



Your ref: Your email dated 15 January 2025
Our ref: DOC25/45435 - 14

out of scope

Manager – Land Projects
Eden Estates Newcastle

By email: out of scope

Dear out of scope

Pre-lodgement Rezoning Referral - Eden Estates – Multiple lots, land off Newcastle Link Road, NSW

Thank you for your email request dated 15 January 2025 seeking advice from the Conservation Programs, Heritage and Regulation (CPHR) Group of the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) on Eden Estates.

CPHR has reviewed the Biodiversity Certification Assessment Report and provides detailed advice relating to the project in Attachment 1.

If you have any further questions about this issue, please contact our Hunter Central Coast Planning Team at huntercentralcoast@environment.nsw.gov.au.

Yours sincerely,

out of scope

Joe Thompson
**Director Hunter Central Coast
Conservation, Programs, Heritage and Regulation**

14 March 2025

Enclosure: Attachment 1

Attachment 1 - CPHR Comments

Pre-lodgement Rezoning Referral - Eden Estates – Multiple lots, land off Newcastle Link Road, NSW

In preparing this advice CPHR has reviewed the following documents:

- Biodiversity Certification Assessment Report - Planning Proposal, Multiple lots, land off Newcastle Link Road, NSW. AEP, Revision 02, December 2024.

Key Assessment Issues

1.	<i>Further avoidance of high environmental values should be demonstrated</i>	Ministerial Direction 1.1 issued under Section 9.1 of the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act) requires that planning proposals include provisions that facilitate the protection and conservation of environmentally sensitive areas. This direction applies to all relevant planning authorities when preparing a planning proposal. Similarly, the Hunter Regional Plan 2041 requires strategic planning proposals to protect areas of High Environmental Value (HEV). The requirement to avoid and minimise impacts to biodiversity is further re-enforced under the Biodiversity Offset Scheme (BOS) and Biodiversity Assessment Method (BAM) 2020. Areas of HEV within the Eden Estates Structure Plan (the Structure Plan) include key habitat for threatened species. The applicants must show how they will minimise the impacts on the natural environment and how viable habitat corridors will be maintained within the site and connecting to the surrounding landscape. Consideration should be given to achieving outcomes in accordance with Ministerial Direction 1.1, the Hunter Regional Plan 2041 and relevant council policies, plans and strategies. HEV and any other biodiversity values identified should be protected through implementation of avoidance and minimisation measures and appropriate zoning in alignment with Strategies 6.1 to 6.4 of the Hunter Regional Plan (2041). It is recognised that since Conservation Programs, Heritage and Regulation (CPHR) (then BCD) provided its last advice in December 2022, the development area has been reduced by approximately 66 hectares (ha) and that these amendments have led to a reduction in impacts to biodiversity values. However, further avoidance of HEV should be demonstrated for the application specifically in relation to TECs, threatened species, connectivity corridors and impacts on watercourses. To demonstrate an appropriate level of avoidance that reflects the importance of biodiversity values onsite, CPHR recommends further amendments to the Structure Plan as outlined below. Recommended action: The Planning Proposal and Biodiversity Certification Assessment Report (BCAR) should address how the proposed rezoning includes provisions which facilitate the protection and conservation of environmentally sensitive areas. The following is recommended to achieve this:
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		• Amendments to the footprint to further avoid impacts to suitable habitat of <i>Tetratheca juncea</i>. This should include a reduction of impacts to known individuals including a 30 metre (m) buffer as specified in Section 5.2.5 of the BAM. Removal of 53.7% of suitable habitat for the species does not satisfy the requirement to avoid impacts to HEV. • Amendments to the footprint to further avoid impacts to <i>Callistemon linearifolius</i>. This should include a reduction of impacts to suitable habitat and known individuals including a 30m buffer. It is currently proposed to impact 936 individuals which amounts to 18.2% of the onsite population. Along with this, the remaining 81.8% of the population would be retained in one small, isolated patch. This does not satisfy the requirement to avoid impacts to HEV. The footprint should be amended to reduce the number of individuals impacted and provide the remaining population with a patch that is suitably connected to the wider landscape and allow for a more sustainable and improved conservation outcome for the species. • Additional information is required to demonstrate further avoidance of impacts to the three pairs of Powerful Owls. Impacts are to be assessed within the context of the Lake Macquarie Large Forest Owl Planning and Management Guidelines (2014). The current footprint along with the cumulative impacts of development in the immediate vicinity of the site is likely to significantly reduce the ability of the three pairs to persist on site through the removal of breeding habitat, foraging habitat and prey species. To reduce impacts and in accordance with the Threatened Biodiversity Data Collection (TBDC), a 200-metre buffer of native vegetation should be established around the known nesting sites. The C2 zoned portion of residential development to the north-east of Transfield Avenue, would lead to the nearby Powerful Owl nest being surrounded by residential development. The footprint should be amended to reducing impacts to Powerful Owl breeding habitat, reduce disturbance and loss of connectivity to the nest tree. This will allow for a more sustainable and improved conservation outcome with a greater probability that the Powerful Owls may persist in this area. • The proposal intends to remove a significant number of hollow bearing trees, which are a critical feature within the landscape. Further amendments to the footprint should aim to retain a larger number of hollows to maintain the biodiversity value of the site. • Further consideration and avoidance of impacts to all Threatened Ecological Communities (TECs) located on site. Currently within the BCAR, impacts are only recognised as occurring to PCT 1592 being commensurate with the <i>Biodiversity and Conservation Act 2016</i> (BC Act) listed <i>Lower Hunter Spotted Gum – Ironbark Forest</i> (Endangered Ecological Community (EEC)). Removal of 24.7% of this EEC does not satisfy the requirement to avoid impacts to HEV. • An assessment as to how the squirrel glider populations will remain viable should be provided. Lake Macquarie's squirrel glider Planning and Management Guidelines 2015 should be considered in the assessment. The removal of 222 ha of suitable breeding and foraging habitat for Squirrel Glider amounting to 39.8% of the
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		onsite habitat does not satisfy the requirement to avoid impacts to HEV. Additional information is also required to address mitigation measures, such as corridors and road crossing treatments, etc. • The BCAR refers to consideration of local and regional corridors. CPHR requires clarification as to which corridors are being considered. Maps should be included within the BCAR showing how species will move through the landscape with reference to mapped local (Newcastle and Lake Macquarie City Council) and regional corridors. Justification for the location, width and length of corridors should be provided and be informed relevant literature and guidelines. • The disturbance footprint should be amended to adequately avoid the required Vegetated Riparian Zones (VRZs) and to establish riparian corridors in accordance with the BAM 2020 and <i>Water Management Act 2000</i> (WM Act). • As well as the above, further survey effort is required for a number of species (detailed in the following sections), the outcomes of which will be required to determine if adequate avoidance has been achieved. Requirements for further survey are outlined in the following sections.
	<i>Timing</i>	To support Planning Proposal

