From: Cornelis Duba
Sent: Monday, 18 December 2017 8:34 AM
To: DPE CSE Information Planning Mailbox <information@planning.nsw.gov.au>
Cc: Jennie Saban
Subject: NSW Planning & Environment Development Application SSD 8596 Arts and Social Sciences Building, University of Wollongong 2 Northfields Avenue, Keiraville

The Secretary
NSW Planning & Environment

ATTENTION: Karen Harragon, Director Social and Other Infrastructure Assessments

Dear Sir or Madam

I refer to the Department's letter of 13 November 2017 regarding Development Application SSD 8596 at University of Wollongong, 2 Northfields Avenue, Keiraville (Lot 1 DP 1188267) for 'Construction of a new four storey Arts and Social Sciences Building on the western side of the campus and associated landscaping and public domain works'. Submissions need to be made to the Department by 15 December 2017. I apologise for the late submission but trust that Endeavour Energy's recommendations and comments will still be considered.

As shown in the below site plans from Endeavour Energy's G/Net master facility model in regards to the proposed building area there are:

- Easements benefitting Endeavour Energy (indicated by red hatching) for 11,000 volt / 11 kV high voltage underground cables.
- Low voltage underground cables from the substations to the customer connection points.

Please note the location, extent and type of any electricity infrastructure, boundaries etc. shown on the plan is indicative only. 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). 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 has noted that from the Electrical Services Report it appears that at some time the demountable buildings may have been located over the easement for the underground cables?

2 Existing Electrical Services

It seems that the location of the existing HV cables routing within below ground ducts across the site are mainly through proposed soft landscaping areas. The HV cable routing North-South is within close proximity to the edge of the planned new building, however this looks to be within the proposed paved area and may not be affected. The locations provided are indicative only and a survey will be required to confirm this.

Therefore, it is not anticipated that these existing services will be affected by these works. Careful coordination of any new electrical services within the landscaping area will be considered as the design develops.

