

REQUEST FOR FEEDBACK

SAPPA & SAILIS Survey Mark Details Reports

Introduction

February 2021 marked the 2 year anniversary of South Australia's transition of survey mark coordinates from MGA94 to MGA2020.

The datum change also introduced the use of positional uncertainty (PU) values. PU replaced 'class' and 'order' as the method of classifying the accuracy of horizontal coordinates which were used to determine the suitability of PSM coordinates for projects; coordinates without a PU are consider unreliable. Refer to [ICSM Standard for the Australian Survey Control Network Special Publication 1](#) for more information.

At the time of the datum change, the Office of the Surveyor-General (OSG) chose to continue to deliver several database fields, including 'class' and 'order' as a way of transitioning the classification of coordinate accuracy to PU.

Survey Mark Details Reports

Although the survey mark details reports from the South Australian Property and Planning Atlas (SAPPA) & the South Australian Integrated Land Information System (SAILIS) access the same database, the details reported from each system differ slightly; SAPPA providing a more detailed report.

In response to industry feedback, and to ensure a consistent and unambiguous delivery of reports from the two systems, the OSG has conducted a review of the survey marks details that are reported from SAPPA and SAILIS.

Proposed changes

As a result of the review, the OSG proposes to deliver equivalent reports from both SAPPA and SAILIS and amend the fields in the survey mark details report as described in the tables below. All other report fields will remain unchanged. Copies of the current reports with proposed changes struck through and/or marked up in red and a mock-up of the proposed reports from both SAPPA & SAILIS are included as attachments to this document.

Mark details

Field	SAPPA	SAILIS
Mark Type	currently reported in full	show full description
Status	change from 'Network status' of the mark to whether it is 'existing' or 'gone'	change from 'Network status' of the mark to whether it is 'existing' or 'gone'
Remarks	include 'TypeB PU Reactive Soil'	include 'TypeB PU Reactive Soil'
Located in Map Sheets	currently not reported	remove
Was/Now	currently reported	add
Dup. Mark No	currently reported	add

Horizontal details

Field	SAPPA	SAILIS
Order	remove	remove
Class	currently not reported	remove
Adjusted	remove	remove
Method	remove	remove
Purpose	remove	remove
Authority	remove	remove
TypeB PU	move to 'Mark details' 'Remarks'	add to 'Mark details' 'Remarks'
Comment	remove	currently not reported
Coordination date	currently reported	add

Vertical details:

Field	SAPPA	SAILIS
G/S Sep	remove	remove
Class	currently not reported	remove
Adjusted	remove	remove
Method	currently reported in full	show full description
Purpose	remove	remove
Authority	remove	remove
Pos Uncertainty	remove	currently not reported
TypeB PU	move to 'Mark details' 'Remarks'	add to 'Mark details' 'Remarks'
Comment	remove	currently not reported
Coordination date	currently reported	add

PSMs with scaled coordinates are rounded to the nearest metre for plotting purposes only and do not have a PU. All other coordinates without a PU have been derived from various survey methods and will be displayed with three (3) decimal places irrespective of their accuracy.

The proposed information provided on the reports will not differentiate between coordinates and PUs rigorously adjusted and derived from the National adjustment and those derived by other survey measurements.

A full version of the survey mark coordinate data base in comma separated variable (csv) format will be available for download from the [Office of the Surveyor-General website](#). This static version of the data base will be refreshed on a monthly basis and contain all information that will no longer be displayed on the survey mark reports.

Information regarding Vertical Detail accuracies

As PU cannot be used to describe the quality of an AHD height, 'order' remains relevant.

The OSG has produced the following table to assist users to understand the indicative accuracies of the orders and the techniques used to derive the heights quoted in the survey mark reports. This information will be provided on the [Office of the Surveyor-General website](#).





Indicative Accuracy		Order	Method
Relative	Absolute		
12√K	+/- 0.1m	3	3rd order levelling
18√K	+/- 0.15m	4	4th order levelling
0.1m	+/- 0.25m	5	Static, Rapid Static & Kinematic GNSS adjusted to the levelling network
0.2m	+/- 0.5m	6	GNSS not adjusted to the levelling network (CORS RTK / RTK / PPP / AUSPOS)
0.5m	+/- 1m	7	Doppler / Inertial / Photogrammetry / Vertical Angles / Other
NA	NA	9	Scaled from topographic map

Combined scale factor calculations require an approximate height to convert MGA grid distances to ground distances. PSM coordinates provided by industry that have a PU <0.1m but no height will be given a height derived from scaling topographic maps and will be stored in the survey mark database as order 9 with the method 'scaled'. These heights will not be displayed on the SAPPA or SAILIS survey mark reports. All other AHD heights (order 7 or better) will be displayed with three (3) decimal places irrespective of their indicative accuracy.

PSM symbology

In addition to the changes proposed to the survey mark details report and the reliance on PU to assess the quality of a PSM's coordinate, the OSG considers the requirement to differentiate between Network, Non-network, adjusted and unadjusted MGA2020 coordinates of a PSM is no longer necessary for external users. It is considered desirable for SAPPA to graphically differentiate between PSMs that have an acceptable PU and those that do not.

To this end, it is proposed to display survey marks with:

- PU <0.1m with the single square symbol and a horizontal line 
- vertical order of 7 or better with the single square symbol and a vertical line 
- PU <0.1m and vertical order of 7 or better with the single square symbol and horizontal and vertical lines 
- PU >= 0.1 or no PU and no height with the single square symbol only 

All PSMs shown on certified survey plans would use the symbol 

Request for Feedback

Please consider the above proposals and submit comments to Survey Operations (DIT.SurveyOperations@sa.gov.au) by COB Friday 23 April 2021.

