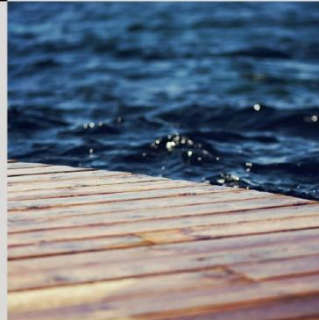


# Appendix E



# SITE COMPATIBILITY CERTIFICATE ENGINEERING ASSESSMENT REPORT

49 Elourera Terrace BRAY PARK NSW 2484 | 18/-/DP627632 & 22/-/DP1170438

Prepared for Marjan Management Pty Ltd  
By Planit Consulting Pty Ltd

June 2019





This report has been prepared by:



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#### Document Control

Issue	Date	Description	Prepared By	Checked By
01	13/06/2019	SCC Approval	KB	AW



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# 1 Introduction

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## 1.1 Background

Planit Consulting Pty Ltd has been engaged by Marjan Management Pty Ltd to prepare an Engineering Assessment Report (EAR) for a Site Compatibility Certificate investigating a proposed Seniors Housing development at 49 Elouera Terrace Bray Park.

The purpose of this EAR is to demonstrate the suitability of the Seniors Housing development at the subject site location in regards to civil works and servicing.

## 1.2 Scope

This report investigates and prepares the following in regard to engineering servicing aspects associated with the proposed development:

1. Review of the site and proposed development (refer Appendix B).
2. Review of existing relevant encumbrances burdening the site;
3. Review of existing services and potential servicing strategies;
4. Provision of a concept servicing plan (refer Appendix C);

## 1.3 Limitations

The limitations of the report include:

1. Services locations are based on historical records and survey;
2. No field sampling or testing has been undertaken;
3. No analysis or calculations as to the capacity of the existing services have been undertaken;
4. No geotechnical investigations have been undertaken;
5. ENV Solutions Pty Ltd have undertaken field sampling works (top 100mm of the soil profile only) as part of a Preliminary Contamination Assessment of the site and have identified no problems;
6. Existing services location and size have been derived from Council and Statutory Authorities' search records which have been made available;
7. Any concept plans provided are not for construction purpose.

This report has been prepared generally in accordance with Council guidelines and other reference documents.

## 2 Site and Proposal Overview

A Site Compatibility Certificate is sought to permit the development of Seniors Housing in the portion of land within both 18/-/DP627632 and 22/-/DP1170438 (zoned RU1 – Primary Production) located above the 100 year ARI flood event (refer Figure 2.1 for location).



Figure 2.1 – Portion of Land for which SCC is sought (High Flow Flood Extent Shown)

A concept plan has been prepared for yield analysis and for the purposes of this request (refer Appendix B). This plan demonstrates up to 139 serviced self-contained dwellings being accommodated onsite. The final dwelling yield and development layout would be determined as part of any development application assessment, subsequent to receiving a Site Compatibility Certificate.

It is noted that a DA application for a residential subdivision is currently being prepared for the area of land located between portion of land for which SCC is sought and Elouera Terrace (18/-/DP627632).

## 3 Civil Engineering and Services Assessment

### 3.1 Topography

The site falls from north-west to south-east at the approximate grades documented in Figure 3.1.

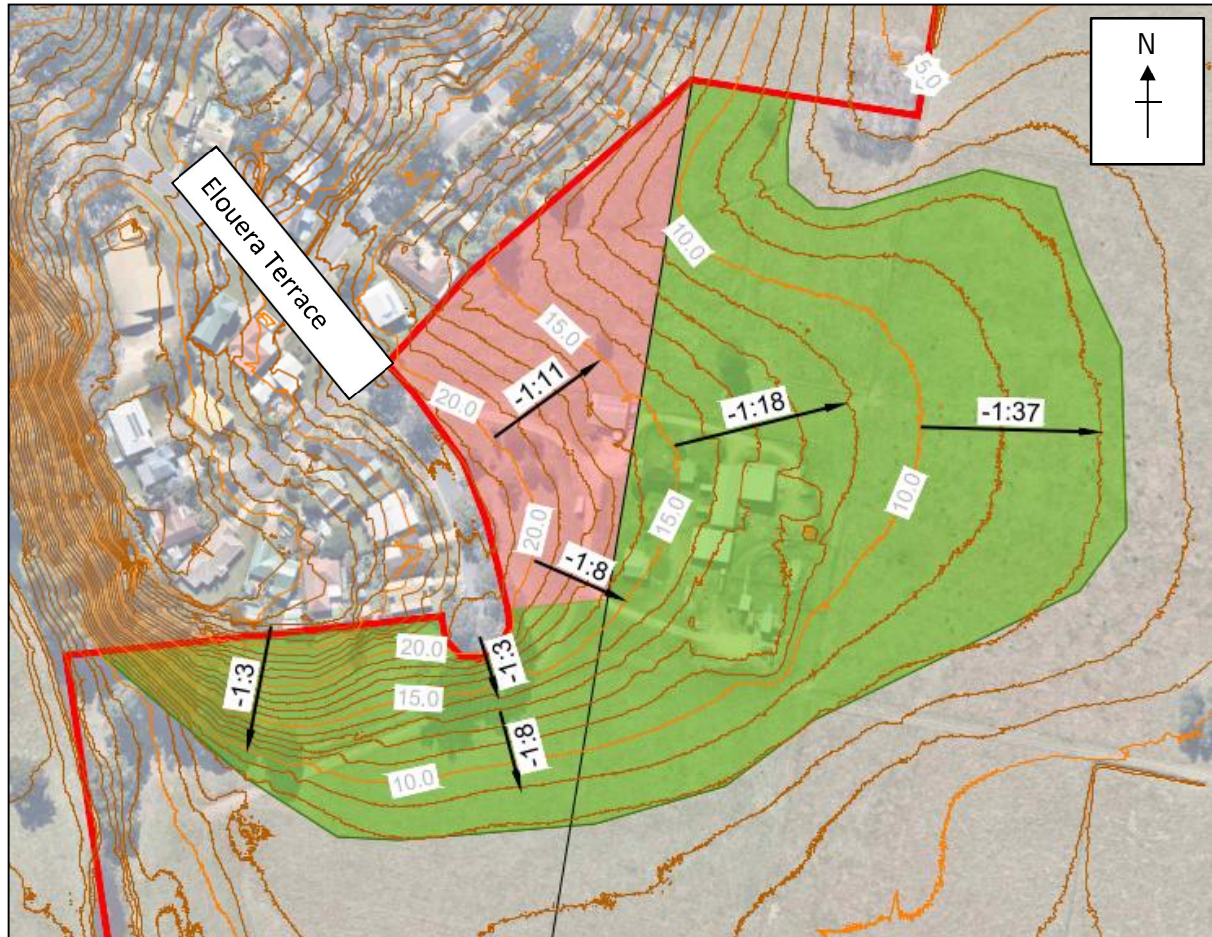


Figure 3.1 – Topography (Showing Only Land above the mapped flood planning level)



## 3.2 Flooding

### 3.2.1 Flooding Overlay

A significant amount of the site is mapped as flooded as shown in Figure 3.2 and Figure 3.3.

Flood Level Contours are generally as follows:

1. High Flow Flood Area (ARI 100 year, AEP 1%) = 7.7m – 8.2m AHD;
2. PMF Inundation Area = 13.1 – 13.6m AHD



Figure 3.2 – High Flow Flood Extent (AEP 1%)

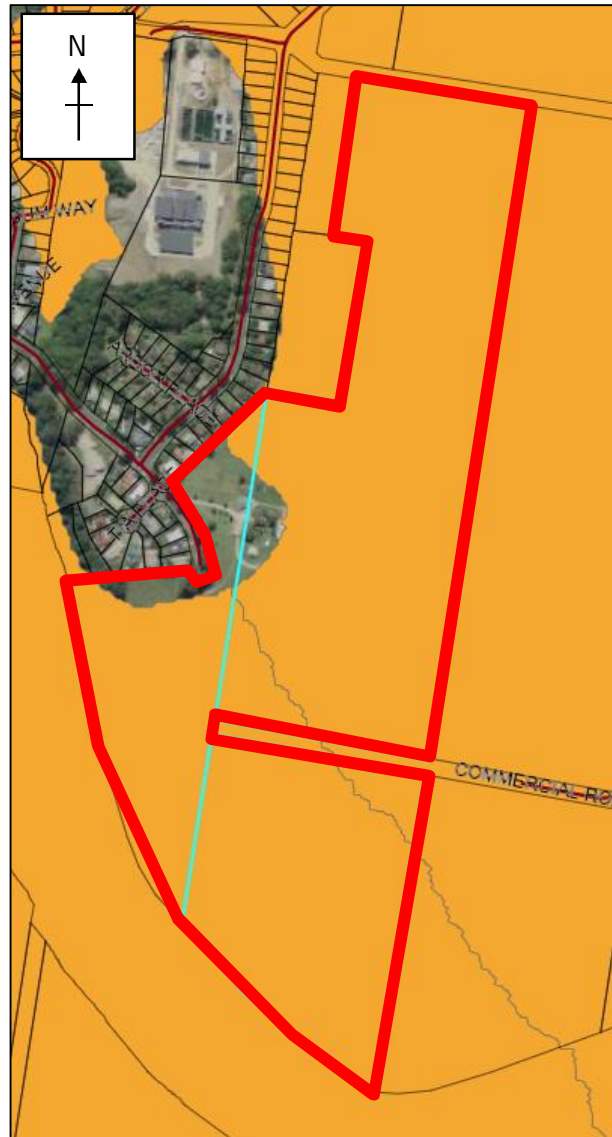


Figure 3.3 – PMF Inundation Areas

### 3.2.2 High Flow Flood Area (ARI 100 year, AEP 1%)

Seniors Housing development at the site is not permitted on land mapped as high flow flood area. This is regardless of whether land forming works have been undertaken to make this high flow flood area flood free.

No works are proposed below the high flow flood area, thus the above requirements are complied with.

### 3.2.3 PMF Inundation Area

A probable maximum flood (PMF) means the largest flood that could conceivably occur at a particular location. The PMF level/flood extent provided informs Council's Emergency Response Provisions.

For the Seniors Housing development a permanent high level road evacuation route to land above PMF (Elouera Terrace) is provided via the proposed residential subdivision which complies with Council requirements.

Dwellings will be designed to achieve compliance with the minimum habitable floor level requirements (DFL + freeboard). As such development can occur within the PMF area subject to suitable design at the DA stage.

## 3.3 Earthworks

Considering the topography described in Section 3.1:

1. Earthworks will be required to facilitate development and will generally involve filling works to level/flatten the site;
2. All earthworks shall be above the High Flow Flood Area (ARI 100 year, AEP 1%);
3. Pathway and accessibility requirements for aged care housing (generally flatter than 1:14 – 1:20) will need to be considered during the earthworks design to achieve compliant grades.

The above shall be further considered and incorporated into designs prepared during the DA phase of the proposal.

## 3.4 Access, Parking & Manoeuvrability

The proposed seniors housing development will be accessed from Elouera Terrace via a new roadway to be determined as part of the proposed residential subdivision.

## 3.5 Stormwater Management

### 3.5.1 Upstream Catchment

The proposed footprint of the Seniors Housing development appears to lie over an existing overland flow path draining the catchment north of O'Connor Drive. Appropriate swales / overland flow paths will need to be constructed around the footprint of the proposed development to ensure the upstream catchment can continue to drain without causing hazard to the new development.

### 3.5.2 Stormwater Quantity/Quality

The site is currently undeveloped and the proposal will involve the increase of impervious areas. Hence stormwater quality and quantity (non-worsening) requirements will be addressed;

The likely treatment option for stormwater quality/quantity will be a bio-retention basin. The total footprint that should be allowed for the basin is typically 6-8% of the development catchment. This allowance includes treatment surface, batters, bunds, inlets and maintenance access.

It is likely that the any proposed bio-retention basin will service both the seniors' housing development (45,000m<sup>2</sup> of developable area) and future residential subdivision (12,750m<sup>2</sup> of developable area). Considering this, 3,600-4,800m<sup>2</sup> should be allocated for bio-retention basin(s). Final sizing shall be confirmed during detailed design.

### 3.5.3 Lawful Point of Discharge

The lawful point of discharge of the proposed development is considered to be the existing drainage channels within the high flow area to the north and south of the proposed development.

### 3.6 Water and Sewerage Reticulation

Tweed Shire Council are the responsible authority for both sewerage and water reticulation for residential customers within their local government area. There are existing sewerage and water reticulation services to the immediate north-west of the site.

#### 3.6.1 Proposed Connection Points

The following connection points have been identified. Refer Appendix C for details.

##### Sewerage

1. Existing sewerage manhole located within the neighbouring property 7DP264397
2. Sewerage pipe servicing manhole is 150 DIA AC;

##### Water

1. Existing 100 DIA AC watermain located within Elouera Terrace

#### 3.6.2 Communications with Council

Planit have been liaising with Council regarding the provision of these services. It is noted that the site is currently located outside both the sewerage and water development servicing plan (DSP) area.

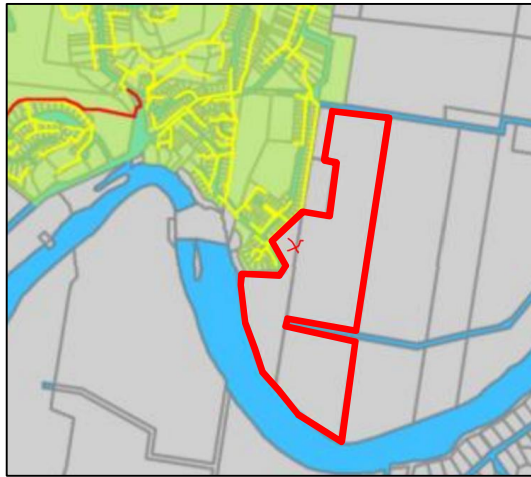


Figure 3.4 – Sewerage DSP Area

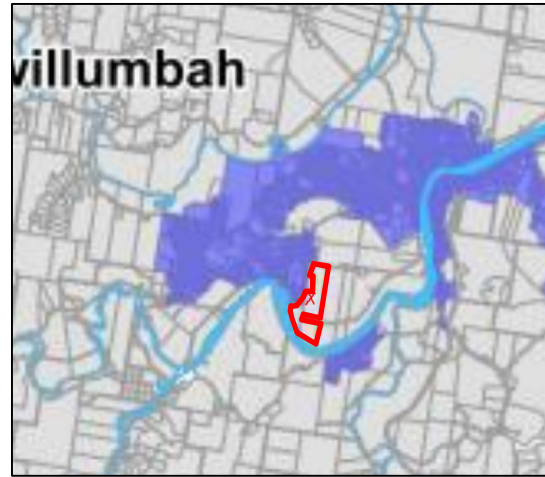


Figure 3.5 – Water Supply DSP Area

Refer below for key points from discussions to date with Council:

1. There is existing sewerage and water infrastructure in close proximity to the proposed development site (refer Appendix C for proposed connection points);
2. Existing Sewerage System Modelling:
  - a. Council is currently undertaking modelling and development of a sewerage strategy for the locality. At this stage the estimate for completion is December 2019;
  - b. Once completed, further modelling can be undertaken to understand if and what upgrades would be required to service the proposed development;
3. Unloading of Water from Water Treatment Plan Option:
  - a. In addition to the above, Council are currently scoping a strategy brief to investigate options to “unload” water from the Water Treatment Plant that currently discharges into the sewerage system.
  - b. The water treatment plant consumes a proportion of the sewerage capacity in the system and this option investigates an alternative disposal method;



- c. Council will undertake a preliminary assessment of the option of irrigating water from the Water Treatment Plant to the pastures on the subject site (22/-/DP1170438 and 18/-/DP627632);
- d. At this stage the estimate for completion for this assessment is December 2019;
4. Any sewerage augmentation works required are not expected to prevent the site from being serviced in a timely manner and can be further detailed during the DA phase;
5. There are no expected issues with the provision of a water reticulation connection.

Considering the above, it is considered likely that sewerage pump stations will be required for the subject site due to the topography. It is possible that network upgrades will be required within the existing Council sewerage network to service the development pending the outcomes of the above investigations. Augmentation works will be further investigated and addressed in detail during the DA phase.

### 3.7 Electrical

Essential Energy is the main service authority for power supply in the region. There is existing electrical infrastructure in the vicinity of the site.

Essential Energy have advised during preliminary discussions:

1. That the substation in the area is close to full capacity hence it is likely that a new pad mount substation and 11KV tie cable to the existing overhead power line east of the proposed development will be required.
2. The substation will require a 7m x 4.2m easement area so a suitable location would need to be confirmed.
3. The proposed electricity service is likely to loop through the site, via Elouera Terrace and the proposed residential subdivision, between the below points;
  - a. Existing overhead power Line in O'Conner Drive;
  - b. Existing overhead power line east of the proposed development;

Refer Appendix C for proposed connection locations.

In order to undertake a detailed assessment of the works required, Essential Energy will require an estimate of the total load of the proposed development. This information would then be provided in an application request to Essential Energy. This shall be confirmed during the DA phase.

### 3.8 Telecommunications

Telstra/NBN are the main telecommunications service providers in the regional. There is an existing copper Telstra/NBN service available within Elouera Terrace that the proposed development can connect into.

Details of the connection location within Elouera Terrace shall be addressed during that DA phase. Refer to Appendix C for schematic.

### 3.9 Gas

There are currently no existing gas mains in the vicinity of the proposed site, nor does there appear to be any plans to provide gas in the near future. Any requirements for gas to be provided will require the proposed dwellings to have a bottled gas supply that will be maintained and serviced by the landowner in accordance with relevant standards and requirements.

---

## 4 Conclusion

---

This engineering assessment has found that the proposed Seniors Housing development:

1. Will comply with Council's flooding requirements, emergency response provisions and stormwater management requirements;
2. Can likely be adequately serviced with water, sewerage, electricity and telecommunications services.

The above findings are subject to final development yields and load demands. It is likely that some minor augmentation works may be required to increase supply capacity or shift loads within the existing servicing infrastructure which have formed current and ongoing investigations to be confirmed through the DA stage(s).

Considering all of the above, based on this desktop assessment and preliminary advice received, there have been no major issues identified that would prevent the proposed development from being adequately serviced.

Yours faithfully  
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## Appendix A. Feature Survey



Table of mm  
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NOTES

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THE SUBJECT PARCEL IS SITUATED ON A RIVER AND AS SUCH SUBJECT TO AN AMBULATORY BOUNDARY. AREA AND DIMENSIONS USED FOR THE BOUNDARY HAVE BEEN DERIVED FROM THE ORIGINAL REGISTERED PLAN AND ANY CALCULATIONS USED FOR DEVELOPMENT PURPOSED COULD SIGNIFICANTLY CHANGE ON FINAL SURVEY. IT IS STRONGLY ADVISED THAT A SURVEY REDEFINING THE BOUNDARIES BE CARRIED OUT PRIOR TO LODGMET OF DEVELOPMENT APPROVALS.

BEARINGS SHOWN ON THIS PLAN ARE ORIENTATED TO NORTH VIDE DP1170438. IF SHADOW DIAGRAMS ARE TO BE CALCULATED THEY MUST BE CALCULATED USING TRUE NORTH.

SERVICES & UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED BY COMBINATION OF FIELD SURVEY AND REFERENCE TO SERVICE PLANS FROM STATUTORY AUTHORITIES. ONLY VISIBLE AND APPARENT SERVICE COVERS AND POLES HAVE BEEN LOCATED BY FIELD SURVEY. SERVICE DETAILS AND LOCATIONS SHOULD BE CONFIRMED WITH THE RELEVANT SERVICE AUTHORITY DURING DESIGN & PRIOR TO ANY CONSTRUCTION. THE LOCATION OF UNDERGROUND SERVICES HAS NOT BEEN INVESTIGATED BY USHER & COMPANY PTY LTD.

WHERE THE EXACT LOCATION OF UNDERGROUND SERVICES IS CRITICAL TO THE DESIGN OR CONSTRUCTION THE RELEVANT PARTY SHOULD ARRANGE TO HAVE AN UNDERGROUND SERVICES TRACE CARRIED OUT TO CONFIRM THE SERVICES EXACT LOCATION. IN THIS REGARD ALL PARTIES SHOULD CONTACT THE 'DIAL BEFORE YOU DIG' SERVICE.

CONTOUR INTERVAL 1.0m MAJOR 0.25m MINOR


MGA CO-ORDINATES WAS ADOPTED FOR HORIZONTAL DATUM  
ORIGIN OF COORDINATES:  
SSM 64713  
EASTING 537024.293  
NORTHING 6864513.878

PLAN COORDINATES HAVE BEEN DETERMINED FROM GROUND (REAL) DISTANCES AND ARE RELATED TO A MGA (GRID) POINT OF ORIGIN. TO CONVERT PLAN COORDINATES TO TRUE MGA GRID COORDINATES A SCALE FACTOR OF 0.999607 ABOUT SSM 64713 MUST BE APPLIED.

