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Department of Planning and Environment

Template – Biodiversity Development Assessment Report, <Insert name of proposed development, location>

Prepared by <Insert name of Accredited Assessor, Insert BAM Accredited Assessor Number>

<Insert Accredited Assessor logo>

<Optional – Replace photo below with one of the subject land or delete it if you have no photo>

Final Report <Insert Month Year>

Document control

| Version | Date | Author | Details |
| --- | --- | --- | --- |
| 1 | 31/05/2021 | A. Smith | Final issued with development application |
| 2 | 1/07/2021 | A. Smith, B. Smith | Amended in response to Council comments |
|  |  |  |  |

The document control table is to be updated only when versions of the Biodiversity Development Assessment Report are issued to the decision-makers, rather than internal versions.

# Summary

Include summary details of the following information required for decision-making:

* development description
* reason why a BDAR has been prepared (reason for entering the BOS)
* measures to avoid and minimise
* plant community types (PCTs), threatened ecological communities (TECs) and ecological communities (ECs) listed under the Commonwealth *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act)
* threatened species
* impacts, including direct, indirect, prescribed, and serious and irreversible impacts (SAII)
* mitigation measures
* final offset requirements (table format).

<Use Table E1 to identify impacts that require an offset (as per BAM Subsection 9.2.2(2.))>

Table E1 Impacts that require an offset – ecosystem credits

| Vegetation zone | PCT | TEC/EC | Impact area (ha)  | Number of ecosystem credits required |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

<Use Table E2 to identify impacts that require an offset (as per BAM Subsection 9.2.2(2.))>

Table E2 Impacts that require an offset – species credits

| Common name | Scientific name | Loss of habitat (ha) or individuals | Number of species credits required |
| --- | --- | --- | --- |
|  |  |  |  |

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# Shortened forms

<Add/remove rows based on shortened forms used in the BDAR>

|  |  |
| --- | --- |
| APZ | asset protection zone |
| BAM | Biodiversity Assessment Method |
| BAM-C | Biodiversity Assessment Method Calculator |
| BC Act | *Biodiversity Conservation Act 2016* (NSW) |
| BC Regulation | Biodiversity Conservation Regulation 2017 (NSW) |
| BDAR | Biodiversity Development Assessment Report |
| BOAMS | Biodiversity Offsets and Agreement Management System |
| BOS | Biodiversity Offsets Scheme |
| CEEC | critically endangered ecological community |
| DBH | diameter at breast height over bark |
| EC | ecological community listed under the EPBC Act |
| EPBC Act | *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) |
| EP&A Act | *Environmental Planning and Assessment Act 1979* (NSW) |
| EEC | endangered ecological community |
| HTW | high threat weed |
| IBRA | Interim Biogeographic Regionalisation for Australia |
| LLS Act | *Local Land Services Act 2013* (NSW) |
| MNES | matters of national environmental significance |
| NPW Act | *National Parks and Wildlife Act 1974* (NSW) |
| NSW | New South Wales |
| PCT | plant community type |
| SAII | serious and irreversible impact |
| SEARs | Secretary’s Environmental Assessment Requirements |
| TBDC | Threatened Biodiversity Data Collection |
| TEC | threatened ecological community |
| VEC | vulnerable ecological community |
| Vegetation SEPP | *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017* (NSW) |

# Declarations

i. Certification under clause 6.15 *Biodiversity Conservation Act 2016*

|  |
| --- |
| I certify that this report has been prepared based on the requirements of, and information provided under, the Biodiversity Assessment Method and clause 6.15 of the *Biodiversity Conservation Act 2016* (BC Act).Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_BAM Assessor Accreditation no: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

This BDAR has been prepared to meet the requirements of BAM 2020. Appendix A provides an assessment of compliance with the minimum information requirements outlined in BAM Appendix K.

The lead or responsible assessor for the project must certify in the BDAR that the report has been prepared on the basis of the requirements of, and information provided under the BAM as at a specified date, and that date is within 14 days of the date the report is submitted to the decision-maker.

The BAM Calculator (BAM-C) must also be finalised and submitted within the Biodiversity Offsets and Agreement Management System (BOAMS). The date the assessor certifies (signs) the BDAR does not need to match the date on the finalised credit report; however, to be considered valid, the BDAR must be submitted to the decision-maker within 14 days of the finalisation of the BAM-C.

ii. Details and experience of author/s and contributors

<Provide details of the person/s responsible for preparing the BDAR plus any surveys and/or investigations on which the BDAR relies (excluding approved biodiversity experts)>

### Authors and contributors

| Name | BAM Assessor Accreditation no. (if relevant) | Position/Role | Tasks performed | Relevant qualifications |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

Tasks performed may include:

* report preparation
* document review
* BAM-C data entry and analysis
* figure preparation
* BAM plot surveys
* targeted threatened flora surveys
* targeted threatened fauna surveys.

Where survey guidelines specify the requirement for provision of resumes for particular targeted threatened species surveys, these must be included as an appendix.

iii. Conflict of interest

|  |
| --- |
| <Delete that which is not relevant>I declare that I have considered the circumstances and there is no actual, perceived or potential conflict of interest OR I wish to openly declare the following actual, perceived or potential conflict of interest and the management strategies employed:<State the nature of the conflict(s) of interest and describe how it will be/has been managed>This declaration has been made in the interests of full disclosure to the decision-maker. Full disclosure has also been provided to the client.Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_BAM Assessor Accreditation no: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

Provide a detailed description in an appendix. Guidance on conflict of interest is available on the Department of Planning and Environment (the department) website.

Assessors must not act in circumstances where there is actual, perceived or potential conflict of interest (Accredited BAM Assessor Code of Conduct). Use this declaration to address any actual, perceived or potential conflicts of interest including any strategies to manage them.

The section is also used to declare that there are no actual, perceived or potential conflicts of interest.

# Stage 1: Biodiversity assessment

1. Introduction
	* + 1. Proposed development

Development overview

<Insert a brief description of the proposed development, including the primary function or purpose of the development or clearing (e.g. school, hospital, carpark, transport infrastructure, industrial estate, etc.)>

<Provide the legislative pathway for the proposed development or activity to be considered.>

Legal assessment pathways include:

* development that requires consent under Part 4 of the EP&A Act
* an activity that requires approval under Part 5, Division 5.1 of the EP&A Act (where the proponent has opted-in to the BOS)
* development that requires approval under Part 5, Division 5.2 of the EP&A Act
* clearing that requires approval from the Native Vegetation Panel under Part 5A of the LLS Act
* clearing that requires approval from the Native Vegetation Panel under the Vegetation SEPP.

Location

<Insert a description of the location of the proposed development, including address and Lot/DP. Refer to Figure 1 Site Map and Figure 2 Location Map>

Proposed development and the subject land

<Insert a general description of the proposed development including:

* any demolitions or land clearance works required (including if any native vegetation will be impacted as a result of permanent shading, inundation or choking, etc.)
* general description of associated infrastructure works required to support operations of the proposal (e.g. roads, stormwater, drainage, asset protection zones (APZ), fencelines, etc.) and temporary infrastructure required during construction (e.g. park up areas, stockpiles, waste or storage zones, temporary buildings).

Refer to Figure 3 Development layout>

<Identify the subject land boundary, including:

* operational footprint
* construction footprint indicating clearing associated with temporary/ancillary construction facilities and infrastructure
* area (hectares).

Refer to Figure 1 Site Map>

<Insert a general description of the subject land, including topographic and hydrological setting, geology, soils, and current and previous land use>

The assessor should ensure the general description includes all components of the proposed development. The total area of all components must be identified as the subject land.

Other documentation

<Insert a list of other documentation submitted with the proposed development that is relevant to biodiversity (e.g. bushfire assessment report)>

The assessor should ensure the BDAR is consistent with the descriptions, boundaries and recommendations detailed within other documentation.

* + - 1. Biodiversity Offsets Scheme entry

<Identify and justify the reason why the BOS applies to the proposed development. Where relevant, include Figure 4 Biodiversity Values Map or Appendix B Biodiversity Values Map and Threshold tool report, or Appendix C Test of Significance>

For Part 5 activities, proponents can opt-in to the BOS when the activity is likely to significantly affect threatened species in accordance with section 7.2 clause 1.a. and 1.c of the BC Act. The decision to opt-in should be outlined within this section.

* + - 1. Excluded impacts

<Identify any excluded impacts (i.e. category 1-exempt land). Where relevant, include a map showing the location of the category 1-exempt land. Where category 1-exempt land has not been determined from the Native Vegetation Regulatory Map, include a justification of how category 1-exempt land was determined within Appendix D Determination of excluded impacts. Refer to Figure 5 Excluded impacts>

Clause 6.8(3) of the BC Act specifies that the BAM is to exclude the assessment of the impacts of any clearing of native vegetation and loss of habitat on category 1-exempt land (as defined in Part 5A of the LLS Act), other than prescribed impacts (as defined in clause 6.1 of the Biodiversity Conservation Regulation 2017 (BC Regulation)). Prescribed impacts must therefore be assessed for category 1-exempt land.

* + - 1. Matters of national environmental significance

<Identify whether the proposed development is deemed a controlled action or needs referral under the EPBC Act. Refer to Appendix E Matters of national environmental significance (MNES) for a summary of details provided throughout the BDAR>

If the proposed development is deemed a controlled action or needs referral under the EPBC Act, consider MNES throughout the BDAR. Some prompts and guidance are included in key sections.

* + - 1. Information sources

<Insert a dot point list of key information sources used in the BDAR, including but not limited to:

* BAM 2020
* BioNet TBDC>

This must include data sources listed in BAM Subsection 1.4.1, reports and spatial data used. Citations should also be used throughout the document.

1. Methods
	* + 1. Site context methods

Landscape features

<Detail any field reconnaissance used to confirm the extent and condition of landscape features (Section 3.2) on the subject land>

Native vegetation cover

<Detail any desktop assessment (e.g. aerial imagery interpretation and date of aerial image) and field reconnaissance used to confirm the extent and condition of native vegetation cover on the subject land and assessment area (Section 3.3). Detail methods and assumptions applied where field assessment of the assessment area was not possible>

* + - 1. Native vegetation, threatened ecological communities and vegetation integrity methods

Existing information

<Describe the review of existing information undertaken to identify PCTs (Section 4.2) and TECs (Section 4.3) including native vegetation information in BioNet, other reports/surveys and existing maps of the subject land and assessment area>

Mapping native vegetation extent

<Describe the method used to map the native vegetation extent (Section 4.1) within the subject land (i.e. field assessment or existing maps)>

Plot-based vegetation survey

<Describe the systematic plot-based floristic vegetation survey undertaken in accordance with BAM Subsection 4.2.1. Also describe the methods used to select sampling locations. Refer to Appendix F Vegetation survey data for survey locations, and Figure 6 Field survey locations>

Vegetation integrity survey

<Describe the methods used to undertake the vegetation integrity survey (Subsection 4.5.1) in accordance with BAM Subsection 4.3.4. Also describe the methods used to select sampling locations>

<Where plot size or shape does not conform to BAM requirements, provide justification>

* + - 1. Threatened flora survey methods

Review of existing information

<Describe the review of existing information undertaken to identify habitat constraints and microhabitats (Section 5.1) for threatened species>

Habitat constraints assessment

<Describe any field surveys undertaken to assess habitat constraints and microhabitats (Section 5.1) for threatened species within the subject land. Provide evidence-based justification>

Field surveys

<Describe field survey methods used and species targeted (Section 5.3). Refer to Figure 6 Field survey locations>

* + - 1. Threatened fauna survey methods

Review of existing information

<Describe the review of existing information undertaken to identify habitat constraints and microhabitats (Section 5.1) for threatened species>

Habitat constraints assessment

<Describe any field surveys undertaken to assess habitat constraints and microhabitats (Section 5.1) for threatened species within the subject land. Provide evidence-based justification>

Field surveys

<Describe field survey methods used and species targeted (Section 5.3). Refer to Figure 6 Field survey locations>

* + - 1. Weather conditions

<Complete Table 1 to document conditions **at the time of** surveys>

<Describe the environmental conditions **leading up to** surveys where relevant to the requirements of a surveyed species (e.g. rainfall in the previous three days may be important for some frog surveys)>

Table  Environmental conditions during threatened species surveys

| Survey undertaken (e.g. method / targeted species) | Date | Time | Temperature (min. & max.) | Wind(light, mod…) | Rainfall(mm) | Other conditions relevant to the species |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |

Refer to species survey guidelines published by the department for further reporting requirements (e.g. moon phase for frog surveys).

