

attachment 1	
to	
item 109	

Government Agency Responses and Council Officer Comments

> date of meeting:15 June 2021 location:council chambers and by audio-visual link time: 6:30 p.m.

Government Agency Responses and Council Officer Comments – 27 Park Road, Vineyard and 41 Park Road, Mulgrave

ltem	Issue	Council Officer Comments
NSW R	Rural Fire Service	
	NSW RFS has considered the information submitted and raised no concerns or issues in relation to bush fire.	Noted.
TransG	rid	
	Both parcels of land are subject to TransGrid's high voltage transmission line (HVTL) easement that accommodates the Eraring to Kemps Creek 500kV transmission line (being Feeders 5A1 & 5A2, Structures 217 – 219). We note in particular that transmission Structure 218 is located on 41 Park Road, Mulgrave (Lot 215 in DP752061).	Noted.
	TransGrid's HVTL infrastructure can be located within any zoning, however there are restrictions on what can occur within our easements. Noting that the proposed zoning is industrial, it is requested that no development occur within our transmission line easement. It is also requested that TransGrid be consulted in the design and position of any industrial development (including but not limited to warehousing) on the land immediately adjacent to our transmission line easement. Vertical and horizontal clearances apply.	Council will not permit any development on easements within the subject site including any electricity easements. Any future Development Applications on the subject site for general industrial purposes will be refererred to TransGrid for comment.
Sydney	water	
1.	 Potable water servicing should be available via the 150mm DICL watermain (laid in 1989) on Park Road. Amplification of this main is likely required and the locations and scope of potential amplifications will be dependent on the timing of this rezoning and the future land-uses proposed for this site. Detailed requirements will be provided at the Section 73 application stage. 	Noted, and subject to further investigation by the applicant as part of the Development Application process.
2.	 Wastewater Servicing Sydney Water has no wastewater services in this area, and we note this site is located within Hawkesbury Council's serviced sewer catchment area. If Council cannot service this rezoning, Sydney Water will not be able to service the site until the nearby Vineyard Stage 2 Precinct within the North West Growth Area is rezoned by the DPIE, Sydney Water concludes planning within the area, and the delivery of trunk assets occurs. Sydney Water's wastewater services are expected to be delivered by FY2022-FY2026 according to our Growth Servicing Plan (2020-2025). This date is subject to change and is dependent on the DPIE rezoning Vineyard Stage 2 prior to this. Detailed requirements will be provided at the Section 73 application stage. 	Noted. The applicant will be advised accordingly, and will be required to undertake further investigation prior to submitting a Development Application.

Item	Issue	Council Officer Comments
Sydney	water (continued)	
3.	Trade wastewater requirement	
	 If any proposed development is going to generate trade wastewater, the developer must submit an application requesting permission to discharge trade wastewater to Sydney Water's wastewater system. The applicant must wait for the approval and issue of a permit before any business activities can commence. The permit application can be made on Sydney Water's web page through Sydney Water 	Noted. The applicant will be advised accordingly.
	Tap In. http://www.sydneywater.com.au/tapin/index.htm	
4.	Sydney Water's advice is not a 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.	Any future Development Applications over the subject site will be referred to Sydney Water for comment.
Infrastr	ucture New South Wales	
1.	It is noted that this proposal is for a rezoning from primary production small lots to general industrial. While the proposed development is above the regional one in 100 chance per year flood, it is important that flood risk is considered more broadly as roads and utility services could be impacted before this level. In a 1 in 100 chance per year flood the only access road and regional evacuation route (Railway Road North) is likely to be closed.	The NSW State Emergency Service's 'Hawkesbury-Nepean Valley Evacuation Arrangements (June 2020)' a supporting document to the Hawkesbury-Nepean Flood Plan shows Windsor Road as the regional flood evacuation route. The document futher states that:
	The NSW State Emergency Service can provide more specific advice on flood evacuation risk. Specifically, an understanding of the number of additional vehicles will be required to assess the cumulative impact of all the potential rezonings in this area on flood evacuation capacity for the Windsor area, including the Vineyard North precinct.	"The McGraths Hill Sector including McGraths Hill and Mulgrave will need to be completely evacuated if the predicted flood height exceeds 13.5m at the Windsor gauge (13.5m AHD.)"
	and that flood impact on the development be considered in its design and construction, noting these larger flood events are infrequent but can have catastrophic impacts. The opportunity to work with Council is welcomed to identify the full extent of future development	Part of Park Road which is the main access road to the subject site at the eastern end leading to Windsor Road is below the 1 in 100 Flood Planning Level.
	consistent with the Hawkesbury Nepean Valley Flood Risk Management Strategy.	A suitable evacuation strategy for the future users on the subject site will be developed in close consultation with the NSW State Emergency Service as part of a future Development Application in order to enable safe and timely evacuation of the users prior to a major flood event.
		The applicant will be advised to consider all possible flood events and prepare appropriate design and construction documents at the Development Application stage in order to minimise any adverse impacts on the future uses on the subject site and faciltate safe and timely

