Transport for NSW

Survey marks

transport.nsw.gov.au

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Survey marks are major reference points placed by surveyors. They provide important information to the community as they are used for surveying property boundaries, road building, construction activity, mapping and other land surveys. There are many types of survey marks used for various purposes.

Survey marks are protected under the Surveying and Spatial Information Act 2002. Penalties may apply if a survey mark is removed, disturbed or destroyed without approval from the Surveyor-General as per Section 24(1) of the Surveying and Spatial Information Act 2002.

Preservation of Survey Infrastructure (POSI) needs to be done by a Registered Land Surveyor, or under their supervision. It is inevitable that cadastral reference marks and permanent survey marks will be destroyed from time to time. If works are likely to impact either of these types of survey marks, an application under the Surveying and Spatial Information Regulation 2017 Clause 90 must be lodged and Approval to remove marks be gained from the Surveyor-General prior to marks being destroyed.

1. Developer Obligations

The Developer must determine whether any survey marks will be threatened when undertaking proposed works. If survey marks are threatened, then the following must occur.

The Developer is responsible for engaging a Registered Land Surveyor to investigate the project impact on survey marks, and for gaining approval to remove survey marks. The Surveyor contracted to undertake these works must be registered (Section 21 of the Surveying and Spatial Information Act 2002).

The Developer's Designer must assess project impact on all survey marks by overlaying these with the project design to assess the vulnerability of the marks (TfNSW use the traffic light system, i.e. green is 'Safe', amber is 'Vulnerable', red is 'To be Destroyed')

1.1 Pre-construction

- Detail Survey Plan - to include cadastral reference marks and State Control marks
- POSI Strategy submitted to Spatial Services as per Surveyor-General's Directions No.11 Preservation of Survey Infrastructure
- Independent Verifier to include POSI Approval letter from Surveyor-General in their witness/hold points. Developer must provide this to TfNSW.

  This approval letter will contain conditions that the Registered Land Surveyor needs to follow to close out the process. Onus is on Surveyor and Developer to complete.

1.2 Post-construction

- Acknowledgement letter from Spatial Services to confirm POSI is closed out on this project. Developer must provide this to TfNSW towards the end of the project.

2. Useful Links

Surveying and Spatial Information Act 2002 No 83 - NSW Legislation

Surveying and Spatial Information Regulation 2017 - NSW Legislation

Surveyor General's Directions No. 11 – Preservation of Survey Infrastructure (SGD11)

Surveyor General's Directions No. 12 – Control Surveys and SCIMS (SGD12)

Protecting survey marks

Information Sheet June 2024

What are survey marks?

Survey marks support billions of dollars of investment, property rights and infrastructure. There are many types of survey marks used for various proposes.

Survey marks – what to look for

Paint

Yellow or white paint on the mark, or surrounding features.

Identification plates

Identification plates in rural areas help to locate permanent survey marks.

Star picket

Painted star pickets in rural areas may indicate a survey mark in the vicinity.

Reference Tree

A blazed tree may indicate a permanent mark or a cadastral boundary corner is located near by. It is most common in rural areas.

Alignment marks

Alignment stones, posts, pins and old stone kerbs are important cadastral marks.

Types of survey marks

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.

Trig Station

Permanent Mark

State Survey Mark

Cadastral (Boundary) Marks

Cadastral marks are used to mark property corners. Cadastral Reference marks also define property boundaries and are buried approx 100-200mm deep, or placed in the footpath, kerb or gutter.

Concrete Block references boundary corner (peg)

Galvanised Iron Pipe references boundary corner

Drill Hole & Wing in Kerb references adjacent boundary corner

Alignment Pin references road alignment

Why protect survey marks?

Survey marks provide a wealth of important information to a wide range of people in the community. They are used to support the surveying of property boundaries, but are also important to engineering, road building, mapping and other land surveys. The loss of survey marks can significantly degrade the integrity of the legal property boundaries and impact on the costs of development projects that depend on position and height.

How survey marks are lost?

Over the last decade in excess of $1 million worth of permanent survey marks have been destroyed in NSW per year*. This does not include the loss in value of destroyed cadastral marks or the lost value to the community and industry that survey marks provide. Survey marks are usually destroyed by development activity, particularly:

- road works and footpath construction
- roadside slashing
- shopping mall developments
- street beautification projects
- underground utility upgrade or replacement
  - gas
  - water
  - electricity
  - telecommunication cable installation.

* Based upon cost of mark placement and survey

Survey marks may need to be removed

As a result of construction or development works it may be necessary to remove some survey marks.

There are procedures in place for times when a survey mark has to be removed or replaced. The Surveyor-General has guidelines for the replacement of survey marks. See Surveyor General's Directions No. 11 Preservation of Survey Infrastructure on the Spatial Services website.

How to protect survey marks?

1. Before Works Commence

Find out if there are survey marks located in the area of interest by:

1.1. Viewing the Permanent Survey Mark layer on SIX Maps - maps.six.nsw.gov.au and print the map showing location of survey marks.

1.2. Downloading the Permanent Survey Mark Locality Sketches.

1.3. Conducting a thorough search of plans on public record (e.g. Deposited Plans) to determine the location of cadastral reference marks. It is recommended a Registered Land Surveyor or a person under their supervision to undertake this task. A registered surveyor should be consulted as early as possible (at the planning stage).

1.4. Inspect the site paying particular attention to survey marks located in the footpath, kerb or gutter.

1.5. If no survey marks are affected by the proposed works then commence works.

2. If any survey marks could be affected by the works, e.g. disturbed or removed

2.1. Submit an Application for Surveyor General Approval - Survey Mark(s) Removal.

2.2 If only Permanent Survey Marks are affected, a declaration made by a Registered Land Surveyor stating that no Reference Marks are affected needs to be submitted with the application.

2.3. Allow 10 working days for a formal response.

2.4. Where required contact a registered surveyor to assist with the conditions of approval.

3. Protect survey marks

3.1. Comply with the conditions of the approval, place new marks and arrange a survey where required.

3.2. Protect adjacent marks from disturbance for the duration of the works. Note that up to 3 weeks may be needed to complete the survey (dependent on the complexity).

Penalties for disturbing survey marks

The unauthorised removal, disturbance or destruction of survey marks is costly to the community. Section 24(1) of the Surveying and Spatial Information Act 2002 states a person must not remove, damage, destroy, displace, obliterate or deface any survey mark unless authorised to do so by the Surveyor-General. In addition to a maximum penalty of 25 penalty units (currently $110 per penalty unit) a person found guilty by a court may be ordered to pay compensation up to $10,000 towards the cost of reinstatement and up to $10,000 towards loss or damage suffered.

For more information, please visit the Preservation of Survey Infrastructure webpage.

For any enquiries contact DCS Spatial Services.

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