



# **NSW Department Of Education**

## North Kellyville New Primary School

### Power and Communications Infrastructure Report

Rev G  
December 2017

# Table of contents

- 1. Electrical/Communications Infrastructure ..... 1
  - 1.1 Existing electrical and telecommunications utilities..... 1
  - 1.2 Service connections ..... 1

# Appendices

- Appendix A – Preliminary Maximum Demand Calculations (Submitted with Application for Supply)
- Appendix B Endeavour Energy Connection Offer Letter Dated 24 April 2017
- Appendix C Drawing 2126108– EL-1001 Site Plan

# 1. Electrical/Communications Infrastructure

## 1.1 Existing electrical and telecommunications utilities

The North Kellyville New Primary School is a greenfield site. There are currently only low voltage and no high voltage distribution networks along Hezlett Road. Multiple residential subdivisions close to the site have padmount substations to supply nearby residences. There are underground NBN cables and overhead telephone cables installed along Hezlett Road.

### 1.1.1 Assumptions

The following assumptions were used in the calculations:

- Electrical and communications supplies can be installed underground from Hezlett road.
- Endeavour Energy high voltage supplies are available close to the site boundary.

## 1.2 Service connections

### 1.2.1 Power Supply

The preliminary maximum demand calculation for the new school has been estimated at 470A (3 phase). - refer Appendix A. This includes allowance for air conditioning to the Library and Admin offices. In response to our application for this supply demand, Endeavour Energy have confirmed connection offer in their letter dated 24 April 2017 – refer Appendix B. Endeavour Energy require the design to be carried out by Level 3 Accredited Service Provider (ASP). We would anticipate that this design will require a new padmount substation which can be located at the corner of the site fronting Hezlett Road – refer to drawing 2126108– EL-1001 (Appendix C).

A 70kW grid connected solar PV system will be installed on the roof of the new school to offset the energy usage in accordance with EFSG design guidelines. Space provision will be allowed for addition of future of solar panels to further offset increases in energy use.

### 1.2.2 Telecommunications

A new communications connection will be made to the NBN network located in Hezlett Road – refer to drawing 2126108– EL-1001 (Appendix C).

# Appendices

## **Appendix A** – Preliminary Maximum Demand Calculations (Submitted with Application for Supply)

North Kellyville New Primary School

Maximum demand to AS 3000

Prepared by

Campbell Griffin

Checked By

Paul Hebblewhite

Area Type	Area existing	new area proposed	VA/m^2	Existing (kVA)	New(kVA)	Total (kVA)	Total (A/phase)	
Existing Houses to be removed	300	-300	20	6	-6	0	0.0	Two existing domestic buildings to be remove
Homebases/classrooms No A/C or heating	0	4000	30	0	120	120	173.9	new building to be provided with gas heating
Homebases/classrooms with A/C or heating	0	0	65	0	0	0	0.0	
Library	0	342	80	0	27.36	27.36	39.7	A/C provided to library
Hall	0	510	30	0	15.3	15.3	22.2	no A/C in hall
Canteen	0	70	400	0	28	28	40.6	
Staff Office	0	400	80	0	32	32	46.4	
Demountable buildings	0	0	65	0	0	0	0.0	
outdoor areas with lighting	0	3966	5	0	19.83	19.83	28.7	
Lift	0	0	0	0	37.5	37.5	54.3	allowance for 1 30kW lifts on site
Back of house and ammenities	0	550	10	0	5.5	5.5	8.0	
Total (KVA)				6	279.49	285.49	413.8	

## **Appendix B** Endeavour Energy Connection Offer Letter Dated 24 April 2017

24 April 2017

**Endeavour Energy Ref: ULL2667 – 2017/02001/001**

GHD  
L15 133 Castlereagh Street  
SYDNEY NSW 2000

**Attention: Campbell Griffin**

**CONNECTION OFFER – STANDARD CONNECTION SERVICE**

**ULL2667 – LOT 3, DP 27031, Connection of Load Application: 120-126 Hezlett Road, KELLYVILLE**

Thank you for your application providing information of the proposed development at the above location. Your application has been registered under the above reference number. Please quote this reference number on all future correspondence.