		evacuation of the users.
		Any future Development Applications over the
		subject site will be referred to both Infrastructure
		New South Wales, and State Emergency Service
		for comments.
Enviror	ment, Energy and Science Group (EES)	
1.	Flooding	
	The Planning Proposal in its current status is not adequate to support and justify the planning	Clause 6.3 Flood Planning of the Hawkesbury
	proposal, for the following reasons:	Local Environmental Plan 2012 defines the flood
		planning level as the level of the 1:100 ARI
	1. The Planning Proposal states in various sections 'the site is not constrained by	(average recurrent interval) flood event. The
	environmental issues such as, flooding, (for example see pages 33, 43 and 56 of the	subject site is between 19m AHD – 22m AHD and
	Planning Ploposal).	as such is located above the 1.100 ART Flood
	EES considers this statement shows inconsistency with the Covernment's adopted	Planning Level.
	Hawkesbury Nenean Valley Flood Risk Management Strategy When considering flooding	Given the flood planning level is currently defined
	in the urban environment, where the community interacts with the full range of flooding, the	as the level of a 1:100 ARI, the current flood
	focus should be on the risk to life and damages to properties rather than a mere	planning provisions contained in the LEP have
	environmental issue	been taken into consideration in assessing the
		Planning Proposal.
	It is well acknowledged that, the primary constraint for development in the Hawkesbury	3 1 2 2
	Nepean Valley (HNV) is the regional evacuation capacity. Therefore, Council needs to	Part of Park Road at the eastern end leading to
	adopt a strategic risk-based approach based on sound understanding of the flood	Windsor Road has been identified as a flood
	constraints on the land and flood risks. A key activity to support Council's understanding	evacuation route in the State Emergency Service
	and assist in undertaking an informed decision on the development is to test the regional	Flood Evacuation Plan for the Hawkesbury Local
	evacuation capacity utilising the HN Flood Evacuation Model (FEM2). The testing should	Government Area is below the 1 in 100 Flood
	include this proposal in conjunction with the balance of the Vineyard precinct (Stage 2). It is	Planning Level.
	recommended that Council continues to consult with the INSW Hawkesbury Nepean	
	Floodplain Risk Management Directorate to undertake this testing.	In the event of a major flood, future occupants of
		the subject site would need to evacuate via
	2. The Planning Proposal states under the Hawkesbury floodplain risk management plan	windsor Road. Given the eastern part of Park
	section 'The site is not mapped as being located within the 1-100 Flood level therefore any	Road leading to Windsor Road is flood affected;
	future development is not considered to be required to comply with Council's Development	both the NSW State Emergechy Service and the
	of Flood Liable Land Folicy. This policy permits the election of non-habitable structures within the 1:100 average recurrent interval ('A PI') providing that any structure is not less	Directorate were consulted in accordance with the
	than 3 metros below the 1:100 API which is currently 17 2m ² (page 40)	Cateway Determination about this matter A
	and o medies below the 1.100 Art which is currently 17.311. (page 49).	response received from the Hawkeshury-Nenean
	Although the subject site is elevated above the 1 in 100 AFP Hawkesbury River flood level	Flood Management Directorate (Infrastructure New
	it remains located within the floodplain and is subject to rare and extreme flooding, where	South Wales) is detailed in this table.
	the consequences are high. As floodwaters rise the site becomes a flood island which is	
	eventually completely inundated. Therefore, it would be essential to evacuate the site prior	
	to its isolation and the users of the development would join the evacuation traffic on the	
	Hawkesbury Valley Way evacuation route. Apart from the obvious risk to life, the damages	

bill under large floods at an industrial site can be significant. Council has a duty of care to ensure that Council's planning documents sufficiently inform future owners of the full flood risk at this site, regardless of the rarity of the floods.

