

DA ELECTRICAL INFRASTRUCTURE REPORT

GOSFORD HEALTH HUB 60-64 SHOWGROUND ROAD, GOSFORD NSW

LEVEL 3 ASP SERVICES



J H A S E R V I C E S . C O M

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### DOCUMENT CONTROL SHEET

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## 1. INTRODUCTION

#### 1.1 **PROJECT DESCRIPTION**

JHA has been engaged by CHP Fund to carry out a due diligence and Development Application (DA) report of electrical utility infrastructure for a potential new integrated medical office building and specialist disability accommodation development located at 60-64 Showground Road, Gosford NSW

The purpose of this DA Report is to provide a detailed summary of electrical utility infrastructure items that may present within the proposed development site, and provide a potential arrangement for the new electrical supply to the site.

The proposed development is understood to include the following:

- Demolition of all existing buildings and structures on the site
- Site preparation works and excavation
- The construction of a new integrated medical health hub and unit development proposed to consist of:
  - Basements 4 1 Carparking, plant and back of house
  - Ground/Podium Level Integrated GP, Pharmacy, Allied Health tenancies
  - Level 1
    Large radiology tenancy
  - Level 2 Day surgery
  - Levels 3 & 4
    Medical consulting Suites
  - Level 5 Seven (7) specialist disability apartments



Figure 1 – Proposed Site Location (Nearmaps Extract 03/08/2022)



JHA has undertaken a desktop assessment of the site to investigate existing infrastructure in the vicinity of the site utilising the tools and information readily available to JHA (DBYD, Ausgrid GIS, Nearmaps).

### 1.2 **REPORT QUALIFICATIONS**

All analysis and investigation undertaken has been done so with an understanding that a high level of seamless integration with the development is achieved.

Information on existing Electrical Utility Infrastructure (Ausgrid) as detailed within this report has been obtained from:

- Dial-Before-You-Dig (DBYD)
- Ausgrid GIS
- Nearmaps

Any potential works on existing authority infrastructure services is subject to negotiation and approvals of the affected authority. Liaison with the authority will be undertaken as part of the detailed design phase works for the site.



# 2. EXISTING ELECTRICAL UTILITY INFRASTRUCTURE

The proposed site lots are currently provided electrical supply via overhead service main cables connected to the Ausgrid Low Voltage (LV) network, both from timber pole GO-6867.

Figure 2 below provides an indication of the existing supply as noted through the Ausgrid GIS system.



Figure 2 – Existing Ausgrid Network (Ausgrid GIS & Nearmap Overlay 03/08/2022)

There is also an existing Ausgrid LV network pillar located within the footpath along the subject site property boundary. Based on the Ausgrid GIS and DBYD sourced information, it is understood that there are no further electrical utility assets located within the subject site.



# 3. PROPOSED ELECTRICAL UTILITY INFRASTRUCTURE

A site-specific AS/NZS3000 preliminary maximum demand has been calculated to determine the anticipated overall electrical load for the proposed development. It is anticipated the optimum electrical demand for the site to be in the order of approximately **1430Amps**, **3 phase** (includes 15% spare capacity).

In consideration of this proposed load, a new Ausgrid 1000kVA kiosk substation is recommended for installation on the subject site. The new Ausgrid KL-Type kiosk substation is proposed to be located in the south-eastern corner of the site, fronting Showground Road as per Figure 3 below.



Figure 3 - Proposed New Ausgrid Substation Location

The proposed Ausgrid kiosk substation at this location will require the following arrangements:

- An easement in favour of Ausgrid of dimensions 5.3m x 3.3m abutting with the boundary line of Showground Rd. no other services or structure is permitted within the substation easement zone
- Unobstructed 24hr / 7day access from Showground Road
- All building elements within a 3.0m radius in any direction from the substation housing must have an FRL of 120/120/120 & 2kPa blast rating
- Construction of a blast wall along the common boundary with the adjacent property to mitigate the 3.0m fire and blast zone.
- Potential acoustic treatment to the proposed blast wall to mitigate noise to the adjacent property
- No building ventilation openings (natural or forced) are permitted within a 6m stringline measurement from the substation housing



To ascertain the potential network connection arrangements that Ausgrid will approve on their network, a formal Ausgrid application is required to be submitted. Following this application, Ausgrid will provide a formal response in the form of a Design Related Service Offer to indicate the potential connection arrangement.

From our knowledge of the existing Ausgrid network arrangements and the Ausgrid GIS information, it is believed the electrical connection arrangement to the site and the proposed kiosk substation will involve the following:

- Excavate the western footpath of Showground Road to expose the existing Ausgrid High Voltage (HV) network
- Install 2 x HV cable feeder tails from the proposed substation to the existing HV network in the street
- Cut and remove a section of existing HV cabling and install 2 x HV joints onto the existing HV cabling within the footpath to 'loop-in' the proposed substation
- Remove existing overhead service connection supplies from Showground Road, Ausgrid pole GO-6867



Figure 4 – Proposed Electrical Utility Works for Supply (Ausgrid GIS 03/08/2022)

The above proposed works will require the engagement of a Level 3 ASP designer to undertake a formal Ausgrid Contestable project of the works. The Ausgrid certified Level 3 ASP design will then require the engagement of a Level 1 ASP contractor to complete the physical works on site.

A Level 2 ASP contractor will be required to install a new private pillar located within 1.0m of the property boundary, to finalise service main connections from the network pillar to the private pillar, and to remove the existing overhead service connection from site.

Final Level 3 ASP work scope will be undertaken and finalised as part of the formal design development works phase, and are wholly subject to Ausgrid acceptance approvals.

