

**PLANS AND DOCUMENTS
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DEVELOPMENT APPROVAL**

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Infrastructure Services Report

Maroochydore SP2, Dalton Drive
Maroochydore Queensland, Stage 1

V171462



Prepared for
Maroochydore Spotlight Property 2 Pty Ltd
C/O Blueprint Group Australia Pty Ltd

29 March 2019

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1 Introduction

Cardno has been engaged by Maroochydore Spotlight Property 2 Pty Ltd C/O Blueprint Group Australia Pty Ltd to investigate the required infrastructure services for the proposed large format retail development including a Spotlight and other tenancies. Specifically, the development application is being sought for “A development permit for Material Change of Use – Showroom, Food & Drink Outlet, Market and Gymnasium”.

As a part of this investigation, we have reviewed existing services asset information and liaised with the relevant authorities regarding servicing and development planning strategies to cater for the development of this site.

This report summarises the outcomes of this investigation.

2 Site Description

The site has an area of 4.35 ha, of which approximately 2.25 ha of the southern portion will be developed as part of the Stage 1 development. The subject site is bounded by Dalton Drive to the west and south, residential townhouses to the south-east and the MCC PDA site (currently being developed by SunCentral Maroochydhore Pty Ltd) to the north and north-east. The subject site is part of the Cornmeal Creek catchment.

The site is currently grassed and with relatively flat terrain. The Stage 1 development area generally slopes in a south-easterly direction towards Dalton Drive. The surface level of the Stage 1 development area ranges from approximately 3.0 mAHD to 4.0 mAHD.

Authority infrastructure services are located in Dalton Drive, including:

- Stormwater drainage in the south-east corner
- Sewerage connection in the south-east corner
- Water supply on the west side of the site, midway along Dalton Drive
- Electricity supply from underground HV cable network in Dalton Drive
- Communications service from NBN, Telstra and Optus in Dalton Drive.

Plans obtained from the relevant authorities have been included as Appendix A.



Figure 2-1 Site Location

Table 2-1 Site Identification Details

Item	Details
Applicant	Maroochydore Spotlight Property 2 Pty Ltd
Site Address	53-91 Dalton Drive, Maroochydore QLD 4558
Real Property Description	Lot 1 on SP202103
Area	4.35 ha
Planning Scheme	Maroochydore City Centre Priority Development Area Development Scheme
Zone	Principal Centre (CBD) Zone
Precinct	Precinct 8 – Dalton Drive
Development Proposal	The proposal seeks a Development Permit for a Material Change of Use for Showroom

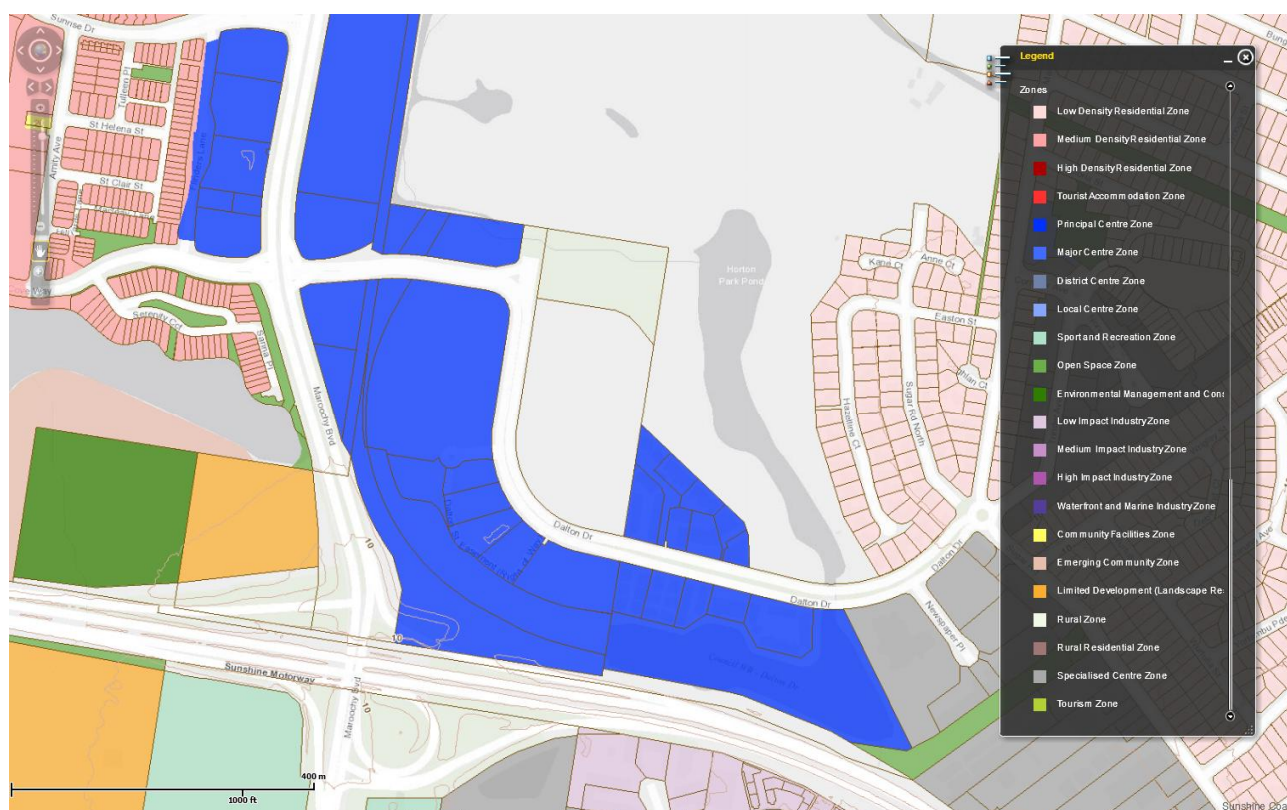


Figure 2-2 Site Zoning (Source: Sunshine Coast Planning Scheme)

3 Development Proposal

3.1 Summary

The proposed site development plan is shown in Figure 3-1. Stage 1 of the development consists of large format retail with associated car parking. During Stage 1 of the development, vacant lots on the northern boundaries will be retained. An access road to the south, connecting to Dalton Drive, will be provided during Stage 1. This access road will require modification of the existing stormwater network, which has an invert level of 1.65 mAHD. Therefore a new connection point for the neighbouring lots may be required, to ensure that this area can continue to freely drain. The roof area from the proposed building and the carpark area will be drained towards the south, replicating the existing catchment area draining towards this location.

Infrastructure service connections for stormwater, sewerage, water supply, electricity and communications will be from Dalton Drive. Proposed levels plans and drainage layouts are included in Appendix B.

3.2 Proposed Site Levels

The minimum floor level for the development in the Stormwater Management Plan is 4.20m.

The minimum floor level references the local site flooding, and this is controlled by the surface levels of Dalton Drive and the internal carpark for Stage 1. The surface levels in the carpark are controlled by fitting in with surrounding surface levels, providing sufficient flood immunity, an overland flow path for surface runoff in high rainfall events and enough grade through the car park.

The proposed floor levels are as follows:

- Stage 1 tenancies and deck level carpark 5.35m
- Future northern development to be approximately 5.10m, to be confirmed when this area is developed and to provide protection to overland flow.

The approximate earthworks volumes for Stage 1 are as follows:

- Stage 1 fill volume approximately 26,100 cub.m.

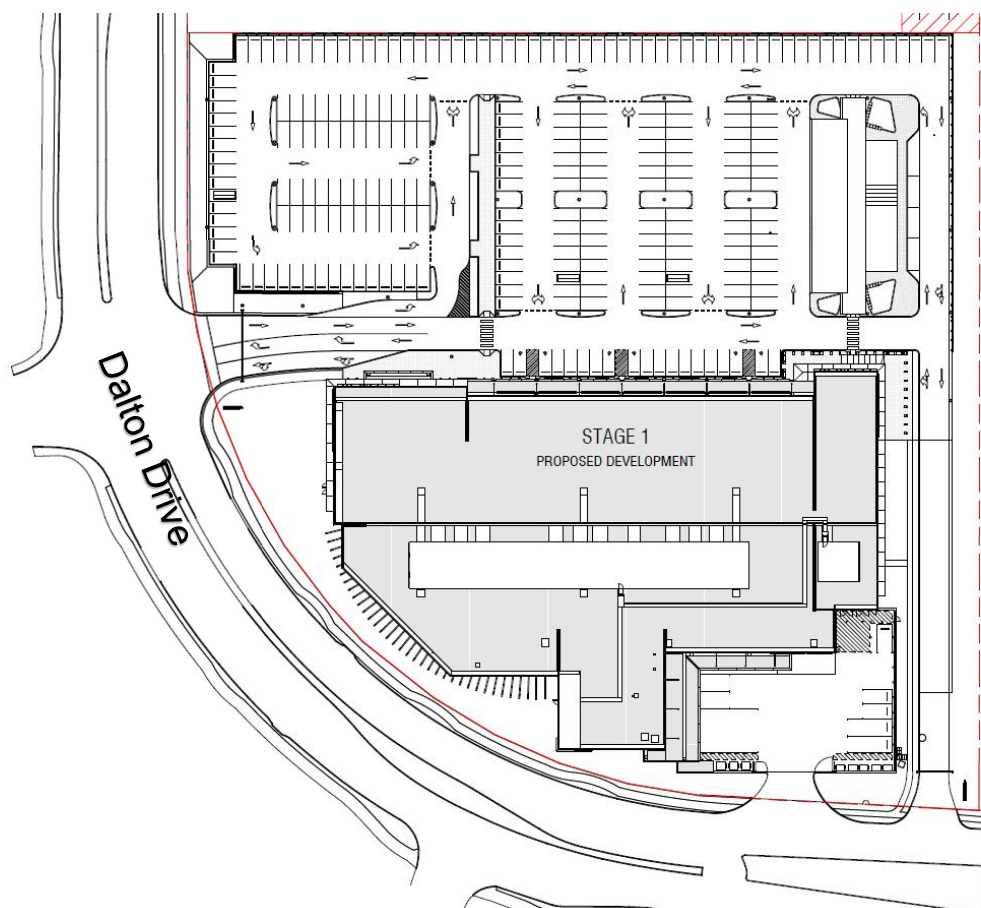


Figure 3-1 Proposed Development—Stage 1

4 Development Infrastructure

4.1 Drainage Infrastructure

The Sun Shine Coast Council is the responsible authority for drainage facilities for the site. The existing Stormwater infrastructure plan shows that there are stormwater networks in the north junction of Dalton Drive crossing to the south and west of the road and also stormwater pipe links are located in the south of the site in the Dalton Drive, feeding the private properties in the south east.

Cardno has prepared a Stormwater Management Plan report for this development, refer to this report for specific details on the stormwater requirements. The following summarises the preliminary findings.

The carpark area will have syphonic drainage directed towards the east and west, with the eastern side discharging into a proposed 525 mm RCP. This 525 mm RCP then connects into a 600 mm RCP, heading south before discharging into the existing council drainage located near the south-east corner of the property at Dalton Drive. The western carpark area will drain to the existing council drainage located to the south west on Dalton Drive.

The main building envelope will be split with 50% draining via a syphonic system to the 600 mm RCP located on the eastern boundary and 50% draining via a syphonic system to the council drainage system located to the south west on Dalton Drive. All stormwater will be treated by end of line treatment devices before discharge into the respective outlets.

The proposed development of Stage 1 has been shown through MUSIC modelling to satisfy the proposed stormwater quality requirements. The proposed stormwater treatment includes:

- > Bio-retention gardens planted with trees at three locations on the southern boundary;
- > 80kL rainwater tank used for toilet flushing and irrigation; and
- > Stormwater360 Enviropod litter baskets on all field and kerb inlets.

The stormwater treatment required for the northern carpark area is proposed to be provided by Enviropod's and bio-retention basins located on the south east and south west corners of the Lot. Treated stormwater will then discharge into the proposed 525 mm RCP on the east and existing council drainage on the west. Approximately 50% of the main roof area on the southern section will drain to the western bio-retention system which will then discharge into council drainage on Dalton Drive. The other 50% will drain to a 80kL rainwater tank, assumed to be used for toilet flushing and irrigation. If the tank is full it will overflow into the eastern bio basin.

The eastern basin will be approximately 4 metres wide by 13 metres long. The filter width will be 4 metres wide with 1 in 1 batters. The filter depth will be 0.8 metres to allow for tree planting. The extended detention depth will be 200 mm. The western basin will be approximately 7 metres wide by 10 metres long. The filter width will be 7 metres wide with 1 in 3 batters. The filter depth will be 0.8 metres to allow for tree planting. The extended detention depth will be 200 mm. The ultimate arrangement will be determined during detailed design.

