Strategic Utility Services Report

Wilga-Wilson Precinct, Ingleside

Prepared on behalf of Mirvac and Truslan

17 June 2025

We acknowledge the Traditional Custodians of the land where we live, work and play, the country of Awabakal, Darkinjung and the Eora Nation.

We recognise their continuing connection to the land and waters of our beautiful regions.

We pay our respects to Aboriginal and Torres Strait Islanders Elders past, present and emerging.

Limitations Statement

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Unless otherwise specified in this report, information and advice received from external parties during the course of this project was not independently verified. However, any such information was, in our opinion, deemed to be current and relevant prior to its use. Whilst all reasonable skill, diligence and care have been taken to provide accurate information and appropriate recommendations, it is not warranted or guaranteed and no responsibility or liability for any information, opinion or commentary contained herein or for any consequences of its use will be accepted by ADW Johnson or by any person involved in the preparation of this assessment and report.

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Hunter
7/335 Hillsborough Road
Warners Bay NSW 2282
(02) 4978 5100

Central Coast
5 Pioneer Avenue
Tuggerah NSW 2259
(02) 4305 4300

Sydney
Level 35, One International Towers
100 Barangaroo Avenue
Sydney NSW 2000
(02) 8046 7412

www.adwjohnson.com.au

Job no: 300360

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B	Amended for Revised Masterplan	06 / 05 / 2025	JTo	JDu
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D				
E				
F				
G				

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Contents

1. Introduction

ADW Johnson has been engaged by Mirvac & Truslan as part of a broader consultant team, to provide a strategic overview of the utilities available to facilitate the development of the Wilga-Wilson Precinct, Ingleside.

Purpose

The purpose of this document is to provide a strategic overview of the utilities available and potential upgrades required to facilitate the development of the Wilga Wilson Precinct, Ingleside.

The Precinct

The Wilga Wilson Precinct is located within the suburb of Ingleside, within the Northern Beaches local government area. The land is in fragmented ownership and is approximately 28.8ha in size.

The precinct is located at the north-western edge of the Elanora Heights suburb and within the Ingleside Priority Growth Area (Department of Planning, Housing & Infrastructure (DPHI). The precinct is located approximately 3.5km south west of Mona Vale and 8.5km north west of Dee Why.

Planning Context

The area has a long history of planning for development with a Site Compatibility Certificate granted in the 2010's permitting seniors housing but subsequently lapsed following encouragement by Council for its integration into the large rezoning program of up to 3,400 residential dwellings supported by Council and the DPHI.

The scope was later reduced to a yield of 980 residential dwellings but due to a number of ongoing concerns not directly concerning the Wilga Wilson Precinct, the rezoning was abandoned in 2022 by DPHI with all future rezonings deferred to Council.

Masterplan and Planning Proposal

A high level masterplan for the precinct has been prepared by Place Design Group which includes 536 dwellings, local parks, as well as conservation and rehabilitation of watercourses and areas of biodiversity significance. The Wilga Wilson Precinct is now subject to a proponent led planning propsoal.

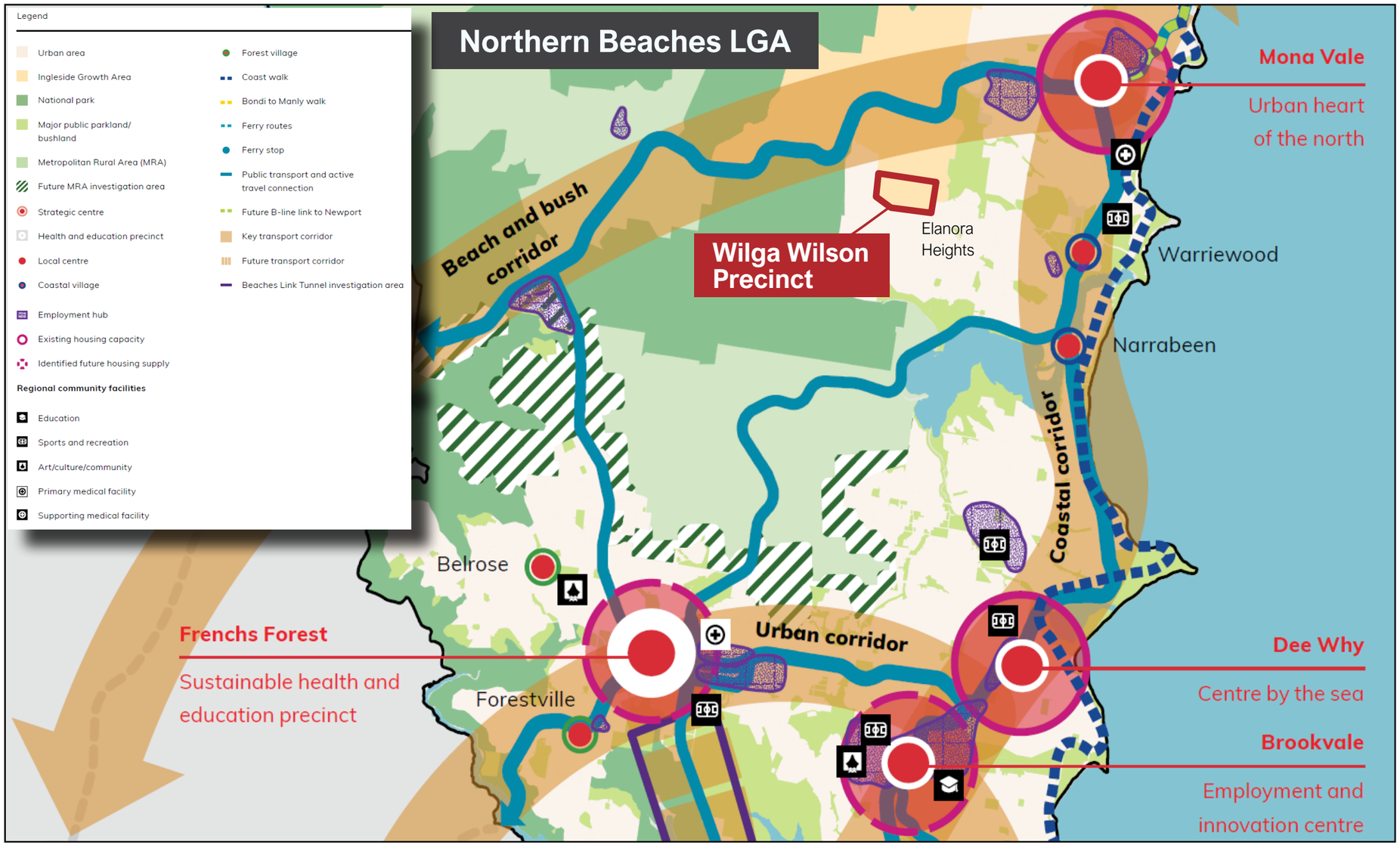


Figure 1: Precinct location on extract of Northern Beaches Council Local Strategic Planning Statement Map 1

2. Precinct Context

Land Use Context

Nestled between the Monash Country Club to the west and Elanora Country Club to the south, the Wilga Wilson Precinct is currently made up of a number of uses including boat storage, a horticultural nursery and rural residential style homes. A place of worship (Serbian Orthodox Church St Sava) is also located within the precinct.

To the north of the precinct, land uses include large lot residential homes, nurseries, and a conference and training centre.

Elenora Heights to the east contains a mix of residential forms and local shops.

Utilities Context

The precinct is located near existing sewer, electricity, potable water, waste water, and gas infrastructure as identified in Figure 2.

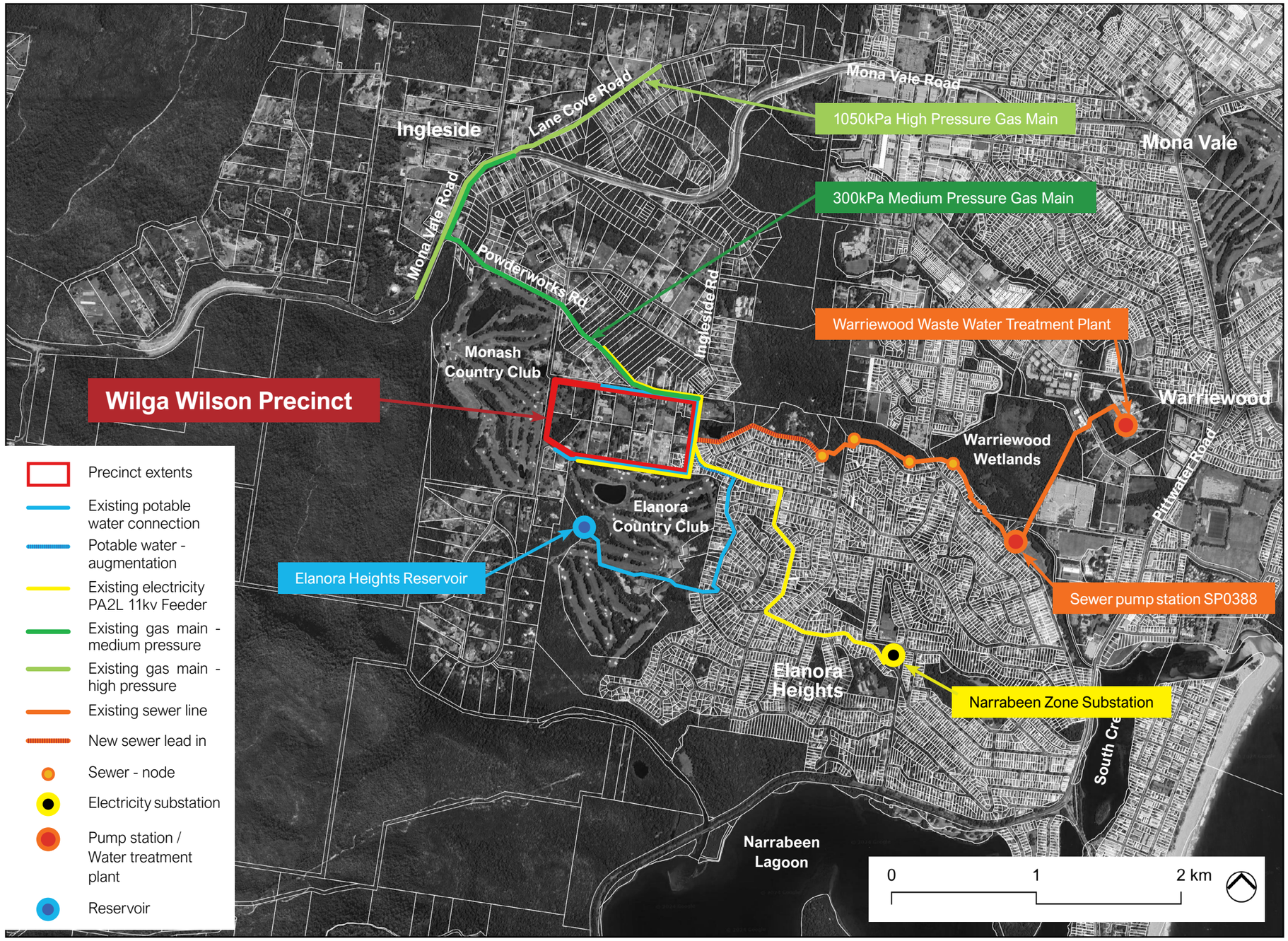


Figure 2: Regional infrastructure

3. Masterplan

A high-level masterplan showcasing the development potential of the precinct has been prepared by Place Design Group. Based upon this masterplan it is anticipated that the future development could consist of the following uses:

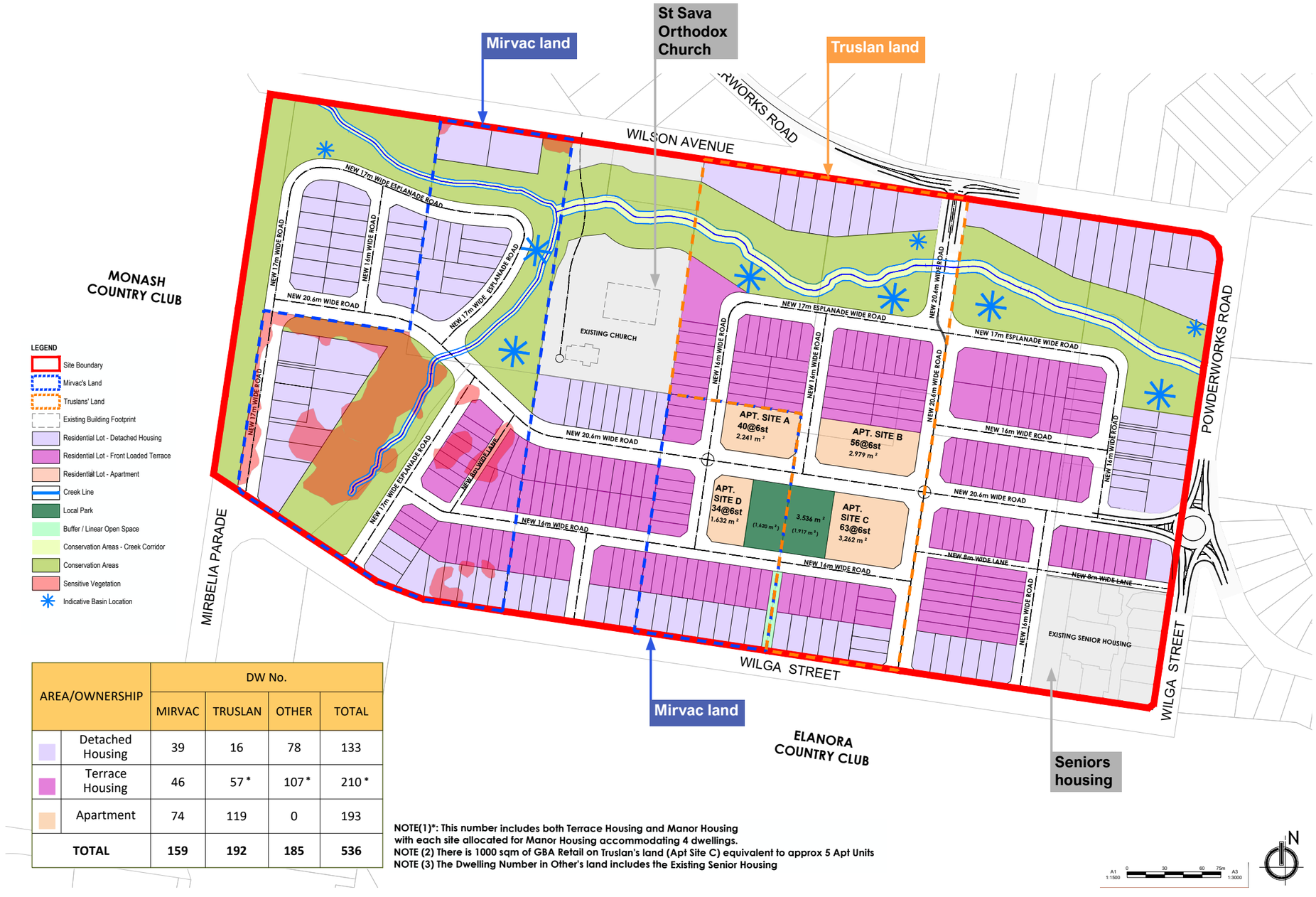
- 133 detached residential lots
- 210 terrace houses
- 193 apartment units
- Areas of open space / recreation, including 3500m^2 of local parks
- Conservation area and rehabilitation of watercourses and a 6.6ha area of biodiversity significance.

The Serbian Orthodox Church (St Sava) and a seniors housing develompent sit within the bounds of the precinct but do not form part of the Planning Proposal.

This masterplan has been utilised to inform servicing investigations presented in the following sections.

