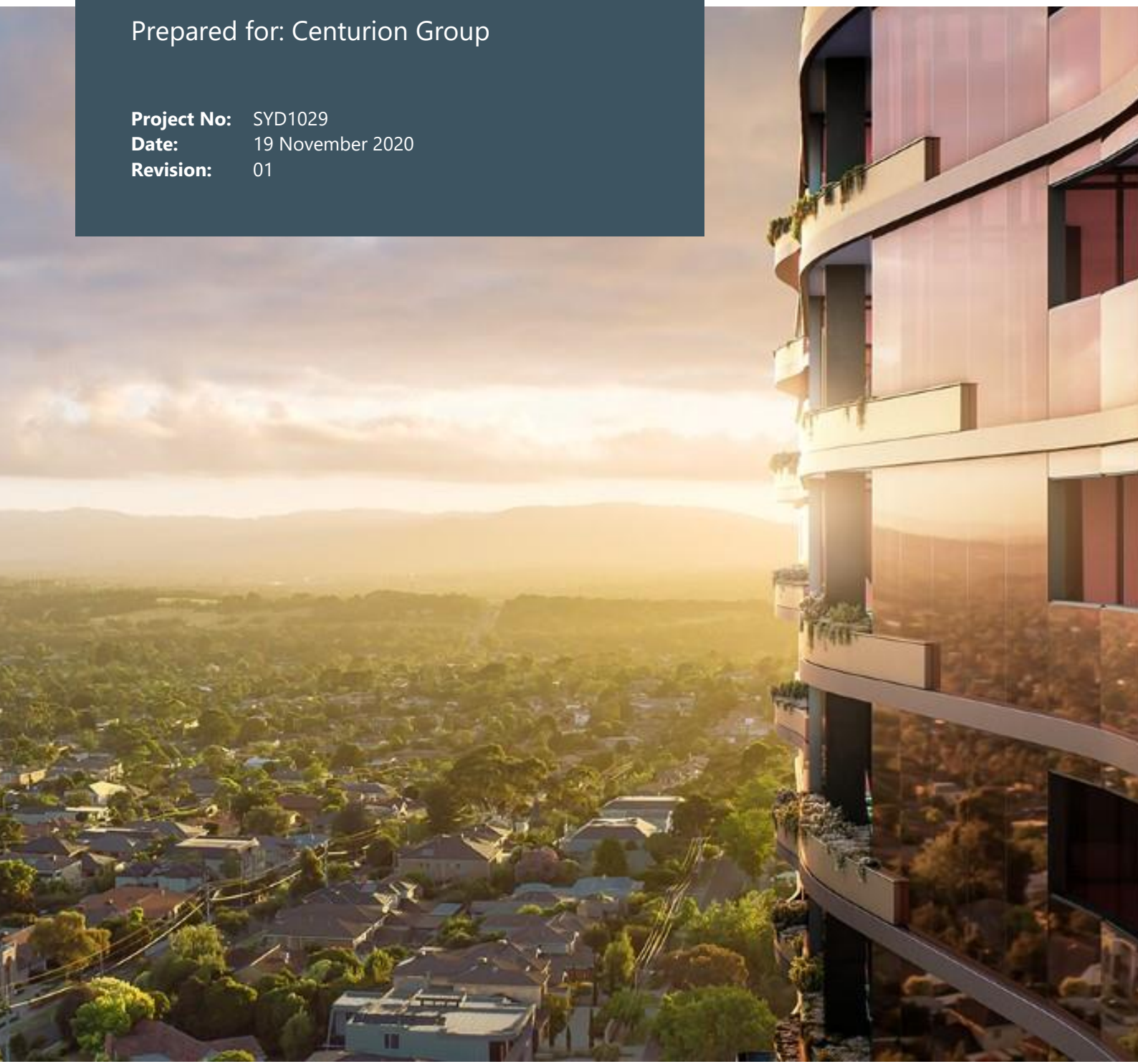
Summit Care Randwick

Infrastructure Report

Prepared for: Centurion Group

Project No: SYD1029
Date: 19 November 2020
Revision: 01

ADP Consulting : Engineering



ADP Consulting : Engineering

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Project:	Summit Care Randwick
Location:	11-19 Frenchmans Road Randwick, NSW, 2031
Prepared by:	ADP Consulting Pty Ltd Level 3, 8 Spring Street Sydney NSW 2000
Project No:	SYD1029
Revision:	01
Date:	19 November 2020

