

BENGALLA MINE (EPBC 2012/6378)

2019 ANNUAL COMPLIANCE REPORT

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March 2020

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BENGALLA MINE ANNUAL COMPLIANCE REPORT FOR EPBC 2012/6378

1 INTRODUCTION

1.1 BACKGROUND

Bengalla Mining Company Pty Limited (BMC) operates the Bengalla Mine (Bengalla) which 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, BMC was granted State Significant Development Consent (SSD-5170) by the NSW Secretary of Department of Planning and Environment (DPE) under the *Environmental Planning & Assessment Act 1979* (EP&A Act).

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

Both of the EPBC2012/6378 and SSD-5170 approvals are supported by 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) was approved by Department of Environment and Energy (DoEE) on 8 March 2017 and approved by DPE on 18 August 2017.

The Biodiversity Management Plan (BDMP) was approved by DPE on 18 August 2017 and approved by DoEE on 20 September 2017.

1.2 PURPOSE AND SCOPE

This report has been prepared in accordance with Condition 12 of EPBC2012/6378 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 2019 to 31 December 2019 (Reporting Period).

This report will form an Appendix to the 2019 Annual Review for Bengalla as required under SSD-5170 Schedule 5 Condition 4.

2 ACTIVITIES UNDERTAKEN IN 2019

Clearing works in 2019 were in relation to the:

- Relocation and development of surface infrastructure (dragline shutdown maintenance pad, relocated Orica reload facility);
- Pre-clearances in advancement of approved mining operations;
- Development of the Mt Pleasant Rail Loop;
- Development of access tracks for topsoil and clay stripping for the establishment of a clay stockpile;
- Exploration drilling in advance of mining activities;
- Environmental monitoring system and infrastructure upgrades; and
- Erection of fence lines on pastoral land adjacent to the mine.

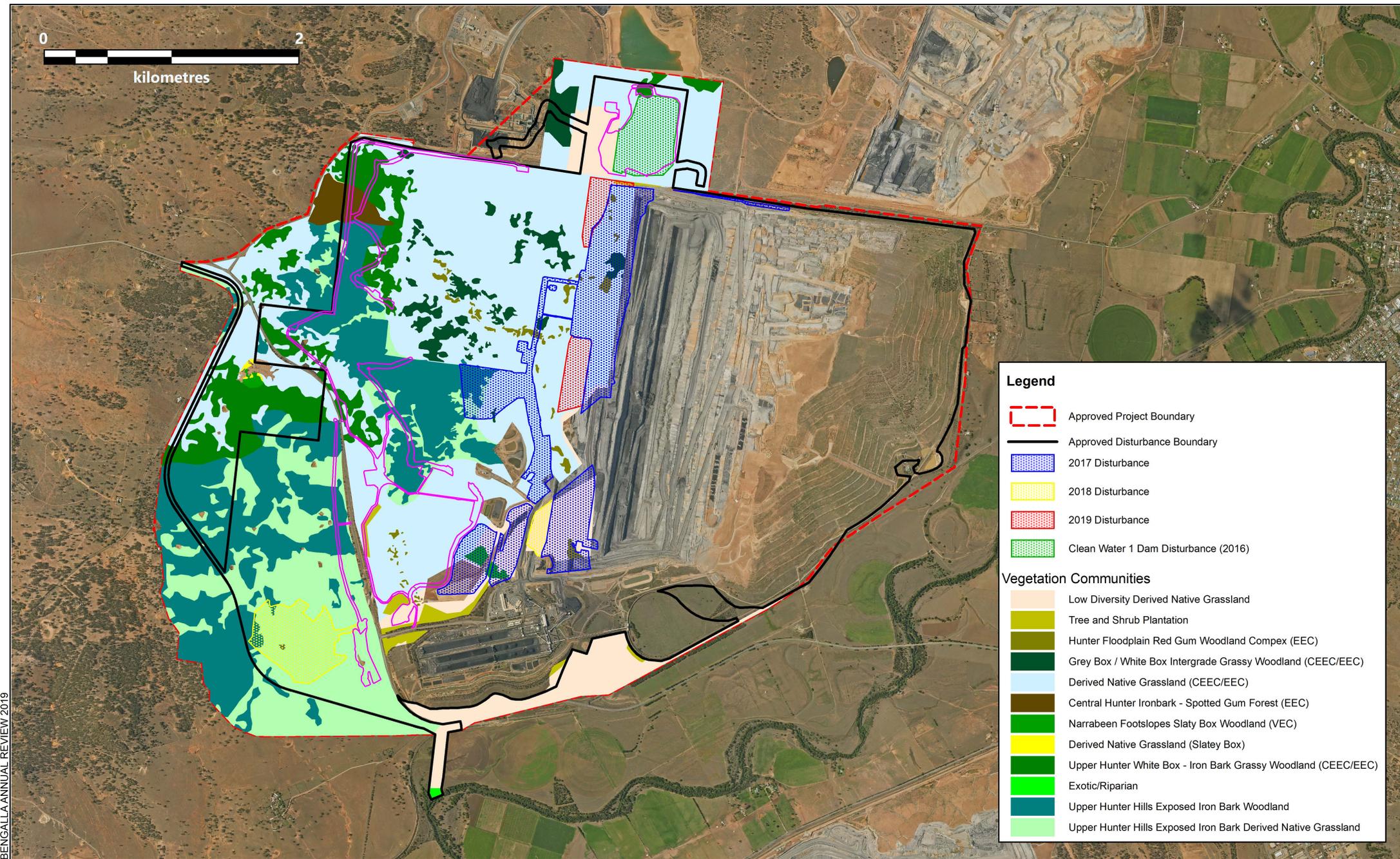
The Clearing Report summarises the 2019 pre-clearance and clearance surveys, which included:

- Identification of 23 hollow-bearing trees and 9 habitat trees, which were felled;
- No animals were relocated or captured during pre-clearance and clearance surveys;
- Observation of 2 animals that evaded capture during clearing;
- No animals were killed or euthanised as a result of clearing operations;
- No injured or immature animals were taken to either the local veterinary centre or directly to Wildlife Aid; and
- No *Cymbidium canaliculatum* (listed as endangered under the EPBC Act) were recorded during 2019 clearing operations.

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.



BENGALLA ANNUAL REVIEW 2019



BENGALLA MINE

Vegetation Communities

FIGURE 1

3 COMPLIANCE REPORT

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

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

Table 2 lists the conditions of EPBC2012/6378 and indicates the compliance status of each as 'compliant', 'not compliant' or 'not triggered'. Comments are provided against each condition, where required.

Table 3.1 of the Clearing Report (**Appendix C**) outlines dates the pre-clearing inspections and clearing activities were undertaken.