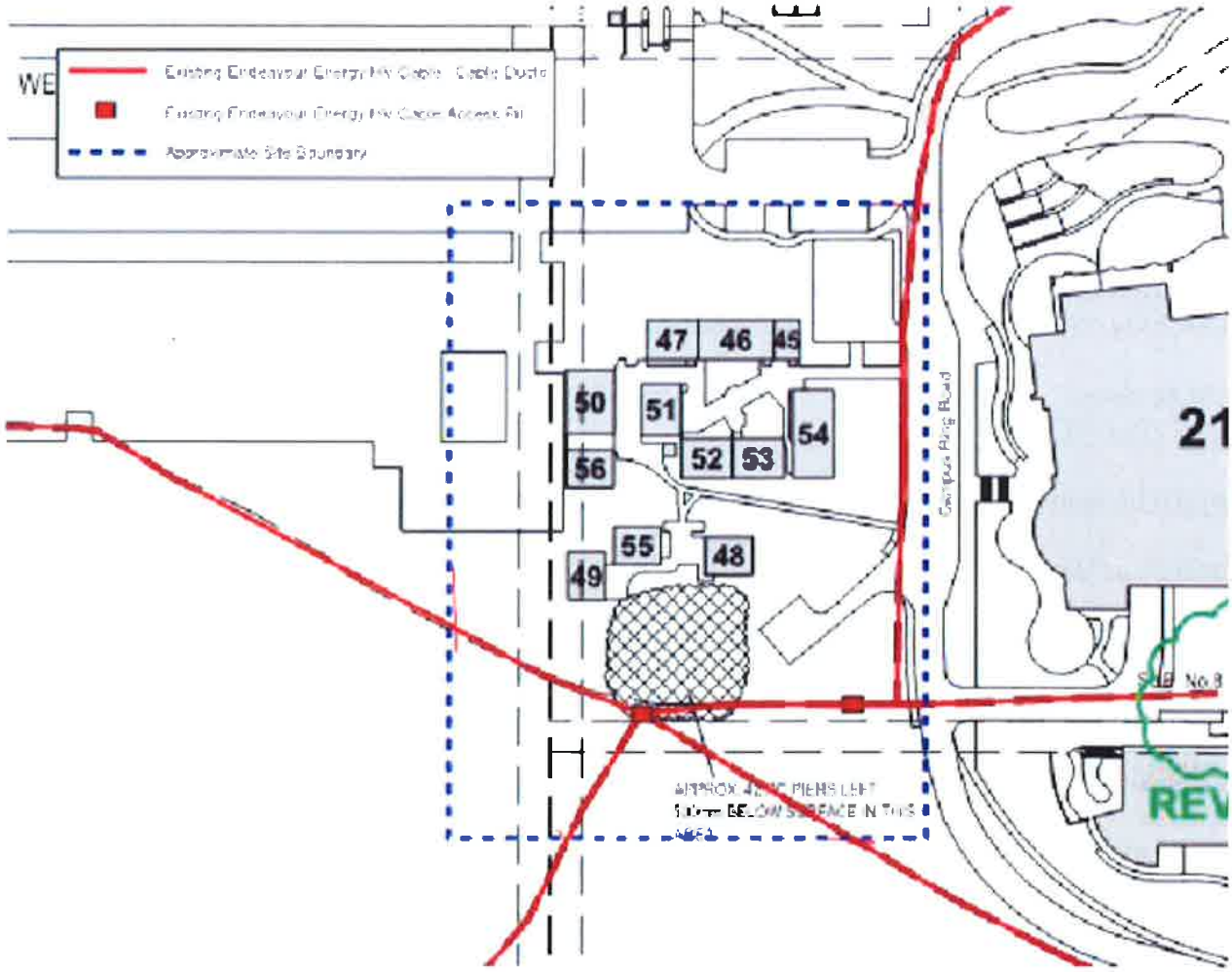


Figure 1 - Existing Endeavour Energy HV

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

- 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 easement areas. If the proposed works (other than those approved / certified by Endeavour Energy's Network Connections Branch as part of an enquiry / application for load – please refer to the point below 'Network Capacity / Connection') will encroach/affect Endeavour Energy's easements, contact must first be made with the Endeavour Energy's Easements Officer,

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 Environmental Impact Statement (EIS)and the Electrical Services Report:

3.11 Infrastructure and Services (referenced in EIS as Section 3.16)

Electrical Services

The estimated electrical demand has been calculated by ARUP and it is confirmed that the required power can be provided from a new 1.5MVA transformer substation, proposed to be located externally to the building within a kiosk. See **Appendix L** for further details.

4 New Electrical Services

A preliminary maximum demand (MD) for Western Building has been calculated to establish the new electrical requirements for the redevelopment. The preliminary MD was calculated at a total of 987 kVA. The average load density is in the order of 96VA/m^2. This is based on the current design GFA of 10,334m^2.

An application for connection of load has yet to be submitted to Endeavour Energy. This will be submitted once approval from the university has been established and a NMI number has been allocated.

The current proposal is to provide a new Endeavour Energy kiosk 1.5MVA substation within the site boundary. It is anticipated that it will be connected from the existing Endeavour Energy HV assets described in the existing services section above. This is subject to confirmation from Endeavour Energy.

The current proposal is to locate the kiosk to the South East of the site adjacent the existing HV line running parallel (North-South) to the campus ring road. This location and feasibility of this proposal will be determined following application to Endeavour Energy and confirmation of existing capacity.

UoW will engage a Level 3 Accredited Service Provider to undertake the design and prepare the documentation for this scope of work.

