Review of Environmental Factors (REF) Decision Statement Report

Menangle Park Zone Substation

09 May 2025

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1. Introduction

NSW Department of Planning and Environment has identified the Greater Macarthur Growth Area as an area of substantial growth, with the Greater Macarthur 2040 interim plan highlighting delivery of approximately 40,000 new homes within the area by 2056.

The 66/11kV 15 MVA mobile substation currently located at the site was developed to support the increase in electricity demand in the interim. Forecasting performed by Endeavour Energy identified that the mobile substation will have load at risk from 2025 with the total capacity exceeded by 2027, which will result in unserved energy without additional electrical capacity investment in the area. This will result in customers not being able to connect to the network, which contravenes Endeavour Energy's obligation to provide connection services.

As such, the need to increase the electrical capacity in this area has been identified to meet these requirements. It is proposed to develop the Menangle Park Zone Substation (ZS) to meet this requirement, which is described and assessed herein.

The implementation of a new substation will strengthen reliability and service the large-scale infrastructure development in the Menangle Park region in line with NSW Department of Planning, Infrastructure and Environment plans. This proposal will enhance the supply security and reliability of new developments by providing a diversified 33kV supply and associated fibre optic network.

2. Consultation

Consultation was undertaken as below:

- Campbelltown Council was notified on the 9th of December 2024.
- TISEPP notification was issued to the Mine Subsidence Board on 9 December 2024. A response was received on 28 January 2025 which indicated that based on information provided in the notification, an application consistent with the proposal would be granted approval subject to conditions under the current development assessment policy framework.
- In accordance with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024), notification to occupiers of adjoining land and 1170 residents and businesses within Menangle and Menangle Park was undertaken via letterbox drop on Wednesday 22 January 2025. The letter outlined the project (ZS and the feeder route), likely environmental impacts and invited the public to make submissions to the Endeavour Energy Project team for a period of no less than 21 days.

No responses have been received from Council and residents.

3. Consideration of Environmental Impacts

The REF details the proposed activity, assesses the potential impacts on the environment and provides management measures to avoid, minimise, manage and/or offset those impacts. The key sensitive environmental aspects related to this proposed activity during construction include typical construction impacts such as noise, traffic and air quality.

As the site is an established mobile zone substation site already, impacts are predicted to be very minimal.

4. Conclusion

In summary, the REF addresses the requirements of Section 5.5 of the *EP&A Act* by considering to the fullest extent possible, all matters affecting or likely to affect the environment from the proposed activity. The REF also considers factors prescribed under Section 171 of the *Environmental Planning and Assessment Regulation 2021.* The REF assesses and considers the likely significance of the environmental impacts of the proposed activity under Section 5.7 of the *EP&A Act.*

The REF also considers the requirements of the *Commonwealth Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) and assesses all matters of National Environmental Significance (NES) and any impacts on Commonwealth land.

Given the nature, scale and extent of impacts and implementation of the mitigation measures outlined in the REF, the REF concludes that the proposed activity is not likely to significantly affect the environment or threatened species, populations or ecological communities, or their habitats. The REF also considers that the proposed activity is not likely to have a significant impact on matters of National Environmental Significance (NES) or Commonwealth land, and therefore does not require a referral under the Commonwealth EPBC Act.

With consideration of the environmental impacts detailed in the REF, the key conclusions are accepted for the following reasons:

- The REF has been prepared by persons appropriately trained to consider and assess the impacts of the proposed activity
- It is considered that the REF provides a true and fair review of the proposed activity in relation to its potential effects on the environment
- The REF is comprehensive and examines and takes into account, to the fullest extent possible, all matters affecting or likely to affect the environment as a result of the proposed activity.

5. Determination

I, as an authorised person on behalf of Endeavour Energy, have examined and considered the REF for the Menangle Park Zone Substation in accordance with Section 5.5 of the *EP&A Act*.

In accordance with the requirements of Section 2.5.1 of the Code, I am an appropriately authorised person and I am not the same person who conducted the assessment.

I determine, on behalf of Endeavour Energy, that:

☒ The proposed activity is not likely to significantly affect the environment, and is not likely to significantly affect threatened species, ecological communities or their habitats and is not to be carried out on land that is or is part of a declared area of outstanding biodiversity value. No Environmental Impact Statement (EIS) or Species Impact Statement (SIS) is therefore required in respect of the subject Activity. Further:

> ☒ This is not a conditional decision and no further conditions are required (other than the mitigation measures attached to this Decision Statement)
>
> ☐ This is a conditional decision and the conditions are attached to this Decision Statement below.

