



Shelmerdines
Consulting Engineers

17 December 2018
PM/KG: 7039

Allen Jack & Cottier
79 Myrtle Street
CHIPPENDALE NSW 2008

Attention: Mr Vinay Moorthy

Dear Sir

**LORETO, NORMANHURST – STAGE 1 MASTER PLAN
ELECTRICAL SERVICES INFRASTRUCTURE**

As part of the master planning for the development of the above school, we have made an application to Ausgrid for the connection of the additional electrical load associated with the construction of the new Boarding House and the Early Learning Centre as well as proposed works in the Primary School Building. A copy of this application is attached for your information.

The existing electricity supply to the eastern half of the site is derived from a 200 amp rated aerial service from the Ausgrid aerial network in Mount Pleasant Avenue. The advice we received from Ausgrid is that the existing service has insufficient capacity to serve the proposed new building works and that it will be necessary to establish a kiosk type substation on the school property in order to meet the additional load. As the load of the new Boarding House represents the largest proportion of the additional load, it will be necessary to establish the substation to enable connection of the load of that building.

The proposed demolition of portion of the Mary Ward Building will not significantly affect the electrical load of the school and will not result in any alterations to the existing electrical infrastructure.

We trust that this information is of assistance.

Yours faithfully
SHELMERDINES

Peter W. Matthews



Shelmerdines

Consulting Engineers

11 Novemeber 2018
PM/KG: 7039

Ausgrid
Contestability Section
GPO Box 4009
SYDNEY NSW 2001

Dear Sir / Madam

LORETO NORMANHURST- ELECTRICITY SUPPLY

We are acting as consulting engineers for the design of the electrical services installation associated with planned new building works at the above school. The School is proposing to construct a new Boarding House and Early Learning Centre on the Mount Pleasant Avenue frontage and to air condition the existing Primary School. Our estimate of the electrical loads of the new works is as follows:

Early Learning Centre	560m ² @ 80VA/m ² =	44kVA
Boarding House		
Basement 3 (Carpark)	1055m ² @ 20VA/m ² =	21kVA
Basement 2 (Carpark & Service)	1046m ² @ 40VA/m ² =	42kVA
Basement 1 (Boarding & Common)	1445m ² @ 80VA/m ² =	116kVA
Lower Ground (Boarding)	1023m ² @ 60VA/m ² =	62kVA
Ground (Boarding)	1196m ² @ 60VA/m ² =	72kVA
Level 1 (Boarding)	1404m ² @ 60VA/m ² =	84kVA
Level 2 (Boarding)	914m ² @ 60VA/m ² =	55kVA
Primary School	2240m ² @ 40VA/m ² =	<u>90kVA</u>
TOTAL		<u>586kVA</u>
		= 813 amp/phase

Our estimate of the existing load on the existing aerals services from Mount Pleasant Avenue is 180 amps per phase. Hence the estimated maximum demand of the affected area of the School is 993 amps per phase.

Can you please advise us of the method of by which the additional supply capacity will be provided to the School? In addition, the College wishes to explore the possible removal of the existing HV switching cubicle CP382. Can you please advise whether this is possible and the works required to do so?

Yours faithfully
SHELMERDINES

Peter W. Matthews

Connection Application - Large, Multiple and Remote Connections



FORM NECF-03

Who should use this form

Use this form if you:

- require a new or altered service connection greater than 100 Amps OR
- require new infrastructure to provide electricity to a subdivision of land OR
- require a new or altered connection at high voltage OR
- require a new or altered service connection at 100 Amps WHERE
 - the development comprises more than 6 separate units OR
 - any item of plant or equipment is rated at 30 amps or more

For other connections use NECF-02 Connection Application - Residential and Small Commercial Connection

How to submit this form to Ausgrid

Sydney, Central Coast and Hunter

Fax: (02) 4399 8007

Fax (local call): 1300 662 089

Email to: datanorth@ausgrid.com.au

Upper Hunter only

Fax: (02) 6542 9037

Email to: datamuswellbrook@ausgrid.com.au

Total number of pages sent*

8

General enquiries

More information on completing this form can be found on our website:

www.ausgrid.com.au/connectingtothenetwork

Fields marked with an * are mandatory.

