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Dear Jarrod,

**Subject: Modification 5 Bloomfield Colliery Continuation Project (MP07\_0087-Mod-5) – Response to Submissions**

Thank you for your Major Projects Portal request dated 8 September 2025 seeking advice from the Conservation Programs, Heritage & Regulation Group (CPHR) of the NSW Department of Climate Change, Energy, the Environment and Water (DCCEE) on Response to Submissions for the Modification 5 Bloomfield Colliery Continuation Project.

CPHR provided advice on the BDAR on 10 June 2025 (DOC25/311404), some of the key issues highlighted remain unresolved.

CPHR has reviewed the Biodiversity Development Assessment Report (BDAR) (prepared by EcoResolve, dated 25 August 2025) and accompanying documentation and concludes that the current application does not meet the minimum requirements of the Biodiversity Offset Scheme (BOS) and Biodiversity Conservation Act 2016 (BC Act). The key issues with the Modification are as follows:

- the proponent is currently in breach of existing Conditions of Consent i.e. Condition 29A has not been met.
- the BDAR does not meet the requirements of a Modification under the BC Act
- there has been no demonstrated avoidance in the BDAR in accordance with the BAM 2020
- the BDAR document is non-compliant and does not meet the requirements of the BAM 2020 i.e. inadequate surveys and impact assessments etc.

Additional information, including amendments to the BDAR and Biodiversity Assessment Method Calculator (BAM-C) would be required prior to CPHR recommending the proposal proceed.

Detailed comments and recommended actions are provided in **Attachment 1**.

If you have any further questions, please contact the Hunter Central Coast Planning Team at [huntercentralcoast@environment.nsw.gov.au](mailto:huntercentralcoast@environment.nsw.gov.au).

Yours sincerely



Lucas Grenadier

**A/Director Hunter Central Coast**

**Conservation Programs, Heritage & Regulation Group (CPHR)**

7 October 2025

Enclosure: Attachment 1

## Attachment 1 - CPHR Comments on Modification 5 Bloomfield Colliery Continuation Project (MP07\_0087-Mod-5) – Response to Submissions

In preparing this advice CPHR has reviewed the following documents:

- Biodiversity Development Assessment Report Modification 5 (MP07\_0087), EcoResolve, 25 August 2025
- Bloomfield Colliery MOD 5 | Response to submissions, prepared by GHD, 29 August 2025
- Bloomfield Colliery Continuation – Modification 5 | Modification Assessment, prepared by GHD, March 2025.

### Key Assessment Issues

1.	<b>Requirement to satisfy Condition 29A (Biodiversity Offsets) of the consent</b>	<p>Unless evidence can be provided otherwise, the proponent may be in breach of the following development consent condition:</p> <p><i>29A. By 31 December 2011, the Proponent must make suitable arrangements to provide appropriate long-term security for the Biodiversity Offset Area (see Appendix 6) to the satisfaction of the Secretary.</i></p> <p>CPHR have consulted the Biodiversity Conservation Trust (BCT), who have confirmed that the proposed Biodiversity Offset Area has not been established in an appropriate long-term security mechanism.</p> <p><b>Recommended action:</b></p> <p>Make suitable arrangements to provide the appropriate long-term security for the Offset Area in accordance with the Condition 29A.</p> <p>It is recommended the establishment of the Offset Area be undertaken in parallel with the modification application, to ensure compliance with previous approvals and support the current modification application.</p>
	<i>Extent and Timing</i>	Pre-determination

2.	<b>Requirement to satisfy Condition 29B (Biodiversity Offsets) of the consent</b>	<p>Unless evidence can be provided otherwise, the proponent may be in breach of the following development consent condition:</p> <p><i>29B. By 31 December 2011, the Proponent must prepare a Biodiversity Offset Management Plan to the satisfaction of the Secretary</i></p> <p>CPHR has found no record of the required Biodiversity Offset Management Plan (BOMP).</p> <p><b>Recommended action:</b></p> <p>Provide the required BOMP.</p>
	<i>Extent and Timing</i>	Pre-determination

3.	<b>Requirement to satisfy Condition 29C</b>	<p>Unless evidence can be provided otherwise, the proponent may be in breach of the following development consent condition:</p>
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	<b>(Conservation Bond) of the consent</b>	<p>29C. Within 6 months of the approval of the Biodiversity Offset Management Plan, the Applicant must lodge a conservation bond with the Department to ensure that the Biodiversity Offset Strategy is implemented in accordance with the performance and completion criteria of the Biodiversity Offset Management Plan.</p> <p>The BOMP has not been finalised and approved therefore the conservation bond has not lodged.</p> <p><b>Recommended action:</b></p> <p>Submit the BOMP and provide evidence of the associated conservation bond.</p>
	<i>Extent and Timing</i>	Pre-determination