☐ The proposed activity is likely to significantly affect the environment and an EIS or SIS or both is required in respect of the subject Activity.

☐ there is insufficient information contained in REF and a supplementary EIA should be prepared.

Signature Panel for Authorised Person who has made the Determination	
Signature	Faith Signature Digitally signed by Faith Signature DN: cn=Faith Signature, email=faith.ijeyan@endeavourenergy.com.au Date: 2025.05.09 15:37:19 +10'00'
Name in full	Faith Ijeyan
Role/Title	Environmental Speialist
Date	09/05/2025

6. Conditions of Determination

Mitigation Measures

Number	Safeguards
General	
G01	An environmental management plan will be prepared prior to construction and will document measures to be implemented to reduce or mitigate environmental impacts as identified in this REF.
Biodiversity	
B01	Vegetation removal will be undertaken in accordance with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024).
B02	An unexpected threatened species finds procedure will be developed as part of the CEMP. The procedure is to be followed if unexpected threatened species or threatened ecological communities not assessed in the biodiversity assessment, are identified within the proposal site.
B03	The following will be implemented as part of the CEMP: Plans showing areas to be cleared and areas to be protected, including exclusion zones, protected habitat features and revegetation areas; Pre-clearing survey requirements; Procedures for unexpected threatened species finds and fauna handling; Procedures addressing relevant matters specified in the DPI *Policy and guidelines for fish and habitat conservation and management (2013)*; and Protocols to manage weeds, pathogens and pest species.
B04	Threatened fauna habitat removal will be minimised through detailed design in accordance with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024).
B05	Fauna encountered on-site during construction will be managed in accordance with *Guide 9: Fauna handling* of the *Biodiversity Management Guideline: Protecting and managing biodiversity for NSW projects* (TfNSW, 2024).
B06	• Weed species and pathogens will be managed in accordance with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024).
Water, hydrology and flooding	
W01	Site-specific Erosion and Sediment Control Plans will be prepared for the proposal in accordance with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024), and will be implemented as part of the Construction Environmental Management Plan (CEMP).
W02	Install construction erosion and sediment control measures before construction commences consistent with 'the Blue Book' (*Managing Urban Stormwater, Soils and Construction Vol 1 and 2A* (Landcom 2004 and DECC 2008)) in order to: • Minimise sediment moving off-site and sediment laden water entering drainage lines, or drain inlets; • Reduce water velocity and capture sediment on site; • Minimise the amount of material transported from site to surrounding pavement surfaces; • Minimise in-stream soil erosion and downstream water quality impacts; and

Number	Safeguards
	• Divert clean water around the site.
W03	The CEMP will include arrangements for managing wet weather events, including monitoring of potential high-risk events (such as storms) and specific controls and follow-up measures to be applied in the event of wet weather.
W04	No cleaning and washing of vehicles should be undertaken on site, and must be completed offsite.
W05	Water quality control measures are to be used to minimise any materials (e.g. concrete, grout, sediment etc) entering drain inlets or waterways, specifically Howes Creek, a waterbody mapped as a key fish habitat.
W06	Spill kits will be available at the construction site in accordance with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024), and all persons undertaking construction works will be made aware of Endeavour Energy's incident response procedures.
W07	Soil and water management will be conducted in accordance with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024).
W08	Disturbance will be restricted to those areas of the proposal required for the active stage of works.
W09	Refuelling and maintenance of vehicles, plant and equipment will not be carried out on the proposal site. All vehicles, plant and equipment are to be refuelled prior to arriving on-site.
W10	No fuels, oils or other chemicals are to be stored at worksites unless small amounts are required for that specific days' work.
W11	All drainage, erosion and sediment control measures will be maintained in proper working order until their function is no longer required.
W12	Where it is necessary to store spoil or other loose materials on site, sediment fences are to be constructed on the down slope side of the stockpile.
W13	Monitor for groundwater seepage during construction. Should groundwater be encountered during earthworks, the Site Supervisor would notify the Environmental Advisor and Project Manager who will co-ordinate any further actions.
W14	Any potential dewatering that may be required will need to be done in accordance with Endeavour Energy's standard *EMS 0014 – Dewatering sites* and the *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024).
W15	If groundwater is encountered during construction, a Water Supply Work approval is to be obtained from WaterNSW in accordance with Chapter 3 Part 2 of the *Water Management Act 2000* before any groundwater dewatering works can commence. Should >3ML be extracted, a Water Access License will be required under the *Water Management Act 2000*.
Soils and contamination	
SC01	An Unexpected Contaminated Finds Protocol will be implemented during construction, and will include appropriate control measures to be implemented to manage and risks of contamination. All other works that may impact on the unexpected find (contaminated area) will cease until the nature and extent of the contamination has been confirmed, and any necessary site-specific controls or further actions identified in consultation with the project manager and/or the EPA.
SC02	Should asbestos be identified unexpectedly on site, asbestos removal must be undertaken in accordance with *Working with Asbestos: Guide 2008* published by