An 80kL rainwater tank has been assumed to be used for toilet flushing and irrigation. Half of the available roof area has been assumed to be directed towards the rainwater tank. However, this should be increased if possible to improve the efficiency of the tank.

Litter baskets are assumed to be installed on all field and kerb inlets in order to remove litter and provide pre-treatment of flows entering the end of line treatment device.

4.2 Sewerage Reticulation

UnityWater is the responsible authority for the provision of sewerage reticulation facilities for the development. Sewerage connection is available at Dalton Drive on the south-east corner of site. The connection size is 150mm and the depth of the sewer will need to be confirmed, it is shown as -0.42m on the authority web data base. The sewer outfall is a 225mm pipe on the southern side of Dalton Drive and connects to a pump station to the east. The 150mm sewerage pipe is intended to serve the full lot and may need to be upgraded for the future development. Sewerage mains are shown as brown lines in Figure 4-1.

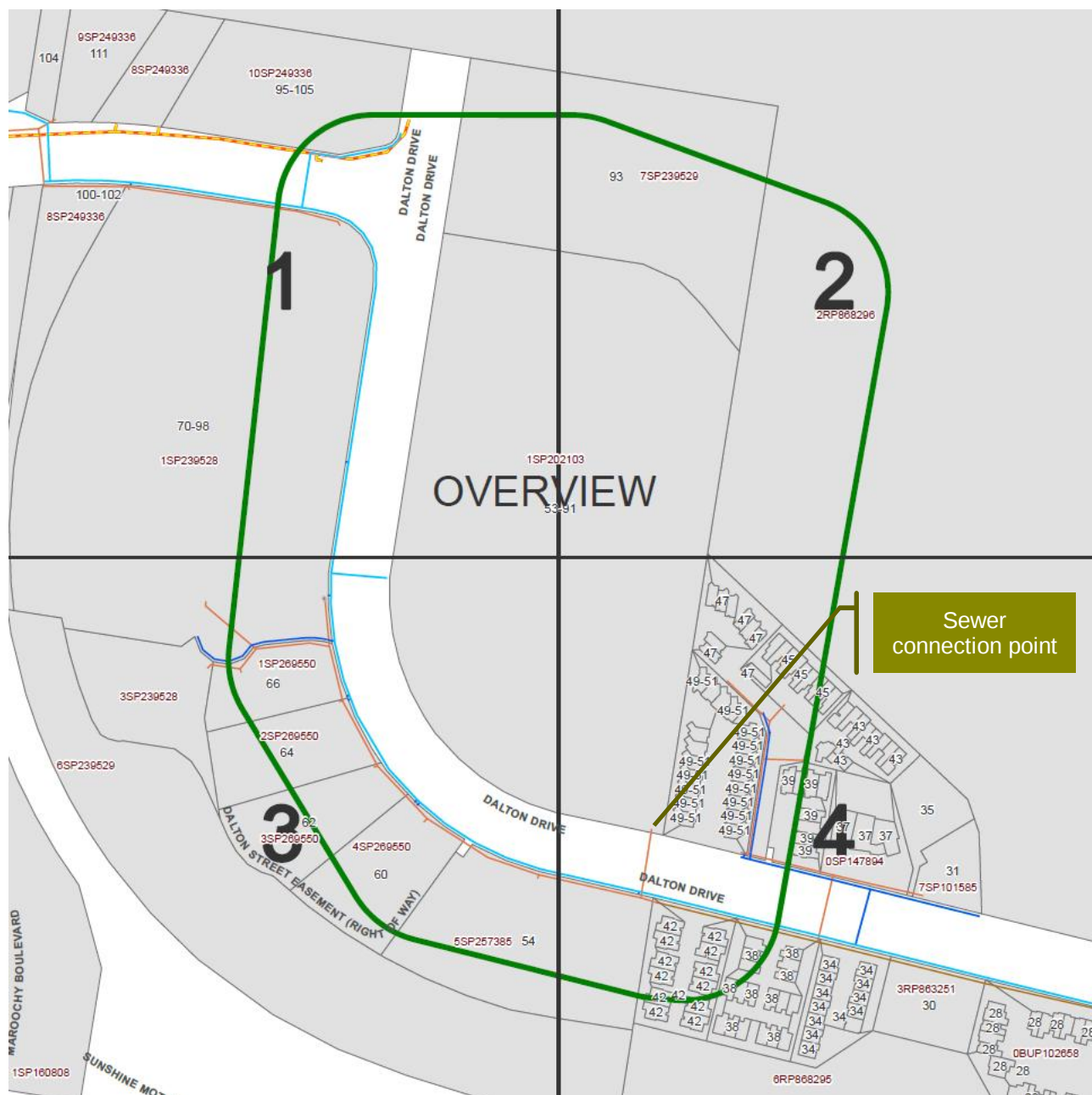


Figure 4-1 Sewer connection point.

4.3 Water Supply

UnityWater is the responsible authority for the provision of water supply reticulation facilities for the development. Authority asset plans indicate a connection point off Dalton Drive crossing to the site. The plan does not show the pipe diameter and existing pressure and flow information is not currently available. Water mains are shown as blue lines in Figure 4-2.

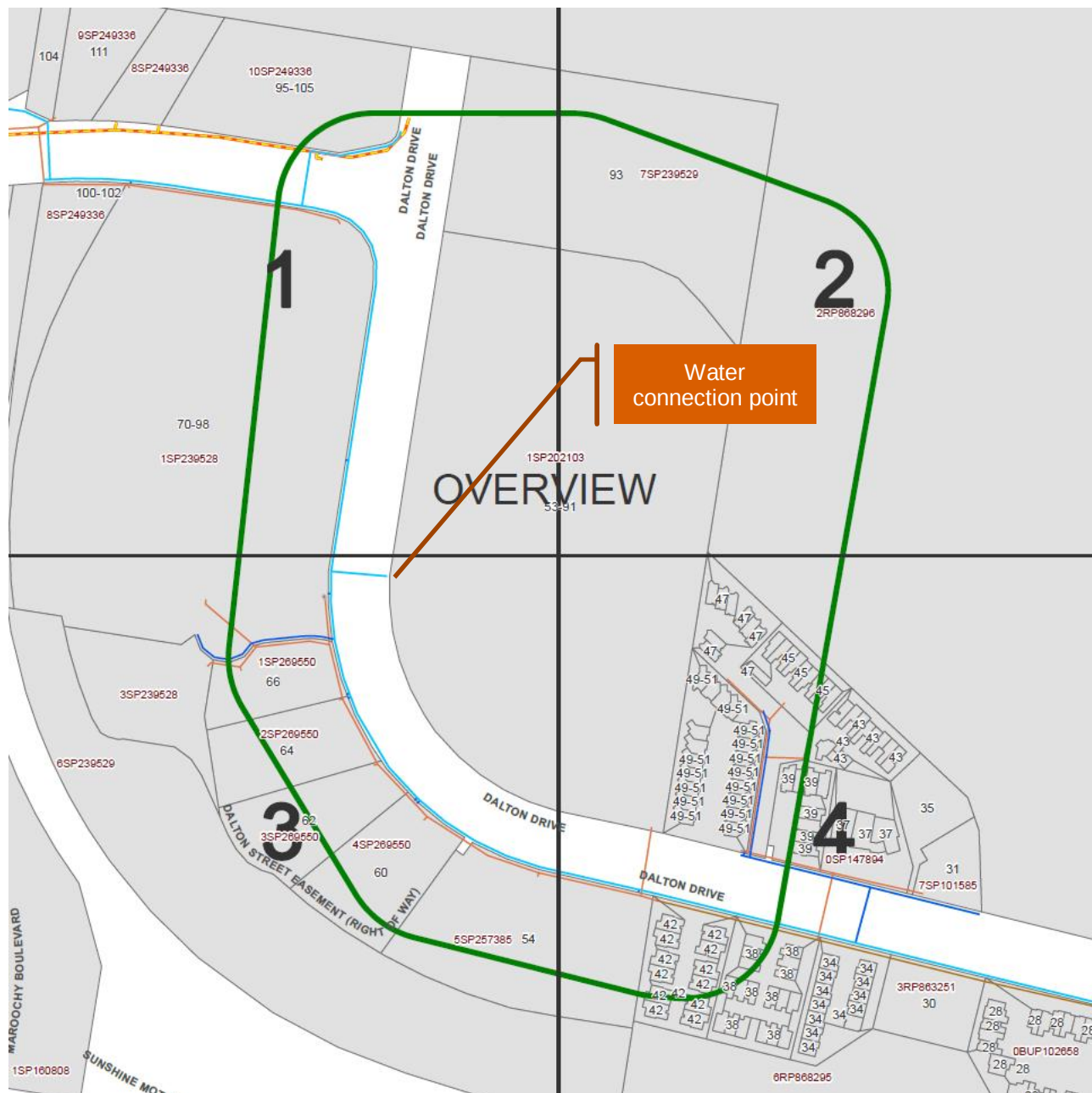


Figure 4-2 Water connection point.

4.4 Electricity Supply

Energex is the responsible authority for the provision of electricity supply facilities for the development. Authority asset information specifies underground high voltage cable running along Dalton Drive which is sufficient asset to provide supply to the development.

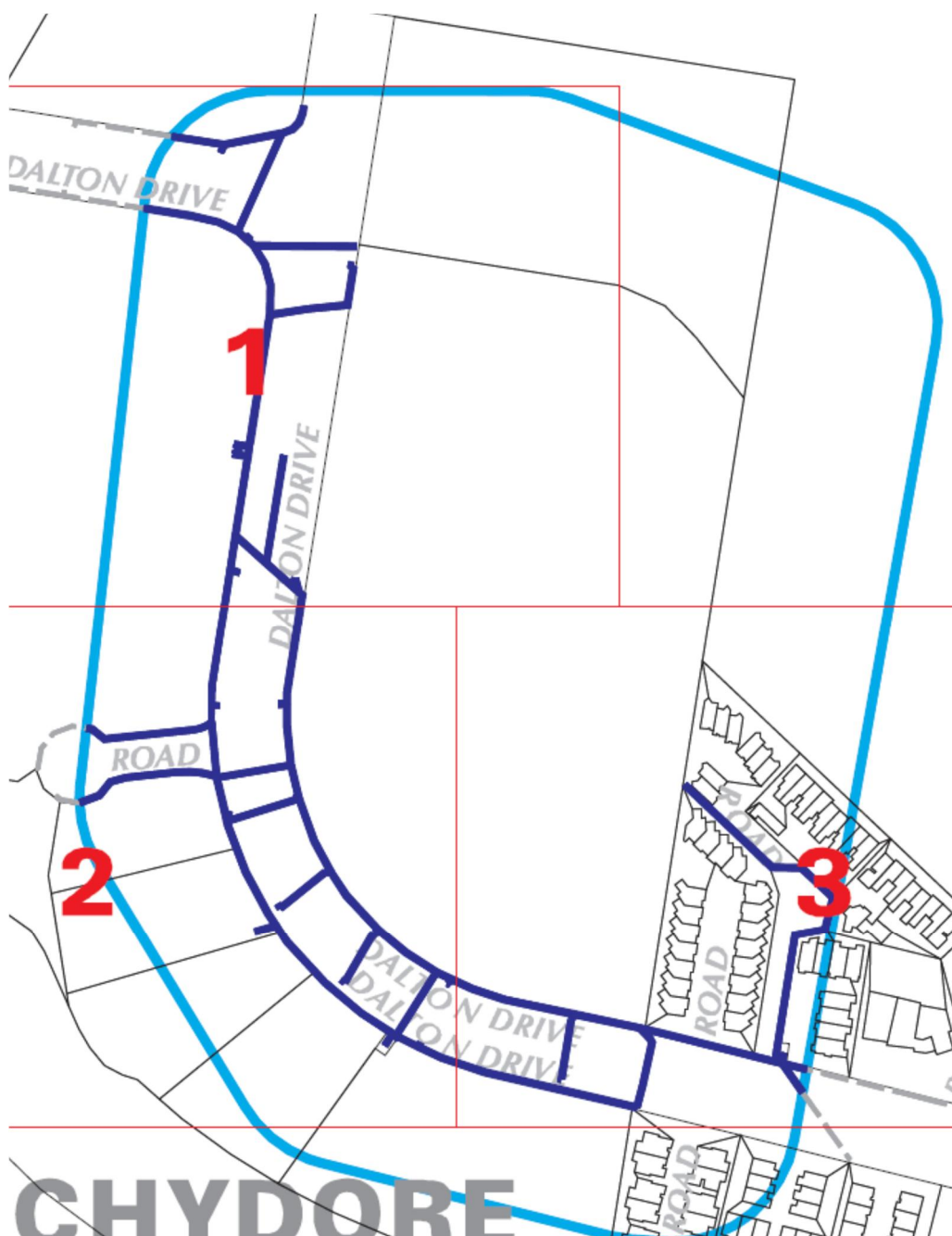


Figure 4-3 Energex HV underground cable plan.