AHD WAS ADOPTED FOR VERTICAL DATUM  
ORIGIN OF LEVELS:  
PM 72204  
RL 20.499

MGA (MAP GRID OF AUSTRALIA 1994 - ZONE 56)

LEGEND



TREE NUMBER SEE SHEET 1 FOR INFORMATION  
TREE SIZES ARE ESTIMATES ONLY

POWER

CUG

S

SWD

FLOOD LEVEL (PLOTTED FROM TWEED LEP)

TOP OF BANK

BOTTOM OF BANK

FENCE

TWEED LEP ZONE BOUNDARY

STORMWATER GRATE

TELSTRA PIT

SEWER MANHOLE

WATER METER

LIGHT POLE

FIRE HYDRANT

POWER POLE

STOP VALVE


GATE

ELECTRICITY PIT

PHOTO LOCATION & DIRECTION

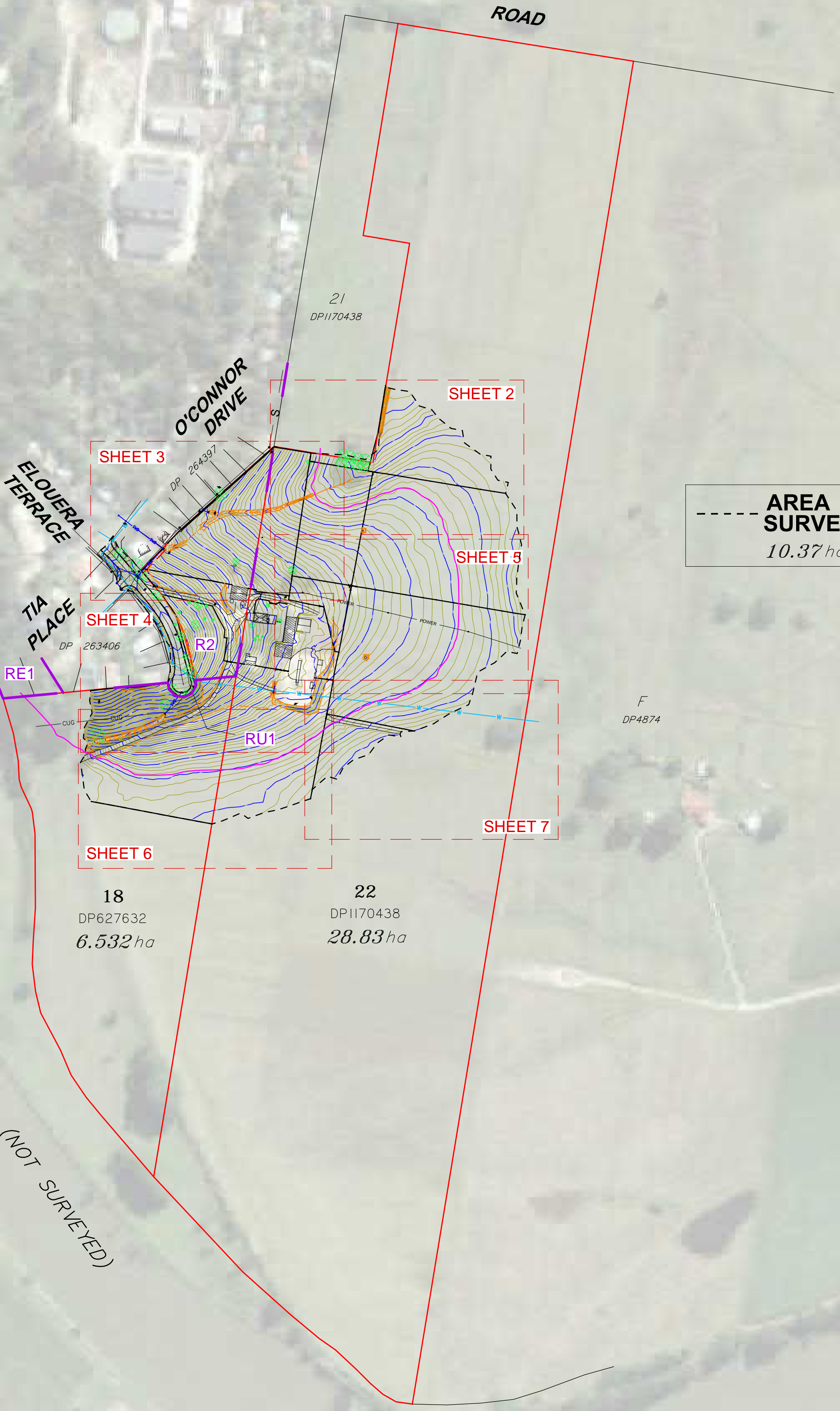
BENCHMARK

SPOT HEIGHTS

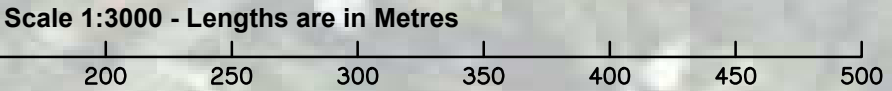


**DIAL BEFORE YOU DIG**  
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TWEED RIVER (NOT SURVEYED)



TREE LIST - 10446							
TREE #	DIAMETER	SPAN	HEIGHT	TREE #	DIAMETER	SPAN	HEIGHT
1077	0.2	3	5	4010	0.5	4	4
1078	0.6	8	10	4076	0.3	1	2
1102	0.6	8	10	4077	0.6	3	6
1103	0.4	3	7	4078	0.3	2	6
1117	0.6	12	10	4079	0.3	2	6
1128	0.6	12	10	4080	0.6	5	6
1147	0.6	12	10	4096	1.5	15	20
1256	0.2	3	5	4308	0.8	7	20
1257	0.6	8	10	4310	0.4	6	8
1258	0.2	3	5	4311	0.3	4	7
1274	0.2	3	5	4320	0.6	10	10
1275	0.2	3	5	4321	0.6	10	10
1276	0.6	8	10	4322	0.6	10	10
1280	0.2	3	5	4325	0.6	10	10
3063	0.5	5	10	4334	0.6	4	10
3065	0.8	10	15	4335	0.6	10	10
3066	0.8	10	15	4336	0.6	10	10
3067	0.5	5	10	4337	0.6	10	10
3068	0.5	5	10	4338	0.6	10	10
3069	0.8	10	15	9013	0.6	12	10
3070	0.8	10	15				



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Amendments

ISSUE	DATE	DETAILS
A	21-11-2018	Original Issue
B	23-11-2018	Add flood level and additional services information
C	14-02-2019	Tweed LEP Zone Boundary added
D	19-02-2019	Background Images Updated
E	08-03-2019	Extra Survey Added

PLAN:

SITE PLAN  
SHOWING DETAIL AND LEVELS  
AT 49 ELOUERA TERRACE, BRAY PARK  
BEING LOT 18 IN DP627632 & LOT 22 IN DP1170438  
  
SHEET 1 OF 7

LG:

TWEED

SUBURB:

BRAY PARK

ORIGIN:

PM 72204  
RL 20.499 AHD  
CLASS LB, ORDER L2

REDUCTION RATIO:

1:3000 (A1)

DATUM:

AHD

DATE OF SURVEY:

15-11-2018

SURVEYED BY:

LN & MB

DRAWN BY:

TM

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PTY LTD ATF**

PLAN REFERENCE

10446

ISSUE

E

**A1**







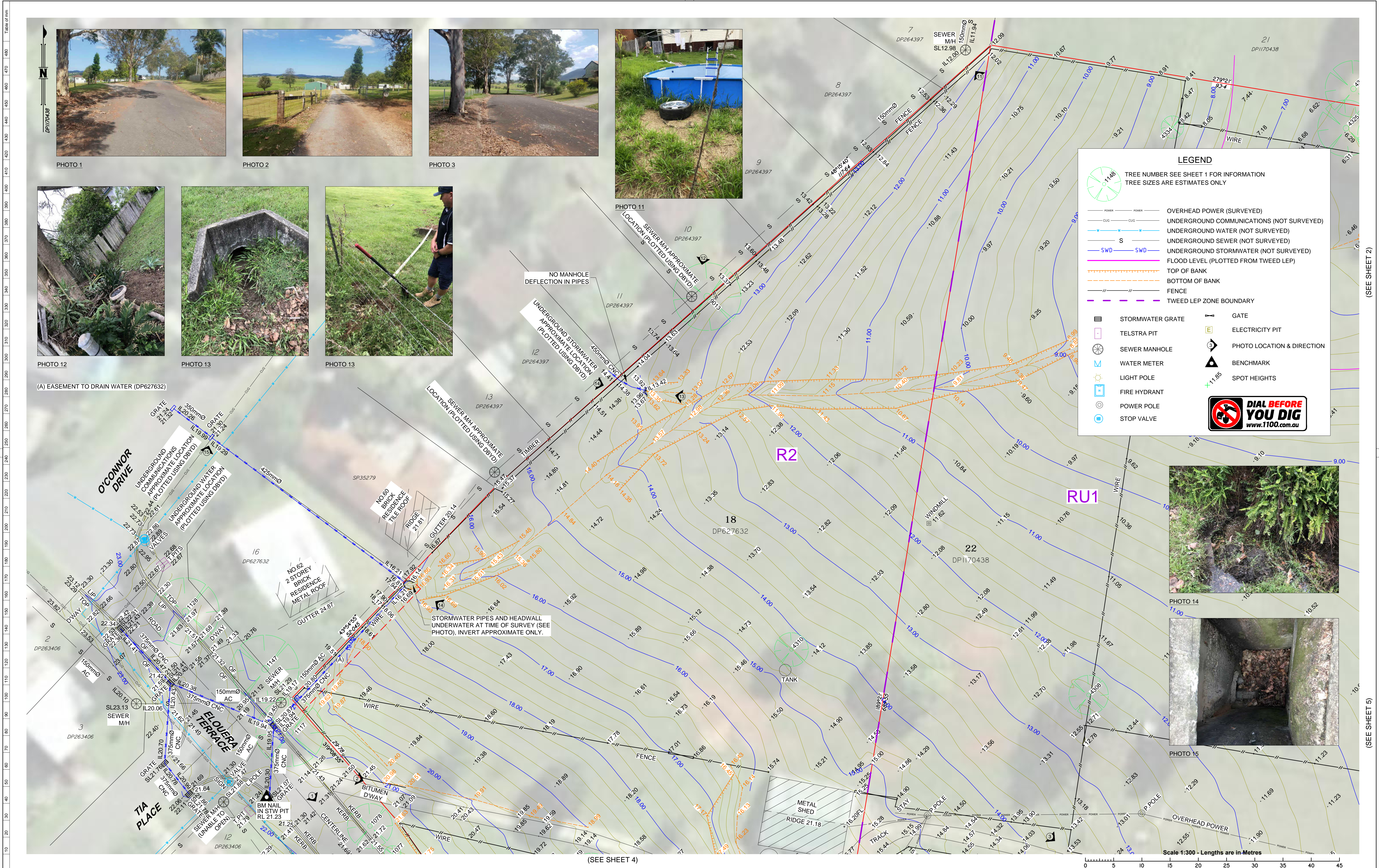


PHOTO 1



PHOTO 2



PHOTO 3



PHOTO 11



PHOTO 12



PHOTO 13



PHOTO 13



PHOTO 14



PHOTO 15

11.85

OVERHEAD POWER (SURVEYED)

UNDERGROUND COMMUNICATIONS (NOT SURVEYED)

UNDERGROUND WATER (NOT SURVEYED)

UNDERGROUND SEWER (NOT SURVEYED)

UNDERGROUND STORMWATER (NOT SURVEYED)

FLOOD LEVEL (PLOTTED FROM TWEED LEP)

TOP OF BANK

BOTTOM OF BANK

FENCE

TWEED LEP ZONE BOUNDARY

STORMWATER GRATE

TELSTRA PIT

SEWER MANHOLE

WATER METER

LIGHT POLE

FIRE HYDRANT

POWER POLE

STOP VALVE

GATE

ELECTRICITY PIT

PHOTO LOCATION & DIRECTION

BENCHMARK

SPOT HEIGHTS

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LEGEND

TREE NUMBER SEE SHEET 1 FOR INFORMATION  
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AT 49 ELOUERA TERRACE, BRAY PARK  
BEING LOT 18 IN DP627632 & LOT 22 IN DP1170438  
SHEET 3 OF 7

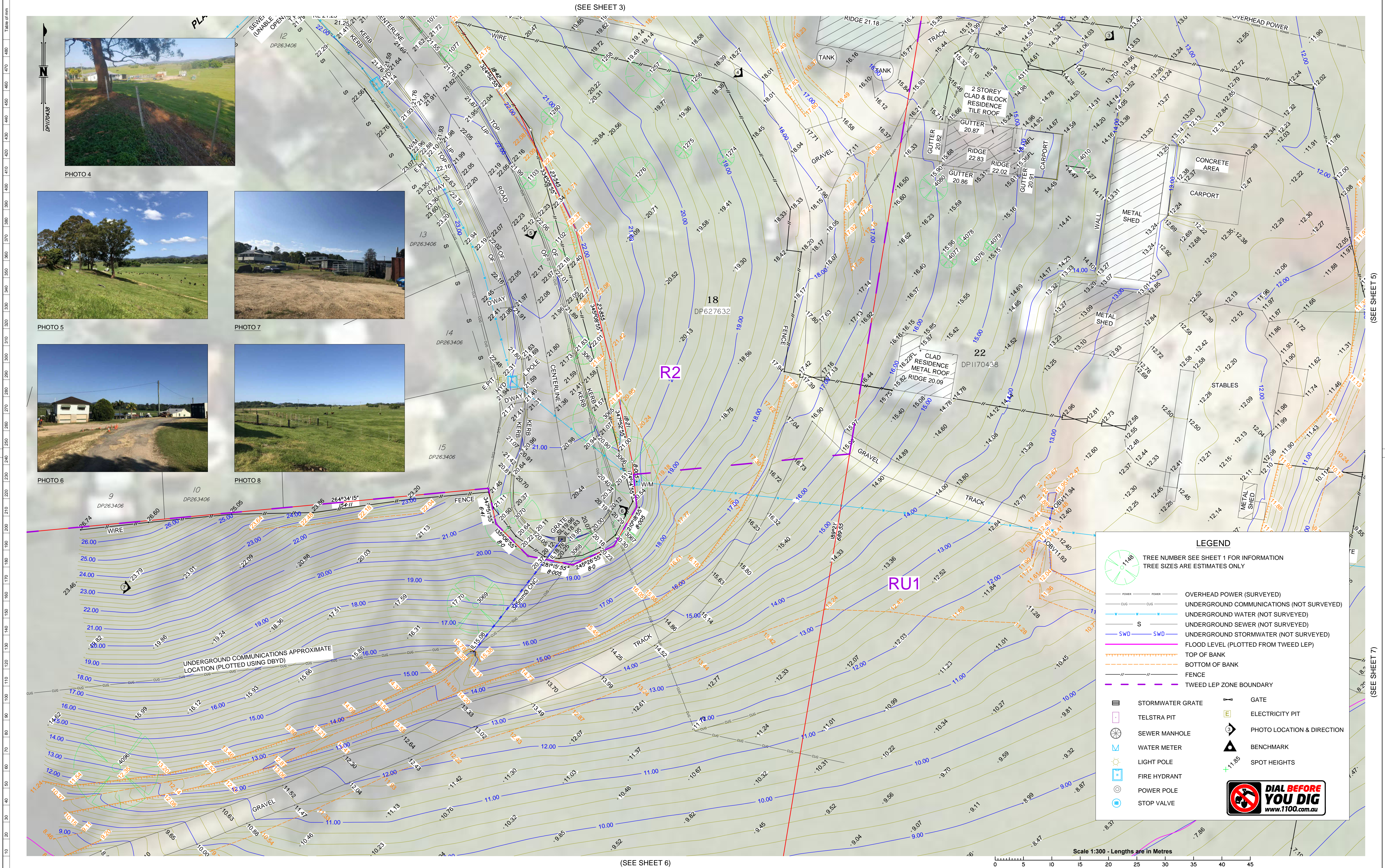
LGA: TWEED  
SUBURB: BRAY PARK  
ORIGIN: PM 72204  
RL 20.499 AHD  
CLASS LB, ORDER L2

REDUCTION RATIO: 1:300 (A1)  
DATUM: AHD  
DATE OF SURVEY: 15-11-2018  
SURVEYED BY: LN & MB  
DRAWN BY: TM

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PTY LTD ATF  
PLAN REFERENCE  
10446

ISSUE  
E





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SHOWING DETAIL AND LEVELS  
AT 49 ELOUERA TERRACE, BRAY PARK  
BEING LOT 18 IN DP627632 & LOT 22 IN DP1170438

SHEET 4 OF 7

LGA:

TWEED

SUBURB:

BRAY PARK

ORIGIN:

PM 72204  
RL 20.499 AHD  
CLASS LB, ORDER L2

REDUCTION RATIO:

1:300 (A1)

DATUM:

AHD

DATE OF SURVEY:

15-11-2018

SURVEYED BY:

LN & MB

DRAWN BY:

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PLAN REFERENCE

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ISSUE

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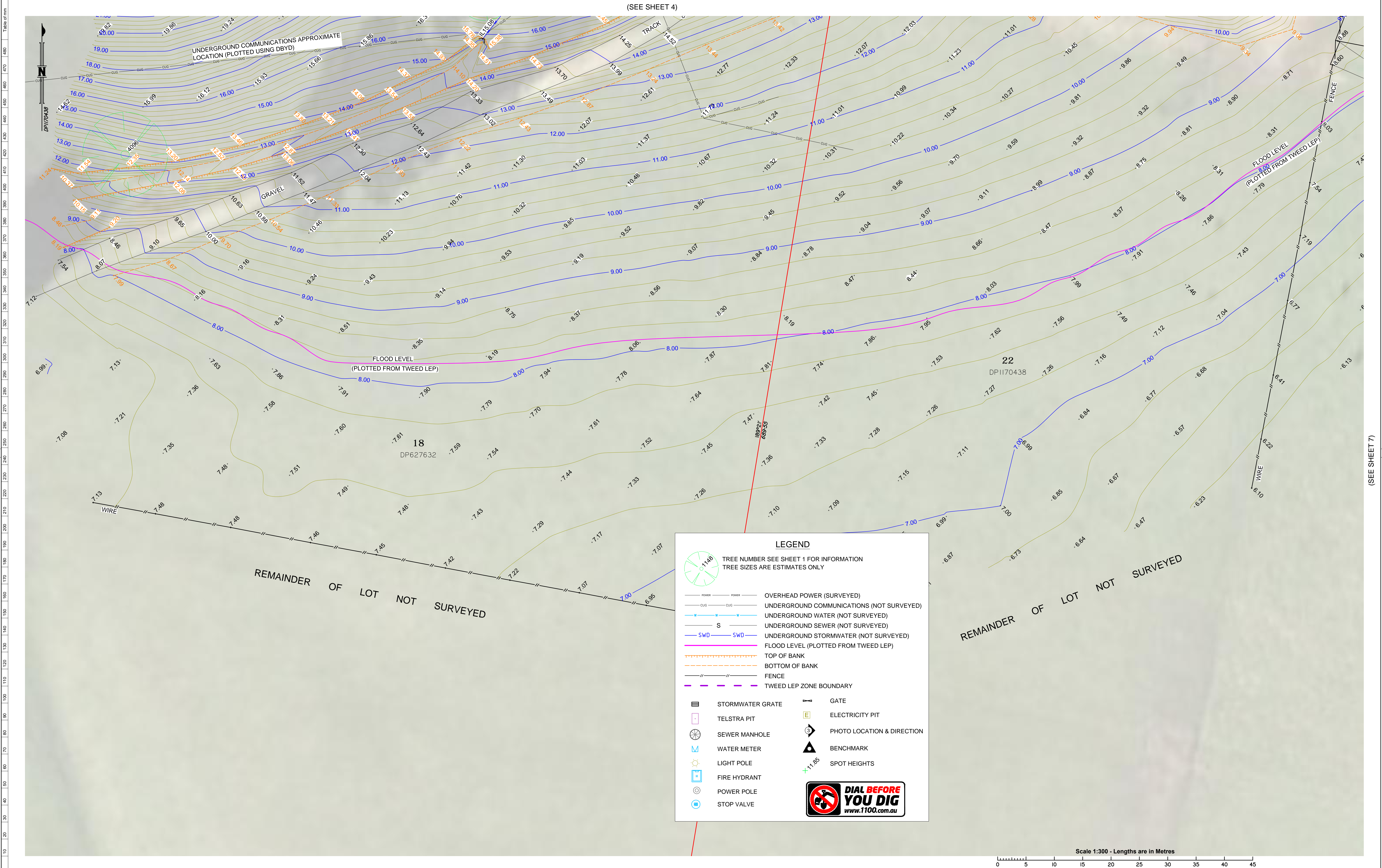
**A1**





