

DOC21/969550-8 – Mount Pleasant Optimisation Project (SSD-10418)
EPBC Bilateral Assessment - BCD Assessment

Assessment of EPBC Act-listed threatened species and communities for projects
Suggested information for inclusion in the advice to DPIE

Mount Pleasant Optimisation Project (SSD 10418) EPBC Bilateral Assessment – BCD
Assessment (EPBC 2020/8735)

All section, table, figure and appendix references in this document (below) refer to sections, tables, figures and appendices in the Biodiversity Development Assessment Report (BDAR) (dated January 2021) submitted with the EIS, and additional information provided during the Response to Submissions stage (Letter to BCD dated 09 September 2021), including a revised BDAR (dated June 2021).

1. Background & Description of Action

Does the EIS/BDAR¹:

- ☒ clearly show how operational and construction footprints, including clearing boundaries, structures to be built and elements of the action are situated with regard to MNES
- ☒ depict stages and timing of the action that may impact on MNES
- ☒ provide a map(s) of the subject land boundary showing the final proposal/disturbance footprint with respect to location of MNES, including GIS shape files

Provide advice on the adequacy of the background and action description with respect to MNES and identify any recommended additional information requirements:

The bilateral assessment for this project relates to the re-routing of the Northern Link Road on the northern edge of the Mount Pleasant Optimisation Project (SSD-10418). There are two road section options, and the final route has not been decided at the time of writing. Both options have been assessed using the Biodiversity Assessment Method 2017 (BAM). Option 1 would clear 26.4 hectares of land with MNES values. Option 2 would clear 22.5 hectares of land with MNES values. Other impacts to MNES for this project have been considered under a previous assessment and will be offset under *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) Referral 2011/5795.

The Biodiversity Development Assessment Report (BDAR) forms Appendix E of the Environmental Impact Statement (EIS) for the project. The BDAR (on page 23) clearly shows the location of both road options in relation to Matters of National Environmental Significance in Figure 8b 'Threatened Ecological Communities listed under the [*Biodiversity Conservation Act 2016*] BC Act and EPBC Act'. The construction footprint matches the operational footprint. Section 3.5 (page 3-14) and Figure 3-11 'Provisional Project Construction Schedule' (p. 3-15) of the main report of the EIS states that construction of the Northern Link Road would occur in Year 3 of the Project (i.e., 2025).

On 17 February 2021 the proponent provided BCD with GIS shape files for the maps in the BDAR, including for the Northern Link Road options and MNES.

2. Landscape Context of the MNES

Provide advice on the adequacy of the landscape context information and identify any additional information requirements:

Section 2 'Landscape Features' of the BDAR (pages 12 to 15) describes the landscape features for the project and meets the requirements of the BAM. No additional information was required.

¹ ¹ Bilateral agreement (BLA) made under section 45 of the EPBC Act, including Amending Agreement No. 1 (2020).

¹ Or revisions of the BDAR and associated documentation made as a result of previous reviews or project changes post-exhibition³

DOC21/969550-8 – Mount Pleasant Optimisation Project (SSD-10418)
EPBC Bilateral Assessment - BCD Assessment

3. EPBC Act Listed Threatened Species & Communities

Verify that the EIS/BDAR includes relevant information on the identification of all EPBC Act listed threatened species and communities on the site or in the vicinity² via:

- ☒ field based survey effort
- ☒ published peer reviewed literature
- ☒ local data
- ☒ supporting databases (such as the NSW BioNet Vegetation Classification, NSW BioNet Threatened Biodiversity Data Collection, NSW BioNet Atlas, Commonwealth Species Profile and Threats Database search results)
- ☒ Verify that the EIS/BDAR includes appropriate mapping of all EPBC Act listed threatened species and communities in accordance with the relevant Commonwealth Listing Advice. The EIS/BDAR should include important populations and critical habitat as defined in Approved Listing Advice, Approved Conservation Advice and Recovery Action Plans.

Provide advice on the adequacy of the identification methods and mapping information / any additional information requirements:

Field-based survey effort:

Vegetation surveys are described in Chapter 6 (particularly Sections 6.1 to 6.3) and Sections 7.1 to 7.7 of Attachment A 'Mount Pleasant Optimisation Project Baseline Flora Report' of the BDAR. Vegetation surveys used the required number of BAM data plots and included Rapid Data Points; it met BAM requirements. The flora survey identified white box – yellow box – Blakely's red gum grassy woodland Critically Endangered Ecological Community (CEEC) on site, including within both possible routes for the Northern Link Road.

Targeted threatened flora and fauna surveys are described in Sections 6.5, 7.8 and 7.9 of Attachment A 'Mount Pleasant Optimisation Project Baseline Flora Report' and Sections 2.4 and 3.2 of Attachment B 'Mount Pleasant Optimisation Project Baseline Fauna Survey Report' of the BDAR. No EPBC Act-listed threatened flora species were found on the site during surveys. Due to drought conditions at the time of surveys (in 2019) an Expert Report was prepared to consider the likelihood that threatened spring-flowering ground orchids may be on the project site. The Expert Report is presented in Attachment D of the BDAR and made a reasonable case that *Prasophyllum* sp. Wybong, the only EPBC Act-listed species of the three orchids considered for the project, was unlikely to grow on the site. Two EPBC Act-listed fauna species were found on the project site: striped legless lizard (*Delma impar*) and the grey-headed flying-fox (*Pteropus poliocephalus*); the latter as foraging individuals – no camp was recorded on the site. The species polygon for the striped legless lizard did not extend into either route for the Northern Link Road. BCD is satisfied that flora and fauna survey requirements for BAM have been met.