Table 1: Land ownership

Land owner	Area
Mirvac Lands	8.1ha
Truslan Lands	6.1ha
St Sava Serbian Orthodox Church	2.0ha
Others	12.6ha
Wilga Wilson Precinct Total	**28.8ha**



AREA/OWNERSHIP	DW No.			
	MIRVAC	TRUSLAN	OTHER	TOTAL
Detached Housing	39	16	78	133
Terrace Housing	46	57*	107*	210*
Apartment	74	119	0	193
TOTAL	**159**	**192**	**185**	**536**

NOTE(1)*: This number includes both Terrace Housing and Manor Housing with each site allocated for Manor Housing accommodating 4 dwellings.
NOTE (2) There is 1000 sqm of GBA Retail on Truslan's land (Apt Site C) equivalent to approx 5 Apt Units
NOTE (3) The Dwelling Number in Other's land includes the Existing Senior Housing

Figure 3: Masterplan (Place Design Group)

4. Potable Water

There is existing potable water infrastructure located around the precinct.

Investigations by Qalcheck are documented in Appendix A - Potable Water and Wastewater Servicing Strategy (Qalcheck, April 2025) which found the precinct is likely to be serviced by reservoir WS0214. It has the required pressures available to adequately service the precinct (min. 20m head) and will not result in excessive pressures (over 60m). The investigations do not make provision for fire fighting requirements.

There are likely to be upgrades to reticulation in order to service the apartment development. This includes upgrading a 320m length of lead in from DN150 to DN200.

There is no existing recycled water infrastructure in the vicinity of the precinct and it is not anticipated Sydney Water will require recycled water. It has been adopted that recycled water is not required to be provided to the development.

The existing trunk water infrastructure has the capacity, with upgrades, to service the development proposed in the masterplan, and will not pose a significant constraint development of the precinct.

Figure 4: Potable water infrastructure

5. Wastewater

The precinct is currently serviced by pump station SP0388, located 1.66km to the south-east of the precinct.

Investigations by Qalcheck are documented in Appendix A - Potable Water and Wastewater Servicing Strategy (Qalcheck, April 2025).

The investigations found that new trunk wastewater infrastructure will be required from the subject precinct east to Elanora Tennis Club, a distance of approximately 780m and comprising a DN225 gravity sewer main subject to approval by Sydney Water.

Additionally upgrades between the precinct and SP0388 are likely to be required.

New wastewater infrastructure at the eastern boundary of the precinct is required to connect the precinct to the Warriewood Waste Water Treatment Plant

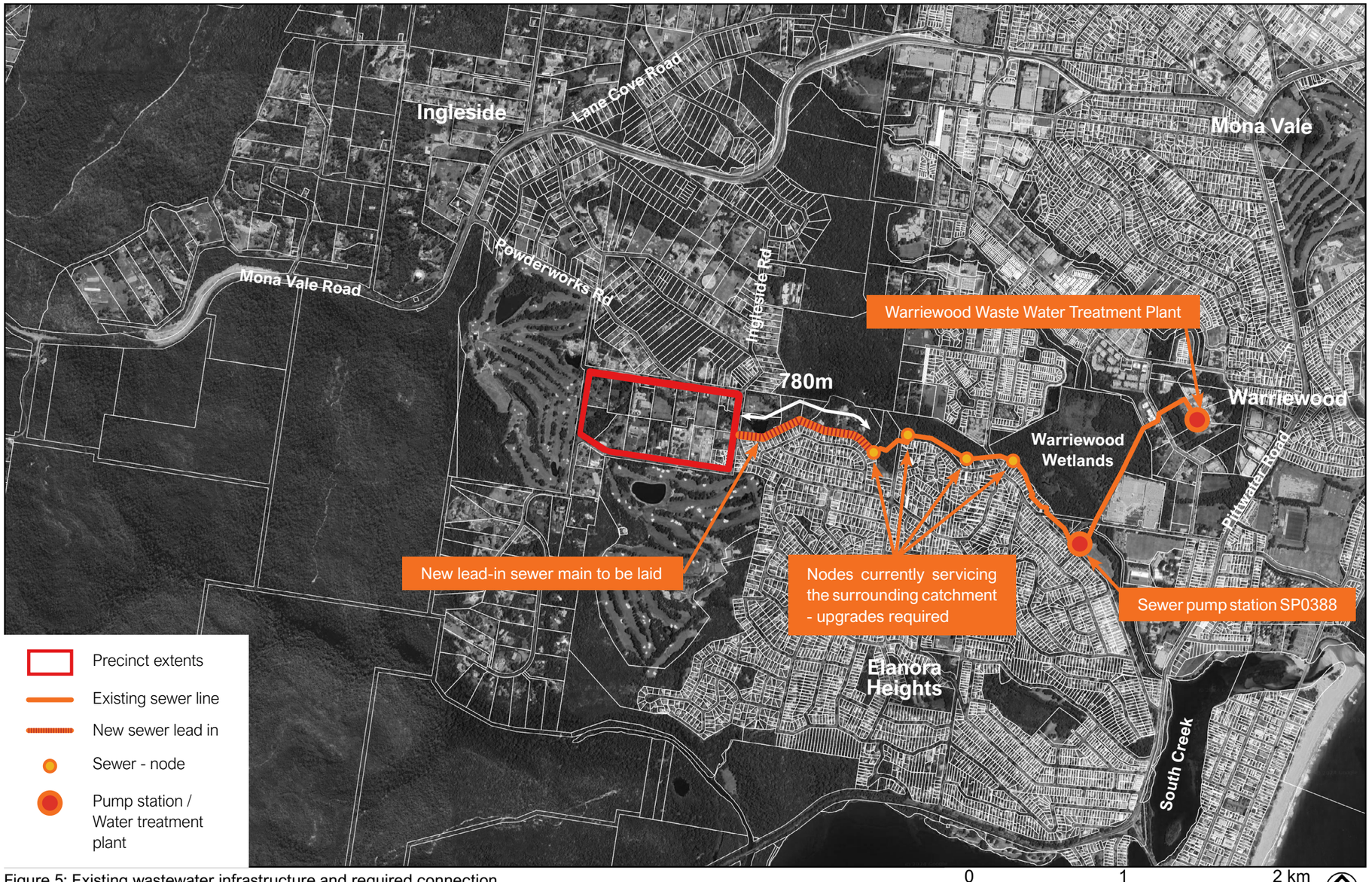


Figure 5: Existing wastewater infrastructure and required connection

6. Electricity

Existing electrical infrastructure in the vicinity of the precinct is largely provided through an overhead network.

The total anticipated load requirement is slightly greater (0.03MVA) than the 2.25MVA or 118A at 11kV (3000 ALV) as outlined in the Appendix B - Preliminary Enquiry – Asset Investment Planning Assessment.

The precinct is within the Ausgrid distribution network and serviced by the Narrabeen Zone Substation and Narrabeen PA2L, a Short Rural 11kV feeder.

The existing pole substation PT.17113 will need to be updated to 400kVA from 200kVA.

Power Solutions has engaged with Ausgrid and determined that no high voltage feeds would be required to be installed from the Narrabeen Zone Substation to the precinct to meet the anticipated electrical demand.

No high voltage feeds are required to meet the anticipated electrical demand generated by the proposed development.

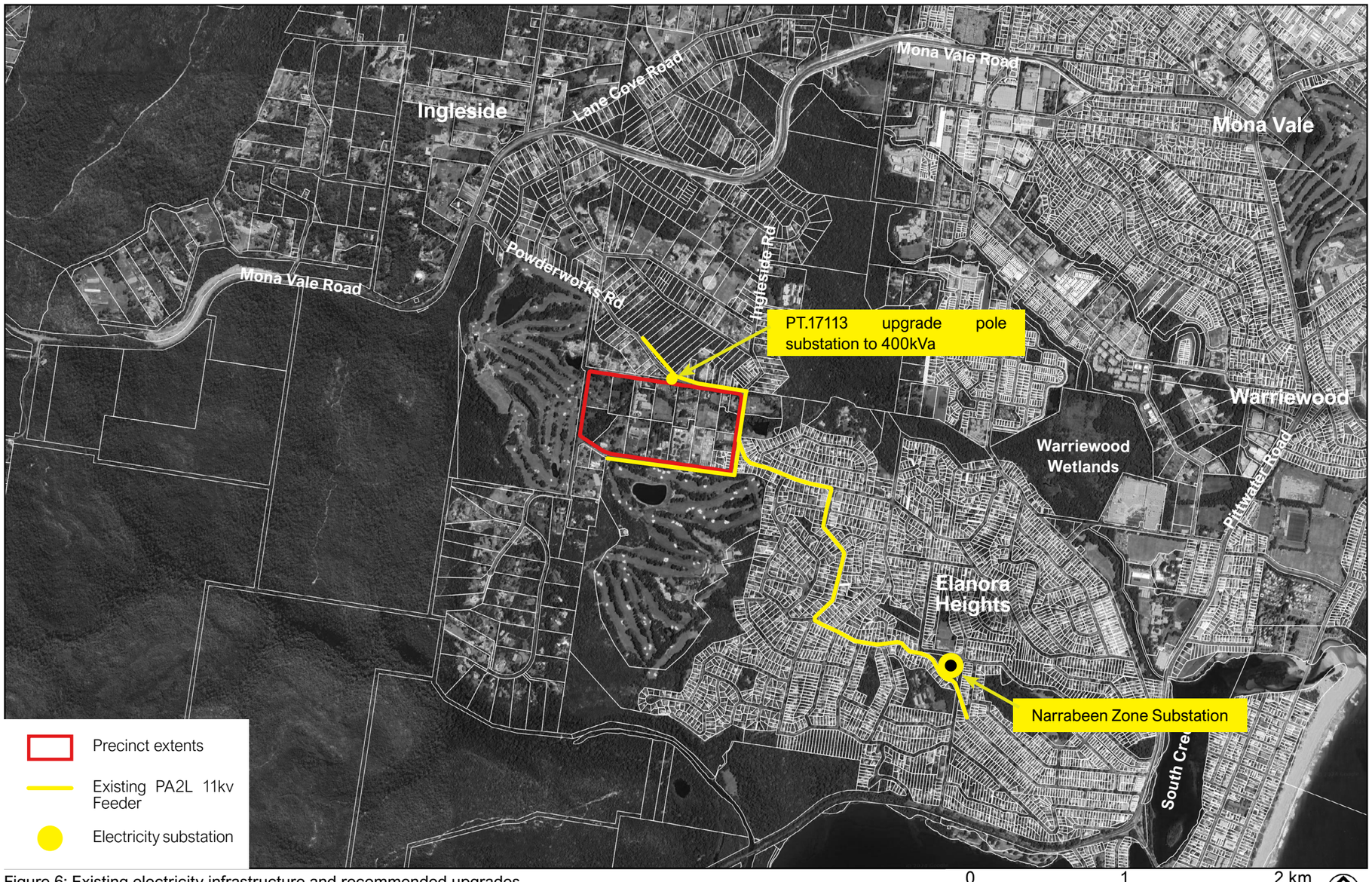


Figure 6: Existing electricity infrastructure and recommended upgrades

7. Communications

The precinct is currently serviced by NBN and mobile services. The nearby suburbs are all serviced by fixed line NBN services. Given the scale of the development proposed all within the precinct, its envisaged that the existing fixed line NBN services will be able to be extended to the precinct.

Figure 7: NBN Coverage Map (nbnco.com.au)

The precinct is capable of being serviced by NBN and mobile services.

8. Gas

Jemina identified in their response included in the Cardno Infrastructure Delivery Plan for South Ingleside Precinct Report prepared for department of Planning Industry and Environment March 2021 that there is an existing 300kPa 32mm gas network in the area along Powderworks Road and Ingleside Road.

There is also a high pressure 1050kpa gas network located on Mona Vale Road which could be utilised for a new district regulator station, should it be required for a feeder to reticulate to service the development.

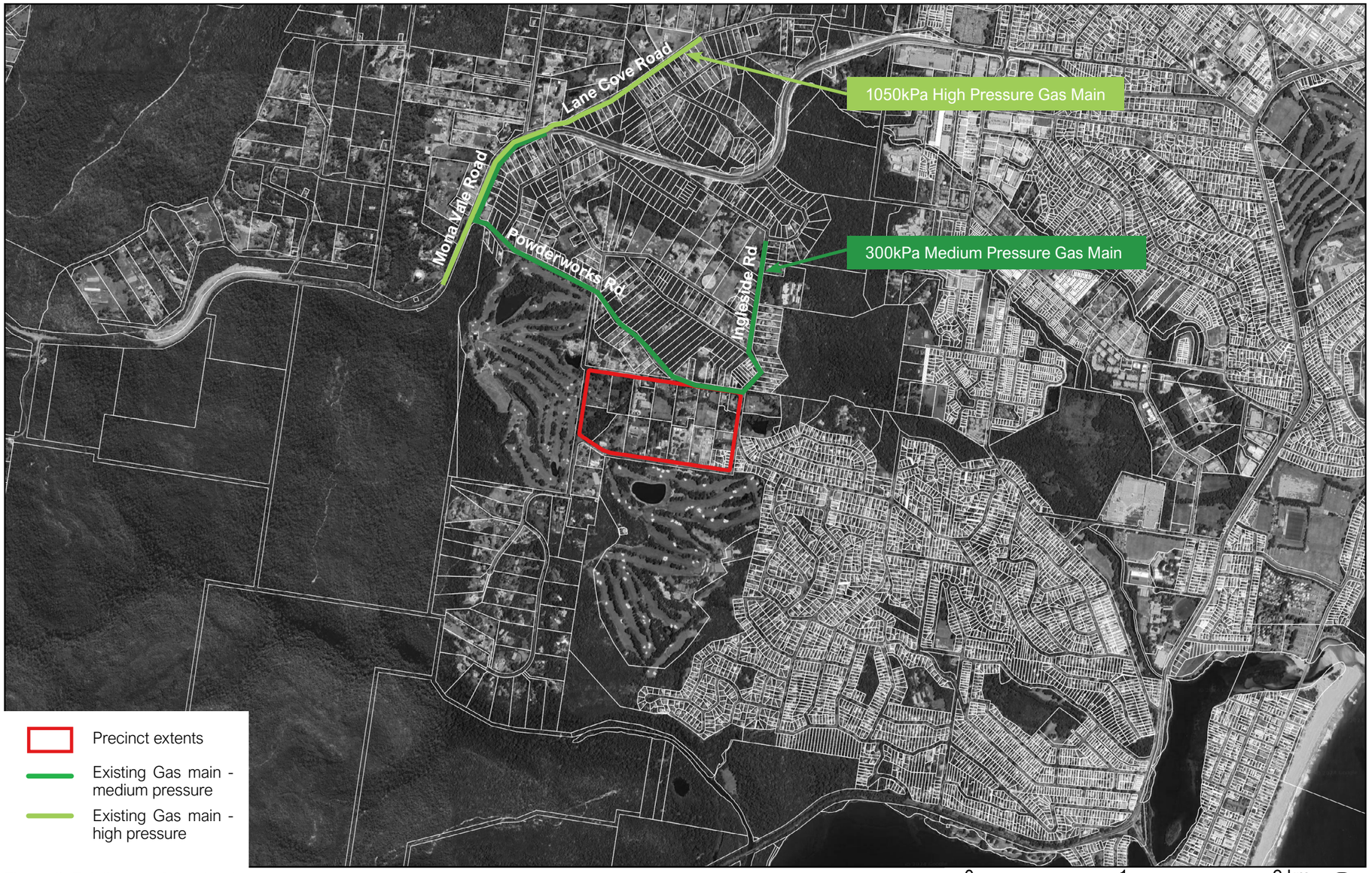


Figure 8: Existing gas infrastructure

Gas is typically not a critical service to enable development and if required, it is considered that this will not pose a constraint to the development.

