

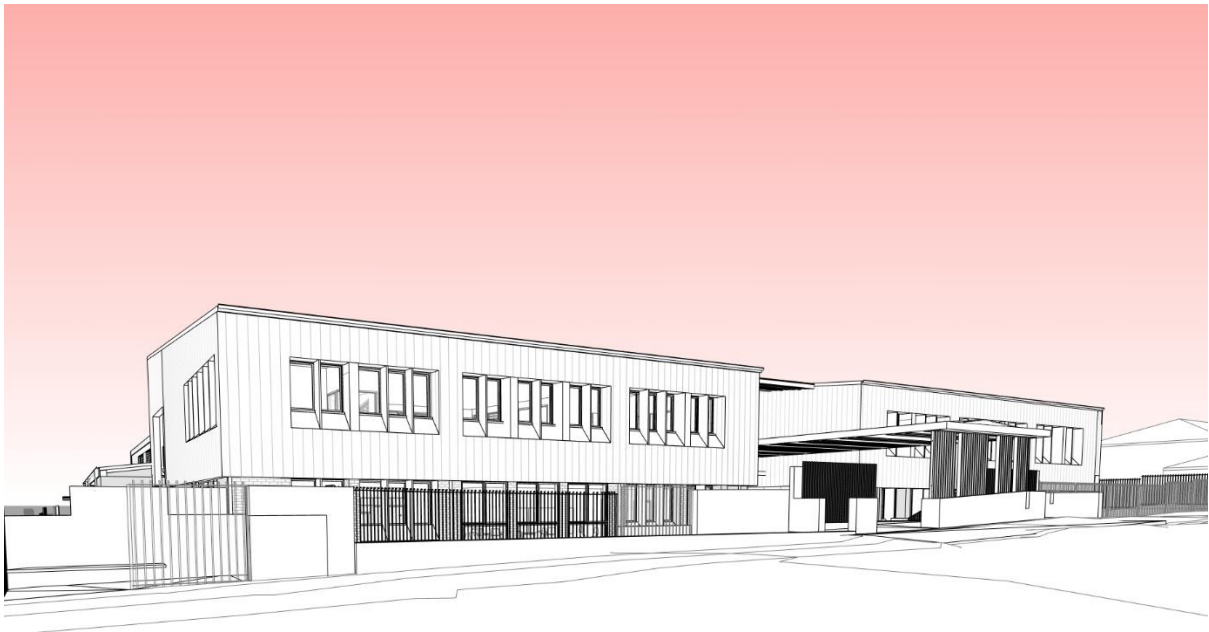
CONRAD GARGETT

PARRAMATTA WEST

POWER AND COMMUNICATIONS INFRASTRUCTURE REPORT

2018/07

CONFIDENTIAL



Question today *Imagine tomorrow* Create for the future

Parramatta West Power and Communications Infrastructure report

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REV	DATE	DETAILS
01	03/07/2018	For Information

	NAME	DATE	SIGNATURE
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Reviewed by:	Sam Dib	03/07/2018	
Approved by:			

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EXECUTIVE SUMMARY

WSP has been engaged by Conrad Gargett to provide the following services for the main works of the 'Parramatta West Public School' project.

- Mechanical; and
- Electrical

This infrastructure report describes the power and communication services infrastructure proposed for the new building for 'Parramatta West Public School' project.

1 INTRODUCTION AND BACKGROUND

1.1 General

WSP has been engaged by Conrad Gargett to provide the following services for the main works of the 'Parramatta West Public School' project.

- Mechanical;
- Electrical;

The site for the proposed development is located in Parramatta, NSW. The development consists of:

- Single two-storey development;
- Comprised of 11 Home Base room;
- 11 withdrawal spaces;
- 11 practical activity spaces; and
- Upgrade for staff facilities

We understand that the development is a new construction on the grounds of an existing school.

1.2 Power Infrastructure

WSP undertook maximum demand calculations for the new school development for the Paramatta west. The calculated maximum demand for the proposed building is 198 A with 15 % spare capacity. This does not have any allowance for air-conditioning.