This form is to be completed using BLOCK LETTERS only

Any application marked TBA or TBD will be incomplete and will be returned with advice that Ausgrid will not be able to process the application until a complete application is re-submitted. If you do not have all the required information at this stage and are only interested in determining how your proposed development will be supplied, you should consider lodging a preliminary connection enquiry, using our form NECF-01.

PART A: PREMISES AND DEVELOPMENT DETAILS

1. Premises and Owner Details

Retailer	NMI	Your NMI can be found on your electricity bill. Put NA for a new site.
Property Name LORETO NORMANHURST		
Floor No.	Unit No.	Street No. or RMB* Lot No.* DP No.*
		91-93 or
Street Name*		Post Code*
PENNANT HILLS ROAD		2076
Suburb*		Nearest Cross Street
NORMANHURST		MOUNT PLEASANT AVE.
Name of Registered Proprietor of Land*		This is the person authorising connection of the premises.
LORETO NORMANHURST LIMITED		
Address of Registered Proprietor of Land*		Post Code*
91-93 PENNANT HILLS RD NORMANHURST		2076

2. Retail Customer or Real Estate Developer Details

Tick here if you are the land owner ☐ Now proceed to Section 3

Title, First Name, Last Name*	ABN (if applicable)
	39842385177
Company Name (if applicable and provide representative details above)	Phone No.
LORETO NORMANHURST LIMITED	9487 3488
Postal Address*	Mobile Phone No.
91-93 PENNANT HILLS RD. NORMANHURST	
Email Address*	Fax No.
reception@loretotonh.nsw.edu.au	9489 2348

3. About You - The Connection Applicant

Questions in this section are about the person making this Connection Application.

What type of applicant are you?*

(write A, B, C, D, E or F)

A = Retail Customer,

B = Real Estate Developer

C = Energy Retailer

D = You are applying on behalf of a retail customer or developer

E = Electrical Contractor on behalf of a customer or developer

F = ASP on behalf of a customer or developer

Title, First Name, Last Name*

MR PETER MATTHEWS

Company Name (if applicable and provide representative details above)

SHELMERDINES CONSULTING ENG.

Postal Address*

PO BOX 1345 CROWS NEST 1585

Email address*

p.matthews@shelmerdines.com.au

ABN (if applicable)

Phone No. * (and/or)

9436 3021

Mobile Phone No.*

0402336389

Fax No.

Electrical Contractor Licence No. * (If E above)

ASP No. * (If F Above)

Level

If you are an ASP you must provide your accreditation number and level (1,2,3)

and/or 2606

03

Street Address of the Premises (to be completed by applicant) *

Post Code*

91-93 PENNANT HILLS RD NORMANHURST

4. Electrical Contractor Details (if available)

Tick here if the same as Section 3 above ☐ Now proceed to Section 5

Title First Name and Last Name (or Company Name)

ABN (if applicable)

Postal Address

Phone No.

Email

Fax No.

Electrical Contractor Licence No.

PART B: LOAD DETAILS

5. Connection Details

(i) Connection Timeframes

(a) When do you expect the construction of the premises connection assets to commence?*

30 / 09 / 2019

(b) When do you wish to energise (ie turn on the supply to) the premises?*

31 / 03 / 2020

Premises connection assets are the components of the distribution system used to provide the connection service to the premises eg service cable, metering, new Ausgrid pole, pillar or substation etc.

(ii) Existing Connection (if applicable)

Existing Point of Common Coupling

Asset No.

This is the No. of the pole, pillar or substation. If there is no asset No. put "unknown".

Meter No.