Published peer reviewed literature:

Section 9 'References' on pages 155 to 160 of the BDAR includes peer-reviewed papers that were used for the assessment of the koala and striped legless lizard. Most of the references are state or Commonwealth government websites, and these are considered to be current and contain reliable information about all MNES considered for this project.

Local data:

Section 1.8 (page 11) of the BDAR states that no local data was used for the assessment.

² On land to which impacts may extend.

DOC21/969550-8 – Mount Pleasant Optimisation Project (SSD-10418)
EPBC Bilateral Assessment - BCD Assessment

Supporting databases:

Four databases were cited as being used for the MNES assessment:

1. NSW BioNet Vegetation Classification – is cited in many parts of the BDAR, including on page EE-2 and in Section 1.7 ‘Published Databases’
2. NSW BioNet Threatened Biodiversity Data Collection – cited in Section 1.7 ‘Published Databases’
3. NSW BioNet Atlas – cited in Section 1.7 ‘Published Databases’
4. Commonwealth Species Profile and Threats Database search results – from a search dated 02 September 2020 were provided in Attachment D-2 of Attachment D ‘Supplementary Biodiversity and Conservation Division Advice and MACH’s Responses’ (dated 9 September 2021).

Appropriate mapping of all EPBC Act-listed species and communities in accordance with relevant Commonwealth Listing Advice:

Section 7.4 of the BDAR discusses the clearance of potential habitat for the striped legless lizard (*Delma impar*) and the grey-headed flying-fox (*Pteropus poliocephalus*), as well as direct clearance of box-gum woodland CEEC. The project does not contain any flying-fox camps (BDAR, pg. 44), so the woody vegetation it contains is considered to be foraging habitat only. Therefore, the grey-headed flying-fox is treated as an ecosystem species and is therefore the foraging value of the project area to this species, and the likely impact in this species is covered by the vegetation map of the project area. As described in Section 7.4.2 of the BDAR, all of the vegetation in the two possible road routes are considered to be habitat for the striped legless lizard. Therefore, habitat for these two MNES species that are considered to be impacted by the project have been appropriately mapped.

Section 7.7 of Attachment A ‘Mount Pleasant Optimisation Project Baseline Flora Report’ of the BDAR describes how the EPBC Act definition of box – gum woodland was applied in recognising and mapping this CEEC on the project area. Therefore, the EPBC Act -defined box – gum woodland has been appropriately mapped for this assessment.

Any important populations and critical habitat, as defined in Approved Listing Advice, Approved Conservation Advice and Recovery Action Plans:

There are no ‘important populations’ or ‘critical habitat’ likely to be impacted by the proposed road.

Confirm that all EPBC Act listed threatened species and communities that occur on the subject land, or in the vicinity, have been identified in the BDAR/EIS including those that are ecosystem credit species.

BCD confirms that all EPBC Act-listed threatened species and communities that occur on the subject land, or in the vicinity, have been identified in the BDAR.

If any species and communities identified in the referral documentation (provided by DAWE) have been ruled out because they don’t occur on or near the site, verify that there is robust analysis and justification for why these species can be ruled out.

The referral decision brief (dated 26 August 2020) identified that the project was likely to have a significant impact on

- White box – yellow box – Blakely’s red gum grassy woodland and derived native grassland (‘box-gum woodland’)
- Swift parrot (*Lathamus discolor*)
- Regent honeyeater (*Anthochaera phrygia*)

DOC21/969550-8 – Mount Pleasant Optimisation Project (SSD-10418)
EPBC Bilateral Assessment - BCD Assessment

- Striped legless lizard (*Delma impar*)

And may have a significant impact on

- Austral toadflax (*Thesium australe*)
- Slaty red gum (*Eucalyptus glauca*)

To this list the proponent (Section 7.4 of the BDAR) added

- Spotted-tailed quoll (*Dasyurus maculatus maculatus*)
- Koala (*Phascolarctos cinereus*)
- Grey-headed flying-fox (*Pteropus poliocephalus*)

As described in Section 7.4 of the BDAR, box-gum woodland was recorded on land for both road options, and the striped legless lizard and the grey-headed flying-fox have been recorded at other locations on the mining lease. The project is considered likely to impact on box-gum woodland and the striped legless lizard, and those specific impacts will be offset.

Section 7.4.3 of the BDAR describes the assessment for the swift parrot. The species was not identified on the site during recent surveys; there are no local records; and the project does not occur within a 'Mapped Important Area' for the species. BCD agrees that this species is unlikely to be present on the site, and its potential habitat will be offset with ecosystem credits.

Section 7.4.4 of the BDAR describes the assessment for the regent honeyeater. The species was not identified on the site during recent surveys; there are no local records; and the project does not occur within a 'Mapped Important Area' for the species, and there are no known breeding sites nearby. BCD agrees that this species is unlikely to be present on the site, and its potential habitat will be offset with ecosystem credits.

Section 7.4.5 of the BDAR describes the assessment for the koala. The species was not identified on the site during recent surveys, and there are no local records. Further, the project area does not contain habitat critical for the survival of the koala. BCD agrees that this species is unlikely to be present on the site, but its potential habitat will be offset with ecosystem credits.

