Thomas Piovesan

From: Cornelis Duba <Cornelis.Duba@endeavourenergy.com.au>
Sent: Thursday, 14 December 2017 9:43 AM
To: OLG - Blacktown City Council
Subject: BLACKTOWN CITY COUNCIL DEVELOPMENT APPLICATION MOD-17-00550 RE Hollinsworth Road & Fairview Place MARSDEN PARK
Attachments: Endeavour Energy MDI0044 Easements and Property Tenure.pdf; Endeavour Energy Technical Review Request FPJ 6007 July 2017.pdf; Endeavour Energy Drawing No. 86232 (OH lines minimum clearances near str....pdf; emf-what-we-know-jan-2014-final_1_1.pdf; Endeavour Energy Guide to Fencing, Retaining Walls & Maintenance Around ....pdf; Work_near_underground_assets_guide.pdf; Work-near-overhead-power-lines-code-of-practice.pdf; Endeavour Energy Electrical Safety When Installing Scaffolding Close to ....pdf; Safety+on+the+job.pdf; FactSheet_Building_Conctruction+web.pdf; FactSheet_Plumber_web.pdf

The General Manager
Blacktown City Council

ATTENTION: Sara Smith, Town Planner

Dear Sir or Madam

I refer to Council's letter of 6 December 2017 regarding Development Application MOD-17-00550 at Hollinsworth Road & Fairview Place MARSDEN PARK (Lots 23 & 24 DP 262886) for 'S96(2) for an approved subdivision, modifications include realignment of boundaries and areas, inclusion of Lot 102 DP 1188147 for a temporary turning head and Lot 25 DP 262886 for drainage works, full width road construction, and modifications to the drainage arrangements, earthworks and site levels'. Submissions need to be made to Council by 20 December 2017.

As shown in the below site plan from Endeavour Energy's G/Net master facility model there are:

- No easements over the site benefitting Endeavour Energy (easements are indicated by red hatching).
- Low voltage overhead power lines [including a low voltage overhead extended service conductor / customer owned pole (indicated by the green circle) on Lot 24] to part of the road verge / roadway. Prospect Highway road verge / roadway.
- The site is diagonally opposite Endeavour Energy's South Marsden Park Zone Substation located at Hollinsworth Road, Marsden Park (Lot 100 DP 1188147).

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).

As an adjoining or nearby owners and occupiers, Endeavour Energy's substation as a non-habitable building / site is comparatively less impacted. Whilst Endeavour Energy is not necessarily opposed to the Development Application, it will leave the determination in regards to the environmental impact and the appropriate development controls for the occupancy to Council.

In regards to Endeavour Energy's role as an electricity supply authority, subject to the foregoing and the following recommendations and comments, Endeavour Energy has no objection to the Development Application:

- Network Capacity / Connection

The availability of electricity supply to an area 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 padmount substation may require a padmount substation to facilitate the development and from which the spare capacity is made available to subsequent nearby development ie. a padmount substation can accommodate loads from 315 kVA up to 1,500 kVA.

Although Endeavour Energy plans for the expansion and augmentation of its electrical network eg. the existing South Marsden Park Zone Substation is due to be upgraded in 2018 to provide additional supply to the Marsden Park Industrial
Precinct, applicants should not automatically assume that the existence of the electricity network or an existing low voltage service conductor / customer connection to a site means that adequate supply is immediately available to facilitate their proposed development. Endeavour Energy's preference is to alert proponents / applicants (and Council) of the potential matters that may arise as further rezoning and redevelopment of non-urban areas continues to occur.

In due course the applicant for the future proposed development of the site will need to submit an application 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. The padmount substation/s required to service the proposed development 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

- Earthing

The construction of any building or structure (including fencing, signage, flag poles etc.) that is connected to or in close proximity to Endeavour Energy's electrical network is required to comply with AS/NZS 3000:2007 'Electrical installations' to ensure that there is adequate connection to the earth. Inadequate connection to the earth places persons and the electricity network at risk. Endeavour Energy is committed to ensuring that its activities and assets conform to all relevant International and Australian Standards, Energy Networks Association (ENA) Standards and NSW legislation. Whilst the earthing of the substation has accordingly been designed within the site boundaries, adjoining properties still need to ensure that any building or structure is adequately earthed to prevent electromagnetic induction and transferred voltage hazards.

- 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. 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 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.

