



Mandalong Southern Extension Project

Construction of 33 kV Powerline

State Significant
Development
Modification Assessment
(SSD 5144 MOD 7)

July 2019

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Cover photo

Existing 132 kV powerline (Centennial Coal Pty Ltd 2019)

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Executive Summary

Centennial Mandalong Pty Ltd (Centennial) owns and operates the Mandalong Coal Mine located near Morisset, approximately 35 kilometres southwest of Newcastle in the Central Coast and Lake Macquarie local government areas.

Centennial is seeking to modify its State significant development consent (SSD 5144) to construct a 33 kilovolt powerline between its Mandalong Mine Access Site and its Mandalong South Surface Site on an alternative alignment than originally proposed. The proposed modification was submitted under section 4.55(2) of the *Environmental Planning and Assessment Act 1979*.

Centennial submitted its Statement of Environmental Effects and related documents on 22 February 2019. These documents assessed the impacts of the proposed modification and found that, in most cases, resulting impacts were negligible or could be avoided. The key assessment issues for the proposed modification are biodiversity and construction traffic impacts. However, the additional biodiversity impacts would require offsetting, which Centennial has proposed to address by way of a payment into the Biodiversity Conservation Fund. The Department's assessment concluded that construction traffic would not adversely impact the local road network, provided that a Construction Traffic Management Plan is prepared and implemented by Centennial. The residual matters would be appropriately managed by existing consent conditions.

The Department exhibited the proposed modification in newspapers covering both the Central Coast and Lake Macquarie local government areas and notified all previous submitters for SSD 5144. The Department also requested advice from eight agencies and two local councils. No objections to the proposed modification were received from agencies or councils. The only objection from a member of the public expressed the concern that approval of the proposed powerline would enable extraction of a coal resource that would be burned, thus contributing to climate change.

Following its assessment of the modification and consideration of the public submission and agencies' advice, the Department considers that the key environmental impacts can be avoided, minimised or managed by modified conditions of consent. Therefore, the Department considers that the modification can be approved, subject to the conditions it has recommended.



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1. Introduction

This report provides an assessment of an application to modify the State significant development (SSD) consent (SSD 5144) for the Mandalong Southern Extension Project (MSEP). The proposed modification seeks consent to construct a 33 kilovolt (kV) powerline along a new corridor from the Mandalong Mine Access Site (MMAS), to the Mandalong South Surface Site (MSSS). The proposed powerline is approximately 7.7 kilometres (km) long.

1.1 Background

Centennial Mandalong Pty Ltd (Centennial) owns and operates the Mandalong Coal Mine (Mandalong) located near Morisset, approximately 35 km southwest of Newcastle in the Central Coast and Lake Macquarie local government areas (see **Figure 1**).

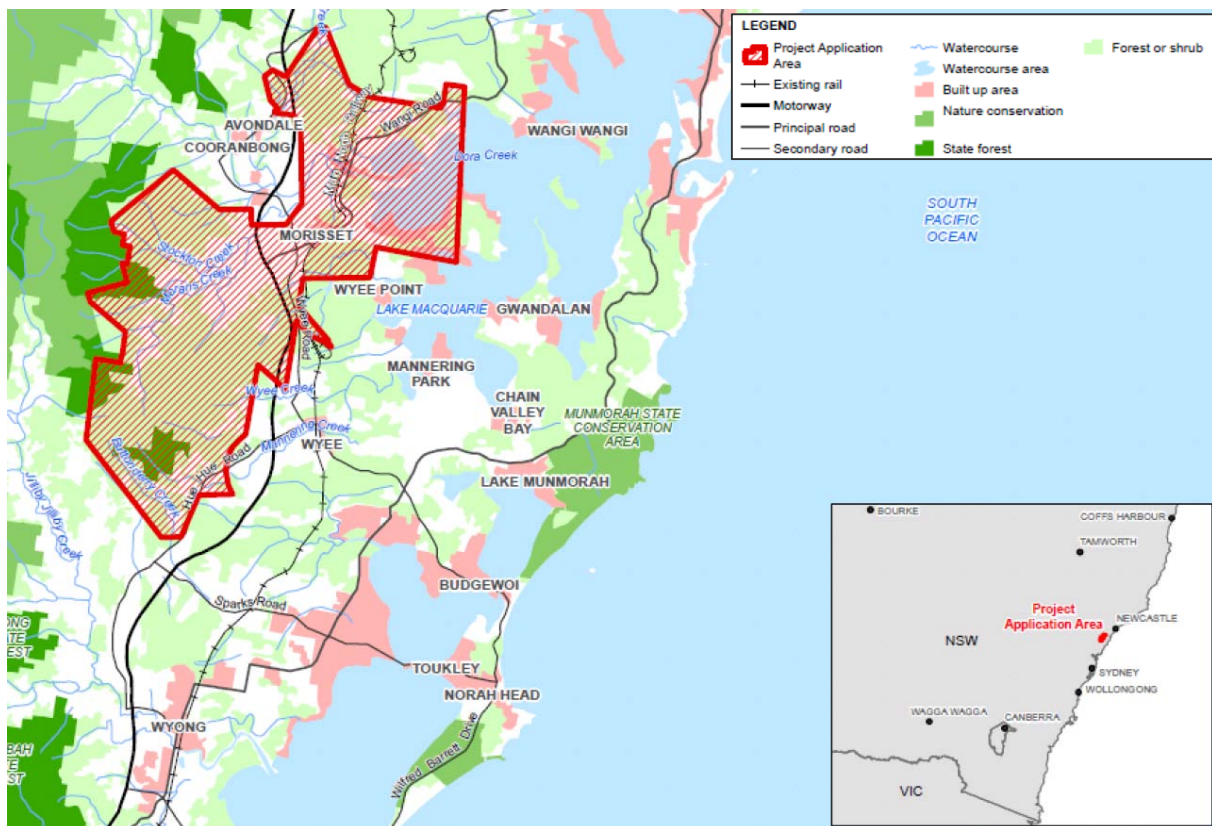


Figure 1 | Site location

The MMAS is surrounded by a variety of agricultural, residential and industrial land uses and undisturbed bushland. The nearest settlements are the townships of Morisset, Dora Creek and Cooranbong that are located around 2.5 km east or 5 km northeast of the MMAS.

