



Gainsplay Pty Ltd

Utility Servicing and Impact Report

Tuckeroo Avenue, Mullumbimby

April 2024

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Author	BF
Checked	SGB
Approved	SGB

Rev No.	Status	Date	Comments
1	For Approval	25/03/2024	Initial Issue
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1 Summary

This utility Servicing and Impact Report has been prepared to support the scoping proposal for the rezoning of Lot 32 DP1169053 on Tuckeroo Avenue, Mullumbimby, north of Left Bank Road from R5 – Large Lot Residential to R2 – Low-Density Residential or R3 – Medium Density Residential.

The report has considered the ability of existing utilities to service the rezone site and potential impacts the concept development layout may have on existing assets.

Discussions with Ausgrid indicate that there is sufficient capacity in the existing substation to service the rezone site, however, an upgrade of LV switchgear at substation 41-6694 may be required. Relocation of Ausgrid assets is not anticipated.

Further investigations are required to confirm if the downstream gravity sewer network and sewer rising main including associated pumps have a suitable capacity to service the rezone site. Relocation of sewer asset is not anticipated.

Further investigations are required to confirm if the existing PVC/DICL 200 main have suitable capacity to service the rezone site. Relocation of potable water asset is not anticipated. However, a more detailed assessment is required with consideration to the proposed site levels and grading during the next stage to identify any potential conflicts.

NBN has confirmed that the proposed development site is serviceable with communication assets. Relocation of existing communication assets is not anticipated.

The rezone site expects to discharge stormwater through assets between Site A and Site B on Tuckeroo Avenue.

The site was not included in the North Byron Floodplain Risk Management Study. It is likely that a flood and stormwater study will be required.

Subject to the outcomes of the additional investigation as outlined above, it is considered that the site is considered suitable for rezoning.

2 Introduction

Barker Ryan Stewart has been engaged by Gainsplay Pty Ltd to prepare a utility servicing and impact report to support the scoping proposal for the rezoning of Lot 32 DP1169053 on Tuckeroo Avenue, Mullumbimby, north of Left Bank Road, from R5 – Large Lot Residential to R2 – Low Density Residential or R3 – Medium Density Residential.

The purpose of this report is to:

- a. Identify existing utility services and assess their ability for connection and capacity to service the rezone site (Site A) and potential future development.
- b. Assess potential impacts to existing utility services resulting from the rezone site (Site A) and potential future development.

Figure 1 illustrates the existing conditions of the subject site through an aerial photograph.



Figure 1 Aerial Photo of Site (image courtesy of Sixmaps)

3 Background

3.1 Site Location

The property description of the site is Lot 32 DP1169053, located at Tuckeroo Avenue, Mullumbimby, within the Byron Shire Council Local Government Area (LGA). The total site area is approximately 2.36ha and is bound by rural living and residential parcels.

The development sites are irregular in shape and split into two sections of land. Tuckeroo Avenue transects the site in a northwest-southeast direction, resulting in a section of the lot to the east of Tuckeroo Avenue and a section to the west of Tuckeroo Avenue. Further, the proposed rezoning will only be at Site A, resulting in a rezoning area of approximately 1.66ha.

The proposed rezone site is predominantly cleared, grassed sites with trees around the perimeter.

3.2 Project Scope

The scope of this utility servicing and impact report is broadly summarised below:

- a. Prepare applications for preliminary servicing advice to each of the utility service providers:
 - Essential Energy Preliminary Enquiry
 - Byron Shire Council Preliminary Water and Sewer Servicing Advice
 - NBN New Developments Application
 - Byron Shire Council Stormwater Advice
- b. Liaise with the utility authorities to confirm their requirements to service the rezone site.
- c. Prepare a report and site plans showing site connections points to the various essential services along with an indication of any upgrades or augmentation to the existing networks to service the rezone site as advised by the relevant authorities.

3.3 Proposed Development

A concept development layout for the rezone site is shown in Figure 2 below. The concept development layout seeks to subdivide the site into 16 vacant lots, including a 0.19ha public reserve.

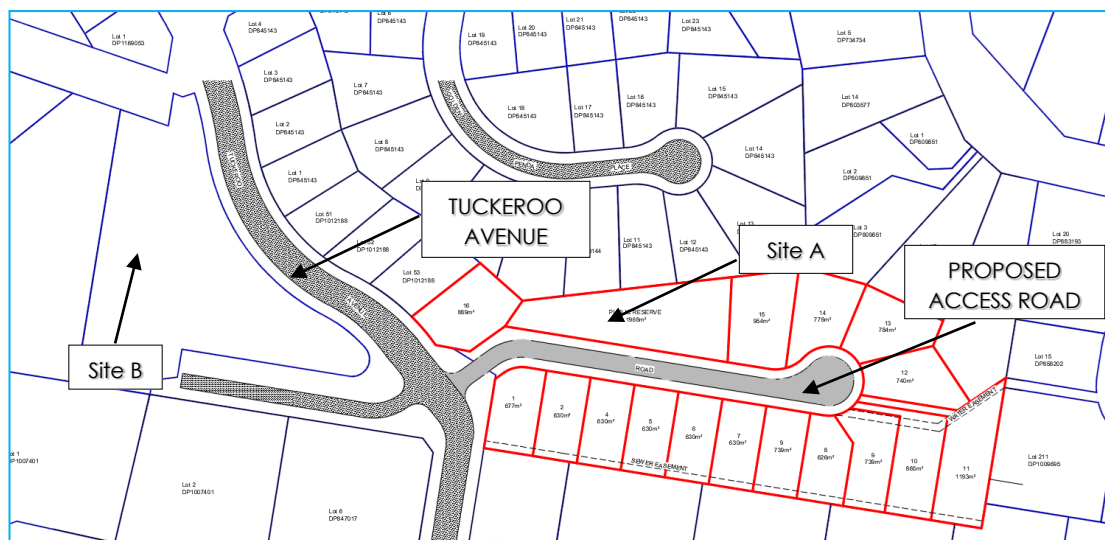


Figure 2 Proposed Subdivision Plan

4 Essential Energy - Electricity

4.1 Authority Enquiry

Barker Ryan Stewart performed a Dial Before You Dig Enquiry (DBYD) and submitted a preliminary enquiry to Essential Energy in November 2023. The enquiry was for the concept development layout. All information regarding connection and current networks related to the rezoning site was requested.

4.2 Existing Electrical Assets

Existing electrical assets are presented in Figure 3 below.