Although there is an existing customer connection, with the new building the applicant for the future proposed development of the site will need to submit an application for connection of additional load via Endeavour Energy's Network Connections Branch to carry out the final load assessment and the method of supply will be determined. Depending on the outcome of the assessment, any required padmount or indoor / chamber 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'. Further details are available by contacting Endeavour Energy's Network Connections Branch via Head Office enquiries on telephone: 133 718 or (02) 9853 6666 from 8am - 5:30pm or on Endeavour Energy's website under 'Home > Residential and business > Connecting to our network' via the following link:

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

Advice on the electricity infrastructure required to facilitate the proposed development (including asset relocations) can be obtained by submitting a Technical Review Request to Endeavour Energy's Network Connections Branch, the form for which FPJ6007 is attached and further details (including the applicable charges) are available from Endeavour Energy's website under 'Our connection services'. 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.

Alternatively the applicant should engage a Level 3 Accredited Service Provider (ASP) approved to design distribution network assets, including underground or overhead. The ASP scheme is administered by NSW Trade & Investment and details are available on their website via the following link or telephone 13 77 88:

http://www.resourcesandenergy.nsw.gov.au/energy-supply-industry/pipelines-electricity-gas-networks/network-connections/contestable-works

The fact that provision is being made for the substation is a positive. From Endeavour Energy's perspective, rather than being too specific in regards to the detailed design of the substation at this stage a note on the drawing referring to Endeavour Energy's Mains Design Instruction MDI 0044 'Easements and Property Tenure Rights' should suffice. Endeavour Energy's general requirements is for a padmount substation easement to have a minimum size of 2.75 x 5.5 m and also have the additional restrictions for fire rating (and possibly swimming pools and spas which in this instance does not appear to be applicable) which should not affect any adjoining property, be at ground level and have direct access from a public street. Generally it is the Level 3 Accredited Service Provider's (ASP) responsibility (engaged by the applicant / developer) to make sure that the substation location and design complies with Endeavour Energy's standards the suitability of access, safety clearances, fire ratings, flooding etc. As a condition of the Development Application consent the applicant should be requested to submit documentary evidence from Endeavour Energy confirming that satisfactory arrangements have been made for the connection of electricity and the design requirements for the substation, prior to the release of the Construction Certificate / commencement of works.

- Network Access

It is imperative that the access to the existing electrical infrastructure adjacent and on the site is maintained at all times. To ensure that supply electricity is available to the community, access to the electrical assets may be required at any time.

Please also find attached for the applicant's reference a copy Endeavour Energy's 'Guide to Fencing and Maintenance Around Padmount Substations'.

- 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. 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 may become subject to Endeavour Energy's Vegetation Management program and/or the provisions of the *Electricity Supply Act 1995* (NSW) Section 48 'Interference with electricity works by trees' by which under certain circumstances the cost of carrying out such work may be recovered.

- Dial before You Dig

Before commencing any underground activity the applicant is required to obtain advice from the ***Dial before You Dig*** **1100** service in accordance with the requirements of the *Electricity Supply Act 1995* (NSW) and associated Regulations. This should be obtained by the applicant not only to identify the location of any

underground electrical and other utility infrastructure across the site, but also to identify them as a hazard and to properly assess the risk.

- Demolition

Demolition work is to be carried out in accordance with Australian Standard AS 2601—2001 ' The demolition of structures'. 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. street light columns, power poles, overhead and underground cables etc.

