




# MOOLARBEN COAL PROJECT 2024 COMPLIANCE REPORT

EPBC 2007/3297

EPBC 2013/6926

EPBC 2008/4444

EPBC 2017/7974

<b>Project Name</b>	Moolarben Coal Complex
<b>Approval Holder</b>	Moolarben Coal Mines Pty Ltd Moolarben Coal Operations Pty Ltd
<b>EPBC Reference</b>	2007/3297 2013/6926 2008/4444 2017/7974
<b>Approved Actions</b>	<p>The establishment of a coal mine and associated infrastructure 40 kilometres (km) north-east of Mudgee, New South Wales (NSW) to generate approximately 10 million tonnes per annum of product coal and as described in the referral received under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth) (EPBC Act) on 16 February 2007 (EPBC 2007/3297).</p> <p>To modify and extend the Moolarben Coal Project (Stage 1), approximately 40 km north-east of Mudgee, NSW (EPBC 2013/6926).</p> <p>To develop a new open cut coal mine and two underground coal mines, 40 km north-east of Mudgee, NSW and as described in the referral received under the EPBC Act on 9 September 2008 and the request for variation received under the EPBC Act on 27 February 2012 (EPBC 2008/444).</p> <p>To modify and extend the Moolarben Coal Project (Stage1 and Stage 2), 40 km north of Mudgee, NSW (EPBC 2017/7974).</p>
<b>Reporting Period</b>	1 January 2024 to 31 December 2024
<b>Version</b>	V2
<b>Declaration of Accuracy</b> In making this declaration, I am aware that sections 490 and 491 of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth) (EPBC Act) make it an offence in certain circumstances to knowingly provide false or misleading information or documents. The offence is punishable on conviction by imprisonment or a fine, or both. I declare that all the information and documentation supporting this compliance report is true and correct in every particular. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.	
<b>Signature of authorised reporting officer</b>	
<b>Name of authorised reporting officer</b>	Ian Flood
<b>Title of authorised reporting officer</b>	Environment and Community Manager
<b>Date</b>	28/03/2025
<b>Organisation Name</b>	Moolarben Coal Operations Pty Ltd
<b>Organisation ACN</b>	077 939 569

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## 1.0 INTRODUCTION

The Moolarben Coal Complex (MCC) is located in the Western Coalfields of New South Wales (NSW) approximately 40 kilometres (km) north of Mudgee to the south-east of Ulan. The MCC is located within the Mid-Western Regional Local Government Area. Figure 1 depicts the regional location of the Biodiversity Offset Areas (BOAs) and the MCC and Table 1 summarises the MCC offsets by approval.

Moolarben Coal Operations Pty Ltd (MCO) is the operator of the MCC on behalf of the Moolarben Joint Venture (Moolarben Coal Mines Pty Ltd [MCM], Yancoal Moolarben Pty Ltd [YM] and a consortium of Korean power companies). MCO, MCM and YM are wholly owned subsidiaries of Yancoal Australia Limited (Yancoal).

All mining operations are conducted in accordance with NSW Project Approval (05\_0117) (Moolarben Coal Project Stage 1) as modified, and NSW Project Approval (08\_0135) (Moolarben Coal Project Stage 2) as modified. Current mining operations undertaken across the MCC have approval until 31 December 2038.

The current mining operations are undertaken in accordance with Approval Decisions (EPBC 2007/3297), (EPBC 2013/6926), (EPBC 2008/4444) and (EPBC 2017/7974) under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

This report details the activities and compliance with EPBC 2007/3297, EPBC 2013/6926, EPBC 2008/4444 and EPBC 2017/7974 for the period 1 January 2024 to 31 December 2024.

**Table 1: EPBC Approval BOAs**

EPBC Approval	Offset		
2007/3297	• Area 1 (Sydney Basin)	• Area 2 (Moolarben)	• Area 3 (Property 6)
2013/6926	• Elward • Bobadeen West	• Bobadeen East • Clifford	• Area 3 (Property 5) • Clarke
2008/4444	• Old Bobadeen • Ulan • Libertus	• On-site • Avisford 2 • Avisford 1	• Dun Dun West • Dun Dun East
2017/7974	• Area 1 (Sydney Basin)	• Rehabilitation (Credits)	• Gilgal (Credits)
Non EPBC offsets	• Moolarmoo	• Property 24/25	

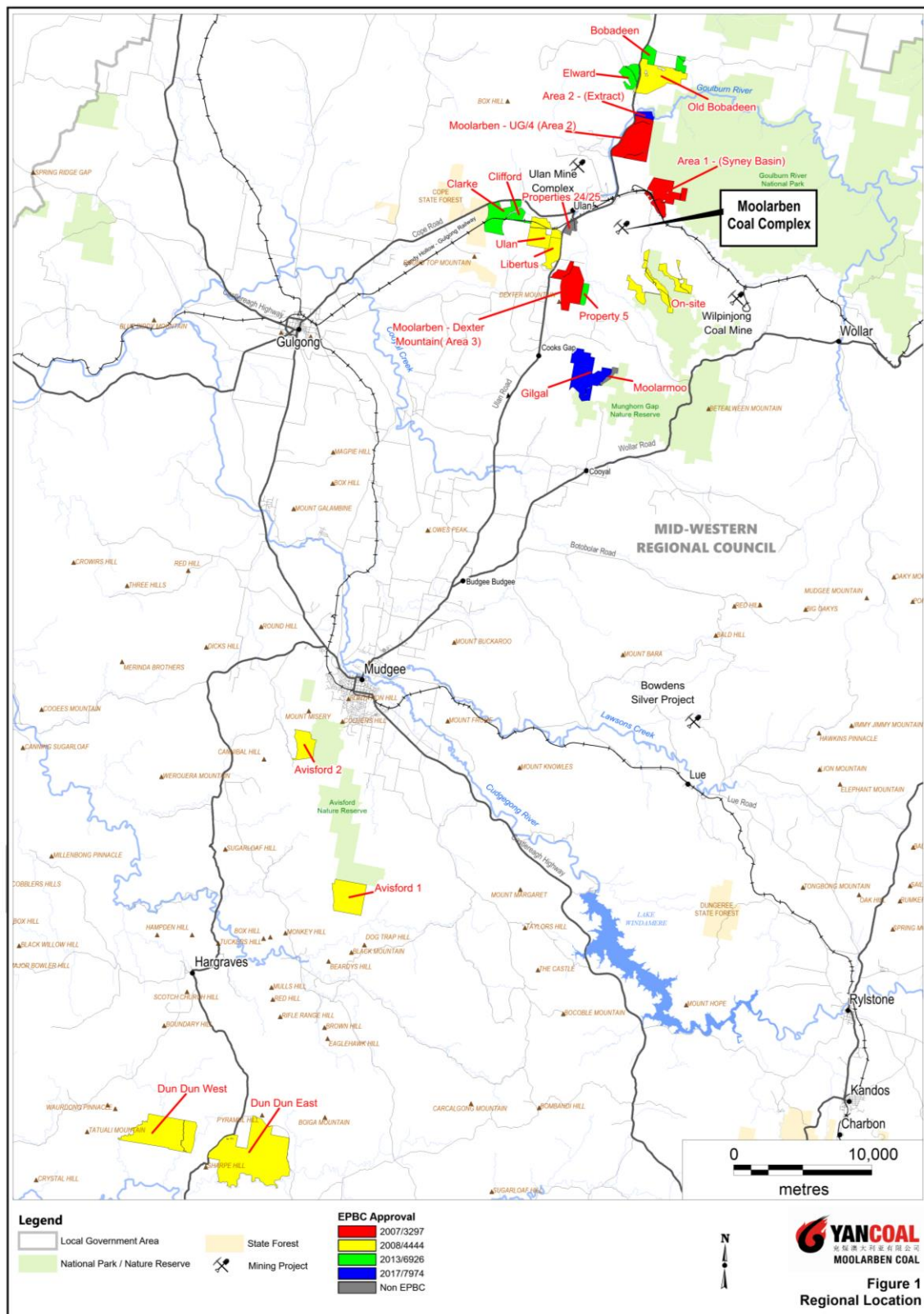
## 2.0 DESCRIPTION OF ACTIVITIES

During the reporting period the following activities have been undertaken:

- Land preparation and disturbance in accordance with the Vegetation Clearance Protocol and Landscape Management Plan (VCPLMP), including pre-clearance surveys, salvage of habitat features and fauna management within action areas.
- Collection of locally sourced native seed.
- BOA management including fencing, access maintenance, weed and vertebrate pest management.
- Continued assisted regeneration across relevant BOAs including planting of approximately 30,220 stems to supplement natural regeneration in the Ulan 18, Bobadeen and Dun Dun BOAs.
- Securement of Gilgal BOA under a Biodiversity Stewardship Agreement, executed under the *Biodiversity Conservation Act 2016* (BC Act).
- Progressing the formal retirement of Gilgal BOA credits with the Department of Planning, Housing and Infrastructure (DPHI).

- Monitoring in accordance with the Biodiversity Offset Management Plan (BOMP), EPBC 2008/4444 Biodiversity and Offset Management Plan, Landscape Management Plan (LMP) and Rehabilitation Management Plan (RMP).

**FIGURE 1: Regional Location of Biodiversity Offset Areas**



### 3.0 COMPLIANCE TABLES (2007/3297) (2008/4444) (2013/6926)

Condition Number	Condition	Compliance <sup>1</sup>	Evidence/Comments
EPBC 2007/3297			
1	In order to protect the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland listed ecological community, the person taking the action shall make suitable arrangements within 12 months of this approval to:  (a) Transfer at least 130 hectares of the White Box-Yellow Box-Blakely's Red Gum Woodland and Derived Native Grassland listed ecological community to the NSW Minister for Climate Change Environment and Water offset, on a "like for like" basis, the 65 hectares that would be cleared by the project at an offset ratio of 2:1; and  (b) Provide the NSW Department of Environment and Climate Change (DECC) with funds (which at the discretion of DECC may include an in-kind contribution) to cover any reasonable costs associated with the transfer and ongoing management of this land.	Compliant	Completed prior to period.
1A	The approval holder must undertake the action within the area enclosed by the red line designated as 'DA Boundary' in the map at Appendix 1. The approval holder must not undertake the action within the areas designated as 'Areas not part of the Action' in the map at Appendix 1.	Compliant	Noted. Action undertaken within the Development Area Boundary and not undertaken within the areas designated as 'Areas not part of the Action'.
2	In order to protect the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland listed ecological community, the person taking the action shall in accordance with the Rehabilitation and Offset Management Plan (See Condition 3 below):  (a) Revegetate at least 38 hectares of disturbed land on the "Red Hills" property with Yellow Box-White Box-Blakely's Red Gum vegetation;  (b) Revegetate at least 143 hectares of cleared land on the "Red Hills" property with suitable native vegetation to improve wildlife corridor linkages;  (c) Conserve and enhance at least 1211 hectares of existing native vegetation onsite within the areas marked with green crosshatching designated as 'Biodiversity Offset Area' shown in the map at Appendix 2; and  (d) make arrangements, as approved in writing by the Minister, to protect these offset areas from development for the long term.	Compliant	Revegetation works were commenced in a prior period.  MCO continues to conserve and enhance Area 1, Area 2 and Area 3.  Area 1, Area 2 and Area 3 were secured in a prior reporting period by the registering on title a 'Positive Covenant' and a 'Restriction on the Use of Land by a Prescribed Authority' under section 88E(3) of the NSW <i>Conveyancing Act 1919</i> .
3	In order to protect the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland listed ecological community, the person taking action shall prepare and implement a detailed	Compliant	The LMP was approved by the Department of Agriculture, Water and the Environment (DAWE <sup>1</sup> ) in <b>2011</b> .

