The Secretary
NSW Department of Planning, Industry and Environment

11 December 2020

ATTENTION: Chris Fraser

Dear Sir or Madam

I refer to the Department's letter of 27 November 2020 regarding Modification Application DA S29/3/97-Mod-1 for Eastern Creek Karts for modification of the Event Parking Area to 50 Peter Brock Drive, Eastern Creek (Lot 4 DP1079897) in the Blacktown local government area (LGA).

The modification involves:

- regularising earthworks for an existing on grade event carparking area
- sealing of the event car park, retaining wall and minor filling in the north-east corner of the event carpark
- landscaping of earth batters
- regularising stormwater works associated with the event carpark
- additional stormwater works including installation of pipes, drainage pits and the addition and retention of drainage swales.

Submissions need to be made to the Department by 11 December 2020.

As shown in the below site plans from Endeavour Energy's G/Net master facility model (and extract from Google Maps Street View and SIX Maps) in regard to the proposed works area (outlined in blue on the Site Plan) there is:

- An easement benefitting Endeavour Energy (indicated by red hatching) for 132,000 volt / 132 kilovolt (kV) high voltage overhead power lines and overhead pilot cables (carrying protection signals or communications between substations).
- Adjoins underground pilot cables over Lot 2 DP 1062094 running parallel to the rear southern boundary.
- It is near an easement for padmount substation no. 26389 (indicated by the symbol (PS))at 10 Raceway Place (Lot 17 DP 1122038)

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).

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

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

Endeavour Energy's preference is for no activities or encroachments to occur within its easements. However, if any proposed works (other than those approved / certified by Endeavour Energy's Network Connections Branch as part of an enquiry / application for load or asset relocation project) will encroach / affect Endeavour Energy's easements or protected assets, contact must first be made with the Endeavour Energy's Easements Officer, Jeffrey Smith, on business days on direct telephone 9853 7139 or alternately email Jeffrey.Smith@endeavourenergy.com.au or Easements@endeavourenergy.com.au .

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

- Mains Design Instruction MDI 0044 'Easements and Property Tenure Rights' which deals with activities / encroachments within easements.
- General Restrictions for Overhead Power Lines.
- General Restrictions for Underground Cables.
- Guide to Fencing, Retaining Walls and Maintenance Around Padmount Substations.

The foregoing is in keeping with the following extract of the then Integral Energy's submission to the Department of Urban Affairs and Planning on 23 July 1997 regarding the original DA R2913/97 - International Go-Kart Facility at Eastern Creek.

It is advised that Integral Energy has transmission lines in the vicinity of the proposed Go-Kart facility.

Having regard to this, it is advised that approval must be sought prior to any activity being undertaken within the easement areas associated with these lines. This is to ensure that no work or any other activity is undertaken under or near the line or structures, that could either by accident or otherwise create an unsafe situation for persons or for the security of the line.

For such approval, a **written application** together with detailed plans drawn to scale and fully dimensioned, showing property boundaries and other relevant information, should be forwarded to Integral Energy.

This application should include the following:-

- amount of cut and/or fill proposed for the easement area
- location of cut and fill within the easement area and in relation to any structures.
- the maximum height of any vehicles used to implement this work
- a site plan of the complex showing its effect on the easement area.

Endeavour Energy has noted the following in the Section 4.55 (2) Modification Application Report:

3.2. Proposed Modifications

3.2.1. Overview of Modifications

This application seeks to modify a car parking area and pit area approved in the south-eastern corner of the subject site by increasing the height of the existing ground level by approximately 1.5m – 3.5m to flatten the parking and pit areas and improve their functionality. The parking area is an event parking area and pit area used only for specific events by participants and visitors. The only associated works are drainage improvements and installation of ground stabilization structures primarily retaining walls. The modified car park and pit area will remain within its originally approved footprint.

It should be noted that most of the proposed works have already been completed. This has included the filling and compaction works to raise the levels of the carpark by 1.5 - 3.5m. All necessary fill is in place and the land has been formed into the required dimensions.

In regard to the increasing the height of the existing ground level, the Report appears to make no mention of the easements for 132 kV overhead power lines which are in 'area of car park in question'. The proposed modifications are in effect the retrospective approval for filling of the car park area which have already been completed.

