

Surveyor - General's Direction

No. 11

Preservation of Survey Infrastructure

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

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5.1	May 2023	To address public consultation draft feedback

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Contents

Definitions	5
1. Preamble	8
2. Introduction	8
3. Authority to Remove or Replace Survey Marks	8
4. Application to Remove or Replace Survey Marks	9
5. General	9
5.1 Aim	9
5.2 Procedure	10
6. Procedure for Small-Scale Projects	11
7. Procedure for Large-Scale Projects	12
8. Procedure for Mining Projects	12
9. Deliverables	15
9.1 Deposited Plan of Survey Information Only	15

Definitions

In this Direction, the following terms have the meaning as indicated below.

Accurate AHD Value	As defined in Clause 5 of the Regulation.
AHD	As defined in Clause 3 of the Act. AHD71 is the datum surface approximating mean sea level that was adopted by the National Mapping Council of Australia in May 1971.
Bench Mark	As defined in Schedule 1 of the Regulation.
Boundary Mark	As defined in Schedule 2 of the Regulation.
Class	As defined in Clause 5 of the Regulation. Refer to SGD12 for more information.
Control Survey	As defined in SGD12.
CORSnet-NSW	CORSnet-NSW is a network of GNSS continuously operating reference stations (CORS) operated by Spatial Services, providing fundamental positioning infrastructure for New South Wales. CORSnet-NSW continuously observes and corrects satellite navigation signals in order to provide high-accuracy positioning across NSW to an international standard. Real-time data is streamed to users via a wireless internet connection.
Deposited Plan of Redefinition	As defined under 'Plan Types' in the Registrar General's Guidelines.
Deposited Plan of Survey Information Only (DPoSIO)	As defined under 'Plan Types' in the Registrar General's Guidelines, see also Section 9.1 of this document.
Established Survey Mark	As defined in Clause 5 of the Regulation.
Extraction Plan	Means a plan required by the Department of Planning, Industry and Environment which describes how subsidence impacts will be managed to meet the requirements of a development consent.
GDA2020	Means the Geocentric Datum of Australia 2020 .
Permanent Survey Mark	As defined in Schedule 4 of the Regulation.
POSI	Means the Preservation of Survey Infrastructure.

In this Direction, the following terms have the meaning as indicated below.

Positional Uncertainty	As defined in SP1 v2.2. Refer to SGD12 for more information.
Public Authority	As defined in Clause 3 of the Act.
Reference Mark	As defined in Schedule 3 of the Regulation including alignment marks.
Registered Land Surveyor	As defined in Clause 3 of the Act.
Replacement Survey Mark	Means any survey mark intended to replace an existing survey mark approved for removal by the Surveyor-General or authorised representative.
Rural Survey	As defined in Clause 5 of the Regulation.
SCIMS	Means the information management system maintained by the Surveyor-General and known as the "Survey Control Information Management System", as defined in Clause 5 of the Regulation.
SGD12	Means the Surveyor-General's Direction No. 12 – Control Surveys and SCIMS .
SP1 v1.7	Means the Intergovernmental Committee on Surveying and Mapping (ICSM) publication ' Standards and Practices for Control Surveys (SP1), Version 1.7 '.
SP1 v2.2	Means the Intergovernmental Committee on Surveying and Mapping (ICSM) publication ' Standard for the Australian Survey Control Network (SP1), Version 2.2 '.
Spatial Services	Means the Department of Customer Service – Spatial Services .
State Cadastre	As defined in Clause 3 of the Act. Also referred to as 'cadastre' in this Direction.
State Control Survey	As defined in Clause 3 of the Act. Also known as the 'State Control Survey Network'.
State Control Survey Network	Means the State Control Survey as defined in Clause 3 of the Act. A network of stations and survey measurements maintained by Spatial Services used to determine coordinates, heights and qualities with respect to the national reference frames.

In this Direction, the following terms have the meaning as indicated below.