This connection offer is made in accordance with the Terms and Conditions of the Model Standing Offer for a Standard Connection Service available on our website. To accept this offer, please complete the enclosed Notice of Advice form and obtain your Level 3 Accredited Service Provider (ASP) signature on the form prior to returning it to Endeavour Energy.

Endeavour Energy has completed a preliminary desk top assessment of the information provided in your application and issued an enclosed Supply Offer. Your next step is to obtain the services of a Level 3 ASP to prepare and provide an electrical design to Endeavour Energy in the form of a Proposed Method of Supply. This activity is customer funded contestable work and you will need to pay for it. An estimate of fees related to review of your design is attached.

A list of the Accredited Service Providers is available at the NSW Trade and Investment website: <http://www.energy.nsw.gov.au/electricity/network-connections/contestable> or can be obtained via phone 13 77 88.

Please note under the National Electricity Rules (NER) customer may choose to enter into a negotiated agreement. A negotiation framework describing this process is available on our website.

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

Yours faithfully,  
Tri  
Tri Minh Truong  
Contestable Works Engineer  
Ph: 02 9853 7922  
Email: [cwtech@endeavourenergy.com.au](mailto:cwtech@endeavourenergy.com.au)



24 April 2017

**Endeavour Energy Ref: ULL2667 – 2017/02001/001**

Endeavour Energy  
PO Box 811  
Seven Hills NSW 1730  
[cwadmin@endeavourenergy.com.au](mailto:cwadmin@endeavourenergy.com.au)

**Attention:** Contestable Works Administrator

**NOTICE OF ADVICE**

**APPOINTMENT OF ACCREDITED DESIGNER FOR THE PROPOSED DEVELOPMENT AT:  
LOT 3, DP 27031, 120-126 HEZLETT ROAD, KELLYVILLE**

**\* Please complete and return when a Level 3 Service Provider has been nominated\***

Please accept this letter as notification that I intend to proceed with the development described above. I own or am developing the land and works on the land, (and/or where relevant on public land). I intend to supply this development to Endeavour Energy requirements.

By signing this Notice of Advice I am accepting the Terms and Conditions of Endeavour Energy's Model Standing Offer for a Standard Connection Service.

- Electricity Supply to Developments.

**The Level 3 Service Provider appointed is:**.....

**The Fees will be Paid to Endeavour Energy by:** .....

.....  
Signature of Level 3 ASP

.....  
Name of Level 3 ASP

.....  
Signature of Applicant/ Applicant's Representative

.....  
Name of Applicant/ Applicant's Representative

.....  
Date

.....  
Company Name

The signatory warrants that they are authorised to execute this Application.

**APPLICATION NO: ULL2667**

**DATE: 24 April 2017**

**SUBJECT: SUPPLY OFFER FOR**  
120-126 Hezlett Road, KELLYVILLE

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Endeavour Energy has carried out a desk top assessment and has prepared the attached Supply Offer for this development.

The supply offer will assist your Level 3 ASP to develop the most efficient solution to meet your needs whilst complying with Endeavour Energy's standards and with the Terms and Conditions of the Model Standing Offer for a Standard Connection Service. Please find below a list of some requirements that will need to be addressed by your nominated Level 3 ASP.

- Field visit to verify physical details
- Trench length
- Cable length
- Length of cable using existing ducts
- Length of new ducts required to be installed
- Substation location shown on a preliminary sketch and HV switchgear numbers
- Types and number of poles to be replaced or installed
- Complexity of trenching (ie rock, under-bore, commercial area etc)
- Earthing requirements and complexity
- Overhead construction and isolation point requirements
- Asset Valuation form must be completed including any extraordinary costing requirements
- Environmental issues addressed in a fully documented Environmental Assessment
- Generation requirements
- Rail Crossing requirements

A sketch of the proposed design utilising the GIS as a base must be returned with the above information.

This Supply Offer is part of the Connection Offer for a Standard Connection Service and is valid for three (3) months from the date of issue.

