

BENGALLA MINING COMPANY



Bengalla Mine (EPBC APPROVAL 2012/6378)

2023 ANNUAL COMPLIANCE REPORT





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BENGALLA MINE

ANNUAL COMPLIANCE REPORT FOR EPBC APPROVAL 2012/6378

1 INTRODUCTION

1.1 Background

Bengalla Mining Company Pty Limited (BMC) operates the Bengalla Mine (Bengalla) on behalf of the Bengalla Joint Venture (comprising New Hope Bengalla Pty Ltd as to 8/10 share and Taipower Bengalla Pty Limited as to 2/10 share). Bengalla is located 130 km north-west of Newcastle and 4 km west of the township of Muswellbrook.

Bengalla commenced operations in 1998 and is approved to extract up to 15 Million tonnes per annum of run of mine coal until 2039.

On 3 March 2015, State Significant Development Consent (SSD-5170) for the Bengalla Continuation of Mining Project was granted by the Secretary of the NSW Department of Planning and Environment (DPE) under the *Environmental Planning and Assessment Act 1979* NSW. SSD-5170 has since been modified on various occasions.

On 27 May 2015, BMC was granted *Environment Protection and Biodiversity Conservation Act 1999* Cth (EPBC Act) Approval 2012/6378 (the EPBC Approval).

Both the EPBC Approval and SSD-5170 (as originally granted) are supported by (relevantly) the 'Continuation of Bengalla Mine Environmental Impact Statement' (Hansen Bailey, 2013) (EIS) and *Continuation of Bengalla Mine Response to Submissions* (Hansen Bailey, 2014) (RTS).

The Biodiversity Offset Management Plan (BOMP) has been developed to meet relevant requirements under the EPBC Approval and SSD-5170. The current version of the BOMP was approved by what was then the Commonwealth Department of Environment and Energy (DoEE)¹ on 8 March 2017 and by DPE on 18 August 2017.

The Biodiversity Management Plan (BDMP) has also been developed to meet relevant requirements under the EPBC Approval and SSD-5170. The current version of the BDMP was approved by DPE on 18 August 2017 and by DoEE on 20 September 2017. The BDMP incorporates the Vegetation Clearance Protocol and Landscape Management Plan (VCPLMP) referred to in the EPBC Approval.

1.2 Purpose and Scope

This report has been prepared in accordance with Condition 12 of the EPBC Approval which states:

"By the end of March each year, 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 VCLMP as specified in the conditions. 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.

Note: The Annual Review required under NSW Approval condition 4 (of Schedule 5) may be used to satisfy this condition if it meets the above content and submission requirements."

This report applies to the period 1 January 2023 to 31 December 2023 (Reporting Period).

¹ Now the Department of Climate Change, Energy, the Environment and Water (DCCEEW).

This report is published as a stand-alone report and will also form an Appendix to the 2023 Annual Review for Bengalla required under SSD-5170 Schedule 5 Condition 4.

1.3 Clearing Activities in 2023

Table 1 is a reproduction of Figure 6 from the BDMP. It provides details of the staged clearing approach undertaken at Bengalla.

Table 1
Staged Clearing Approach

Stage	Actions
Pre-Clearing Survey	<ul style="list-style-type: none"> Performed within one month of clearing All fauna, flora and <i>Cymbidium canaliculatum</i> recorded Vegetation health assessed and documented Habitat features marked and flagged Fauna captured and relocated
Clearing – Stage 1	<ul style="list-style-type: none"> Removal of all vegetation other than habitat trees Habitat features left standing overnight
Clearing – Stage 2	<ul style="list-style-type: none"> A final pre-clearing inspection will be conducted to identify and capture any fauna Habitat trees lightly shaken by machinery prior to felling Appropriate machinery used to fell the tree Any <i>Cymbidium canaliculatum</i> (Tiger Orchid) translocated Remaining fauna captured and relocated Felled habitat trees left overnight and then appropriate sections are removed and relocated to a storage location, rehabilitation areas or disposed

The Bengalla Mine Annual Clearing Report for 2023 (Clearing Report) is presented in **Appendix C** and contains details about the procedures and results for all pre-clearing and clearing activities completed at Bengalla during the Reporting Period.

Clearing works in 2023 were undertaken in relation to, but not limited to the following:

- General pit progression and relocation of infrastructure,
- Construction of new infrastructure, and
- Maintenance works.

The Clearing Report summarises the 2023 pre-clearance and clearance surveys, which included:

- Identification of 297 hollow-bearing / habitat trees, of which 134 were felled;
- 46 animals were relocated or captured during pre-clearance and clearance surveys;
- Observation of 54 animals that evaded capture during clearing;
- Nine animals were killed as a result of tree felling;
- Two animals required euthanasia following tree felling;



- One *Cymbidium canaliculatum* (listed as endangered under the EPBC Act) was identified during Stage 1 pre-clearance surveys in 2022. This individual was translocated to a donor tree in 2023.

Figure 1 is a reproduction of Figure 3 from the approved BOMP and has been updated to illustrate areas cleared during the Reporting Period, including Critically Endangered Ecological Communities (CEEC) listed under the EPBC Act.

CEEC identified in environmental assessments completed for the EIS and RTS included the following four communities identified as conforming to Upper Hunter White Box-Ironbark Grassy Woodland (Box Gum Woodland):

- Grey Box/White Box Intergrade Grassy Woodland;
- Upper Hunter White Box -Ironbark Grassy Woodland;
- Central Hunter Ironbark – Spotted Gum Forest; and
- Derived Native Grassland.

1.4 [Weed and Pest Management in 2023](#)

Information about the weed and pest management programs implemented at Bengalla and the offset areas during the Reporting Period is presented in **Appendix D**.

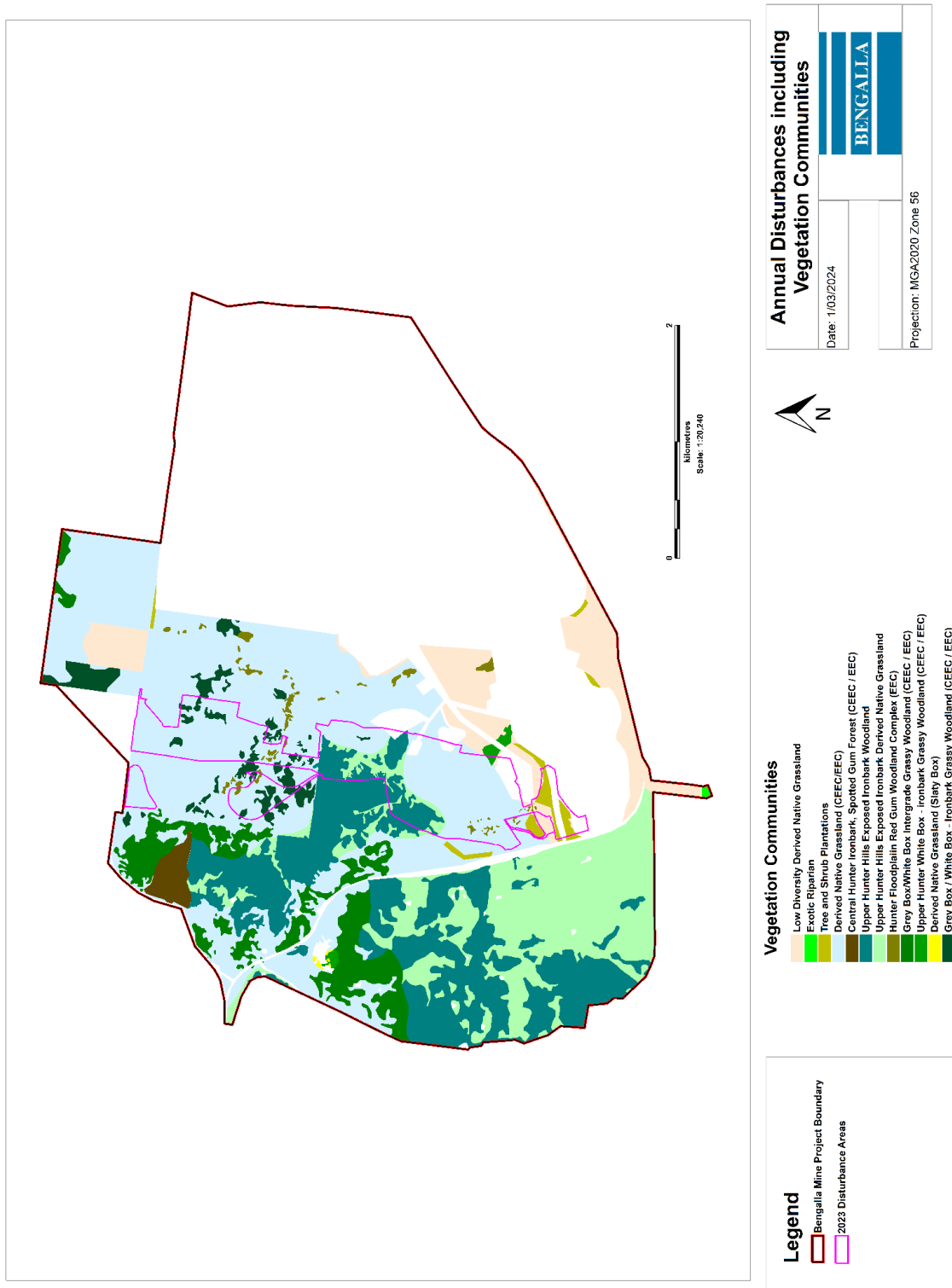


Figure 1 - Vegetation Communities

1.5 Compliance Report

The commitments made in the approved BDMP and BOMP, along with the compliance status of each for the Reporting Period, are presented in **Appendix A** and **Appendix B** respectively with comments provided against each where required.

Table 2 lists the conditions of the EPBC Approval and indicates the compliance status of each for the Reporting Period as ‘compliant’, ‘not compliant’ or ‘not triggered’. Comments are provided against each condition, where required.

Table 2
BMC Compliance Status against Conditions of EPBC Approval for 2023

Ref	Condition	Status	Comment
1	The approval holder must not clear more than 535 hectares of <i>White Box-Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland</i> ecological community (Box Gum Woodland) and must limit clearing to within the project disturbance boundary defined at Schedule 1.	Compliant	In 2023 clearing was undertaken within the Project Disturbance Boundary shown on the plan at Schedule 1 of the EPBC Approval. BMC has not cleared more than 535 hectares of Box Gum Woodland (see Figure 1).
2	<p>To mitigate impacts of the action on Box Gum Woodland, the Grey Headed Flying Fox, Large-eared Pied Bat, South-eastern Long-eared Bat, Regent Honeyeater, Swift Parrot and 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:</p> <ol style="list-style-type: none"> Delineate areas to be cleared, describe pre-clearance survey methods, specify actions to minimise fauna impacts and detail vegetation clearance procedures Require collection and stockpiling of habitat features important to threatened fauna species for reinstatement in rehabilitation areas Require use of native, locally sourced seed for propagation for rehabilitation activities Include measures to avoid, suppress and control the spread of plant pathogens (such as <i>Phytophthora cinnamomi</i>) Specify a two stage clearing protocol where non-habitat trees are cleared 24 hours prior to any habitat trees being cleared, to encourage fauna to move out of an area. <p>The approval holder must not commence the action until the VCPLMP is approved by the</p>	Compliant	<p>A BMP was developed to meet this requirement and is implemented at Bengalla. Appendix A sets out the commitments from the BMP and the compliance status of each for the Reporting Period.</p> <p>The original BMP was approved by each of (then) DPE and DoEE on 14 August 2015. BMC commenced implementation of the BMP from that date (before operations commenced under SSD-5170).</p> <p>The current (revised) version of the BMP was approved by DPE on 18 August 2017 and DoEE on 20 September 2017.</p> <p>The BMP addresses each of the requirements in Condition 2(a)-(e) of the EPBC Approval (refer to Table 1 of the BMP).</p>

Ref	Condition	Status	Comment
	<p>Minister. The approved VCPLMP must be implemented.</p> <p>Note: The Biodiversity Management Plan required under NSW Approval condition 29 may be used to satisfy this condition if it meets the above content and submission requirements.</p>		
3	<p>To compensate for the loss of 535 hectares of Box Gum Woodland ecological community and 272 hectares of habitat for the Grey Headed Flying Fox, Large-eared Pied Bat, South-eastern Long-eared Bat, Regent Honeyeater, Swift Parrot and the Spotted-tail Quoll, the approval holder must prepare and submit, by 3 September 2015, a Biodiversity Offset Management Plan (BOMP) for the Minister's written approval.</p> <p>The BOMP must:</p> <ol style="list-style-type: none"> Identify those lands described as the Offset Areas at Schedule 2 (Figures 1- 6) of this notice. This must include offset attributes, shape files, textual descriptions and maps to clearly define the location and boundaries of the offset area(s) Provide a survey and description of the current condition (prior to any management activities) of the offset areas identified in Condition 3a Detail management actions and regeneration and revegetation strategies to be undertaken on the offset areas to improve the ecological quality of these areas, including: <ol style="list-style-type: none"> a description and timeframe of measures that would be implemented to improve the condition of Box Gum Woodland and habitat for the Grey Headed Flying Fox, Large-eared Pied Bat, South-eastern Long-eared Bat, Regent Honeyeater, Swift Parrot and the Spotted-tail Quoll on the offsets sites; performance and completion criteria for evaluating the management of the offset areas, and criteria for triggering remedial action; a program to monitor and report on the effectiveness of these measures, and progress 	Non-Compliant	<p>A BOMP was developed to meet this requirement and is implemented at Bengalla. Appendix B sets out the commitments from the BOMP and the compliance status of each for the Reporting Period.</p> <p>The draft BOMP was submitted to then DoEE and DPE on 2 September 2015. Following an extensive consultation process (see Appendix A of the BOMP), the BOMP was approved by DoEE on 8 March 2017 and by DPE on 18 August 2017.</p> <p>The BOMP addresses each of the requirements in Condition 3(a)-(c) of the EPBC Approval (refer to Table 1 of the BOMP).</p> <p>The approved BOMP was published on Bengalla's website within 1 month after being approved and continues to be available on the website.</p> <p>As noted in last year's report, BMC has taken preliminary steps towards entering into a Biodiversity Stewardship Agreement for each of the three offset properties (refer to Condition 4 below). The currently approved BOMP continues to be implemented in the interim.</p> <p>All Biodiversity Offset Areas identified in Schedule 2 (Figures 1-6) of the EPBC Approval are owned by the Bengalla Joint Venturers (BJV) and managed by BMC. All Biodiversity Offset Areas are managed in accordance with the BOMP.</p> <p>One non-compliance with the BOMP was identified in the reporting period. By email and the Planning Portal 9 June 2023, BMC notified what is now known as the DPHI of a non-compliance with Condition 29 of Schedule 3 of SSD 5170 under Condition 7A of Schedule 5 of SSD 5170. By email on 6 June 2023 BMC notified the Department of Climate Change, Energy, the Environment and Water (DCCEEW) regarding a non-compliance with Condition 3 of EPBC Approval 2012/6378 under Condition 13 of EPBC Approval 2012/6378.</p> <p>The non-compliance involved the use of part of 'Kenalea' in a manner that is inconsistent with the approved Biodiversity Offset Management Plan (BOMP) by a tenant of the property, for stock, (that is also inconsistent with the Residential Tenancy Agreement (RTA) between BMC and the tenant).</p>

