



Cover photo: Red goshawk (*Erythrotriorchis radiatus*). Ashwin Rudder/DCCEEW



Biodiversity Assessment Method Calculator User guide

v 1.0.0

The Biodiversity Assessment Method Calculator (BAM Calculator) is an online interactive view of the Biodiversity Assessment Methodology (BAM). The BAM Calculator follows the rules and calculations outlined in the BAM, and assists the user in applying the BAM at a site and generating an outcome.

Users can apply the BAM and use the BAM Calculator to assess development proposals and estimate credit generation at biodiversity stewardship sites. These proposals can be based on survey data collected using the BAM field survey methods or on estimated data.

The BAM Calculator contains all biodiversity data for New South Wales that is available in BioNet, the department's repository for biodiversity data products. The BAM Calculator has biodiversity data from all IBRA regions, all plant community types (PCT) and all ecosystem credit species and species credit species.

Acknowledgement of Country

Department of Climate Change, Energy, the Environment and Water acknowledges the Traditional Custodians of the lands where we work and live. We pay our respects to Elders past, present and emerging. This resource may contain images or names of deceased persons in photographs or historical content.

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Shortened Forms

Shortened form	Description
assessor	a person accredited to apply the Biodiversity Assessment Method under the Biodiversity Conservation Act 2016
BAM 2020	Biodiversity Assessment Method (published 2020)
BAM-C or BAM Calculator	Biodiversity Assessment Method Calculator
BAR	Biodiversity Assessment Report
BC Act	Biodiversity Conservation Act 2016 (NSW)
BCF	Biodiversity Conservation Fund
BCT	Biodiversity Conservation Trust
BOAMS	Biodiversity Offsets and Agreement Management System
BOPC	Biodiversity Offsets Payment Calculator
BOS	Biodiversity Offsets Scheme
BOS Help Desk	Biodiversity Offsets Scheme Help Desk
BRW	biodiversity risk weighting(s)
DBH (or DBHOB)	diameter at breast height (over bark)
DP	deposited plan
EOI	expression of interest
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Cth)
HBT	hollow bearing tree(s)
HTW	high threat weed(s)
IBRA	Interim Biogeographic Regionalisation for Australia

Shortened form	Description
LLS Act	Local Land Services Act 2013 (NSW)
OTG	offset trading group
PCT	plant community type
TBDC	Threatened Biodiversity Data Collection
TEC	threatened ecological community – listed as either a vulnerable, endangered or critically endangered ecological community under the BC Act and/or the EPBC Act
the department, DCCEEW	NSW Department of Climate Change, Energy, the Environment and Water
the scheme	NSW Biodiversity Offsets Scheme
this guide	Biodiversity Assessment Method Calculator User Guide
UoM	unit of measure
Veg-C	BioNet Vegetation Classification
VI	vegetation integrity

1. Introduction

In this subsection

Purpose of this guide

Biodiversity Assessment Method Calculator

Scope and structure of the guide

Purpose of this guide

The NSW Biodiversity Offsets Scheme (the scheme) is the framework for offsetting unavoidable impacts on biodiversity from development with biodiversity gains achieved at biodiversity stewardship sites. The scheme is supported by the Biodiversity Assessment Method (BAM 2020).

The BAM 2020 establishes a transparent, consistent and scientifically based approach for assessing impacts to, or improvements in, biodiversity. It outlines how an accredited person (assessor) assesses impacts on biodiversity at development sites and stewardship sites.

The BAM 2020 is operationalised by the Biodiversity Assessment Method Calculator (BAM-C), which is an online interactive tool. Assessors (persons accredited to apply the BAM under the Biodiversity Conservation Act 2016 (BC Act)) must use the BAM-C for the purpose of carrying out an assessment using the BAM 2020.

The Biodiversity Assessment Method Calculator User Guide (the guide) provides detailed step-by-step instructions and technical advice for assessors when using the BAM-C.

The Department of Climate Change, Energy, the Environment and Water (the department) will review and update the guide periodically to incorporate new information and reflect legislative or policy changes.

Biodiversity Assessment Method Calculator

The BAM-C uses the rules and calculations outlined in the BAM 2020 and allows the user to apply the BAM 2020 at a site and observe the results of the assessment. The BAM-C helps with preparation of standardised reports and allows assessors to enter field data and determine the number and class of biodiversity credits.

The vegetation integrity (VI) and habitat suitability assessments are used to calculate the number and class of biodiversity credits to offset impacts at development/clearing sites or to establish biodiversity stewardship agreements at stewardship sites.

The BAM-C uses biodiversity data from the NSW BioNet Threatened Biodiversity Data Collection (TBDC) and BioNet Vegetation Classification (Veg-C) to perform BAM 2020 calculations.

Assessors and consent authorities can access the BAM-C via the Biodiversity Offsets and Agreement Management System (BOAMS).

Scope and structure of the guide

The guide outlines step-by-step instructions for completing each phase of the BAM 2020 assessment within the BAM-C. It also provides tips and other useful information to support its application (blue boxes).

The guide should be used in association with the BAM 2020 operational manuals (Stages 1 (<https://www.environment.nsw.gov.au/publications/biodiversity-assessment-method-2020-operational-manual-stage-1>), 2 (<https://www.environment.nsw.gov.au/publications/biodiversity-assessment-method-2020-operational-manual-stage-2>), 3 (<https://www.environment.nsw.gov.au/publications/biodiversity-assessment-method-2020-operational-manual-stage-3>)). See **Appendix B** below for links to these and other useful documents and webpages mentioned in this guide.

The guide does not contain detailed instructions for using BOAMS. Refer to the BOAMS user guides (for **assessors** (<https://www.environment.nsw.gov.au/publications/biodiversity-offsets-and-agreement-management-system-guide-accredited-assessors>) or **community users** (<https://www.environment.nsw.gov.au/publications/biodiversity-offsets-and-agreement-management-system-boams-guide-community-users>)) for more information (see **Appendix B**). Where relevant, this guide will outline specific BOAMS prerequisites that will impact using the BAM-C.

Two versions of the BAM-C exist:

- a registered user version accessed via a BOAMS login, which allows assessors to save assessments and generate and download reports that display the results of assessments
- a public version with no login required, however, data cannot be saved or viewed as a downloadable report.

This guide provides information on the registered user version of the BAM-C, however, much of the information is also applicable to the public version.

Tip

A public version of the BAM-C is available, but it is intended for demonstration purposes only and has limited functionality (for example, users cannot save data or print reports).

For ease of use, the guide has a chapter dedicated to each assessment type:

- **Chapter 4:** Development/clearing assessments – Part 4 Developments (General), Major Projects, Part 5 Activities, Biocertification, and Clearing (General)
- **Chapter 5:** Small area assessments – Part 4 Development (Small Area) and Part 5 Development (Small Area)
- **Chapter 6:** Scattered Trees
- **Chapter 7:** Stewardship (for offset sites).

The intention is to provide standalone information in each of these chapters to enable the user to follow the instructions specific to a particular assessment type.

The guide is aligned with the number ‘tab’ structure of the BAM-C and provides:

- the purpose of the tab
- a brief description of the steps needed to complete an assessment
- references to relevant sections of the BAM 2020 and other useful information.

2. Using Biodiversity Offsets and Agreement Management System to access and manage BAM-C cases

Assessors and decision-makers must access the BAM-C via their BOAMS registered user account.

Specific BAM 2020 tasks can only be carried out by assessors. Access to BOAMS is provided after assessors have become accredited.

Further information about BOAMS for assessors is in the [**BOAMS Guide for Accredited Assessors**](https://www.environment.nsw.gov.au/publications/biodiversity-offsets-and-agreement-management-system-guide-accredited-assessors) (<https://www.environment.nsw.gov.au/publications/biodiversity-offsets-and-agreement-management-system-guide-accredited-assessors>) (see [Appendix B](#)).

