

Robert Micallef  
Liverpool City Council  
Email: micallefr@liverpool.nsw.gov.au

Letter uploaded to the Concurrence and Referral (CNR) portal

Dear Mr Micallef

**GENERAL TERMS OF APPROVAL  
INTEGRATED DEVELOPMENT APPLICATION  
NATIONAL PARKS AND WILDLIFE ACT 1974**

**Address:** 164 Croatia Avenue Edmondson Park 2174

**Proposal:** Concept DA for a mixed use development as part of the Edmondson Park Town Centre comprising of 676 residential apartments, 2000 m<sup>2</sup> of retail floor space, a child care centre and supporting roads and infrastructure.

**IDA application no:** DA: DA-33/2021, CNR-17700, A-20672, received 2 February 2021

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This letter contains our general terms of approval for the above integrated development application for those known Aboriginal sites which would require an Aboriginal Heritage Impact Permit pursuant to s.90 of the *National Parks and Wildlife Act 1974*.

We have reviewed the Aboriginal Cultural Heritage Assessment Report (ACHAR), dated 28 February 2022, prepared by Apex Archaeology and the notice to supply response dated 2 May 2022.

The report has identified that Aboriginal objects will be impacted by the proposed development.

Considering the above, and in accordance with Section 4.47 of the *Environmental Planning and Assessment Act 1979*, the following general terms of approval are granted:

**APPROVED DEVELOPMENT**

1. Development must be in accordance with:
  - a. Apex Archaeology 2022, 164-170 Croatia Avenue, Edmondson Park, NSW: Aboriginal Cultural Heritage Assessment Report, Final version dated February 2022, unpublished report prepared for The Bathla Group.
  - b. Apex Archaeology 2022, Re: 164-170 Croatia Avenue, Edmondson Park – Integrated Development Application: Notice to Supply Further Information, letter response to Heritage NSW dated 2 May 2022.
  - c. File Planning & Development Services 2021, *Statement of Environmental Effect: Concept Development Application Mixed Use Residential Development 164-170 Croatia Avenue, Edmondson Park*, prepared for Superstar Pty Ltd.
  - d. Any other relevant documents uploaded to the CNR portal as of 8 June 2022.

Please note that any modification of the above development that will result in impacts to Aboriginal cultural heritage must be referred to us to determine whether changes to these general terms of approval are required.

**EXCEPT AS AMENDED** by the following general terms of approval:

2. A s.90 [Aboriginal Heritage Impact Permit \(AHIP\)](#) for the proposed works must be sought and granted prior to the commencement of works.
3. The AHIP application must be accompanied by appropriate documentation and mapping as outlined in [Applying for an Aboriginal Heritage Impact Permit: Guide for applicants](#) (2011).
4. Consultation with the Aboriginal community undertaken as part of the AHIP application must be in accordance with the [Aboriginal cultural heritage consultation requirements for proponents 2010](#) (2010).
5. The AHIP application must be completed with reference to the requirements of the [Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW](#) (2011).
6. The AHIP application must include complete records satisfying the requirements of the [Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales](#) (2010).
7. Long term management of Aboriginal objects must be considered as part of the AHIP application.

#### **ADVICE**

Prior to submitting the AHIP application, the ACHAR must be appropriately updated to reflect the letter response provided by Apex Archaeology in response to the Heritage NSW notice to supply further information dated 22 April 2022. An appropriate summary and justification for survey coverage in consideration of the Eco Logical assessment must be clearly integrated into the Apex 2022 ACHAR.

Please ensure that future documentation includes photographs with appropriate scales in line with the [Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales](#) (2010).

#### **ABORIGINAL COMMUNITY CONSULTATION MUST BE MAINTAINED**

Consultation with the Registered Aboriginal Parties (RAPs) must be maintained. We recommend updates on the project are provided to the RAPs every 6 months to ensure the consultation is continuous.

If you have any questions regarding these general terms of approval, please contact Emily Dillon, Senior Assessment Officer, at Heritage NSW, on 02 6229 7189 or [emily.dillon@environment.nsw.gov.au](mailto:emily.dillon@environment.nsw.gov.au).

Yours sincerely



**Kym McNamara**

**Senior Assessments Officer**

**Heritage NSW**

**Department of Planning and Environment**

Date: 8 June 2022

Contact: Department of Planning and Environment—Water  
Phone: 1800 633 362  
Email: [waterlicensing.servicedesk@dpie.nsw.gov.au](mailto:waterlicensing.servicedesk@dpie.nsw.gov.au)

Our ref: IDAS-2021-10351  
Your ref: DA33/2021

9 June 2022

The General Manager  
Liverpool Plains Shire Council  
PO Box 152  
QUIRINDI NSW 2343

Attention: EplanningTeam

Uploaded to the ePlanning Portal

Dear Sir/Madam

**Re: IDAS-2021-10351 - Integrated Development Referral – General Terms of Approval**

**Dev Ref: DA33/2021**

**Description: Mixed-use development and Associated Works**

**Location: 164-170 CROATIA AVENUE EDMONDSON PARK 2174**

I refer to your recent referral regarding an integrated Development Application (DA) proposed for the above location. Attached, please find the Department of Planning and Environment—Water's General Terms of Approval (GTA) for part of the proposed development requiring a Controlled Activity approval under the *Water Management Act 2000* (WM Act), as detailed in the subject DA.

