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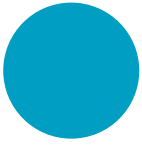
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ELECTRICAL ENGINEERING

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**Proposed ancillary works at Narrabeen North Public  
School within a coastal wetlands area**

**Designated Development Report**

**Electrical and Communications Infrastructure**

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### Document Revision and Status

Date	Rev	Issue	Notes	Checked	Approved
2 <sup>nd</sup> Nov 2022	01		For Comment	MH	MH
20 <sup>th</sup> Jan 2023	02			MH	MH

**Sydney November 2, 2022**  
Project No. 217193

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# 1.0 Executive Summary

This Infrastructure Management Plan for Electrical and Telecommunications services has been prepared by Steensen Varming on behalf of the NSW Schools Infrastructure for the Narrabeen Education Precinct.

The document encapsulates current and future planning needs associated with existing and new electrical and communication services site infrastructure systems.

The details within this document are preliminary and based on the information available at the time.

The Infrastructure Management Plan (IMP) has been prepared for lodgement with the application for the Narrabeen Education Precinct project.

This IMP, together with the Infrastructure Management Plan for other services prepared by other consultants and held under separate cover, addresses the Infrastructure Management Plan requirements.

The report within is provided to facilitate a record of the capacity of these existing services, and any augmentation/upgrades required. The report also details record of consultation with the relevant agencies.

## 2.0 Description of Development

### 2.1 Introduction

This report has been prepared having regard to the Secretary's Environmental Assessment Requirements issued for the project by NSW Department of Education C/- DFP Planning Pty Ltd Issued on 9 September 2022.

Item	SEARs Requirement	Relevant Section of Report
	<p>Infrastructure Requirements and Utilities</p> <p>In consultation with relevant service providers prepare a services and utilities impact assessment which:</p> <ul style="list-style-type: none"><li>o assesses the capacity of existing services and utilities and identify any upgrades required to facilitate the development</li><li>o assesses the impacts of the proposal on existing utility infrastructure and service provider assets and describe how any potential impacts would be managed.</li></ul>	See Section 3.0, 4.0 and 5.0

## 2.2 The Site

The subject site, Narrabeen North Public School (NNPS) is located at 6 Namona Street, North Narrabeen and falls within the local government area of Northern Beaches Council.

Narrabeen North Primary School (NNPS) is located on the northern side of Namona Street, North Narrabeen and is legally described as Lot 3 Deposited Plan (DP) 1018621. NNPS is surrounded by residential dwellings to the east, grassed sporting fields (Warriewood Valley Sportsground) to the north and Northern Beaches Indoor Sports Centre to the west. NNPS contains two (2) Binishell domes (Block A and Block B) which are identified as a local heritage item under the Pittwater Local Environmental Plan 2014. The two (2) Binishell Domes are listed as State significant on DoE's Section 170 Heritage and Conservation Register. The Double Binishell Dome (Block B) is listed on the State Heritage Register (SHR).

A map of the site is shown in **Figure 1**.



Figure 1 – Site Aerial Map, Source: DFP

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## 2.3 Overview of the Proposed Development

The Designated Development (DD) seeks consent for the following works at NNPS.

- Removal of eight (8) trees;
- New accessible pedestrian pathways;
- New substation on Namona Street frontage along with associated conduit connections;
- New fire hydrant booster and associated conduit connections;
- New hard and soft landscaping including planting of 12 new trees.

Other development works are occurring on the site under separate planning pathways including:

- Development Application (DA);
- Tree Removal (DA);
- Development without Consent (REF); and
- Exempt development

The proposed development does not seek to increase staff or student numbers.

## 3.0 Existing Utility Services

### 3.1 Electrical and Telecommunications Services

The following provides an outline of the existing electrical and telecommunications services infrastructure in the precinct and identifies any required alterations to serve the proposed development.

A 'dial before you dig' (DBYD) search as detailed in the Appendix, a site visit and discussions with utility authorities and telecommunications firms including the NBNco indicate:

- There are existing utility services supporting the site.

The study confirmed the existence of Services nearby include:

#### **Electricity Supply:**

- Ausgrid Overhead Power Networks
- Ausgrid Substation

#### **Telecommunications Services:**

- Telstra Underground cabling exists
- NBNCo Underground cabling exists

Diversions and augmentation are required due to the project.

### 3.2 Electrical

The design team has held discussions with Essential Energy including email correspondence to inform an understanding of the existing services.

#### **Existing Services**

Ausgrid :

- Ausgrid substation and Services

Diversions and augmentation are required due to the project.



