

#### ELECTRICAL INFRASTRUCTURE ASSESSMENT FOR REF

# **NEW PRIMARY SCHOOL AT WILTON JUNCTION**

ELECTRICAL SERVICES



This report is prepared for the nominated recipient only and relates to the specific scope of work and agreement between JHA and the client (the recipient). It is not to be used or relied upon by any third party for any purpose.

## DOCUMENT CONTROL SHEET

Project Number	220295
Project Name	New Primary School at Wilton Junction
Description	Electrical Infrastructure Assessment for REF
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#### Revision History

Issued To	Revision and Date					
School	REV	P1	P2	Р3	P4	
Infrastructure NSW	DATE	31.01.25	24.02.25	25.02.25	07.03.25	
Area 3	REV					
	DATE					
	REV					
	DATE					



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# **1 INTRODUCTION**

This electrical infrastructure assessment has been prepared to support a Review of Environmental Factors (REF) for the NSW Department of Education (DoE) for the construction and operation of the new primary school at Wilton Junction (the activity).

The purpose of the REF is to assess the potential environmental impacts of the activity prescribed by *State Environmental Planning Policy (Transport and Infrastructure) 2021* (T&I SEPP) as "development permitted without consent" on land carried out by or on behalf of a public authority under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The activity is to be undertaken pursuant to Chapter 3, Part 3.4, Section 3.37A of the T&I SEPP.

This document has been prepared in accordance with the *Guidelines for Division 5.1 assessments* (the Guidelines) by the Department of Planning, Housing and Infrastructure (DPHI) as well as the *Addendum Division 5.1 guidelines for schools*.

The NSW Department of Education (DoE) is the proponent and determining authority pursuant to Section 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The purpose of this report is to:

- Identify power and communications infrastructure that proposed to facilitate operation and construction of the proposed development.
- Determine whether the relevant criteria can be achieved based on the proposed operations and construction methods.

This report shall be read in conjunction with the Architectural design drawings and other consultant design reports submitted as part of the application.

The following documentation has been used for the preparation of this report:

- Architectural drawings of the proposed development.
- DBYD plans
- Relevant authority documentation

This document and related work have been prepared following JHA Consulting Engineers Quality and Environmental Management Systems, which are based on AS/NZS ISO 9001:2015 and ISO 14001:2015 respectively.



# 2 DESCRIPTION OF THE PROPOSAL

## 2.1 LOCATION / SITE DESCRIPTION

The current street address is 200 Fairway Drive, Wilton, 2571, NSW. The site forms part of the northern portion of Lot 1063 in Deposited Plan 1289197) that was previously subdivided by Landcom. The site is approximately 3.4ha hectares in size and is located within Wilton Junction which is part of the North Wilton Precinct.

As a result of precinct wide rezonings, the surrounding locality is transitioning from a semi-rural residential area to a highly urbanised area with new low to medium density residential development with supporting services. North Wilton Precinct is approximately 85km south-west of the Sydney CBD, 30km north-west of Wollongong and 30km southwest of Campbelltown-Macarthur Strategic Centre. The precinct is located on the interchange with the Hume Highway, which connects the Southern Highlands with the Sydney metropolitan region to the northeast and Canberra to the south-west.

The proposed school site does not currently have road access, however Landcom is expected to deliver the road network and surrounding public domain network in accordance with DA/2022/1279/1. Proposed Road 14 located on the eastern boundary of the site will ultimately provide future access to the site. The site contains several patches of remnant native vegetation particularly within the northern portion of the site. The central part of the site has been predominantly cleared and consists of grassland. An aerial photograph of the site is provided at **Figure 1**.

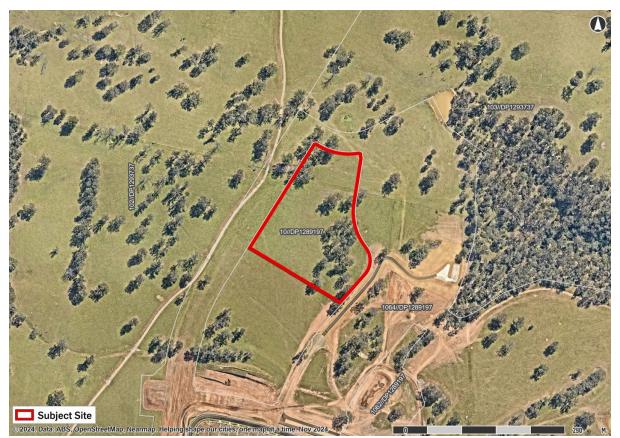


Figure 1: Aerial Photograph of the Site. Source: Urbis, 2024.