Rev	Date	Comment	Author	Signature	Technical Review	Signature	Authorisa-tion & QA	Signature
P1	31/07/2020	Draft			PP	PP	PP	PP
01	19/11/2020	Final	Various		PP		GM	

Project Team	
Client / Principal	Frenchmans Lodge Properties Pty Ltd
Project Manager	Centurion Group
Architect	Boffa Robertson Group

Contents

1. Executive Summary

This report provides an infrastructure due diligence of the existing in-ground infrastructure surrounding and serving the site at 11-19 Frenchmans Road, Randwick, NSW 2021. The existing building on site will be demolished to make way for a new Summit Care aged care facility, with services provisions to cater for on-site kitchen, laundry and resident facilities such as theatre, gymnasium and spa. .

ADP have undertaken a desktop review of the information provided from the site Dial Before You Dig (DBYD) search. Furthermore, ADP conducted a site visit at the Baulkum Hills' facility to provide a more in-depth review on services required by Summit Care .

The report provides an overview of the following information relating to each service:

- Existing infrastructure surrounding and serving the site.
- Estimated new infrastructure works associated with the development.
- A summary of additional infrastructure items to be resolved as part of the project design.

The report identifies the risks and opportunities for the related works.

2. Introduction

2.1 Project Description

The subject site, 11 – 19 Frenchmen Rd, is occupied by an existing aged care facility and 2 residential residences. Based on the plans submitted by the architect the existing building on site will be demolished to allow for the construction of the new Summit Care aged care facility.

The intention of the development proposal is to amalgamate the lots associated with the development which will trigger the requirement for consolidating the incoming services into the site.

Figure 1 Site location (Source: Google maps)

2.2 Purpose of the Report

This report provides an infrastructure due diligence of the existing authority infrastructure surrounding and serving the current site. This includes an overview of the following in-ground services:

- Water & Sewer (Sydney Water)
- Power (Ausgrid)
- Telecommunication (Telstra, NBN, Vocus, Primus, AARNet, NextGen, PIPE, Verizon and Optus)
- Gas (Jemena)

2.3 Information Sources

The following information sources have been utilised to prepare this report:

> Dial before you dig (DBYD) information packages
> Architectural drawings by Boffa Robertson Group.
> Preliminary feedback received to date from authorities.

3. Site Infrastructure Overview

3.1 General

The following section of the report provides a description of the existing infrastructure and proposed works associated with the refurbishment.

Authority infrastructure reviewed in this report includes:

- Electrical (Ausgrid)
- Telecommunications (NBN or Telstra)
- Water & Sewer (Sydney Water)

3.2 Infrastructure Matrix

There is limited information available on the status of consultation with the Authorities. The following matrix summarises our understanding of the status of the Authorities works.

Table 1 Infrastructure Matrix

Authority	Scope of Works	Status
Ausgrid	(Proposed) Establishment of new kiosk substation on site.	Ausgrid to be notified of the new works. Level 3 design to commence once design information package released by authority.
Telstra	N/A – Summit Care telecommunication services are provided by NCIS. Existing services the be decommissioned and removed.	Application for services removal to form part on detailed design
NBN	N/A – Summit Care telecommunication services are provided by NCIS.	N/A
Sydney Water	Modification of sewer and water connection for the building.	PFI submitted Submission to of Section 73 to Sydney Waters will be required Trade waste agreement Verify the location of existing cold-water meter
Gas - Jemena	Extend Gas supply from existing gas mains to site with Gas meter	Verify the existence of existing gas connection