<sup>1</sup> References to DAWE includes the previous relevant commonwealth agencies responsible for administering the EPBC Act.

Condition Number	Condition	Compliance <sup>1</sup>	Evidence/Comments
	<p>Rehabilitation and Offsets Management Plan for the project to the satisfaction of the Minister for the Environment and Water Resources. The proponent shall progressively rehabilitate the site to the satisfaction of Minister for the Environment and Water Resources and the NSW Department of Primary Industries, in general accordance with the proposed Rehabilitation and Offset Management Plan. The rehabilitation and Offset Management Plan must include:</p> <p>(a) The rehabilitation objectives for the site, vegetation offsets and landscaping;</p> <p>(b) A description of the short, medium and long-term measures that would be implemented to:</p> <ul style="list-style-type: none"> <li>• Rehabilitate the site</li> <li>• Implement the vegetation offsets; and</li> <li>• Landscape the environmental bunds;</li> </ul> <p>(c) Performance and completion criteria for the rehabilitation of the site, implementation of the vegetation offsets, and landscaping of the environmental bunds;</p> <p>(d) A detailed description of the measures that would be implemented over the next 3 years including the progressive rehabilitation of mining areas and progressive implementation of the vegetation offset areas referred to in Condition 2.</p> <p>(e) A program to monitor the effectiveness of these measures, and progress against the performance and completion criteria (see (c) above);</p> <p>(f) A description of the potential risks to successful rehabilitation and/or revegetation, and a description of the contingency measures that would be implemented to mitigate these risks; and</p> <p>(g) Details of who would be responsible for monitoring, reviewing, and implementing the plan.</p> <p>Coal mining operations must not commence until the plan has been approved. The approved plan must be implemented.</p>		<p>The NSW Project Approval RMP was updated in accordance with the Resources Regulator amendments to Mining Lease conditions relating to rehabilitation through amendments to the Regulation under the Mining Act 1992. The latest revision of the RMP was undertaken in August 2022.</p> <p>This report, Appendix A and B.</p>
4	The person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval, by 31 March for the preceding calendar year. Annual reports must be published until the Minister is satisfied that the person taking the action has complied with all conditions of the approval. Documentary evidence providing proof of the date of publication must be provided to the Department at the same time as the compliance report is published.	Compliant	This report.
5	Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister'. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister	Compliant	Noted.
6	If the Minister believes that it is necessary or desirable for the better protection of the listed threatened species and ecological communities to do so, the Minister may request that the person taking the	Compliant	Noted.



Condition Number	Condition	Compliance <sup>1</sup>	Evidence/Comments
	action make specified revisions to the plans, reports or management strategies approved pursuant to paragraphs 1, 2 and 3, and submit the revised plan, report or strategy for the Minister's approval. The person taking the action must comply with any such request. The revised approve plan, report or strategy must be implemented.		
7	If at any time after 5 years from the date of this approval, the Minister notifies the person taking the action in writing that the Minister is not satisfied that there has been substantial commencement of coal mining operations, the action must not thereafter be commenced without the written agreement of the Minister.	Compliant	Action commenced <b>2009</b> .
EPBC 2008/4444			
1	The approval holder must not clear more than 1, 534 hectares of native vegetation within the defined footprint at Schedule 1.	Compliant	At the end of the reporting period <b>1,011 Ha</b> of the approved <b>1,534 Ha</b> of native vegetation within the defined footprint had been disturbed.
2	To mitigate the impacts of the proposal on the Large-eared Pied Bat, Southern Long-eared Bat, Regent Honeyeater, Swift Parrot and the Spotted-tail Quoll, the approval holder must prepare and submit, prior to the proposed date of commencement of the action, a mine site Vegetation Clearance Protocol and Landscape Management plan (VCPLMP) for the Minister's written approval. The VCPLMP must; a. Delineate areas to be cleared, describe pre-clearance survey methods, specify actions to minimise fauna impacts and detail vegetation clearance procedures. b. Require collection and stockpiling of habitat features important to threatened fauna species for reinstatement in rehabilitation areas. c. Require use of native, locally sourced seed for propagation for rehabilitation activates. d. Specify a two stage clearing protocol where non-habitat trees are cleared 24 hours prior to any habitat trees are cleared, to encourage fauna to move out of an area. The approval holder must not commence until the VCPLMP is approved by the Minister. The approved VCPLMP must be implemented.	Compliant	The VCPLMP was approved by the minister on <b>29 May 2015</b> . Action commenced <b>2 August 2015</b> . The VCPLMP continues to be implemented.
3	To compensate for the loss of 123.3 hectares of the White Box-Yellow Box- Blakely's Red Gum Grassy Woodland and Derived Native Grassland (WBGW) ecological community and 902 hectares of habitat for <b>EPBC listed threatened species</b> , the approval holder must submit, by 1 September 2021, a Biodiversity Offset Management Plan (BOMP) for the <b>Minister's</b> written approval. The BOMP must: a. include offset attributes, shapefiles, textual descriptions and maps that clearly define the location and boundaries of the offset areas specified at Figures 1-7 of Schedule 2; b. include a survey, and describe the condition of, the offset areas specified at Figures 1-7 of Schedule 2, immediately prior to them being managed as offset areas; c. for the offset areas shown at Figures 1-3 and 6-7 of Schedule 2: (i) specify strategies and management actions that will improve the quality of WBGW and habitat for <b>EPBC listed threatened species</b> ;	Compliant	The BOMP was approved by the DAWE on <b>14 December 2021</b> .

Condition Number	Condition	Compliance <sup>1</sup>	Evidence/Comments
	<ul style="list-style-type: none"> <li>(ii) include timeframes for management actions;</li> <li>(iii) specify performance and completion criteria for achieving (i) above, for evaluating effectiveness of the management of the offset areas, and criteria for triggering remedial action;</li> <li>(iv) include a program to detect trigger criteria and monitor and report on the effectiveness of management actions, and progress against the performance and completion criteria;</li> <li>(v) describe potential risks to achieving the plans objectives, measures that will be implemented to mitigate against these risks and remedial actions that will be implemented if defined trigger criteria are detected; and</li> <li>(vi) detail of who will be responsible for monitoring, reviewing, and implementing the BOMP.</li> </ul> <p>d. for offset areas shown at Figure 4 and 5 of Schedule 2, explain how management of the offset areas will ensure the quality of WBGW and habitat for EPBC listed threatened species in the offset areas will be improved and protected for the period of approval.</p> <p>If, after 1 December 2021, the <b>Minister</b> informs the approval holder that the submitted BOMP (required by 1 September 2021) is not suitable for approval, the <b>Minister</b> may, after 1 February 2022, approve a version of the BOMP revised by the <b>Department</b>.</p> <p>The approved BOMP must be published on the approval holder's internet web site, within 1 month of being approved by the <b>Minister</b> and remain so published for the period of approval. The approval holder must implement the BOMP approved by the <b>Minister</b> in writing.</p>		
4	<p>To compensate for the loss of 123.3 hectares of the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland (WBGW) ecological community and 902 hectares of habitat for EPBC listed threatened species, within 24 months of the date of this approval, the approval holder must secure the lands identified as the Offset Areas at Schedule 2 (Figures 1-7) of this notice as a biodiversity offset by a legal instrument under relevant nature conservation legislation on the title of the land. This instrument must:</p> <ul style="list-style-type: none"> <li>a. Provide for the protection of the land in perpetuity;</li> <li>b. Prevent any future development activities, including mining and mineral extraction;</li> <li>c. Ensure the active management of the land; and</li> <li>d. Be provided to the Department within 3 months of it being issued, as evidence of compliance with this condition.</li> </ul>	Compliant	Eight BOAs (Old Bobaddeen, On-site, Avisford 1, Avisford 2, Libertus, Ulan 18, Dun Dun East, and Dun Dun West) were secured in accordance with Condition 4 of EPBC 2008/4444 in a previous reporting period.
5	The approval holder must undertake management and monitoring of water resources in accordance with this project approval for Application Number 08-0135 issued by the NSW Planning Assessment	Compliant	Moolarben Complex Water Management Plan (WAMP).

Condition Number	Condition	Compliance <sup>1</sup>	Evidence/Comments
	Commission under the Environmental Planning and Assessment Act 1979 (NSW) on 30 January 2015.		MCO 2024 Annual Review
6	Upon request, the approval holder shall supply the groundwater monitoring data for the Moolarben Coal Project to the Department, NSW Government agencies, Operators of the Ulan and/or Wilpinjong mines or other adjacent mine operators. A protocol for the supply of the data will be included in the project's Water Management Plan.	Compliant	Section 5.5 of the Moolarben Complex WAMP.
7	The approval holder must make available for the Minister on request, all plans or programs and any review of plans or programs produced pursuant to Condition 5.	Compliant	Noted. No requests received during the 2024 reporting period.
8	Within 30 days after the commencement of the action, the approval holder must advise the Department in writing of the actual date of commencement.	Compliant	Completed in a previous period. Action commenced <b>2 August 2015</b> . Notification in writing sent on <b>13 August 2015</b> .
9	The approval holder must maintain accurate records substantiating all activities associated with or relevant to these conditions of approval, including measures taken to implement the BOMP and VCPLMP, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.	Compliant	Noted.
10	The approval holder must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of the BOMP and VCPLMP as specified in the conditions, by 31 March for the preceding calendar year. Documentary evidence providing proof of the date of publication must be provided to the Department at the same time as the compliance report is published.	Compliant	This report.
11	Non-compliance with any of the conditions of this approval must be reported to the Department within 2 business days of becoming aware of the non-compliance.	Compliant	Noted.
12	Upon the direction of the Minister, the approval holder must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.	Not Applicable	Noted.
13	If the approval holder wishes to carry out any activity otherwise than in accordance with the Plans as specified in the conditions, the approval holder must submit to the Department for the Minister's written approval a revised version of that Plan. The approval holder must not commence the varied activity until the Minister has approved the varied Plan in writing. The Minister will not approve a varied	Not Applicable	Noted.