(SEE SHEET 7)





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Amendments

ISSUE	DATE	DETAILS
A	21-11-2018	Original Issue
B	23-11-2018	Add flood level and additional services information
C	14-02-2019	Tweed LEP Zone Boundary added
D	19-02-2019	Background Images Updated
E	08-03-2019	Extra Survey Added

PLAN:

SHOWING DETAIL AND LEVELS  
AT 49 ELOUERA TERRACE  
BEING LOT 18 IN DP627632 & LOT 22 IN DP1170438  
SHEET 6 OF 7

LG:

TWEED

SUBURB:

BRAY PARK

ORIGIN:

PM 72204  
RL 20.499 AHD  
CLASS LB, ORDER L2

REDUCTION RATIO:

1:300 (A1)

DATUM:

AHD

DATE OF SURVEY:

15-11-2018

SURVEYED BY:

LN & MB

DRAWN BY:

TM

THIS PLAN IS FOR THE EXCLUSIVE USE OF  
**MARJAN MANAGEMENT  
PTY LTF ATF**

PLAN REFERENCE

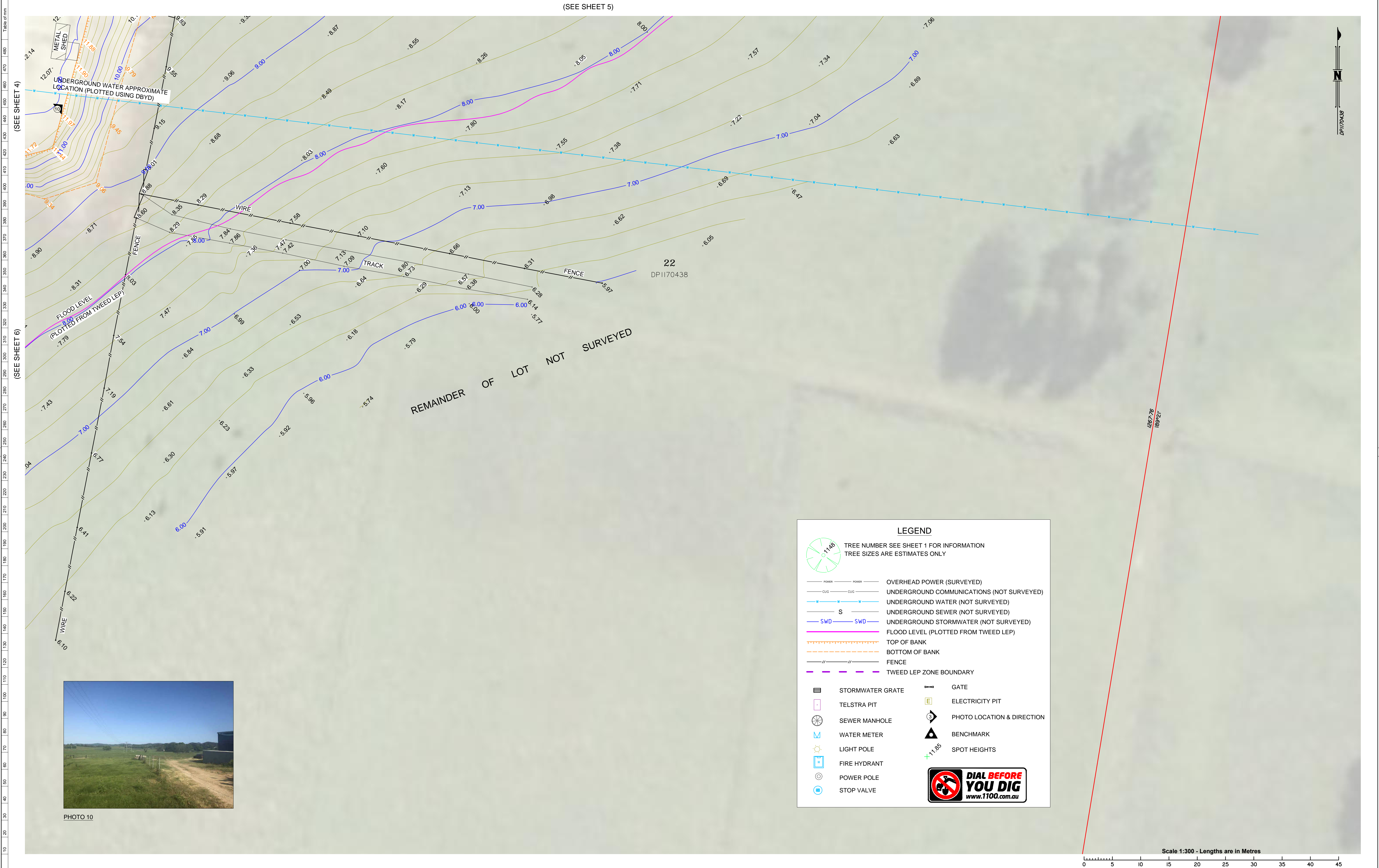
10446

ISSUE

E

**A1**





**USHER & COMPANY**

Surveying & Land Development Consultants

A.B.N. 70 128 414 602

1 West Street, Burleigh Heads QLD 4220  
PO Box 756 Burleigh Heads QLD 4220  
Phone: (07) 5535 8346  
Fax: (07) 5535 8155  
Email: admin@usherandcompany.com.au

APPROVED

Amendments

ISSUE	DATE	DETAILS
A	21-11-2018	Original Issue
B	23-11-2018	Add flood level and additional services information
C	14-02-2019	Tweed LEP Zone Boundary added
D	19-02-2019	Background Images Updated
E	08-03-2019	Extra Survey Added

PLAN:

SHOWING DETAIL AND LEVELS  
AT 49 ELOUERA TERRACE, BRAY PARK  
BEING LOT 18 IN DP627632 & LOT 22 IN DP1170438

SHEET 7 OF 7

LG:

TWEED

SUBURB:

BRAY PARK

ORIGIN:

PM 72204  
RL 20.499 AHD  
CLASS LB, ORDER L2

REDUCTION RATIO:

1:300 (A1)

DATUM:

AHD

DATE OF SURVEY:

15-11-2018

SURVEYED BY:

LN & MB

DRAWN BY:

TM

THIS PLAN IS FOR THE EXCLUSIVE USE OF  
**MARJAN MANAGEMENT  
PTY LTD ATF**

PLAN REFERENCE

10446

ISSUE

E

**A1**



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## Appendix B. Concept Development Plan



# Elouera Terrace, Bray Park

## Concept Layout Plan



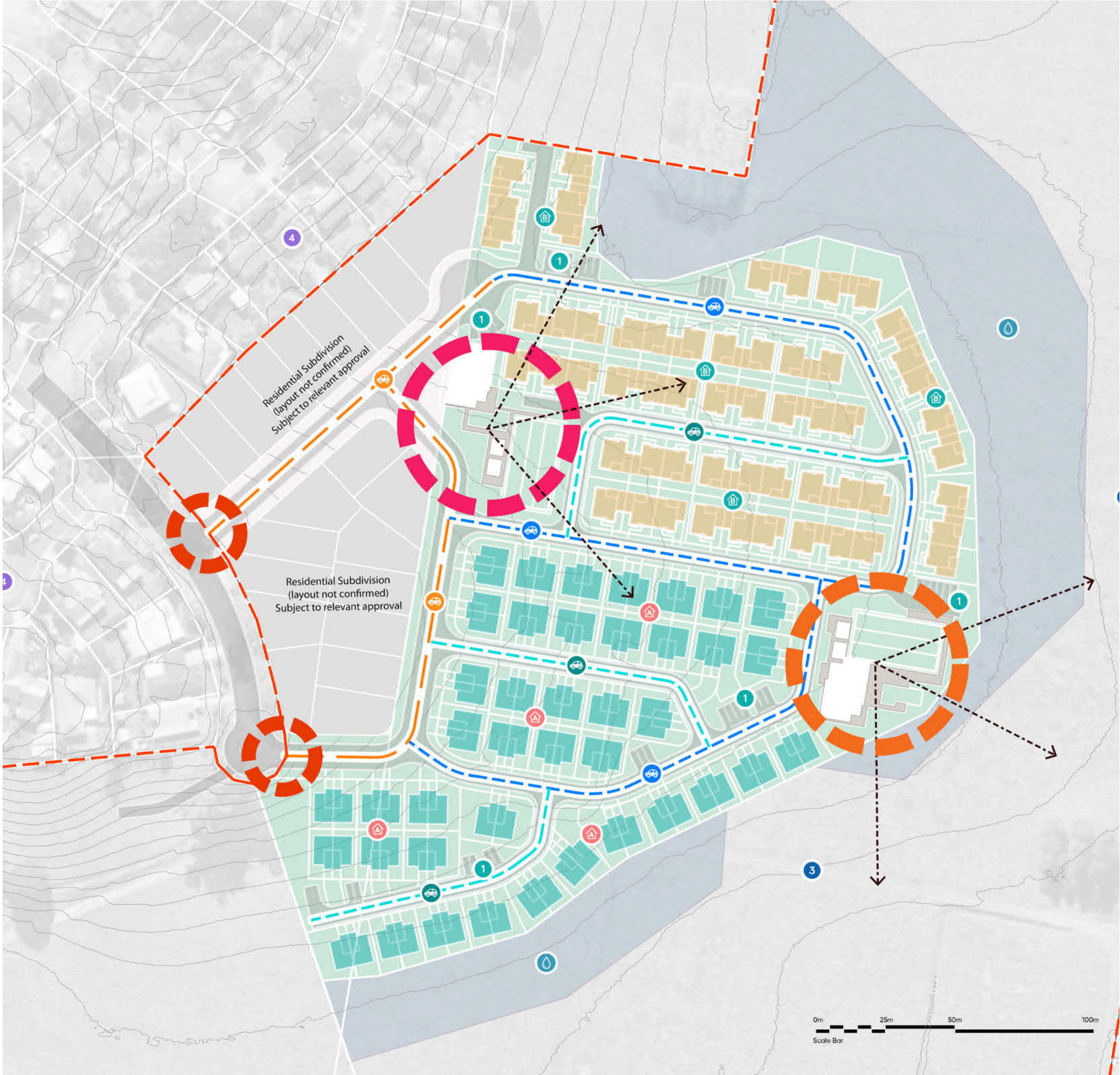
- Seniors Housing Type 1A**  
Seniors Housing Lots 18m depth average.  
Average Lot Size 150m<sup>2</sup>  
Single Storey Attached Dwellings in groups of 2-3  
Typical template used: 2 bedroom, single carpark per dwelling (one covered)  
Yield: 82
  - Seniors Housing Type 1B**  
Seniors Housing Lots 18m depth average.  
Average Lot Size 200m<sup>2</sup> - 250m<sup>2</sup>  
Single Storey Attached Dwellings in groups of 2-3  
Typical template used: 2-3 bedroom, 2 x tandem carparks per dwelling (one covered)  
Yield: 57
  - Primary Access Street (Indicative)**  
16.0m wide road reserve, 9.0m sealed. TSC 'Wider Access Street'. This street provides a loop road through the development, connecting the primary and secondary site entry points to Elouera Terrace.
  - Indicative Internal Street**  
10.0m wide road reserve, 6.0m sealed.
  - Indicative Internal Laneway**  
8.0m wide laneway reserve, 6.0m sealed.
  - Low Flow Flood Area**  
Area identified through topographic analysis as area of low flow flood area. Nil development proposed within this zone. Potential buffer planting located within this zone to transition to surrounding farmland. Development within this area would be subject to relevant flood considerations and design.
  - Indicative Community Facilities 01**  
Community facilities area. Primarily services the northern residential precinct (Residential Type C). Potential to include pool area, lawn bowls, landscaped gardens, areas of open turf. Community use building, footprint illustrated approximately 350-400m<sup>2</sup>. Located to take advantage of views to the east and south across existing farmland. Located at the eastern end of the primary site entry to allow clear line of site through the development of the primary community facilities and to long views to the east.
  - Indicative Community Facilities 02**  
Community facilities area. Primarily services the southern residential precinct (Residential Type B). Potential to include pool area, lawn bowls, landscaped gardens, areas of open turf. Community use building, footprint illustrated approximately 350-400m<sup>2</sup>. Located on an elevated site to take advantage of views to the east and south across the residential precincts and over existing farmland. Located at the primary entry of the estate to serve as the 'entry statement' of the development and create a clear and legible arrival.
  - Indicative Site Entry**  
Site entry off Elouera Terrace To be confirmed through residential subdivision layout. Subject to relevant approval.
  - 1 Visitor Parking**  
Visitor carparking indicative locations illustrated. Requirement based on number of dwelling sites: 20.  
Car parking located primarily in close proximity to community facilities areas (qty: 20) with balance of spaces located throughout the development where layout permits.  
Total visitor carparks illustrated: 40.
  - 3 Existing Agricultural Land**  
Working farm located to balance of lot. Potential to provide informal pedestrian access from the proposed development (from Community Facilities 01) to facilitate potential for community gardens and integration of these landuses.
  - 4 Existing Residential Area**
  - Indicative Bus Pick up point**
- Area 1 Seniors: 45,272 m2  
Area 2 Buffer: 20,039 m2  
Area 3 Residential Subdivision: 12,728 m2





# Elouera Terrace, Bray Park

## Concept Layout Plan



- Seniors Housing Type 1A**  
Seniors Housing Lots 18m depth average.  
Average Lot Size 150m<sup>2</sup>  
Single Storey Attached Dwellings in groups of 2-3  
Typical template used: 2 bedroom, single carpark per dwelling (one covered)  
**Yield: 82**
- Seniors Housing Type 1B**  
Seniors Housing Lots 18m depth average.  
Average Lot Size 200m<sup>2</sup> - 250m<sup>2</sup>  
Single Storey Attached Dwellings in groups of 2-3  
Typical template used: 2-3 bedroom, 2 x tandem carparks per dwelling (one covered)  
**Yield: 57**
- Primary Access Street (Indicative)**  
16.0m wide road reserve, 9.0m sealed. TSC 'Wider Access Street'. This street provides a loop road through the development, connecting the primary and secondary site entry points to Elouera Terrace.
- Indicative Internal Street**  
10.0m wide road reserve, 6.0m sealed.
- Indicative Internal Laneway**  
8.0m wide laneway reserve, 6.0m sealed.
- Low Flow Flood Area**  
Area identified through topographic analysis as area of low flow flood area. Nil development proposed within this zone. Potential buffer planting located within this zone to transition to surrounding farmland. Development within this area would be subject to relevant flood considerations and design.
- Indicative Community Facilities O1**  
Community facilities area. Primarily services the northern residential precinct (Residential Type C). Potential to include pool area, lawn bowls, landscaped gardens, areas of open turf. Community use building, footprint illustrated approximately 350-400m<sup>2</sup>. Located to take advantage of views to the east and south across existing farmland. Located at the eastern end of the primary site entry to allow clear line of site through the development of the primary community facilities and to long views to the east.
- Indicative Community Facilities O2**  
Community facilities area. Primarily services the southern residential precinct (Residential Type B). Potential to include pool area, lawn bowls, landscaped gardens, areas of open turf. Community use building, footprint illustrated approximately 350-400m<sup>2</sup>. Located on an elevated site to take advantage of views to the east and south across the residential precincts and over existing farmland. Located at the primary entry of the estate to serve as the 'entry statement' of the development and create a clear and legible arrival.
- Indicative Site Entry**  
Site entry off Elouera Terrace To be confirmed through residential subdivision layout. Subject to relevant approval.
- 1 Visitor Parking**  
Visitor carparking indicative locations illustrated. Requirement based on number of dwelling sites: 20.  
Car parking located primarily in close proximity to community facilities areas (qty: 20) with balance of spaces located throughout the development where layout permits.  
Total visitor carparks illustrated: 40.
- 3 Existing Agricultural Land**  
Working farm located to balance of lot. Potential to provide informal pedestrian access from the proposed development (from Community Facilities O1) to facilitate potential for community gardens and integration of these landuses.
- 4 Existing Residential Area**
- Indicative Bus Pick up point**
- Area 1 Seniors: 45,272 m<sup>2</sup>**
- Area 2 Buffer: 20,039 m<sup>2</sup>**
- Area 3 Residential Subdivision: 12,728 m<sup>2</sup>**



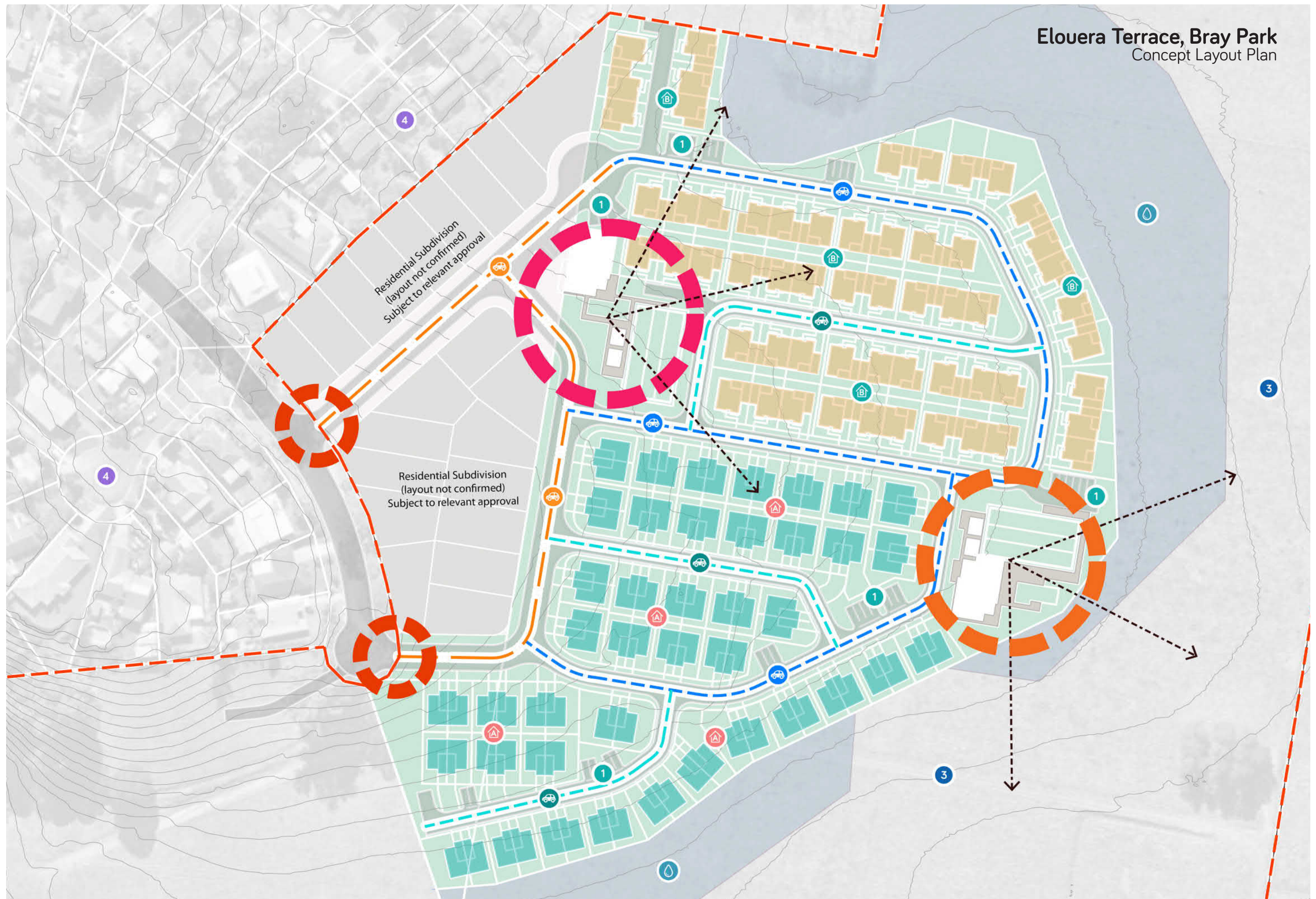
# Elouera Terrace, Bray Park Concept Layout Plan





# Elouera Terrace, Bray Park

Concept Layout Plan







**Seniors Housing Type 1A**  
Seniors Housing Lots 18m depth average.  
Average Lot Size 150m<sup>2</sup>  
Single Storey Attached Dwellings in groups of 2-3  
Typical template used: 2 bedroom, single carpark per dwelling (one covered)  
**Yield: 82**



**Seniors Housing Type 1B**  
Seniors Housing Lots 18m depth average.  
Average Lot Size 200m<sup>2</sup> - 250m<sup>2</sup>  
Single Storey Attached Dwellings in groups of 2-3  
Typical template used: 2-3 bedroom, 2 x tandem carparks per dwelling (one covered)  
**Yield: 57**



**Primary Access Street (Indicative)**  
16.0m wide road reserve, 9.0m sealed, TSC 'Wider Access Street'. This street provides a loop road through the development, connecting the primary and secondary site entry points to Elouera Terrace.