Section 7.4.6 of the BDAR describes the assessment for the spotted-tailed quoll. The species was not identified on the site during recent surveys. There is one local record in BioNet (from 2006), but it has a degree of accuracy of 10,000 metres. BCD agrees that this species is unlikely to be present on the site, but its potential habitat will be offset with ecosystem credits.

Section 7.4.7 of the BDAR describes the assessment for the grey-headed flying-fox. The species was not identified on the site during recent surveys; but there are records from other parts of the Mining Lease. However, no camp has been identified on the Mining Lease or the project area. Potential foraging habitat will be cleared for this project and this will be offset with ecosystem credits.

Section 7.2.2 of the BDAR summarised the assessment for austral toadflax, with further details provided in Attachment A (Baseline Flora Report). Targeted surveys were conducted for this species in accordance with BCD threatened flora survey guidelines. Due to records of this species on the nearby Dartbrook and Mangoola Mine sites BCD considered that this species had a high likelihood of also occurring on the Mount Pleasant project area but is satisfied that this species has been demonstrated to not be present there.

Section 7.2.2 of the BDAR summarised the assessment for slaty red gum, with further details provided in Attachment A (Baseline Flora Report). Targeted surveys were conducted for this species in

DOC21/969550-8 – Mount Pleasant Optimisation Project (SSD-10418)
EPBC Bilateral Assessment - BCD Assessment

accordance with BCD threatened flora survey guidelines. Further, most trees and shrubs on the project area were included in Rapid Datapoint Surveys. BCD is satisfied that if this species was present in the project area it would have been detected.

Provide advice on whether there are any other MNES species or communities that are missing from the assessment based on BCS knowledge and experience.

No currently-listed MNES species or communities are missing from the assessment for this project.

Advise whether there is appropriate justification and supporting evidence for the addition and/or exclusion of any EPBC Act listed threatened species and/or communities from the list (if applicable):

BCD is satisfied that it was justifiable to include the spotted-tailed quoll, the koala and the grey-headed flying-fox in the assessment of MNES, and that they have been appropriately assessed.

4. Avoidance, Minimisation Mitigation & Management

Verify that the EIS/BDAR demonstrates all feasible alternatives and efforts to avoid and minimise impacts on EPBC Act listed threatened species and communities (including direct, indirect and prescribed impacts) including an analysis of alternative:

- ☒ designs and engineering solutions
- ☒ modes or technologies
- ☒ routes and locations of facilities
- ☒ sites within the subject site
- ☒ Verify that the EIS/BDAR identifies any other site constraints in determining the location and design of the proposal (such as bushfire protection requirements, flood planning levels, servicing constraints, etc).

Verify that the EIS/BDAR provides feasible measures to mitigate and/or manage impacts on EPBC Act listed threatened species and communities (including direct, indirect and prescribed impacts) including:

- ☒ techniques, timing, frequency and responsibility
- ☒ identify measures for which there is risk of failure
- ☒ evaluate the risk and consequence of any residual impacts
- ☒ any adaptive management strategy proposed to monitor and respond to impacts.

Provide advice on whether all feasible impact avoidance, minimisation, mitigation and management measures have been considered and are adequately justified:

EIS

The EIS does not discuss the issue of avoid, minimise, offset, instead this is discussed in Chapter 4 of the BDAR (pages 71 to 108).

Appendix E – BDAR

Sections 4.1. 'Measures to avoid and minimise impacts' of the BDAR specifically addresses the avoid and minimise aspects of the Project that relate to MNES. Most of the discussion on 'avoid and minimise' for this project focus on the 'Relinquishment Area' (509.8 hectares: Table 17 in the BDAR), that is area with approval to be cleared that under the current project the proponent would now not clear. Instead, the proponent would clear the 'Project Additional Disturbance Area' (448.5 hectares: Table 15 in the BDAR). The former area has more native woody vegetation and about 456.6 hectares of vegetation that meets the definition of box – gum woodland CEEC. The new area proposed to be developed has about 214.9 hectares of box – gum woodland CEEC. More details on both areas are provided in the Revised BDAR (dated June 2021) that forms Attachment G to the Response to Submissions Report. Both the 'Relinquishment Area' and the 'Project Additional Disturbance Area'

DOC21/969550-8 – Mount Pleasant Optimisation Project (SSD-10418)
EPBC Bilateral Assessment - BCD Assessment

have been assessed for MNES under a previous consent, and so will not be discussed further here. Instead, this assessment will look at the so far unassessed areas of the two road options for the re-routed Northern Link Road.

In relation to the measures to avoid and minimise impacts to MNES for the Northern Link Road:

- There are no statements in the BDAR, or revised BDAR about designs and engineering solutions to achieve avoid or minimise direct impacts, or in the selection of Option 2 (23.3 hectares of total clearing) over Option 1 (27.4 hectares of total clearing).
- There are no statements on the use of modes of development or technologies to facilitate avoid and minimise outcomes for the road.
- The selection of the route of the new road would be based upon detailed engineering design and land access constraints, rather than selecting the Road Option 2 that has the smallest impact on box – gum woodland CEEC (22.5 hectares vs 26.4 hectares). However, the revised BDAR (page 126) states that the road options were preferentially located in area of low quality derived native grassland, and to avoid areas of box – gum woodland CEEC as much as possible.
- There is no discussion on the avoidance of any particular sites within either road option.
- The site constraints for the overall project were described in the BDAR (on pg. 74) as ‘...the location of the project was selected based on the presence of coal seams able to be mined within MACH’s existing tenements’ and that placing new mining operations beside currently operating mining operations minimises the amount of new disturbance for this mining activity. The selection of the Northern Link Road option would be based on detailed engineering design and site access issues rather than MNES.
- Indirect impacts are discussed in Section 4.4 of the BDAR in relation to the overall project. Edge effects, weed spread, increased risk of fire and vehicle strike are relevant indirect impact issues for the Northern Link Road and would be addressed primarily by management plans. All were considered to be of likely minor impact due to existing development and actions on the project area.
- Prescribed biodiversity impacts are described in Section 4.5 of the BDAR. Changes to fauna movement and vehicle strike are the two prescribed impacts that relate to the Northern Link Road. The BDAR states (pg. 100) that the Northern Link Road could be developed under the exiting consent for the Mount Pleasant Mine.

BCD acknowledges that the Northern Link Road comprises a very small part of the overall project, and that the two road options are of similar size and have similar direct, indirect and prescribed impacts on MNES. Standard management actions are proposed. BCD has concerns that the new road could facilitate the spread of aggressive exotic tussock grasses (such as Coolatai Grass (*Hyparrhenia hirta*), Jaragua Grass (*Hyparrhenia rufa*), African Love Grass (*Eragrostis curvula*) and Rhodes Grass (*Chloris gayana*)) into a part of the Mining Lease with a currently low level of exotic species. In addition, it is not clear if actions could be undertaken to prevent the new road from being a barrier to movement of striped legless lizards: these are addressed with recommendations (see Section 8, below).

5. Impact Assessment

Verify that the EIS/BDAR:

- ☒ identifies the residual adverse impacts likely to occur to **each** EPBC Act listed threatened species and/or community after the proposed avoidance and mitigation measures are taken into account
- ☒ provides adequate justification and evidence for the predicted level of impact, with reference to the:

DOC21/969550-8 – Mount Pleasant Optimisation Project (SSD-10418)
EPBC Bilateral Assessment - BCD Assessment

- Commonwealth's Significant Impact Guideline:
https://www.environment.gov.au/system/files/resources/42f84df4-720b-4dcf-b262-48679a3aba58/files/nes-guidelines_1.pdf
- DPIE Guidance to Assist a Decision-Maker to Determine a Serious and Irreversible Impact (SAIL): (https://www.environment.gov.au/system/files/resources/42f84df4-720b-4dcf-b262-48679a3aba58/files/nes-guidelines_1.pdf)

Complete the following information for each EPBC Act listed threatened species and/or community (add/remove rows as necessary):

- EPBC Act listed threatened species and/or community
- nature and consequences of impacts (i.e., direct and indirect)
- duration of impact (e.g., construction, operation, life of project)
- quantum of impact
- consequences of impacts on the species, the population and / or extent of the community at local, state and national scales

Confirm the level of predicted impact (cross appropriate):

☒ high risk of impact (requiring offsets)[#] or SAIL ☐ Low risk of impact (not requiring offsets)

[#] For purposes of EPBC approval, as a minimum, significant adverse residual impacts **must** be offset (significant impact can be evaluated with reference to the significance impact guidelines)

BCD's assessment of the Impact Assessment for both road options are provided in Table 1a and 1b (below).

Table 1a Summary of Impact Assessment: Northern Link Road Option 1

EPBC Act entity	Nature & consequence of impact (direct & indirect)	Duration of impact (e.g., construction, operation, life of project)	Quantum of impact	Consequence of impact at local, state and national scale	Level of impact (is an offset required?)
Box – gum woodland CEEC	26.4 hectares of direct clearing; edge effects to adjacent vegetation	The impact will occur for the life of the project. Disturbed areas associated with road construction, but not within the new public road corridor would be rehabilitated.	44 ecosystem credits	<u>Local:</u> Small impact – the project would clear 26.4 hectares of the 6,561 hectares mapped for the IBRA subregion <u>State:</u> Small impact – the project would clear 26.4 hectares of the 250,729 hectares estimated to occur in NSW. <u>National:</u> Small impact – the project would clear 26.4 hectares of the 416,325 hectares estimated to	High risk of impact – an offset is required. Not SAIL

DOC21/969550-8 – Mount Pleasant Optimisation Project (SSD-10418)
EPBC Bilateral Assessment - BCD Assessment

				occur in Australia.	
Striped legless lizard	27.4 hectares of direct clearing of habitat; road will be a barrier to movement	The impact will occur for the life of the project	293 species credits	<p><u>Local:</u> Small impact - the Project area includes part of the Muswellbrook Population (area not provided). Most of the Project area is considered habitat for this species, but the Northern Link Road forms a very small part of the 474.7 hectares of impact.</p> <p><u>State:</u> Small impact – the species occurs over a large part of the Central and South Western slopes of NSW.</p> <p><u>National:</u> Small impact, the project would clear 24.7 hectares out of a total area of occupancy of about 81,870 km².</p>	High risk of impact – an offset is required. Not SAI
Grey-headed flying-fox	6 hectares of clearing of potential foraging plants and shelter	The impact will occur for the life of the project	8 ecosystem credits	<p><u>Local:</u> Small impact – the only population recognised is the national population. The Northern Link Road is a very small part of the 153.3 hectares of suitable habitat to be cleared for the project. The area of potential foraging</p>	Low risk of impact – no offset is required for species credits. Not SAI

