



Surveyor-General's Direction

No. 2

Preparation of Locality Sketch Plans



**Title: Surveyor-General's Direction No. 2
Preparation of Locality Sketch Plans**

Published by

Spatial Services
A Unit of the Department of Customer Service
346 Panorama Ave
BATHURST NSW 2795
Tel: (02) 6332 8287

www.spatial.nsw.gov.au

Cover photograph shows State Survey Mark No. 62462
Photographer: Les Gardner

Enquiries

Any enquiries regarding this Direction should be forwarded to

Phone: 1300 211 253

E-Mail: SCIMS@customerservice.nsw.gov.au

Mail: SCIMS & CORS Unit
Office of the Surveyor-General
DCS Spatial Services
Level 14
2-24 Rawson Place
Haymarket, NSW, 2000

For access to legislation in force in NSW go to the official NSW Government website for online publication of legislation at www.legislation.nsw.gov.au.

Copyright



© Crown in right of New South Wales through Spatial Services, a division of the Department of Customer Service (DCS Spatial Services), 2019.

This copyright work is licensed under a Creative Commons Australia Attribution 4.0 licence.

Document Control Sheet

Record of Document Issues

Version No.	Issue Date	Nature of Amendment
1.0	November 1993	Initial Release
1.1	October 1994	Minor Revision
1.2	August 1997	Minor Revision
1.3	January 1999	Minor Revision
2.0	March 2000	Minor Revision - GDA94
2.1	December 2009	Minor Revision - <i>Surveying and Spatial Information Regulation 2006</i>
2.2	June 2016	Minor Revision
3.0	April 2019	Major Revision - <i>Surveying and Spatial Information Regulation 2017</i>
3.1	December 2019	Minor Revision - GDA2020

Document Approval:

Approved By:



Narelle Underwood

Surveyor-General of NSW

Date of Approval: December 2019

Contents

- 1. General1
- 2. Requirements for Preparation of Locality Sketch Plans1
- 3. Information to be recorded on Locality Sketch Plans..... 2
 - 3.1 New Urban Subdivisions 2
 - 3.2 Existing Developed Areas 2
 - 3.3 Rural Areas 3
 - 3.4 Additional Information 3
 - 3.5 Mark Status Information..... 3
 - 3.6 Datum Requirements 4
- 4. Survey Plaques..... 4
- 5. Lodgement of Locality Sketch Plans..... 5
 - 5.1 Correct Format for Electronic Submission of Locality Sketch Plans..... 5
- 6. Appendices 6
 - 6.1 Example Locality Sketch Plans..... 6
 - 6.1.1 New Urban Subdivision 6
 - 6.1.2 Existing Developed Area..... 7
 - 6.1.3 Rural Area 8
 - 6.1.4 Rural Area 9
 - 6.1.5 Rural Area 10
 - 6.2 Survey Plaque 11

1. General

Locality Sketch Plans (LSPs) are required for all permanent survey marks placed within the meaning of [Clause 43](#) of the *Surveying and Spatial Information Regulation 2017*. This directive provides the requirements for the information to be shown on LSPs.

Detailed information on permanent survey mark types and specifications is contained in [Surveyor General's Direction No. 1 - Approved Permanent Survey Marks](#).

2. Requirements for Preparation of Locality Sketch Plans

LSPs are required to be drawn on the correct forms. The current blank official LSP forms can be downloaded in TIFF or DWG formats at:

www.spatial.nsw.gov.au/surveying/scims_online/lsp_form

Basic information required in the preparation of LSPs comprises:

- a) On-site measurements, adequate to locate the permanent survey mark relative to visible and easily identifiable fixed features in the field;
- b) Information, measured or calculated, essential for the plotting of a permanent mark position onto the Digital Cadastral Data Base (DCDB);
- c) MGA94 or MGA2020 co-ordinates of the permanent survey mark to enable the permanent survey mark to be spatially located in the Survey Control Information Management System (SCIMS). [3.6 Datum Requirements](#) provides guidance on which datum to use. Captured in order of preference:
 - i. calculated or measured directly in the field;
 - ii. scaled from a Spatial Services map.
- d) Australian Height Datum (AHD) level values are to be provided where required by [Clause 13](#) and [Clause 43](#) of the *Surveying and Spatial Information Regulation 2017*. (See [Appendix 6.1 Example Locality Sketch Plans](#)).

3. Information to be recorded on Locality Sketch Plans

The following outlines the information to be shown on LSPs for *placed* permanent survey marks in differing areas.