In this section

[**2.1 Creating a case number**](#)

[**2.2 BAM-C user access**](#)

[**2.3 Updates to BAM-C functionality or data**](#)

[**2.4 Download supporting documentation**](#)

[**2.5 Delete cases**](#)

Using Biodiversity Offsets and Agreement Management System to access and manage BAM-C cases

2.1 Creating a case number

To launch the BAM-C, you must first create a parent case in BOAMS. From the BOAMS home page, follow the steps below.

1. Click ‘New stewardship assessment’ or ‘New development/clearing assessment’, as appropriate.

As an Assessor what would you like to do today ?

NEW STEWARDSHIP ASSESSMENT

NEW DEVELOPMENT/CLEARING ASSESSMENT

2. Add a subject and description and click 'Confirm'. This will create a parent case that will then open.
Note: Choose a useful subject name and description so you can distinguish between multiple cases.

NEW DEVELOPMENT/CLEARING ASSESSMENT

Type

Development

Subject

Part 4 Metcalfe Enterprises Boroowra

Description

Use this field to describe this assessment case, especially if there are multiple cases for the same area

CONFIRM

3. Click 'Create Assessment' to create a related case and access the BAM-C.

[Edit](#)[Create Assessment](#)[Submit to Consent Authority](#)

4. The related case will have identical ‘Subject’ and ‘Description’ information to the parent case. When multiple related cases (assessments) are created it is good practice to re-name the related cases to readily distinguish between parent and related cases, and also between related cases.

Case 00044139/BAAS01234/23/00044140				BAM Calculator	Edit	Delete As													
Application Type Development Assessment	Type Development	Status In-Progress	Related Parent Cases 00044139																
Assessment Details <table border="1"> <tr> <td>Subject Part 4 Metcalfe Enterprises Boroowra</td> <td></td> <td>Related Parent Cases 00044139</td> <td> Lot/DPs (0)</td> </tr> <tr> <td>Description Use this field to describe this assessment case, especially if there are multiple cases for the same area</td> <td></td> <td>In Progress</td> <td> Properties (0)</td> </tr> <tr> <td>Contact Name EA BAM</td> <td></td> <td></td> <td> Credit Recording (0)</td> </tr> </table>				Subject Part 4 Metcalfe Enterprises Boroowra		Related Parent Cases 00044139	 Lot/DPs (0)	Description Use this field to describe this assessment case, especially if there are multiple cases for the same area		In Progress	 Properties (0)	Contact Name EA BAM			 Credit Recording (0)				
Subject Part 4 Metcalfe Enterprises Boroowra		Related Parent Cases 00044139	 Lot/DPs (0)																
Description Use this field to describe this assessment case, especially if there are multiple cases for the same area		In Progress	 Properties (0)																
Contact Name EA BAM			 Credit Recording (0)																

Assessment Details	
Subject Part 4 Metcalfe Enterprises Boroowra_Child	Related Parent Cases 00044139
Description Use this field to describe this assessment	Status In Progress

5. To navigate back to the parent case at any time, click on the link under ‘Related Parent Cases’.

Assessment Details	
Subject Part 4 Metcalfe Enterprises Boroowra_Child	Related Parent Cases 00044139
Description Use this field to describe this assessment	Status In Progress

6. Open the BAM-C by clicking ‘BAM Calculator’. Tab 1 in the BAM-C will open.

BAM Calculator	Edit	Delete Assessment
--------------------------------	----------------------	-----------------------------------



BAM Calculator

App last updated: 13/04/2023 10:00 (Version: 1.4.0.00)
BAM data last updated *: 22/06/2023 (Version: 61) * Disclaimer

General Functions:

- OPEN
- SAVE
- SAVE AS NEW REVISION
- CANCEL
- DELETE
- FINALISE
- PRINT -
- LOGOUT
- User icon

00044139/BAAS01234/23/00044140 / Revision: 0

1. Assessment details 2. Site context 3. Vegetation 4. Habitat suitability: Predicted 5. Habitat suitability: Candidate

6. Habitat survey 7. Credits 8. Credit classes 9. Price

All fields marked with an asterisk (*) are mandatory

Tip!
Choosing the 'Assessment type' is an important step. Once you click, 'Next' this value will become read-only and it cannot be un-done.

Assessment type *

Proposal name

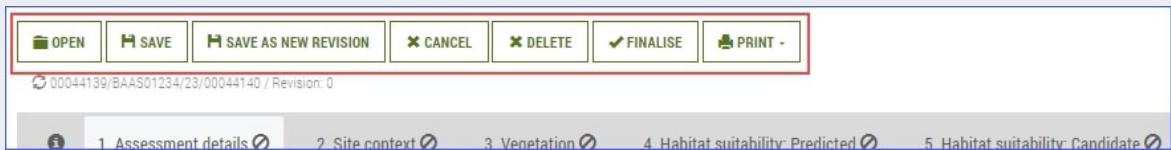
Assessment ID: 00044139/BAAS01234/23/00044140
Assessment Revision: 0

NEXT

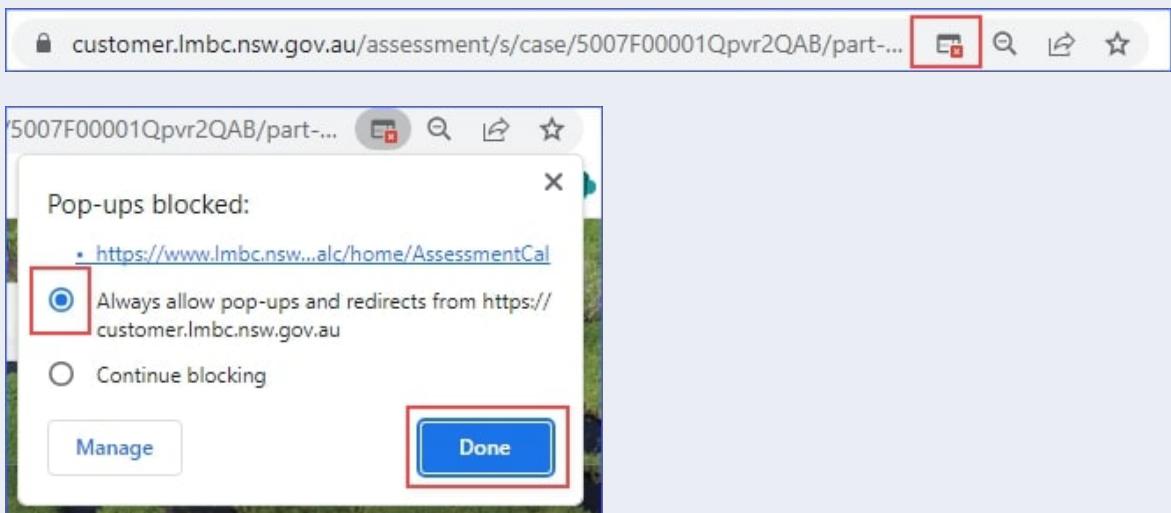
i Tip

Issues with accessing or launching the BAM-C

- The Google Chrome web browser is recommended for access to BOAMS and the BAM-C. The BAM-C will not load in the Safari web browser.
- The BOAMS case owner has full edit access to the BAM-C assessment, but other assessor case parties have limited access (see [BAM-C user access](#)).
- If you cannot see the row of general functions buttons (see [General Functions](#)), you may be using the public version of the BAM-C, or your session has timed out. Switch to the registered user version accessed via BOAMS, or log back into BOAMS, as appropriate.



Ensure your web browser's pop-up blocker is disabled. The pop-up blocker is found in the settings option of most browsers. 'LMBC' must be allowed.



Using Biodiversity Offsets and Agreement Management System to access and manage BAM-C cases

2.2 BAM-C user access

Registered users will have varying levels of access to the BAM-C, depending on their user type and purpose, as displayed in Table 1.