Please note Council's statutory obligations under section 4.46 of the *Environmental Planning and Assessment Act 1979* (EPA Act) which requires consent, granted by a consent authority, to be consistent with the general terms of any approval proposed to be granted by the approval body.

If the proposed development is approved by Council, the department requests these GTA be included (in their entirety) in Council's development consent. Please also note the department requests notification:

- if any plans or documents are amended and these amendments significantly change the proposed development or result in additional works or activities (i) in the bed of any river, lake or estuary; (ii) on the banks of any river lake or estuary, (iii) on land within 40 metres of the highest bank of a river lake or estuary; or (iv) any excavation which interferes with an aquifer.

The Department of Planning and Environment—Water will ascertain from the notification if the amended plans require review of or variation/s to the GTA. This requirement applies even if the amendment is part of Council's proposed consent conditions and do not appear in the original documentation.

- if Council receives an application under s4.46 of the EPA Act to modify the development

consent and the modifications change the proposed work or activities described in the original DA.

- of any legal challenge to the consent.

As the proposed work or activity cannot commence before the applicant applies for and obtains an approval, the department recommends the following condition be included in the development consent:

**The attached GTA issued by the Department of Planning and Environment—Water do not constitute an approval under the**

**Water Management Act 2000.** The development consent holder must apply to the department for a Controlled Activity approval **after consent** has been issued by Council **and before** the commencement of any work or activity.

A completed application must be submitted to the department together with any required plans, documents, application fee and proof of Council's development consent. Finalisation of an approval can take up to eight (8) weeks from the date the application and all required supporting documentation is received.

Applications for controlled activity approval should be made to the department, by lodgement of a Controlled Activity Approval – New approval application on the NSW Planning Portal at:

<https://www.planningportal.nsw.gov.au/>

The Department of Planning and Environment—Water requests that Council provide a copy of this letter to the development consent holder.

The Department of Planning and Environment—Water also requests a copy of the determination for this development application be provided by Council as required under section 4.47(6) the EPA Act.

Yours Sincerely



M Ismail

**For**

**Bryson Lashbrook**

**Manager**

**Licensing and Approvals**

**Department of Planning and Environment—Water**

## General Terms of Approval

for proposed development requiring approval under s89,  
90 or 91 of the Water Management Act 2000

<b>Reference Number:</b>	IDAS-2021-10351
<b>Issue date of GTA:</b>	9 June 2022
<b>Type of Approval:</b>	Controlled Activity
<b>Location of work/activity:</b>	164-170 CROATIA AVENUE EDMONDSON PARK 2174
<b>Waterfront Land:</b>	Maxwells Creek
<b>DA Number:</b>	DA33/2021
<b>LGA:</b>	Liverpool City Council

**The GTA issued by Department of Planning and Environment—Water do not constitute an approval under the *Water Management Act 2000*.** The development consent holder must apply to the Department of Planning and Environment—Water for the relevant approval **after development consent** has been issued by Council **and before** the commencement of any work or activity.

Condition Number	Details
TC-G001	Before commencing any proposed controlled activity on waterfront land, an application must be submitted to Department of Planning and Environment—Water, and obtained, for a controlled activity approval under the Water Management Act 2000.
TC-G004	<p>A. This General Terms of Approval (GTA) only applies to the proposed controlled activity described in the plans and associated documents found in Schedule 1, relating to Development Application DA33/2021 provided by Council to Department of Planning and Environment—Water.</p> <p>B. Any amendments or modifications to the proposed controlled activity may render the GTA invalid. If the proposed controlled activity is amended or modified, Department of Planning and Environment—Water, must be notified in writing to determine if any variations to the GTA will be required.</p>
TC-G005	<p>A. The application for a controlled activity approval must include the following plan(s):</p> <ol style="list-style-type: none"> <li>Site plans indicating the demarcation of waterfront land, designated riparian corridors</li> <li>Detailed civil construction plans;</li> <li>Construction staging plans;</li> <li>Construction streamworks plans;</li> <li>Construction watercourse crossing design plans;</li> <li>Erosion and sediment control plans;</li> <li>Construction detailed drainage plans;</li> <li>Construction stormwater drainage outlet plan;</li> <li>Vegetation management plan;</li> </ol> <p>B. The plan(s) must be prepared in accordance with Department of Planning and Environment—Water 's guidelines located on the website <a href="https://www.nrar.nsw.gov.au/how-to-apply/controlled-activities/guidelines-for-controlled-activities">https://www.nrar.nsw.gov.au/how-to-apply/controlled-activities/guidelines-for-controlled-activities</a></p>

## **SCHEDULE 1**

The plans and associated documentation listed in this schedule are referred to in general terms of approval (GTA) issued by Department of Planning and Environment—Water for integrated development associated with IDAS-2021-10351 as provided by Council:

- Statement of Environmental Effects, prepared by File Planning & Development Services, January 2021



# NSW RURAL FIRE SERVICE



Liverpool City Council  
Locked Bag 7064  
LIVERPOOL BC NSW 1871

Your reference: CNR-17700 (DA-33/2021)  
Our reference: DA20220620008626-Original-1

24 June 2022

**Attention:** Robert Micallef

Dear Robert,

## **Proposed mixed use residential development at 164 Croatia Avenue Edmondson Park**

I refer to your correspondence regarding the above proposal, which was received by the NSW Rural Fire Service (RFS) on 03/05/2022.