Condition Number	Condition	Compliance <sup>1</sup>	Evidence/Comments
	plan unless the revised Plan would result in an equivalent or improved environmental outcome over time. If the Minister approves the revised Plan, that Plan must be implemented in place of the Plan originally approved.		
14	If the Minister believes that it is necessary or convenient for the better protection of listed threatened species and ecological communities to do so, the Minister may request that the approval holder make specified revisions to the Plan specified in the conditions and submit the revised Plan for the Minister's written approval. The approval holder must comply with any such request. The revised approved Plan must be implemented. Unless the Minister has approved the revised Plan then the approval holder must continue to implement the plan originally approved.	Not Applicable	Noted.
15	If, at any time after 5 years from the date of this approval, the approval holder has not substantially commenced the action, then the approval holder must not substantially commence the action without the written agreement of the Minister.	Compliant	Action commenced <b>2 August 2015</b> .
EPBC 2013/6926			
1	The approval holder must not clear more than 171.4 hectares of native vegetation within the defined footprint at Schedule 1, Figures 1 and 2.	Compliant	At the end of the period <b>155 Ha</b> of the approved <b>171.4 Ha</b> of native vegetation within the defined footprint had been disturbed.
2	To assist in mitigating the impacts of the proposal on the Large-eared Pied Bat, Southern Long-eared Bat, Regent Honeyeater, Swift Parrot, Potted-tail Quoll and the Koala, the approval holder must prepare and submit a mine site Vegetation Clearance Protocol and Landscape Management Plan (VCPLMP) for the Minister's written approval. The VCPLMP must; a. Delineate areas to be cleared, describe pre-clearance survey methods, specify actions to minimise fauna impacts and details vegetation clearance procedures. b. Require collection and stockpiling of habitat features important to threatened fauna species for reinstatement in rehabilitation areas. c. Require use of native, locally sourced seed for propagation for rehabilitation activities. d. Specify a two stage clearing protocol where non-habitat trees are cleared 24 hours prior to any habitat trees in their proximity being cleared, to encourage fauna to move out of an area. e. Include a revegetation strategy to improve connectivity between isolated vegetation patches (including between Munghorn Gap Nature Reserve, Goulburn River National Park and Dexter Mountain).	Compliant	The VCPLMP was approved by the Minister on <b>17 December 2014</b> . The VCPLMP continues to be implemented.
3	The approval holder must not commence until the VCPLMP is approved by the Minister. The approved VCPLMP must be implemented.	Compliant	The VCPLMP was approved by the Minister on <b>17 December 2014</b> .

Condition Number	Condition	Compliance <sup>1</sup>	Evidence/Comments
			Action commenced on <b>23 December 2014</b> . The VCPLMP continues to be implemented.
4	To compensate for the loss of 16.5 hectares of the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland (WBGW) ecological community and 171.4 hectares of habitat for EPBC listed threatened species, the approval holder must prepare and submit a Biodiversity Offset Management Plan (BOMP) for the proposed EPBC offset sites, for the Minister's written approval. The BOMP must; a. Identify those lands described as the Offset Areas at Schedule 2 (Figures 1-5) of this notice that are necessary to achieve the outcomes required by the Environmental Offsets Policy 2012 (or subsequent published revisions). This must include offset attributes, shapefiles, textual descriptions and maps clearly define the location and boundaries of the offset area(s). b. Provide a survey and description of the current condition (prior to any management activities) of the offset areas identified in Condition 4a. c. Details management actions and regeneration and revegetation strategies to be undertaken on the offset areas to improve the ecological quality of these areas, including: (i) A description and timeframe of measures that would be implemented to improve the condition of the ecological communities on the site; (ii) Performance and completion criteria for evaluating the management of the offset area, and criteria triggering remedial action; (iii) A program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria; (iv) A description of potential risks to the successful implementation of the plan, a description of the measures that will be implemented to mitigate against these risks and a description of the contingency measures that will be implemented if defined triggers arise; and (v) Details of who would be responsible for monitoring, reviewing, and implementing the plan.	Compliant	A BOMP was approved by the Minister on <b>17 December 2014</b> . The requirements of this conditions are addressed in the below section of the BOMP: a) Section 2 and Appendix 1 b) Section 3 c) Sections 4, 5, 6 & 7.
5	The approval holder must not commence the action until the BOMP is approved by the Minister. The approved BOMP must be published on an internet web site approved by the Department, within 1 month of being approved and for a period of 5 years thereafter. The approved BOMP must be implemented.	Compliant	A BOMP was approved by the Minister on <b>17 December 2014</b> . Action commenced on <b>23 December 2014</b> . The BOMP is located on MCO's website. ( <a href="https://www.yancoal.com.au/our-sites/moolarben/">https://www.yancoal.com.au/our-sites/moolarben/</a> ) The BOMP continues to be implemented. This report, refer to Appendix A and B
6	To compensate for the loss of 16.5 hectares of the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland (WBGW) ecological community and 171.4 hectares of habitat	Compliant	Six BOAs (Bobadeen East, Bobadeen West, Elward, Clifford, Clarke and Property 5) were secured in accordance with

Condition Number	Condition	Compliance <sup>1</sup>	Evidence/Comments
	for EPBC listed threatened species, the approval holder must secure the lands identified as the Offset Areas at Schedule 2 (Figures 1-5) of this notice as a biodiversity offset by a legal instrument under relevant nature conservation legislation on the title of the land. This instrument must: a. Provide for the protection of the land in perpetuity; b. Prevent any future development activities, including mining and mineral extraction; and c. ensure the active management of the land. The approval holder must not commence the action until the Department has approved the proposed instrument in writing.		Condition 6 of EPBC 2013/6926 in a previous reporting period. The Department approved the protection mechanism for offsets under EPBC 2013/6926 on <b>17 December 2014</b> .
7	The approval holder must provide evidence to the Department of their compliance with Condition 6, along with offset attributes, shapefiles and textual descriptions and maps to clearly define the location and boundaries of the offset sites, prior to the commencement of the action.	Compliant	Completed in a previous period. Evidence including shapefiles provided on <b>1 December 2014</b> .
8	Within 30 days after the commencement of the action, the approval holder must advise the Department in writing of the actual date of commencement.	Compliant	Completed in a previous period. Notification in writing sent on <b>20 January 2015</b> .
9	The approval holder must maintain accurate records substantiating all activities associated with or relevant to these conditions of approval, including measures take to implement the BOMP and VCPLMP, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with Section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may be publicised through the general media.	Compliant	Noted.
10	The approval holder must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of the BOMP and VCPLMP as specified in the conditions, by 31 March for the preceding calendar year. Documentary evidence providing proof of the date of publication must be provided to the Department at the same time as the compliance report is published.	Compliant	This report.
11	Non-compliance with any of the conditions of this approval must be reported to the Department within 2 business days of becoming aware of the non-compliance.	Compliant	Noted.
12	Upon the direction of the Minister, the approval holder must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must be address the criteria to the satisfaction of the Minister.	Not Applicable	Noted.
13	If the approval holder wishes to carry out any activity otherwise than in accordance with the Plan as specified in the conditions, the approval holder must submit to the Department for the Minister's written approval a revised version of the Plan. The approval holder must not commence the varied	Not Applicable	Noted.

Condition Number	Condition	Compliance <sup>1</sup>	Evidence/Comments
	activity until the Minister has approved the varied Plan in writing. The Minister will not approve a varied Plan unless the revised Plan would result in an equivalent or improved environmental outcome over time. If the Minister approves the revised Plan, that Plan must be implemented in place of the Plan originally approved.		
14	If the Minister believes that it is necessary or convenient for the better protection of listed threatened species and ecological communities to do so, the Minister may request that the approval holder make specified revisions to the Plan specified in the conditions and submit the revised Plan for the Ministers written approval. The approval holder must comply with any such request. The revised approved Plan must be implemented. Unless the Minister has approved the revised Plan then the approval holder must continue to implement the Plan originally approved.	Not Applicable	Noted.
15	If, at any time after 5 years from the date of this approval, the approval holder has not substantially commenced the action, then the approval holder must not substantially commence the action without the written agreement of the Minister.	Compliant	Action commenced <b>23 December 2014</b> .
EPBC 2017/7974			
1	The approval holder must undertake the Moolarben Coal Project within the development footprint.	Compliant	Noted.
2	The approval holder must comply with Condition 34A of Schedule 3 of the NSW Consolidated Project Approvals to implement the supplementary offset strategy, by retiring the required number of credits specified in Table 12A.	Compliant	The Gilgal BOA is owned and managed by Moolarben. During the reporting period, actions were undertaken to formally retire credits as specified in Table 12A of the NSW Consolidated Project Approvals with the DPHI.  A Biodiversity Stewardship Agreement has been prepared, signed by all parties on 19 July 2024, and executed under the BC Act.
3	The approval holder must comply with Conditions 35A of the NSW Consolidated Project Approvals to secure the credits and/or area at the Gilgal Offset Area (as identified at Attachment B) under a Biodiversity Stewardship Agreement, unless otherwise agreed in writing by the Minister. The approval holder may seek agreement from the Minister to use an alternative mechanism to secure the credits and/or area, subject to the additional rules at Condition 20. The approval holder must submit a copy of the Biodiversity Stewardship Agreement to the Minister within ten business days of an agreement being made.	Compliant	MCO submitted an application in accordance with Condition 35A of the NSW Consolidated Project Approvals to secure the credits and area at the Gilgal BOA under a Biodiversity Stewardship Agreement. The application has been prepared and signed by all parties on 19 July 2024, and executed formally under the BC Act. The calculated Total Fund Deposit requirement was paid by Moolarben Coal on 24 December 2024.  MCO will submit a copy of the Biodiversity Stewardship Agreement to the Minister within ten business days of an agreement being made.

Condition Number	Condition	Compliance <sup>1</sup>	Evidence/Comments
4	The approval holder must provide for the long-term security of the Area 2 (extract) offset area as identified at Attachment B, by 30 June 2020. The approval holder must submit details of the security mechanism to the Minister within ten business days of the mechanism being made.	Non-Compliant	<p>Area 2 (Extract) offset was secured on <b>25 August 2020</b>, post the required due date.</p> <p>MCO advised the DAWE on <b>24 June 2020</b> that the offsets security mechanism were in the final stages of execution and requested an Extension of time to <b>31 August 2020</b> to align with the offset security timing as approved by the NSW Department of Planning, Industry and Environment (DPIE) for the same offset area.</p> <p>On <b>2 July 2020</b> MCO advised the DAWE of a technical non-compliance as the offset security mechanism for Area 2 (Extract) had been executed by MCO but not the NSW DPIE on 30 June 2020.</p> <p>On <b>25 August 2020</b>, a 'Positive Covenant' and a 'Restriction on the Use of Land by a Prescribed Authority' under section 88E(3) of the NSW <i>Conveyancing Act 1919</i> was executed by MCO and the NSW DPIE to secure the Area 2 (Extract).</p> <p>On <b>18 September 2020</b>, MCO provided the DAWE with a copy of the Positive and Restrictive Covenants executed by MCO and the NSW DPIE to secure the Area 2 (Extract) offset.</p>
5	The approval holder must enhance existing native vegetation in the Area 2 (extract) offset area, in accordance with the biodiversity offset strategy required by Condition 34 of the NSW Consolidated Project Approvals, and in accordance with the Biodiversity Management Plan required by Condition 36 of Schedule 3 of the NSW Consolidated Project Approvals.	Compliant	During the reporting period MCO continued works to maintain and enhance the existing native vegetation in the Area 2 (Extract) BOA.
6	The approval holder must comply with Condition 35B of Schedule 3 of the NSW Consolidated Project Approvals to develop suitable rehabilitation performance and completion criteria for the rehabilitation of OC2 and/or OC3, to generate the required number of residual credits specified in Table 12A of Schedule 3.	Compliant	Suitable rehabilitation performance and completion criteria for OC2 and/or OC3 have been developed by MCO with approval of the criteria granted by the NSW DPIE on <b>7 July 2020</b> in accordance with Condition 35B of Schedule 3.
7	Unless the approval holder retires the residual credits in accordance with Condition 8, the approval holder must undertake progressive rehabilitation of OC2 and OC3, so as to meet the rehabilitation performance and completion criteria developed in accordance with Condition 6, and in accordance with an approved Rehabilitation Management Plan. The approval holder must also comply with Condition 35C of Schedule 3 of the NSW Consolidated Project Approvals to retire the residual credits if the performance and completion criteria are not achieved in the specified timeframe in Condition 35C,	Compliant	Noted.



