

The General Manager
Blacktown City Council

15 July 2020

ATTENTION: Iuma Araim

Dear Sir or Madam

I refer to the referral of 3 July 2020 from NSW Planning, Industry & Environment regarding NSW Government concurrence and referral request CNR-9654 for Blacktown City Council Development Application DA-20-00804 at AUGUSTA STREET BLACKTOWN 2148 (Lots 218 & 219 DP 457024; Lot 2 DP 516449; Lot 164, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 216 and Augusta Street, Blacktown (Undedicated Portion) DP 8716; Lot 2151 DP 135859; Lot 1 DP 119616; Lot 4 DP 585492; Lots 4, 5 & 6 DP 226294; Lot 7 DP 803359; Lots 50, 51 & 52 DP 1144623; Lots 9 & 10 DP 801210) for 'Consolidation and resubdivision into 4 lot Torrens title, bulk earthworks and associated infrastructure'. Submissions need to be made to Council by 24 July 2020.

Please refer to the attached copy of Endeavour Energy's submission made to NSW Planning, Industry & Environment on 17 June 2020 regarding Request for Secretary's Environmental Assessment Requirements (SEARs) for State Significant Development SSD-10469 the Augusta Street, Blacktown Data Centre (Lots 218 & 219 DP 457024; Lot 2 DP 516449; Lot 164, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 216 and Augusta Street, Blacktown (Undedicated Portion) DP 8716; Lot 2151 DP 135859; Lot 1 DP 119616; Lot 4 DP 585492; Lots 4, 5 & 6 DP 226294; Lot 7 DP 803359; Lots 50, 51 & 52 DP 1144623; Lots 9 & 10 DP 801210) being Construction and operation of a Data Centre including electrical substations, diesel storage, ancillary offices, bulk earthworks and vegetation clearing'. The recommendations and comments provided therein are also applicable to this Development Application.

Subject to 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 following in the Statement of Environmental Effects addressing the suitability of the site for the development in regard to whether electricity services are available and adequate for the development.

5.10 INFRASTRUCTURE REQUIREMENTS

The *Civil and Infrastructure Report* prepared by at&I (2020) considers the relevant infrastructure requirements to facilitate future built form on the Subject Site (refer to **Appendix 2**).

5.10.5 Electricity

As part of the scope of works, the existing 11 kV aboveground High Voltage (HV) cables traversing the Site will need to be relocated to suit the realignment proposed of Augusta Street. The existing HV cables and surrounding easements will be realigned to suit the proposed development works and to ensure no disruptions to sites south of the M4 Motorway. Accordingly, preliminary analysis by Endeavour Energy has indicated that the Site will be serviced by the Arndell Park Zone Substation 1.7 km northeast of the Site. It is considered likely, that a minimum of one feeder (11 kV) cable will be required to be brought into the Site.

Furthermore, the existing HV transmission lines located within the southern portion of the Site running parallel to the M4 Motorway are proposed to remain and be protected during the construction phase. A Low Voltage electricity will also be provided within Augusta Street, servicing the proposed street lights required as part of the road infrastructure works.

Accordingly the applicant and their Accredited Service Provider (ASP) should continue to contact Endeavour Energy's Network Connections Branch who are responsible for are managing the conditions of supply to the proposed development and can be contacted via Head Office enquiries on telephone: 133 718 or (02) 9853 6666 from 9am - 4:30pm). Network Asset Design

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 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 and as a result it may take longer than usual to respond to enquiries. Thank you for your understanding during this time.

Yours faithfully

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From: Cornelis Duba

Sent: Wednesday, 17 June 2020 9:30 PM

To: information@planning.nsw.gov.au

Cc: shaun.williams@planning.nsw.gov.au; Jeffrey Smith <Jeffrey.Smith@endeavourenergy.com.au>

Subject: NSW Planning, Industry & Environment Request for SEARs SSD-10469 Augusta Street, Data Centre, Blacktown

The Secretary

NSW Planning, Industry & Environment

ATTENTION: Shaun Williams, A/ Senior Environmental Assessment Officer

Dear Sir or Madam

I refer to the Department's below email of 6 June 2020 regarding Request for Secretary's Environmental Assessment Requirements (SEARs) for State Significant Development SSD-10469 the Augusta Street, Blacktown Data Centre (Lots 218 & 219 DP 457024; Lot 2 DP 516449; Lot 164, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 216 and Augusta Street, Blacktown (Undedicated Portion) DP 8716; Lot 2151 DP 135859; Lot 1 DP 119616; Lot 4 DP 585492; Lots 4, 5 & 6 DP 226294; Lot 7 DP 803359; Lots 50, 51 & 52 DP 1144623; Lots 9 & 10 DP 801210) being Construction and operation of a Data Centre including electrical substations, diesel storage, ancillary offices, bulk earthworks and vegetation clearing'. Submissions need to be made to the Department by 17 June 2020.

