

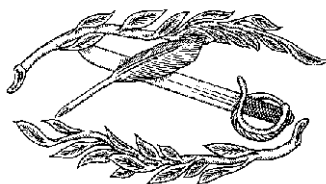


New South Wales Government

# Surveyor General's Directions

No. 11

## Preservation of Survey Infrastructure





# Preservation of Survey Infrastructure

## Contents

	Page
<b>1. PREAMBLE</b> .....	1
<b>2. INTRODUCTION</b> .....	1
<b>3. AUTHORITY TO UNDERTAKE WORK</b> .....	1
<b>4. METHODOLOGY</b> .....	1
4.1 Permanent Marks .....	2
4.2 Cadastral Reference Marks .....	3
4.3 Permanent Marks Disturbed/Destroyed by Mining Activities .....	4

## Appendices

<b>A</b> – Office Locations for Land & Property Information NSW .....	6
<b>B</b> –“Proof of Position” .....	7
<b>B1</b> –“Proof of Position” .....	8
<b>C</b> – “Example of plan for Survey Information Only” .....	9
<b>D</b> - Notification of the Destruction of Survey Marks .....	10



## 1. PREAMBLE

Section 24(1) of the Surveying Act 2002 states that 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 (which is currently \$2750) a person found guilty by a court may be required to pay compensation up to \$10000 towards the cost of reinstatement plus up to \$10000 towards loss or damage suffered.

In order to obtain authority from the Surveyor-General for the removal of any permanent survey mark or reference mark, the following procedures should be followed.

## 2. INTRODUCTION

It is inevitable that survey marks will be destroyed from time to time by various types of works, e.g. permanent marks and reference marks may be obliterated in a mall redevelopment.

Permanent marks are fundamental points that help underpin spatial infrastructure. This includes geographic information systems and databases that are the management tools for records at all levels of Government. The loss of the permanent mark infrastructure can significantly impact on infrastructure projects such as roads and rail and on any planning and management of resources that have a spatial component such as mapping and environmental management.

Cadastral reference marks are fundamental to the definition of the cadastre. The loss of these marks and permanent marks can significantly degrade the integrity and accuracy of the cadastre and significantly add to the costs of subsequent surveys.

## 3. AUTHORITY TO UNDERTAKE WORK

Any survey necessary to recover the position of survey marks proposed to be destroyed may only be undertaken by a surveyor registered under the Surveying Act 2002 or made under the supervision of a registered surveyor or by survey staff authorised by the Surveyor-General.

## 4. METHODOLOGY

The following procedures detail the method of survey to be adopted to preserve the survey control infrastructure and the cadastral framework when the destruction of survey marks is proposed. Department of Lands survey staff have the authority to modify these procedures if requested to cover specific cases.

### 4.1 Permanent Marks

#### Aim

The aim of the survey is to replace permanent marks proposed to be destroyed and to provide sufficient survey measurements to be able to coordinate the replacement mark to a similar standard as the mark being replaced.



## Procedure

The following procedure should be implemented:

