

## SURVEY REGULATIONS 2020

### NOTICE OF THE SURVEYOR-GENERAL (NO 4)—PLACING PERMANENT SURVEY MARKS AND PROVISION OF INFORMATION FOR PERMANENT SURVEY MARKS

#### *Regulations 13, 21 and 22*

1. This notice may be cited as the ‘*Notice of the Surveyor-General (No 4)—Placing Permanent Survey Marks and Provision of Information for Permanent Survey Marks, Survey Regulations 2020*’.
2. This notice comes into operation on 24 August 2020.
3. I, MICHAEL PAUL BURDETT, Surveyor-General, in accordance with my powers and functions in the *Survey Act 1992* and Regulations 13, 21 and 22 of the *Survey Regulations 2020* HEREBY directs and requires, as applicable, the following matters detailed in the Schedule herein.

Dated: 17 August 2020

MICHAEL BURDETT  
Surveyor-General

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#### SCHEDULE

##### 1.1 Interpretation

In this Notice:

*Adelaide City* means land within the City of Adelaide

*Network Permanent Survey Mark (PSM)* means a PSM with coordinates adjusted to the State geodetic network

*Non-network Permanent Survey Mark (PSM)* means a PSM with coordinates that are not adjusted to the State geodetic network

*PU* means positional uncertainty

*Regulations* means the *Survey Regulations 2020*

*Rural area* means locations that are not included in urban areas or Adelaide City

*Type B PU* means a positional uncertainty deemed to be suspect due to factors external to the coordinate’s adjustment, for example, a reactive soil area

*Urban area* means locations where land parcels are generally less than 5000m<sup>2</sup> in area that are not included in Adelaide City



##### 1.2 Application of this Notice



In relation to cadastral surveys of land:

- within a designated survey area,
- coordinated cadastre, and
- outside both a designated survey area and coordinated cadastre

the Surveyor-General DIRECTS, under Regulations 13(1),13(2) and 21 of the Regulations, and also REQUIRES, under Regulation 22 of the Regulations (where specified in 1.5.4 and 1.7.3 below), the following matters in relation to the placing and provision of information concerning permanent survey marks:

##### 1.3 Permanent Survey Marks

Permanent Survey Marks (PSMs) shall be identified by the symbols  or .

The PSM symbol  is reserved for those marks that are classified as Network PSMs and used in the State geodetic adjustment. PSMs that are coordinated under item 1.7.1 of this Notice as part of a cadastral survey or by voluntary coordinate submission are classified as non-network PSMs and identified by the symbol . These marks are not included in the State geodetic adjustment.

Three types of survey mark have been gazetted as PSMs pursuant to Section 49(3) of the *Survey Act 1992*:

- below ground PSMs
- above ground PSMs
- stainless steel pins, at least 50mm long and 5mm in diameter, with inscribed washer suitable for permanent installation in concrete (mini PSMs).

The last of these, mini PSMs, are restricted to placement in community divisions and subdivisions of more than 5 allotments. Refer to Section 14.3 of the Cadastral Survey Guidelines for further details.

Brass survey mark plaques, provided by the Surveyor-General, shall be used for all new PSMs, other than mini PSMs.

#### **1.4 Marks placed in lieu of Permanent Survey Marks on surveys in Pastoral Areas and for Freeholding Waterfront Perpetual Leases**

Surveys carried out in pastoral areas and for freeholding waterfront perpetual leases, where it is not practicable to place a PSM as detailed in 1.3 above, surveyors are instead permitted to place a steel star dropper at least 450mm in length in lieu of a PSM. Refer to Sections 8.4, 8.5 and 8.6 of the Cadastral Survey Guidelines for further detail.

All of the other requirements for the connection and placing of a PSM and the information required to be provided to the Surveyor-General must be complied with in these circumstances in relation to the droppers placed (as if they were non-network PSMs). Refer to items 1.7.1 and 1.7.2 of this Notice.

#### **1.5 Requirement to Connect and Place Permanent Survey Marks**

Note that Regulation 21 of the Regulations requires that a cadastral survey of land must connect to at least 3 permanent survey marks for which the MGA2020 coordinates are known or established.

##### *1.5.1 Connection to Permanent Survey Marks*

Surveys must physically connect to at least three PSMs (network or non-network), existing or new. PSMs whose coordinates are used to derive their position must not be included. If any two or more of the PSMs are within a 100m radius of each other in urban areas, or within a 500m radius of each other in rural areas, they shall count as only one PSM for the purposes of this requirement. Refer to the Cadastral Survey Guidelines Section 14 for requirements when utilising the coordinates of gone or inaccessible PSMs.

##### *1.5.2 Spacing*

PSMs within the survey are required at 200m spacing from other PSMs in urban areas and 2000m spacing from other PSMs in rural areas. If PSMs connected, existing or new, do not satisfy these spacing then additional PSMs shall be placed. Refer to the Cadastral Survey Guidelines Section 14 for application of these spacing requirements and when utilising the coordinates of gone or inaccessible PSMs.