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

- Easements benefitting Endeavour Energy (indicated by red hatching) for 132,000 volt / 132 kilovolt (kV) high voltage overhead power lines, overhead earth cables and overhead pilot cables (carrying protection signals or communications between substations) along the southern side of the site adjacent to the Great Western Motorway.
- 132 kV high voltage underground cables and underground pilot cables to the Great Western Highway road verge / roadway.
- Low voltage and 11,000 volt / 11 kV high voltage overhead power lines to the Augusta Street road verge / roadway including pole mounted substation no. 8078 (indicated by the symbol ).
- Low voltage overhead power lines from the Great Western Highway going south to Augusta Street from where the 11 kV high voltage overhead power lines continue south to the Great Western Motorway to an underground to overhead (UGOH) pole from which there is an easement for underground cables crossing the Great Western Motorway.
- Low voltage and 33,000 volt / 33 kV high voltage overhead power lines (currently 'Out of Service'), overhead earth cables and overhead pilot cables to the Prospect Highway road verge / roadway.

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).

Endeavour Energy would expect that as shown in the following extract of a Draft Planning Secretary's Environmental Assessment Requirements for another proposed State Significant Development that the applicant to address in the future Environmental Impact Statement includes utilities as a key issue.

13. Utilities

The EIS shall:

- address the existing capacity of the site to service the proposed development and any augmentation requirements for utilities, including arrangements for electrical network requirements, drinking water, wastewater and recycled water
- identify the existing infrastructure on-site and any possible impacts of the construction and operation of the proposal on this infrastructure.

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

- Network Capacity / Connection

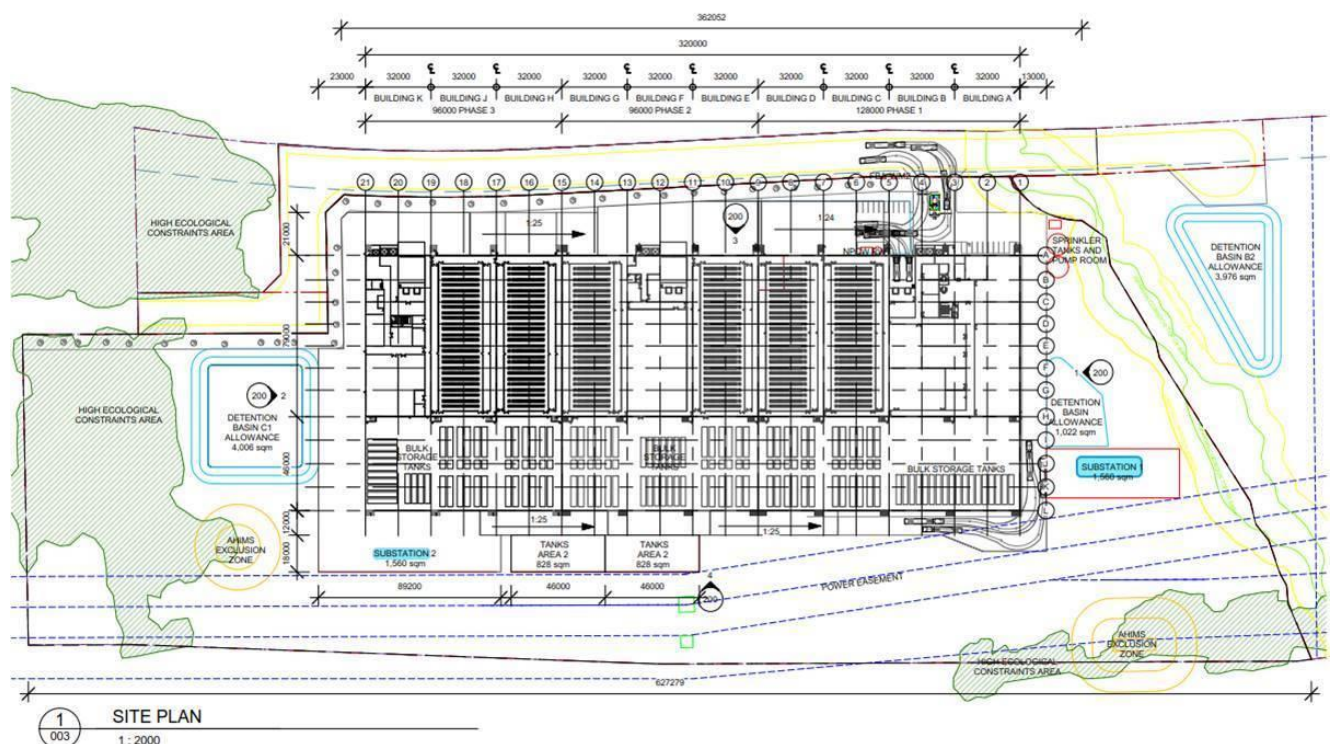
Endeavour Energy has noted the following in the Request for SEARs Report:

3.2.2 Electrical Substations and Diesel Fuel Storage

Due to the significant electricity requirements to run a Data Centre, provisions for two (2) substations has been proposed to facilitate the electrical functionalities of the Subject Site, which would improve the operational efficiencies of the Site, with regard to electricity demand.

Additionally, two (2) diesel fuel storage tanks have been proposed which would facilitate the fuel consumption requirements for the emergency back up generators, should the Site ever experience a power outage which would require the emergency back up generators to be powered during the interim period until power is restored to the Site.

The two substations are shown in the following extract of the Preliminary Architectural Plans.



Endeavour Energy's Network Connections Branch has provided the following advice:

Network Connections Branch had responded to the proponent's initial supply enquiry for a proposed data centre development at the subject site in April this year (Endeavour Energy Ref: ENL3661 – 2014/02306/001) indicating that to supply the estimated load would require significant 132 kV feeder works to be established

from TransGrid Sydney West Bulk Supply Point 200 Old Wallgrove Road, Eastern Creek to the data centre site and to Endeavour Energy's Blacktown Transmission Substation located at 418 Blacktown Road, Prospect.

Network Connections Branch had recently received the application for connection of load for a reduced load for this data centre development. With the reduced load it is likely the developer will be required to provide two 132 kV feeders from Blacktown Transmission Substation to the data centre site. As the works is contestable, the feeder route is subject to further feasibility study by developer's Accredited Service Provider (ASP).

In addition Asset Planning & Performance Branch have advised that it is also likely that Blacktown Transmission Substation requires the extension of the 132 kV busbar to install two 132 kV feeder bays and circuit breakers for the new feeder connections, as well as relocation of a 132 kV feeder within Substation.

The final scope of works is still subject to detailed feasibility study and will be confirmed via Endeavour Energy's normal application process.

As such the applicant and their ASP should continue to complete the application process with Endeavour Energy's Network Connections Branch are managing the conditions of supply. However the applicant will need to contact Endeavour Energy's Network Connections Branch (via Head Office enquiries on telephone: 133 718 or (02) 9853 6666 from 9am - 4:30pm) if this Development Application:

- Includes any contestable works projects that are outside of the existing approved / certified works.
- Results in an electricity load that is outside of the existing Supply / Connection Offer requiring the incorporation of the additional load for consideration. This is due to load being based on a desktop assessment using an After Diversity Maximum Demand (ADMD) where demand is aggregated over a large number of customers providing an ADMD for the site / per lot. Depending on the actual development proposed for the site, the ADMD provided may not be sufficient.
- 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 treed² 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.

² 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.

- Streetlighting

The streetlighting for the proposed development should be reviewed and if necessary upgraded to comply with the series of standards applying to the lighting of roads and public spaces set out in with Australian/New Zealand Standard AS/NZS 1158: 2010 'Lighting for roads and public spaces' as updated from time to time.

Whilst the determination of the appropriate lighting rests with the road controlling authority, Endeavour Energy as a Public Lighting Service Provider is responsible for operating and maintaining the streetlights on behalf of local councils, Roads and Maritime Services and other utilities in accordance with the NSW Public Lighting Code 2019 (Code) as updated from time to time. Endeavour Energy recognises that well designed, maintained and managed Public Lighting offers a safe, secure and attractive visual environment for pedestrians and drivers during times of inadequate natural light.