9. Conclusion

A review of BYDA information and other authority information indicates that there is existing trunk infrastructure located in close vicinity to the precinct. It is anticipated that with appropriate upgrades / lead in works, the proposed development could be adequately serviced by all utility services.

A summary of each utility service to service the proposed overall development is provided in Table 2.

Table 2: Summary of Existing Utility Services Infrastructure

Utility service	Currently available?	Are upgrades required?	Can development be serviced?*
Potable water	Yes	320m of DN200 lead-in	Yes
Recycled water	No	Service not required	N/A
Wastewater	Yes	Lead-in between precinct and Sewer Pump Station	Yes
Electricity	Yes	Minor asset upgrades required	Yes
Communications	Yes	Yes – fixed line service can be provided through upgrade works	Yes
Gas	No	Service not required	N/A

* Details of exact requirements to service the development subject to discussions with each authority as part of future development phases.

Whilst detailed discussions are required with each service authority to confirm the capacities of their existing networks and any required upgrades, it is anticipated these will not pose a constraint to the development.

Appendix A

POTABLE WATER AND WASTEWATER SERVICING STRATEGY
Qalchek | April 2025

POTABLE WATER AND WASTEWATER SERVICING STRATEGY FOR PROPOSED INGLESIDE DEVELOPMENT (RE-ZONING)

APRIL 2025

Feasibility Report

Qalchek reference: PM 33858

T 02 4722 8181
F 02 4722 3155
E admin@qalchek.com.au
www.qalchek.com.au
PO Box 465 Emu Plains, 2750
Unit 2, Level 1, 15-17 David Road EMU PLAINS, 2750
ABN 14 062 942 509

REVISION DETAILS				
Rev.	Date	Description	Author	Verifier
A	27.05.24	First Issue	Amanpreet Kalsi	Shyam Thapa
B	31.05.24	Additional info included as per Client review	Amanpreet Kalsi	Shyam Thapa
C	12.08.24	Report updated to suit new Development Yields	Amanpreet Kalsi	Shyam Thapa
D	24.04.25	Report updated to suit new Development Yields	Amanpreet Kalsi	Shyam Thapa

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1. INTRODUCTION

Qalchek has been engaged by Mirvac Homes (NSW) P/L (C/- ADW Johnson) to undertake a Wastewater / Potable Water servicing strategy for a future residential re-zoning at Ingleside.

The area to be developed is enveloped within Powder Works Rd, Wilga St, Mirbelia Pde and Wilson Ave at Ingleside, just north of the Elanora Country Club (Golf course)

Please refer to the map in Fig.1 below for the sites' approximate location.

Figure 1: Site locality, not to scale.

2. REPORT OBJECTIVES

This report aims to determine the following:

- Estimate the possible development Water & Wastewater flow parameters.
- Investigate the nearest available point of connection which could service the development.
- Propose possible Potable Water and Wastewater service options.

3. DEVELOPMENT YEILDS

Based on the information available, the total area to be developed is approximately 28.1Ha. The development is anticipated to comprise of the following:

- 343 Residential lots over approx. 12.3 Hectares (Ha)
- 193 units within four (4), six (6) storeys building over approx. 1.01Ha
- Two (2) Local parks over approx. 0.35Ha

The remaining area within the development would be for local roads, stormwater detention zones and Conservation areas. A Master Plan for the development is attached at Appendix A.

There is an existing Church at No.5 Wilson Ave (approx. 2Ha) which will remain, however, for the purposes of the servicing strategy, the service demand for this property will be considered.

4. ESTIMATED DEMANDS

4.1. SEWER

Using the current Sydney Water Flow estimation methods, the expected sewage flow for the total development under normal operation is presented below.

Development type	# of units	EP/Unit	EP for Development type
Residential Lots	343	3.5/Lot	1200.5
Apartments	193	2.5/ apartment	482.5
Local Park	0.35	20/Ha	7.0
Existing Church	2.0	25/Ha	50
		Total EP	**1740.0**

Pending a detailed review, SWC may alter the EP loadings for the Development types identified above.

4.2. POTABLE WATER

SWC has provided a guideline to estimate the average daily water based on development type, this document can be found here: https://www.sydneywater.com.au/content/dam/sydneywater/documents/provider-information/constructing-new-pipes/average-daily-water-use-by-property-type.pdf

Development type	# of units	Average Water Demand (L/#/Day)	Water Demand per Development type (ML/Day)
Residential Lots	343	623/single Torrens lot	0.214
Apartments	193	500/unit	0.097
Local Park	2	623/park (assumed)	0.001
Existing Church	1532	1.30/Square meter of Developed floor area	0.002
		Total Demand	**0.31ML/Day**

4.3. RECYCLED WATER

At this stage, we do not anticipate SWC to have provision of a recycled water network for this development.

5. SITE LAYOUT

In general, the site falls West to East. Ground levels at the Eastern end of the development ranges between AHD 98m to 112m, while the western end of the site has levels between AHD 118m to 130m. See figure 2 below:

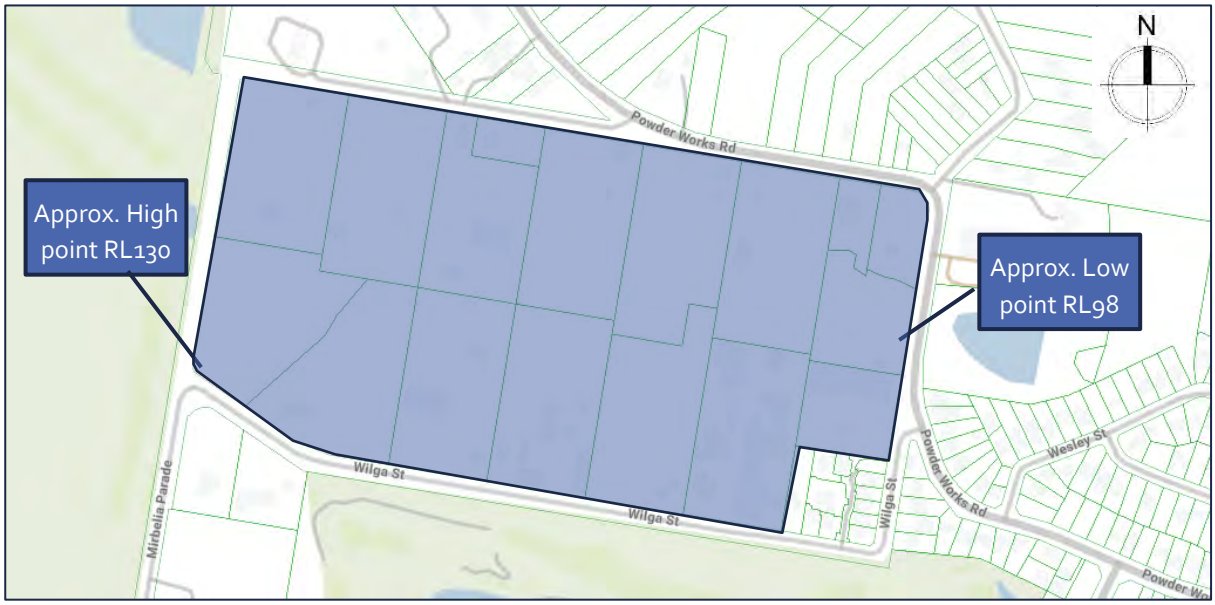


Figure 2: Site Topography, not to scale.

6. WASTEWATER SERVICING SOLUTIONS

This area is currently being serviced by pump station SP0388, which is located at the corner of Natuna St and Garden St. It is assumed that this pump station has the capacity available to service for the subject development.

The nearest gravity sewer is located at No.210 Powder Works Rd. This is DN150 VC sewer and is approx. 40m away from South-easter corner of the development area. It has been identified there is an opportunity for the existing Sewer network to serve part of the proposed development without the need for any lead-ins or upsizing. However, this can only be confirmed via detailed hydraulic modelling.

The current WSA 02 requirement (as per CL 4.5.5 table 4.4) are that a DN150 sewer shall serve a maximum of 1050E.P. (regardless of any hydraulics analysis). Therefore, this development (as a whole) would require a minimum of DN225 Sewer for its servicing needs (even if some lots are drained into the Existing DN150VC sewer).

The nearest DN225 sewer connection point available is located at the rear of No.13 Wesley St and within the `Elenora Tennis Club`. To service the subject development, it is expected that approx. 780m of new DN225 Sewer will need to be constructed from the development low point to the DN225 sewer within the `Elanora Tennis Club`. Refer to the figure 3 below.

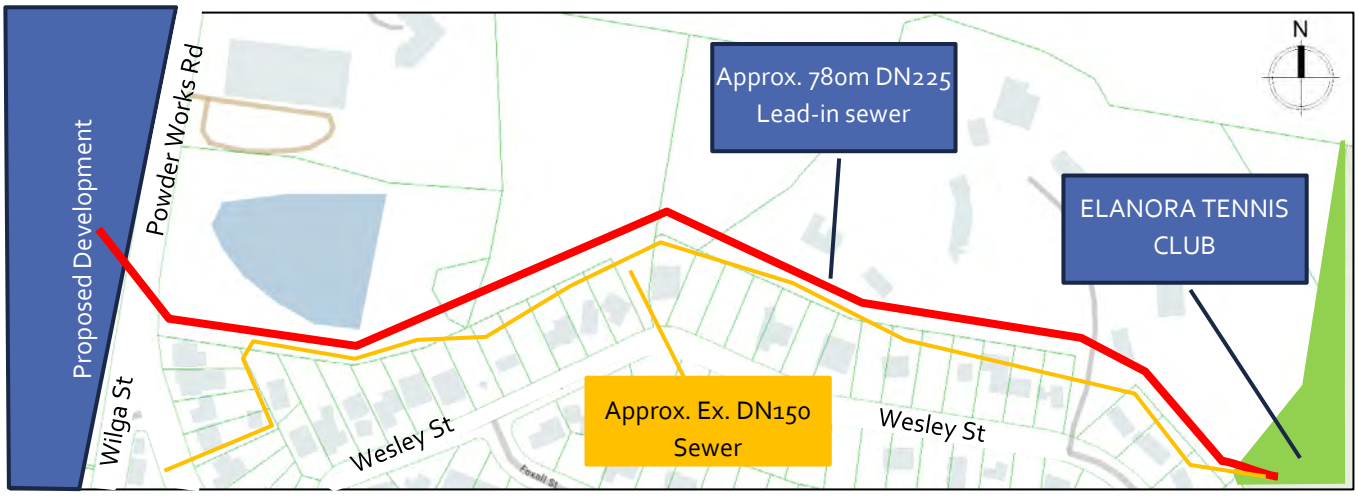


Figure 3: New DN225 Sewer Lead-in, not to scale.

Due to the site topography, we expect the new DN225 to be laid with minimum cover (900mm) and the structures to be built at minimum depth (1.2m). However, this will be subject to final design. The new DN225 lead-in sewer would need to be laid at minimum 0.54% grade to meet capacity and self-cleansing requirements. At a grade of 0.54%, the new pipe will have a capacity of 2044EP (or 584 standard residential lots). Should the pipe be laid at a higher grade, it's capacity will increase accordingly (capped at 4100EP for a DN225, regardless of grade)

6.1. WASTEWATER DESKTOP HYDRAULIC ANALYSIS

A Desktop analysis was conducted to ensure the existing sewer is adequate to service the subject development, over four (4) crucial nodes between the DN400 VC connection point (Node 1) and the DN225 VC start (Node 4). It is assumed that the DN400 VC sewer has enough capacity to service existing properties and the subject development, this will be subject to SWC confirmation. These nodes have been selected as they capture their respective catchments. These nodes (and respective catchments) are shown in the figure 4 and shown in detail within Appendix B. Node 5 is the Development low point.

The minimum sewer grades between these nodes are the most crucial, therefore for the purposes of this study, the minimum grades identified were used. Based on the minimum grades for each node (and respective catchment) and the proposed subject development (1740EP), a hydraulics analysis has been conducted using SWC's latest Flow schedule calculator (May 2023). The results of the existing sewer hydraulics analysis between Node1 and Node 4 are presented within Appendix C and summarised on the following page:

Node run	Sewer Size and Material	Shallowest grade	E.P. loading	Self-Cleansing	Slime Control	Pipe E.P. Capacity	Capacity
1-2	DN300 VC	0.35%	2972	Not OK	Not OK	3702	OK
2-3	DN225VC	0.60%	2416	OK	N/A – Retic	2186	Not OK
3-4	DN225VC	1.14%	2293	OK	N/A - Retic	3263	OK

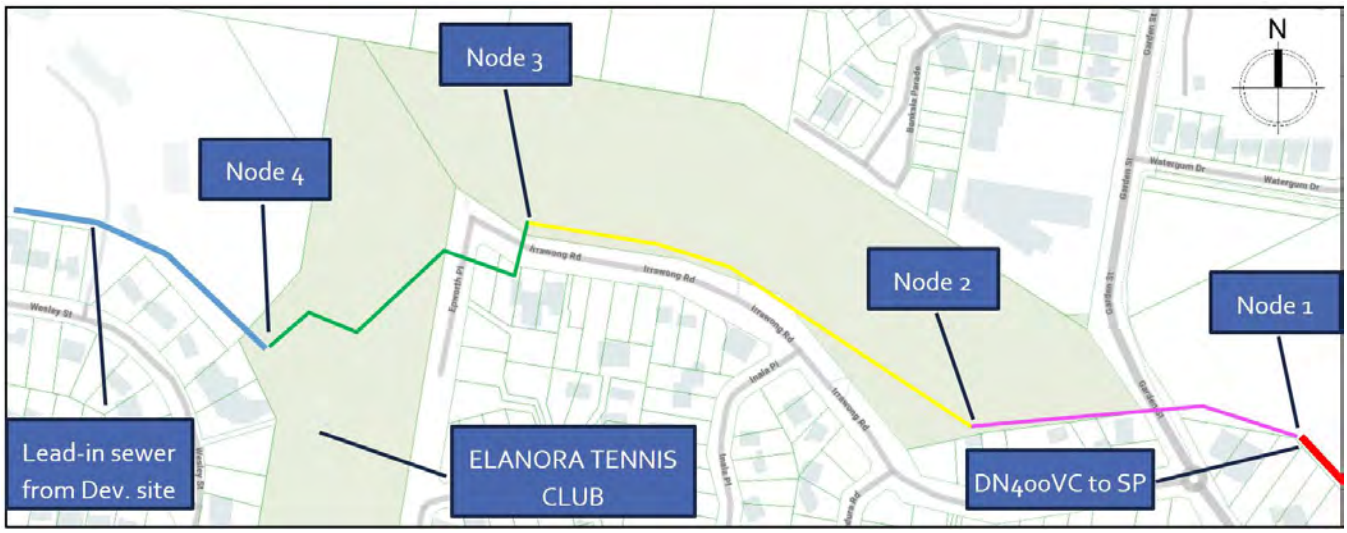


Figure 4: Sewer analysis route, not to scale. Refer to Appendix A for detailed Sewer information.

These results show that the existing Sewer between Node 3 and 4 has adequate hydraulic capacity to serve its respective catchments along with the proposed subject development. Whilst the new lead-in sewer (Upstream of Node4) has a higher capacity, the reticulation network will be constricted between Node 1-3, where the networks doesn't have enough capacity (Node 2-3) or meet performance requirements (Node 1-2).