* + - 1. Limitations

<Describe any limitations or assumptions to surveys and how these were overcome.

Indicate where multiple species were surveyed simultaneously.

List appropriate licences to undertake required survey.

Document the location of soft copies of data files>

1. Site context
	* + 1. Assessment area

<Identify the assessment area, which includes the subject land and the area of land within the 1500 metre buffer zone surrounding the subject land for site-based development, or 500 metre buffer for linear development. Refer to Figure 2 Location Map>

* + - 1. Landscape features

Landscape features identified within the subject land and assessment area are shown on Figure 1 Site Map and Figure 2 Location Map, respectively. A discussion of relevant landscape features is provided below.

If any of these landscape features are not identified, provide evidence-based justification, i.e. a desktop image analysis was completed for the subject land and assessment area, SEED map layers ‘x, y, z’, full site walk over, etc.

IBRA bioregions and IBRA subregions

<Identify Interim Biogeographic Regionalisation for Australia (IBRA) bioregions and IBRA subregions within the subject land and assessment area>

Rivers, streams, estuaries and wetlands

<Identify rivers, streams, estuaries and wetlands on, adjacent to, and downstream of, the subject land and within the assessment area>

Habitat connectivity

<Identify the connectivity of different areas of habitat that may serve as movement corridors for threatened species across their range>

<For proposed development that includes the construction of wind turbines, identify flyways for migratory species that pass over the subject land>

Karst, caves, crevices, cliffs, rocks or other geological features of significance

<Identify karst, caves, crevices, cliffs, rocks or other geological features of significance within the subject land and assessment area>

Areas of outstanding biodiversity value

<Identify areas of outstanding biodiversity value, as identified under the BC Act, within the subject land and assessment area>

NSW (Mitchell) landscape

<Identify NSW (Mitchell) landscapes within the subject land and assessment area>

Additional landscape features identified in SEARs

This subsection only applies when there are Secretary’s Environmental Assessment Requirements (SEARs) for the development.

Soil hazard features

<Identify all soil hazard features that occur within the subject land and assessment area>

This subsection only applies to vegetation clearing proposals (i.e. development that requires approval from the Native Vegetation Panel under Part 5A of the LLS Act, or the Vegetation SEPP).

* + - 1. Native vegetation cover

<Identify locations of native vegetation cover, including woody and non-woody vegetation, in the assessment area. Include justification for how the cover was determined, including justification for areas of vegetation that have been excluded from the assessment>

Table 2 summarises the extent of native vegetation cover within the assessment area. Figure 2 Location Map shows native vegetation cover within the assessment area.

Table  Native vegetation cover in the assessment area

|  |  |
| --- | --- |
| **Assessment area (ha)** |  |
| **Total area of native vegetation cover (ha)** |  |
| **Percentage of native vegetation cover (%)** |  |
| **Class (0-10, >10-30, >30-70 or >70%)** |  |

1. Native vegetation, threatened ecological communities and vegetation integrity
	* + 1. Native vegetation extent

<Identify native vegetation extent within the subject land. Refer to Figure 7 Native vegetation extent>

Changes to the mapped native vegetation extent

<Describe differences between the actual native vegetation extent and that shown on the aerial imagery used in the figures. Provide evidence-based justification to support differences between mapped vegetation extent and aerial imagery, i.e. state whether existing maps were used or alternatively, if an assessment of the subject land was undertaken, describe the assessment. Refer to Figure 7 Native vegetation extent>

Areas that are not native vegetation

<Identify all parts of the subject land that do not contain native vegetation and provide evidence-based justification as to why these areas do not support any native vegetation. Refer to Figure 7 Native vegetation extent>

* + - 1. Plant community types

Overview

Vegetation within the subject land has been assessed as aligning with the BioNet Vegetation Classification PCTs identified within Table 3 and their extent is shown in Figure 8 Plant community types. Detailed descriptions of each PCT are provided in the following subsections.

<Complete Table 3>

Table  PCTs identified within the subject land

| PCT ID | PCT name | Subject land area (ha) |
| --- | --- | --- |
|  |  |  |
| **Total area** |  |

<Insert PCT ID and name>

This entire subsection, including the subsections following, must be duplicated and completed for each PCT identified within the subject land.

PCT overview

<Complete the fields in Table 4 using the data contained within the BioNet Vegetation Classification for PCT ID, name, vegetation formation, vegetation class and per cent cleared value, and data obtained for the subject land>

Table  PCT <Insert ID number and title>

|  |  |
| --- | --- |
| **PCT ID** |  |
| **PCT name** |  |
| **Vegetation formation** |  |
| **Vegetation class** |  |
| **Per cent cleared value (%)** |  |
| **Extent within subject land (ha)** |  |

<Provide a general description of the PCT based on field assessment, or if applicable, existing data>

Photo 1 PCT <Insert ID number and title>

<Insert representative photograph>

If the PCT contains multiple condition states, include a representative photograph of each condition state within Section 4.2.2.2, rather than within this section.

Condition states

<If present, insert description of conditions states (equivalent to vegetation zones) of the PCT on the subject land>

Justification of PCT selection

<Provide evidence-based justification of the decision pathway used in identification of the PCT (e.g. vegetation structure and landscape position/geomorphology). Include:

* discussion of any differences between the selected PCT and previous PCT mapping
* analysis of existing and new survey data and matching the outputs to PCTs in the Flora Survey module of the BioNet Vegetation Classification
* species relied upon for identification and relative abundance.

For PCTs that are identified outside the IBRA region, include evidence-based justification as to how PCT allocation has been undertaken>

Alignment with TECs

<Where the PCT is associated with a TEC within the BioNet Vegetation Classification, provide evidence-based justification of the decision pathway used to identify it as the TEC or not, including alignment with different vegetation zones. Include field assessment results and analysis of information in the determination made by the Threatened Species Scientific Committee to list the TEC, including the bioregions referenced in the determination>

Alignment with EPBC Act listed ECs

<Where the PCT is associated with an EC listed under the EPBC Act within the BioNet Vegetation Classification, provide evidence-based justification of the decision pathway used to identify it as the EC or not, including alignment with different vegetation zones. Include field assessment results and analysis of information in the Listing Advice and/or Conservation Advice made by the Threatened Species Scientific Committee to list the EC including any condition thresholds associated with the community>

* + - 1. Threatened ecological communities

TECs and where relevant, ECs identified within the subject land are listed in Table 5 and their extent is shown on Figure 9 Threatened ecological communities and ECs.

Table  TECs within the subject land

| TEC name | Profile ID (from TBDC) | BC Act status | EPBC Act status | Associated vegetation zones within the subject land | Area within subject land (ha) |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |

* + - 1. Vegetation zones

<Describe how vegetation zones were identified and delineated within PCTs (see BAM Subsection 4.3.1), including any assumptions made and/or issues encountered, and how these were addressed. Describe how patch size classes were identified (see BAM Subsection 4.3.2). Refer to Table 6 Vegetation zones and patch sizes. Refer to Figure 10 Vegetation zones>

<Complete Table 6 for each vegetation zone within the subject land>

Table  Vegetation zones and patch sizes

| Vegetation zone ID | PCT ID number and name | Condition / other defining feature | Area (ha) | Patch size class(select multiple if areas of native vegetation are discontinuous) | No. vegetation integrity plots required | No. vegetation integrity plots completed | No. vegetation integrity plots used in assessment | Plot IDs of vegetation integrity plots used in assessment |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | [ ]  <5 ha[ ]  5–24 ha[ ]  25–100 ha[ ]  >100 ha |  |  |  |  |

* + - 1. Vegetation integrity (vegetation condition)

Vegetation integrity survey plots

<Describe/justify the number of plots sampled for each vegetation zone and outline whether the minimum number of plots has been sampled in accordance with BAM Table 3>

<Where plots have not been used in the assessment, provide justification for not using these plots>

Scores

<For each vegetation zone, complete Table 7>

Table  Vegetation integrity scores

| Vegetation zone ID | Composition condition score | Structure condition score | Function condition score (where relevant) | Vegetation integrity score | Hollow bearing trees present? |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | Choose an item. |

Use of benchmark data

<Include a brief statement identifying the source of benchmark data that was used to assess vegetation integrity attributes in each zone>

<If using more appropriate local benchmark data, complete Table 8, and provide evidence-based justification for use of local data rather than BioNet Vegetation Classification benchmark values. Refer to Appendix G Decision-maker authorisation to use more appropriate local data>

Assessors should consider any relevant guidance published by the department on modifying benchmarks.

Table  Use of more appropriate local benchmark data<delete if not relevant>

|  |  |  |
| --- | --- | --- |
| PCT or vegetation class | Published sources | Methods |
| <Insert the PCT or vegetation class for which local benchmark data will be applied> | <Insert published sources of local benchmark data (if benchmarks obtained from published sources)> | <Insert description of methods of local benchmark data collection (if reference sites used to determine local benchmark data)> |

1. Habitat suitability for threatened species
	* + 1. Identification of threatened species for assessment

Ecosystem credit species

<Using Table 9, list ecosystem credit species likely to occur on or use the subject land and the source of information (e.g. automatically populated in BAM-C, recently listed under the BC Act and not yet added to the TBDC, previous ecological reports (environmental impact statements, scientific literature, Council reports, site survey, etc.)). Identify and justify species added to the BAM-C auto-populated list or removed from the list in accordance with BAM Subsections 5.2.1 and 5.2.2. For species on the list, include their sensitivity to gain class (from the TBDC)>

Table  Predicted ecosystem credit species

| Common name | Scientific name | Listing status | Dual credit species | Sources | Species retained for further assessment? | Reason for exclusion from further assessment | Vegetation zone ID species retained within, including PCT ID | Sensitivity to gain class  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| BC Act | EPBC Act |
|  |  |  |  | Choose an item. | [ ]  BAM-C[ ]  TBDC[ ]  Previous survey[ ]  Current survey | Choose an item. | <If a species is excluded from further assessment, indicate which of the following reasons were used, and provide evidence-based justification below the table:1. Geographic limitations2. Habitat constraints3. Vagrant species> |  | Choose an item. |

<Provide detailed, evidence-based justification for addition/exclusion of species to/from the BAM-C list, with the justification relating to the application of the allowable reasons for exclusion>

<Where a predicted ecosystem credit species is assessed differently in different vegetation zones (e.g. habitat constraint applies to vegetation zone 1, but not vegetation zone 2), provide detailed justification for this assessment>

Geographic limitations, habitat constraints and vagrant species are the only permitted reasons for excluding an ecosystem credit species. Geographic limitations and habitat constraints used to justify removal of a species must be based upon those held within the TBDC.