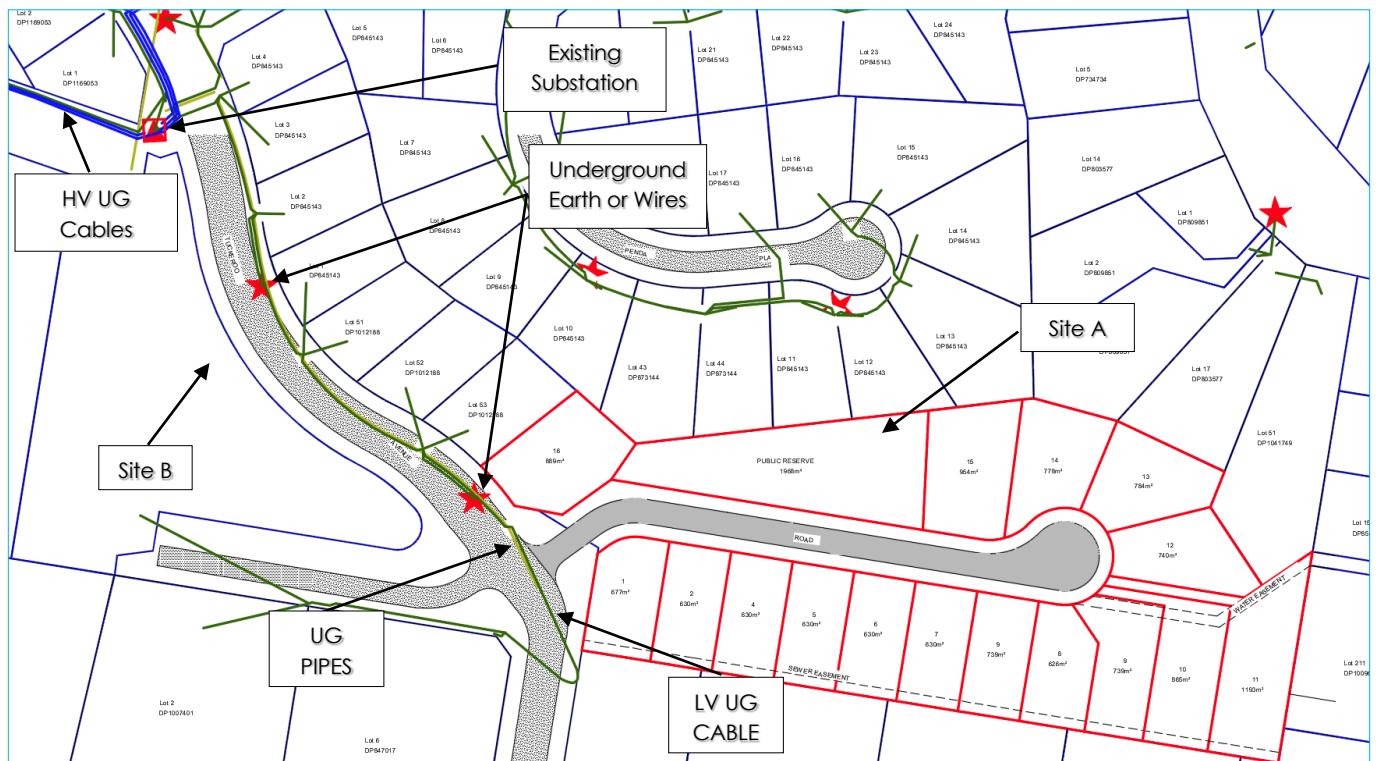


Figure 3: Existing Electrical Assets (source: DBYD)

4.3 Authority Summary

Essential Energy advises that their:

'...calculations indicate that there is sufficient capacity in the existing substation to supply the proposed development based on an after-diversity maximum demand (ADMD) of 4.0KVA per lot. However, the development would not comply with LVDrop requirements on the existing LV conductor. It may be possible to install new LV circuits from the existing substation to supply the development, depending on the proposed network configuration. An upgrade of the LV switchgear at substation 41-6694 would be required to provide a connection point for these LV circuits.'

4.4 Potential Impacts to Authority Assets

An assessment of the existing electrical assets was undertaken against the proposed concept development. The assessment indicated that there are no potential impacts to authority assets.

5 Byron Shire Council – Sewer

5.1 Authority Enquiry

Barker Ryan Stewart made an enquiry for Byron Shire Council regarding sewer servicing for the proposed concept development layout and requested all information regarding connection and current networks related to the rezoning site.

5.2 Existing Sewer Assets

Within the vicinity of the development site, the following exist:

- uPVC DN150 gravity sewer along the two development sites.
- uPVC DN50 sewer rising main along Site B, near Tuckeroo Avenue.
- Pump station at the west end of the road, between Site B and childcare centre.

Existing gravity sewer assets are presented in Figure 4 below.

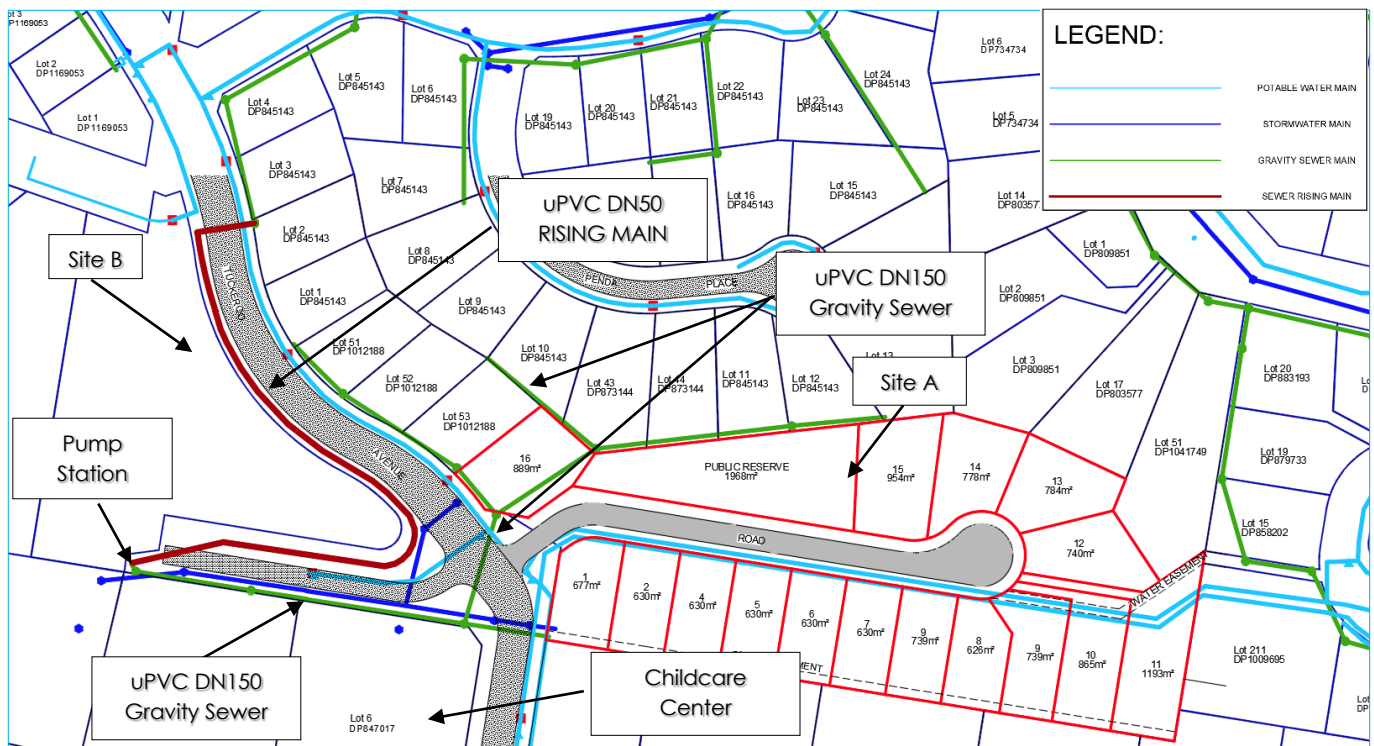


Figure 4: Existing Sewer Assets (source: DBYD)

5.3 Authority Summary

The Byron Shire Residential Strategy 2020, notes the following in relation water and sewer for the site (referred to as Area 4):

- '...Water and sewerage infrastructure capacity and ability to connect to existing infrastructure.'
- '...Possible area for water security by water recycling. (Presented to water and sewer committee Oct 2020).'