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	WorkCover NSW and by Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024).
SC03	A spill kit is to be available at all times during construction, in accordance with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024).
SC04	Monitoring should be undertaken during construction in the event that ASS are encountered. In the event that ASS are present, appropriate remedial works should be carried out in accordance with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024).
SC05	All topsoil, fill and natural soil to be excavated are to be disposed to an appropriately licensed landfill should be classified in accordance with the EPA's *Waste Classification Guidelines: Part 1: Classifying waste* (EPA, 2014). Natural soil classified and validated as Virgin Excavated Natural Material (VENM) should be reused at an approved site or disposed at a licensed waste facility.
SC06	Any screened and clean in-situ fill intended to be reused on-site should be validated by laboratory analysis to ensure suitability of the material for reuse.
SC07	All imported fill required for bulk earthworks should be validated as VENM free of organics, non-saline and not affected by ASS. This is in accordance with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024).
SC08	All excavated topsoil, fill, VENM and waste should be segregated into separate stockpiles to prevent cross contamination.
Traffic and transport	
T01	Access to properties and local businesses will be maintained during construction.
T02	Delivery of construction plant and materials are to be managed to minimise number of deliveries/vehicles on site.
T03	Road users and local communities will be provided with timely, accurate, relevant and accessible information about changed traffic arrangements and delays owing to construction activities. The affected community will be notified a minimum of five working days before any changed conditions that are likely to result in disruption.
Noise and vibration	
NV01	All sensitive receivers (as identified in **Section** Error! Reference source not found.) will be notified at least five working days prior to commencement of any works associated with the activity that may have an adverse noise or vibration impact. The notification will provide details of: The proposal; The construction period and construction hours; Contact information for project management staff; Complaint and incident reporting; and How to obtain further information. This is in accordance with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024).
NV02	Additional mitigation measures presented in **Section** Error! Reference source not found. based on the TfNSW Noise Tool are to be considered in the CEMP and applied where appropriate.
NV03	Traffic flow, parking and loading/unloading areas to be planned to minimise reversing movements. Non-tonal reversing beepers are to be fitted and used on all construction vehicles and on mobile plants and during any out of hours work.

Number	Safeguards
NV04	All employees, contractors and subcontractors are to receive a site-specific prestart/toolbox talk. The talk must at least include: Any site-specific and relevant standard noise and vibration mitigation measures; Relevant licence and approval conditions; Permissible hours of work; Location of nearest sensitive receivers; Construction employee parking areas; Designated loading/unloading areas and procedures; Site opening/closing times (including deliveries); and • Environmental incident procedures.
NV05	Use quieter emitting methods in line with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024). Ensure plant and equipment are fitted with appropriate silencers that are maintained in good working order for the duration of the works.
NV06	The distance between noise intensive plant and nearby sensitive receivers is to be maximised. Noise emitting plant is to be directed away from sensitive receivers during use. Plant used intermittently is to be throttled down or shut down when not in use.
NV07	Limit the use of engine compression breaks during site entry/egress where possible, to minimise impact on nearby sensitive receivers. Vehicles to be fitted with fully complaint exhaust silencers.
NV08	No OOHW, other than the hours assessed in this section, should be undertaken without approval from the Endeavour Energy Environmental Services team and would require additional assessment.
Aboriginal heritage	
AH01	An unexpected heritage finds protocol will be prepared and implemented prior to commencement of works. If unexpected Aboriginal items are uncovered during the works, all works must cease in the vicinity of the material/find, and the Endeavour Energy project manager must be contacted immediately.
Non-Aboriginal heritage	
NH01	An unexpected finds procedure must be implemented during ground disturbing works. In the event that archaeological remains are discovered during the works, works must cease in that location and the remains must be protected, and a suitably qualified archaeologist must be contacted to assess the potential archaeological remains and advise on the required archaeological management. If unexpected 'relics' or state significant archaeological remains are identified, further assessment and approvals may be required.
NH02	Any substantial changes to the proposed scope of works requires further assessment to identify any additional heritage impacts.
Air Quality	
AQ01	Dust levels will be visually monitored during construction works in accordance with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024). If excessive dust generation is occurring on site, causing a safety issue or complaints are received, immediately follow appropriate mitigation options.
AQ02	Vehicles and machinery are to be turned off when not in use and not to be left idling during construction and operation.