Condition Number	Condition	Compliance <sup>1</sup>	Evidence/Comments
	subject to the additional rules at Condition 20.		
8	The approval holder may retire the residual credits earlier than the specified timeframe in Condition 35C in accordance with Condition 35D of Schedule 3 of the NSW Consolidated Project Approvals, subject to the additional rules at Condition 20. If the approval holder chooses to retire credits early, the approval holder must notify the Department within 30 business days of retiring the credits.	Not Applicable	Noted.
9	The approval holder must comply with Condition 36 of Schedule 3, and Conditions 3 and 5 of Schedule 5, of the NSW Consolidated Project Approvals to prepare and implement a Biodiversity Management Plan for the Moolarben Coal Project.	Compliant	A revised Biodiversity Management Plan was approved by the NSW DPIE on <b>2 September 2020</b> .
10	The Biodiversity Management Plan implemented in accordance with Condition 9 must be approved by the Department as adequately providing for the management of protected matters on the site and in the offset areas.	Compliant	Noted. The DAWE advised MCO on <b>14 August 2020</b> that there is no requirement for the Biodiversity Management Plan to be approved under the EPBC Act.
11	The approval holder must comply with Condition 33 of Schedule 3, and Conditions 3 and 5 of Schedule 5, of the NSW Consolidated Project Approvals to prepare and implement a revised Water Management Plan for the Moolarben Coal Project.	Complaint	A revised Moolarben Complex WAMP incorporating EPBC 2017/7974 was approved by DPE on <b>21 October 2020</b> . The WMP continues to be implemented.
12	The approval holder must comply with the timing and content requirements of Condition 32A of Schedule 3 of the NSW Consolidated Project Approvals for the completion of an Independent Water Quality Study (IWQS).	Compliant	Completed in a previous period. The Independent Water Quality Study (IWQS), in accordance with Condition 32A was required by <b>1 December 2021</b> . An Extension of Time was granted by NSW Department of Planning and Environment (DPE) until <b>30 April 2023</b> . The IWQS was submitted in accordance with Condition 32A with DPE acknowledging that all requirements of Condition 32A had been met on <b>27 July 2023</b> .
13	The approval holder must ensure that the performance measures recommended in the IWQS are incorporated in a revised version of the Water Management Plan within 12 months of the IWQS being completed, and must implement the revised Water Management Plan.	Not Applicable	Completed in a previous period. The IWQS was approved by the NSW DPE on <b>27 July 2023</b> . A revised version of the Moolarben Complex Surface Water Management Plan including the recommendations from the IWQS was submitted to the DPE on <b>28 August 2023</b> .
14	The approval holder must comply with condition 33A of the NSW Consolidated Project Approvals to prepare and implement a Brine Management Plan.	Compliant	A revised Moolarben Complex Brine Management Plan incorporating EPBC 2017/7974 was approved by DPIE on <b>21</b>

Condition Number	Condition	Compliance <sup>1</sup>	Evidence/Comments
			<b>October 2020.</b> The Brine Management Plan continues to be implemented.
15	The approval holder must notify the Department in writing of the date of commencement of works in OC3, within ten business days after the date of commencement of works in OC3.	Compliant	Notification was provided to the Department on <b>18 February 2020</b> informing on the commencement of works in OC3.
16	The approval holder must notify the Department in writing of the date of commencement of operation of the water treatment facility, within ten business days after the date of commencement of operation of the water treatment facility.	Compliant	The commencement of operation of the water treatment facility occurred on <b>18 May 2020</b> . Written notification of commencement of the water treatment facility was provide to the Department on <b>27 May 2020</b> .
17	The approval holder must maintain accurate and complete compliance records.	Compliant	Noted.
18	If the Department makes a request in writing, the approval holder must provide electronic copies of compliance records to the Department within the timeframe specified in the request.	Compliant	Noted. No requests received during the 2024 reporting period.
19	The approval holder must: <ul style="list-style-type: none"> <li>a. Submit the Biodiversity Management Plan electronically to the Department for approval by the Minister.</li> <li>b. Publish each plan on its website within 20 business days of the date the plan is approved by the Minister and/or Secretary.</li> <li>c. Exclude or redact sensitive ecological data from plans published on its website or provided to a member of the public.</li> </ul>	Compliant	Noted. The DAWE advised MCO on <b>14 August 2020</b> that there is no requirement for the Biodiversity Management Plan to be approved under the EPBC Act.
20	The approval holder must use one or a combination of the following methods to retire the credits required for protected matters: <ul style="list-style-type: none"> <li>a. Retire like-for-like biodiversity credits within the meaning of the Biodiversity Conservation Act 2016 (NSW).</li> <li>b. Make payments into an offsets fund that has been developed by the NSW Government and that has been endorsed by the Minister. The financial contribution or payments into an offset fund must be determined by converting biodiversity credits to an equivalent dollar value through the NSW offsets payment calculator. The approval holder must submit evidence to the Minister of any payments, within ten business days of the payment being made.</li> <li>c. Fund a biodiversity conservation action within the meaning of the Biodiversity Conservation Act 2016 (NSW). The financial contribution to biodiversity conservation actions must be determined by converting biodiversity credits to an equivalent dollar value through the NSW</li> </ul>	Compliant	Noted. Credits associated with Condition 34A have been retired during the reporting period.

Condition Number	Condition	Compliance <sup>1</sup>	Evidence/Comments
	offsets payment calculator. The approval holder must submit to the Minister evidence of any payments within ten business days of the payment being made.		
21	<p>The approval holder must prepare a compliance report each year. The timing for preparing the compliance report must be consistent with the requirements of Condition 4 of Schedule 5 of the NSW Consolidated Project Approvals, or otherwise in accordance with an annual date that has been agreed in writing by the Department. The approval holder must:</p> <ul style="list-style-type: none"> <li>a. Publish each compliance report on its website within one month of being approved by the Secretary.</li> <li>b. Notify the Department by email that a compliance report has been published on its website within five business days of the date of publication.</li> <li>c. Exclude or redact sensitive ecological data from compliance reports published on its website.</li> <li>d. Where any sensitive ecological data has been excluded from the version published, submit the full compliance report to the Department within five business days of publication.</li> </ul>	Compliant	This report.
22	<p>The approval holder must notify the Department in writing of any non-compliance with the conditions or non-compliance with the commitments made in plans that relate to protected matters. The notification must be given no later than two business days after becoming aware of the non-compliance. The notification must specify:</p> <ul style="list-style-type: none"> <li>a. The condition which is or may be in breach.</li> <li>b. A short description of the non-compliance.</li> </ul>	Compliant	Noted.
23	<p>The approval holder must provide to the Department the details of any non-compliance with the conditions or commitments made in plans that relate to protected matters no later than ten business days after becoming aware of the non-compliance, specifying:</p> <ul style="list-style-type: none"> <li>a. Any corrective action or investigation which the approval holder has already taken or intends to take in the immediate future.</li> <li>b. The potential impacts of the non-compliance.</li> <li>c. The method and timing of any remedial action that will be undertaken by the approval holder.</li> </ul>	Compliant	Noted.
24	The approval holder must ensure that independent audits of compliance with the conditions are conducted as requested in writing by the Minister.	Not Applicable	Noted.
25	<p>For each independent audit, the approval holder must:</p> <ul style="list-style-type: none"> <li>a. Provide the name and qualifications of the independent auditor and the draft audit criteria to the Department.</li> <li>b. Only commence the independent audit once the audit criteria have been approved in writing</li> </ul>	Not Applicable	Noted.

Condition Number	Condition	Compliance <sup>1</sup>	Evidence/Comments
	by the Department. c. Submit an audit report to the Department within the timeframe specified in the approved audit criteria.		
26	The approval holder must publish the audit report on its website within ten business days of receiving the Department's approval of the audit report and keep the audit report published on its website until the end date of this approval.	Not Applicable	Noted.
27	The approval holder may, at any time, apply to the Minister for a variation to the Biodiversity Management Plan approved by the Minister under condition 10, or as subsequently revised in accordance with these conditions, by submitting an application in accordance with the requirements of section 143A of the EPBC Act.	Not Applicable	Noted.
28	The approval holder may revise the Biodiversity Management Plan approved by the Minister under condition 10, or as subsequently revised in accordance with these conditions, without submitting it for approval under section 143A of the EPBC Act, if the taking of the action in accordance with the revised Biodiversity Management Plan would not be likely to have a new or increased impact.	Not Applicable	Noted.
29	If the approval holder revises the Biodiversity Management Plan without submitting it for approval, the approval holder must: a. notify the Department in writing that the approved action management plan has been revised and provide the Department with: I. An electronic copy of the revised Biodiversity Management Plan. II. An explanation of the differences between the approved action management plan and the revised Biodiversity Management Plan. III. The reasons the approval holder considers that taking the action in accordance with the revised Biodiversity Management Plan would not be likely to have a new or increased impact. IV. Written notice of the date on which the approval holder will implement the revised Biodiversity Management Plan.	Not Applicable	Noted.
30	If the Minister gives a notice to the approval holder that the Minister is satisfied that the taking of the action in accordance with the revised Biodiversity Management Plan would be likely to have a new or increased impact, then: a. Condition 28 does not apply, or ceases to apply, in relation to the revised Biodiversity Management Plan. b. The approval holder must implement the Biodiversity Management Plan specified by the Minister in the notice.	Not Applicable	Noted.

Condition Number	Condition	Compliance <sup>1</sup>	Evidence/Comments
31	At the time of giving the notice under condition 30, the Minister may also notify that for a specified period of time, condition 28 does not apply for one or more specified action management plans.	Not Applicable	Noted.
32	The approval holder must notify the Department in writing of any proposed change to the conditions of the NSW Consolidated Project Approvals referred to in the conditions of this approval, no later than two weeks after formally proposing a change or becoming aware of a change being proposed. The approval holder must also notify the Department in writing of any change to the conditions of the NSW Consolidated Project Approvals referred to in the conditions of this approval, within two weeks of a change being finalised.	Not Applicable	Noted. There have been no proposed changes to the conditions of the NSW Consolidated Project Approvals referred to in the conditions of this approval during the reporting period.
33	Within 30 days after the completion of the action, the approval holder must notify the Department in writing and provide completion data.	Not Applicable	Noted.

<sup>1</sup> Definitions:

Compliant

*'Compliance' is achieved when all the requirements of a condition have been met, including the implementation of management plans or other measures required by those conditions.*

Non-compliant

*requirements of a condition or elements of a condition, including the implementation of management plans and other measures have not been met.*

Not applicable

*requirements of a condition or elements of a condition fall outside of the scope of the current reporting period. For example, a condition which applies to an activity that has not yet commenced.*

## **APPENDIX A – Moolarben Coal Annual Summaries –Biodiversity Offset Area (BOA) Flora and Fauna Monitoring**

### **Stage 1 Offset Monitoring Outcomes**

All MZ1 areas met all the performance criteria outlined in the Land Management Plan (LMP). With all areas recording at least one overstorey species common to analogue sites, at least one overstorey species consistent with the range associated with each vegetation association and recorded more than four native groundcover species common to analogue sites and therefore met the related completion criterion.