5.4 Proposed Servicing Strategy

The rezone site will be serviced by a new internal gravity sewer network in accordance with Council's requirements.

Sites A will discharge to the existing downstream gravity sewer mains adjoining the existing rising main and pump station between the western portion of Lot 32 and the childcare centre, as shown in Figure 4.

The existing gravity sewer main, sewer rising main, and pump station capacities will need to be reviewed in consultation with the Council.

5.5 Potential Impacts to Authority Assets

The existing sewer assets were assessed against the proposed concept development layout.

This assessment indicated no expected impacts to the existing sewer assets, and the rezone site is expected to be serviceable by sewer.

An assessment to assess the capacity of the gravity sewer main, rising main, and the sewer pump station will need to be reviewed in conjunction with the Council as part of the next stage of the rezoning.

6 Byron Shire Council – Potable Water

6.1 Authority Enquiry

Barker Ryan Stewart made an enquiry for Byron Shire Council regarding potable water servicing for concept development layout and requested all information regarding connection and current networks related to the rezoning site.

6.2 Existing Water Assets

Within the vicinity of the development site, the following exist:

- DICL and PVC DN200 water main within Site A.
- PVC DN100 on the north and southeastern bound of Site B.
- PVC DN200 near the southern-bound lane of Tuckeroo Avenue, between Site A and B.

Existing water assets are presented in Figure 5 below.

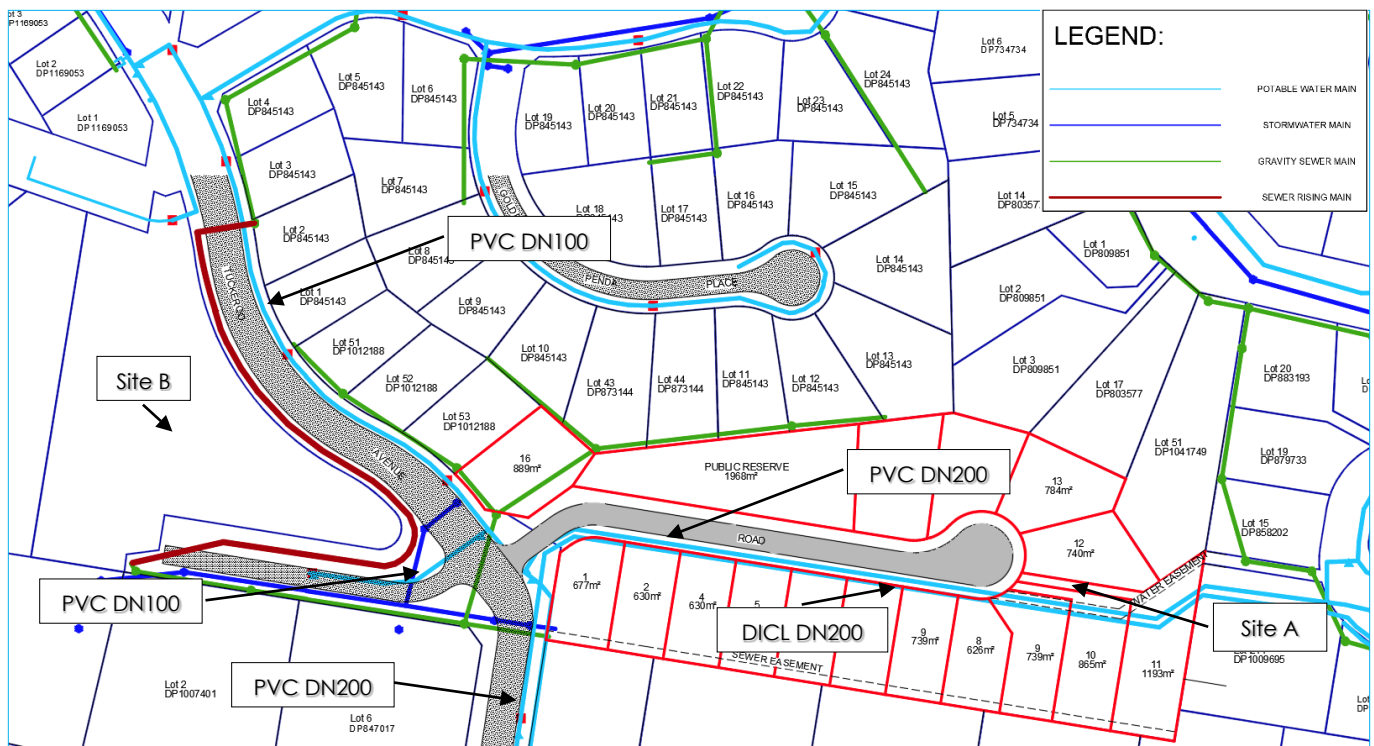


Figure 5: Existing Water Assets (source: DBYD)

6.3 Authority Summary

The Byron Shire Residential Strategy 2020, notes the following in relation water and sewer for the site (referred to as Area 4):

- '...Water and sewerage infrastructure capacity and ability to connect to existing infrastructure.'
- '...Possible area for water security by water recycling. (Presented to water and sewer committee Oct 2020)'

6.4 Proposed Servicing Strategy

With consideration to the existing potable water network and concept development layout, the following servicing strategy is proposed:

- a. Construct a new service connection off the PVC/DICL 200 water main in Site A via an open trench to allow new 'T' junctions to be cut into the main and meet Council's requirements.
- b. Install a water meter for each proposed lot and construct internal site reticulation to meet AS3500.1.

The ability of the existing PVC/DICL 200 main to service the rezone site will need to be discussed with the Council.

6.5 Potential Impact to Authority Assets

The existing water assets were assessed against the concept development layout.

DICL and DN200 water pipes were mapped under Site A. During the next stage, a more detailed assessment will be undertaken, with consideration to the site levels and grading of future lots and road of the proposed rezone site, to identify any potential conflicts.

The capacity of the existing PVC/DICL 200 main pipe will need to be discussed with the Council as part of the next stage of the rezoning to confirm if the rezone site may be appropriately serviced.

7 Telstra/NBN - Communications

7.1 Authority Enquiry

Barker Ryan Stewart submitted a preliminary enquiry to NBN Developments on 22 November 2023 regarding communications servicing for the concept development layout and requested all information regarding connection and current networks related to the rezoning site.

7.2 Existing Communication Assets

The existing communication assets are a mixture of Telstra and NBN. Within the vicinity of the development site, the following assets exist:

- A distribution network is present along Tuckeroo Avenue, west of Site A.
- Disconnected pairs are present in Site A, as shown in Figure 6.

Existing assets are presented in Figure 6 below.