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

Table 2
BMC Compliance Status against Conditions of EPBC 2012/6378

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	<p>In 2019 clearing was undertaken within the Project Disturbance Boundary.</p> <p>During 2019, approximately 17.45 ha of Derived Native Grassland was cleared for progression of the mining void and associated infrastructure (see Figure 1).</p> <p>24.69 ha of Derived Native Grassland was unaccounted for in historical disturbance. The disturbance was undertaken to construct the Clean Water 1 Dam and has been added to the cumulative Derived Native Grassland value below.</p> <p>To date, approximately 1.5 ha of Upper Hunter Hills Exposed Ironbark Woodland and approximately 30 ha of Upper Hunter Hills Exposed Ironbark Derived Native Grassland was cleared.</p> <p>To date, approximately 177.14 ha of White Box-Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland (Box Gum Woodland) has been cleared.</p>
2	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	Compliant	A BDMP was developed to meet this requirement (see Appendix A). NSW approval for the initial BDMP was provided on 14 August 2015. Final

Ref	Condition	Status	Comment
	<p>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>approval from Department of Environment and Energy (DoEE) was provided on 14 August 2015. BMC commenced implementation of the BDMP after 14 August 2015.</p> <p>The BDMP was revised and approved by DoEE on 20 September 2017 and by NSW DPE on 18 August 2017.</p> <p>Section 1.3 of the BDMP describes where sub-conditions a) to e) are addressed.</p>
	<p>The approval holder must not commence the action until the VCPLMP is approved by the 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>	Compliant	<p>A BDMP was developed to meet this requirement (see Appendix A). NSW approval for the initial BDMP was provided on 14 August 2015. Final approval from Department of Environment and Energy (DoEE) was provided on 14 August 2015. BMC commenced implementation of the BDMP after 14 August 2015.</p> <p>The BDMP was revised and approved by DoEE on 20 September 2017 and by NSW DPE on 18 August 2017.</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) 	Compliant	<p>Following extensive consultation (Appendix A of BOMP), the BOMP received approval from DoEE on 8 March 2017. The BOMP was later granted approval by NSW DPE on 18 August 2017 (see Appendix B).</p> <p>Table 1 of the approved BOMP details where each requirement of Condition 3 is satisfied.</p>

Ref	Condition	Status	Comment
	<p>b. Provide a survey and description of the current condition (prior to any management activities) of the offset areas identified in Condition 3a</p> <p>c. Detail management actions and regeneration and revegetation strategies to be undertaken on the offset areas to improve the ecological quality of these areas, including:</p> <ul style="list-style-type: none"> (i) 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; (ii) performance and completion criteria for evaluating the management of the offset areas, and criteria for 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. <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>		
4	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.	Compliant	All Biodiversity Offset Areas identified in Schedule 2 (Figures 1-6) of EPBC 2012/3678 conditions of approval are under the ownership of and management of BMC. All Biodiversity Offset

Ref	Condition	Status	Comment
			<p>Areas identified in EPBC 2012/3678 are managed in accordance with the BOMP.</p> <p>Discussions with NSW OEH, NPWS and DPIE continued throughout 2019 in relation to determining the appropriate long-term mechanism for biodiversity offset areas, in accordance with Condition 28 of SSD-5170.</p>
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	See Section 8 of the 2019 Annual Review.
6	The approval holder must undertake management and monitoring of water resources in accordance with NSW approval conditions 23 to 25.	Compliant	See Section 7 of the 2019 Annual Review.
7	In order to protect water resources, the approval holder must undertake rehabilitation activities in accordance with NSW approval conditions 44 and 46.	Compliant	See Section 8 of the 2019 Annual Review.
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.
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 <i>the Environmental Planning and Assessment Act, 1979</i> (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	<p>No request was made during the Reporting Period.</p> <p>Approved Bengalla management plans are available on the BMC website.</p>
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	In an email dated 30 October 2015, BMC advised DoE that the Action commenced 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.	Not Triggered	No request was made during the Reporting Period. Appendix C describes activities implemented under the BDMP.

Ref	Condition	Status	Comment
	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.		
12	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. 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.	Compliant	The 2019 Annual Review (to which this is an appendix) meets this requirement. Appendix A of this report provides a summary of commitments from the BDMP and how each has been addressed in the Reporting Period. Appendix B of this report provides a summary of the commitments from the BOMP and how each has been addressed in the Reporting Period.
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	No non-compliances occurred during the Reporting Period
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 request 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 activities other than those described in the BDMP or BOMP have been required during the Reporting Period.

Ref	Condition	Status	Comment
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 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.	Not Triggered	No request was made during in the Reporting Period.
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	In an email dated 30 October 2015, BMC advised DoE that the Action commenced 1 October 2015.

4 CONCLUSION

This review of the compliance status of the Bengalla operations during the 2019 Reporting Period against the EPBC 2012/6378 approval identified no non-compliances.

BMC will continue to review and document all relevant activities at Bengalla during the 2020 Reporting Period to assist in maintaining compliance with the EPBC 2012/6378 conditions.

Appendix A and **Appendix B** provide comment in regard to the implementation of BDMP and BOMP commitments during the Reporting Period.

Appendix A
BDMP Commitments

BMP Section	Control / Action	Timing / Trigger	Responsibility	Monitoring	Reporting	Status	Comment
4.1	Marking Limits of Clearing	Prior to clearing	Environmental Superintendent / Mining Manager / Surveyors	Inspection to be undertaken throughout duration of clearing.	Documented in GDP form and signed off.	Compliant	GDP boundaries are demarcated prior to clearing, where required.
4.2	Identification of suitable fauna relocation sites	Prior to clearing	Environmental Superintendent / Mining Manager	N/A	Documented in GDP form and/or pre-clearing report.	Compliant	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.	To be documented and signed off in the pre-clearing report. Results to be reported in Annual Review. OEH notified if new threatened species identified.	Compliant	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.	To be documented and in the clearing report. Results to be reported in Annual Review. OEH notified if new threatened species identified.	Compliant	Section 3.2 of Appendix C .

BMP Section	Control / Action	Timing / Trigger	Responsibility	Monitoring	Reporting	Status	Comment
4.3	Pre-clearing weed management	Prior to clearing and during clearing	Suitably qualified person and Environmental Superintendent	Inspection to be undertaken prior to clearing.	Documented and signed off in the GDP. Results to be reported in the Annual Review.	Compliant	Section 3.1.7 of Appendix C .
4.2.3	Relocation of habitat features to rehabilitation areas, adjacent vegetation or storage location.	During and/or after clearing	Environmental Superintendent	N/A	Documented and signed off in the GDP. Results to be reported in the Annual Review.	Compliant	Section 3.1.8 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.	Environmental Superintendent Safety Specialist	N/A	As per 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 / Environmental Superintendent	N/A	N/A	Compliant	No wildlife crossing areas were identified by WSP during 2019. 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	Environmental 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 the Annual Review.	Compliant	Section 3.1.6 of Appendix C .

BMP Section	Control / Action	Timing / Trigger	Responsibility	Monitoring	Reporting	Status	Comment
4.3	Weed control	Ongoing over life of mine	Environmental Superintendent	Routine field observations in Weed Control Zones, including rehabilitation areas.	Results to be reported in Annual Review.	Compliant	Section 6.13 of the 2019 Annual Review.
4.4	Feral control	Ongoing over life of mine	Environmental Superintendent	Routine field observations in Weed Control Zones including rehabilitation areas	Results to be reported in Annual Review.	Compliant	Section 6.13 of the 2019 Annual Review.
5.0	Monitoring Program	Ongoing over life of mine	Ecologist	N/A	Results to be reported in the Annual Review	Compliant	Section 8 of the 2019 Annual Review.