3.1 New Urban Subdivisions

In new urban zoned subdivisions, the following should be provided:

- a) For a State Survey Mark (SSM) placed in a concrete kerb or gutter at least 3 basic distance connections to fixed services, objects or reference marks. Fixed services are such things as power poles, manhole covers, stop valves and gutter inlet pits. Objects can be anything of a substantial and permanent nature. Reference marks are as defined by [Schedule 3](#) of the *Surveying and Spatial Information Regulation 2017*;
- b) For an SSM placed elsewhere or a Permanent Mark (PM) at least 4 distance connections to fixed services, objects or reference marks (including an offset or connection to any adjacent boundaries);
- c) Adjacent lot numbers and deposited plan numbers. If the LSPs for a new development are lodged prior to the subdivision being finalised please use any Pre-allocated Plan Numbers (PPNs) with the Lot numbers shown;
- d) Approximate distance, to the nearest 10 metres, to the nearest street intersection identifiable on a Spatial Services map or a current street directory;
- e) MGA94 or MGA2020 co-ordinates to spatially locate the newly placed permanent survey mark as per Part 2 of this direction. [3.6 Datum Requirements](#) provides guidance on which datum to use.

An example for a new urban subdivision LSP is provided in [Appendix 6.1.1](#).

3.2 Existing Developed Areas

In existing developed and mapped areas, the following should be provided:

- a) If an SSM is placed in a concrete kerb or gutter, at least 3 distance connections to fixed services, objects or reference marks;
- b) If an SSM is placed elsewhere or a PM is placed, at least 4 distance connections (including an offset or connection to a boundary);
- c) If a permanent survey mark is on a road or at a road intersection, show the names of the roads if they are identifiable on a map or a currently published street directory;
- d) The adjacent house postal numbers (and if available the lot and deposited plan numbers) and the approximate distance, to the nearest 10 metres, to the nearest street intersection;
- e) MGA94 co-ordinates to spatially locate the newly placed permanent survey mark as per Part 2 of this direction.

An example for a new permanent survey mark placed in an existing developed area is provided in [Appendix 6.1.2](#).

3.3 Rural Areas

In rural areas, the following should be provided:

- a) At least 3 connections, with magnetic bearing and distance, to easily identifiable objects or monuments of a permanent nature. Where possible show a magnetic bearing along all fences and to any visible trigonometrical station or recognisable structure (e.g. church spire, tower, reservoir) and at least two of the following:
- b) MGA94 or MGA2020 co-ordinates to spatially locate the newly placed permanent survey mark as per Part 2 of this direction. [3.6 Datum Requirements](#) provides guidance on which datum to use.
- c) A connection to an identifiable feature depicted on a map;
- d) A connection to, or offsets from a cadastral corner and indicate portion and/or lot numbers, parish and county names;
- e) An odometer (tripmeter) distance to nearest approximate 0.1 km from an officially named and identifiable geographical feature – in addition if deemed necessary to enable the recovery of the new permanent survey mark a distance from the nearest post office, or similarly well-known structure.

An example of a rural LSP is provided in [Appendix 6.1.3, 6.1.4 and 6.1.5](#).

3.4 Additional Information

Additional information can be attached to the LSP to assist in the plotting of the mark's position.

This information can be in any of the following forms:

- a) A copy of a map or recently published street directory showing the approximate position of the permanent survey mark;
- b) A written description, starting from a geographical or topographically defined feature with direction and odometer readings to locate the approximate position of the permanent survey mark;
- c) A copy of a deposited plan showing the permanent survey mark's location.

3.5 Mark Status Information

[Clause 39 \(b\)](#) of the *Surveying and Spatial Information Regulation 2017* requires that Surveyors report the physical status of any existing permanent survey mark. Provision has been made for additional information to be derived about a permanent survey marks status on the LSP form with fields for redraw (inferring that the mark has been found) and for replacement.

Additionally there are two methods of online reporting of a permanent survey marks status:

- **SCIMS Status Report form** – a web form located at www.spatial.nsw.gov.au/surveying/surveying_services/forms_and_applications/scims_status_report
- **NSW Survey Marks** – a mobile application available on both Android and Apple platforms

3.6 Datum Requirements

Clause 5B of the Surveying and Spatial Information Regulation 2017 defines the prescribed datum to be used in NSW as GDA2020 from 01 January 2020. As such, the date of mark placement will define which datum is to be used for coordinate information on the LSP, either MGA94 or MGA2020.

- If the mark was placed prior to 01 January 2020, then the datum can either be MGA94 or MGA2020, depending on which datum the coordinates were captured in;
- If the mark was placed on or after 01 January 2020, the coordinates must be supplied in GDA2020, unless the mark has been placed in connection with a survey and Deposited Plan in GDA94, supported by an exemption as per [Clause 43](#) of the *Surveying and Spatial Information Regulation 2017*.