**Indicative Internal Street**  
10.0m wide road reserve, 6.0m sealed.



**Indicative Internal Laneway**  
8.0m wide laneway reserve, 6.0m sealed.



**Low Flow Flood Area**  
Area identified through topographic analysis as area of low flow flood area. Nil development proposed within this zone. Potential buffer planting located within this zone to transition to surrounding farmland. Development within this area would be subject to relevant flood considerations and design.



**Indicative Community Facilities 01**  
Community facilities area. Primarily services the northern residential precinct (Residential Type C). Potential to include pool area, lawn bowls, landscaped gardens, areas of open turf. Community use building, footprint illustrated approximately 350-400m<sup>2</sup>. Located to take advantage of views to the east and south across existing farmland. Located at the eastern end of the primary site entry to allow clear line of site through the development of the primary community facilities and to long views to the east.



**Indicative Community Facilities 02**  
Community facilities area. Primarily services the southern residential precinct (Residential Type B). Potential to include pool area, lawn bowls, landscaped gardens, areas of open turf. Community use building, footprint illustrated approximately 350-400m<sup>2</sup>. Located on an elevated site to take advantage of views to the east and south across the residential precincts and over existing farmland. Located at the primary entry of the estate to serve as the 'entry statement' of the development and create a clear and legible arrival.



**Indicative Site Entry**  
Site entry off Elouera Terrace To be confirmed through residential subdivision layout. Subject to relevant approval.



**Visitor Parking**  
Visitor carparking indicative locations illustrated. Requirement based on number of dwelling sites: 20.  
Car parking located primarily in close proximity to community facilities areas(qty: 20) with balance of spaces located throughout the development where layout permits.  
Total visitor carparks illustrated: 40.



**Existing Agricultural Land**  
Working farm located to balance of lot. Potential to provide informal pedestrian access from the proposed development (from Community Facilities 01) to facilitate potential for community gardens and integration of these landuses.



**Existing Residential Area**



**Indicative Bus Pick up point**

Area 1 Seniors: 45.272 m2

Area 2 Buffer: 20.039 m2

Area 3 Residential Subdivision: 12.728 m2



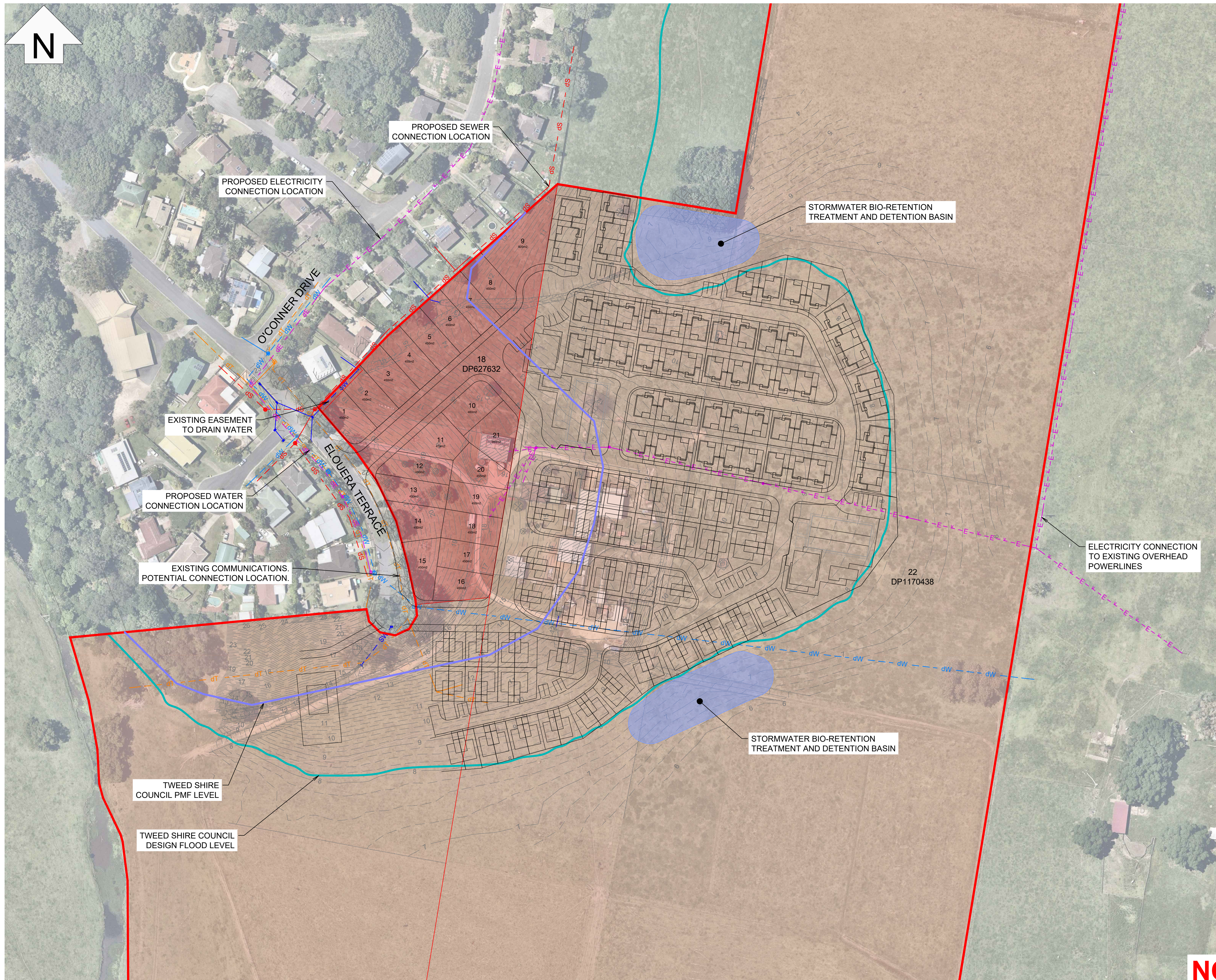


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## Appendix C. Concept Servicing Plan



100mm AT ORIGINAL SIZE



### LEGEND

- SITE BOUNDARY
- LOT BOUNDARY
- EXISTING SURFACE CONTOURS MINOR (0.25m)
- EXISTING SURFACE CONTOURS MAJOR (1.0m)
- EXISTING STORMWATER PIPE
- EXISTING STORMWATER PIPE DBYD
- EXISTING SEWER PIPE DBYD
- EXISTING WATER PIPE DBYD
- EXISTING ELECTRICAL OVERHEAD
- EXISTING ELECTRICAL UNDERGROUND DBYD
- EXISTING TELSTRA DBYD
- ZONE R2
- ZONE RU1
- TWEED SHIRE COUNCIL DESIGN FLOOD LEVEL
- TWEED SHIRE COUNCIL PMF LEVEL
- STORMWATER BIO-RETENTION TREATMENT AND DETENTION STRUCTURE

**NOT FOR CONSTRUCTION**

REV	DESCRIPTION	DATE	DRAWN	DESIGN	CHECK	APPROVED
A	FOR APPROVAL	11/06/19	BT	BT	KB	KB

SCALE: 0 10 20 40 60  
Full Size 1:1000 ; Half Size 1:2000  
Scale (m)  
DO NOT SCALE FROM DRAWING

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DRAWN BY:  
DESIGN BY:  
APPROVED BY:  
DATE:  
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED

PLANIT CONSULTING  
LEVEL 2, 11-13 PEARL STREET  
PO BOX 1623  
KINGSCLIFF NSW 2487  
TELEPHONE: 02 6674 5001  
ABN: 20 099 261 711  
EMAIL: administration@plantitconsulting.com.au



CLIENT:  
MARJAN MANAGEMENT PTY LTD  
LOCAL GOVERNMENT AUTHORITY:  
TWEED SHIRE COUNCIL

PROJECT: 49 ELOUERA TERRACE	ORIGINAL SIZE: A1	PLANIT JOB No.: J5957	DRAWING No.: 0001	REV: A
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## Appendix D. DBYD Information

## Caller Details

**Contact:** Mr Brendan Thomson  
**Company:** Planit Engineering  
**Address:** PO Box 1623  
Kingscliff NSW 2487

**Caller Id:** 1866918  
**Mobile:** Not Supplied  
**Email:** brendant@planitconsulting.com.au  
**Phone:** 02 6670 1301  
**Fax:** Not Supplied

## Dig Site and Enquiry Details

**WARNING:** The map below only displays the location of the proposed dig site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.



**User Reference:** J6135  
**Working on Behalf of:** Tweed Shire Council  
**Enquiry Date:** 01/02/2019  
**Start Date:** 11/02/2019  
**End Date:** 12/02/2019

**Address:**  
Elouera Terrace  
Bray Park NSW 2484

**Job Purpose:**

Excavation

**Location of Workplace:**

Both

**Onsite Activity:**

Vertical Boring

**Location in Road:**

CarriageWay, Footpath, Nature Strip

- Check the location of the dig site is correct. If not submit a new enquiry.
- If the scope of works change, or plan validity dates expire, resubmit your enquiry.
- Do NOT dig without plans. Safe excavation is your responsibility. If you do not understand the plans or how to proceed safely, please contact the relevant asset owners.

**Notes/Description of Works:**

Not Supplied

## Your Responsibilities and Duty of Care

- If plans are not received within 2 working days, contact the asset owners directly & quote their Sequence No.
- ALWAYS perform an onsite inspection for the presence of assets. Should you require an onsite location, contact the asset owners directly. Please remember, plans do not detail the exact location of assets.
- Pothole to establish the exact location of all underground assets using a hand shovel, before using heavy machinery.
- Ensure you adhere to any State legislative requirements regarding Duty of Care and safe digging requirements.
- If you damage an underground asset you MUST advise the asset owner immediately.
- By using this service, you agree to Privacy Policy and the terms and disclaimers set out at **www.1100.com.au**
- For more information on safe excavation practices, visit **www.1100.com.au**

## Asset Owner Details

The assets owners listed below have been requested to contact you with information about their asset locations within 2 working days. Additional time should be allowed for information issued by post. It is **your responsibility** to identify the presence of any underground assets in and around your proposed dig site. Please be aware, that not all asset owners are registered with the Dial Before You Dig service, so it is **your responsibility** to identify and contact any asset owners not listed here directly.

\*\* Asset owners highlighted by asterisks \*\* require that you visit their offices to collect plans.


# Asset owners highlighted with a hash require that you call them to discuss your enquiry or to obtain plans.

Seq. No.	Authority Name	Phone	Status
79760079	Essential Energy	132391	NOTIFIED
79760081	NBN Co, NswAct	1800626762	NOTIFIED
79760080	Telstra NSW, North	1800653935	NOTIFIED
79760078	Tweed Shire Council	0266702626	NOTIFIED





END OF UTILITIES LIST



## Indicative Plans

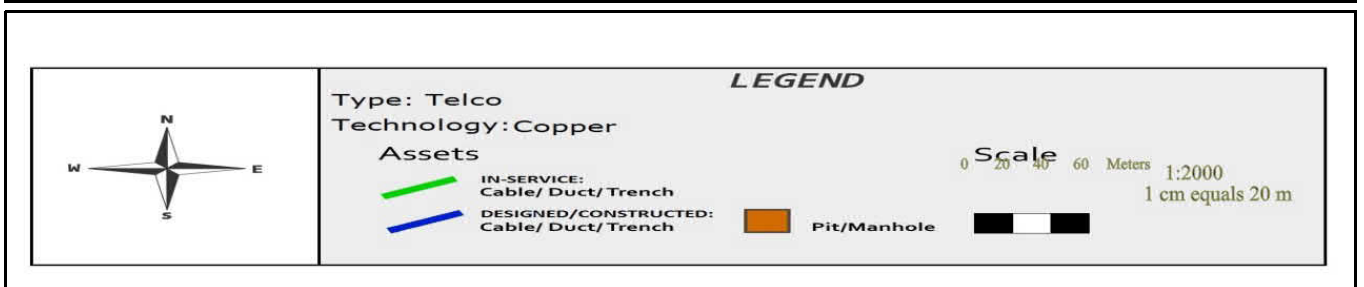
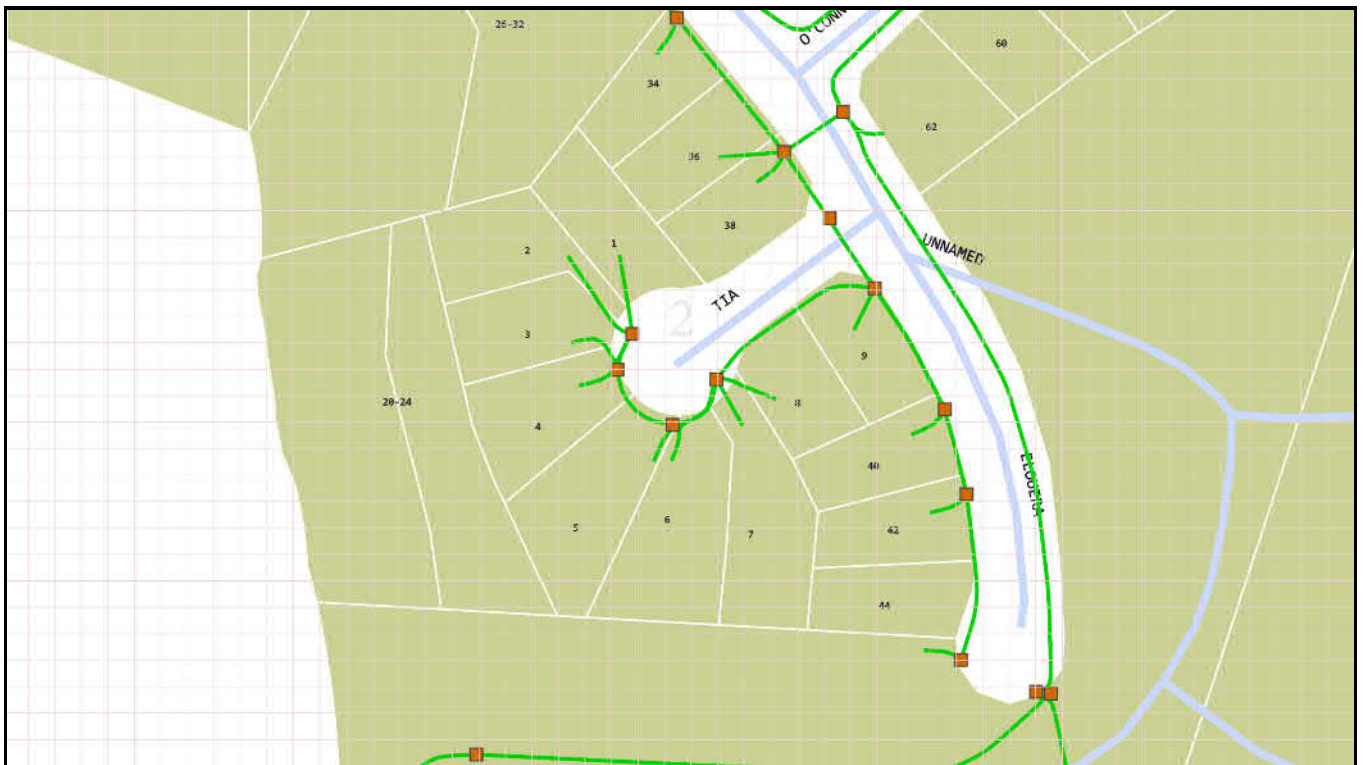
<b>Issue Date:</b>	31/01/2019	
<b>Location:</b>	Elouera Terrace , Bray Park , NSW , 2484	

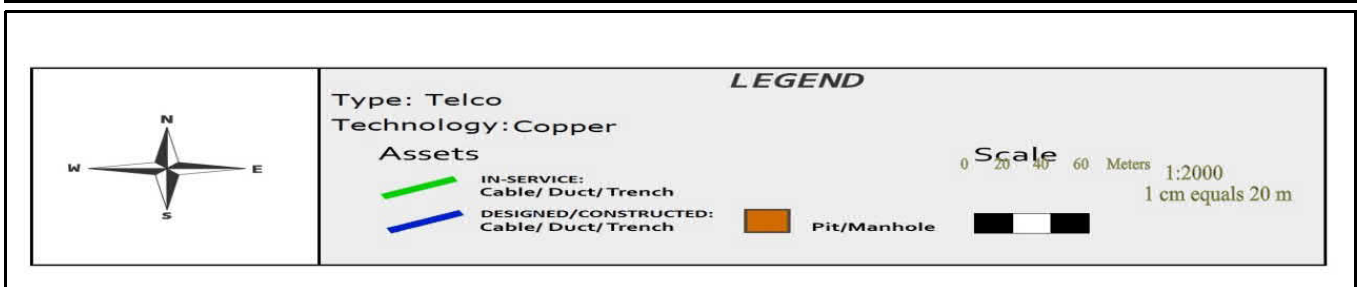
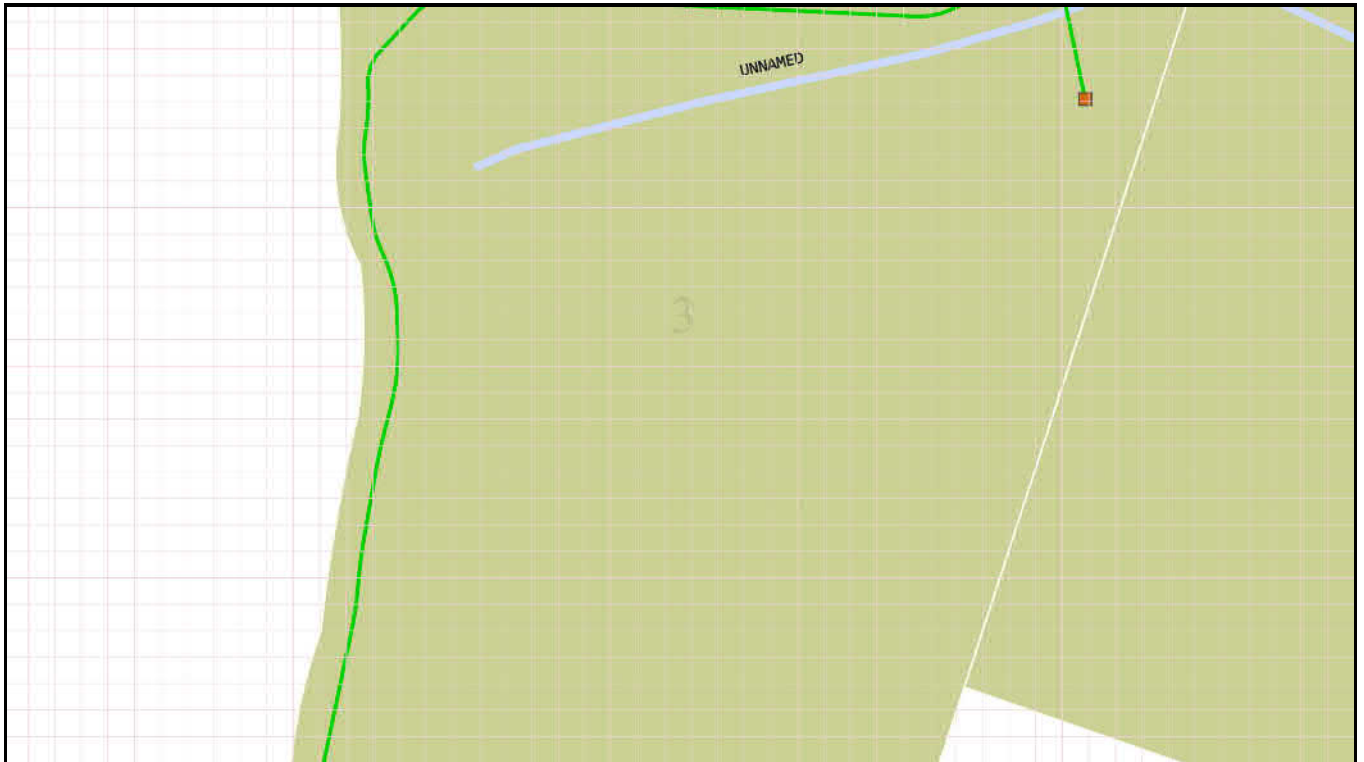
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2	6
3	7
4	8