Ref	Condition	Status	Comment
	<p>against the performance and completion criteria;</p> <p>(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</p> <p>(v) details of who would be responsible for monitoring, reviewing, and implementing the plan.</p> <p>The approved BOMP must be implemented. The approved BOMP must be published on the approval holder's internet web site within 1 month of being approved. The most recently approved version of the BOMP must be published on the approval holder's internet web site for a period of 5 years after it is approved.</p> <p>Note: The Biodiversity Management Plan required under NSW Approval condition 29 may be used to satisfy this condition if it meets the above content and submission requirements.</p>		<p>Under the terms of the RTA, the tenant was not permitted to keep stock on the property (other than up to 12 dogs) however stock had been kept on part of 'Kenalea', on approximately 97 hectares at the southern end of the 'Kenalea' property. The total area of 'Kenalea' is approximately 4,097 hectares with the overall biodiversity offset area being approximately 6,215 hectares.</p> <p>BMC contacted the tenant to remove the stock as soon as possible and will investigate whether the presence of the stock. The tenant removed all animals by the 2 July 2023 and then vacated the property in August 2023. BMC engaged Cumberland Ecology to undertake an ecological assessment of the area where grazing occurred for the purpose of determining whether grazing had resulted in any ecological damage. Cumberland Ecology provided a report that was subsequently forwarded to DPHI and DCCEEW. This report indicated higher levels of degradation had occurred when compared to areas of non-grazing and had delayed regeneration within the subject land. It was also reported that the area is likely to regenerate to a similar condition to remaining areas in Kenalea once all stock had been excluded.</p> <p>Monitoring of these areas is now incorporated into annual ecological monitoring with the establishment of 4 permanent monitoring plots on the grazing area.</p> <p>Correspondence was received on 20 December 2023 from DECCW that no further action would be taken provided the actions described above are implemented.</p>
4	<p>The approval holder must secure the lands identified as the <i>Offset Areas</i> at Schedule 2 (Figures 1- 6) of this notice as a biodiversity offset, in accordance with NSW Approval condition 28.</p>	<p>DCCEEW concluded not compliant with Condition 4 – no further action taken</p>	<p>All Biodiversity Offset Areas identified in Schedule 2 (Figures 1-6) of the EPBC Approval are owned by the Bengalla Joint Venturers (BJV) and managed by BMC. All Biodiversity Offset Areas are managed in accordance with the BOMP.</p> <p>By letter dated 6 October 2020, the Secretary agreed to an extension of time until 30 June 2022 to finalise the long-term security of the Biodiversity Offset Areas under Schedule 3 Condition 28 of SSD-5170 (Condition 28). At this stage, the DPE has not granted a further extension in which to comply with Condition 28.</p> <p>BMC corresponded with the relevant NSW government departments during 2022 to determine the appropriate long-term mechanism for securing the offsets. Following that correspondence, BMC has taken steps to progress Biodiversity Stewardship Agreements (BSAs) for the offset areas.</p> <p>BMC notified the non-compliance with Condition 28 to DCCEEW on 7 September 2022. By letter dated 12 October 2022, DCCEEW advised that it had reviewed the matter and "<i>concluded that the issuing of an infringement notice would not be an appropriate</i></p>

Ref	Condition	Status	Comment
			<p><i>course of action in this case. Consequently, no further action will be taken regarding this matter”.</i></p> <p>During the Reporting Period communication continued between BMC and the DPHI and the Biodiversity Conservation Trust (BCT) being:</p> <ul style="list-style-type: none"> - BMC letter dated 6 April 2023 to what is now the NSW Department of Planning, Housing and Infrastructure (DPHI) where BMC confirmed the ‘Department’s [DPHI] advice that it considers that the establishment of a BSA to be the - - appropriate mechanism for securing the required offset areas. Based on that advice, BMC has instructed its consultants to proceed with preparing the relevant BSAs’ - Meeting 20 July 2023 with BMC and its advisors presented to the DPHI and the BCT, discussion occurred regarding: <ul style="list-style-type: none"> o Background and Biodiversity Stewardship Agreement Site Overview; o Long Term Security Process; o Biodiversity Stewardship Agreement Applications; o Consultation with Local Land Services and Council; and o Future Land Management. <p>Actions:</p> <ul style="list-style-type: none"> o Create an Action Plan outlining specific dates in which key project milestones are completed. o Organise a pre-submission meeting to discuss the draft BSA Applications and supporting documentation. <ul style="list-style-type: none"> - BMC Action Plan dated 18 August 2023 provided by email to DPHI and BCT outlining steps to establishment of BSA’s for each offset property. - The BSA’s applications continue to be prepared for each offset property during the Reporting Period. <p>In the meantime, the offset areas will continue to be owned by the BJV and managed by BMC in accordance with the BOMP</p>

Ref	Condition	Status	Comment
5	In order to protect listed threatened species and listed threatened ecological communities, the approval holder must undertake rehabilitation activities in accordance with NSW approval conditions 44, 45 and 46.	Compliant	<p>Condition 44</p> <ul style="list-style-type: none"> <u>Requirement</u> <p>Schedule 3 Condition 44 of SSD-5170 (Condition 44) requires BMC to rehabilitate the site to the satisfaction of what is now the Resources Regulator.² The rehabilitation must comply with the objectives in Table 15 of SSD-5170 and be consistent with the conceptual final landform shown in Appendix 9 of SSD-5170.</p> <ul style="list-style-type: none"> <u>Status</u> <p>Rehabilitation at Bengalla is ongoing. It is undertaken in accordance with SSD-5170 (as modified) and the current Forward Program and Rehabilitation Management Plan.</p> <p>The current Forward Program covers a period from 27 June 2022 to 26 June 2025. The proposed rehabilitation activities for Year 2 (July 2023 to July 202) include development of approx. 47.7 ha of retrofitted High Density Woody Vegetation (HDWV) on the eastern face of the Overburden Emplacement Area (OEA) and reshaping of approximately 20 ha of land of overburden for rehabilitation to Class IV pasture 8.7 ha and HDWV 11.3 ha on the landform of the OEA.</p> <p>During the Reporting Period, no areas of new rehabilitation were undertaken.</p> <p>BMC installed 64,000 HDWV tubestock into previously rehabilitated land according to the current Forward Plan.</p> <p>Further detail about the rehabilitation carried out at Bengalla during the Reporting Period will be available in Section 8 of the Annual Review for 2023.</p> <p>Condition 45</p> <ul style="list-style-type: none"> <u>Requirement</u> <p>Schedule 3 Condition 45 of SSD-5170 requires BMC to carry out progressive rehabilitation. Interim stabilisation measures are to be used where reasonable and feasible to control dust emissions in disturbed areas that are not active but not ready for final rehabilitation.</p> <ul style="list-style-type: none"> <u>Status</u> <p>Rehabilitation is carried out progressively at Bengalla, as soon as reasonably practicable following disturbance. Interim stabilisation measures are used where required.</p> <p>Condition 46</p> <ul style="list-style-type: none"> <u>Requirement</u>

² This requirement was modified slightly as a result of Mod 5 to SSD-5170 (approved on 24 February 2023, after the end of the Reporting Period). The first part of Schedule 3 Condition 44 of SSD-5170 now requires BMC to “rehabilitate the site in accordance with the provisions under the Mining Act 1992”.



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Ref	Condition	Status	Comment
			<p>During the Reporting Period, Schedule 3 Condition 46 of SSD-5170 (Condition 46) required BMC to prepare a Rehabilitation Management Plan to the satisfaction of what is now the Resources Regulator. The plan was to be prepared in accordance with and incorporate the elements specified in Condition 46. BMC was required to implement the plan as approved by the Resources Regulator.³</p> <ul style="list-style-type: none"> • <u>Status</u> <p>BMC was required to develop and implement a new Rehabilitation Management Plan and Forward Program (among other actions) from 1 July 2022 due to reforms to the Mining Act 1992.</p> <p>The Rehabilitation Management Plan and Forward Program were updated in 2023 and are implemented at Bengalla as part of mining operations.</p>
6	The approval holder must undertake management and monitoring of water resources in accordance with NSW approval conditions 23 to 25.	Compliant	<p>Condition 24</p> <ul style="list-style-type: none"> • <u>Requirement</u> <p>Schedule 3 Condition 24 of SSD-5170 requires BMC to ensure that mining operations comply with the performance measures in Table 12 of SSD-5170 to the satisfaction of the Secretary.</p> <ul style="list-style-type: none"> • <u>Status</u> <p>Water management at Bengalla during the Reporting Period was undertaken in accordance with the performance measures in Table 12 of SSD-5170. The approved Water Management Plan (WMP) also addresses the performance measures (see Table 1 of the WMP).</p> <p>Further detail about the site water balance and results of surface water monitoring and groundwater monitoring during the Reporting Period will be available in the Annual Review for 2023.</p> <p>Condition 25</p> <ul style="list-style-type: none"> • <u>Requirement</u> <p>Schedule 3 Condition 25 of SSD-5170 requires BMC to prepare a Water Management Plan to the satisfaction of the Secretary. The plan must be prepared in accordance with and incorporate the elements specified in Condition 25. BMC must implement the plan as approved by the Secretary.</p> <ul style="list-style-type: none"> • <u>Status</u> <p>The WMP was developed to meet this requirement and is implemented at Bengalla.</p>

³ Schedule 3 Condition 46 of SSD-5170 was modified on 24 February 2023, after the end of the Reporting Period. It now requires BMC to “prepare a Rehabilitation Management Plan for the development in accordance with the provisions under the Mining Act 1992 and carry out the development in accordance with this plan.”

Ref	Condition	Status	Comment
			The current WMP was updated in 2023 and was approved by the Secretary on 8 August 2023. The WMP was prepared in consultation with the relevant authorities and addresses each of the requirements of Schedule 3 Condition 25 of SSD-5170 (see Table 2 of the WMP).
7	In order to protect water resources, the approval holder must undertake rehabilitation activities in accordance with NSW approval conditions 44 and 46.	Compliant	Refer to comments at Conditions 5 and 6 above.
8	Upon request, the approval holder shall supply the groundwater monitoring data for the Bengalla Mine to the Department, NSW Government agencies, operators of the Mt Arthur and/or Mount Pleasant mines or other adjacent mine operators. A protocol for the supply of the data must be included in the approval holder's Water Management Plan.	Not Triggered	No request was made during the Reporting Period. In accordance with Schedule 5 Condition 11 of SSD-5170 and BMC's approved Water Management Plan, groundwater monitoring results are published as part of the Annual Review on Bengalla's website each year.
9	The approval holder must make available to the Minister on request, all plans or programs and any review of plans or programs required under the Project Approval issued for the project under the Environmental Planning and Assessment Act, 1979 (NSW), including the Biodiversity Management Plan, the Rehabilitation Management Plan and the Water Management Plan, which must include a Site Water Balance, Surface Water Management Plan and Groundwater Management Plan.	Not Triggered	No request was made during the Reporting Period. Approved Bengalla management plans are available on Bengalla's website. BMC's approved Water Management Plan includes a Site Water Balance, Surface Water Management Plan and Groundwater Management Plan.
10	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	By email dated 30 October 2015, BMC advised the then DoEE that the action the subject of the EPBC Approval commenced on 1 October 2015.
11	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 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 also be publicised through the general media.	Not Triggered	BMC maintains accurate records substantiating all activities associated with or relevant to the EPBC Approval conditions, including measures to implement the BOMP and the BDMP (which incorporates the VCPLMP). No request was made during the Reporting Period to make any records available to DCCCEW. Appendix A describes the commitments made in the approved BDMP and how each has been addressed in the Reporting Period. Appendix B describes the commitments made in the approved BOMP and how each has been addressed in the Reporting Period. Appendix C describes pre-clearing and clearing activities implemented in accordance with the BDMP during the Reporting Period.

Ref	Condition	Status	Comment
12	<p>By the end of March each year, 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. 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.</p> <p>Note: The Annual Review required under NSW Approval condition 4 (of Schedule 5) may be used to satisfy this condition if it meets the above content and submission requirements.</p>	Compliant	<p>This report addresses compliance with each of the conditions of the EPBC Approval for the Reporting Period.</p> <p>Appendix A describes the commitments made in the approved BDMP and how each has been addressed in the Reporting Period.</p> <p>Appendix B describes the commitments made in the approved BOMP and how each has been addressed in the Reporting Period.</p> <p>Appendix C describes pre-clearing and clearing activities implemented in accordance with the BDMP during the Reporting Period.</p> <p>This report will be uploaded to Bengalla’s website by the end of March 2024 and documentary evidence of publication will be provided to DCCEEW at the same time.</p>
13	Non-compliance with any of the conditions of this approval must be reported to the Department within 2 business days of the approval holder becoming aware of the non-compliance.	Compliant	
14	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 Triggered	No direction was made during the Reporting Period.
15	If the approval holder wishes to carry out any activity other than in accordance with a Plan 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 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.	Not Triggered	No relevant activities other than those described in the BMP or BOMP were required during the Reporting Period.
16	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 a Plan specified in the conditions and submit the revised Plan for the	Not Triggered	No request was made during the Reporting Period.



Ref	Condition	Status	Comment
	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, as specified in the conditions.		
17	If, at any time after 5 years from the date of this approval, the approval holder has not commenced the action, then the approval holder must not commence the action without the written agreement of the Minister.	Not Triggered	By email dated 30 October 2015, BMC advised the then DoEE that the action the subject of the EPBC Approval commenced on 1 October 2015.

1.6 Conclusion

During the Reporting Period, there were two non-compliances with EPBC Approval conditions reported to DCCEE. These related to Condition 3 (implementation and Compliance of the Biodiversity Offset Management Plan (BOMP)) and Condition 4 (provision of long-term security for offset properties in respect of which DCCEE has advised that no further action will be taken).

BMC will continue to review and document all relevant activities at Bengalla during the 2024 reporting period to assist in maintaining compliance with the EPBC Approval conditions.

Appendix A and **Appendix B** provide comments about the implementation of the BMP and BOMP commitments respectively during the Reporting Period. In summary, BMC has generally complied with the BMP and BOMP commitments for the Reporting Period.