Based on this load calculation WSP submitted connection for Application form to the supply authority Endeavour energy. The application for connection was submitted on 24.07.2017. Endeavour energy reviewed the application for connection with regards to existing supply network in the area. The assessment from Endeavour energy advised that a pad mount substation is required to be installed on site to service the new building. The response from supply authority indicated that level 3 design is required which needs to be undertaken by the level 3 designer and provided for review and approval by Endeavour energy.

Endeavour energy response is attached along with this report.

The Fig.1 indicates proposed location of the pad mount substation. The consumer mains will be reticulated from the substation to the external MSB. The external MSB will external grade and have the supply authority meters. The consumer mains will be reticulated in underground conduits. From the external MSB submain cabling will be reticulated to the building MDB and further distributed to the distribution boards for final reticulation.

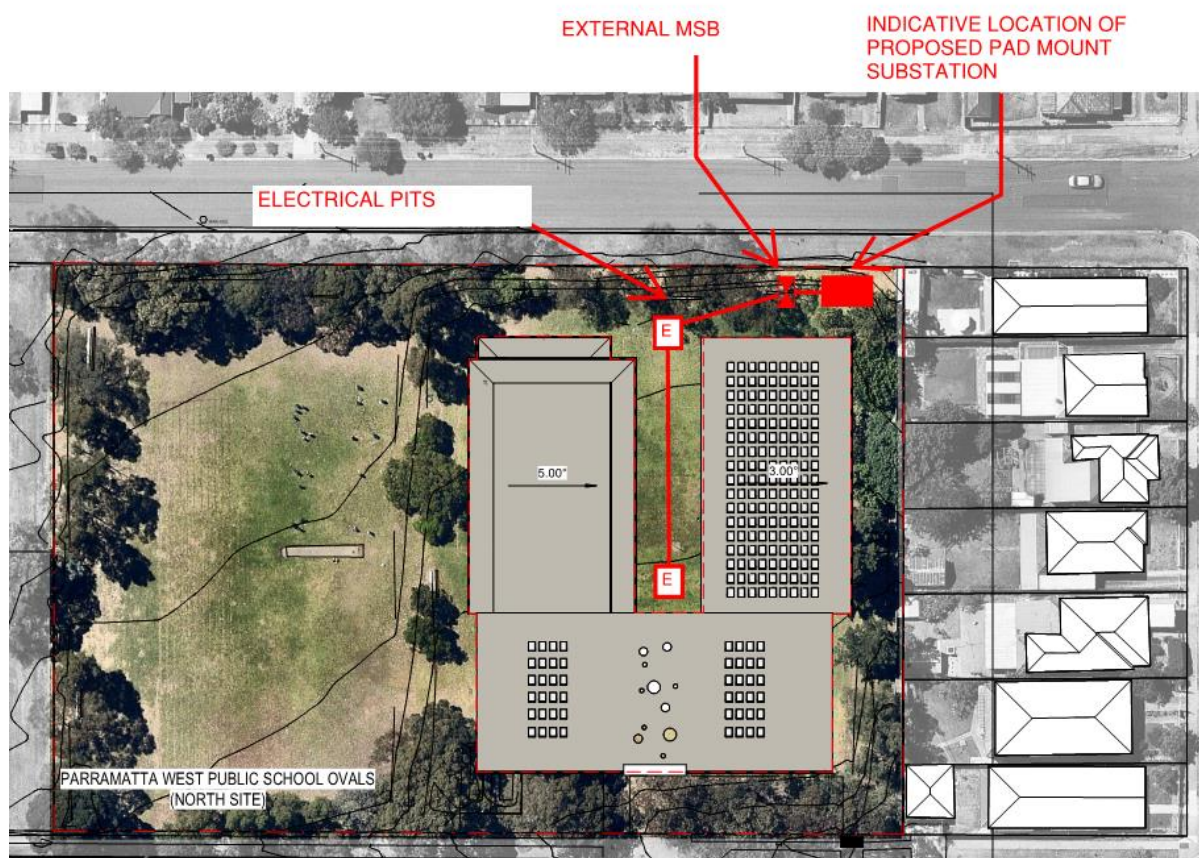


Fig. 1 Proposed Power Infrastructure

1.3 Communications

A structured cabling system shall be installed to distribute communications services throughout the project and shall comply with the following Australian (and associated) standards:

- AS/NZS 3000, Wiring Rules
- AS/NZS 3080, Telecommunications installations – Generic cabling for commercial premises.