- 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

- Emergency Contact

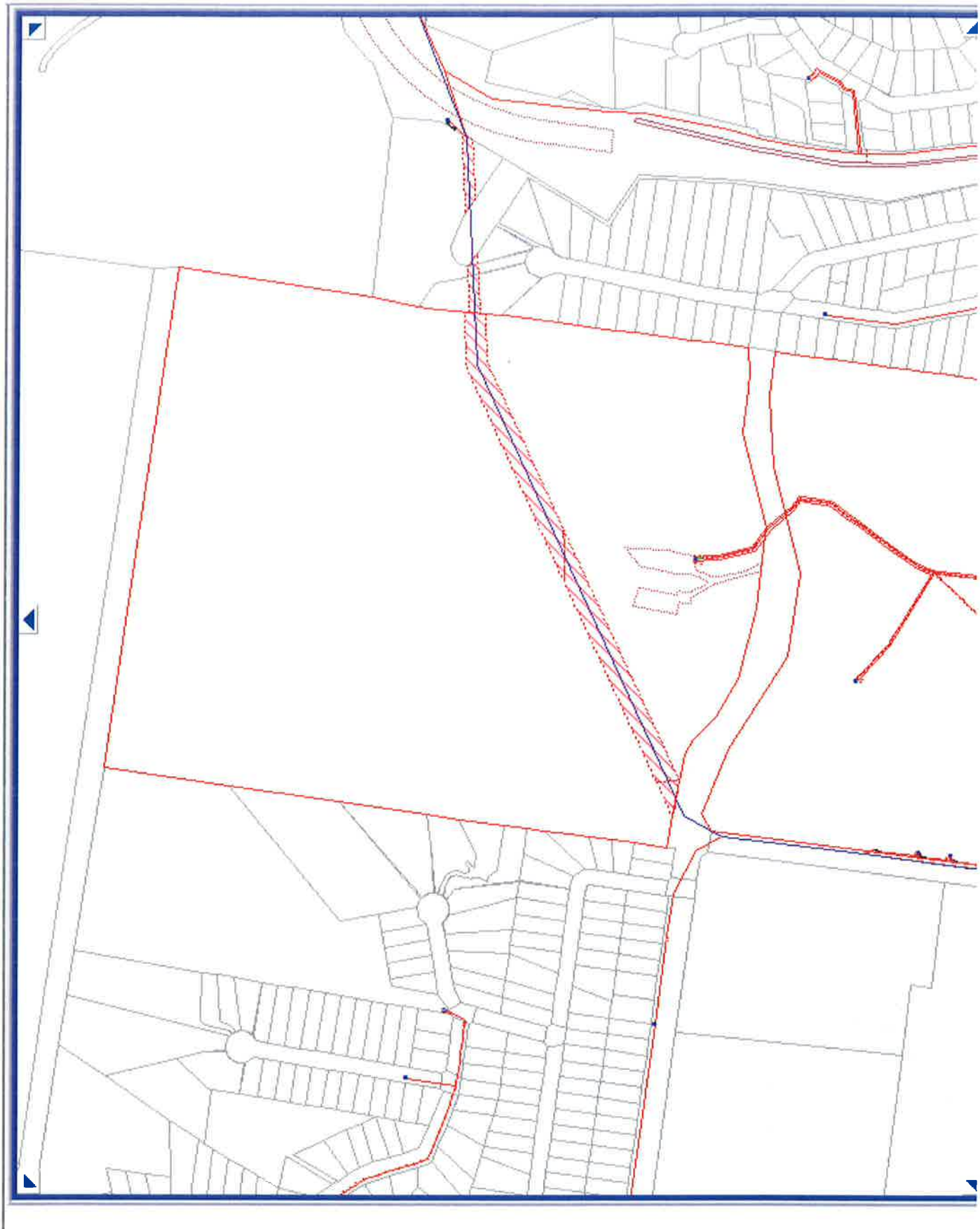
In case of an emergency relating to Endeavour Energy's electrical network, the applicant should note the Emergencies Telephone is 131 003 which can be contacted 24 hours/7 days.

Could you please pass on 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. As I am working on different projects across the company's franchise area, to ensure a response contact by email is preferred.