In case that the FEM2 testing supports the proposal, users of the development need to understand the full flood risks at this site including the secondary risks of fire and medical emergencies during floods. It is recommended that, Council continues to consult with NSW State Emergency Service (SES), INSW and other relevant agencies. Understanding the risk will enable the industrial users to adequately prepare for shut down, minimise the exposure of people to rare but hazardous flooding, and appropriately locate equipment including hazardous material and minimise losses.

In 2012 Council finalised the Hawkesbury Floodplain Risk Management Study and Plan (FRMS/P) which recommended measures within Council's control and outside the regional responsibilities of Directorate. The study was adopted by Council except for the town planning measures to include in the planning instruments. EES (formerly OEH) has argued that these instruments remain inadequate in satisfactorily accounting for the full extent of the flood risk from Hawkesbury regional flooding in the valley. The Hawkesbury Local Environmental Plan 2012 and Hawkesbury Development Control Plan 2002 and require revisions to better reflect all the available information to ensure people are not placed in harm's way, especially during rare flooding. Council was awarded a grant under the 2019-20 NSW Floodplain Management Program to undertake a review of the 2012 FRMS/P. EES notes Council has yet to commence the review.

The Hawkesbury-Nepean Valley Regional Flood Study uses best practice and the latest techniques in flood modelling to define flood behaviour in the Hawkesbury-Nepean Valley, and provides the most upto date publicly available flood information for the Hawkesbury- Nepean Valley which was previously undertaken in 1996. It provides contemporary information on flood risk important for increasing community awareness of their flood risk and building resilience and detailed analysis of flood behaviour to assist flood managers and Council in management and development of flood prone land.

The Study adopts the following revised hazard classifications identified in 'Managing the floodplain: a guide to best practice in flood risk management in Australia' (AIDR 2017):

- H1 No constraints
- H2 Unsafe for small vehicles
- H3 Unsafe for all vehicles, children and the elderly
- H4 Unsafe for all people and all vehicles
- H5 Unsafe for all people and all vehicles. Buildings require special engineering design and construction.
- H6 Unsafe for people or vehicles. All buildings types considered vulnerable to failure.

The study provides spatial maps of flood levels as a result of major river flooding. The Study states that flood levels for the 1 in 100 at Windsor has not changed.

The Hawkesbury Local Environmental Plan 2012 and Hawkesbury Development Control Plan 2002 are currently being reviewed, and appropriate flood planning provsions consistent with the Hawkesbury Nepean Valley Flood Risk Management Strategy will be considered as part of this review.

tem	Issue	Council Officer Comments
2.	Biodiversity	
	The Planning Proposal refers to an Ecological Report by First Field Environmental and it indicates this report is a supporting document which is provided as a background study (page 5). The table of contents to the Planning Proposal indicates this report is provided in Attachment 2. However, the	The Ecological Report by First Field Environmental received from the applicant states the following:
	EES contacted Council to confirm whether it should have received a copy of the original Firstfield Environmental Report. Council advised EES in an email reply of 30 April 2021 that no ecological assessment has been submitted to Council other than a Vegetation Management Plan required by the Gateway Determination. EES requests it is provided with a copy of the Ecological Report by First Field Environmental as the PPR indicates it is a supporting document.	The site is currently mapped as supporting connectivity values and contains native vegetation mapped as Cooks River /Castlereagh Ironbark Forest. The treed vegetation areas are consistent with the State listed Endangered Ecological Community.
	Adjoining RE1 zoned land	The condition of native vegetation on the site is poor and lacks structural complexity and species
	The Planning Proposal notes the sites are directly opposite an area of IN1 (General Industrial) zoned land which "makes these properties an ideal extension of the IN1 zone" (page 4). While the site is adjacent to the Mulgrave Industrial and Business Precinct to the north, EES notes the site adjoins, RE1 zoned land along its eastern boundary and RU4 zoned land to the south.	connected to better quality vegetation in the study area, it is likely that fauna species would preferentially utilise vegetation and habitat resources outside of the site.
	Cooks River Castlereagh Ironbark Forest (CRCIF) occurs on the adjoining RE1 zoned land and the subject site (see Figure 3 in the VMP). The RE1 land (Vineyard Park), supports approximately 2.2 ha of natural vegetation consistent with CRCIF and the condition of the community in this park is considered to be good, displaying structural complexity and a mix of native vegetation consistent with the EEC (Section 3.2 of the VMP). Two threatened flora species have also been recorded on site.	Removal of native vegetation patches on the site would decrease the overall area of Cooks River /Castlereagh Ironbark Forest in the region, however it would not lead to fragmentation of existing habitat or vegetation communities outside of the site.
	CRCIF is listed as endangered under the Biodiversity Conservation Act 2016 and critically endangered under the Environment Protection and Biodiversity Conservation Act 1999. This community has been extensively cleared and only about 7% of the original distribution is estimated to remain. The NSW Scientific Committee Final Determination for this ecological community states "in view of the originally restricted distribution of this community, its inadequate representation within conservation reserves, the extensive disturbance and fragmentation and weed invasion that	Past and present agricultural landuse on the site has led to the degradation of the original native vegetation community and continued agricultural use would not encourage regeneration or rehabilitation.
	has occurred and the ongoing development and use threats, the Scientific Committee is of the opinion that CRCIF is likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival or evolutionary development cease to operate".	No vulnerable, endangered or critically endangered native flora, populations or fauna were identified within the site during the survey.
	The Planning Proposal states:	The proposed rezoning is not likely to have a
	 The proposed extended IN1 zone "will not undermine or adversely impact on natural constraints and features such 'biodiversity" (page 15) "The proposal does not affect an area classified for environmental protection" (page 47) "the proposal will not impact adversely on the adjoining RE1 land and protection of this use and area could occur despite the rezoning" (page 52) 	significant impact on a Matter of National Environmental Significance listed under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999, nor is it likely to have a significant impact on threatened species, populations or endangered communities (and their

