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Project: **Multi-Level Warehouse & Distribution Centre – 94-98 Cosgrove Road, Enfield**
Service Infrastructure Assessment

Our Ref: **SY076143.000**

Date: **October 2024**

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Revision:

Issue	Date	Comment
A	06/2024	Issue for comment
B	19/06/2024	Ausgrid response received
C	24/10/2024	Updated masterplan, GFA amendment, Sydney Water feasibility response not yet received

EXECUTIVE SUMMARY

Servicing Capability

This report has been prepared to address expected relevant requirements as setout within the Secretary's Environmental Assessment Requirements (SEARS) for Service Infrastructure and Association Utilities. The anticipated service infrastructure and utilities required to service the development include:

- Potable Water
  - Estimated Potable Water Demand
    - Average Day Demand 38kl/day
    - Max Day Demand 84kl/day
  - Potable water reticulation system exists adjacent to the site in Hope Street and Cosgrove Road. A 250mm trunk water main is located in Madeleine Street and is not available for direct connection.
  - There is a 2,400mm trunk main constructed in tunnel at depth bisects the property.
- Waste Water
  - Estimated Waste Water Demand 31kl/day Average Dry Weather Flow
  - A 225mm reticulation sewer exists within the site and due to the location of the proposed building footprints this main is likely to be disused and assets recovered.
  - A 225mm sewer is laid in Madeleine Street and is available for connection.
  - Connection to the existing 225mm main in Madeleine Street will be required and this main has adequate capacity to serve the proposed development.
- Electricity
  - The site is currently serviced by existing Ausgrid high voltage underground cables in the surrounding road network leading to four (4) existing Ausgrid padmount substations established on the subject site.
  - Electrical demand for the proposed development has been calculated as 1.2MVa – refer appendix B. The existing 4 substations will be decommissioned and replaced with two (2) new substations. One substation of capacity 1MVa will supply the proposed development. Another substation (expected capacity of 1MVa) will augment capacity for the subject site, supply the surrounding electrical network and street lighting systems.
  - Applications for Technical Review Request had been lodged with Ausgrid and their response is attached in Appendix B.
- Telco
  - NBN is the default network provider for the area and has established underground fibre optic cables within the adjacent road network. Connections to the existing warehouse facilities on the site are in place from the fibreoptic reticulation in Madeleine Street and Cosgrove Road. The existing connections to the existing warehouse facilities will be removed during demolition of the existing buildings. New connections to the fibre optic systems within Madeleine Street and Cosgrove Road will be undertaken during construction of the proposed development.
  - Optus also has fibre optic systems installed in Cosgrove Road and these will also be available for connection to the proposed new development.

- Gas
  - Jemena has a 1,050kPa gas main in Cosgrove Road and a low pressure main (7kPa) in Madeleine Street.
  - Due to the nature of the proposed development, it is unlikely that connection to the gas reticulation system would be required.

1.0 INTRODUCTION:

This report has been prepared by LandPartners on behalf of Centuria Capital Ltd in support of a Planning Proposal for 94-98 Cosgrove Road Enfield.

1.1 THE SITE

The Site is identified as 94-98 Cosgrove Road Enfield, which is made up of the following land holdings:

TABLE 1. SITE IDENTIFICATION		
Site Address	**Legal Description**	**Land Area (approx.)**
92-98 Cosgrove Road Enfield	Lot 100 DP882635	4.293ha
TOTAL:		**4.293ha**

The Site is located within the Strathfield Local Government Area and is zoned E4 General Industrial pursuant to Strathfield LEP 2012.

The subject site is legally described as Lot 100 DP882635. This site is located within a well established commercial/industrial precinct which is well serviced by existing public utility infrastructure.

The current use of the site has three (3) existing single storey warehouse premises. The existing buildings are serviced from the existing utility service infrastructure adjacent to or within the subject property.