Species credit species

<Using Table 10 (flora) or Table 11 (fauna), list all predicted species credit species (e.g. automatically populated in BAM-C, recently listed under the BC Act and not yet added to the TBDC) and the relevant source of information (e.g. previous ecological reports, environmental impact statements, scientific literature, Council reports, site survey etc.). Identify and justify species added to the BAM-C auto-populated list or removed from the list>

Table  Predicted flora species credit species

| Common name | Scientific name | Listing status | Sources | Species retained for further assessment? | Reason for exclusion from further assessment | Vegetation zone ID species retained within, including PCT ID |
| --- | --- | --- | --- | --- | --- | --- |
| BC Act | EPBC Act |
|  |  |  |  | [ ]  BAM-C[ ]  TBDC[ ]  Previous survey[ ]  Current survey | Choose an item. | <If a species is excluded from further assessment, indicate which of the following reasons were used, and provide evidence-based justification below the table:1. Geographic limitations 2. Habitat constraints3. Microhabitats> |  |

<Provide detailed, evidence-based justification for addition/exclusion of species to/from the BAM-C list, with the justification relating to the application of the allowable reasons for exclusion>

<Where a predicted species credit species is assessed differently in different vegetation zones (e.g. habitat constraint applies to vegetation zone 1, but not vegetation zone 2), provide detailed justification for this assessment>

Geographic limitations, habitat constraints and microhabitats are the only permitted reasons for excluding a flora species credit species. Geographic limitations and habitat constraints used to justify removal of a species must be based upon those held within the TBDC.

Table  Predicted fauna species credit species

| Common name | Scientific name | Listing status | Dual credit species | Sources | Species retained for further assessment? | Reason for exclusion from further assessment | Vegetation zone ID species retained within, including PCT ID |
| --- | --- | --- | --- | --- | --- | --- | --- |
| BC Act | EPBC Act |
|  |  |  |  | Choose an item. | [ ]  BAM-C[ ]  TBDC[ ]  Previous survey[ ]  Current survey | Choose an item. | <If a species removed, provide the following (where relevant):1. Geographic limitations2. Habitat constraints3. Vagrant species4. Microhabitats> |  |

<Provide detailed, evidence-based justification for addition/exclusion of species to/from the BAM-C list, with the justification relating to the application of the allowable reasons for exclusion>

<Where a predicted species credit species is assessed differently in different vegetation zones (e.g. habitat constraint applies to vegetation zone 1, but not vegetation zone 2), provide detailed justification for this assessment>

Geographic limitations, habitat constraints, vagrant species and microhabitats are the only permitted reasons for excluding a fauna species credit species. Geographic limitations and habitat constraints used to justify removal of a species must be based upon those held within the TBDC.

* + - 1. Presence of candidate species credit species

<From the remaining list of candidate species credit species, use Table 12 (flora) or Table 13 (fauna) to identify species determined to be present within the subject land based on:

* assumed presence within the subject land
* an important habitat map (for dual credit species)
* targeted threatened species surveys, or
* an expert report

in accordance with BAM Subsection 5.2.4>

Table  Determining the presence of candidate flora species credit species on the subject land

| Common name | Scientific name | Listing status | Method used to determine presence  | Present? | Further assessment required?(BAM Subsections 5.2.5 and 5.2.6) |
| --- | --- | --- | --- | --- | --- |
| BC Act | EPBC Act |
|  |  |  |  | Choose an item. | Choose an item. | Choose an item. |

Table  Determining the presence of candidate fauna species credit species on the subject land

| Common name | Scientific name | Listing status | Method used to determine presence  | Present? | Further assessment required?(BAM Subsections 5.2.5 and 5.2.6) |
| --- | --- | --- | --- | --- | --- |
| BC Act | EPBC Act |
|  |  |  |  | Choose an item. | Choose an item. | Choose an item. |

* + - 1. Threatened species surveys

<Where targeted threatened species surveys were used to determine presence of the species, complete Table 14 (flora) or Table 15 (fauna)>

Table  Threatened species surveys for candidate flora species credit species on the subject land

| Common name | Scientific name | Threatened flora species surveys | Present | Further assessment required (BAM Subsections 5.2.5 and 5.2.6) |
| --- | --- | --- | --- | --- |
| Survey method (transects or grids)  | Timing of survey – within recommended period? (BAM-C / TBDC) | Effort (hours & no. people) |
|  |  |  | [ ]  Yes<Dates & times> | [ ]  No<Dates & times> |  | Choose an item. | Choose an item. |

<Provide additional details here including:

* a list of specific survey requirements for the species (BAM-C / TBDC), and guidelines published by the department, and how they have been addressed (referring to the methods described in Section 2.3.3)
* references to support survey technique/effort (including TBDC)
* reference site used and location
* factors that affected survey effort, ameliorative steps taken and evidence-based justification for survey methods if they deviate from methods recommended in survey guidelines>

Table  Threatened species surveys for candidate fauna species credit species on the subject land

| Common name | Scientific name | Threatened fauna species surveys | Present | Further assessment required (BAM Subsections 5.2.5 and 5.2.6) |
| --- | --- | --- | --- | --- |
| Survey method (e.g. harp trap, Elliott trap, bioacoustics, etc.) | Timing of survey – within recommended period? (BAM-C / TBDC) | Effort (hours & no. people) |
|  |  |  | [ ]  Yes<Dates & times> | [ ]  No<Dates & times> |  | Choose an item. | Choose an item. |

<Provide additional details here including:

* a list of specific survey requirements for the species (BAM-C / TBDC), and guidelines published by the department, and how they have been addressed (referring to the methods described in Section 2.4.3)
* references to support survey technique/effort (including TBDC)
* reference site used and location
* factors that affected survey effort, ameliorative steps taken and evidence-based justification for survey methods if they deviate from methods recommended in survey guidelines>
	+ - 1. Expert reports

<Where relevant, refer to expert reports used in place of threatened species surveys, including:

* provide justification for the use of an expert report
* identify the expert and confirm they are on the list of experts published by the department, or provide evidence that the expert was approved by the Secretary of the department or anyone authorised by the Secretary (NB approval must be sought prior to the BDAR being submitted)
* attach the expert report/s to the BDAR
* report outcomes in Table 12 and Table 13
* ensure expert reports have all relevant information required by the BAM including the species polygon and counts of individuals (if required)>
	+ - 1. More appropriate local data (where relevant)

<Where more appropriate local data has been used to assess habitat suitability, complete Table 16 for each of the affected species. Refer to Appendix G Decision-maker authorisation to use more appropriate local data>

Table  Use of more appropriate local data for habitat suitability

| Species | Amendments to species data | Local data source/s |
| --- | --- | --- |
|  |  |  |

* + - 1. Area or count, and location of suitable habitat for a species credit species (a species polygon)

<For species credit species either:

* assumed to be present, or
* determined to be present, or likely to use suitable habitat on the subject land (by survey, expert report or important habitat map)

include a species polygon (Figure 11) detailing the extent (area) of suitable habitat for the target species within the subject land:

* For flora species assessed by a count of individuals, provide the estimated number of individuals present and their location (or the location of a group of individuals) on the subject land. Apply the 30 metre buffer. Include a description of the method used to derive this number (i.e. threatened species survey or expert report) and evidence-based justification for the approach taken.
* For species assumed to be present, include a description of, and evidence-based justification for, the habitat constraints, features or microhabitats used to map the species polygon including reference to information in the TBDC for that species.
* For dual credit species with an important habitat map, include the entire area mapped on the important habitat map that occurs within the subject land.

In each species polygon, include a description of habitat condition and complete Table 17>

Refer to species survey guidelines published by the department and the TBDC for methods used to determine species polygons.

Table  Results for present species (recorded within the subject land)

| Common name | Scientific name | Biodiversity risk weighting (BAM-C & TBDC\*) | SAII entity\*\* (BAM-C & TBDC) | Habitat constraints / microhabitats present on the subject land / vegetation zone | Abundance – No. individual plants present on subject land (flora with unit of measure of count) | Extent (ha) of suitable habitat present on site (flora or fauna with unit of measure of area)  | TBDC species specific recommendations e.g. buffers, general comments(where relevant) | Habitat condition (vegetation integrity score for each vegetation zone in the polygon – area species only) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Choose an item. | Choose an item. |  |  |  |  |  |

\* There may be occasions when the TBDC has been updated with new listings or new information for a listed species that is not yet reflected in BAM-C. At all times, the data in the BAM-C is to be used in an assessment and is considered correct; however, the TBDC could provide more up to date data/information that should be considered as part of the assessment.

\*\* A list of SAII entities is also available on the department’s website.

Table  Results for EPBC Act listed species present (recorded within the subject land)

| Common name | Scientific name | Abundance – No. individual plants present on subject land (flora with unit of measure as count) | Extent (ha) of suitable habitat present on site (flora or fauna with unit of measure as area)  |
| --- | --- | --- | --- |
|  |  |  |  |

1. Identifying prescribed impacts

<Complete Table 19. If prescribed impacts are present, include these features on Figure 1 Site Map and Figure 2 Location Map. Once complete, cross-check this section with your proposed development description (Section 1.1) and landscape features (Section 3.2) to ensure you have: 1) fully described the site and all aspects of the proposed development in those sections, and 2) fully identified all potential prescribed impacts in this section. Where a potential prescribed impact is identified as not present, provide evidence-based justification>

Table  Prescribed impacts identified

| Feature  | Present | Description of feature characteristics and location | Threatened entities that use, are likely to use, or are part of the habitat feature. Where relevant, threatened species or fauna that are part of a TEC or EC, that are at risk of vehicle strike |
| --- | --- | --- | --- |
| Example: Karst, caves, crevices, cliffs, rocks or other geological features of significance | [x] Yes / [ ] No | Small cave in escarpment along southern edge of site. Entrance 50 cm in width | Southern myotis |
| Example: Vehicle strikes | [ ] Yes / [x] No | N/A | N/A |
| Karst, caves, crevices, cliffs, rocks or other geological features of significance  | [ ] Yes / [ ] No |  |  |
| Human-made structures | [ ] Yes / [ ] No |  |  |
| Non-native vegetation | [ ] Yes / [ ] No |  |  |
| Habitat connectivity | [ ] Yes / [ ] No |  |  |
| Waterbodies, water quality and hydrological processes | [ ] Yes / [ ] No |  |  |
| Wind turbine strikes (wind farm development only) | [ ] Yes / [ ] No |  |  |
| Vehicle strikes | [ ] Yes / [ ] No |  |  |

<Where a potential prescribed impact is identified for a threatened entity or their habitat:

a) document how the list of threatened entities was generated

b) describe the importance of each habitat feature to each threatened entity, including how the feature is used or likely to be used by each threatened entity and impacts on life cycle or movement patterns and provide evidence-based justification>

<Where a proposal may result in vehicle strike on threatened fauna or animals that are part of a TEC, identify potential impact locations on the Site Map (Figure 1) and use Table 19 to list the threatened fauna or animals that are part of a TEC and at risk>

<Where relevant (i.e. for a proposed wind farm development only), use Table 20 below to list protected animals that may use the development site as a flyway or migration route, including resident threatened aerial species, resident raptor species and nomadic and migratory species that are likely to fly over the proposed development site. Use Table 20 to document targeted survey technique, effort, timing and outcome for each species. Provide evidence-based justification in detail below Table 20>

Table  Prescribed impacts identified for proposed wind farm development

| Protected animals that may live in, or fly over the development site (including migratory pathways, breeding, feeding and resting habitat) | Targeted survey | Result – habitual flight path or likely habitat for the species? |
| --- | --- | --- |
| Technique | Effort (date & time) |
|  |  |  | Choose an item. |