• "the proposed change is not considered to have a significant bearing on environmental outcomes" (page 54).

EES considers insufficient information has been provided in the planning proposal documents to justify the above statements. It is important the proposed rezoning to IN1 does not impact the CRCIF or any threatened flora and fauna species or their habitat within the RE1 zoned land or on the site.

The Planning Proposal states "the objectives of the IN1 zone are to: promote a wide variety of industrial and warehouse uses ... " while the objectives of the existing RU4 zoning include among other things "to encourage development which does not adversely affect the natural environment" (page 31). It is unclear if development that would be allowed under the proposed rezoning could impact the EEC on the adjoining RE1 land. The Planning Proposal notes future development would be set back from the boundary of the RE1 zone, away from trees and vegetation but details need to be provided on what is the minimum proposed setback width.

Council's report and resolution states "as part of the rezoning of the subject site, the LEP, Height of Buildings Map and the Lot Size Map are proposed to be amended to remove the maximum height and minimum lot size provisions to be consistent with the IN1 General Industrial zone within the LEP" (page 16). This implies there will be an unconstrained/unlimited building height if the site is rezoned to IN1. EES notes the current maximum height of buildings is 10m and the current minimum lot size is 2ha. The Planning Proposal states, however "the proposal would allow compliance with the development standards contained within the HLEP including Clause 4.3 which sets a maximum height of 10 metres for built form" (page 31). This statement in the Planning Proposal appears to be inconsistent with Council's report which indicates the building height will be unconstrained by rezoning to IN1. Clarification is required on this as an unconstrained/unlimited building height has the potential to impact/overshadow the EEC in Vineyard Park.

Additional information is required to assess potential impacts of the planning proposal, including:

- the potential impacts of removing the maximum height of building provisions on the EEC within the site and the adjoining RE1 site
- the location and extent of the EEC within the adjoining RE1 site
- the minimum width of the proposed setbacks along the eastern and southern boundaries of the site which are shown on Figure 9 of the PPR as a revegetation management zones A and B (page 11)
- the potential for future IN1 development of the site to result in overshadowing of the CRCIF on the RE1 zoned land if there is an unconstrained building height
- shadow diagrams showing the worst-case scenario in mid-winter using the proposed minimum setbacks along the eastern boundary and proposed building height.

habitats) listed under the NSW Biodiversity Conservation Act 2016. No Species Impact Statements are required and referral to the Minister is not necessary".

The Planning Proposal does not include either a Concept Development Plan for the subject site or additional information to support these statements. However, given the proposed development will need to be located within the subject site with adequate setbacks to the adjoining properties, the likely impacts of the adjoining development on the existing vegetation within the RE1 Public Recreation land or the public park owned by Council will be minimal. The inclusion of detailed information on this matter in the Planning Proposal is not considered to be necessary. Such detailed information would be required in support of a Development Application over the subject site.