The NSW RFS has reviewed the revised documentation provided in relation to the proposed concept development application (DA) for mixed use residential development on the subject site.

General Terms of Approval, under Division 4.8 of the *Environmental Planning and Assessment Act 1979*, and a Bush Fire Safety Authority, under section 100B of the *Rural Fires Act 1997*, are now issued subject to the following conditions:

### **Asset protection zones**

***The intent of measures is to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting fire fighting activities. To achieve this, the following conditions shall apply:***

1. From the start of building works, and in perpetuity to ensure ongoing protection from the impact of bush fires, the entire property must be managed as an inner protection area (IPA) in accordance with the requirements of Appendix 4 of *Planning for Bush Fire Protection 2019*. When establishing and maintaining an IPA the following requirements apply:

- tree canopy cover should be less than 15% at maturity;
- trees at maturity should not touch or overhang the building;
- lower limbs should be removed up to a height of 2 metres above the ground;
- tree canopies should be separated by 2 to 5 metres;
- preference should be given to smooth barked and evergreen trees;

#### **Postal address**

NSW Rural Fire Service  
Locked Bag 17  
Granville NSW 2141

#### **Street address**

NSW Rural Fire Service  
4 Murray Rose Avenue  
Sydney Olympic Park NSW 2127

**T** (02) 8741 5555  
**F** (02) 8741 5550  
**[www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au)**

- large discontinuities or gaps in vegetation should be provided to slow down or break the progress of fire towards buildings;
- shrubs should not be located under trees;
- shrubs should not form more than 10% ground cover;
- clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.
- grass should be kept mown (as a guide grass should be kept to no more than 100 mm in height); and
- leaves and vegetation debris should be removed.

## Construction standards

***The intent of measures is to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting firefighting activities. To achieve this, the following conditions shall apply:***

**2.** New construction of proposed Building E and F must comply with section 3 and section 7 (BAL 29) Australian Standard AS3959-2018 *Construction of buildings in bush fire-prone areas* or NASH Standard (1.7.14 updated) *National Standard Steel Framed Construction in Bushfire Areas – 2014* as appropriate and Section 7.5 of *Planning for Bush Fire Protection 2019*.

**3.** New construction of proposed Buildings A, B, and H must comply with section 3 and section 6 (BAL 19) Australian Standard AS3959-2018 *Construction of buildings in bush fire-prone areas* or NASH Standard (1.7.14 updated) *National Standard Steel Framed Construction in Bushfire Areas – 2014* as appropriate and Section 7.5 of *Planning for Bush Fire Protection 2019*.

**4.** New construction of proposed Buildings C and D must comply with Sections 3 and 5 (BAL 12.5) Australian Standard AS3959-2018 *Construction of buildings in bush fire-prone areas* or NASH Standard (1.7.14 updated) *National Standard Steel Framed Construction in Bushfire Areas – 2014* as appropriate and Section 7.5 of *Planning for Bush Fire Protection 2019*.

## Public access

***The intent of measures is to provide safe operational access to structures and water supply for emergency services, while residents are seeking to evacuate from an area. To achieve this, the following conditions shall apply:***

**5.** Proposed access via Macdonald Road must comply with the general requirements of Table 5.3b of *Planning for Bush Fire Protection 2019* and the following:

- are two-way sealed roads with minimum 8 metre carriageway width kerb to kerb;
- a minimum vertical clearance of 4 metre to any overhanging obstructions, including tree branches, is provided.
- parking is provided outside of the carriageway width;
- are through roads, and these are linked to the internal road system at an interval of no greater than 500 metre;
- curves of roads have a minimum inner radius of 6 metre;
- the maximum grade road is 15 degrees and average grade of not more than 10 degrees;
- the road crossfall does not exceed 3 degrees;
- traffic management devices are constructed to not prohibit access by emergency services vehicles;
- dead end roads are not recommended, but if unavoidable, are not more than 200 metres in length, incorporate a minimum 12 metres outer radius turning circle, and are clearly sign posted as a dead end;
- the capacity of perimeter and non-perimeter road surfaces and any bridges/causeways is sufficient to carry fully loaded firefighting vehicles; bridges/causeways are to clearly indicate load rating;



- hydrants are located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression; and
- hydrants are provided in accordance with the relevant clauses of *AS 2419.1:2005 - Fire hydrant installations System design, installation and commissioning*.