<Provide additional details here including notes on factors that affected survey effort, ameliorative steps taken and evidence-based justification for survey methods if they deviate from methods recommended in survey guidelines>

<Where survey confirmed that the proposed development site is a habitual flight path for nomadic or migratory species, map the flight paths on Figure 1 Site Map and Figure 2 Location Map. Where survey confirmed that the proposed development site is likely habitat for resident threatened aerial species and raptor species, map the likely habitat on Figure 1 Site Map>

# Stage 2: Impact assessment (biodiversity values and prescribed impacts)

1. Avoid and minimise impacts
	* + 1. Avoid and minimise direct and indirect impacts

Project location

<Document and justify measures to locate the proposed development to avoid and minimise direct and indirect impacts on native vegetation, TECs, ECs, threatened species and their habitat>

Project design

<Document and justify measures to design the proposed development to avoid and minimise direct and indirect impacts on native vegetation, TECs, ECs, threatened species and their habitat>

* + - 1. Avoid and minimise prescribed impacts

Project location

<Document and justify measures to locate the proposed development to avoid and minimise prescribed impacts (as identified in Section 6)>

Project design

<Document and justify measures to design the proposed development to avoid and minimise prescribed impacts (as identified in Section 6)>

* + - 1. Other measures considered

<Document and justify measures evaluated but not selected for implementation>

* + - 1. Summary of measures to avoid and minimise impacts

<Complete Table 21 to document the measures to avoid and minimise direct, indirect and prescribed impacts>

Table  Avoidance and minimisation measures for direct, indirect and prescribed impacts

| Action | Outcome(Describe the outcome of implementing the measure, with reference to specific entities identified in Sections 4 and 5) | Timing | Responsibility |
| --- | --- | --- | --- |
|
| <For greater detail, include a reference to figures (maps)> |  |  |  |

1. Impact assessment
	* + 1. Direct impacts

Residual direct impacts

<Complete Table 22 to document impacts likely to occur on the subject land after steps taken to avoid and minimise impacts (refer to Figure 12). >

Table  Summary of residual direct impacts

| Direct impact (Describe the impact on PCT/TEC/EC or threatened species and their habitat) | BC Act status  | EPBC Act status | SAII entity | Project phase/timing of impact (e.g. construction, operation, rehabilitation) | Extent(ha, number of individuals) |
| --- | --- | --- | --- | --- | --- |
|  |  |  | Choose an item. |  |  |

Change in vegetation integrity score

<Complete Table 23 to document the change in vegetation integrity for residual direct impacts on native vegetation, TECs, threatened species and their habitat that were identified on the subject land>

Table  Impacts to vegetation integrity

| Vegetation zone | PCT ID | Management zone | Area (ha) | Before development | After development | Change |
| --- | --- | --- | --- | --- | --- | --- |
| Composition | Structure | Function | VI score | Composition | Structure | Function | VI score | Change in VI score |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

<For all vegetation integrity scores above zero (0) after development, describe and justify the proposed management actions to maintain the integrity of the remaining vegetation and prevent further decline. For example, if under-scrubbing is proposed for an APZ, describe and justify the proposed management actions to maintain the remaining trees without natural recruitment over time>

* + - 1. Indirect impacts

<Complete Table 24 to document residual indirect impacts (likely to occur on native vegetation, threatened entities and their habitat beyond the development footprint). Refer to Figure 12 Final impacts likely to occur on the subject land if indirect impacts are mapped>

Table  Summary of residual indirect impacts

| Indirect impact (Describe impact, e.g. transport of weeds and pathogens form the site to adjacent vegetation) | Impacted entities (PCT/threatened entity and their habitats and where relevant, EPBC Act listing) | Extent(ha or zone reference) | Frequency | Duration (long-term/ short-term/ medium-term) | Project phase/ timing of impact (e.g. construction, operation, rehabilitation) | Likelihood and consequences |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |

<Where possible, provide evidence-based justification for predictions of impacts. Discuss any limitations to data, assumptions and predictions about impacts on biodiversity>

* + - 1.
			2. Prescribed impacts

<Complete sections below for all prescribed impacts identified in Section 6. Delete sections for prescribed impacts not assessed as occurring. Justifications for predictions must be included. Discuss any limitations to data, assumptions and predictions>

Karst, caves, crevices, cliffs, rocks or other geological features of significance

Nature

Extent

Duration

Consequences

Human-made structures

Nature

Extent

Duration

Consequences

Non-native vegetation

Nature

Extent

Duration

Consequences

Habitat connectivity

Nature

Extent

Duration

Consequences

Waterbodies, water quality and hydrological processes

Nature

Extent

Duration

Consequences

Maximum predicted offset liability

<If the proposed development comprises longwall mining, calculate the maximum predicted offset liability as per the *Addendum to the NSW Biodiversity Offsets Policy for Major Projects: upland swamps impacted by longwall mining subsidence,* using predictions of impacts on water-dependant plant communities and the threatened species they support>

Wind turbine strikes

<For a proposed wind farm development only, complete Table 25 to document residual predicted impacts of wind turbine strikes on protected animals identified in Section 6. Provide evidence-based justification for predicted impacts. Refer to Figure 13 Wind turbine disturbance zone>

Table  Prescribed impacts – wind turbine strikes

| Protected animals that may use the development site as habitat or a flyway or migration route (identified in Section 6) | SAII entity | Predicted impact (e.g. bat or bird strike, barotrauma) | Rate & timing of impact per turbine per year | Consequences | Cumulative impact | Likelihood and nature of impacts on aerial species | Impact of avoidance behaviour |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Choose an item. |  |  |  |  |  |  |

Vehicle strikes

<Complete Table 26 to document residual predicted impacts of vehicle strike on: 1) threatened fauna, and 2) protected fauna that are part of a TEC, identified in Section 6. Provide evidence-based justification for predicted impacts >

Table  Residual prescribed impacts – vehicle strikes

| Threatened fauna or protected fauna that are part of a TEC that are at risk of vehicle strike (identified in Section 6) | SAII entity | Likelihood | Estimated vehicle strike rates | Consequences |
| --- | --- | --- | --- | --- |
|  | Choose an item. |  |  |  |

* + - 1. Mitigating residual impacts – management measures and implementation

<Complete Table 27 to detail proposed mitigation and management measures>

Table  Summary of proposed mitigation and management measures for residual impacts (direct, indirect and prescribed)

| Mitigation measure (specify if none proposed and ensure an adaptive management strategy is developed and addressed in Section 1.1) | Method/technique | Timing | Frequency | Responsibility | Likely efficacy (including risk of failure) | MNES (when relevant) |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |

<For each measure listed in Table 27, include further details on implementation in Table 28>

Table  <Name of measure> implementation

| Measure/action  | Monitoring and evaluation strategy(Data, frequency, timing and reporting) | Performance criteria (linked to monitoring and evaluation strategy) | Adaptive management threshold (trigger for adaptive management plan/actions) | Adaptive management response(when triggered) |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

Residual direct impacts require further assessment for SAII (BAM Section 9.1) and to determine a credit requirement (BAM Section 9.2). Residual indirect or prescribed impacts for which no mitigation measures are proposed require an adaptive management strategy (BAM Section 8.5). Other indirect and prescribed impacts that remain after avoid, minimise and mitigate have been applied, may be offset using additional biodiversity credits (above the credit requirement generated by the BAM-C for direct impacts) and/or other conservation measures.

* + - 1.
			2. Adaptive management strategy for uncertain impacts (where relevant)

<Address the following considerations to outline an adaptive management plan for uncertain impacts (indirect or prescribed), or remaining impacts where mitigation measures have not been proposed:

* identify impacts where no mitigation measures are proposed
* describe the impacts (PCT/ threatened entity/ indirect/ prescribed)
* indicate the likelihood of impact and details of the extent, both spatially and temporally
* document the baseline data required and monitoring methods to measure uncertain impacts including frequency, timing and reporting; include published data sources where relevant
* assign performance indicators that trigger management intervention and determine when the action is completed
* evaluate the risk of failure
* management actions proposed to reduce or eliminate the impact, which may include additional biodiversity credits to offset (above the credit requirement generated by the BAM-C for direct impacts), other conservation measures and/or mitigation measures. Document the decision pathway and justification for the proposed actions
* where an adaptive management strategy is not required for the proposal or some impacts of the proposal, justify why adaptive management strategies have not been prepared. Include details on the size and nature of the impacts and reasons why the severity and consequence of direct and indirect impacts are easily predicted and well understood>
1. Serious and irreversible impacts
	* + 1. Assessment for serious and irreversible impacts on biodiversity values

<Complete Table 29 to outline entities at risk of an SAII relevant to the proposed development>

Table  Entities at risk of an SAII

| Common name | Scientific name | Reason for inclusion in assessment  |
| --- | --- | --- |
|  |  | Choose an item. |

Additional impact assessment provisions for TECs at risk of an SAII

A **separate section** should be included **for each TEC at risk of an SAII**. Use Figure 14 Serious and irreversible impacts to show the extent of TECs at risk of an SAII within the subject land.

<Insert name of candidate TEC SAII entity>

##### 1. Actions to avoid and minimise direct and indirect impacts

<Refer to previous section of the BDAR on avoid and minimise impacts that relate to this TEC at risk of an SAII>

##### 2. Current status (excluding impacts of the proposal)

Table  Current status – <insert name of candidate TEC at risk of an SAII>

| Criteria | Data/ information | Data sources | Details of data deficiency, assumptions, reasons for low confidence in information (e.g. TBDC indicates data is unknown or deficient)  |
| --- | --- | --- | --- |
| Current total geographic extent (ha) of the TEC in NSW |  |  |  |
| Estimated reduction in geographic extent of the TEC since 1970 |  |  |  |
| **Extent of reduction in ecological function, describing the degree of environmental degradation or disruption to biotic processes (Principle 2)** indicated by factors listed in BAM Subsection 9.1.1(2.b.) |
| **Evidence of restricted geographic distribution (Principle 3) based on the TEC’s geographic range in NSW** |
| Extent of occurrence (ha) |  |  |  |
| Area of occupancy (ha) |  |  |  |
| Number of threat-defined locations |  |  |  |

Where the data is available (and it is not available in all cases) the department is working to provide it in the TBDC for each of the fields in Table 30. Decisions about where the data will be made available (BOAMS or TBDC) are pending progress on getting datasets and examples completed.

##### 3. Impact assessment

1. Table  Impact assessment – <insert name of candidate TEC at risk of an SAII>

| 1. Criteria
 | 1. Data/ information
 | 1. Data sources
 | 1. Details of data deficiency, assumptions, reasons for low confidence in information (e.g. TBDC indicates data is unknown or deficient)
 |
| --- | --- | --- | --- |
| 1. **Impact on the geographic extent of the TEC (Principles 1 and 3)**
 |
| 1. Area of TEC to be impacted by the proposal (ha)
 |  | 1. N/A
 | 1. N/A
 |
| 1. Area of TEC to be impacted by the proposal as a % of the current geographic extent in NSW (%)
 |  | 1. N/A
 | 1. N/A
 |
| 1. Direct/indirect impacts likely as a result of the proposal to contribute to loss of flora/fauna species characteristic of the TEC (BAM Subsection 9.1.1(4.a.ii.))
 |  | 1. N/A
 | 1. N/A
 |
| 1. **Impacts likely to contribute to further environmental degradation or disruption of biotic processes (Principle 2)**
 |
| 1. Remaining extent of isolated areas of TEC (ha)
 |  |  |  |
| 1. Average distance between remaining remnants – remnant is retained (m)
 |  |  |  |
| 1. Average distance between remaining remnants – remnant is removed (m)
 |  |  |  |
| 1. Estimated maximum dispersal distance of species associated with the TEC (km)
 |  |  |  |
| 1. Area to perimeter ratio of remaining remnants (ratio)
 |  |  |  |
| 1. **Vegetation integrity analysis**
 |
| 1. Vegetation Zone 1 (Composition score)
 |  | 1. N/A
 | 1. N/A
 |
| 1. Vegetation Zone 1 (Structure score)
 |  | 1. N/A
 | 1. N/A
 |
| 1. Vegetation Zone 1 (Function score)
 |  | 1. N/A
 | 1. N/A
 |

1. Greyed cells are not relevant/required because the assessment is the source of data.
2. <Where new information demonstrates that the principle identifying the TEC as at risk of an SAII is inaccurate, provide evidence-based justification>

Additional impact assessment provisions for threatened species at risk of an SAII

1. A **separate section** should be included **for each threatened species at risk of an SAII**. Use Figure 14 Serious and irreversible impacts to show the extent of TECs at risk of an SAII within the subject land.