Endeavour Energy was aware of the filling of the car park area within the easement and had expressed concerns over these works to the Department, Blacktown City Council and Sydney Indoor MX Dome and Eastern Creek Karts Pty Ltd which to date have not been satisfactorily addressed.

The Overflow Car Park Plan shows the easement but is only a two dimensional drawing which does not show the effects on the overhead power lines. In January 2019 when Endeavour Energy became aware of the filling it was provided with Richard & Co. Plan of Detail and Levels Over Part Lot 4 in DP 1079897 dated 21/01/2019 Version B Sheets 1 – 5. Following completion of the filling, in October 2019 Endeavour Energy was provided with Richard & Co. Plan of Detail and Levels Over Part Lot 4 in DP 1079897 dated 21/01/2019 Version C Sheets 1 – 5 which indicates 'Carpark Under Construction'. In addition as shown in the following extract of the Stormwater Report there is also a 'Newley (sic) Constructed Swale' partially within the easement for 132 kV overhead power lines.

Figure 2 Aerial image of Event Carpark & Pit Area post-construction; area shaded green has been filled approximately up to 3.5m

As it has now been over 12 months, a new survey plan will need to be provided to confirm the final finished levels of the completed carpark and swale including any changes which may result from the proposed modifications subject of this Development Application.

Endeavour Energy has also noted the discrepancies in the description of the use from overflow car park to event parking area and pit area. In regard to the use of the easement area for small vehicles / cars is generally not an issue. Endeavour Energy's Mains Design Instruction MDI 0044 'Easements and Property Tenure Rights' includes the following requirement for the parking of vehicles in overhead easements.

5.14.4.6 Parking of vehicles or mobile plant

Parking within an overhead easement is subject to the vehicle:

- having a height limitation of 4.3 metres;
- is not occupied;
- is not connected to power; and,
- must be able to be readily removed if Endeavour Energy requires access to its assets.

However the proposed used of the overhead easement as a 'pit area' will encourage people to congregate and/or spend time within the easement or immediately adjacent thereto and increases the potential to a large number of people simultaneously being exposed to a fault current. Accordingly full details of the proposed activities to be undertaken in the 'pit area' such as the erection of tents, storage and handling of fuel etc. within the easement need to be provided to Endeavour Energy for assessment. Please note that this does not constitute or imply the granting of permission by Endeavour Energy to any or all of the proposed encroachments and / or activities within the easement.

Due to the foregoing Endeavour Energy objects to the Development Application. Subject to the satisfactory resolution of the foregoing and the following recommendations and comments Endeavour Energy would have no further objection to the Development Application.

- Flooding and Drainage

Endeavour Energy has noted that the Stormwater Report refers to the increased flooding at 10 Raceway Place (Lot 17 DP 1122038) subject to current action in the Land and Environment Court of NSW. This flooding has also impacted padmount substation no. 26389 located on 10 Raceway Place.

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

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

- Network Access

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

- Prudent Avoidance

The electricity industry has adopted a policy of prudent avoidance by doing what can be done without undue inconvenience and at modest expense to avert the possible risk to health from exposure to emissions 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 reducing exposure and increasing separation distances to more sensitive uses such as residential or schools, pre-schools, day care centres or where potentially a greater number of people are regularly exposed for extended periods of time.

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

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

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

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

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

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

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

- Vegetation Management

The planting of large trees near electricity infrastructure is not supported by Endeavour Energy. Particularly for overhead power lines, ongoing vegetation management / tree trimming is a significant network cost and falling trees and branches during storms are a major cause of power outages.

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

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

Endeavour Energy's recommendation is that existing trees which are of low ecological significance in proximity of overhead power lines be removed and if necessary replaced by an alternative smaller planting to ensure appropriate clearances are maintained whilst minimising the need for future pruning.

- 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. I have attached Endeavour Energy's public safety training resources, which were developed to help general public / workers to understand why you may be at risk and what you can do to work safely. The public safety training resources are also available via Endeavour Energy's website via the following link:

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

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

- Emergency Contact

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

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

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

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Network Environment & Assessment
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Endeavour Energy

2. SITE DETAILS

The subject site is 50 Peter Brock Drive, Eastern Creek, formally known as Lot 4 in DP 10798987. An aerial view of the site is given in Figure 1 below with the proposed works area outlined blue.