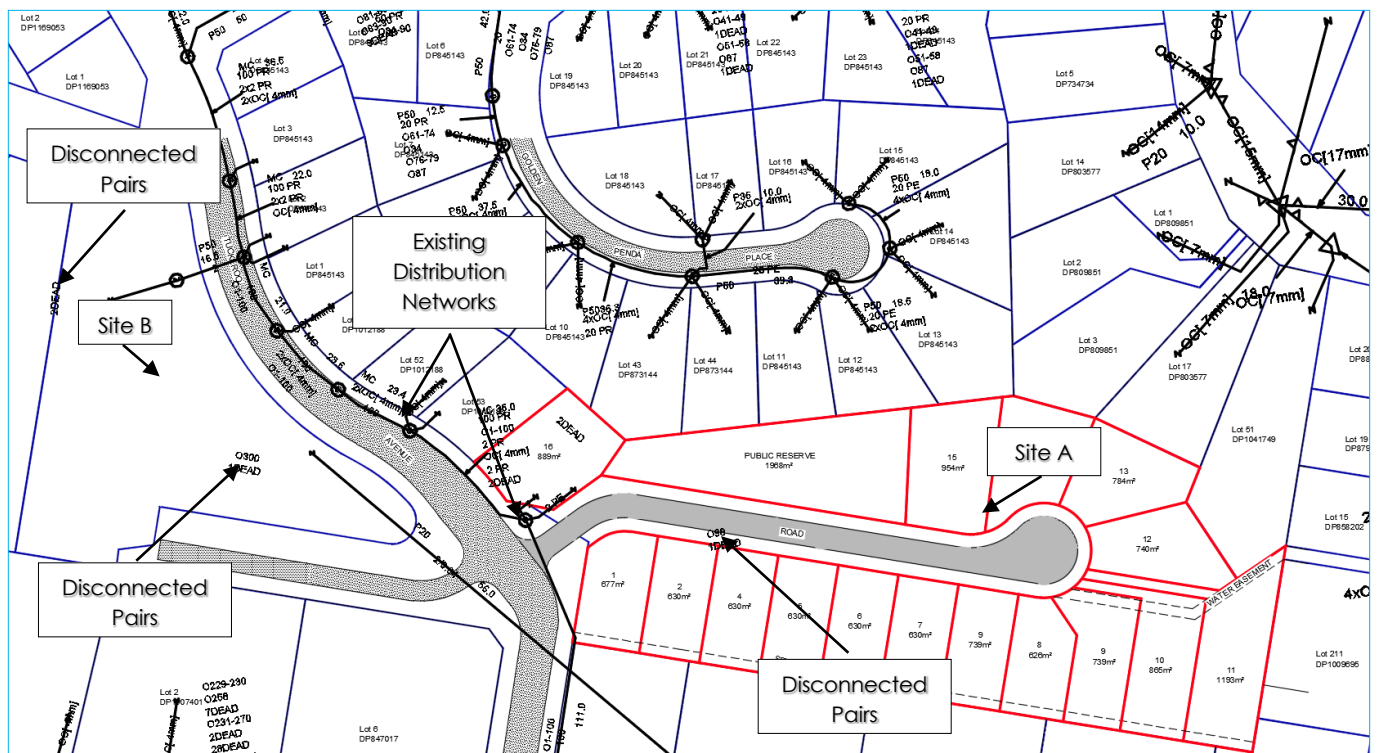


Figure 6: Existing Communications Assets (source: Telstra DBYD)

7.3 Authority Summary

In response to the preliminary enquiry, NBN advises:

- A servicing enquiry has been lodged.
- Communications servicing of the rezone site will be undertaken by NBN Developments.
- The rezone site, upon assessing, is eligible for a physical NBN connection.

In addition, NBN Developments advised that the development site currently has a live network running past this location, as shown in Figure 7, which we would be able to service the rezone site.

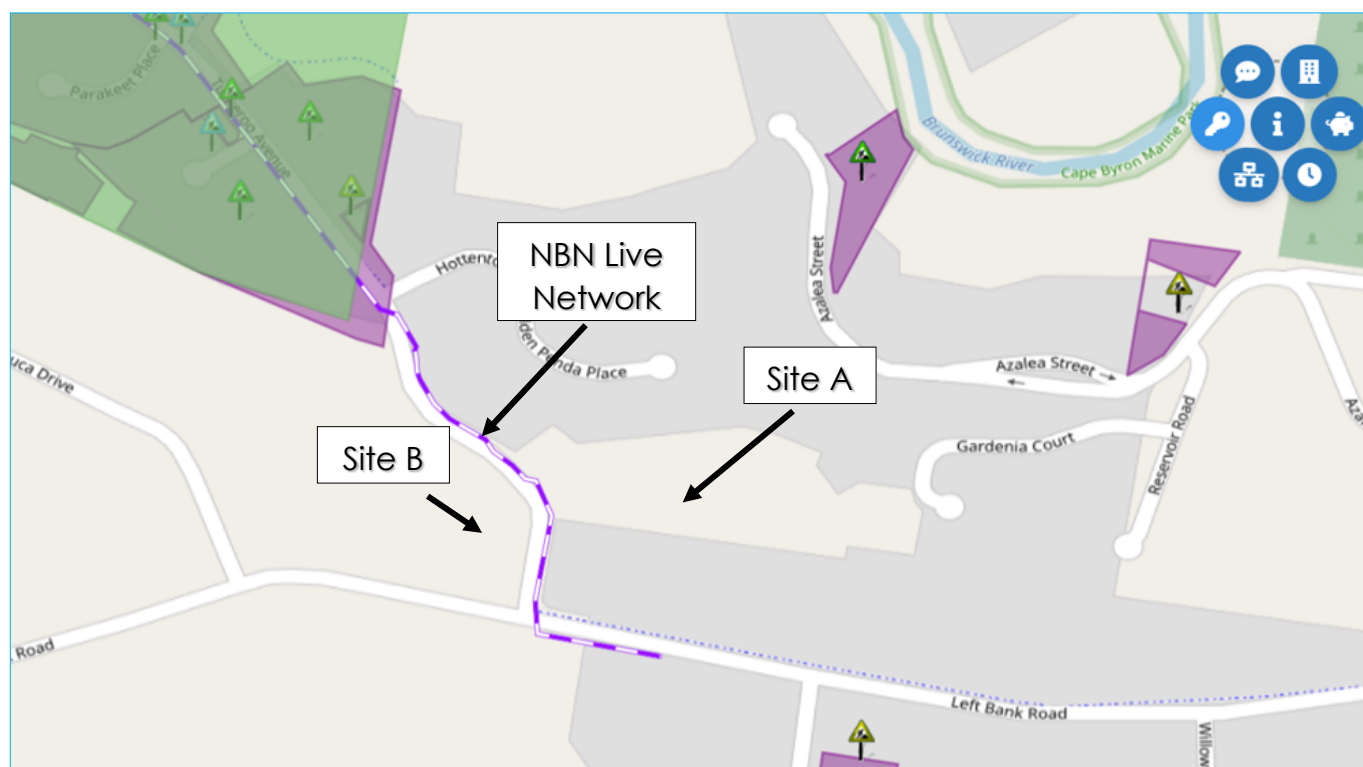


Figure 7: Existing Communications Assets (source: NBN Development)

7.4 Potential Impacts to Authority Assets

An assessment of the existing communication assets was undertaken against the concept development layout.