2.	<i>Further information is required to assess avoided land</i>	CPHR seeks clarification relating to the categorisation of lands within the site to assess if the avoid and minimise provisions of the BC Act have been applied correctly. The BCAR states throughout that the majority of retained lands will be managed under a Biodiversity Stewardship Agreement (BSA). The avoidance of the “retained lands” is the central component within the BCAR to demonstrate the avoidance minimise provisions of the BC Act. However, to achieve avoidance, it must be demonstrated on developable land. C2 zoned land and riparian buffers may not be defined as avoided land. A distinction should be made within the BCAR and all calculations therein, between avoided (as defined by the BAM 2020) and retained land. Avoided land should exclude C2 zoned land and riparian buffers. Clarity is also sought about what is meant by “retained land” in the context of avoidance. Land may not be considered as avoided land or used to demonstrate avoidance unless measures are implemented and proposed within the BCAR that seek to maintain the biodiversity values of the avoided land. In accordance with Section 2 of the BAM Operational Manual – Stage 2, “for any of these areas to be considered functionally avoided measures must be implemented and proposed within the BCAR for example, consent conditions, conservation agreements or similar covenants that prevent disturbance and degradation.” Recommended Action: • The BCAR should be amended to correctly define avoided land in accordance with the BAM 2020. The BCAR should clearly define
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		and delineate areas that are to be avoided to meet the requirement of the avoid and minimise provisions. • Further information regarding conservation measures is required to determine what areas of retained land may be considered functionally avoided and which CPHR can be confident that these areas will be protected in perpetuity from disturbance and degradation.
	<i>Timing</i>	To support Planning Proposal

3.	<i>Further information regarding ongoing conservation of land</i>	In December 2022 CPHR requested the following: <i>“BCD requires evidence that the offsets outlined in the BCAR have, at a minimum, in-principle support from the Biodiversity Conservation Trust (BCT) and/or Credit Supply Taskforce and are considered suitable as Biodiversity Stewardship Sites (BSS).</i> <i>On page 112/635 of the BCAR it is stated that “Further conservation measures within the Subject Site were in discussion at time of writing of the BCAR and will be specified upon finalisation of the lodgement process”. Details of all measures will be required prior to finalisation.”</i> <i>The BCAR should outline all proposed conservation measures and evidence of in-principle support from the Biodiversity Conservation Trust or Credit Supply Taskforce for proposed offset areas.”</i> These details have not been included within the BCAR. CPHR again requests that this information is provided and the Biodiversity Stewardship Site Assessment Report (BSSAR) be finalised to inform the BCAR if possible. As a minimum, the planning proposal should include statements from the Biodiversity Conservation Trust (BCT), supporting a BSA and details of its extent. The avoidance of “retained lands” both as a Biodiversity Stewardship Site (BSS) and otherwise, is the central component of the BCAR that demonstrates the avoidance and minimise provisions of the BAM 2020 and the BC Act. Further information is required to understand and assess the adequacy of these measures. CPHR notes that the Local Environmental Plan (LEP) practice note - Environmental Protection Zones, indicates that prior to the application of an environmental zone, the environmental values should be established on the basis of a strategy or an environmental study. Additionally, the planning proposal should include supporting statements from the BCT and the potential owners and managers of these areas to indicate that these stakeholders are supportive of this rezoning and dedication of land. Management plans should be prepared to accompany the land dedications. Once lands to be managed under a BSA have been established, the BCAR and planning proposal should also provide information regarding the ongoing ownership of the BSA site and its long-term management. Along with this, the remaining retained land will need to be managed in perpetuity under a community title arrangement, and
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	some type of conservation covenant like a Voluntary Conservation Agreement and / or, if Councils agrees, dedication. The BCAR outlines a proposal for the ongoing management of urban bushland and parkland, stating that 'Biodiversity Certified lands will be required to accompany subsequent Development Applications (DAs) with relevant Biodiversity or Vegetation Management Plans (BMPs or VMPs)'. CPHR is not supportive of this approach as mechanisms to conserve land should be agreed upon prior to approval. The BCAR needs to clearly distinguish between land to be retained and land to be managed as a BSA, and an Avoided and Conservation Land Biodiversity Management Plan should be provided upfront at BCAR stage. The complex shape of the development area, and the interface between the development and the BSS is likely to be challenging to manage and monitor. Feedback from BCT should be sought and should guide the shape of the footprint to maximise the retention of retained lands in a BSS. Management of retained lands within a BSA will result in better outcomes for biodiversity than separate, disjunct parcels managed under BMPs. Understanding what the BCT will accept as a BSA is therefore integral to finalising and determining the appropriateness of the footprint. Recommended Action: • Further information is required to support the proposed conservation measures as proposed within the BCAR. Assessment of avoidance measures cannot be undertaken until sufficient information is provided to determine what lands may be considered avoided in accordance with the BAM. • CPHR recommends that more practical defined edges are used for the boundaries between the development site and conservation areas so that the interface and edge-effects can be appropriately managed and allow for the greatest extent of retained lands to be placed within the BSS. Feedback from BCT should be utilised to determine the appropriateness of retained areas for the BSS, specifically in relation to areas surrounded by development and largely disconnected from the larger site. CPHR recommends that the proponent liaise with the BCT and that the BSS is finalised in accordance with their expectations. • The applicant should provide evidence of support for the BSS (and the extent of the BSS) and/or how it intends to protect in perpetuity the avoided land, in an amended BCAR. An agreed approach for managing these areas should be established between the Councils and Eden Estates and provided with the BCAR in order to demonstrate security for the management of these areas, including information on the ongoing ownership of the BSS. • Prepare an Avoided and Conservation Land Biodiversity Management Plan for remaining lands. Update the BCAR to contain measures identified in the plan. • Detail of how retained land will need to be managed in perpetuity under a community title arrangement, and some type of conservation covenant like a Voluntary Conservation Agreement and / or, if Councils agrees, dedication.
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		CPHR seeks clarification relating to 'transition' lands. Table 22 of the BCAR identifies the conservation of the transition lands as a mitigation measure for biodiversity loss. Clarity is sought regarding the ongoing management and use of this area.
	<i>Timing</i>	To support Planning Proposal