4. Survey Plaques

Survey plaques are designed to help preserve and protect marks by aiding the identification and location of permanent survey marks. The purpose of the plaque is to advise that there is a permanent survey mark in the vicinity, assist the location of the mark by the user and warn that there is a penalty for the destruction of the mark. A diagram of a Survey Plaque is provided in [Appendix 6.2](#). Survey Plaques are available from the Permanent Survey Mark Distributors as outlined in [Surveyor-General's Direction No. 1 - Approved Permanent Survey Marks](#).

It is recommended that:

- a) The plaque should be placed, wherever possible, to face in the direction of the permanent survey mark.
- b) The plaque should be fixed to a star picket or length of white PVC pipe of minimum diameter 90 mm securely embedded in the ground.
- c) The consent of the relevant service authority or property owner should be sought where it is intended to attach the plaque to piece of service supply infrastructure or other localised feature, e.g. fence post.
- d) The plaque and post (if used) should be located so that no hazard is created to the public or livestock.
- e) The bearing and distance from the permanent survey mark to the plaque should be included on the sketch plan and stamped on the plaque if possible.

Sensible usage of these plaques should ensure a greater awareness of these marks and save time when locating permanent survey marks.

Note: Care should be taken when installing the galvanised star picket or PVC pipe to not disturb any underground services in the area.

5. Lodgement of Locality Sketch Plans

As soon as practicable, but no longer than two (2) months after the placement of any new permanent survey mark, the original LSP is to be lodged electronically with Spatial Services – Department of Customer Service by email to SCIMS@customerservice.nsw.gov.au.

If lodgement of LSPs is delayed there is a danger that another permanent survey control mark may be placed in the same general location, wasting surveyors' time and resources.

For further information contact the SCIMS & CORS Unit at SCIMS@customerservice.nsw.gov.au or call 1300 211 253 and refer to the applicable Clauses of the *Surveying and Spatial Information Regulation 2017* (see [Appendix 6.2](#)).

5.1 Correct Format for Electronic Submission of Locality Sketch Plans

LSPs must be electronically lodged in the following format:


- TIFF file format
- Black and white (1 bit colour depth)
- CCITT T.6 (Group 4) compression
- 200 dots per inch resolution
- Single-page TIFFs only (only one LSP per TIFF)

File name AAnnnnnn.tif where AA is the mark type (PM, SS, etc.) and nnnnnnn is the seven-digit mark number including leading zeroes. For instance, PM0123456.tif is the LSP for permanent survey mark 123456.