<Name of candidate threatened species SAII entity>

##### 1. Actions to avoid and minimise direct and indirect impacts

1. Refer to previous section of the BDAR on avoid and minimise impacts that relate to this threatened species at risk of an SAII.

##### 2. Current status

Table  Current status – <insert name of candidate threatened species at risk of an SAII>

| Criteria | Data/ information | Data sources | Details of data deficiency, assumptions, reasons for low confidence in information (e.g. TBDC indicates data is unknown or deficient) |
| --- | --- | --- | --- |
| **Evidence of rapid decline (Principle 1)**  |
| Change in population size in NSW in the past 10 years or 3 generations (indicate whether as a direct estimate of the population or if indicated by an index or surrogate) |  |  |  |
| **Evidence of small population size (Principle 2)** |
| Current population size in NSW |  |  |  |
| Decline in species’ population size in 3 years or one generation |  |  |  |
| Number or percentage of mature individuals in each subpopulation or whether the species is likely to undergo extreme fluctuations |  |  |  |
| **Evidence of limited geographic range (Principle 3)**  |
| Extent of occurrence (ha) |  |  |  |
| Area of occupancy (ha) |  |  |  |
| Number of threat-defined locations  |  |  |  |
| Whether the species’ population is likely to undergo extreme fluctuations |  |  |  |

Where the data is available (and it is not available in all cases) the department is working to provide it in the TBDC for each of the fields in Table 32 with the exception of ‘Number or percentage of mature individuals in each subpopulation’. Decisions about where the data will be made available (BOAMS or TBDC) are pending progress on getting datasets and examples completed. In the interim, please submit data requests using the [BOS enquiry form](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/about-the-biodiversity-offsets-scheme/biodiversity-offsets-scheme-support).

##### 3. Impacts assessment

Table  Impacts assessment – <insert name of threatened species at risk of an SAII>

| Impact  | Data / information | Data sources | Details of data deficiency, assumptions or reasons for low confidence in information (e.g. TBDC indicates data is unknown or deficient) |
| --- | --- | --- | --- |
| Number of individuals (mature and immature) present in the subpopulation on the subject land |  |  |  |
| Number of individuals (mature and immature) present as a percentage of total NSW population (%) |  |  |  |
| Number of individuals (mature and immature) to be impacted by the proposal |  |  |  |
| Individuals (mature and immature) to be impacted by the proposal as a percentage of total NSW population (%) |  |  |  |
| Area of habitat to be impacted (ha) (for species measured by area only) |  |  |  |
| Area of the species’ geographic range to be impacted by the proposal (ha) |  |  |  |
| Area of the species’ geographic range to be impacted as a percentage of the total area or extent of occupancy (%) |  |  |  |
| Individuals impacted | Choose an item. |  |  |
| Viability of a fragmented population (see below) |  |  |  |

<If the species’ population will become fragmented and some individuals are likely to remain on the site or continue to use habitat remaining on the site, provide evidence-based justification for the viability of the remaining population, addressing BAM requirements>

<Where new information demonstrates that the principle identifying the species as at risk of an SAII is inaccurate, provide evidence-based justification>

1.
2. Impact summary
	* + 1. Determine an offset requirement for impacts

Impacts on native vegetation and TECs or ECs (ecosystem credits)

<Use Table 34 to identify impacts on native vegetation and TECs or ECs that do not require an offset (as per BAM Subsection 9.2.1(3.)). Use Table 35 to identify impacts that require an offset (as per BAM Subsection 9.2.1(1.)). Refer to Figure 15 Thresholds for assessment and offsetting impacts>

Table  Impacts that do not require offset – ecosystem credits

| Vegetation zone | PCT name | TEC | Impact area (ha)  | TEC association | Entity at risk of an SAII? | Current VI score |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | Choose an item. |  |

Table  Impacts that require an offset – ecosystem credits

| Vegetation zone | PCT name | TEC | Impact area (ha)  | Current VI score | Future VI score | Change in VI score | Biodiversity risk weighting | Number of ecosystem credits required |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |
| **Total credits** |  |

Impacts on threatened species and their habitat (species credits)

<Use Table 36 to identify impacts on threatened species (species credits) that require an offset (as per BAM Subsection 9.2.2(2.))>

Table  Impacts that require an offset – species credits

| Common name | Scientific name | BC Act status | EPBC Act status | Loss of habitat (ha) or individuals | Biodiversity risk weighting | Number of species credits required |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
| **Total credits** |  |

Indirect and prescribed impacts

Indirect and prescribed impacts that remain after measures to avoid, minimise and mitigate have been applied, may be offset using additional biodiversity credits (above the credit requirement generated by the BAM‑C for direct impacts) and/or other conservation measures. Specify the proposed offset for each of these impacts by completing Table 37 below.

Table  Summary of proposed offsets for residual indirect and prescribed impacts

| Residual indirect or prescribed impact (identified in Table 28 after mitigation) | Proposed offset(additional biodiversity credit requirement and/or other conservation measures) |
| --- | --- |
|  |  |

<Document and justify the approach used to determine the offset>

#### Other scenarios

If a proponent proposes to fund a biodiversity conservation action instead of, or in combination with, the retirement of species credits, outline the details here (see BAM Sections 10(3.b.ii) and 10.1(5.)). Refer to *Ancillary rules: Biodiversity conservation actions.*

If the BDAR is for a major project proposing ecological rehabilitation as a measure to offset or compensate for impacts under a mining lease, provide details here (clause 6.8 of the BC Regulation). Refer to *Ancillary rules for mine site ecological rehabilitation* to be published by the department.

* + - 1. Impacts that do not need further assessment

<Use Table 38 to identify impacts that do not need further assessment for ecosystem credits (as per BAM Section 9.3(1–2.). Refer to Figure 15 Thresholds for assessment and offsetting impacts>

Table  Impacts that do not need further assessment for ecosystem credits

| Impact | Location within subject land | Justification why no further assessment is required |
| --- | --- | --- |
|  |  |  |

1. Biodiversity credit report

<Present information required on the ecosystem and species credits and matching credit profiles in the relevant table below. Refer to Appendix H Credit reports>

The BAM-C credit report must identify the numbers and classes of biodiversity credits required to be retired in accordance with the like-for-like requirements of the offset rules and those that could be retired in accordance with the variation rules. The BDAR must be submitted to the decision-maker within 14 days of the date the BAM-C credit report was finalised.

* + - 1. Ecosystem credits

Table  Ecosystem credit class and matching credit profile

| Ecosystem credit | Attributes shared with matching credits  |
| --- | --- |
| PCT name  | PCT vegetation class | PCT vegetation formation | Associated TEC or EC | Offset trading group (BAM Section 10.2, Tables 4 & 5) | Hollow bearing trees present? | IBRA subregion (in which proposal is located) |
|  |  |  |  |  |  | Choose an item. |  |

* + - 1. Species credits

Table  Species credit class and matching credit profile

| Species credit | Attributes shared with matching credits |
| --- | --- |
| Name of threatened species | Kingdom | BC Act status | EPBC Act status | IBRA region |
|  |  |  |  |  |  |

1. References

<Insert references for all literature cited within the document>

1. Figures

Figure  Site Map

The assessor must prepare a Site Map based on digital aerial photography (such as ADS40 imagery) or the best available imagery, showing (at a recommended scale of 1:1000 or finer):

* the boundary of the subject land
* the cadastre boundaries within the subject land
* landscape features identified in BAM Subsection 3.1.3, including:
	+ IBRA bioregions and subregions
	+ rivers, streams, estuaries and wetlands
	+ habitat connectivity
	+ karst, caves, crevices, cliffs, rocks and other geological features of significance
	+ areas of outstanding biodiversity value
	+ NSW (Mitchell) landscapes
	+ additional features (if relevant).

Figure  Location Map

The assessor must prepare a Location Map based on digital aerial photography (such as ADS40 imagery) or the best available imagery, showing (at a recommended scale of 1:1000 or finer):

* the boundary of the subject land
* the assessment area
* landscape features identified in BAM Subsection 3.1.3, including:
	+ IBRA bioregions and subregions
	+ rivers, streams, estuaries and wetlands
	+ habitat connectivity
	+ karst, caves, crevices, cliffs, rocks and other geological features of significance
	+ areas of outstanding biodiversity value
	+ NSW (Mitchell) landscapes
	+ additional features (if relevant)
	+ additional relevant detail, such as local government area boundaries or other base data relevant at this scale
	+ all areas of native vegetation cover within the assessment area, including all areas of planted native vegetation identified in accordance with BAM Appendix D.

Figure  Development layout

Show the following:

* the boundary of the subject land
* development layout (as per description of the proposed development).

Figure  Biodiversity Values Map

Show the following:

* the boundary of the subject land
* the Biodiversity Values Map results.

Figure  Excluded impacts

Show the following:

* the boundary of the subject land
* areas identified as having excluded impacts (i.e. category 1 – exempt land).

Figure  Field survey locations

Show the following:

* the boundary of the subject land
* location of the plot-based vegetation survey
* location of the vegetation integrity survey plots, including:
	+ location of 50 metre transect
	+ location of 20x20 metre plot
	+ plot numbering (as per field datasheet and data entered into the BAM-C)
	+ PCTs
	+ survey tracks
* targeted threatened species survey location (by survey type).

Figure  Native vegetation extent

The assessor must map the extent of native vegetation on the subject land, using digital aerial photography (such as ADS40 imagery) or the best available imagery of the subject land, including:

* the boundary of the subject land
* areas of native vegetation
* areas of non-native vegetation
* cleared land
* if present, areas of vegetation that are visible on the aerial imagery but have subsequently been cleared.

The map should be at a scale consistent with the Site Map and the Location Map (recommended scale of 1:1000 or finer). Where the map scale exceeds 1:10,000, the Site Map should be split into separate maps that capture the entire area.

Figure  Plant community types

Show the following:

* the boundary of the subject land
* verified PCTs (or most likely PCTs as per BAM Subsection 4.2.2) within the subject land.

Figure  Threatened ecological communities and ecological communities

The assessor must include a map of TEC and EC distribution within the subject land (where relevant).

Show the following:

* the boundary of the subject land
* TECs and ECs within the subject land.

Figure  Vegetation zones

Show the following:

* the boundary of the subject land
* vegetation zones within the subject land
* patch sizes within the subject land.

Figure  Candidate species credit species records and species polygons

Show the following:

* the boundary of the subject land
* species polygons within the subject land
* where relevant, habitat features that have been used to determine species polygons (e.g. hollow bearing trees, waterways)
* threatened species locations of all individuals of each candidate species credit species (or evidence thereof, e.g. koala scats, frog calls, etc.)
* listing status – BC/EPBC Act.