4.	<i>The application of previous CPHR (then BCD) advice</i>	CPHR provided advice to the proponent in December 2022 (reference DOC22/881802-7). It appears that many of these comments have not been addressed. While a number of these matters have been incorporated into this current advice, the previous advice should be cross referenced to ensure all comments are addressed. Recommended action: The BCAR should be updated to include the information that was previously requested in December 2022.
	<i>Extent and Timing</i>	To support Planning Proposal

5.	<i>Council support has not been obtained</i>	As outlined in the Department's Biodiversity Certification Fact Sheet No. 3, applications without council support are discouraged and certification is unlikely to be conferred if the relevant council(s) do not provide support. CPHR understands that the councils responsible for the application site do not support the application in its current form. Due to the complex nature of biodiversity matters at the site and multiple stakeholders involved, CPHR recommends that recommendations proved by both Newcastle and Lake Macquarie Councils are adopted to gain support. CPHR also recommends that this development is prepared within the context of Lake Macquarie City Council's guidelines including: - Lake Macquarie Grevillea parviflora subsp. parviflora Planning (2013) - Lake Macquarie Squirrel Glider Planning and Management Guidelines (2015) - Lake Macquarie Large Forest Owl Planning and Management Guidelines (2014) - Both Councils DCPs and City of Newcastle's Environment Strategy (2023) and the Newcastle Local Housing Strategy. It should be noted that the role of local government as a decision maker for development applications (also referred to as local development), under Part 4 of the EP&A Act, requires assessment of applications in the context of the Biodiversity Offset Scheme (BOS). However this is not local government's sole consideration. Council's may consider other matters relating to the impact of the proposal on
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		biodiversity values and the environment specifically, to prevent loss of biodiversity at a local level. Recommended action: The issues raised by both councils in the following documents should be adopted to gain support: • Newcastle City Council's Letter (31 January 2024) - Response to Resubmission Package 22/11/2023. ○ CN's previous advice remains to exclude development south of Link Road. The proponent's response does not adequately respond to the Hunter Regional Plan or CN's policies, plans and strategies. ○ It has been identified that several proposed areas of residential urban footprint proposed north of Link Road should also be removed. • Lake Macquarie Council's email dated 19/3/2024 including Attachment 1 Survey and information Summary and Attachment 2 – Examples of watercourse and creek line mapping issues. CN's previous advice remains to exclude development south of Link Road. ○ LMCC has requested that adequate ecological data and supporting information (including additional species surveys) is necessary so that council can be satisfied that the development footprint avoids and minimises impacts on biodiversity, that the current footprint results in a net loss of conservation land with very high ecological significance and is likely to result in decline of threatened species populations south of the link road. • CPHR will review the BCAR comprehensively once it has been revised and both councils have provided their support.
	<i>Extent and Timing</i>	To support Planning Proposal

6.	<i>CPHR requires assessment and information in accordance with BAM 2020, the Department's threatened species guidelines and the Threatened Biodiversity Data Collection (TBDC) - Threatened Flora</i>	CPHR requires assessment and information in accordance with BAM 2020, the Department's threatened species guidelines and the TBDC. The updated BCAR has not addressed comments provided by CPHR in December 2022 which are still relevant and are required to be adopted. Adequate detail, presented in a concise way is required to determine the amount of time spent surveying each threatened species, and which methods were used. Currently it is not possible to determine if BAM requirements have been met such as how many species were surveyed simultaneously, whether the species were of the same guild or vegetation stratum. The date, start and end time and number of survey repeats must be reported to accurately understand the survey effort. It is unclear if the Two-phase Grid-based Systematic Survey has been correctly implemented for all species, as details of what is considered suitable habitat and justification for exclusion of areas has not been provided. This method will only be accepted if the area of suitable habitat exceeds 50 ha within the subject land. If suitable habitat is less
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	than 50 ha stratified parallel transects are required be undertaken. It appears that the Two-phase Grid-based Systematic Survey may have been incorrectly applied to <i>Maundia triglochinosoides</i>, <i>Persicaria elatior</i> and <i>Senna acclinis</i>. Upon review of the shapefiles provided it is unclear why certain survey methods were undertaken in different areas, why some areas were excluded and why finer-scale grid surveys were missed in some areas. The unit of measure for threatened plant species is either area or count (according to the TBDC) and is described in Paragraph 6.4.1.28 and 6.4.1.29 of the BAM. For <i>Callistemon linearifolius</i> (Netted Bottle Brush) and <i>Rhodamnia rubescens</i> (Scrub Turpentine), the unit of measure is count. Where individuals are identified by point locations, each must be buffered by a 30-metre radius. If individuals are spaced less than 30 metres apart, overlapping areas of buffer can be combined to form the boundary of the species polygon. For <i>Grevillea parviflora</i> subsp. <i>parviflora</i> (Small-flower Grevillea) and <i>Tetralthea juncea</i> (Black-eyed Susan), the unit of measures is area. The method and information used to define the area of suitable habitat must be documented with reference given to the points described in Section 5.2.3 of the 'Surveying threatened plants and their habitats: NSW survey guide for the Biodiversity Assessment Method' (Threatened Plants Survey Guide). The polygon for <i>Tetralthea juncea</i> (Black-eyed Susan), does not appear to buffer the record locations. This should be rectified. Comments provided by CPHR in December 2022 are still relevant as the issues contained therein have not be rectified. CPHR requires the <i>Tetralthea juncea</i> (Black-eyed Susan), to be surveyed in accordance with the 50-metre belt method over the entire site, not just within Lake Macquarie City Council. The species should be surveyed within the City of Newcastle part of the site in the same way as in the Lake Macquarie City Council area to be able to understand accurately the cumulative impact of the development. The methodology for creating the threatened flora species polygons, has not been justified in the BCAR. Figure 8 – Figure 11 are also not reflective of the methodology described in the Threatened Plants Survey Guide. The BCAR does not contain information regarding a reference population being sited to determine flower timing for threatened orchids. 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. Recommended action: • Further information is required for exclusion of areas as suitable habitat as per Chapter 5 of the BAM (2020). The BCAR must describe the timing, methods and effort used for a species survey including details of what is considered suitable habitat (area and PCTs) and justification for exclusion of areas. • Any potential suitable habitat not searched requires evidence-based justification to demonstrate why the area does provide
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		suitable habitat for the species. If targeted surveys were not adequately conducted, CPHR recommends conducting further assessment, assuming presence for the species or seeking an expert report. All amendments must be reflected within the BDAR and BAM-C, with updated shapefiles submitted. • Black-eyed Susan (<i>Tetratheca juncea</i>) should be surveyed in accordance with the 50-metre belt method over the entire site, not just within Lake Macquarie local government area. • Amendments to the footprint to further avoidance of impacts to <i>Tetratheca juncea</i> (Black-eyed Susan), assessment should be undertaken in accordance with <i>LMCC Planning and Management Guidelines</i>. • As stated in the recommendations provided by CPHR in 2022, impact to <i>Grevillea parviflora subsp. parviflora</i> (small-leaved grevillea), should be avoided where possible, particularly if this will lead to the extinction of the local population. Justification for not avoiding impacting this species has not been reported in the BCAR. • Evidence should be provided demonstrating that reference populations were in flower at the time of survey for all orchids in accordance with the Threatened Biodiversity Database Survey Guidelines. If this cannot be provided, then further surveys should be undertaken. • Digital data submission should be made in accordance with the BAM Operational Manual Stage 2, Appendix D and is to contain the minimum digital data requirements in accordance with Table 7.
	Timing	To support planning proposal