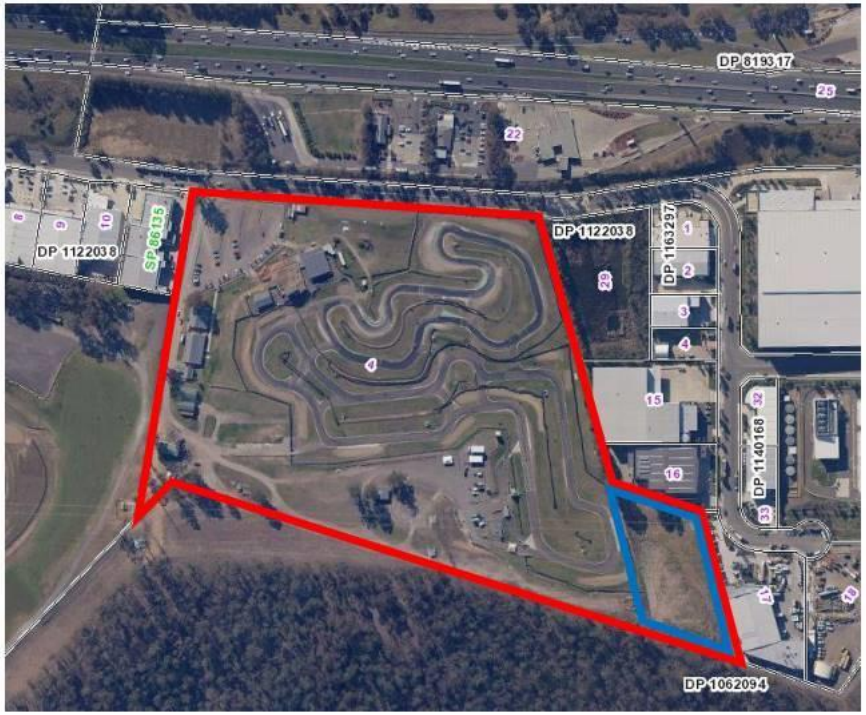
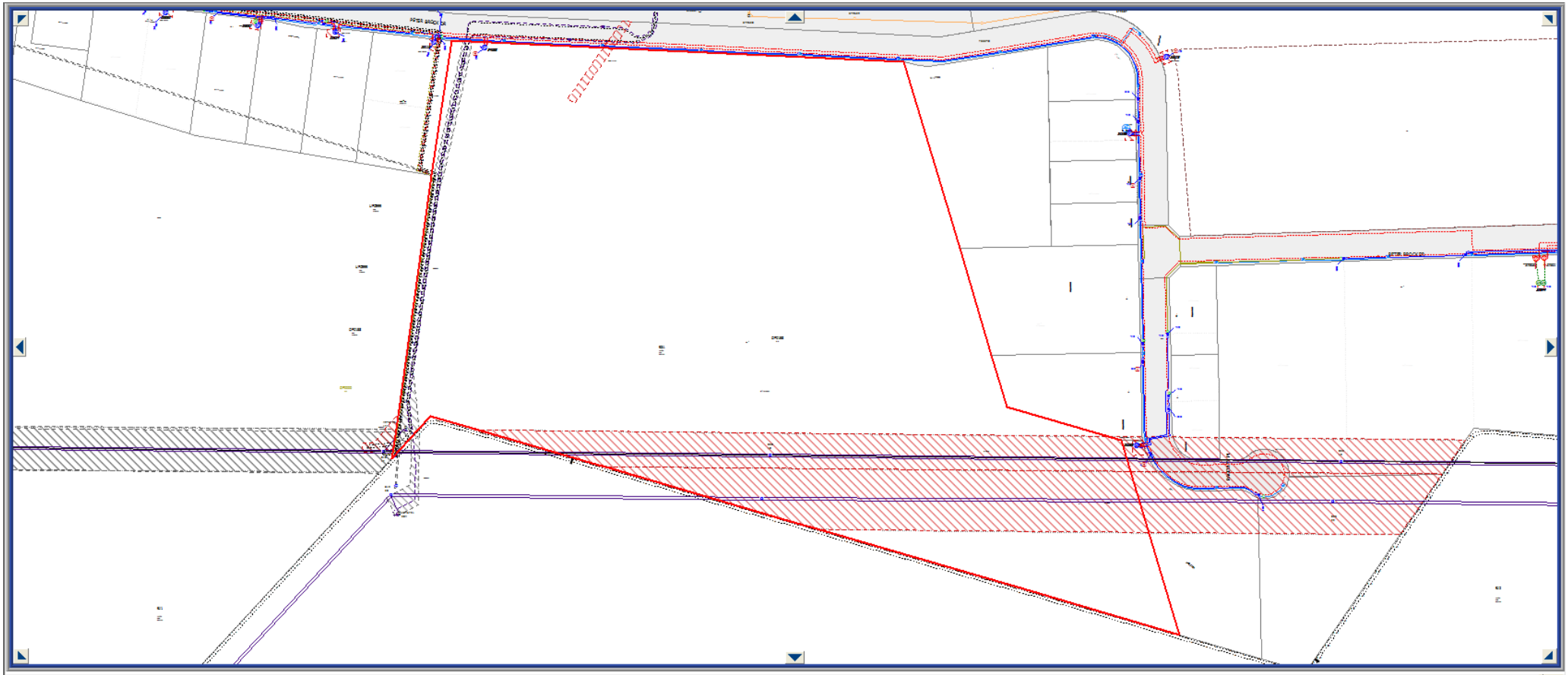