1.2 DESCRIPTION OF DEVELOPMENT

The proposed development seeks consent for the following:

- Demolition of existing building premises;
- Site preparation works, including earthworks and clearing of disused infrastructure;
- Construction of a multi-level warehouse and distribution centre comprising;
    - 1 x Three storey warehouse building, with ancillary office floorspace in each;
    - No. 357 car parking spaces provided at grade;
    - Hardstand areas to provide internal vehicular circulation routes;
    - Construction of two vehicular access ramps to first and second floor level, serving truck movements;
    - Associated new soft landscaping and the replacement planting of trees;

The proposed multi-level warehouse and distribution centre includes those works as identified in **TABLE 1** below.

TABLE 1. DEVELOPMENT STATISTICS

Component	Proposed Outcome
Site Area	4.293ha
Land Use	Industrial (warehouse and distribution centre) with ancillary office floorspace. Defined by the Strathfield LEP 2012 as: **warehouse or distribution centre** means a building or place used mainly or exclusively for storing or handling items (whether goods or materials) pending their sale, but from which no retail sales are made, but does not include local distribution premises.
Gross Floor Area	69,900m^2 ▪ Warehouse GFA – 63,300m^2 ▪ Office GFA – 6,600m^2
Floor Space Ratio	1.6:1
Building Height	35m
Number of Storeys	Three (3) storeys
Number of tenancies/units	Six (6) tenancies
Landscaping	TBA
Earthworks	• Minor excavation; *Detailed earthworks to be confirmed.*
Roads / Driveways	• Retention and upgrade of existing vehicular access to Cosgrove Road, for truck entry in Cosgrove Road and Madeleine Street with separate car access provided; • Internal circulation roads and ramps to the west and east of warehouse 3; • New truck ramp proposed to the east end of warehouse 3 to provide access to first and second floor warehouse loading bays; • New truck ramp provided to the west end of warehouse 3 to provide egress from first and second floor loading bays; • New hardstanding provided at ground floor between warehouse 1 and 2 to provide an area for heavy truck manoeuvring and loading/unloading.
Car Parking	357 car parking spaces
Bicycle Parking	TBA
Tree Removal / Planting	TBA
Signage	The development will propose signage; however, the design and final location is yet to be confirmed.

1.3 SEARS REQUIREMENTS

This report has been prepared to address the following matters set out within the industry specific SEARS expected to be issued for the proposed development:

Infrastructure Requirements & Utilities	How It Is Addressed	Section of this Report
Assess the impacts of the development on existing utility infrastructure & service provider assets surrounding the site.	Identify existing services through site inspection and utilising existing service utility plans.	Section 3, 4, 5 & 6
Identify any infrastructure upgrades required onsite and offsite to facilitate the development and any arrangements to ensure that the upgrades will be implemented on time and be maintained.	Determine demand requirements for the development, determine if any upgrades or infrastructure amplifications required.	Sec 3-6 inclusive Appendix A & B
Provide infrastructure staging plan, description of how infrastructure requirements would be coordinated, funded and delivered to facilitate the development.	Assess existing infrastructure if staging of any upgrades (if required) will be required and if so what funding is required	Section 8

2.0 SERVICE AUTHORITIES:

The service authorities who provide infrastructure services to this area are:

(a) Sydney Water: Potable Water & Waste Water Infrastructure
(b) Ausgrid: Electrical Infrastructure
(c) NBN Co: Telecommunications Infrastructure
(d) Jemena: Gas Infrastructure

2.1 SERVICE AUTHORITY CONSULTATION

a) Sydney Water – a feasibility application had been lodged with Sydney Water and the feasibility response will be inducted in further updates to this report. A pressure and flow enquiry regarding the existing reticulation system in Hope Street has been obtained – also attached in Appendix A. The feasibility application (CN216635) is under assessment. Discussion with Sydney Water noted that due to large volume of projects various stakeholders in Sydney Water had not yet been able to review a feasibility application (which is not subject to a processing deadline) and recently a further request to Sydney Water resulted in expansion of the demand calculations noted in this report.

b) Ausgrid – a Technical Review Request has been lodged with Ausgrid and their response will be included in future updates to this report.

c) NBN Co – were contacted by phone (01/04/2024) concerning business connections. Advice received was that existing substantial fibre optic systems installed in surrounding road network, and these systems are available for connection through a suitable telecommunication provider.

d) Jemena – have not been contacted as the development is unlikely to require the provision of gas due to the proposed warehouse/logistics use of the site.