Appendix A Biodiversity Management Plan Commitments

BDMP Section	Control / Action	Timing / Trigger	Responsibility	Monitoring	Reporting	Status	Comment
4.1	Marking Limits of Clearing	Prior to clearing	Environment Superintendent / Mining Manager / Surveyors	Inspection to be undertaken throughout duration of clearing.	Documented in Ground Disturbance Permit (GDP) form and signed off.	Compliant	GDP boundaries are demarcated prior to clearing, where required. Refer section 2.2 of Appendix C .
4.2	Identification of suitable fauna relocation sites	Prior to clearing	Environment Superintendent / Mining Manager	N/A	Documented in GDP form and/or pre-clearing report.	Compliant	Refer Section 2.2.6 of Appendix C .
4.2	Pre-clearing surveys	Within one month prior to clearing	Suitably qualified person	Monitoring of fauna and flora (including Tiger Orchid, pest and weed species), habitat features and plant pathogens.	Documented and signed off in the pre-clearing report. Results are reported in Annual Review. OEH notified if new threatened species identified.	Compliant	Refer Section 3.1 of Appendix C .
4.2	Clearing Surveys	Within one month of the pre-clearing survey	Suitably qualified person	Monitoring of fauna and flora (including Tiger Orchid, pest and weed species), habitat features and plant pathogens.	Documented and signed off in the clearing report. Results are reported in Annual Review. OEH notified if new threatened species identified.	Compliant	Refer Section 3.2 of Appendix C .
4.3	Pre-clearing weed management	Prior to clearing and during clearing	Suitably qualified person and Environment Superintendent	Inspection to be undertaken prior to clearing.	Documented and signed off in the GDP. Results are reported in Annual Review.	Compliant	Refer Section 3.1.7 of Appendix C .



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BDMP Section	Control / Action	Timing / Trigger	Responsibility	Monitoring	Reporting	Status	Comment
4.2.3	Relocation of habitat features to rehabilitation areas, adjacent vegetation or storage location.	During and/or after clearing	Environment Superintendent	N/A	Documented and signed off in the GDP. Results are reported in Annual Review.	Compliant	Refer Section 3.1.8 and Section 3.2 of Appendix C.
4.1	Inductions and Staff Education	Ongoing as part of the existing induction process or as part of toolbox talks prior to commencement of ground disturbance works.	Environment Superintendent	N/A	As per BMC Induction procedure	Compliant	Inductions provided to BMC staff and contractors include a component on biodiversity management.
4.2	Vehicle Driving Policy and Signage	Ongoing or when wildlife crossing areas are identified	Mining Manager / Environment Superintendent	N/A	N/A	Compliant	No wildlife crossing areas were identified by the suitably qualified expert (WSP) during 2023. Site access tracks and controls are included in site procedures.
4.2.5	Seed collection	Targeted throughout year and opportunistically before and immediately after clearing	Environment Superintendent	Observations to be made throughout year to check flowering / seeding development of key species. Ensure correct licences are held by any contractors.	To be documented and reported in Annual Review.	Compliant	Refer Section 3.1.6 of Appendix C.
4.3	Weed control	Ongoing over life of mine	Environment Superintendent	Routine field observations and management undertaken in Weed Control Zones, including rehabilitation areas.	Results to be reported in Annual Review.	Compliant	Refer Appendix D.
4.4	Feral animal control	Ongoing over life of mine	Environment Superintendent	Routine field observations undertaken and management undertaken	Results to be reported in Annual Review.	Compliant	Refer Appendix D.



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BDMP Section	Control / Action	Timing / Trigger	Responsibility	Monitoring	Reporting	Status	Comment
				including rehabilitation areas.			
5.0	Ecological Monitoring and Inspections	Ongoing over life of mine	Ecologist	N/A	Results to be reported in Annual Review.	Compliant	<p>The purpose of the ecological monitoring program is primarily to monitor the risks posed by plant pathogens, exotic weeds and feral animals in biodiversity offsets, residual vegetation and rehabilitation areas and to indicate where management actions are required.</p> <p>For weed and feral animal monitoring programs for Bengalla and the biodiversity offset areas refer to Appendix D.</p> <p>Rehabilitation monitoring was completed during January 2024 for 2023. Details of results are presented in Section 8 of the 2023 Annual Review.</p> <p>As stated at section 5.4 of the BMP, no immediate management actions are required for the management of plant pathogens at Bengalla. However, signs of pathogens outbreaks (e.g. in pre-clearing surveys) may require measures to be taken in the future.</p>



Appendix B Biodiversity Offset Management Plan Commitments

BOMP Section	Commitment	Status	Comment
Notification			
2.3	Following approval, all actions detailed within this BOMP will be implemented. Within one month of receiving approval, this BOMP will be made available to the public on the BMC website.	Compliant	The BOMP is implemented as part of BMC's operations. The BOMP (with regulatory approval letters) (August 2017) is publicly available on Bengalla's website.
Fencing, Gates and Signage			
8.1	Boundary fencing will remain around all BOS Areas and will be inspected annually to identify areas that may require maintenance.	Compliant	An annual inspection of boundary fencing for all biodiversity offset areas (BOS Areas) was undertaken in 2023.
8.1	Internal fencing within Kenalea properties and Black Mountain will be maintained (where appropriate) to allow for the management of controlled grazing in these properties.	Compliant	No internal fence repairs were required in 2023 at Kenalea or Black Mountain.
8.1	Stock proof fencing will be utilised where existing fences are absent to protect sensitive areas.	Not Triggered	Not required during the Reporting Period.
8.1	Current gates for access to BOS Areas will be retained and kept locked.	Compliant	Gates to BOS Areas remained secured and locked during 2023.
8.1	BMC will install signage at the entrances to the BOS Areas to inform the public of restricted access to properties.	Compliant	Restricted access signage at the entrances to the BOS Areas has been installed prior to 2023.
Controlled Activities			
8.2	All contractors, stakeholders and visitors to the BOS Areas will be inducted. The induction will include information on activities prohibited in BOS Areas unless explicitly undertaken for the purposes of ongoing management.	Compliant	BMC has established internal polices which require all staff/contractors, stakeholders and visitors working at Bengalla (or BOS Areas) to be inducted prior to undertaking specified work. The BOS Areas induction identifies relevant compliance obligations including under applicable management plans.



BOMP Section	Commitment	Status	Comment
Control Grazing			
8.3	Control grazing will only be permitted in Zone 1 and Zone 2 management areas.	Not Triggered	No control grazing was undertaken during 2023.
8.3	Best practice for control grazing will be implemented wherever control grazing is employed, including: <ul style="list-style-type: none"> • Providing adequate rest periods and adjusting rest periods to suit the recovery needs and growth rates of the desirable plants; • Targeting defined areas with high fuel loads or weed infestations; • Cattle stocking numbers kept below 4 dray sheep equivalent; • Pre and post grazing monitoring; • Periods of grazing must be kept as short as practicable; and • Control grazing will not be conducted during declared drought periods. 	Not Triggered	No control grazing was undertaken during 2023.
8.3	Control grazing will be monitored against Trigger and Performance Criteria.	Not Triggered	No control grazing was undertaken during 2023.
7.1	Should monitoring results indicate that regeneration is not occurring naturally after Year 5, assisted revegetation will take place in areas that require this management action.	Not Triggered	An assisted regeneration program will be developed and implemented to mid and over storey covers in identified areas as required.
8.3	Stock will be excluded from riparian areas and will access water primarily from farm dams or water troughs.	Not Triggered	No cattle grazing was undertaken during 2023.
8.3	Monitoring will be undertaken pre and post grazing with the use of photo reference points. Areas subject to control grazing will be monitored as part of annual monitoring program.	Not Triggered	No cattle grazing was undertaken during 2023.
Bushfire management			
8.4	BMC will take practicable steps to prevent the occurrence of bushfires on the land and minimise the spread of bushfire.	Compliant	Bushfire hazard reduction burns were conducted on all Biodiversity Offset areas in 2023. Black Mountain was conducted in January, Echo in May 23, Kenalea in June 23 and Merriwa River in August 2023.
8.4	BMC will provide maps (including water fill points) and contact details of the properties to the RFS.	Compliant	Maps, keys and relevant contact information have previously been provided to local RFS captains. Locations of water fill points were provided to the RFS in 2018 following the ground truthing of these locations.



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BOMP Section	Commitment	Status	Comment
Weed Control			
8.5	Weed management actions will target Weeds of National Significance and Noxious Weeds across BOS Areas.	Compliant	Enright Land Management undertook a weed monitoring and control program in BOS Areas during the Reporting Period. Records of the locations of weed control are detailed in Appendix D .
8.5	Weed control will focus on species that exclude or have the potential to exclude native species, disrupt the recruitment of native species or impede ecological progress.	Compliant	A summary of the weed monitoring and control program undertaken during the Reporting Period is provided in Appendix D .
8.5	Weed management will be undertaken in accordance with the management principles listed in Section 8.5 of the BOMP.	Compliant	Weed management practices were undertaken during the Reporting Period in accordance with Section 8.5 of the BOMP.
8.5	The results and outcomes of weed management will be documented and analysed for each year in the Annual Review. This will include documentation of areas subject to weeding, techniques used, target species controlled, new species identified, chemicals used and revised approaches to weed control in light of learnings during the previous reporting period.	Compliant	A summary of the weed monitoring and control program for the Reporting Period is provided in Appendix D .
8.5	Weed infestation maps will be updated annually and annotated as required with information about previously implemented weed controls.	Compliant	A weed monitoring and control program was undertaken during the Reporting Period. The location of weeds identified during the program were recorded for GIS input and is presented in Appendix D .
Feral Animal Control			
8.6	BMC will conduct an annual feral animal control program in conjunction with current Local Land Services programs.	Compliant	A feral animal control program was undertaken in 2023. This was undertaken in line with neighbouring properties and the Local Land Services baiting program and is described in Appendix D .
8.6	Should any native fauna deaths be recorded during 1080 baiting and if sufficient carcass is available the animal will be sent to a veterinarian to provide a cause of death should there be any evidence of poisoning.	Not triggered	No native fauna deaths were reported during the 2023 feral animal control program.
8.6	The results and outcomes of feral animal management will be documented for each year in the Annual Review. This will include documentation of the techniques used for each feral species, the quantity of bait material purchased and deployed, the areas subject to control, estimate of the numbers of animals culled, new species identified (if any) and any other chemicals used.	Compliant	A summary of the 2023 feral animal control program is provided in Appendix D .



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BOMP Section	Commitment	Status	Comment
8.6	All personnel involved in feral animal management must hold relevant and valid licences/permits, including any relevant chemical licences for pesticide use or a firearms licence for shooting.	Compliant	Staff and/or contractors involved in feral animal management held all relevant licences and accreditations to undertake the feral animal control works in 2023.
Maintenance Track Improvement and Additional Infrastructure			
8.7	Maintenance of existing tracks and installation of additional infrastructure may be required to provide safe access to BOS Areas. Maintenance or construction works may result in minor/localised disturbance. BMC will ensure compliance with all legal and environmental protection measures prior to any significant disturbance.	Compliant	All existing access tracks in all offsets were assessed and regraded in 2023.
8.7	BMC will record and store all relevant GIS information related to the improvement or installation of additional infrastructure.	Compliant	BMC has recorded and stored GIS information for all improvements and installation of additional infrastructure on the BMC GIS database.
8.7	BMC will undertake routine inspections and maintenance of BOS infrastructure (eg. tracks, fence lines, gates)	Compliant	Inspections and maintenance of tracks was undertaken in 2023. Fence lines and gates were also inspected.
Contingency Measures			
8.8	Contingency measures will be utilised should monitoring indicate that performance measures or contingency measures are not being met.	Not Triggered	No contingency measures were required during the Reporting Period.



Appendix C

Annual Clearing Report 2023

**Design
for a better
*future /***

Bengalla Mining Company

Bengalla Coal Mine

2023 Annual Clearing
Report



March 2024

Question today *Imagine tomorrow* Create for the future

Bengalla Coal Mine 2023 Annual Clearing Report

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Approved by:	Nathan Cooper	26/03/2024	

WSP acknowledges that every project we work on takes place on First Peoples lands.
We recognise Aboriginal and Torres Strait Islander Peoples as the first scientists and engineers and pay our respects to Elders past and present.

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Abbreviations

BMC	Bengalla Mining Company Pty Ltd
Bengalla	Bengalla Mine
BMP	Biodiversity Management Plan
EEC	Endangered Ecological Community
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
GDP	Ground Disturbance Permit
BC Act	<i>Biodiversity Conservation Act 2016</i>

1 Project background

1.1 Existing operation

The Bengalla Mining Company (BMC) operates Bengalla Mine (Bengalla), an open cut coal mine located approximately four kilometres (km) west of Muswellbrook in the Upper Hunter Valley, NSW.

Activities associated with clearing operations during the reporting period relate to the construction of new infrastructure, the relocation and maintenance of infrastructure and service roads, in addition to an extension of the open cut mining pit towards the west.

1.2 Aims and objectives

The aims of this annual clearing report are to detail the procedures and results for all pre-clearing and clearing operations completed at Bengalla in 2023, inclusive of:

- ecology pre-clearing surveys
- Stage 1 and Stage 2 clearing operations
- fauna handling and relocation
- habitat salvage and procedures.

2 Methods

2.1 Personnel

The contributors to the delivery of clearing operations and reporting, their qualifications and roles are listed in Table 2.1 and Table 2.2.

Table 2.1 Contributors and their role (WSP)

Name	Qualification	Role
Gavin Shelley	B.Env Sc. Mgmt	Ecologist – pre-clearing surveys, spotter catcher and reporting
Sebastian Miller	B.Sc.	Ecologist – pre-clearing surveys, spotter catcher and reporting
Allan Richardson	B Env Sc (Hons)	Associate Ecologist – pre-clearing surveys, spotter catcher and reporting
Nathan Cooper	B.Env.Sc. Grad Dip Ornithology	Principal Ecologist – project manager, pre-clearing surveys, spotter catcher and technical review

All work was carried out under the appropriate licenses, including a scientific licence as required under Part 2 of the NSW *Biodiversity Conservation Act 2016* (BC Act) (License Number: SL100630), and an Animal Research Authority issued by the Department of Primary Industries (Agriculture).

Table 2.2 Contributors and their role (SLR)

Name	Role
Josh Drane	Ecologist – pre-clearing surveys, spotter catcher
Hannah Centra	Ecologist – pre-clearing surveys, spotter catcher
David Conder	Ecologist – pre-clearing surveys, spotter catcher
Jeremy Pepper	Ecologist – pre-clearing surveys, spotter catcher

2.2 Pre-clearing survey procedure

Ecology pre-clearance surveys were conducted throughout 2023 and were completed in accordance with Section 4.2.1 of the BMP (Hansen Bailey, 2017), which outlines management actions for vegetation pre-clearance procedures. The aims and objectives of the ecology pre-clearing survey include:

- detecting the presence/absence of threatened species and their habitat, including *Cymbidium canaliculatum* (Tiger Orchid)
- recording the presence of any fauna or flora species
- identification and demarcation of habitat trees, large logs, and boulders
- identification and demarcation of salvageable material including hollow bearing trees, debris, and boulders
- searching for evidence of plant pathogen *Phytophthora cinnamomi*
- identification of appropriate fauna relocation sites for captured fauna species
- identification of plants suitable for seed collection
- identification of weed and pest species infestations.

Clearing boundaries were initially marked by a surveyor with survey pegs, generally incorporating spacing commensurate with visible line of sight. A hard copy map of the GDP area was also used as a reference when in the field.

