

The General Manager  
Campbelltown City Council

5 July 2021

**ATTENTION: CNR Team**

Dear Sir or Madam

I refer to the referral of 5 July 2021 from NSW Planning, Industry & Environment regarding NSW Government concurrence and referral request CNR-24607 for Shellharbour City Council Development Application 1308/2021/DA-SL at 19 JULIUS ROAD ROSEMEADOW 2560 (Lots 33 & 34 DP 700703) for 'Senior Living Development - Construction of a part two storey and three storey senior housing development comprising of 45 independent living units and carparking'. Submissions need to be made to Council by 26 July 2021.

Please find attached a copy of Endeavour Energy's previous submission made to Council via email on 20 June 2021 for Development Application 1308/2021/DA-SL at Julius Reserve, Julius Road ROSEMEADOW (Lot 194 in the proposed subdivision of Lots 33 and 34 DP 700703) for 'Construction of a part two storey and three storey senior housing development comprising of 45 independent living units and carparking'.

Endeavour Energy has no additional recommendations or comments regarding the Development Application.

Could you please pass on a copy of this submission to the applicant? Should you wish to discuss this matter, or have any questions, please do not hesitate to contact me or the contacts identified in Endeavour Energy's previous submission in relation to the various matters. Due to the high number of development application / planning proposal notifications submitted to Endeavour Energy, to ensure a response contact by email to [property.development@endeavourenergy.com.au](mailto:property.development@endeavourenergy.com.au) is preferred.

With the COVID-19 health risk a significant number of Endeavour Energy staff are working from home. Access to emails and other internal stakeholders can accordingly be somewhat limited. As a result, it may sometimes take longer than usual to respond to enquiries. Thank you for your ongoing understanding during this time.

Your faithfully  
Cornelis Duba  
Development Application Specialist  
Network Environment & Assessment  
M: 0455 250 981  
E: [cornelis.duba@endeavourenergy.com.au](mailto:cornelis.duba@endeavourenergy.com.au)  
51 Huntingwood Drive, Huntingwood NSW 2148  
[www.endeavourenergy.com.au](http://www.endeavourenergy.com.au)



**From:** Cornelis Duba

**Sent:** Sunday, 20 June 2021 4:41 PM

**To:** council@campbelltown.nsw.gov.au

**Cc:** Philip Wilson <Philip.Wilson@endeavourenergy.com.au>

**Subject:** CAMPBELLTOWN CITY COUNCIL DEVELOPMENT APPLICATION 1308/2021/DA-SL RE JULIUS RESERVE, JULIUS ROAD ROSEMEADOW

The General Manager  
Campbelltown City Council

**ATTENTION: Emma Page**

Dear Sir or Madam

I refer to the Council's website where Development Application 1308/2021/DA-SL at Julius Reserve, Julius Road ROSEMEADOW (Lot 194 in the proposed subdivision of Lots 33 and 34 DP 700703) for 'Construction of a part two storey and three storey senior housing development comprising of 45 independent living units and carparking' is included in the 'Development Applications on Public Exhibition' from start date of 3 June 2021 and end date of 2 July 2021.

As shown in the below site plan from Endeavour Energy's G/Net master facility model (and extract from Google Maps Street View) there is:

- An easement benefitting Endeavour Energy (indicated by red hatching) for low voltage underground cables associated with Fitzwater Way and the previous development of the site.
- Low voltage underground cables to parts of the Copperfield Drive road verge / roadway for streetlighting.

Please note the location, extent and type of any electricity infrastructure, boundaries etc. shown on the plan is indicative only. In addition it must be recognised that the electricity network is constantly extended, augmented and modified and there is a delay from the completion and commissioning of these works until their capture in the model. Generally (depending on the scale and/or features selected), low voltage (normally not exceeding 1,000 volts) is indicated by blue lines and high voltage (normally exceeding 1,000 volts but for Endeavour Energy's network not exceeding 132,000 volts / 132 kV) by red lines (these lines can appear as solid or dashed and where there are multiple lines / cables only the higher voltage may be shown). This plan only shows the Endeavour Energy network and does not show electricity infrastructure belonging to other authorities or customers owned electrical equipment beyond the customer connection point / point of supply to the property. This plan is not a 'Dial Before You Dig' plan under the provisions of Part 5E 'Protection of underground electricity power lines' of the Electricity Supply Act 1995 (NSW). Subject to the satisfactory resolution of the foregoing and the following recommendations and comments Endeavour Energy has no objection to the Development Application.