4.5 Telecommunications

Telstra are the responsible authority for the provision of telecommunications facilities to the development. Asset information provided by Telstra indicates that there is a main cable network with four cable jointing pit running on East side of the Dalton Drive which is around the southwest boundary of the site.

NBN's records indicate that there is a NBN cable network on the west side of the Dalton Drive and crossing to the south side of the site to provide services for private properties.

Optus's plan discloses that there is an underground fibre optic telecommunications cable along the west side of the Dalton Drive.

It is expected that these authorities will extend supply infrastructure to the site from the development in accordance with standard industry practice.

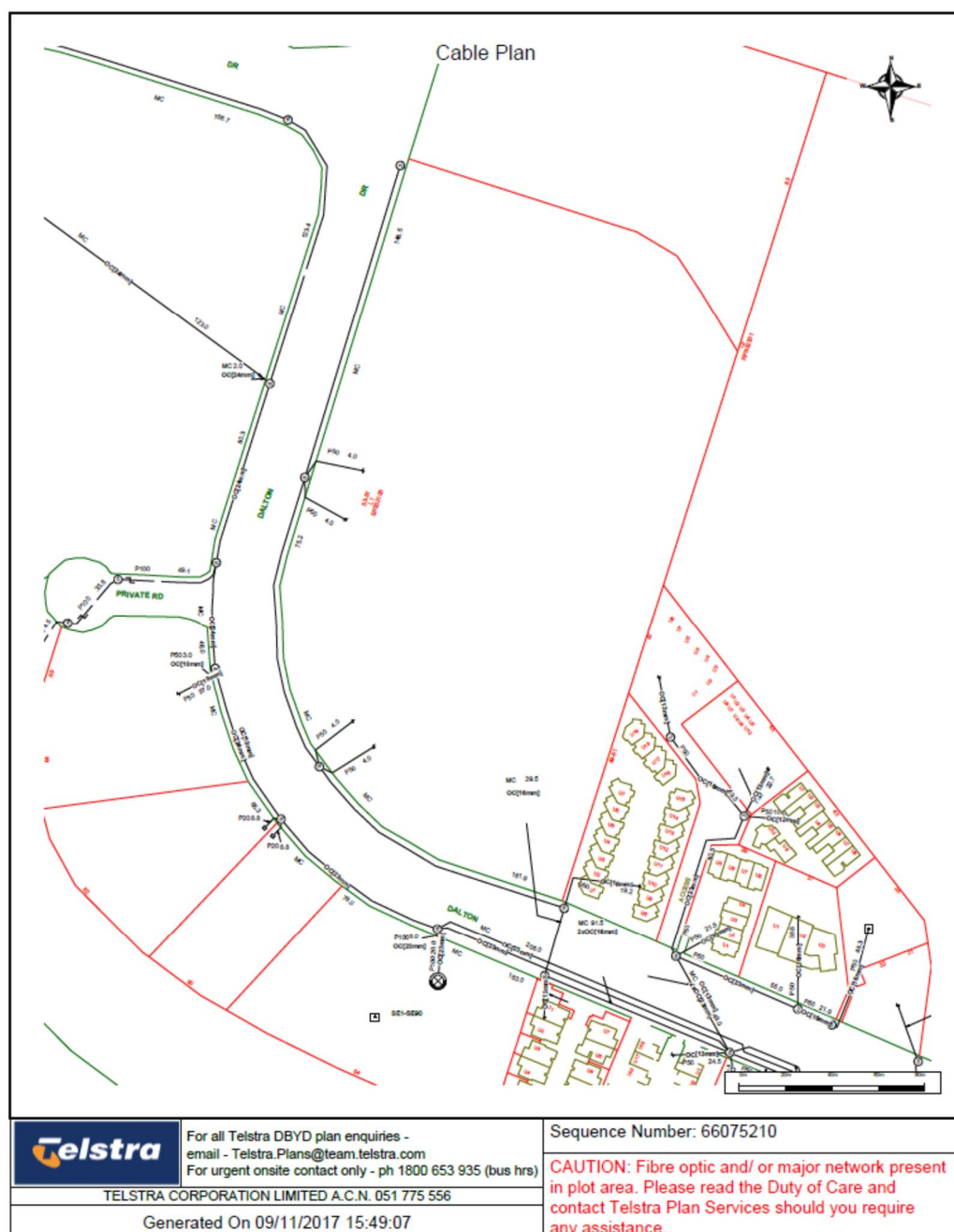


Figure 4-4 Telstra underground cable plan.

5 Summary

Our investigations have determined that the infrastructure required to cater for the development of the site can be readily provided within the framework of the infrastructure planning for the precinct by the relevant authorities.

Augmentation of the local reticulation infrastructure along Dalton Drive is viable and facilitating this will extend service capacity for the full development.

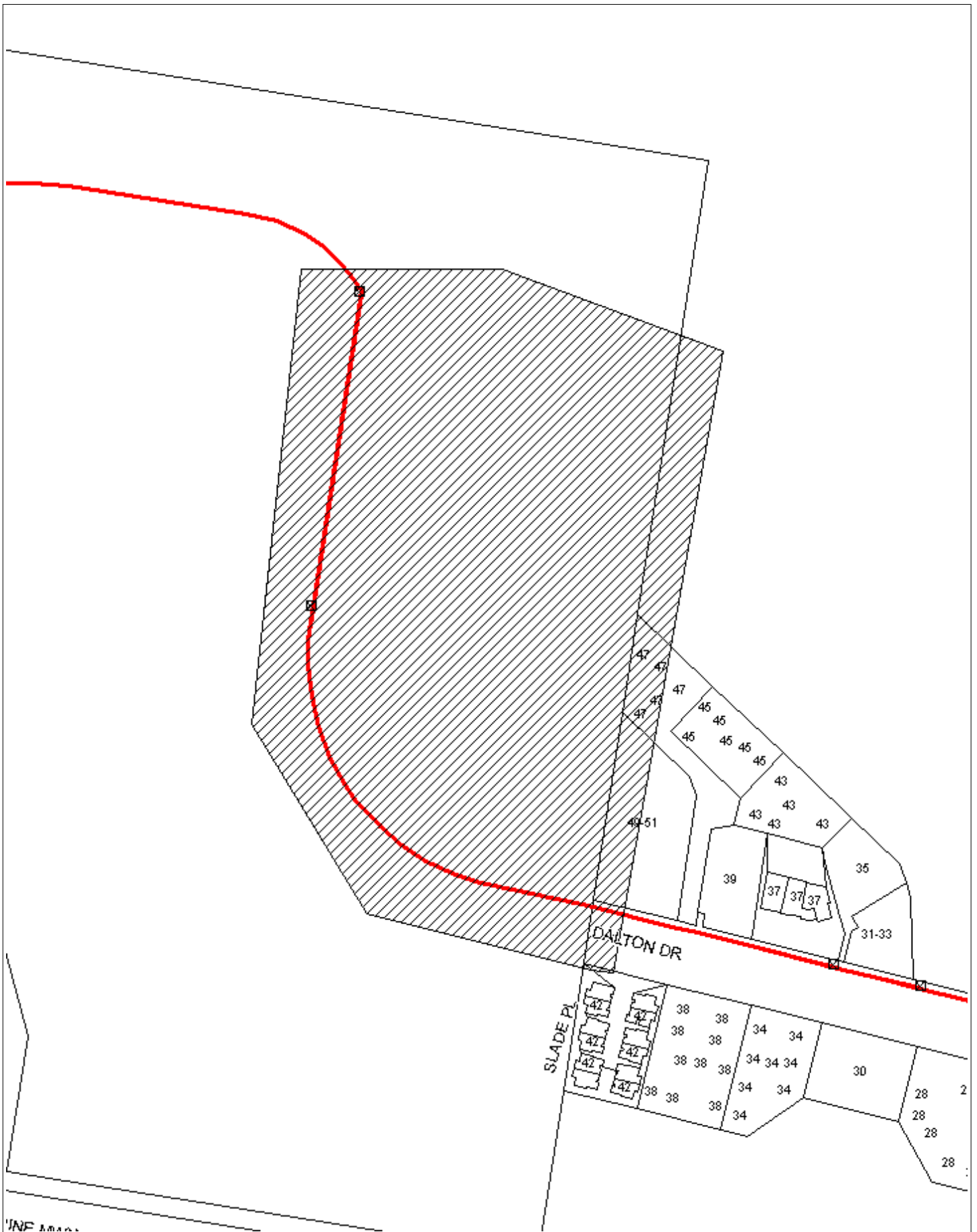
Fill volume in the order of 26,100cub.m, is required in the formation of the carpark area.

Maroochydore SP2, Dalton Drive
Maroochydore Queensland, Stage 1

APPENDIX

A

DBYD SERVICE AUTHORITY INFORMATION



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Sequence Number: 66075211

Date Generated: 09/11/2017



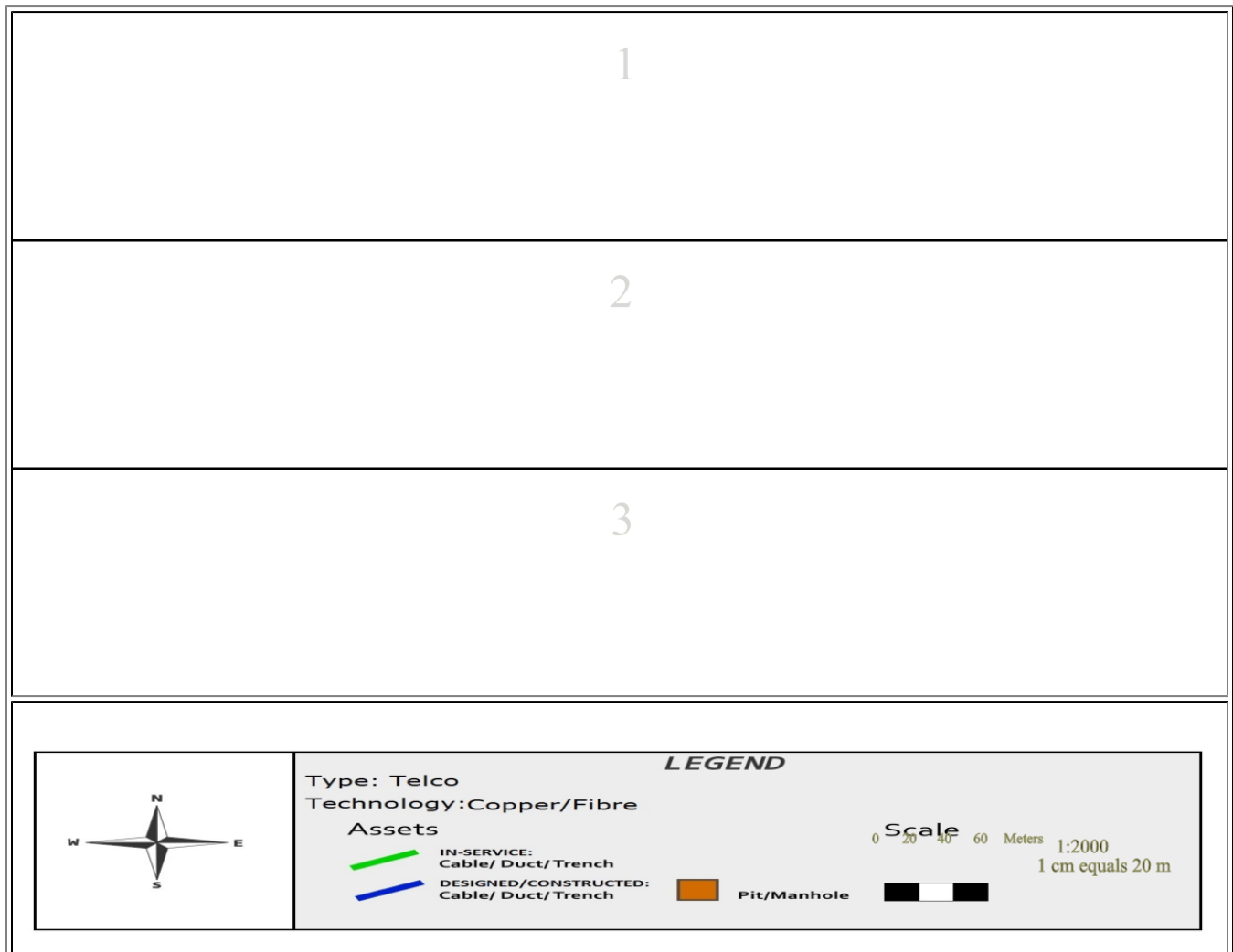
For all Optus DBYD plan enquiries –
Email: Fibre.Locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208