Survey Mark	Means any mark as per Clause 90 of the Regulation (including alignment marks).
Surveyor-General	As defined in Clause 3 of the Act. Also interchangeable with 'Office of the Surveyor-General'
Survey Plan	As defined in Clause 3 of the Act.
The Act	Means the Surveying and Spatial Information Act 2002 .
The Regulation	Means the Surveying and Spatial Information Regulation 2017 .
Uncertainty	As defined in SP1 v2.2, uncertainty in this Direction means doubt about the validity of a measurement or result of a measurement (e.g. a position). Uncertainty is an indication of how wrong a value may be and is used in this Direction to quantify the level of survey quality, expressed as a standard deviation in the International System of Units (SI) expanded to the 95% confidence level.
Urban Survey	As defined in Clause 5 of the Regulation.

1. Preamble

The *Surveying and Spatial Information Act 2002* (the Act), Section 24, prohibits the destruction, removal or alteration of any survey mark unless authorised by the Surveyor-General of NSW. Significant penalties apply, including financial compensation towards loss or damage suffered and the costs of reinstating destroyed survey infrastructure. The *Surveying and Spatial Information Regulation 2017* (the Regulation), Clause 90, provides a mechanism for the authorised removal of survey marks, outlining minimum timeframes, forms and styles of marks to which this clause applies. Spatial Services, on behalf of the Surveyor-General, assesses applications for the removal of survey marks to maintain the integrity of the State control survey and State cadastre.

The State control survey (hereafter the State Control Survey Network), provides, through physical monumentation on the ground (Permanent Survey Marks) as well as high-accuracy real-time positioning services (CORSnet-NSW), direct connection to a reliable, accurate and nationally adopted spatial reference system that underpins surveying, land information and mapping systems. The loss of Permanent Survey Marks can therefore adversely affect future upgrades to physical infrastructure such as road, rail, ports and greenfield developments, as well as the planning and management of other development or resource management projects that require a spatial component, such as urban renewal, mapping and environmental management.

The State cadastre, as defined in the Act, is the official register of property boundaries within the State of NSW. Reference Marks are fundamental to the definition and re-establishment of the 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.

In order to obtain authority from the Surveyor-General for the removal of any Permanent Survey Mark, Reference Mark or Bench Mark, these directions must be followed.

2. Introduction

Surveyor-General's Direction No. 11 – Preservation of Survey Infrastructure (SGD11) outlines the process and requirements that need to be met for the authorised removal of survey marks. It details the aims, procedures and deliverables to follow to lawfully remove survey marks and preserve the integrity of the State Control Survey Network and/or State cadastre.

SGD11 differentiates applications for survey mark removal into either small-scale, large-scale or mining projects, depending on the type of work involved, number of survey marks affected and impact on the State Control Survey Network and/or State cadastre. Specific procedures, deliverables and minimum notification times apply for each type of Preservation of Survey Infrastructure (POSI) application.

Spatial Services reserves the right to ask for additional information or deliverables when granting approval for the removal of a survey mark.

3. Authority to Remove or Replace Survey Marks

In accordance with the Act and the Regulation in force at the time of survey, the following conditions apply when carrying out surveys under this Direction:

Any survey of a Bench Mark or Permanent Survey Mark affected by the works may only be undertaken by a person authorised by the Surveyor-General, or engaged by a public authority and subject to its quality assurance procedures. The public authority takes full responsibility for the work undertaken by the person(s) so engaged.

Any survey of a Boundary Mark or Reference Mark affected by the works shall be surveyed by, or under the supervision of, a Registered Land Surveyor.

Bench Marks or Permanent Survey Marks, which are also Reference Marks and affected by the works, shall be surveyed by, or under the supervision of, a Registered Land Surveyor.

4. Application to Remove or Replace Survey Marks

An application for authorisation to remove or replace a survey mark(s) must be made in accordance with Clause 90 of the Regulation.