DOC21/969550-8 – Mount Pleasant Optimisation Project (SSD-10418)
EPBC Bilateral Assessment - BCD Assessment

				<p>habitat is large, but not provided.</p> <p><u>State:</u> Small impact – the species occurs widely in the eastern third of the state.</p> <p><u>National:</u> Small impact – the species occurs widely in South Eastern Australia.</p>	
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Table 1b Summary of Impact Assessment: Northern Link Road Option 2

EPBC Act entity	Nature & consequence of impact (direct & indirect)	Duration of impact (e.g., construction, operation, life of project)	Quantum of impact	Consequence of impact at local, state and national scale	Level of impact (is an offset required?)
Box – gum woodland CEEC	22.5 hectares of direct clearing; edge effects to adjacent vegetation	The impact will occur for the life of the project. Disturbed areas associated with road construction, but not within the new public road corridor would be rehabilitated.	95 ecosystem credits	<p><u>Local:</u> Small impact – the project would clear 22.5 hectares of the 6,561 hectares mapped for the IBRA subregion.</p> <p><u>State:</u> Small impact – the project would clear 22.5 hectares of the 250,729 hectares estimated to occur in NSW.</p> <p><u>National:</u> Small impact – the project would clear 22.5 hectares of the 416,325 hectares estimated to occur in Australia</p>	High risk of impact – an offset is required. Not SAI
Striped legless lizard	23.3 hectares of direct clearing of habitat; road will	The impact will occur for the life of the project	225 species credits	<u>Local:</u> Small impact - the Project area includes part of	High risk of impact – an offset is

DOC21/969550-8 – Mount Pleasant Optimisation Project (SSD-10418)
EPBC Bilateral Assessment - BCD Assessment

	be a barrier to movement			the Muswellbrook Population (area not provided). Most of the Project area is considered habitat for this species, but the Northern Link Road forms a very small part of the 470.6 hectares of impact. <u>State:</u> Small impact – the species occurs over a large part of the Central and South Western slopes of NSW. <u>National:</u> Small impact, the project would clear 23.3 hectares out of a total area of occupancy of about 81,870 km ²	required. Not SAI
Grey-headed flying-fox	6 hectares of clearing of potential foraging plants and shelter	The impact will occur for the life of the project	6 ecosystem credits	Local: Small impact – the only population recognised is the national population. The Northern Link Road is a very small part of the 153.3 hectares of suitable habitat to be cleared for the project. The area of potential foraging habitat is large, but not provided. <u>State:</u> Small impact – the species occurs	Low risk of impact – no offset is required for species credits. Not SAI

DOC21/969550-8 – Mount Pleasant Optimisation Project (SSD-10418)
EPBC Bilateral Assessment - BCD Assessment

				widely in the eastern third of the state. <u>National:</u> Small impact – the species occurs widely in South Eastern Australia.	
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The data in the above Tables comes from Table 48 (for box – gum woodland CEEC and the striped legless lizard) and Table 15 (for the ecosystem credits of potential foraging habitat for the grey-headed flying-fox). An assessment of impacts on MNES is presented in Section 7.4 of the BDAR. An assessment of the significant impact criteria for these entities is presented in Section 7.4 (pages 125 to 129, and 135 to 137) of the Revised BDAR. The 6,561-hectare extent of box – gum woodland in the Hunter IBRA subregion is provided on page 105 of the revised BDAR. Table 13 of the Revised BDAR provides the areas of potential habitat for the striped legless lizard for different parts of the project. Table 29 of the Revised BDAR lists the PCTs associated with the grey-headed flying-fox. The extent of those PCTs in the Project is provided in Table 15. The extent of occurrence of box – gum woodland and for the striped legless lizard come from the Listing Advice and Approved Conservation Advice respectively.

Provide advice on whether adequate justification and evidence is provided for species and communities that have been identified as being at low risk of impact.

Grey-headed flying-foxes have been observed on the Mining Lease, but not in either of the road route option areas. Those areas, and the entire project area have been appropriately surveyed for the grey-headed flying-fox and no flying-fox camp was found. Therefore, the project area is considered only to provide food and shelter for the species, rather than breeding habitat, and so the grey-headed flying-fox is treated as an ecosystem species for this project. There is no requirement to offset the grey-headed flying-fox as a species-credit for this project.

The proponent has been able to demonstrate that the project is not likely to have a significant impact on the swift parrot, regent honeyeater, koala, and the spotted-tailed quoll.

6. Offsets

Verify that the EIS/BDAR:

- ☒ identifies any MNES that haven't been offset using the BAM
 - ☒ identifies how impacts requiring offsets correlate to MNES impacts
 - ☒ identifies the plant community types (PCTs) requiring offset and the number and type of ecosystem credits required for impacts to MNES
 - ☒ identifies threatened species requiring offset and the number of species credits required for impacts to MNES
 - ☒ correctly uses the BAM (and BAM calculator) to identify the number and class of biodiversity credits that need to be offset to achieve a standard of 'no net loss' of biodiversity
 - ☒ identifies if ecological rehabilitation and/or biodiversity conservation actions are proposed for offsetting
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- ☒ if known, identifies any other offsetting approach proposed, such as land-based offsets, retiring credits by payment into the Biodiversity Conservation Fund and/or through supplementary measures[#]

[#] In accordance the BAM there is no longer a requirement to define the offsetting approach at EIS stage.