7.	CPHR requires assessment and information in accordance with BAM 2020, the Department's threatened species guidelines and the Threatened Biodiversity Data Collection (TBDC) - Forest Owls	<u>Survey requirements</u> Threatened species surveys must be conducted as per section 5.3 of the BAM, which requires surveys to comply with the Department's threatened species survey guides and the Threatened Biodiversity Data Collection (TBDC). In accordance with the TBDC, projects using passive acoustic recording for owl survey must provide a draft survey approach via BOS.helpdesk@environment.nsw.gov.au for information and review by the Department. Evidence of correspondence with the BOS helpdesk should be provided in the BCAR. Table 9 of the BCAR does not accurately reflect survey requirements as outlined within the TBDC and lacks the required information to determine if surveys are adequate. For example, the BCAR states that acoustic detection was undertaken for 311 nights in season and 79 nights out of season for the Powerful Owl. This limited information does not allow for survey effort to be verified for its adequacy and alignment with the TBDC requirements. Survey methodology for forest owls detailed in Appendix D – Fauna Survey Methodology and Results Section 2.2.8 of the BCAR describes call playback undertaken. However, this does not align with the methodology outlined in Table 9 which does not include call playback
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	as a survey method undertaken nor does it align with the survey requirements as outlined in the TBDC. Dates of songmeter deployment in Table 5 of the Appendix D – Fauna Survey Methodology and Results do not align with the dates outlined in Appendix C - Songmeter Methodology and Results and the dates the songmeter was deployed does not align with the TBDC requirements. The TBDC states: <i>“The proposed survey period and minimum total survey duration (e.g. “3 months from March to May 2024” or “90 days over 3 disjunct 30 day periods in April, July and October”) and justification for this proposed approach (including details of previous surveys published or otherwise, when owls were detected using the proposed approach)”</i> <u>Updates to Forest Owl</u> The BCAR does not reflect the changes to Large Forest Owls that came into effect in March 2024 and the BAM-C case. In accordance with the changes, a species polygon must be drawn to include all vegetation zones; 1. within 800 m from the location of a detected owl, and 2. containing a living or dead tree with a hollow >20 cm diameter that occurs >4 m above the ground. The species polygon for Powerful Owl is to be amended to reflect the above. Masked Owl is to be included as a Species Credit Species and a species polygon is to be generated for from the location of the detected calls. <u>Masked Owl</u> The BCAR states that “a small number of screeches thought to be that of Masked Owl were recorded on site. Around 9 call sequences were recorded. However, each time the calls were distant and typically only a single screech. Additional placement of songmeters in these areas and physical searches including call playback failed to positively identify the species on site”. 9 calls, the presence of highly suitable habitat and numerous suitable hollow bearing trees gives rise to the notion that these is a high possibility of breeding in the vicinity. Masked owls are notoriously quiet and secretive, cackling tends to be soft and on occasion will not call at all. Further work is required to demonstrate avoidance of impacts to this species. <u>Avoidance of impacts to Forest Owls</u> Assessment of impacts to Forest Owls should encompass the cumulative impacts of habitat loss both within the site and the wider landscape. The BAM avoid, minimise and offset hierarchy is to be applied and avoidance of the majority of trees containing suitable hollows for Forest Owls is highly recommended. If impacts to trees containing suitable hollows is proposed, these should be identified and mapped as should hollows within 200 m of the impact. Surveys should then be undertaken to confidently conclude absence of any breeding activity for Masked Owl within any of the identified hollows i.e. stagwatching.
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		Alternatively, comments provided in December 2022 could be applied: <i>“The presence of three powerful owl nest hollows and a masked owl being heard on ten occasions on the songmeter indicates that there is high value habitat for large forest owls on site. Currently known nest trees of the powerful owls have been buffered from development. However, BCD recommends the use of an owl expert to provide information relating to the use of roost trees and other trees with suitably large hollows in order to ensure there are adequate buffered areas for foraging and connectivity between the different parts of the habitat being utilised. In addition, the report does not mention stag watching at big hollows. An owl expert could be asked to stag watch and / or inspect large hollows as part of their investigation of owl habitat.”</i> Given the highly suitable habitat on site, further justification should be provided to demonstrate how the removal of 310 hollows and large area of breeding habitat from the landscape is acceptable. Assessment of impacts to Forest Owls should encompass the cumulative impacts of habitat loss both within the site and the wider landscape and in accordance with the TBDC. Additionally, an assessment of the importance of the site to the species' survival should include the linkages which the site provides for the species between ecological resources across the broader landscape. Recommended action: • Credits for Masked and Powerful Owl should be generated in accordance with the TBDC and the BCAR and BAM-C should be updated accordingly. • All amendments to species polygons must be reflected within the BCAR and BAM-C, with updated shapefiles submitted. • The date, start and end time and number of survey repeats should be reported to accurately understand the survey effort. • To reduce impacts and in accordance with the TBDC, a 200-metre buffer of native vegetation should be established around the known nesting sites. • Further survey is required to demonstrate avoidance of impacts to Masked Owl i.e. stagwatching. • Impacts should be assessed within the context of the Lake Macquarie Large Forest Owl Planning and Management Guidelines (2014). Additional assessment is required to determine if the three pairs will be able to persist on site through the removal of breeding habitat, foraging habitat and prey species. The current footprint along with the cumulative impacts of development in the immediate vicinity of the site is to be considered. • Inaccuracies/inconsistencies as described above should be amended within the BCAR. • Clarity is sought regarding the location of the photo of the Masked Owl Appendix I Fauna Photographs of the BCAR.
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	<i>Timing</i>	To support Planning Proposal
8.	<i>CPHR requires assessment and information in accordance with BAM 2020, the Department's threatened species guidelines and the Threatened Biodiversity Data Collection (TBDC) - South-eastern Glossy Black-Cockatoo</i>	South-eastern Glossy Black-Cockatoo nest in large hollows in dead and living eucalypt trees. With a typical nest hollow having an entrance diameter of at least 15 cm. The BCAR states hollow-size classes as being XS – XL, however it does not describe the range (cm) in which hollows are categorised. Therefore, the number of hollows potentially suitable for the species cannot accurately be determined. Further information is required to allow assessment and to confidently exclude the presence of breeding behaviours and habitat within the site. In accordance with the TBDC, assessors should look for signs of breeding on site as follows; (a) begging birds of any age or sex; or (b) lone adult males identified during the breeding season (April to August); or (c) an occupied nest. The BCAR states that a total of 21 call sequences from Glossy Black-Cockatoo were recorded within the site, however no information is provided of any analysis to determine if breeding activity is present or details of further surveys to stagwatch suitable hollows to identify an occupied nest. CPHR acknowledges that time spent in the field undertaking other surveys can provide opportunity for incidental observations of threatened species across the site, however this cannot be used in place of appropriate survey effort and best practice methodology. Tables describing surveys effort should be consistent throughout the BCAR and distinction is to be made between incidental surveys and the required survey effort completed in accordance with the TBDC and relevant guidelines. Recommended action: • Further detail is required to describe the methodology of looking for signs of breeding and potential nest trees within the site for the South-eastern Glossy Black Cockatoo. This should include an analysis of call sequences to determine if they include begging birds of any age or sex or lone adult males identified during the breeding season and stagwatching of suitable hollows to confidently conclude utilisation is absent. • The BCAR should demonstrate consistency with Section 5.2 of the BAM by describing the timing, methods and effort used for a species survey including justifying the survey method and effort (e.g. citing peer-reviewed literature) if the approach differs from the Department's taxa-specific survey guides or where no relevant guideline has been published. • Section 1.8.4.1 is to describe the range (cm) in which hollows have been categorised into XS – XL hollow size classes. • If targeted surveys were not adequately conducted, CPHR recommends conducting supplementary survey work, assuming presence for the species or seeking an expert report. • The date, start and end time and number of survey repeats must be reported to accurately understand the survey effort.