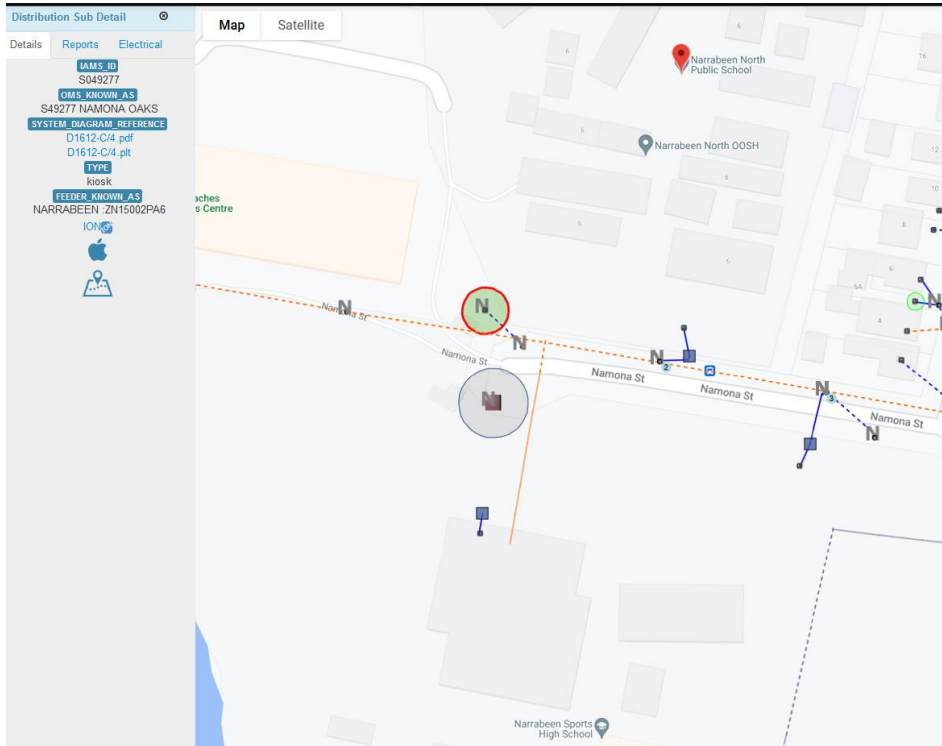
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**Figure 1: Detail from the Ausgrid GIS**

### 3.3 Telecommunications

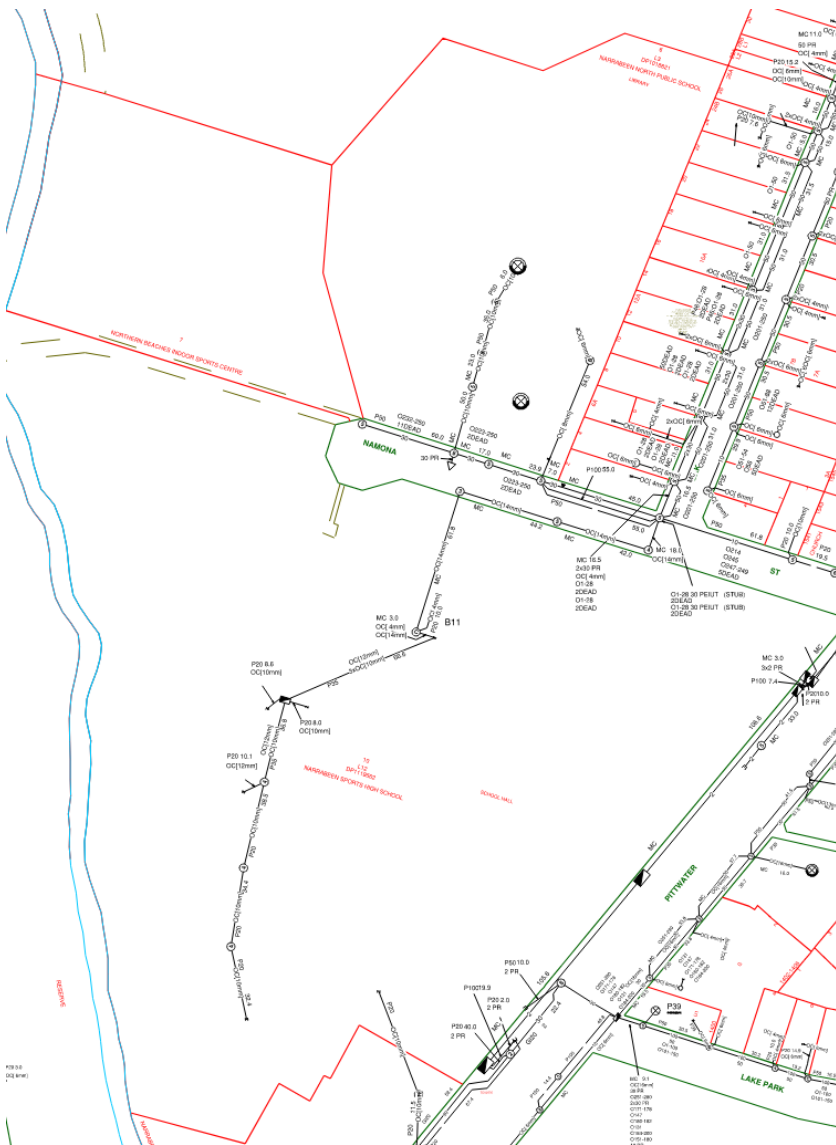
The design team has held discussions with telecommunications firms including email correspondence to inform an understanding of the existing services.