Complete the Impacts and Offsets Summary table below (Table 2) (below)

DOC21/969550-8 – Mount Pleasant Optimisation Project (SSD-10418)
EPBC Bilateral Assessment - BCD Assessment

TABLE 2(a): MNES IMPACT AND OFFSET SUMMARY: NORTHERN LINK ROAD – OPTION 1

Threatened Species / Community listed under EPBC Act	PCTs associated with the ecosystem credit species / ecological community (if applicable)	Area of Impact (ha)	Credits Required	Offsetting Approach	Reference (EIS, revised BDAR)
White box-yellow box-Blakely's red gum grassy woodland and derived native grassland – Critically Endangered Ecological Community	PCT 483 Grey Box x White Box Grassy Woodland	0.4	17	Mach Energy may establish a Biodiversity Stewardship Site on its own land, to generate and retire the required credits. Or Mach Energy may make the appropriate payment into the NSW Biodiversity Conservation Fund.	RTS Appendix G – Revised BDAR: Table 15 & Table 31 Attachment K (of Revised BDAR) (credit report). (pages 628 to 637 of 768)
	PCT 483 Grey Box x White Box Grassy Woodland - DNG	14.8	0		
	PCT 483 Grey Box x White Box - Spotted Gum Grassy Woodland	4.6	237		
	PCT 483 Grey Box x White Box - Spotted Gum Grassy Woodland – DNG	4.3	0		
	PCT 618 – Forest Red Gum Grassy open Forest	0.1	5		
	PCT 1605: - Narrow-leaved Ironbark Woodland - Plantation *	0.4	0 *		
	PCT1606: White Box - Narrow-leaved Ironbark - Blakely's Red Gum shrubby open forest of the central and upper Hunter – moderate	0.5	16		
	PCT1606: White Box - Narrow-leaved Ironbark - Blakely's Red Gum shrubby open forest of the central and upper Hunter – moderate – DNG	1.7	32		
TOTAL		26.8	307		
Striped legless lizard (<i>Delma impar</i>)	PCT 483: Grey Box x White Box Grassy Woodland	0.4	10	Mach Energy may establish a Biodiversity Stewardship Site on its own land, to generate and retire the required credits. Or Mach Energy may make the appropriate payment into the NSW Biodiversity Conservation Fund.	EIS – Main Report: pages 7-83 RTS Appendix G – Revised BDAR: Table 16 and Table 31 Attachment B (of Revised BDAR) (Baseline fauna survey report). Attachment K (of Revised BDAR) (credit report) (pages 628 to 637 of 768)
	PCT 483: Grey Box x White Box Grassy Woodland - DNG	14.8	80		
	PCT 483: Grey Box x White Box - Spotted Gum Grassy Woodland	4.6	142		
	PCT 483: Grey Box x White Box - Spotted Gum Grassy Woodland – DNG	4.3	24		

DOC21/969550-8 – Mount Pleasant Optimisation Project (SSD-10418)
EPBC Bilateral Assessment - BCD Assessment

	PCT 618: – Forest Red Gum Grassy open Forest	0.1	3		
	PCT 1605: Narrow-leaved Ironbark Shrubby Forest - DNG	0.6	1		
	PCT 1605: Narrow-leaved Ironbark Shrubby Forest - Plantation	0.4	5		
	PCT1606: White Box - Narrow-leaved Ironbark - Blakely's Red Gum shrubby open forest of the central and upper Hunter – moderate	0.5	9		
	PCT1606: White Box - Narrow-leaved Ironbark - Blakely's Red Gum shrubby open forest of the central and upper Hunter – moderate – DNG	1.7	19		
TOTAL		27.4	293		

TABLE 2(b): MNES IMPACT AND OFFSET SUMMARY: NORTHERN LINK ROAD – OPTION 2

Threatened Species / Community listed under EPBC Act	PCTs associated with the ecosystem credit species / ecological community (if applicable)	Area of Impact (ha)	Credits Required	Offsetting Approach	Reference (EIS, revised BDAR)
White box-yellow box-Blakely's red gum grassy woodland and derived native grassland – Critically Endangered Ecological Community	PCT 483: Grey Box x White Box Grassy Woodland	2.6	104	Mach Energy may establish a Biodiversity Stewardship Site on its own land, to generate and retire the required credits. Or Mach Energy may make the appropriate payment into the NSW Biodiversity Conservation Fund.	RTS Appendix G – Revised BDAR: Table 15 & Table 31 Attachment N (of Revised BDAR) (credit report). (pages 669 to 678 of 768)
	PCT 483: Grey Box x White Box Grassy Woodland - DNG	15	0		
	PCT 483: Grey Box x White Box - Spotted Gum Grassy Woodland	2.5	72		
	PCT 483: Grey Box x White Box - Spotted Gum Grassy Woodland – DNG	0.2	2		
	PCT 618: – Forest Red Gum Grassy open Forest	0.1	5		
	PCT 1605: - Narrow-leaved Ironbark Woodland - Plantation *	0.3	0 *		
	PCT1606: White Box - Narrow-leaved Ironbark - Blakely's Red Gum shrubby open forest of the central and upper Hunter – moderate	0.5	16		
	PCT1606: White Box - Narrow-leaved Ironbark - Blakely's Red Gum shrubby open forest of the central and upper Hunter – moderate – DNG	1.6	30		
TOTAL		22.8	229		
Striped legless lizard (<i>Delma impar</i>)	PCT 483: Grey Box x White Box Grassy Woodland	0.5	9	Mach Energy may establish a Biodiversity Stewardship Site on	EIS – Main Report: pages 7-83