Appendix B
BOMP 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	At the time of this compliance review, the BOMP (with regulatory approval letters) (August 2017) was available on the BMC website.
Fencing, Gates and Signage			
8.1	Boundary fencing will remain around all BOS Areas and will be inspected annually to identify area that may require maintenance.	Complaint	Fencing and maintenance works were undertaken at Kenalea (approx. 3km) during 2018.
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	Fencing and maintenance works were undertaken at Kenalea (approx. 3km) during 2018.
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.	Complaint	All gates to BOS area remained secured and locked during 2019.
8.1	BMC will install signage at the entrances to the BOS Area to inform the public of restricted access to properties.	Compliant	Restricted access signage at the entrances to the BOS Areas has been installed.
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 Area unless explicitly undertaken for the purposes of ongoing management.	Compliant	As required by internal polices, all staff, stakeholders and visitors working at Bengalla (or offsets) are required to be inducted prior to undertaking specified bodies of work.
Control Grazing			
8.3	Controlled grazing will only be permitted in Zone 1 and Zone 2 management areas.	Not Triggered	No controlled grazing undertaken during 2019.

BOMP Section	Commitment	Status	Comment
8.3	<p>Best practice guidelines for control grazing will be implemented wherever control grazing is employed, including:</p> <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 Dry 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 cattle grazing undertaken during 2019.
8.3	Control grazing will be monitored against Trigger and Performance Criteria	Not Triggered	Trigger and Performance Criteria comment from Year 5 onwards.
8.3	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	Trigger and Performance Criteria comment from Year 5 onwards.
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 undertaken during 2019.
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 undertaken during 2019.
Bushfire Management			

BOMP Section	Commitment	Status	Comment
8.4	BMC will take practicable steps to prevent the occurrence of bushfires on the land and minimise the spread of bushfire.	Compliant	Fire trail maintenance was completed on all BOS Areas during 2019. A small fire occurred on an adjoining property to Kenalea Offset during 2019. Bengalla assisted in the control of the fire and it was extinguished without impacting on BMC Offset area.
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 area RFS captains. Locations of water fill points were provided to the RFS in 2018 following the ground truthing of these locations.
Weed Control			
8.5	Weed management actions will target Weeds of National Significance and Noxious Weeds across BOS Area.	Compliant	HLM undertook a weed monitoring and control program in BOS areas during the Reporting Period. HLM records the location of weed identified during the program and records their location for GIS input (HLM, 2018). Section 6.13 of the 2019 Annual Review.
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 on BOS areas during the Reporting Period is provided in Section 6.13 of the 2019 Annual Review.
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 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 is provided in Section 6.13 of the 2019 Annual Review.

BOMP Section	Commitment	Status	Comment
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 in BOS areas during the Reporting Period. The location of weeds identified during the program was recorded for GIS input.
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 during 2019. This was undertaken in line with neighbouring properties and the LLS Baiting program. Section 6.13 of the 2019 Annual Review.
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 of native animals	Not Triggered	No native fauna deaths were reported during the 2019 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 2019 feral animal control program is provided in Section 6.12 and 6.13 of the 2018 Annual Review.
8.6	All personnel involve 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 accreditation to undertake the feral control program works in 2019.
Maintenance Track Improvement and Additional Infrastructure			

BOMP Section	Commitment	Status	Comment
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.	Complaint	All existing access tracks in Kenalea and Black Mountain Offsets were assessed and regraded where required during 2019. Merriwa River Offset will be assessed in 2020.
	BMC will record and store all relevant GIS information related to the improvement or installation of additional infrastructure.	Complaint	BMC has recorded and stored all improvements and installation of additional infrastructure on the BMC GIS Database.
	BMC will undertake routine inspections and maintenance of BOS infrastructure (e.g. tracks, fence lines and gates).	Compliant	Inspections and maintenance of tracks was undertaken during 2019.
Contingency Measures			
8.8	Contingency measures will be utilised should monitoring indicate that performance.	Not Triggered	No contingency measures were required during the monitoring period.

Appendix C
Annual Clearing Report 2019

BENGALLA MINE

FEBRUARY 2020

2019 ANNUAL CLEARING REPORT

wsp



Question today

Imagine tomorrow

Create for the future

2019 Annual Clearing Report

Bengalla Mine

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Approved by:	Nathan Cooper	14/02/2020	

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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
TSC Act	<i>Threatened Species Conservation Act 1995</i>
BC Act	<i>Biodiversity Conservation Act 2016</i>

EXECUTIVE SUMMARY

The Bengalla Mining Company (BMC) Biodiversity Management Plan (BMP) (Bengalla Mining Company Pty Ltd 2017) provides a framework for biodiversity management, reporting and auditing of ecological issues across the Bengalla Mine. As part of the Ground Disturbance Permit (GDP) process, the BMP requires that ecological pre-clearing and clearing surveys be carried out by a suitably qualified person to minimise harm to native flora and fauna.

This report summarises the pre-clearing and clearing surveys completed at Bengalla between January and December of 2019 (reporting period). These works were in relation to:

- general pit progression and relocation of infrastructure
- construction of new infrastructure
- maintenance work.

During the reporting period, pre-clearing and clearing surveys were undertaken by appropriately qualified WSP ecologists in accordance with the BMP.

During pre-clearing surveys habitat features such as hollow trees were recorded, marked with the letter “H” (for habitat) and flagged with fluorescent tape. A total of 23 hollow-bearing / habitat trees were identified within GDP areas, 9 of which were felled in 2019. Salvaged habitat items were stockpiled, with the intention to relocate them to rehabilitation areas as the areas become available.

Immediately prior to the habitat trees being felled, the ecologist generally conducted a final pre-clearance survey and recorded the results as part of the clearance documentation. Following the felling of the tree, the ecologist investigated hollows for the presence of animals. During the 2019 clearing activities, no animals were relocated, 2 were observed but evaded capture and no animals died or were euthanised. No injured or immature animals were taken to either the local veterinary centre or directly to the wildlife care group Wildlife Aid, for treatment and/or rehabilitation.

Clearing activities undertaken throughout 2020 will continue to follow the methodology outlined within the BMP.

1 INTRODUCTION

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 2019, 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.

Table 2.1 Contributors and their role

NAME	QUALIFICATION	ROLE
Paul Shelley	Grad Cert Ornithology	Senior ecologist – pre-clearing surveys and spotter catcher
Troy Jennings	B. Biodiversity and Conservation M. Wildlife Management	Ecologist – pre-clearing surveys, spotter catcher and reporting
Gavin Shelley	B.Env Sc. Mgmt	Ecologist – pre-clearing surveys, spotter catcher and reporting
Nathan Cooper	B.Env.Sc. Grad Dip Ornithology	Senior Ecologist – technical review
Alex Cockerill	B.Sc. (Hons)	Principal Ecologist – project manager

All pre-clearing and clearing works were carried out under the appropriate licences, including a Scientific Licence as required under Clause 22 of the *National Parks and Wildlife Regulations 2002* and Section 132C of the *National Parks and Wildlife Act 1974*, and *Animal Research Authority* issued by the *Department of Primary Industries* as supplied in 2019.

2.2 PRE-CLEARING SURVEY PROCEDURE

The ecology pre-clearance surveys were conducted throughout 2019 and were completed in accordance with Section 4.2.1 of the BMP, 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 3.1).

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, hollow-bearing or significant 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*, were clearly marked prior to the commencement of clearing activities. The number of habitat, hollow-bearing or significant trees were recorded on field proforma.