Pole ☒ Pillar ☒ Substation ☐

UNKNOWN

If you have an existing supply, is it from a substation located on the premises?*

Y ☐ N ☒

(iii) Infrastructure to a Land Subdivision

(a) Is this an application to provide infrastructure to a land subdivision, eg provide low voltage reticulation within an URD subdivision?*

Y ☐ N ☒

If No, proceed to (iv) below otherwise continue on to (b) below

(b) No. of lots in the subdivision*

(c) Nearest existing Ausgrid Asset*

Asset No.

This is the number of the pole, pillar or substation. If there is no asset number put "unknown".

Pole ☐ Pillar ☐ Substation ☐

► Proceed to (vi)

(iv) Proposed Point of Common Coupling* (Please tick one)

Pole ☐ Pillar ☐ Substation ☒

Asset No.

UNKNOWN

This is the number of the pole, pillar or substation. If there is no asset number put "unknown".

Is the Point of Common Coupling within 50m of the boundary of your land?*

Y ☒ N ☐

(v) Proposed Point of Supply* (Please tick one or if Other, please describe)

Private Pole / Pit / Pillar ☐Main Switchboard ☒Front of Premises ☐

Other

(vi) Connection Type*

(Please tick all that apply)

New ☒Upgrade ☐Alteration ☒Separation ☐Amalgamation ☒

(vii) Embedded Generation Details* (e.g. solar, wind, hydro, back-up and standby)

(a) Does the premises have existing embedded generation?*

Y ☐ N ☒

► If Yes

Rated Output

kW

Type:

(solar, wind, gas, etc)

(b) Are you upgrading or installing new embedded generation?*

Y ☐ N ☒

► If Yes, submit our NECF-04 form in addition to this form

(c) Your Installer's Clean Energy Council Accreditation No.

Only complete if embedded generation comprising of AS/NZS 4777 compliant components is being installed

Street Address of the Premises (to be completed by applicant) *

Post Code*

91-93 PENNANT HILLS RD NORMANHURST 2076

(viii) Service Type*
(Please tick one)Overhead ☐Underground ☒UGOH ☐Off Pole
Transformer ☐Busbar
Supply ☐(ix) Service Size*
(Please tick one)100 Amps ☐200 Amps ☐400 Amps ☐630 Amps ☐800 Amps ☐1000 Amps ☐1200 Amps ☒1600 Amps ☐2000 Amps ☐2500 Amps ☐3000 Amps ☐Other ☐

Describe _____

(Complete if Other is ticked, eg high voltage connection at 11KV)

(x) Number of Phases*
(Please tick one)1 Phase ☐2 Phases ☐3 Phases ☒

(xi) Metering Details*

(a) Are new meters being installed as part of this connection application?*

Y ☒ N ☐

► If yes, number of meters in (b) below must be completed

Tariff

(b) Number of Meters:
(enter total number)

Single Phase

(E1)

Three Phase (E3)

Single Phase &

Controlled Load(E2)

Controlled Load 1

Controlled Load 2

(c) Embedded generation metering:
(tick if applicable or describe)Net ☐Gross ☐

Other _____

(d) Will your installation be CT metered?*

Y ☒ N ☐

► If yes, CT Metering Form must be submitted. Refer to that form for submission details

(xii) Type and Number of Premises	Land Title Type* (Please tick one)	Premises Usage* (Please tick one or more)	No. of Premises* (enter total number)	Which of the following applies to your premises?* (one must be ticked)
	Torrens <input checked="" type="checkbox"/>	Residential <input type="checkbox"/>	1	Urban <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>
	Strata <input type="checkbox"/>	Commercial / Industrial <input checked="" type="checkbox"/>		Rural <input type="checkbox"/>
	Community Title <input type="checkbox"/>	House Services <input type="checkbox"/>		
		Builder's Service <input type="checkbox"/>		

◀ Only fill out House Services if you have Multiple Installations

(xiii) Calculated Maximum Demand in Each Phase (Amps)

◀ This question is not asking about service rating.

(a) Existing Maximum Demand

A 180

B 180

C 180 Amps

Existing Service Length

_____ m

(b) Proposed Maximum Demand *
(Total of New & Existing Load)

993

993

993 Amps

Proposed Service Length*

5 m

(c) Is a Maximum Demand Calculation worksheet
attached to this application?*Y ☒ N ☐

A worksheet showing the maximum demand calculation in accordance with AS/NZS3000 must be attached to this form unless you answered "Y" in (iii)(a) above.