For the MZ2 areas, all vegetation associations met the four of five performance criteria outlined in the LMP that apply at the current stage of development and are on a trajectory to meet all criteria in the long-term. With the exception of the Box Woodland MZ2 area within Area 1 BOA, which met all the performance targets in the LMP.

### ***Trends in Overall Biodiversity Values***

The BioBanking Assessment Methodology (BBAM) site values scores (SVSs) (OEH 2014) provide an integrated metric of the general biodiversity values of a zone compared to the benchmark values of the associated vegetation type. They can be used to identify whether biodiversity values are being maintained or improved. For Stage 1 MZ1 areas, an assessment of SVSs demonstrated:

- There has been a continued improvement in biodiversity values within MZ1 areas of Area 1 in 2024, with average SVS increasing for the seventh year in a row, and SVS close to analogue values.
- Biodiversity values have been maintained within MZ1 areas of Area 2 and Area 3, with a slight decrease in average SVS. However, at Area 2, the SVS remains close to analogue values.

For Stage 1 MZ2 areas, an assessment of SVSs demonstrated:

- SVSs within MZ2 areas in Area 1 and Area 3 showed a slight decrease in average SVS compared to previous years.
- Average SVS decreased in 2024 within the MZ2 area within Area 2, which continues a downward trend. There are, however, established overstorey trees (two to three metres in height) and shrub species present within this monitoring site that are not yet contributing to cover along the transect at this time. Furthermore, natural and successful assisted regeneration of overstorey and midstorey species is occurring across the broader MZ2 area.

### **MOD 9 Offset Monitoring Outcomes – Assessment against BOMP Completion Criteria for MZ2 Areas**

Completion criteria will have been achieved when the vegetation has either achieved the relevant Biometric Vegetation Type (BVT) benchmark condition (for at least one upper structural layer and one ground cover class) or it can be demonstrated that it is on a self-sustaining trend towards the relevant benchmark condition.

All MZ2 areas within Clarke BOA continued to achieve all completion criteria.

At Bobadeen BOA, the MZ2 sites within the Blakely's Red Gum – Yellow Box Grassy Open Forest vegetation community area achieved all completion criteria. Three White Box – Yellow Box Grassy Woodland

monitoring sites continue to achieve the groundcover criterion, with two site also achieving native overstorey/midstorey completion criterion. All other MZ2 sites achieved native groundcover benchmark condition.

At Moolarmoo BOA, all MZ2 monitoring sites achieved the groundcover criterion. Almost all sites have achieved the native overstorey/midstorey completion criterion, with only one site in White Box – Yellow Box Grassy Woodland yet to achieve this.

At Property 5 BOA and Property 24 & 25 BOA, all MZ2 areas within the Blakely's Red Gum – Yellow Box Grassy open Forest vegetation community achieved all completion criteria.

The Rough-barked Apple – Silvertop Stringybark – Red Stringybark Grassy Open Forest vegetation community within MZ2 areas achieved native groundcover benchmark condition. Native overstorey/midstorey benchmark condition has not yet been achieved, however monitoring continues to show evidence of progression towards achieving the criteria.

### ***Trends in Overall Biodiversity Values***

BBAM SVSs were used to determine whether biodiversity values are being maintained or improved.

All MZ2 areas of MOD 9 BOAs displayed an increase in SVS during autumn 2024 monitoring.

MZ2 areas within Bobadeen, Property 5 and Moolarmoo recorded the highest average SVS recorded in 2024 reflecting an increase in biodiversity values. This increase is attributed to higher native species diversity and native groundcover observed at monitoring sites in autumn 2024.

### **Stage 2 Offset Monitoring Outcomes – Assessment against Stage 2 BOMP Performance Indicators and Completion Criteria**

The vegetation monitoring across the OMZ1 and OMZ2 sites at Stage 2 BOAs in autumn 2024 was conducted in accordance with the monitoring schedule and methodology in the Stage 2 BOMP and Cluster Management Plans (CMPs). Fauna monitoring was not conducted in 2024 in Stage 2 BOAs in accordance with the required three-yearly monitoring frequency, with the next round of monitoring due to be conducted in 2025. The key findings from the 2024 monitoring against the Performance Indicators and Completion Criteria are summarised below.

- For Offset Outcome 1(a) (woodland/forest) areas at all relevant BOAs are:
  - Expected to meet the Performance Indicator within the six yearly assessment timeframe.
  - Currently achieving all Completion Criteria or are expected to achieve all criteria by the target date (2065).
- For Offset Outcome 1(a) (DNG) areas within:
  - Dun Dun West, Libertus, Onsite Offset and Ulan 18 had sufficient natural and/or assisted regeneration and are therefore achieving this criteria.
  - Dun Dun East did not achieve this criterion, with no overstorey species recorded at monitoring sites. Assisted revegetation that has occurred in this BOA has been impacted

by the bushfire. Additional active revegetation has been planned for this BOA that will assist in achieving Completion Criteria by the target date (2065).

- For Offset Outcome 1(b) (woodland) areas at all relevant BOAs are:
  - Currently achieving or are expected to achieve all Completion Criteria by 2065.
- All Offset Outcome 1(b) (DNG) areas:
  - All relevant BOAs had sufficient natural and/or assisted regeneration recorded to meet the associated performance indicator in 2024.
  - Dun Dun East BOA and Old Bobadeen BOA is currently achieving or is on a trajectory to achieve all Completion Criteria by 2065.
- For Offset Outcome 2(c) (woodland) areas:
  - The revegetation associated performance indicators have not yet been applicable in the Onsite BOA as revegetation work is only planned to occur in 2025. However, is on track to achieving the vegetated grasslands associated performance indicators.
  - Old Bobadeen is not currently achieving the Completion Criteria, however with more revegetation work planned in 2025 this should aid in being on track to achieving the associated Completion Criteria by 2065.

### **Actions for Next Reporting Period**

During the next period activities to be undertaken include review of management plans and revision where necessary, continued monitoring, assisted regeneration planning and implementation, fencing, track and fire trail works, continued weed and feral animal control works.

There are three existing flora and fauna monitoring sites that are expected to be impacted by Energy Co works that are planned to commence mid-2025. Due to this, flora site's 14a (Area 1), 2c (Area 1), FI31 (Property 24/25) and fauna site's Fa14a (Area 1), Fa2b (Area 1) and Mod9\_Fa31 (Property 24/25) will need to be re-established during the 2025 monitoring campaign. These sites are expected to be scoped out and established with a monitoring stake installed, however it will not be monitored until 2026 as per the monitoring schedule.

Additionally, in 2025 all Stage 1 BOA's (Area 1 Redhills, Area 2 UG4/Westwoods and Area 3 Dexter Mountain) monitoring requirements will be undertaken in accordance with the methods prescribed in the Stage 2 Biodiversity and Offset Management Plan V6 2021 (EPBC 2008/4444 & EPBC 2017/7974) (BOMP). All sites which don't have two pickets at either the start and finish of the transects, will need to be established during monitoring. Plots FI135 (Stage2\_FI157), FI138 (Stage2\_FI158) and FI69 will need stakes installed whenever the next round of monitoring occurs.

Review of the fauna monitoring program to be conducted after the collection of three years of annual monitoring data.



## **APPENDIX B – Moolarben Coal Annual Summaries –Rehabilitation Flora and Fauna Monitoring**

MCO undertakes a comprehensive monitoring program of rehabilitation areas in accordance with the RMP. The program includes monitoring for initial establishment, long term floristic for composition, structure and ecological functioning, habitat and koala feed tree presence, fauna, and a comprehensive rehabilitation walkover. Monitoring is conducted in spring, and results assessed against preliminary rehabilitation completion criteria.

The rehabilitation monitoring program was reviewed and updated during 2024 to incorporate recommendations made by Eco Logical Australia. Changes included the removal of Ecosystem Functional Analysis and visual transect monitoring to remove repetition of data that is already being collected through detailed floristic monitoring. Monitoring has also been consolidated to all be conducted during the spring season to improve data integrity.

### **Initial Establishment and Long-term Monitoring**

Initial Establishment Monitoring (IEM) is a rapid style assessment of young ( $\leq 3$  years old) rehabilitated areas, principally to determine germination success, landform stability and early threats to the rehabilitation. The more detailed Long Term Monitoring (LTM) is applied in older rehabilitation areas ( $\geq 4$  years old) to evaluate progress of the rehabilitation towards fulfilling agreed or proposed completion criteria, and ultimately the targeted post-mining land use.

#### *Rehabilitation Monitoring Sites*

Progressive rehabilitation of disturbed areas is undertaken as land becomes available on a campaign basis. The rehabilitated landform therefore consists of a mosaic of areas that have been rehabilitated at different times. Monitoring sites have been selected to incorporate as many rehabilitation campaign areas as possible to provide a representative sample of conditions across each rehabilitated landform. Data is collected at individual sites and interpreted to assess the condition of each rehabilitation campaign, final land use domain or open cut area. The rehabilitation objectives and completion criteria in the RMP apply to the whole of landform scale.

There are currently 32 rehabilitation sites monitored across OC1, OC2 and OC4. Sites R31, R32, and R33 were established during spring 2023 with R34 being established in spring 2024. For the spring 2024 campaign, only sites R33 and R34 were monitored using IEM methodology. All other sites meet the required age for LTM. Rehabilitation monitoring sites are shown in **Figure B-1**.