Ensure the records and polygons for each species are clear, i.e. insert a map for each species if necessary to achieve this.

Figure  Final impacts likely to occur on the subject land

Show the following:

* the boundary of the subject land
* the extent of direct impacts, including management zones
* the extent of indirect impacts (if mapped)
* vegetation zones.

Figure  Wind turbine disturbance zone

Insert a map of the disturbance zone around the proposed wind turbines and for species likely to be affected, the significant landscape and habitat features within that zone.

Figure  Serious and irreversible impacts

Show the following:

* the boundary of the subject land
* the extent or location of SAII entities.

Figure  Thresholds for assessing and offsetting impacts

Show the following:

* the boundary of the subject land
* areas not requiring further assessment (e.g. cleared land, exotic vegetation)
* areas not requiring an offset (as per BAM Subsection 9.2.1(3.))
* areas requiring an offset (as per BAM Subsection 9.2.1(1.))
* the extent or location of SAII entities.

Appendix A: BDAR requirements compliance

<Complete Table 41 to specify where each component of the BDAR minimum information requirements has been addressed in accordance with BAM Appendix K>

The operational manuals (Stage 1 and Stage 2) provide further operational guidance for the preparation of a BDAR and are companion documents to the BAM. In preparing BDARs, assessors should read the operational manuals in conjunction with the BAM. Some best practice items outlined in the operational manuals that are not reflected in BAM Appendix K have been added in red within Table 41.