- Ascertain from search of plans on public record whether the permanent mark to be replaced has also been used as a reference mark. For a permanent mark to qualify as a reference mark it must be within 30 metres of the corner and be shown on a deposited plan. If the permanent mark is also a reference mark as defined by the Surveying Regulation then the procedure for cadastral reference marks (refer section 4.2 below) must also be implemented,
- Advise Department of Lands survey staff of the proposed mark replacement. They will be able to provide advice if required,
- In consultation with the Surveyor General and the Local Council replace all permanent marks proposed to be destroyed with new permanent marks located in safe positions that will not be affected by the proposed works,
- Obtain an up to date Survey Control Information Management System (SCIMS) search,
- If the permanent mark to be replaced does not have AHD height of Order L5 or 3 or better then no height will be required on the replacement mark,
- If the permanent mark has AHD height of Order L5 (or 3) or better then height differences to Class LD or B standard or better between the replacement mark and the new mark plus an additional permanent mark with height of Order L5 (or 3) or better is required. The information is to be shown on the new locality sketch plan,
- If the permanent mark to be replaced does not have MGA coordinates of Class C or better then no further survey field work is required,
- If the permanent mark to be replaced has MGA coordinates of Class C or better then closed connections between the replacement mark and the new mark plus 2 additional coordinated permanent marks is required. All measurements must be made using constrained centring. The standard of measurements must conform to the requirements of Class C of the current “Standards and Practices for Control Surveys (Special Publication No. 1)”. Refer: [www.icsm.gov.au/publications](http://www.icsm.gov.au/publications),
- A diagram detailing the actual reduced field measurements must be forwarded to one of the Department of Lands survey offices (refer Appendix ‘A’). Examples are shown in Appendix ‘B’. Alternatively the information may be included on a “Plan of Survey Information” signed by a registered surveyor and lodged as a Deposited Plan at the Department of Lands, Prince Albert Road, Queens Square, Sydney with the prescribed fee,



- A locality sketch plan (in accordance with the Surveyor General's Directions - No. 2 "Preparation of Locality Sketch Plan") with all the appropriate details must be lodged at the Land & Property Information Office, Prince Albert Road, Queens Square, Sydney.

## 4.2 Cadastral Reference Marks

### Aim

The aim of the survey is to provide sufficient measurements to be able to re-establish the position of the cadastral infrastructure including reference marks within the accuracy's specified in the Surveying Regulation after they have been destroyed by the proposed works.

### Procedure

The following procedure should be implemented:

- Conduct a thorough search of SCIMS and all relevant plans on public record,
- Ascertain the survey marks (including survey control, cadastral reference marks and cadastral corner marks) and monuments affected by the proposed works,
- Conduct a thorough visual inspection of the site to locate any additional survey marks affected by the proposed works e.g. private survey marks, new marks (unregistered plans),
- Carry out the required fieldwork to connect all survey marks that are proposed to be destroyed or disturbed to permanent marks (or reference marks if permanent marks are not available in the vicinity) that will not be affected by the proposed works,
- Ensure all survey marks have been surveyed by closed connections (two independent radiations will generally be sufficient). Where possible connections are to be made directly from permanent marks,
- The survey must be connected to at least 3 permanent marks (preferably established marks) that will not be affected by the proposed works. If there is a shortage of permanent marks in the vicinity then stable reference marks may be substituted,
- Prepare a plan (in accordance with the *Registrar General's directions for the preparation of plans*) detailing the actual reduced field measurements. It is not intended that the plan re-defines or coordinates cadastral boundaries unless requested by the client. The following information must be shown on the plan:
  - Street/road names,
  - Cadastral linework and adjoining survey information,



## Surveyor General's Directions



- Closed connections (as observed) by bearings and horizontal ground distances to all marks found or placed,
  - Details of the type and origin of all survey marks located,
  - If the established survey control network is available, include a table of all established permanent marks connected, specifying the MGA coordinates, zone, class, order, combined scale factor, source and date of SCIMS search,
- Lodge the plan as a “Plan of Survey Information” at the Department of Lands, Prince Albert Road, Queens Square, Sydney with the prescribed fee.

### 4.3 Permanent Marks Disturbed/Destroyed by Mining Activities

#### Aim

The aim of this section is the re-establishment of the survey control network following the completion of mining activities.

#### Procedure

The following procedure should be implemented:

- Prepare a plan or diagram showing the area to be affected,
- Conduct a thorough search of SCIMS,
- Ascertain the permanent marks (including any trigonometrical stations) that will be affected by the proposed works,
- Provide a summary of the mining technique (ie. long wall mining, open cut, etc.),
- Provide a summary of the likely impact on any permanent mark that could be affected,
- Provide the commencement and completion dates of mining and the expected period for subsidence (if applicable).