The existing DN225 sewer between Node 2 and 3 is primarily laid at 0.60% (approx. 335m) and as such is unable to cater for the proposed development. To Provide adequate sewer service, the existing DN225 sewer will need to be adjusted to be laid at a minimum grade of 0.70%. This would likely be in the form of a new DN225 Sewer laid parallel to the existing sewer which can be decommissioned once the new sewer is connected.

The existing DN300 VC sewer between Nodes 1 & 2 does not meet self-cleaning or slime-control requirements, due to the combined flow of existing and proposed development, as it is laid at a very flat grade (0.35%). It is likely that SWC will require this section of the network to be upgraded to cater for the new development. As such, we have explored two (2) options to address this:

Option 1 – Relay existing DN300 between Nodes 1 and 2 with minimum 0.75% grade (approx. 160m) to achieve compliant hydraulic performance. Flow Schedule for this option is presented within Appendix C.

Option 2 – Intercept sewer upstream of Node 2 and lay approx. 110m of new DN225 sewer to DN375 MH with a min. grade of 0.70%. This option assumes that the DN375 sewer (which connects to Node 1) will have enough capacity to service the existing respective catchments and the proposed development. Flow Schedule for this option is presented within Appendix C.

6.2. WASTEWATER COSTING

The following indicative costings has been provided based on the following:

- No Sydney Water funding would be applicable as there are no apparent adjacent upcoming developments that would benefit from the new Sewer lead-in.
- No costs are considered for the sewer upgrade options between Node 1 and 4 as these are subject to SWC confirmation and may be subject to a funding arrangement.
- No costs are considered for the 'internal' reticulation sewer as these are 'normal' expenses for a development of this nature.
- External consultant costs (REF, Geotech etc.) are assumed to be part of the development costs as these can be integrated into the 'internal' works.
- Basic access and restoration costs are included, however no specific factors which may arise during the detailed design process are included, these may be (and not limited to) environmental restrictions, restricted construction times, extensive access improvements, restoration, compensation etc.
- Costs based on basic open trenching works only and normal access shafts (WSA-137 MS/MC's, or DTC MH's)

	Unit type	# of units	$ /unit	Estimated cost
Lead-In from site to the existing DN225 sewer	Meters	780	$1,200.00	$936,000.00
Anticipated WSC cost (Design and PM)	Lump Sum	1	$90,000.00	$ 90,000.00

7. POTABLE WATER SERVICING SOLUTION

This site has ground levels ranging between 98m to 130m AHD. The site is likely to be serviced by reservoir WS0214 which has an operating service RL of 166m. It is anticipated that this Reservoir will be able to supply adequate pressure for all the dwellings (min. 20m head) and will not result in excessive pressures (over 60m). Please note, Sydney Waters' primary task is to provide potable water for domestic supply. Sydney Water does not need to provide water to meet firefighting requirements.

The proposed development comprises of four (4) six (6) storey apartment blocks. As per WSA-03 CL3.1.2 (Table 3.1), the apartment blocks will need a frontage to a minimum DN200 potable water main. To meet the minimum potable water main size requirement, a DN200 lead-in main to maintain supply will be required from the corner of Powder Works Rd and Elanora Rd to the Corner of Wilga St and Powder Works Rd. This is briefly shown in Figure below.

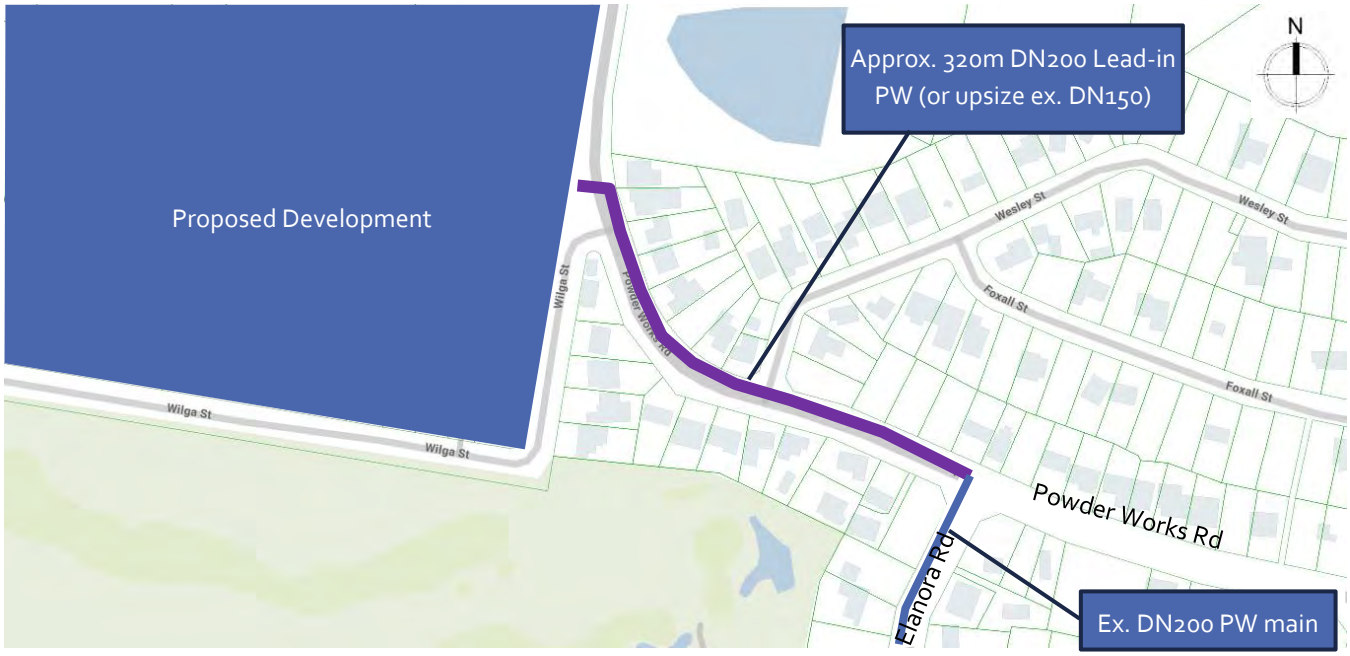


Figure 5: Brief Potable Water lead-in schematic (Not to Scale)

It has been identified that the existing DN100 main in Wilga St may need to be upsized to a DN150 to maintain supply and reduce hydraulic losses (i.e. maintain pressure). We expect the Ex. Mains in Powder works Rd and Wilson Ave to remain as is, however, pending review of any civil works, these may need to be adjusted to suit.

It has been identified there is an opportunity for the existing water network to serve part of the proposed development (namely the residential lots) without the need for any lead-ins or upsizing. However, this can only be confirmed via detailed hydraulic modelling by SWC.

We do not anticipate the need for any PRV's or supply Zone separations at this stage.

The above will be subject to detailed hydraulic modelling analysis by SWC. Please refer to Appendix D for the anticipated potable water strategy plan.

7.1. POTABLE WATER COSTING

The following indicative costings has been provided based on the following:

- No Sydney Water funding would be applicable as there are no apparent adjacent upcoming developments that would benefit from the new water lead-in.
- Cost for upsizing mains along Wilga St are considered part of the development cost as these will eventually form part of the reticulation network.
- No costs are considered for the 'internal' reticulation mains as these are 'normal' expenses for a development of this nature.
- External consultant costs (REF, Geotech etc) are assumed to be part of the development costs as these can be integrated into the 'internal' works.
- Basic access and restoration costs are included, however no specific factors which may arise during the detailed design process are included, these may be (and not limited to) environmental restrictions, restricted construction times, detailed restoration etc.
- Costs based on basic open trenching works only.

	Unit type	**# of units**	**$ /unit**	**Estimated cost**
Lead-In from site to the existing DN200 PW main	Meters	320	$600.00	$192,000.00
Anticipated WSC cost (Design and PM)	Lump Sum	1	$20,000.00	$ 20,000.00
Total cost	$212,000.00			

8. SWC INFRASTRUCUTRE CONTRIBUTIONS

Effective from 1 December 2023, the NSW Independent Pricing and Regulatory Tribunal (IPART) has registered fourteen (14) wastewater infrastructure contribution prices and four drinking water prices to be levied by Sydney Water. These water and wastewater infrastructure contributions will be gradually reintroduced from 1 July 2024. In 2024-25, prices will be capped at 25% of the full price registered with IPART, rising to 50% in 2025-26, with full contributions from 1 July 2026, in line with a transition plan approved by the NSW Government. SWC policy is to calculate and charge these contributions at the time of development connection. It is likely that this development will be subject to the full charges as it is still in pilot stages (pre-zoning) i.e. first connections likely to be after 1 July 2026.

The infrastructure contributions are calculated on an ET (equivalent Tenement) basis where 1 ET is identified as a single residential lot at 3.5EP pet lot. The proposed development has a total EP loading of 1740 (Section 4.1), which includes 50EP for the existing church and that SWC would be expected to recover these charges once the Church applies to connect to the sewer mains. We do not believe this 50EP to be calculated within the DSP charges, therefore, the charges will be based on 1690EP or 482.86ET.

The charges for Potable water and Wastewater are based on the service area and the following breakdown is made for this development:

Service Stream	Applicable DSP	$ per ET	Total ET	Total ($)
Potable Water	Greater Sydney Drinking Water DSP	3,399.99	482.86	1,641,719.17
Wastewater	Outer Sydney Coastal Wastewater DSP	2,467.44	482.86	1,191,428.08

The above are based on current published figures and will be subject to any CPI reviews.

Further details can be found in Sydney Water's website, in the following link:

https://www.sydneywatertalk.com.au/infrastructure-contributions

9. RECOMMENDATIONS

1. The client needs to review the development site yields as this will affect all assumptions within the report.

2. Waste-Water items:

   - A detailed wastewater master plan should be prepared for the entire site early in the development process.
   - Early consultation with Sydney Water to determine if the existing DN375 and DN400 sewer main has the capacity to service the development.
   - Consultation with owners likely to be affected by the sewer lead-in and/or augmentation works.
   - Undertake a detailed survey from the site to the first Lead-In Sewer connection point.
   - There may be an opportunity for the development to connect to the existing Wastewater network (DN150VC) in the initial stages of the development and delay the lead in main works. Sydney Water should be consulted to determine the number of lots that can be connected before the lead-in main and/or upsizing works would be required.

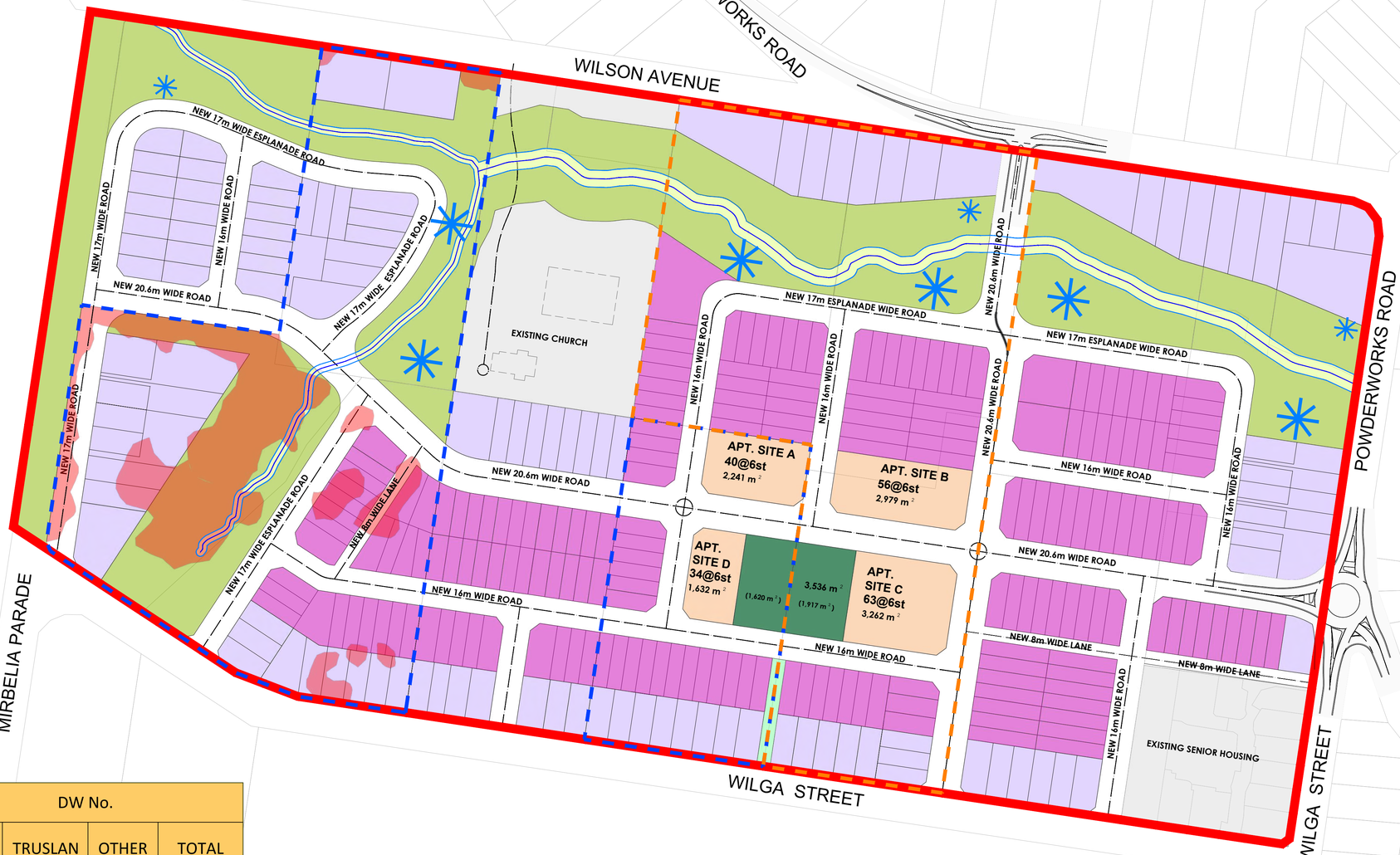
3. Potable Water items:

   - Early consultation with Sydney Water to determine the existing Reservoirs capacity to service the proposed development.
   - There may be an opportunity for the development to connect to the existing Potable Water network (DN100 & DN150 PW mains) in the initial stages of the development and delay the lead in potable water main works. Sydney Water should be consulted to determine the number of lots that can be connected before the lead-in potable water main and/or upsizing works would be needed.