Where this Connection Offer has lapsed, you or your Level 3 ASP must contact Endeavour Energy with the request to extend the Connection Offer. Endeavour Energy will assess your request and will inform you of the outcome. It must be recognised that the network is being constantly extended/augmented as new customers get connected. This means that for your Connection Offer to be extended, your Supply Offer may require alteration. If this is the case, additional fees to cover administrative costs may apply.

The fees applicable to this phase of the project will need to be paid prior to design certification and are outlined in the Network Price List available on the Endeavour Energy website.

24 April 2017

Endeavour Energy Ref: ULL2667 – 2017/02001/001

## **SUPPLY OFFER**

(Based on a desktop assessment)

Department of Education is requesting for connection of load for new school at **120-126 Hezlett Rd, Kellyville**. Total load require for this development is 671A/phase.

This site will require a new substation on site to accommodate the requested load

Supply offer:

- Possible linkage point is HV feeder MR2224- Note: this is 22kV network area
- Engage a Level 3 Service Provider to carry out investigate and determine method of supply for the new load.
- Install new PM substation on site to supply the load
- Provide full site plan for assessment

*The scope of works is to be undertaken in accordance with Connection Policy and Model Standing Offers and must comply with all relevant policies, regulations and network standards.*

*All service works are to comply with the requirements of the NSW Service and Installation Rules.*

24 April 2017

**Endeavour Energy Ref: ULL2667 – 2017/02001/001**

## **Initial Funding Arrangements**

**Endeavour Energy Supplied Materials:**

Nil

**Endeavour Energy Funded and Constructed:**

Nil

**Endeavour Energy Funded and Level1 ASP Constructed – Reimbursement  
Paid by Endeavour Energy**

Nil

**Reimbursement to be paid to Endeavour Energy by Customer:**

Nil

**Customer Funded Monopoly Services:**

Network switching, commissioning, contractor inspection, ancillary fees, etc.

**Customer Funded Contestable Works:**

All other works required

## **ANCILLARY FEE ESTIMATE**

*(for assessment of the Proposed Method of  
Supply and approval of the Design)*



**CAP No. :** ULL2667    **File No:** 2017/02001/001

**Proposed Location:** Lot 3, DP 27031, 120-126 Hezlett Road  
KELLYVILLE

Detailed below is the **estimate** of the proportion of applicable Ancillary Network Services Fees (GST Inclusive) related to design assessment for your information only. The final fees for this phase of the project will be sent to you with a Design Brief. Ancillary Network Services Fees will also apply for the construction and connection phase of the project (e.g., site establishment fee). These fees will be conveyed to you after the receipt of a signed Letter of Intent indicating that you will proceed with the construction phase of the project.

Administration Fee	24-04-2017	\$312.18
Design Certification Fee	24-04-2017	\$1668.70
Design Information Fee	24-04-2017	\$2002.44
Standard Connection Offer Fee	24-04-2017	\$267.63
Estimate Total (inc GST)		\$4250.95