**6.** Proposed access Roads 01 and 02 must comply with the general requirements of Table 5.3b of *Planning for Bush Fire Protection 2019* and the following:

- are two-way sealed roads with minimum 5.5 metre carriageway width kerb to kerb;
- a minimum vertical clearance of 4 metre to any overhanging obstructions, including tree branches, is provided.
- parking is provided outside of the carriageway width;
- are through roads, and these are linked to the internal road system at an interval of no greater than 500 metre;
- curves of roads have a minimum inner radius of 6 metre;
- the maximum grade road is 15 degrees and average grade of not more than 10 degrees;
- the road crossfall does not exceed 3 degrees;
- traffic management devices are constructed to not prohibit access by emergency services vehicles;
- dead end roads are not recommended, but if unavoidable, are not more than 200 metres in length, incorporate a minimum 12 metres outer radius turning circle, and are clearly sign posted as a dead end;
- the capacity of perimeter and non-perimeter road surfaces and any bridges/causeways is sufficient to carry fully loaded firefighting vehicles; bridges/causeways are to clearly indicate load rating;
- hydrants are located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression; and
- hydrants are provided in accordance with the relevant clauses of *AS 2419.1:2005 - Fire hydrant installations System design, installation and commissioning*.

## Water and utilities

***The intent of measures is 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. To achieve this, the following conditions shall apply:***

**7.** The provision of water, electricity and gas must comply with the following in accordance with Table 5.3c of *Planning for Bush Fire Protection 2019*:

- reticulated water is to be provided to the development where available;
- fire hydrant, spacing, design and sizing complies with the relevant clauses of Australian Standard *AS 2419.1:2005*;
- hydrants are not located within any road carriageway;
- reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads;
- fire hydrant flows and pressures comply with the relevant clauses of *AS 2419.1:2005*;
- all above-ground water service pipes are metal, including and up to any taps;
- where practicable, electrical transmission lines are underground;
- where overhead, electrical transmission lines are proposed as follows:
  - a. lines are installed with short pole spacing (30 metres), unless crossing gullies, gorges or riparian areas; and
  - b. no part of a tree is closer to a power line than the distance set out in accordance with the specifications in *ISSC3 Guideline for Managing Vegetation Near Power Lines*.
- reticulated or bottled gas is installed and maintained in accordance with *AS/NZS 1596:2014* and the requirements of relevant authorities, and metal piping is used;
- all fixed gas cylinders are kept clear of all flammable materials to a distance of 10 metres and shielded on the hazard side;

- connections to and from gas cylinders are metal; polymer-sheathed flexible gas supply lines are not used; and
- above-ground gas service pipes are metal, including and up to any outlets.

## Landscaping

***The intent of measures is for landscaping. To achieve this, the following conditions shall apply:***

**8.** Landscaping within the required asset protection zone must comply with Appendix 4 of *Planning for Bush Fire Protection 2019*. In this regard, the following principles are to be incorporated:

- A minimum 1 metre wide area (or to the property boundary where the setbacks are less than 1 metre), suitable for pedestrian traffic, must be provided around the immediate curtilage of the building;
- Planting is limited in the immediate vicinity of the building;
- Planting does not provide a continuous canopy to the building (i.e. trees or shrubs are isolated or located in small clusters);
- Landscape species are chosen to ensure tree canopy cover is less than 15% (IPA), and less than 30% (OPA) at maturity and trees do not touch or overhang buildings;
- Avoid species with rough fibrous bark, or which retain/shed bark in long strips or retain dead material in their canopies;
- Use smooth bark species of trees species which generally do not carry a fire up the bark into the crown;
- Avoid planting of deciduous species that may increase fuel at surface/ ground level (i.e. leaf litter);
- Avoid climbing species to walls and pergolas;
- Locate combustible materials such as woodchips/mulch, flammable fuel stores away from the building;
- Locate combustible structures such as garden sheds, pergolas and materials such as timber garden furniture away from the building; and
- Low flammability vegetation species are used.

## General Advice

- A Vegetation Management Plan must be prepared for the revegetation within Maxwells Creek. The restoration and revegetation of the entire Riparian Corridor must not exceed fuel loads of 10.5 and 20.2 t/ha for Woodland as per Table A1.12.8 of *Planning for Bushfire Protection 2019* as recommended in the Bushfire Protection Assessment prepared by Australian Bushfire Protection Planners (Ref: B203519 - 2, dated 17 June 2021).

For any queries regarding this correspondence, please contact Rohini Belapurkar on 1300 NSW RFS.

Yours sincerely,



Kalpana Varghese  
**Supervisor Development Assessment & Planning**  
**Built & Natural Environment**

# BUSH FIRE SAFETY AUTHORITY

Subdivision – Strata Subdivision  
164 Croatia Avenue Edmondson Park,  
RFS Reference: DA20220620008626-Original-1  
Your Reference: DA-33/2021 (CNR-17700)

This Bush Fire Safety Authority is issued on behalf of the Commissioner of the NSW Rural Fire Service under s100b of the *Rural Fires Act (1997)* subject to the attached General Terms of Approval.

This authority confirms that, subject to the General Terms of Approval being met, the proposed development will meet the NSW Rural Fire Service requirements for Bush Fire Safety under s100b of the *Rural Fires Act 1997*.

**Kalpana Varghese**

**Supervisor Development Assessment & Planning  
Built & Natural Environment**

Friday 24 June 2022



Transport  
for NSW

30 August 2021

TfNSW Reference: SYD21/00130/02

Client Reference: CNR-17700 - DA-33/2021

The General Manager  
Liverpool City Council  
Locked Bag 7064  
Liverpool BC NSW 1871

Attention: **Nabil Alaeddine**

**ADDITIONAL INFORMATION FOR RESIDENTIAL, RETAIL AND CHILDCARE DEVELOPMENT (EDMONDSON PARK TOWN CENTRE) - 164-170 CROATIA AVENUE, EDMONDSON PARK**

Dear Sir/Madam,

Reference is made to Council's correspondence dated 6 August 2021, regarding the abovementioned Application which was referred to Transport for NSW (TfNSW) for comment in accordance with the *State Environmental Planning Policy (Infrastructure) 2007*.

