LAKISS & ASSOCIATES CONSULTING ENGINEERS

SERVICES SITE INFRASTRUCTURE REPORT
PLANNING PROPOSAL

PROPOSED EXTENSION TO OCEANGROVE, DEE WHY

Prepared for **DEE WHY RSL**

Architect **MARCHESE PARTNERS**

Revision 3

December 2023

Revision	Date	Purpose	Prepared By	Reviewed By
0	21/8/2023	Issued to MPI for review	R Gruber	N Lakiss
R1	24/8/2023	Issued to MPI	R Gruber	N Lakiss
R2	5/12/2023	Issued to MPI	R Gruber	N Lakiss
R3	12/12/2023	Issued to MPI	R Gruber	N Lakiss

Table of Contents

1 Introduction

Lakiss & Associates was engaged by Dee Why RSL to undertake a preliminary review of services infrastructure associated with the proposed residential development located in Dee Why, NSW.

The review comprised services searches via 'Dial Before You Dig' and Desk Top investigation of existing site conditions as related to services infrastructure (Sewer, water, gas and high voltage conduits).

This report encompasses hydraulic, fire and electrical services.

1.1 Site Address

2-6 Dee why Parade, Part of 8 Dee Why Parade, 10-12 Dee Why Parade and Part of 2 Clarence Avenue

1.2 Project Scope

The planning proposal intends to expand the existing seniors housing development, known as Oceangrove, towards the south of the site. This site is currently occupied by a vacant shop-top building, a vacant land/parking area, a residential flat building, and a child care centre.

A nine (9) storey building and a seven (7) storey building are proposed to be integrated into the existing Oceangrove building to provide fifty one (51) seniors housing dwellings.

The development consists of 2 levels of basement carparking, new multistorey buildings, which include: -

- 24 x 3 bed + @135m²
- 27 x 2 bed + @ 100m²
- 805m2 total of communal area
  - 270m² multipurpose room (200 seats)
  - 135m² for circulation
  - 400m² to be allocated to library, craft room, game room, B.O.H and amenities.

2 Existing Services Infrastructure Authorities

Dial Before You Dig (DBYD) information has been provided by the following supply authorities that may affect the proposed development: -

- Sydney Water
- Northern Beaches Council
- Telstra
- AARNET
- Ausgrid
- Aussie Broadband
- Fibre sense
- Jemena
- NBN
- Optus and Uecomm
- Transport for NSW

2.1 Sewer

Dial Before You Dig (DBYD) information shows that Sydney Water sewer is in and around the proposed works site(s).

Sydney Water sewer infrastructure is located as follows: -

- 225Ø CICL sewer main and junction connection point located on the north side of Dee Why Parade, connecting to 1050Ø RC sewer main on the south side of Dee Why Parade. (Serving 2-6 Dee Why Parade),
- 225Ø PVC (concrete encased) sewer main and junction connection point. (Serving 10 Dee Why Parade) located on the southeast corner of the existing Oceangrove site extending north and parallel with eastern boundary to sewer access chamber.
- 225Ø CICL sewer main extending east from existing Oceangrove site through 10 Dee Why Parade; and 16-18 Dee Why Parade (16-18 is a separate site).

Refer Figure 1

The sewer main located in Dee Why Parade ranges from approximately 1.5m to 2.1m deep in the roadway.

The sewer junction point serving 10 Dee Why Parade, is indicated as 1.2m deep.

The sewer main traversing 10 Dee Why Parade and 16-18 Dee Why Parade (16-18 is a separate site) is approximately 2m deep.

A site-specific feasibility request should be issued to Sydney Water to ascertain their specific requirements regarding the sewer main works.

Based on the available information, the Sydney Water sewer systems should not require augmentation or major infrastructure upgrade works.

However, the 225Ø CICL sewer main, extending east from existing Oceangrove site through 10 Dee Why Parade and 16-18 Dee Why Parade (16-18 is separate site) is affected by Sydney Water building over or adjacent to an existing Sydney Water asset, requirements.

This will need to be addressed during Section 73 application and process and detail design.

2.2 Water

Dial Before You Dig (DBYD) information shows that Sydney Water potable water mains are located around the proposed works site(s).

Sydney Water potable water infrastructure is located as follows: -

- 100Ø CICL water main located on the north side of Dee Why Parade, connecting to 250Ø CICL water main on the north side of Pittwater Road.
- 200Ø CICL water main(s) located on the north and south side of Pittwater Road

Refer Figure 1

A site-specific feasibility request should be issued to Sydney Water to ascertain their specific requirements regarding the water main works.

However, based on the proposed development works, the size and location(s) of water mains should not require augmentation or relocation.