		• Tables describing surveys effort are to be consistent throughout the BCAR and distinction is to be made between incidental surveys and the required survey effort undertaken in accordance with the TBDC and relevant guidelines. • Clarity is sought regarding the location of the photo of the South-eastern Glossy Black-Cockatoo Appendix I Fauna Photographs of the BCAR.
	<i>Timing</i>	To support Planning Proposal

9.	<i>CPHR requires assessment and information in accordance with BAM 2020, the Department's threatened species guidelines and the Threatened Biodiversity Data Collection (TBDC) - Raptors</i>	The BCAR states that White-bellied Sea-eagle, Little Eagle and Square-tailed Kite were all recorded on site during surveys. Along with this, the BCAR acknowledges the presence of suitable trees for breeding purposes and the identification of two stick nests recorded within the site. Further information regarding the observations of these species is required to confidently conclude breeding habitat is absent from the site, as is further information about surveys of the stick nests and visits to determine utilisation. In accordance with the TBDC, White-bellied Sea-eagle breeding habitat is live large old trees within 1 km of a rivers, lakes, large dams or creeks, wetlands and coastlines AND the presence of a large stick nest within tree canopy; or an adult with nest material; or adults observed duetting within breeding period. Breeding habitat for the Little Eagle is live (occasionally dead) large old trees within suitable vegetation AND the presence of a male and female; or any adult with nesting material; or an individual on a large stick nest in the top half of the tree canopy; or pairs displaying (soaring, diving, engaging in chases, or a male observed calling in flight with a female begging from tree). Breeding habitat for Square-tailed Kite is live large old trees within suitable vegetation AND the presence of a male and female; or female with nesting material; or an individual on a large stick nest in the top half of the tree canopy. Further information and data is required to determine if breeding habitat is absent from the site in accordance with the TBDC. CRHR acknowledges that time spent in the field undertaking other surveys can provide opportunity for incidental observations of threatened species across the site, however this cannot be used in place of appropriate survey effort and best practice methodology. Tables describing surveys effort should be consistent throughout the BCAR and distinction is to be made between incidental surveys and the required survey effort completed in accordance with the TBDC and relevant guidelines. Recommended action: • Additional information should be provided to confirm if threatened species surveys were conducted in accordance with relevant guidelines and TBDC, and to confidently exclude breeding habitat
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		from the site. If additional information cannot be provided, additional surveys should be undertaken. The BCAR should demonstrate consistency with Section 5.2 of the BAM by describing the timing, methods and effort used for a species survey including justifying the survey method and effort (e.g. citing peer-reviewed literature) if the approach differs from the Department's taxa-specific survey guides or where no relevant guideline has been published. • All amendments to must be reflected within the BCAR and BAM-C, with updated shapefiles submitted. • The date, start and end time and number of survey repeats must be reported to accurately understand the survey effort. • If targeted surveys were not adequately conducted, CPHR recommends conducting supplementary survey work, assuming presence for the species or seeking an expert report.
	<i>Timing</i>	To support Planning Proposal

10.	<i>CPHR requires assessment and information in accordance with BAM 2020, the Department's threatened species guidelines and the Threatened Biodiversity Data Collection (TBDC) - Giant Dragonfly</i>	Table 9 of the BCAR states that surveys for Giant Dragonfly were mainly out of season, in November 2020 which is inconsistent with other tables throughout the BCAR and the BAM-C. Recommended action: • Surveys for the Giant Dragonfly should be undertaken during the required period in accordance with the TBDC. Alternatively, the species can be assumed to be present or a species expert can provide a report to confirm presence or absence. • All amendments must be reflected within the BCAR and BAM-C, with updated shapefiles submitted.
	<i>Timing</i>	To support Planning Proposal