DOC21/969550-8 – Mount Pleasant Optimisation Project (SSD-10418)
EPBC Bilateral Assessment - BCD Assessment

				its own land, to generate and retire the required credits. Or Mach Energy may make the appropriate payment into the NSW Biodiversity Conservation Fund.	RTS Appendix G – Revised BDAR: Table 16 and Table 31 Attachment B (of Revised BDAR) (Baseline fauna survey report). Attachment N (of Revised BDAR) (credit report). (pages 669 to 678 of 768)
	PCT 483: Grey Box x White Box Grassy Woodland - DNG	15	84		
	PCT 483: Grey Box x White Box - Spotted Gum Grassy Woodland	0.1	3		
	PCT 483: Grey Box x White Box - Spotted Gum Grassy Woodland – DNG	2.6	62		
	PCT 618: – Forest Red Gum Grassy open Forest	2.5	43		
	PCT 1605: Narrow-leaved Ironbark Shrubby Forest - DNG	0.3	4		
	PCT 1605: Narrow-leaved Ironbark Shrubby Forest – Plantation *	0.2	1		
	PCT1606: White Box - Narrow-leaved Ironbark - Blakely's Red Gum shrubby open forest of the central and upper Hunter – moderate	1.6	18		
	PCT1606: White Box - Narrow-leaved Ironbark - Blakely's Red Gum shrubby open forest of the central and upper Hunter – moderate – DNG	0.5	1		
TOTAL		23.3	225		

* - PCT 1605 Narrow-leaved Ironbark Shrubby Forest – Plantation does not meet the criteria of any EPBC Act-listed Threatened Ecological Community and so does not generate ecosystem credits to be offset under the EPBC Act. However, it has been included so that these tables include all vegetation zones that are shown in the ecosystem credits section of Table 8 'Biodiversity credit requirements – Northern Link Road' in the draft consent conditions.

The likely impacts on MNES for both road options have been assessed in accordance with the BAM, described in the BDAR and are summarised in Tables 1a and 1b (above). All MNES likely to be impacted by the project have been assessed by the BAM.

Provide advice on the adequacy of the proposed offsets in meeting the requirements of the BAM:

The commitment to offset impacts to MNES by either establishing Biodiversity Stewardship Sites and retiring the appropriate type and number of credits from those sites, or to pay the required amount of money into the Biodiversity Trust Fund meets the requirements of the BAM. No details have been provided of where any Stewardship Sites may be established, or the biodiversity values that they contain.

The proponent has not identified the use of ecological restoration, any biodiversity conservation actions, or any supplementary measures to be included in the offset package for MNES for this project.

DOC21/969550-8 – Mount Pleasant Optimisation Project (SSD-10418)
EPBC Bilateral Assessment - BCD Assessment

7. Other considerations

Verify if any relevant Commonwealth guidelines and policy statements are applicable to the action and listed threatened species and/or community, including but not limited to:

- ☒ International environmental obligations
- ☒ Recovery Plans
- ☒ Approved Conservation Advice
- ☒ Threat Abatement Plans

*The relevant Commonwealth guidelines and policy statements for each species and community are available at:
<http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>*

For each EPBC Act listed threatened species and/or community, provide advice on whether the assessment has been adequately informed by applicable Commonwealth guidelines and/or policy statements. For example, the interaction between the proposed action and important populations or critical habitat identified in policy documents and/or the interaction between the proposed action and threatening processes or recommended conservation actions outlined in Commonwealth policies and plans.

Chapter 7 of the Revised BDAR (dated June 2021) that forms Attachment G to the Response to Submissions Report provides additional information on the assessment of Commonwealth matters. Section 7.4.8 'Recovery Plans and Approved Conservation Advices' states the Approved Conservation Advice, Recovery Plans and Threat Abatement Plans that may be relevant to the action. It identified Conservation Advices for the striped legless lizard, swift parrot, regent honeyeater and the spotted-tailed quoll as being applicable to this action and stated there is no approved Conservation Advice for box-gum grassy woodland or the grey-headed flying-fox. It identified the recovery plans for box – gum woodland, striped legless lizard, swift parrot, regent honeyeater, spotted-tailed quoll and the grey-headed flying-fox as relevant to the action.

Section 7.4.8 also discusses threat abatement plans in relation to MNES. It identified the threat abatement plan for feral pigs as relevant to box – gum woodland. It identified the threat abatement plan for rabbits as relevant to the striped legless lizard and the regent honeyeater. It identified the threat abatement plan for predation by feral cats as relevant to the striped legless lizard, swift parrot and the spotted-tailed quoll. It identified the threat abatement plan for predation by European red fox as relevant to the striped legless lizard and the spotted-tailed quoll and that there is currently no threat abatement plan linked to the grey-headed flying-fox. It considered that the threat abatement plans for the biological effects of the cane toad and of disease in natural ecosystems caused by *Phytophthora cinnamomi* were not relevant to the action.

The proponent links impacts of all MNES considered for the project to mitigation and avoidance measures with Conservation Advices, Recovery Plans and Threat Abatement Plans. This is shown in Table 33 'Impact Mitigation Measures Relevant to Threatened Species and Communities Listed Under the EPBC Act'. It includes 'Feral animal management' and 'weed management' for which no details are currently available.