## Surveyor General's Directions



Forward this information with a letter containing contact details for the relevant Mine/Mining Surveyor to the Department of Lands. Address the letter to:

**Senior Surveyor**  
Department of Lands  
PO Box 488G  
Newcastle NSW 2300.

The Senior Surveyor will then liaise with the Mine/Mining Surveyor and the Mine Subsidence Board regarding re-establishment and/or replacement of permanent marks on completion of subsidence or open cut restoration.

For further information and advice contact:

Manager,  
Cadastral Management Unit  
Land & Property Information  
Department of Lands  
P.O. Box 143  
Bathurst NSW 2795  
Phone: 02 6332 8224  
E-mail: [cmu@lands.nsw.gov.au](mailto:cmu@lands.nsw.gov.au)

Manager,  
Cadastral Integrity  
Land & Property Information  
Department of Lands  
GPO Box 15  
Sydney NSW 2001  
Phone: 02 9228 6606

For the notification of details see Appendix D.



# Surveyor General's Directions



## Appendix A:

### Office Locations for Land & Property Information NSW

Information Centres for survey marks and the protection of survey marks.

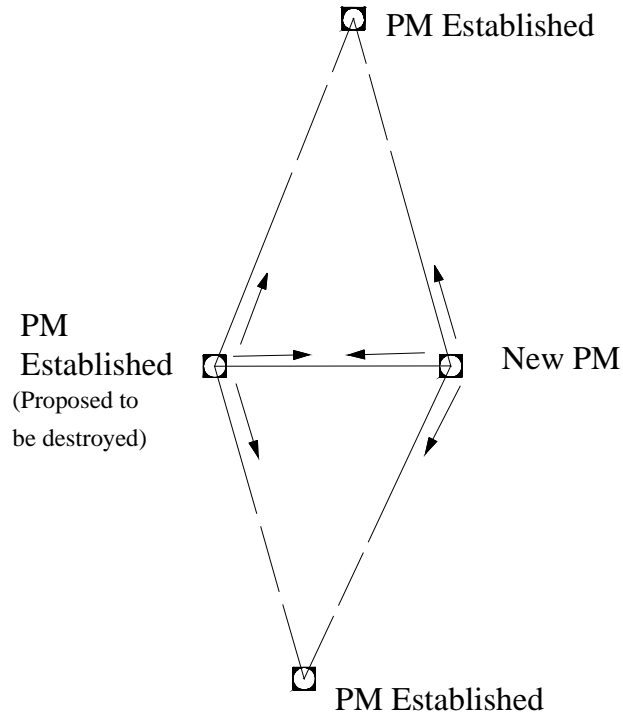
Within office hours of: 8.30 am - 4.30 pm (Monday to Friday):

<b>SYDNEY:</b>	Survey Services 2nd Floor, 1 Prince Albert Road, Queens Square Building      or SYDNEY NSW 2000	Phone: (02) 8258 7500 Fax: (02) 8258 7555  GPO Box 15 SYDNEY NSW 2001
<b>BATHURST:</b>	Survey Services PO Box 143 Panorama Avenue Bathurst NSW 2795	Phone: (02) 6332 8224 Fax: (02) 6332 8230
<b>LISMORE:</b>	C/- Department of Commerce (Dalley St East Lismore) (PO Box 73) Lismore NSW 2480	Phone: (02) 6626 5632 Fax: (02) 6626 5666
<b>COFFS HARBOUR:</b>	C/- Department of Commerce 359 High Street (PO Box 291J) Coffs Harbour Jetty NSW 2450	Phone: (02) 6651 2507 Fax: (02) 6651 1001
<b>NOWRA</b>	C/- Shoalhaven Shire Council Bridge Road PO Box 42 Nowra NSW 2541	Phone: (02) 4429 3279 Fax: (02) 4422 1816
<b>NEWCASTLE:</b>	Land & Property Information NSW State Government Building 117 Bull Street (PO Box 488G) Newcastle NSW 2300	Phone: (02) 4925 9999 Fax: (02) 4929 2969
<b>PORT MACQUARIE:</b>	C/- Hastings Municipal Council Cnr Lord St & Burrawan St (PO Box 84) Port Macquarie NSW 2444	Phone: (02) 6581 8638 Fax: (02) 6581 8620
<b>WYONG:</b>	C/- Wyong Shire Council 16 Hely Street (PO Box 20) Wyong NSW 2259	Phone: (02) 4350 5324 Fax: (02) 4350 5324

