participate in assessment workshops but do present at the instructional workshops.

3.2 Present Format of the Instructional Workshop

The instructional workshop is a 2-day workshop held over one weekend with up to 12 presentations on a range of cadastral and related topics. Some examples of presentations are listed in Table 1. Lunch, morning and afternoon teas and refreshments at the end of each day are provided. All presenters are volunteers, i.e. they are not paid. All presentations and additional reference material are now posted on Drop Box for easy access.

Table 1: Examples of presentations at instructional workshops.

Topic	Coverage
Land Ownership	Old system deeds - Torrens Title - Notations on Title - Qualified Title - Limited Title - Current Title Easements - types - creation - section 88B - transfer & grant leases
Rural Surveys Session 1	Natural boundaries - non-tidal streams - 'ad medium filum aquae' bank and bed of streams - doctrine of accretion & erosion - gradual and imperceptible - use of GNSS for rural cadastral purposes
Rural Surveys Session 2	Cadastral portions and town allotments Roads - Act 4 William IV, No 11-1833 - Public Roads Act 1902 Roads Act 1993 - Practical rural boundary definition
Rural Surveys Session 3	Presentation by a successful BOSSI candidate of a recently assessed rural survey project
Urban Surveys Session 1	City surveys - search - alignment/roads - obstructed boundaries old system deeds/conversions - survey the title not the plan
Urban Surveys Session 2	Identification surveys - procedures and many examples
Urban Surveys Session 3	Presentation by a successful BOSSI candidate of a recently assessed urban survey project
Equipment Calibration	Background - regulation & legislation – procedures including total station calibration over an EDM baseline
Community Title	An introduction to community schemes and plans
Plan Drawing	Good drafting practice - examples of bad drafting practice - how to deal with errors found on plans by others
Strata Title	An introduction to strata schemes and plans
The BOSSI Examination Process	Examples of both acceptable and unacceptable projects presented by a BOSSI examiner and details of what to bring on the day

3.3 Present Format of the Assessment Workshop

The assessment workshop is held over one day consisting of a 'pre-examination' of the candidates' cadastral projects, held approximately 3 weeks after the instructional workshop and 3 weeks before the BOSSI examinations. The candidates are assessed as they would be in the BOSSI examination by two registered surveyors with extensive specialist experience in the project being examined, be it rural, urban or strata. Each candidate is allocated a minimum of one hour for a review of each cadastral project. The candidate brings a draft plan, full search (i.e. adjoining plans and titles), calculations and field notes in electronic and/or hand-drawn format. Candidates are advised if more field work should be undertaken for their project. Candidates are welcome to sit in on another candidate's assessment, and many candidates take up this opportunity to learn from another candidate's experience. Occasionally, a candidate will realise that their project is not ready for assessment and consequently will withdraw from the upcoming BOSSI assessment.

4 WORKSHOPS IN OTHER AUSTRALIAN STATES

The Queensland and Victorian surveyors boards, in conjunction with professional surveying organisations in each state, are developing their own cadastral workshop models. The genesis of what they are developing is based on the ISNSW cadastral workshops outlined in section 3.

4.1 Queensland

Surveying graduates in Queensland become registered surveyors via a somewhat different process than in NSW. They register first as a surveying graduate, provide a postgraduate

training plan (PTP), provide a progressive assessment of competency via a series of Career Episode Reports (CERs) which demonstrate their exposure to and competence in the range of skills set out in the competency frameworks. The registered surveyor then applies for cadastral endorsement and provides another cadastral related set of CERs to satisfy a Cadastral Competency Framework.

The Queensland Surveyors Board (QSB) has appointed a training advocate and is implementing a series of surveying graduate training workshops. These workshops are free, have about eight delegates per workshop and address issues such as the process required to progress to registration as surveyor, interpretation of the competency framework for surveyors, assessors' expectations regarding amount of evidence to be provided and the format of the CERs.

The Surveying and Spatial Sciences Institute Queensland (SSSIQ) is introducing weekend seminars for graduate surveyors working towards registration as a surveyor or towards cadastral endorsement. These weekend residential-school style camps are aimed at providing graduates with the information and skills required to complete components of their registration that may not always be provided in the workplace. Targeted areas include titling, tenures, land administration, reinstatement and the use of Global Navigation Satellite System (GNSS) technologies. The seminars are supported by the QSB and include some practical sessions.

4.2 Victoria

Surveying graduates in Victoria become licensed via a Professional Training Agreement (PTA) that is registered with the Surveyors Registration Board of Victoria (SRBV). The PTA is structured to develop competencies in the categories of generic skills, boundary definition surveys, development planning, engineering surveying and professional practice management. The graduate surveyor is required to undertake and successfully complete an urban and a rural cadastral survey, a professional assessment project and the SRBV's cadastral law project.

The Surveying and Spatial Sciences Institute Victoria (SSSIV), the Institution of Surveyors Victoria (ISV) and the Association of Consulting Surveyors Victoria (ACSV) are collaborating to produce a PTA cadastral training professional development program. The initial workshop, to be held in June 2014, will be a one-day event involving an urban survey case study. A desktop assessment of plans, surveys and titles will be followed by a field session demonstrating urban surveying field methodology for the measurement of party wall and obstructed boundaries. A review of the essential components of field records, computations, plan drafting requirements and surveyors reports will complete the day.

It is proposed that future workshops will cover rural cadastral surveys, cadastral law and professional assessment projects. The development of the workshops is being supported by the SRBV.

5 HAVE THE ISNSW WORKSHOPS PROVED WORTHWHILE?

BOSSI answers yes. The better prepared candidates are presenting a higher standard of projects leading to increased pass rates and thus an increase in registrations.

ISNSW answers yes. There is continued interest and patronage from candidates, continued support from volunteer presenters, continued support from BOSSI and increased ISNSW membership as non-member candidates see a very tangible and valuable reason for being a member of a professional surveying institution.

Candidates answer yes. The instructional workshops provide well structured, relevant content. The assessment workshop's pre-examination procedures provide beneficial advice. Old friendships are renewed, new ones formed and valuable networks for the future are established.

6 LOOKING BEYOND 2014

ISNSW does not currently include worksite visits and practical sessions in their workshops. An evaluation of the success or otherwise of these components of the Queensland and Victorian models may lead to such visits and sessions in future ISNSW workshops.

Many countries have a similar system of registering surveyors to that in New South Wales. Those countries that require a candidate to have a degree in surveying, serve a period of practical experience after graduation, and sit for examinations conducted by a surveyors board, are being subjected to a desktop audit. The audit is seeking information regarding any initiatives that may be in place to assist graduates attain their professional surveyors licence. New Zealand, Canada, Malaysia, Singapore and the United States of America are being audited. As a result of the audit, further directions, innovations and ideas may be added to the ISNSW workshops to improve and enhance a proven worthwhile program.

REFERENCES

- BIS Shrapnel (2013) Determining the future demand, supply and skills gap for surveying and geospatial professionals, <http://www.stanfield.com.au/sites/default/files/BIS-Shrapnel-Final-report-January-2013.pdf> (accessed Jan 2014).
- BOSSI (2014) Board of Surveying and Spatial Information of NSW, <http://www.bossi.nsw.gov.au/> (accessed Jan 2014).