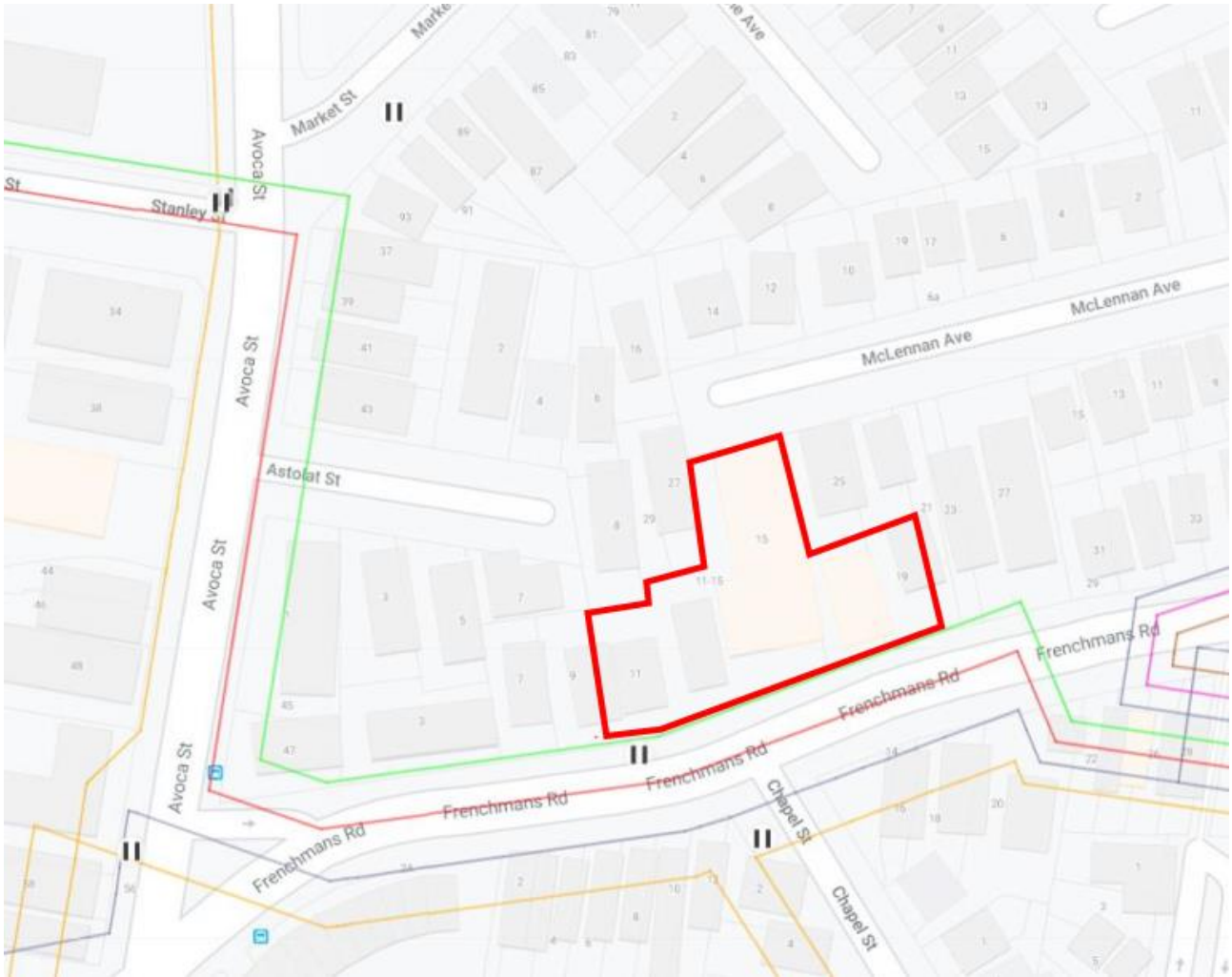
Note: The above does not include stormwater as this will require a civil engineer to prepare the stormwater management plan. A stormwater management is generally nominated as part of the DA conditions.