For any Code implementation and administration / technical matters please contact Endeavour Energy's Substation Mains Assets Section via Head Office enquiries on telephone: 133 718 or (02) 9853 6666 from 9am - 4:30pm or email mainsenquiry@endeavourenergy.com.au.

- Bushfire

Endeavour Energy has noted the following in the Request for SEARs Report:

6.5 BUSHFIRE

The northern boundary of the Subject Site is intersected by Bushfire Prone Land, for which a Bushfire Impact Assessment will be prepared to consider the Proposed Development in accordance with potential bushfire impacts, including recommendations pertaining to Asset Protection Zones (APZs), as well as ensuring compliance with the *Planning for Bushfire Protection 2019* (PBP 2019) document.

Although industrial uses are not covered by Chapters 5 to 7 of NSW Rural Fire Service 'Planning for Bush Fire Protection 2019' (PBP), the aim and objectives of PBP still need to be considered and a suitable package of bush fire protection measures should be proposed commensurate with the assessed level of risk to the development. PBP provides the following advice regarding electricity services:

5.3.3 Services – Water, electricity and gas

Intent of measures: to provide adequate services of water for the protection of buildings during and after the passage of a bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building.

Table 5.3c

Performance criteria and acceptable solutions for water, electricity and gas services for residential and rural residential subdivisions.

PERFORMANCE CRITERIA		ACCEPTABLE SOLUTIONS	
The intent may be achieved where:			
ELECTRICITY SERVICES	➤ location of electricity services limits the possibility of ignition of surrounding bush land or the fabric of buildings.	➤ where practicable, electrical transmission lines are underground;	
		➤ where overhead, electrical transmission lines are proposed as follows: ➤ lines are installed with short pole spacing of 30m, unless crossing gullies, gorges or riparian areas; and ➤ no part of a tree is closer to a power line than the distance set out in <i>ISSC3 Guideline for Managing Vegetation Near Power Lines</i> .	

The following is an extract of Endeavour Energy's Company Policy 9.1.1 Bushfire Risk Management:

9.1.1 BUSHFIRE RISK MANAGEMENT

1.0 POLICY STATEMENT

The company is committed to the application of prudent asset management strategies to reduce the risk of bushfires caused by network assets and aerial consumer mains to as low as reasonably practicable (ALARP) level. The company is also committed to mitigating, the associated risk to network assets and customer supply reliability during times of bushfire whilst achieving practical safety, reliability, quality of supply, efficient investment and environmental outcomes. The company is committed to compliance with relevant acts, regulations and codes.

Accordingly the electricity network required to service the proposed development must be fit for purpose and meet the technical specifications, design, construction and commissioning standards based on Endeavour Energy's risk assessment associated with the implementation and use of the network connection / infrastructure for a bushfire prone site. In assessing bushfire risk, Endeavour Energy has traditionally focused on the likelihood of its network starting a bushfire, which is a function of the condition of the network. Risk control has focused on reducing the likelihood of fire ignition by implementing good design and maintenance practices. However the potential impact of a bushfire on its electricity infrastructure and the safety risks associated with the loss of electricity supply are also considered.

- Flooding and Drainage

Endeavour Energy has noted the following in the Request for SEARs Report:

6.1 SOIL AND WATER

With regard to water quantity, the Proposed Development will include provisions for On-site Stormwater Detention (OSD) to capture all site stormwater runoff and manage overland flow across the Subject Site. The OSD system will be sized accordingly to accommodate sufficient storage volume to mitigate increased peak flows generated from the newly constructed impervious areas (roofs and hardstand areas) to pre-development flows for all storm events, up to and including the 1% AEP Flood Extent, as per Council's flooding and engineering requirements.

The electricity network required to service an area / development must be fit for purpose and meet the technical specifications, design, construction and commissioning standards based on Endeavour Energy's risk assessment associated with the implementation and use of the network connection / infrastructure for a flood prone site. Risk control has focused typically on avoiding the threat, but where this is not possible, reducing the negative effect or probability of flood damage to assets by implementing good design and maintenance practices.

Distribution substations should not be subject to flood inundation or stormwater runoff ie. the padmount substation cubicles are weatherproof not flood proof and the cable pits whilst designed to be self-draining should not be subject to excessive ingress of water. Section 7 'Substation and switching stations' of Endeavour Energy's Mains Construction Instruction MCI 0006 'Underground distribution construction standards manual' provides the following details of the requirements for flooding and drainage in new distribution substation locations.