4.	<b>Requirement to satisfy Condition 29D (Biodiversity credits) of the consent</b>	<p>Unless evidence can be provided otherwise, the proponent may be in breach of the following development consent condition:</p> <p>29D. Prior to works commencing for the widening of the haul road and upgrade of the watercourse as described in EA (MOD 4), the Proponent must retire 10 ecosystem credits as listed in the credit profile in Appendix D of EA (MOD 4) in consultation with OEH and in accordance with the Biodiversity Offsets Scheme of the BC Act, to the satisfaction of the BCT and OEH.</p> <p><b>Recommended action:</b></p> <p>Provide evidence that this condition has been met.</p>
	<i>Extent and Timing</i>	Pre-determination

5.	<b>The modification application does not meet the minimum requirements of the BAM 2020</b>	<p>The Biodiversity Development Assessment Report (BDAR) must be prepared following the Biodiversity Assessment Method (BAM) and in accordance with the requirements for modifications (see further information on <a href="#">The Department's website</a> ). To achieve this the BDAR will need to:</p> <ul style="list-style-type: none"> <li>• outline available information about the original impact of the development and consider any measures already taken to avoid, minimise or offset the impact on biodiversity values in connection with the approval before the proposed modification</li> <li>• identify those offset requirements that have been discharged with documentary evidence</li> <li>• assess any new impacts on biodiversity values resulting from the modification of the development in accordance with the BAM</li> <li>• identify offset requirements and any new measures to avoid and minimise impacts in accordance with the BAM.</li> </ul> <p>The BDAR must outline how the offset obligation for the previous impact remains unmet and provide accurate and transparent information to support a proper assessment.</p> <p>The BDAR is also required to clearly describe the original impact, with particular emphasis threatened entities previously recorded and/ or impacted.</p>
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		<p>The establishment of the Biodiversity Offset Site (BSS) and meeting of consent conditions is an important element to support the current application and its proposed impacts. Without this it is unclear how impacts to threatened species particularly those entities at risk of a Serious and Irreversible Impact (SAIL) can be justified and supported.</p> <p><b>Recommended action:</b></p> <ul style="list-style-type: none"> <li>• Update the BDAR to include the minimum information requirements for modifications.</li> <li>• Provide information and evidence to demonstrate the outcomes of existing obligations for conditions 27 – 30</li> <li>• Option 1: Establish a Biodiversity Offset Site to satisfy the offset obligations prior to or in parallel with Mod 5 to support the current application <b>or</b></li> <li>• Option 2: Update the BDAR to clearly detail how the previous offset obligation remains unmet. Provide accurate and complete information to enable a proper assessment of impacts and to support the submission of a valid BDAR. The BDAR will need to detail the previous impacts, including the proposed modification, as the previous impact have not yet been offset and this will support CPHR to make proper assessment of all accumulative impacts.</li> </ul>
	<i>Extent and Timing</i>	Pre-determination

6.	<p><b>Inadequate avoidance and minimisation of Biodiversity issues – BAM (2020) Stage 2</b></p>	<p>The BDAR does not adequately address the avoid, minimise and offset hierarchy (Section 6.3A of the (BC Act)). In particular the BDAR does not adequately avoid significant habitat and threatened entities detected on site ( Stage 2: Impact Assessment of the BAM (2020)). CPHR requests further avoidance of impacts to:</p> <ul style="list-style-type: none"> <li>• Endangered Lower Hunter Spotted Gum Ironbark Forest in the Sydney Basin and NSW North Coast Bioregions (51.69 ha)</li> <li>• identified candidate species</li> <li>• SAIL entities</li> <li>• habitat features such as stags and hollow bearing trees utilised by Masked Owls and Squirrel Gliders</li> <li>• habitat connectivity and biodiversity corridors.</li> </ul> <p>The BDAR does not identify how the significant findings of the Stage 1 BAM Assessment have informed the avoid and minimise strategy and led to impacts to biodiversity being avoided. The BAM identifies 2 key areas of project planning to avoid and minimise direct, indirect and prescribed impacts:</p> <ul style="list-style-type: none"> <li>• proposal location – locating the development away from the highest biodiversity values</li> <li>• proposal design – retaining biodiversity values through design features that limit vegetation clearing or reduce the amount of development within the footprint.</li> </ul> <p>The assessor should document the analysis and evolution of the avoid and minimise options in the BDAR (see Section 3.3 of the manual) to provide transparency and support decision making. The assessor</p>
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		<p>must demonstrate how reasonable avoid and minimise measures have been adopted, including an evaluation of feasible alternatives, spatial identification of areas avoided, and supporting analyses, data, and justifications for the decisions made.</p> <p>The BDAR lacks any substantive analysis or documentation addressing how impacts have been avoided or minimised in accordance with the BAM. This deficiency is of particular concern given the extent of impacts on a threatened ecological community and threatened species habitat.</p> <p><b>Recommended action</b></p> <ul style="list-style-type: none"> <li>• The proponent to adjust footprint in order to adequately demonstrate avoidance particularly of high condition TEC, important habitat features and corridor connectivity</li> <li>• Demonstrate how biodiversity values have been protected and informed design of the proposal.</li> <li>• Updates to the project design, BDAR, BAM-C and spatial package required as appropriate.</li> </ul> <p>CPHR staff would be available to meet to discuss the proposed avoidance footprint. Further avoidance of the high condition TEC and important habitat features should be explored and detailed.</p>
	<i>Extent and Timing</i>	Pre-determination