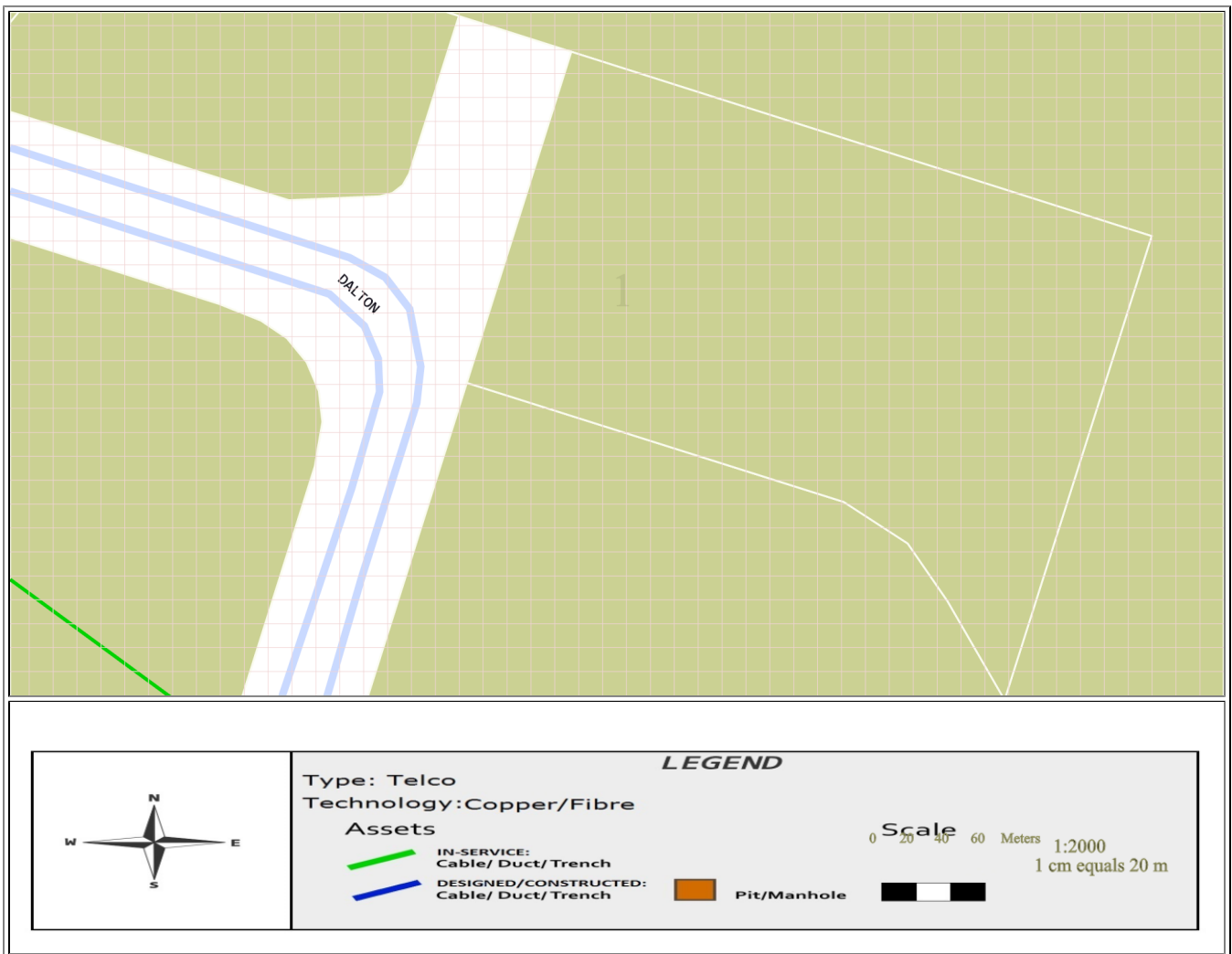


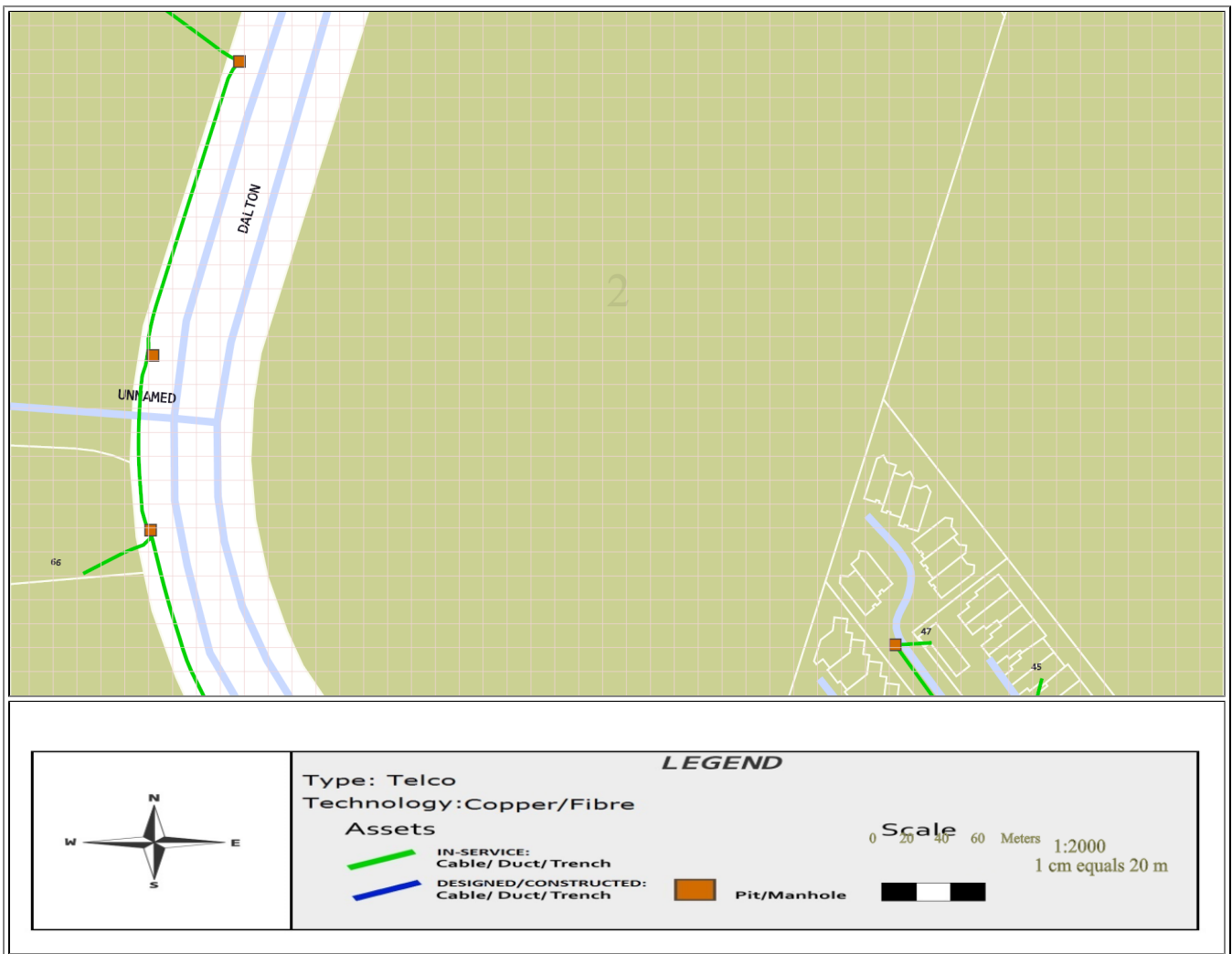


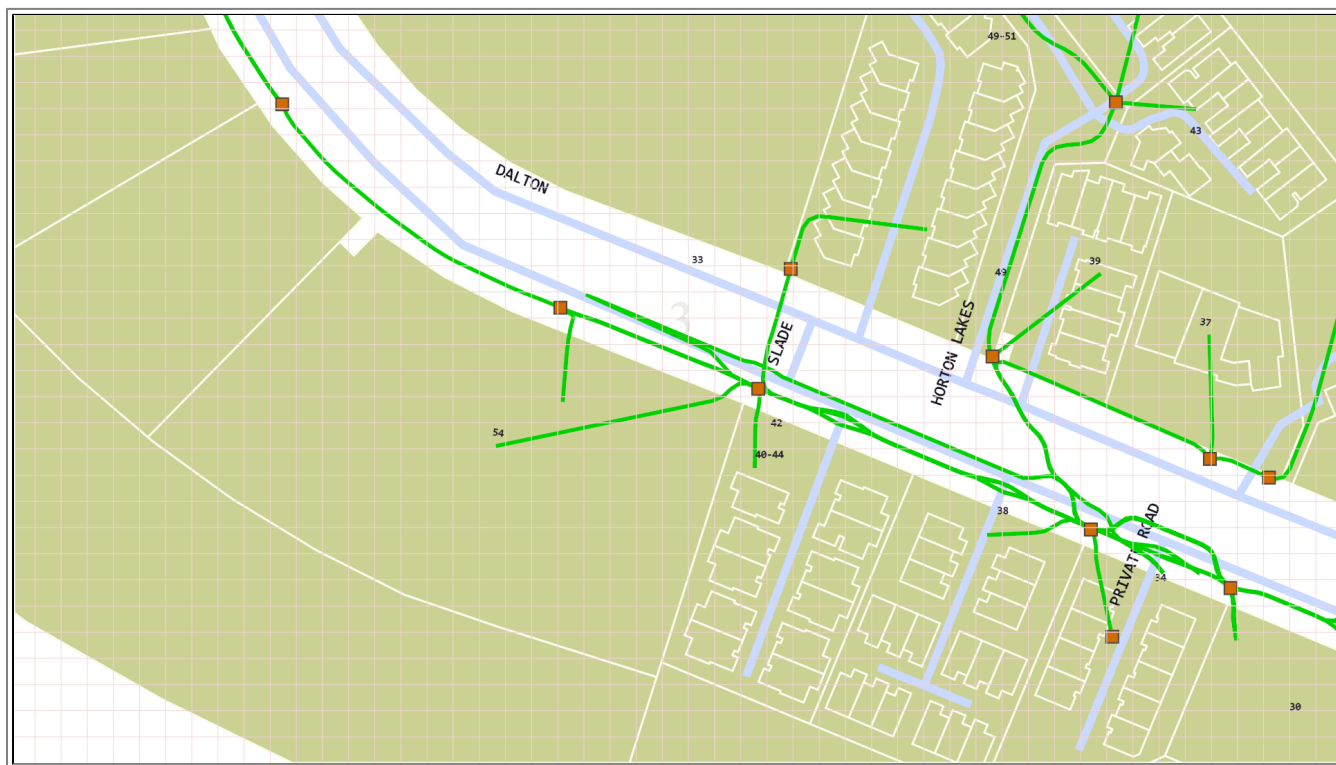
Indicative Plans

Issue Date:	09/11/2017	 DIAL BEFORE YOU DIG www.1100.com.au
Location:	Dalton Drive, Maroochydore, QLD-4558	