7.1.6 Flooding and drainage

Substations are to be located such that the risk of flooding or stormwater damage is minimal.

As a minimum the level at the top of the transformer footing, HV and LV switchgear, shall not be lower than the 1:100 year flood level.

All drains within the substation site area or in the vicinity shall be properly maintained to avoid the possibility of water damage to Endeavour Energy's equipment.

In areas where, as determined by the Network Substation Manager, there is a high water table or a heightened risk of flooding, indoor substations will not be permitted.

All materials used in the construction below the substation (ground level) shall be capable of withstanding prolonged immersion in water without swelling or deterioration.



Figure 51 - Example substation raised above 1:100 flood level

- Subdivision of Easements

Endeavour Energy has noted the following in the Request for SEARs Report:

3.2.4 Access and Servicing

Under the concurrent Subdivision DA currently under assessment with Blacktown City Council, there are provisions which assessed the future infrastructure requirements for the Site, which includes potable water, wastewater, gas, electricity and telecommunications. Accordingly, all infrastructure services can be provided to the Subject Site to service the proposed Data Centre.

3.5.1 Proposed Four (4) Lot Torrens Title Subdivision & Proposed Earthworks and Infrastructure Works

In a concurrent Development Application issued to Blacktown City Council, Development Consent is sought to develop the Site for a four (4) lot Torrens Title Subdivision, proposed earthworks and installation and augmentation of associated infrastructure services at Augusta Street, Blacktown.

Endeavour Energy has not received any notification from Blacktown City Council in regard to the proposed subdivision.

Although the Request for SEARs Report includes Section 5.10 State Environmental Planning Policy (Infrastructure) 2007, it does not mention Division 5 'Electricity transmission or distribution', Subdivision 2 'Development likely to affect an electricity transmission or distribution network', Clause 45 'Determination of development applications—other development' I regard to the existing easements / electricity infrastructure on the site.

Endeavour Energy's preference is to have continuity of its easements over the most direct and practicable route affecting the least number of lots as possible. Therefore, it generally does not support the subdivision of easements (even in part) and their incorporation into multiple / privately owned lots. The incorporation of electricity easements into privately owned lots is generally problematic for both Endeavour Energy and the landowner and requires additional easement management to ensure no uncontrolled activities / encroachments occur within the easement.

Although in this instance the subdivision will result in the consolidation of lots, the applicant must demonstrate how the subdivision has taken into consideration to minimising the impact on the easement rights. This is particularly important where there are poles or structures and changes in direction to a line route. In the event of fallen conductors or faults in underground cables, access to the poles or cable pits to restring or pull cables is essential for restoring electricity supply. The number and length of crossings should be kept to a minimum eg. crossings should be or close to perpendicular to the overhead power lines or underground cables and must be at least half the easement width beyond any pole or structure.

However, if the subdivision does result in the incorporation of Endeavour Energy's easement into multiple lots, not only must the easements, rights and restrictions, covenants etc. be retained over the effected lots and in accordance with the requirements of NSW Land Registry Services (LRS), but Endeavour Energy may need to include additional requirements / restrictions to be registered on title/s to the lots encumbered by the easements.

The applicant should note the following requirements of Endeavour Energy's 'Property Tenure Guidelines, Provision of Network Connection Services':

7.0 SUBDIVISIONS

Endeavour Energy will require the developer to create all necessary easements, restrictions, rights of access, and positive covenants.

The creation of property tenure is **not** required for any network asset located within a public road (unless it is a temporary road).

7.2 Urban property tenure requirements

Endeavour Energy will require the creation of property tenure for:

- all new transmission, high voltage and low voltage assets; and
- all existing transmission, high voltage and low voltage assets located within the developer's land.

• Protected Electrical Works

In regard to the low voltage and 11 kV high voltage overhead power lines traversing the site which are not held under easement, these are protected assets and deemed to be lawful for all purposes under Section 53 'Protection of certain electricity works' of the Electricity Supply Act 1995 (NSW). Essentially this means the owner or occupier of the land cannot take any action in relation to the presence in, on or over the land of electricity works ie. the electricity infrastructure cannot be removed to rectify the encroachment. These protected assets are managed as if an easement is in place - please refer to the below point 'Easement Management / Network Access'.