7.	<b>BDAR not valid in accordance with the BAM and BC Act</b>	<p>The BAM-C biodiversity credit report attached to the V10 BDAR was finalised 17/03/2025 (Appendix D).</p> <p>The BAM-C must be finalised within 14 days of the submission to comply with the certification requirements under the BC Act 2016 to ensure that the assessment is based on data that is current.</p> <p><b>Recommended action</b></p> <p>Revise the BDAR and BAM-C to meet the requirements of the BAM and comply with the certification requirements under the BC Act 2016. The proponent must:</p> <ul style="list-style-type: none"> <li>• submit a certified BDAR within 14 days of the date that the credit report being finalised to be considered valid and attached updated report to revised BDAR.</li> <li>• submit all digital data associated with a BDAR to the decision-maker (see Appendix K BAM 2020).</li> </ul>
	<i>Extent and Timing</i>	Pre-determination

8.	<p><b>PCT determination does not meet the minimum requirements of the BAM 2020</b></p>	<p>The BDAR does not provide adequate justification for the PCT determination or for areas that cannot be assigned to a PCT within the subject site.</p> <p>The PCT determination needs to be supported by evidence-based justification and process needs to be clearly documented with the BDAR, including a short list of other PCTs considered, in accordance with section 4.2 of the BAM.</p> <p>Failure to justify PCT selection with the support of quantitative and qualitative data in the BDAR constitutes a failure to comply with the requirements of the BAM.</p> <p><b>Recommended action:</b></p> <p>Revise the BDAR to detail PCT identification within the subject site and include reference (but not limited) to:</p> <ul style="list-style-type: none"> <li>• Plot survey data</li> <li>• Their process for identifying and refining PCTS, including a shortlist</li> <li>• Quantitative and Qualitative analysis of survey data</li> <li>• Use of PCT identification tools, such as Plot to PCT,</li> <li>• Abiotic and biotic factors that contribute to PCT justification</li> <li>• Alignment of plot data with PCTS in BioNet.</li> <li>• Adequate justification of areas that cannot be assigned a PCT.</li> </ul>
	<i>Extent and Timing</i>	Pre-determination

9.	<p><b>TEC determination does not meet the minimum requirements of the BAM 2020</b></p>	<p>The BDAR does not provide adequate justification of TEC determination. The BDAR states there is 51.69 ha of BC Act listed Endangered Lower Hunter Spotted Gum Ironbark Forest in the Sydney Basin and NSW North Coast Bioregions within the subject site, but further assessment is required.</p> <p>The BDAR should include a comparison of the PCT description, Plot floristics and other site attributes to relevant NSW Threatened Species Committee Final Determinations and relevant Species Profile and Threats Database (SPRAT) profiles for EPBC Act list communities.</p> <p>The BDAR does not provide adequate justification for why the native vegetation does not meet the EPBC Act listing. The BDAR must include evidence-based justification for identifying or not identifying TECs and process needs to be clearly documented with the BDAR.</p> <p><b>Recommended action:</b></p> <p>Revises the BDAR to detail TEC determination within the subject site and include reference (but not limited) to:</p> <ul style="list-style-type: none"> <li>• Identification of TECs including assessment of PCT against the final determinations for BC Act listed communities and relevant SPRAT profiles for EPBC Act listed communities, including adequate justification for why the native vegetation does not meet the EPBC Act listing.</li> </ul>
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		<ul style="list-style-type: none"> <li>Quantitative and qualitative analysis of survey data i.e. discussion of floristics and associated cover to support conclusions</li> </ul>
	<i>Extent and Timing</i>	Pre-determination