Table 1 BAM-C user access

User	Purpose	Access level	Obtaining access
Assessor	Complete BAM 2020 assessment for a clearing, development, biodiversity certification or stewardship proposal and generate associated reports to include in the Biodiversity Assessment Report (BAR)	Case owner – view and edit access to BAM-C cases created or with transferred ownership of case to assessor Case party – view-only access to BAM-C cases when listed as an assessor case party on the BOAMS parent case	Assessors will receive registered user access to the BAM-C via BOAMS once accreditation is approved

User	Purpose	Access level	Obtaining access
Community users	<ul style="list-style-type: none"> • Landholder who is a party to a development (case party) obligation • Create an expression of interest (EOI) credits listing to create and sell credits • Wish to list biodiversity credits wanted 	View, edit and find information using the tiles on the BOAMS landing page View and manage existing cases in BOAMS Create certain applications and listings in BOAMS	Community users cannot access the BAM-C. To enter into a biodiversity stewardship agreement the community user will need to engage an assessor
Decision-maker / consent authority	Review BAM 2020 assessment, calculations, and associated reports for clearing, development, biodiversity certification or stewardship proposals	View-only access to BAM-C cases sent for review	Consent authority access to BOAMS cases and associated BAM-C assessments can be requested by contacting the BOS Help Desk (https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/help-and-support/help-desk) (see Appendix B)

Using Biodiversity Offsets and Agreement Management System to access and manage BAM-C cases

2.3 Updates to BAM-C functionality or data

The BAM-C is updated periodically to incorporate enhancements to functionality, bug fixes or changes to legal or policy positions relating to the BAM 2020 method. Datasets within the TBDC and Veg-C are also routinely updated.

Updates to BAM-C functionality (how it operates) are rolled out periodically. Changes and any impacts to cases are communicated to BAM-C users via the BOS updates monthly newsletter.

The BAM-C displays the date the last modification to functionality was implemented and the application version number.

The screenshot shows the top right corner of the BAM Calculator interface. It includes the text "App last updated: 13/04/2023 10:00 (Version: 1.4.0.00)" and "BAM data last updated *: 22/06/2023 (Version: 61) * Disclaimer". Below this are four buttons: "NEW REVISION" (green), "CANCEL" (yellow with a red X), "DELETE" (yellow with a red X), and "FINALISE" (green with a checkmark). To the right are "LOGOUT" and a user profile icon.

Updates to the BAM-C data, based on changes to TBDC or Veg-C data, occur semi-regularly. The data changes and any potential impacts to assessments are communicated to BAM-C users via the BOS updates monthly newsletter.

The BAM-C displays the date when the last change to data in the BAM-C occurred and the data version number.

Hover your cursor over 'BAM data last updated' to see the individual datasets used by the BAM-C, and when each was last updated. These dates may indicate a large data upload, or a single data change.

The screenshot shows the BAM Calculator interface with a tooltip hovering over the "BAM data last updated" text. The tooltip contains a list of datasets and their last update dates: TEC data last updated *: 22/06/2023 (Version: 60), PCT data last updated *: 22/06/2023 (Version: 61), Species data last updated *: 22/06/2023 (Version: 59), and Benchmarks data last updated *: 1/02/2023 (Version: 57). The tooltip has a red border.

The date when the most recent change to data in the BAM-C occurred is also shown in reports printed from the BAM-C.

The screenshot shows the "BAM Credit Summary Report" page. At the top left is the NSW Government logo. The page displays "Proposal Details" with the following information:

Assessment Id	Proposal Name	BAM data last updated *
00043684/BAAS01234/23/00044061	test	22/06/2023
Assessor Name	Report Created	BAM Data version *
EA BAM	02/11/2023	61
Assessor Number	BAM Case Status	Date Finalised
BAAS01234	Open	To be finalised
Assessment Revision	Assessment Type	BOS entry trigger
0	Part 4 Developments (General)	BOS Threshold: Biodiversity Values Map

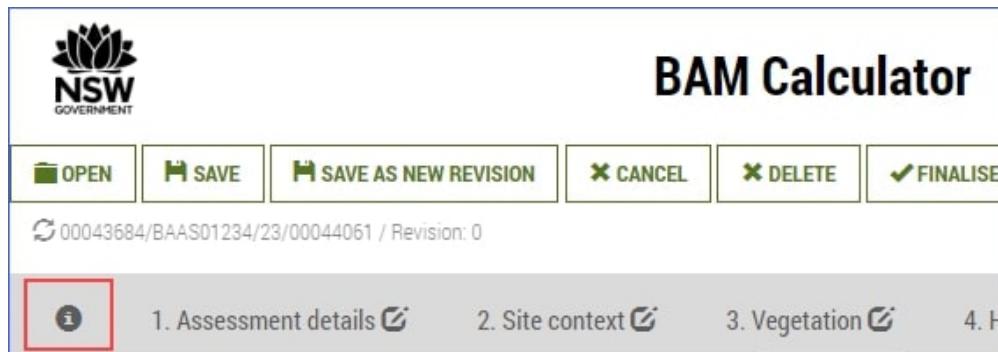
Using Biodiversity Offsets and Agreement Management System to access and manage BAM-C cases

2.4 Download supporting documentation

The  icon in the BAM-C, to the left of Tab 1, provides downloadable supporting information.

1. Click on the  icon to see the available documents, including:

- this guide
- Version 1.1 Benchmarks – archived data
- rates of increase/rates of decline tables – estimates of gain and decline for each attribute
- species with specific survey requirements list
- native species by growth form list – BioNet Power Query
- high threat weeds list – BioNet Power Query
- serious and irreversible impact (SAll) examples – how to assess SAll
- koala use tree list



2. Click ‘Download’ below the document you need. If the downloaded file does not open automatically, go to your downloads folder and open the file from there.

Serious and Irreversible Impacts Examples



The screenshot shows a Microsoft Word document with a table. The table has two columns: 'Impact' and 'Description'. The 'Impact' column lists various environmental impacts such as habitat loss, fragmentation, degradation, and destruction. The 'Description' column provides a brief explanation for each impact.

DOWNLOAD

Koala use tree list



The screenshot shows a Microsoft Word document with a table. The table has two columns: 'Impact' and 'Description'. The 'Impact' column lists various environmental impacts such as habitat loss, fragmentation, degradation, and destruction. The 'Description' column provides a brief explanation for each impact.

DOWNLOAD

Using Biodiversity Offsets and Agreement Management System to access and manage BAM-C cases

2.5 Delete cases

It is good practice to keep only the cases you have finalised, or those you are still working on. Cases that are no longer required should be deleted from BOAMS.

In this subsection

[Deleting parent cases](#)

[Deleting child cases](#)

Deleting parent cases

1. Click on the 'My Cases' tile on the BOAMS landing page and select the parent case you want to delete from the list.



Cases

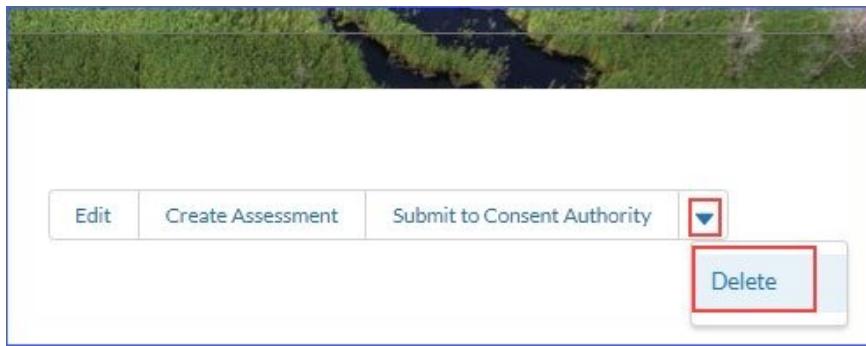
My Development/Clearing Assessment Cases

50+ items • Sorted by Date/Time Opened • Filtered by All cases - Application Type, Business Unit • Updated a few seconds ago

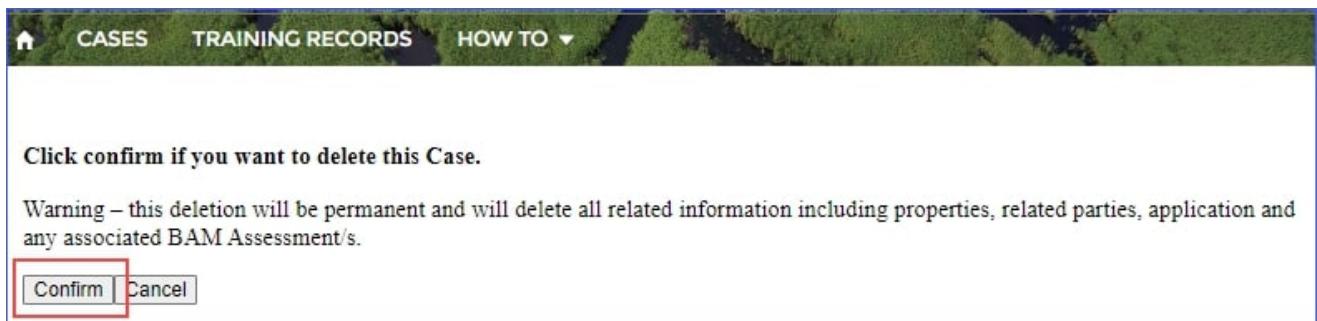
Search this list...