6. Appendices

6.1 Example Locality Sketch Plans

6.1.1 New Urban Subdivision



LOCALITY SKETCH PLAN

PM _____

SS 205916

MGA E: 760136.386 Replaces PM/SS N/A

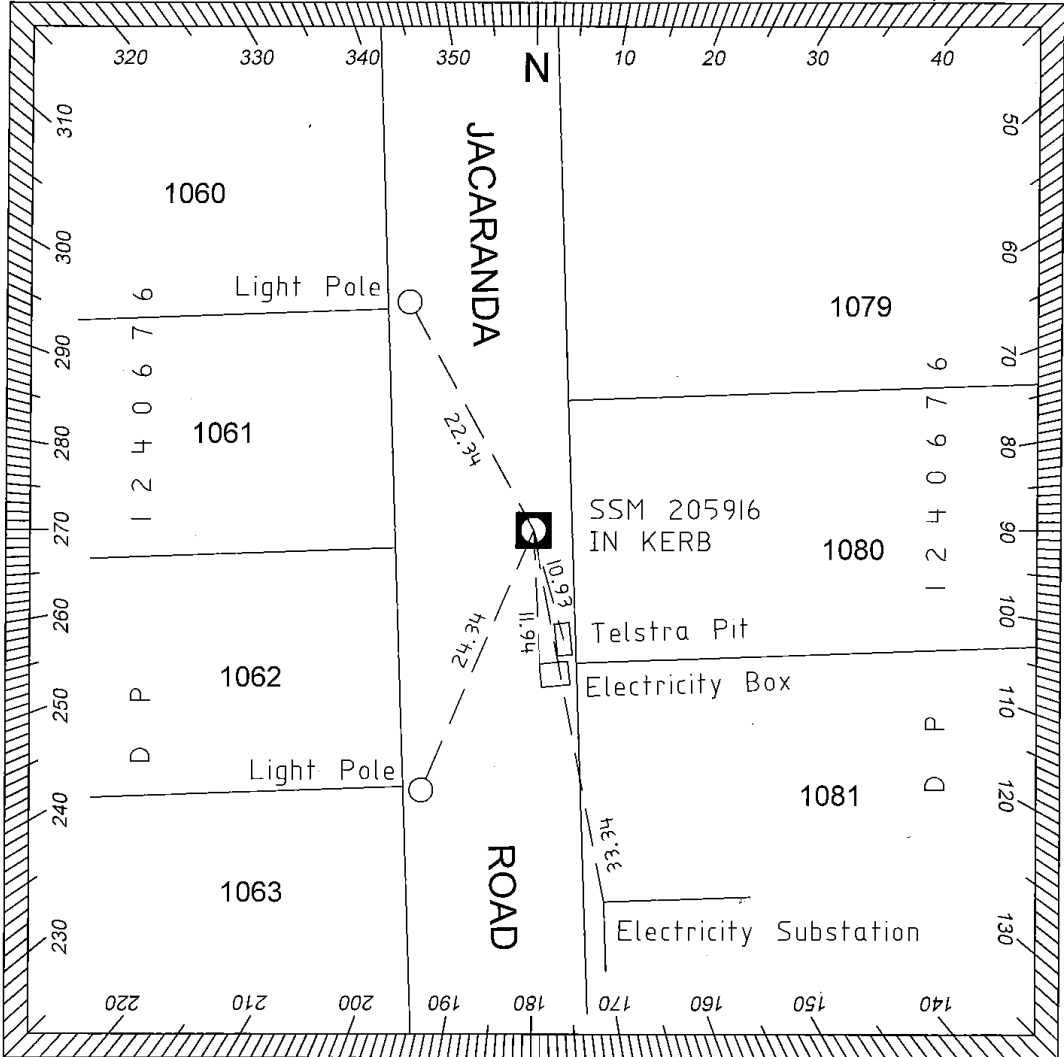
MGA N: 5914766.171

Datum: ~~MGA94~~ / MGA2020 Zone: ~~54/55/56/57/58~~

Coordinates determined by: (~~AUSPOS/RTK/Handheld GNSS~~ / TRAV) Other: _____

AHD Level: 74.75 Mark to Ground Level: 0 (ABOVE GROUND / BELOW GROUND)

Height determined by: (~~Diff Levelling/AUSPOS/RTK/Trig Heighting/Handheld GNSS~~) Other: _____



Please use black ink only
Distances shown are in metres
(Refer to Surveyor-General's Direction No. 2 - Preparation of Locality Sketch Plans.)

Town/Suburb/Locality: <u>Mirador</u>	Monument Description: <u>SSM placed in concrete kerb</u>
I certify that the mark has been placed/ found and numbered as detailed hereon.	Name of Organisation <u>Harrison Friedmann & Associates</u> placing mark:
Date mark placed/found: <u>28/06/2019</u>	Surveyor's Ref: <u>64844DT</u>
Name: <u>DAVID JOHN TREMAIN</u>	Signed: <u><i>David Tremain</i></u>