10.	<b>The BDAR does not meet the requirements of BAM 2020 (General examples)</b>	<p>The BDAR does not meet the requirements of the BAM 2020 as set out in BAM Operational Manual – Stage 1, for example:</p> <ul style="list-style-type: none"> <li>the BDAR does not include discussion of ancillary or temporary infrastructure</li> <li>the BDAR does not include mapped areas of habitat connectivity on the subject land and assessment area</li> <li>The BDAR does not address important habitat corridors. The removal of approximately 51.69ha of native vegetation within a significant ecological corridor requires discussion and further assessment within the BDAR. This vegetation has been mapped as minor corridor linking priority habitats by Lower Hunter Strategic Assessment (Drielsma et al. 2014). Cessnock LGA has also mapped the vegetation as important for biodiversity moment in their <a href="#">Environmental lands study for Cessnock Local Government Area</a></li> <li>the BDAR does not detail the percent native vegetation cover calculation in accordance with the BAM. The BDAR needs to clearly document this assessment process and provide a map, in accordance with BAM Section 3.2</li> <li>the BDAR does not provide BAM plots shown on a map (relative to vegetation zones) that are labelled to facilitate cross reference with field data</li> <li>the BDAR does not provide photographic records of BAM plots including examples of hollows, leaf litter sub-plots, logs and other attributes. These should be retained as a visual record of vegetation condition</li> <li>the BDAR does not provide a description of habitat constraints and or suitability and it does not provide evidence-based justification for the exclusion of candidate species credit species</li> <li>the BDAR does not provide a description of the field survey methods, it does not provide justification when survey effort differs from what is described in TBDC, and it does not provide justification that best practice methods were used where no guidelines is available for a species.</li> </ul> <p><b>Recommended action:</b></p> <p>Revise the BDAR to meet requirements of the BAM 2020, and include the following:</p> <ul style="list-style-type: none"> <li>maps and information on the location of temporary or ancillary construction facilities</li> <li>map of habitat connectivity assessment within the study area including the consideration of connectivity corridors as</li> </ul>
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		<p>identified by Lower Hunter Strategic Assessment and Cessnock LGA.</p> <ul style="list-style-type: none"> <li>• detail and map of the percent native vegetation cover calculation</li> <li>• Show Plot IDs on a map with mapped vegetation zones</li> <li>• Provide photos of BAM plots etc to meet requirements of the BAM</li> <li>• provide further information regarding habitat constraints and robust justification for the exclusion of candidate species credit species.</li> <li>• provide further information regarding survey methods, including justification of survey method and effort when it differs from what is prescribed in the TBDC for a species.</li> </ul>
	<i>Extent and Timing</i>	Pre-determination

11.	<b>Spatial data supplied does meet the requirements of BAM 2020.</b>	<p>Appendix D of BAM 2020 Operational Manual – Stage 2 – outlines the requirements of the data submission with a BDAR. At this stage there are inconsistencies with the data provided when cross referenced with BDAR, as well the data provided does not meet the minimum digital data requirements as described in Appendix D of BAM 2020 Operational Manual – Stage 2. Examples of this include:</p> <ul style="list-style-type: none"> <li>• the data supplied for artificial cover checks is missing the date of survey and therefore does not meet requirements of the BAM</li> <li>• the data supplied for Anabat deployment locations is missing date of survey and therefore does not meet requirements of the BAM</li> <li>• the data supplied for Spotlighting August 2023 is missing date of survey and therefore does not meet requirements of the BAM</li> <li>• No data supplied for the South-eastern Glossy Black-Cockatoo survey dates as described in the BDAR (Table 6) 16/07/2024 – 15/08/2024).</li> <li>• Camera trap dates in the BDAR (Table 6) are recorded as 6/11/2023 - 20/11/2023, however the supplied spatial data only recorded 8/11/2023 - 20/11/2023. The supplied data does not meet the requirements of the BAM</li> <li>• Funnel trapping dates in BDAR (Table 6) are recorded as 6/11/2024- 10/11/2024, however the supplied spatial data only recorded 6/11/2023- 9/11/2023. The supplied data does not meet the requirements of the BAM.</li> <li>• Diurnal bird survey data from 26/06/2025 has not been supplied</li> <li>• The Hollow bearing tree (HBTs) data that has been spatially supplied does not match what is recorded in Table 10 of the BDAR</li> <li>• Threatened species were recorded within the subject site - provide spatial locations of these recordings in accordance</li> </ul>
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		<p>with the minimum digital data requirements as described in Appendix D of BAM 2020 Operational Manual – Stage 2.</p> <ul style="list-style-type: none"> <li>• Masked Owl species polygon map is missing from BDAR and spatial data was not supplied</li> <li>• CPHR also notes that survey dates for most threatened flora species have changed since our previous comments in April. However, no new surveys have been completed, and the survey dates have just been swapped around for species. CPHR reminds the proponent of the actions available to CPHR to ensure accredited assessors comply with the conditions of their accreditation, including applying the BAM and the Code of conduct for accredited assessors.</li> </ul> <p><b>Recommended action:</b> Revise the BDAR in alignment with Appendix D of BAM 2020 Operational Manual – Stage 2 and ensure spatial data files are updated accordingly and resubmitted to CPHR. The proponent is also required to update BAM-C accordingly and resubmit. The proponent needs to ensure all spatial data files include the minimum attributes for Threatened Flora and Fauna as described Table 7 Appendix D of BAM 2020 Operational Manual – Stage 2. The proponent needs to ensure the data supplied is consistent with what is described in the BDAR and the BAM-C.</p>
	<i>Extent and Timing</i>	Pre-determination