Spatial Services categorises survey mark removal applications into small-scale, large-scale and mining projects. For the purpose of this Direction, small-scale projects are those that are confined to a small area (nominally a single road intersection or a frontage not exceeding four lots). Large-scale projects are considered any project other than a small-scale project. Mining projects are considered specialised types of projects differentiated into underground or open cut.

Spatial Services may, on occasion, change the category of survey mark removal application if deemed appropriate. The applicant may propose a different category if substantiated by evidence.

For an application to:

- Remove or replace a survey mark(s) affected by small-scale projects, refer to **Section 5** and **6** of this Direction.
- Remove or replace a survey mark(s) for large-scale projects, refer to **Section 5** and **7** of this Direction.
- Remove or replace a survey mark(s) for mining projects, refer to **Section 5** and **8** of this Direction.

The application must be made to the Surveyor-General at least 14 days before the date on which the applicant intends to remove, damage, destroy, obliterate or deface the survey mark in respect of which the authorisation is sought. A Registered Land Surveyor should be consulted as early as possible (at the planning stage) to ensure that no survey marks are overlooked and sufficient time is allowed to complete the survey work before survey marks are removed.

The application platform is available on the [Spatial Services Customer Hub](#).

Refer to the SGD11 POSI Resource Pack available on the [Surveyor-General's Directions website](#) for more information, templates and documents regarding application requirements.

5. General

5.1 Aim

In regard to **Permanent Survey Marks** and **Bench Marks**, the aim of the proposed survey work is to preserve the integrity of the State Control Survey Network by ensuring that sufficient Permanent Survey Marks and/or Bench Marks are available following completion of the project.

On completion of works, the control survey must be of sufficient horizontal and vertical Class and uncertainty to allow the existing and/or replacement survey mark(s) to be coordinated to a similar standard as the mark(s) affected by the works. The control survey must meet the requirements outlined in SGD12.

In regard to **Reference Marks**, the aim of the proposed survey work is to preserve sufficient cadastral infrastructure, place additional survey marks and provide sufficient measurements in order to re-establish the cadastre at the accuracies specified in the Regulation following completion of the works.

The public authority or organisation responsible for the project shall manage and monitor the preservation of survey infrastructure, and that all work is carried out in accordance with the approval, including the delivery of the final survey plan and associated documentation.

5.2 Procedure

The following general procedures must be implemented prior to addressing the specific procedures relevant to the scale of the project as detailed in **Section 6**, **Section 7** and **Section 8**.

- Obtain a current search of the Survey Control Information Management System (SCIMS).
- Conduct a thorough search of plans on public record (e.g. Deposited Plans) for any potentially affected survey marks. It is recommended that a Registered Land Surveyor or a person under their supervision undertakes this task.
- Determine whether any affected Permanent Survey Mark(s) is also included in any Deposited Plan. According to the Regulation, a Permanent Survey Mark shown in a Deposited Plan may also be a Reference Mark.
- Conduct a thorough visual inspection of the site and, if necessary, a field survey to locate any existing and/or additional survey marks (e.g. Permanent Survey Marks not recorded in SCIMS or new Reference Marks shown on unregistered plans) which may be affected by the proposed works.
- Prepare a Survey Mark Audit Schedule of all survey marks within the extent of works and report their physical state (found, not found, disturbed or destroyed) and the expected impact of the project works (safe, vulnerable, to be destroyed or already gone) as a result of the field inspection.
- If a survey mark(s) is affected, apply to the Surveyor-General for the removal of the survey mark(s) in accordance with Clause 90 of the Regulation.
- If only Permanent Survey Marks are affected, a Registered Land Surveyor declaration stating that no Reference Marks are affected needs to be submitted with the application.
- If a Reference Mark(s) or a Permanent Survey Mark(s) identified as a Reference Mark(s) is to be removed, a Deposited Plan of Survey Information Only (or an approved alternative) must be prepared in accordance with **Section 9**. A replacement survey mark must be located in a safe position, either outside the zone of influence of the works or within a completed stage of the works, such that the replacement survey mark is protected from further physical impact for the duration of the project.
- If the affected Permanent Survey Mark(s) contains an 'Established' or 'Accurate' coordinate/height as shown in SCIMS, then the replacement survey mark(s) will need to be surveyed to an equivalent Class, as detailed in this Direction.
- Similarly, if the affected Permanent Survey Marks(s) has Positional Uncertainty as shown in SCIMS, the replacement survey mark(s) will need to be surveyed to a similar standard to enable the propagation of Positional Uncertainty, as detailed in this Direction.
- All control surveys must sufficiently connect to datum (GDA2020, AHD71) via direct or indirect means. See SGD12 for further information.
- A replacement survey mark(s) can either be a survey mark placed or an existing survey mark found which will remain safe from project impact.
- In some cases, the number of required replacement survey marks can be rationalised if sufficient existing survey marks will remain to meet the aims of this Direction. Each application will be evaluated on its merits.