The Planning Proposal seeks only to rezone the subject site from RU4 Primary Production Small Lots to IN1 General Industrial and does not include a Development Concept Plan to show how and to what extent the subject site is proposed to be developed for general industrial purposes. Should the proposed amendment to the LEP is made to give effect to the Planning Proposal, a detailed assessment will be undertaken in close consultation with the Environment, Energy and Science Group.

The statement relevant to the proposed amendment to the Height of Buildings Map in the Council Report is correct. The inconsistency between the Planning Proposal and this statement was noted, and has been amended in the Planning Proposal (Post-exhibition).

As outlined above, the Planning Proposal seeks only to rezone the subject site from RU4 Primary Production Small Lots to IN1 General Industrial. These issues have no direct relevance to the Planning Proposal, and also are not considered to be relevant factors in determination of the Planning

 Connectivity between significant vegetation The Planning Proposal provides an extract from Council's terrestrial biodiversity map (sheet BIO_008DB) in the LEP 2012 (see Figure 8) which shows 'significant vegetation' occurs on part of the site and the adjoining RE1 zoned land while the remainder of the site is mapped as 'connectivity between significant vegetation' (see page 10). Apart from Figure 8, the Planning Proposal provides no other details on the significance of the site in providing 'connectivity between significant vegetation' and why it has been mapped as such. While the PPR indicates the site is largely cleared of significant vegetation, there is potential to revegetate and improve connectivity on the site. Figure 9 in the PPR proposes planting along the southern and eastern boundaries of the site in movie of the site in provides on be required on the properse planting along the southern and eastern boundaries of the site in provosed minimum widths of Management Zones A and B, and indicates these zones are intended to enhance and maintain the connectivity between vegetation patches adjacent to the property. Details are required on the proposed minimum widths of Management Zones A and B. EES considers the function of these management zones in providing connectivity to adjacent vegetation patches is compromised as: Management Zone A is within an electricity transmission easement so any planting will be limited to small shrubs and groundcover species with only 15 native trees proposed to be planted along the southern boundary (page 11) Management Zone B along the Eastern boundary is proposed to be an Asset Protection Zone (APZ) (page 10). Figure 5 in the PPR also appears to show that an existing dam located in the south eastern corner of the site is proposed to be retained between management zones A and B and the RE1 zoned land which could potentially sever connectivity and the movement of terrestrial native fauna in an east-west direction. 	Proposal. These issues will be addressed in detail at the development application stage in close consultation with the Environment, Energy and Science Group. The proposed Management Zones identified in the Planning Proposal are indicative only to outline the proposed offset mechanism for the likely removal of native vegetation on the subject site to allow future industrial development on the subject site. The inclusion of detailed Management Zones and information accurately reflecting the areas proposed for revegetation to compensate for any loss of trees due to the future development of the subject site demonstrating how these zones will be help to achieve connectivity between significant vegetation in any future Development Application.
 Vegetation Management Plan	
Cooks River Castlereagh Ironbark Forest The extent of Cooks River Castlereagh Ironbark Forest (CRCIF) on site is unclear from the Vegetation Management Plan (VMP). The VMP states the vegetation on site 'appears to be consistent' with the NPWS 2003 vegetation mapping, however the VMP also states that only vegetation on the NW boundary is CPCIE, while the NPWS moning indicates all paties vegetation	
on site is CRCIF. Also, the VMP says that shrub and groundcover strata are absent, however the description of one of the vegetation patches states it is dominated by Bursaria spinosa (a shrub). The vegetation map (Figure 3) is presented at a scale that is not informative	

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EES recommends that a vegetation map is prepared showing the extent of CRCIF as well as vegetation that has been mapped by NPWS as CRCIF but, in the ecologist's opinion, does not meet the definition of CRCIF. Plots should be undertaken in each of these vegetation strata, a figure should be provided showing the location of the plots and plot data provided to justify why areas have been determined as meeting or not meeting the description of CRCIF.

Revegetation

The Council report indicates that approximately 1.2 ha of native vegetation would be removed during the proposed development (page 36) and it states that the First Field Environmental report recommends that 'the area of revegetation should be at least consistent with the area of vegetation proposed to be removed'.