12.	<p><b>Targeted flora and fauna searches have not been completed in accordance with the BAM, Threatened Biodiversity Database Collection (TBDC) and relevant survey guidelines</b></p>	<p>Targeted flora and fauna searches have not been completed in accordance with the BAM, TBDC and relevant guidelines, example include:</p> <p><b>Flora</b></p> <ul style="list-style-type: none"> <li>• More than 5 species surveyed for in single traverse and /or search and multiple stratum were surveyed for in a single traverse. Further information is required to show surveys were conducted in accordance with Section 5 of '<i>Surveying threatened plants and their habitats – NSW survey guide for the Biodiversity Assessment Method</i>'. Multi-species searches are to be restricted to a maximum of five species in the same stratum (i.e. search for five ground species, five mid-layer species or five canopy species) per traverse.</li> <li>• <i>Maundia trigiochinoides</i> and <i>Persicaria elatior</i> are aquatic plants and it is unclear if all suitable habitat was adequately surveyed as these species, as they were included in the Two-phase Grid survey methodology for terrestrial species. The proponent needs to provide evidence that suitable habitat (including waterbodies) within the subject site were surveyed in accordance with the guidelines, <i>Surveying threatened plants and their habitats – NSW survey guide for the Biodiversity Assessment Method</i></li> <li>• <i>Callistemon linearifolius</i> – Table 6 in the BDAR states this species was surveyed in June. The TBDC states survey for this species must take place Oct – Jan. CPHR also notes the BAM-C Habitat survey incorrectly has October selected. Provide justification on why the species was surveyed outside the recommended survey period or undertake surveys for the</li> </ul>
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species as per the TBDC. Alternatively, presence can be assumed or provide an expert report as per Section 5.2 of the BAM.

- *Tetradlea juncea* – Table 6 in the BDAR states this species was surveyed for in November. The TBDC states survey for this species must take place in September and October. CPHR also notes the BAM-C Habitat survey incorrectly has October selected. Provide justification on why the species was surveyed outside the recommended survey period, or undertake surveys for the species as per the TBDC. Alternatively, presence can be assumed, or an expert report provided, as per Section 5.2 of the BAM.
- *Syzygium paniculatum* – Table 6 in the BDAR states this species was surveyed for in October. The TBDC states survey for this species must take place in April-June. CPHR also notes the BAM-C Habitat survey incorrectly has June selected. Provide justification on why the species was surveyed outside the recommended survey period, or undertake surveys for the species as per the TBDC. Alternatively, presence can be assumed or an expert report provided, as per section 5.2 of the BAM.
- A number of candidate flora species require further information regarding targeted flora searches. Reference populations required for the following candidate species:
  - *Acacia bynoeana*
  - *Callistemon linearifolius*
  - *Rutidosis heterogama*
  - *Diuris praecox*

The BDAR does not contain information regarding a reference population being cited to determine flower timing for the three species listed above. Use of a reference population to determine survey timing is a survey requirement of the species as listed Threatened Biodiversity Data Collection (TBDC). Further evidence is required within the BDAR to demonstrate that the species was flowering at the time of survey.

- The survey effort (person hours) described in Table 6 of BDAR does not meet what is provided in Table 3 of the guidelines, *Surveying threatened plants and their habitats – NSW survey guide for the Biodiversity Assessment Method*.

### **Fauna**

- Methodology for Artificial cover checks is not described, and the date of deployment and date of tile checks is missing from the data supplied by the proponent. It is unclear if the artificial covers were in place for a month prior to the first check on 16 October 2023. It appears surveys were conducted for 8 weeks only, when surveys are recommended for 10 weeks. Therefore, this does not meet requirements of the BAM for Striped Legless Lizard
- When the proponent updates the BAM-C, the Striped legless lizard (*Delmar impar*) will now default to the newly described Hunter Valley Delma (*Delma vascolineata*), the BDAR will need to be updated to reflect this.