- If a Trigonometrical Station is affected by an Aboriginal land claim, road closure, Western Land Lease or construction works (e.g. tower, solar panel, antenna installation, building installation), a 'Trig station application' must be made to the Surveyor-General. The application platform is available on the [Spatial Services Customer Hub](#).
 - o For Trigonometrical Stations and CORS, the Surveyor-General reserves the right to establish a buffer zone in order to protect these assets. The buffer zone radius will be decided by Spatial Services and assessed by the importance of the asset.

6. Procedure for Small-Scale Projects

In addition to the general aims and procedures detailed in **Section 5**, the following specific procedures are applicable to small-scale projects.

Small-scale projects are those that are confined to a small area (nominally a single road intersection or a frontage not exceeding four lots) which may result in the damage or removal of Permanent Survey Marks and/or Reference Marks.

Where small-scale projects are contiguous (e.g. kerb and gutter or footpath upgrades), the procedures for large-scale projects must be followed (see **Section 7**). This is to prevent the destruction of a large number of survey marks, which may involve several contracts, over an extended period of time.

The survey must specifically address the following:

- A small-scale project application must include as a minimum:
 - o The **Survey Mark Audit Schedule**, completing only relevant sections.
 - o The **extent of work** must be clearly communicated. A sketch and/or existing plan(s) with notes showing extent of work, affected survey marks and proposed control network are encouraged to assist in the application process.
- If a Reference Mark(s) or a Permanent Survey Mark(s) identified as a Reference Mark(s) is to be removed, a **survey plan preserving the integrity of the cadastre** must be prepared, such as a DPoSIO.
- If the Permanent Survey Mark(s) to be replaced is '**Established**', then the replacement survey mark(s) is to be surveyed to an equivalent Class.
- If the Permanent Survey Mark(s) to be replaced **is not 'Established'**, then no further control survey field work is required for the replacement survey mark(s).
- If the Permanent Survey Mark(s) **has an AHD71 'Accurate' height**, then the replacement survey mark(s) is to be surveyed to an equivalent Class.
- If the Permanent Survey Mark(s) to be replaced **does not have an AHD71 'Accurate' height**, then no further control survey field work is required for the replacement survey mark(s).
- If the Permanent Survey Mark(s) to be replaced has a **Positional Uncertainty value**, then the replacement survey mark(s) is to be surveyed to a similar standard to enable the propagation of Positional Uncertainty, as detailed in this Direction.
- If it is considered that the replacement of any survey mark in accordance with these procedures is not justified, then the application to remove the mark(s) without replacement must be substantiated. Each application will be evaluated on its merits.

7. Procedure for Large-Scale Projects

In addition to the general aims and procedures detailed in **Section 5**, the following specific procedures must be followed for large-scale projects.

Large-scale projects are anything other than small-scale projects that extend over a significant area, e.g. infrastructure upgrade to road, rail or ports, greenfield development or urban renewal projects. These projects may result in the damage or removal of a significant number of Permanent Survey Marks or Reference Marks.