According to EES calculations, approximately 1.5 ha of CRCIF is currently mapped as occu being 8640 m² and 4000 m² in size, as occurring on site (NPWS 2013). The proposal is to revegetate with plants in two zones, being 8640 m² and 4000 m² in size, which is a smaller area than the area to be removed. The full extent of Zone A will not be revegetated, as an easement of unspecified width (and shown as a black dotted line on Fig 5) cannot be revegetated to allow for vehicle access under electricity power easement. It is noted that Zone A can only be revegetated with shrubs and groundcovers, except for a thin strip along the southern boundary, therefore the vegetation will mostly not be recreating CRCIF as the typical structure of CRCIF cannot be recreated. Similarly, Zone B must be maintained as an asset protection zone. As such, no shrubs can be planted, and trees will need to be placed some distance apart. Therefore, apart from a thin strip along the southern boundary of the site, the revegetation will not be recreating CRCIF and the areas to be managed under the VMP will not offset the loss of CRCIF.

Threatened flora species

EES notes that five individuals of two threatened flora species have been recently recorded within Vineyard Park to the east of the site, being Acacia pubescens and Pultenaea parviflora. While it is noted that the VMP states no threatened flora species were recorded on site, the proximity of these records should have been mentioned in the VMP.

Also, EES notes the one-day site survey on 3 December 2020 was conducted outside the flowering period for Pultenaea parviflora. The OEH (2019) Pultenaea parviflora profile states "Flowers occur between August and November, with a peak in September". This species is best identified during the peak flowering period, as non-flowering plants are superficially like other vegetation. It is not clear from the VMP whether targeted plant surveys were conducted across the whole of the site.

EES considers the potential impact of future IN1 permissible development of the site on Acacia pubescens and Pultenaea parviflora within the adjoining Vineyard Park should be assessed.

Should the proposed amendment to the Hawkesbury Local Environmental Plan 2012 be made to give effect to the Planning Proposal, the applicant will be required to submit an updated Vegetation Management Plan and Vegetation Map containing sufficient details addressing all the issues raised by the Environment, Energy and Science Group in support of any future Development Application over the subject site. This will include assessment by Council and the Environment, Energy and Science Group. Cumberland Plain Land Snail

The Planning Proposal states:

- "there are no known habitats for threatened species on the site" (page 31)
- "The proposed zoning change is not likely to adversely affect critical habitat, threatened species, populations or ecological communities
- "These considerations and potential impacts can be dealt with in detail during development assessment" (page 54).

EES considers it is not appropriate to defer potential impacts to the DA stage. This needs to be addressed as part of the planning proposal and further details are required to verify these above statements. The PPR indicates "the VMP aims to provide and enhance habitat for local fauna including the endangered Cumberland Plain Land Snail (Meridolum corneovirens) which is known to occur in the locality" (page 11). EES confirms there are records of the Cumberland Land Snail within 1 km of the site.

While the Summary to the VMP refers to the Cumberland Plain Land Snail (Meridolum corneovirens) there is no other mention of this threatened fauna species in the VMP, so it is not clear if surveys were undertaken for it, or whether consideration was given to it occurring on site. The Cumberland Land Snail lives under bark, leaves and logs, in loose soil around grass clumps and occasionally in rubbish. EES notes that the VMP states that "fallen timber is present across the site".

Section 2.2 of the VMP indicates a one-day survey was conducted on the 3rd December 2020 to identify any threatened flora and fauna species. The OEH Cumberland Plain Land Snail profile indicates this species is generally active at night. It is unclear if a fauna survey was also conducted at night.

EES also notes the proposed revegetation Management Zone B which is to function as an APZ would not provide suitable habitat for the Cumberland Plain Land Snail as the VMP states "this area should be regularly maintained and all fuel removed e.g. fallen branches, leaf build-up" and that "ground fuels such as fallen leaves, twigs (less than 6mm in diameter) and branches should be removed on a regular basis, and grass needs to be kept closely mown" (see section 4.6 of the VMP). As the BAR indicates Management Zone A is also intended to function as an APZ clarification is required as to whether fallen timber, leaves and twigs are proposed to be removed from Management zone A as well. It is unclear where habitat for the Cumberland Plain Land Snail is proposed to be provided and enhanced on the site. Details are required on this. Offsets.