- Pink-tailed Legless Lizard – the TBDC now states this species requires an expert report, however the survey for this species occurred before this updated advice was provided. In these instances the proponent must justify that best practice methods were used at the time of survey. However, Artificial cover checks were not best practice at the time of survey, and diurnal rock searches were the recommended method described in *Threatened reptiles Biodiversity Assessment Method survey guide*. CPHR recommend proponent either assumes presence or obtains an expert report in accordance with the TBDC.
- Bush Stone-curlew - further information required to demonstrate adequate survey effort has been undertaken across the entire site as per the TBDC guidelines for the species.
- Gang-gang Cockatoo - further information required to demonstrate adequate survey effort has been undertaken across the entire site as per the TBDC guidelines for the species.
- South-eastern glossy black-cockatoo - further information required to demonstrate adequate survey effort has been undertaken across the entire site as per the TBDC guidelines for the species.
- Common Planigale - Incorrect survey method for (i.e. camera trap) was used instead of pitfall for traps. Conduct targeted surveys in accordance with the TBDC, assume presence, or obtain an expert report.
- Green and Golden Bell Frog and Mahony's Toadlet - the spatial data has only been provided for 3 nights (23/01/2024 – 25/01/2024) when 4 replicates of aural-visual surveys are recommended in the guidelines. Spatial data of survey effort and suitable habitat required for review. Further information required to justify surveys for 3 replicates only.
- Green-thighed Frog - it is unclear if Aural-visual surveys were combined with tadpole surveys as recommended in the guidelines.
- In table 6 of the BDAR opportunistic survey method is listed for a number threatened bird species, survey dates and survey effort need to be provided
- Anabat recorded *Nyctophilus* sp. but in the BDAR *Nyctophilus corbeni* has been discounted as occurring in Table 6.

**Recommended action**

The updated BDAR has still not addressed some comments provided by CPHR in April 2025 which are still relevant and are required to be adopted.

Provide adequate justification and evidence to ensure survey for threatened flora and fauna has been completed in accordance with the BAM, TBDC and relevant survey guidelines. Alternatively, presence can be assumed or provide an expert report as per Section 5.2 of the BAM.

Survey effort needs to be described with adequate detail and presented in a concise way, which describes survey dates, survey effort and survey method.

		<p>Currently it is not possible to determine if BAM requirements have been met, or how many species were surveyed simultaneously, whether the species were of the same guild or vegetation stratum. The start and end time and number of survey repeats must be reported to accurately understand the survey effort.</p> <p>Data supplied needs to meet the requirements of the BAM, described in Appendix D of BAM 2020 Operational Manual – Stage 2.</p>
	<i>Extent and Timing</i>	Pre-determination

13.	<p><b>Incomplete habitat searches and assessment for microbat species in the BDAR</b></p> <p><b>General inconsistencies between the BDAR and EIS.</b></p>	<p>Table 5 of the BDAR excludes both Large Bent-winged Bat and Little Bent-winged Bat from further assessment given the absence of the habitat constraints. No habitat assessment or discussion is provided. Table 8 of the BDAR describes inconsistent habitat assessment for Large-eared Pied Bat and Eastern Cave Bat, which share similar habitat constraints. CPHR recommends this be amended.</p> <p>SAIL assessment includes Large Bent-winged Bat but does not include Little Bent-winged Bat on the basis that its habitat constraints are absent from the project area. These two species share the same habitat constraints. Include Little Bent-winged Bat in the SAIL assessment if Large Bent-winged Bat is being assessed. CPHR recommends this be amended.</p> <p>There are inconsistencies with the habitat presence descriptions between the BDAR and EIS, for example:</p> <p>The BDAR states <i>“After extensive field surveys, it was confirmed that there are no caves present nor any open old mine workings or open mine shafts within the subject land and no maternity roosts were identified on site.”</i></p> <p>However the EIS states in Attachment 1 - AoS of Large-eared Pied Bat (Page 152) -</p> <p><i>“...the proposed activity involves mining into historic mine shafts. Disused mine shafts are known to be utilised by the Large-eared Pied Bat for breeding and roosting activities (DCEEW, 2023), therefore, their modification has the potential to impact breeding and roosting habitat.”</i></p> <p>CPHR also notes general inconsistencies between the EIS and BDAR, with the EIS identifying impacts to many additional threatened species not included in the impact assessment of the BDAR. For example, the EIS describes habitat loss for the Regent Honeyeater, Grey-headed Flying-fox, New Holland Mouse, Greater Glider, and Spotted-tailed Quoll.</p> <p><b>Recommended action</b></p> <p>Provide further justification for the exclusion of candidate species credit species based on the absence of habitat constraints.</p> <p>Revise the inconsistencies in Table 8 and the SAIL assessment.</p>
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		<p>Revise the EIS and BDAR to ensure they are consistent. Further clarification is required around whether the subject site has disused mine shafts that could provide potential habitat for microbat species. If yes, the BDAR will need to be revised to further assess impacts to other threatened microbat species that may use this habitat.</p> <p>Provide further assessment to the risk of SAIL for Large Bent-winged Bat and Little Bent-winged Bat if there are mine shafts affected by the proposal which could constitute breeding habitat for these species, in accordance with the requirements of the BAM and relevant species habitat guidelines.</p>
	<i>Extent and Timing</i>	Pre-determination