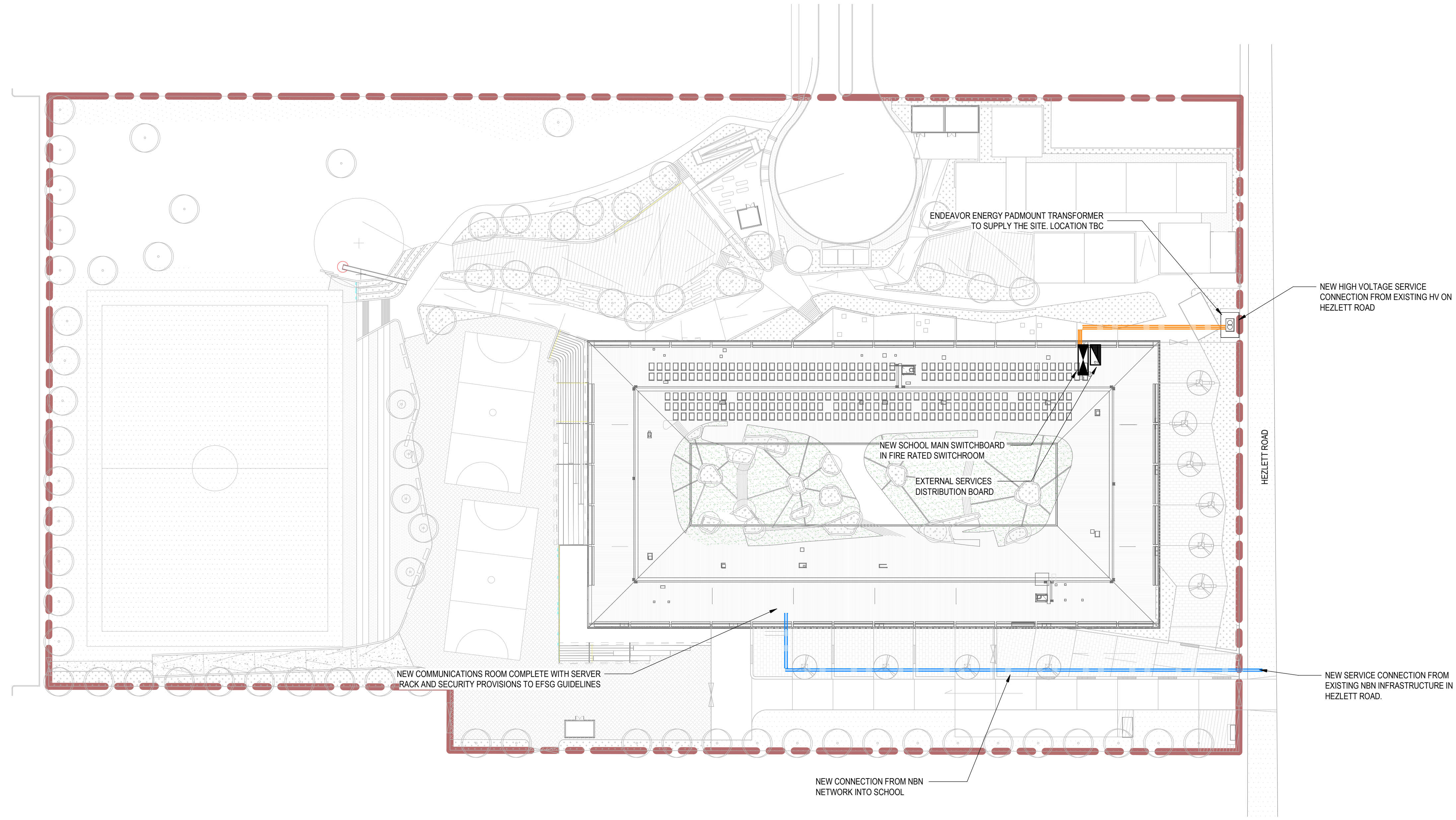
Where Endeavour Energy assets may need to be placed on private property, property easements will be required. Urgent action should be taken to create easements so that timely acquisition and registration with the Land and Property Information (NSW) can be completed.

Endeavour Energy will accept a property tenure bond while the property owner is in the process of creating the easement. The property tenure bond will be returned after the easement has been registered.

**Please do not make any fee payment at this time.**

Once the design fee amount has been finalised Endeavour Energy will send a request for the fees and property tenure bond payment (if required) to your nominated Level 3 Accredited Service Provider.

## **Appendix C** Drawing 2126108– EL-1001 Site Plan



GHD

Level 15

133 Castlereagh Street

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#### Document Status

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		Name	Signature	Name	Signature	Date
A	Mousa Abulhawa *	Trevor McMaster *				
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C	Mousa Abulhawa *	Trevor McMaster *				
D	Mousa Abulhawa *	Trevor McMaster *				
E	Campbell Griffin	Trevor McMaster	T.McMaster*	M.Dean	M.Dean*	30/8/2017
F	Campbell Griffin	Trevor McMaster	T.McMaster*			
G	Campbell Griffin	Trevor McMaster	T.McMaster*			12/12/2017

\* indicates signature on original issue of document or last issue of document



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