6. Additional Development Details (please fill in where relevant to your premises)

If your development involves any of these, this section MUST be completed, even if you are providing your plans with this application

Residential Portion

Number of living units

Number of bedrooms per unit

Gas hot water (yes/no)

Y ☐ N ☐

Gas cooktop (yes/no)

Y ☐ N ☐

Car park ventilation current rating

_____ Amps

Car park area requiring lighting

_____ m²

Air conditioning (yes/no & if Yes, No. of units)

Y ☐ N ☐ _____

Air conditioning rating (Electrical Input)

_____ Amps

Industrial Portion

No of factory units

Total floor area of all factory units

_____ m²

Commercial Portion

Number of shops

Total floor area with air conditioning

_____ m²

Total office area without air conditioning

_____ m²

Car park ventilation current rating

_____ Amps

Car park area requiring lighting

_____ m²

Warehouse floor area

_____ m²

Commercial areas for food handling (yes/no)

Y ☐ N ☐

Other (eg Lifts, Cranes, etc - List Type, No & Rating in Amps)

Street Address of the Premises (to be completed by applicant) *

Post Code*

91-93 PENNANT HILLS RD NORMANHURST 2076

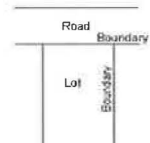
7. Location Diagram*

This section is about the physical location of your premises and an electrical schematic will not be accepted. Ensure that your diagram clearly identifies property, nearest cross street, North Point, Proposed Point of Common Coupling, Point of Supply and service cable route to main switchboard. Attach a separate paper if more space is required.

Use the following symbols where necessary:



REFER ATTACHED DRAWING.



8. Specific Equipment - Non Linear/Fluctuating Load Details (complete if installing any of the items listed below)

This section is for connections where (a) any single item of plant or equipment has a rating > 75 Amps at 230/400V, (b) any HV connections, or (c) Work where the proposed equipment may cause excessive fluctuations of voltage (eg. lifts, welders, pumps, x-ray machines).

Description	kVA/kW	Amp	No of Ops/Hr	Design Standard	Mitigation Measures
Distorting Loads					
1 Phase capacitor-filtered or conventional rectifier					
3 Phase 6-pulse capacitor filtered rectifier / VSD					
3 Phase 6 pulse capacitor filtered rectifier with series inductor > 3% or DC drive / VSD					
3 Phase 6 pulse inductor filtered rectifier / VSD					
3 Phase 12 pulse rectifier / VSD					
AC voltage regulator					
Variable voltage variable frequency (VVVF) drive					
Switch mode power supplies					
Power Factor Correction					
Other (please specify)					
Fluctuating Loads					
Rating of the largest motor					
Rating of the second largest motor					
Rating of other frequently fluctuating loads:					
Other:					
Special Equipment					
X-Ray or Magnetic Resonance Imaging Devices					
Welding plant rating					
Arc furnaces rating					
Unbalanced loads (e.g PH-N / PH-PH loads)					
Other, (incl >75A rated equipment):					
TOTAL APPARENT POWER RATING (KVA)					

91-93 PENNANT HILLS RD NORMANHURST 2076

9. Expedited Connection (optional)

For information regarding this section please refer to our website or the guide for this form.

Are you applying for an expedited connection? Y ☐ N ☒ If No, proceed to Section 10

If Yes, then indicate which model standing offer to provide connection services is acceptable to you (you may tick more than one).

- ☐ Basic - 100 Amps connection ☐ Standard - connection requiring Ausgrid-funded offsite works
- ☐ Basic - Over 100 Amps connection ☐ Standard - connection requiring Ausgrid-funded onsite substation
- ☐ Basic - micro EG connection ☐ Standard - ASP/1 connection
- ☐ Standard - connection requiring Ausgrid augmentation (substation upgrade)

10. Other Information

Information you provide in this section may help Ausgrid to process your connection application faster.