There are approximately 114 privately-owned residences within 1 km to the south and west of the MSSS. This includes 19 private land holdings that either adjoin, or would be traversed by, the proposed powerline's construction alignment.

1.2 Approval History

Mandalong was originally known as Cooranbong Colliery Extension, which was approved by the then Minister of Urban Affairs and Planning under development consent DA97/800. Centennial purchased the mine in 2002 and changed its name to Mandalong Mine. Consent DA97/800 permitted:

- extraction of up to 6 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal until 2019;
- transportation up to 4 Mtpa of ROM coal to the Cooranbong Entry Site via underground conveyor;
- delivery of 4 Mtpa of ROM coal to Eraring Power Station via overland conveyor;
- operation of the MMAS; and
- disposal of coal fines into disused workings.

In 2013, Centennial lodged a SSD application to establish a southern extension to Mandalong (see **Figure 2**). The Mandalong Southern Extension Project (MSEP) was approved by the then Planning Assessment Commission on 12 October 2015. This consent permitted:

- extended underground mining operations south of the existing mining domains;
- construction and use of the MSSS;
- continued mining operations in Areas 1 and 2;
- continued operation of the MMAS;
- extending the life of the mine by 25 years; and
- progressive rehabilitation of the MMAS and MSSS.

The development consent for the MSEP has since been modified on six occasions (see **Table 1**):

Table 1 | Summary of Modifications

Mod	Summary of Modification	Approval Authority	Type	Approval Date
MOD 1	Relocation of a 2.4 km section of a TransGrid 330 kV transmission line	Minister	96 (2)	14 June 2016
MOD 2	Extension of first workings associated with Longwalls 22 and 23	Minister	96 (1A)	22 September 2016
MOD 3	Increased annual production limit from 6 to 6.5 Mtpa	Minister	96 (1A)	16 November 2016
MOD 4	Extension of Longwalls 22 and 23 and extraction of an additional 1.4 million tonnes of ROM coal	Minister	96 (2)	24 March 2017
MOD 5	Extension of Longwall 24, addition of Longwall 24A and extraction of an additional 3.71 million tonnes of ROM coal	Minister	96 (2)	1 August 2017
MOD 6	Controlled discharge of mine water from MSSS's sediment dam	Minister	4.55 (2)	15 April 2019

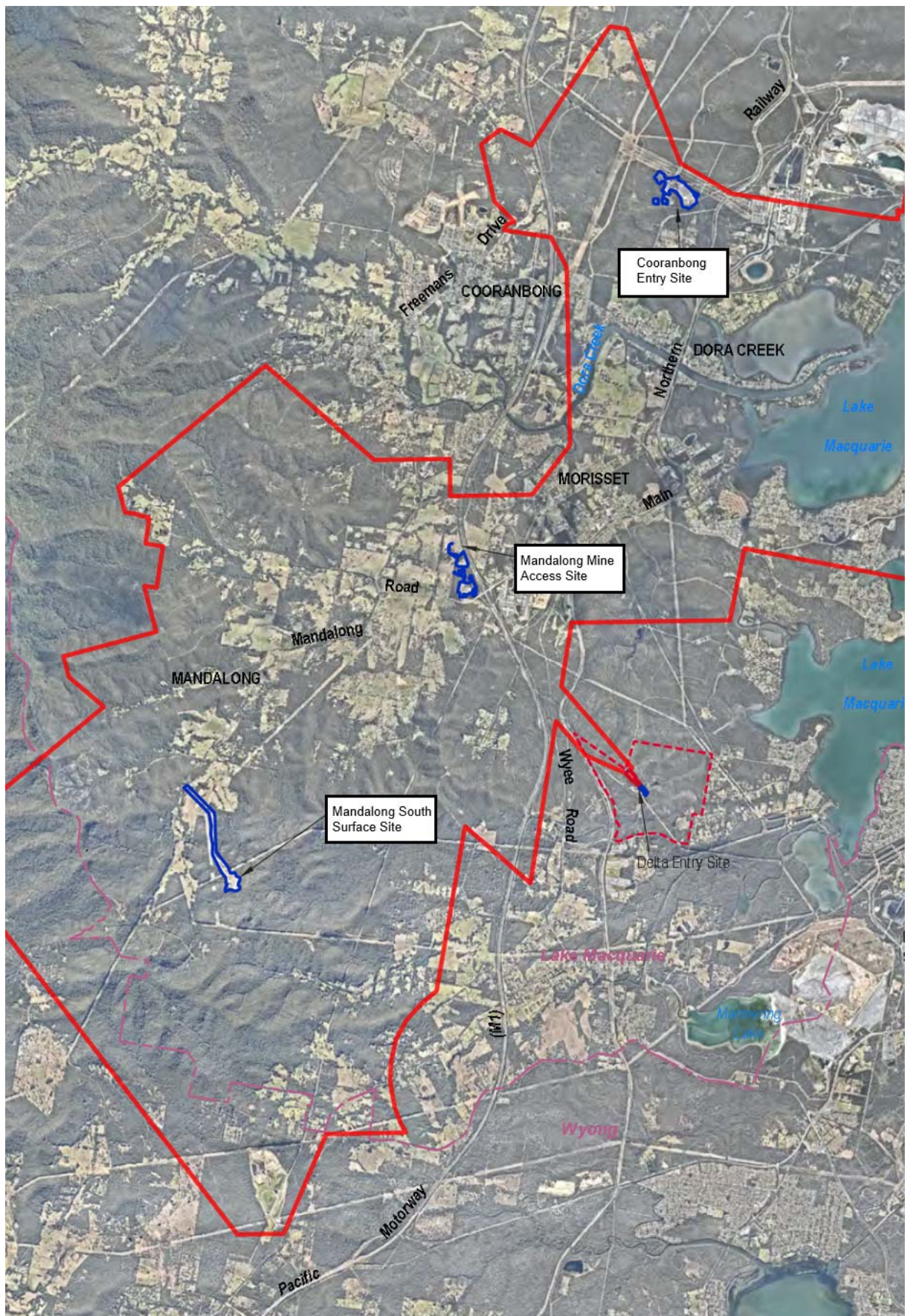


Figure 2 | Location of MSSS and MMAS



2. Proposed Modification

Centennial has identified that the approved powerline route from the MMAS to the MSSS would be difficult to maintain within the Mandalong Road reserve without clearing visually prominent native vegetation with high biodiversity values. The removal of this vegetation would likely impact the character of the locality. On 22 February 2019, Centennial submitted a modification application that proposed an alternate alignment for its 33 kV powerline to reduce clearing of vegetation with high biodiversity values and also minimise visual impacts (see **Figure 3**). The modification involves:

- establishing powerline easements in accordance with AusGrid's standards;
- upgrading existing access tracks and easements, and associated vegetation clearing;
- relocating communications and electricity infrastructure;
- erecting poles and wires and commissioning of the new infrastructure; and
- rehabilitating worksites.