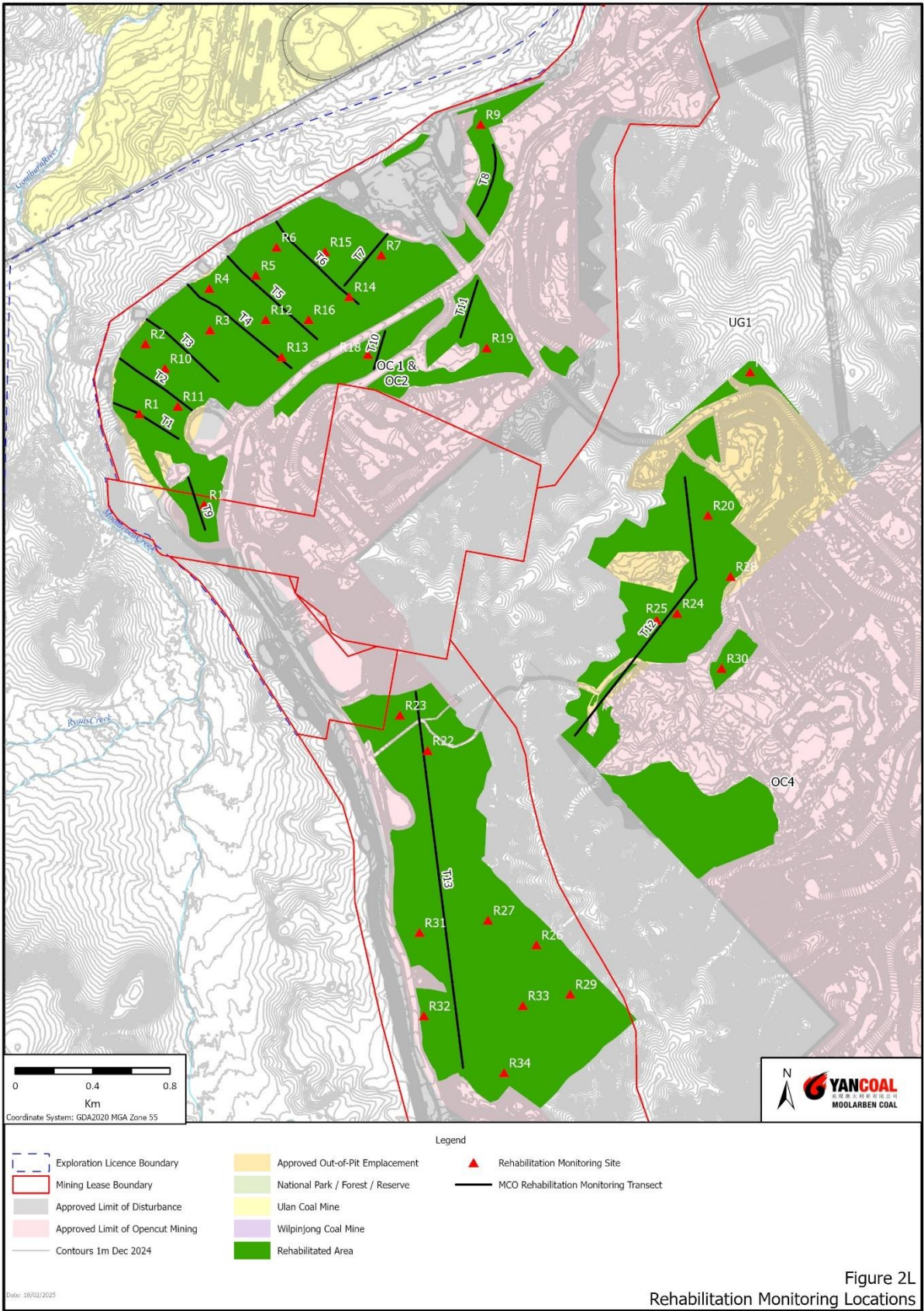


Figure B-1: Location of rehabilitation monitoring plots

### *Analogue Sites*

Analogue sites representative of the target Domain A vegetation communities have been established in the nearby Durrigere State Conservation Area and Goulburn River National Park for the OC1 and OC4 rehabilitated landforms. The representative target vegetation communities for these analogue sites are stated in the current RMP.

The rehabilitation outcomes for Domain D (OC2) rehabilitation do not require reference to analogues as they rely on published benchmark conditions for the target BVTs/PCTs (OEH 2017).

### *Results of Floristic Monitoring – Domain A*

During the 2024 monitoring of Box Gum Shrubby Woodland rehabilitation sites, native species richness ranged from 22 (R10) to 45 (R4). These results were generally comparable to analogue site results where native species richness ranged from 29 to 47. Only three (R7, R24 and R25) of the 11 sites surveyed were below the range of species richness across analogue sites.

Within the Sedimentary Ironbark Forest rehabilitation sites, native species richness ranged from 17 (R12) to 42 (R11). Three sites R16, R19 and R28 were just below the analogue range whilst R12 was below the analogue range of 30-54 species.

Within the Box Gum Grassy Woodland rehabilitation site (R30), native species richness was 32, being below the Box Gum Shrubby Woodland analogue sites of 39 – 58 species.

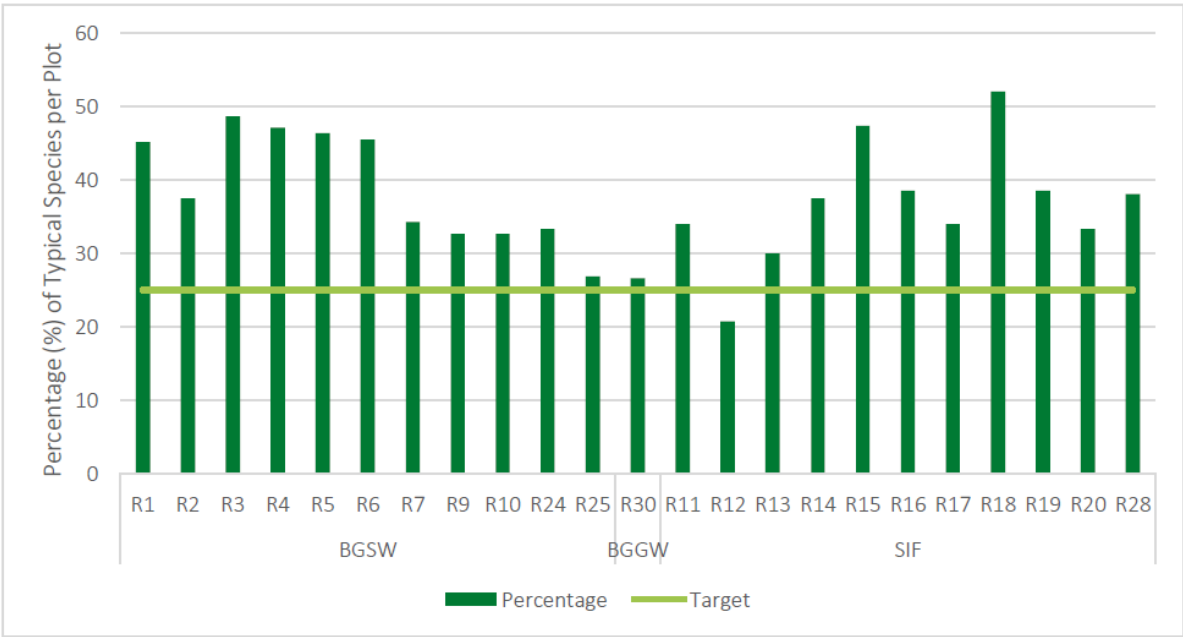
**Figure B-2** presents the percentage of species within rehabilitation areas that are typical of the target vegetation community. Plant Community Types (PCTs) that matched the general associations of Box Gum Shrubby Woodland, Sedimentary Ironbark Forest and Box Gum Grassy Woodlands were compiled during the development of the RMP completion criteria, and a typical species list was collated from these using the PCT profiles in BioNet Vegetation Classification. The target proportion of species being typical of the relevant vegetation community outlined in the criteria is 25%. The outcomes of the 2024 monitoring are:

All 11 Box Gum Shrubby Woodland sites have achieved this criterion.

10 out of 11 Sedimentary Ironbark Forest sites have achieved this criterion. One site (R12) recorded 21% typical species in the plot.

The Box Gum Grassy Woodland site (R30) has achieved this criterion with 27% typical species.

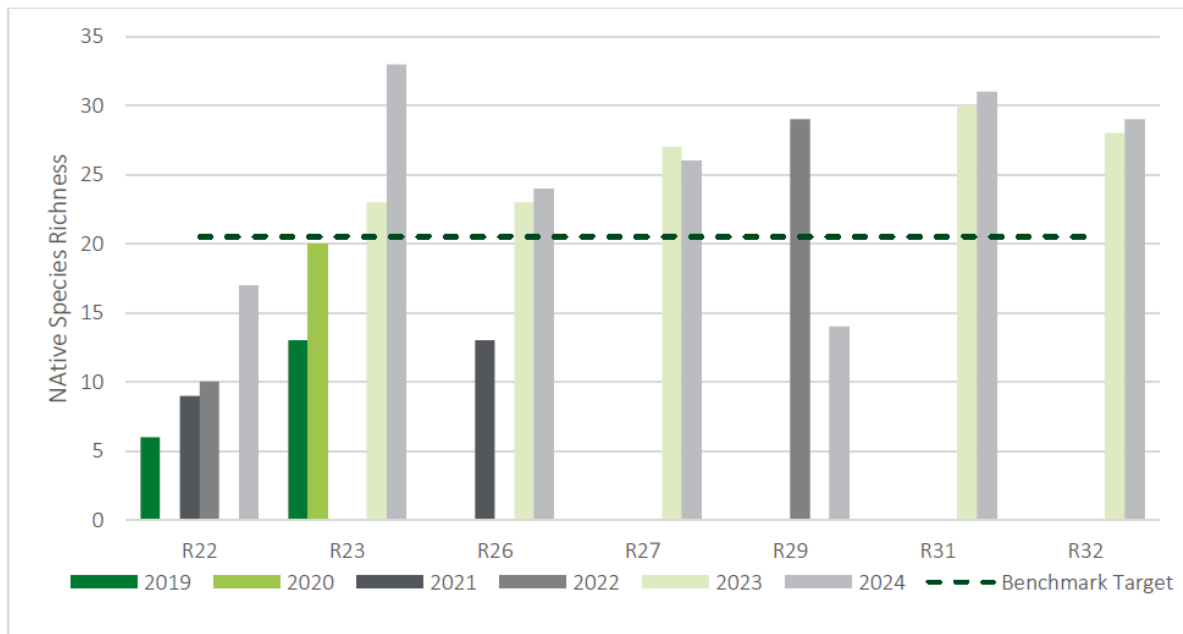
Sites that have achieved the criteria are therefore considered to be representative of or trending towards the target vegetation community.



**Figure B-2: Percentage of typical species in the monitoring plots that are representative of the Plant Community Types during the 2024 monitoring**

*Results of Floristic Monitoring – Domain D*

The native species richness recorded within OC2 sites during 2024 is provided in **Figure B-3**. The species richness ranged from 14 at R29 to 33 at R23. Two of the sites, R22 and R39, have not reached the benchmark native species richness of 20.5. Site R29 experienced a decrease compared to previous monitoring, with exotic cover increasing substantially at this monitoring point. When assessed over the overall OC2 landform, the total richness in the spring surveys remained consistent with the previous year, averaging 24.9 across OC2.



**Figure B-3: Native species richness for rehabilitation sites in the Domain D target vegetation communities from 2019 to 2024**

#### Domain D – Site Value Scores

Site Value Scores (SVSs) based on HU730 / HU910 BVT Benchmarks were calculated from the 2024 monitoring data at OC2 sites. The benchmark SVS required under the proposed completion criteria (13.8) has been achieved at an individual plot level at seven out of eight sites. The average SVS across OC2 rehabilitation was 20.9, which is well above this completion criterion. R22 was the only site which didn't meet the benchmark SVS largely due to the high exotic cover recorded.

#### Domain D – Koala Habitat Assessment

Sites R22, R23, R26, R27, R31, and R32 contained koala feed tree species within the 20 x 20 m floristic plot; however, all trees remain <10 cm DBH. The species included *Eucalyptus melliodora*, *Eucalyptus albens*, *Eucalyptus crebra*, *Eucalyptus fibrosa*, and *Eucalyptus punctata*. Therefore, 'highly suitable koala habitat' (where ≥15% of tree species are species listed within Schedule 2 of the SEPP (Koala Habitat Protection) 2019) should develop as rehabilitation progresses and trees mature above 10 cm DBH at these sites.