The VMP states that 'the native plantings sufficiently offset the loss of trees requiring removal for future development as a result of the proposed rezoning'. A biodiversity development assessment report will need to be prepared for any development application for the site given the vegetation on site is mapped on the Biodiversity Values Map. Given these impacts, biodiversity credits will need to be retired. The native planting to be undertaken in accordance with the VMP will not be able to be used to offset these impacts under the Biodiversity Offsets Scheme.

ltem	Issue	Council Officer Comments
Endeav	our Energy	
1.	As shown in the site plans from Endeavour Energy's G/Net master facility model (and extract from Google Maps Street View) there are:	
	 No easements benefitting Endeavour Energy (active easements are indicated by red hatching). Low voltage and 33,000 volt / 33 kilovolt (kV) high voltage overhead power lines, overhead earth cables, overhead pilot cables (carrying protection signals or communications between substations) and low voltage underground cables to the road verge / roadway. Extended low voltage overhead 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 connection points for the existing premises. 	
	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).	Noted.
	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 <i>Electricity Supply Act 1995</i> (NSW).	
2.	Subject to the following recommendations and comments Endeavour Energy has no objection to the Planning Proposal.	
	Network Capacity / Connection	
	Endeavour Energy has noted that the Planning Proposal does not appear to address in detail 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.	

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	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.	Noted, and subject to further detailed investigation by the applicant as part of the Development Application process.
	Padmount substations (indicated by the symbol on the site plan from Endeavour Energy's G/Net master facility model) 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.	
	As shown in the site plan from Endeavour Energy's G/Net master facility model, whilst there are a number of padmount substations in proximity of the site which are likely to have some spare capacity, it may 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 may 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.	Noted.
	Depending on the outcome of the assessment, any required padmount substation/s 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'.	
	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.	

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 .	
Network Asset Design	
`Endeavour Energy's Company Policy 9.2.5 'Network Asset Design', includes electricity connections to new urban subdivision / development:	Noted.
Bushfire	
Endeavour Energy has noted that the Planning Proposal indicates 'The site is mapped as bushfire prone'. The accompanying Bushfire Assessment Report which provides and 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.	
Although industrial uses are not covered by Chapters 5 to 7 of NSW Rural Fire Service 'Planning for Bush Fire Protection 2019' (PBP), the aim and objectives of PBP still need to be considered and a suitable package of bush fire protection measures should be proposed commensurate with the assessed level of risk to the development. PBP provides the following advice regarding electricity services.	Noted.
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.	
Streetlighting	
With the likely increase in both vehicular and pedestrian traffic, the streetlighting for the proposed development should be reviewed and if necessary upgraded to comply with the series of standards applying to the lighting of roads and public spaces set out in with Australian/New Zealand Standard AS/NZS 1158: 2010 'Lighting for roads and public spaces' as updated from time to time.	Noted.

 Whilst the determination of the appropriate lighting rests with the road controlling authority, Endeavour Energy as a Public Lighting Service Provider is responsible for operating and maintaining the streetlights on behalf of local councils, Roads and Maritime Services and other utilities in accordance with the NSW Public Lighting Code 2019 (Code) as updated from time to time. Endeavour Energy recognises that well designed, maintained and managed Public Lighting offers a safe, secure and attractive visual environment for pedestrians and drivers during times of inadequate natural light. Safety Clearances 	
As a minimum any building or structure (including fencing, signage, flag poles etc.) whether temporary or permanent must comply with the minimum safe distances / clearances for voltages u to and including 132,000 volts (132 kV) as specified in:	Noted. p
 Australian/New Zealand Standard AS/NZS 7000 – 2016: 'Overhead line design' as update from time to time. 'Service and Installation Rules of NSW' which can be accessed via the following link to the Energy NSW website: 	d
https://energy.nsw.gov.au/government-and-regulation/legislative-and-regulatory- requirements/service-installation-rules	
These distances must be maintained at all times and regardless of the Council's allowable building setbacks etc. under its development controls. As a guide only please find attached a copy of Endeavour Energy Drawing 86232 'Overhead Lines Minimum Clearances Near Structures'. Factor such as the span (the longer the span the greater the sag and blowout of the overhead power lines), type of conductor, access, property type and use etc.will impact on the minimum clearance	s.
Earthing	
The construction of any building or structure (including fencing, signage, flag poles, hoardings, material stockpiles 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.	Noted.
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'.	
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).	Noted.
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.	Noted.
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	