4. Electrical Infrastructure

4.1 Existing Infrastructure

Based upon the Ausgrid database, there is existing (underground) high voltage network along the Frenchmans Rd property boundary (per the image below). In addition, there is also Ausgrid low voltage (overhead) network that serves the existing connections. Due to the load demand of the site, the existing low voltage network does not permit the connection to be made, where a substation will be required to provide the electrical capacity that the connection requires. The substation is proposed to be located on the development frontage, on Frenchmans Rd.

Figure 2 Ausgrid Infrastructure (HV network)



4.2 New Works Associated with Electrical Infrastructure

Anticipated responses from the supply authority Ausgrid will indicate that the existing network does not have suitability to provide the site with the anticipated ~520Amps. Importantly, the low voltage overhead network in Frenchmans Rd, provides only 400Amps to service residential customers, and the proposed load of the development is anticipated to be over 500Amps. This would therefore overload the street network, thus dictating additional capacity needs to be established, in order to serve the development. This capacity is proposed to be provided by a kiosk substation, on site.

With the existing high voltage underground along the development frontage in Frenchmans Rd, the anticipation is that an essentially simple project construction scope will be required to install the substation.

The new kiosk substation, subject to detailed design, will likely include the following high-level scope:

- Liaison with Ausgrid via Connection application
- New consumer mains from the transformer to a new Site Main Switchboard

4.3 Items To Be Resolved

The following items will be required to be addressed as part of the project design:

> Proceed with lodgement of the "application for connection" to the authority to commence confirmation of the electrical connection requirements, for the authority assessment

> ADP Level 3 designer to progress with detail design based on the authority assessment results

> Ausgrid contestable design process to commence, with a certified design to be achieved

5. Telecommunications

5.1 Existing Infrastructure

The site is currently served by Telstra 10-pair lead-in to the existing lot.

The current DBYD information indicates there are in-ground NBN Co. Hybrid Fibre Coaxial (HFC) communication services which run along both street frontages of the development site.

The following telecommunications services are available to the development.

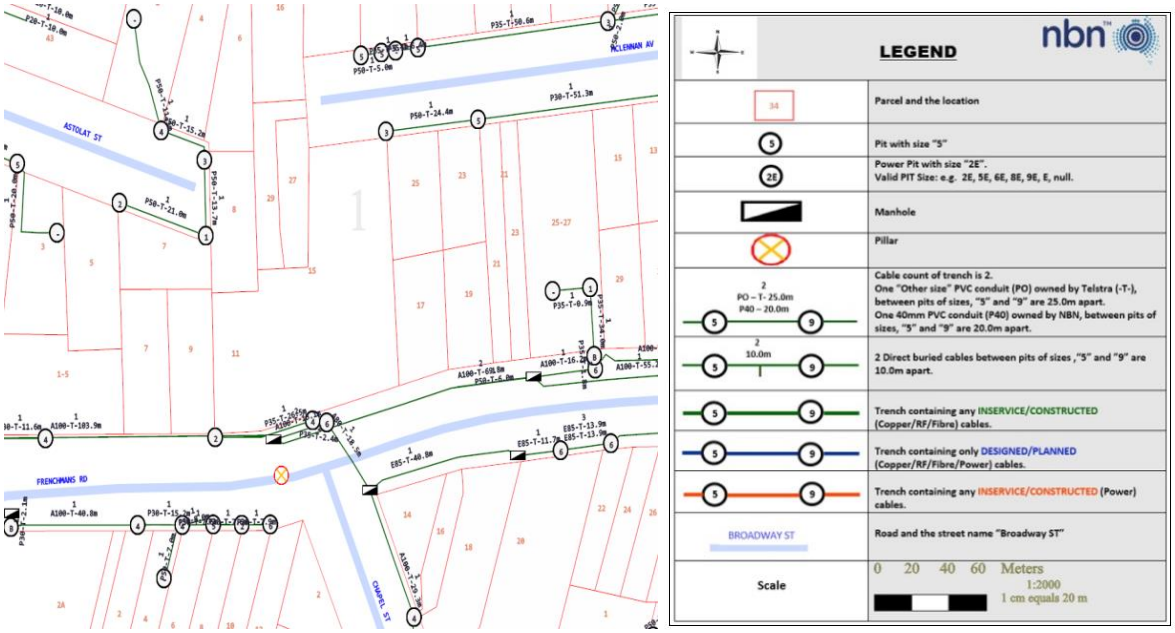
5.1.1 NBN Co

NBN Co. has provided HFC services in the area.