Yours faithfully
Cornelis Duba
Development Application Review
Network Environment & Assessment

51 Huntingwood Drive, Huntingwood NSW 2148
www.endeavourenergy.com.au

Endeavour Energy



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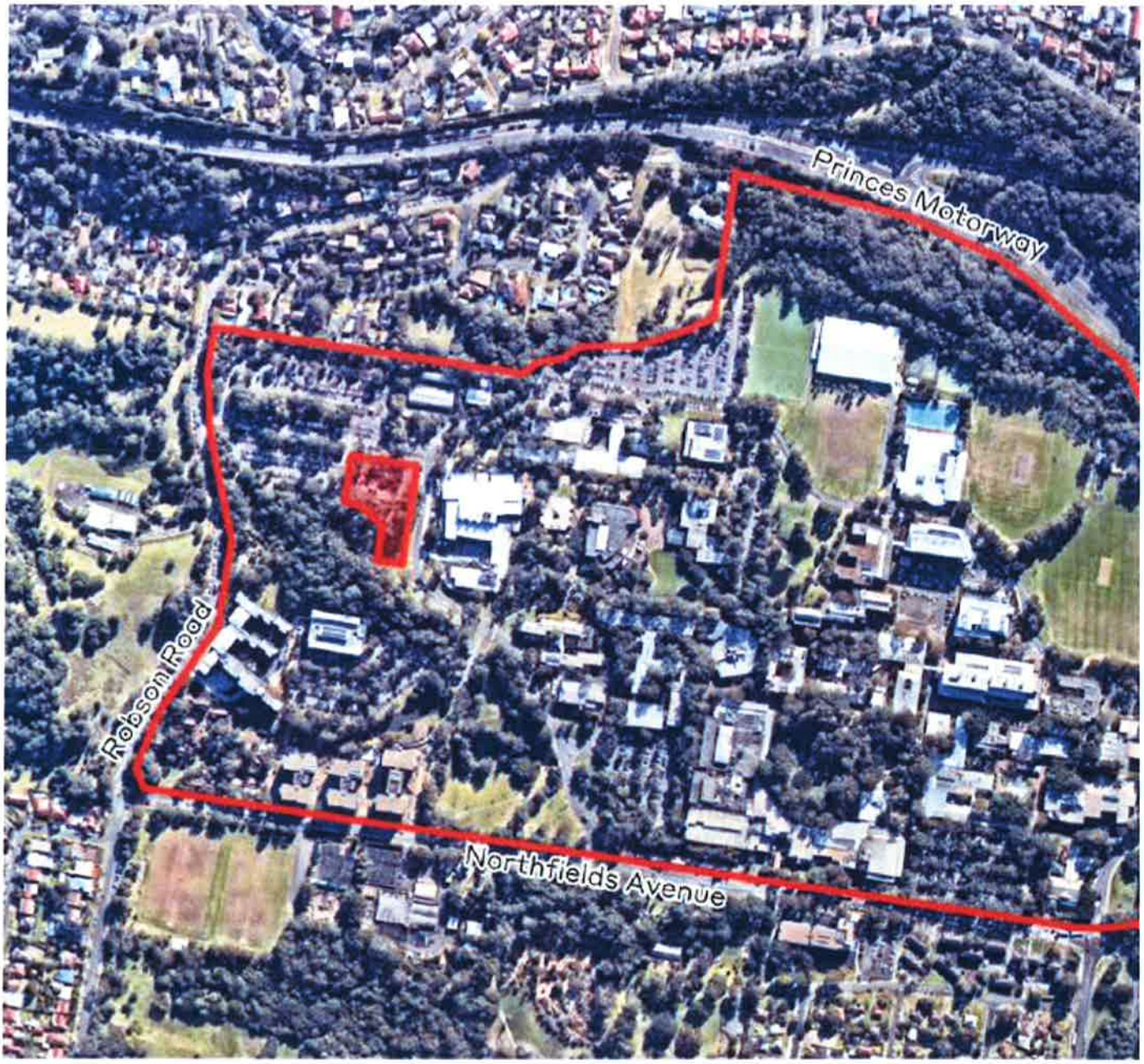