### 2.2 PROPOSED ACTIVITIES

The proposed activity is for the construction and operation of a new primary school at Wilton Junction which will accommodate up to 552 students and 35 staff. Additionally, the proposal includes an integrated preschool which will capacity for up to 60 students and 7 staff. In total, the new school will support up to 612 students and 42 staff.

The new school includes general and support learning spaces, a library, administrative areas and a staff hub. Core facilities include a standalone school hall and canteen, two carparks and a sports court.

Specifically, this proposal includes the following:

Construction of a 3-storey learning hub which includes:

24x General Learning Spaces

3 x Support Learning Spaces

Staff hub including administrative areas and library.

Integrated public pre-school.

Standalone hall and COLA with outside of school hours care (OSHC).

Associated landscaping including sports court and separate outdoor play space for the preschool.

Associated site utilities and services including installation of new 1500 kVA padmount substation and a new main switchboard.

Main car park to the south of the site with 33 car spaces (including one accessible space).

Separate car park for pre-school located to the north of the school with 18 spaces (including one accessible space).

Main school pedestrian entrance proposed off Road 14.

Earthworks.



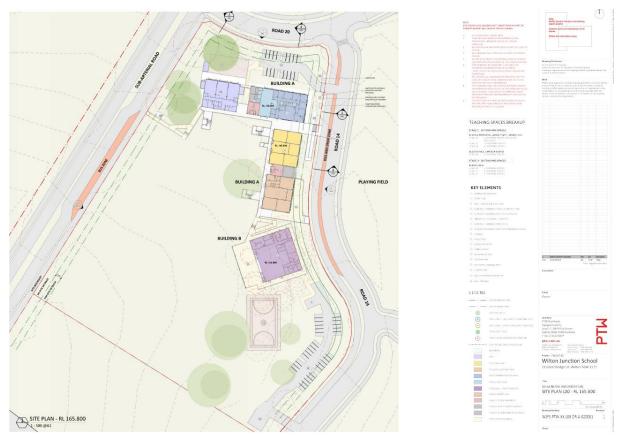


Figure 2 Proposed Site Plan – Staging. Source: PTW, 2025



# **3 SITE CONDITIONS**

#### 3.1 GENERAL

As the proposed site is undeveloped, there is no existing authority infrastructure (Power or Communications). The nearest observed power infrastructure is located south of the development site, consisting of multiple substations and low voltage turrets expected to serve the upcoming residential developments.

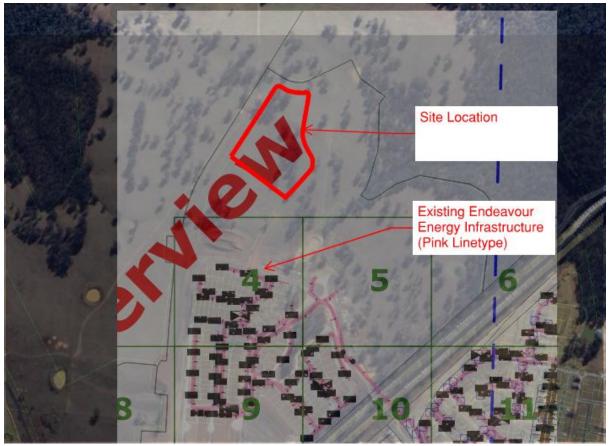


Figure 3: Existing Endeavour Energy Infrastructure with respect to site location.



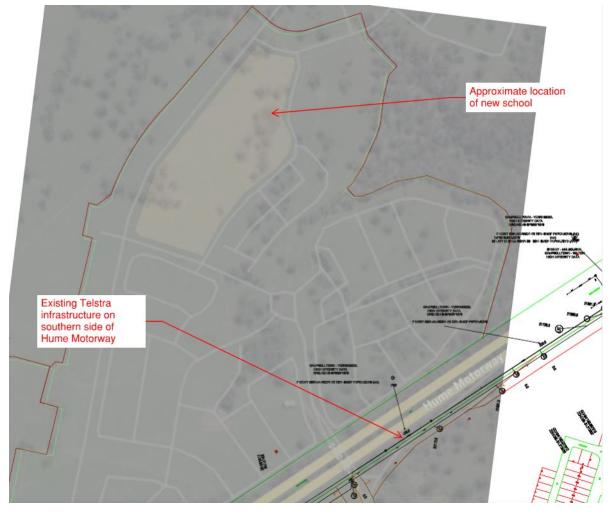


Figure 4: Existing Telstra Infrastructure with respect to site location.