6.1.2 Existing Developed Area



LOCALITY SKETCH PLAN

PM 52606

~~SS~~

MGA E: 248765.393

Replaces PM/~~SS~~ Re Draw of PM 52606

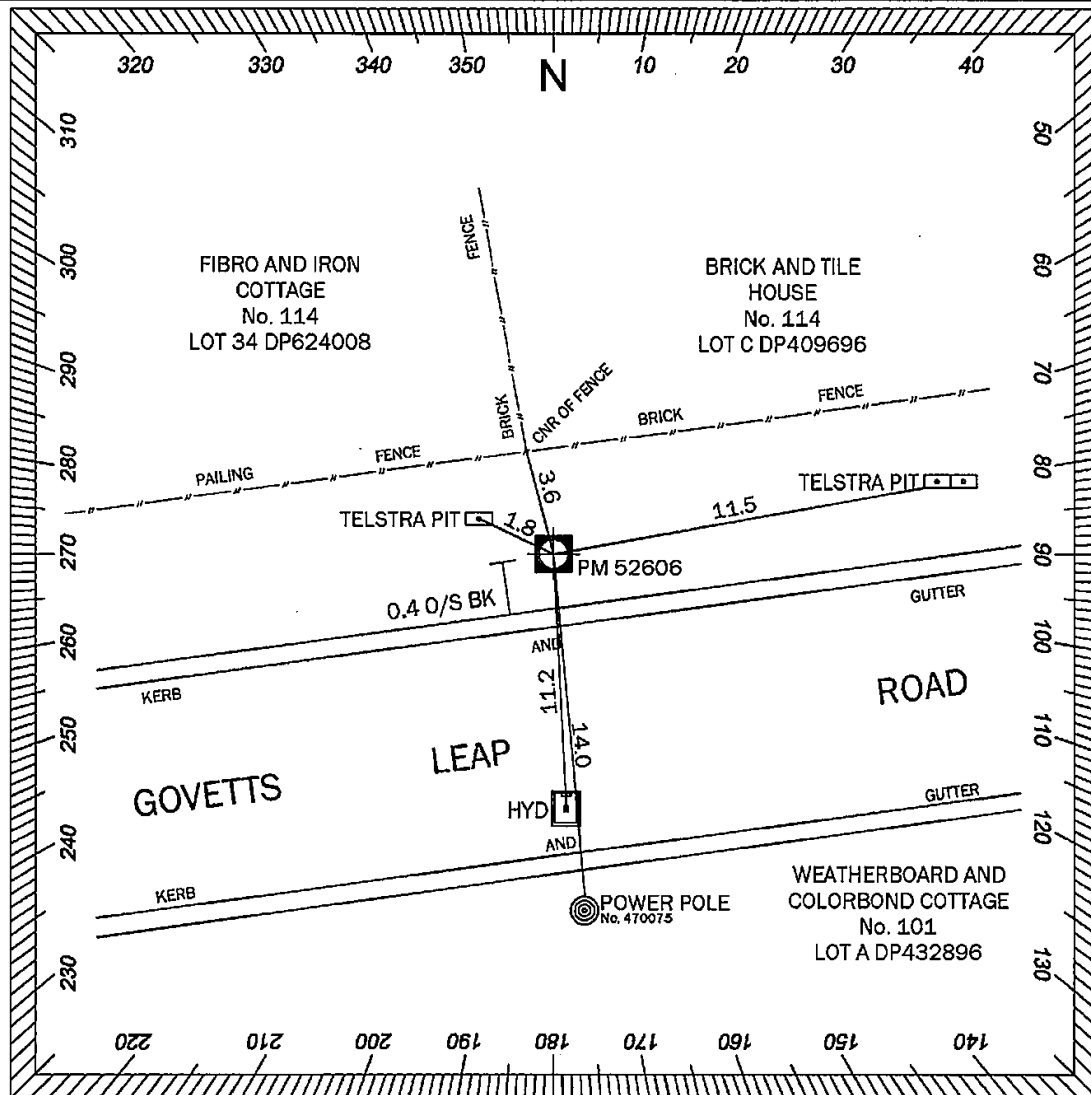
MGA N: 6274726.852

Datum: MGA94 / ~~MGA2020~~ Zone: 54/55/~~(56)~~/57/58

Coordinates determined by: ~~AUSPOS / RTK / Handheld GNSS / TRAVAL~~ Other: SCIMS

AHD Level: 1051.272 Mark to Ground Level: GROUND LEVEL ABOVE GROUND
BELOW GROUND

Height determined by: ~~(Diff Levelling / AUSPOS / RTK / Trig Heighting / Handheld GNSS)~~ Other: SCIMS



Please use black ink only
Distances shown are in metres
(Refer to Surveyor-General's Direction No. 2 - Preparation of Locality Sketch Plans.)

Town/Suburb/Locality: BLACKHEATH Monument Description: STAINLESS STEEL PIN IN CONCRETE

I certify that the mark has been ~~placed~~/found and numbered as detailed hereon. Name of Organisation: BLUE MOUNTAINS CITY COUNCIL placing mark:

Date mark ~~placed~~/found: 1/08/2019 Surveyor's Ref: JF 1651 - POSI

Name: MICHEAL KOCOSKI Signed: _____

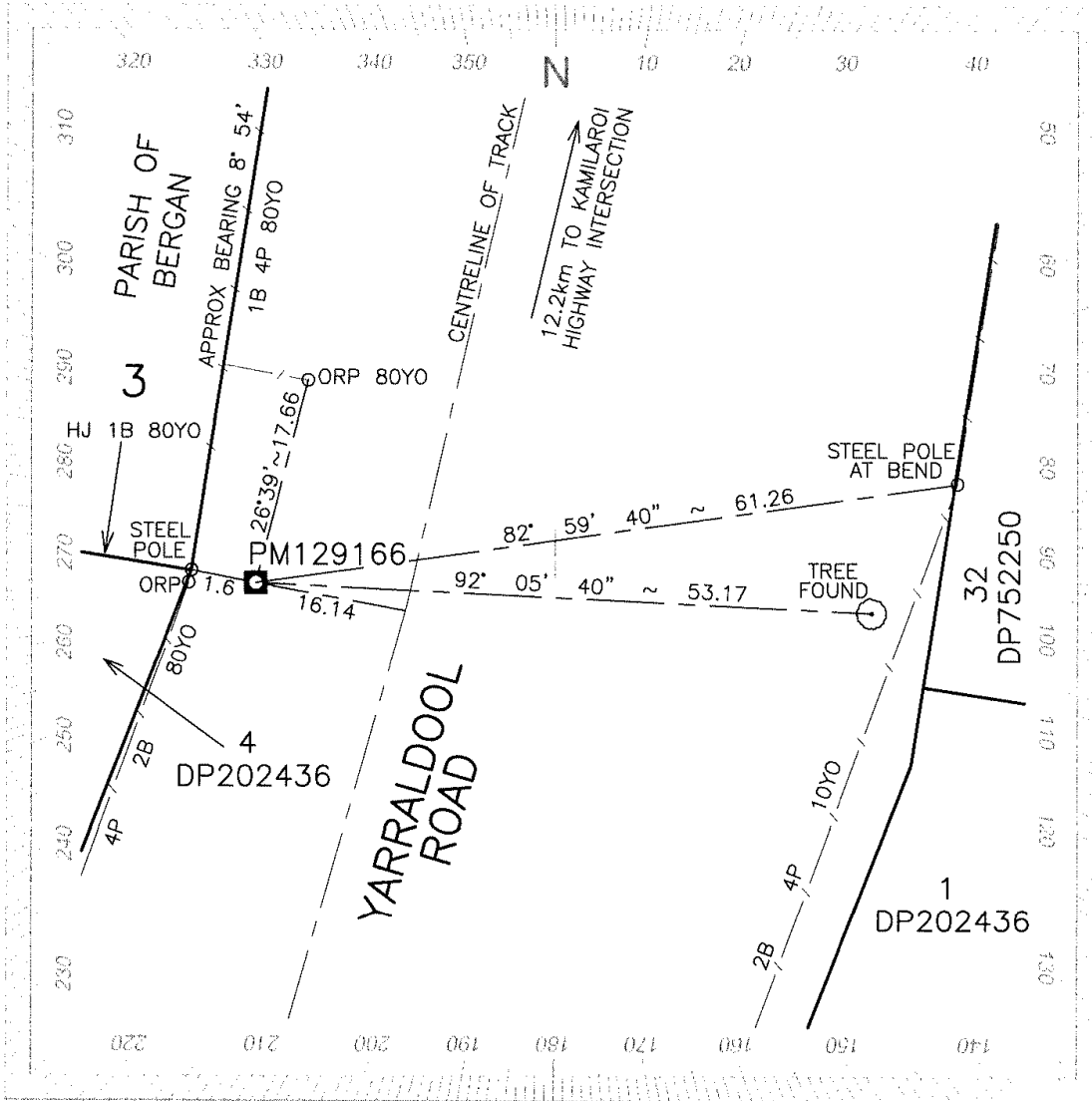
6.1.3 Rural Area



LOCALITY SKETCH PLAN

PM 129166
SS

MGA E: 655163.000 Replaces PM/SS
 MGA N: 666590.302
 Datum: MGA94 / MGA2020 Zone: 54 / 55 / 56 / 57 / 58
 Coordinates determined by: (AUSPOS / RTK / Handheld GNSS / TRAV) Other: CORS RTK
 AHD Level: _____ Mark to Ground Level: (ABOVE GROUND) (BELOW GROUND)
 Height determined by: (Diff Levelling / AUSPOS / RTK / Trig Heighting / Handheld GNSS) Other:



Please use black ink only
 Distances shown are in metres
 (Refer to Surveyor-General's Direction No. 2 - Preparation of Locality Sketch Plans.)

Town/Suburb/Locality: JERREL Monument Description: STAR PICKET WITH PM COVER BOX
 I certify that the mark has been placed/found Name of Organisation MONTEATH & POWYS
 and numbered as detailed hereon. placing mark:
 Date mark placed/found: 16/10/2019 Surveyor's Ref: 190439
 Name: LEIGH MICHAEL BARRY Signed: *Leigh Barry*