TfNSW has reviewed the submitted information and notes that the traffic generation information provided in Section 6 of the submitted Traffic Report does not cover the proposed child care development. Notwithstanding this, TfNSW raises no objection to the proposed development, as the traffic generated from the proposed development has a minor impact on the classified road network.

If you have any further questions, Mr. Felix Liu would be pleased to take your call on 8849 2113 or email [development.sydney@rms.nsw.gov.au](mailto:development.sydney@rms.nsw.gov.au). I hope this has been of assistance.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Malgy'.

**Malgy Coman**  
Senior Land Use Planner

25 February 2021

The General Manager  
Liverpool City Council  
Locked Bag 7064  
Liverpool BC NSW 1871

**ATTENTION: NABIL ALAEDDINE**

Dear Sir/Madam,

**STATE ENVIRONMENTAL PLANNING POLICY (INFRASTRUCTURE) 2007  
DEVELOPMENT APPLICATION – DA-33/2021 (CNR-17700  
164-170 CROATIA AVENUE, EDMONDSON PARK**

I refer to Council's Referral requesting comments for the above development application in accordance with Clause 85 of State Environmental Planning Policy (Infrastructure) 2007.

Council is advised that Sydney Trains, via Instruments of Delegation, has been delegated to act as the rail authority for the Leppington Line heavy rail corridor and to process the review for this development application.

As such, Sydney Trains now advises that the proposed development has been assessed in accordance with the relevant Transport for NSW Assets Standard Authority standards and Sydney Trains requirements. To ensure that the proposed development is undertaken in a safe manner Council is now requested to impose the conditions provided in Attachment A.

In the event that this development proposal is the subject of a Land and Environment Court appeal, Council's is requested to notify Sydney Trains should such an event occur.

Council is also advised that the Sydney Trains requested conditions of consent in provided in Attachment A are not to be amended, replaced or superseded by any subsequent submission provided by any other rail authority, without the further agreement from Sydney Trains.

Please contact Sydney Trains Town Planning Management via email to [DA\\_sydneytrains@transport.nsw.gov.au](mailto:DA_sydneytrains@transport.nsw.gov.au) should you wish to discuss this matter.



Finally, Sydney Trains requests that a copy of the Notice of Determination and conditions of consent be forwarded to Sydney Trains.

Yours sincerely,

**Rita Nakhle**  
**Senior Town Planning Officer**  
**Sydney Trains**

## Attachment A

- *Sydney Trains has a High Voltage Substation near this site. It is advised that the applicant consult a relevant expert to prepare an EMF (Electromagnetic Fields) report and implement any recommendations. This is critical given proposed sensitive land uses such as child care centre.*
- *The Applicant must ensure that all drainage from the development is adequately disposed of and managed and not allowed to be discharged into the railway corridor unless prior written approval has been obtained from Sydney Trains.*
- *The Applicant/Developer is advised to approach Sydney Trains early in the design process (as part of pre-DA discussion) relating to future developments on site, to ensure that all relevant Sydney Trains matters of consideration are taken into account and are incorporated in the future design of the development. These considerations include, but are not limited to, geotechnical and structural details and construction methodology, (no rock anchors/bolts within TAHE land).*

--oOo--

9 April 2021

Our Ref: 189902

**Nabil Alaeddine**

Council Assessing Officer

Liverpool City Council

[alaeddinen@liverpool.nsw.gov.au](mailto:alaeddinen@liverpool.nsw.gov.au)

**RE: Development Application DA-33/2021 at 164 Croatia Avenue, Edmondson Park**

Thank you for notifying Sydney Water of DA-33/2021 at 164 Croatia Avenue, Edmondson Park, which proposes the concept DA for a mixed use development as part of the Edmondson Park Town Centre comprising of 676 residential apartments, 2000sqm of retail floor space, a child care centre and supporting roads and infrastructure. Sydney Water has reviewed the application based on the information supplied and provides the following comments to assist in planning the servicing needs of the proposed development.

**Water Servicing**

- Potable water servicing should be available via the 375mm trunk watermain in Croatia Avenue at the west boundary of the site
- Detailed requirements including potential amplifications and extensions will be provided at the Section 73 application stage.

**Recycled Water Servicing**

- Recycled water servicing should be available via the 600mm recycled watermain in Croatia Avenue at the west boundary of the site to service this development.
- Detailed requirements including potential amplifications and/or extensions will be provided at the Section 73 application stage.

**Wastewater Servicing**

- Wastewater servicing should be available via the 375mm sewer main traversing the north-east corner of the site.
- Detailed requirements including potential amplifications, extensions, and/or adjustments will be provided at the Section 73 application stage.

This advice is not formal approval of our servicing requirements. Detailed requirements, including any potential extensions or amplifications, will be provided once the development is referred to Sydney Water for a Section 73 application. More information about the Section 73 application process is available on our web page in the [Land Development Manual](#).