NBN Co telecommunications assets are located at both Frenchmans Rd and McLennan Av frontages of the development area and presented in the figure below.

As required under current legislation, NBN will be provided with the first right of offer for this development should it commence construction after NBN rollout is complete.

Figure 3 NBN Co Spring Street Infrastructure & Legend



5.1.2 Telstra, Vocus, Primus, AARNet, NextGen, PIPE, Verizon and Optus

Above mentioned telecommunications assets for connection are available in the vicinity of the development area. Connection maybe available should the developer chooses to select from these infrastructure providers.

5.2 New Works Associated With Telecommunications Infrastructure

The new development will require relocation, decommission and removal of the existing services from the frontage of the development site.

Applications to telecommunication providers should always be made at the first convenience once requirements are further identified and confirmed to avoid potential delays.

5.3 Gigabit Passive Optic Fibre

A nominated GPON operator is able to provide a new fibre connection from the existing NBN Co. pit and pipe network within the area to the site.

No network connection applications will be required by the Client and the GPON operator are able waive connection fees provided the network infrastructure requires less than 1km of new lead-in fibre and an ongoing service connection is taken up.

5.4 Items To Be Resolved

The following items will be required to be addressed as part of the project design:

> Additional application to Telstra maybe required to decommission and removal existing services;

> Note the site infrastructure is designed based on a GPON system to be established as discussed in the meeting. Where changes to an alternate system (NBN Co.) is required, a separate application to the authority will be required.

6. Water and Sewer services

6.1 Background

The DBYD information provided by Sydney Water indicates there is an existing water and sewer network.

The existing water and sewer services system in the area of the development can be summarised as follows:

> A DN150 water main along Frenchmans Road
> A DN300 trunk water main along Frenchmans Road
> A DN225 sewer main along Chapel St
> A DN225 sewer main along McLennan Street

A pressure and flow inquiry (PFI) has been submitted to Sydney Water. The PFI results indicate the available pressure and flow from Sydney Water mains to the site.

Figure 4 PFI Sydney Water – Existing Water Assets along Frenchmans Road.

Statement of Available Pressure and Flow

Sydney WATER

Charbel Raad
350 Kent Street
Sydney NSW 2000

Attention: Charbel Raad Date: 10/10/2019

Pressure & Flow Application Number: 720027
Your Pressure Inquiry Dated: 2019-09-02
Property Address: 11-15 Frenchmans Road, Randwick NSW 2031

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: Frenchmans Road	Side of Street: South
Distance & Direction from Nearest Cross Street	3 metres East from Chapel Street
Approximate Ground Level (AHD):	80 metres
Nominal Size of Water Main (DN):	150 mm

EXPECTED WATER MAIN PRESSURES AT CONNECTION POINT

Normal Supply Conditions	
Maximum Pressure	30 metre head
Minimum Pressure	22 metre head