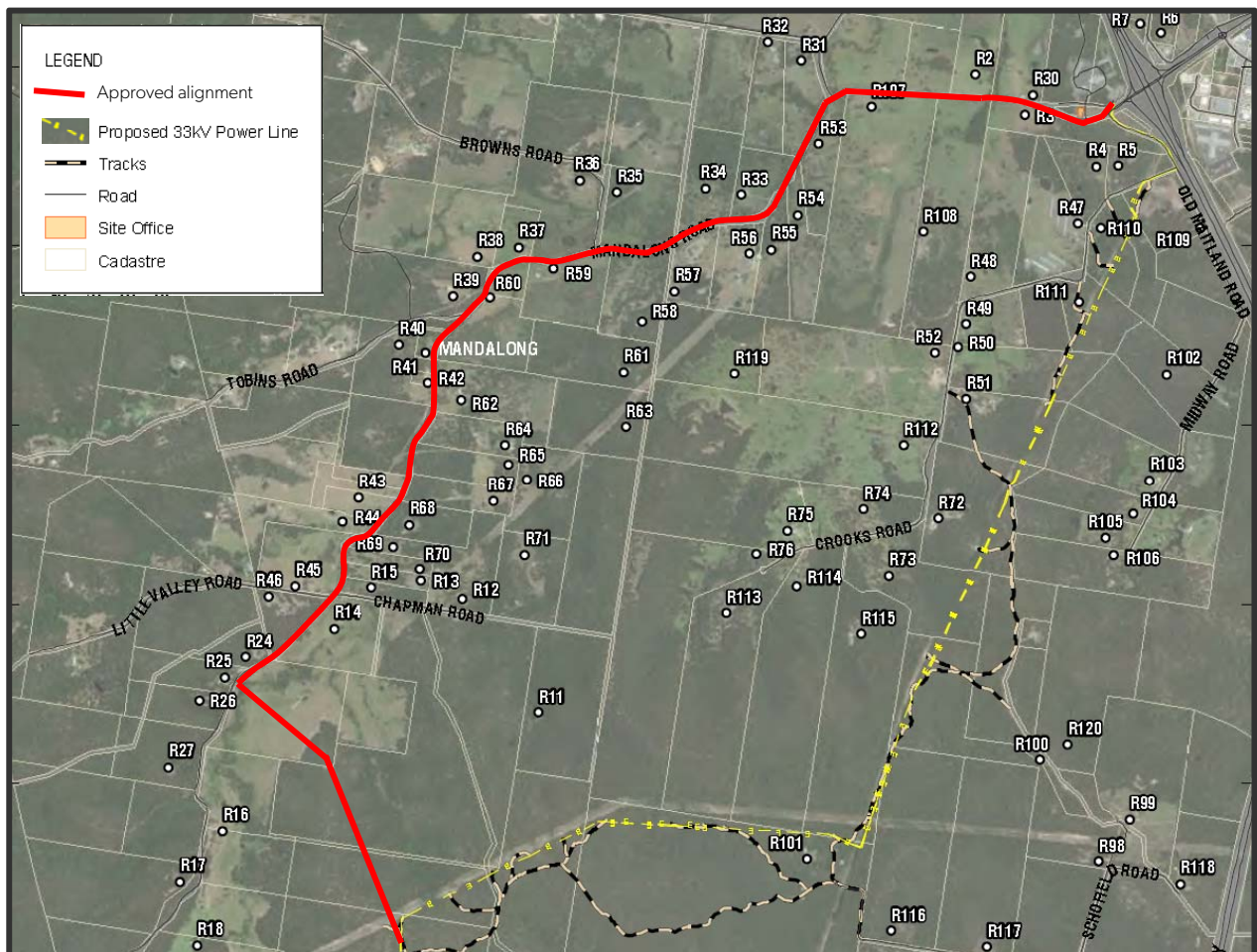


Figure 3 | Existing and Proposed 33 kV powerline alignment

The proposed modification is supported by a Statement of Environmental Effects (SEE, see **Appendix A**).

Construction of the powerline requires the installation of 73 poles (steel or timber) up to 30 metres (m) in height, shown indicatively in **Figure 4**. Centennial has estimated that construction would take approximately nine months to complete.



Figure 4 | Example of constructed powerline

Centennial provided an updated Statement of Commitments (SoC) as part of this proposed modification. The SoC includes a commitment to prepare a Construction Environmental Management Plan (CEMP) to manage impacts of the proposed powerline construction.

Centennial stated that the purpose of the modification is to provide power to the ventilation fans servicing the underground workings of the MSSS. The ventilation fans are necessary to ensure that adequate fresh air is supplied to the underground operations in accordance with the *Work Health and Safety (Mines and Petroleum Sites) Regulation 2014*.



3. Statutory Context

3.1 Proposed Modification

This application seeks to modify development consent SSD 5144 in accordance with section 4.55(2) of the *Environmental Planning and Assessment Act 1979* (EP&A Act). A development consent cannot be modified under

section 4.55(2) unless the consent authority is satisfied that the proposed development would remain substantially the same as the development for which consent was originally granted.

The Department considers that the proposed modification is consistent with section 4.55(2) of the EP&A Act as the MSEP would remain substantially as originally approved. The nature and scale of the development would also remain unchanged as the proposed 33 kV powerline is ancillary to the approved MSEP.

Therefore, the Department considers that the proposed modification is within the scope of section 4.55(2) of the EP&A Act and does not require a new development application.