	<input type="checkbox"/> Application Number	▼ Case Type	▼ Subject	▼ Status
1	<input type="checkbox"/> 00044407	Application Devel...	test	In-Progress
2	<input type="checkbox"/> 00044383	Application Devel...	Error messaging Part 4 JD	In-Progress
3	<input type="checkbox"/> 00044199	Application Devel...	Scattered Tree JH SWS Parent	In-Progress
4	<input type="checkbox"/> 00044139	Application Devel...	Part 4 Subdivision	In-Progress

2. For development cases, select ‘Delete’ from the drop-down list beside the ‘Submit to Consent Authority’ button at the top right of the page. For stewardship cases, the drop-down is beside the ‘Create Application’ button.



3. A message will appear to confirm or cancel your request to delete the case.



4. Once deleted, a message will appear confirming the assessment has been removed.



Remove BAM Assessment

Assessment Id(s):

BAM Assessment successfully removed.

Tip

Deleting a parent case will also delete all child cases associated with that parent case.

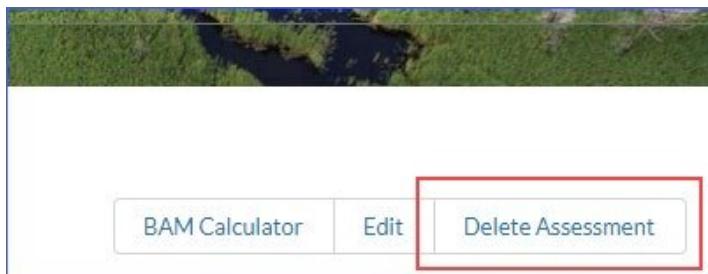
Deleting child cases

1. In BOAMS navigate to the child case to be deleted.

Applic...	Case Type	Case Nu...	Status
00044...	Steward...	000441...	In-Progr...
00044...	Assessm...	000441...	In-Progr...

View All

2. Click 'Delete Assessment' at the top right of the case page.



3. A message will display to confirm the deletion. Click 'Confirm', or to retain the case, click 'Cancel'.

Click confirm if you want to delete this Assessment.

Warning – this deletion will be permanent and will also delete any associated BAM Assessment/s.

Confirm Cancel

4. A message will appear confirming the assessment has been removed.



Remove BAM Assessment

Assessment Id(s):

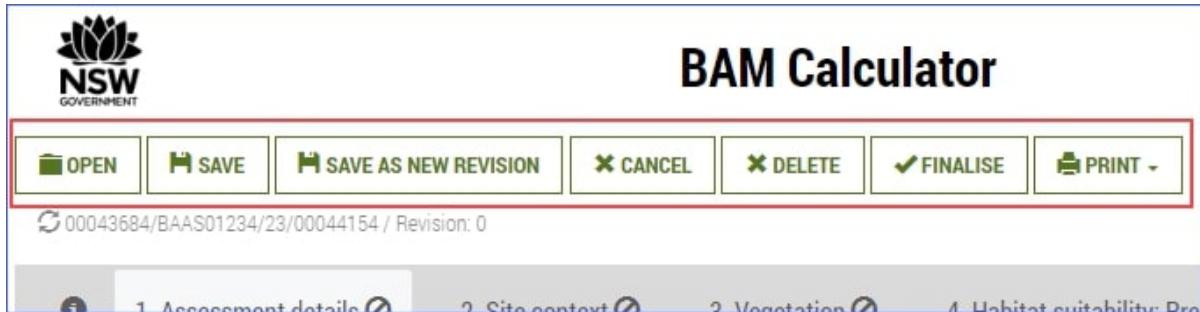
BAM Assessment successfully removed.

i Tip

Deleting a child case will also delete all BAM-C data and calculations related to that child case.

3. General functions

There are high-level functions, unrelated to the BAM-C data tabs, to help you manage assessments and create reports.



The use of these functions is detailed in Sections 3.1–3.9 below.

In this section

[**3.1 Open an existing assessment revision**](#)

[**3.2 Save an assessment**](#)

[**3.3 Save a new revision**](#)

[**3.4 Cancel an assessment**](#)

[**3.5 Delete an assessment revision**](#)

[**3.6 Finalise an assessment revision**](#)

[**3.7 Reopen a revision after finalising**](#)

[**3.8 Use Biodiversity Offsets and Agreement Management System to submit a case to the consent authority**](#)

[**3.9 Print a report**](#)

General functions

3.1 Open an existing assessment revision

Multiple revisions of a case can be created to understand the impact of changes to an assessment, while maintaining an unchanged copy of the original assessment.

1. Click 'Open' in the row of general functions buttons.



2. The 'Open assessment' dialog box will open, which shows the list of assessment revisions saved for the assessment.

Assessment ID	Proposal Name	Status	Revision	Created on	Updated on	Reference Data Version
00040514/BAAS01234/23/00040531		Open	1	17/05/2023 10:43:59	17/05/2023 10:43:59	Current classification (live - default)
00040514/BAAS01234/23/00040531		Open	0	17/05/2023 09:40:56	17/05/2023 10:43:41	Current classification (live - default)

3. Click on the assessment ID link or revision number link to open the assessment you want to examine or revise.

Assessment ID	Proposal Name	Status	Revision	Created on	Updated on	Reference Data Version
00043684/BAAS01234/23/00044060	Reduced Area	Open	1	01/11/2023 09:38:58	02/11/2023 12:47:13	Current classification (live - default)
00043684/BAAS01234/23/00044060	Total Area	Open	0	31/10/2023 09:28:59	02/11/2023 12:46:44	Current classification (live - default)

General functions

3.2 Save an assessment

Save the assessment you are working on regularly. Where there are multiple revisions in a case, only the open assessment is saved. Remember to save when switching to another revision or creating a new revision.

1. Click 'Save' in the row of general functions buttons. The current assessment revision will be saved with all entered data and completed calculations.



2. A pop-up will open to say the assessment has been saved. Click 'OK'.

!

Alert

Application Saved!



i Tip

Clicking the save button only saves edits to the current revision.

General functions

3.3 Save a new revision

Remember to save your existing revision before creating a new revision if you want to retain the data.

1. Click '**Save as new revision**' in the row of general functions buttons.



2. A confirmation pop-up will appear, click '**Yes**'.



3. To differentiate between revisions, another proposal name can be added to indicate why the revision was made (for example, a reduced area of assessment to compare the credit outcomes).

1. Assessment details  2. Site context  3. Vegetation  4. Habitat suitabil

6. Habitat survey  7. Credits  8. Credit classes  9. Price 

fields marked with an asterisk (*) are mandatory

Message!