Endeavour Energy has noted the Statement of Environmental Effects does not appear to address the easement / existing electricity infrastructure on the site. The easement is shown in the following extract of the Plan of Proposed Subdivision and indicated as 'TO BE RELEASED'.



Under Endeavour Energy's Company Policy 9.2.3 'Property Tenure for Network Assets', the company will assess all applications for the release of easements to identify and manage risks to its network, commercial and community interests. The company may seek compensation for the extinguishment of property tenure. No easement is considered to be redundant or obsolete until it is released under this policy.

Applications for the release / extinguishment of an easement can only be made by the registered landowners of the encumbered property and are usually done either:

- As part of an application for connection of load or capital works project for a development project eg. where alternative / new network arrangements are to be put in place, which is managed by Endeavour Energy's Network Connections Branch. Endeavour Energy's Network Connections Branch will make the applicant or their ASP aware of Endeavour Energy's requirements for the release of easement. Please refer to the above point 'Network Capacity / Connection'.
- At the request of landowners where the electrical assets within the easement have been removed or it has become apparent that the easement has possibly become redundant to Endeavour Energy's future network requirements eg. no electrical assets have ever been installed in the easement. Further details are available by contacting Endeavour Energy's Property Services Section via Head Office enquiries on business days from 9am - 4:30pm on telephone: 133 718 or (02) 9853 6666 or email [network\\_property@endeavourenergy.com.au](mailto:network_property@endeavourenergy.com.au) (underscore between 'network' and 'property'). The greater amount of detail provided will assist in the assessment of the application.

In some circumstances the release of easement may be for nil compensation eg. the affected land is subject to dedication as public road or as part of an asset relocation / capital works project where the alternative network arrangements occur at the same voltage and level of easement affectation. Otherwise the release will be subject to monetary compensation paid by the applicant having regard to the potential increase in value of the land as a result of the easement release / reduction in the extent of easement affectation (with appropriate consideration given to the applicant's alternative network arrangements).

Subject to the satisfactory resolution of the foregoing and the following recommendations and comments Endeavour Energy has no objection to the Development Application.

- Network Capacity / Connection

Endeavour Energy has noted the Statement of Environmental Effects does not appear to address in detail the suitability of the site for the development in regard to whether electricity services are available and adequate for the development.

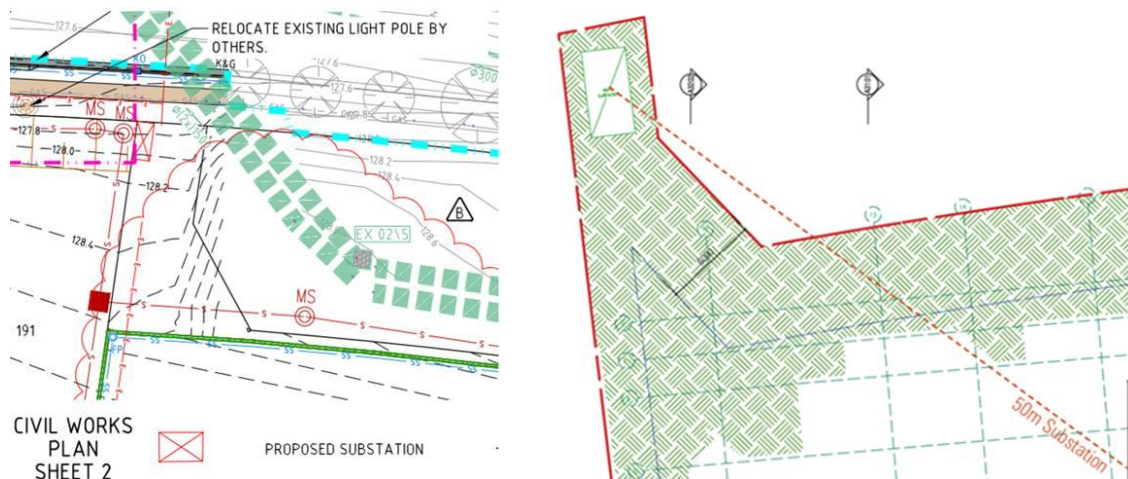
## 2.7 Infrastructure and Site Services

Existing infrastructures services and connections are available to the site including water, electricity, gas, stormwater, and telecommunications. Where necessary, these services will be extended, adapted and augmented in order to meet the demands of the development.