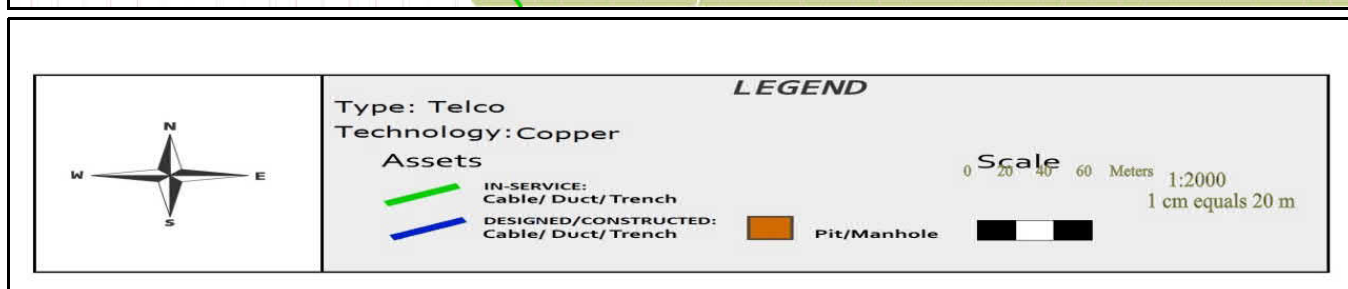
	<b>LEGEND</b>	
	Type: Telco Technology: Copper <b>Assets</b>  IN-SERVICE: Cable/ Duct/ Trench  DESIGNED/CONSTRUCTED: Cable/ Duct/ Trench  Pit/Manhole	<b>Scale</b> 0 20 40 60 Meters 1:2000 1 cm equals 20 m

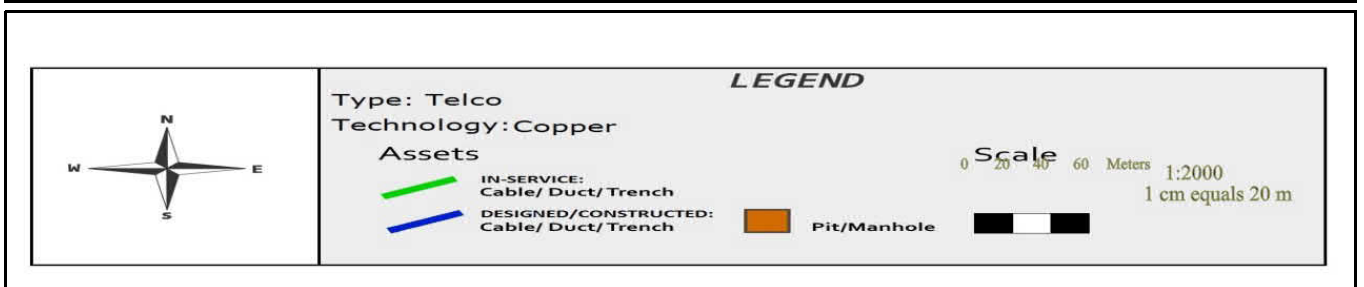
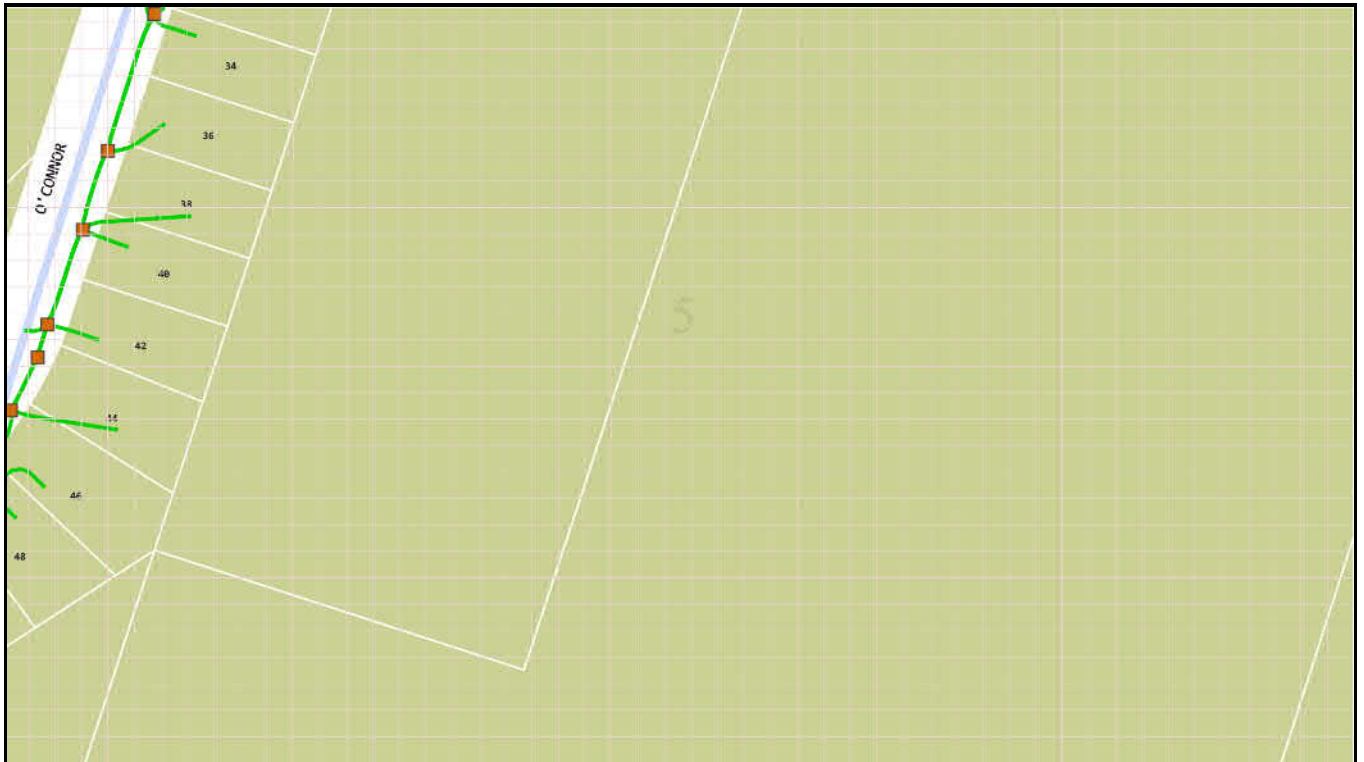


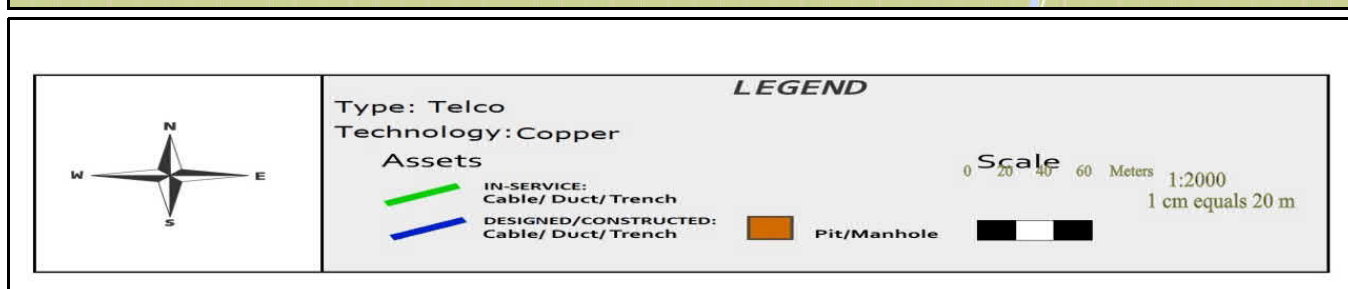
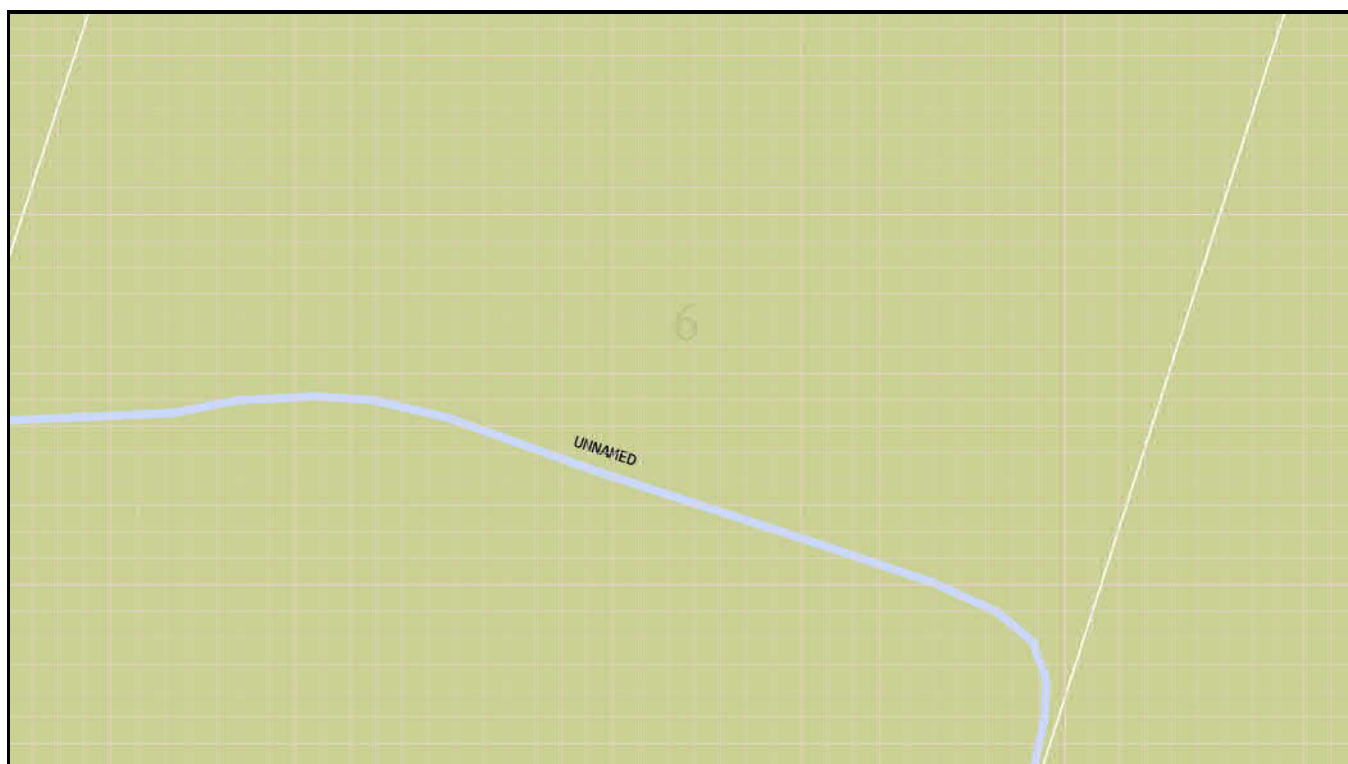




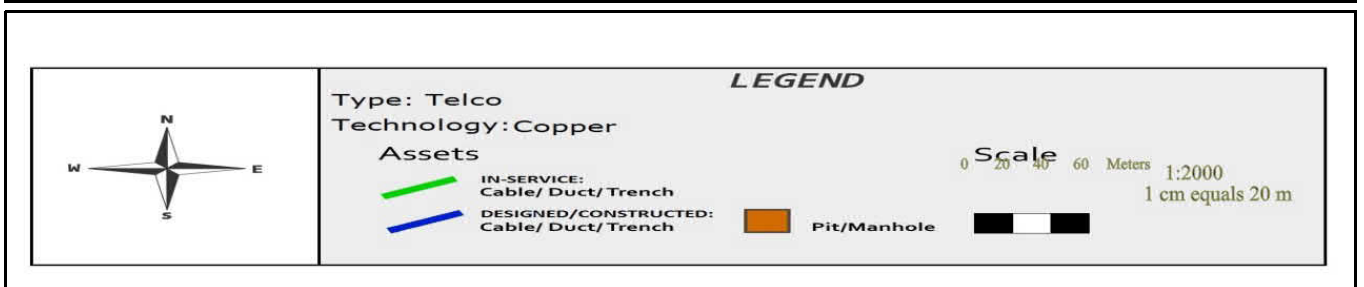
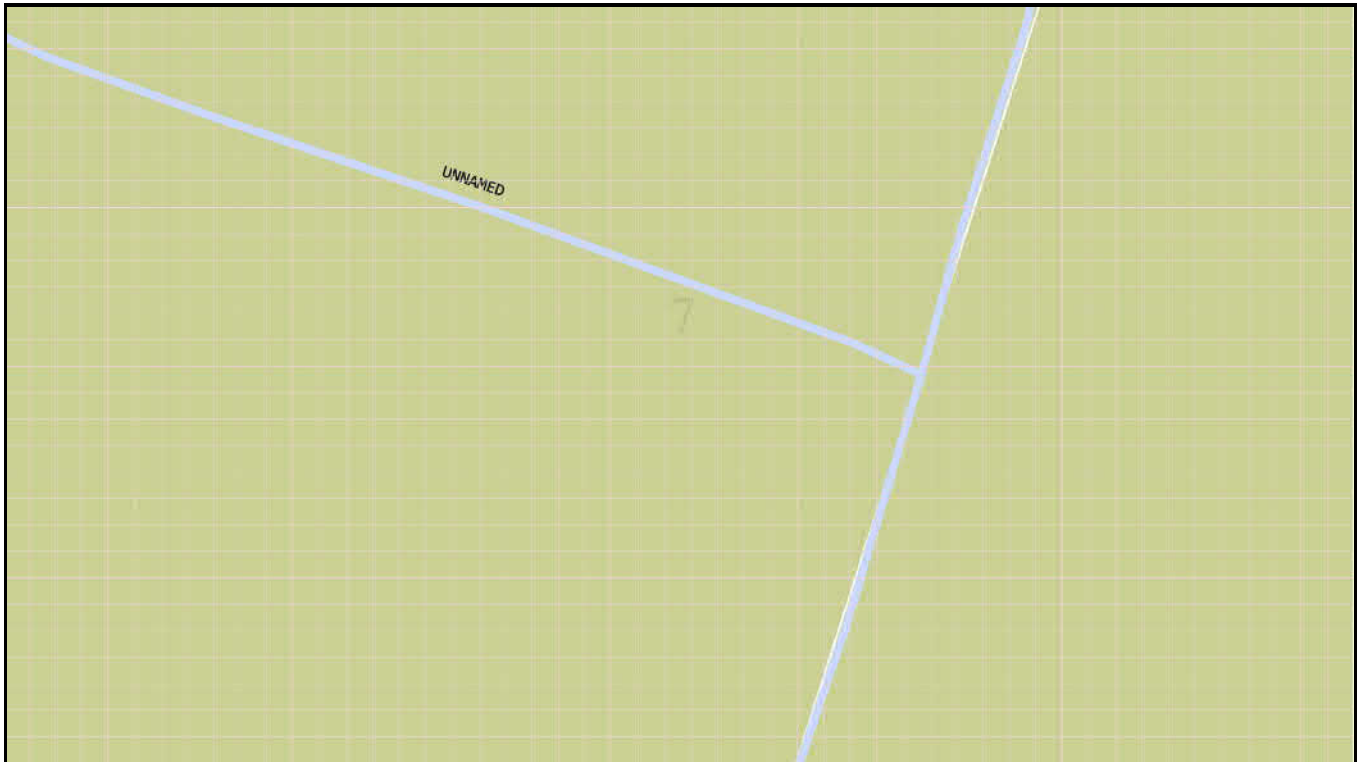


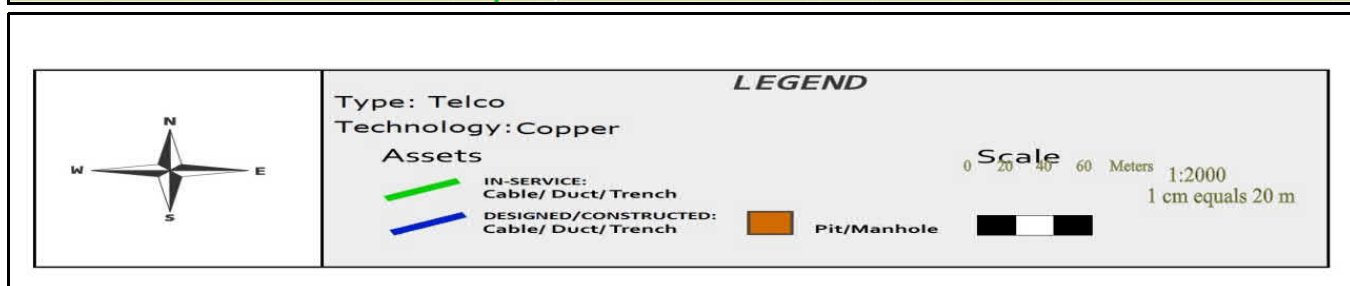
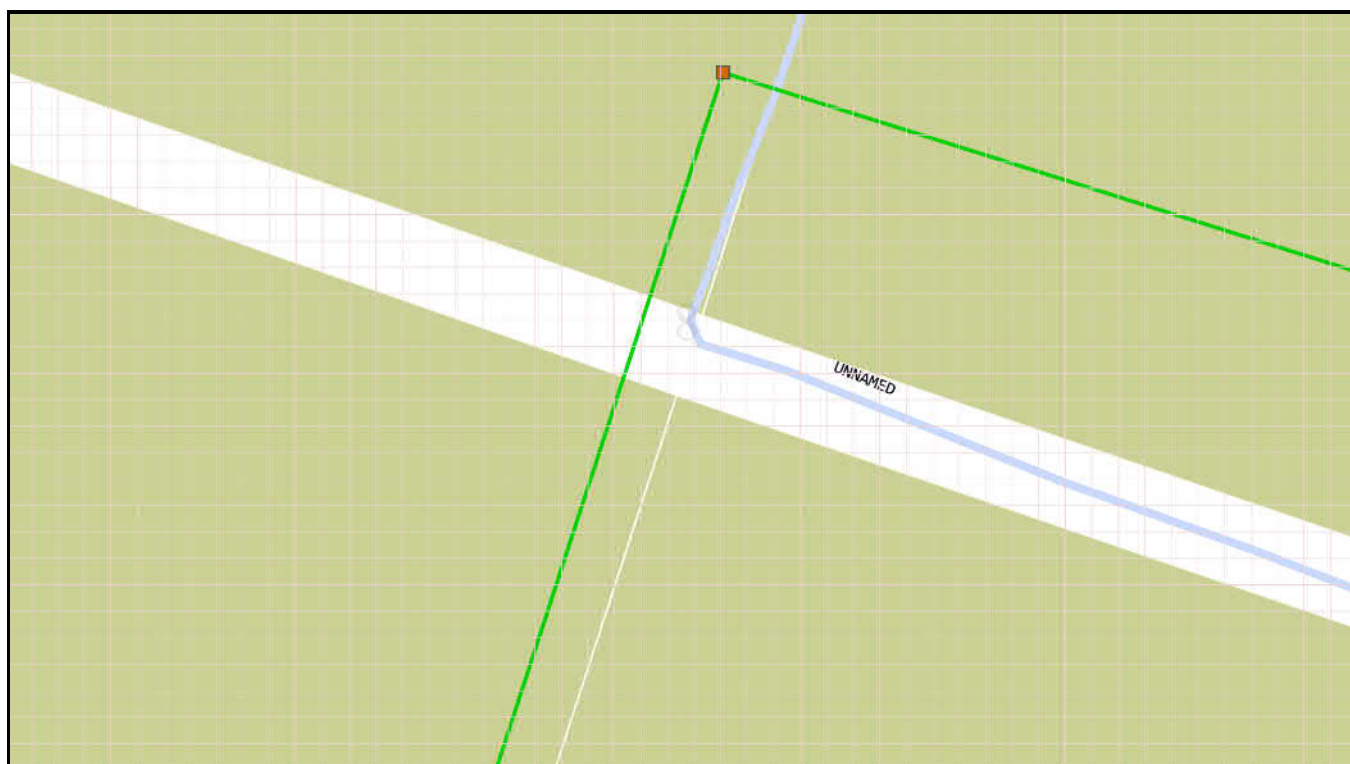












## Emergency Contacts

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



## Dial Before You Dig (DBYD) Pipeline Location Information

**Customer Service** | 1300 292 872 | (02) 6670 2400  
PO Box 816 Murwillumbah NSW 2484  
Fax (02) 6670 2429 | ABN 90 178 732 496  
tsc@tweed.nsw.gov.au | www.tweed.nsw.gov.au

**To:**

Planit Engineering - Mr Brendan Thomson  
PO Box 1623  
Kingscliff NSW 2487

**Email:** brendant@planitconsulting.com.au

**Fax:** Not Supplied

**Phone:** 02 6670 1301

**Mobile:** Not Supplied

### Enquiry Details

Utility ID	17550
Sequence Number	79760078
Enquiry Date	01/02/2019 10:46
Response	<b>AFFECTED</b>
Address	Elouera Terrace Bray Park
Location in Road	CarriageWay, Footpath, Nature Strip
Activity	Vertical Boring

### Enquirer Details

Customer ID	1866918		
Contact	Mr Brendan Thomson		
Company	Planit Engineering		
Email	brendant@planitconsulting.com.au		
Phone	02 6670 1301	Mobile	Not Supplied

### Enquirer Responsibilities

**Asbestos Cement Pipes:** Some of Council's pipe assets are constructed of AC (Asbestos Cement). In most instances our plans will indicate the pipe construction material. For any diggings in the vicinity of these pipes need to be aware of health implications of disruption to AC pipes. Individual risk assessments need to be conducted for working near these pipes to ensure protection of your staff.