Number	Safeguards
AQ03	Soil/spoil tracked onto roadways will be swept up on a regular basis during construction, in accordance with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024).
AQ04	Vehicles transporting waste or other materials that may produce dust are to be covered during transportation to and from the site during construction.
AQ05	Any temporary stockpiles within the proposal site will be covered or stabilised during construction.
AQ06	Traffic speed and movements will be decreased over disturbed areas of ground during construction.
AQ07	Dust suppression techniques, including wetting down surfaces will be used as necessary during construction.
Bushfire	
BF01	The Construction site and substation facility would be managed as an Asset Protection Zone (APZ) in accordance with *RFS Standards for Asset Protection Zones* (SAPZ 2005) (RFS, 2005). At the commencement of building works, the construction site would be managed as an APZ as outlined in Appendix 4 of the PBP and the SAPZ 2005. APZ requirements include: • Screening vegetation and related landscaping features shall be placed outside the designated APZ; • Trees: Tree canopy should be less than 15% of maturity; Trees at maturity should not touch or overhang the building; Lower limbs should be removed up to a height of 2m above the ground; Tree canopies should be separated by 2 to 5m; Preference should be given to smooth barked and evergreen trees; • Shrubs: Create large discontinuous or gaps in the vegetation; Shrubs should not be located under trees or form more than 10% of ground cover; Clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation; and • Grass: Grass should be kept low (no more than 100 millimetres (mm) in height); Leaves and vegetation debris should be removed.
BF02	The landscaping provided to provide a visual buffer shall comply with the following provisions: • No vegetation or yard storage within 10m of buildings or transformers; • A 1.5m clear egress is provided around within the immediate curtilage of all structures; • Fencing and gates in a Bushfire Attack Level (BAL) of 29 or within 6m of a building should be of non-combustible materials; • Garden mulch will not be permitted. Alternatives shall be applied; • No timbers permitted within landscaping area; • Tree branches less than 2m from ground surface are to be trimmed annually; • No shrubs to be planted under tree canopy; • Gaps of more than 1m shall be applied between shrubs; • Grasses removed annually; and • Designed in accordance with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024).
BF03	Vulnerable buildings and/or critical assets are to be constructed to appropriate BAL levels in accordance with the *Australian Standard for the Construction of Buildings in*

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	Bushfire Prone Zones (AS3959:2018). This will be refined during detailed design. The following shall be applied: • The external wall and roof will be non-combustible, and all vents metal screened with aperture <2mm; • External critical elements are those deemed to be essential for return to service following a bushfire event shall be located in areas exposed to <12kW/m^2 radiant heat load; • All external doors must match the fire performance FRL of the building and be fitted with fire resistant smoke seals at the base of the door to prevent embers entering under the door; and • Covering openings with a steel, bronze or aluminium to maximum allowable aperture of 2mm or weather strip with a flammability index not greater than 5 (AS1530.2).
BF04	Reticulated water must be provided. External attack hydrant through the fire hydrant booster is to be provided.

BF05	Emergency management during construction phase should be administered through site specific construction operations and risk plans. The principles within this document shall be used to guide to the site-specific operations and risk plans during the construction phase.
	A comprehensive Bushfire Emergency Management and Evacuation Plan would be completed for the operational phase of the project. The bushfire evacuation procedures would be completed in accordance with NSW *RFS Guide to Developing A Bushfire Emergency Management Plan*. This includes:
	• Ignition prevention:
	  ○ Hot work (activities involving high temperatures) and fire risk work (activities involving heat or with the potential to generate sparks) from construction activities may cause fire ignition. These works will be managed under a Hot Work and Fire Risk Work procedure, with measures including suspension of activities on days of elevated fire danger;
	  ○ Certain construction activities, including hot works, are prohibited by law on any day declared to be a total fire ban;
	  ○ Essential work during construction may be completed on a total fire ban, providing it complies with the Hot Work and Fire Risk Work procedure exemption from the NSW RFS; and
	  ○ Substations must be inspected and cleaned regularly to prevent the build-up of combustible matter.
	• Ignition suppression:
	  ○ Firefighting equipment will be maintained and accessible to active construction site during the declared bushfire danger season, and site personnel should be trained in its use. Equipment should be appropriate to the activities being conducted and the fire danger at the time of works, but as a minimum should include extinguishers, knap sacks and hand tools (e.g. fire rakes).