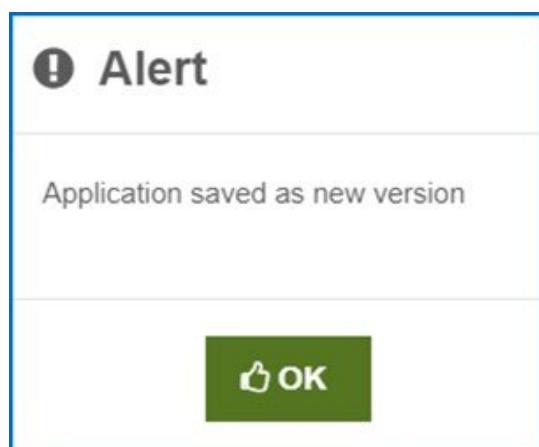
You have selected 'Part 4 Developments (Small Area)' as the 'Assessment Type' so we now have enough information to proceed.

Assessment type *	Part 4 Developments (Small Area)
Biodiversity Offsets Scheme entry trigger *	BOS Threshold: Area clearing threshold
Proposal name	Reduced Area
Assessment ID	00043684/BAAS01234/23/00044060
Assessment Revision	1

4. A new revision of the assessment will be saved with all updated data and completed calculations.

Assessment ID	Proposal Name	Status	Revision	Created on	Updated on	Reference Data Version
00043684/BAAS01234/23/00044060	Reduced Area	Open	1	01/11/2023 09:38:58	02/11/2023 12:47:13	Current classification (live - default)
00043684/BAAS01234/23/00044060	Total Area	Open	0	31/10/2023 09:28:59	02/11/2023 12:46:44	Current classification (live - default)

5. A pop-up will appear, click 'OK'.



Tip

- Create multiple revisions of a case to test the impact of changes to an assessment while maintaining an unchanged copy of the original assessment.

- Any of the assessment revisions created can be finalised and submitted.
- If multiple revisions have been finalised, the most recent finalised version will be sent to the consent authority.
- Finalising a revision protects the data and calculations from being modified, either when comparing various scenarios, or when assigning the case to another case party.

General functions

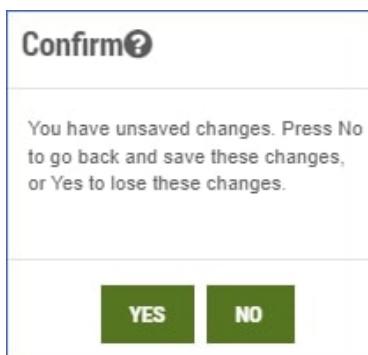
3.4 Cancel an assessment

You can cancel a revision at any time. All data and calculations since the last save will be cleared.

1. To cancel your progress, click 'Cancel' in the row of general functions buttons.



2. Click 'Yes' in the pop-up to confirm.



3. The open revision will revert to the most recent saved data and calculations.

General functions

3.5 Delete an assessment revision

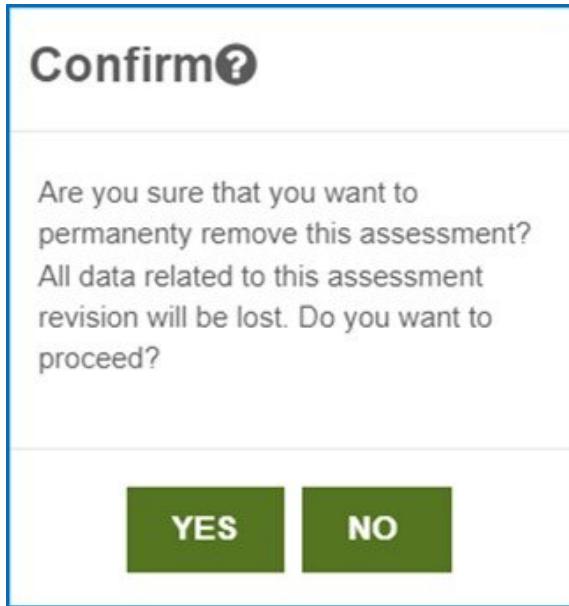
1. To permanently delete an assessment, click 'Delete' in the row of general functions buttons.



Tip

Only revisions with an ‘Open’ status can be deleted. ‘Finalised’ or ‘Locked’ assessments cannot be deleted.

2. Click ‘Yes’ in the pop-up to confirm.



3. To delete the entire child case, refer to **Subsection 2.5.2** of this guide.

General functions

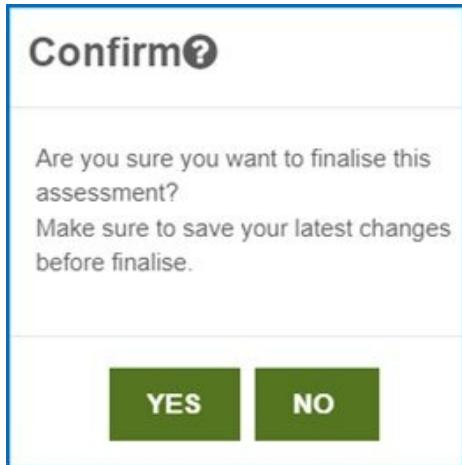
3.6 Finalise an assessment revision

Once all required information has been entered into a revision, the revision can be finalised. Multiple revisions of a case can be finalised.

1. Ensure all the required data for the revision has been entered and saved before finalising it.
2. To finalise an assessment, click ‘Finalise’ in the row of general functions buttons.



3. Click ‘Yes’ in the pop-up to confirm.



4. Another pop-up will appear, click ‘OK’.

! Alert

Application finalised!

 OK

i Tip

- o To finalise a case in the BAM-C, the following information must first be recorded in the BOAMS parent case:
 - landholder case party (either corporation or individual landholder)
 - property details.
- o Refer to the **BOAMS Guide for Accredited Assessors** (<https://www.environment.nsw.gov.au/publications/biodiversity-offsets-and-agreement-management-system-guide-accredited-assessors>) for further information (see **Appendix B**).

5. An alert pop-up will appear if the assessment is incomplete. Click 'OK', then go back to the assessment and complete all mandatory fields.

! Alert

Please fix errors if available and complete the Assessment before finalise.

 OK

6. Any previously open revisions are also retained (as read-only) with a status of 'Locked'. Users can view the data for these assessments by clicking the assessment ID. The assessment ID number is the identifier number of the parent and child case created through BOAMS.

Assessment ID	Proposal Name	Status	Revision	Created on	Updated on	Reference Data Version
00039875/BAAS01234/23/00039885	UAT Part 4 Development	Finalised	2	03/05/2023 14:49:21	17/05/2023 11:05:33	Current classification (live - default)
00039875/BAAS01234/23/00039885	UAT Part 4 Development	Finalised	1	18/04/2023 10:07:23	18/04/2023 12:15:43	Current classification (live - default)
00039875/BAAS01234/23/00039885	UAT Part 4 Development	Locked	0	14/04/2023 12:16:40	18/04/2023 10:07:05	Legacy Classification (pre-ENSW)

7. Once a revision is finalised, the available function buttons for the assessment change to ‘Open’ and ‘Re-open’. Clicking ‘Open’ will display a read-only version of the assessment.



8. You can, however, reopen and update the assessment provided it has not been submitted to the consent authority through BOAMS. Click ‘Re-open’ to do this.