**Internal Drainage:** Map does not cover internal drainage to property.

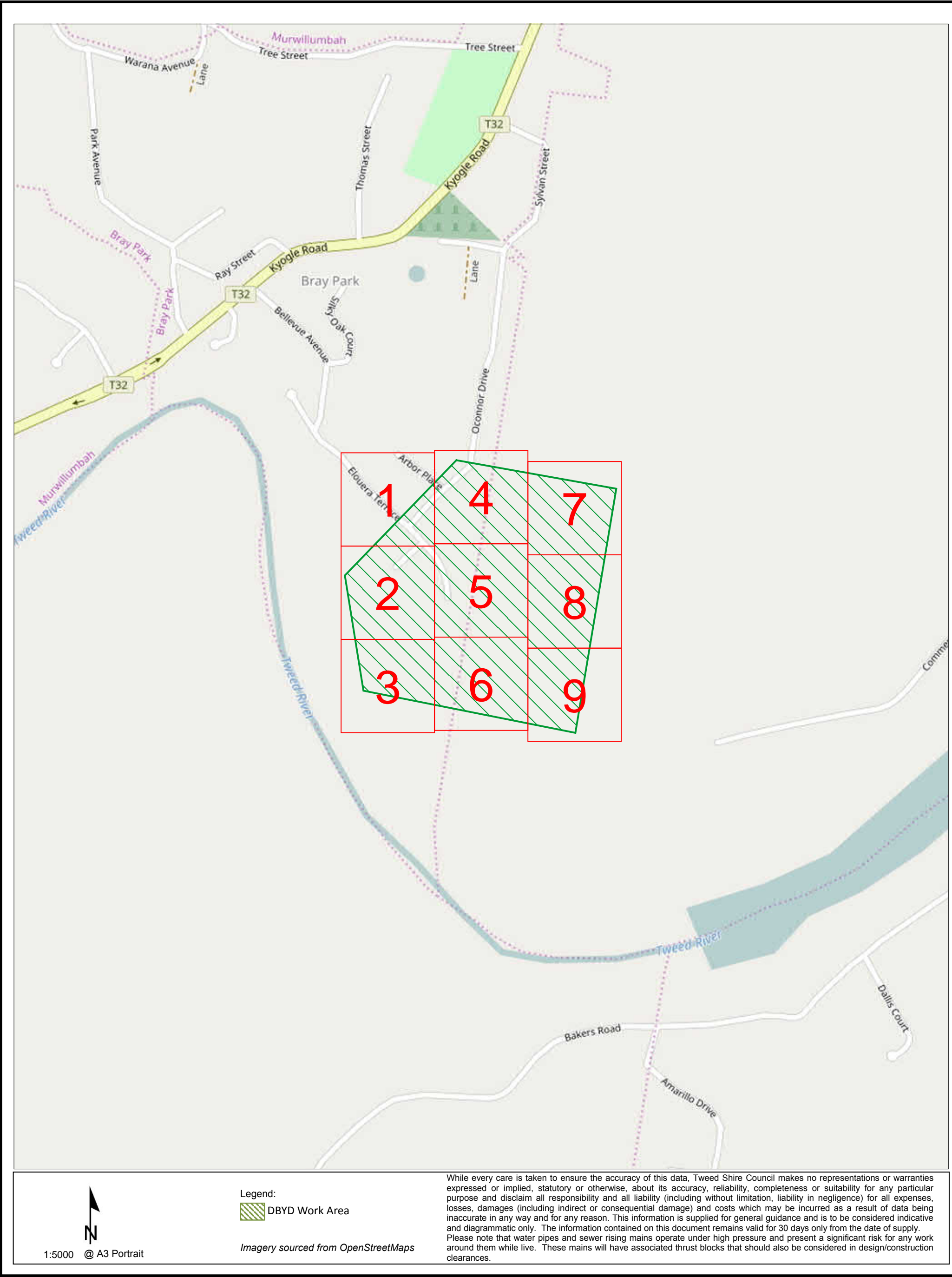
**Damage:** Tweed Shire Council reserves all rights to recover compensation for any damage to Sewer mains, Water mains and Stormwater.

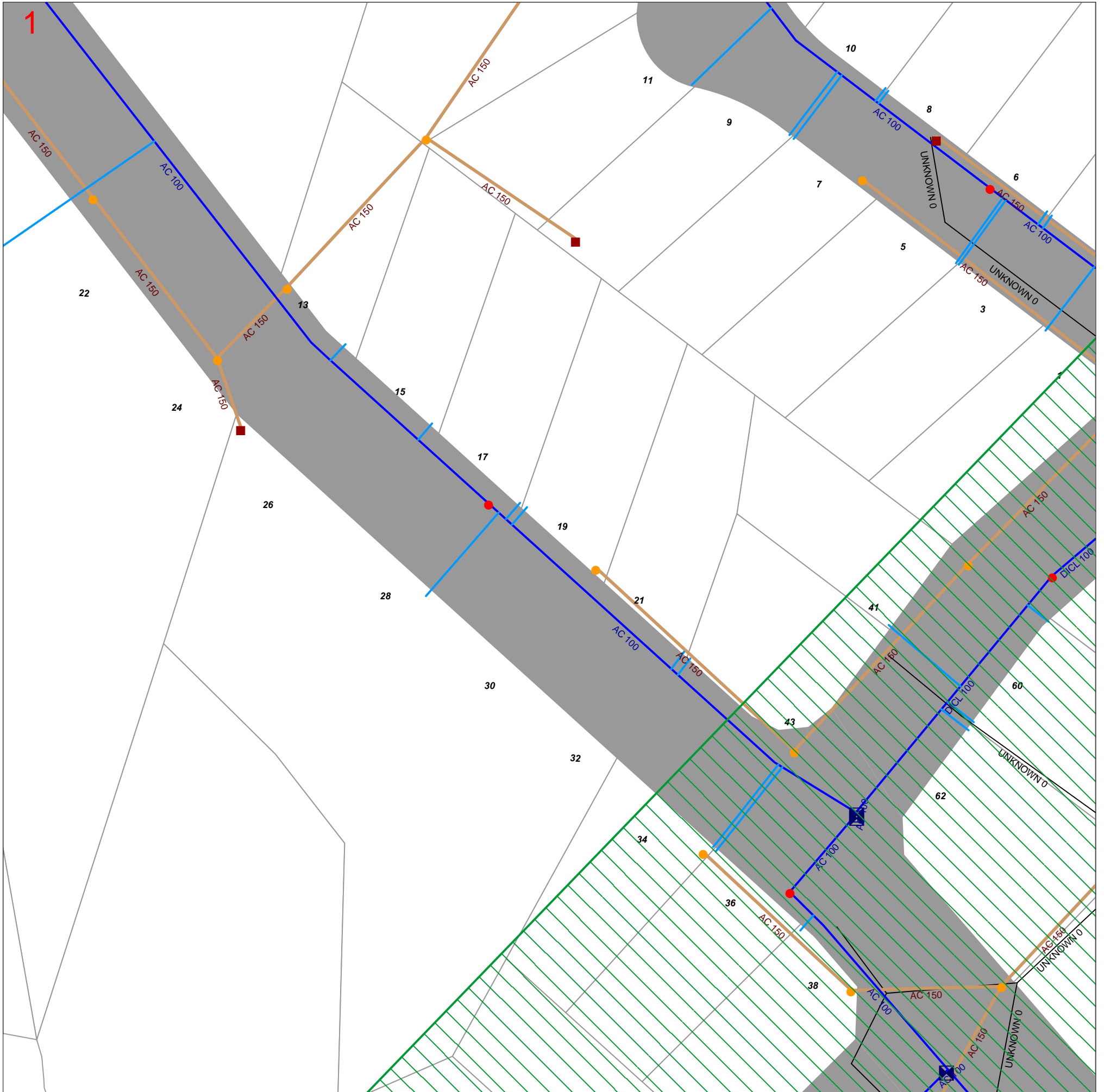
**On Site Locations:** Tweed Shire Council provides on site location for D.B.Y.D. requests only. For onsite sewer mains, water mains and stormwater drain locations please contact Tweed Shire Council on (02) 6670 2600 at least 2 to 3 days prior to commencement.




# Overview Map

Sequence No: 79760078  
Elouera Terrace Bray Park





Sewer Pipeline	Stormwater Pipeline	Communication Cable	Sewer Node	Stormwater Node	Water Node
Sewer Rising Main	Stormwater Culvert	Communications Cable	Vent Stack	Stormwater Manhole	Water Pump Station
Sewer Rising Main (Abandoned)	Stormwater Culvert (Abandoned)	<b>Water Pipeline</b>	Vacuum Chamber	Drop Inlet	Reservoir
Sewer Rising Main (Private)	Stormwater Channel	Water Service	Sewer Pump Station	Kerb Inlet	Water Valve
Sewer Vacuum Main	Stormwater Channel (Abandoned)	Water Main (0-250mm)	Sewer Pump	Wingwall	Water Endcap
Sewer Gravity Overflow	Stormwater Pipe (0-975mm)	Water Main (300-1000mm)	Sewer Valve	Private Stormwater Point	Hydrant
Sewer Gravity Main (0-200mm)	Stormwater Pipe (1000-2100mm)	Water Main (Abandoned)	Sewer Endcap	<b>Communication Node</b>	Private Water Point
Sewer Gravity Main (225-600mm)	Stormwater Pipe (Abandoned)	Water Pipe (Private)	Sewer Manhole	Communications Node	
Sewer Gravity Main (700-900mm)	Stormwater Pipe (Private)		Private Sewer Point		
Sewer Gravity Main (Abandoned)					
Sewer Gravity Main (Private)					

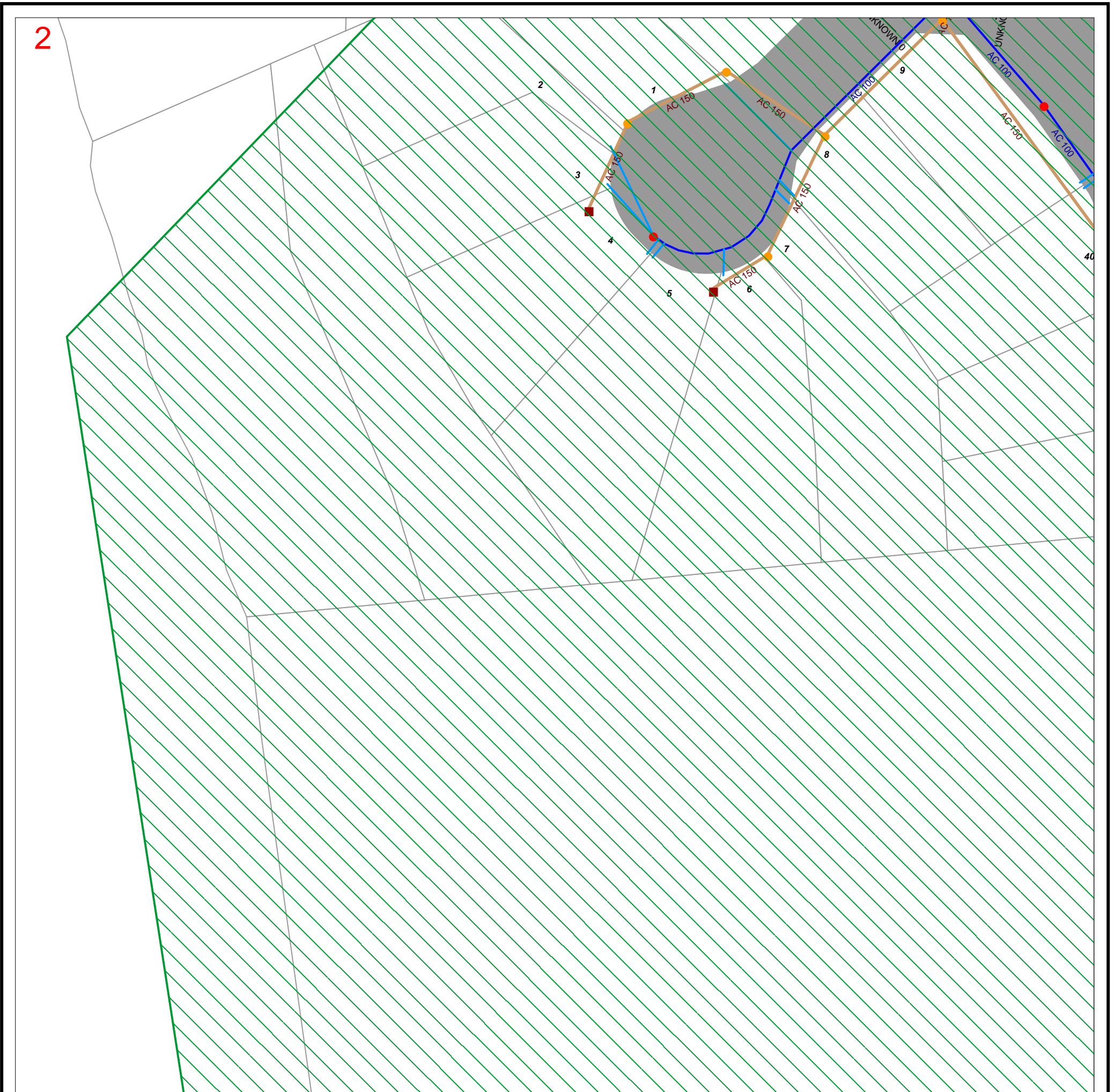
















































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Date printed: 01/02/2019  
 © Land and Property Information (LPI)  
 & Tweed Shire Council.  
 Boundaries shown should be  
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<u>Sewer Pipeline</u>	<u>Stormwater Pipeline</u>	<u>Communication Cable</u>	<u>Sewer Node</u>	<u>Stormwater Node</u>	<u>Water Node</u>
 Sewer Rising Main	 Stormwater Culvert	 Communications Cable	 Vent Stack	 Stormwater Manhole	 Water Pump Station
 Sewer Rising Main (Abandoned)	 Stormwater Culvert (Abandoned)	<u><u>Water Pipeline</u></u>	 Vacuum Chamber	 Drop Inlet	 Reservoir
 Sewer Rising Main (Private)	 Stormwater Channel	 Water Service	 Sewer Pump Station	 Kerb Inlet	 Water Valve
 Sewer Vacuum Main	 Stormwater Channel (Abandoned)	 Water Main (0-250mm)	 Sewer Pump	 Wingwall	 Water Endcap
 Sewer Gravity Overflow	 Stormwater Pipe (0-975mm)	 Water Main (300-1000mm)	 Sewer Valve	 Private Stormwater Point	 Hydrant
 Sewer Gravity Main (0-200mm)	 Stormwater Pipe (1000-2100mm)	 Water Main (Abandoned)	 Sewer Endcap	<u><u>Communication Node</u></u>	 Private Water Point
 Sewer Gravity Main (225-600mm)	 Stormwater Pipe (Abandoned)	 Water Pipe (Private)	 Sewer Manhole	 Communications Node	<u><u>General</u></u>
 Sewer Gravity Main (700-900mm)	 Stormwater Pipe (Private)		 Private Sewer Point		 Property Boundary
 Sewer Gravity Main (Abandoned)					 DBYD Work Area
 Sewer Gravity Main (Private)					



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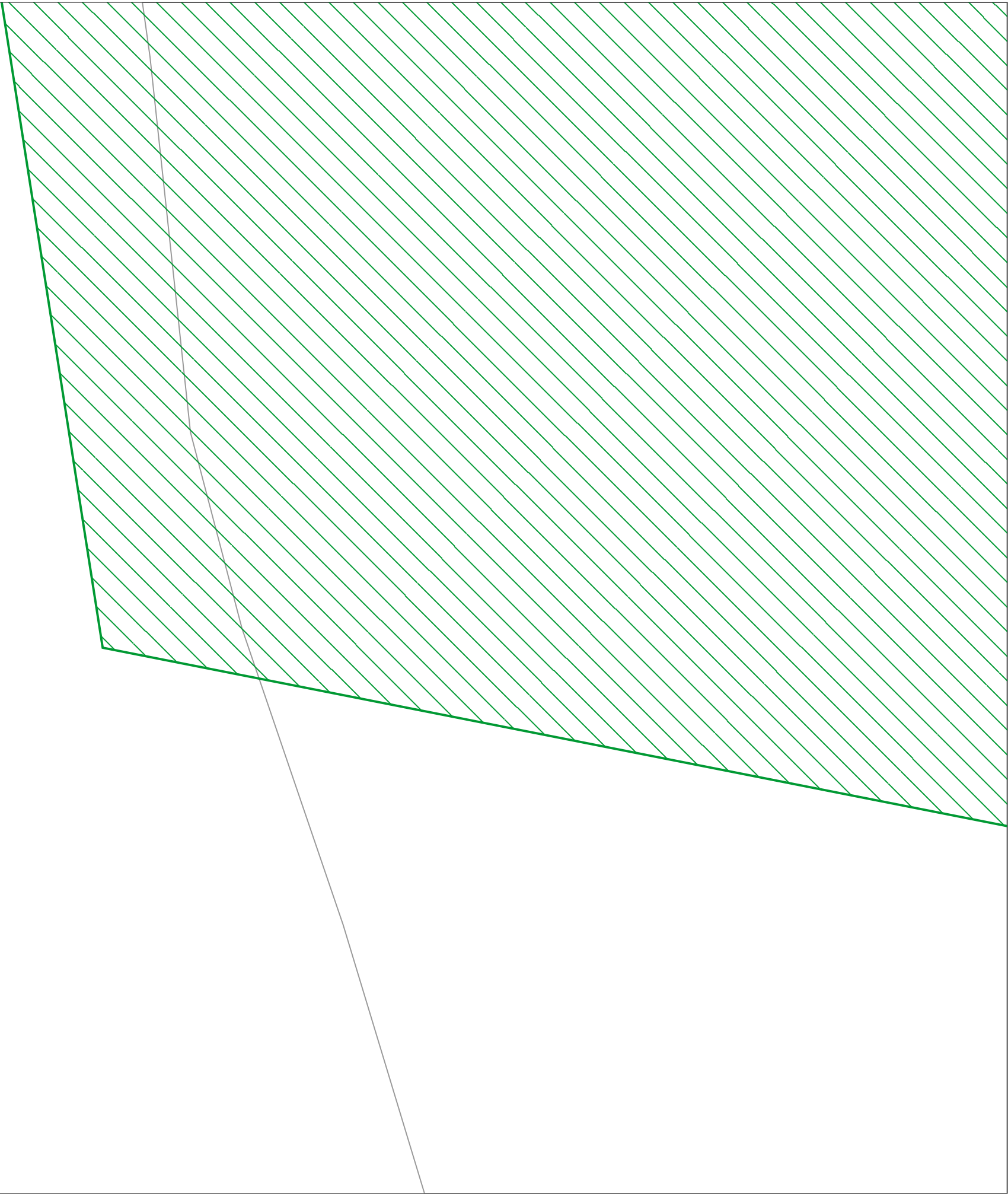


Map 3

Sequence No: 79760078  
Elouera Terrace Bray Park

Date: 01/02/2019

3



**Sewer Pipeline**

- Sewer Rising Main
- Sewer Rising Main (Abandoned)
- Sewer Rising Main (Private)
- Sewer Vacuum Main
- Sewer Gravity Overflow
- Sewer Gravity Main (0-200mm)
- Sewer Gravity Main (225-600mm)
- Sewer Gravity Main (700-900mm)
- Sewer Gravity Main (Abandoned)
- Sewer Gravity Main (Private)

**Stormwater Pipeline**

- Stormwater Culvert
- Stormwater Culvert (Abandoned)
- Stormwater Channel
- Stormwater Channel (Abandoned)
- Stormwater Pipe (0-975mm)
- Stormwater Pipe (1000-2100mm)
- Stormwater Pipe (Abandoned)
- Stormwater Pipe (Private)

**Communication Cable**

- Communications Cable
- Water Pipeline**
- Water Service
- Water Main (0-250mm)
- Water Main (300-1000mm)
- Water Main (Abandoned)
- Water Pipe (Private)

**Sewer Node**

- Vent Stack
- Vacuum Chamber
- Sewer Pump Station
- Sewer Pump
- Sewer Valve
- Sewer Endcap
- Sewer Manhole
- Private Sewer Point

**Stormwater Node**

- Stormwater Manhole
- Drop Inlet
- Kerb Inlet
- Wingwall
- Private Stormwater Point
- Communication Node**
- Communications Node

**Water Node**

- Water Pump Station
- Reservoir
- Water Valve
- Water Endcap
- Hydrant
- Private Water Point