Table  Assessment of compliance with BDAR minimum information requirements

| BDAR section | BAM ref. | BAM requirement | Page reference(s) in the BDAR |
| --- | --- | --- | --- |
| Introduction | Chapters 2 and 3 | **Information** |  |
|  |  | Introduction to the biodiversity assessment including: | – |
|  |  | [ ]  brief description of the proposal | <1.1.1> |
|  |  | [ ]  identification of subject land boundary, including:[ ]  operational footprint[ ]  construction footprint indicating clearing associated with temporary/ancillary construction facilities and infrastructure | <1.1.3> |
|  |  |  |  |
|  |  |  |  |
|  |  | [ ]  general description of the subject land | <1.1.3> |
|  |  | [ ]  sources of information used in the assessment, including reports and spatial data | <1.5> |
|  |  | [ ]  identification and justification for entering the BOS  | <1.2> |
|  |  | **Maps and tables** |  |
|  |  | [ ]  Map of the subject land boundary showing the final proposal footprint, including the construction footprint for any clearing associated with temporary/ancillary construction facilities and infrastructure | <Figure 1> |
| Landscape | Sections 3.1 and 3.2, Appendix E | **Information** |  |
|  |  | Identification of site context components and landscape features, including: | – |
|  |  | [ ]  general description of subject land topographic and hydrological setting, geology and soils | <1.1.3> |
|  |  | [ ]  per cent native vegetation cover in the assessment area (as described in BAM Section 3.2) |  |
|  |  | [ ]  IBRA bioregions and subregions (as described in BAM Subsection 3.1.3(2.)) | <3.2.1> |
|  |  | [ ]  rivers and streams classified according to stream order (as described in BAM Subsection 3.1.3(3.) and Appendix E) | <3.2.2> |
|  |  | [ ]  wetlands within, adjacent to and downstream of the site (as described in BAM Subsection 3.1.3(3.)) | <3.2.2> |
|  |  | [ ]  connectivity of different areas of habitat (as described in BAM Subsection 3.1.3(5–6.)) | <3.2.3> |
|  |  | [ ]  karst, caves, crevices, cliffs, rocks and other geological features of significance and for vegetation clearing proposals, soil hazard features (as described in BAM Subsections 3.1.3(7.) and 3.1.3(12.)) | <3.2.4> |
|  |  | [ ]  areas of outstanding biodiversity value occurring on the subject land and assessment area (as described in BAM Subsection 3.1.3(8–9.)) | <3.2.5> |
|  |  | [ ]  any additional landscape features identified in any SEARs for the proposal | <3.2.7> |
|  |  | [ ]  NSW (Mitchell) landscape on which the subject land occurs | <3.2.6> |
|  |  | [ ]  details of field reconnaissance undertaken to confirm the extent and condition of landscape features and native vegetation cover (as described in Operational Manual Stage 1 Section 2.4) | <2.1> |
|  |  | **Maps and tables** |  |
|  |  | [ ]  Site Map[ ]  Property boundary[ ]  Boundary of subject land[ ]  Cadastre of subject land (including labelling of Lot and DP or section plan if relevant)[ ]  Landscape features identified in BAM Subsection 3.1.3 | <Figure 1> |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  | [ ]  Location Map[ ]  Digital aerial photography at 1:1,000 scale or finer[ ]  Boundary of subject land[ ]  Assessment area (i.e. the subject land and either 1500 m buffer area or 500 m buffer for linear development)[ ]  Landscape features identified in BAM Subsection 3.1.3[ ]  Additional detail (e.g. local government area boundaries) relevant at this scale | <Figure 2> |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  | Landscape features identified in BAM Subsection 3.1.3 and to be shown on the Site Map and/or Location Map include: | – |
|  |  | [ ]  IBRA bioregions and subregions[ ]  rivers, streams and estuaries[ ]  wetlands and important wetlands[ ]  connectivity of different areas of habitat[ ]  karst, caves, crevices, cliffs, rocks and other geological features of significance and if required, soil hazard features[ ]  areas of outstanding biodiversity value occurring on the subject land and assessment area[ ]  any additional landscape features identified in any SEARs for the proposal[ ]  NSW (Mitchell) landscape on which the subject land occurs | <Figure 1 & Figure 2> |
|  |  |  |  |
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|  |  |  |  |
|  |  |  |  |
|  |  | **Data** |  |
|  |  | [ ]  All report maps as separate jpeg files | – |
|  |  | Individual digital shape files of: | – |
|  |  | [ ]  subject land boundary | – |
|  |  | [ ]  assessment area (i.e. subject land and 1500 m buffer area) boundary | – |
|  |  | [ ]  cadastral boundary of subject land | – |
|  |  | [ ]  areas of native vegetation cover | – |
|  |  | [ ]  landscape features | – |
| Native vegetation | Chapter 4, Appendix A and Appendix H | **Information** |  |
|  |  | [ ]  Identify native vegetation extent within the subject land, including cleared areas and evidence to support differences between mapped vegetation extent and aerial imagery (as described in BAM Section 4.1(1–3.) and Subsection 4.1.1) | <4.1 & Figure 7> |
|  |  | [ ]  Provide justification for all parts of the subject land that do not contain native vegetation (as described in BAM Subsection 4.1.2) | <4.1.2> |
|  |  | [ ]  Review of existing information on native vegetation including references to previous vegetation maps of the subject land and assessment area (described in BAM Section 4.1(3.) and Subsection 4.1.1) | <2.2.2> |
|  |  | [ ]  Describe the systematic field-based floristic vegetation survey undertaken in accordance with BAM Section 4.2 | <2.2.3> |
|  |  | [ ]  Where relevant, describe the use of more appropriate local data, provide reasons that support the use of more appropriate local data and include the written confirmation from the decision-maker that they support the use of more appropriate local data (as described in BAM Subsection 1.4.2 and Appendix A) | <Insert relevant reference & Appendix G> |
|  |  | For each PCT within the subject land, describe: | – |
|  |  | [ ]  PCT name and ID | <4.1 & Figure 7> |
|  |  | [ ]  vegetation class | <4.1.2> |
|  |  | [ ]  extent (ha) within subject land | <2.2.2> |
|  |  | [ ]  evidence used to identify a PCT including any analyses undertaken, references/sources, existing vegetation maps (BAM Section 4.2(1–3.)) | <2.2.3> |
|  |  | [ ]  plant species relied upon for identification of the PCT and relative abundance of each species | <Insert relevant reference and Appendix G> |
|  |  | [ ]  if relevant, TEC status including evidence used to determine vegetation is the TEC (BAM Subsection 4.2.2(1–2.)) | <4.1 & Figure 7> |
|  |  | [ ]  estimate of per cent cleared value of PCT (BAM Subsection 4.2.1(5.)) | <4.1.2> |
|  |  | Describe the vegetation integrity assessment of the subject land, including: | – |
|  |  | [ ]  identification and mapping of vegetation zones (as described in BAM Subsection 4.3.1) | <4.4 & Figure 10> |
|  |  | [ ]  description of vegetation zones within the subject land (as described in Operational Manual Stage 1 Table 2 and Subsection 3.3.2) | <4.4 & Figure 10> |
|  |  | [ ]  area (ha) of each vegetation zone | <4.4> |
|  |  | [ ]  assessment of patch size (as described in BAM Subsection 4.3.2) | <4.4> |
|  |  | [ ]  survey effort (i.e. number of vegetation integrity survey plots) as described in BAM Subsection 4.3.4(1–2.) | <4.5.1> |
|  |  | [ ]  use of relevant benchmark data from BioNet Vegetation Classification (as described in BAM Subsection 4.3.3(5.)) | <4.5.3> |
|  |  | Where use of more appropriate local benchmark data is proposed (as described in BAM Subsection 1.4.2, BAM Subsection 4.3.3(5.) and BAM Appendix A): | – |
|  |  | [ ]  identify the PCT or vegetation class for which local benchmark data will be applied[ ]  identify published sources of local benchmark data (if benchmarks obtained from published sources)[ ]  describe methods of local benchmark data collection (if reference plots used to determine local benchmark data) | <4.5.3> |
|  |  |  |  |
|  |  |  |  |
|  |  | [ ]  provide justification for use of local data rather than BioNet Vegetation Classification benchmark values | <4.5.3> |
|  |  | [ ]  provide written confirmation from the decision-maker that they support the use of local benchmark data | <Appendix G> |
|  |  | **Maps and tables** |  |
|  |  | [ ]  Map of native vegetation extent within the subject land at scale not greater than 1:10,000 including identification of all areas of native vegetation including areas that are ground cover only, cleared areas (as described in BAM Section 4.1(1–3.)) and all parts of the subject land that do not contain native vegetation (BAM Subsection 4.1.2) | <Figure 7> |
|  |  | [ ]  Map of PCTs within the subject land (as described in BAM Section 4.2(1.)) | <Figure 8> |
|  |  | [ ]  Map of vegetation zones within the subject land (as described in BAM Subsection 4.3.1) | <Figure 10> |
|  |  | [ ]  Map the location of floristic vegetation survey plots and vegetation integrity survey plots relative to PCT boundaries | <Figure 6> |
|  |  | [ ]  Map of TEC distribution on the subject land and table of TEC listing, status and area (ha) | <Figure 9 & Table 5> |
|  |  | [ ]  Map of patch size locations for each native vegetation zone and table of patch size areas (as described in BAM Subsection 4.3.2) | <Figure 10 & Table 6> |
|  |  | Table of current vegetation integrity scores for each vegetation zone within the site and including: | – |
|  |  | [ ]  composition condition score[ ]  structure condition score[ ]  function condition score[ ]  presence of hollow bearing trees | <Table 7> |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  | **Data** |  |
|  |  | [ ]  All report maps as separate jpeg files | – |
|  |  | [ ]  Plot field data (MS Excel format) |  |
|  |  | [ ]  Plot field datasheets | <Appendix F> |
|  |  | Digital shape files of: | – |
|  |  | [ ]  PCT boundaries within subject land | – |
|  |  | [ ]  TEC boundaries within subject land | – |
|  |  | [ ]  vegetation zone boundaries within subject land | – |
|  |  | [ ]  floristic vegetation survey and vegetation integrity plot locations | – |
| Threatened species | Chapter 5 | **Information** |  |
|  |  | Identify ecosystem credit species likely to occur on the subject land, including: | – |
|  |  | [ ]  list of ecosystem credit species derived from the BAM-C (as described in BAM Subsection 5.1.1 and Section 5.2(1.)) | < > |
|  |  | [ ]  justification and supporting evidence for exclusion of any ecosystem credit species based on geographic limitations, habitat constraints or vagrancy (as described in BAM Subsections 5.2.1 and 5.2.2) | <5.1.1> |
|  |  | [ ]  justification for addition of any ecosystem credit species to the list | <5.1.1> |
|  |  | Identify species credit species likely to occur on the subject land, including: | – |
|  |  | [ ]  list of species credit species derived from the BAM-C (as described in BAM Subsection 5.1.1) | <Table 10 & Table 11> |
|  |  | [ ]  justification and supporting evidence for exclusions based on geographic limitations, habitat constraints or vagrancy (as described in BAM Subsections 5.2.1 and 5.2.2) | <5.1.2> |
|  |  | [ ]  justification and supporting evidence for exclusions based on degraded habitat constraints and/or microhabitats on which the species depends (as described in BAM Subsection 5.2.2) | <5.1.2> |
|  |  | [ ]  justification for addition of any species credit species to the list | <5.1.2> |
|  |  | From the list of candidate species credit species, identify: | – |
|  |  | [ ]  species assumed present within the subject land (if relevant) (as described in BAM Subsection 5.2.4(2.a.))[ ]  species present within the subject land on the basis of being identified on an important habitat map for a species (as described in BAM Subsection 5.2.4(2.d.))[ ]  species for which targeted surveys are to be completed to determine species presence (BAM Subsection 5.2.4(2.b.))[ ]  species for which an expert report is to be used to determine species presence (BAM Subsection 5.2.4(2.c.)) | <Table 12 & Table 13> |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  | Present the outcomes of species credit species assessments from: | – |
|  |  | [ ]  threatened species survey (as described in BAM Section 5.2.4) | <Table 14 & Table 15> |
|  |  | [ ]  expert reports (if relevant) including justification for presence of the species and information used to make this determination (as described in BAM Subsection 5.2.4, Section 5.3, Box 3) | <5.4> |
|  |  | Where survey has been undertaken include detailed information on: | – |
|  |  | [ ]  survey method and effort (as described in BAM Section 5.3) | <Table 14 & Table 15> |
|  |  | [ ]  justification of survey method and effort (e.g. citation of peer-reviewed literature) if approach differs from the department’s taxa-specific survey guides or where no relevant guideline has been published | <5.3> |
|  |  | [ ]  timing of survey in relation to requirements in the TBDC or the department’s taxa-specific survey guides. Where survey was undertaken outside these guides include justification for the timing of surveys | <Table 14 & Table 15 & 5.3> |
|  |  | [ ]  survey personnel and relevant experience | <Declarations ii> |
|  |  | [ ]  describe any limitations to surveys and how these were addressed/overcome | <5.3> |
|  |  | Where an expert report has been used in place of survey (as described in BAM Section 5.3, Box 3), include: | – |
|  |  | [ ]  justification of the use of an expert report[ ]  identify the expert, provide evidence of their expert credentials and departmental approval of expert status[ ]  all requirements of Box 3 have been addressed in the expert report | <5.4> |
|  |  |  |  |
|  |  |  |  |
|  |  | Where use of local data is proposed (BAM Subsection 1.4.2): | – |
|  |  | [ ]  identify relevant species[ ]  identify data to be amended[ ]  identify source of information for local data, e.g. published literature, additional survey data, etc.[ ]  justify use of local data in preference to VIS Classification or TBDC data | <5.5> |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  | [ ]  provide written confirmation from the decision-maker that they support the use of local data | <Appendix G> |
|  |  | Species polygon completed for species credit species present within the subject land (assumed present or determined on the basis of survey, expert report or important habitat map) ensuring that: | – |
|  |  | [ ]  the unit of measure for each species is documented | <Table 17 & Table 18> |
|  |  | for species assessed by area: | – |
|  |  | [ ]  the polygon includes the extent of suitable habitat for the target species within the subject land (as described in BAM Subsection 5.2.5) | <Figure 11> |
|  |  | [ ]  a description of, and evidence-based justification for, the habitat constraints, features or microhabitats used to map the species polygon including reference to information in the TBDC for that species and any buffers applied | <5.6> |
|  |  | for species assessed by counts of individuals: | – |
|  |  | [ ]  the number of individual plants present on the subject land (as described in BAM Subsection 5.2.5(3.)) | <5.6> |
|  |  | [ ]  the method used to derive this number (i.e. threatened species survey or expert report) and evidence-based justification for the approach taken | <5.6> |
|  |  | [ ]  the polygon includes all individuals located on the subject land with a buffer of 30 m around the individuals or groups of individuals on the subject land | <Figure 11> |
|  |  | [ ]  Identify the biodiversity risk weighting for each species credit species identified as present within the subject land (as described in BAM Section 5.4) | <Table 17 & Table 18> |
|  |  | **Maps and tables** |  |
|  |  | [ ]  Table showing ecosystem credit species in accordance with BAM Subsection 5.1.1, and identifying: |  |
|  |  | [ ]  the ecosystem credit species removed from the list | <Table 9> |
|  |  | [ ]  the sensitivity to gain class of each species | <Table 9> |
|  |  | [ ]  Table detailing species credit species in accordance with BAM Section 5.2 and identifying: | <Table 10 & Table 11> |
|  |  | [ ]  the species credit species removed from the list of species because the species is considered vagrant, out of geographic range or the habitat or microhabitat features are not present | <Table 10 & Table 11> |
|  |  | [ ]  the candidate species credit species not recorded on the subject land as determined by targeted survey, expert report or important habitat map | <Table 12 & Table 13> |
|  |  | [ ]  Table detailing species credit species recorded or assumed as present within the subject land, habitat constraints or microhabitats associated with the species, counts of individuals (flora)/extent of suitable habitat (flora and fauna) (as described in BAM Subsection 5.2.6) and biodiversity risk weighting (BAM Section 5.4) | <5.6 & Table 17 & Table 18> |
|  |  | [ ]  Map indicating the GPS coordinates of all individuals of each species recorded within the subject land and the species polygon for each species (as described in BAM Subsection 5.2.5) | <Figure 11> |
|  |  | **Data** |  |
|  |  | [ ]  Digital shape files of suitable habitat identified for survey for each candidate species credit species | – |
|  |  | [ ]  Survey locations including GPS coordinates of any plots, transects, grids |  |
|  |  | [ ]  Digital shape files of each species polygon including GPS coordinates of located individuals | – |
|  |  | [ ]  Species polygon map in jpeg format | – |
|  |  | [ ]  Expert reports and any supporting data used to support conclusions of the expert report |  |
|  |  | [ ]  Field datasheets detailing survey information including prevailing conditions, date, time, equipment used, etc. |  |
| Prescribed impacts | Chapter 6 | **Information** |  |
|  |  | Identify potential prescribed biodiversity impacts on threatened entities, including: | – |
|  |  | [ ]  karst, caves, crevices, cliffs, rocks and other geological features of significance (as described in BAM Subsection 6.1.1)[ ]  occurrences of human-made structures and non-native vegetation (as described in BAM Subsection 6.1.2)[ ]  corridors or other areas of connectivity linking habitat for threatened entities (as described in BAM Subsection 6.1.3)[ ]  waterbodies or any hydrological processes that sustain threatened entities (as described in BAM Subsection 6.1.4) | <Table 19> |
|  |  |  |  |
|  |  | [ ]  protected animals that may use the proposed wind farm development site as a flyway or migration route (as described in BAM Subsection 6.1.5) | <Table 20> |
|  |  |  |  |
|  |  | [ ]  where the proposed development may result in vehicle strike on threatened fauna or on animals that are part of a threatened ecological community (as described in BAM Subsection 6.1.6) | <Table 19> |
|  |  |  |  |
|  |  | [ ]  Identify a list of threatened entities that may be dependent upon or may use habitat features associated with any of the prescribed impacts |  |
|  |  | [ ]  Describe the importance of habitat features to the species including, where relevant, impacts on life cycle or movement patterns (e.g. Subsection 6.1.3) | <6> |
|  |  | Where the proposed development is for a wind farm: | – |
|  |  | [ ]  identify a candidate list of protected animals that may use the development site as a flyway or migration route, including: resident threatened aerial species, resident raptor species and nomadic and migratory species that are likely to fly over the proposal area (as described in BAM Subsection 6.1.5) | <Table 20> |
|  |  | [ ]  provide details of targeted survey for candidate species of wind farm developments undertaken in accordance with BAM Subsection 6.1.5(2–3.) | <Table 20> |
|  |  | [ ]  predict the habitual flight paths for nomadic and migratory species likely to fly over the subject land and map the likely habitat for resident threatened aerial and raptor species (BAM Subsection 6.1.5(4.)) | <Figure 1 & Figure 2> |
|  |  | Where the proposal may result in vehicle strike: | – |
|  |  | [ ]  identify a list of threatened fauna or protected fauna species that are part of a TEC and at risk of vehicle strike due to the proposal | <Table 19> |
|  |  | **Maps and tables** |  |
|  |  | [ ]  Map showing location of any prescribed impact features (i.e. karst, caves, crevices, cliffs, rocks, human-made structures, etc.) | <Figure 1 & Figure 2> |
|  |  | [ ]  Map showing location of potential vehicle strike locations | <Figure 1> |
|  |  | [ ]  Maps of habitual flight paths for nomadic and migratory species likely to fly over the site and maps of likely habitat for threatened aerial species resident on the site (for wind farm developments only) | <Figure 1 & Figure 2> |
|  |  | **Data** |  |
|  |  | [ ]  Digital shape files of prescribed impact feature locations | – |
|  |  | [ ]  Prescribed impact features map in jpeg format | – |
| Avoid and minimise impacts | Chapter 7 | **Information** |  |
|  |  | Demonstration of efforts to avoid and minimise impacts on biodiversity values (including prescribed impacts) associated with the proposal location in accordance with Chapter 7, including an analysis of alternative: | – |
|  |  | [ ]  modes or technologies that would avoid or minimise impacts on biodiversity values and justification for selecting the proposed mode or technology | <7.1.2 & 7.2.2> |
|  |  | [ ]  routes that would avoid or minimise impacts on biodiversity values and justification for selecting the proposed route | <7.1.1 & 7.2.1> |
|  |  | [ ]  alternative locations that would avoid or minimise impacts on biodiversity values and justification for selecting the proposed location | <7.1.1 & 7.2.1> |
|  |  | [ ]  alternative sites within a property on which the proposal is located that would avoid or minimise impacts on biodiversity values and justification for selecting the proposed site | <7.1.1 & 7.2.1> |
|  |  | [ ]  Describe efforts to avoid and minimise impacts (including prescribed impacts) to biodiversity values through proposal design (as described in BAM Sections 7.1 and 7.2) | <7.1.2 & 7.2.2> |
|  |  | [ ]  Identification of any other site constraints that the proponent has considered in determining the location and design of the proposal (as described in BAM Subsection 7.2.1(3.)) | <7> |
|  |  | [ ]  Detail measures or options considered but not implemented because they are not feasible and/or practical (e.g. due to site constraints) | <7.3> |
|  |  | **Maps and tables** |  |
|  |  | [ ]  Table of measures to be implemented to avoid and minimise the impacts of the proposal, including action, outcome, timing and responsibility | <Table 21> |
|  |  | [ ]  Map of alternative footprints considered to avoid or minimise impacts on biodiversity values; and of the final proposal footprint, including construction and operation | <Figure 3> |
|  |  | [ ]  Maps demonstrating indirect impact zones where applicable | <Figure 12> |
|  |  | **Data** |  |
|  |  | Digital shape files of: | – |
|  |  | [ ]  alternative and final proposal footprint | – |
|  |  | [ ]  direct and indirect impact zones | – |
|  |  | [ ]  Maps in jpeg format | – |
| Assessment of impacts | Chapter 8, Sections 8.1 and 8.2 | **Information** |  |
|  |  | [ ]  Determine the impacts on native vegetation and threatened species habitat, including a description of direct impacts of clearing of native vegetation, threatened ecological communities and threatened species habitat (as described in BAM Section 8.1) | <Table 22> |
|  |  | Assessment of indirect impacts on vegetation and threatened species and their habitat including (as described in BAM Section 8.2): | – |
|  |  | [ ]  description of the nature, extent, frequency, duration and timing of indirect impacts of the proposal | <Table 24> |
|  |  | [ ]  documenting the consequences to vegetation and threatened species and their habitat including evidence-based justifications | <8.2> |
|  |  | [ ]  reporting any limitations or assumptions, etc. made during the assessment | <8.2> |
|  |  | [ ]  identification of the threatened entities and their habitat likely to be affected | <Table 24> |
|  |  | Assessment of prescribed biodiversity impacts (as described in BAM Section 8.3) including: | – |
|  |  | assessment of the nature, extent frequency, duration and timing of impacts on the habitat of threatened species or ecological communities associated with: | – |
|  |  | [ ]  karst, caves, crevices, cliffs, rocks and other features of geological significance | <8.3.1> |
|  |  | [ ]  human-made structures | <8.3.2> |
|  |  | [ ]  non-native vegetation | <8.3.3> |
|  |  | [ ]  connectivity of different areas of habitat of threatened species that facilitates the movement of those species across their range | <8.3.4> |
|  |  | [ ]  movement of threatened species that maintains their life cycle | <8.3.4> |
|  |  | [ ]  water quality, waterbodies and hydrological processes that sustain threatened species and threatened ecological communities | <8.3.5> |
|  |  | [ ]  assessment of the impacts of wind turbine strikes on protected animals | <1.1.1> |
|  |  | [ ]  assessment of the impacts of vehicle strikes on threatened species of animals or on animals that are part of a TEC | <8.3.7> |
|  |  | [ ]  evaluate the consequences of prescribed impacts | <1.1> |
|  |  | [ ]  describe impacts that are uncertain | <8.2 & 1.1> |
|  |  | [ ]  document limitations to data, assumptions and predictions | <8.2 & 1.1> |
|  |  | **Maps and tables** |  |
|  |  | [ ]  Table showing change in vegetation integrity score for each vegetation zone as a result of identified impacts | <Table 23> |
|  |  | **Data** |  |
|  |  | N/A | – |
| Mitigation and management of impacts | Chapter 8, Sections 8.4 and 8.5 | **Information** |  |
|  |  | Identification of measures to mitigate or manage impacts in accordance with the recommendations in BAM Sections 8.4 and 8.5 including: | – |
|  |  | [ ]  techniques, timing, frequency and responsibility[ ]  identify measures for which there is risk of failure[ ]  evaluate the risk and consequence of any residual impacts | <Table 27> |
|  |  |  |  |
|  |  |  |  |
|  |  | [ ]  document any adaptive management strategy proposed | <1.1> |
|  |  | Identification of measures for mitigating impacts related to: | – |
|  |  | [ ]  displacement of resident fauna (as described in BAM Subsection 8.4.1(2.))[ ]  indirect impacts on native vegetation and habitat (as described in BAM Subsection 8.4.1(3.))[ ]  mitigating prescribed biodiversity impacts (as described in BAM Subsection 8.4.2) | <8.4> |
|  |  |  |  |
|  |  |  |  |
|  |  | [ ]  Details of the adaptive management strategy proposed to monitor and respond to impacts on biodiversity values that are uncertain (BAM Section 8.5) | <1.1> |
|  |  | **Maps and tables** |  |
|  |  | [ ]  Table of measures to be implemented before, during and after construction to mitigate and manage impacts of the proposal, including action, outcome, timing and responsibility | <Table 27> |
|  |  | **Data** |  |
|  |  | N/A | – |
| Impact summary | Chapter 9 | **Information** |  |
|  |  | Identification and assessment of impacts on TECs and threatened species that are at risk of a serious and irreversible impacts (SAII, in accordance with BAM Section 9.1) including: | – |
|  |  | [ ]  addressing all criteria in Subsection 9.1.1 for each TEC listed as at risk of an SAII present on the subject land | <Table 30 & Table 31> |
|  |  | [ ]  for each TEC, report the extent of the TEC in NSW | <Table 30> |
|  |  | [ ]  addressing all criteria in Subsection 9.1.2 for each threatened species at risk of an SAII present on the subject land | <Table 32 & Table 33> |
|  |  | [ ]  for each threatened species, report the population size in NSW | <Table 32> |
|  |  | [ ]  documenting assumptions made and/or limitations to information[ ]  documenting all sources of data, information, references used or consulted[ ]  clearly justifying why any criteria could not be addressed | <Table 30–Table 33> |
|  |  |  |  |
|  |  |  |  |
|  |  | [ ]  Identification of impacts requiring offset in accordance with BAM Section 9.2 | <Table 35 & Table 36> |
|  |  | [ ]  Identification of impacts not requiring offset in accordance with BAM Subsection 9.2.1(3.) | <Table 34> |
|  |  | [ ]  Identification of areas not requiring assessment in accordance with BAM Section 9.3 | <Table 38> |
|  |  | **Maps and tables** |  |
|  |  | [ ]  Map showing the extent of TECs at risk of an SAII within the subject land | <Figure 14> |
|  |  | [ ]  Map showing location of threatened species at risk of an SAII within the subject land  | <Figure 14> |
|  |  | Map showing location of: | – |
|  |  | [ ]  impacts requiring offset | <Figure 15> |
|  |  | [ ]  impacts not requiring offset | <Figure 15> |
|  |  | [ ]  areas not requiring assessment | <Figure 15> |
|  |  | **Data** |  |
|  |  | Digital shape files of: | – |
|  |  | [ ]  extent of TECs at risk of an SAII within the subject land | – |
|  |  | [ ]  location of threatened species at risk of an SAII within the subject land | – |
|  |  | [ ]  boundary of impacts requiring offset | – |
|  |  | [ ]  boundary of impacts not requiring offset | – |
|  |  | [ ]  boundary of areas not requiring assessment | – |
|  |  | [ ]  Maps in jpeg format | – |
| Impact summary | Chapter 10 | **Information** |  |
|  |  | Ecosystem credits and species credits that measure the impact of the development on biodiversity values, including: | – |
|  |  | [ ]  future vegetation integrity score for each vegetation zone within the subject land (Equation 25 and Equation 26 in BAM Appendix H)[ ]  change in vegetation integrity score (BAM Subsection 8.1.1)[ ]  number of required ecosystem credits for the direct impacts of the proposal on each vegetation zone within the subject land (BAM Subsection 10.1.2) | <Table 35> |
|  |  |  |  |
|  |  |  |  |
|  |  | [ ]  biodiversity risk weighting for each | <Table 35 & Table 36> |
|  |  | [ ]  number of required species credits for each candidate threatened species that is directly impacted on by the proposal (BAM Subsection 10.1.3) | <Table 36> |
|  |  | **Maps and tables** |  |
|  |  | [ ]  Table of PCTs requiring offset and the number of ecosystem credits required | <Table 35> |
|  |  | [ ]  Table of threatened species requiring offset and the number of species credits required | <Table 36> |
|  |  | **Data** |  |
|  |  | [ ]  Submitted proposal in the BAM Calculator | – |
| Biodiversity credit report | Chapter 10 | **Information** |  |
|  |  | [ ]  Description of credit classes for ecosystem credits and species credits at the development or clearing site or land to be biodiversity certified (BAM Section 10.2) | <Table 39 & Table 40> |
|  |  | [ ]  BAM credit report in pdf format | <Appendix H> |
|  |  | **Maps and tables** |  |
|  |  | [ ]  Table of credit class and matching credit profile | <Table 40> |
|  |  | **Data** |  |
|  |  | [ ]  BAM credit report in pdf format | <Appendix H> |