Further advice and requirements for this proposal are in Attachments 1 & 2. If you require any further information, please contact the Growth Planning Team at [urbangrowth@sydneywater.com.au](mailto:urbangrowth@sydneywater.com.au).

Yours sincerely,

A handwritten signature in black ink, appearing to be 'K. Leitch', with a large, sweeping horizontal stroke at the end.

**Kristine Leitch**

Commercial Growth Manager

City Growth and Development, Business Development Group

Sydney Water, 1 Smith Street, Parramatta NSW 2150

## Attachment 1

### Sydney Water Servicing

A Section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained from Sydney Water.

The proponent is advised to make an early application for the certificate, as there may be water and wastewater pipes to be built that can take some time. This can also impact on other services and buildings, driveways or landscape designs.

Applications must be made through an authorised Water Servicing Coordinator. For help either visit [www.sydneywater.com.au](http://www.sydneywater.com.au) > Plumbing, building and developing > Developing > Land development or telephone 13 20 92.

### Building Plan Approval

The approved plans must be submitted to the Sydney Water [Tap in™](#) online service to determine whether the development will affect any Sydney Water sewer or water main, stormwater drains and/or easement, and if further requirements need to be met.

*The Sydney Water [Tap in™](#) online self-service replaces our Quick Check Agents as of 30 November 2015.*

The [Tap in™](#) service provides 24/7 access to a range of services, including:

- building plan approvals
- connection and disconnection approvals
- diagrams
- trade waste approvals
- pressure information
- water meter installations
- pressure boosting and pump approvals
- changes to an existing service or asset, e.g. relocating or moving an asset.

Sydney Water's [Tap in™](#) online service is available at:  
<https://www.sydneywater.com.au/SW/plumbing-building-developing/building/sydney-water-tap-in/index.htm>

## Attachment 2

### Requirements for **Business Customers for Commercial and Industrial Property Developments.**

#### **Trade Wastewater Requirements**

If this development is going to generate trade wastewater, the property owner must submit an application requesting permission to discharge trade wastewater to Sydney Water's sewerage system. You must obtain Sydney Water approval for this permit before any business activities can commence. It is illegal to discharge Trade Wastewater into the Sydney Water sewerage system without permission.

The permit application should be emailed to Sydney Water's Business Customer Services at [businesscustomers@sydneywater.com.au](mailto:businesscustomers@sydneywater.com.au)

A Boundary Trap is required for all developments that discharge trade wastewater where arrestors and special units are installed for trade wastewater pre-treatment.

If the property development is for Industrial operations, the wastewater may discharge into a sewerage area that is subject to wastewater reuse. Find out from Business Customer Services if this is applicable to your development.

#### **Backflow Prevention Requirements**

Backflow is when there is unintentional flow of water in the wrong direction from a potentially polluted source into the drinking water supply.

All properties connected to Sydney Water's supply must install a testable Backflow Prevention Containment Device appropriate to the property's hazard rating. Property with a high or medium hazard rating must have the backflow prevention containment device tested annually. Properties identified as having a low hazard rating must install a non-testable device, as a minimum.

Separate hydrant and sprinkler fire services on non-residential properties, require the installation of a testable double check detector assembly. The device is to be located at the boundary of the property.

Before you install a backflow prevention device:

1. Get your hydraulic consultant or plumber to check the available water pressure versus the property's required pressure and flow requirements.
2. Conduct a site assessment to confirm the hazard rating of the property and its services. Contact PIAS at NSW Fair Trading on 1300 889 099.

For installation you will need to engage a licensed plumber with backflow accreditation who can be found on the Sydney Water website:

<http://www.sydneywater.com.au/Plumbing/BackflowPrevention/>

## Water Efficiency Recommendations

Water is our most precious resource and every customer can play a role in its conservation. By working together with Sydney Water, business customers are able to reduce their water consumption. This will help your business save money, improve productivity and protect the environment.

Some water efficiency measures that can be easily implemented in your business are:

- Install water efficiency fixtures to help increase your water efficiency, refer to WELS (Water Efficiency Labelling and Standards (WELS) Scheme, <http://www.waterrating.gov.au/>
- Consider installing rainwater tanks to capture rainwater runoff, and reusing it, where cost effective. Refer to <http://www.sydneywater.com.au/Water4Life/InYourBusiness/RWTCalculator.cfm>
- Install water-monitoring devices on your meter to identify water usage patterns and leaks.
- Develop a water efficiency plan for your business.

It is cheaper to install water efficiency appliances while you are developing than retrofitting them later.

## Contingency Plan Recommendations

Under Sydney Water's [customer contract](#) Sydney Water aims to provide Business Customers with a continuous supply of clean water at a minimum pressure of 15meters head at the main tap. This is equivalent to 146.8kpa or 21.29psi to meet reasonable business usage needs.

Sometimes Sydney Water may need to interrupt, postpone or limit the supply of water services to your property for maintenance or other reasons. These interruptions can be planned or unplanned.

Water supply is critical to some businesses and Sydney Water will treat vulnerable customers, such as hospitals, as a high priority.