3.2 Environmental Planning Instruments

Several environmental planning instruments (EPIs) apply to the proposed modification, including:

- *State Environmental Planning Policy (SEPP) (State and Regional Development) 2011;*
- *SEPP (Mining, Petroleum and Extractive Industries) 2007;*
- *SEPP (Infrastructure) 2007;* and
- *Lake Macquarie Local Environmental Plan (LEP) 2004;*
- *Lake Macquarie LEP 2014;*

The Department has considered the proposed modification against the relevant provisions of these EPIs, as well as Centennial's review of these matters. The Department considers that the project, if modified, could continue to operate in a manner that is consistent with the aims, objectives and provisions of these EPIs.

3.3 Consent Authority

The Minister for Planning and Public Spaces is the consent authority for the application under section 4.5(a) of the EP&A Act. Centennial has not reported any political donations and neither local Council objected to the modification. However, as there was one public objection, the Executive Director, Energy and Resources, may determine the application under the Minister's delegation dated 11 October 2017 and 25 June 2019.

3.4 Object of the EP&A Act

The Minister or delegate must consider the objects of the EP&A Act when making decisions under the Act. The Department has assessed the proposed modification against the objects of the EP&A Act as set out in its section 1.3. The objects of most relevance to the decision of whether to approve the proposed modification are:

- Object 1.3(a): *to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources;*
- Object 1.3(b): *to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment;*
- Object 1.3(c): *to promote the orderly and economic use and development of land;*
- Object 1.3(e): *to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats;*
- Object 1.3(f): *to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage);* and
- Object 1.3(j): *to provide increased opportunity for community participation in environmental planning and assessment.*

The Department considers that the proposed modification encourages the proper management and development of resources (Object 1.3(a)) and the promotion of the orderly and economic use of land (Object 1.3(c)). The proposed modification:

- involves a permissible land use on the subject lands;
- does not alter Mandalong's surface or transport infrastructure; and
- maintains socio-economic benefits for the community of NSW.

The Department has considered the principles of ecologically sustainable development (ESD, Object 1.3(b)) in its assessment of the proposed modification. The Department has also noted Centennial's consideration of these matters in its Environmental Impact Statement (EIS) for the original SSD application. The Department considers that mining operations would remain consistent with the principles of ESD under the proposed modification. The Department's assessment has sought to integrate all significant environmental, social and economic considerations.

The Department has considered the protection of the environment and heritage (Objects 1.3(e) and (f)). The Department recognises that the proposed modification could introduce minor additional impacts on biodiversity and items of Aboriginal cultural heritage significance. The Department's detailed consideration of biodiversity and Aboriginal cultural heritage impacts are included in **Section 5.1** and **Section 5.3** respectively.

The Department exhibited the proposed modification and made the accompanying SEE publicly available (Object 1.3(j)). One public submission by way of objection was received (see **Section 4.3**).



4. Engagement

4.1 Department's Engagement

Centennial's Mandalong Mine is located in both the Central Coast and Lake Macquarie local government areas. Therefore, the Department:

- publicly exhibited the proposed modification in newspapers that circulate in each LGA;
- made the SEE and supporting documents available on its website; and
- provided hard copies of these documents at Central Coast and Lake Macquarie City Councils' offices.

The Department also requested advice from eight Government agencies, being the Department's Division of Resources and Geosciences (DRG), Department of Industry (DoI), Roads and Maritime Services (RMS), Office of Environment and Heritage (OEH), Environment Protection Authority (EPA), Subsidence Advisory NSW (SA NSW), TransGrid and Ausgrid. Central Coast Council (CCC) and Lake Macquarie City Council (LMCC) were also invited to comment on the modification (see **Section 4.2**).

The Department also notified 216 previous submitters for the original development application and later modification applications. Nineteen private landowners whose land either adjoined, or would be traversed by, the proposed powerline were also notified and invited to comment (see **Section 4.3**).

The Department received advice from 7 agencies and the two Councils during exhibition. One submission was also received from a member of the public objecting to the proposed modification (see **Appendix B**).

4.2 Government Agencies

Advice was received from DoI, DRG, OEH, EPA, RMS, SA NSW and TransGrid. Comments were received from both CCC and LMCC. No submission was received from Ausgrid.

Dol provided advice from its Crown Lands and Water Division and the Department of Primary Industry's Fisheries Division (**DPI – Fisheries**). DPI – Fisheries did not object to the proposed modification but advised that creek crossings can impact fish and water habitat and recommended that any waterway crossing be designed in accordance with relevant guidelines. Dol's Division of Crown Lands advised that, under the *Mining Act 1992*, all crown lands and roads within a mining lease must be subject to a compensation agreement and that all crown lands and roads within an exploration licence must be subject to an access arrangement.

DRG advised that it did not object to the modification as no land use conflicts were evident nor did the modification impede access to coal resources. No amendments to conditions were recommended.

OEH advised that it did not object to the modification but requested additional information regarding the assessment of biodiversity impacts and flagged that some threatened species records were missing from the SEE. OEH also recommended a range of conditions to protect Aboriginal heritage items. The Department's consideration of biodiversity and Aboriginal cultural heritage is included in **Section 5.1** and **Section 5.3**, respectively.

EPA advised that sections of the proposed powerline alignment were situated outside the area covered by Mandalong's Environmental Protection Licence (EPL) and therefore were under the authority of the local Council. EPA advised that the existing EPL adequately addressed matters such as erosion and sediment controls, noise, air quality, groundwater, surface water and waste. No amendments to conditions were recommended.

RMS advised that it did not object to the modification provided that the powerline easement did not encroach into the Pacific Motorway road corridor.

SA NSW did not object to the proposed modification or recommend amendments to conditions.

TransGrid did not object to the proposed modification and provided its guidelines for third party developments in or near its powerline easements.

CCC did not object to the proposed modification as the powerline's construction would occur in LMCC.

LMCC did not object to the proposed modification but raised concerns about impacts on flora and fauna, impacts on biodiversity offsets and potential erosion and sediment run-off hazards. The Department's consideration of biodiversity is included in **Section 5.1**.

4.3 Community

One public submission was received which objected to the modification. This submission expressed the concern that mining contributed to climate change and that the proposed modification would enable mining at Mandalong to continue. The Department's consideration of climate change is included in **Section 5.3**

4.4 Response to Submissions

On 8 April 2019, the Department requested Centennial to prepare a Response to Submissions report (RTS). The Department received the RTS on 14 May 2019 (see **Appendix C**) and made it available to agencies that raised concerns during the exhibition.