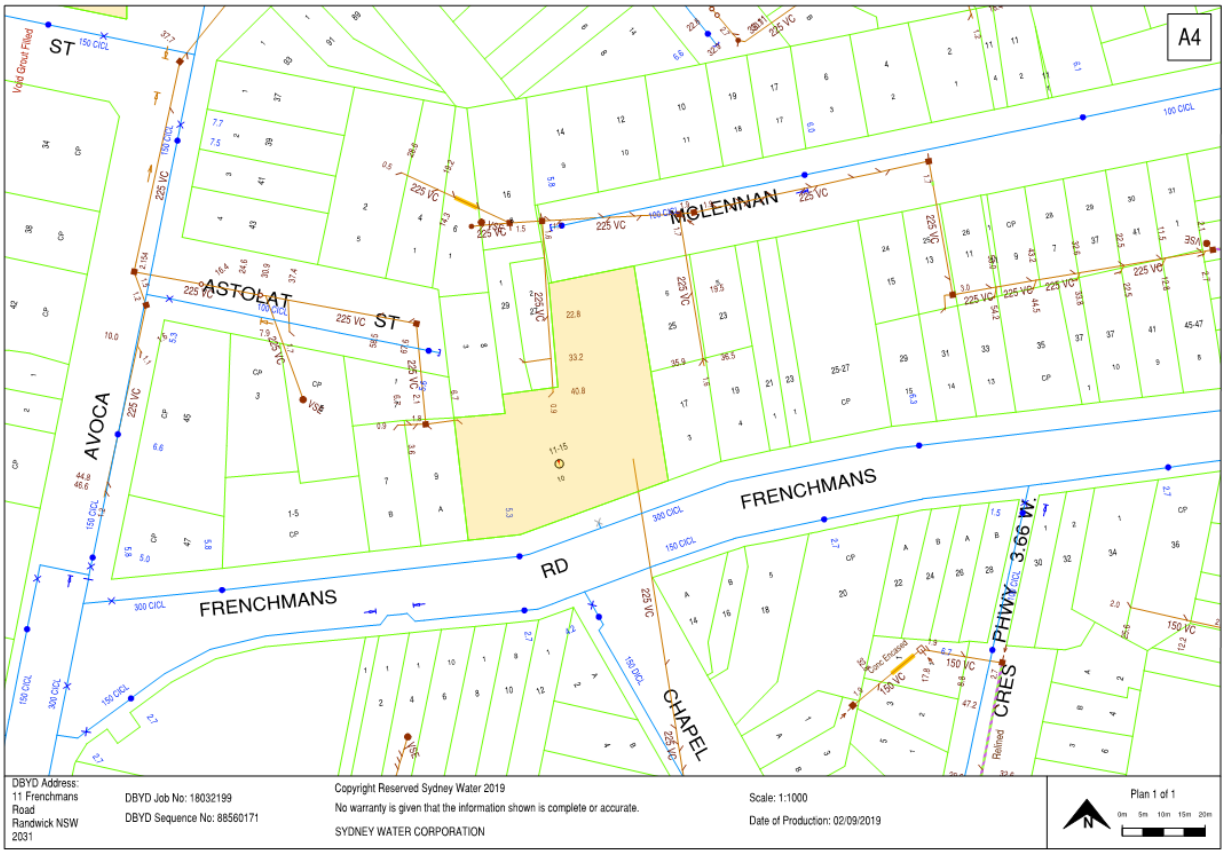
WITH PROPERTY FIRE PREVENTION SYSTEM DEMANDS	Flow l/s	Pressure head m
Fire Hose Reel Installations (Two hose reels simultaneously)	0.66	22
Fire Hydrant / Sprinkler Installations (Pressure expected to be maintained for 95% of the time)	5 10 15 20 26 30 40 50	24 24 24 23 23 22 21 20
Fire Installations based on peak demand (Pressure expected to be maintained with flows combined with peak demand in the water main)	5 10 15 20 26 30 40 50	22 21 21 21 20 20 18 17
Maximum Permissible Flow	67	14

(Please refer to reverse side for Notes)

For any further inquiries regarding this application please email :

swtapin@sydneywater.com.au

Figure 4 DBYD Sydney Water – Existing Water, Stormwater and Sewer Assets along Frenchmans Road



6.2 New works associated with Water & Sewer infrastructure

The above Sydney Water Pressure and Flow Inquiry (PFI) indicates that fire service pumps will be required, however a fire service storage tank will not be required for fire-fighting purposes for the development.

The above Sydney Water Pressure and Flow Inquiry (PFI) indicates that fire service pumps will be required and fire service storage tank/s will not be required for fire-fighting purposes for the development.

To cater for the commercial kitchen and remote serveries, a new grease arrestor and a trade waste agreement with Sydney Water will be required, the final grease arrestor size and suitable location will be determined during the design stage.