Where possible, provide at least 30 business days notification before the proposed removal or replacement of the survey mark(s), thereby extending the timeframe of 14 days minimum notice under Clause 90 of the Regulation.

In large-scale projects, the applicant must submit a well-documented strategy to maintain the integrity of the State Control Survey Network and the cadastre. The application will be evaluated for approval by the Surveyor-General.

The application must include the following:

- A field audit of all survey marks within the extent of the proposed works. The **Survey Mark Audit Schedule** is to include the mark's physical state (e.g. found intact, not found, disturbed or destroyed), the mark's status (e.g. type, position, height and accuracy) and date of inspection. The schedule must also include the expected impact of the project works on the mark (e.g. safe, vulnerable, to be destroyed, already gone, or proposed for any new replacement survey marks). The status of a Reference Mark can only be verified by a Registered Land Surveyor.
- A **Survey Project Plan Drawing** showing the extent of works, all existing survey marks, proposed location and accuracy of any replacement survey marks, and other relevant information. The Survey Project Plan Drawing is to be coincident with the Survey Mark Audit Schedule.
- A **POSI Strategy Report** outlining both the preservation and replacement strategy and how this will be achieved.
- A **proposed horizontal and/or vertical control network diagram(s)** to cover any control survey work that might be required.

The application, including the above documentation, should be lodged by the public authority or organisation responsible for the infrastructure or development project. Where existing arrangements are in place, Spatial Services will not accept applications/deliverables from a survey contractor undertaking the work on behalf of the public authority or organisation responsible for the project.

To facilitate this process, the Surveyor-General has established formal lines of communication and liaison with various public authorities responsible for the maintenance and construction of large-scale infrastructure in NSW.

8. Procedure for Mining Projects

In this Direction, mining projects are considered specialised types of projects in terms of Preservation of Survey Infrastructure requirements. These projects may result in the disturbance, damage or removal of Permanent Survey Marks and Reference Marks over a significant area.

- Within the mine workings area, no new Permanent Survey Marks are to be placed if these will also be affected by the project. If a new replacement survey mark(s) is needed, it should be placed in a location that is accessible to the public, unless the mine requires an additional survey mark(s) within the mine for its own purposes. Different mining projects will have different implications on survey infrastructure.

- Reference Marks affected by the mine workings will impact future users differently, depending on the size and timing of the works. The standard creation of a DPoSIO may not be practical, as there may not be safe locations to place new marks. Different mining projects will have different implications on cadastral infrastructure.
- The construction of a Continuously Operating Reference Station (CORS) and its inclusion in either the NSW Government operated CORSnet-NSW network and/or the Federal Government's Positioning Australia network are alternative solutions that may be considered and would deliver benefits to all users.
- In some cases, Permanent Survey Marks with 'Accurate' AHD71 values may require a minimum 6hr+ AUSPOS session to be observed prior to any mining activity. This is necessary to measure, model and hence preserve orthometric (AHD71) to ellipsoidal height relationships for current and future Australian geoid models.

There are two types of mining projects that may impact on survey infrastructure:

- **open cut mining projects**, and
- **underground mining projects** (e.g. long wall or block caving).

Each type of mining project will require a specific approach to the Preservation of Survey Infrastructure.

Open Cut Mining Projects

- If the mining project affects the density of the State Control Survey Network in the area, the addition of new Permanent Survey Marks should be placed at the extents of the mine workings (preferably on public land) and outside any potential deformation zone surrounding the open cut mine.
- The new replacement survey marks will be of a similar type, and surveyed to an equivalent Class and a similar uncertainty, as the ones that they replace. This will satisfy the requirements of the State Control Survey Network.
- If any unplanned disturbance occurs to Permanent Survey Marks (i.e. subsidence from high wall failures, earth works and plant movement), then a new application referencing the original consent should be submitted to the Surveyor-General.
- Reference Marks along the perimeter of the mining lease must either be protected or shown on a DPoSIO. This will meet the requirements of adjoining land definitions.
- At the end of the mining project, the organisation responsible for the project will carry out an audit survey and any anomalies within the cadastre caused by the mining project will be rectified at this stage.
- For deformation effects occurring, or predicted to occur, as a result of land movement towards an open cut mine void, the following Underground Mining Projects section in this Direction should be followed.