11.	<i>CPHR requires assessment and information in accordance with BAM 2020, the Department's threatened species guidelines and the Threatened Biodiversity Data Collection (TBDC) - Reptiles</i>	Survey effort for the Pale-headed Snake has not been undertaken in accordance with Threatened Reptiles: Biodiversity Assessment Method survey guide (Threatened Reptiles survey guide). Pale-headed snake requires funnel traps (72 traps per 50 ha of suitable habitat, 4 survey replicates), in addition to spotlight surveys. As per the Threatened Reptiles survey guide, meteorological conditions on the subject land (2 days prior to survey and each day or night of the survey), must be recorded using a portable meteorological station or the closest Bureau of Meteorology station. <i>Hoplocephalus bitorquatus</i> has also been incorrectly named Broad-headed snake, throughout the BCAR. Recommended action: • Herpetofauna surveys should be undertaken in reference to Threatened reptiles – Biodiversity Assessment Method survey
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		guide. Funnel trapping required to adequately survey for the Pale-headed snake. • Meteorological conditions to be documented in the BCAR (2 days prior to survey and each day or night of the survey), include but are not limited to the following: ○ rainfall (mm) ○ minimum and maximum temperature (°C) ○ relative humidity (%) ○ mean wind speed (km/h) ○ cloud cover (oktas) • The BCAR should be amended to correctly name <i>Hoplocephalus bitorquatus</i> as the Pale-headed snake. • The date, start and end time and number of survey repeats must be reported to accurately understand the survey effort. • Survey is to be undertaken during the required period in accordance with the TBDC, alternatively you may opt to assume presence for the species or seek an expert report. • All amendments must be reflected within the BCAR and BAM-C, with updated shapefiles submitted.
	Timing	To support Planning Proposal

12.	CPHR requires assessment and information in accordance with BAM 2020, the Department's threatened species guidelines and the Threatened Biodiversity Data Collection (TBDC) - Amphibians	It is currently not possible from the BCAR to ascertain the methodology used (how the songmeter was set to record), who analysed the output, and what experience the person had with songmeter recordings of frogs. Some expertise is required in the assessment of songmeter outputs. There is no indication of the assessor's level of expertise or experience with this method. No data sheets have been provided to show what level of interpretation has been carried out in relation to the songmeters (e.g. whether the songmeters were set to record continuously or set to record a certain time frame per day/night). Finally, the results of the songmeter were not detailed (e.g. four amphibian species, rather than naming the four species), although a full list of the amphibians either heard or found was listed elsewhere in the BCAR. Insufficient information has been provided within the BCAR to determine if frog surveys have been undertaken in accordance with NSW Survey Guide for Threatened Frogs nor has data been provided to adequately assess survey effort. All survey effort for frog species described in Table 9 of the BCAR consist of acoustic detection, spotlighting and quiet listening and section 2.2.5 of Appendix D describes physical searches undertaken. Acoustic recording is only suitable for Wallum Froglet, Green and Golden Bell Frog and Stuttering Frog. For these species further information is required to determine if the recording distance was suitable to detect the target species, this must be documented and justified in the BCAR. Information on the type of recorder used, the method to analyse the recordings and the experience and skills of the analyser must be provided.
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		For the remaining species the proponent should demonstrate that transects of suitable breeding habitat were conducted for all threatened frog species in accordance with the guidelines. The BCAR should be updated, and data provided to demonstrate evidence of this. Currently, CPHR has not received GPS tracks for frog surveys. As per the NSW Survey Guide for Threatened Frogs, meteorological conditions on the subject land must be reported. For aural-visual surveys weather conditions should be recorded at the start and end of each transect using a portable meteorological station. If this is not possible, remote recordings collected from weather stations can be reported. This is particularly important as significant/insignificant rainfall events can produce false negatives. CPHR considers surveys undertaken outside of the recommended TBDC survey period, are irrelevant and should not contribute to the total survey effort. It is noted that advice from CPHR provided on 30 September 2022, previously identified a number of these unresolved issues. It was recommended at the time, that a suitably qualified herpetologist should be engaged to survey for frogs in accordance with the Department's survey guidelines. Recommended action: The BCAR should be amended to address the following: • Frog surveys are to be undertaken in accordance with NSW Survey Guide for Threatened Frogs and data provided to adequately assess survey effort. • The date, start and end time and number of survey repeats must be reported to accurately understand the survey effort. • Attachment C is to include methodology of the acoustic recordings deployed for frogs and evidence of the suitably qualified person who undertook the call analysis. • The total number and types of all species recorded acoustically is to be included. • Until enough detail is provided for CPHR to have confidence in the results of the songmeter recordings, CPHR considers that the results of the songmeter should not be relied on. • All amendments must be reflected within the BCAR and BAM-C, with updated shapefiles submitted.
	<i>Timing</i>	To support Planning Proposal

13.	<i>CPHR requires assessment and information in accordance with BAM 2020, the Department's threatened species guidelines and the</i>	Further information and amendments to the BCAR and BAM-C are required to ensure survey is to be in accordance with 'Species credit' threatened bats and their habitats – NSW guide for the Biodiversity Assessment Method (2021). The Eastern Cave Bat (<i>Vespadelus troughtoni</i>) was recorded within the site as part of a species group, as there exists overlapping call characteristics between the eastern cave bat and other <i>Vespadelus</i> sp. When the species is present on the subject land and the proposed
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	<i>Threatened Biodiversity Data Collection (TBDC) - Microbats</i>	impact is not a potential SAIL, standard species credits are to be generated in accordance with 'Species credit' threatened bats and their habitats – NSW guide for the Biodiversity Assessment Method. A species polygon therefore should be created. The species polygon boundary should align with all PCTs on the subject land that are within 2 kilometres of identified potential roost habitat features, and with which the species is associated (as listed in the TBDC), also include any PCTS where the species has been recorded on the land even if not associated with the species in the TBDC. The BCAR states that no evidence of breeding was found, however field notes identify that a lactating <i>Vespadelus sp.</i> was captured on the 9/12/2020. The species is very difficult to separate from several other closely related species that occur in similar areas. Further information is to be provided of this capture, or the unidentified <i>Vespadelus sp.</i> is to be assumed to be <i>Vespadelus troughtoni</i>. Recommended action: • Standard species credits are to be generated for Eastern Cave Bat in accordance with 'Species credit' threatened bats and their habitats – NSW guide for the Biodiversity Assessment Method. • Further information regarding the capture of a lactating <i>Vespadelus sp.</i> is to be provided within the BCAR.
	<i>Timing</i>	To support Planning Proposal