**General**

- Property Boundary
- DBYD Work Area



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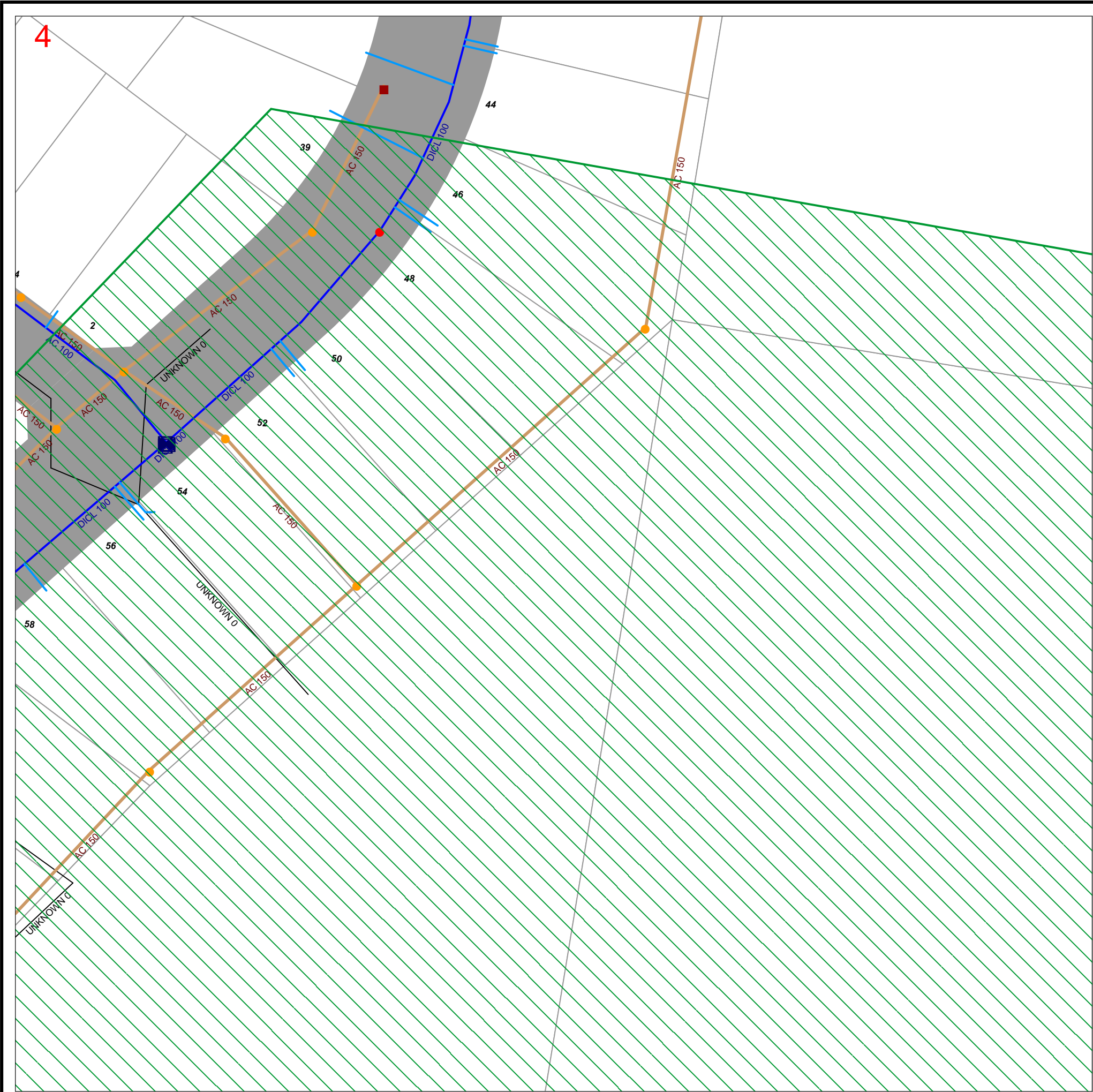
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Map 4

Sequence No: 79760078  
Elouera Terrace Bray Park

Date: 01/02/2019



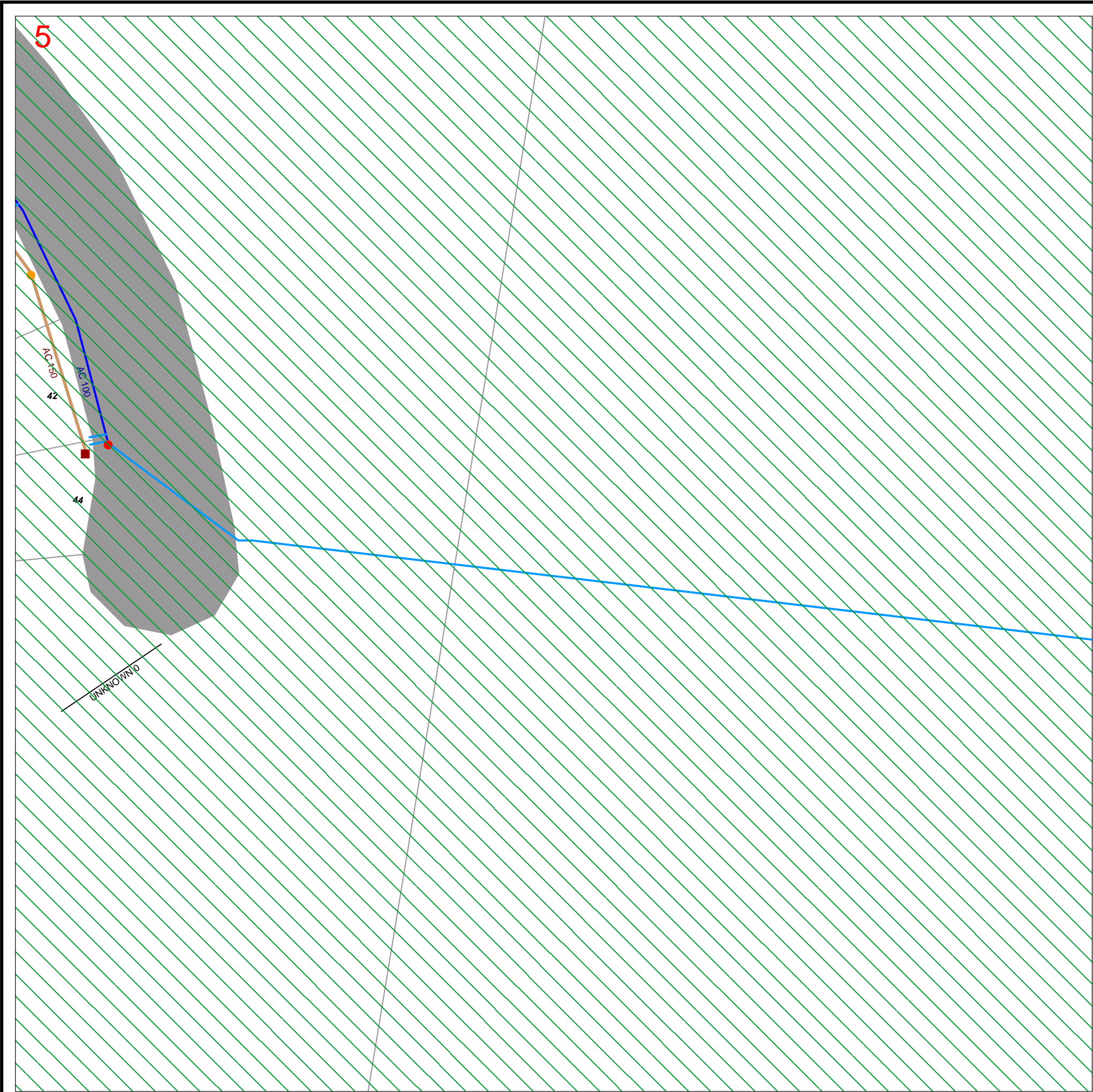
Sewer Pipeline	Stormwater Pipeline	Communication Cable	Sewer Node	Stormwater Node	Water Node
Sewer Rising Main	Stormwater Culvert	Communications Cable	Vent Stack	Stormwater Manhole	Water Pump Station
Sewer Rising Main (Abandoned)	Stormwater Culvert (Abandoned)	<b>Water Pipeline</b>	Vacuum Chamber	Drop Inlet	Reservoir
Sewer Rising Main (Private)	Stormwater Channel	Water Service	Sewer Pump Station	Kerb Inlet	Water Valve
Sewer Vacuum Main	Stormwater Channel (Abandoned)	Water Main (0-250mm)	Sewer Pump	Wingwall	Water Endcap
Sewer Gravity Overflow	Stormwater Pipe (0-975mm)	Water Main (300-1000mm)	Sewer Valve	Private Stormwater Point	Hydrant
Sewer Gravity Main (0-200mm)	Stormwater Pipe (1000-2100mm)	Water Main (Abandoned)	Sewer Endcap	<b>Communication Node</b>	Private Water Point
Sewer Gravity Main (225-600mm)	Stormwater Pipe (Abandoned)	Water Pipe (Private)	Sewer Manhole	Communications Node	
Sewer Gravity Main (700-900mm)	Stormwater Pipe (Private)		Private Sewer Point		
Sewer Gravity Main (Abandoned)					
Sewer Gravity Main (Private)					















































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Sewer Pipeline	Stormwater Pipeline	Communication Cable	Sewer Node	Stormwater Node	Water Node
 Sewer Rising Main	 Stormwater Culvert	 Communications Cable	 Vent Stack	 Stormwater Manhole	 Water Pump Station
 Sewer Rising Main (Abandoned)	 Stormwater Culvert (Abandoned)	<b>Water Pipeline</b>	 Vacuum Chamber	 Drop Inlet	 Reservoir
 Sewer Rising Main (Private)	 Stormwater Channel	 Water Service	 Sewer Pump Station	 Kerb Inlet	 Water Valve
 Sewer Vacuum Main	 Stormwater Channel (Abandoned)	 Water Main (0-250mm)	 Sewer Pump	 Wingwall	 Water Endcap
 Sewer Gravity Overflow	 Stormwater Pipe (0-975mm)	 Water Main (300-1000mm)	 Sewer Valve	 Private Stormwater Point	 Hydrant
 Sewer Gravity Main (0-200mm)	 Stormwater Pipe (1000-2100mm)	 Water Main (Abandoned)	 Sewer Endcap	<b>Communication Node</b>	 Private Water Point
 Sewer Gravity Main (225-600mm)	 Stormwater Pipe (Abandoned)	 Water Pipe (Private)	 Sewer Manhole	 Communications Node	<b>General</b>
 Sewer Gravity Main (700-900mm)	 Stormwater Pipe (Private)		 Private Sewer Point		 Property Boundary
 Sewer Gravity Main (Abandoned)					 DBYD Work Area
 Sewer Gravity Main (Private)					

  
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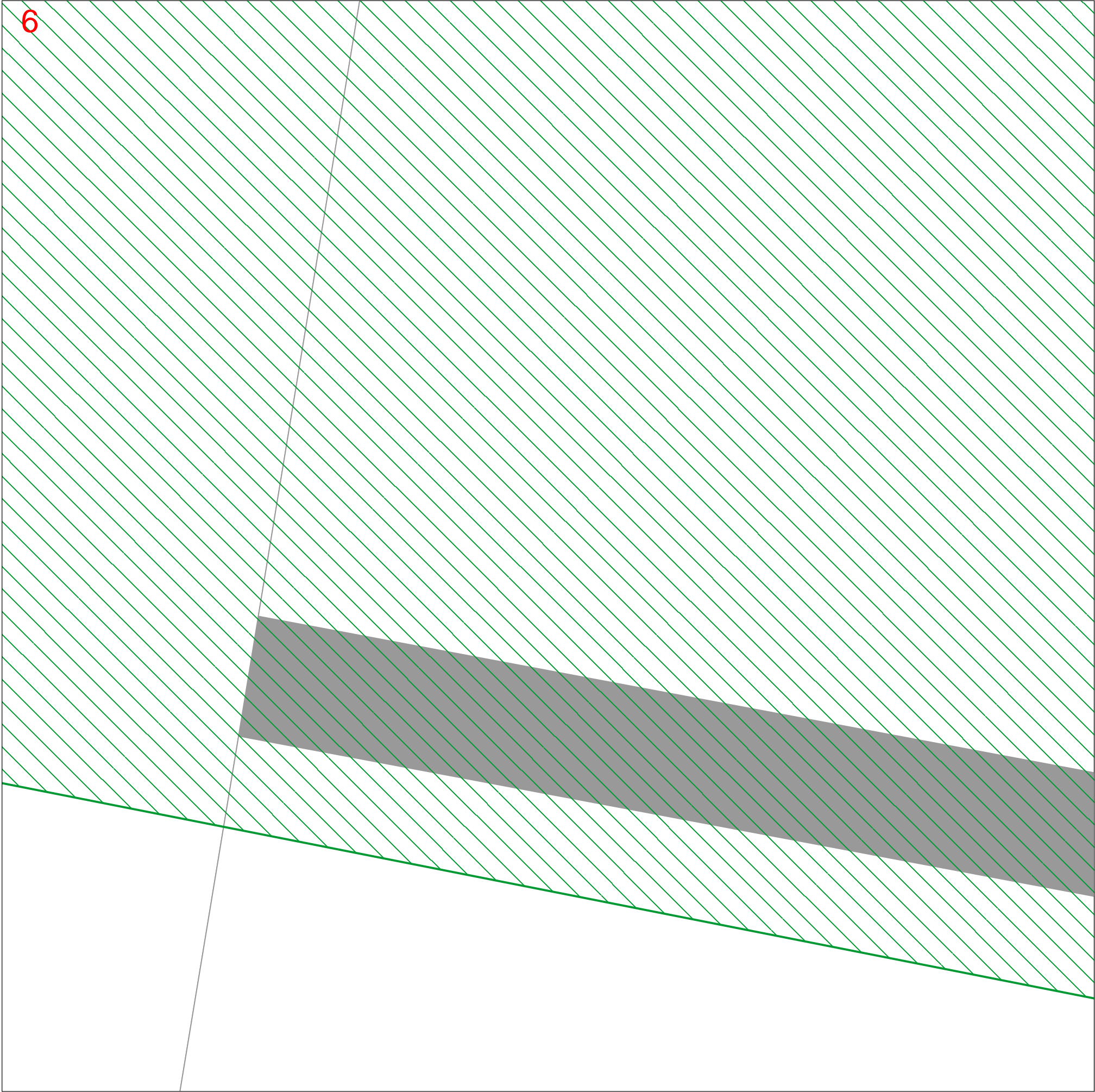




Map 6

Sequence No: 79760078  
Elouera Terrace Bray Park

Date: 01/02/2019



Sewer Pipeline	Stormwater Pipeline	Communication Cable	Sewer Node	Stormwater Node	Water Node
Sewer Rising Main	Stormwater Culvert	Communications Cable	Vent Stack	Stormwater Manhole	Water Pump Station
Sewer Rising Main (Abandoned)	Stormwater Culvert (Abandoned)	<u>Water Pipeline</u>	Vacuum Chamber	Drop Inlet	Reservoir
Sewer Rising Main (Private)	Stormwater Channel	Water Service	Sewer Pump Station	Kerb Inlet	Water Valve
Sewer Vacuum Main	Stormwater Channel (Abandoned)	Water Main (0-250mm)	Sewer Pump	Wingwall	Water Endcap
Sewer Gravity Overflow	Stormwater Pipe (0-975mm)	Water Main (300-1000mm)	Sewer Valve	Private Stormwater Point	Hydrant
Sewer Gravity Main (0-200mm)	Stormwater Pipe (1000-2100mm)	Water Main (Abandoned)	Sewer Endcap	<u>Communication Node</u>	Private Water Point
Sewer Gravity Main (225-600mm)	Stormwater Pipe (Abandoned)	Water Pipe (Private)	Sewer Manhole	Communications Node	<u>General</u>
Sewer Gravity Main (700-900mm)	Stormwater Pipe (Private)		Private Sewer Point		Property Boundary
Sewer Gravity Main (Abandoned)					DBYD Work Area
Sewer Gravity Main (Private)					



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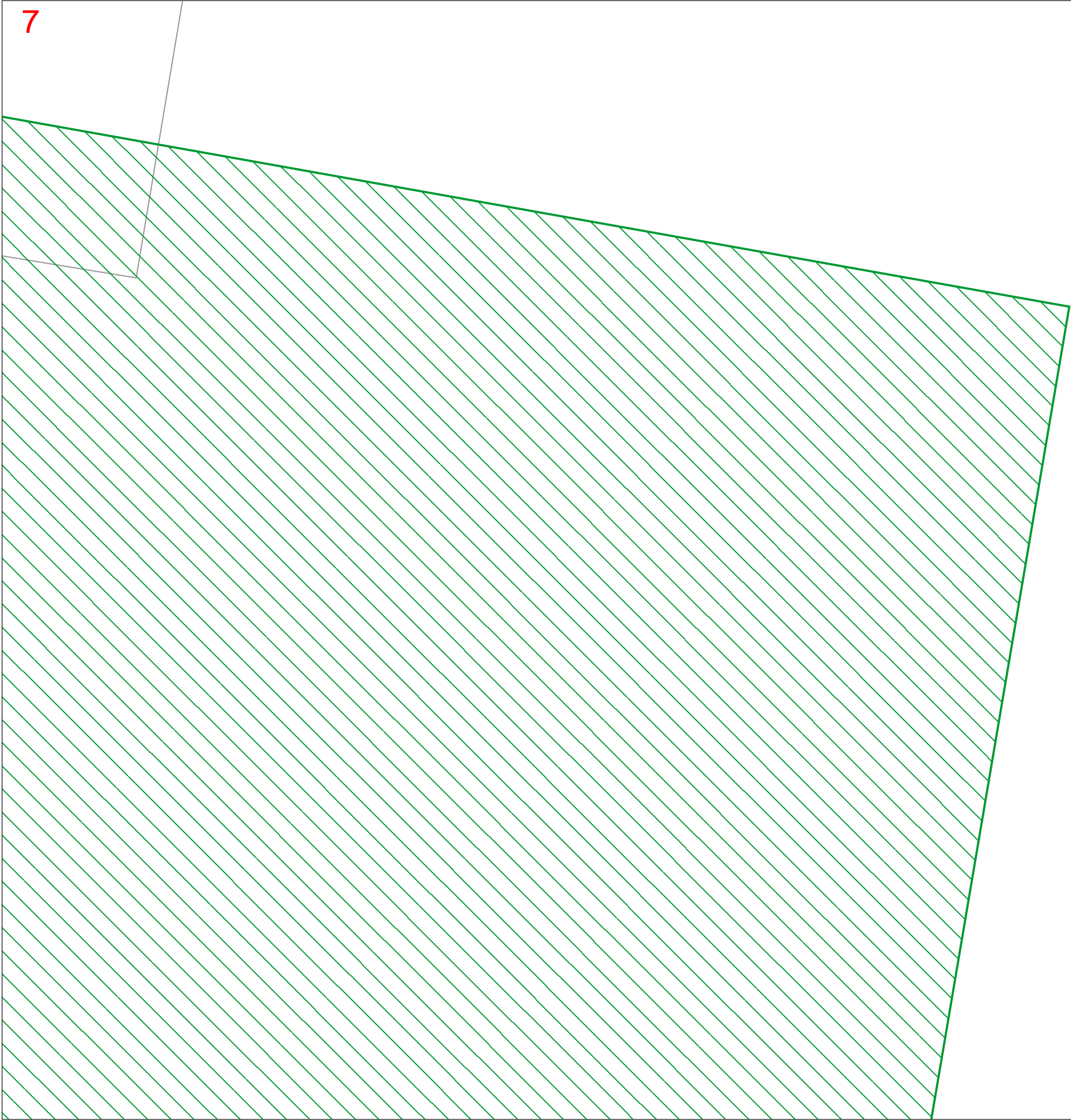




Map 7

Sequence No: 79760078  
Elouera Terrace Bray Park

Date: 01/02/2019



Sewer Pipeline	Stormwater Pipeline	Communication Cable	Sewer Node	Stormwater Node	Water Node
Sewer Rising Main	Stormwater Culvert	Communications Cable	Vent Stack	Stormwater Manhole	Water Pump Station
Sewer Rising Main (Abandoned)	Stormwater Culvert (Abandoned)	<u>Water Pipeline</u>	Vacuum Chamber	Drop Inlet	Reservoir
Sewer Rising Main (Private)	Stormwater Channel	Water Service	Sewer Pump Station	Kerb Inlet	Water Valve
Sewer Vacuum Main	Stormwater Channel (Abandoned)	Water Main (0-250mm)	Sewer Pump	Wingwall	Water Endcap
Sewer Gravity Overflow	Stormwater Pipe (0-975mm)	Water Main (300-1000mm)	Sewer Valve	Private Stormwater Point	Hydrant
Sewer Gravity Main (0-200mm)	Stormwater Pipe (1000-2100mm)	Water Main (Abandoned)	Sewer Endcap	<u>Communication Node</u>	Private Water Point
Sewer Gravity Main (225-600mm)	Stormwater Pipe (Abandoned)	Water Pipe (Private)	Sewer Manhole	Communications Node	<u>General</u>
Sewer Gravity Main (700-900mm)	Stormwater Pipe (Private)		Private Sewer Point		Property Boundary
Sewer Gravity Main (Abandoned)					DBYD Work Area
Sewer Gravity Main (Private)					