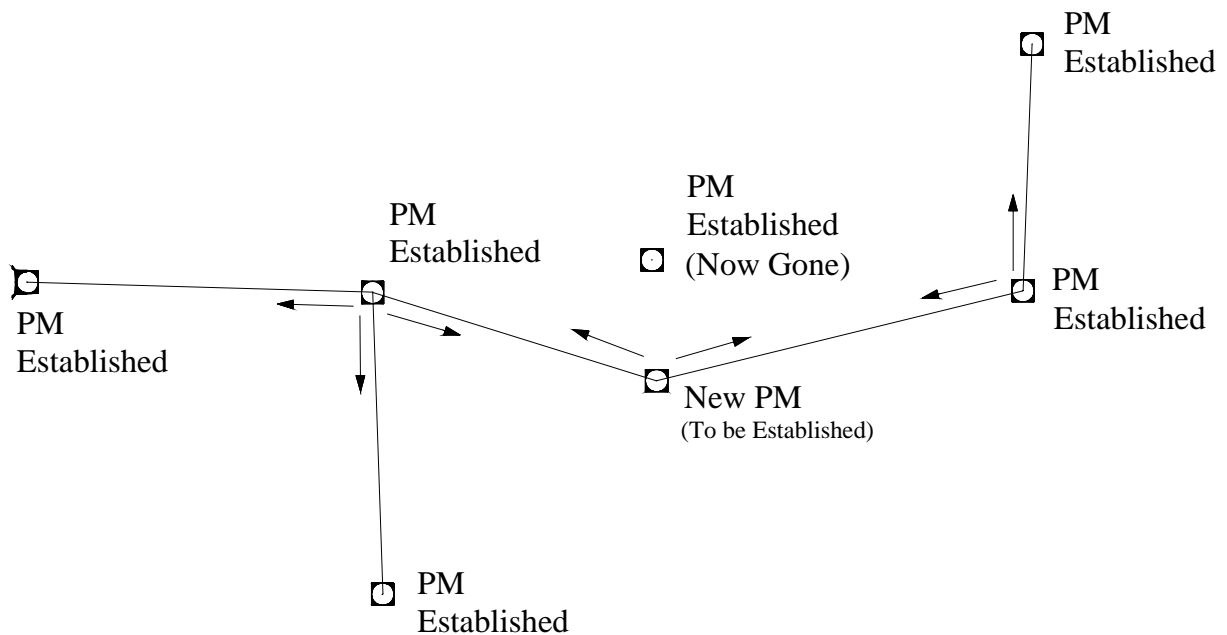


## Appendix B – “Proof of Position”

If the PM to be destroyed is “Established”, then proven connections to at least 3 established PM’s are required.