It should be noted that throughout the year some GDP areas were assessed more than once due to only part of the GDP area being disturbed or an extended time frame between the initial pre-clearance inspection and commencement of works (Section 3).

2.2.1 *Fauna habitat identification*

Each clearing area was traversed by a field ecologist to identify important fauna habitat values, including:

- habitat trees – identified as any substantial non hollow-bearing tree that either provided significant canopy cover and thus significant potential foraging resources, or was observed to contain nesting material
- hollow-bearing trees – which include any tree that was observed to contain a visible hollow or fissure that may support microhabitat values for native fauna.

All identified habitat and hollow-bearing trees were marked with “H” (habitat tree) in high visibility paint as well as pink flagging tape to ensure dark trees, such as *Eucalyptus crebra* (Narrow-leaved Ironbark), were clearly marked prior to the commencement of clearing activities. The number of habitat, hollow-bearing or significant trees were recorded on field proformas.

2.2.2 *Species inventory*

All flora and fauna species identified during the ecology pre-clearance surveys and clearing surveys were recorded and are presented in Appendix A and Appendix B.

2.2.3 *Surveys for *Cymbidium canaliculatum**

Trees within the clearing area were visually examined for the presence of *Cymbidium canaliculatum*, which is listed as an Endangered Population in the Hunter Catchment under the NSW BC Act.

2.2.4 *Salvageable habitat material*

In accordance with the BMP (Hansen Bailey, 2017), selected salvageable hollow logs and rocks were identified for later reuse in rehabilitation areas. Since materials vary in abundance and quality throughout Bengalla, ecologists are guided by the selection criteria for salvageable materials (as outlined in Table 5 of the BMP) when identifying logs and rocks for re-use.

2.2.5 *Surveys for *Phytophthora cinnamomi**

Vegetation health assessments were undertaken to detect the presence of the plant pathogen *Phytophthora cinnamomi*. This involved assessing vegetation for any visible signs of disease.

2.2.6 *Fauna relocation sites*

Sites suitable for the relocation of displaced native fauna were assessed prior to the commencement of the ecology pre-clearance survey. Relocation sites were assessed for habitat attributes that represent similar or commensurate habitat attributes as those within the clearing areas. All relocation sites are located outside of the clearing area and consist of the same vegetation community. Fauna relocation sites are illustrated on Figure 3.1.

2.2.7 *Collection of seeds for rehabilitation purposes*

In accordance with the BMP (Hansen Bailey, 2017), native trees and shrubs suitable for the harvesting and propagation of native seed for use in rehabilitation activities are required to be identified. Any areas of particularly high seed yield were marked on maps for future reference. During pre-clearing surveys throughout 2023, there was a lack of seed availability and as such, no seed was collected for use in rehabilitation areas.

2.2.8 *Identification of weed and pest species infestations*

Significant infestations of Weeds of National Significance (WONS) and noxious weeds identified during the field surveys were recorded and notified to BMC Environmental Department.

2.3 Clearing procedure

In accordance with Section 4.2.2 of the BMP (Hansen Bailey, 2017), clearing activities in 2023 were undertaken as a two-stage process as follows:

- **Stage 1 clearing** – removal of understory vegetation other than marked/flagged habitat features. Habitat trees, marked with an ‘H’, were left to stand overnight to enable any resident fauna to self-relocate into adjacent habitat.
- **Stage 2 clearing** – commenced no less than 24 hours following the completion of Stage 1 clearing. Felled habitat trees were left undisturbed over night to allow any undetected fauna further opportunity to relocate.

2.3.1 *Fauna handling and relocation*

The following information was recorded in relation to fauna species observed during the clearing activities:

- details of animals sighted, captured, relocated, injured, or killed as a result of vegetation clearing activities
- the relocation of fauna within designated relocation areas
- tree species used for breeding or roosting by fauna
- micro-habitat features of where the species was found on the tree.

Uninjured adult fauna will be relocated into suitable habitat within designated relocation sites. Juvenile and injured fauna will be passed on to the Muswellbrook Satur Vets, local Wildlife Aid carers or euthanised in accordance with the Animal Research Authority Code of Practice (National Health and Medical Research Council, 2013).

3 Results

3.1 Stage 1 pre-clearance surveys

Pre-clearing surveys completed by or on behalf of BMC in 2023 are summarised in Table 3.1 and illustrated in Figure 3.1. It should be noted that throughout 2023 the GDP area was assessed on more than one occasion due to only part of the GDP area being disturbed, or an extended time frame between the initial pre-clearance inspection and commencement of works.

Table 3.1 Pre-clearing surveys completed in 2023 – BMC

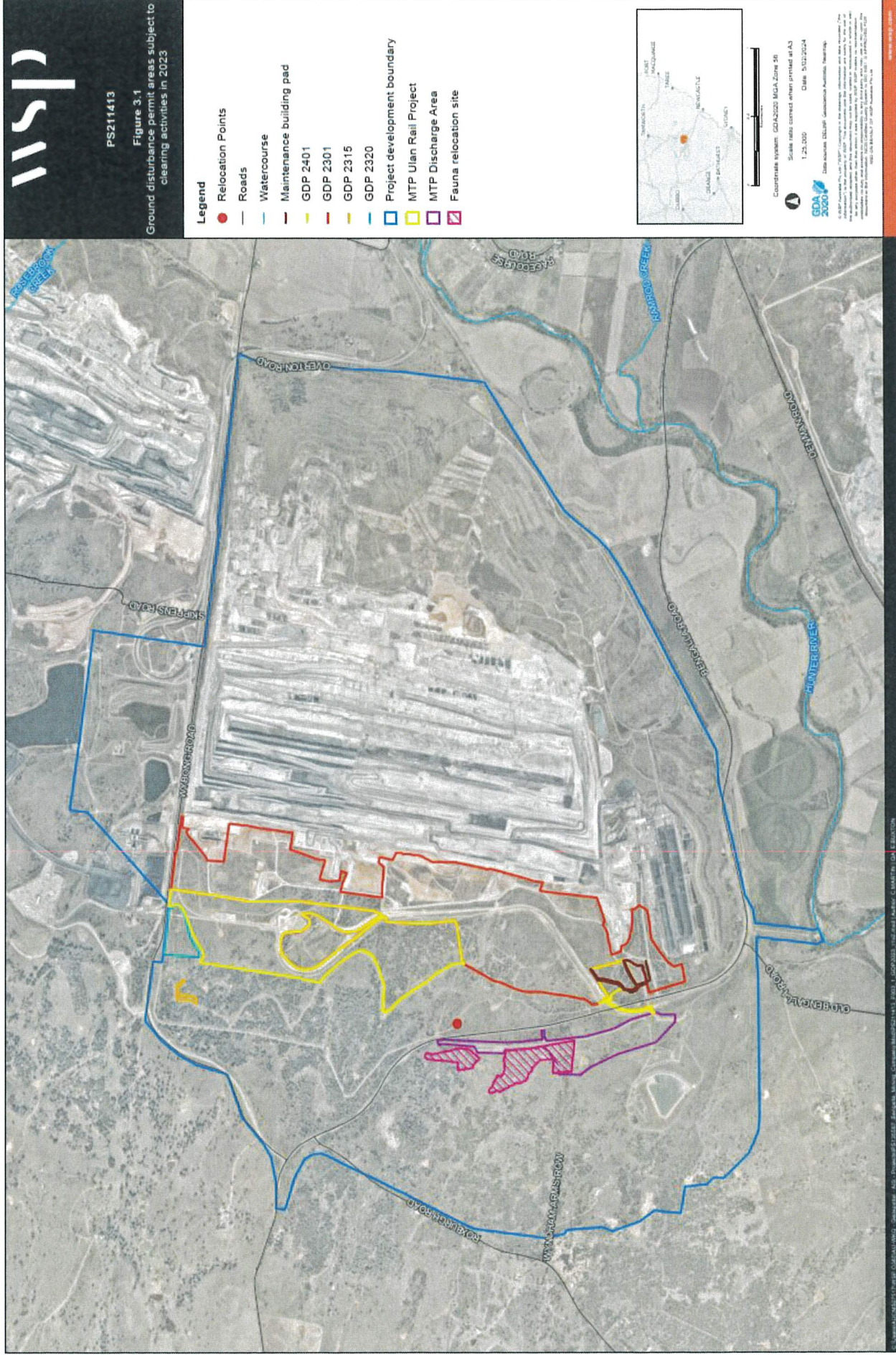
Ground disturbance permit area (GDP)	Date pre-clearance undertaken	Vegetation community
GDP 2301	31 January 2023	Grey Box/White Box Intergrade Grassy Woodland and Derived Native Grassland (CEEC/EEC)
GDP 2301	1-2 February 2023	Derived Native Grassland (CEEC/EEC), Upper Hunter Hills Exposed Ironbark Woodland and Derived Native Grassland Grey Box/White Box Intergrade Grassy Woodland and Derived Native Grassland (CEEC/EEC)
Maintenance Building Pad	27 February 2023	Tree and shrub plantations commensurate with <i>Eucalyptus crebra</i> , <i>Eucalyptus tereticornis</i> , <i>Eucalyptus moluccana</i> , <i>Allocasuarina luehmannii</i> and <i>Acacia implexa</i>
GDP 2301	1 March 2023	Grey Box/White Box Intergrade Grassy Woodland and Derived Native Grassland (CEEC/EEC)
GDP 2301	7 September 2023	Low Derived Native Grassland/Exotic Grassland
GDP 2401	13-14 December 2023	Derived Native Grassland (CEEC/EEC) Hunter Floodplain Red Gum Woodland Complex (EEC)

In addition to the works completed for BMC, a pre-clearance survey for Mount Pleasant Operations was undertaken for water discharge pipeline that occurred in BMC project boundary (Table 3.2).

Table 3.2 Pre-clearing surveys completed in 2023 – Mount Pleasant Operations

Ground disturbance permit area (GDP)	Date pre-clearance undertaken	Vegetation community
MTP Discharge Area	15 February 2023	Upper Hunter Hills Exposed Ironbark Woodland and Derived Native Grassland

Figure 3.1 GDP area subject to pre-clearing or clearing activities in 2023



3.1.1 *Vegetation community structure*

The following vegetation communities were identified in the areas pre-cleared in 2023:

- Grey Box/White Box Intergrade Grassy Woodland and Derived Native Grassland (CEEC/EEC)
- Derived Native Grassland (CEEC/EEC)
- Hunter Floodplain Red Gum Woodland Complex (EEC)
- Upper Hunter Hills Exposed Ironbark Woodland and Derived Native Grassland
- Low Derived Native Grassland
- Exotic Grassland.
- Tree and shrub plantations.

3.1.2 *Habitat, hollow-bearing and significant trees*

A total of 297 hollow-bearing/habitat trees were identified within the GDP areas subject to pre-clearing surveys in 2023.

3.1.3 *Species inventory*

3.1.3.1 Flora

A total of 31 flora species were recorded during pre-clearing surveys completed in 2023. Of these, 15 were introduced species (Appendix A).

3.1.3.2 Fauna

A total of 36 fauna species were recorded during pre-clearing surveys completed in 2023. Of these, two were introduced species, including Common Starling and European Rabbit (Appendix B).

Two Geckos were captured during pre-clearing surveys completed in November 2023 and transported to Bengalla Coal Mine Environment personnel for relocation.

3.1.4 *Cymbidium canaliculatum surveys*

One *Cymbidium canaliculatum* was identified during pre-clearing surveys in 2023 in association with the former Mount Pleasant Operations Rail Loop (Latitude: -32.26699 Longitude: 150.80649) (Photo 3.1). The orchid was observed growing in a *Eucalyptus molucanna*. This orchid was not translocated or cleared during the 2023 clearing operations and remains extant.



Photo 3.1 *Cymbidium canaliculatum* recorded in the former Mount Pleasant Operations Rail Loop

3.1.5 *Phytophthora cinnamomi* surveys

No evidence of disease or plant dieback was identified within the GDP area subject to pre-clearing surveys in 2023.

3.1.6 *Collection of seeds for rehabilitation purposes*

During pre-clearing surveys throughout 2023, no seed was identified within survey areas deemed suitable to be collected for use in rehabilitation. Overall, due to clearing times and large areas of derived native and exotic grasslands limiting the number of canopy species, no suitable native flora seeding opportunities were present and no seed collection was conducted.

3.1.7 *Weed species*

Table 3.3 Noxious weeds recorded during pre-clearance surveys

Species	Class	Legal requirements
<i>Lycium ferocissimum</i> (African Boxthorn)	3	This plant must be continually suppressed and destroyed, and the plant must not be sold propagated or knowingly distributed.
<i>Opuntia stricta</i> (Prickly Pear)	4	The growth of the plant must be managed that reduces its numbers, spread and incidence and continuously inhibits its reproduction and the plant must not be sold propagated or knowingly distributed.
<i>Senecio madagascariensis</i> (Fireweed)	4	The growth of the plant must be managed that reduces its numbers, spread and incidence and continuously inhibits its reproduction and the plant must not be sold propagated or knowingly distributed.

3.1.8 *Salvageable material*

A total of 503 lineal metres of hollow ground timber was identified during Stage 1 pre-clearance surveys in 2023. A further 19 log piles and 121 logs were identified in pre-clearing areas in November and December 2023.

3.2 Stage 2 tree clearing

The GDP areas cleared in part in 2023 are summarised in Table 3.4 and illustrated on Figure 3.1. The removal of understory vegetation surrounding habitat trees was undertaken a minimum of 24 hours prior to habitat tree removal. Stage 2 clearing of habitat trees was undertaken in January, February, September, and November in 2023, with a total of 134 habitat trees felled (Table 3.4).

Table 3.4 Stage 2 clearing completed in 2023

Ground disturbance permit area	Stage 2 clearing completed (date)	Vegetation community
GDP 2301	31 January 2023	Central Hunter <i>Eucalyptus crebra</i> and <i>Eucalyptus moluccana</i> grassy woodland.
GDP 2301	31 January 2023	Upper Hunter Hills Exposed Ironbark Woodland and Derived Native Grassland
MTP Discharge Area	24 February 2023	Upper Hunter Hills Exposed Ironbark Woodland and Derived Native Grassland
GDP 2301	27 February 2023	Upper Hunter Hills Exposed Ironbark Woodland and Derived Native Grassland
GDP 2301	28 February 2023	Upper Hunter Hills Exposed Ironbark Woodland and Derived Native Grassland
GDP 2301	1 March 2023	Upper Hunter Hills Exposed Ironbark Woodland and Derived Native Grassland
Maintenance Building Pad		Tree and shrub plantations
GDP 2301	7 September 2023	Low Derived Native Grassland/Exotic Grassland
GDP 2401	13-14 December 2023	Derived Native Grassland (CEEC/ EEC) Hunter Floodplain Red Gum Woodland Complex (EEC)

Prior to the habitat trees being felled, the trees were visually inspected to identify signs of fauna utilisation. Habitat trees were gently shaken prior to felling to encourage any resident fauna to vacate any fissure and/ or hollow. Habitat trees were then felled sequentially when directed by the supervising ecologist.