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 *Biodiversity Conservation Act 2016* (BC Act).

2.2.4 SALVAGEABLE HABITAT MATERIAL

In accordance with the BMP, 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 and confirmation of its presence through laboratory analysis of soils and plant tissue if necessary.

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 which 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 and Figure 3.2.

2.2.7 COLLECTION OF SEEDS FOR REHABILITATION PURPOSES

In accordance with the BMP, 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 2019, there was a lack of seed availability and as such no seed was collected for use in rehabilitation.

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, clearing activities in 2019 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 were relocated into suitable habitat within designated relocation sites. Juvenile and injured fauna were passed on to the Muswellbrook Veterinary Hospital, local Wildlife Aid carers or euthanized in accordance with the Animal Research Authority Code of Practice.

3 RESULTS

3.1 ECOLOGY PRE-CLEARANCE SURVEYS

Pre-clearing surveys completed on behalf of BMC in 2019 are summarised in Table 3.1 and illustrated in Figure 3.1. It should be noted that throughout 2019, some GDP areas were 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.

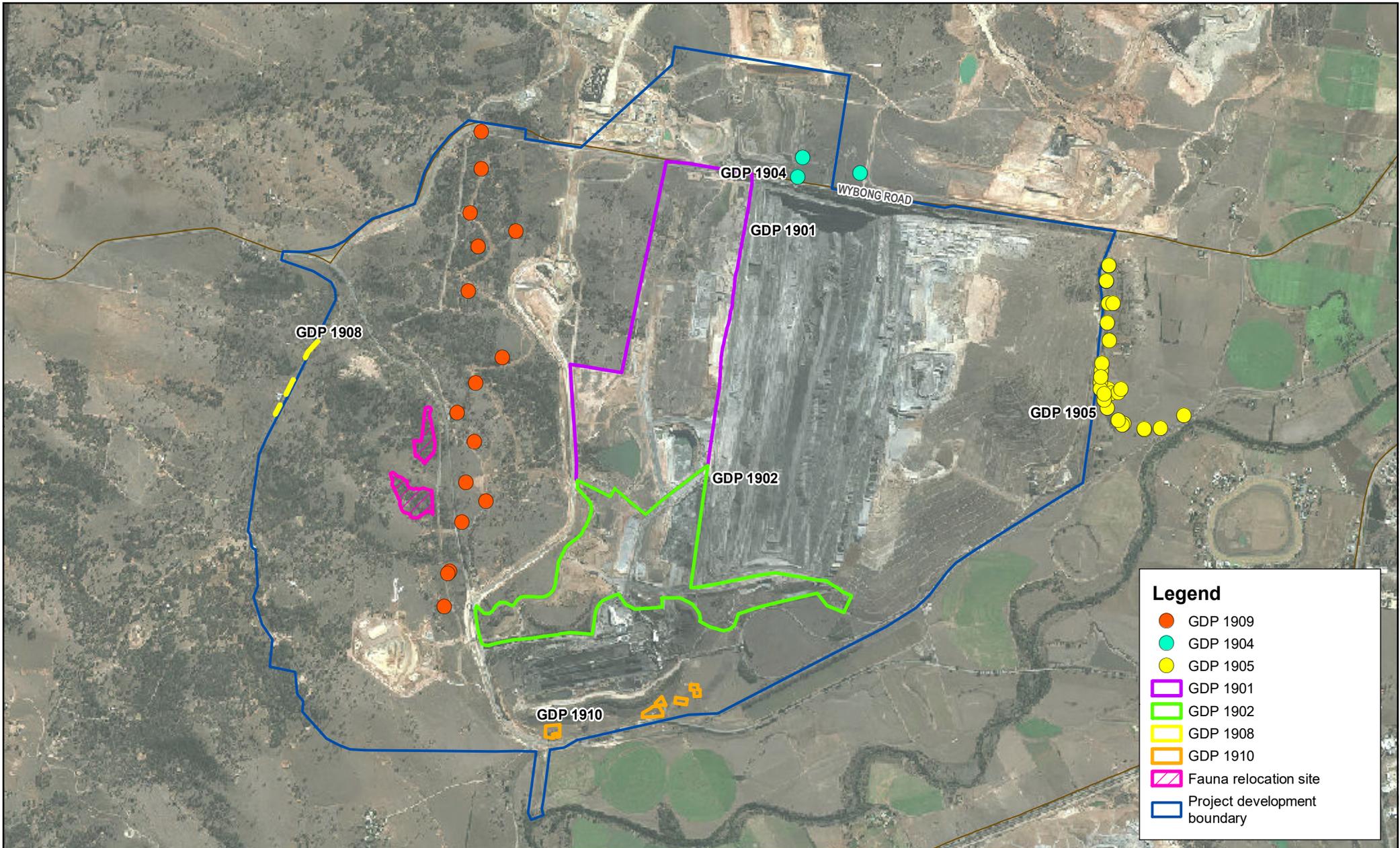
Table 3.1 Pre-clearing surveys completed in 2019

GROUND DISTURBANCE PERMIT AREA (GDP)	DATE PRE-CLEARANCE UNDERTAKEN	VEGETATION COMMUNITY
GDP 1901	03/01/2019	Derived Native and Exotic Grassland with isolated pockets of <i>Eucalyptus crebra</i> woodland.
GDP 1827 & 1907	12/02/2019	Derived Native and Exotic Grassland
GDP 1901, 1902, 1909	06/03/2019	GDP 1901 - Derived Native and Exotic Grassland with isolated pockets of Hunter Floodplain Red Gum Woodland. GDP 1902 - Derived Native and Exotic Grassland & scattered <i>Allocasuarina luehmannii</i> . GDP 1909 - Derived Native and Exotic Grassland with isolated pockets of <i>Eucalyptus crebra</i> and <i>Corymbia maculata</i> woodland.
GDP 1805, 1901, 1902	05/04/2019 & 15/04/2019	GDP 1805 - Derived Native and Exotic Grassland with isolated pockets of <i>Allocasuarina luehmannii</i> Regrowth. GDP 1901 - Derived Native and Exotic Grassland with isolated pockets of <i>Eucalyptus mollucana</i> Woodland. GDP 1902 – <i>Eucalyptus camaldulensis</i>
GDP 1902	24/07/2019	<i>Eucalyptus crebra</i> Woodland, planted <i>Corymbia maculata</i> and <i>Allocasuarina luehmannii</i>
GDP 1909	11/09/2019	Derived Native Grassland with isolated pockets of <i>Eucalyptus crebra</i> , <i>Eucalyptus mollucana</i> Woodland.

3.1.1 VEGETATION COMMUNITY STRUCTURE

The following vegetation communities were identified in the areas cleared in 2019:

- Derived Native and Exotic Grassland
- Derived Native and Exotic Grassland & scattered *Allocasuarina luehmannii*.
- Derived Native and exotic Grassland with isolated pockets of Hunter Floodplain Red Gum Woodland.
- Derived Native Grassland with isolated pockets of *Allocasuarina luehmannii* and *Eucalyptus crebra*
- Derived Native and Exotic Grassland with isolated pockets of *Eucalyptus mollucana*.
- Derived Native and Exotic Grassland some eucalypt regeneration
- *Eucalyptus camaldulensis*
- Derived Native and Exotic Grassland with pockets of *Eucalyptus crebra*, *Eucalyptus mollucana* Woodland.