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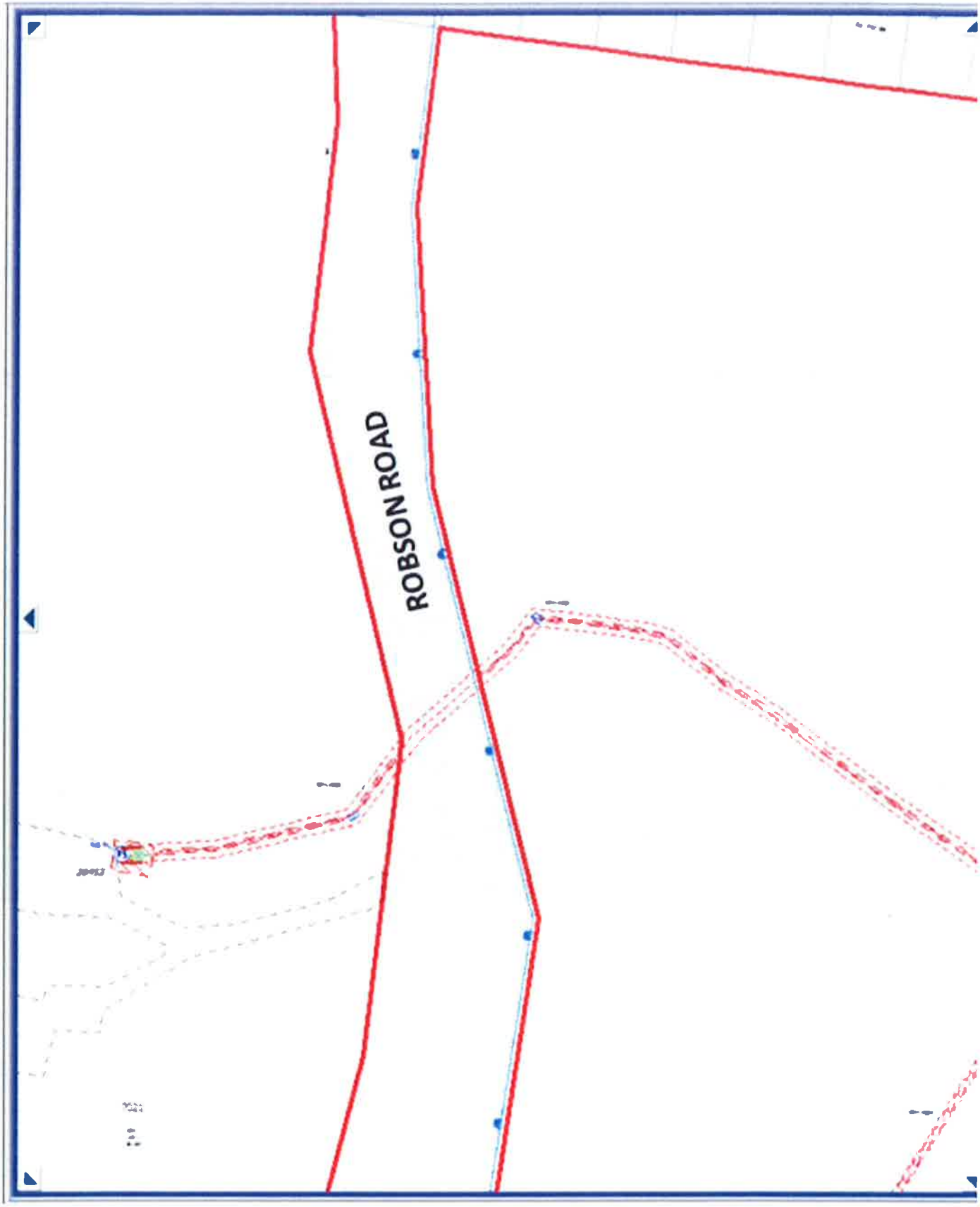
Robson Road
Northfields Avenue
University of Wollongong
The Site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