Communications services for the new facility will be provided with a new connection. The application for connection will be undertaken by the contractor. The new connection will be an NBN connection from the street via 100 mm underground HDUPVC conduits with marker label at 150 mm from the top of the conduit. A new fibre to the premise provided and terminated onto a NBN termination device by NBN Co. From this connection, the Electrical contractor will then connect fibre to the school main distribution frame (42 RU data rack) located within the main communications room in the ground floor.

The original proposal from DoE was to get a connection from the existing Parramatta West school campus. However, this is unlikely to be approved by the council as this requires reticulation of cabling and conduits under the existing council road.

Communications infrastructure shall be installed within the building. This shall include:

- Installation of new Main Communications Room (MCR) on a Ground floor
- Provision of cabling pathway from the street to the ground floor MCR for telecom fibre lead-in.
- Fibre lead in cabling and install to be provided by NBN co.
- Installation of Floor Communications rooms (FCRs) on each floor
- Installation of Backbone Single Mode Optical Fibre cabling from MCR to the FCRs

Installation of Horizontal Category 6A U/FTP cabling from the FCRs to field Telecommunications Outlets

2 APPENDIX A – ENDEAVOUR ENERGY ASSESEMENT

15 June 2018



Endeavour Energy Ref: UCL9114 – 2017/03367/001
Customer Ref:

WSP Buildings Pty Ltd
L27/680 George Street
SYDNEY NSW 2000

Attention: David Mitchell

Dear Sir/Madam

**UCL9114 – LOT 406, DP 729083, Connection of Load Application: Young Street,
PARRAMATTA**

Your Proposed Method of Supply has been assessed, and Endeavour Energy has determined the method of supply requirements as outlined in the enclosed Design Brief. Please use this Design Brief in preparation of the design package which you will submit for certification.

The design must comply with all the conditions specified in this document, the Terms and Conditions of Endeavour Energy's Model Standing Offer for a Standard Connection Service and all relevant Endeavour Energy standards and instructions.

This Design Brief is valid for three (3) months from the date of issue.

A final Determination of Funding and a Payment Advice for Ancillary Network Services Fees applicable to this phase of the project are attached.

Property tenure is required for this project.

The applicable bond for this project is:

<i>Property Tenure Bond</i>	\$20,000
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A Payment Advice for the total bond required is attached. This Payment Advice along with the agreement to enter (Form FPJ 5013), signed by the owner, must be returned with the evidence of payment of the Property Tenure Bond.

Should you have any enquiries regarding your application please contact the undersigned.

Yours faithfully,

A handwritten signature in cursive script, appearing to read "M. Grimwood".

Matthew Grimwood
Contestable Works Officer/Engineer
Ph: 02 9853 7916
Fax: 9853 7925
Email: cwtech@endeavourenergy.com.au

15 June 2018

Endeavour Energy Ref: UCL9114 – 2017/03367/001
Customer Ref:

Design Brief

Method Of Supply Requirement:

Install 315kVA padmount substation with single feeder HV switchgear and FIF CAT.2 LV switchgear

Install 11kV 240sqmm 3C Al XLPE cable from pole 560692 via HV UGOH to proposed padmount substation

Install LV 240sqmm 4C Al XLPE cable from pole 560692 via LV UGOH to proposed padmount substation

Determination of Funding

Endeavour Energy Supplied Materials:

Nil

Endeavour Energy Funded and Constructed:

Nil

Endeavour Energy Funded and Customer (ASP L1) Constructed – Reimbursement Paid by Endeavour Energy:

315kVA padmount substation including transformer, HV/LV switchgear, cubicle plinth and culvert.

Reimbursements to be paid to Endeavour Energy by Customer:

Use of any existing Endeavour Energy ducts

Customer Funded Non-Contestable Works:

Network switching, substation commissioning, contract inspection

Customer Funded Contestable Works:

All other work