Landscaping that interferes with electricity infrastructure may become a potential safety risk, cause Noted. of bush fire, restrict access, reduce light levels from streetlights or result in the interruption of Noted. supply. Such landscaping may be subject to Endeavour Energy's Vegetation Management program Noted. electricity works by trees' by which under certain circumstances the cost of carrying out such work may be recovered. Noted. Endeavour Energy's recommendation is that existing trees which are of low ecological significance with the Endeavour Energy structure trained whilst minimising the need for turner program of overhead power lines be henoved and if necessary replaced by an alternative smaller planting to ensure appropriate clearances are maintained whilst minimising the need for turner young and activity the applicant is required to obtain advice from the Dial Before You Dig Noted. Before commencing any underground activity the applicant is required to obtain advice from the Dial Before You Dig underground electrical and other utility infrastructure across the site, but also to identify the castion 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. Domolition Demolition Survey and accordance with Australian Standard AS 2601—201: "The demolition works is to be carried out in accordance with Australian Standard AS 2601—201: "The demolition works, the low voltage service conductor and customer connection may need to be isolated and/or removed during demolition. Please refer to the below point "Removal of Electricity Supply for further information. Noted	plant.	
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. Noted, and compliance with the Endeavour Energy standards and requirements will be addressed through the subsequent development application. Dial Before You Dig Before commencing any underground activity the applicant is required to obtain advice from the Dial Before You Dig 1100 service in accordance with the requirements of the Electricity Supply Act 1995 (NSW) and associated Regulations. This should be obtained by the applicant not only to identify the location of any underground electrical and other utility infrastructure across the site, but also to identify them as a hazard and to properly assess the risk. Demolition Demolition work is to be carried out in accordance with Australian Standard AS 2601—2001: "The demolition of structures' as updated from time to time. All electric cables or apparatus which are liable to be a source of danger, other than a cable or apparatus used for the demolition works shall be disconnected ie. all electrical and/or removed during demolition. Please refer to the below point "Removal of Electricity Supply' for further information. Noted. Council will advise the applicant accordingly. Appropriate care must be taken to not otherwise interfere with any electrical infrastructure on or in the vicinity of the site eg. streetlight columns, power poles, overhead power lines and underground cables etc. Noted. Council will advise the applicant accordingly.	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 <i>Electricity Supply Act 1995</i> (NSW) Section 48 'Interference with electricity works by trees' by which under certain circumstances the cost of carrying out such work may be recovered.	Noted.
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Appropriate care must be taken to not otherwise interfere with any electrical infrastructure on or in the vicinity of the site eg. streetlight columns, power poles, overhead power lines and underground cables etc.	Depending on the extent of the demolition works, the low voltage service conductor and customer connection may need to be isolated and/or removed during demolition. Please refer to the below point 'Removal of Electricity Supply' for further information.	Noted. Council will advise the applicant accordingly.
	Appropriate care must be taken to not otherwise interfere with any electrical infrastructure on or in the vicinity of the site eg. streetlight columns, power poles, overhead power lines and underground cables etc.	

Removal of Electricity Supply	
Approval for the permanent disconnection and removal of supply must be obtained from Endeavour Energy's Network Connections Branch (contact via Head Office enquiries on business days from 9am - 4:30pm on telephone: 133 718 or (02) 9853 6666) by Accredited Service Providers (ASP) with the relevant class of Authorisation for the type of work being carried out. The work could involve:	Noted. Council will advise the applicant accordingly.
 The disconnection and removal of an underground service cable or overhead service line, Removal of metering equipment. 	
The written request must be submitted to Endeavour Energy using Form FPJ4603 ' Permission to Remove Service / Metering by Authorised Level 2 Accredited Service Provider' which must be accompanied by Notification of Service Works (NOSW) forms provided as a result of service work activity performed by a Level 2 ASP. The retailer must also provide written agreement for the permanent removal of supply.	
Site Remediation	
Endeavour Energy has noted that the Stage 1 Contamination Assessment 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 areas of environmental concern (AEC) and associated contaminants of potential concern (COPC).	Noted.
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'.	
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. Please find attached copies of 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:	Noted.
http://www.endeavourenergy.com.au/wps/wcm/connect/ee/nsw/nsw+homepage/communitynav/safe ty/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 the Risk & Safety Management Plan.	
I appreciate that not all the foregoing issues may be directly or immediately relevant or significant to the Planning Proposal eg. establishing the final connection of end use customers for the site will not occur until the actual end use is known. 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.	