Pressure and flow information has been received from Sydney Water, and determined: -

1. *If the proposed site is connected to the 200dia main in Pittwater Road, there is no requirement for onsite water storage for fire services, however pumping equipment for firefighting and potable water will be required.*
2. *If the proposed site is connected the 100dia main in Dee Why Parade, then on-site water storage for fire fighting purposes would be required.*

Figure 1 - Sydney Water Assets Map

2.3 Natural Gas

Dial Before You Dig (DBYD) information shows that natural gas mains are located around the proposed works site(s).

Jemena natural gas infrastructure is located as follows: -

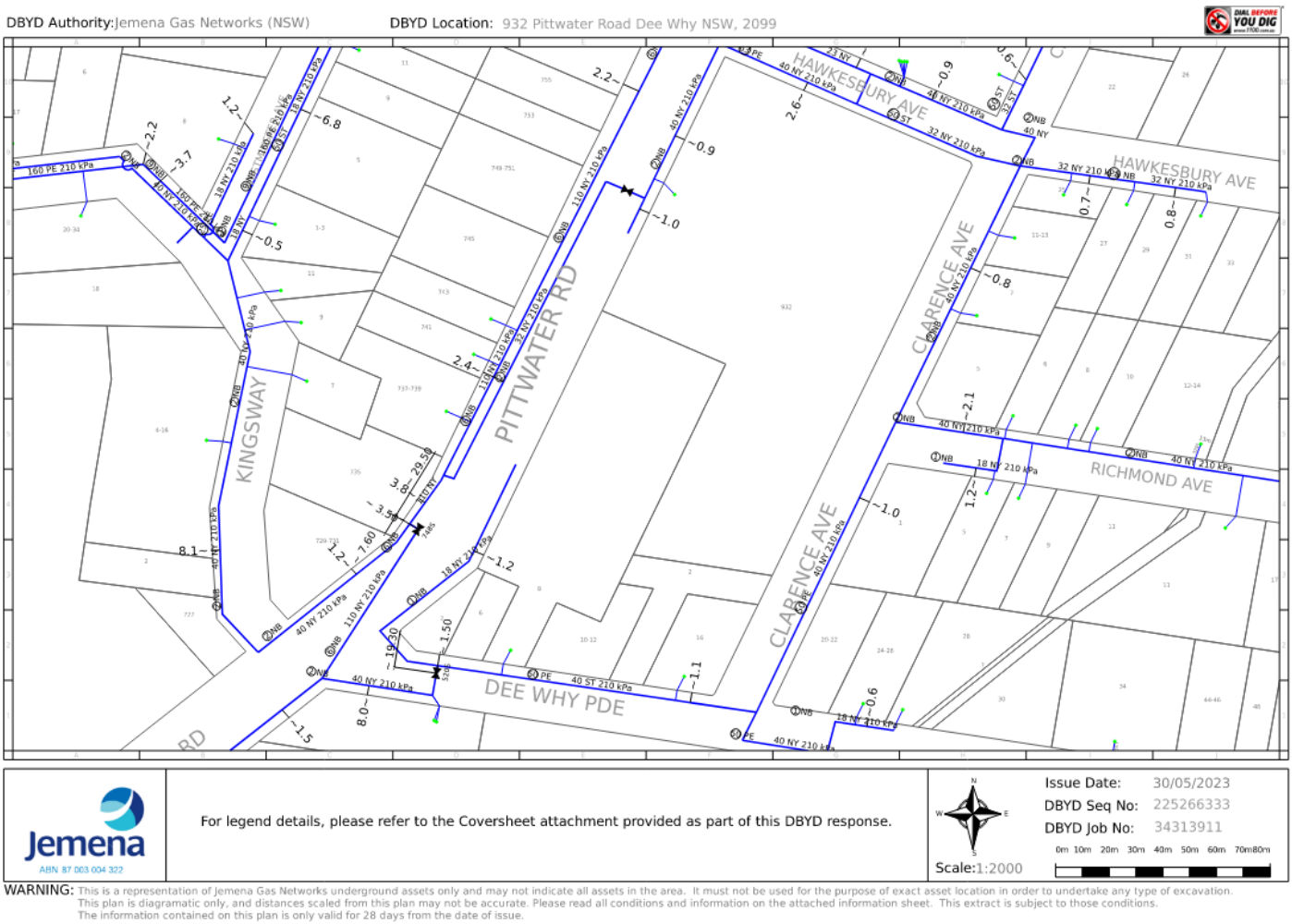
- 50Ø PE 210Kpa gas main located on the north side of Dee Why Parade.
- 50Ø PE 210Kpa gas main located on the south side of Pittwater Road
- 110Ø NY 210Kpa gas main located on the north side of Pittwater Road

Refer Figure 2

A site-specific feasibility request should be issued to Jemena to ascertain their specific requirements regarding the gas connection feasibility.