Legend

- GDP 1909
- GDP 1904
- GDP 1905
- GDP 1901
- GDP 1902
- GDP 1908
- GDP 1910
- Fauna relocation site
- Project development boundary

Map: PS118424_ENV_001_B1
 Author: suansrir
 Date: 3/24/2020
 Approved by: N.Cooper

1:45,000
 Coordinate system:
 WGS 1984 Web Mercator Auxiliary Sphere
 Scale ratio correct when printed at A4

Source: Bengalla Mine Satellite Orthophoto July 2018

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Bengalla Mining Company

BENGALLA MINE ANNUAL CLEARING REPORT 2019

Figure 3.1
 Ground disturbance permit areas
 subject to pre-clearing in 2019

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3.1.2 HABITAT, HOLLOW-BEARING AND SIGNIFICANT TREES

A total of 23 hollow-bearing/ habitat trees were identified within GDP areas subject to pre-clearing surveys.

3.1.3 SPECIES INVENTORY

3.1.3.1 FLORA

A total of 47 flora species were recorded in 2019 during pre-clearing surveys. Of these, 21 were introduced species (Appendix A).

3.1.3.2 FAUNA

A total of 41 fauna species were recorded in 2019 during pre-clearing surveys. Of these, four were introduced species (Appendix B). The Grey-crowned Babbler, which is listed as Vulnerable under the BC Act, was also recorded during pre-clearing surveys.

3.1.4 CYMBIDIUM CANALICULATUM SURVEYS

No *Cymbidium canaliculatum* were identified during pre-clearing surveys in 2019.

3.1.5 PHYTOPHTHORA CINNAMOMI SURVEYS

No evidence of disease or plant die-back was identified within GDP areas subject to pre-clearing surveys in 2019.

3.1.6 COLLECTION OF SEEDS FOR REHABILITATION PURPOSES

During pre-clearing surveys throughout 2019, no seed was identified within survey areas to be collected for use in rehabilitation. The lack of seed may be possibly due to dry conditions throughout the majority of 2019. Due to the lack of seeding from native flora species, no seed collection was conducted.

3.1.7 WEED SPECIES

Table 3.2 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>Olea europaea</i> subsp. <i>cuspidata</i> (African Olive)	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>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

3.1.8 SALVAGEABLE MATERIAL

A total of nine habitat trees were felled during Stage 2 tree clearing operations, of which one was identified as potentially suitable for salvage. In addition, 20 lineal metres of hollow ground logs were identified for salvage in 2019.

3.2 STAGE 1 AND STAGE 2 CLEARING

The GDP areas cleared in full or in part in 2019 are summarised in Table 3.3 and illustrated on Figure 3.2. 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 over several periods in 2019, with a total of nine habitat trees felled.

Table 3.3 Stage 2 clearing completed in 2019

GROUND DISTURBANCE PERMIT AREA (GDP)	DATE STAGE 2 CLEARANCE UNDERTAKEN	VEGETATION COMMUNITY
GDP 1901	5/4/2019 & 15/4/2019	Derived Native and Exotic Grassland & scattered <i>Allocasuarina luehmannii</i> . Derived Native and Exotic Grassland with isolated pockets of <i>Eucalyptus mollucana</i> Woodland.
GDP 1902	5/4/2019	Derived Native and Exotic Grassland with isolated pockets of Hunter Floodplain Red Gum Woodland.

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.

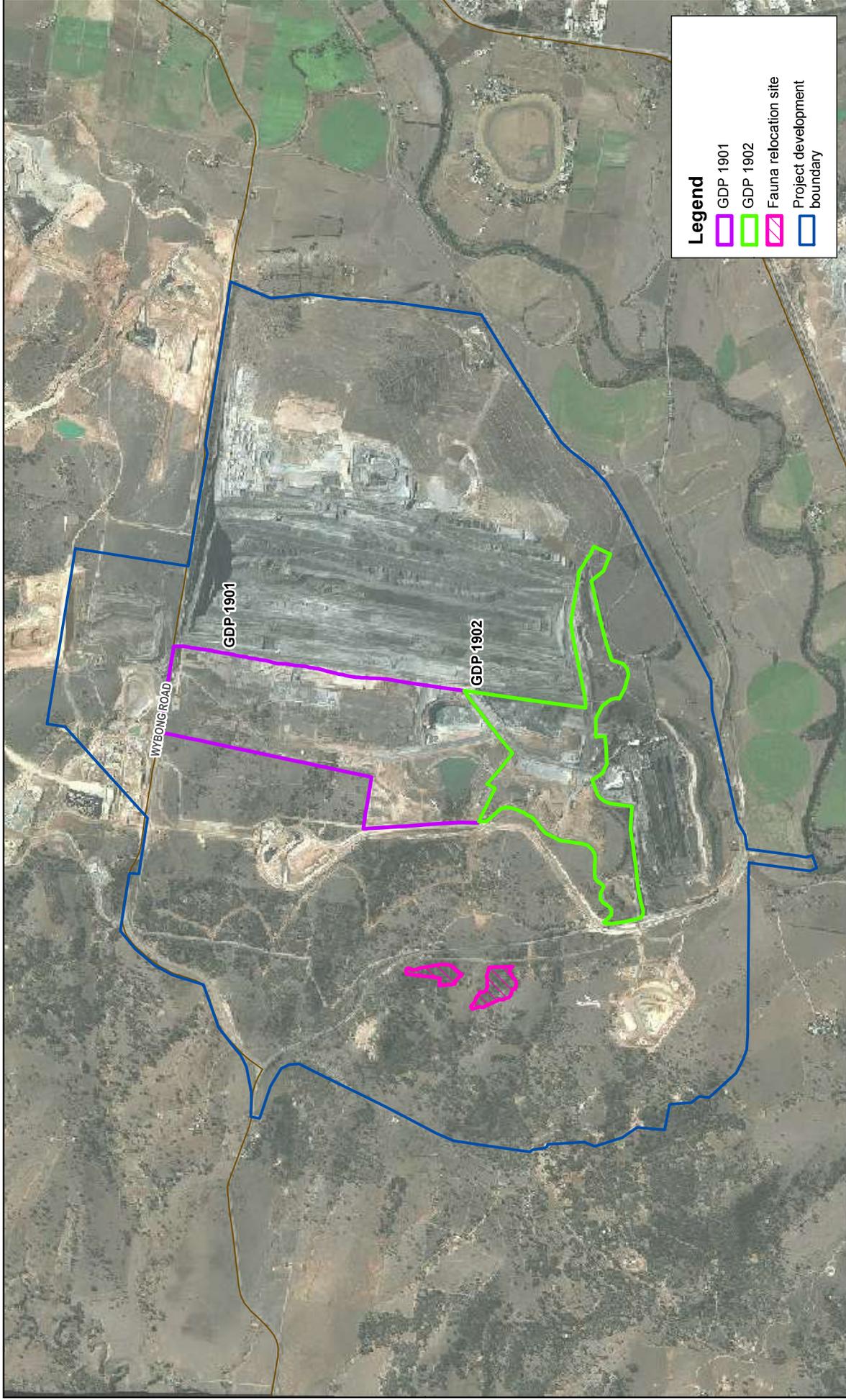
Immediately following the felling of each habitat tree, the supervising ecologist inspected the trees for remaining fauna. Tree hollows were inspected using a hand-held torch. Felled habitat trees were left undisturbed over night to allow any undetected fauna further opportunity to relocate. The habitat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