APPENDIX A

Development Master Plan

300360-MP_ADWJ_MP



LEGEND

- Site Boundary
- Mirvac's Land
- Truslans' Land
- Existing Building Footprint
- Residential Lot - Detached Housing
- Residential Lot - Front Loaded Terrace
- Residential Lot - Apartment
- Creek Line
- Local Park
- Buffer / Linear Open Space
- Conservation Areas - Creek Corridor
- Conservation Areas
- Sensitive Vegetation
- Indicative Basin Location

AREA/OWNERSHIP		DW No.			
		MIRVAC	TRUSLAN	OTHER	TOTAL
	Detached Housing	39	16	78	133
	Terrace Housing	46	57 *	107 *	210 *
	Apartment	74	119	0	193
TOTAL		**159**	**192**	**185**	**536**

NOTE(1)*: This number includes both Terrace Housing and Manor Housing with each site allocated for Manor Housing accommodating 4 dwellings.
NOTE (2) There is 1000 sqm of GBA Retail on Truslan's land (Apt Site C) equivalent to approx 5 Apt Units
NOTE (3) The Dwelling Number in Other's land includes the Existing Senior Housing

N

ver.	date	comment	drawn	pm	co-ordinate information	level information	scale (A1 original size)	notes
A	09.04.2025	DRAFT	JDU	PJA	CO-ORDINATE SYSTEM: MGA56 GDA2020	DATUM: N/A CONTOUR INTERVAL: N/A	A1 1:1500 0 30 60 75m A3 1:3000	

drawing title:

CONCEPT MASTERPLAN

location: INGLESIDE AND ELANORA HEIGHTS, NSW

council: NORTHERN BEACHES COUNCIL

dwg ref: 300360-MP-012-V01

client:

adw johnson
central coast office ph: (02) 4305 4300
hunter office ph: (02) 4978 5100
sydney office ph: (02) 8046 7411
www.adwjohnson.com.au

working beyond expectations

APPENDIX B

Wastewater Servicing Strategy plan

Proposed Development
TOTAL 1740.07EP
OVER 15.62 Ha

Low point - RL 98

NODE 5

NEW DN225 lead-in sewer main approx. 780m to be laid with minimum 0.54% grade

DN225 Ex. Sewer Grade range between 1.14% to 53.45%. Ex. Sewer has capacity

143 lots

NODE 4

NODE 3

DN225 Ex. Sewer Grade range between 0.60% - 7.72%. Will require new DN225 @ min. 0.70% grade

Option 2 - Intercept ex. Sewer U/S of 'Node 2' and lay new DN225 pipe to Ex. DN375 MH - approx. 110m with min. 0.70% grade

DN375 Sewer - approx. connection point (OPT2)

35 lots

159 lots

NODE 1
DN400VC
D/S of here

NODE 2

Option 1 - Relay existing DN300 between Node 1 and 2 with atleast 0.75% grade (current low grade is 0.35%)

SP0388

Map:137 Grid:Q12 Edition:Sydney UBD Edition 41

0m 60m 120m 180m 240m 300m

Scale 1:7500

APPENDIX C

Wastewater Servicing Strategy Flow Schedule

SEWERAGE FLOW SCHEDULE - LEAKTIGHT Sewers

Complied by: Amanpreet Kalsi — **Date:** 24-Apr-25
Checked by: Shayam Thapa — **Date:** 24-Apr-25
Plan No PM33858 — **Location:** Ingleside — **JOB No. (SWC use):** 0
e-Developer No. 0 — **Description:** Status quo system check (With new Lead-in to Node 4) — **Date:** 24-Apr-25
Flow Schedule Ver. May 2023

SUMMARY

Section	Line No	Chainage	Pipe Status	Total Area	Total Gravity	Total Grav + Pump	Pipe Material	Pipe Size (DN)	Pipe Size (ID)	Pipe Grade	Design Flow (DF)	Actual PDWF	Qf (Capacity)	Velocity @ Qf	Velocity @ PDWF	SHEAR STRESS	Grade Check	Max EP Check	Self Cleansing	Slime Control	Capacity Check
		m		Ha	EP	EP		mm	mm	%	L/s	L/s	L/s	m/s	m/s	Pa		for dia <=300			
2-1	1	00	OLD	49.421	2972	2972	Vitrified Clay	300	300	0.35	37.82	12.61	58.10	0.82	0.66	1.84		RETIC 3702EP MAX	Self Cleansing Not OK	Slime Control Not OK	Capacity OK
3-2	1	00	OLD	35.721	2416	2416	Vitrified Clay	225	224	0.60	32.02	10.67	34.91	0.89	0.78	2.72		RETIC 2186EP MAX Check	Self Cleansing OK	NA - Reticulation	Capacity OK
4-3	1	00	OLD	33.021	2293	2293	Vitrified Clay	225	224	1.14	30.73	10.24	48.12	1.22	0.97	4.44		RETIC 3263EP MAX	Self Cleansing OK	NA - Reticulation	Capacity OK
5-4	1	00	NEW	15.611	1740	1740	PVC SN8	225	234	0.54	24.90	8.36	37.04	0.86	0.70	2.25		RETIC 2044EP MAX	Self Cleansing OK	NA - Reticulation	Capacity OK

Figure 6: Sewer network check with Subject development loading.

SEWERAGE FLOW SCHEDULE - LEAKTIGHT Sewers

Complied by: Amanpreet Kalsi — **Date:** 24-Apr-25
Checked by: Shayam Thapa — **Date:** 24-Apr-25
Plan No PM33858 — **Location:** Ingleside — **JOB No. (SWC use):** 0
e-Developer No. 0 — **Description:** Relay existing DN300 between Node 1-2 (option 1) — **Date:** 24-Apr-25
Flow Schedule Ver. May 2023

SUMMARY

Section	Line No	Chainage	Pipe Status	Total Area	Total Gravity	Total Grav + Pump	Pipe Material	Pipe Size (DN)	Pipe Size (ID)	Pipe Grade	Design Flow (DF)	Actual PDWF	Qf (Capacity)	Velocity @ Qf	Velocity @ PDWF	SHEAR STRESS	Grade Check	Max EP Check	Self Cleansing	Slime Control	Capacity Check
		m		Ha	EP	EP		mm	mm	%	L/s	L/s	L/s	m/s	m/s	Pa		for dia <=300			
2-1	1	00	NEW	49.42	2972	2972	PVC SN8	300	289	0.75	37.82	12.61	77.13	1.17	0.87	3.37		RETIC 5869EP MAX	Self Cleansing OK	Slime Control OK	Capacity OK
3-2	1	00	NEW	35.72	2416	2416	PVC SN8	225	234	0.70	32.02	10.67	42.17	0.98	0.82	3.06		RETIC 2419EP MAX	Self Cleansing OK	NA - Reticulation	Capacity OK
4-3	1	00	OLD	33.02	2293	2293	Vitrified Clay	225	224	1.14	30.73	10.24	48.12	1.22	0.97	4.44		RETIC 3263EP MAX	Self Cleansing OK	NA - Reticulation	Capacity OK
5-4	1	00	NEW	15.61	1740	1740	PVC SN8	225	234	0.60	24.90	8.36	39.04	0.91	0.73	2.44		RETIC 2186EP MAX	Self Cleansing OK	NA - Reticulation	Capacity OK

Figure 7: Sewer network with Option 1 augmentation as per Option 1 i.e. DN300 sewer re-laid with minimum 0.75% grade between Nodes 1 and 2

SEWERAGE FLOW SCHEDULE - LEAKTIGHT Sewers

Complied by: Amanpreet Kalsi — **Date:** 24-Apr-25
Checked by: Shayam Thapa — **Date:** 24-Apr-25
Plan No PM33858 — **Location:** Ingleside — **JOB No. (SWC use):** 0
e-Developer No. 0 — **Description:** Option 2 - New DN225 to DN375 — **Date:** 24-Apr-25
Flow Schedule Ver. May 2023

SUMMARY

Section	Line No	Chainage	Pipe Status	Total Area	Total Gravity	Total Grav + Pump	Pipe Material	Pipe Size (DN)	Pipe Size (ID)	Pipe Grade	Design Flow (DF)	Actual PDWF	Qf (Capacity)	Velocity @ Qf	Velocity @ PDWF	SHEAR STRESS	Grade Check	Max EP Check	Self Cleansing	Slime Control	Capacity Check
		m		Ha	EP	EP		mm	mm	%	L/s	L/s	L/s	m/s	m/s	Pa		for dia <=300			
2-1	1	00	NEW	35.74	2416	2416	PVC SN8	225	234	0.70	32.03	10.68	42.17	0.98	0.82	3.06		RETIC 2419EP MAX	Self Cleansing OK	NA - Reticulation	Capacity OK
3-2	1	00	NEW	35.74	2416	2416	PVC SN8	225	234	0.70	32.03	10.68	42.17	0.98	0.82	3.06		RETIC 2419EP MAX	Self Cleansing OK	NA - Reticulation	Capacity OK
4-3	1	00	OLD	33.04	2293	2293	Vitrified Clay	225	224	1.14	30.74	10.25	48.12	1.22	0.94	4.24		RETIC 3263EP MAX	Self Cleansing OK	NA - Reticulation	Capacity OK
5-4	1	00	NEW	15.63	1740	1740	PVC SN8	225	234	0.54	24.90	8.36	37.04	0.86	0.70	2.25		RETIC 2044EP MAX	Self Cleansing OK	NA - Reticulation	Capacity OK

Figure 8: Sewer network with Option 2 augmentation i.e. New DN225 from Upstream of Node 2 and connect to Dn375 MH

APPENDIX D

Potable Water Servicing Strategy plan

Ex. DN100 anticipated to remain as is

GL RL 118

High point - GL RL 130

Low point - RL 98

Ex. DN150 anticipated to remain as is

Ex. DN100 may need to be up-sized to DN150

DN200 PW lead-in (or upsize ex. DN150) approx. 320m

WP0226
ELANORA HEIGHTS

WS0214
ELANORA HEIGHTS

Res supply level - RL166

Map:137 Grid:M12 Edition:Sydney UBD Edition 41

0m 40m 80m 120m 160m 200m

Scale 1:5000

Page

Appendix B

AUSGRID PRELIMINARY RESPONSE
Ausgrid | September 2024

Preliminary Enquiry – Asset Investment Planning Assessment

To Shanming Zhou

From Anthony Curran

Date 16th September 2024

Subject PI-2024_0943 - Preliminary Enquiry – 644 Lot subdivision, 11 Wilga St, Ingleside

Background

Asset Investment Planning (AIP) has received a preliminary application for the available capacity and required upstream augmentation (if required) for a proposed connection of a multiple lot subdivision at the premises of 11 Wilga St, Ingleside.

Proposed Load

The total anticipated load requirement, as supplied by the customer's Maximum Demand information, is estimated to be approximately 2.25MVA or 118A at 11kV (3000 ALV). The proposed plan is shown in Figure 1.

11kV Network Existing Supply Considerations

The only feeder available to the proposed subdivision is Narrabeen PA2L, a Short Rural feeder of approximately 11km in length.

The proposed substations are to be arranged on two separate legs of PA2L. The nearest supply points, proposed UGHOs and possible pole replacements are as shown in Figures 1 & 2.

It is noted that substation, PT.17113 Wilson PowderWorks, is shown to supply 3 x development lots. At present, this substation is rated at 200kVA with two 400A Network Distributors.

To facilitate this supply connection, PT.17113 substation will be required to be upgraded to a 400kVA transformer with the appropriate HV and LV conductors to facilitate connection.

Figure 1 – Proposed Subdivision

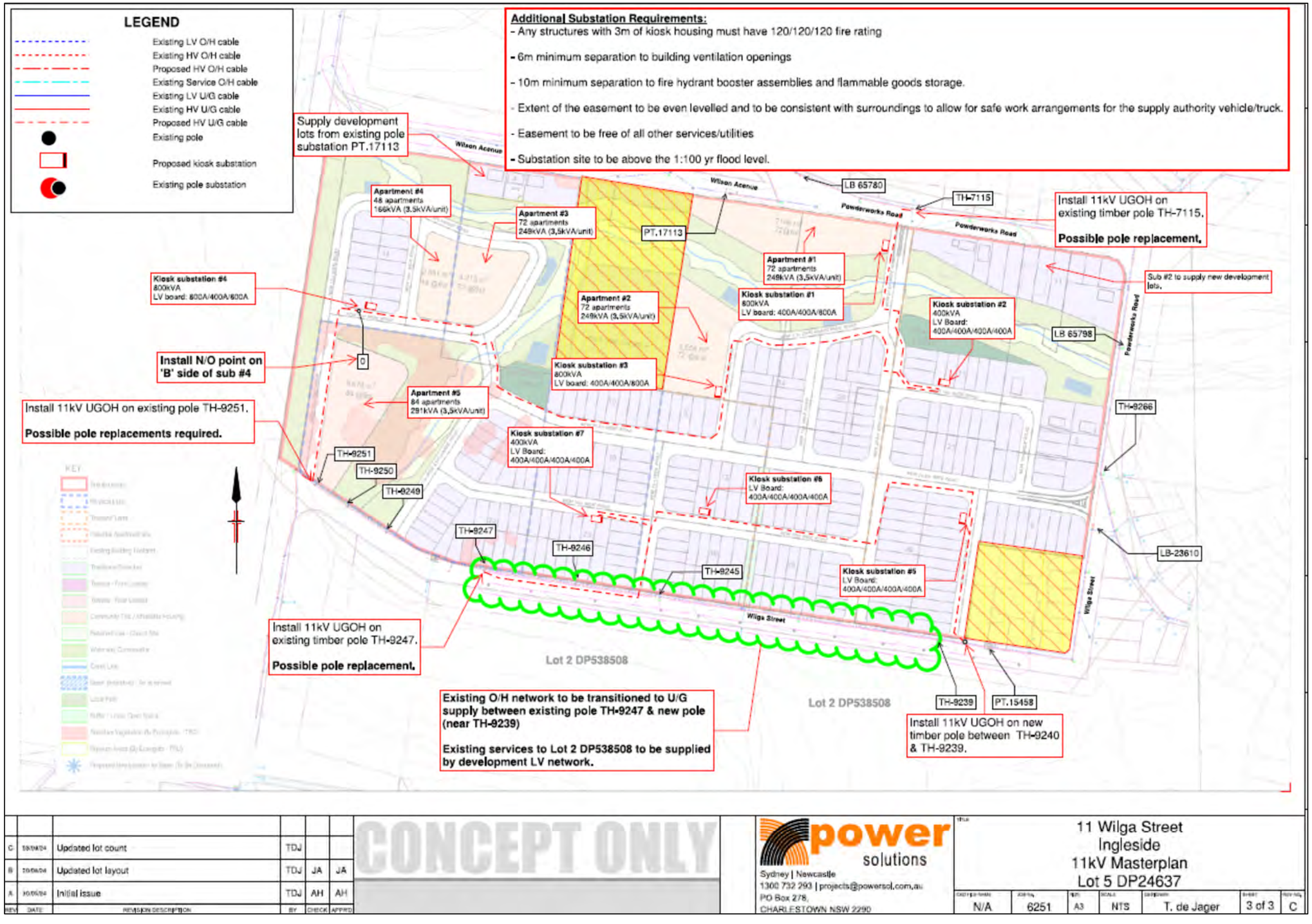
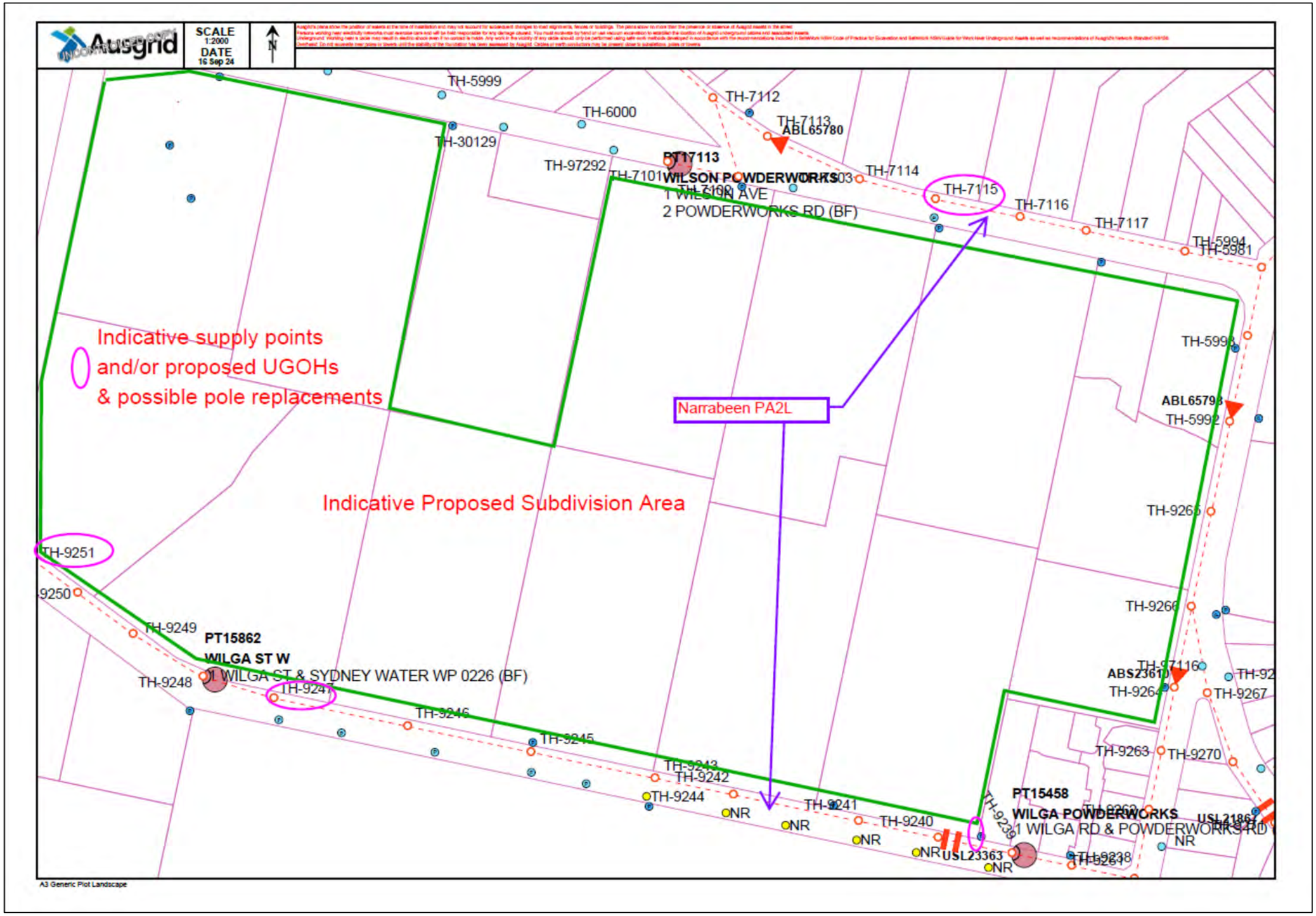