Emergency Contacts

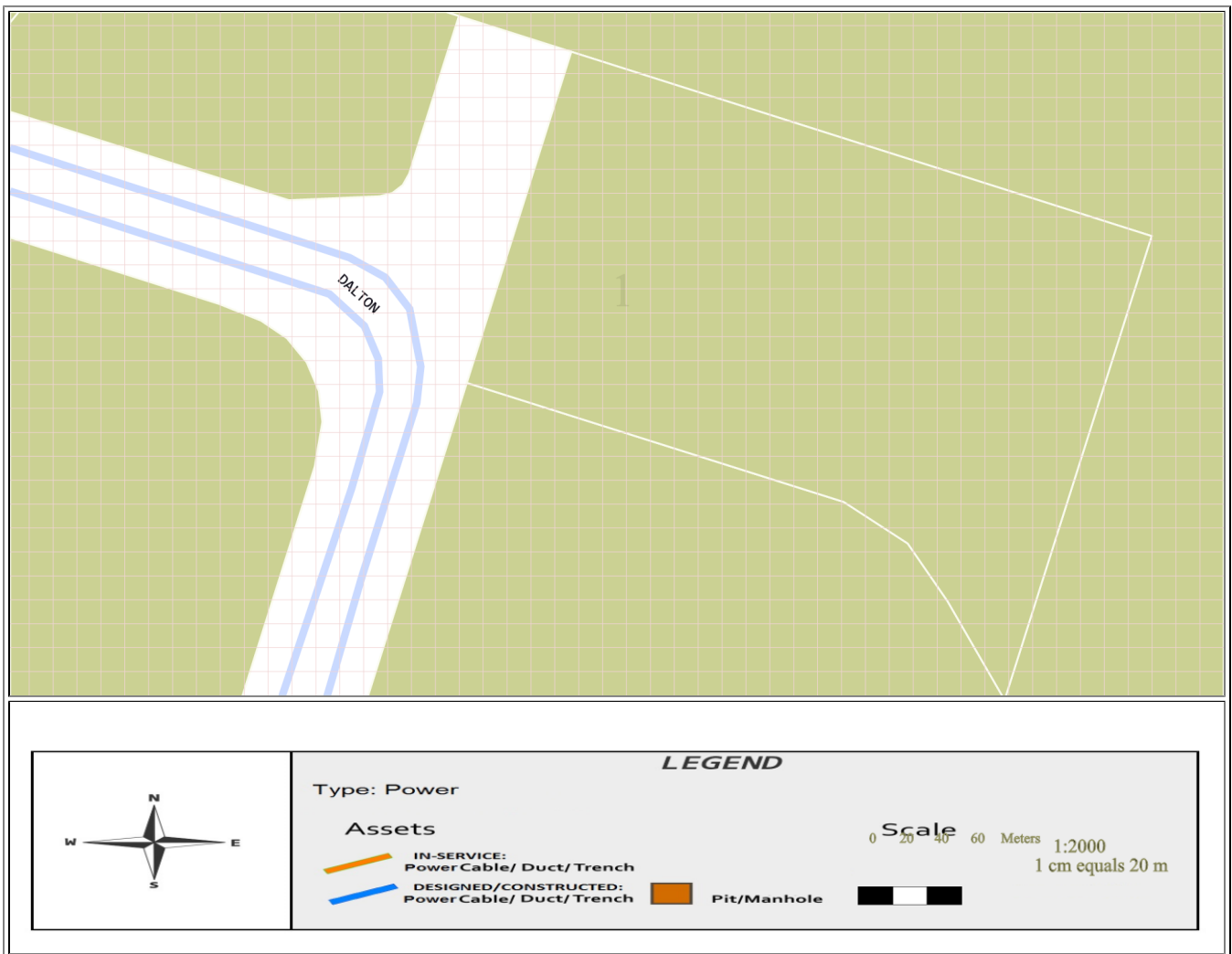
You must immediately report any damage to **nbn**™ network that you are/become aware of. Notification may be by telephone - 1800 626 329.

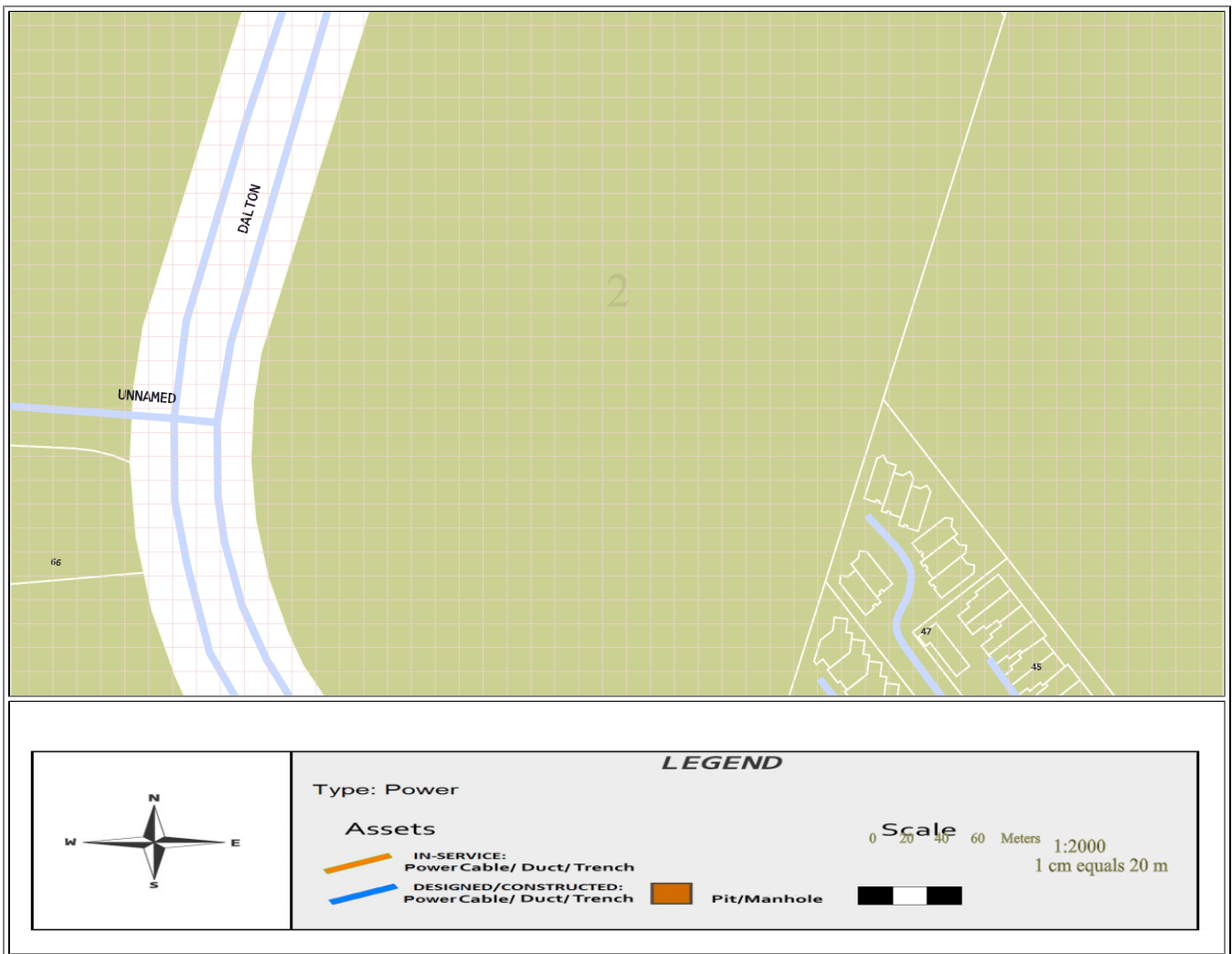


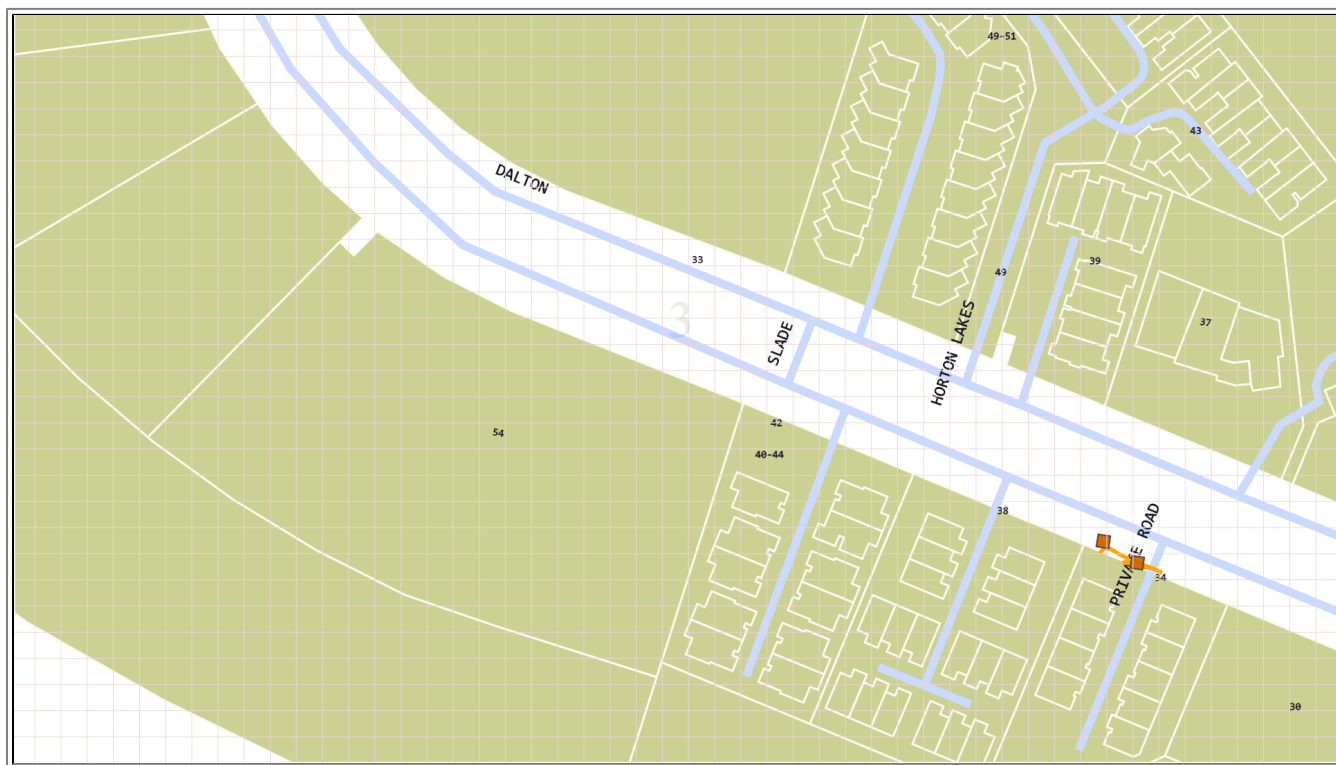
Indicative Plans

Issue Date:	09/11/2017	 DIAL BEFORE YOU DIG www.1100.com.au
Location:	Dalton Drive, Maroochydore, QLD-4558	

1
2
3
 LEGEND Type: Power Assets IN-SERVICE: Power Cable/ Duct/ Trench DESIGNED/CONSTRUCTED: Power Cable/ Duct/ Trench Pit/Manhole Scale 0 20 40 60 Meters 1:2000 1 cm equals 20 m







Emergency Contacts

You must immediately report any damage to **nbn**™ network that you are/become aware of. Notification may be by telephone - 1800 626 329.

All underground cables shall be treated as being energised. Where a cable is located that is not represented on the **ENERGEX EnerGISE DBYD** map, then **ENERGEX** shall be contacted immediately.