OEH reviewed the RTS and advised that its concerns had been satisfactorily addressed.

The RTS confirmed that no works would occur within the Pacific Motorway road reserve. Based on this information, RMS advised that it did not object to the proposed modification.

LMCC reviewed the RTS and was satisfied that its concerns about flora and fauna impacts had been suitably addressed. LMCC recommended conditions to be included in the consolidated consent.

No other advice was received from agencies regarding the RTS.



5. Assessment

In assessing the merits of the proposal, the Department has considered the:

- EIS for the original project;
- SEEs for previous modifications;
- SEE for the proposed modification;
- relevant EPLs; and
- requirements of the EP&A Act, including the objects of the Act.

The Department considers that the key issues for assessment of the proposal are biodiversity impacts and construction traffic. The Department's consideration of these issues is provided below in **Sections 5.1** and **5.2**. The Department has also considered other issues in **Section 5.3**.

5.1 Biodiversity

The construction of the 33 kV powerline would need clearing of approximately 8.83 ha of native vegetation, namely:

- 6.81 ha from within the proposed easement to satisfy AusGrid's standard for powerline easements and protection of its assets;
- 1.84 ha to upgrade access tracks for construction and maintenance; and
- 0.18 ha to install a temporary site office.

Approximately 1.66 ha of exotic flora would also require to be removed.

The modification is proposed to reduce the impacts of vegetation clearing required to construct the 33 kV powerline in its approved alignment. The approved and proposed alignments both require removal of a similar amount of vegetation, however the proposed alignment contains vegetation of lower biodiversity and aesthetic value and would be more obscured from public views, particularly those along Mandalong Road.

The approved alignment is located mainly within the Mandalong Road reserve and then traverses several parcels of land that are heavily vegetated (see **Figure 3**). There are also several large stands of established trees within the Mandalong Road reserve that would require high level pruning and, where poles are sited, clearing to comply with AusGrid's standards for easements. The approved alignment also would require the removal of up to nine hollow-bearing trees. In contrast, the proposed alignment makes use of existing access tracks and cleared land to construct the 33 kV powerline which would not require removal of any hollow-bearing trees.

Centennial's SEE included a Biodiversity Development Assessment Report (BDAR) prepared in accordance with the Biodiversity Assessment Method (BAM) under the *Biodiversity Conservation Act 2016* (BC Act). The BDAR assessed direct and indirect biodiversity impacts of the project and included a Biodiversity Inventory Report (BIR). The BDAR identified that several Plant Community Types (PCTs) and threatened fauna species would be impacted and that biodiversity credits would need to be retired to offset these impacts. Centennial proposes to satisfy its biodiversity credit requirements by making a payment into the Biodiversity Conservation Fund (BCF).

Centennial approached the Commonwealth Department of Environment and Energy (DoEE) to confirm that the powerline construction would not constitute a 'controlled action' under the *Environment Protection and*

Biodiversity Conservation Act 1999 (EPBC Act). DoEE advised that the proposed modification was not a 'controlled action' and would not require further assessment or approval under the EPBC Act.

5.1.1 Flora Impacts

During preparation of the SEE, Centennial examined a range of options for realigning the 33 kV powerline. The alternatives included:

- constructing the powerline along the Mandalong Road reserve;
- rebuilding the existing 11 kV powerline;
- sub-surface boring; and
- laying high-voltage cables through Mandalong's underground workings.

These scenarios were not selected as they would result in one or more of the following:

- increased vegetation clearance;
- excessive costs;
- unreasonable and prolonged impacts on residents' power supply; and
- noticeable visual impacts.

The preparation of the BDAR included a desktop review of the most recent information available from Commonwealth and OEH databases, LMCC vegetation mapping, aerial photography and field surveys. The desktop review identified 20 listed threatened flora that could be present within 10 km of the powerline construction alignment and access tracks.

Centennial collected rapid data points (RDPs) across the project area to ground-truth LMCC's vegetation mapping. Following collection of the RDPs, GIS was used to determine the required survey effort. A total of 17 flora plots were used to assess the structure, composition and functional components of vegetation integrity, which exceeded the plot requirements set out in the BAM.

These targeted surveys identified six PCTs that would be directly impacted by the powerline's construction, which were all considered for offsetting under the BAM. However, only five PCTs require offsetting (see **Table 2**). The sixth PCT is likely to be impacted by the powerline's construction but has a low biodiversity value and, in accordance with the BAM, did not require further assessment or offsetting.

Table 2 | Plant community types

Plant Community Type	PCT ID	Area of Clearance (ha)	Required Ecosystem Credits
Blackbutt – Turpentine – Sydney Blue Gum	1568	0.02	1
Sydney Blue Gum – Lilly Pilly	1573	0.3	9
Grey Ironbark – Broad Leaf Mahogany – Red Forest Gum	1588	6.1	147
Smooth-barked Apple – Red Bloodwood – Brown Stringybark - Hairpin Banksia	1619	2	36
Smooth-barked Apple - Red Bloodwood - Scribbly Gum	1638	0.18	4
Total		8.6	197

The proposed powerline easement traverses an existing biodiversity offset site for TransGrid's 330 kV transmission line 24 (TL 24). The proposed powerline easement would require clearing 0.53 ha of the TL 24 offset site. Centennial included this vegetation clearing in its offset calculations under the BAM and proposed to make a payment into the BCF to satisfy its offset requirements. The proposed vegetation clearing in TL 24 would also

require Centennial to amend its Property Vegetation Plan. OEH stated that it was satisfied with Centennial's proposal to offset the vegetation clearing in TL 24 by making a payment into the BCF.

The BDAR identified that the powerline's construction would avoid all threatened flora within the proposed alignment. However, OEH questioned the accuracy of this conclusion as the mapping of three species, *Tetradlea juncea* (Black-eyed Susan), *Grevillea parviflora subsp. parviflora* (Small-flower Grevillea) and *Melaleuca biconvexa* (Biconvex Paperbark), appeared to conflict with the proposed siting location of several poles. OEH requested Centennial to confirm that the pole siting locations did not impact these threatened species.