However, based on the proposed development works, the size and location(s) of natural gas mains should not require augmentation or relocation.

Figure 2 – Jemena Natural Gas Assets Map



2.4 Electricity

Dial Before You Dig (DBYD) information shows that high voltage conduits are located around the proposed works site(s).

The calculated electrical maximum demand for proposed development indicates an approximate load of 637 A/ph. Therefore, a substation will be required to supply the development as this supply capacity is unlikely to be available from street supply.

The kiosk style substation which supplies the existing residential building is located adjacent the main driveway entrance. Based on the proposed new works it is likely that the existing substation will need to be removed and a new substation provided in a suitable location and equipped to supply both the existing building and the proposed development. The exact supply arrangements to both buildings and staging will be determined during the concept phase.

Note: Refer to appendix B for Ausgrid DBYD Map.

3 Conclusion

Based on available authority infrastructure supplied information, it is considered that the proposed works site can be connected to sewer, water and gas supplies without the need for major infrastructure works and cost. There is sufficient capacity in the authority mains to supply the proposed development.

A new substation is required, and this will service the existing building and the proposed development. The new infrastructure will need to be installed and fully commissioned before removal of the existing substation.

Based on supplied information from Ausgrid, there is available high voltage supply for the proposed development.

Appendix A – Pressure and Flow Advice

Statement of Available Pressure and Flow

Sydney WATER

Dakota Masters
277 Clarence Street
Sydney, 2000

Attention: Dakota Masters Date: 21/07/2023

Pressure & Flow Application Number: 1689371
Your Pressure Inquiry Dated: 2023-07-13
Property Address: 914-930 Pittwater Road, Dee Why 2099

The expected maximum and minimum pressures available in the water main given below relate to modelled existing demand conditions, either with or without extra flows for emergency fire fighting, and are not to be construed as availability for normal domestic supply for any proposed development.

ASSUMED CONNECTION DETAILS

Street Name: Pittwater Road	Side of Street: East
Distance & Direction from Nearest Cross Street	72 metres North from Dee Why Parade
Approximate Ground Level (AHD):	15 metres
Nominal Size of Water Main (DN):	200 mm

EXPECTED WATER MAIN PRESSURES AT CONNECTION POINT

Normal Supply Conditions	
Maximum Pressure	95 metre head
Minimum Pressure	77 metre head

WITH PROPERTY FIRE PREVENTION SYSTEM DEMANDS	Flow l/s	Pressure head m
Fire Hose Reel Installations (Two hose reels simultaneously)	0.66	77
Fire Hydrant / Sprinkler Installations (Pressure expected to be maintained for 95% of the time)	10 15 20 25 30 40 50 60	78 77 77 76 76 75 73 72
Fire Installations based on peak demand (Pressure expected to be maintained with flows combined with peak demand in the water main)	10 15 20 25 30 40 50 60	74 74 74 74 73 72 70 68
Maximum Permissible Flow	94	60

(Please refer to reverse side for Notes)

For any further inquiries regarding this application please email :

swtapin@sydneywater.com.au

Statement of Available Pressure and Flow

Sydney WATER

Dakota Masters
277 Clarence Street
Sydney, 2000

Attention: Dakota Masters Date: 13/06/2023

Pressure & Flow Application Number: 1660640
Your Pressure Inquiry Dated: 2023-06-01
Property Address: 6 Dee Why Parade, Dee Why 2099

The expected maximum and minimum pressures available in the water main given below relate to modelled existing demand conditions, either with or without extra flows for emergency fire fighting, and are not to be construed as availability for normal domestic supply for any proposed development.

ASSUMED CONNECTION DETAILS

Street Name: Dee Why Parade	Side of Street: North
Distance & Direction from Nearest Cross Street	25 metres East from Pittwater Road
Approximate Ground Level (AHD):	15 metres
Nominal Size of Water Main (DN):	100 mm

EXPECTED WATER MAIN PRESSURES AT CONNECTION POINT

Normal Supply Conditions	
Maximum Pressure	95 metre head
Minimum Pressure	75 metre head

WITH PROPERTY FIRE PREVENTION SYSTEM DEMANDS	Flow l/s	Pressure head m
Fire Hose Reel Installations (Two hose reels simultaneously)	0.66	75
Fire Hydrant / Sprinkler Installations (Pressure expected to be maintained for 95% of the time)	10 15 20 25	78 76 75 74
Fire Installations based on peak demand (Pressure expected to be maintained with flows combined with peak demand in the water main)	10 15 20 25	74 74 72 71
Maximum Permissible Flow	26	70