The assessment indicates that NBN/Telstra assets are not expected to be impacted by the concept development layout.

The proposed rezone site (Site A) will be serviced by NBN. NBN has confirmed suitable capacity within their network.

8 Byron Shire Council – Stormwater

8.1 Authority Enquiry

Barker Ryan Stewart undertook a desktop observation the existing Council stormwater network in the vicinity of the site through a Dial Before You Dig enquiry.

8.2 Existing Stormwater Assets

Within the vicinity of the rezone site, the DBYD shows an existing stormwater asset near the subject site.

Existing assets are presented in Figure 8 below.

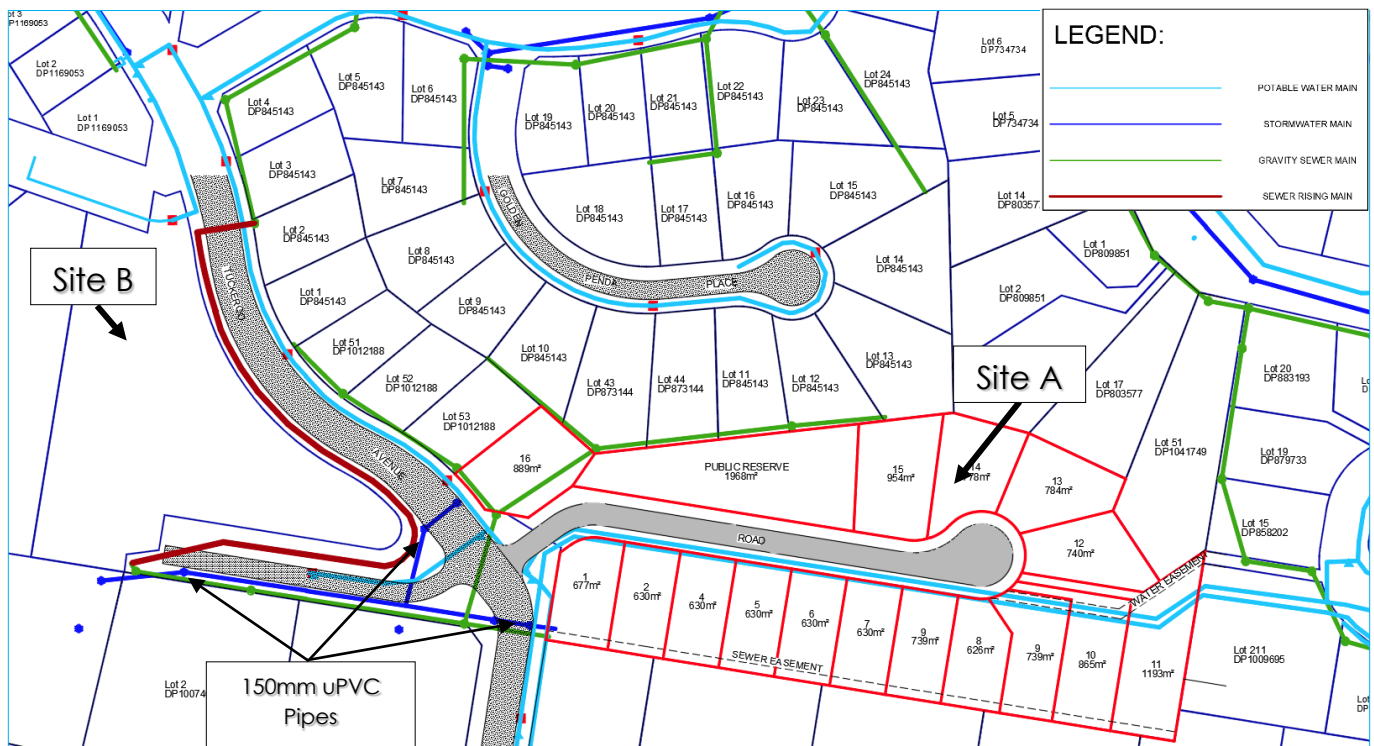


Figure 8: Existing Stormwater Assets (source: DBYD)

8.3 Authority Summary

The Byron Shire Residential Strategy 2020, notes the following in relation water and sewer for the site (referred to as Area 4):

'...Flooding and stormwater drainage study required.'

Following approval of the Development Application, further enquiries will be made with Byron Shire Council to discuss the above requirements for the site's stormwater management.

8.4 North Byron Floodplain Management Study

A review of the Council's flood mapping indicates that the rezone site was not included in the study. Further assessment and study will be undertaken during the later stage regarding hydraulics and hydrology analysis of the site.

An extract of the Council's flood map is presented in Figure 9. The proposed rezone site is indicatively labelled.