In its RTS, Centennial clarified its approach for avoiding construction impacts on these species stating that much of the vegetation clearing was high level pruning to provide the necessary separation between the wires and vegetation. Centennial had conservatively assessed all vegetation disturbance within the project area, including pruning of canopy vegetation and understory clearance, which produced a degree of overlapping information. OEH was satisfied that Centennial had addressed its concerns and subsequently recommended conditions to be included in the modified consent.

The Department accepts that the proposed construction alignment would pose the lowest impact on flora, subject to AusGrid's requirements for powerlines easements and aside from not proceeding. These impacts would be appropriately offset through Centennial's payment into the BCF.

5.1.2 Fauna Impacts

The BDAR identified that primary impacts for fauna would be removal of habitat and the risk of vehicle strike. The assessment identified that species occurring in the project area and surrounding roads and access tracks were nocturnal and, as works are only proposed during the day, the chance of vehicle strike would be low. Centennial has also committed to reducing the likelihood of vehicle strike by strictly applying speed limits.

Based on the PCTs, Centennial's desktop audit identified that 60 listed threatened fauna could be present within 10 km of the powerline alignment and access tracks. Targeted surveys within the project area identified nine fauna species potentially present and of these, only two would require species offsets.

The BDAR identified suitable habitat for the Glossy Black Cockatoo and Green Thighed Frog. Both species were likely to be impacted within the proposed area of clearing and would require the purchase and retirement of species credits (229 and 9 credits, respectively).

OEH's advice raised concerns that the threatened species included in the BIR were inconsistent with those included in the flora and fauna assessment in the EIS for the original MSEP. OEH suggested that this was because species records had not been submitted in accordance with Centennial's Scientific Licence. In its RTS, Centennial confirmed that the species identified were up to date, which was accepted by OEH. Following review of the RTS, OEH advised that its concerns had been addressed and recommended conditions regarding monetary payment into the BCF to offset the required species and ecosystem credits.

5.1.3 Biodiversity Offsets

Centennial would need to purchase and retire 197 ecosystem and 238 species credits to offset the biodiversity impacts of the proposed powerline. Under the BC Act, the options available are:

- purchasing and retiring the equivalent biodiversity credits to establish a stewardship site;
- funding a biodiversity conservation action that benefits the impacted biodiversity;
- committing to deliver mine site ecological rehabilitation that creates the same ecological community or threatened species; or
- paying an offset amount into the BCF.

Centennial has elected to pay a monetary contribution into the BCF as determined by OEH's offsets payment calculator. The Department considers that, based on OEH's advice, this an acceptable method of offsetting the biodiversity impacts of the proposed powerline. The Department has recommended conditions requiring payment into the BCF prior to the commencement of vegetation clearing works.

5.2 Construction Traffic

Construction of the proposed powerline would result in additional traffic over a period of approximately nine months. A Traffic Impact Assessment (TIA) was prepared to determine the impact of worst-case construction traffic for the surrounding road network. There are eight road access points to the project area, being:

- five off Crooks Road; and
- one each off Schofield, Mandalong and Dyce Roads.

The access points from the public road network to the project area are shown in **Figures 5 and 6**.

The results of traffic counts and the predicted maximum vehicle trips resulting from the proposed modification are provided in **Table 3**.

Table 3 | Peak existing and predicted vehicle trips

Road	Existing AM max. vehicle trips per hour (vtp/h)	Predicted AM max. (vtp/h)	Existing PM max. (vtp/h)	Predicted PM max. (vtp/h)
Mandalong Road (west)	281	371	337	427
Mandalong Road (north)	42	132	44	134
Old Maitland Road	38	128	51	141
Crooks Road	35	125	48	138
Hue Hue Road	230	320	351	441
Wyee Farms Road	50	140	65	155
Manhire Road	30	120	34	124
Schofield Road	38	128	46	136
Dyce Road	36	126	48	138

The greatest increase in maximum hourly vehicle trips for each assessed road is in the afternoon peak, with the highest number of vehicles predicted on Hue Hue Road. However, Level of Service (LoS) B would be maintained for this road, according to the *RTA's Guide to Traffic Generating Developments (2002)*.

The proposed traffic route to the southern access points from the MMAS included several right turns which are serviced by either roundabouts or channelised right turn lanes. Centennial's TIA identified that the roundabout intersection of Mandalong and Wyee Roads had LoS A in the morning peak and LoS D in the afternoon peak. The TIA predicted that construction traffic using this route would add around 40 vehicle trips per hour. Based on this predicted increase, the roundabout would have LoS B in the morning peak and maintain LoS D during the afternoon peak. The intersection of Hue Hue Road and Wyee Road would maintain LoS C in both the morning and afternoon peaks. As the construction traffic impacts would be temporary (ie up to nine months), the Department considers this impact to be acceptable. No upgrades to any intersection are considered necessary.

As the roads are classified as local roads under the authority of Council, the Department sought advice from both LMCC and CCC regarding impacts on the local road network. Neither Council raised any concern. The Department considers that construction traffic impacts are manageable and has recommended a condition for

Centennial to prepare and implement a Construction Traffic Management Plan specifically for the construction of the 33 kV powerline.