In accordance with Endeavour Energy's Mains Design Instruction MDI 0044 'Easements and Property Tenure Rights', as shown in the following extracts of Table 1 – 'Minimum easement widths', the low voltage and 11 kV high voltage overhead power lines both require a 9 metre minimum easement width ie. 4.5 metres to both sides of the centre line of the poles / conductors.

Table 1 - Minimum easement widths

	Voltage	Asset Type	Construction	Minimum Easement (m)
Overhead Assets	400V–22kV	Bare Construction	All	9
		ABC		
		CCT		

ABC = Aerial Bundled Cables CCT = Covered Conductor Thick

This easement width in some circumstances may not be warranted ie. depending on the span, type of conductor, access, small urban lots etc. However as a minimum any buildings, structures (including fencing, signage, flag poles etc.) whether temporary or permanent must comply with the minimum safe distances / clearances for voltages up to and including 132,000 volts (132 kV) as specified in:

- Australian/New Zealand Standard AS/NZS 7000 – 2016: ‘Overhead line design’ as updated from time to time.
- ‘Service and Installation Rules of NSW’ which can be accessed via the following link to the Energy NSW website:

<https://energy.nsw.gov.au/government-and-regulation/legislative-and-regulatory-requirements/service-installation-rules> .

These distances must be maintained at all times to all buildings and structures and regardless of the Council’s allowable building setbacks etc. under its development controls. As a guide please find attached a copy of Endeavour Energy Drawing 86232 ‘Overhead Lines Minimum Clearances Near Structures’.

Even if there is no issue with the safety clearances to the building or structure, ordinary persons must maintain a minimum safe approach distance of 3.0 metres to all voltages up to and including 132,000 volts / 132 kV. Work within the safe approach distances requires an authorised or instructed person with technical knowledge or sufficient experience to perform the work required, a safety observer for operating plant as well as possibly an outage request and/or erection of a protective hoarding.

- 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 services or structures 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 (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 or protected electrical works / assets, contact must first be made with the Endeavour Energy’s Easements Officer, Jeffrey Smith, on direct telephone 9853 7139 or alternately email Jeffrey.Smith@endeavourenergy.com.au or Easements@endeavourenergy.com.au .

Please find attached for the applicant’s reference copies of Endeavour Energy’s:

- General Restrictions for Overhead Power Lines.

- Mains Design Instruction MDI 0044 'Easements and Property Tenure Rights' which in Section 5.14 'Encroachments on overhead line easements' 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.

- Hazardous and/or Offensive Development

Endeavour Energy has noted the following in the Request for SEARs Report:

5.11 STATE ENVIRONMENTAL PLANNING POLICY NO. 33 – HAZARDOUS AND OFFENSIVE DEVELOPMENT

To facilitate the operational use of the proposed Data Centre, there will be some diesel fuel stored on the Site for the back-up generators. However, there are no combustibles proposed to be stored, thus *State Environmental Planning Policy No 33 - Hazardous and Offensive Development* (SEPP 33) is not triggered. Notwithstanding, a Preliminary Risk Screening report would be undertaken and prepared and included within the EIS.

Endeavour Energy has traditionally focused on the likelihood of its network starting a fire. However conversely Endeavour Energy believes that applicants and determining authorities should consider the safety risks associated with inappropriate development in proximity of electricity infrastructure that may result in damage to the network and the loss of electricity supply.

Endeavour Energy is aware that the provisions of State Environmental Planning Policy No 33— Hazardous and Offensive Development (SEPP33) that in the preparation of a preliminary hazard assessment electricity infrastructure is not defined / regarded as sensitive land use. However, in similar situations Endeavour Energy has sought further advice from the consultants preparing the preliminary hazard assessment on the basis that, although not a sensitive land use in the traditional / environmental sense, if the electricity infrastructure on or in proximity of the site is damaged, the resulting outage could leave thousands of properties / customers without power. The consultants have been requested to specifically address the risks associated with the proximity of the electricity infrastructure ie. detail design considerations, technical or operational controls etc. to demonstrate as required by SEPP33 that the proposed business / development is suitably located and can be built and operated with an adequate level of safety and pollution control.

- 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.

- 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). Only low growing shrubs not exceeding 3.0 metres in height, ground covers and smaller shrubs, with non-invasive root systems are the best plants to use. Larger trees should be planted well away from electricity infrastructure (at least the same distance from overhead power lines as their potential full grown height) and even with underground cables, be installed with a root barrier around the root ball of the plant.