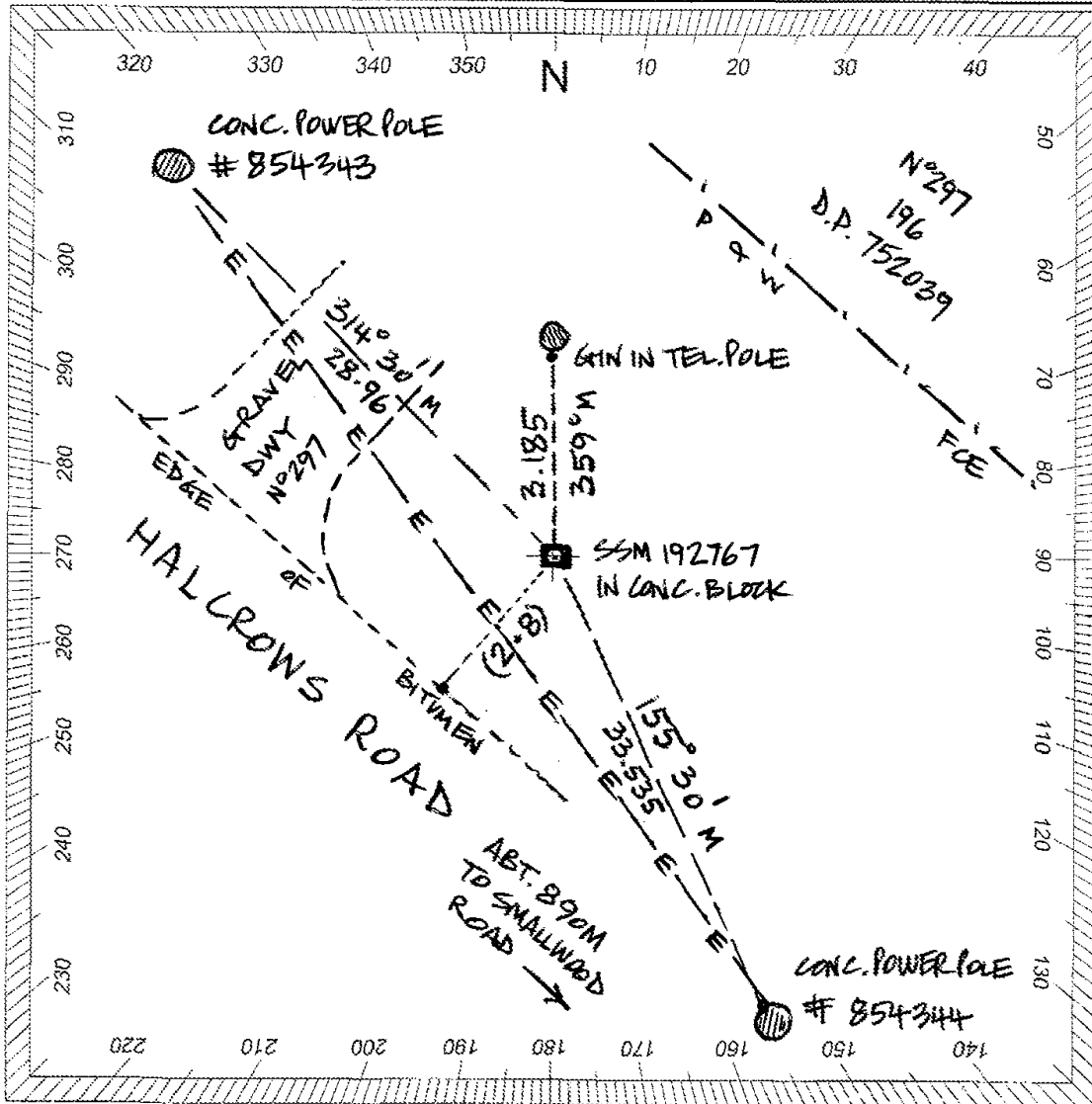
6.1.4 Rural Area



LOCALITY SKETCH PLAN

PM
SS 192767

MGA E: 309929.583
 MGA N: 6283965.686
 Datum: MGA94 / ~~MGA2000~~ Zone: ~~54/55~~ / 56 / ~~57/58~~
 Coordinates determined by: (AUSPOS / RTK / Handheld GNSS / TRAV) Other: CORS STATIC
 AHD Level: 95.824 Mark to Ground Level: 0.100 (BELOW GROUND)
 Height determined by: (Diff Levelling / AUSPOS / RTK / Trig Heighting / Handheld GNSS) Other: CORS STATIC



Please use black ink only
 Distances shown are in metres
 (Refer to Surveyor-General's Direction No. 2 - Preparation of Locality Sketch Plans.)