Figure 1: Aerial view with entire site outlined red. Area of car park in question is outlined blue (Source: SixMaps/City Plan)



G3E_FID	Feature Name	Component Name	G3E_CID	G3E_ID	LOT	SECTION	DP
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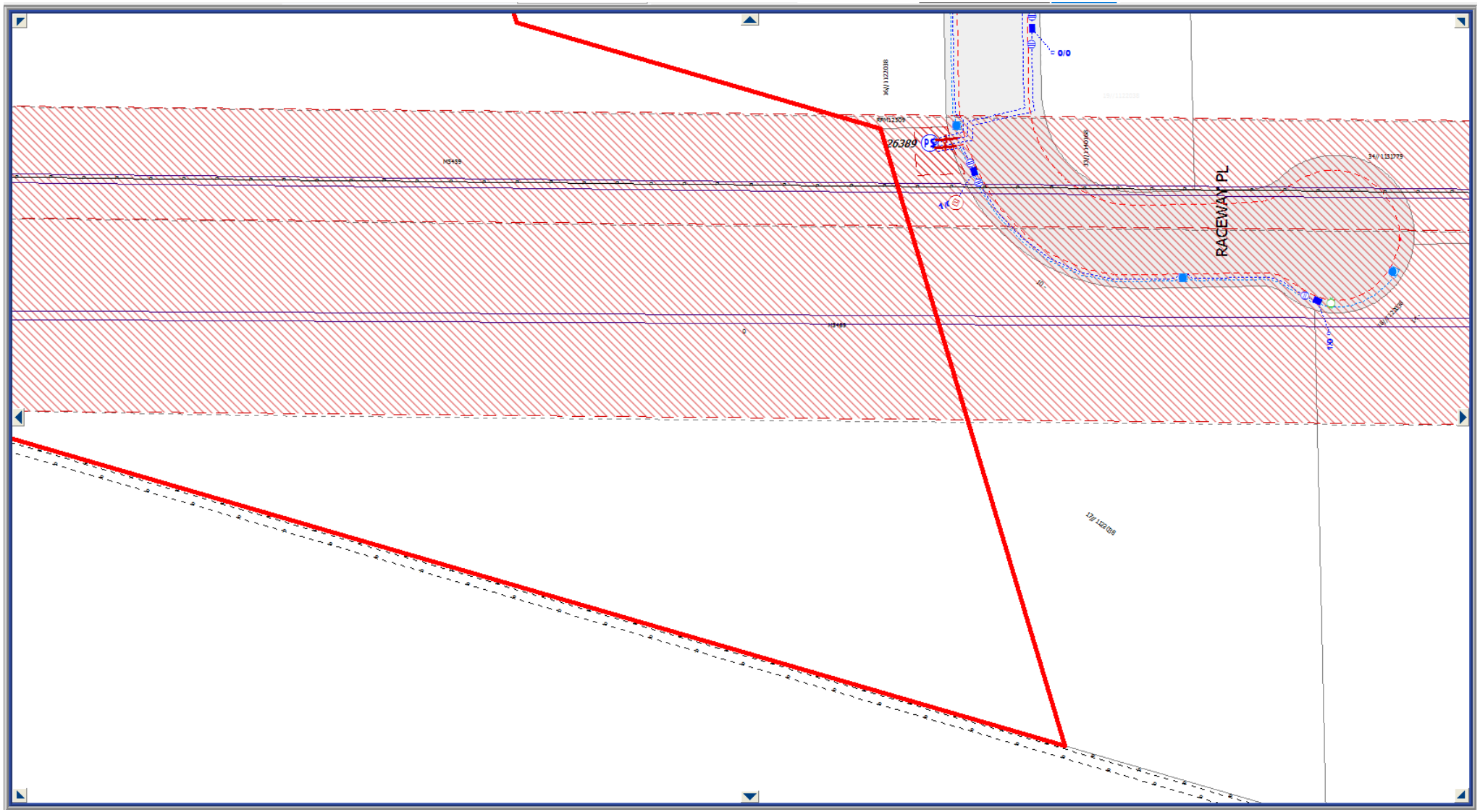
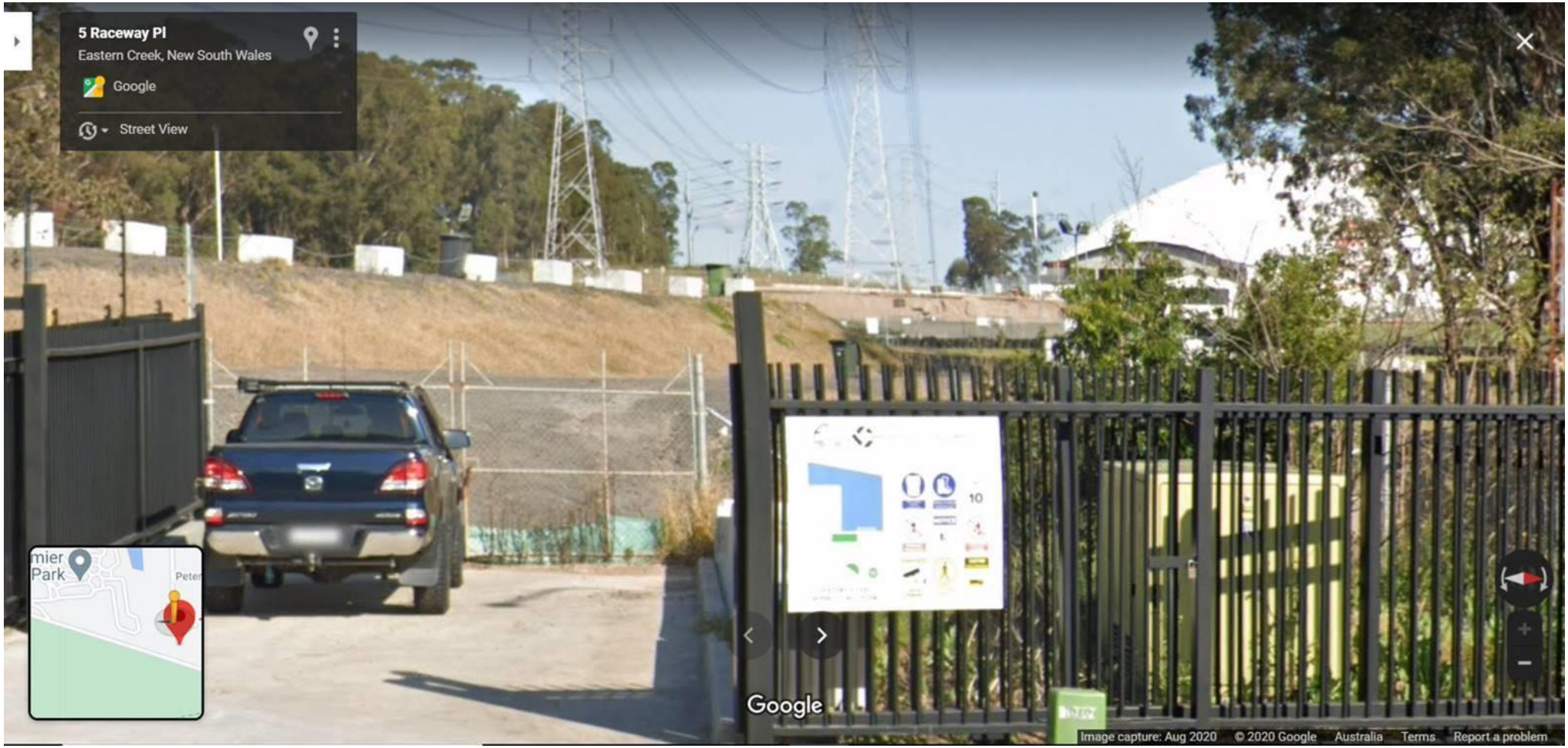