Landscaping that interferes with electricity infrastructure may become a potential safety risk, cause of bush fire, restrict access, reduce light levels from streetlights or result in the interruption of supply. Such landscaping may be 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.

- Demolition

Demolition work is to be carried out in accordance with Australian Standard AS 2601—2001: 'The demolition of structures' as updated from time to time. All electric cables or apparatus which are liable to be a source of danger, other than a cable or apparatus used for the demolition works shall be disconnected ie. the existing customer service lines will need to be isolated and/or removed during demolition. Appropriate care must be taken to not otherwise interfere with any electrical infrastructure on or in the vicinity of the site eg. streetlight columns, power poles, overhead power lines and underground cables etc.

- Removal of Electricity Supply

Approval for the permanent disconnection and removal of supply must be obtained from Endeavour Energy's Network Connections Branch (contact via Head Office enquiries on telephone: 133 718 or (02) 9853 6666 from 9am - 4:30pm) by Accredited Service Providers (ASP) with the relevant class of Authorisation for the type of work being carried out. The work could involve:

- The disconnection and removal of an underground service cable or overhead service line,
- Removal of metering equipment.

The written request must be submitted to Endeavour Energy using Form FPJ4603 'Permission to Remove Service / Metering by Authorised Level 2 Accredited Service Provider' which must be accompanied by Notification of Service Works (NOSW) forms provided as a result of service work activity performed by a Level 2 ASP. The retailer must also provide written agreement for the permanent removal of supply.

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> .

- Site Remediation

Endeavour Energy has noted the following in the Request for SEARs Report:

5.12 STATE ENVIRONMENTAL PLANNING POLICY NO. 55 – REMEDIATION OF LAND

Under the provisions of *State Environmental Planning Policy No 55 – Remediation of Land* (SEPP 55), where a Development Application (in this instance, SSD Application) is made concerning land that is contaminated, the consent authority must not grant consent unless:

- (a) it has considered whether the land is contaminated, and
- (b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and
- (c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

Detailed investigations are currently underway with respect to contamination on the Site. An Environmental Site Assessment (Phase 2 Contamination Investigation) will be submitted with the SSD Application.

Endeavour Energy's Environmental Business Partner section have advised that the remediation of soils impacted by various forms of electricity infrastructure is not uncommon eg. transformer oil associated with leaking substations, pole treatment chemicals at the base of timber poles etc. The method of remediation is generally the removal of the electricity infrastructure, excavation of any contaminated soils and their disposal at a licensed land fill. The decommissioning and removal of the redundant electricity infrastructure will be dealt with by Endeavour Energy's Network Connections Branch as part of the application for the connection of load for the new development.

If the applicant has any concerns over the remediation of soils impacted by redundant electricity infrastructure they should contact Environmental Business Partner section via Head Office enquiries on telephone: 133 718 or (02) 9853 6666 from 9am - 4:30pm.

- 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 .

- 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 request for SEARs / Development Application. However in keeping with the Department's aim of earlier and better engagement, 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 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 and as a result it may take longer than usual to respond to enquiries. Thank you for your understanding during this time.