##### *1.5.3 Whole to Part*

If PSMs connected, existing or new, as required in items 1.5.1 and 1.5.2 of this Notice, do not provide sound geometric control for the survey then additional PSMs, existing or new, are required to be connected to provide sound geometric control.

##### *1.5.4 Divisions of Land into More Than Five Allotments*

On plans for division of land into more than 5 allotments the Surveyor-General, following receipt of the proposal plan, shall advise the surveyor carrying out the division of the number and location of new non-network PSMs, based on the matters in items 1.5.1, 1.5.2 and 1.5.3 of this Notice above. The PSM configuration may include some mini PSMs for use in kerbs; refer to Section 14.3b3 of the Cadastral Survey Guidelines for required locations of these mini PSMs.

Further to Regulation 22 of the Regulations and where the placement of PSMs has been delayed until works for the provision of roads, drains or other services in association with the

land division have been completed, and such works have not been completed, and PSMs have not been placed, within two years of the plan's deposit by the Registrar-General, in accordance with Regulation 22(1)(a) of the Regulations, the Surveyor-General REQUIRES that the surveyor who has carried out the survey must place the PSMs required under Regulation 22(1)(a) of the Regulations.

#### 1.5.5 *Potential Infrastructure Destruction*

Surveyors undertaking surveys for infrastructure projects are responsible for replacing PSMs disturbed, or threatened with destruction, through those projects; refer to Section 14.3b3 of the Cadastral Survey Guidelines.

### 1.6 **Protecting Permanent Survey Marks**

PSMs shall be placed in safe locations where they are least likely to be disturbed. Below ground marks placed shall be set at least 200mm below ground level to allow encasement in urban areas and to reduce the risk of being disturbed in rural areas.

Below ground PSMs shall be protected by a cast iron cover suitably supported by a 195 millimetre diameter PVC pipe:

- when placed in urban areas, or
- on re-establishment of the pavement after existing PSMs are found in place below pavements.
- PSMs shall be witnessed by a steel dropper with a witness plate attached:
  - when placed in rural areas, or
  - if existing PSMs connected in rural areas are not already witnessed by a dropper, or the witness dropper and/or its witness plate are in a state of disrepair such that they no longer serve their purpose, or
  - if not practicable to protect below ground PSMs placed in urban areas with a cast iron cover.

Witness droppers shall be placed to best protect the PSM, and to be in safe locations. In urban areas witness droppers shall be encased in a PVC sleeve; a rolled witness plate shall be fixed to the PVC sleeve.

The witness plates to be used on steel droppers or PVC sleeves shall be those provided by the Surveyor-General, with the relevant details of the PSM's location marked on the witness plate in a permanent manner.

### 1.7 **Provision of Information of Permanent Survey Marks**

#### 1.7.1 *Coordination of Permanent Survey Marks*

Surveyors shall determine and provide to the Surveyor-General MGA2020 coordinates for:

- PSMs they place,
- existing PSMs they connect that have coordinates, in the Survey Mark Database (the geodetic dataset published by the Surveyor-General), with no PU or a PU greater than or equal to 0.10m,
- existing PSMs connected where their survey differs to current coordinates by more than tolerances set by the Surveyor-General, see item 1.2.4, Differences to Published Coordinates of Permanent Survey Marks, of the *Notice of the Surveyor-General (No 1)—Accuracy, Survey Regulations 2020*, made under Regulations 14 and 21 of the Regulations.

The provision of coordinates to the Surveyor-General shall be undertaken in accordance with Section 2 of the Cadastral Survey Guidelines.

The requirement to determine and provide coordinates of existing PSMs where their survey differs to current coordinates by more than the allowable tolerances may be ignored if the published PU for a PSM's coordinate exceeds 0.03m in Adelaide City, 0.05m in urban areas

or has a “*Type B PU*” attribute such as “*Reactive Soil Area*”. Refer to Section 2.4 of the Cadastral Survey Guidelines for further detail.

#### 1.7.2 *Locality Plans*

A locality plan shall be provided by the surveyor to the Surveyor-General for every PSM placed on a survey; refer to Section 14.3f of the Cadastral Survey Guidelines for further detail.

#### 1.7.3 *Divisions of Land into More Than Five Allotments*

Further to Regulation 22(1) of the Regulations, for divisions of land into more than 5 allotments, and where the placement of PSMs has been delayed until works for the provision of roads, drains or other services in association with the land division have been completed, the surveyor must, as soon as practicable but not later than 30 days after completion of such works, in accordance with Regulation 22(1)(b) of the Regulations, provide to the Surveyor-General (using the online “Notification of Final Marking” form) the information REQUIRED, which is set out under items 1.7.1 and 1.7.2 of this Notice. Corner fixings for all PSMs placed are also REQUIRED to be provided to the Surveyor-General within the same timeframe. Refer to Section 14.5 of the Cadastral Survey Guidelines for further detail.

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