## 4.18 Infrastructure and Site Services

Services including electricity, telecommunications, gas, water and sewage infrastructure are available to the site. These existing services will be extended, expanded and augmented as required in order to meet the demands and requirements of the proposed development.

Endeavour Energy has noted as shown in the following extracts of the Civil Works Plans and Architectural Plans respectively the provision of a possible padmount substation site to the Copperfield Road frontage.

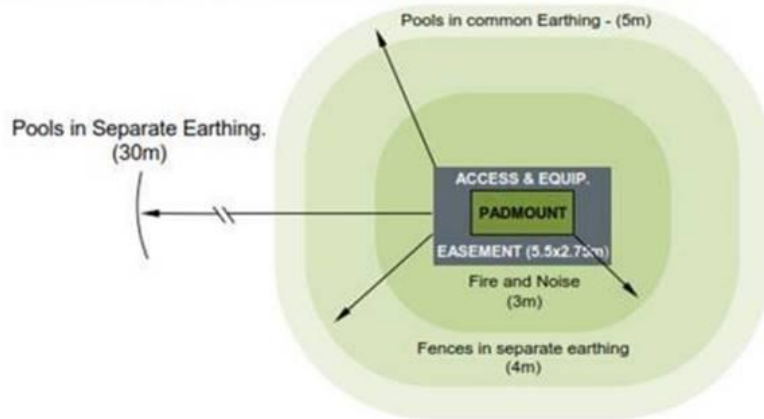


From Endeavour Energy's perspective the fact that provision is being made for a padmount substation is a positive. Endeavour Energy's general requirements is for a padmount substation to be at ground level and have direct access from a public street (unless provided with appropriate easements for the associated underground cables and right of access).

As shown in the following extract of Endeavour Energy's Mains Design Instruction MDI 0044 'Easements and Property Tenure Rights', Figure A4.3 'Padmount easements and clearances', padmount substations require:

- Easement with a minimum size of 2.75 x 5.5 metres (single transformer).
- Restriction for fire rating which usually extends 3 metres horizontally from the base of the substation footing / plinth and 6 metres vertically from the same point.
- Restriction for swimming pools which extends 5 metres from the easement.

#### A4.3 - Padmount easements and clearances



The easement should not cross property boundaries but the restriction/s may affect any adjoining property provided they are able to be registered on the title to that property.

Please find attached for the applicant's information copies of Endeavour Energy's:

- Mains Design Instruction MDI 0044 'Easements and Property Tenure Rights'.
- Guide to Fencing, Retaining Walls and Maintenance Around Padmount Substations.

Generally it is the Level 3 Accredited Service Provider's (ASP) responsibility (engaged by the developer) to make sure that the substation location and design complies with Endeavour Energy's standards the suitability of access, safety clearances, fire ratings, flooding etc.

As well as the capacity / provision of a padmount substation the other factors such as the size and rating / load on the conductors and voltage drop (which can affect the quality of supply particularly with long conductor runs) etc. need to be assessed.

As a condition of the Development Application consent Council should request the submission of documentary evidence from Endeavour Energy confirming that satisfactory arrangements have been made for the connection of electricity, the release of the existing easement and the design requirements for the substation, prior to the release of the Construction Certificate / commencement of works.

In due course the applicant for the proposed development of the site will need to submit an appropriate application based on the maximum demand for electricity for connection of load via Endeavour Energy's Network Connections Branch to carry out the final load assessment and the method of supply will be determined. Straightforward applications can be completed online and permission to connect may be provided immediately if submitting a complying application.

For more complex connections, advice on the electricity infrastructure required to facilitate the proposed development (including asset relocations) can be obtained by submitting a Technical Review Request to Endeavour Energy's Network Connections Branch, the form for which FPJ6007 is attached. The response to these enquiries is based upon a desktop review of corporate information systems, and as such does not involve the engagement of various internal stakeholders in order to develop a 'Connection Offer'. It does provide details of preliminary connection requirements which can be considered by the applicant prior to lodging a formal application for connection of load.

Further details are available by contacting Endeavour Energy's Network Connections Branch via Head Office enquiries on business days from 9am - 4:30pm on telephone: 133 718 or (02) 9853 6666 or on Endeavour Energy's website under 'Home > Residential and business > Connecting to our network' via the following link:

<http://www.endeavourenergy.com.au/> .