6.3 Items to be resolved

The following items will need to be confirmed during the design development process:

- Verify the location of proposed cold water meter
- The size of Grease Arrestor
- Location of Grease Arrestor
- Make applications for Cold water meter, connection and Trade waste agreement with Sydney Water

7. Stormwater services

7.1 Background

In review of the DBYD Sydney water – Existing Water, Stormwater and Sewer Assets maps above, there is no existing Sydney Water stormwater drainage system located on either Frenchmans Road or McLennan Street.

7.2 New Works associated with Stormwater Infrastructure

Any new stormwater in-ground infrastructure and the legal point of discharge will need to be developed by a suitably qualified civil engineer or the planning permit.

Allow to design new roof drainage associated with the proposed building 11-19 Frenchmans Road.

Further consultation with the relevant authorities (i.e. Local Council) will be required in order to finalise the system requirements.

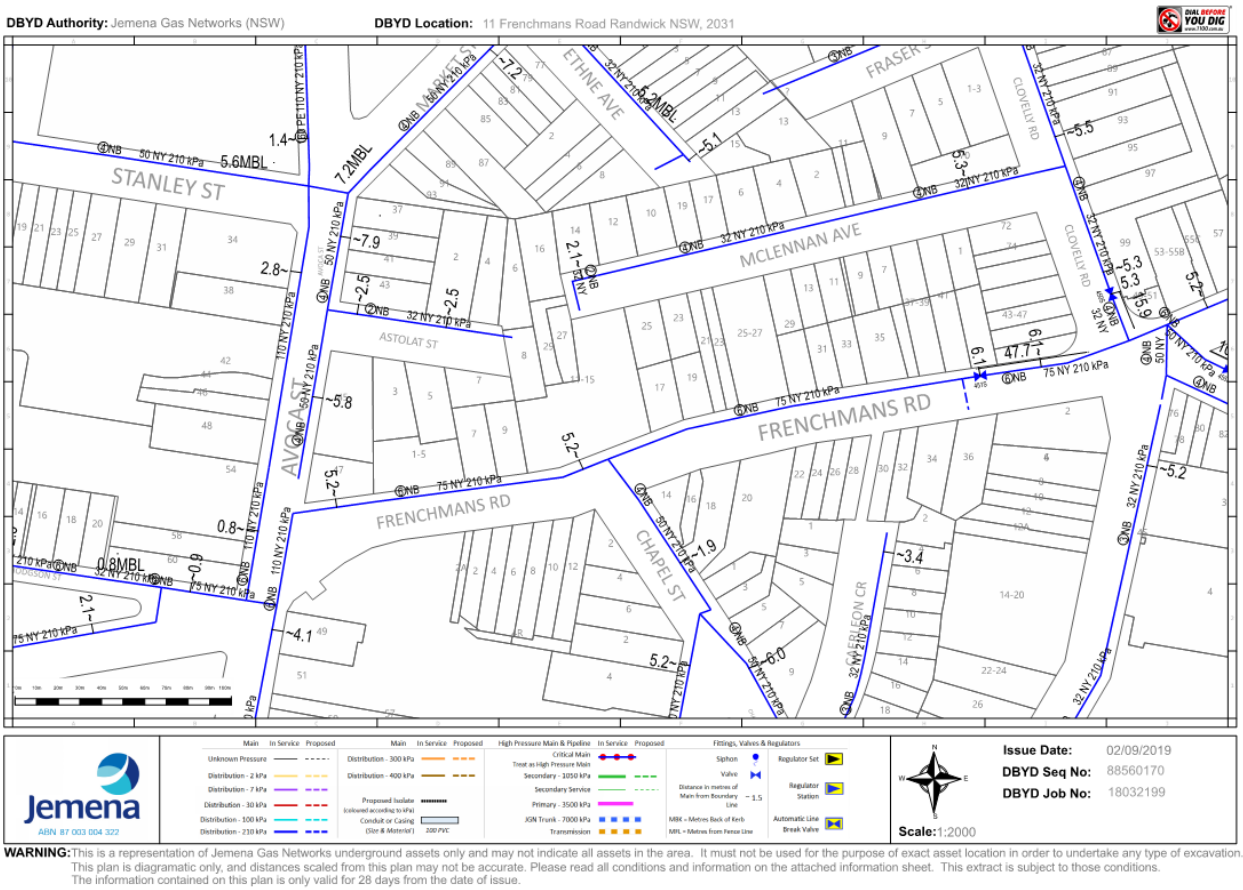
7.3 Items to be resolved

- Coordination with Local Council
- Sydney Water yet to be notified of the new works via application

8. Gas Infrastructure

8.1 Existing Infrastructure

The DBYD information provided by Jemena indicates an 75mm NY network gas main (210Pa) is currently on the northern side of Frenchmans Road.