Yours faithfully

Cornelis Duba

Development Application Specialist

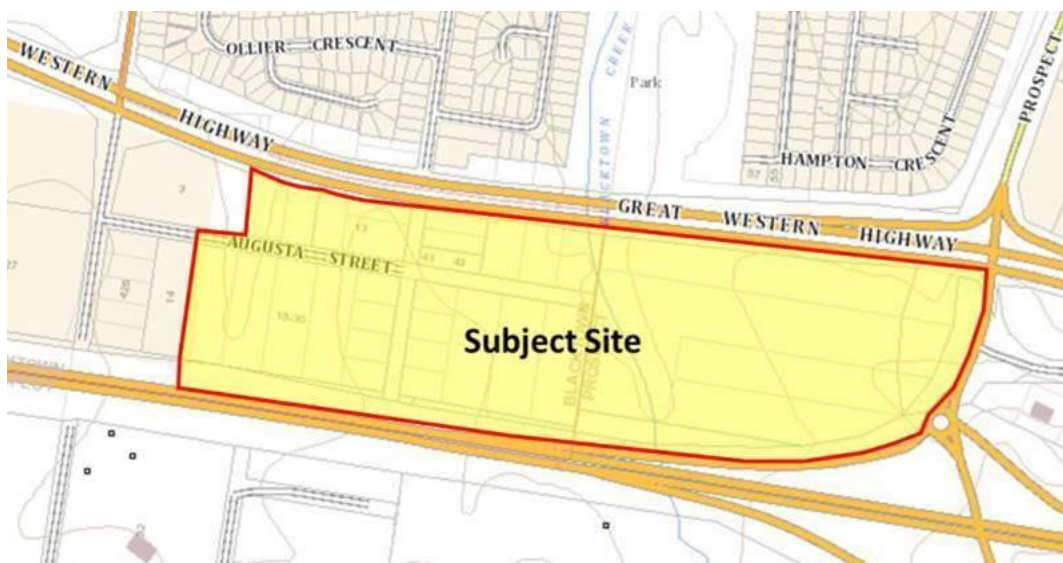
Network Environment & Assessment

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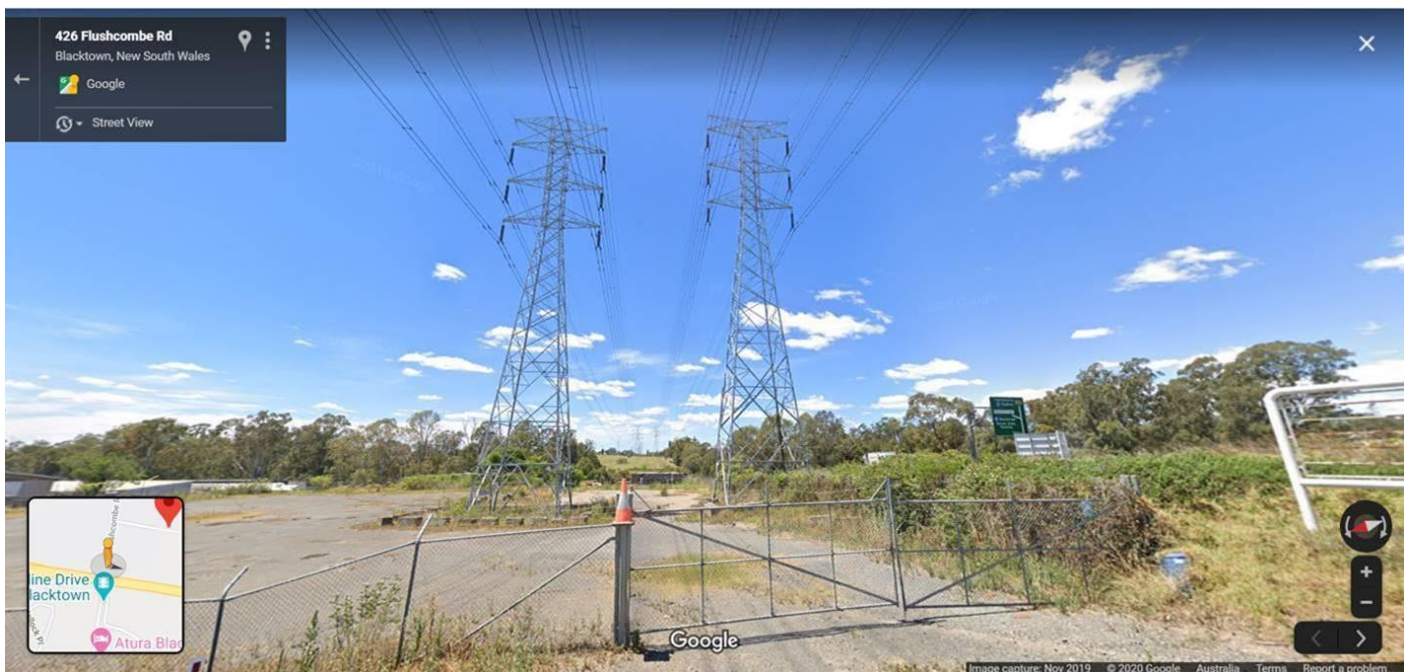




Corner Augusta Street & Flushcombe Road looking east.



End of Augusta Street looking east.



End of Flushcombe Road adjacent to Western Motorway looking east.



Great Western Highway looking west back towards Flushcombe Road. 'Existing Telstra Electricity Supply Station' on left but Lot 164 is off Augusta Street as is the low voltage service conductor / customer connection point?



Prospect Highway looking west.