For Emergency Situations
Please call 13 19 62

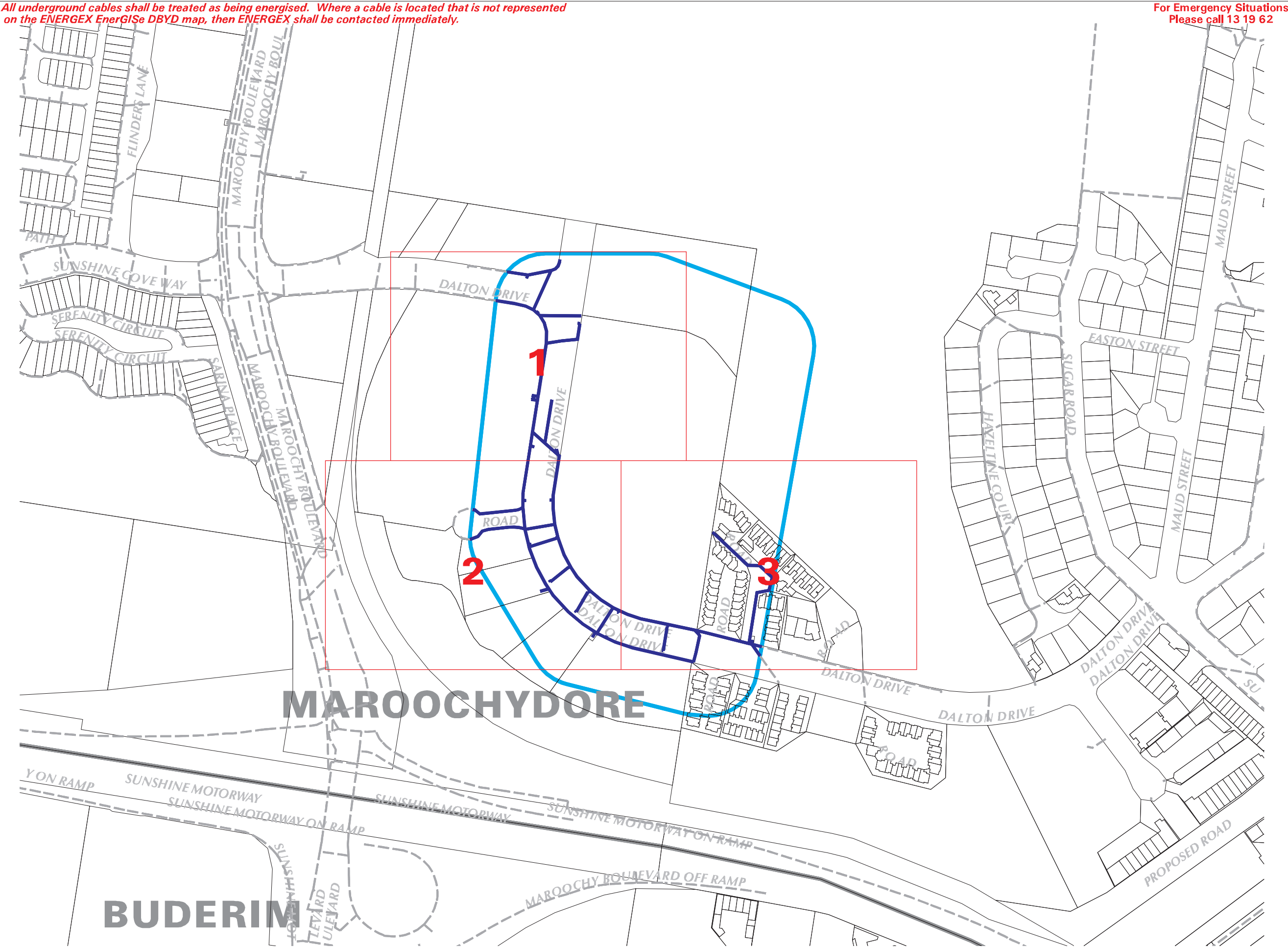


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Requested By: DBYD

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KEY MAP

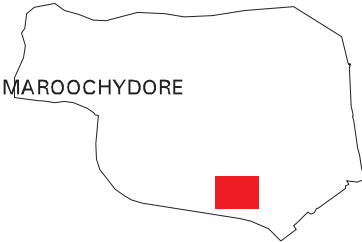
Enquiry Area



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LOCALITY DIAGRAM



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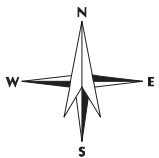
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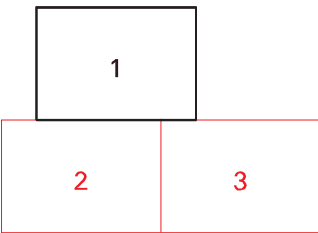
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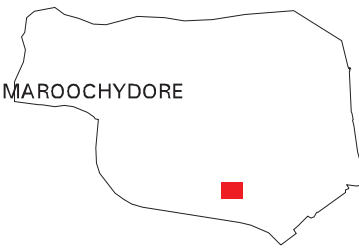
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|--|---------------------|--|------------------------------|
| | Ground Transformer | | Cable Voltage Less Than 33kV |
| | Cubicle Transformer | | Cable Voltage 33kV or Higher |
| | Ring Main Unit | | Direct-Lay Cable |
| | Metering Unit | | Conduit |
| | Link Pillar | | Multi-Section Duct |
| | Service Pillar | | Trench |
| | Junction Pillar | | Cable Tray |
| | Pit | | Tunnel |
| | Cable Joint | | |
| | Cable Termination | | |
| | Cable Marker | | |
| | Street Light Pole | | |
| | Earth | | |
| | Works Order Polygon | | |



INDEX TO SHEETS



LOCALITY DIAGRAM



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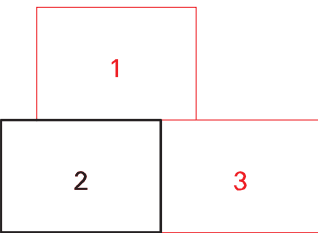
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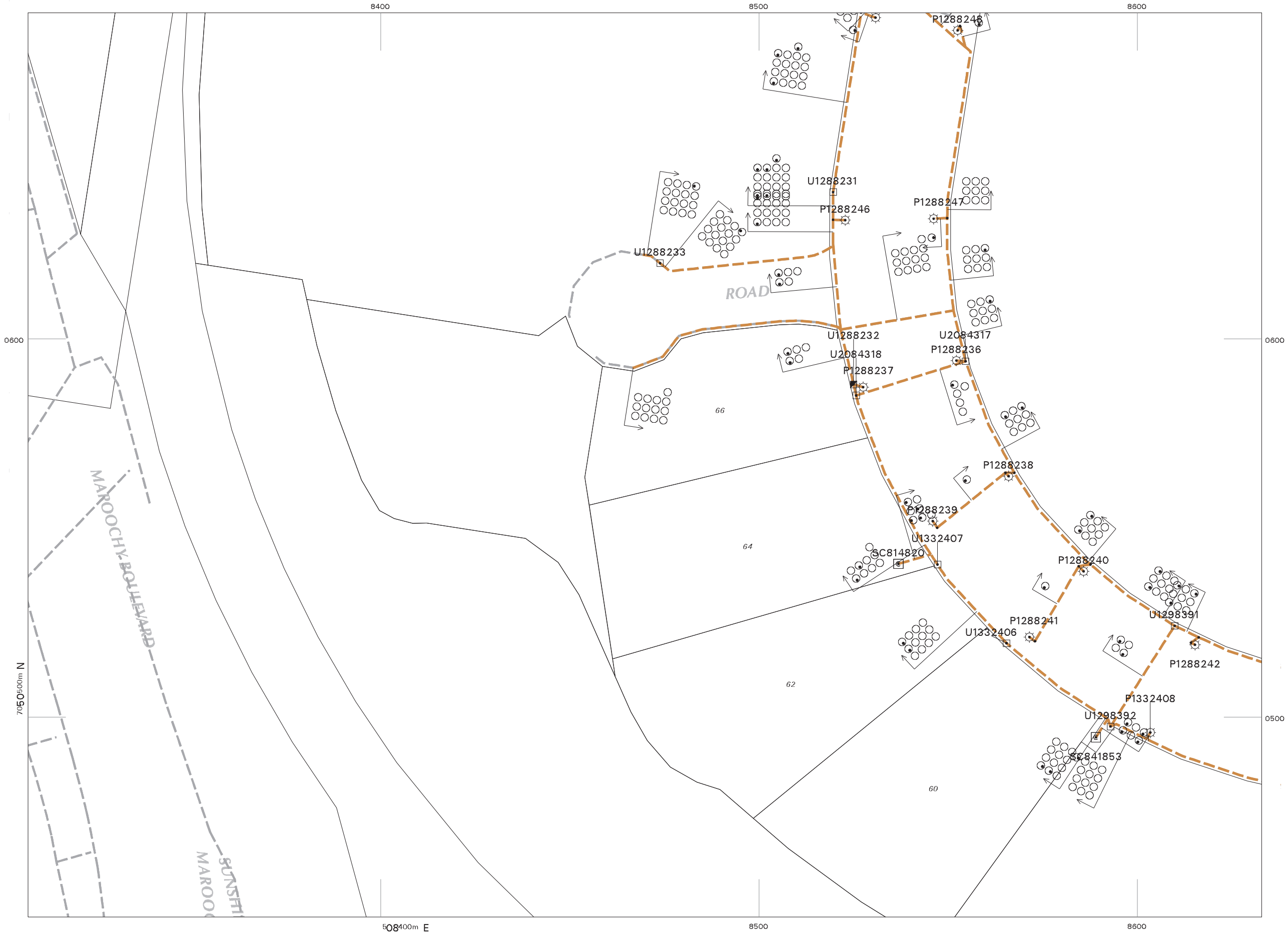
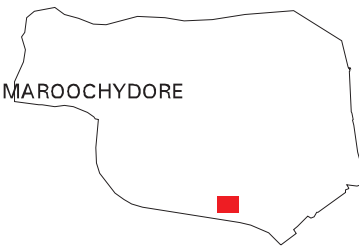
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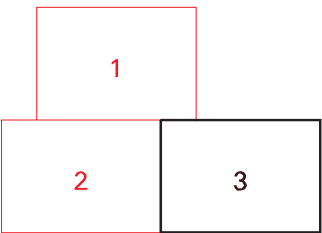
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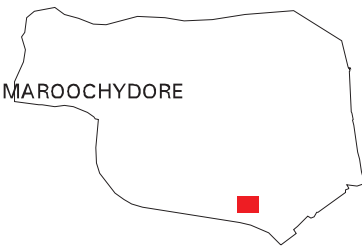
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NOTE
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Sunshine Coast Council
(07) 5475 7272

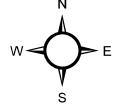
This plan expires 30 days from
Sunshine Coast Council's
'Printed On' date.

SUNSHINE COAST COUNCIL STORMWATER, ELECTRICAL AND COMMUNICATION INFRASTRUCTURE LOCATION

Printed on: Friday, 10 November 2017



Asset Information Services
Cnr. Currie and Bury Streets, Nambour QLD 4560
Locked Bag 72, Sunshine Coast Mail Centre QLD 4560
Enquiries: Tel (07) 5475 8545
Email: dbyd@sunshinecoast.qld.gov.au



N
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S

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Legend

Stormwater Pit

-  CatchPit
-  EndCap
-  FieldInlet
-  Manhole
-  Stormwater End Structure
-  Stormwater Quality Device

Stormwater Pipe

-  Allotment
-  Box
-  Pipe

Stormwater Culvert

-  Box Culvert
-  Pipe Culvert
-  Stormwater Misc Infrastructure
-  Stormwater Open Drain
-  Stormwater Water Quality Area

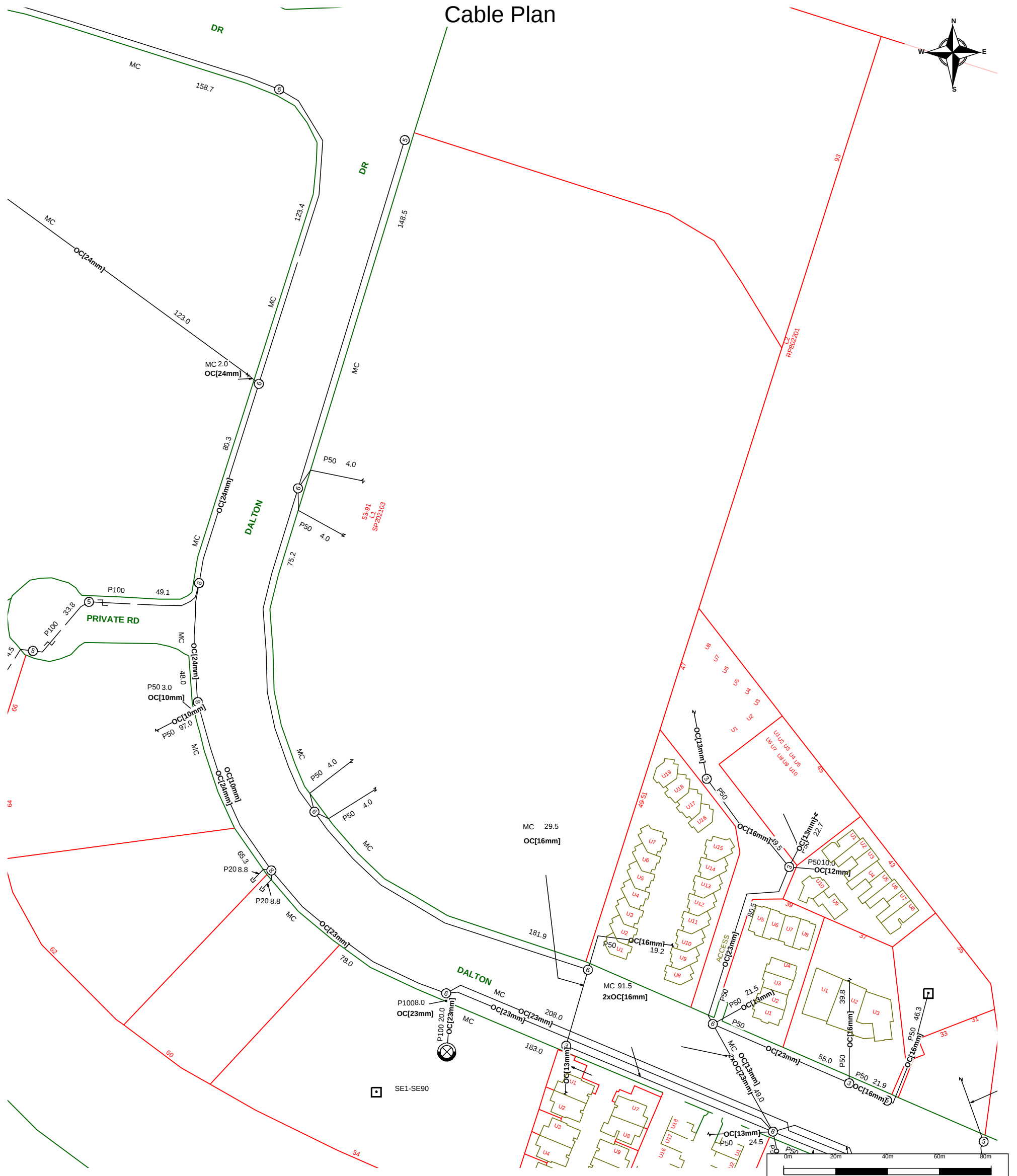
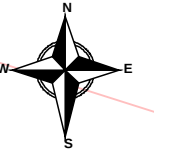
SCC TeleComm Network

-  SCC TeleComm Network
-  SCC Traffic Counter Area

SCC Electrical Infrastructure

-  SCC Electrical Infrastructure

Cable Plan



For all Telstra DBYD plan enquiries -
email - Telstra.Plans@team.telstra.com
For urgent onsite contact only - ph 1800 653 935 (bus hrs)

TELSTRA CORPORATION LIMITED A.C.N. 051 775 556

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CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.