Have you thought about a contingency plan for your business? Your Business Customer Representative will help you to develop a plan that is tailored to your business and minimises productivity losses in the event of a water service disruption.

For further information please visit the Sydney Water website at:

<http://www.sydneywater.com.au/OurSystemsandOperations/TradeWaste/> or contact Business Customer Services on 1300 985 227 or [businesscustomers@sydneywater.com.au](mailto:businesscustomers@sydneywater.com.au).

Chief Executive Officer  
Liverpool City Council


13 February 2021

**ATTENTION: Nabil Alaeddine**

Dear Sir or Madam

I refer to the referral of 2 February 2021 from NSW Planning, Industry & Environment regarding NSW Government concurrence and referral request CNR-17700 for Liverpool City Council Development Application DA-33/2021 at 164 & 170 CROATIA AVENUE EDMONDSON PARK 2174 (Lots 25 & 26 DP 228850) for 'Concept DA for a mixed use development as part of the Edmondson Park Town Centre comprising of 676 residential apartments, 2000sqm of retail floor space, a child care centre and supporting roads and infrastructure'. Submissions need to be made to Council by 23 February 2021.

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

- No easements over the site benefitting Endeavour Energy (active easements are indicated by red hatching).
- Low voltage and 11,000 volt / 11 kilovolt (kV) (constructed at 22,000 volts / 22 kV) high voltage overhead power lines including pole mounted substation no. 7426 (indicated by the symbol ) to the Croatia Road road verge / roadway. There is an extended low voltage overhead service conductor coming from the pole on the road verge to a customer owned / private pole (indicated by the green circle) providing a customer connection point for Lot 25 DP 228850. These will become redundant electrical assets should the proposed development proceed.
- Two low voltage overhead extended service conductors coming from poles on the road verge to customer owned / private poles (indicated by the green circles) on the site providing the customer connections for the existing dwellings.
- 33,000 volt / 33 kV high voltage underground under ground cables, underground earth cables and underground pilot cables (carrying protection signals or communications between substations) to the Soldier Parade 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).

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

The availability of electricity supply to a site is based on a wide range of factors eg. the age and design of the network; other development in the locality utilising previously spare capacity within the local network; the progress of nearby / surrounding sites including electricity infrastructure works eg. a smaller and isolated development that may not of its own accord require a substation may require a substation to facilitate the development and from which the spare capacity is made available to subsequent nearby development.

Distribution substations are required to transform the high voltage of the distribution feeder (usually at 11,000 volts / 11 kV) to the secondary system voltage (400/230 volts) to supply customers / developments. Distribution substations are divided into ground mounted substations most commonly being a padmount substations installed a complete unit on a concrete foundation / plinth and usually associated with underground distribution and pole mounted substations where there is overhead distribution.

Pole mounted substations have comparatively limited capacity of 16 kilovolt amperes (kVA) up to a maximum of 400 kVA. Padmount substations can accommodate loads from 315 kVA up to 1,500 kVA (typically 500 kVA). Accordingly there is a significant variation in the number and type of premises able to be connected to a substation ie. a single distribution substation may serve one large building, or many homes.

Whilst there are a number of distribution substations in proximity of the site which are likely to have some spare capacity, it will not be sufficient to facilitate the proposed development. As well as the capacity of distribution substations, 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.

Accordingly an extension and / or augmentation of the existing local network will be required. However the extent of the works will not be determined until the final load assessment is completed. Endeavour Energy's preference is to alert proponents / applicants (and Council) of the potential matters that may arise as further development of areas continues to occur.

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.

Depending on the outcome of the assessment, any required padmount substation will need to be located within the property (in a suitable and accessible location) and be protected (including any associated cabling) by an easement and associated restrictions benefiting and gifted to Endeavour Energy. Please refer to Endeavour Energy's Mains Design Instruction MDI 0044 'Easements and Property Tenure Rights'.

Traditionally Endeavour Energy's preference has been for the utilisation of padmount substations. For new developments particularly within town centres and central business districts where zero and minimal building setbacks are allowed (and which given their size makes the provision of the easements and restrictions for a padmount substation difficult to achieve on site), Endeavour Energy's recommendation is for the distribution substation consideration be given to the use of an indoor. Whilst indoor substations are predominantly utilised for commercial / office type development, in May 2017 Endeavour Energy's Mains Design Instruction MDI 0028 'Underground distribution network design' was amended to allow certain types of urban multi residential load (UML) (mixed use) developments to utilise either indoor substations where a padmount substation is not practicably possible.



For more complex connections, advice on the electricity infrastructure required to facilitate the proposed development 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 on telephone: 133 718 or (02) 9853 6666 from 9am - 4:30pm 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 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.

- 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.

- Bushfire

Endeavour Energy has noted that the Statement of Environmental Effects indicates that ‘the site includes land which is identified as Category 1 Bushfire Prone Vegetation and associated buffer zone’. The accompanying Bushfire Protection Assessment which provides an assessment of the site having regards to NSW Rural Fire Service ‘Planning for Bush Fire Protection 2019’ does not appear to include any specific recommendations related to electricity services.

NSW Rural Fire Service ‘Planning for Bush Fire Protection 2019’ provides the following advice:

### 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 that the Statement of Environmental Effects indicates that 'The proposed development site is located within the Maxwells Creek catchment and the property is affected by flooding under the 1% Annual Exceedance Probability (AEP) event'.