Appendix B: Biodiversity Values Map and Threshold tool report

<Include a copy of the Biodiversity Values Map and Threshold tool report if the BV Map was the reason for entering the BOS and Figure 4 Biodiversity Values Map is not provided>

Appendix C: Test of Significance

<Include a copy of the Test of Significance if this is the reason why the BOS is being applied>

Appendix D: Determination of excluded impacts

<Where category 1-exempt land on the subject land has not been determined from the Native Vegetation Regulatory Map, include a justification of how category 1-exempt land was determined. Include evidence of consultation with LLS and the department’s Biodiversity Conservation Division Regional Planning team and their support for the determination.>

Appendix E: Matters of national environmental significance

If a project is deemed a controlled action, summarise details provided in the BDAR including:

* MNES relevant to the project
* Measures to avoid and minimise impacts on MNES
* Impacts to MNES
* Mitigation measures relevant to MNES
* Final offset requirements for MNES.

Reference relevant sections of the BDAR.

1. Appendix F: Vegetation survey data
2. The vegetation survey data must include the following components:
* plot-based vegetation and vegetation integrity survey locations
* vegetation integrity survey plot data
* field datasheets.
1. <Complete Table 42 by copying and pasting BAM plot data from the ‘import template’ spreadsheet on Tab 3 in the BAM-C or your own spreadsheet. Use the checkboxes in the last two columns to show how the plots were used>
2. <Append field datasheets (either hard copy scans or digital copies if collected electronically>
3. Data from plot-based vegetation surveys and vegetation integrity survey plots is required to be submitted in electronic format (MS Excel) to the decision-maker.
4. Table  Vegetation survey data and locations

| 1. plot
 | 1. pct
 | 1. area
 | 1. patchsize
 | 1. condition class
 | 1. zone
 | 1. easting
 | 1. northing
 | 1. bearing
 | 1. compTree
 | 1. compShrub
 | 1. compGrass
 | 1. compForbs
 | 1. compFerns
 | 1. compOther
 | 1. strucTree
 | 1. strucShrub
 | 1. strucGrass
 | 1. strucForbs
 | 1. strucFerns
 | 1. strucOther
 | 1. funLargeTrees
 | 1. funHollowtrees
 | 1. funLitterCover
 | 1. funLenFallenLogs
 | 1. funTreeStem5to9
 | 1. funTreeStem10to19
 | 1. funTreeStem20to29
 | 1. funTreeStem30to49
 | 1. funTreeStem50to79
 | 1. funTreeRegen
 | 1. funHighThreatExotic
 | 1. Plot-based vegetation survey?
 | 1. Vegetation integrity survey?
 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1. [ ]  Yes
2. [ ]  No
 | 1. [ ]  Yes
2. [ ]  No
 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1. [ ]  Yes
2. [ ]  No
 | 1. [ ]  Yes
2. [ ]  No
 |

Appendix G: Decision-maker authorisation to use more appropriate local data

<Provide written authorisation from the decision-maker to use more appropriate local data>

Appendix H: Credit reports

Append a copy (PDF format) of the following BAM-C credit reports with finalised status:

* Credits summary report
* Biodiversity credit report (Like-for-like)
* Candidate threatened species report
* Predicted species report.