Attachment 1

SAPPA survey mark details report – Proposed amendments

SAPPA Report

Survey Mark and Plan Details: 662852296

The South Australian Property and Planning Atlas is available at the Plan SA website <https://sappa.plan.sa.gov.au/>

Date Created: January 20, 2021



Scale ≈ 1:2257 (on A4 page)

100 metres≈

The information provided is not represented to be accurate, current or complete at the time of printing this report.

The Government of South Australia accepts no liability for the use of this data, or any reliance placed on it.

This report and its contents are (c) copyright Government of South Australia.



Government of South Australia
Attorney-General's Department

Refer to the [Office of the Surveyor-General website](#) for further information relating to survey marks

Mark Detail

Mark No. 662852296
Mark Type PSM with plaque
Status ~~Network-PSM-HV-Existing or Gone~~
Remark TypeB PU Reactive Soil
Was/Now
Dup. Mark No

Horizontal Detail

Easting 287737.290
Northing 6137363.140
Zone 54
Datum MGA2020
~~Order 3~~
~~Adjusted Yes~~
~~Method GPS-Rapid-Static~~
~~Purpose Geodetic~~
~~Authority Surveyor-General~~
Pos. Uncert 0.017
~~TypeB-PU~~
~~Comment~~
Coordination Date 26/02/2000
Entry Date 23/10/2020

Vertical Detail

Elevation(m) 84.905
~~GS/Sep~~
Datum AHD
Order 5
~~Adjusted Yes~~
Method GPS Static
~~Purpose Geodetic~~
~~Authority Surveyor-General~~
~~Pos. Uncert~~
~~TypeB-PU~~
~~Comment~~
Coordination Date
Entry Date 18/06/1999

Plan No.	Plan Type	Search No.	Docket No.	Date	Remark	Comment
1	D118012			23/01/2018	Found	
2	SD11904			16/07/1998	Covered	
3	D40701			26/08/1994	Placed	

Attachment 2

SAPPA survey mark details report – Proposed report

SAPPA Report

Survey Mark and Plan Details: 662852296

The South Australian Property and Planning Atlas is available at the Plan SA website <https://sappa.plan.sa.gov.au/>

Date Created: January 20, 2021



Scale ≈ 1:2257 (on A4 page)

100 metres≈

The information provided is not represented to be accurate, current or complete at the time of printing this report.

The Government of South Australia accepts no liability for the use of this data, or any reliance placed on it.

This report and its contents are (c) copyright Government of South Australia.



Government of South Australia
Attorney-General's Department

Refer to the [Office of the Surveyor-General website](#) for further information relating to survey marks

Mark Detail

Mark No. 662852296
Mark Type PSM with plaque
Status Existing or Gone
Remark TypeB PU Reactive Soil
Was/Now
Dup. Mark No

Horizontal Detail

Easting 287737.290
Northing 6137363.140
Zone 54
Datum MGA2020
Pos. Uncert 0.017
Coordination Date 26/02/2000
Entry Date 23/10/2020

Vertical Detail

Elevation(m) 84.905
Datum AHD
Order 5
Method GPS Static
Coordination Date
Entry Date 18/06/1999

	Plan No.	Plan Type	Search No.	Docket No.	Date	Remark	Comment
1	D118012	Deposited Plan			23/01/2018	Found	
2	SD11904	SD Docket&Page			16/07/1998	Covered	
3	D40701	Deposited Plan			26/08/1994	Placed	

Attachment 3

SAILIS survey mark details report – Proposed amendments



Product
Date/Time

Survey Mark Details
20/01/2021 02:57PM

Survey Mark Details

Survey Mark Number 6628/52296
Mark Type PSM with Plaque
Status NET PSM Existing or Gone
Remark Existing TypeB PU Reactive Soil

Located in Map Sheets

Was/Now

Dup. Mark No

Horizontal Detail

Easting 287737.290
Northing 6137363.140
Zone 54
Datum MGA2020
Positional Uncertainty 0.017
Order 3
Class
Adjusted Yes
Method GPR
Purpose GEO
Authority SG

Coordination Date

Entry Date 23/10/2020

Vertical Detail

Elevation 84.905
GS/Sep
Datum AHD
Order 5
Class
Adjusted Yes
Method **GPS**
Purpose GEO
Authority SG

Coordination Date

Entry Date 18/06/1999

Refer to the [Office of the Surveyor-General website](#) for further information relating to survey marks

Attachment 4

SAILIS survey mark details report – Proposed report



Product
Date/Time

Survey Mark Details
20/01/2021 02:57PM

Survey Mark Details

Survey Mark Number 6628/52296
Mark Type PSM with Plaque
Status Existing or Gone
Remark **TypeB PU Reactive Soil**
Was/Now
Dup. Mark No

Horizontal Detail

Easting 287737.290
Northing 8137363.140
Zone 54
Datum MGA2020
Positional Uncertainty 0.017
Coordination Date
Entry Date 23/10/2020

Vertical Detail

Elevation 84.905
Datum AHD
Order 5
Method **Static GPS**
Coordination Date
Entry Date 18/06/1999

Refer to the [Office of the Surveyor-General website](#) for further information relating to survey marks