(Please refer to reverse side for Notes)

For any further inquiries regarding this application please email :

swtapin@sydneywater.com.au

Appendix B – Ausgrid DBYD Map and Existing Substation Location

FF624 - EK1

Ref: B8

FF624 - EO1

6x150 PVC

NR

1.2-1.1

Ref: C6

FF624 - ET1

2x150 PVC

NR

NR

Ref: D8

FF624 - EV1

Ref: D5

FF624 - FL1

1x50 FC

4x135 FC

NA

NR

Ref: D4

FF624 - FM1

2 X 125 PVC

0.3 - 0.85

0.45

Ref: E4

FF624 - FP1

Ref: E4

FF624 - FS1

Ref: F5

FF624 - GM1

Ref: E6

FF624 - GP1

5x50 PVC

2x150 PVC

NA

NR

Ref: F7

FF624 - GR1

6x150 PVC

NA

0.7

Ref: F7

FF624 - JT1

4x125 PVC

0.7

0.7

Ref: F6

FF624 - JU1

6x125 PVC

0.7

0.7

Ref: F6

FF624 - JV1

2x140 AC

5x125 PVC

1.2

0.7

0.7

Ref: F5

FF624 - JY1

4 X 125 PVC

1.0-1.2

0.6-1.0

Ref: F5

FF624 - JZ1

1x140 AC

0.7

0.7

1 X 150 PVC

0.7

0.7

Ref: F5

FF62414

FF62424

FF62434

FF62444

WESTMINSTER AVE

HAWKESBURY AVE

CLARENCE AVE

PITTWATER RD

KINGSWAY

RICHMOND AVE

DEEWHY PDE

EXISTING KIOSK SUBSTATION ON THE SITE

WARNING

Ausgrid's plans show the position of assets at the time of installation and may not reflect the subsequent changes to road alignments, fences or buildings. The plans shown no more than the presence or absence of Ausgrid assets in the area.

Persons working near electricity networks must exercise care and will be held responsible for any damage caused.

You must accurately locate and use vacuum excavation to establish the location of Ausgrid underground cables in the area associated activity.

Underground electricity cable may result in electric shock even if no contact is made. Any work in the vicinity of any cable should only be performed using safe work methods developed in accordance with the recommendations included in Safework NSW Code of Practice for Excavation and Safework NSW Guide for Work Near Underground Assets.

Do not excavate near poles as per Ausgrid's Network Standard NS156, Overhead. Do not excavate near poles or towers until the stability of the foundation has been assessed by Ausgrid. Cables or earth conductors may be present close to substations, poles or towers.

Workers must maintain safe approach distances and follow applicable Safework NSW Guide for Work Near Overhead Lines.

NOTE: 1. You must keep Ausgrid plans on site during excavation works. If the people actually performing the excavation work do not know how to read and interpret Ausgrid's plans, then the work must be directed by a person who knows how to read and interpret the plans. 2. This information includes data from the NSW Digital Cadastral Database by Land and Property Information on 2016, used

GMLA0

Distribution - 225266332

31 May 2023

Page 1 of 2

1:803

0 36 metres

Ausgrid

FF624 - KA1

1 X 125 PVC

0.9

0.9

Ref: F5

FF624 - KB1

Ref: F5

FF624 - KO1

2 X 125 PVC

0.3 - 0.85

0.45

Ref: E4

FF624 - KP1

Ref: E4

FF624 - KQ1

4x50 PVC

2x150 PVC

1x25 PVC

NR

NR

Ref: F7

FF624 - KV1

1x150 PVC

4x50 PVC

2x150 PVC

NR

NR

Ref: E5

FF624 - KW1

2x50 PVC

0.5

0.5

Ref: E5

FF624 - LA1

1x125 PVC

0.6 - 0.8

0.5 - 0.6

Ref: A7

FF624 - LK1

4x150 PVC

1x50 PVC

NA

NR

Ref: F5

FF624 - LL1

4x150 PVC

1x50 PVC

NA

NR

Ref: E6

FF624 - LM1

6x150 PVC

1x50 PVC

NA

NR

Ref: E6

FF624 - LO1

2 x 140 AC

4 x 125 PVC

0.7-1.2

0.7-1.2

Ref: F5

FF624 - LP1

4x150 PVC

1x50 PVC

NA

NR

Ref: E6

FF624 - LU1

2 x 150 PVC

1 x 50 PVC

NA

NR

Ref: E5

FF624 - LV1

2 x 150 PVC

1 x 50 PVC

2.2-3.0

0.7-0.8

Ref: F5

FF624 - ML1

3x150 PVC

NA

0.8

Ref: C6

A0 MOCS_std_plot