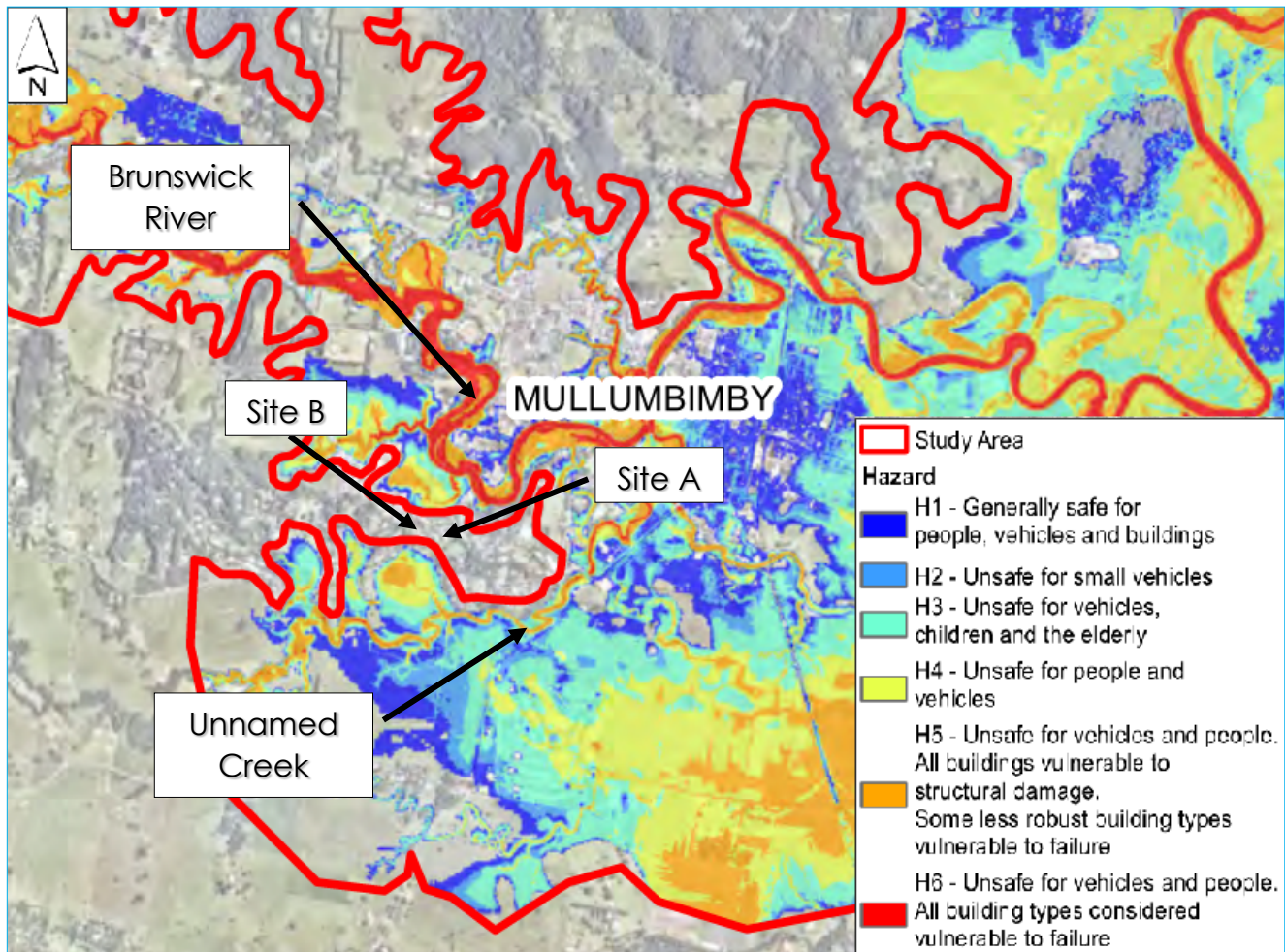


Figure 9: 1% AEP Flood Event Hazard Map (source: Byron Shire Council website)

8.5 Proposed Servicing Strategy

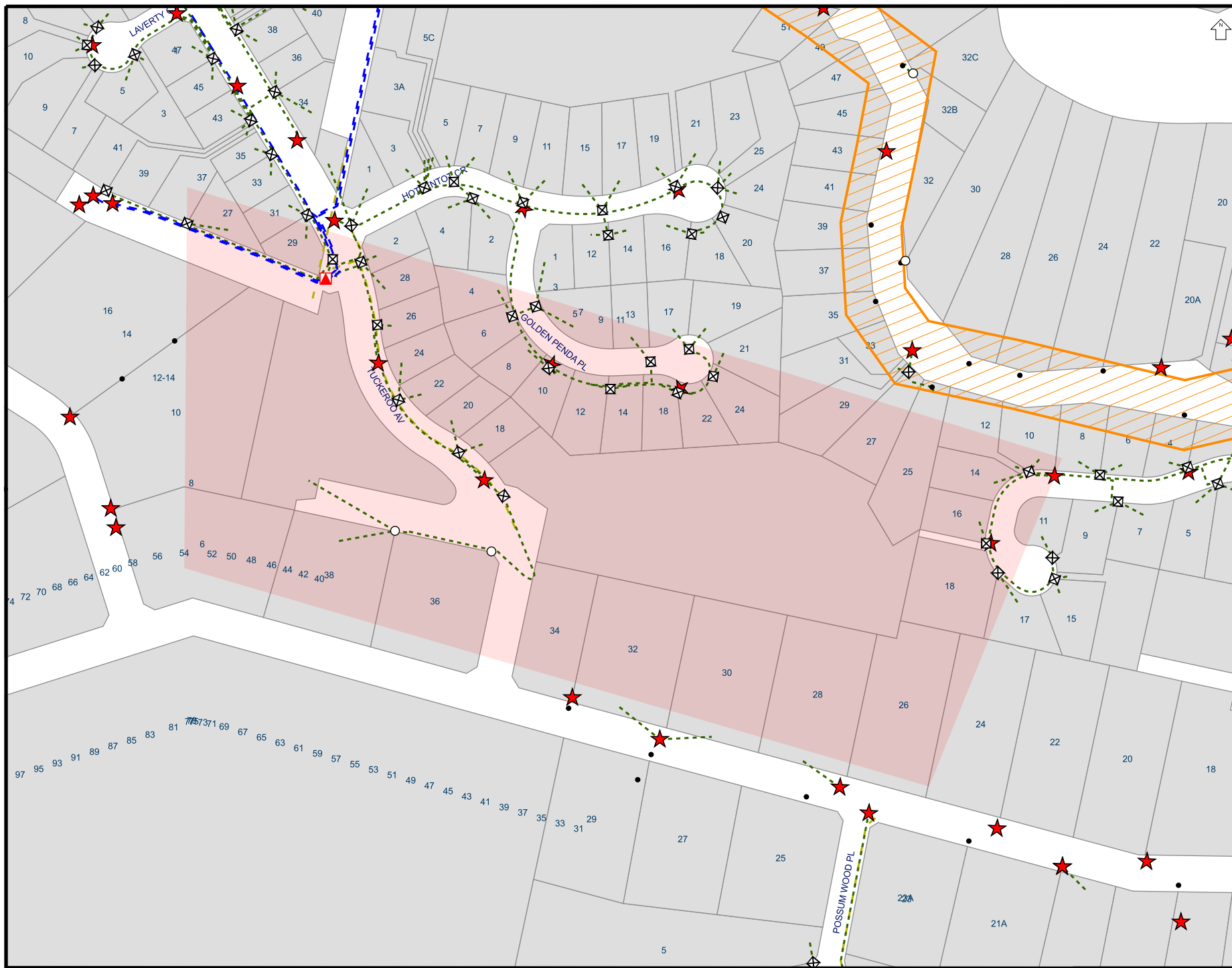
With consideration of the DBYD plans for stormwater drainage and proposed development layout, it is proposed to service the site with stormwater drainage by:

- Installing a traditional stormwater pipe and pipe network within the proposed road network to collect and convey runoff from the development for the agreed 'minor' storm event.
- Manage overland flows for the agreed 'major' storm event via the proposed road network and suitable easements over private land, where required.
- Discharge of the above stormwater network to a stormwater detention facility, if required. Treatment of the stormwater to improve water quality.
- Discharge of stormwater from the rezone site (Site A), likely to the existing stormwater network located to the west of Site A, on Tuckeroo Avenue. The network's discharge will flow to an unnamed waterbody connected to Mullumbimby Creek, south of the development site.

8.6 Potential Impacts to Authority Assets

An assessment of the stormwater assets was undertaken against the proposed development works. The assessment indicated no expected impacts to the existing stormwater assets.

Appendix A – Essential Energy



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: 21/11/2023

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

A4 SCALE: 1:2816



Job Number: 35517010

Sequence number: 232408433

Job location: 12 Golden Penda Place, Mullumbimby

Map
Centre: 153° 29' 7.8", -28° 33' 30.5"

AUSGRID PRELIMINARY ENQUIRY AND RESPONSE FROM AUSGRID PORTAL

Enquiry Response

Response

Calculations indicate that there is sufficient capacity in the existing substation to supply the proposed development based on an after diversity maximum demand (ADMD) of 4.0KVA per lot, however the development would not comply with LVDrop requirements on the existing LV conductor. It may be possible to install new LV circuits from the existing substation to supply the development depending on the proposed network configuration, recommend you seek advice from a level 3 Accredited Service Provider (ASP). A list of ASPs can be found at: <https://www.energy.nsw.gov.au/households/guides-and-helpful-advice/being-more-energy-efficient/understand-your-energy-bill/altering-supply> (<https://www.energy.nsw.gov.au/households/guides-and-helpful-advice/being-more-energy-efficient/understand-your-energy-bill/altering-supply>).