Was a Preliminary Connection Enquiry lodged for the premises using our form NECF-01?

Y ☐ N ☒

Preliminary Enquiry No.

Has Ausgrid provided a certified design number for a Network Augmentation project associated with the premises?

Y ☐ N ☒

Certified Design No.

If you have appointed an ASP/1, please provide their details below otherwise skip to next question

ASP/1 Name

ASP No.

Do you have development consent for your proposal?

Y ☐ N ☒

DA Reference No.

If yes, please attach any conditions relating to electricity where not already provided to Ausgrid.

Do you wish to underground/relocate electricity assets in conjunction with this connection application?

Y ☐ N ☒

If yes, please provide details in section 11, or on a separate paper

11. Comments and Additional Information (if applicable)

(e.g. References to similar existing installations, supporting information. Attach information on a separate paper if there is insufficient space below)

LORETO ARE PLANNING THE CONSTRUCTION OF A NEW BOARDING HOUSE & EARLY LEARNING CENTRE ON THE MOUNT PLEASANT AVENUE FRONTAGE OF THE COLLEGE. BOTH BUILDINGS WILL BE AIR CONDITIONED.

THE COLLEGE IS ALSO PLANNING TO INSTALL AIR CONDITIONING IN THE EXISTING PRIMARY SCHOOL BUILDING.

THE THREE PROJECTS WILL INCREASE THE ESTIMATED MAXIMUM DEMAND TO 905 AMPS PER PHASE.

THE EXISTING SUPPLY TO THAT AREA OF THE COLLEGE IS PROVIDED BY TWO AERIAL SERVICES.

WE ANTICIPATE THAT THE INCREASED LOAD WILL NECESSITATE THE ESTABLISHMENT OF A MISC SUBSTATION.

IN CONJUNCTION WITH THE ESTABLISHMENT OF THE SUBSTATION, THE COLLEGE WISHES TO EXPLORE THE POSSIBLE REMOVAL OF THE EXISTING H.V. SWITCHING CUBICLE CP382.

Street Address of the Premises (to be completed by applicant) *

Post Code*

91-93 PENNANT HILLS RD NORMANHURST 2076

12. Signatory

Signatory should be the person named in Section 3, ie the *Connection Applicant*.

Where this application requests an expedited connection, I declare that I have read and understood the terms and conditions of the connection offer referred to in section 9 (including the Connection Offer Summary) and agree that if the connection is expedited that a contract based on that offer will be formed with Ausgrid on the date that Ausgrid receives the application.

Where this application is being made on behalf of a retail customer or real estate developer, I declare that I have obtained the authority of that person to make this application of their behalf, including where applicable, making a request for expedition of the connection application.

Signatory Name*

PETER MATTHEWS

Signatory Position*

DIRECTOR

Signature of Connection Applicant*

Peter J. Matthews

Date signed by the Connection Applicant*

11/11/2018

Attachment Checklist:

Tick if done

No of pages

Remarks

This Connection Application form	<input checked="" type="checkbox"/>	6	Ensure all fields marked with * are filled in
AS/NZS3000 maximum demand worksheet	<input checked="" type="checkbox"/>	1	Refer to question 5(xiii)(c)
Connection Application for Embedded & Standby Generation Form NECF-04	<input type="checkbox"/>		Required if you answered "Y" in question 5(vii)(b)
Development Plans	<input type="checkbox"/>		Attach if available
Location Diagram (if space in Section 7 is inadequate)	<input checked="" type="checkbox"/>	1	
Conditions of consent to your Development Application	<input type="checkbox"/>		Refer to Section 10
Other (please specify) _____	<input type="checkbox"/>		
Other (please specify) _____	<input type="checkbox"/>		
TOTAL*		8	

If this application is incomplete in a material respect or if Ausgrid requires more information, Ausgrid will not process the application until you provide the relevant information. If you do not supply the requested information within 12 months, this application will lapse.