8.2 New Works associated with Gas Infrastructure

A new gas service will be required for the new development. A new application will need to be provided to Jemena to make connection to the existing gas infrastructure.

8.3 Items to be resolved

The following items will need to be confirmed during the design development process in order to determine the development gas demand:

- Gas load (MJ/hr) for the proposed building (kitchen cooking, special plant or equipment requiring gas, etc.)
- Gas connection to the existing gas main
- Jemena yet to be notified of the new works via application.

9. Fire Services

9.1 New Works Associated with Fire Services Infrastructure

9.1.1 Sprinkler System

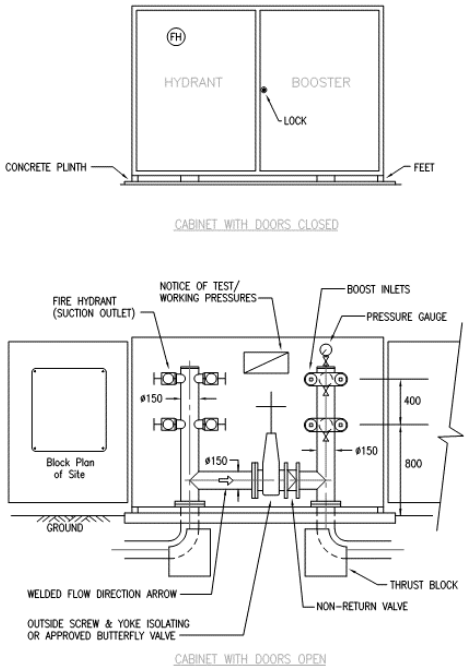
A sprinkler system will be required for the development due to the classification of the building as per the BCA.

A new Sprinkler Booster may be required for the building, a typical booster assembly layout is provided below for reference (Figure 5). As per the Australian standards, the booster will need to be at the front of the building and within site of the main entrance.

The initial dimensions are 2500 (w) x 1500 (h) x 500 (d) and can be seen below.

In addition to the above, based on the based on the results of the Sydney Water Pressure and Flow Inquiry, a sprinkler pump will be required to supply adequate pressure to the new sprinkler system. Spatial for the pump has been catered for within the current set of architectural drawings.

Figure 5 Example Booster Assembly



9.1.2 Hydrant System

As the development has a total floor area of greater than 500m^2, a new fire hydrant system will be required pending confirmation by the building certifier.

A per the standards, a new Hydrant Booster will be required for the building, a typical booster assembly layout is provided below for reference (Figure 5). As per the Australian standards, the booster will need to be at the front of the building and within site of the main entrance.

In addition to the above, hydrant pumps will be required to supply adequate pressure to the new hydrant system. The requirement of this shall be confirmed, based on detailed design and confirmation by the certifier.

9.1.3 Fire Detection and Warning System

The detection and warning systems will be required to comply with the BCA.

A new addressable FIP shall be installed within the ground floor lobby area along with an occupant warning system.

The building certifier is to confirm whether an Emergency Warning and Intercom System (EWIS) is required for the building.

9.2 Items to Be Resolved

- Confirmation from certifier for following:
  - EWIS System

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Creating great environments with great people

Melbourne
Level 11, 60 Albert Road
South Melbourne VIC 3205
T. 03 9521 1195

Sydney
Level 3, 8 Spring Street
Sydney NSW 2000
T. 02 8203 5447

Brisbane
Ground Floor, 102 Adelaide Street
Brisbane QLD 4000
T. 07 3088 4022

adpconsulting.com.au