14.	<i>CPHR requires assessment and information in accordance with BAM 2020, the Department's threatened species guidelines and the Threatened Biodiversity Data Collection (TBDC) - Koala</i>	Further information is required to determine if survey effort for Koala is in accordance with Koala (<i>Phascolarctos cinereus</i>) Biodiversity Assessment Method Survey Guide (Koala survey guide). Passive acoustic survey effort does not appear to meet the minimum surveys requirements in accordance with Table 2 which states that 10 recording units + 3 recording units / additional 200 ha are required for units with a 100 m detection range and 2 recording units + 1 recording unit / additional 200 ha with a detection range of 300 m. Information on the detection range of the recording units utilised in the survey are required to determine adequacy. As per the Koala survey guide, and the State Environmental Planning Policy (Biodiversity and Conservation) 2021, the survey effort to detect koala presence on the subject land requires either Spot Assessment Technique (SAT) or detection dogs <u>and</u> spotlighting or passive acoustic or drones. Section 4.1.1 of the Koala survey guide states that the use of SAT must be justified in the BCAR, with reference to the vegetation condition and quality of habitat for koalas, as it is less effective for sites with dense ground cover, as this will strongly influence the probability of scat detection. The recording unit model must be suited to the acoustic characteristics of koalas, as higher sampling rates will improve the quality of recorded calls. The recording unit model used during the koala surveys is not
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	specified in the BCAR nor justification for recording unit locations. There are discrepancies throughout the BCAR regarding when the recorders were deployed; Mar-Sep and Sep-Dec. As per the Koala survey guide, meteorological conditions on the subject land, prior to and at the time of the survey, must be recorded using a portable meteorological station or the closest Bureau of Meteorology station. This is particularly important as spotlighting surveys and passive acoustic should not be undertaken in extreme temperatures ($\leq 35^{\circ}\text{C}$), rainfall or high wind, as these conditions may reduce fauna activity and detectability. As per the Biodiversity and Conservation SEPP 2021, Core Koala Habitat is determined by the presence of highly suitable koala habitat and where koalas have been recorded within the last 18 years. 10 records exist within proximity to the development site including 5 within a 2.5 km radius, 4 from 2023 and all occurring within connected habitat to the development site. It is considered that historical and recent records within the locality are representative of a local population that forms part of the wider Lower Hunter Koala Population. Low activity levels should not necessarily detract from the potential importance of habitat for longer-term conservation, particularly if preferred koala food trees are present and populations of Koala are known to occur in the area. A precautionary approach whereby the presence of any activity in areas occupied by naturally occurring, low density populations should be regarded as ecologically meaningful for conservation and management purposes until proven otherwise. The Tier 2 Assessment is to be revised to correct inaccuracies, reflect that Koalas are known to occur within proximity to the site and adequately assess impacts to Koala within the locality. Recommended action: The following amendments to the BCAR are recommended: • The use of SAT must be justified in the BCAR, in addition to providing justification for variation to minimum sampling effort (30 trees), as the GPS tracks provided do not meet the minimum sampling effort. Considering the SAT is less effective for sites with dense ground cover, the use of detection dogs should be considered. • The recording unit model during the Koala surveys must be specified in the BCAR. Justification for recording unit locations must also be provided. The BCAR is to only include recording periods which were within the breeding season (Sep-Dec). The recordings must be analysed by a bioacoustics specialists, with the algorithm used to identify Koala calls, detailed in the BCAR. • Update the BCAR to accurately report BioNet records for the past 18 years. • The Tier 2 assessment is to be revised, with consideration given to the recent records. • Meteorological conditions to be documented in the BCAR include but are not limited to the following:
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		○ rainfall (mm) for the 72 h prior to the survey ○ rainfall (mm) for each day or night of the survey ○ minimum and maximum temperature (°C) for each day or night of the survey ○ relative humidity (%) for each day or night of the survey ○ mean wind speed (km/h), for each day or night of the survey ● If the species is detected, impacts must first be avoided and minimised – any residual impacts require offsetting.
	<i>Timing</i>	To support Planning Proposal

15.	<i>CPHR requires assessment and information in accordance with BAM 2020, the Department's threatened species guidelines and the Threatened Biodiversity Data Collection (TBDC) - Watercourses</i>	The BCAR should be updated to provide evidence that adequate assessment of water features both within and adjacent to the site, has been undertaken in accordance with the BAM 2020. Section 3.1.3 of the BAM states that the assessor must map rivers, streams, estuaries, wetlands on, adjacent to, and downstream of, the subject land and within the assessment area. It is of particular importance to identify the top of bank of all watercourses that adjoin development to accurately establish riparian corridors. Vegetated Riparian Zones (VRZ's) should be established either side of the watercourse in accordance with the BAM 2020 and provisions of the WM Act. The required width of the VRZ is to be measured from the top of the high bank on each side of the watercourse. The total riparian corridor therefore amounts to the required buffer width either side of the watercourse, plus the total width of the channel. Riparian buffers within the BCAR only account for the width of the VRZ and have therefore likely been measured from a central line, rather than top of the highest bank incorporating the channel width. Further details regarding the required riparian corridor widths can be found here: Controlled activities – Guidelines for riparian corridors on waterfront land Attachment 2 of Lake Macquarie Council's Letter provided in January 2024 identifies several issues with riparian mapping and buffer encroachments that will need to be addressed. Recommended Action: ● A riparian assessment should be undertaken of all waterbodies that will be subject to direct and indirect impacts from the proposal. The assessment should ground truth, map, provide stream order and details of habitat features in accordance with the BAM. Maps and shapefiles are to be provided to demonstrate evidence of adequate assessment and findings. ● Riparian corridors should be established in accordance with the BAM 2020 and WM Act. Buffers for VRZs are to be measured from the top of the highest bank so the total riparian corridor amounts to the required buffer width either side of the watercourse, plus the total width of the channel.
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	<i>Timing</i>	To support Planning Proposal
16.	<i>PCT and TEC mapping</i>	PCTs form the foundation of the BAM assessment, including species polygons, and it is critical that this is correct. CPHR intends to review the PCT mapping and PCT allocation through field validation in early/ mid 2025. While PCT mapping verification is under review by CPHR, some initial comments are provided as follows: Best-fit PCT justification is not provided. This is particularly important where there are variations from previous vegetation mapping (S. Bell & P. Brinckerhoff). As per the BioNet Vegetation Classification database, the following TECs (BC Act listed), are associated with PCTs occurring on the site, but have not been identified nor mapped: • <i>Hunter Valley Vine Thicket in the NSW North Coast and Sydney Basin Bioregions or Lower Hunter Valley Dry Rainforest in the Sydney Basin and NSW North Coast Bioregions</i> – PCT 1543 • <i>Subtropical Coastal Floodplain Forest of the New South Wales North Coast Bioregion</i> - PCT 1588 • <i>Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i> – PCT 1737. It is noted that Stephen Bell associated the TEC (EPBC Act listed) <i>River-Flat Eucalypt Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions</i> with PCT 1573. As per Subsection 4.2.2. of the BAM 2020, where a TEC is identified on a site that is not associated with the dominant PCT, that TEC is required to be assessed and offset accordingly. All TECs (PCT 1592, PCT 1573, and PCT 1543) should be avoided. Currently, this proposal will result in the removal of 49.97 ha of the Lower Hunter Spotted Gum Ironbark Forest EEC (PCT 1592), 0.18 ha of River-flat Eucalypt Forest on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions EEC (PCT 1573) and 0.06 ha of Lower Hunter Valley Dry Rainforest in the Sydney Basin and NSW North Coast Bioregions (PCT 1543). The BCAR has reported a total of 88 BAM plots, including 59 BAM plots by AEP and 29 BAM plots by EFS. However, CPHR has only received data for 24 EFS plots, with data not included for BP01-BP05 and BP30-BP31. The vegetation zone 1588_ DiRLU covers an area of 6.76 ha and requires three (3) BAM plots, as per subsection 4.3.4 of the BAM 2020. However, only two (2) BAM plots have been completed for this vegetation zone. The data package provided to CPHR on 2022 does not include shape files of PCT, TEC or vegetation zone boundaries within subject land.