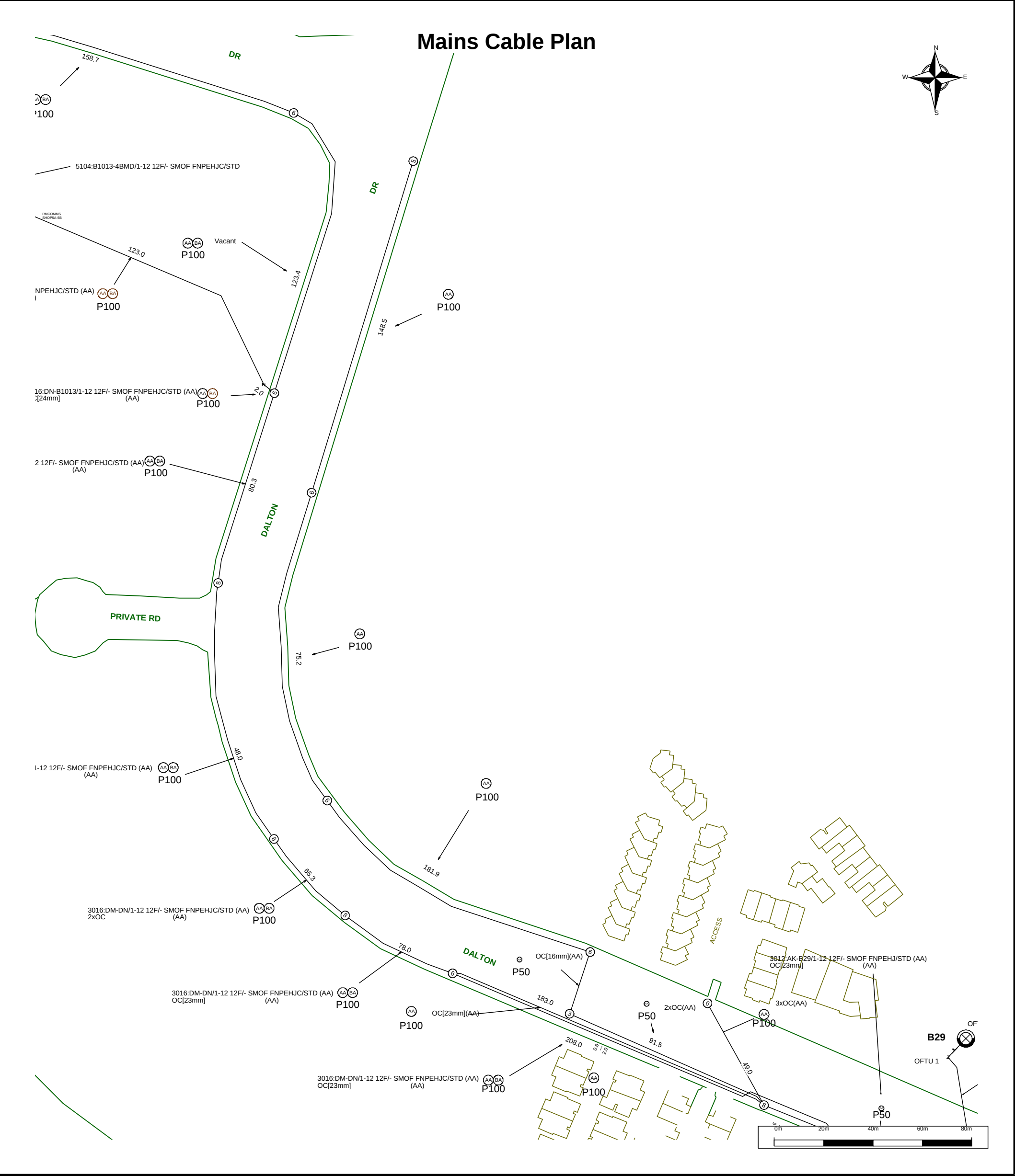
The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING - Due to the nature of Telstra underground plant and the age of some cables and records, it is impossible to ascertain the precise location of all Telstra plant from Telstra's plans. The accuracy and/or completeness of the information supplied can not be guaranteed as property boundaries, depths and other natural landscape features may change over time, and accordingly the plans are indicative only. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans.

It is your responsibility to locate Telstra's underground plant by careful hand pot-holing prior to any excavation in the vicinity and to exercise due care during that excavation.

Please read and understand the information supplied in the duty of care statement attached with the Telstra plans. TELSTRA WILL SEEK COMPENSATION FOR LOSS CAUSED BY DAMAGE TO ITS PLANT.

Telstra plans and information supplied are valid for 60 days from the date of issue. If this timeframe has elapsed, please reapply for plans.



	For all Telstra DBYD plan enquiries - email - Telstra.Plans@team.telstra.com For urgent onsite contact only - ph 1800 653 935 (bus hrs)	Sequence Number: 66075210
	Generated On 09/11/2017 15:49:09	CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.

WARNING - Due to the nature of Telstra underground plant and the age of some cables and records, it is impossible to ascertain the precise location of all Telstra plant from Telstra's plans. The accuracy and/or completeness of the information supplied can not be guaranteed as property boundaries, depths and other natural landscape features may change over time, and accordingly the plans are indicative only. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans.

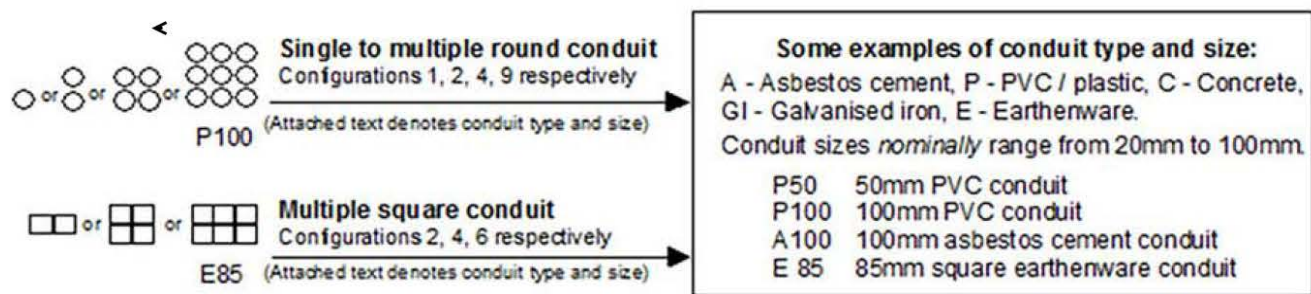
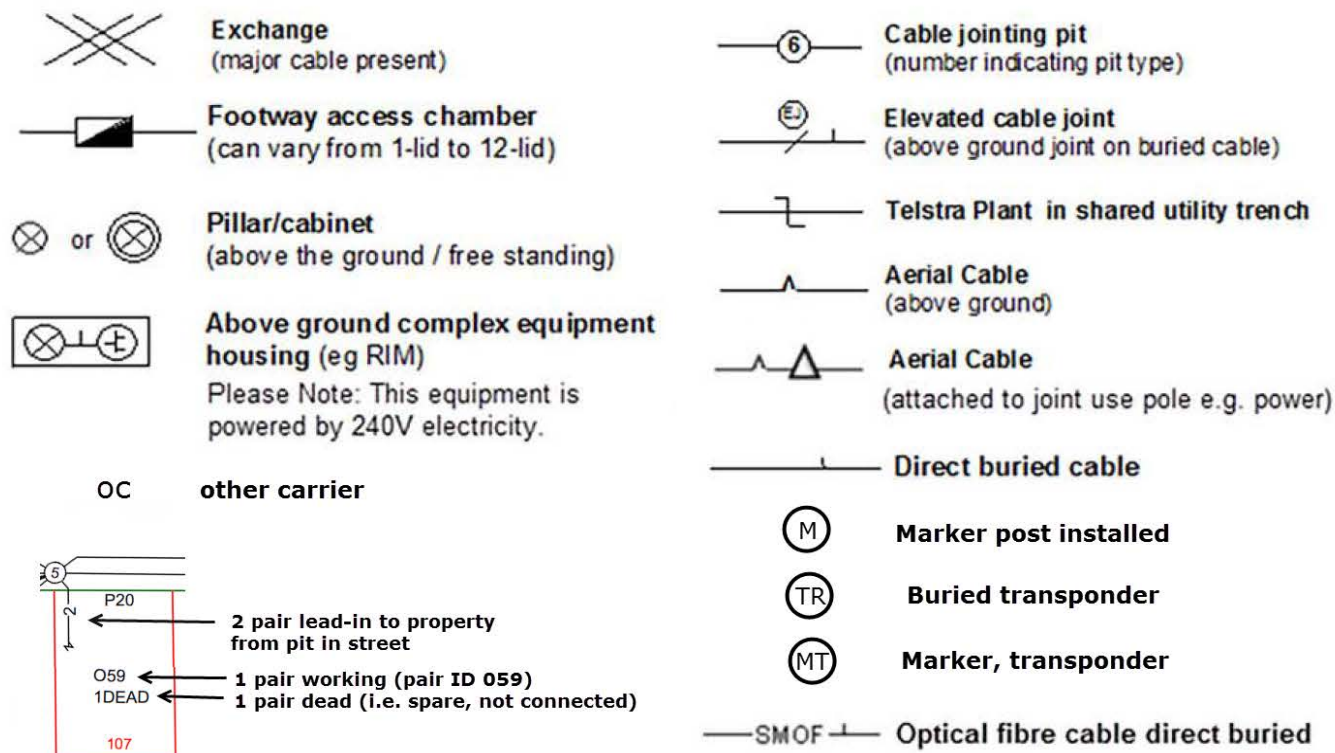
It is your responsibility to locate Telstra's underground plant by careful hand pot-holing prior to any excavation in the vicinity and to exercise due care during that excavation.

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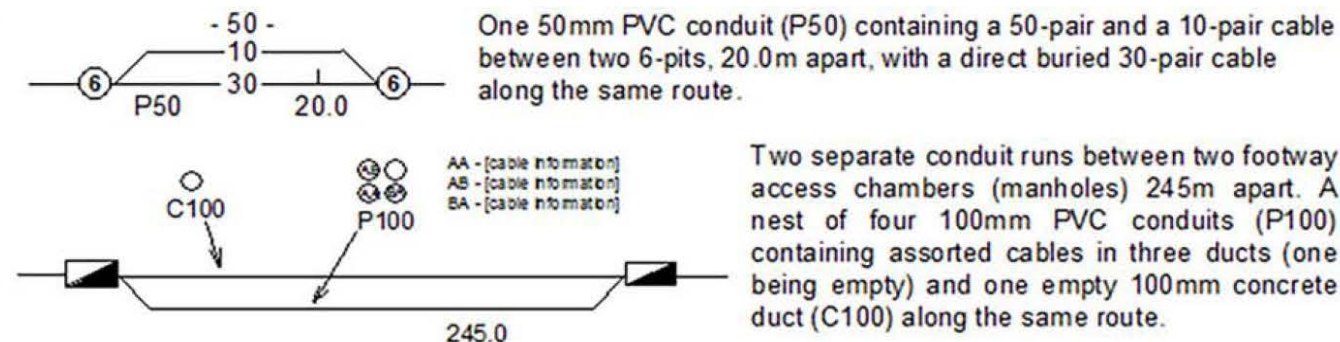
Telstra plans and information supplied are valid for 60 days from the date of issue. If this timeframe has elapsed, please reapply for plans.