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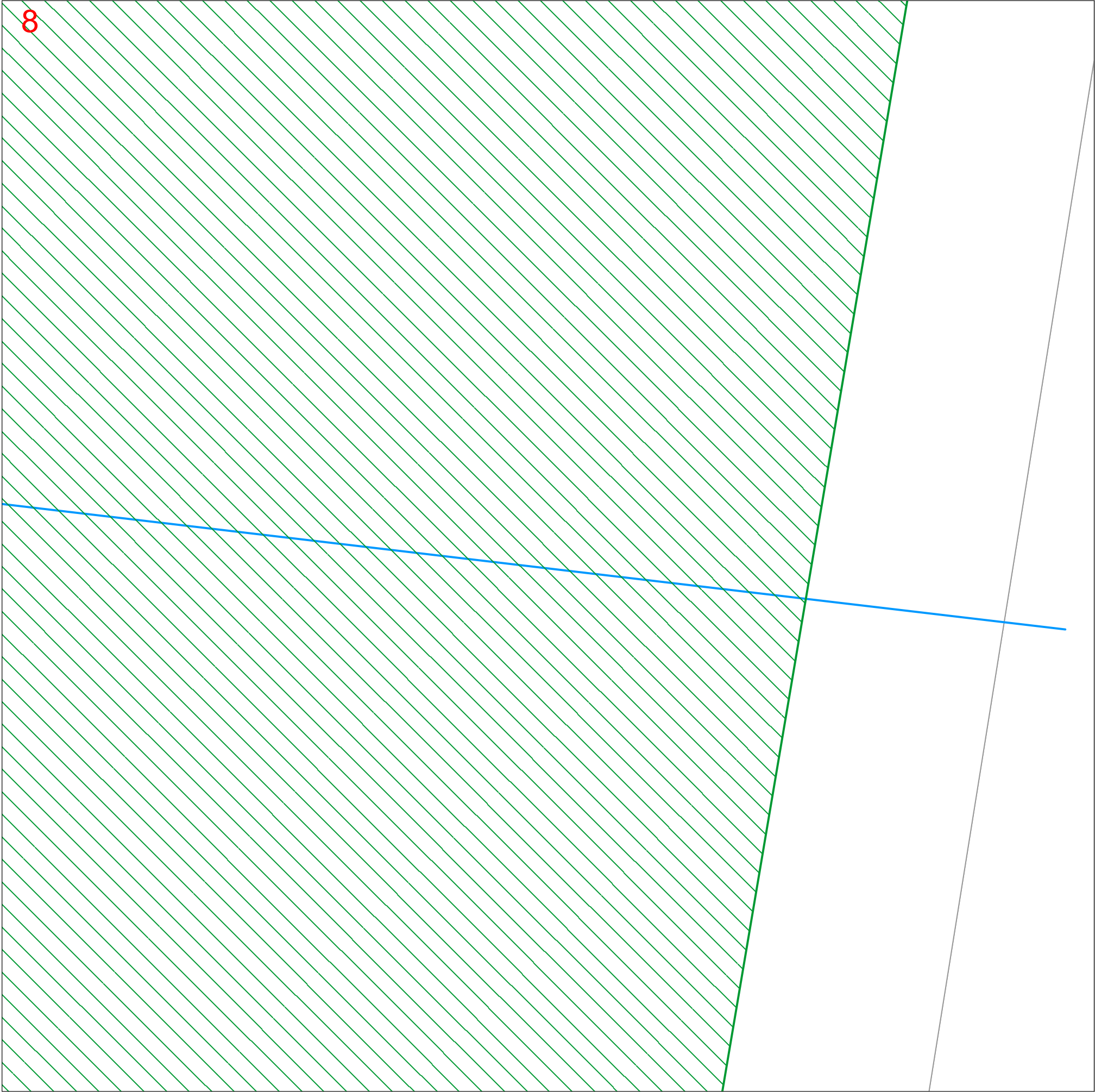




Map 8

Sequence No: 79760078  
Elouera Terrace Bray Park

Date: 01/02/2019



Sewer Pipeline	Stormwater Pipeline	Communication Cable	Sewer Node	Stormwater Node	Water Node
Sewer Rising Main	Stormwater Culvert	Communications Cable	Vent Stack	Stormwater Manhole	Water Pump Station
Sewer Rising Main (Abandoned)	Stormwater Culvert (Abandoned)	<u>Water Pipeline</u>	Vacuum Chamber	Drop Inlet	Reservoir
Sewer Rising Main (Private)	Stormwater Channel	Water Service	Sewer Pump Station	Kerb Inlet	Water Valve
Sewer Vacuum Main	Stormwater Channel (Abandoned)	Water Main (0-250mm)	Sewer Pump	Wingwall	Water Endcap
Sewer Gravity Overflow	Stormwater Pipe (0-975mm)	Water Main (300-1000mm)	Sewer Valve	Private Stormwater Point	Hydrant
Sewer Gravity Main (0-200mm)	Stormwater Pipe (1000-2100mm)	Water Main (Abandoned)	Sewer Endcap	<u>Communication Node</u>	Private Water Point
Sewer Gravity Main (225-600mm)	Stormwater Pipe (Abandoned)	Water Pipe (Private)	Sewer Manhole	Communications Node	<u>General</u>
Sewer Gravity Main (700-900mm)	Stormwater Pipe (Private)		Private Sewer Point		Property Boundary
Sewer Gravity Main (Abandoned)					DBYD Work Area
Sewer Gravity Main (Private)					



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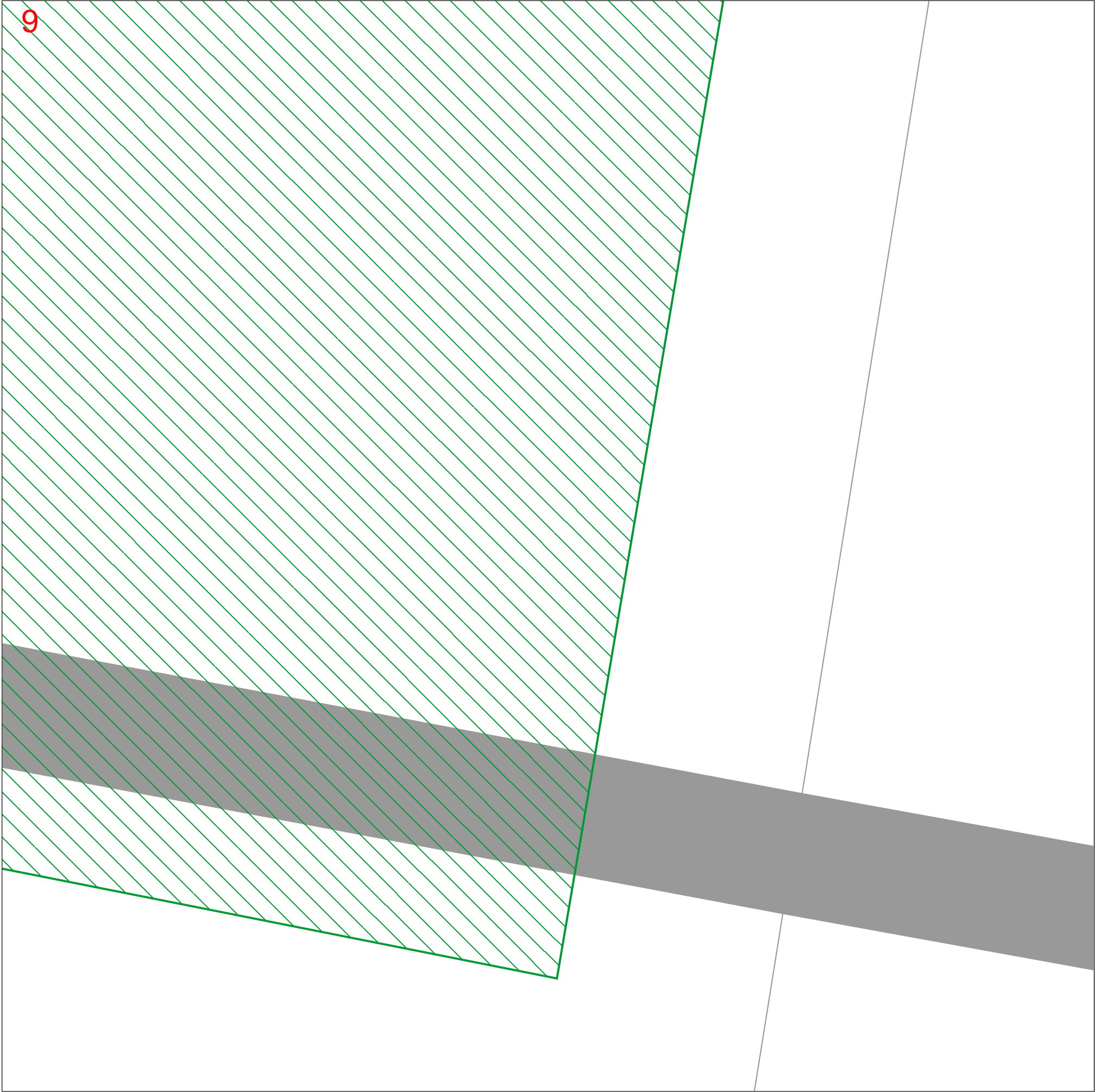




Map 9

Sequence No: 79760078  
Elouera Terrace Bray Park

Date: 01/02/2019



<b>Sewer Pipeline</b> <ul style="list-style-type: none"><li>Sewer Rising Main</li><li>Sewer Rising Main (Abandoned)</li><li>Sewer Rising Main (Private)</li><li>Sewer Vacuum Main</li><li>Sewer Gravity Overflow</li><li>Sewer Gravity Main (0-200mm)</li><li>Sewer Gravity Main (225-600mm)</li><li>Sewer Gravity Main (700-900mm)</li><li>Sewer Gravity Main (Abandoned)</li><li>Sewer Gravity Main (Private)</li></ul>	<b>Stormwater Pipeline</b> <ul style="list-style-type: none"><li>Stormwater Culvert</li><li>Stormwater Culvert (Abandoned)</li><li>Stormwater Channel</li><li>Stormwater Channel (Abandoned)</li><li>Stormwater Pipe (0-975mm)</li><li>Stormwater Pipe (1000-2100mm)</li><li>Stormwater Pipe (Abandoned)</li><li>Stormwater Pipe (Private)</li></ul>	<b>Communication Cable</b> <ul style="list-style-type: none"><li>Communications Cable</li></ul> <b>Water Pipeline</b> <ul style="list-style-type: none"><li>Water Service</li><li>Water Main (0-250mm)</li><li>Water Main (300-1000mm)</li><li>Water Main (Abandoned)</li><li>Water Pipe (Private)</li></ul>	<b>Sewer Node</b> <ul style="list-style-type: none"><li>Vent Stack</li><li>Vacuum Chamber</li><li>Sewer Pump Station</li><li>Sewer Pump</li><li>Sewer Valve</li><li>Sewer Endcap</li><li>Sewer Manhole</li><li>Private Sewer Point</li></ul>	<b>Stormwater Node</b> <ul style="list-style-type: none"><li>Stormwater Manhole</li><li>Drop Inlet</li><li>Kerb Inlet</li><li>Wingwall</li><li>Private Stormwater Point</li></ul> <b>Communication Node</b> <ul style="list-style-type: none"><li>Communications Node</li></ul>	<b>Water Node</b> <ul style="list-style-type: none"><li>Water Pump Station</li><li>Reservoir</li><li>Water Valve</li><li>Water Endcap</li><li>Hydrant</li><li>Private Water Point</li></ul> <b>General</b> <ul style="list-style-type: none"><li>Property Boundary</li><li>DBYD Work Area</li></ul>
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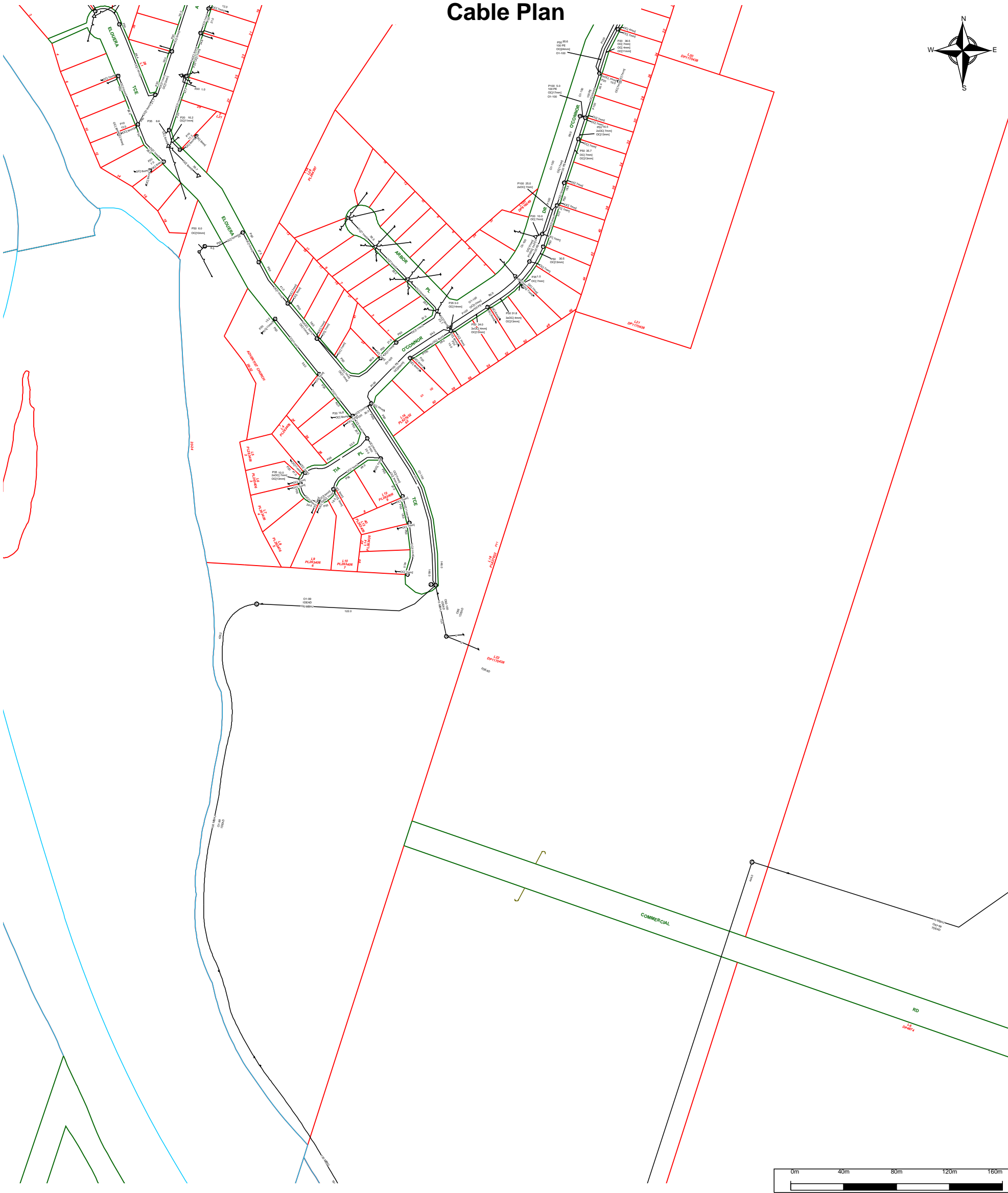
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Cable Plan



For all Telstra DBYD plan enquiries -  
email - [Telstra.Plans@team.telstra.com](mailto: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

Generated On 01/02/2019 10:49:35

Sequence Number: 79760080

Please read Duty of Care prior to any excavating

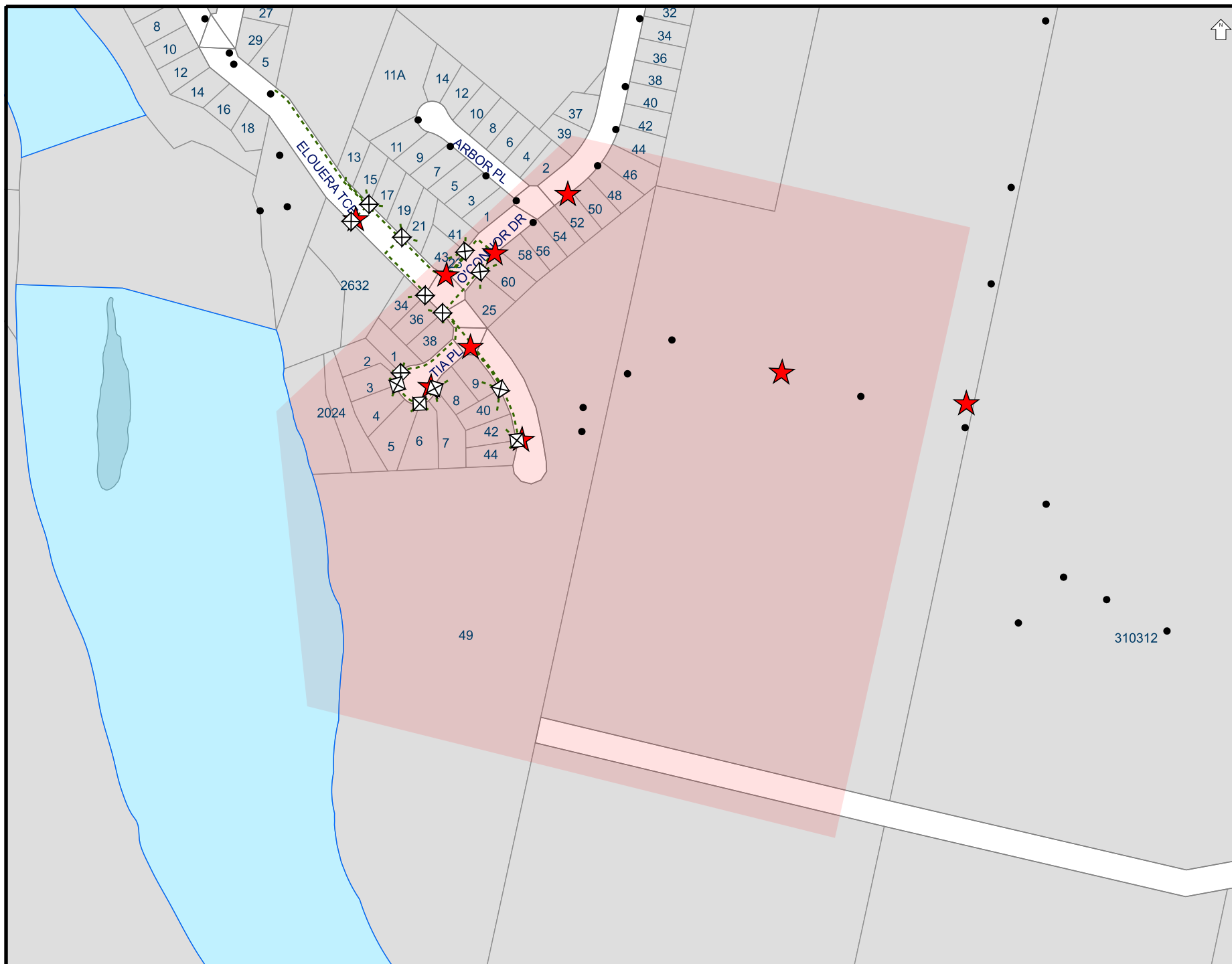
WARNING - Due to the nature of Telstra underground plant and the age of some cables and records, it is impossible to ascertain the precise location of all Telstra plant from Telstra's plans. The accuracy and/or completeness of the information supplied can not be guaranteed as property boundaries, depths 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.





Overhead wires not shown  
LOOK UP & LIVE!

## LEGEND

- LV Underground Cable
- HV Underground Cable
- Underground Pipe
- ★ Underground Earth or Wires
- ▲ Ground Substation
- Pole
- ⊠ Cubicle
- Pit
- Area of Interest

## Critical Assets

Contact Essential Energy  
on 13 23 91

- Zone Substation
- Underground Cable
- Underground Fibre

## Proposed Works

- Area of proposed works

Proposed assets are shown as  
orange symbols

THE INFORMATION ON THIS  
MAP MAY NOT BE  
ACCURATE.  
If details are incorrect,  
please notify  
Essential Energy on  
13 23 91  
(or fax 1800 354 636)

ISSUE DATE: 01/02/2019

You must resubmit your  
request if you have not  
started work within 4 weeks  
of the 'Issue Date' above

A4 SCALE: 1:3912