14.	<b>Inconsistencies between BDAR and BAM-C</b>	<p>The timing of targeted species surveys for a number of candidate species is not correctly entered into the BAM-C.</p> <p>The survey dates within Table 6 of the BDAR do not match those entered Tab 6 of the BAM-C for the following species:</p> <p>Flora</p> <ul style="list-style-type: none"> <li>• <i>Acacia bynoeana</i></li> <li>• <i>Angophora inopina</i></li> <li>• <i>Callistemon linearifolius</i></li> <li>• <i>Eucalyptus parramattensis subsp. Decadens</i></li> <li>• <i>Eucalyptus pumila</i></li> <li>• <i>Grevillea parviflora subsp. parviflora</i></li> <li>• <i>Pomaderris queenslandica</i></li> <li>• <i>Heath Wrinklewort</i></li> <li>• <i>Spyridium burragorang</i></li> <li>• <i>Syzygium paniculatum</i></li> <li>• <i>Tetratheca juncea</i></li> </ul> <p>Fauna</p> <ul style="list-style-type: none"> <li>• Brush-tailed Phascogale</li> <li>• Bush Stone-curlew</li> <li>• Square-tailed Kite</li> </ul> <p><b>Recommended action</b></p> <p>Updates to the BAM-C are required to ensure it reflects when targeted surveys were conducted and adequate spatial data files need to be supplied as evidence.</p>
	<i>Extent and Timing</i>	Pre-determination

15.	<b>Prescribed impacts have not been adequately assessed.</b>	<p>Prescribed additional biodiversity impacts (prescribed impacts) must be assessed as part of the Biodiversity Offset Scheme (BOS), in line with clause 1.6 and 6.1 of the Biodiversity Conservation Regulation 2017 (BC Regulation). Clause 1.4 of the BC Regulation notes habitat connectivity as a prescribed additional biodiversity impact.</p>
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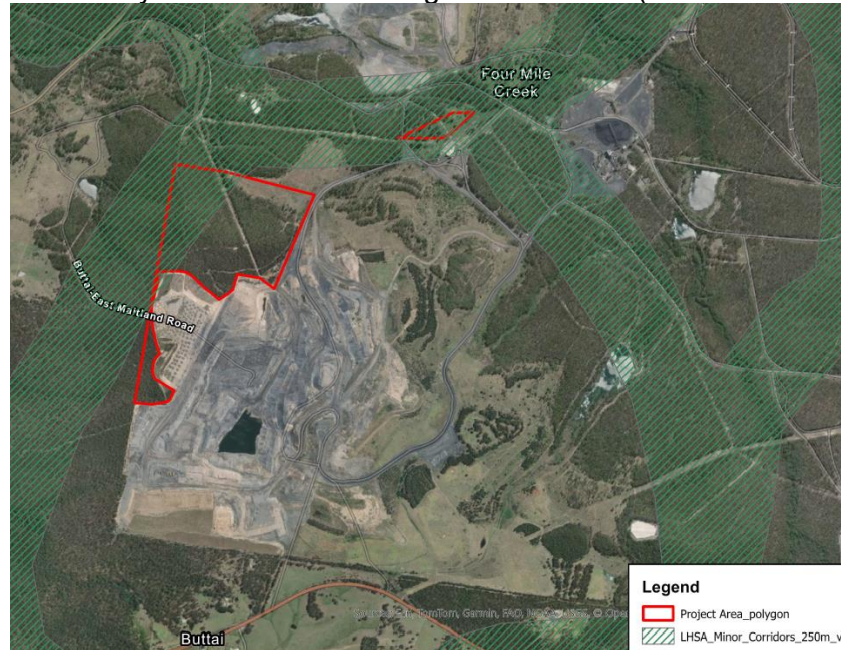
**Inadequate habitat connectivity assessment**

**Potential impacts to the Lower Hunter Koala Population must be considered.**

The BDAR must further consider impacts to connectivity. The BDAR does not adequately assess the role of this connection within the wider landscape.

Table 14 of the BDAR states the proposal will have a negligible impact to Koala habitat connectivity. CPHR deems this assessment inadequate

This vegetation has been mapped as minor corridor linking priority habitats by Lower Hunter Strategic Assessment (Drielsma et al. 2014).



Cessnock LGA has also mapped the vegetation as important for biodiversity in their [Environmental lands study for Cessnock LGA](#).

The subject site is linked to the Watagan Stockton Green Corridor which is ecologically significant for the Lower Hunter Koala Population and forms a connection to the Port Stephens Koala Population to the northeast.