Alternatively the applicant may need to engage an Accredited Service Provider (ASP) of an appropriate level and class of accreditation to assess the electricity load and the proposed method of supply for the development. The ASP scheme is administered by Energy NSW and details are available on their website via the following link or telephone 13 77 88:

<https://energy.nsw.gov.au/government-and-regulation/legislative-and-regulatory-requirements/asp-scheme-and-contestable-works> .

Endeavour Energy is urging applicants /customers to engage with an Electrical Consultant / ASP prior to finalising plans to in order to assess and incorporate any required electricity infrastructure. In so doing the consideration can also be given to its impact on the other aspects of the proposed development. This can assist in avoiding the making of amendments to the plan or possibly the need to later seek modification of an approved development application.

- Asset Relocations

In regard to the 'Relocate Existing Light Pole' shown in the above extract of the Civil Works Plan, the application for an asset relocation / removal should be made to Endeavour Energy's Network Connections Branch who can be contacted via Head Office enquiries on business days from 9am - 4:30pm on telephone: 133 718 or (02) 9853 6666) by completing either of the following attached forms:

- FPJ7006 Technical Review Request where the asset relocation is proposed as part of an application for connection of load to a proposed development (please refer to the above point 'Network Capacity / Connection').
- FPJ4015 Application for the Relocation / Removal of Electrical Network Assets.

- Network Asset Design

Endeavour Energy's Company Policy 9.2.5 'Network Asset Design', includes the following requirements for electricity connections to new urban subdivision / development.

## **5.11 Reticulation policy**

### **5.11.1 Distribution reticulation**

In order to improve the reliability performance of and to reduce the operating expenditure on the network over the long term the company has adopted the strategy of requiring new lines to be either underground cables or where overhead is permitted, to be predominantly of covered or insulated construction. Notwithstanding this strategy, bare wire overhead construction is appropriate and permitted in some situations as detailed below.

In areas with the potential for significant overhanging foliage, CCT is used to provide increased reliability as it is less susceptible to outages from wind-blown branches and debris than bare conductors. CCT must only be used in treed<sup>2</sup> areas as the probability of a direct lightning strike is low. In open areas where the line is not shielded from a direct lightning strike, bare conductors must generally be used for 11kV and 22kV reticulation.

Non-metallic Screened High Voltage Aerial Bundled Cable (NMSHVABC) must be used in areas which are heavily treed and where it is not practicable to maintain a tree clearing envelope around the conductors.

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<sup>2</sup> A "treed" area is one with a substantial number of trees adjacent to the line, in each span. In these situations CCT is used to provide increased reliability as it is less susceptible to outages from wind-blown

#### 5.11.1.1 Urban areas

Reticulation of new residential subdivisions will be underground. In areas of low bushfire consequence, new lines within existing overhead areas can be overhead, unless underground lines are cost justified or required by either environmental or local council requirements.

Where underground reticulation is required on a feeder that supplies a mixture of industrial, commercial and/or residential loads, the standard of underground construction will apply to all types of load within that development.

Where ducting is used, adequate spare ducts and easements must be provided at the outset to cover the final load requirements of the entire development plan.

Extensions to the existing overhead 11kV/22kV network must generally be underground. Bare wire will be used for conductor replacements and augmentations except in treed areas where CCT or NMSHVABC must be used.

Extensions to the existing overhead LV network and augmentations must either be underground or ABC. Conductor replacements greater than 100m in route length must utilise aerial bundled cable.

- Earthing

The construction of any building or structure (including fencing, signage, flag poles, hoardings etc.) whether temporary or permanent that is connected to or in close proximity to Endeavour Energy's electrical network is required to comply with Australian/New Zealand Standard AS/NZS 3000:2018 'Electrical installations' as updated from time to time. This Standard sets out requirements for the design, construction and verification of electrical installations, including ensuring there is adequate connection to the earth. It applies to all electrical installations including temporary builder's supply / connections.

Inadequate connection to the earth to allow a leaking / fault current to flow into the grounding system and be properly dissipated places persons, equipment connected to the network and the electricity network itself at risk from electric shock, fire and physical injury. The earthing system is usually in the form of an earth electrode consisting of earth rods or mats buried in the ground. It should be designed by a suitably qualified electrical engineer / Accredited Service Provider (ASP) following a site-specific risk assessment having regard to the potential number of people could be simultaneously exposed, ground resistivity etc.