Photo 3.1 Stage 2 – clearing – GDP 1901



Photo 3.2 Stage 2 – clearing – post felling



Map: PST18424_ENV_002_A1	Author: SunserR		
Date: 10/02/2020	Approved by: N.Cooper		
<p>Source: Bengalla Mine Satellite Imagery: July 2018</p> <p>© WSP Australia Pty Ltd (WSP). Copyright in the drawings, information and data recorded in this information is the property of WSP. This document and the information are supplied to you under license only. WSP makes no representation, warranty or acceptance for responsibility for any use of this information for any purpose other than that which it was supplied for. WSP makes no representation, warranty or acceptance for responsibility for any use of this information for any purpose other than that which it was supplied for. WSP makes no representation, warranty or acceptance for responsibility for any use of this information for any purpose other than that which it was supplied for.</p> <p>Coordinate system: WGS 1984 Web Mercator Auxiliary Sphere Scale ratio correct when printed at A4</p>			

BENGALLA MINE ANNUAL CLEARING REPORT 2019

Figure 3.2
Ground disturbance permit areas cleared in 2019

 Bengalla Mining Company

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3.2.1 FAUNA RECORDED AND RELOCATED

Fauna were handled in accordance with the Animal Research Authority Code of Practice. Details on fauna encountered during 2019 clearing activities are outlined below and are presented in Appendix B. A total of 41 species of fauna were observed whilst onsite at Bengalla. Of these 41 species, only two skinks were recorded using habitat trees to be removed/impacted within the GDP areas (Table 3.4). The remaining species observed within the GDP areas were birds. During the 2019 clearing operations:

- no animals required relocation
- no animals were killed
- no animals were euthanised
- no animals required veterinarian treatment or rehabilitation.

Table 3.4 Fauna recorded during Stage 2 clearing operations in 2019

GUILD	NUMBER OF INDIVIDUALS RECORDED				
	Relocated	Observed	Injured	Dead/Euthanised	Taken to Wildlife carer
Reptiles	0	2	0	0	0
Microchiropteran bats / mammals	0	0	0	0	0
Amphibians	0	0	0	0	0
Birds	0	21	0	0	0
Total	0	23	0	0	0

3.2.2 SALVAGE OF HABITAT RESOURCES

Pre-clearing surveys and clearing operations identified one tree and 20 lineal metres of hollow ground logs as potentially suitable for salvage and reuse in rehabilitation works. Salvaged habitat items have been stockpiled, with the intention to relocate within rehabilitation areas as work progresses.

4 CONCLUSION

This report documents the pre-clearing and clearing activities completed at Bengalla Mine in 2019. In 2019, pre-clearing and clearing surveys at Bengalla were undertaken by appropriately qualified WSP ecologists to allow for the safe removal and relocation of native flora and fauna, where practicable.

During Stage 2 clearing operations, no animals required relocation, were killed or euthanised, or required veterinarian treatment or rehabilitation. However, two reptiles were observed using habitat trees but evaded capture.

A total of 23 hollow-bearing/ habitat trees were identified within GDP areas, nine of which were felled in 2019. In total, one hollow-bearing/ habitat tree and 20 lineal metres of hollow ground logs were identified as potentially suitable for salvage and have been stockpiled, with the intention to relocate within rehabilitation areas as work progresses.

Clearing activities undertaken throughout 2020 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 05/12/2017 and agreement with the Client dated 13/01/2020 (*Agreement*).

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APPENDIX A

RECORDED FLORA



Table A.1 Recorded flora

SCIENTIFIC NAME	COMMON NAME	INTRODUCED	EPBC ACT ¹	BC ACT ²
<i>Acacia sp.</i>	Wattle			
<i>Allocasuarina luehmannii</i>	Bullock			
<i>Angophora floribunda</i>	Rough-barked Apple			
<i>Austrodanthonia caespitosa</i>	Wallaby Grass			
<i>Bidens pilosa</i>	Cobblers Pegs	*		
<i>Brachychiton populneus</i>	Kurrajong			
<i>Bursaria spinosa</i>	Blackthorn			
<i>Carthamus lanatus</i>	Saffron Thistle	*		
<i>Cheilanthes distans</i>	Bristly Cloak Fern			
<i>Chloris gayana</i>	Rhodes Grass	*		
<i>Chrysocephalum apiculatum</i>	Golden Buttons			
<i>Conyza sp.</i>	Fleabane	*		
<i>Cymbopogon refractus</i>	Barbed-wire Grass			
<i>Cynodon sp.</i>	Couch	*		
<i>Dichondra repens</i>	Kidney Weed			
<i>Digitaria sp.</i>	-			
<i>Eragrostis curvula</i>	African Lovegrass	*		
<i>Eucalyptus camaldulensis</i>	River Red-Gum			
<i>Eucalyptus crebra</i>	Narrow-leaved Ironbark			
<i>Eucalyptus moluccana</i>	Grey Box			
<i>Eucalyptus tereticornis</i>	Forest Red Gum			
<i>Glycine sp.</i>	-			
<i>Gomphocarpus fruticosus</i>	Balloon Cotton	*		
<i>Hypochoeris radicata</i>	Catsear	*		
<i>Lomandra sp.</i>	-			
<i>Lycium ferocissimum</i>	African Boxthorn	*		
<i>Magenta sp.</i>	Geranium			
<i>Medicago sp.</i>	-			
<i>Melinis repens</i>	Red-natal Grass	*		
<i>Onopordum acanthium</i>	Scotch Thistle	*		
<i>Opuntia stricta</i>	Prickly Pear	*		
<i>Panicum sp.</i>	Panic Grass			

SCIENTIFIC NAME	COMMON NAME	INTRODUCED	EPBC ACT ¹	BC ACT ²
<i>Paspalum sp.</i>	Paspalum	*		
<i>Plantago sp.</i>	Plantain	*		
<i>Ricinus communis</i>	Castor Oil	*		
<i>Rumex sp.</i>	-	*		
<i>Salsola australis</i>	Soft Roly-poly			
<i>Schinus sp.</i>	Peppercorn			
<i>Sclerolaena birchii</i>	Galvanised Burr			
<i>Senecio madagascariensis</i>	Fireweed	*		
<i>Sida rhombifolia</i>	Paddys Lucerne	*		
<i>Sisymbrium officinale</i>	Mustard Weed	*		
<i>Solanum sp.</i>	-			
<i>Taraxacum officinale</i>	Common Dandelion	*		
<i>Themeda triandra</i>	Kangaroo Grass			
<i>Verbena rigida</i>		*		
<i>Wahlenbergia sp.</i>	Blue Bells			