Endeavour Energy requires the electricity network needed to service an area / development to 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 padmount 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**

- 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 / ASP following a site-specific risk assessment having regard to the potential number of people could be simultaneously exposed, ground resistivity etc.

For details of the ASP scheme please refer to the above point 'Network Capacity / Connection'.

- Location of Electricity Easements / Prudent Avoidance

The incorporation of electricity easements into privately owned lots is generally problematic for both Endeavour Energy and the future landowners and requires additional easement management to ensure no uncontrolled activities / encroachments occur within the easement area.

Accordingly Endeavour Energy's recommendation is that whenever reasonably possible, easements be entirely incorporated into public reserves and not burden private lots. 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.

This is also in keeping with a policy of prudent avoidance. 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 in the vicinity of 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.

In regard to the Development Application including a child care centre, Endeavour Energy's Network Environment Assessment Section has provided the following advice:

*As far as Network Environment Assessment Section is aware there are no restrictions in legislation that stop schools, pre-schools, day care centres being placed next to electricity infrastructure.*

*In regard to the NSW Planning & Environment 'Child Care Planning Guideline' August 2017, other than Part 36 'Noise and air pollution' which refers to substations as a 'noisy environment', there is no specific requirement under the site selection and location criteria to consider proximity to electricity infrastructure although arguably a child care centre and electricity infrastructure are not a compatible use.*

*Prudent avoidance measures must however be implemented. Prudent avoidance was a policy recommended by former Chief Justice of the High Court of Australia, Sir Harry Gibbs, as a result of an inquiry he conducted into community needs and high voltage transmission lines including issues in relation to EMF back in 1991. The findings in the Gibbs report are consistent with subsequent inquiries and are still relevant today.*

*Prudent avoidance is defined as doing what can be done without undue inconvenience and at modest expense to avert the possible risk to health from exposure to new high voltage transmission facilities. In practical terms, this means designing new transmission and distribution facilities having regard to their capacity to produce EMFs, and siting them having regard to the proximity of houses, schools and the like.*

*Although the Gibbs report was particularly aimed at electricity distributors to consider when placing their infrastructure, and bearing in mind that there are schools, pre-schools, day care centres adjacent to our infrastructure in various locations right across our franchise area, it is nonetheless Endeavour Energy's recommendation it that such 'sensitive uses' not be built adjacent to major electricity infrastructure.*

*Should such a development proceed, the design of the schools, pre-schools, day care centres should also consider prudent avoidance measures such as any rooms which the children will occupy (class rooms, play areas, sleeping rooms, eating areas) be arranged such that they are on the side of the site/building which is furthest away from the electricity infrastructure.*

*There is scientific consensus that health effects have not been established but that the possibility cannot be ruled out. Accordingly, if there are any concerns regarding the location of the schools, pre-schools, day care centres in proximity to the electricity infrastructure, in order to make an informed conclusion, the applicant may need to commission an independent review to provide an overall assessment including electric and magnetic field measurement and advice. Applying a precautionary approach early on in the design process will hopefully result in the adoption of prudent avoidance principles benefitting the eventual development of the site.*

Although not part of Endeavour Energy's electricity network, the applicant should consider wiring the new building and locating high electricity consuming devices away from areas occupied by children.

As part of the further acoustic assessment consideration should also be provided to the padmount substation/s required to facilitate the proposed development. The transformers in substations may emit a hum – especially when under heavy load say in the summer peak when use of air conditioning is at its highest. The noise is usually not perceptible enough to be regarded as disruptive and/or to the point where amelioration measures are required. As noise levels, frequency and timing can vary and people perceive sounds differently, to minimise any potential exposure to intrusive noise, the siting towards the electricity infrastructure of less sensitive uses or parts of the building not regularly occupied is recommended.

- 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.

In regard to the future padmount substation site/s required to facilitate the proposed development, please find attached for the applicant's reference a copy Endeavour Energy's 'Guide to Fencing, Retaining Walls and Maintenance Around Padmount Substations'.

- 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.

- Site Remediation

Endeavour Energy has noted that the Detailed Site Investigation does not appear to identify the electricity infrastructure on or in vicinity of the site which is likely to become redundant assets as a result of the proposed development as potential contamination source or contaminants of potential concern.

Endeavour Energy's Environmental Business Partner Team have advised that the remediation of soils or surfaces impacted by various forms of electricity infrastructure is not uncommon but is usually not significant 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, removal of any stained surfaces or 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 – please refer to the above point 'Network Capacity / Connection'.

If the applicant has any concerns over the remediation works related to redundant electricity infrastructure they should contact Environmental Business Partner Team via Head Office enquiries on business days 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](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 the any risk or safety management plan.

I appreciate that not all the foregoing issues may be directly or immediately relevant or significant to the Development Application ie. if a padmount substation is not required on site. 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 easing of the current COVID-19 health risk, whilst a significant number of Endeavour Energy staff are returning to the office they are at times still working from home. Although working from home, access to emails and other internal stakeholders can still be somewhat limited and as a result it may take longer than usual to respond to enquiries. Thank you for your ongoing 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)