The ASP scheme is administered by Energy NSW and details are available on their website via the following link or telephone 13 77 88:

<https://energy.nsw.gov.au/government-and-regulation/legislative-and-regulatory-requirements/asp-scheme-and-contestable-works> .

- Easement Management / Network Access

The following is a summary of the usual / main terms of Endeavour Energy's electrical easements requiring that the landowner:

- Not install or permit to be installed any buildings, structures or services within the easement site.
- Not alter the surface level of the easement site.
- Not do or permit to be done anything that restricts access to the easement site without the prior written permission of Endeavour Energy and in accordance with such conditions as Endeavour Energy may reasonably impose.

Endeavour Energy's preference is for no activities or encroachments to occur within its easements. However, if any proposed works or activities (other than those approved / certified by Endeavour Energy's Network Connections Branch as part of an enquiry / application for load or asset relocation project) will encroach / affect Endeavour Energy's easements, contact must first be made with the Endeavour Energy's Easements Officer, Philip Wilson, on business days on direct telephone 9853 7110 or alternately by email [Philip.Wilson@endeavourenergy.com.au](mailto:Philip.Wilson@endeavourenergy.com.au) or [Easements@endeavourenergy.com.au](mailto:Easements@endeavourenergy.com.au) .

For further information please refer to the attached copy of Endeavour Energy's Mains Design Instruction MDI 0044 'Easements and Property Tenure Rights' which deals with activities / encroachments within easements.

It is imperative that the access to the existing electrical infrastructure on and in proximity of the site be maintained at all times. To ensure that supply electricity is available to the community, access to the electricity infrastructure may be required at any time. Restricted access to electricity infrastructure by maintenance workers causes delays in power restoration and may have severe consequences in the event of an emergency.

- Prudent Avoidance

The electricity industry has adopted a policy of prudent avoidance by doing what can be done without undue inconvenience and at modest expense to avert the possible risk to health from exposure to emissions from electricity infrastructure such as electric and magnetic fields (EMF) and noise which generally increase the higher the voltage ie. Endeavour Energy's network ranges from low voltage (normally not exceeding 1,000 volts) to high voltage (normally exceeding 1,000 volts but not exceeding 132,000 volts / 132 kV).

In practical terms this means that when designing new transmission and distribution facilities, consideration is given to reducing exposure and increasing separation distances to more sensitive uses such as residential or schools, pre-schools, day care centres or where potentially a greater number of people are regularly exposed for extended periods of time.

These emissions are usually not an issue but with Council's permitting or encouraging development with higher density, reduced setbacks and increased building heights, but as the electricity network operates 24/7/365 (all day, every day of the year), the level of exposure can increase.

Endeavour Energy believes that irrespective of the zoning or land use, applicants (and Council) should also adopt a policy of prudent avoidance by the siting of more sensitive uses eg. the office component of an industrial building, away from and less susceptible uses such as garages, non-habitable or rooms not regularly occupied eg. storage areas in a commercial building, towards any electricity infrastructure – including any possible future electricity infrastructure required to facilitate the proposed development.

Where development is proposed near electricity infrastructure, Endeavour Energy is not responsible for any amelioration measures for such emissions that may impact on the nearby proposed development.

Please find attached a copy of Energy Networks Association's 'Electric & Magnetic Fields – What We Know' which can also be accessed via their website at <https://www.energynetworks.com.au/electric-and-magnetic-fields> and provides the following advice:

*Electric fields are strongest closest to their source, and their strength diminishes rapidly as we move away from the source.*

*The level of a magnetic field depends on the amount of the current (measured in amps), and decreases rapidly once we move away from the source.*

Typical magnetic field measurements associated with Endeavour Energy's activities and assets given the required easement widths, safety clearances etc. and having a maximum voltage of 132,000 volt / 132 kV, will with the observance of these separation distances not exceed the recommended magnetic field public exposure limits.

- Vegetation Management

The planting of large trees in the vicinity of electricity infrastructure is not supported by Endeavour Energy. Suitable planting needs to be undertaken in proximity of electricity infrastructure (including any new electricity infrastructure required to facilitate the proposed development). Larger trees should be planted well away from electricity infrastructure and even with underground cables, be installed with a root barrier around the root ball of the plant.