3.0 POTABLE WATER AND WASTE WATER

3.1 POTABLE WATER

a) The site is bisected by a 2,400mm water supply system laid in tunnel. This pipeline comes from the Potts Hill distribution facility and serves the Sydney CBD and areas in the eastern suburbs of Sydney. This is a critical Sydney Water asset.

b) The water supply pipe system is installed in a tunnel – we would need to investigate the depth of the tunnel below existing surface level but generally this tunnel is anywhere between 10m deep-60m deep depending on ground topography.

c) Given the existence of existing buildings on this property it would appear that the tunnel is deep and has not prevented development of the site. However, with any new development Sydney Water will need to be consulted for Building Plan Approval assessment depending on depth of the tunnel.

d) A 250mm trunk water main is laid in Madeline Street. This main is not available for connection. A 150mm reticulation main is laid in Hope Street and along part of the frontage of the site to Cosgrove Road. This main is available for connection.

3.2 WASTE WATER

a) A 225mm diameter sewer main is laid in Madeline Street with a number of junctions to facilitate connection of the site to this sewer.

b) A 225mm diameter sewer is laid within the site. Notations on Sydney Water hydra system indicates this main was installed for a future subdivision. It is likely this sewer may be redundant based on the proposed building footprint shown in the concept masterplan.

4.0 ELECTRICITY

a) Substantial high voltage electrical reticulation systems are available in Madeline St, Hope St and Cosgrove Road.

b) These high voltage systems support a network of padmount substations in the area – 4 of those padmount substations are installed within the subject property.

c) A Technical Review Request was lodged with Ausgrid, and their response is attached in Appendix B.

As noted in the Ausgrid response the existing 4 substations on site provide a capacity of 3.6MVa. Two (2) of these substations are provided to service the existing user of the subject site. Another two (2) substations on the subject site support the surrounding electrical network.

Due to the building footprints proposed for the development it would be expected that the 4 existing substations will be decommissioned and replaced with two (2) new padmount substations. One substation will be allocated to supply the subject site and augment supply (if required) to the subject development and the other substation will support the surrounding electrical network. This extra substation will also provide low voltage feeders to a number of street lighting poles.

d) As the subject site is within a well-established and well serviced industrial precinct the availability of electrical distribution services is of high quality.

5.0 GAS

a) It is unlikely that the proposed development would require connection to the adjacent gas reticulation system.

b) A 1,050kPa gas main is laid in Cosgrove Road with connections by the existing development to this main.

c) In Madeline Street there are a number of low pressure gas mains (7kPa) which would be available for connection if required.

6.0 TELCOMMUNICATIONS

a) Substantial fibre-optic systems are installed in the street systems that abut the subject site. Connections have been made to the existing buildings established on site.

b) Given the number of fibre-optic systems surrounding the site existing telecommunications infrastructure will support the proposed development.

7.0 EXPECTED IMPACTS ON EXISTING INFRASTRUCTURE

a) As discussed in Sec 3.2 an existing 225mm sewer main is located within the site. This sewer main only serves the existing development. Due to the building footprint of the proposed development this sewer main is likely to be disused and removed from the site.

The existing 225mm sewer main adjacent to the Madeleine Street frontage will remain insitu to enable connection by the proposed development to Sydney Water sewer system.

b) There are 4 padmount substations located within the site and these padmounts will need to be disconnected and recovered from the site. The development will be serviced by the installation of a new padmount substation to supply the expected demand of 1MVa and another padmount substation to supply the surrounding electrical network and street lighting systems.

c) Existing internal telecommunications assets currently servicing the existing buildings on site will be terminated and removed. New telecommunications facilities will be provided as part of the proposed development by an authorised telco provider.

d) Due to the proposed use of the site as a warehouse/logistics facility it is highly unlikely that gas reticulation will be required to serve the development.

8.0 INFRASTRUCTURE STAGING & DELIVERY PLAN

8.1 SYDNEY WATER

a) Sydney Water has a standard asset creation path outlined in their Sec 73 process. It is expected that Sydney Waters' Notice of Requirements will note that existing services adjacent to the site in the surrounding road network will be used for the proposed development.

b) The site is adequately serviced by existing potable water reticulation system in Hope Street and Cosgrove Road.

