

An Introduction to Surveyor-General's Direction No. 11 Preservation of Survey Infrastructure

Survey Infrastructure supports billions of dollars' worth of investment, property rights and infrastructure. Survey Infrastructure includes:

Permanent Survey Marks: Permanent Survey Marks are fundamental marks that define location for surveying, mapping and engineering projects. Uses include housing developments, new road and bridge construction, improving railways and environmental mapping.

Cadastral Reference Marks: Cadastral Reference Marks are fundamental to the definition and re-establishment of the State Cadastre. The loss of these marks and Permanent Survey Marks can significantly degrade the integrity and accuracy of the cadastre, and add to the costs of subsequent surveys.

NSW is currently experiencing an unprecedented amount of large infrastructure projects; unfortunately, this can lead to large scale mark destruction. The recently released Surveyor-General's Direction No.11 (SGD11-September 2017) provides an effective tool to preserve surveying infrastructure when undertaking both large and small scale projects. The aim of the direction is to preserve sufficient surveying infrastructure and place additional marks in order to preserve the integrity of both the State Cadastre and the State Control Survey network at the completion of the project. A copy of the SGD11 can be obtained from DFSI-Spatial Services website. <http://spatialservices.finance.nsw.gov.au/>

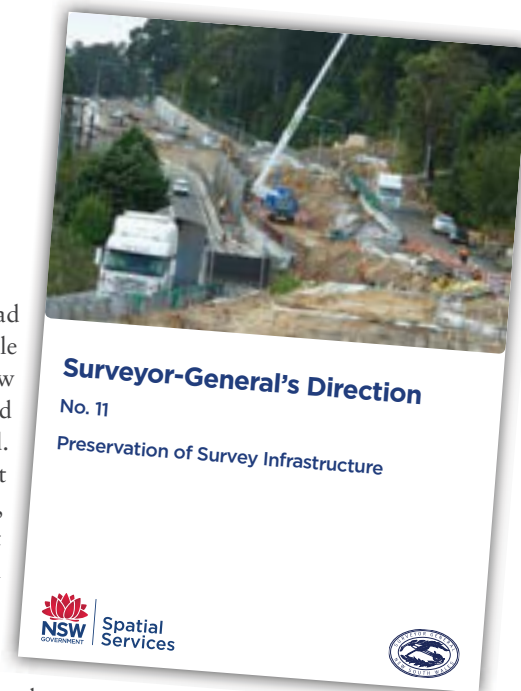
The previous version of SGD11 was written to address single mark removal or relatively small projects. This meant that SGD11 was difficult to adapt to large-scale projects. The newly released SGD11 (September 2017) provides two distinct types of applications directly related to the size of the project; small and large scale projects. Small-scale projects are those

contained within a small area such a road frontage not exceeding four lots or a single road intersection affecting only a few survey marks. All survey marks affected by small-scale projects must be replaced. However, a request can be made as part of the Surveyor Generals application, if it is believed that the replacement marks are not necessary. The application should include sufficient evidence and supporting documents to justify the request.

Large-scale projects are those that extend over a significant area such as major road/highway upgrades. These projects may result in the removal of a substantial amount of survey infrastructure. The public authority responsible for the project should ensure that the application includes the following documents:

- A field audit of all survey marks (including Permanent Survey Marks, Cadastral Reference Marks and Bench Marks)
- A Survey Project Plan outlining the strategy to be taken for mark protection and reinstatement of survey infrastructure for the duration of the project. The Survey Project Plan is to include diagrams/notes showing the proposed position and accuracy of each mark, survey technique, methodology and equipment proposed to be used. The diagrams should clearly identify marks that are affected, vulnerable, already gone, safe and new proposed marks.
- When Cadastral Reference Mark(s) are to be removed, and connected to a new or existing mark, then a Deposited Plan of Survey Information Only should be lodged in accordance with the Registrar General's Guidelines and Surveyor General's Directions.

At the completion of the work all conditions on the consent must have been



met and any survey submitted must be in accordance with the agreed Survey Project Plan and comply with the other relevant Surveyor Generals' Directions.

The public authority or organisation responsible for the project shall monitor and ensure the management and implementation of the Survey Project Plan and that all work is carried out in accordance with the approval, including the delivery of the final survey plan and associated documentation.

An application for authorisation to remove or replace survey marks (Permanent Survey Marks or Cadastral Reference Marks) should be made in accordance with clause 90 of the Surveying and Spatial Information Regulation 2017 (SSI Reg.). The digital application form is available at: http://spatialservices.finance.nsw.gov.au/surveying/publications/surveyor_generals_directions

This article highlights the importance of the NSW Survey Infrastructure as the foundation of any spatially enabled dataset. The newly updated Surveyor Generals Direction No.11 was prepared by Spatial Services to preserve NSW's survey infrastructure and addressed feedback received from both the survey profession and public authorities engaged in major infrastructure projects in NSW.

Narelle Underwood
Surveyor-General of NSW

Interview with Phillip Nixon Young Professional of the Year 2016 (EISSI Awards)



Phillip Nixon out in the field

Where were you brought up?

On a Farm at Oaklands in the Riverina

What high school did you attend?

Oaklands Central and Hurlstone Agricultural High School

Siblings?

3 brothers

Sports?

Played Rugby Union at School, these days only get in the occasional round of golf.

Do you still keep in touch with old school mates – if so what sort of careers did they choose?

One is a magician/clown, the other works in horticulture.

How did you find out about surveying?

My parents put me through an aptitude test and surveying was one of the suggestions. Apparently I scored reasonably high in spatial reasoning.

Where did you do your surveying studies and what are your reflections of the course?

Part time TAFE at Ultimo for 4 years and then University by correspondence with USQ for 6 years. Studying part time was a real advantage. As well as still being paid, the other advantage was that what I was studying was often related to what I was doing. I recall the very early on, the surveyor I was working with telling me “backsights longer foresights” and sure enough the next week at TAFE we learnt that exact concept.

What was your first job as a surveyor?

My first job as a survey assistant was to mark gridlines on a slab of level 16 of a residential tower in Bondi Junction in late July. I just remember it being cold.

Mentors?

There have been many people who have inspired and taught me much. The short list would be Ian Neilson, Leigh Finlay, Richard Lemon and Paul Summers.

Family?

My wife and 2 daughters who never complain about the long hours, when I work away, or my “side projects”.

Now that you have embarked on surveying as a career – what are your immediate and more distant expectations?

Ha... wouldn't say that I have just embarked on a surveying career.