Immediately following the felling of each habitat tree, the supervising ecologist inspected the trees for remaining fauna. Tree hollows were inspected using a hand-held torch. Felled habitat trees were left undisturbed over night to allow any undetected fauna further opportunity to relocate. The habitat trees were then stockpiled for mulching or utilisation in rehabilitation areas.

3.2.1 Fauna recorded and relocated

A total of 50 species of animal were observed whilst on site at Bengalla during Stage 1 and Stage 2 clearing activities (Appendix B). Of the 50 species observed on site, a minimum of 114 individual animals were recorded using habitat trees impacted within GDP areas subject to Stage 2 tree clearing activities. This comprised of two species of bird, six mammals, five reptiles and two species of frog. Animals handled for purpose of relocation or euthanasia were handled in accordance with the Animal Research Authority Code of Practice (National Health and Medical Research Council, 2013). During the 2023 Stage 2 tree clearing operations:

- 46 animals were successfully relocated
- 54 animals were displaced but evaded capture

- nine animals died as a result of tree felling
- three animals were euthanised following tree felling
- two animals required assistance from wildlife rehabilitation agencies.

Table 3.5 Species of animal recorded during Stage 2 tree clearing operations in 2023.

Common name	Scientific name	Notes	Number of individuals
Animals relocated during Stage 2 tree clearing operations			
Eastern Bearded Dragon	<i>Pogona barbata</i>	—	3
Elegant Snake-eyed Skink	<i>Cryptoblepharus pulcher</i>	—	4
Robust Velvet Gecko	<i>Nebulifera robusta</i>	—	8
Tree Skink	<i>Egernia striolata</i>	—	11
Common Brushtail Possum	<i>Trichosurus vulpecula</i>	—	2
Gould's Wattled Bat	<i>Chalinolbus gouldii</i>	—	9
Ride's Free-tailed Bat	<i>Ozimops ridei</i>	—	2
Green Tree Frog	<i>Litoria caerulea</i>	—	5
Peron's Tree Frog	<i>Litoria peroni</i>	—	2
Total			46
Animals displaced but evaded capture			
Elegant Snake-eyed Skink	<i>Cryptoblepharus pulcher</i>	—	12
Lace Monitor	<i>Varanus varius</i>	—	4
Tree Skink	<i>Egernia striolata</i>	—	13
Robust Velvet Gecko	<i>Nebulifera robusta</i>	—	3
Common Brushtail Possum	<i>Trichosurus vulpecula</i>	—	2
Gould's Wattled Bat	<i>Chalinolbus gouldii</i>	Self-relocated	6
Ride's Free-tailed Bat	<i>Ozimops ridei</i>	Self-relocated	1
Unidentified microbat	—	Roost limb. Hollow entrance observed but bats were not accessible. Trunk could not be sectioned and relocated, and individuals remained in hollow to self-relocate at nightfall.	1 (minimum)
Unidentified microbat	—	Self-relocated	5
Unidentified microbat	—	—	4
House Mouse	<i>Mus Musculus</i>	—	2
Australian Owlet Nightjar		Self-relocated	1
Total			54

Common name	Scientific name	Notes	Number of individuals
Animals that died during Stage 2 tree clearing operations			
Gould's Wattled Bat	<i>Chalinolobus gouldii</i>	–	7
Ride's Free-tailed Bat	<i>Ozimops ridei</i>	–	2
Total			9
Animals euthanised following Stage 2 tree clearing operations			
Common Brushtail Possum	<i>Trichosurus vulpecula</i>	–	1
Lesser Long-eared Bat	<i>Nyctophilus geoffroyi</i>	–	1
Black Rat	<i>Rattus rattus</i>	–	1
Total			3
Animals requiring assistance from wildlife rehabilitation agencies			
Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	Delivered to Muswellbrook Satur Vets for collection by wildlife rehabilitation agencies	2
Total			2

Table 3.6 Fauna guilds recorded during Stage 2 clearing operations in 2023

Guild	Number of individuals recorded				
	Relocated	Observed	Injured	Dead/ Euthanised	Taken to Wildlife carer
Reptiles	26	32	0	0	0
Microchiropteran bats/mammals	13	21	0	12	0
Amphibians	7	0	0	0	0
Birds	0	1	0	0	2
Total	46	54	0	12	2

In mid-December 2022, a Noisy Friarbird nest was observed in an *Allocasuarina luehmanii* (Buloke) during clearing works with adults attending and sitting on the nest (Photo 3.2). It was envisaged that nest might be vacated in a 5–6-week window, so a strip of trees associated with the nest tree was left in situ for the purpose of allowing the adults to raise and fledge their young (Photo 3.3), after which the nest would be inspected by an ecologist to gauge activity and guide clearing of the remaining trees in accordance with the BMP. On 31 January 2023, the Noisy Friarbird nest was inspected, and no activity was observed. Accordingly, the nest tree and remaining support trees were then cleared without incident.



Photo 3.2 Active Noisy Friarbird nest, December 2022



Photo 3.3 Vegetation strip reserved to assist Noisy Friarbird breeding attempt, December 2022

3.2.2 Salvage of habitat resources

Stage 1 clearing operations identified approximately A total 503 lineal metres of new salvageable material potentially suitable for re-use in rehabilitation works in 2023. A further 19 existing log piles and another 121 logs (presumably from existing log piles) were identified from pre-clearing areas in November and December 2023.

An additional 78 lineal metres of suitable salvageable material was identified from hollow-bearing trees felled during Stage 2 tree clearing activities (Photo 3.4 and Photo 3.5). Salvaged habitat items were to be stockpiled with the intention to relocate within rehabilitation areas as work progresses.



Photo 3.4 An example of salvageable material identified during Stage 2 tree clearing



Photo 3.5 An example of salvageable material identified during Stage 2 tree clearing

3.2.3 Stage 2 clearing works completed outside approved clearing time

In accordance with Bengalla’s BMP, clearing of woodland areas will be avoided during May to November, in order to avoid impacting hibernating bats and important growth and flowering periods for *Cymbidium canaliculatum* (Hansen Bailey, 2017). If clearing is to occur during this period, an assessment by a suitably qualified ecologist justifying clearing activities must be recorded.

New light vehicle road/pipeline relocation (September 2023)

In September 2023, Bengalla were progressing the construction of a new light vehicle road, including a pipeline relocation, associated with standard open cut mine progression. One habitat tree immediately adjacent to the alignment was observed to have previously been cut with a chainsaw (Photo 3.6) and posed a significant safety issue to construction personnel and machinery (Photo 3.7). An ecologist from WSP attended Bengalla on 7 September 2023 to undertake a pre-clearing inspection of the tree and immediate area for biodiversity values, and the habitat tree was felled with caution with the ecologist present.

One Gould's Wattled Bat (*Chalinolobus gouldii*) escaped the tree unharmed and self-relocated to nearby remnant vegetation. No other microchiropteran bats or fauna were found following thorough inspection of all hollows and the trunk with a torch. The tree was left in place overnight to allow any undetected fauna further opportunity to escape.



Photo 3.6 Dangerous habitat tree detail



Photo 3.7 Dangerous habitat tree

4 Conclusions

This report documents the pre-clearing and clearing activities completed at Bengalla Mine in 2023. Pre-clearing and clearing surveys were undertaken by appropriately qualified WSP ecologists to allow for the safe removal and relocation of native flora and fauna, where practicable.

A total of 297 hollow-bearing/ habitat trees were identified within GDP areas, 134 of which were felled in 2023. In total, approximately 503 lineal metres of salvageable material potentially suitable for reuse in rehabilitation programs was identified, with the intention to relocate within rehabilitation areas as work progresses.

During Stage 2 clearing operations, 46 animals were captured and relocated, nine animals died as a result of tree felling activities, and a further three animals were euthanised post tree felling. Two juvenile birds were also captured post-felling and passed on to wildlife rehabilitation agencies for additional care. In addition, 54 animals were observed using habitat trees but evaded capture once the tree was felled.

One large *Cymbidium canaliculatum* was identified during Stage 1 pre-clearing surveys in 2023. This individual was left in place during Stage 2 tree clearing activities in February 2023.

One habitat tree was felled during the May to November avoidance period in 2023. Due to the unsafe nature of the tree observed, and its proximity to construction activities and personnel, it was considered that the tree could be safely felled with appropriate ecological supervision to ensure that any arising ecological matters were appropriately addressed and handled to ensure protection of important biodiversity. The tree was felled successfully, with no animals injured or requiring veterinary assistance. No animals were captured and relocated during these works.

Clearing activities undertaken in 2024 will continue to follow the methodology outlined within the BMP.

5 Limitations

This Report is provided by WSP Australia Pty Limited (*WSP*) for Bengalla Mining Company (*Client*) in response to specific instructions from the Client and in accordance with WSP's proposal dated 13 December 2023 (*Agreement*).

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Bibliography

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- NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL 2013. Australian code for the care and use of animals for scientific purposes, 8th edition. Canberra: National Health and Medical Research Council.

Appendix A

Recorded flora



Table A.1 Recorded flora

Scientific name	Common name	Introduced	EPBC Act ¹	BC Act ²
<i>Acacia implexa</i>	Hickory Wattle			
<i>Allocasuarina luehmannii</i>	Buloke			
<i>Angophora floribunda</i>	Rough-barked Apple			
<i>Austrostipa verticillata</i>	Bamboo Grass			
<i>Aster subulatus</i>	Wild Aster	*		
<i>Bidens pilosa</i>	Cobblers Pegs	*		
<i>Bidens subalternans</i>	Greater Beggar's Ticks	*		
<i>Bothriochloa macra</i>	Red Grass			
<i>Brachychiton populneus</i>	Kurrajong			
<i>Cirsium vulgare</i>	Spear Thistle	*		
<i>Chrysocephalum apiculatum</i>	Golden Buttons			
<i>Conyza bonariensis</i>	Flaxleaf Fleabane	*		
<i>Corymbia maculata</i>	Spotted Gum			
<i>Cymbidium canaliculatum</i>	Tiger Orchid			EP
<i>Cynodon</i> sp.	Couch	*		
<i>Daviesia ulicifolia</i>	Gorse Bitter Pea			
<i>Dichondra repens</i>	Kidney Weed			
<i>Einada hastata</i>	Berry Saltbush			
<i>Eragrostis curvula</i>	African Lovegrass	*		
<i>Eucalyptus crebra</i>	Narrow-leaved Ironbark			
<i>Eucalyptus moluccana</i>	Grey Box			
<i>Eucalyptus tereticornis</i>	Forest Red Gum			
<i>Lycium ferocissimum</i>	African Boxthorn	*		
<i>Melinis repens</i>	Red-natal Grass	*		
<i>Onopordum acanthium</i>	Scotch Thistle	*		
<i>Opuntia stricta</i>	Prickly Pear	*		
<i>Phyla canescens</i>	–	*		
<i>Rytidosperma caespitosum</i>	Wallaby Grass			
<i>Senecio madagascariensis</i>	Fireweed	*		
<i>Sida rhombifolia</i>	Paddys Lucerne	*		
<i>Verbena bonariensis</i>	Purpletop	*		

(1) Environment Protection and Biodiversity Conservation Act 1999

(2) Biodiversity Conservation Act 2016 – EP = Endangered Population.

Appendix B

Recorded fauna



Table B.1 Recorded fauna

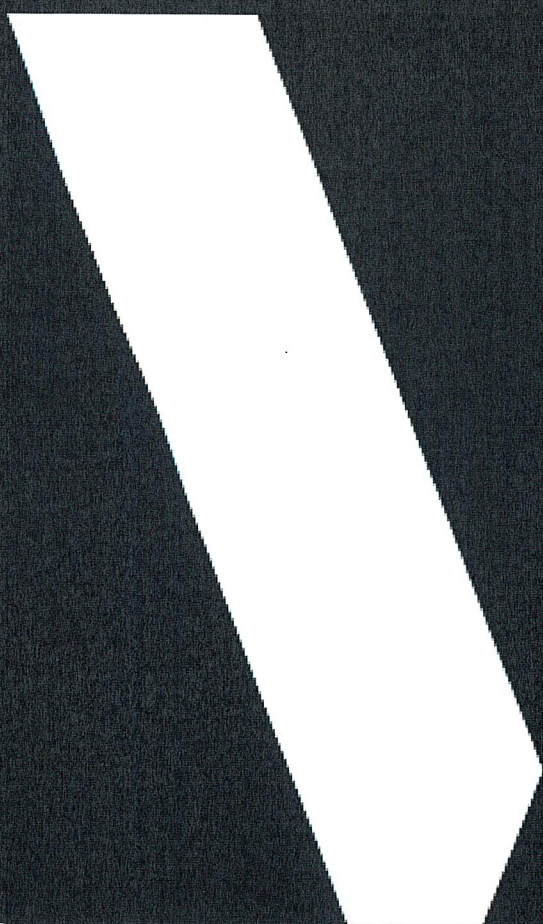
Scientific name	Common name	Introduced	EPBC Act ¹	BC Act ²
Amphibians (2)				
<i>Litoria caerulea</i>	Green Tree Frog			
<i>Litoria peroni</i>	Peron's Tree Frog			
Birds (32)				
<i>Acanthiza chrysoorhoa</i>	Yellow-rumped Thornbill			
<i>Acanthiza nana</i>	Yellow Thornbill			
<i>Acridotheres tristis</i>	Common Myna	*		
<i>Aegotheles cristatus</i>	Australian Owlet-nightjar			
<i>Alisterus scapularis</i>	Australian King-Parrot			
<i>Aquila audax</i>	Wedge-tailed Eagle			
<i>Cacatua galerita</i>	Sulphur-crested Cockatoo			
<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike			
<i>Corcorax melanorhamphos</i>	White-winged Chough			
<i>Corvus coronoides</i>	Australian Raven			
<i>Coturnix ypsilophora</i>	Brown Quail			
<i>Cracticus tibicen</i>	Australian Magpie			
<i>Cracticus nigrogularis</i>	Pied Butcherbird			
<i>Cracticus torquatus</i>	Grey Butcherbird			
<i>Dicaeum hirundinaceum</i>	Mistletoebird			
<i>Elanus axillaris</i>	Black-shouldered Kite			
<i>Eolophus roseicapilla</i>	Galah			
<i>Falco cenchroides</i>	Nankeen Kestrel			
<i>Grallina cyanoleuca</i>	Magpie Lark			
<i>Malurus cyaneus</i>	Superb Fairywren			
<i>Manorina melanocephala</i>	Noisy Miner			
<i>Ocyphaps lophotes</i>	Crested Pigeon			
<i>Pardalotus striatus</i>	Striated Pardalote			
<i>Petrochelidon nigricans</i>	Tree Martin			
<i>Platyercus elegans</i>	Crimson Rosella			
<i>Platyercus eximius</i>	Eastern Rosella			
<i>Pomatostomus temporalis</i>	Grey-crowned Babbler			Vulnerable
<i>Rhipidura leucophrys</i>	Willie Wagtail			

<i>Sericornis frontalis</i>	White-browed Scrubwren			
<i>Smicrornis brevirostris</i>	Weebill			
<i>Sturnus vulgaris</i>	Common Starling	*		
<i>Taeniopygia guttata</i>	Zebra Finch			
Mammals (9)				
<i>Chalinolobus gouldii</i>	Gould's Wattled Bat			
<i>Macropus giganteus</i>	Eastern Grey Kangaroo			
<i>Mus musculus</i>	House Mouse	*		
<i>Nyctophilus geoffroyi</i>	Lesser-long-eared Bat			
<i>Oryctolagus cuniculus</i>	Rabbit	*		
<i>Ozimops ridei</i>	Ride's Free-tailed Bat			
<i>Rattus rattus</i>	Black Rat	*		
<i>Trichosurus vulpecula</i>	Common Brushtail Possum			
<i>Vombatus Ursinus</i>	Common Wombat			
Reptiles (7)				
<i>Cryptoblepharus pulcher</i>	Elegant Snake-eyed Skink			
<i>Ctenotus robustus</i>	Robust Ctenotus			
<i>Egernia striolata</i>	Tree Skink			
<i>Nebulifera robusta</i>	Robust Velvet Gecko			
<i>Pogona barbata</i>	Eastern Bearded Dragon			
<i>Pseudonaja textilis</i>	Eastern Brown Snake			
<i>Varanus varius</i>	Lace Monitor			

(1) Environment Protection and Biodiversity Conservation Act 1999; (2) Biodiversity Conservation Act 2016

Appendix C

Scientific licence





Department of Planning, Industry and Environment
Scientific Licence
Biodiversity Conservation Act 2016

Name and postal address of principal licensee

Nominated premises (where appropriate)

Mr Alex Cockerill
 WSP Australia
 Se 1 L 3 51-55 Bolton St
 NEWCASTLE NSW 2300

Your licence number is: SL100630

This licence is valid from: 01 September 2022

This licence will expire on: 31 March 2024

Additional authorisations:

Project Title: General flora and fauna surveys for environmental impact assessments

This class of biodiversity conservation licence granted under Part 2 of the *Biodiversity Conservation Act 2016* authorises the following activities: Harm, by means of capture, deal in (possess), and liberate protected and threatened animals for survey purposes; Pick and deal in (possess) protected and threatened plants for identification purposes.