#### Existing Services

The NBN Co has assets in the Road which contain underground conduits and pits.

Similarly, Telstra has existing underground services in the area.

The school is currently using both the Telstra and NBN services.



Drawing Existing and Planned works based on Survey of Telstra Asset

## 4.0 Proposed Infrastructure & Augmentation

### 4.1 Electrical and Telecommunications Services

The following provides details of the electrical and telecommunications infrastructure proposed to service the development and demonstrates that the site can be suitably serviced from the power supply authority and the National Broadband Network (NBN).

### 4.2 Electrical Power

The existing assets will be modified and increased to support the new facility's electrical power requirements.

For the project the works includes:

- Install a 600kVA L Type Kiosk Substation for Narrabeen Public School. Coordinate the works at the High School and upgrade Substation S49277 to provide a 1200amp supply to Narrabeen High School.
- Upgrade of the existing L-Type kiosk type substation S49277 'Namona Oaks':
  - Replace existing 600kVA with a 1000kVA transformer.
  - Replace existing 400/400/800 LV Board using a new 1600/400 SAIF LV Board;
  - Replace existing 11kV SIBA 300.20.93 80amp with a SIBA 300.20.93 100amp fuse.
- Consolidation of second supply from Ausgrid pole MV-19101 to a private pillar within the school site shall be considered and allowed for at this stage. This relates to the separate Sports Field Supply and Switchboard. This additional load may impact on the Maximum Demand.

### 4.3 Telecommunications

The NBN Co has assets in the Road which contain underground conduits and pits.

Similarly, Telstra has existing underground services in the area.

Existing infrastructure will be modified to support the required changes.

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The Telecom Service providers will be responsible for supplying, installing and terminating the incoming fibre optic cabling, while the Customer will be responsible for providing an appropriate cable pathway within the property.

Conduits and pits within the property shall be provided as part of the development work.

#### **4.4 Infrastructure Management Plan – Electrical and Telecommunications**

There is sufficient telecommunications infrastructure capacity available to support the proposed development.

Some existing Telecommunications services will be modified and diverted to accommodate the new works.

An extension of the existing electrical power systems shall be arranged and agreed with the Power Supply Authority, Ausgrid.

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# 5.0 Appendix

## 5.1 Correspondence - Dial before you dig Summary



**Job No 31849293**

Phone: 1100  
 www.1100.com.au

### Caller Details

**Contact:** Muhammad Usama      **Caller Id:** 3220392      **Phone:** (02) 9967 2200  
**Company:** Steensen Varming  
**Address:** Level 8/9-13 Castlereagh St Sydney NSW 2000      **Email:** muhammad.usama@steensenvarming.com

### Dig Site and Enquiry Details

**WARNING:** The map below only displays the location of the proposed dig site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.



**User Reference:** 217193 - Narrabeen Sports High School  
**Working on Behalf of:** Other NSW Department of Education  
**Enquiry Date:** 29/04/2022      **Start Date:** 02/05/2022      **End Date:** 05/05/2022

**Address:** 10 Namona Street North Narrabeen NSW 2101

**Job Purpose:** Excavation

**Onsite Activities:** Horizontal Boring, Manual Excavation, Mechanical Excavation, Non-Destructive Digging, Vertical Boring

**Location of Workplace:** Both

**Location in Road:** Road, Nature Strip, Footpath

- Check that the location of the dig site is correct. If not you must submit a new enquiry.
- Should the scope of works change, or plan validity dates expire, you must submit a new enquiry.
- Do NOT dig without plans. Safe excavation is your responsibility. If you do not understand the plans or how to proceed safely, please contact the relevant asset owners.

**Notes/Description of Works:** Not supplied

### Asset Owner Details

The assets owners listed below have been requested to contact you with information about their asset locations within 2 working days. Additional time should be allowed for information issued by post. It is **your responsibility** to identify the presence of any underground assets in and around your proposed dig site. Please be aware, that not all asset owners are registered with the Dial Before You Dig service, so it is **your responsibility** to identify and contact any asset owners not listed here directly.

\*\* Asset owners highlighted by asterisks \*\* require that you visit their offices to collect plans.  
 # Asset owners highlighted with a hash # require that you call them to discuss your enquiry or to obtain plans.