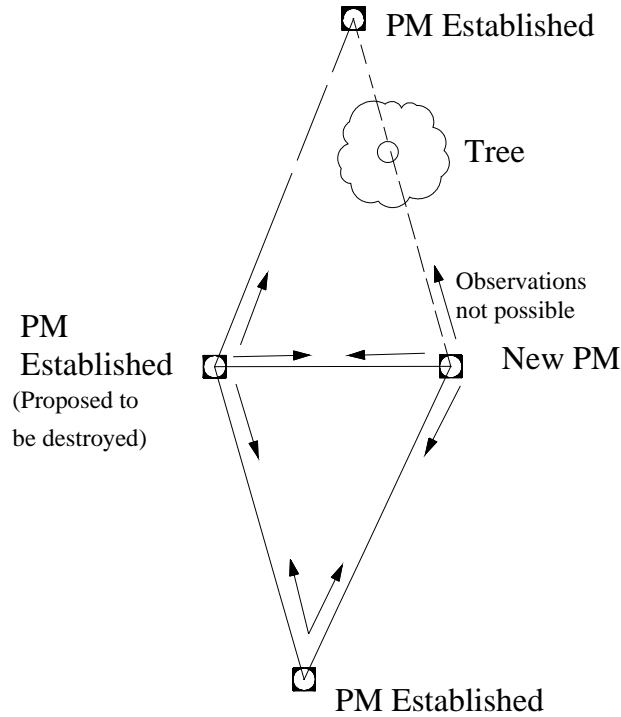
If the PM was “Established” and has been destroyed, then the proven connections to establish the new PM are more extensive (See below).



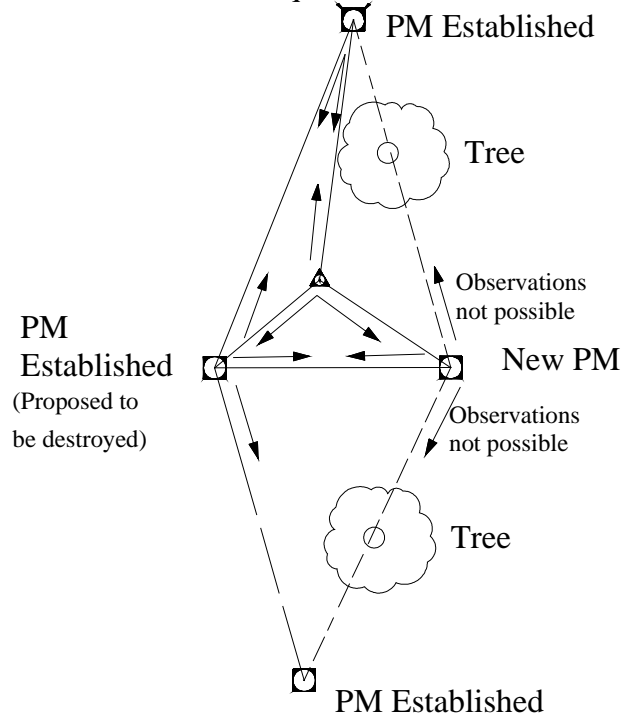


## Appendix B1 - Continued –“Proof of Position”

If the PM to be destroyed is “Established”, then closed connections to established PM’s are required.



If the PM to be destroyed is “Established”, then closed connections to established PM’s are required.







Notification of the Destruction of Survey Marks  
Permanent Marks & Reference Marks

(Please show sufficient information to identify the survey mark)

Mark Details

Mark Name:	
Description: TS PM SSM	No.
Reference Mark: (Type / Description)	
Deposited Plan:	
Location:	
Road / Street Name:	
LGA:	
Suburb:	
Coordinates: MGA E:	
Coordinates: MGA N:	
Status: Disturbed Destroyed Will be Destroyed	
Reason:	
<i>Contact Details:</i>	
Name:	
Organisation	
Address:	
Ph No.:	
Fax No.:	
E-mail:	

Include a diagram, survey plan or photograph to assist the description of any circumstance if needed.

Forward details to:

The Manager  
Survey Services  
Land, Property and Information NSW  
2nd Floor,

Queens Square Building  
SYDNEY NSW 2000

Telephone: 02 8258 7500

Facsimile: 02 8258 7555

E-mail to [scims@lands.nsw.gov.au](mailto:scims@lands.nsw.gov.au)

Or GPO Box 15  
SYDNEY NSW 2001