Fig.2 – Proposed Subdivision Area HV Geo Existing Supply



11kV Network Supply Connection

The following outlines, but is not limited to, the scope of works involved as per any network upgrade requirements for an N only connection of the proposed 644 lots:

- The existing network has the available capacity to supply the proposed subdivision.
- As indicated, It is expected several new 400kVA & 800kVA Kiosks with 3 to 4, 400ALV UG distributors to be installed with the appropriate HV and LV conductors to facilitate connection.
- Where necessary – Pole replacements, at the nominated supply points as shown in the supplied Master Plan, to facilitate UGOH connections for looping in the proposed kiosks.
- If the load & number of subdivision lots change from the assumptions made in this preliminary response, then a new assessment will be required.

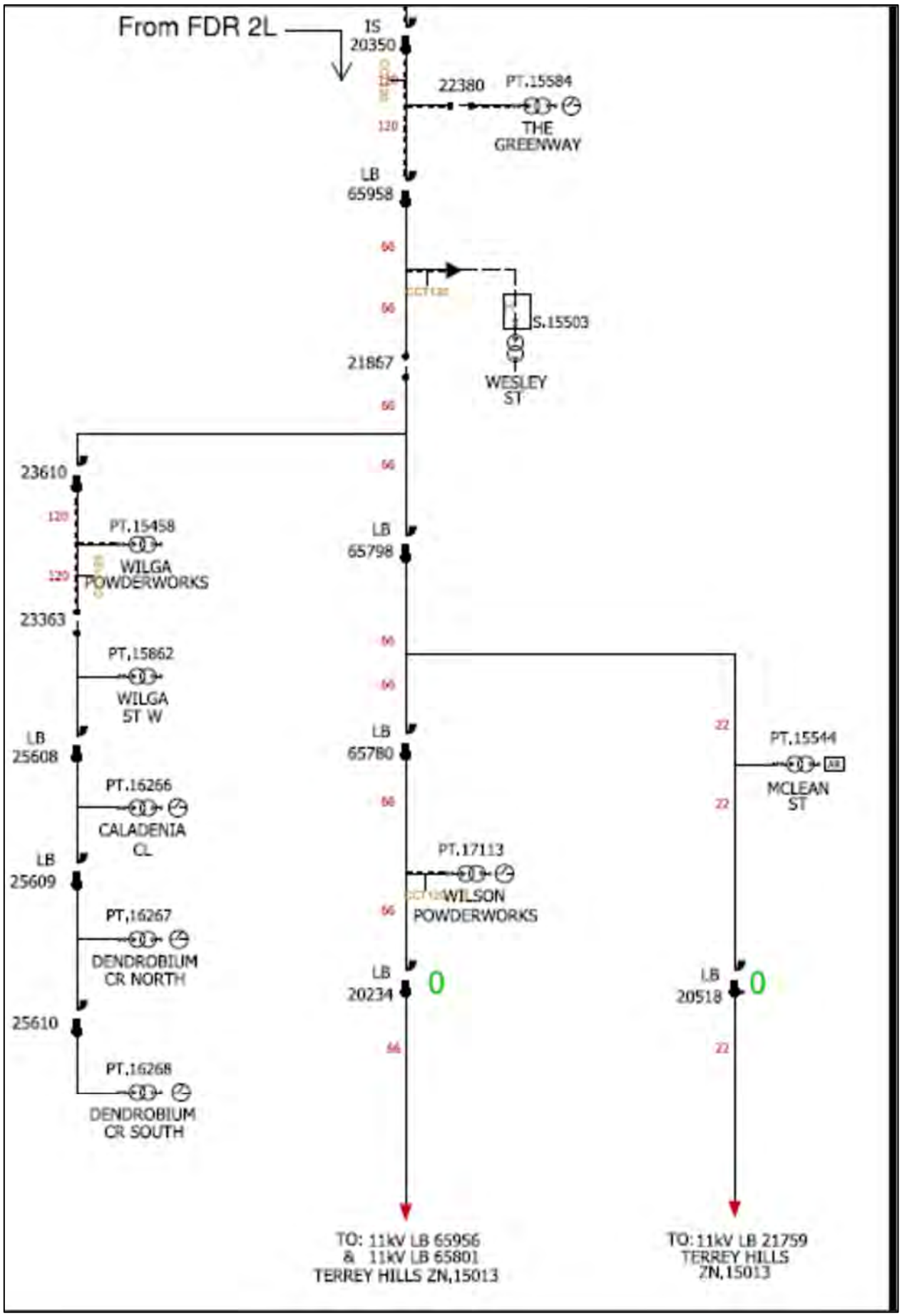


Fig.4 – Existing System Diag. Narrabeen PA2L

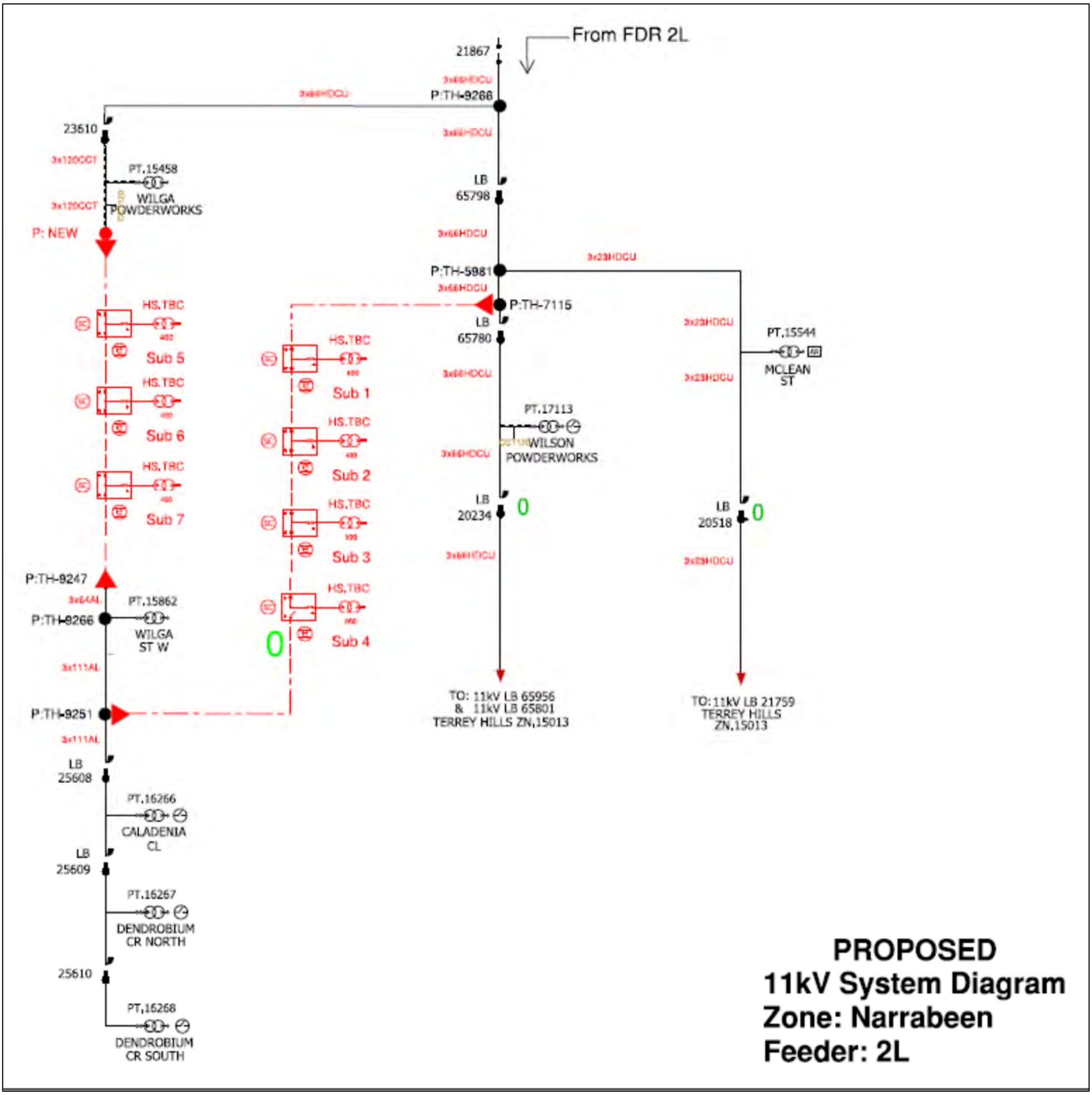


Fig.5 – Proposed Subdivision System Diagram Narrabeen PA2L

Planning Considerations

There are many influencing factors that could affect the available supply capacity including but not limited to other developments, future network augmentation, load growth and policy changes.

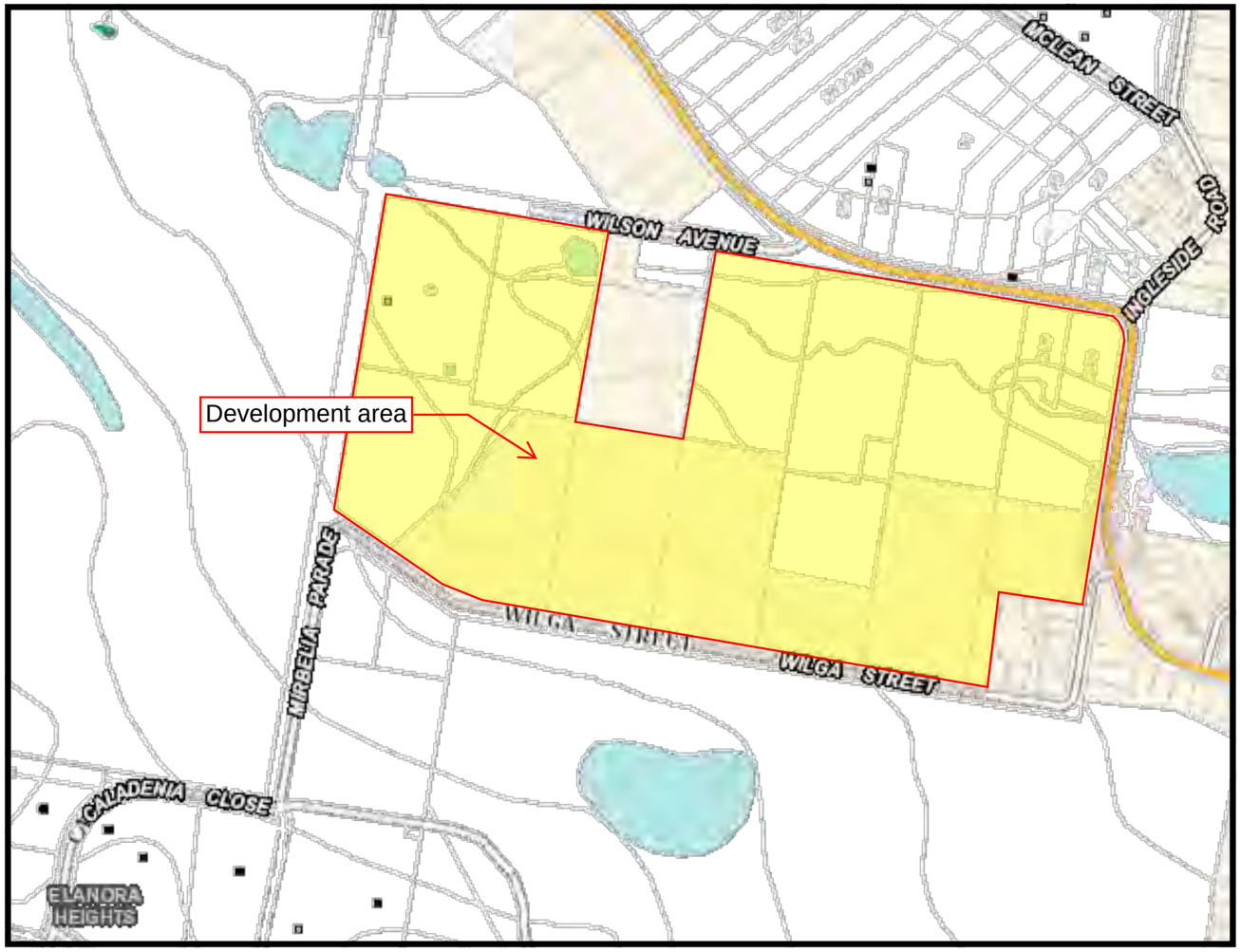
This preliminary response is based on information available at the time and may change into the future.

It is expected that a connection application will be submitted by the applicant. Upon receipt of the connection application a more detailed planning study will be undertaken to enable a Design Information Package to be produced outlining the connection requirements.

The information in this response is for use by Contestability to enable a response to the preliminary enquiry by the applicant.

Appendix C

UPDATED ELECTRICAL 11KV MASTER PLAN
Power Solutions | April 2025



Locality Sketch
N.T.S

Development Maximum Demand

Precinct	Total	ADMD [kVA]	Total MD [kVA] Per precinct
Apartment A	40	3.5	139
Apartment B	56	3.5	194
Apartment C	63	3.5	218
Apartment D	34	3.5	118
Detached Housing	133	3.5	461
Terrace Housing	210	3.5	727
Total	536		
Total MD			**1.86 MVA**

Kiosk Substation Requirements:

- 3m minimum separation to all non-fire rated structures. Any structures with 3m of kiosk housing must have 120/120/120 fire rating

- 5m minimum separation to stormwater drains

- 6m minimum separation to building ventilation openings

- 10m minimum separation to fire hydrant booster assemblies and flammable goods storage.