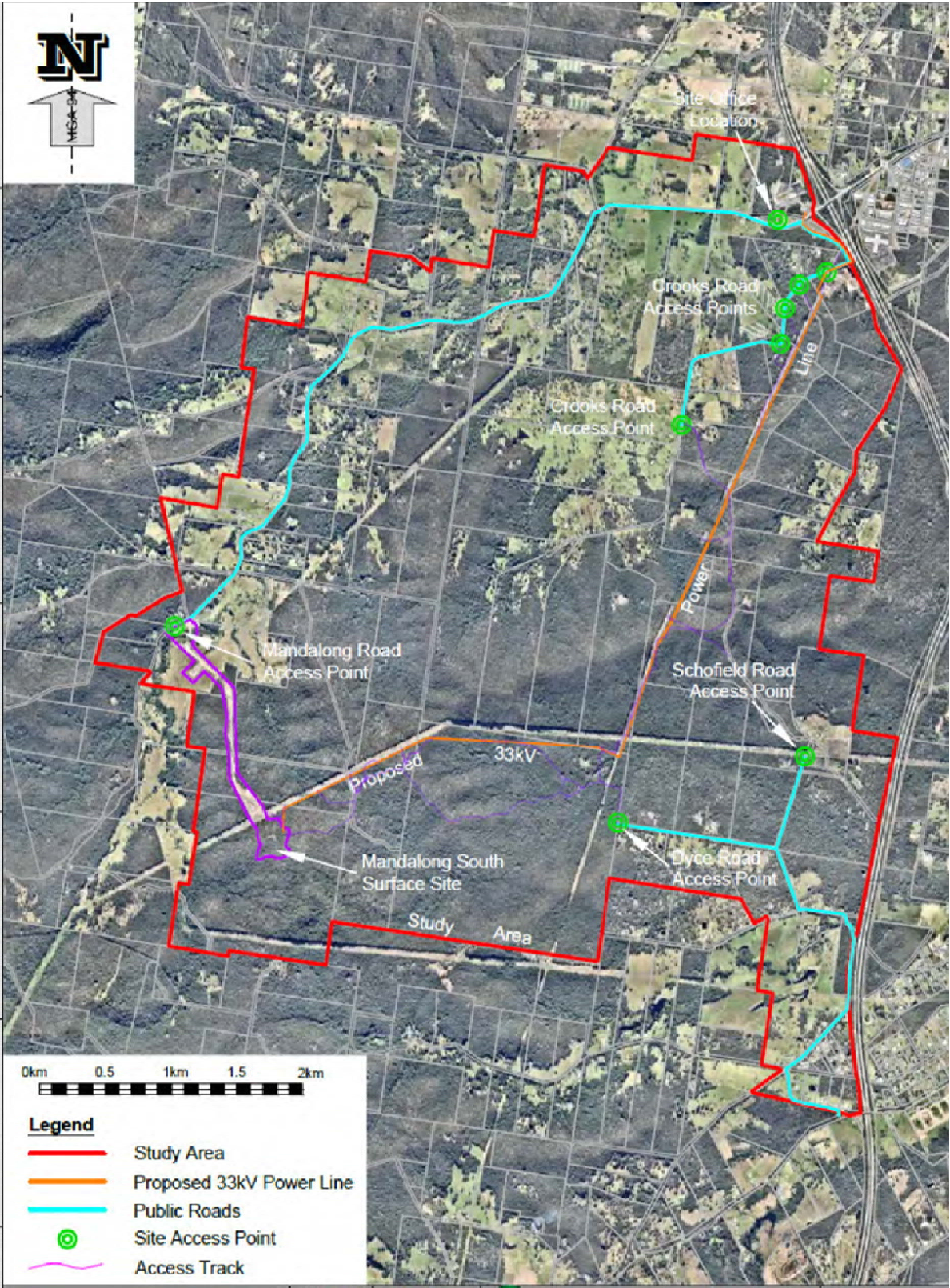


Figure 5 | Traffic routes to access the project area

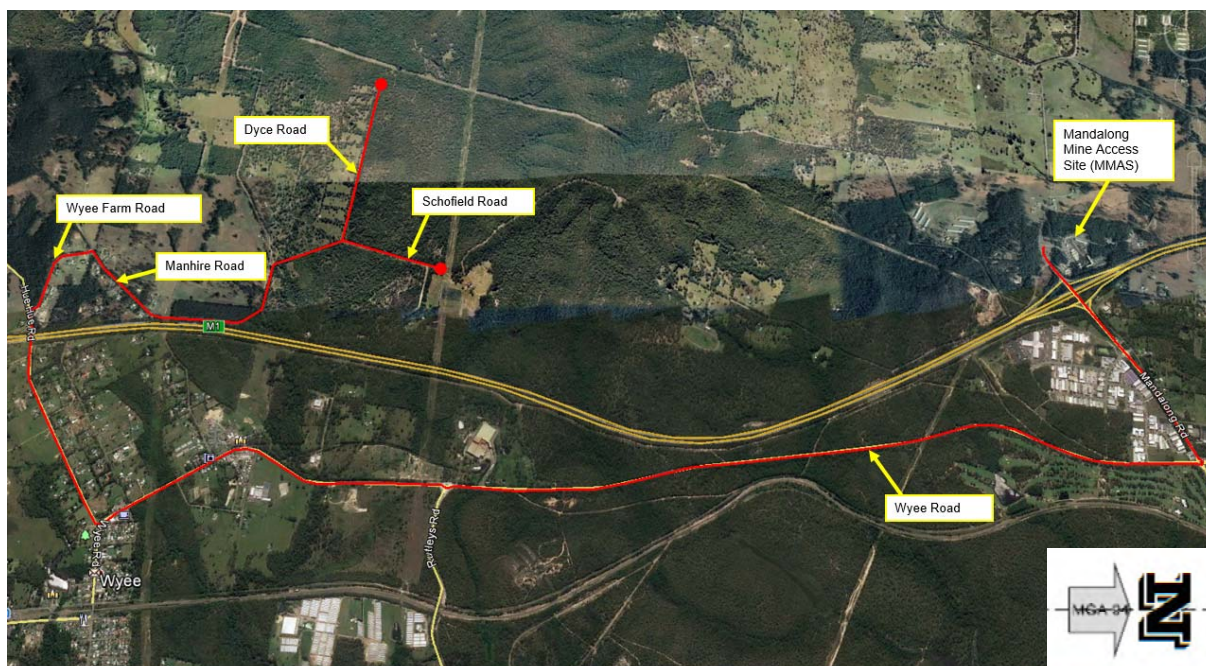


Figure 6 | Traffic route from MMAS to Schofield Road and Dyce Road access points

5.3 Other Issues

Other impacts resulting from the proposed modification are considered negligible. A summary of the Department's consideration of these matters is included in **Table 4**.