(1) *Environment Protection and Biodiversity Conservation Act*

(2) *Biodiversity Conservation Act 2016.*

APPENDIX B

RECORDED FAUNA



Table B.1 Recorded fauna

SCIENTIFIC NAME	COMMON NAME	INTRODUCED	EPBC ACT ¹	BC ACT ²
Amphibians (1)				
<i>Limnodynastes tasmaniensis</i>	Spotted Marsh Frog			
Birds (33)				
<i>Acanthiza chrysorrhoa</i>	Yellow-rumped Thornbill			
<i>Acridotheres tristis</i>	Common Myna	*		
<i>Aquila audax</i>	Wedge-tailed Eagle			
<i>Corcorax melanorhamphos</i>	White-winged Chough			
<i>Cormobates leucophaeus</i>	White-throated Treecreeper			
<i>Corvus coronoides</i>	Australian Raven			
<i>Cracticus tibicen</i>	Australian Magpie			
<i>Cracticus nigrogularis</i>	Pied Butcherbird			
<i>Dicaeum hirundinaceum</i>	Mistletoebird			
<i>Egretta novaehollandiae</i>	White-faced Heron			
<i>Elanus axillaris</i>	Black-shouldered Kite			
<i>Eolophus roseicapilla</i>	Galah			
<i>Falco berigora</i>	Brown Falcon			
<i>Grallina cyanoleuca</i>	Magpie Lark			
<i>Hirundo neoxena</i>	Welcome Swallow			
<i>Malurus cyaneus</i>	Superb Fairywren			
<i>Manorina melanocephala</i>	Noisy Miner			
<i>Ocyphaps lophotes</i>	Crested Pigeon			
<i>Pardalotus punctatus</i>	Spotted Pardalote			
<i>Pardalotus striatus</i>	Striated Pardalote			
<i>Pelecanus conspicillatus</i>	Australian Pelican			
<i>Petrochelidon ariel</i>	Fairy Martin			
<i>Philemon corniculatus</i>	Noisy Friarbird			
<i>Platycercus eximius</i>	Eastern Rosella			
<i>Pomatostomus temporalis temporalis</i>	Grey-crowned babbler			V
<i>Psephotus haematonotus</i>	Red-rumped Parrot			
<i>Rhipidura leucophrys</i>	Willie Wagtail			
<i>Sturnus vulgaris</i>	Common Starling	*		
<i>Streptopelia chinensis</i>	Spotted Dove			

SCIENTIFIC NAME	COMMON NAME	INTRODUCED	EPBC ACT ¹	BC ACT ²
<i>Taeniopygia bichenovii</i>	Doubled-barred Finch			
<i>Taeniopygia guttata</i>	Zebra Finch			
<i>Threskiornis spinicollis</i>	Straw-necked Ibis			
<i>Vanellus miles</i>	Masked Lapwing			
Mammals (6)				
<i>Macropus giganteus</i>	Eastern-grey Kangaroo			
<i>Macropus robustus</i>	Common Wallaroo			
<i>Macropus rufogriseus</i>	Red-necked Wallaby			
<i>Oryctolagus cuniculus</i>	Rabbit	*		
<i>Vulpes vulpes</i>	Fox	*		
<i>Wallabia bicolor</i>	Swamp Wallaby			
Reptiles (1)				
<i>Cryptoblepharus virgatus</i>	Wall Skink			

(1) *Environment Protection and Biodiversity Conservation Act*

(2) *Biodiversity Conservation Act 2016.*

APPENDIX C

SCIENTIFIC LICENCES





SCIENTIFIC LICENCE

Biodiversity Conservation Act 2016

Name and postal address of principal licensee

Nominated premises (where appropriate)

Mr Alex Cockerill
Parsons Brinckerhoff
Se 1 L 3 51-55 Bolton St
NEWCASTLE NSW 2300

Your licence number is: SL100630

This licence is valid from: 01 February 2019

This licence will expire on: 31 May 2020

Additional authorisations:

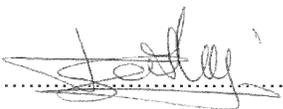
Project Title: General flora and fauna surveys for environmental impact assessments

This class of biodiversity conservation licence granted under Part 2 of the *Biodiversity Conservation Act 2016* authorises the following activities: Pick protected plants for identification purposes; Harm, trap, release protected animals.

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.

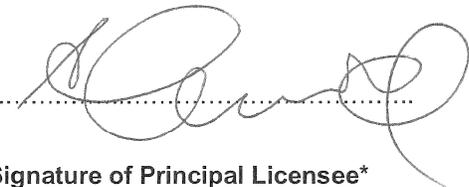
This licence also authorises the principal licensee to conduct research on National Park estate under clause 23 of the *National Parks and Wildlife Regulation 2009* (NPW Reg), where this forms part of a project approved by a delegated officer of the Office of Environment and Heritage (OEH).

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 and Environment or a 'delegated officer' of OEH ("delegated officer") and the OEH "Scientific Licensing Policy".



Signature of Delegated Officer

Date: 03 June 2019



Signature of Principal Licensee*

Date: 3/6/2019

* 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.

LICENCE CONDITIONS

Specific

- a) Work on NPWS estate may only be conducted under a NPWS contract or with the prior written consent of the relevant area manager.
- b) The licensee must comply with any restrictions or conditions imposed by the NPWS local area office.
- c) Animals are to be managed in accordance with a current Animal Care and Ethics Committee approval and released at the point of capture.
- d) The NPWS Frog hygiene protocol is to be followed when working in habitat likely to contain frogs.
- e) Clean, sharp secateurs are to be used to sample plants.

General

1. Only the person/s named on the licence, or authorised to operate under the terms and conditions of the licence, may undertake the work. This licence is not transferable except with written confirmation from the Wildlife Team ("WT").
2. The principal licensee may vary the associated parties authorised during the term of the licence only by maintaining a signed and dated register of the associates. A copy of the register must be provided to the WT at renewal or on request by an authorised officer.
3. The licensee must carry this licence at all times whilst work is being undertaken in the field. Where multiple parties are listed, photocopies will suffice provided some other proof of identity can be provided e.g. Driver's licence.
4. The licensee must provide other parties authorised to conduct the specified activities with a copy of this licence.
5. The licensee must obtain the permission of the owner, manager or occupier of lands upon which research is conducted (for persons working on NPWS lands see also conditions 18-20).
6. Specimens or samples taken under this licence must not be sold, bartered, given, lent or promised to others without the prior written approval of the Environment Agency Head or delegate.
7. Collections or research shall, as far as is possible, be carried out away from the view of the public.
8. The licensee shall indemnify and keep indemnified, so far as the law allows, Her Majesty Queen Elizabeth II, the Minister administering the *Biodiversity Conservation Act 2016*, the Government of New South Wales, the Environment Agency Head of the Department of Planning and Environment, and the National Parks and Wildlife Service and its servants, agents or contractors (herein jointly and severally referred to as "OEH"), FROM AND AGAINST all lawful suits, claims, demands, proceedings, costs, (including solicitor - client costs) and expenses of any nature whatsoever which the OEH may suffer or incur in connection with loss of life, personal injury or damage to property from an occurrence in connection with any land, premises, vehicle or other mode of conveyance or other item under the care, control or management of the OEH, and arising either directly or indirectly from any negligent or wrongful act or omission of the licensee in the course of an operation or activities pursuant to the licence or otherwise.