- 40m separation to a water body (e.g. pond, lake, river, drainage basin)

- Extent of the easement to be even levelled and to be consistent with surroundings to allow for safe work arrangements for the supply authority vehicle/truck.

- Easement to be free of all other services/utilities

- Substation site to be above the 1:100 yr flood level.

NOTE: No consideration has been given to the impacts of staging. This will be determined when staging information is available.

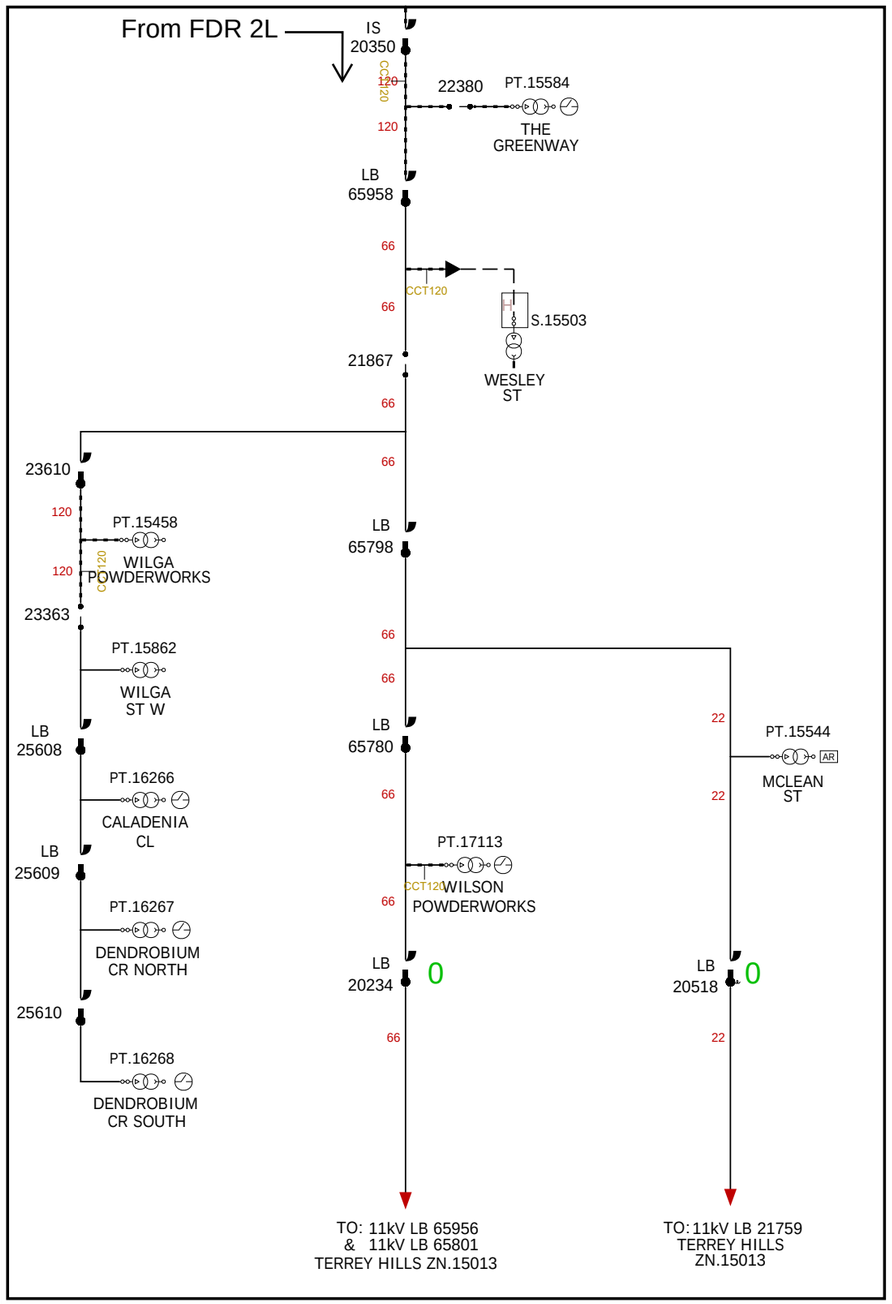
REV	DATE	REVISION DESCRIPTION	BY	CHECK	APPR'D
D	15/04/25	Updated lot count & layout	TDJ		
C	03/09/24	Updated lot count	TDJ		
B	20/08/24	Updated lot layout	TDJ	JA	JA
A	30/05/24	Initial issue	TDJ	AH	AH

CONCEPT ONLY

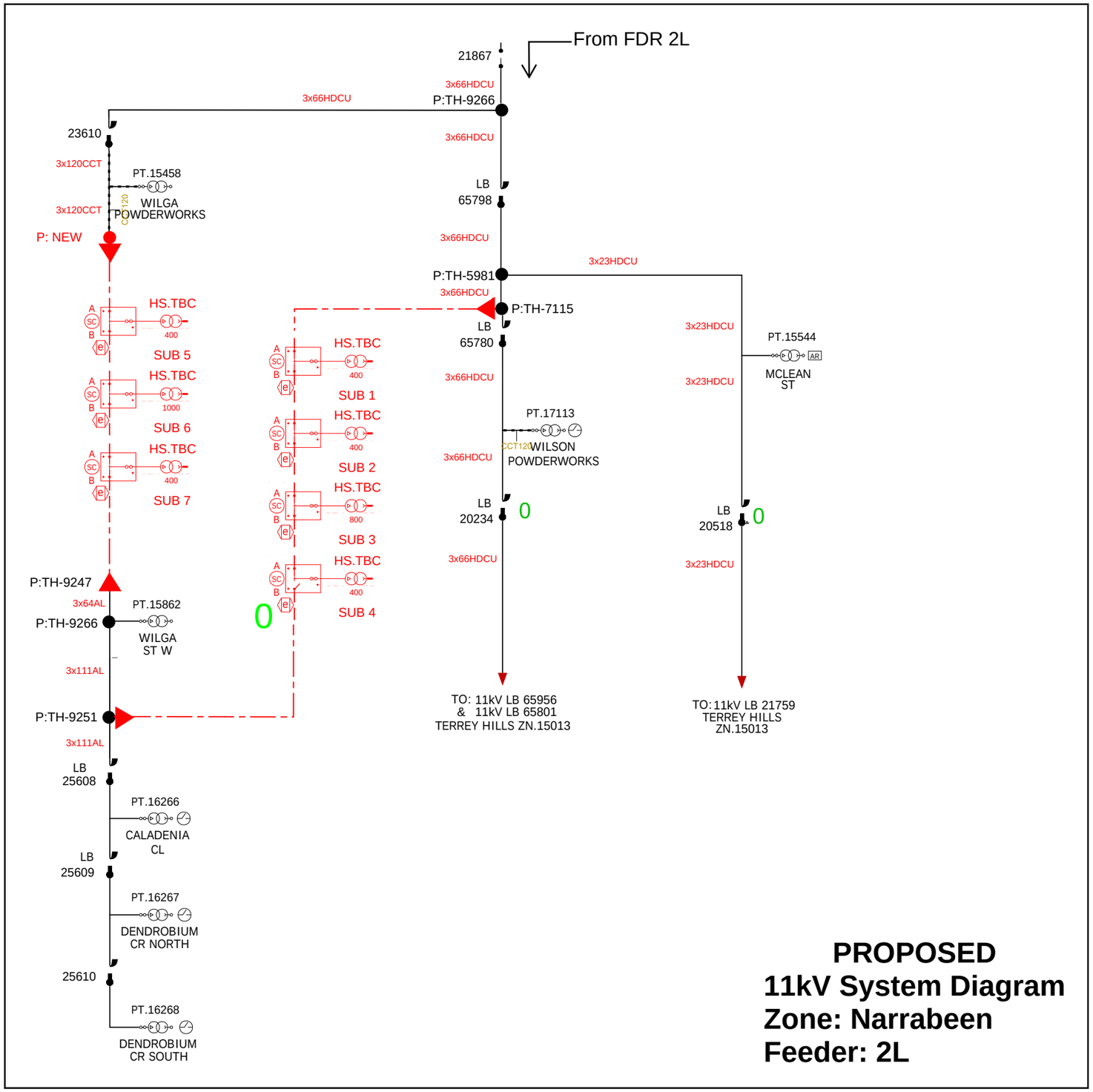
power solutions
Sydney | Newcastle
1300 732 293 | projects@powersol.com.au
PO Box 278,
CHARLESTOWN NSW 2290

TITLE
11 Wilga Street
Ingleside
11kV Masterplan
Lot 5 DP24637

CAD FILE NAME	JOB No.	SIZE	SCALE	DESIGNER	SHEET	REV NO.
N/A	6251	A3	NTS	T. de Jager	1 of 4	D



EXISTING
11kV System Diagram
Zone: Narrabeen
Feeder: 2L



PROPOSED
11kV System Diagram
Zone: Narrabeen
Feeder: 2L

REV	DATE	REVISION DESCRIPTION	BY	CHECK	APPR'D
D	15/04/25	Updated lot count & layout	TDJ		
C	03/09/24	Updated lot count	TDJ		
B	20/08/24	Updated lot layout	TDJ	JA	JA
A	30/05/24	Initial issue	TDJ	AH	AH

CONCEPT ONLY

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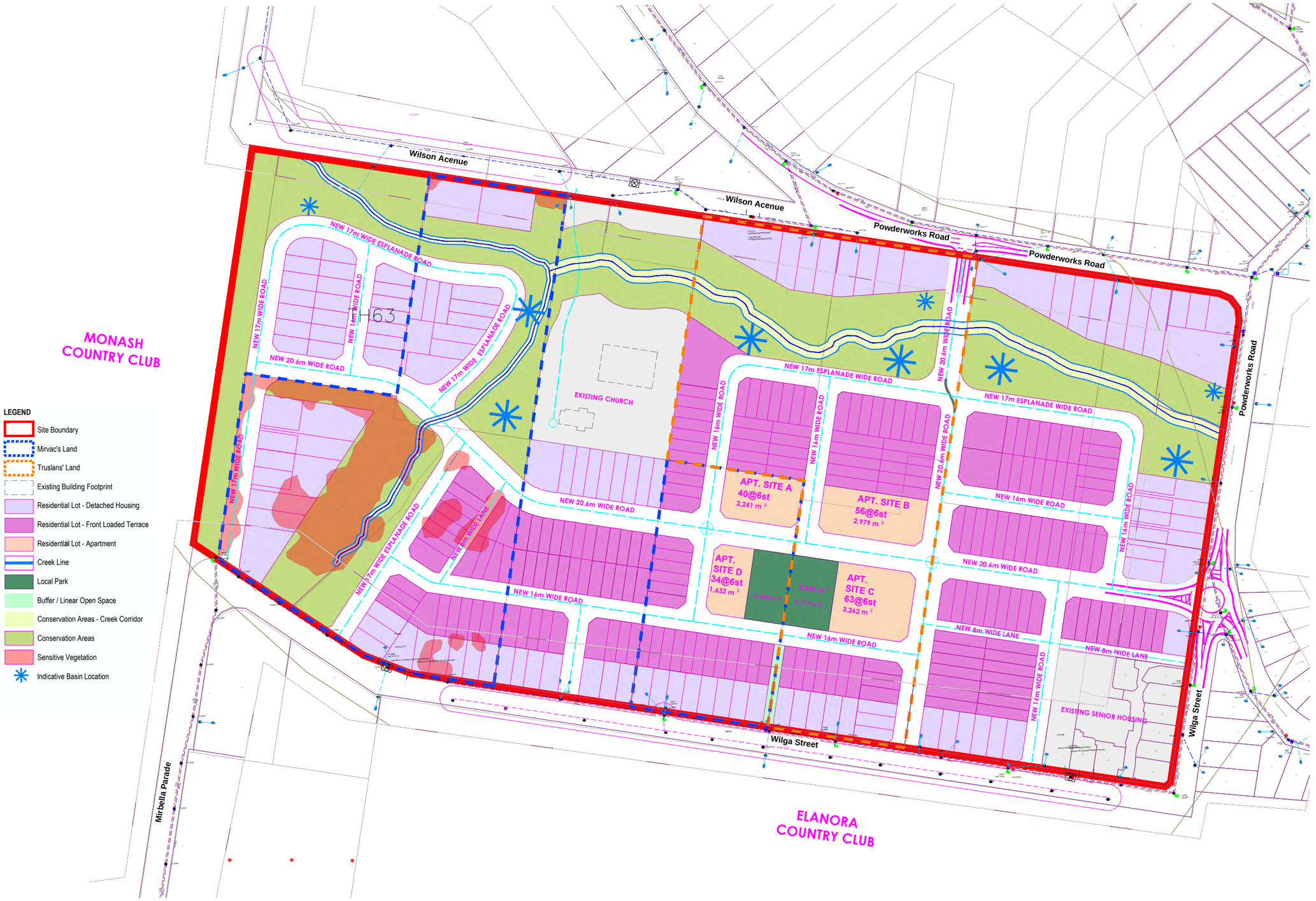
Sydney | Newcastle
1300 732 293 | projects@powersol.com.au
PO Box 278,
CHARLESTOWN NSW 2290

TITLE
11 Wilga Street
Ingleside
11kV Masterplan
Lot 5 DP24637

CAD FILE NAME	JOB No.	SIZE	SCALE	DESIGNER	SHEET	REV NO.
N/A	6251	A3	NTS	T. de Jager	2 of 4	D



REV	DATE	REVISION DESCRIPTION	BY	CHECK	APPR'D
D	15/04/25	Updated lot count & layout	TDJ		
C	03/09/24	Updated lot count	TDJ		
B	20/08/24	Updated lot layout	TDJ	JA	JA
A	30/05/24	Initial issue	TDJ	AH	AH

CONCEPT ONLY

power solutions
Sydney | Newcastle
1300 732 293 | projects@powersol.com.au
PO Box 278,
CHARLESTOWN NSW 2290

TITLE
11 Wilga Street Ingleside 11kV Masterplan Lot 5 DP24637

CAD FILE NAME	JOB No.	SIZE	SCALE	DESIGNER	SHEET	REV NO.
N/A	6251	A3	NTS	T. de Jager	3 of 4	D

LEGEND

- Existing LV O/H cable
- Existing HV O/H cable
- Proposed HV O/H cable
- Existing Service O/H cable
- Existing LV U/G cable
- Existing HV U/G cable
- Proposed HV U/G cable
- Existing pole
- Proposed kiosk substation
- Existing pole substation

Supply development lots from existing pole substation PT.17113

Wilson Acenue

Wilson Acenue

LB 65780

TH-7115

Powderworks Road

Powderworks Road

Install 11kV UGOH on existing timber pole TH-7115.

Possible pole replacement.

PT.17113

Kiosk substation #1
400kVA
LV board: 400A/400A/400A/400A

Kiosk substation #4
400kVA
LV board: 400A/400A/400A/400A

MONASH COUNTRY CLUB

Kiosk substation #3
800kVA
LV board: 400A/400A/400A/400A

Kiosk substation #2
400kVA
LV Board: 400A/400A/400A/400A

LB 65798

Powderworks Road

0

Install N/O point on 'B' side of sub #4

Install 11kV UGOH on existing pole TH-9251.

Possible pole replacements required.

TH-9251

TH-9250

TH-9249

Kiosk substation #7
400kVA
LV Board: 400A/400A/400A/400A

TH-9266

TH-9247

TH-9246

Kiosk substation #6
1000kVA
LV Board: 800A/400A/800A

Kiosk substation #5
400kVA
LV Board: 400A/400A/400A/400A

LB-23610

Wilga Street

Wilga Street

Mirbella Parade

Install 11kV UGOH on existing timber pole TH-9247.

Possible pole replacement.