The proponent does not discuss impacts to MNES in relation to Australia's international obligations. However, there are no likely impacts of the project to migratory species, thus the China – Australia Migratory Bird Agreement (CAMBA), Japan – Australia Migratory Bird Agreement (JAMBA) and Republic of Korea – Australia Migratory Bird Agreement (ROKAMBA) are not triggered. Neither is the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention). There are unlikely to be impacts on any Ramsar-listed wetlands.

The Convention on Conservation of Nature in the South Pacific (Apia Convention) has the main objective for convention parties, of which Australia is one, to '...commit to action for the conservation, utilisation and development of the natural resources of the South Pacific region through careful

DOC21/969550-8 – Mount Pleasant Optimisation Project (SSD-10418)
EPBC Bilateral Assessment - BCD Assessment

planning and management for the benefit of present and future generations.’ The key objectives to achieve this are to create protected areas to safeguard representative examples of natural ecosystems, to maintain lists of flora and fauna in danger of extinction and to give such species as much protection as possible, to commit to not alter national parks, and to have provision for customary use of areas and species in accordance with traditional cultural practices. The objectives of the Apia convention do not apply to what is proposed for this project.

BCD considers the assessment of MNES has been adequately informed by applicable Commonwealth guidelines and policy statements with two exceptions, and both may be addressed by recommended conditions (See Section 8). They pertain to the risk of weed impact to box – gum woodland CEEC and to a current lack of protection to a novel variant of box – gum woodland CEEC that is primarily found on the project area.

The test of significance for box-gum woodland CEEC, Section 7.4.1 ‘Box – Gum Woodland CEEC listed under the EPBC Act’ did not identify the project as likely to have a significant impact on the extent of this CEEC within the project area. BCD notes that this was the response to section ‘e’, ‘cause a substantial change in species composition of an occurrence of an ecological community, including causing a loss of functionally important species, for example through regular burning or flora or fauna harvesting’ and section ‘f’, ‘cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to: i.. assisting invasive species, that are harmful to the listed ecological community, to become established...’ of the assessment. BCD is concerned about the potential establishment of perennial exotic tussock grasses, such as Coolatai Grass (*Hyparrhenia hirta*), Jaragua Grass *H. rufa* or African Lovegrass (*Eragrostis curvula*) along the new section of the Northern Link Road, and how such species are then likely to spread into adjacent private property. Such species of perennial exotic tussock grass represents a threat to the integrity of the composition of remnants of box – gum woodland in adjacent private land. Perennial exotic tussock grasses thrive on disturbance and these three species are spreading throughout the Hunter Valley. They form dense swards that outcompete smaller native plants and also hamper regeneration of canopy species. BCD notes that management practises are proposed, such as for weeds, bushfires and soil, Monitoring will be required to ensure that such management actions prevent such exotic perennial grasses from becoming established in remnant box – gum woodland CEEC on the project area. Keeping exotic perennial tussock grasses out of the box – gum woodland CEEC will also maintain suitable habitat for the striped legless lizard.

Vegetation analysis presented in Appendix A ‘Mount Pleasant Optimisation Project Baseline Flora Report’ of the revised BDAR identified a variant of box – gum woodland CEEC. It is called ‘Grey Box x White Box – Spotted Gum Grassy Woodland’ and assigned to Vegetation Zone 2 (woodland variant (236.3 hectares)) and Vegetation Zone 2a (Derived Native Grassland Variant (129.3 hectares)). It was matched to Plant Community Type (PCT) 483 ‘Grey Box x White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley’ even though the site is not on the Merriwa plateau. It occurs primarily in the north-western part of the Relinquishment Area (e.g., Figure 7b ‘Vegetation Mapping Inset’ of the revised BDAR). The Relinquishment Area currently has no formal protection from future development. Action 2.2 of the National Recovery Plan for box – gum woodland is to identify gaps in the current reserve and off reserve protection in representing the geographic and ecological variation within the ecological community. BCD recommends that this variant of box – gum woodland CEEC is considered in relation to whether it has conservation protection, and if not, that an area is identified to for conservation as an offset for impacts to this variant by the Northern Link Road component of the project.

8. Recommendations

DOC21/969550-8 – Mount Pleasant Optimisation Project (SSD-10418)
EPBC Bilateral Assessment - BCD Assessment

Provide advice on any recommended conditions and reasons for imposing the conditions:

BCD recommend that if this project is approved by DAWE that any consent issued includes approval conditions that include the following requirements and outcomes:

- Weed management to effectively prevent aggressive exotic tussock grasses (e.g., Coolatai Grass, Jaragua Grass, and African Love Grass) from spreading from disturbed areas beside the re-routed Northern Link Road into both intact remnant native vegetation and areas of native vegetation regeneration and rehabilitation. This is particularly important for the box – gum woodland CEEC and the preservation of striped legless lizard habitat.
- Investigate and implement measures to enable striped legless lizards to safely cross the Northern Link Road so that it does not form a barrier to the local population.
- Protect an area of the variant of box – gum woodland with White Box – Grey Box intergrade and Spotted Gum in the canopy. This variant is of limited geographic extent, with the largest known remnants on the Mount Pleasant mine land (in the relinquishment area).
- Keep rabbit numbers to less than 0.5 rabbits per hectare in areas of striped legless lizard habitat, as identified in the Threat Abatement Plan for competition and land degradation by rabbits.

Reviewed By



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26 April 2022