- Prudent Avoidance

The electricity network is operational 24/7/365 ie. all day, every day of the year. 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 form 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 locating them where exposure to the more sensitive uses is reduced and increasing separation distances. These emissions are generally not an issue but with new development occurring within closer proximity of electricity infrastructure, there is a potential increase in sensitivity. 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 ENA's 'Electric & Magnetic Fields – What We Know, January 2014' which can also be accessed via the ENA's website at http://www.ena.asn.au/ and provides the following advice:

> *Localised EMFs may also be encountered in specific situations such as near substations, underground cables, specialised electrical equipment, or at elevated locations near lines. Note that the strengths of EMFs decrease rapidly with distance 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 volts / 132 kV, will not exceed the recommended
magnetic field public exposure limits.

Endeavour Energy believes that likewise applicants (and Council) should also adopt a policy of prudent avoidance by the siting of more sensitive uses away from any electricity infrastructure.

- 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.

- 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. Ordinary persons must maintain a minimum safe approach distance to live exposed conductors of 3.0 metres to all voltages up to and including 132,000 volts / 132 kV high voltage. 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

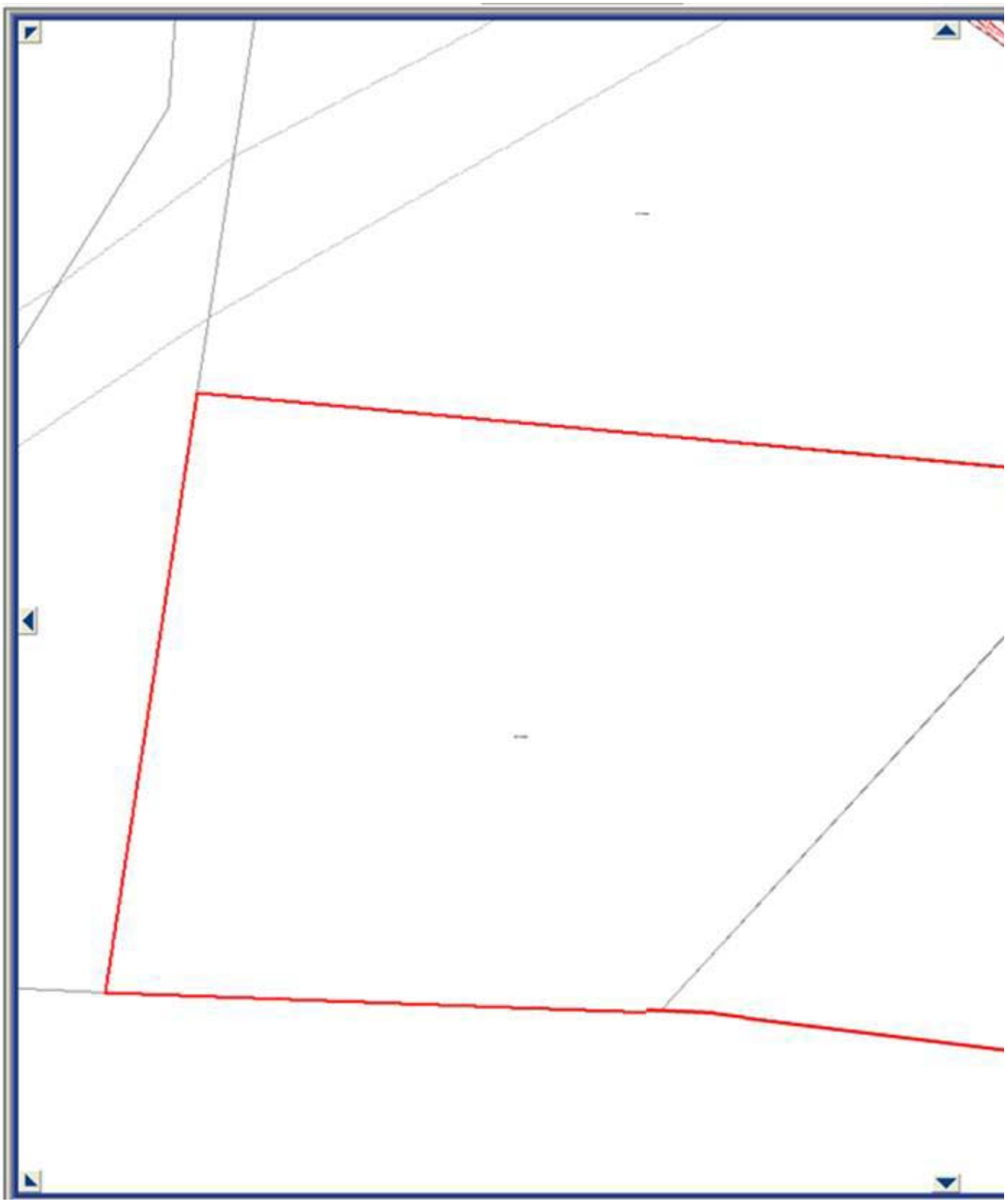
- Emergency Contact

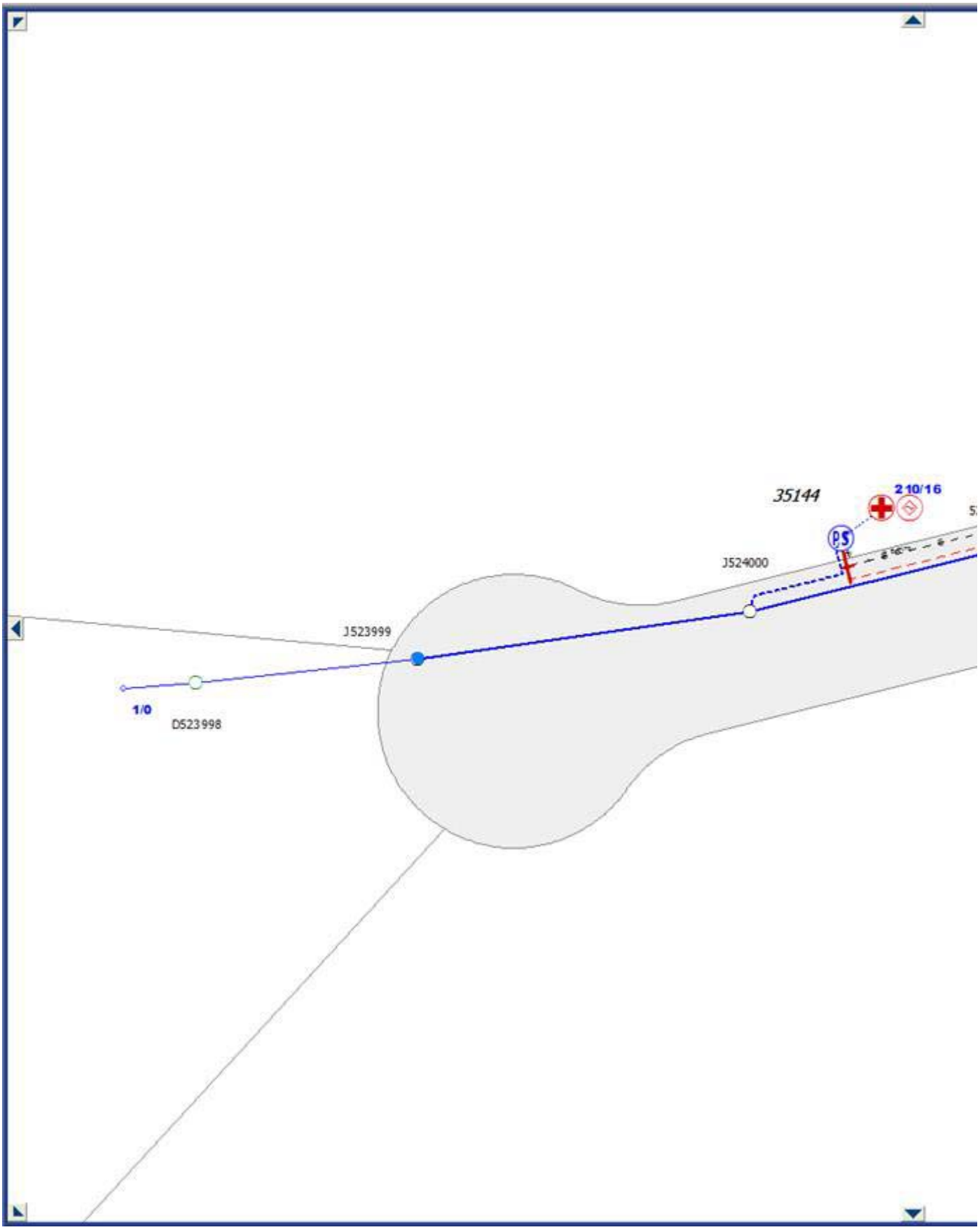
In case of an emergency relating to Endeavour Energy's electrical network, the applicant should note the Emergencies Telephone is 131 003 which can be contacted 24 hours/7 days.

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

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
T: 9853 7896
E: cornelis.duba@endeavourenergy.com.au
51 Huntingwood Drive, Huntingwood NSW 2148
www.endeavourenergy.com.au

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