Please note, an upgrade of the LV switchgear at substation 41-6694 would be required to provide a connection point for these LV circuits.

Enquiry Details

Subject

Description

Enquiring if the capacity of existing power assets within the proposed development (Lot 32 DP1169053) is adequate to service the proposed 24 lots plus a public reserve. Please refer to attached preliminary site layout.

Asset Details

Related Enquiries

Related Applications

Appendix B – Byron Shire Council (Water and Sewer)



Sequence No: 232408434
Job No: 35517010
Location: 12 Golden Penda Place, Mullumbimby, NSW 2482



Legend

- Water Main Drinking
- Water Main Abandoned
- Water Meter Pipe
- Water Valves
- Water Hydrants
- Water Main Recycled
- Water Valves Recycled
- Wastewater Gravity Main
- Wastewater Abandoned
- Wastewater Manhole
- Wastewater Rising Main
- Wastewater Valve
- Wastewater Vacuum Main
- Wastewater Vacuum Valves
- Wastewater Vacuum Pods
- Wastewater Pressure Main
- Wastewater Pressure Valve
- Stormwater Main
- Stormwater Abandoned
- Stormwater Pit
- Stormwater Culvert
- SCIMS Survey Control Point
- Incomplete Data
- Property Boundary
- Road Reserve
- Rivers
- Contamination No Digging



Scale: 1:3075
Expires: 19 Dec 2023

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Overview



Sequence No: 235733146
Job No: 36091898
Location: 22 Tuckerroo Avenue, Mullumbimby, NSW 2482



Legend

- Water Main Drinking
- Water Main Abandoned
- Water Meter Pipe
- Water Valves
- Water Hydrants
- Water Main Recycled
- Water Valves Recycled
- Wastewater Gravity Main
- Wastewater Abandoned
- Wastewater Manhole
- Wastewater Rising Main
- Wastewater Valve
- Wastewater Vacuum Main
- Wastewater Vacuum Valves
- Wastewater Vacuum Pods
- Wastewater Pressure Main
- Wastewater Pressure Valve
- Stormwater Main
- Stormwater Abandoned
- Stormwater Pit
- Stormwater Culvert
- SCIMS Survey Control Point
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- Property Boundary
- Road Reserve
- Rivers
- Contamination No Digging

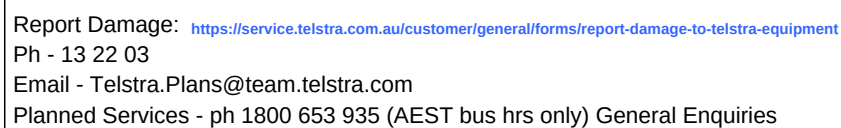


Scale: 1:2050
Expires: 20 Mar 2024

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Overview

Appendix C – Telstra/NBN



Generated On 21/11/2023 12:36:57

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

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.

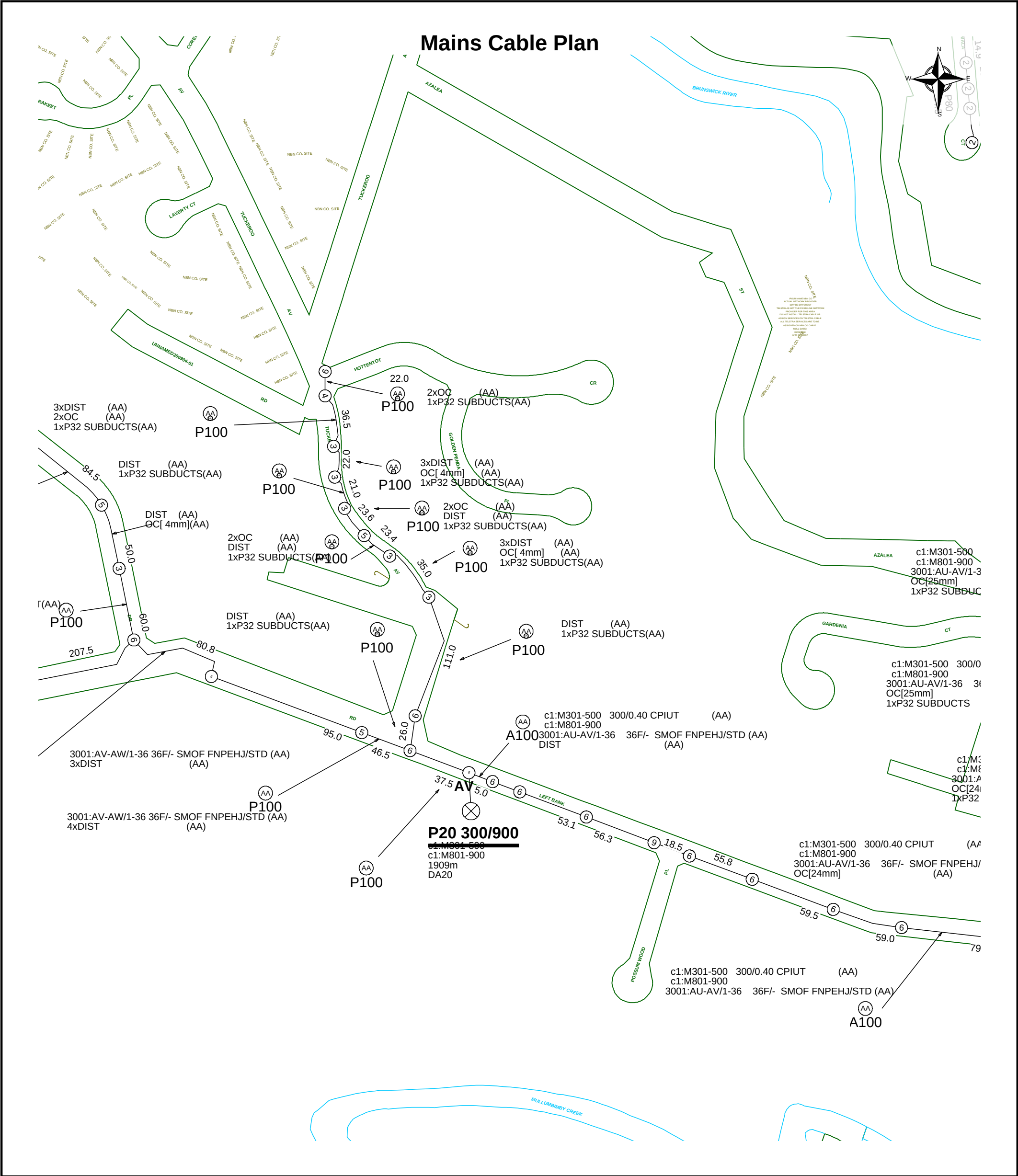
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.

Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.

Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.

A Certified Locating Organisation 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.

See the Steps- Telstra Duty of Care that was provided in the email response.



	<p>Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment Ph - 13 22 03 Email - Telstra.Plans@team.telstra.com Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries</p>	<p>Sequence Number: 232408435</p>
<p>TELSTRA LIMITED A.C.N. 086 174 781</p> <p>Generated On 21/11/2023 12:36:59</p>		<p>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.</p>

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. The exact position of Telstra assets can only be validated by physically exposing it. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy. Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work. A Certified Locating Organisation 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.