This licence authorises the principal licensee and any associates named in **Attachment A** to conduct those activities authorised above, to those species, communities or materials listed in **Attachment B**, at the locations specified in **Attachment C** of this licence.

This licence also authorises the principal licensee to conduct research on National Park estate under clause 26 of the National Parks and Wildlife Regulation 2019 (NPW Reg), where this forms part of a project approved by a delegated officer of the *Biodiversity Conservation Act 2016*.

This licence is granted subject to the provisions of *Biodiversity Conservation Act 2016*, Biodiversity Conservation Regulation 2017, the general conditions listed below, any special conditions as may be notified in writing to the licensee by the Environment Agency Head of the Department of Planning, Industry and Environment (the Department) or a 'delegated officer' of the *Biodiversity Conservation Act 2016* and the Department's "Scientific Licensing Policy".

Signature of Delegated Officer

Date: 21 March 2023

Signature of Principal Licensee*

Date: 5 5 2023

* This licence is not valid unless it is signed by the principal licensee. By signing this licence, the licensee agrees that they have read, understood and agree to comply with all of the conditions listed on the licence.

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Appendix D Weed and Pest Management

WEED AND PEST MANAGEMENT

1 Environmental Management

Weed and pest management at Bengalla and on the offset properties is undertaken in accordance with the BMP and BOMP, respectively.

Inspections are undertaken for weeds and pests, as required. Weed and pest control at Bengalla and on the offset properties is undertaken through targeted chemical and baiting applications.

2 Environmental Performance

Weed Management

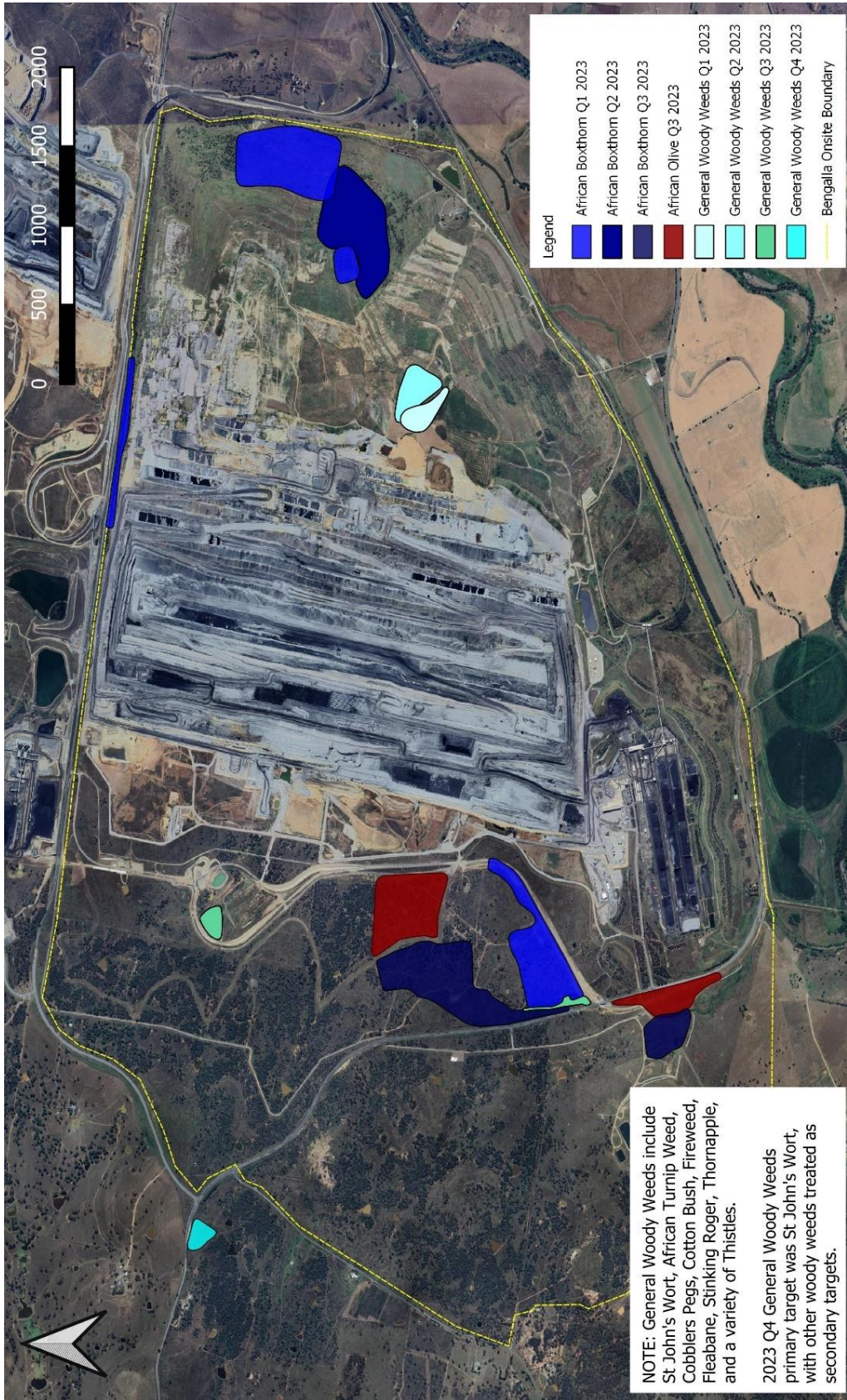
Weeding is undertaken using boom spray, spot spraying or stem application dependent upon the specific weed and the terrain.

- *Bengalla*

During 2023, approximately 211 ha was treated for the management of weeds. Target weed species included African boxthorn, Galenia, St John's wort, African olive and other environmental weeds. Priority areas for treatment included the pre-clearance areas and rehabilitation areas. Chemicals used during 2023 included Glyphosate with metsulfuron, Grazon Extra, Starane, Tordon, Amicide advanced, Lontrel and Garlon 600.

Observations during the weed treatment program and follow up inspections indicate that treatment methods used during the Reporting Period have generally been effective in reducing the presence of weeds in target areas.

Weed management areas at Bengalla are shown on **Figure 2** below.



BENGALLA MINING COMPANY
BENGALLA ONSITE AREA
Weed Works Completed 2023



Compiled by ENRIGHT LAND MANAGEMENT 31/12/2023

Figure 2 - Bengalla Mine Weed Management Areas 2023



- Biodiversity Offset Areas

Weed management across the biodiversity offset areas involves quarterly inspections and weed control programs.

Quarterly inspections are undertaken to determine weed control required for each quarter in each of the offset areas. Following identification, weed control commences and quarterly work records of site attendance are submitted which detail the sites treated, area (ha) treated, techniques and chemicals utilised and rates of application.

The chemicals to be utilised are based on their effectiveness depending on the type of weeds present. Chemicals used during 2023 include Glyphosate with metsulfuron, Grazon Extra, Roundup Bi-active, Starane advanced, Lontrel Advanced and Garlon 600.

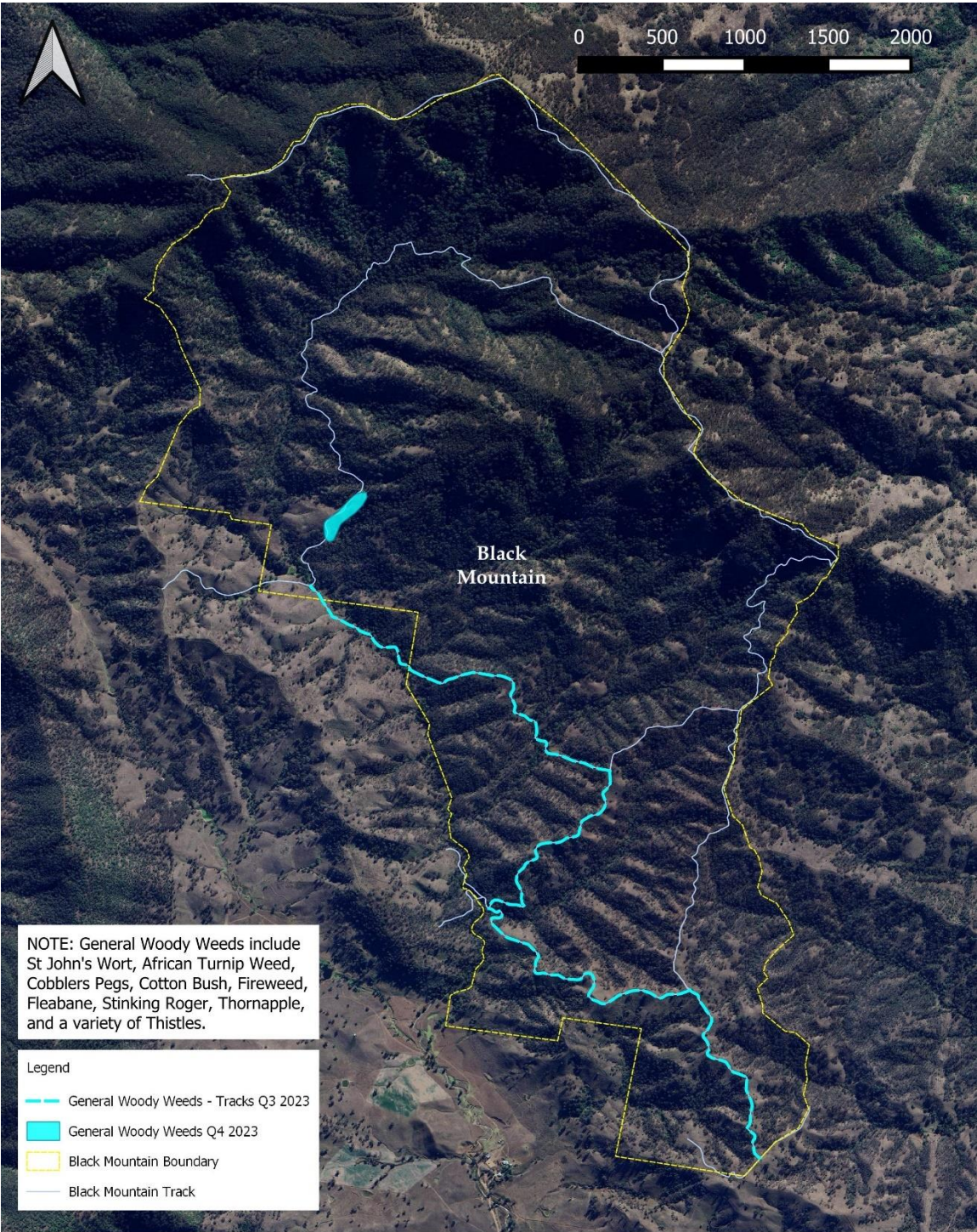
The weeds controlled during the Reporting Period included prickly pear, fire weed, spear thistle, African boxthorn, lantana and several environmental weeds across each BOA.

Application of chemicals was primarily via vehicle mounted spray rigs however backpacks were also used in some areas inaccessible by vehicle.

Particularly higher infestations of seasonal weeds were found in Kenalea and Echo, specifically in disturbed areas, riparian zones, gullies, and grasslands while minimal seasonal weeds were observed in Merriwa and Black Mountain.

Regional rainfall was well below the long-term average for 2023 which contributed to the decrease of several weed populations such as St Johns Wort.

Figures 3 to 4 below show locations of weed control in 2023 at the Black Mountain, Kenalea and Merriwa offset properties.