Lot 2 DP538508

TH-9245

ELANORA COUNTRY CLUB

Lot 2 DP538508

TH-9239

PT.15458

Existing O/H network to be transitioned to U/G supply between existing pole TH-9247 & new pole (near TH-9239)

Existing services to Lot 2 DP538508 to be supplied by development LV network.

Install 11kV UGOH on new timber pole between TH-9240 & TH-9239.

Assumed Services for Apartments:
Site A: 400A
Site B: 400A
Site C: 800A
Site D: 800A

REV	DATE	REVISION DESCRIPTION	BY	CHECK	APPR'D
D	15/04/25	Updated lot count & layout	TDJ		
C	03/09/24	Updated lot count	TDJ		
B	20/08/24	Updated lot layout	TDJ	JA	JA
A	30/05/24	Initial issue	TDJ	AH	AH

CONCEPT ONLY

power solutions
Sydney | Newcastle
1300 732 293 | projects@powersol.com.au
PO Box 278,
CHARLESTOWN NSW 2290

TITLE

11 Wilga Street Ingleside 11kV Masterplan Lot 5 DP24637

CAD FILE NAME	JOB No.	SIZE	SCALE	DESIGNER	SHEET	REV NO.
N/A	6251	A3	NTS	T. de Jager	4 of 4	D

Appendix D

FEASIBILITY LETTER
Sydney Water | October 2024

Case Number: 218362

October 23, 2024

MIRVAC HOMES (NSW) PTY LIMITED
c/- QALCHEK PTY LTD

Feasibility Letter

Developer:	**MIRVAC HOMES (NSW) PTY LIMITED**
Your WSC's reference:	**PM 33858**
Development:	**Lot 218 DP837828** **17 WILGA ST, Ingleside**
Development Description:	**Residential Re-Development**
Your application date:	**September 24, 2024**

Dear Applicant

This Feasibility Letter (Letter) is a guide only. It provides general information about what our requirements could be if you applied to us for a Section 73 Certificate (Certificate) for your proposed development. **The information is accurate at today's date only.**

We have not allocated any system capacity to your proposal from the investigation into this Feasibility advice. This advice is only an indication of our systems and possible requirements as of today. Where there is system capacity, it may have been fully utilised by the time you obtain a Consent. The requirements applied to any approved Development proposal may differ significantly in the future since the original advice was issued.

If you obtain development consent for that development from your consent authority (this is usually your local Council) they will require you to apply to us for a Section 73 Certificate. You will need to submit a new application (and pay another application fee) to us for that Certificate by using your current or another Water Servicing Coordinator (WSC).

We'll then send you either a:

- Notice of Requirements (Notice) and Developer Works Deed (Deed)
  or
- Certificate.

These documents will be the definitive statement of our requirements.

There may be changes in our requirements between the issue dates of this Letter and the Notice or Certificate. The changes may be:

- if you change your proposed development e.g. the development description or the plan/site layout, after today, the requirements in this Letter could change when you submit your new application.

- if you decide to do your development in stages then you must submit a new application (and pay another application fee) for each stage.

No warranties or assurances can be given about the suitability of this document or any of its provisions for any specific transaction. It does not constitute an approval from us and to the extent that it is able, we limit its liability to the reissue of this Letter or the return of your application fee. You should rely on your own independent professional advice.

What You Must Do To Get A Section 73 Certificate In The Future.

To get a Section 73 Certificate you must do the following things. You can also find out about this process by visiting Plumbing, building & developing page on our website.

1. **Obtain Development Consent from the consent authority for your development proposal.**
2. **Engage a Water Servicing Coordinator (WSC).**

You must engage your current or another authorised WSC to manage the design and construction of works that you must provide, at your cost, to service your development. If you wish to engage another WSC (at any point in this process) you must write and tell us.

You'll find a list of WSC's at Listed providers on our website.

The WSC will be your point of contact with us. They can answer most questions that you might have about the process and developer charges and can give you a quote or information about costs for services/works (including our costs).
As of the date of this advice, it is anticipated that no Sydney Water Construction works are required. Your WSC can advise you about this.

3. **Developer Works Deed**

After the WSC has submitted your new application, they'll receive our Notice and Developer Works Deed. You and your accredited Developer Infrastructure Providers (Providers) will need to sign and lodge both copies of the Deed with your nominated Coordinator. After we've signed the documents, one copy will be returned to the WSC.

The Deed sets out for this project:
• your responsibilities
• our responsibilities
• the Provider's responsibilities.

You must do all the things that we ask you to do in that Deed. This is because lots in your subdivision do not have water and sewer services and you must construct and pay for the following works extensions under this Deed to provide these services.

Note: The coordinator must be fully authorised by us for the whole time of the agreement

4. Water and Sewer Works

4.1 Water

Your development must have a frontage to a water main that is the right size and can be used for connection.

We've assessed your application and found that:

The proposed development site is in Elanora Heights water supply zone. Preliminary assessment suggests that augmentations will be required to service this development. This will be reassessed during the S73 application.

- **You must provide a water service connection and property service (also known as a "property service (main to meter)") at your cost for all lots off the water main and your WSC must manage the work. See section below for details.**

- The existing water property service and meter may be used as a property service (main to meter) for one of the proposed lots if it is located in an appropriate position. Your WSC will be able to provide further advice regarding this.

- **Property Service (Main to Meter) Installation Details**

The property service connection must be carried out by a Sydney Water listed Driller and the installation of the property service must either be carried out or supervised by a licensed plumber. They must meet the:

(a) Administrative requirements of the New South Wales Code of Practice for Plumbing and Drainage; and
(b) Our Property Service (Main to Meter) Installations Technical Requirements.

- **Before the Certificate can be issued, your WSC must give us certification that the property service works comply with our requirements.**

4.2 Sewer

Your development must have a sewer main that is the right size and can be used for connection. That sewer must also have a connection point within your development's boundaries.

We've assessed your application and found that:

The proposed development is in ELANORA HEIGHTS SCAMP which is in Warriewood Catchment.

The current WSA 02 requirement (as per CL 4.5.5 table 4.4) are that a DN150 sewer shall serve a maximum of 1050E.P (regardless of any hydraulics analysis). Therefore, this development (as a whole) would require a minimum of DN225 sewer for its servicing needs.

Preliminary assessment indicate trunk mains DN375 (Asset # 8645663) and DN400(Asset# 8645626) have capacity to service this development. This will be reconfirmed during S73 application.

Sydney Water prefers Option 1, which involves connecting to the DN400. However, further review is required at detail design stage to evaluate the lead-in and the options.

The detailed design, including plans, longitudinal sections, and the flow schedule for the adjustment and deviation of the main, must comply with the WSAA code and to be submitted to Sydney Water for review.

Design must comply with grade, self-cleansing, and slime control requirements as per WSAA code.

5. Ancillary Matters

5.1 Asset adjustments

After we issue this Notice (and more detailed designs are available), we may require that the water main/sewer main/stormwater located in the footway/your property needs to be adjusted/deviated. If this happens, you'll need to do this work as well as the extension we have detailed above at your cost. The work must meet the conditions of this Notice and you will need to complete it **before we can issue the Certificate**. We'll need to see the completed designs for the work, and we'll require you to lodge a security. The security will be refunded once the work is completed, and all charges paid.

5.2 Entry onto neighbouring property

If you need to enter a neighbouring property, you must have the written permission of the relevant property owners and tenants. You must use our **Permission to Enter** form(s) for this. You can get copies of these forms from your WSC or on our website. Your WSC can also negotiate on your behalf. Please make sure that you address all the items on the form(s) including payment of compensation and whether there are other ways of designing and constructing that could avoid or

reduce their impacts. You will be responsible for all costs of mediation involved in resolving any disputes. Please allow enough time for entry issues to be resolved.

6. Infrastructure contributions

You will need to pay an infrastructure contribution towards the cost of each Sydney Water system that will serve your development.

The infrastructure contributions are calculated in accordance with the Development Servicing Plans registered with the Independent Pricing and Regulatory Tribunal (IPART) under the *Independent Pricing and Regulatory Tribunal Act*.

An estimate of your infrastructure contributions is shown in the table below. These amounts have the NSW Government-directed cap applied for the current financial year**. These amounts are subject to the NSW Government transition pathway and other factors and will change** – see Section 6.1 Price Changes for full details.

No payments can be accepted for these estimates. Should you obtain Development Approval for this proposal and apply for a Section 73 Certificate in the future, then we'll advise you of the applicable charges to your Development.

Development Servicing Plan (DSP)	**Basis of Calculation**	**Charge ($) for Applicable Period (10/23/24-6/30/25)**
Greater Sydney Drinking Water	Residential Development Density 0 - 29 lots/dwellings per ha band 644 lots/dwellings @ $850 = $547400 less Credit of $0.0 for previous use	$547,400.00
Outer Sydney Coastal Wastewater	Residential Development Density 0 - 29 lots/dwellings per ha band 644 lots/dwellings @ $616.86 = $397257.84 less Credit of $0.0 for previous use	$397,257.84
DEVELOPER CHARGES TOTAL:		**$944,657.84**

6.1 Price changes

The infrastructure contribution you must pay may also change due to:

1. Changes to the Consumer Price Index (CPI). Our prices increase by CPI each financial year. CPI is the weighted average of the capital cities CPI for the 12 months to the end of the previous March.

2. The NSW Government-directed transition pathway for infrastructure contributions for drinking water and wastewater infrastructure:

Financial Year payment is made	Percentage of infrastructure contribution payable
1 July 2023 to 30 June 2024	Infrastructure contribution capped at 0% of the full price
1 July 2024 to 30 June 2025	Infrastructure contribution capped at 25% of the full price
1 July 2025 to 30 June 2026	Infrastructure contribution capped at 50% of the full price
1 July 2026 onwards	Full price payable

3. Any updates to our Development Servicing Plans (including prices). Our Development Servicing Plans must be updated every five years. The next updates will be introduced by 31 December 2028.

   Your infrastructure contributions become payable once your WSC has submitted all Project Completion Packages under each Developer Works Deed to us confirming that the works required under the Notice are complete.

7. Special Requirements

Multi-level individual metering requirements

Your development must either allow for or provide individual metering. This means that you must:

1. comply at all times and in all respects with the requirements of our "*Multi-level Individual Metering Guide*". You can find this in the Meters & metered standpipes page on our website.

2. provide and install plumbing and space for individual metering in accordance with our "*Multi-level Individual Metering Guide*".

3. if and when you implement a strata/ stratum plan (or strata/ stratum subdivide) you must:

    a. engage an Accredited Metering Supplier ("**AMS**") to provide individual metering in accordance with the "*Multi-level Individual Metering Guide"* and meet the cost of the meters and metering system.

    b. transfer the meters and metering system to us once the Testing Certificate has been issued by us to the AMS and the AMS has confirmed that payment for the meters and metering system has been paid in full.

Before the Section 73 Certificate can be issued, you will be required to sign an undertaking to show that you understand and accept these metering requirements and associated costs.

Visit Meters & metered standpipes to see the *Multi-level individual metering guide* and find out more.

OTHER THINGS YOU MAY NEED TO DO

Shown below are other things you need to do that are NOT a requirement for the Certificate. They may well be a requirement from us in the future because of the impact of your development on our assets. You must read them before you go any further.

Approval of your building plans

Please note that the building plans must be approved when each lot is developed. This can be done at in our Tap in™ system Sydney Water Tap in ™.

This is not a requirement for the Certificate, but the approval is needed because the construction/building works may affect our assets (e.g. water, sewer, and stormwater mains). In any case, these works MUST NOT commence until we have granted approval.

If our stormwater channel, pipe, or culvert is located within ten (10) metres of your development site it must be referred to us for a detailed review.

Your Coordinator can tell you about the approval process including:

- Possible requirements
- Their costs
- Timeframes.

If your building plans need to be referred to us for detailed review you will be required to pay us for the costs associated with the detailed review.

Please note that your building plans must be approved. This can be done on our Tap in™ system Sydney Water Tap in ™ or call 13 20 92.

We recommend that you apply for Building Plan Approval early as in some instances your WSC may need to refer your building plans to us for detailed review. You'll be required to pay us for the costs associated with the detailed review.

Note: You must obtain our written approval before you do any work on our systems. We'll take action to have work stopped on the site if you do not have that approval. We will apply Section 44 of the *Sydney Water Act 1994.*

Backflow Prevention Water supply connections

A backflow prevention containment device appropriate to the property's hazard rating must be installed at the property boundary. The device is to be installed on all water supplies entering the property, regardless of the supply type or metering arrangements. It is needed to reduce the risk of contamination by backflow from these supplies.

A licensed plumber with backflow accreditation can advise you of the correct requirements for your property. To view a copy of our Backflow Prevention Policy and a list of backflow accredited plumbers Plumbing, building & developing.

The water service for your development

We don't consider whether the existing water main(s) talked about above is adequate for firefighting purposes for your development. We cannot guarantee that this water supply will meet your Council's firefighting requirements. The Council and your hydraulic consultant can help.

You must make sure that each home/lot has its own 20mm meter.

When access to the water supply is required, the property owner or agent must apply to with us online. A meter must be installed before any water is used. It is illegal for anyone other than us to remove the locking mechanism on the water meter.

The online application can be found by visiting our website Plumbing, building & developing. You'll need to have the:

- account (Property) Number which can be obtained from the WSC
- serial Number which can be found on the metal tag on your property service.

You can find more information by using the "Ask Sydney Water" section of our website.

Fire Fighting

Definition of firefighting systems is the responsibility of the developer and is not part of the Section 73 process. It is recommended that a consultant should advise the developer regarding the firefighting flow of the development and the ability of our systems to provide that flow in an emergency. Sydney Water's Operating Licence directs that our mains are only required to provide domestic supply at a minimum pressure of 15 m head.

Disused Water Service Sealing

You must pay to disconnect all disused private water services and seal them at the point of connection to our water main. This work must meet our standards in the Plumbing Code of Australia (the Code) and be done by a licensed plumber. The licensed plumber must arrange for an inspection of the work by a NSW Fair Trading Plumbing Inspection Assurance Services (PIAS) officer. After that officer has looked at the work, the drainer can issue the Certificate of Compliance. The Code requires this.

Disused Sewerage Service Sealing

Please don't forget that you must pay to disconnect all disused private sewerage services and seal them at the point of connection to our sewer main. This work must meet our standards in the Plumbing Code of Australia (the Code) and be done by a licensed drainer. The licensed drainer must arrange for an inspection of the work by a NSW Fair Trading Plumbing Inspection Assurance Services (PIAS) officer. After that officer has looked at the work, the drainer can issue the Certificate of Compliance. The Code requires this.

Soffit Requirements

Please be aware that floor levels must be able to meet our soffit requirements for property connection and drainage.

Other fees and requirements

The requirements in this Advice Letter relate to your future Certificate application only. We may be involved with other aspects of your development and there may be other fees or requirements. These include:

- construction/building plan approval fees
- plumbing and drainage inspection costs
- the installation of backflow prevention devices
- council firefighting requirements. (It will help you to know what the firefighting requirements are for your development as soon as possible. Your hydraulic consultant can help you here)

No warranties or assurances can be given about the suitability of this document or any of its provisions for any specific transaction. It does not constitute an approval from us and to the extent that it is able, we limit its liability to the reissue of this Letter or the return of your application fee. You should rely on your own independent professional advice.

END OF ADVICE

Hunter
7/335 Hillsborough Road
Warners Bay NSW 2282
(02) 4978 5100

Central Coast
5 Pioneer Avenue
Tuggerah NSW 2259
(02) 4305 4300

Sydney
Level 35, One International Towers
100 Barangaroo Avenue
Sydney NSW 2000
(02) 8046 7412

www.adwjohnson.com.au