General functions

3.7 Reopen a revision after finalising

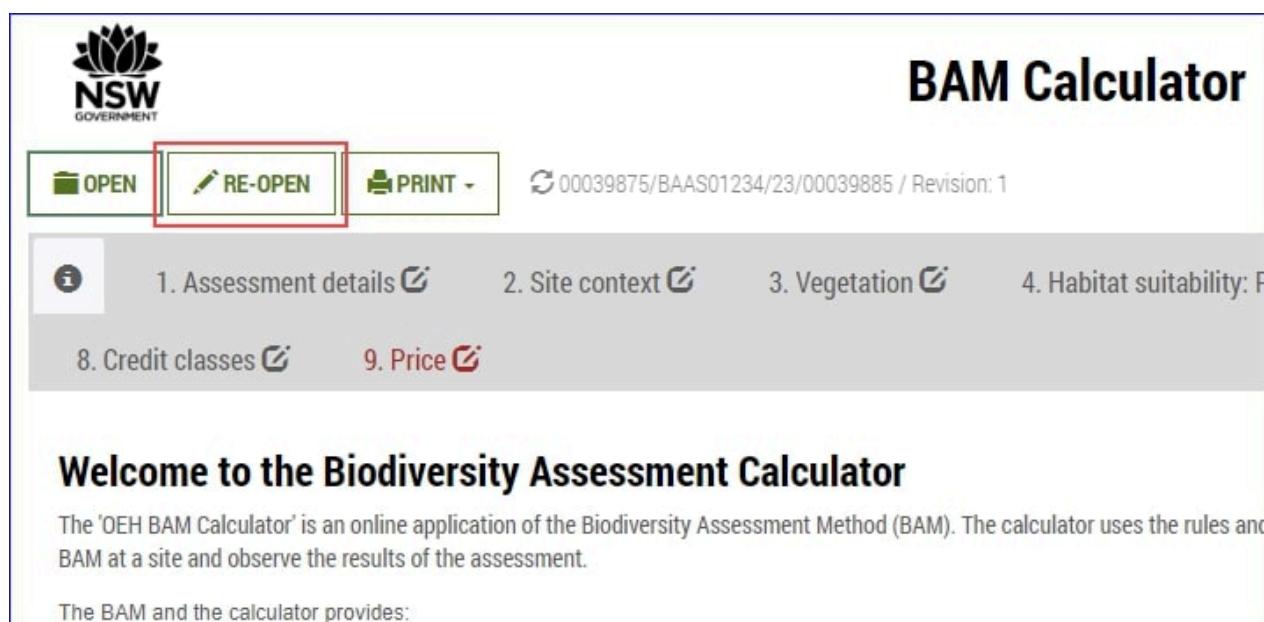
An assessment can be finalised multiple times, which will create multiple revisions.

1. View the assessment revision information by clicking ‘Open’ and then clicking on the assessment ID hyperlink. Each finalised revision is retained (as read-only) with a ‘Finalised’ status.

The most recent ‘Finalised’ revision will appear at the top of the list, and the data from this revision will be used by BOAMS when submitting assessments to the consent authority. All assessments that have not been finalised will be locked.

Assessment ID	Proposal Name	Status	Revision	Created on	Updated on	Reference Data Version
00039875/BAAS01234/23/00039885	UAT Part 4 Development	Finalised	2	03/05/2023 14:49:21	17/05/2023 11:05:33	Current classification (live - default)
00039875/BAAS01234/23/00039885	UAT Part 4 Development	Finalised	1	18/04/2023 10:07:23	18/04/2023 12:15:43	Current classification (live - default)
00039875/BAAS01234/23/00039885	UAT Part 4 Development	Locked	0	14/04/2023 12:16:40	18/04/2023 10:07:05	Legacy Classification (pre-ENSW)

2. To reopen a finalised revision, click the link from its assessment ID and then click 'Re-open'.



The screenshot shows the NSW Government logo and the title 'BAM Calculator'. Below the title are three buttons: 'OPEN', 'RE-OPEN' (which is highlighted with a red box), and 'PRINT -'. To the right of these buttons is a link '00039875/BAAS01234/23/00039885 / Revision: 1'. Below this is a navigation bar with numbered steps: 1. Assessment details, 2. Site context, 3. Vegetation, 4. Habitat suitability: P, 8. Credit classes, and 9. Price. The background features a large heading 'Welcome to the Biodiversity Assessment Calculator' and a descriptive paragraph about the calculator's purpose.

3. A pop-up will open to say the application has been reopened. Click 'OK'.

⚠ Alert

Application re-opened!

◀ OK

Assessment ID	Proposal Name	Status	Revision	Created on	Updated on	Reference Data Version
00039875/BAAS01234/23/00039885	UAT Part 4 Development	Open	3	17/05/2023 11:16:16	17/05/2023 11:16:16	Current classification (live - default)
00039875/BAAS01234/23/00039885	UAT Part 4 Development	Finalised	2	03/05/2023 14:49:21	17/05/2023 11:05:33	Current classification (live - default)
00039875/BAAS01234/23/00039885	UAT Part 4 Development	Finalised	1	18/04/2023 10:07:23	18/04/2023 12:15:43	Current classification (live - default)
00039875/BAAS01234/23/00039885	UAT Part 4 Development	Locked	0	14/04/2023 12:16:40	18/04/2023 10:07:05	Legacy Classification (pre-ENSW)

i Tip

- The ‘Save’ and ‘Save as new revision’ buttons are no longer available once an assessment is finalised.
- The ‘Open’ button allows different revisions to be viewed along with information about each revision.
- To continue working on a locked or finalised revision, click on the assessment ID hyperlink, then click the ‘Save as a new revision’ button. All data from the locked or finalised version will be copied to the new revision.

General functions

3.8 Use Biodiversity Offsets and Agreement Management System to submit a case to the consent authority

The steps required to submit a case to the consent authority differ depending on whether the assessment is for a development or a stewardship proposal, as shown below in Subsections 3.8.1–3.8.3.

In this subsection

[Add Lot/DP and case parties \(all assessment types\)](#)

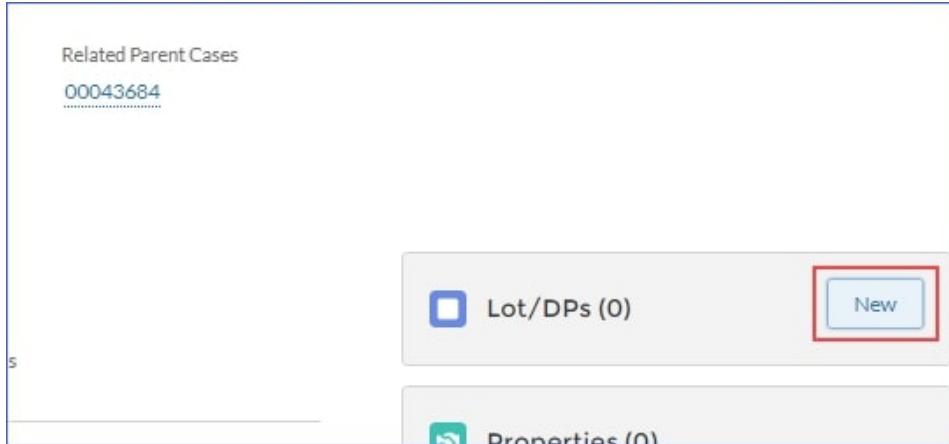
[Submit a development-type case](#)

[Submit a stewardship case](#)

Add case attachments

Add Lot/DP and case parties (all assessment types)

1. Add the lot and deposited plan (DP) details to the child case by clicking 'New' on the 'Lot/DPs' tab on the child case page.



2. Enter the lot and DP information and click 'Save'.

New Property Lot

User Notes

Instructions
Record a single land parcel here. Only ONE of either Lot/DP & Plan Type OR Folio OR Registered Deed is required for each land parcel on this page. You must add all the land parcels for this assessment, click "Save and Next" to continue adding more land parcels.

Information

Lot i	* Case
<input type="text"/>	<input type="text" value="00044060"/> X
Plan Number i	Section
<input type="text"/>	<input type="text"/>
Plan Type i	Registered Deed Number i
--None-- ▼	<input type="text"/>
	Folio identifier or volume-folio i
	<input type="text"/>

Additional Information

Notes i

Notes

Information
The fields on the Assessed lots are now read only. Use the fields above to create/edit Lot/DP information.

Cancel Save & New Save

3. Return to the parent case page and add an individual landholder or landowner representative case party by clicking 'New' on the 'Case Parties' tab to open the 'New Case Party' dialog box. Other case parties may also be added if required.