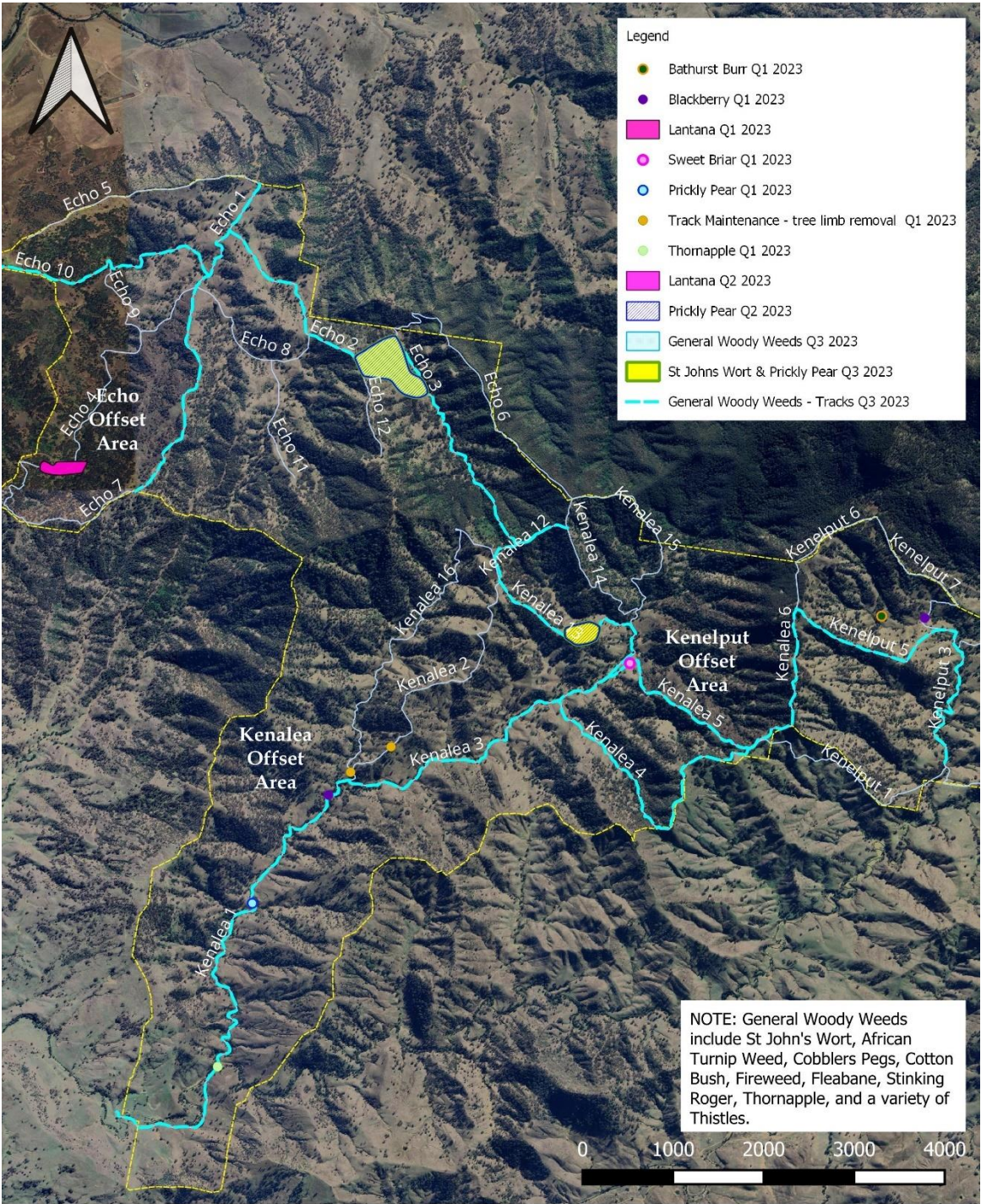


**BENGALLA MINING COMPANY
BENGALLA OFFSET AREA - BLACK MOUNTAIN
Weed Works Completed 2023**



Compiled by ENRIGHT LAND MANAGEMENT 31/12/2023

Figure 3 – Black Mountain Weed Management Locations 2023



**BENGALLA MINING COMPANY
BENGALLA OFFSET AREA - ECHO, KENALEA & KENELPUT
2023 Weed Control Completed**



Compiled by ENRIGHT LAND MANAGEMENT 31/12/2023

Figure 4 – Kenalea Weed Management Locations 2023



Pest Management

- *Bengalla*

A pig control program was conducted throughout 2023 at various locations across Bengalla. A total of 29 pigs were trapped and culled in 2023.

Feral pigs were trapped utilising a penning system using grain and molasses as the main attractant. Once trapped, all pigs were disposed of humanely.

The culling program will continue into 2024 across Bengalla.

Dog baiting programs at Bengalla occurred in the Autumn and Spring 2023. Each program was undertaken in conjunction with Local Land Services and local wild dog associations and additionally forms part of a broader scale baiting program targeting foxes and wild dogs in the Hunter Valley. Baiting included utilising 1080 poison baits in addition to ejector capsule baits and each baiting program extended for three weeks during each period.

Both buffer lands and rehabilitation areas were utilised in the programs. **Figure 5** and **Figure 6** shows the location of wild dog bait stations utilised at Bengalla. The distribution of bait locations covered both buffer land west of the mine site and rehabilitation areas.

During the autumn baiting program, 29 bait stations were laid over a three week period with a total of 87 baits. Results indicate 49 takes of which 32 takes were by target species being foxes and 3 wild dogs. Bait shyness was detected at all locations.

During the spring baiting program, 29 stations were laid over a three week period with a total of 87 baits. Results indicate 17 takes were by target species being foxes. No wild dog takes were recorded. Evidence of bait shyness was also detected. Trail cameras were used in conjunction with the baiting program to record species taking the baits.



BENGALLA MINING COMPANY
1080 WILD DOG BAITING AUTUMN 2023
Wild Dog & Fox Bait Takes - Map 1

Figure 5 – Bengalla Mine Wild Dog Bait Locations Autumn 2023



BENGALLA MINING COMPANY
1080 WILD DOG BAITING SPRING 2023
Wild Dog & Fox Bait Takes - Map 1

Compiled by ENRIGHT LAND MANAGEMENT 01/11/2023

Figure 6 – Bengalla Mine Wild Dog Bait Locations Spring 2023



- Offset Properties

During the Reporting Period, BMC undertook two 4-week dog ground baiting programs across all offset properties, including aerial dog baiting in Autumn and Spring in consultation with Local Land Services.

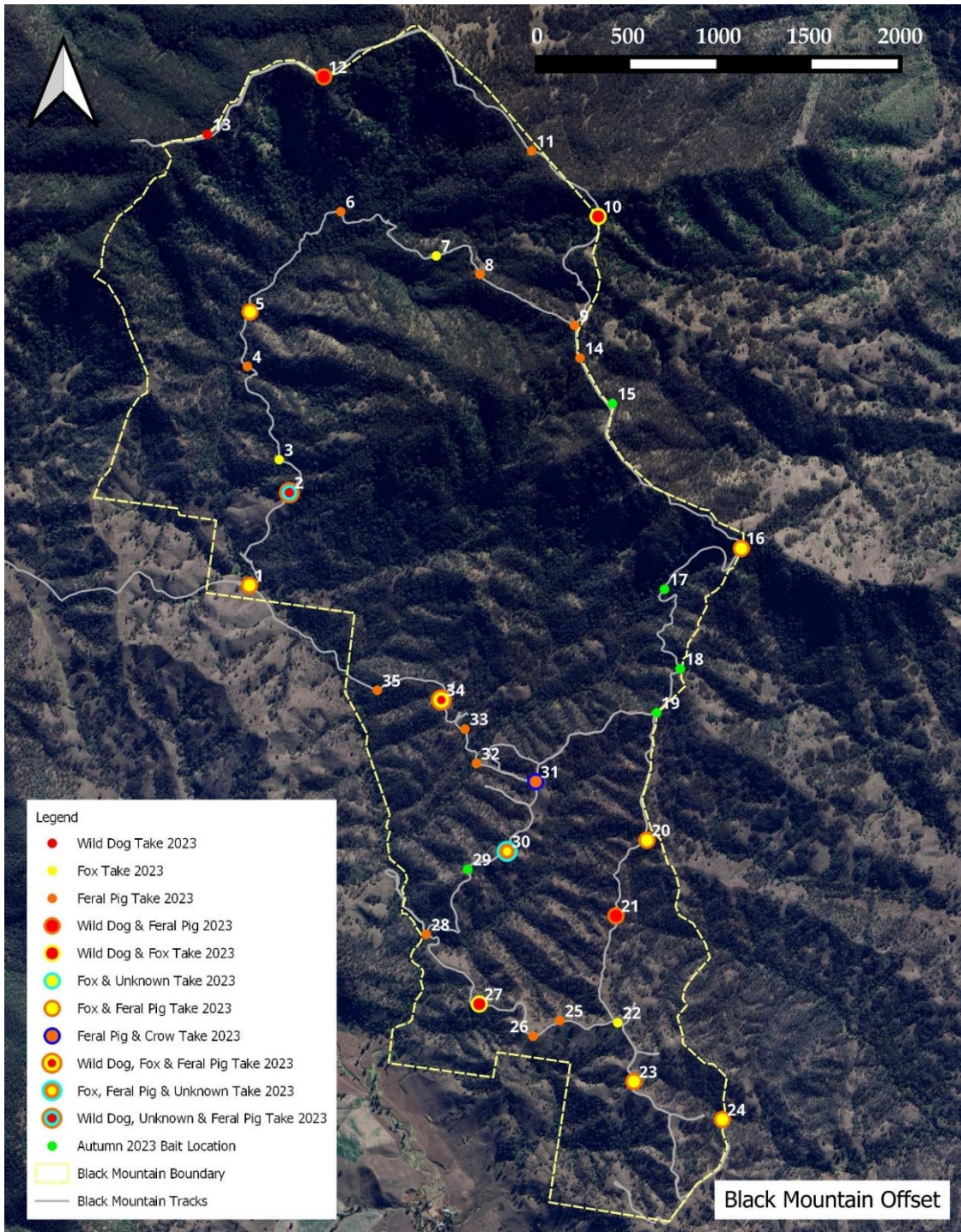
Figure 7 to Figure 12 show locations of wild dog baiting locations on each BOA for each baiting period in 2023.

A total of 687 baits were placed during the 2023 ground baiting program targeting foxes and wild dogs. A total of 136 baits were taken during the program by the targeted species. Results indicated that 26% of baits were taken by wild dogs and 64% by foxes. Trends over the previous 3 years indicate that wild dog takes have varied from 28 in 2021, 39 in 2022 and 36 in 2023. This suggests that dog numbers have remained relatively stable throughout the period however may also be now increasing due to an increase in available in food supply.

Opportunistic feral animal control was also undertaken during weed control works targeting 34 pigs and 5 deer utilising open range opportunistic shooting.

Further Actions

Ongoing management of weeds and feral animals at Bengalla and BOA's will continue during 2024.

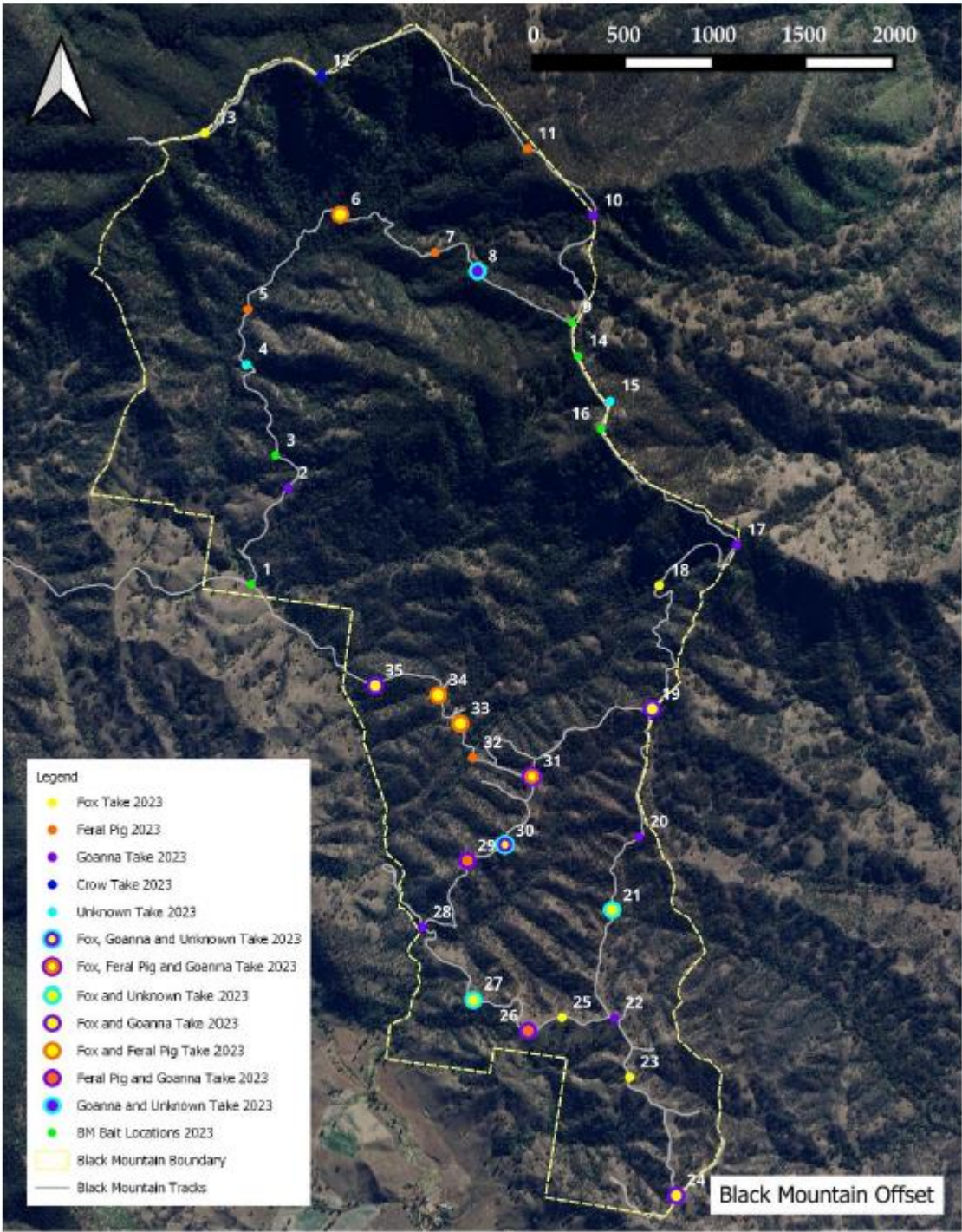


BENGALLA MINING COMPANY
1080 BAITING PROGRAM AUTUMN 2023
Wild Dog & Fox Bait Taken - Map 1