For more info contact a Telstra Accredited Locator or Telstra Plan Services 1800 653 935



Some examples of how to read Telstra plans:



WARNING: Telstra plans and location information conform to Quality Level 'D' of the Australian Standard AS 5488 - Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans. FURTHER ON SITE INVESTIGATION IS REQUIRED TO VALIDATE THE EXACT LOCATION OF TELSTRA PLANT PRIOR TO COMMENCING CONSTRUCTION WORK. A plant location service is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works. The exact position of Telstra assets can only be validated by physically exposing it. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers.

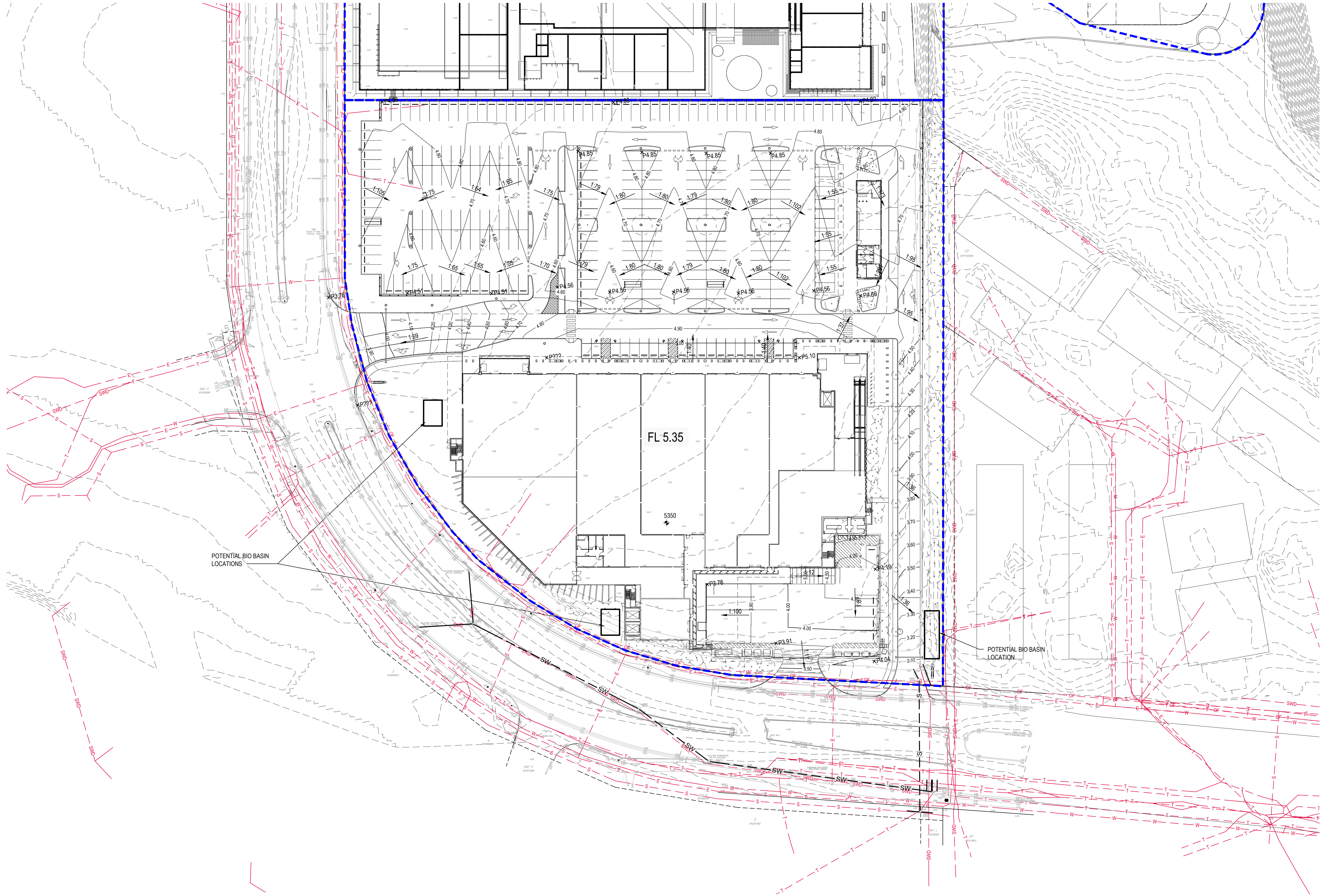
Maroochydore SP2, Dalton Drive
Maroochydore Queensland, Stage 1

APPENDIX

B

PROPOSED DEVELOPMENT PLANS

FOR CONTINUATION REFER V171462-CI-SK003

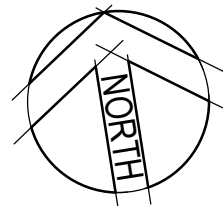


LEGEND

PSM	PERMANENT SURVEY MARK
TBM	TEMPORARY BENCH MARK
DTR	BOREHOLE LOCATION
BH	DEPTH TO REFUSAL AND DEPTH TO TERMINATION
DTT	PROPOSED FINISHED SURFACE CONTOUR
ST 0	EXISTING SURFACE CONTOUR
ES 48.00	FALL OF ALLOTMENT
XES48.00	EXISTING SURFACE LEVEL
XFS48.00	FINISHED SURFACE LEVEL
XBL48.00	BULK EARTHWORK LEVEL
XFL48.00	FINISHED FLOOR LEVEL
PROPOSED BATTER	
X X	EXISTING FEATURES TO BE REMOVED
SE	SEDIMENTATION FENCE
48.00 2250 SWD	EXISTING STORMWATER DRAIN, PIT, DIAMETER AND DRAINAGE INVERT LEVEL
48.00 2250 SWD	PROPOSED STORMWATER DRAIN, PIT, DIAMETER AND DRAINAGE INVERT LEVEL
2	PROPOSED PIT AND PIT NUMBER
EXISTING PIT	
F/O AG	PROPOSED AGRICULTURAL DRAIN WITH FLUSH OUT RISER
PROPOSED SWALE DRAIN	
S	EXISTING SEWER
E	EXISTING ELECTRICITY
OF	EXISTING FIBRE OPTIC
T	EXISTING TELECOM
W	EXISTING WATER

CONTRACTOR TO VERIFY EXISTING SERVICES CONNECTION LEVELS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES MUST BE IMMEDIATELY IDENTIFIED AND THE SUPERINTENDENT NOTIFIED PRIOR TO CONSTRUCTION COMMENCING.

0 10 20m
SCALE 1:500 @A1



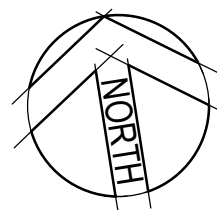
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BLUEPRINT AUSTRALIA
PROPOSED LEVELS PLAN
GROUND FLOOR
SHEET 2 OF 2

Date	29.03.2019	Scale	1:500	Size	A1	
Drawing Number	V171462-CI-SK004				Revision	8

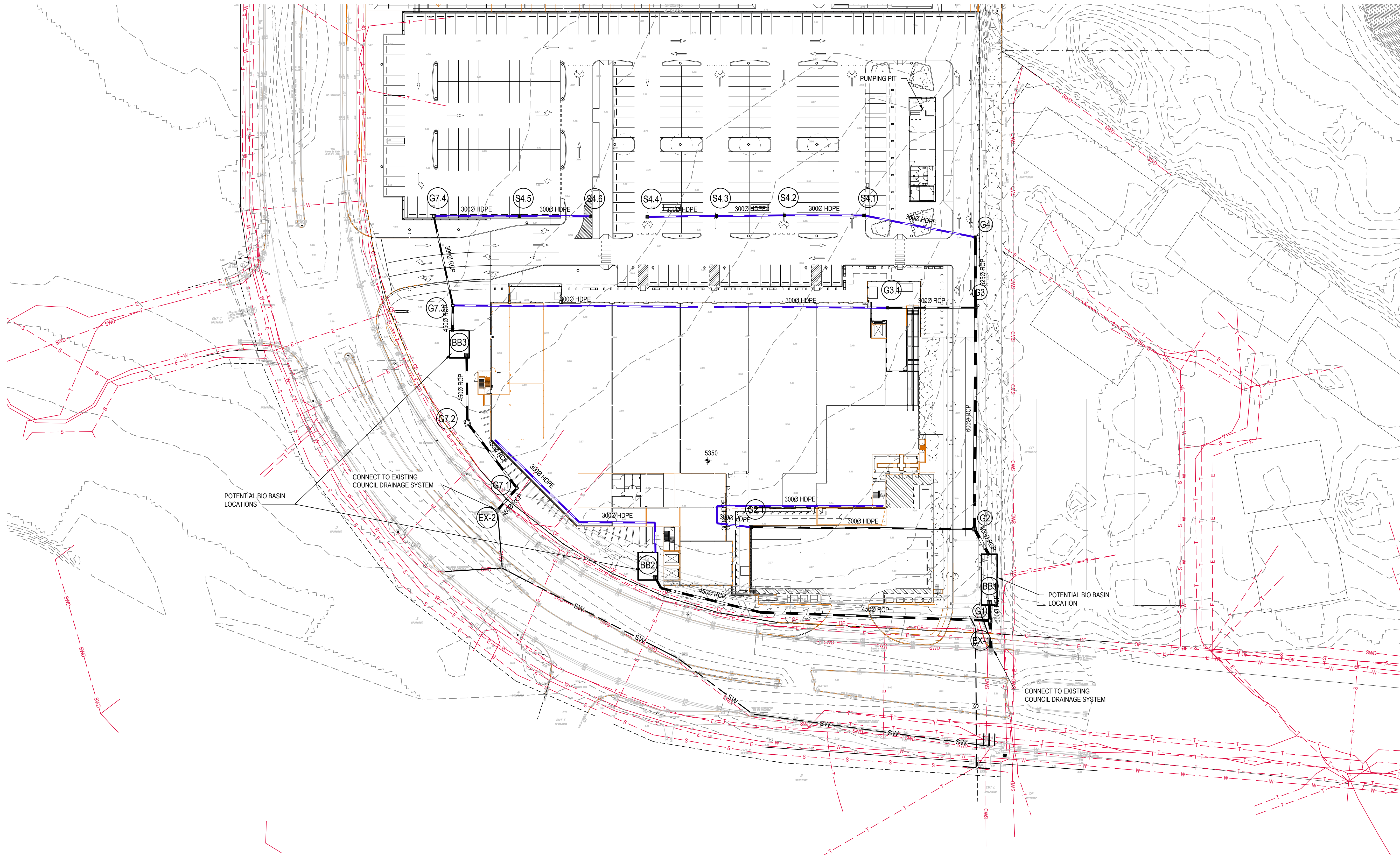


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BLUEPRINT AUSTRALIA
PROPOSED LEVELS PLAN
BASEMENT LEVEL
SHEET 2 OF 2

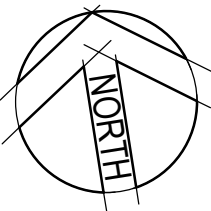
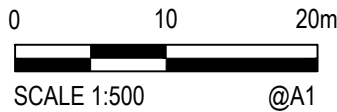
	Date 20.03.2019	Scale 1:500	Size A1
Drawing Number V171462-CI-SK006			Revision 5



LEGEND

	EXISTING STORMWATER DRAIN, PIT, DIAMETER AND DRAINAGE INVERT LEVEL
	PROPOSED STORMWATER DRAIN, PIT, DIAMETER AND DRAINAGE INVERT LEVEL
	PROPOSED SYPHONIC DRAIN, PIT, DIAMETER AND DRAINAGE INVERT LEVEL
	PROPOSED PIT AND PIT NUMBER
	EXISTING PIT
	PROPOSED SWALE DRAIN
	EXISTING SEWER
	EXISTING ELECTRICITY
	EXISTING FIBRE OPTIC
	EXISTING TELECOM
	EXISTING WATER

CONTRACTOR TO VERIFY EXISTING SERVICES CONNECTION LEVELS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES MUST BE IMMEDIATELY IDENTIFIED AND THE SUPERINTENDENT NOTIFIED PRIOR TO CONSTRUCTION COMMENCING.



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BLUEPRINT AUSTRALIA
PROPOSED DRAINAGE PLAN
SHEET 2 OF 2

	Date 29.03.2019	Scale 1:500	Size A1
Drawing Number V171462-CI-SK008			Revision 7