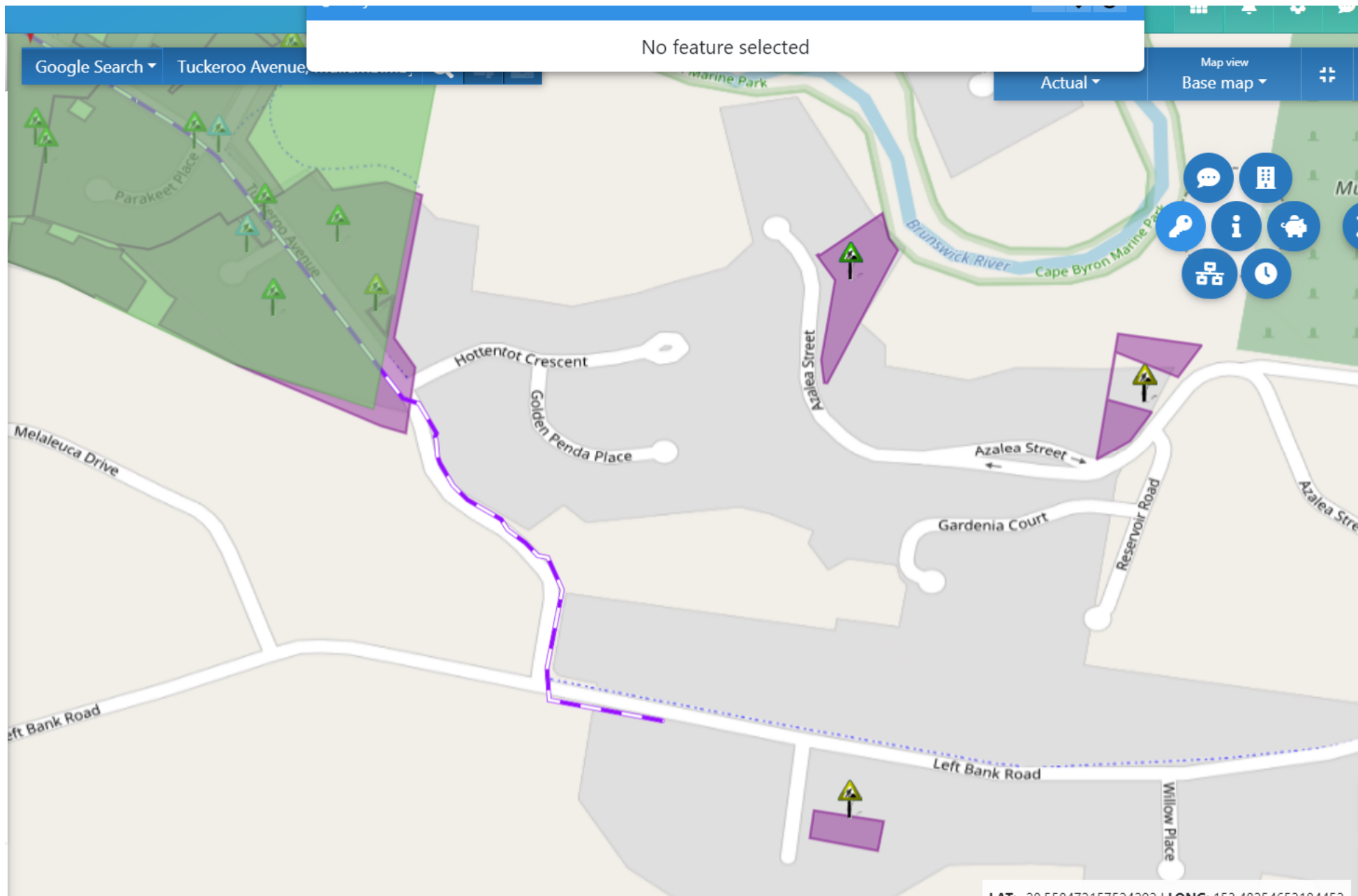
See the Steps- Telstra Duty of Care that was provided in the email response.

Bryan Faustino

From: Greg Clifford <gregclifford@nbnco.com.au>
Sent: Wednesday, 22 November 2023 4:23 PM
To: Bryan Faustino
Cc: Charlie Hewitt
Subject: RE: [#230571] [External] NBN Servicing Strategy - Tuckerroo Avenue, Mullumbimby [Commercial - Anyone]

Hi Bryan,

Thanks for your email. Happy to help this opportunity. I have checked the system and **NBN** currently has live network running past this location which we would be able to service this development if required. Please reach out if you need anything further or if an application is made as I'll ensure I manage the development. Thanks Greg



Greg Clifford
Senior Account Manager, New Developments

M +61 419 492 745 | **E** gregclifford@nbnco.com.au
100 Mount Street, North Sydney, NSW, 2060



nbn acknowledges and pays respects to the traditional custodians of all the lands upon which we work.

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From: Bryan Faustino <bryan@brs.com.au>
Sent: Wednesday, November 22, 2023 11:32 AM
To: Greg Clifford <gregclifford@nbnco.com.au>
Cc: Charlie Hewitt <charlie@brs.com.au>
Subject: [External] [#230571] NBN Servicing Strategy - Tuckeroo Avenue, Mullumbimby

EXTERNAL SENDER – Be cautious opening Links and Attachments

Hi Greg,

Good day!

BRS is currently preparing a servicing strategy for Lot 32 DP1169053 at Tuckeroo Avenue. You were referred to me by Charlie Hewitt and hoping that you could please assist us in obtaining the assessment the existing NBN assets against the proposed development within the area. Also, please let me know if there's any formal procedure or application lodging required to obtaining an assessment.

I've attached the draft plans for your review. Thanks!

Kind regards,

Bryan Faustino
Graduate Engineer



E: bryan@brs.com.au
W: www.brs.com.au
P: 02 4966 8388

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Appendix D – Byron Shire Council (Stormwater and Flooding)



Sequence No: 232408434
Job No: 35517010
Location: 12 Golden Penda Place, Mullumbimby, NSW 2482



Legend

- Water Main Drinking
- Water Main Abandoned
- Water Meter Pipe
- Water Valves
- Water Hydrants
- Water Main Recycled
- Water Valves Recycled
- Wastewater Gravity Main
- Wastewater Abandoned
- Wastewater Manhole
- Wastewater Rising Main
- Wastewater Valve
- Wastewater Vacuum Main
- Wastewater Vacuum Valves
- Wastewater Vacuum Pods
- Wastewater Pressure Main
- Wastewater Pressure Valve
- Stormwater Main
- Stormwater Abandoned
- Stormwater Pit
- Stormwater Culvert
- SCIMS Survey Control Point
- Incomplete Data
- Property Boundary
- Road Reserve
- Rivers
- Contamination No Digging



Scale: 1:3075
Expires: 19 Dec 2023

DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Byron Shire Council nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

Overview

FIGURE 90
HYDRAULIC HAZARD
NORTH BYRON FLOODPLAIN MANAGEMENT STUDY
CLIMATE CHANGE SEA LEVEL RISE 2100 1%AEP (LEFT)
VERSUS 1%AEP FLOOD EVENT (RIGHT)