Compiled by ENRIGHT LAND MANAGEMENT 31/05/2023



Figure 7 – Black Mountain Wild Dog Bait Locations Autumn 2023

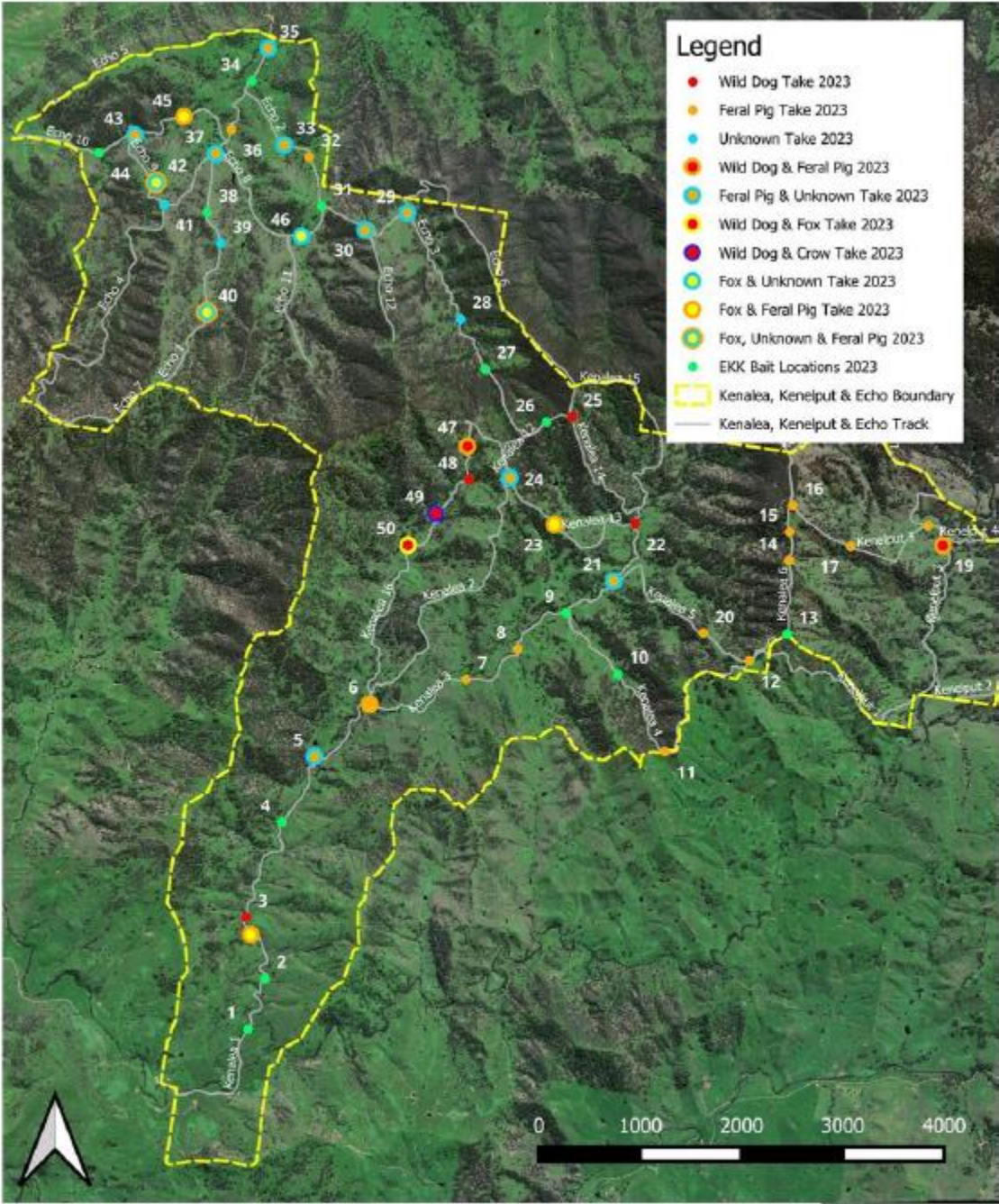


BENGALLA MINING COMPANY
1080 BAITING PROGRAM SPRING 2023
Wild Dog & Fox Bait Taken - Map 18

Compiled by ENRIGHT LAND MANAGEMENT 01/11/2023



Figure 8 – Black Mountain Wild Dog Bait Locations Spring 2023

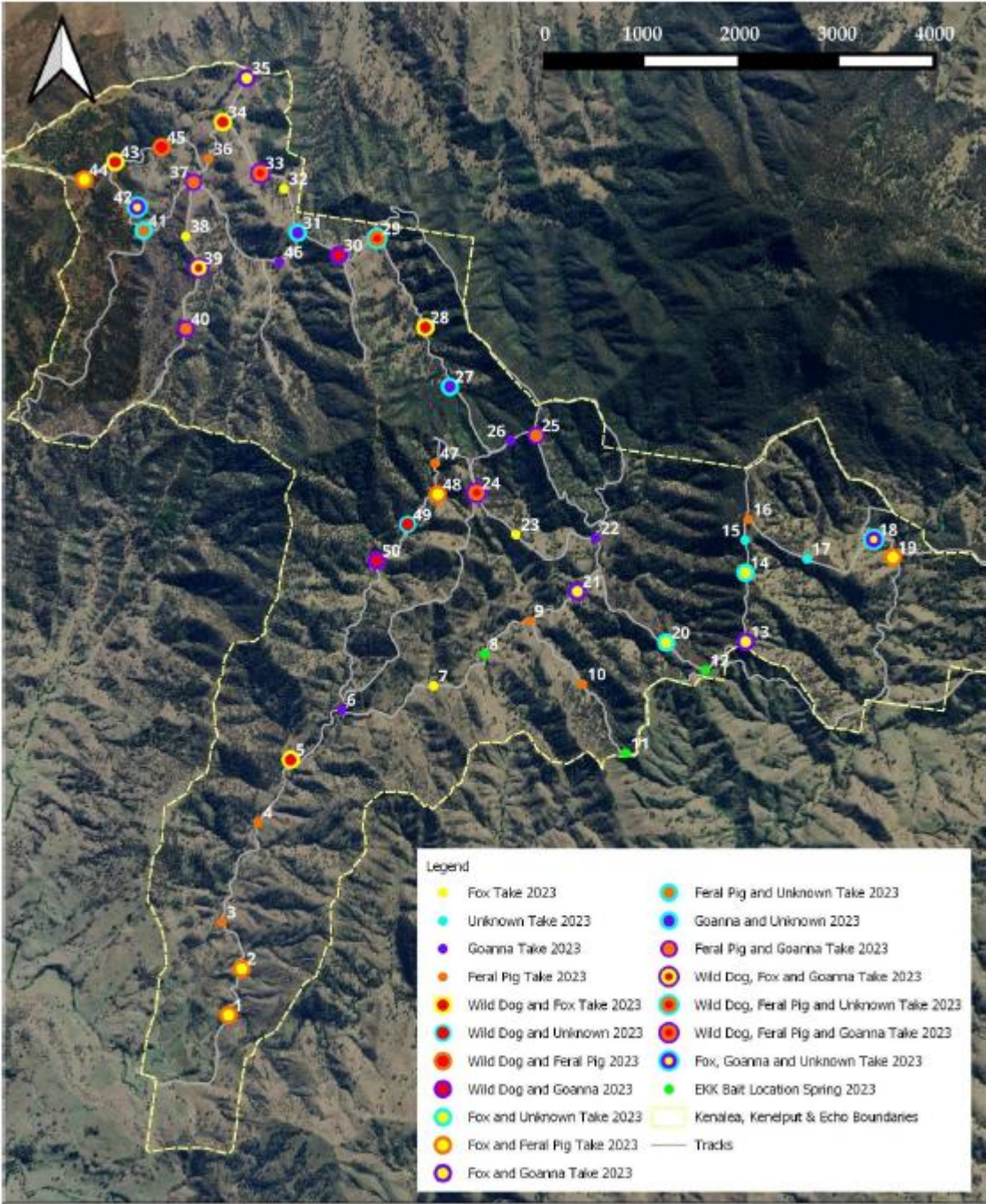


BENGALLA MINING COMPANY
1080 BAITING PROGRAM AUTUMN 2023
Echo/Kenalea/Kenelput Offset
Wild Dog & Fox Bait Takes - Map 14



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Figure 9 – Kenalea Wild Dog Bait Locations Autumn 2023

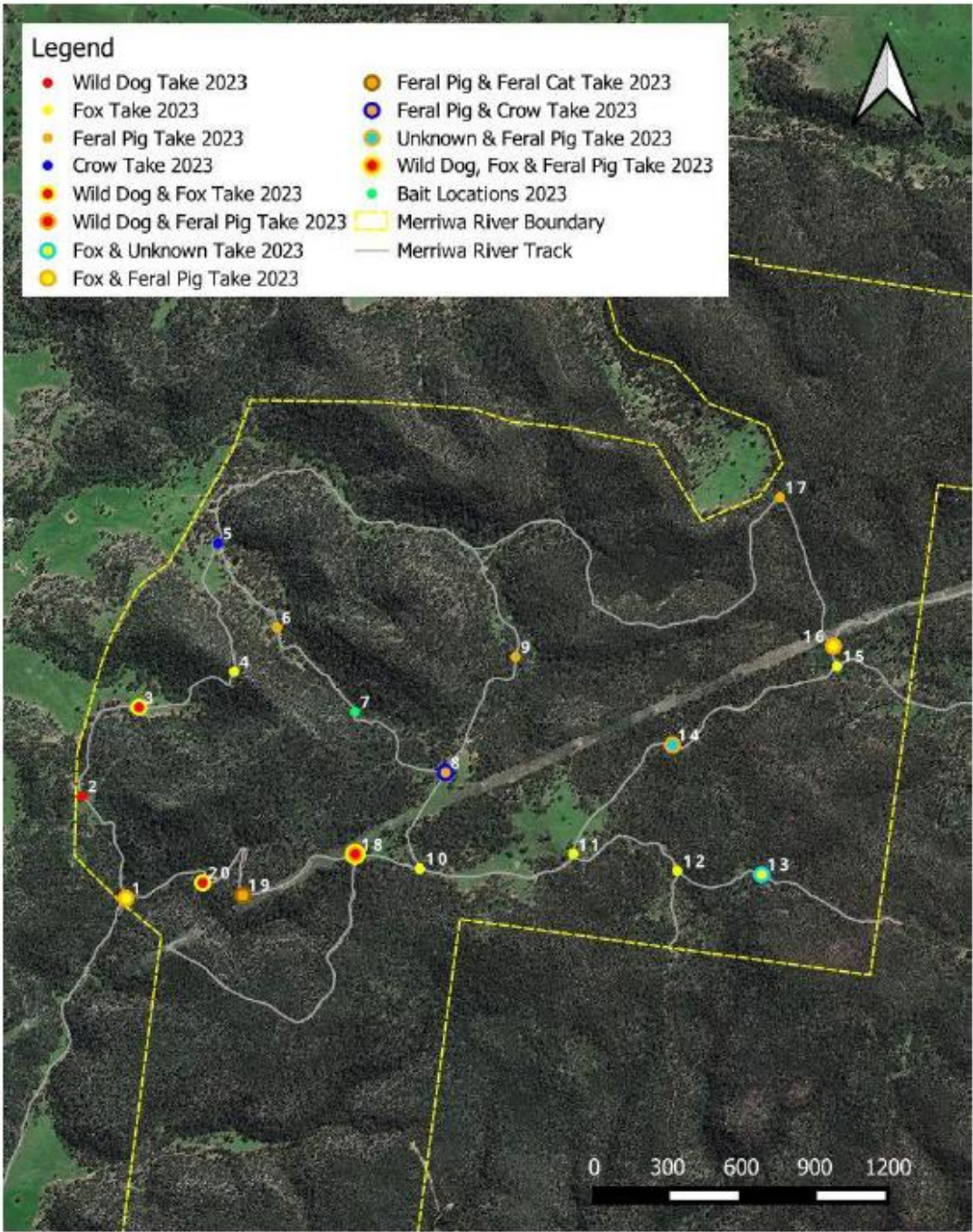


BENGALLA MINING COMPANY
1080 BAITING PROGRAM SPRING 2023
Echo/Kenalea/Kenelput Offset
Wild Dog & Fox Bait Takes - Map 17

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Figure 10 – Kenalea Wild Dog Bait Locations Spring 2023

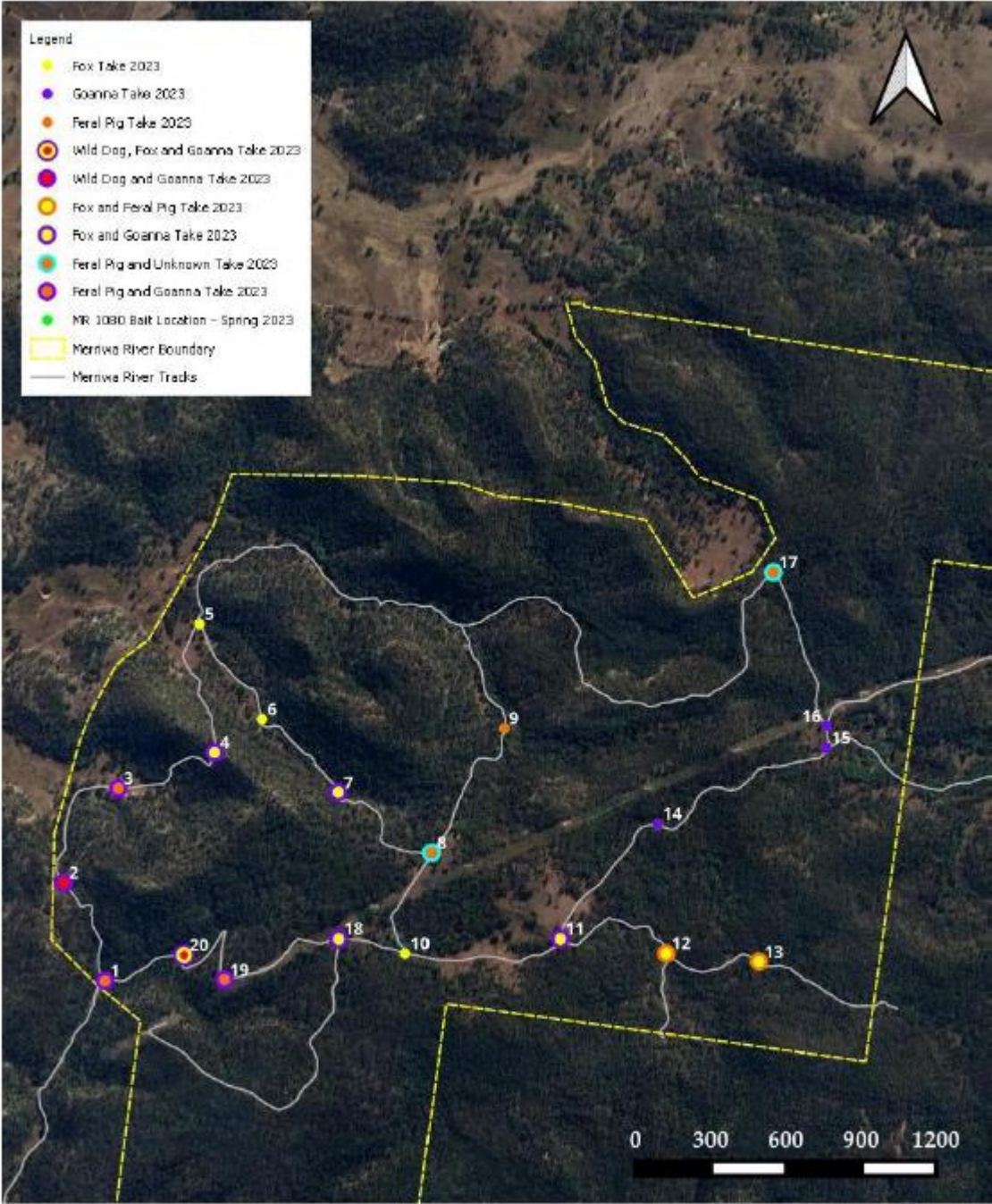


BENGALLA MINING COMPANY
1080 BAITING PROGRAM AUTUMN 2023
Wild Dog & Fox Baits Taken - Map 16

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Figure 11 – Merriwa River Wild Dog Bait Locations Autumn 2023



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1080 BAITING PROGRAM SPRING 2023
Wild Dog & Fox Baits Taken - Map 19**



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Figure 12 – Merriwa River Wild Dog Bait Locations Spring 2023