Underground Mining Projects

For any survey infrastructure affected by underground mine projects, the survey infrastructure may seem undisturbed. However, their position may change due to the effects of subsidence - usually both in the horizontal and vertical directions.

- If, during the project, Permanent Survey Marks are disturbed by subsidence from movement related to open cut high walls and underground workings, a monitoring survey to a standard as agreed with the Surveyor-General is to be conducted. The monitoring survey density will be at a 500-metre spacing or of the existing marks' density (whichever is less).
- A monitoring survey is required at regular intervals, as agreed between the Surveyor-General and the applicant, to provide survey control for public use during the project's life. Monitoring will continue until both the applicant and the Surveyor-General deem all practical subsidence has ceased.

- To avoid duplication of monitoring surveys, when planning a monitoring program under the proposed Extraction Plan, consideration should also be given to the monitoring survey required by the Surveyor-General.
- When the Surveyor-General and the applicant have agreed that practical subsidence has ceased, the final survey of all Permanent Survey Marks is to be conducted to an equivalent Class and a similar uncertainty which existed before being affected by the mine project.
- As the cadastre is determined by relative means, there will generally not be large burdens placed upon future definition of the cadastre. However, if there are unforeseen large geological events caused by the subsidence, a Deposited Plan of Redefinition is the only means to rectify the impact to the cadastre. In this situation an amendment to the approval will be required.

Application

Similarly to large-scale projects, independent of the type of the mining project, the applicant must submit a well-documented strategy to maintain the integrity of the NSW State Control Survey Network and the cadastre. The application will be evaluated for approval by the Surveyor-General.

Where possible, provide at least 30 business days notification before the proposed removal or replacement of a survey mark(s), thereby extending the timeframe of 14 days minimum notice under Clause 90 of the Regulation.

The application must include the following:

- A summary of the type of mining (underground mining techniques or open cut mining etc.), with the likely impact on the survey infrastructure that could be affected.
- Survey marks that will remain in-situ but are to be buried by overburden or tailings are to be considered destroyed for the purposes of this application.
- Planned commencement and completion dates, along with predictions of when full subsidence impacts are expected to be completed.
- A field audit of all survey marks (a desktop audit for Reference Marks is allowable) within the extent of the proposed works. The **Survey Mark Audit Schedule** is to include the mark's physical state (e.g. found intact, not found, disturbed or destroyed), the survey mark's status (e.g. type, position, height and accuracy) and date of inspection. The schedule must also include the expected impact of the project works on the mark (e.g. safe, vulnerable, to be destroyed, already gone, or proposed for any new replacement survey marks). Note that the status of a Reference Mark(s) must be verified by a Registered Land Surveyor.
- **Mining Lease Plan**, depicting the integrity of the cadastre.
- A **Survey Project Plan** including:
 - o Strategy and methodology for survey mark protection and the proposed reinstatement of survey infrastructure at the end of the mining project.
 - o Diagram or drawing showing all existing survey marks.
 - o Proposed position and accuracy of each new replacement survey mark, survey technique, and equipment to be used.
 - o Extent of the proposed works including the extraction area.
 - o Mining infrastructure that will be built (e.g. haul roads, stockpiles, ore dumps, waste dumps, detention basins, tailings dam).
 - o Location of final high walls with predicted limits of effective subsidence if high walls were to fail, and the predicted limits of effective subsidence.

- o Predicted magnitude and limit of horizontal and vertical subsidence from the proposed mining project.