#### Results of Fauna Habitat monitoring

A range of fauna habitats were recorded within rehabilitation areas including:

- Deep litter, mistletoe, surface rock, rock piles, stags containing hollows, and dense midstorey within Box Gum Shrubby Woodland and Sedimentary Ironbark Forest communities in OC1 rehabilitation
- Surface rock, rock piles and stags within Sedimentary Ironbark Forest communities in OC4 rehabilitation
- Surface rock and rock piles within Box Gum Shrubby Woodland and Box Gum Grassy Woodland in OC4 rehabilitation.

### Results of Fauna Monitoring

Fauna monitoring is undertaken to demonstrate the presence of suitable fauna habitat and utilisation of rehabilitation areas by fauna species as rehabilitation progresses. Surveys included microbat detection, bird surveys and herpetological searches, dam inspections and deployment of four remote cameras within OC1, as well as opportunistic observations of fauna throughout the OC1, OC2 and OC4 rehabilitation areas. Fauna monitoring was undertaken at a range of sites to ensure a survey effort appropriate to the age and complexity of the rehabilitation across all target vegetation communities.

A total of 55 fauna species were recorded or potentially recorded across all rehabilitation sites monitored in spring 2024. This included one amphibian species, 28 bird species, and 26 mammals including 17 microbat species and four introduced species. Six of the species recorded are listed as vulnerable under the NSW *Biodiversity Conservation Act 2016* (BC Act), being the Speckled Warbler (*Chthonicola sagittata*), White-bellied Sea Eagle (*Haliaeetus leucogaster*), Large-eared Pied Bat (*Chalinolobus dwyeri*) and Eastern Bent-winged Bat (*Miniopterus orianae oceanensis*).

A wide range of bird guilds were recorded including insectivores, nectivores and herbivores which forage at different stratum levels within vegetation, which indicates that multiple types of habitats are available within the rehabilitation areas. The most frequently recorded bird species across Domain A was Yellow-faced Honeyeater (*Caligavis chrysops*), which was recorded at all sites. White-eared Honeyeater (*Lichenostomus leucotis*), Spotted Pardalote (*Pardalotus punctatus*) and Superb Fairy-wren (*Malurus cyaneus*) were also frequently recorded in 2024.

Dam inspections were performed at two dams within OC1 which recorded one species at both dams, Spotted Marsh Frog (*Limnodynastes tasmaniensis*). Both dams contained little to no water which may explain why more species were not found in spring 2024. The same species was recorded opportunistically at OC4.

Nine mammal species were either recorded on remote cameras camera or opportunistically observed, including five native species (Common Brushtail Possum (*Trichosurus vulpecula*), Eastern Grey Kangaroo (*Macropus giganteus*), Red-necked Wallaby (*Macropus rufogriseus*), Swamp Wallaby (*Wallabia bicolor*), Wombat (*Vombatus ursinus*) and four introduced species (Hare (*Lepus europaeus*), Pig (*Sus scrofa*), Rabbit (*Oryctolagus cuniculus*), and Red Fox (*Vulpes vulpes*)).

A total of 17 different bat species were 'definitely' or 'probably' recorded, which is an increase from 15 species in 2023. The number of microbat species recorded was similar among sites in the same rehabilitation areas. Notably, the threatened cave-dependent microbat species Large-eared Pied Bat, was 'definitely' recorded at both OC1 sites for the third year. Gould's Wattled Bat and Southern Free-tailed Bat were also 'definitely' recorded across all sites. The microbat activity levels were much higher within OC1 sites compared to OC4 sites across both target vegetation communities. This likely reflects the age of rehabilitation areas within OC1 containing more developed foraging habitat.

### Assessment of Rehabilitation Performance Indicators

Analysis of the Box Gum Shrubby Woodland, Sedimentary Ironbark Forest, Box Gum Grassy Woodland rehabilitation, and OC2/OC3 Ecosystem and species credit sites against the proposed completion criteria is presented in **Table B-1**, **Table B-2**, **Table B-3** and **Table B-4**.



In summary, the outcomes of monitoring were:

OC1:

- Domain A Box Gum Shrubby Woodland areas have achieved 10 and partially achieved three of the 13 completion criteria.
- Domain A Sedimentary Ironbark Forest areas have achieved 10 and partially achieved three of the 13 completion criteria.

OC4:

- Domain A Box Gum Shrubby Woodland areas have achieved eight and partially achieved four of the 12 completion criteria.
- Domain A Box Gum Grassy Woodland areas have achieved seven and partially achieved five of the 12 completion criteria.
- Domain A Sedimentary Ironbark Forest areas have achieved eight and partially achieved four of the 12 completion criteria.

OC2: Domain D areas have achieved 10 out of 15 completion criteria.

**Table B-1: Box Gum Shrubby Woodland Rehabilitation Assessment**

Proposed Completion Criteria	OC1 - 2024 Monitoring Outcome	OC4 - 2024 Monitoring Outcome
Reconstructed landforms are stable with no evidence of slumping.	Slumping of the landform observed.  <b>Outcome:</b> Proposed completion criteria not yet achieved in 2024.	There were no signs of slumping landforms observed.  <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Gullies and rills occurring in monitoring transects are assessed to be limited and stabilising.	Signs of gullies or rills were recorded, but at a density consistent with surrounding remnant vegetation.  <b>Outcome:</b> Proposed completion criteria was achieved in 2024.	Signs of active gully and rill erosion observed.  <b>Outcome:</b> Proposed completion criteria not yet achieved in 2024.
'High Threat Exotic' (HTE*) weed presence and cover is monitored regularly. Priority and HTE weeds identified through monitoring have been controlled.	There were HTE present at all monitoring sites. The level of HTE is not significant and is managed through ongoing maintenance.  <b>Outcome:</b> Proposed completion criteria achieved in 2024.	There were HTE present at all monitoring sites. The level of HTE is not significant and is managed through ongoing maintenance.  <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Vertebrate pest species presence and impacts are recorded and controlled.	Feral pests were recorded during monitoring, and some signs of damage in OC1 but the level of damage was not considered to be unacceptable.  <b>Outcome:</b> Proposed completion criteria achieved in 2024.	Feral pests were recorded during monitoring, and some signs of damage in OC4 but the level of damage was not considered to be unacceptable.  <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Rehabilitation area at some point since seeding or final surface preparation has experienced a fire or declared drought or	All rehabilitation campaigns have experienced an intense drought.	All rehabilitation campaigns have experienced an intense drought.

at least one year with annual rainfall in the first decile range and all other vegetation completion criteria have been met.	<b>Outcome:</b> Proposed completion criteria partially achieved in 2024.	<b>Outcome:</b> Proposed completion criteria partially achieved in 2024.
Priority weeds are controlled and HTE cover is maintained at < 15%.	At all sites, the HTE cover was below 15%. <b>Outcome:</b> Proposed completion criteria achieved in 2024.	At all sites, the HTE cover was below 15%. <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Multiple fauna habitats are available within all rehabilitation areas.	During 2024 monitoring a range of fauna habitat was recorded. <b>Outcome:</b> Proposed completion criteria achieved in 2024.	During 2024 monitoring a range of fauna habitat was recorded. <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Monitoring confirms multiple native fauna species are recorded utilising rehabilitation areas.	2024 monitoring confirmed that there were multiple species utilising the rehabilitation areas. <b>Outcome:</b> Proposed completion criteria achieved in 2024.	2024 monitoring confirmed that there were multiple species utilising the rehabilitation areas. <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Stands <sup>2</sup> of <i>Allocasuarina</i> spp have been maintained within Box Gum Shrubby Woodland / Sedimentary Ironbark Forest rehabilitation areas on OC1.	There were stands of <i>Allocasuarina</i> spp present during 2024 monitoring in OC1. <b>Outcome:</b> Proposed completion criteria achieved in 2024.	N/A
Revegetation areas contain flora species assemblages characteristic of or trending towards that of: Box Gum Shrubby Woodland communities <sup>1</sup> / Secondary Ironbark Forest communities <sup>3</sup> / Box Gum Grassy Woodland <sup>1</sup> .	All sites in OC1 achieved the greater than 25% of typical species composition. <b>Outcome:</b> Proposed completion criteria achieved in 2024.	All sites in OC4 achieved the greater than 25% of typical species composition. <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Median foliage cover of the ecologically dominant layers (trees/shrubs/ground cover) and developing litter cover are within the 10th-90th percentile variation range of the Box Gum Shrubby Woodland Community / Secondary Ironbark Forest community / Box Gum Grassy Woodland Community Analogue sites.	Only tree cover did not achieve the percentage variation range. All other values achieved this criterion. <b>Outcome:</b> Proposed completion criteria partially achieved in 2024.	Tree, shrub and litter cover did not achieve the percentile variation range. Groundcover exceeded the 90 <sup>th</sup> percentile criterion. <b>Outcome:</b> Proposed completion criteria not yet achieved in 2024.
Rehabilitation monitoring verifies that second generation seedlings of species characteristic of Box Gum Shrubby Woodland Communities / Secondary Ironbark Forest communities / Box Gum Grassy Woodland communities are present or likely to be, based on comparable older rehabilitation sites.	Second generation seedlings of characteristic species were recorded within OC1. <b>Outcome:</b> Proposed completion criteria achieved in 2024.	Only first-generation seedlings of characteristic species have been observed, however evidence of reproductive potential was observed at the time of survey. <b>Outcome:</b> Proposed completion criteria not yet achieved in 2024.



**Table B-2: Sedimentary Ironbark Forest Rehabilitation Assessment**

Proposed Completion Criteria	OC1 – 2024 Monitoring Outcome	OC4 - 2024 Monitoring Outcome
Reconstructed landforms are stable with no evidence of slumping.	Slumping of the landform observed. <b>Outcome:</b> Proposed completion criteria not yet achieved in 2024.	There were no signs of slumping landforms observed. <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Gullies and rills occurring in monitoring transects are assessed to be limited and stabilising.	Signs of gullies or rills were recorded, but at a density consistent with surrounding remnant vegetation. <b>Outcome:</b> Proposed completion criteria was achieved in 2024.	Signs of active gully and rill erosion observed. <b>Outcome:</b> Proposed completion criteria not yet achieved in 2024.
'High Threat Exotic' (HTE*) weed presence and cover is monitored regularly. Priority and HTE weeds identified through monitoring have been controlled.	There were HTE present at all monitoring sites. The level of HTE is not significant and is managed through ongoing maintenance. <b>Outcome:</b> Proposed completion criteria achieved in 2024.	There were HTE present at all monitoring sites. The level of HTE is not significant and is managed through ongoing maintenance. <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Vertebrate pest species presence and impacts are recorded and controlled.	Feral pests were recorded during monitoring, and some signs of damage in OC1 , but the level of damage was not considered to be unacceptable. <b>Outcome:</b> Proposed completion criteria achieved in 2024.	Feral pests were recorded during monitoring, and some signs of damage in OC4 , but the level of damage was not considered to be unacceptable. <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Rehabilitation area at some point since seeding or final surface preparation has experienced a fire or declared drought or at least one year with annual rainfall in the first decile range and all other vegetation completion criteria have been met.	All rehabilitation campaigns have experienced an intense drought. <b>Outcome:</b> Proposed completion criteria partially achieved in 2024.	All rehabilitation campaigns have experienced an intense drought. <b>Outcome:</b> Proposed completion criteria partially achieved in 2024.
Priority weeds are controlled and HTE cover is maintained at < 15%.	At all sites, the HTE cover was below 15%. <b>Outcome:</b> Proposed completion criteria achieved in 2024.	At all sites, the HTE cover was below 15%. <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Multiple fauna habitats are available within all rehabilitation areas.	During 2024 monitoring a range of fauna habitat was recorded. <b>Outcome:</b> Proposed completion criteria achieved in 2024.	During 2024 monitoring a range of fauna habitat was recorded. <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Monitoring confirms multiple native fauna species are recorded utilising rehabilitation areas.	2024 monitoring confirmed that there were multiple species utilising the rehabilitation areas. <b>Outcome:</b> Proposed completion criteria achieved in 2024.	2024 monitoring confirmed that there were multiple species utilising the rehabilitation areas. <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Stands <sup>2</sup> of <i>Allocasuarina</i> spp have been	There were stands of <i>Allocasuarina</i> spp	