Table 4 | Summary of other issues raised

Issue	Findings	Recommended Condition
Air Quality	<ul style="list-style-type: none"> Potential sources of dust from the powerline's construction were identified from vegetation clearing, pole delivery and boring and from exposed lands. Centennial modelled the predicted increases in PM_{2.5}, PM₁₀, Total Suspended Particulates and deposited dust cumulatively with Mandalong's current approved operations. No exceedances of the existing approved air quality assessment criteria were predicted as a result of the proposed modification. The EPA did not raise concerns about air quality impacts in its advice. The Department considers that negligible air quality impacts would result from the proposed modification. 	<ul style="list-style-type: none"> No changes to conditions considered necessary. Centennial has also included management commitments in its updated SoC.
Construction Noise	<ul style="list-style-type: none"> Construction noise is predicted from vegetation clearing, power pole delivery and boring activities. A Construction Noise Impact Assessment was included in the SEE and prepared in accordance with the Noise Policy for Industry and the Interim Construction Noise Guideline. No exceedances of the 'highly affected' construction noise criterion were predicted at any receiver location. 	<ul style="list-style-type: none"> The Department has included Centennial's updated SoC in the proposed Notice of Modification (see Appendix E). The SoC includes a commitment to prepare and implement a Construction Environment Management Plan to manage noise during the powerline's construction.

	<ul style="list-style-type: none"> The Department considers construction noise to be reasonable and notes that it would occur over a limited period (up to 9 months in total, but at varying locations). 	
Aboriginal Cultural Heritage	<ul style="list-style-type: none"> Potential impacts on items of Aboriginal heritage significance are considered low. An Aboriginal Cultural Heritage Assessment included in the SEE was prepared in consultation with Registered Aboriginal Parties (RAPs). Three existing and three new Aboriginal sites were identified. However, none would be impacted directly by the powerline's construction. RAPs did not recommend surface collection as the areas of the new sites were highly eroded. There is a low risk of undiscovered Aboriginal sites, such as grinding grooves in the abundant outcrops of sandstone, particularly along minor drainage lines that cross the project area. OEH recommended that heavy vehicles are prevented from accessing these areas. Existing conditions of consent require the preparation and implementation of a Heritage Management Plan, which must be reviewed and updated following approval of any modification. The Department would expect the updated management plan to satisfactorily address the risk of impacting undiscovered Aboriginal sites 	<ul style="list-style-type: none"> No additional conditions considered necessary. Centennial has also included management commitments in its updated SoC.
Bushfire	<ul style="list-style-type: none"> The proposed powerline is within land mapped as bushfire affected. The proposed modification includes vegetation removal for the proposed easement in accordance with AusGrid's Network Standard NS 179 Vegetation Management. AusGrid would take ownership of the poles and wires upon completion and inherit their maintenance and management requirements. AusGrid has developed a Bushfire Risk Management Plan to satisfy the <i>Electricity Supply (Safety and Network Management) Regulation 2014</i>. 	<ul style="list-style-type: none"> No changes to conditions considered necessary. Centennial has also included management commitments in its updated SoC.
Surface and Ground Water	<ul style="list-style-type: none"> The Department received a submission from LMCC raising concerns over erosion and sediment laden run-off from exposed areas. Centennial stated in its RTS that it would be implementing erosion and sediment controls in accordance with the <i>Managing Urban Stormwater: Soils and Construction – Volume 1</i> (Landcom, 2004) and <i>Volume 2C: Unsealed Roads</i> (DECC, 2008). 	<ul style="list-style-type: none"> No changes to conditions considered necessary. Centennial has also included management commitments in its updated SoC.
Visual	<ul style="list-style-type: none"> The approved construction alignment would be visually obtrusive from a number of public viewpoints, particularly along Mandalong Road. 	<ul style="list-style-type: none"> No changes to conditions considered necessary.

	<ul style="list-style-type: none"> The proposed alignment would be largely obscured from view from public viewpoints. Centennial has also included management commitments in its updated SoC. 	
Climate Change	<ul style="list-style-type: none"> One public submission raised a concern that providing power to the MSEP promoted coal extraction that in turn would be burned to create electricity, which releases greenhouse gases contributing to climate change. The Department notes that increased coal extraction does not form part of Modification 7. Centennial's development consent requires the preparation and implementation of an Air Quality and Greenhouse Gas Management Plan. This plan must be reviewed and updated following approval of any modification. 	No changes to conditions considered necessary.

5.4 Recommended conditions

A notice of modification (see **Appendix D**) and a consolidated version of the MSEP development consent (see **Appendix E**), as proposed to be amended, have been prepared.

The Department has recommended conditions for offsetting biodiversity impacts as well as requiring the preparation and implementation of a Construction Traffic Management Plan.

The Department provided the draft conditions to Centennial for comment. Centennial has accepted the recommended conditions.



6. Evaluation

This proposed modification seeks approval to construct a 33 kV powerline from the MMAS to the MSSS via an alternate construction alignment to that currently approved. The construction would require approximately 8.83 ha of native vegetation clearing for easements, access tracks and pole siting locations.

The proposed modification results in clearing of vegetation of a lower biodiversity value than along the approved alignment. The proposed construction alignment would be visually less obtrusive from public viewpoints.

The assessment of traffic impacts has demonstrated that the temporary increased vehicle movements resulting from the proposed modification would not detrimentally affect users of the surrounding road network. The capacity of the surrounding local roads and intersections would remain within RMS guidelines.

The Department considers that MSEP, as modified, would continue to provide benefits to the region through its production of thermal coal for electricity generation. Therefore, the Department considers that the proposed modification is in the public interest and should be approved.



7. Recommendation

It is recommended that the Acting Executive Director, Energy and Resources, as delegate of the Minister for Planning and Public Spaces:

- **considers** the findings and recommendations of this report;
- **determines** that the application Mandalong Southern Extension Project Mod 7 falls within the scope of section 4.55(2) of the EP&A Act;
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant consent to the application;
- **modifies** the consent SSD 5144; and
- **signs** the attached notice of modification (**Appendix E**).

Recommended by:

Recommended by:

Anthony Barnes 25.7.19.
Senior Environmental Assessment Officer
Resource Assessments

Howard Reed 25.7.19.
Director
Resource Assessments



8. Determination

The recommendation is: **Adopted** / Not adopted by:

Mike Young 25/7/19.
Acting Executive Director
Energy and Resources



Appendices

Appendix A – Statement of Environmental Effects

Please refer to the Department's major projects website at:

http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9926

Appendix B – Submissions

Please refer to the Department's major projects website at:

http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9926

Appendix C – Response to Submissions

Please refer to the Department's major projects website at:

http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9926

Appendix D – Consolidated Consent

Please refer to the Department's major projects website at:

http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9926

Appendix E – Notice of Modification

Please refer to the Department's major projects website at:

http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9926