8.2 ELECTRICITY

a) Application to Ausgrid should occur early in the development process to provide guidance for any new padmount substation that will be required and the decommissioning and removal of the existing padmount substations and surrender of associated leases noted on the title of the property.

8.3 GAS

a) There is expected to be no gas reticulation required to serve the proposed development.

9.0 COST

a) All assets to service the development will be delivered through the various utility organisations asset creation path and in this instance those assets will be developer funded.

APPENDIX A
POTABLE WATER & WASTE WATER DEMAND

POTABLE WATER & WASTE WATER DEMAND

- Centuria has provided an architectural design of the site to produce a multi-storey warehouse/office facility. Plans prepared by Nettleton Tribe Architects reference dwg No. 14054_SK011(3) dated 6/09/2024 are used for this calculation.

- The concept masterplan outlines a GFA as follows:
  - Warehouse: 63,300m^2
  - Office: 6,600m^2

1.0 Potable Water Demand Estimate

EP (Equivalent Person) demand is based on:

Warehouse: 1EP/250m^2 of GFA
Office: 1EP/20m^2 of GFA
and a daily potable water demand of 65litres/EP/day

Sec 5.3.1 and 5.3.2 of Sydney Water document "Infrastructure Contributions – how we apply IPART's pricing method", Sydney Water note that each employee in a non-residential development would utilise:

(i) 65 litres of drinking water per day.

(ii) Waste Water discharge is 80.5% of the drinking water usage.

These figures are utilised in the following demand calculations:

Facility	GFA	EP	Litres/EP/day	Estimated Demand/day
Warehouse	63,300	253	65	16.4kl/day
Office	6,600	330	65	21.5klday
			Total	**37.9kl/day**

Average Day Demand (A.D.D) is estimated at 38kl/day.
Max Day Demand (M.D.D) is estimated at 84kl/day.

2.0 Waste Water Demand

Waste Water Average Dry Weather Flow (A.D.W.F) is calculated as 35kl/day x 0.805 = 31kl/day

A.D.W.F utilises A.D.D as the basis of determining W.W demand.

APPENDIX B
ELECTRICAL DEMAND

ELECTRICAL DEMAND ESTIMATE

- Centuria has provided an architectural design of the site to produce a multi-storey warehouse/office facility. Plans prepared by Nettleton Tribe Architects reference dwg No. 14054_SK004(2) dated 29/02/2024 are used for this calculation.

- The concept masterplan outlines a GFA as follows:
  - Warehouse: 63,300m^2
  - Office: 6,600m^2

The following estimated demand for the various facilities is utilised:

a) Lighting – 7Va/m^2 office, 5Va/m^2 warehouse, 2Va/m^2 carpark, hardstand
b) General Power – 45Va/m^2 office, 17Va/m^2 warehouse
c) Appliances such as E.V charging – 7kVa forklifts, heavy vehicles 30Va/m^2, light vehicles 10Va/m^2
d) Motors such as roller doors 2kVa/unit, dock levellers 20kVa/unit (assess this as 25% utilising factor)
e) Airconditioning – 55Va/m^2 (90% utilisation rate)

I have further assumed the following:

- Ground floor, level one and level two – 78 roller doors
- Forklifts – allow 4 per warehouse tenancies + 2 extra/floor = 30 forklifts
- EV Charging – allow 20% carpark areas + 4 truck parking charging stations per level (carpark 325 spaces)

The following electrical demand estimate is determined:

Facility	Warehouse	Office	Carpark/Hardstand
Lighting	317kVa	46kVa	40kVa
General Power	63kVa	297kVa	
Appliance			273kVa
Motors (utilisation)	168kVa		
Airconditioning		363kVa	
Total	**548kVa**	**706kVa**	**313kVa**

Total all facilities: 1.57MVa – SAY 1.7MVa providing an allowance for highly automated or specialised end user requirements.

As all units do not operate concurrently a usage rate of 67% is adopted.