RACEWAY PL
26389
0/0
1/0


5 Raceway Pl
Eastern Creek, New South Wales
Google
Street View
10
Google
Image capture: Aug 2020
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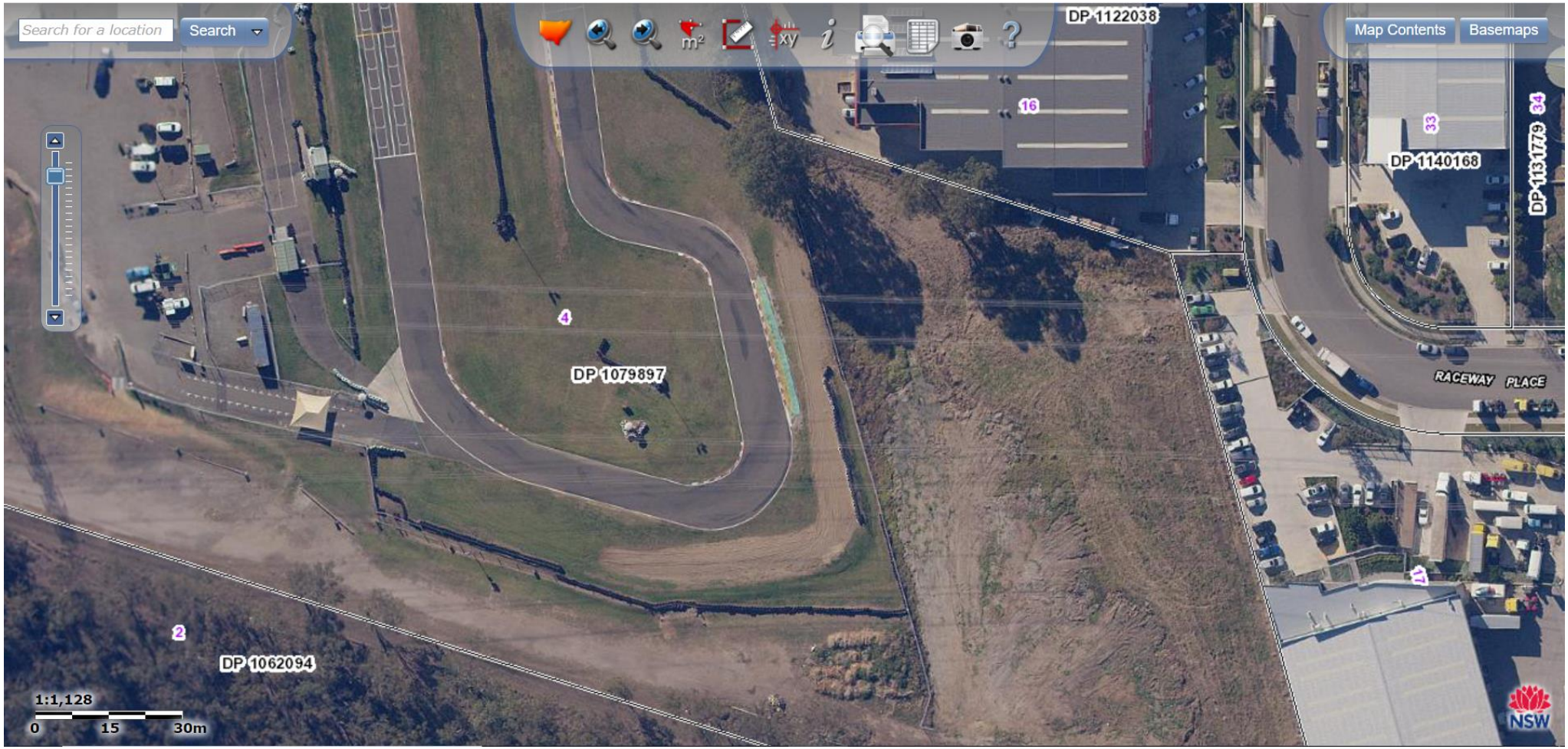
Report a problem


Search for a location
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Basemaps
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