Credit Recording (0)								
Case Parties (1) New								
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Party ...</th> <th style="width: 15%;">Full Na...</th> <th style="width: 15%;">Role</th> <th style="width: 15%;">Account</th> </tr> </thead> <tbody> <tr> <td>CP-52...</td> <td>EA BAM</td> <td>Assessor</td> <td>EA BAM ▼</td> </tr> </tbody> </table>	Party ...	Full Na...	Role	Account	CP-52...	EA BAM	Assessor	EA BAM ▼
Party ...	Full Na...	Role	Account					
CP-52...	EA BAM	Assessor	EA BAM ▼					
View All								

4. Select the case party type to be added, then click 'Next'.

New Case Party

Select a record type

- Individual Landholder
- Assessor
- Authorised Person
- Consent Authority Member
- Contact Person
- Corporation Landholder
- Council Member
- Credit Buyer
- Interest Holders

[Cancel](#) [Next](#)

5. Enter the case party details. All fields with a red asterisk are mandatory. Tick the box to 'Show contact details in public register' if required (mandatory for stewardship cases only). Click 'Save'.

New Case Party: Individual Landholder

Case Details

* Case Account

Show Contact Details in Public Register

Individual Landholder Details

* Customer Number <input type="text"/>	First Name <input type="text"/>
* Person Email <input type="text"/>	Last Name <input type="text"/>

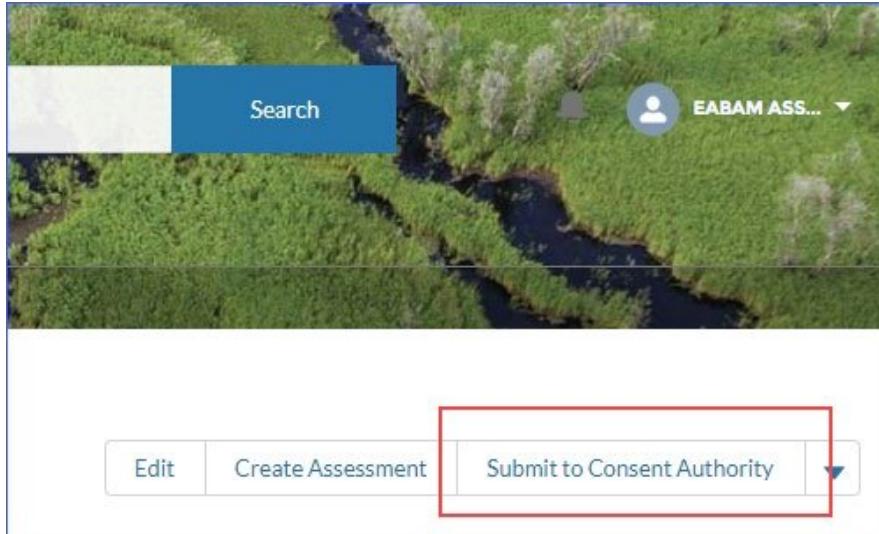
[Cancel](#) [Save & New](#) [Save](#)

6. Follow the instructions above to add the consent authority as a case party.

Submit a development-type case

To submit a development-type case to the consent authority, first follow the steps in Subsection 3.8.1 to add the lots/DPs and the landholder and consent authority case parties.

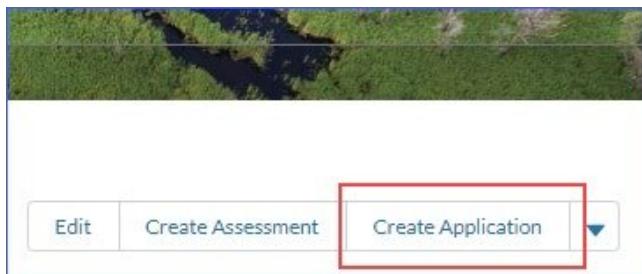
1. With the parent case selected in BOAMS, click ‘Submit to Consent Authority’. The assessment (child case) must be finalised before taking this step. Where there are multiple finalised assessments, the most recent finalised assessment will be submitted to the consent authority.



Submit a stewardship case

To submit a stewardship case (for offset sites) in BOAMS, first follow the steps in Subsection 3.8.1 to add the lots/DPs and the landholder case party.

1. With the parent case selected in BOAMS, click ‘Create Application’.



2. A pop-up will open reminding you that a completed stewardship assessment must be attached to the parent case prior to submission. Click ‘Create’.

Create Application

Please attach a completed stewardship assessment to the parent case prior to submitting the application.

3. Enter the required information, attach the relevant documents and tick the boxes to indicate which documents have been provided. Fields marked with a red asterisk are mandatory. Once complete, click 'Save'.

New Case: Stewardship Application

Application details

* Status <input type="text" value="In-Progress"/>	* Applicant Category <input type="text" value="--None--"/>
Subject <input type="text"/>	Description <input type="text"/>

Related Parent Cases
00035871

Assessment Details

* Accreditation number <input type="text"/>	Contact Name <input type="text"/>
All Information Declaration <input type="checkbox"/>	Data collection declaration <input type="checkbox"/>
Are there additional Landholders? <input type="checkbox"/>	

Property Interest holder details

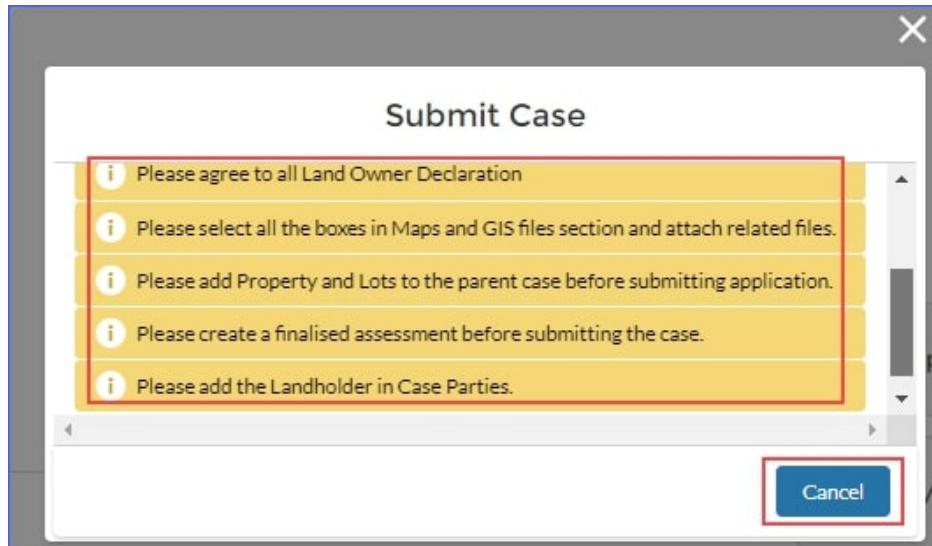
* Approval obtained from interest holders? <input type="text" value="--None--"/>
--

Supporting Documents

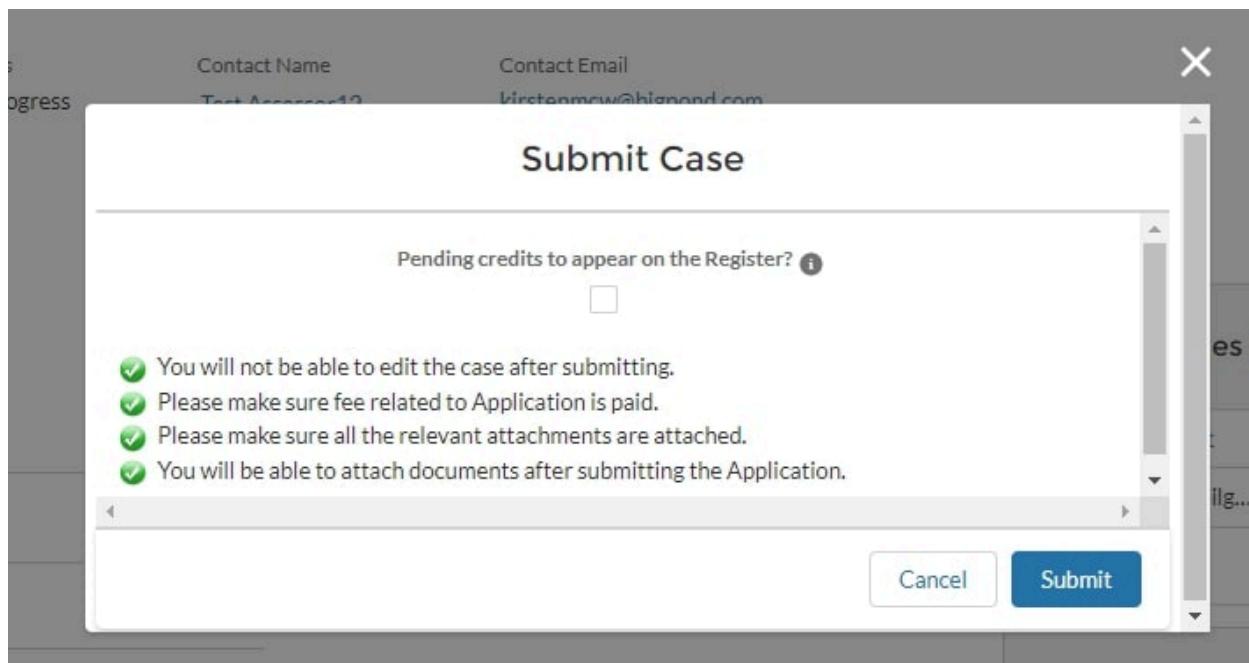
Proof of ownership <input type="checkbox"/>	Management Action Notes <input type="text"/>
Management actions <input type="checkbox"/>	Proposed fund notes <input type="text"/>
Proposed Total Fund Deposit <input type="checkbox"/>	Additionality notes <input type="text"/>