Although the site falls just to the north of the Watagan Stockton Green Corridor, it forms an important sub-regional corridor (Scotts, 2003). Scotts (2003) outlines that the minimum benchmark width for a sub-regional corridor is 300m and that the minimum regional corridor width for Koala is 350m.

Office of the NSW Chief Scientist & Engineer provided [expert advice](#) stating koalas need the average minimum width of 390-425 metres, including a buffer within the corridor.


The proposed action will reduce the existing corridor from 500-800m down to 150m in some locations. CPHR recommends that a corridor of approximately 350m width be maintained at a minimum.

**Recommended action**

Additional assessment of Prescribed Impacts is required, and the habitat connectivity assessment should be revised to include evidence-based justifications for conclusions.

Proponent to adjust footprint in order to consider impacts on habitat connectivity.

		<i>NOTE: CPHR are willing to discuss revised footprint options with the proponent.</i>
	<i>Extent and Timing</i>	Pre-determination

16.	<p><b>Species Polygon for Masked Owl has not been provided for review</b></p> <p><b>Species polygon for Southern Myotis does not meet BAM requirements</b></p>	<p>The species polygon for Masked Owl has been redacted from the BDAR. The map and spatial data need to be supplied to the CPHR to allow for proper review of the BDAR in accordance with the BAM.</p> <p>CPHR notes that the Southern Myotis species polygon in the BDAR appears to not include all potential habitat. Two additional water bodies have been observed during desktop review which have not been included in the species polygon. These look to be associated with Elweels Creek, near the northeast corner of the subject site (image below). Justification needs to be provided to why these waterbodies have not been included in the species polygon.</p>  <p><b>Recommendation:</b> Species polygon map and spatial data for Masked Owl as per the BAM are required to allow for proper review by CPHR. CPHR recommend the proponent revise species polygon for Southern Myotis to include all waterbodies within 200m of the proposed development as per the BAM or provide adequate justification otherwise. The proponent will need to update BDAR and BAM-C accordingly.</p>
	<i>Extent and Timing</i>	Pre-determination

17.	<p><b>Additional mitigation measures should be considered</b></p>	<p>Table 18 of the BDAR provides information on the management measures to implemented to minimise the impacts of the vegetation clearing on fauna.</p> <p>CPHR considers that a number of additional measures should be included to minimise risk of impacts to threatened fauna. These protocols are described below:</p> <ul style="list-style-type: none"> <li>• scheduling the clearing works for a time of year to avoid the breeding seasons of identified potential threatened species and other fauna that may breed on site</li> <li>• comparative habitat assessments should be conducted on clearing sites and proposed release sites to ensure that habitat features are available in the released sites</li> <li>• release sites should be identified and mapped prior to clearing and all appropriate approvals granted by the landholders</li> <li>• tree clearing should not be conducted above 35°C in the interests of animal welfare</li> <li>• communication should occur with rescue agencies and local veterinarians prior to the commencement of clearing to confirm the availability of resources for any captured/injured fauna that is unable to be released</li> <li>• clearing should be conducted sequentially and directionally towards areas of refuge to prevent the creation of vegetation islands</li> <li>• felled trees should be positioned so that hollows are facing upwards and out to allow fauna to escape overnight.</li> <li>• appropriate koala safety fencing should be installed at the project boundary to manage any potential interactions with koalas during clearing activities and operation.</li> </ul> <p>The BDAR should also provide a detailed appraisal of how injured and uninjured animals will be treated, particularly with respect to relocation to nearby habitat.</p> <p><b>Recommendation:</b> Additional mitigation measures should be considered and detailed in the BDAR.</p>
	<i>Extent and Timing</i>	Pre-determination

**References:**

DCCEEW, 2014, *Environmental lands study for Cessnock LGA, A spatial database for the Cessnock LGA* (<https://www.environment.nsw.gov.au/sites/default/files/environmental-lands-study-for-cessnock-lga-240215.pdf>)

Department of Planning and Environment, 2022, *Fact sheet - New expert advice on koala corridors*, (<https://www.planning.nsw.gov.au/sites/default/files/2023-03/cpcp-new-expert-advice-on-koala-corridors-fact-sheet.pdf>)

Drielsma, Michael, Ferrier, Simon, Howling, Gary, Manion, Glenn, Taylor, Subhashni, and Love, Jamie (2014) *The Biodiversity Forecasting Tool: answering the 'how much', 'what', and 'where' of planning for biodiversity persistence*. *Ecological Modelling*, 274. pp. 80-91.

Scotts, D., 2003, *Key Habitats and Corridors for Forest Fauna: A Landscape Framework for Conservation in North-east New South Wales*, NSW NPWS Occasional Paper 32, NSW National Parks and Wildlife Service, Sydney.