Landscaping that interferes with electricity infrastructure could become a potential safety risk, restrict access, reduce light levels from streetlights or result in the interruption of supply may become subject to Endeavour Energy's Vegetation Management program and/or the provisions of the Electricity Supply Act 1995 (NSW) Section 48 'Interference with electricity works by trees' by which under certain circumstances the cost of carrying out such work may be recovered.

- Dial Before You Dig

Before commencing any underground activity the applicant is required to obtain advice from the **Dial Before You Dig 1100** service in accordance with the requirements of the Electricity Supply Act 1995 (NSW) and associated Regulations. This should be obtained by the applicant not only to identify the location of any underground electrical and other utility infrastructure across the site, but also to identify them as a hazard and to properly assess the risk.

- Asbestos

Endeavour Energy's G/Net master facility model indicates that the site is in an area identified or suspected of having asbestos or asbestos containing materials (ACM) present in the electricity network. Whilst Endeavour Energy's underground detail is not complete within G/Net in some areas, in older communities, cement piping was regularly used for the electricity distribution system and in some instances containing asbestos to strengthen the pipe; for insulation; lightness and cost saving.

When undertaking works on or in the vicinity of Endeavour Energy's electricity network, asbestos or ACM must be identified by a competent person employed by or contracted to the applicant and an asbestos management plan, including its proper disposal, is required whenever construction works has the potential to impact asbestos or ACM.

The company's potential locations of asbestos to which construction / electricity workers could be exposed include:

- o customer meter boards;
- o conduits in ground;
- o padmount substation culvert end panels; and
- o joint connection boxes and connection pits.

Further details are available by contacting Endeavour Energy's Electrical and Public Safety Section via Head Office enquiries on business days from 9am - 4:30pm on telephone: 133 718 or (02) 9853 6666.

- Public Safety

Workers involved in work near electricity infrastructure run the risk of receiving an electric shock and causing substantial damage to plant and equipment. I have attached Endeavour Energy's public safety training resources, which were developed to help general public / workers to understand why you may be at risk and what you can do to work safely. The public safety training resources are also available via Endeavour Energy's website via the following link:

<http://www.endeavourenergy.com.au/wps/wcm/connect/ee/nsw/nsw+homepage/communitynav/safety/safety+brochures>.

If the applicant has any concerns over the proposed works in proximity of the Endeavour Energy's electricity infrastructure to the road verge / roadway, as part of a public safety initiative Endeavour Energy has set up an email account that is accessible by a range of stakeholders across the company in order to provide more effective lines of communication with the general public who may be undertaking construction activities in proximity of electricity infrastructure such as builders, construction industry workers etc. The email address is [Construction.Works@endeavourenergy.com.au](mailto:Construction.Works@endeavourenergy.com.au).

- Emergency Contact

In case of an emergency relating to Endeavour Energy's electrical network, the applicant should note the Emergencies Telephone is 131 003 which can be contacted 24 hours/7 days. Endeavour Energy's contact details should be included in any relevant risk and safety management plan.

I appreciate that not all the foregoing issues may be directly or immediately relevant or significant to the Development Application. However, Endeavour Energy's preference is to alert proponents / applicants of the potential matters that may arise should development within closer proximity of the existing and/or required electricity infrastructure needed to facilitate the proposed development on or in the vicinity of the site occur.

Could you please pass on a copy of this submission and the attached resources to the applicant? Should you wish to discuss this matter, or have any questions, please do not hesitate to contact me or the contacts identified above in relation to the various matters. Due to the high number of development application / planning proposal notifications submitted to Endeavour Energy, to ensure a response contact by email to [property.development@endeavourenergy.com.au](mailto:property.development@endeavourenergy.com.au) is preferred.

With the current COVID-19 health risk, as many as possible of Endeavour Energy staff are working from home. As a result there is only a small contingent located at the Huntingwood head office for essential operations. Although working from home, access to emails and other internal stakeholders is now somewhat limited. As a result it may sometimes take longer than usual to respond to enquiries. Thank you for your understanding during this time.

Yours faithfully

Cornelis Duba

Development Application Specialist

Network Environment & Assessment

M: 0455 250 981

E: [cornelis.duba@endeavourenergy.com.au](mailto:cornelis.duba@endeavourenergy.com.au)

51 Huntingwood Drive, Huntingwood NSW 2148

[www.endeavourenergy.com.au](http://www.endeavourenergy.com.au)