Town/Suburb/Locality: GLENORIE Monument Description: SSM TYPE 2 IN CONCRETE BLOCK
 I certify that the mark has been placed/~~found~~ and numbered as detailed hereon. Name of Organisation placing mark: TAYLOR SURVEYING &
 Date mark placed/~~found~~: 22.7.19 Surveyor's Ref: 1810
 Name: SCOTT TAYLOR Signed: [Signature]

6.1.5 Rural Area

LOCALITY SKETCH PLAN



Local Government Area TAMWORTH

PM169431

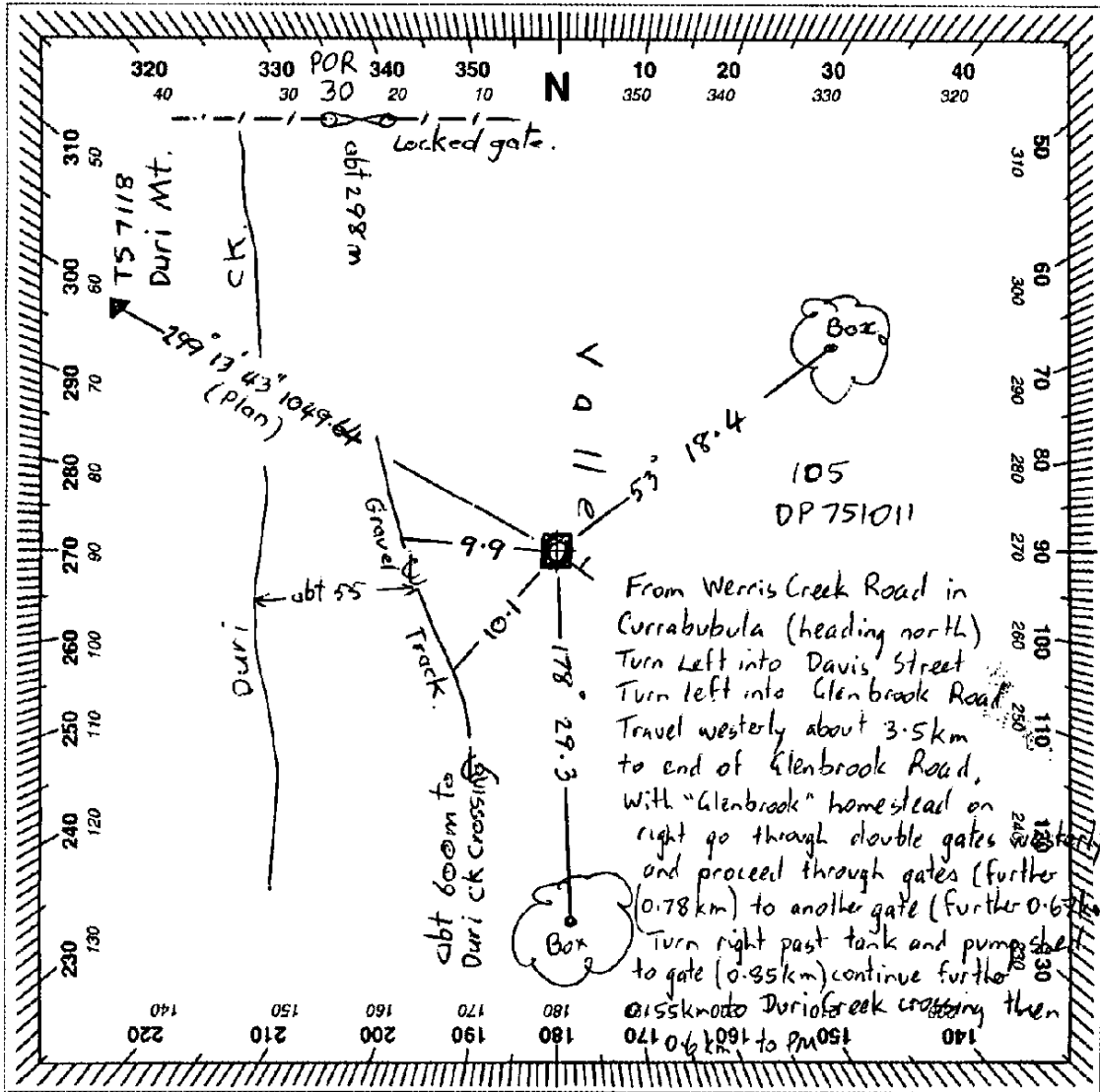
Town/Suburb/Locality CURRABUBULA

Approx MGA Coordinate: Zone 56

Description of Mark Star Picket

E: 284455.50

N: 6544909.40



Please use black ink only

SURVEYING REGULATION			
MARK	AHD	SOURCE	DATE
HEIGHT DETERMINED BY (Specify)		- DIFF. LEVELLING	- TRIG HEIGHTING
ADOPTED MARKS		- GPS	

Measurements are in metres

PM 169431

SS

PM
Replaces
SS

I certify that the mark has been placed found and numbered as detailed hereon.

Signed: PH Searl

Name: PHILIP H SEARL

Organisation placing mark: Geolyse P/L

Date mark placed/found: 31/1/08

Ref: 208003

6.2 Survey Plaque



End of Direction