If a monitoring survey network is required, this will need to be shown within the Survey Project Plan as described within the Underground Mining Projects section of this Direction. The monitoring survey must meet the requirements outlined in SGD12.

If a replacement survey is required, all control survey work must satisfy the requirements outlined in SGD12.

9. Deliverables

On completion of the works, the following must be addressed:

- All conditions of the approval granted under Clause 90 of the Regulation must be met, including all survey data, documents and plans, as detailed in the approval.
- Any survey submitted must also comply with the Regulation and applicable Surveyor-General's Directions.
- The survey data, documents and plans shall be lodged initially with the Surveyor-General by the [Project Data Submission](#) through the [Spatial Services Customer Hub](#) to check compliance with the conditions of approval (or public authority or organisation responsible for the project if instructed so by the Surveyor-General).
- Any Deposited Plan must then be lodged with the appropriate authorities.

9.1 Deposited Plan of Survey Information Only

A Deposited Plan of Survey Information Only (DPoSIO) is a plan showing connections between survey marks and other physical features and must not redefine land parcels or land boundaries, show proposed subdivision boundaries or new lot numbers and areas.

This plan category was introduced to allow surveyors to place survey information on public record. The information shown may provide valuable evidence for the relocation of boundaries in future plans.

A plan prepared for the purpose of meeting a condition of survey mark removal consent must comply with the Regulation. In particular:

- The following note must be shown on every sheet of the plan: "NOT INVESTIGATED IN NSW LRS. SURVEY INFORMATION ONLY. NOT TO BE USED FOR TITLE DESCRIPTION."
- The survey mark removal (SMR) approval number must be shown next to the Surveyor's Reference.
- Approved symbols must be used, as stated in Schedule 5 of the Regulation (e.g. double circle symbol for all Reference Marks, square and circle for PSMs).
- Replacement survey marks must be shown in their actual location, with approved symbols.
- Original Reference Marks can be shown at the boundary corner, as in the source plan, or in their actual location. See Section 3.2.5 of Surveyor-General's Direction No. 7 for more details. In either case, opinion or reference to the cadastre's position must not be stated or shown.
- All Reference Marks affected by the works are to show connections on the DPoSIO to survey marks, either existing or placed, including Boundary Marks if applicable, to maintain the integrity of the cadastre. Sufficient connections must be shown to survey marks which will remain undisturbed following completion of the works. All survey marks must be connected by a closed survey. Where possible, those connections should be shown directly from Permanent Survey Marks or newly placed replacement survey marks.

- The connection between the Reference Mark affected by the works and the replacement mark must not exceed 30 metres for urban surveys or 150 metres for rural surveys.
- Two independent radiations (from two different survey marks) may be sufficient where fully closed connections are not practical.
- The connections must be listed as sequential bearings and distances either on the face of the plan or tabulated.
- Origin of all survey marks must be stated on the face of the plan or tabulated.
- Status of all survey marks must be stated on the face of the plan or tabulated ("Found – Now Gone" for all marks removed by the project).
- Show height difference schedule and height schedule if placing a new Permanent Survey Mark in an urban area and connecting into two Permanent Survey Marks (that define the datum line) with accurate AHD values as stated in Clause 43(2) of the Regulation.
- If the plan consists of multiple sheets, all connections, survey marks and relevant tables must be shown on each sheet as an independent section of the whole survey.

Prior to the lodgment of the above plan, a draft copy of the plan together with a DPoSIO checklist must be submitted to the Surveyor-General for feedback.

With the approval of the Surveyor-General, a different type of Deposited Plan may be used to re-establish the cadastre (e.g. Deposited Plan of Redefinition, Identification, Subdivision, Consolidation, Acquisition etc.).

If, due to unforeseen events caused by project works, there is a substantial loss of survey marks and the integrity of the cadastre is severely degraded, a plan redefining the cadastre will be the only means to rectify the impact to the cadastre.

End of Direction