BF06	The public road provides Category 1 fire appliances access to the south of the facility. Within the fenced compound, unobstructed pedestrian access is required to enable fire fighters to operate. The following access requirements are recommended: • A vehicle access gate be provided; • Internal access to all buildings and north side of transformer 1 and 2 to have a trafficable surface with capacity of 23T with a maximum grade of not more

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	than 15 degrees, crossfall not more than 6 degrees, minimum vertical clearance of 4m is provided above the surface of the trafficable surface clear of obstructions, curves have a minimum inner radius of 6m, minimum distance between inner and outer curves is 6m; • Turn-a-round provided in accordance with Appendix 3 of PBP.
Landscape character and visual amenity	
LV01	Working areas are to be maintained, kept free of rubbish and cleaned up at the end of each working day.
LV02	Fencing with material attached (e.g. shade cloth) to be provided around the construction compounds to screen views from roads and neighbouring properties.
LV03	Landscaping around the ZS will be maintained during operation.
Socio-economic	
SE01	In accordance with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024), Community notification to occur prior to construction, to advise on the construction and operation of the proposal and expected impacts (as per **Section** Error! Reference source not found.).
Waste and hazardous materials	
WH01	The following resource management hierarchy principles will be followed in line with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024): Avoid unnecessary resource consumption as a priority; and Avoidance will be followed by resource recovery (including reuse of materials reprocessing and recycling and energy recovery. Disposal will be undertaken as a last resort (in accordance with the *Waste Avoidance and Resource Recovery Act 2001*).
WH02	Waste material generated on site will not be left on site once the construction works have been completed.
WH03	The site is to be kept clean and tidy at all times.
WH04	Waste mitigation and management strategies will be documented in the CEMP and in accordance with Endeavour Energy's Environmental Management Standard EMS 0007 Waste Management.
WH05	Any excess waste or spoil including fill material and VENM, will be classified, verified and either reused or disposed of at a licensed waste or recycling facility as appropriate.
WH06	All excavated spoil will be classified prior to disposal and/or re-use. Waste disposal dockets will be obtained from the licensed waste disposal facility and copies retained for audit purposes.
WH07	In accordance with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024), report any third party illegal dumping into MySafe or to site Environmental Representative. Do not inspect it until an appropriate Worksite Hazard and Risk Assessment (WHRA) has been completed. Secure the waste if required by covering with plastic and erecting barricading where appropriate to reduce safety risks.
WH08	Any imported fill should be certified at source location as pathogen and weed free Virgin Excavated Natural Material (VENM) or ENM (Excavated Natural Material) in accordance with the POEO Act and the *Protection of the Environment (Waste) Regulation (2014)*.

Number	Safeguards
WH09	If fill material is proposed to be imported onto site, fill material should be stockpiled in dedicated areas and managed in accordance with the appropriate Endeavour Energy standards including *EMS 0013 – Spoil management* and the *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024).
Utilities and services	
US01	Before You Dig Australia searches will be undertaken prior to commencement of construction works on site.
US02	Impacted residents or businesses will be notified prior to any potential interruptions to electricity supply occurring during construction in accordance with National Energy Customer Framework requirements.
Electromagnetic fields	
EM01	All designs are to comply with the standards outlined in Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) *Radiation Protection Series no. 3: Maximum exposure limits to radiofrequency fields* (ARPANSA, 2002).
EM02	When designing and scoping proposal, EMF is to remain below 2000 miiligaus in accordance with Endeavour Energy's *Environmental Guidelines Handbook April 2024* (Endeavour Energy, 2024).
Cumulative impacts	
CI01	Current and upcoming projects with the potential to interact with the proposal will be monitored. Where potential cumulative impacts are identified (including Spring Farm Parkway), the scheduling of works will be coordinated with interacting projects to minimise potential impacts, including scheduling of works to minimise consecutive construction noise and access impacts of local projects.