Reporting requirements

9. The licensee undertaking survey, research or other biodiversity assessment works must provide a full report of the work carried out under this licence online via Bionet using the most recent version of the Atlas data sheet available at www.environment.nsw.gov.au/resources/atlas/AtlasDatashet.xls.
10. The licensee must ensure that all coordinates provided as part of the data submitted to OEH include a measurement of the accuracy of those coordinates. Coordinate accuracy should not be greater than zero but no greater than **100m**.
11. The licensee must submit reports online using a secure login acquired from OEH Biodiversity Information Systems. Contact bionet@environment.nsw.gov.au for account details and guidelines.
12. Licensees undertaking work that cannot be supplied in the above format must provide a report to the OEH specifying:
 - a. Title of the project
 - b. A precise description of the locality including geographic coordinates where practical
 - c. Results of the project
13. The licensee may also be required to complete a metadata proforma for works on NPWS estate.
14. Licensees undertaking permanent/semi-permanent marking, banding or tagging must provide marking details (e.g. tag number, date, location, species) to BWT with any renewal application.
15. The licensee must provide a copy of any final report and/or any scientific papers relating to this work to the Environment Agency Head (marked "attention Wildlife Team") when the study is completed.

Additional reporting requirements for consultants

16. Licences granted to consultants and consulting companies for survey and assessment purposes are required to provide a list of the sites where work was conducted and a list of the reports produced. A copy of these reports may be requested.
17. Reports in accordance with licence conditions 9. to 16. must be provided annually, from the "valid from" date of the licence.

Projects undertaken on NPWS managed land

18. The licensee may only undertake works in NPWS managed lands with the prior written approval of the relevant Area Manager and comply with any imposed restrictions or conditions.
19. The licensee must maintain regular contact with the NPWS Area office throughout the project as park management activities and other events may affect access to research locations. Access to reserves may be restricted during management activities or while the reserve is closed for other reasons.
20. The licensee must only use vehicles on public roads unless otherwise approved by an authorised officer.

It is an offence under the *Biodiversity Conservation Act 2016* to breach any of the conditions of this licence, issue any false receipt, make a false entry in any record, or otherwise keep a false record or provide false or misleading records or information.

Records, notifications and inquiries should be directed to:

Wildlife Team
Office of Environment and Heritage
PO Box 1967
Hurstville NSW 1481

Phone: 02 9585 6406
Fax: 02 9585 6401
Email: scientific.licensing@environment.nsw.gov.au

Additional Information for licence holders

It is the licence holder's responsibility to ensure they are familiar with any other relevant statutory or regulatory provisions relevant to this licence such as the ***National Parks and Wildlife Regulation 2009***, particularly with respect to activities undertaken on NPWS managed lands, the ***Firearms Act 1999***, any local council, building and health requirements and codes of practice under the ***Prevention of Cruelty to Animals Act 1979***, as well as specific requirements under the ***Animal Research Act 1985***. On the expiration of your permit the onus is on you to renew. While OEH forwards renewal notices to permit holders, it will not be responsible for the non-receipt of such a notice.

It is the licensee's responsibility to inform themselves of any likely hazards and ensure that appropriate risk management and emergency procedures are developed and in place for works undertaken on NPWS managed lands. The risk management and emergency procedures will also extend to cover OEH staff and any other third parties which may be impacted by the licensee's works. OEH accepts no responsibility for any event which results in the licensee suffering any loss. The licensee will be held liable for any damages resulting from their works which have impacted on OEH staff or any other third party.

Attachment A

Other parties

In addition to the principal licensee identified above, the following parties are also authorised under this licence:

Title	Name
Ms	Tanya Bangel
Mr	Nathan Cooper
Ms	Selga Harrington
Mr	Robert Harrison
Mr	Troy Jennings
Mr	Steve Lyngoln
Mr	Nicholas McCaffrey
Mr	Justin Pegg
Mr	Allan Richardson
Ms	Lauren Smith
Mr	Mark Stables
Ms	Zoe Steven
Ms	Jessica Wait
Ms	Clementine Watson
Mr	Sam Wilson
Ms	Julia Wyllie



NSW National Parks & Wildlife Service
Office of Environment & Heritage

Attachment B

Licence Class

Class Name	Class Start Date
Ecological survey/consultancy	30/01/2012

Focus of work

This project authorises the licensee to Harm, Pick, collect or otherwise interact with the following species, communities or materials as described on this licence in the listed quantities:

Species Type	Family	Genus	Species	Species Code	Common Name	Target Parts	Units	Qty
FA	ALL FAUNA				ALL FAUNA	Individuals	Sites	
FL	ALL FLORA				ALL FLORA	Individuals	Sites	



**NSW National Parks
& Wildlife Service**
Office of Environment & Heritage

Attachment C

Project location

This project is authorised in the following areas:

NPWS Estate

Tenure Type	Branch	Region	Area	Park
NPWS Estate				All NPWS estate under NPWS contract or with Area Manager approval.

Other

Tenure Type	State Forests	LLS Region	LGA	Lot Sec DP	Other Location
Other					All non-NPWS estate with land manager approval.



NSW National Parks & Wildlife Service
Office of Environment & Heritage

ANIMAL RESEARCH AUTHORITY

Issued by

**THE SECRETARY
NSW DEPARTMENT OF PLANNING, INDUSTRY &
ENVIRONMENT**

**Principal Investigator: Mr Alex Cockerill
Principal Ecologist
WSP Australia Pty Ltd
PO Box 1162
NEWCASTLE NSW 2300**

Associate Investigators:

Mr Nathan Cooper	Ms Selga Harrington	Mr Mark Stables
Mr Troy Jennings	Mr Allan Richardson	Ms Tanya Bangel
Mr Rob Harrison	Ms Julia Wylie	Ms Clementine Watson
	Mr Paul Shelley	Mr Gavin Shelley
	Mr Sam Wilson	

are authorised to conduct the following research

GENERAL FAUNA SURVEYS ASSOCIATED WITH ENVIRONMENTAL IMPACT ASSESSMENT

Being fauna survey for environmental impact assessments

Location: Various locations throughout New South Wales

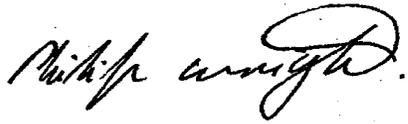
As approved by and in accordance with the
**ANIMAL CARE AND ETHICS COMMITTEE OF
THE SECRETARY NSW DEPARTMENT OF PLANNING, INDUSTRY & ENVIRONMENT**

Being animal research carried out in accordance with the Code of Practice, for a recognised research purpose and in connection with animals (other than exempt animals) that have been obtained from the holder of an animal suppliers licence.

Approved with the following conditions:-

- 1 The Secretary's Animal Care and Ethics Committee is to be informed of the specific location of each study and the procedures to be undertaken prior to work being commenced;
- 2 The Secretary's Animal Care and Ethics Committee must be notified if toe clipping is undertaken, include species and number of animals;
- 3 Traps must be cleared within two hours of sunrise;
- 4 The number of nights trapping is limited to four consecutive nights at any one site.

This authority remains in force from **6 June 2019** to **6 June 2020** unless suspended, cancelled or surrendered



PHILIP WRIGHT
GROUP DIRECTOR SCIENCE, CHIEF SCIENTIST*
CHIEF SCIENTIST BRANCH

19 August 2019

NSW Department of Primary Industries (DPI), an office of NSW Department of Planning, Industry & Environment (DPIE)
*Delegate of the Secretary of the Department of Planning, Industry & Environment (DPIE)