1.7MVa x 0.67 = 1.14MVa SAY 1.2MVa

Preliminary Enquiry – Response Letter

18/06/24 Webform ref: 1921751

Landpartners Pty Ltd
Attention: GREG OXLEY
Via email: greg.oxley@landpartners.com.au

Premises address: **COSGROVE ROAD, STRATHFIELD SOUTH**

Ausgrid AE Reference: **700009218**

Dear GREG

I refer to your preliminary enquiry regarding the electricity connection at the above address and provide the following information.

- ❑ The site contains 4 existing substations

- ❑ S.1139 Madeline Hope No 1 is a 1000kVA Chamber type substation
  - Low voltage distributor LVF:1 supplies 1 Hope St.
  - Low voltage distributor LVF:2 supplies Madeline St & S.1363.

- ❑ S. 1363 Madeline Hope No 2 is a 1000kVA Outdoor Enclosure type substation
  - Low voltage distributor LVF:2 supplies Madeline St & S.1139 An MDI reading on this distributor indicates a load of 380 amps.

- ❑ S. 5169 Cosgrove Hope No 1 is a 600kVA Kiosk type substation
  - Low voltage distributor LVF:1 supplies 92 Cosgrove Rd.
  - Low voltage distributor LVF:2 supplies Cosgrove Rd & S.6543 & SLCP No 1709. An MDI reading on this distributor indicates a load of 130 amps.

- ❑ S. 6543 Cosgrove Hope No 2 is a 1000kVA Outdoor Enclosure type substation
  - Low voltage distributor LVF:1 supplies 94-98 Cosgrove Rd.
  - Low voltage distributor LVF:2 supplies Cosgrove Rd & S.5169

- ❑ S.1139 Madeline Hope No 1 & S. 6543 Cosgrove Hope No 2 only supply the site in question. These substations may be decommissioned.
- ❑ S. 1363 Madeline Hope No 2 & S. 5169 Cosgrove Hope No 1 supply the surrounding network.
  The existing Ausgrid network does not have the capacity to accommodate these loads. At least one new substation will need to be established to accommodate these network supplies and allow these substations to be decommissioned.

- ❑ S. 5169 Cosgrove Hope No 1 contains SLCP 1709 which supplies a portion of streetlighting network.
  3 Streetlights will need to be replaced to allow decommissioning of the SLCP.

- ❑ The Ausgrid network does not have the capacity to connect the proposed 1.2MVA low voltage electricity connection. An extension/augmentation of the Ausgrid network is required. Following is the likely work(s) required to provide the request capacity.
  - Installation of a substation.

- ❑ An extension/augmentation of the Ausgrid network is Contestable and requires the customer to engage accredited service providers to undertake the design and construction of the required works. Information on how to connect to the Ausgrid network can be found on our website at the following link: https://www.ausgrid.com.au/Connections

- ❑ Alterations to the existing Ausgrid network (ie relocation works) is also Contestable as detailed above and is fully funded by the applicant.
- ❑ Ausgrid is unable to provide costs or timeframes for Contestable works. However, accredited service providers may be able to provide the information.
- ❑ The electrical connection will require Ausgrid to provide auxiliary services that only Ausgrid can provide. The auxiliary services and the associated fee are detailed in the Ausgrid document ***Alternative control services fee schedule.***. The document is available on our website at the following link: https://www.ausgrid.com.au/Connections/charges
- ❑ To proceed further in obtaining a new or altered electrical connection to the property a Connection Application will need to be submitted. The various application forms are available on our website at the following link: https://www.ausgrid.com.au/Connections

It should be noted that the above advise is based on Ausgrid's polices and network status as of today and are subject to change.

Connections to the Ausgrid network are governed by a set of laws and rules referred to as the National Energy Customer Framework (NECF). Included in the NECF is the National Electricity Rules (NER). Under these rules, a binding contract may only be formed after a connection application is lodged and Ausgrid has made a connection offer in response to that application. Accordingly, to make arrangements for the electricity connection of the development to the Ausgrid network you should lodge a completed connection application.

Should you require any further information please contact me.

Yours sincerely,

Dane Davis

Ausgrid

Direct Telephone Number: 0295855923
Email: ddavis@ausgrid.com.au