# 3.2 PROPOSED CONNECTION ARRANGEMENTS (POWER)

It is understood that nnegotiations are ongoing for the Department of Education (DoE) to acquire the site from Landcom to deliver the Wilton Junction Public School project outlined in this document. It is also understood that Landcom will augment the existing Endeavour Energy infrastructure install high voltage (HV) cabling adjacent to the site, prior to handover to DoE. The current understanding is that Landcom will install HV cabling on 'road 14' (refer figure 5) which presents the opportunity for the Wilton Junction Public School substation to be located adjacent this road.





Figure 5: Proposed Substation location (located with the undnerstanding that incoming high voltage cabling is installed on 'road 14').

New High Voltage cabling will be installed underground from the new substation location to the new Road 14 location where it will interface with the Landcom installed underground HV Endeavour Energy network. A section of existing underground HV cable is to be removed to loop the proposed substation into the existing HV feeder. This arrangement of a HV ring will provide redundancy should the Endeavour Energy network or upstream substations fail to ensure the school supply is retained online.

A point of LV backup connection to the Endeavour Energy network is to be provided between proposed substation and existing LV network to a location still to be confirmed external to the site.

A private underground pit and pipe network is proposed to be constructed to provide the school with a pathway for connection to the main switchboard.



#### 3.3 PROPOSED CONNECTION ARRANGEMENTS (COMMUNICATIONS)

As there is existing telstra communications infrastructure on the southern end of the Hume Motorway (refer figure 4), it is understood that Landcom will augment and expand the existing telstra infrastructure to within close proximity of the site, prior to handover to DoE. The current understanding is that Landcom will install Telstra cabling on 'road 14' (refer figure 6) whih presents the opportunity for the comms lead-in fibre to also be located adjacent this road.

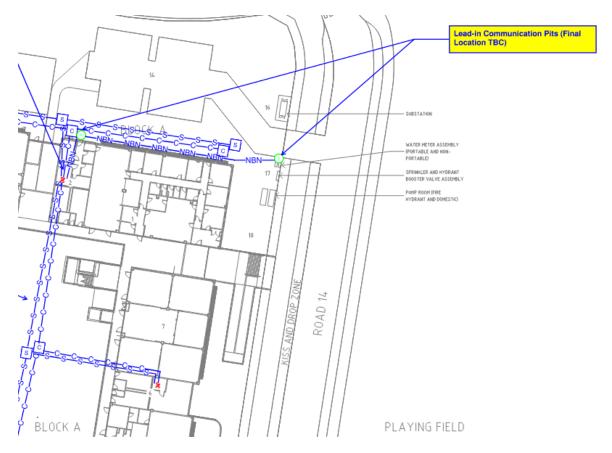


Figure 6: Proposed Comms lead-in (located with the udnerstanding that incoming incoming comms cabling is installed on 'road 14').

In terms of staging, the external Telstra infrastructure (on the new road) would need to be in place before Telstra allows a retail customer connection to the premises, works of which is undertaken by Landcom in conjunction with Telstra. Once this is complete and the area becomes a Telstra serviceable area, DoE would contact Telstra and negotiate to bring in a fibre connection to the site and provide JHA's site plans as supporting documentation.





A private underground pit and pipe network is proposed to be constructed to provide the school with a backbone pathway for connection to the main comms room.



# 4 SUMMARY

#### 4.1 MITIGATION MEASURES

It is expected that there will be a low-to-medium amount of excavation and conduit-laying work internal to the site. This would involve excavation, laying of underground infrastructure and hauling of private cabling. JHA wishes to summarise the environmental impacts of such works, as well as mitigation strategies below.

Action	Environmental Impact	Mitigation Strategy	Section of Report
Excavation works (infrastructure augmentation)	Noise from heavy machinery/Increased personnel presence	Acoustic impact assessment to determine times where noise impact to environment is low.	3.2, 3.3
Excavation works (infrastructure augmentation)	Soil disturbance due to excavation and laying of new underground infrastructure	Geotech assessment to determine areas at risk to be avoided where possible	3.2, 3.3
Excavation works (infrastructure augmentation)	impacted (e.g. trenching through a tree root		3.2, 3.3
Excavation works (infrastructure augmentation)	Excess soil generated from works	Geotech REF assessment to determine areas where excess soil can be relocated to	3.2, 3.3

Potential impacts can be appropriately mitigated or managed to ensure that there is minimal impact on the locality, community and/or the environment.

#### 4.2 EVALUATION OF ENVIRONEMNTAL IMPACTS

An assessment of the environmental impacts of the new primary school at Wilton Junction has been conducted. Based on the information presented in this report, the extent and nature of potential impacts are low and will not have a significant impact on the locality, community and/or the environment. Potential impact can be appropriately mitigated or managed to ensure that there is minimal impact on the locality, community and/or the environment.