maintained within Box Gum Shrubby Woodland / Sedimentary Ironbark Forest rehabilitation areas on OC1.	present during 2024 monitoring in OC1.  <b>Outcome:</b> Proposed completion criteria achieved in 2024.	N/A
Revegetation areas contain flora species assemblages characteristic of or trending towards that of: Box Gum Shrubby Woodland communities <sup>1</sup> / Secondary Ironbark Forest communities <sup>3</sup> / Box Gum Grassy Woodland <sup>1</sup> .	All but one site in OC1 achieved greater than 25% of typical species composition.  <b>Outcome:</b> Proposed completion criteria partially achieved in 2024.	All sites have achieved greater than 25% of typical species composition.  <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Median foliage cover of the ecologically dominant layers (trees/shrubs/ground cover) and developing litter cover are within the 10th-90th percentile variation range of the Box Gum Shrubby Woodland Community / Secondary Ironbark Forest community / Box Gum Grassy Woodland Community Analogue sites.	Shrub, ground and litter cover achieved the percentile variation range. Tree cover values were very close to achieving this criterion.  <b>Outcome:</b> Proposed completion criteria partially achieved in 2024.	All values were within the target percentile variation ranges.  <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Rehabilitation monitoring verifies that second generation seedlings of species characteristic of Box Gum Shrubby Woodland Communities / Secondary Ironbark Forest communities / Box Gum Grassy Woodland communities are present or likely to be, based on comparable older rehabilitation sites.	Second generation seedlings of characteristic species were recorded within OC1.  <b>Outcome:</b> Proposed completion criteria achieved in 2024.	Only first-generation seedlings of characteristic species have been observed, however evidence of reproductive potential was observed at the time of survey.  <b>Outcome:</b> Proposed completion criteria not yet achieved in 2024.

**Table B-3: Box Gum Grassy Woodland Rehabilitation Assessment**

Proposed Completion Criteria	OC4 - 2024 Monitoring Outcome
Reconstructed landforms are stable with no evidence of slumping.	There were no signs of slumping landforms observed.  <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Gullies and rills occurring in monitoring transects are assessed to be limited and stabilising.	Signs of active gully and rill erosion observed.  <b>Outcome:</b> Proposed completion criteria not yet achieved in 2024.
'High Threat Exotic' (HTE*) weed presence and cover is monitored regularly. Priority and HTE weeds identified through monitoring have been controlled.	There were HTE present at all monitoring sites. The level of HTE is not significant and is managed through ongoing maintenance.  <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Vertebrate pest species presence and impacts are recorded and controlled.	Feral pests were recorded during monitoring, and some signs of damage in OC4 , but the level of damage was not considered to be unacceptable.  <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Rehabilitation area at some point since seeding or final surface preparation has experienced a fire or declared drought or at least one year with annual rainfall in the first decile range and all other vegetation	All rehabilitation campaigns (except site R30) have experienced an intense drought.  <b>Outcome:</b> Proposed completion criteria partially achieved in 2024.

completion criteria have been met.	
Priority weeds are controlled and HTE cover is maintained at < 15%.	At all sites, the HTE cover was below 15%. <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Multiple fauna habitats are available within all rehabilitation areas.	During 2024 monitoring a ranged of fauna habitat was recorded. <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Monitoring confirms multiple native fauna species are recorded utilising rehabilitation areas.	2024 monitoring confirmed that there were multiple species utilising the rehabilitation areas. <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Revegetation areas contain flora species assemblages characteristic of or trending towards that of: Box Gum Shrubby Woodland communities <sup>1</sup> / Secondary Ironbark Forest communities <sup>3</sup> / Box Gum Grassy Woodland <sup>1</sup> .	Rehabilitation in OC4 achieved the greater than 25% of typical species composition. <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Median foliage cover of the ecologically dominant layers (trees/shrubs/ground cover) and developing litter cover are within the 10th-90th percentile variation range of the Box Gum Shrubby Woodland Community / Secondary Ironbark Forest community / Box Gum Grassy Woodland Community Analogue sites.	Litter cover achieved the completion criteria, ground cover was close to achieving the percentile variation, whereas tree and shrub cover were below the completion criteria in OC4 rehabilitation. <b>Outcome:</b> Proposed completion criteria partially achieved in 2024.
Rehabilitation monitoring verifies that second generation seedlings of species characteristic of Box Gum Shrubby Woodland Communities / Secondary Ironbark Forest communities / Box Gum Grassy Woodland communities are present or likely to be, based on comparable older rehabilitation sites.	Only first-generation seedlings of characteristic species have been observed, however evidence of reproductive potential was observed at the time of survey. <b>Outcome:</b> Proposed completion criteria not yet achieved in 2024.

**Table B-4: OC2 Ecosystem and Species Credit Rehabilitation Assessment**

Proposed Completion Criteria	2024 Monitoring Outcome
Reconstructed landforms are stable with no evidence of slumping.	There was no slumping of the landform observed during monitoring. <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Gullies and rills occurring in monitoring transects are assessed to be limited and stabilising.	There were signs of gullies and rill erosion in in the OC2 rehabilitation. <b>Outcome:</b> Proposed completion criteria not achieved in 2024.
Active erosion (soil loss due to gully and rilling) is assessed to be minimal.	There were signs of gullies and rill erosion in in the OC2 rehabilitation. <b>Outcome:</b> Proposed completion criteria not achieved in 2024.
'High Threat Exotic' (HTE*) weed presence and cover is monitored regularly. Priority and HTE weeds identified through monitoring have been controlled.	Ongoing. There were HTE present at all monitoring sites. The level of HTE is not significant and is managed through ongoing maintenance. <b>Outcome:</b> Proposed completion criteria achieved in 2024.
Vertebrate pest species presence and impacts are recorded and controlled.	Feral pests were recorded during monitoring, and some signs of damage in OC2, but the level of damage was not considered to be unacceptable.

	<b>Outcome:</b> Proposed completion criteria achieved in 2024.
Native Plant Species Richness is $\geq 20.5$ at year 10 post mining.	Average native plant species richness was greater than 20.5. <b>Outcome:</b> Proposed completion criteria not yet assessable in 2024.
$\geq 15\%$ of the total number of trees are the regionally relevant species** within koala FBA species credit areas.	There were no trees suitable for koala use of greater than 10cm DBH in the monitoring plots, however this is expected at this stage of the rehabilitation area. <b>Outcome:</b> Proposed completion criteria not assessable in 2024.
Native Over Storey Cover between 3.75 and 80% at year 10 post mining operations.	Average native overstorey cover is 0.2%. <b>Outcome:</b> Proposed completion criteria not yet assessable in 2024.
Native Mid-Storey Cover between 1.25 and 40% at year 10 post mining operations.	Average mid-storey cover was 2.5% across OC2 and OC3. <b>Outcome:</b> Proposed completion criteria not yet assessable in 2024.
Native Ground Cover, Grass between 3 and 100% at year 10 post mining operations.	Native grass ground cover is 10% across OC2. <b>Outcome:</b> Proposed completion criteria not yet assessable in 2024.
Native Ground Cover, Shrubs between 0.5 and 20% at year 10 post mining operations.	Average native shrub groundcover is 0.3%. <b>Outcome:</b> Proposed completion criteria not yet assessable in 2024.
Native Ground Cover, Other between 2 and 80% at year 10 post mining operations.	The average native ground cover, other was 4.9% across OC2 rehabilitation. <b>Outcome:</b> Proposed completion criteria not yet assessable in 2024.
Total Length Fallen Logs (m) is 1.25 at year 10 post mining operations.	The average length of fallen logs was greater than 1.25m. <b>Outcome:</b> Proposed completion criteria not yet assessable in 2024.
Exotic Plant Cover is <45% at year 10 post mining operations.	The average exotic plant cover achieved the criteria of less than 45% exotic plant cover. One site did not achieve this criterion (R22) <b>Outcome:</b> Proposed completion criteria not yet assessable in 2024.
Overall Site Value Score (OEH, 2015) (average of plots in vegetation zone) is $\geq 13.8$ at 10 years post mining operations.	The overall Site Value Score for OC2 in 2022 was 20.9 and achieved the completion criteria. <b>Outcome:</b> Proposed completion criteria not yet assessable in 2024.

\* HTEs as per the BAM 2020

\*\* Under the *State Environmental Planning Policy (SEPP) (Koala Habitat Protection) 2021*.

<sup>1</sup> A range of characteristic means that at least 25% of the species present in rehabilitated areas are recognised as being typical of the vegetation communities that match the Box Gum Shrubby Woodland Association (inclusive of any additional species listed in Table 16 of the RMP)

<sup>2</sup> Patches of three or more individual stems

<sup>3</sup> A range of characteristic means that at least 25% of the species present in rehabilitated areas are recognised as being typical of the vegetation communities that match the Sedimentary Ironbark Forest Association (inclusive of any additional species listed in Table 17 of the RMP)

<sup>4</sup> A range of characteristic means that at least 25% of the species present in rehabilitated areas are recognised as being typical of the vegetation communities that match the Box Gum Grassy Woodland Association (inclusive of any additional species listed in Table 18 of the RMP)

<sup>5</sup> At least 50% of the vegetative cover.

## Rehabilitation Works

Rehabilitation of disturbed lands are undertaken sequentially (or in phases) to achieve the final land use. A description of these phases of rehabilitation relevant to the MCC are provided in the FWP. A summary of rehabilitation phases completed during the reporting period included:

### *Decommissioning*

There were no decommissioning activities undertaken at MCO.

### *Landform Establishment*

43.8ha of landform establishment in OC2, OC3 and OC4 was completed during 2024. Final landforms were established to the relevant completion criteria including:

- Constructed landforms consistent with surrounding topography.
- Slopes were generally between 10° and 18°
- Constructed landforms were free draining.
- No hostile overburden material in the final surface layers.

### *Growth Medium Development*

47.1ha of opencut areas within OC3 and OC4 underwent growth medium development followed by ecosystem and land use establishment during 2024.

### *Ecosystem and Land use Establishment*

420.1ha of rehabilitation located within OC1, OC2, OC3 and OC4 is in the ecosystem and land use establishment phase. These areas were maintained and further enhanced during 2024.

### **Actions for Next Reporting Period**

Rehabilitation actions to be progressed in the next period include:

- Continued progressive rehabilitation.
- Continued weed and feral animal control.

Continued monitoring of rehabilitation areas and undertake management actions informed by monitoring results, including erosion and track maintenance, infill planting or reseeding where required.