Seq. No.	Authority Name	Phone	Status
210809692	Ausgrid	(02) 4951 0899	NOTIFIED
210809693	Jemena Gas North	1300 880 906	NOTIFIED
210809690	NBN Co NswAct	1800 687 626	NOTIFIED
210809689	Northern Beaches Council	0466 015 284	NOTIFIED
210809694	Sydney Water	13 20 92	NOTIFIED
210809691	Telstra NSW Central	1800 653 935	NOTIFIED
210809695	Transport for NSW	(02) 8837 0285	NOTIFIED

END OF UTILITIES LIST

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## 5.2 Correspondence - Power – Ausgrid

OFFER to provide DESIGN RELATED SERVICES



### DESIGN RELATED SERVICES OFFER

Premises address: 6 NAMONA STREET, NORTH NARRABEEN 2101  
NMI - Number: TBA Webform Ref 352092  
MC Reference: 1900116414 AP Reference: 800511628

This offer is made on 14/09/2022

By Ausgrid of 24 Campbell St, Haymarket NSW 2000.

To the **connection applicant** named in the *connection application* received on 31/08/2022 in respect of the premises referred to above.

Ausgrid has determined that network alterations are required to connect your development and we cannot proceed to a connection or relocation offer at this stage. To enable Ausgrid to further consider and process your application you will require a certified design and associated certification number. Your application remains technically incomplete until you have been issued a certification number.

This Design Related Services Offer provides guidance on how to obtain a certified design and associated certification number.

#### Scope of Network Alterations

Ausgrid has determined that the following works are likely to be required:

- Installation of a kiosk type substation; and
- Decommission existing 200amp service to the school site.

These works are classified as contestable, which means that you are required to fund the design and some or all of the construction works. If you have not already done so, you will need to engage and manage suitably qualified contractors, known as Accredited Service Providers (ASPs) to undertake the design and construction.

Initially, your ASP Level 3 (ASP/3) will undertake the design, and then your ASP Level 1 (ASP/1) will undertake construction in accordance with the design and Ausgrid's policies and standards. The timeframe for the works will vary depending on factors such as the complexity and the way in which you manage your ASP's.

Once the works have been satisfactorily completed and electrified, the premises connection assets will be owned and maintained by Ausgrid as part of the electricity distribution network.

#### Contract for Design Related Services

**This letter is an offer for the Customer to enter into a Contract for Design Related Services with Ausgrid.** It remains open for acceptance for 45 business days. If the offer is accepted by the Applicant, the Applicant does so as the Customer's agent. No work will be undertaken by Ausgrid until a Design Contract is in place.

You are encouraged to contact ASP/3's and ASP/1's to understand the likely overall costs you will incur for design and construction before you accept and commit to the Contract for Design Related Services.

**IMPORTANT:** The contractual arrangements provide the framework for a design to be prepared by your ASP/3, and NOT by Ausgrid. Ausgrid's fees as outlined below are for the design related network services we provide during the design phase and are **IN ADDITION** to the fees charged by your ASP/3 in preparing the design.

#### Acceptance Fees

The acceptance fees relating to the Contract for Design Related Services are outlined in the attached Acceptance Fee Summary and also detailed on the Ausgrid Portal page. Ausgrid will invoice the Customer once we receive acceptance via the Ausgrid Portal along with a Customer Details Form (attached). The Contract will commence when you pay the invoiced fee.

The acceptance fees are an estimate for the Ausgrid services required and are payable up front by the Customer. Further fees may apply for any additional services required and these will be quoted via the Ausgrid Portal on each occasion.

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## OFFER to provide DESIGN RELATED SERVICES



### DESIGN RELATED SERVICES OFFER

Premises address: 10 NAMONA STREET, NORTH NARRABEEN 2101  
NMI - Number: TBA Webform Ref 352367  
MC Reference: 1900116415 AP Reference: 800511625  
This offer is made on 14/09/2022

By Ausgrid of 24 Campbell St, Haymarket NSW 2000.

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This Design Related Services Offer provides guidance on how to obtain a certified design and associated certification number.

#### Scope of Network Alterations

Ausgrid has determined that the following works are likely to be required:

- Uprate of existing L-Type kiosk type substation S49277 'Namona Oaks':
  - Replace existing 600kVA with a 1000kVA transformer.
  - Replace existing 400/400/800 LV Board using a new 1600/400 SAIF LV Board;
  - Replace existing 11kV SIBA 300.20.93 80amp with a SIBA 300.20.93 100amp fuse.
- Consolidation of second supply from Ausgrid pole MV-19101 to a private pillar within the school site shall be considered.

These works are classified as contestable, which means that you are required to fund the design and some or all of the construction works. If you have not already done so, you will need to engage and manage suitably qualified contractors, known as Accredited Service Providers (ASPs) to undertake the design and construction.

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