		Recommended action: • PCT identification must be in accordance with the NSW PCT classification as described in the BioNet Vegetation Classification. Consideration of other PCTs and justification for why alternative PCTs have been discounted should be included. • The identification of TECs must be consistent with the Threatened Species Scientific Committee Final Determination for the TEC. Justification in the BCAR is required for why the associated TECs have been discounted. • Further consideration of all areas of mapped TECs and how they will be avoided. • Clarification regarding the number of BAM plots completed. Missing data from BAM plots is to be sent to CPHR for review. • Justification for completing one (1) less BAM plot than the minimum number of plots required for the vegetation zone 1588_DiRLU. • Shape files of PCT and TEC boundaries vegetation zone boundaries within subject land are to be provided.
	Timing	To support Planning Proposal

17.	Further consideration of Indirect impacts	In December 2022, CPHR requested the following: <i>“As no credits have been calculated for indirect impacts, it is not clear how indirect impacts would be offset. BCD expects that credits will be provided to compensate for indirect impacts. Further consideration of this issue should be provided in the BCAR.”</i> The BCAR has identified indirect impacts via the identification of a 30-meter buffer around the development footprint, however credits have not been generated. Indirect impacts from changes to hydrological conditions and impacts from edge effects are likely to degrade the condition and integrity of retained and surrounding habitats, reduce the function of important wildlife corridors and impact biodiversity features essential to threatened entities. Edge effects can have significant consequences for habitats including weed incursion, increase in pest animals, micro-climatic changes such as solar radiation, air temperature, humidity, and wind speed, impacts to vegetation composition, light, noise and impacts from unauthorised access. Recommended action: In accordance with Section 8.6 of the BAM, biodiversity credits should be used to mitigate or offset indirect or prescribed impacts from the proposal. The retirement of biodiversity credits may be used to mitigate the indirect impacts of a proposal on areas of adjacent native vegetation, TECs and/or threatened species, or their habitat adjacent to the subject land. Section 4.5.10 of the BAM Operation Manual – Stage 2 outlines the best approach for estimating an offset for the residual indirect impact. The following is recommended:
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		Mapping an area of vegetation adjacent to an existing vegetation zone as a management zone. The area of the management zone can be defined by a set distance (e.g. X m buffer) from the outer edge of the direct impact area. The management zone is then used to estimate the indirect impact in terms of partial loss in the VI score. The partial loss (e.g. a percentage of the original condition), scored in future value of the vegetation in that management zone, is estimated by considering the impact of the changed land use on each of the condition attributes used to determine the VI score. Partial loss will depend on the type of development, the condition of retained vegetation and its proximity to the development.
	<i>Timing</i>	To support Planning Proposal

18.	<i>Prescribed impacts to habitat connectivity</i>	The BCAR has not adequately assessed the potential impacts on habitat connectivity within the surrounding landscape. The impacts both direct and indirect have the potential to impact how species move through and utilise the landscape, specifically for less mobile and flora species. CPHR previously requested that the BCAR refers to consideration of local and regional corridors. CPHR requires clarification as to which corridors are being considered. Maps showing mapped local (Newcastle and Lake Macquarie City Council) and regional corridors overlaid against the development footprint would assist the assessment of this aspect of the proposal. The proposal also includes several island developments and linkages that are fragmented. Recommended Action: The BCAR should be updated, and further information be provided to demonstrate conclusions therein, with reference to peer-reviewed and other reliable sources to adequately assess impacts to habitat connectivity.
	<i>Timing</i>	To support Planning Proposal

19.	<i>Provide missing data and provide improved presentation of data to facilitate assessment</i>	The BCAR should be updated to include information required under BAM 2020: - CPHR requires adequate detail, presented in a concise way, to determine the amount of time spent surveying each threatened species, and which methods were used. It is not possible to determine how many species were surveyed simultaneously, whether the species were of the same guild or vegetation stratum, what the weather conditions were for each species (if they are weather dependant), or how much of the survey was conducted in the correct time of year. - It is recommended that a table is provided which shows the amount of survey required for each species, whether that amount of survey was achieved in accordance with the TBDC and BAM methodology (including how many hours per method e.g.
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		spotlighting versus call playback), whether the amount of effort was spent using the correct methods for that species, and whether other species were being surveyed at the same time. • The date, start and end time and number of survey repeats must be reported to accurately understand the survey effort. • Rainfall data in provided in Appendix G does not allow for a determination of suitability of survey effort. • The proponent is to ensure that all data is no more than 5 years old on submission of the Panning Proposal and finalised BCAR. • Currently all shapefiles that has been supplied contains no attribute data and therefore assessment is unable to be undertaken. Recommended action: The BCAR should be updated to provide additional information to determine whether the correct amount of effort has been made, with the correct methodology, for each species. Digital data submission is to be in accordance with the BAM Operational Manual Stage 2, Appendix D and is to contain the minimum digital data requirements in accordance with Table 7.
	<i>Timing</i>	To support Planning Proposal