4. Once the application has been saved and all necessary documents have been attached to the parent case, it can be submitted by clicking 'Submit'.

5. Alternatively, the application may be saved and submitted after completing the required components of the stewardship application. If error messages display when you try to submit, review the message(s), then click 'Cancel' and complete the outstanding action(s).



6. When everything is ready for submission, click 'Submit'.

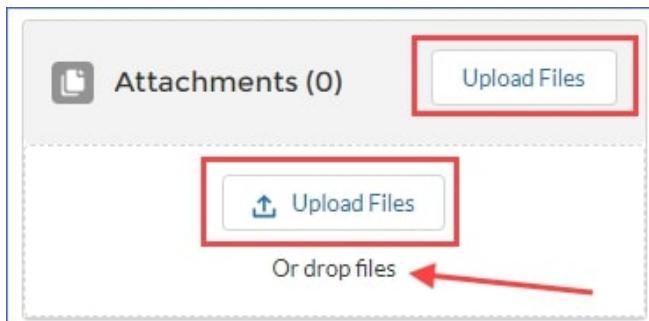


7. After submission the status on the parent case page will update to 'Submitted'.

 Case	00034365
Type Stewardship	Status Submitted
Additional Information	
Status <small>ⓘ</small> Submitted	Type Stewardship
Subject Test1228	Description test16082022
Pending credits to appear on Register? <small>ⓘ</small> <input checked="" type="checkbox"/>	Contact Person on Register CP-36986

Add case attachments

To add attachments and shapefiles to BOAMS, select the BOAMS parent case and click on the ‘Upload Files’ button on the ‘Attachments’ tab. Files can also be dragged and dropped into the ‘Attachments’ tab.



General functions

3.9 Print a report

You must launch the BAM-C via BOAMS as a registered user to use the report functionality in the BAM-C.

1. Open the required assessment revision and click ‘Print’.

BAM Calculator

OPEN SAVE SAVE AS NEW REVISION CANCEL DELETE FINALISE PRINT

00044199/BAAS01234/24/00045222 / Revision: 0

1. Assessment details 2. Site context 3. Vegetation 4. Habitat suitability: Pre
8. Credit classes 9. Price

2. Assessment details must be saved before printing.

New assessment or any changes to the existing assessment details must be saved before printing

3. A drop-down list of the available reports will appear below the 'Print' button. The list will differ depending on whether it is a development/clearing, scattered tree or stewardship assessment.

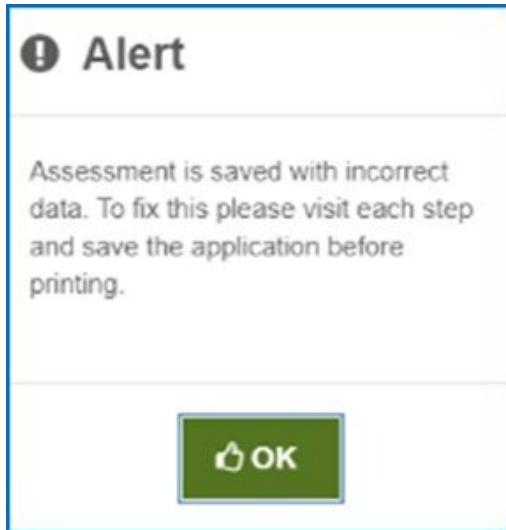
Development cases

CREDITS SUMMARY REPORT
CANDIDATE THREATENED SPECIES REPORT
PREDICTED SPECIES REPORT
VEGETATION ZONES REPORT
BIODIVERSITY CREDIT REPORT (LIKE FOR LIKE)
BIODIVERSITY CREDIT REPORT (VARIATIONS)

Stewardship cases

CREDITS SUMMARY REPORT
CANDIDATE THREATENED SPECIES REPORT
PREDICTED SPECIES REPORT
VEGETATION ZONES REPORT
BIODIVERSITY CREDIT REPORT

4. Select the relevant report. If an alert box appears, the report cannot be printed until the issues in the alert box have been addressed.

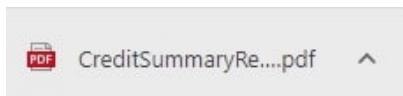


Alert!

- Not enough information to print this report.
- First visit '3. Vegetation' and complete data input
 - visit '4. Habitat suitability'
 - save the assessment
 - then print the report

OK

- When all outstanding issues have been addressed, the report will open in PDF format, and will download to your downloads folder.



The purpose of each report is detailed in Table 2.

Table 2 Purpose of BAM-C reports

Assessment type *	Report	Purpose
Development, scattered tree and stewardship	Credits Summary Report	Details the ecosystem credits for plant community types (PCTs), ecological communities, threatened species habitat, and species credits for threatened species
Development and stewardship	Candidate Threatened Species Report	Lists species requiring survey
Development, scattered tree and stewardship	Predicted Species Report	Lists threatened species reliably predicted to utilise the site. No surveys are required for these species. Ecosystem credits apply to these species

Assessment type *	Report	Purpose
Development, scattered tree and stewardship	Vegetation Zones Report	Provides information about the vegetation zone(s)
Development and scattered tree	Biodiversity Credit Report (Like-for- like)	Provides details of like-for-like ecosystem and threatened species retirement options
Development and scattered tree	Biodiversity Credit Report (Variations)	Provides details of variation options for ecosystem and threatened species
Scattered tree	Scattered Tree Report	Lists the tree groups and the number of trees, their class, DBH category, if they contain hollows, and if they require assessment
Stewardship	Biodiversity Credit Report	Details the ecosystem credit summary (number and class of biodiversity credits to be created)

* Development assessments include Part 4 Developments (General), Part 5 Activities, Major Projects, Clearing (General), Biocertification, Part 4 small area, and Part 5 small area.

4. Creating a development/ clearing assessment

The types of assessment covered by this chapter are:

- Part 4 Developments (General)
- Part 5 Activities
- Major Projects
- Clearing (General)
- Biocertification

Refer to **Chapter 5** of this guide for information on assessing small areas, **[Chapter 6 \(/bamguide/6-scattered-trees/6-creating-a-scattered-trees-assessment.html\)](#)** for assessing scattered trees, and **Chapter 7** for assessing stewardship (for offset) sites.

When entering data into each tab of the BAM-C, proceed to the next tab by using the ‘Next’ button at the bottom of the page. The data added then flows through to the next tab in the BAM-C.

1. Assessment details 2. Site context 3. Vegetation 4. Habitat suitability: Predicted 5. Habitat suitability: Candidate 6. 7. Credits 8. Credit classes 9. Price

Fields marked with an asterisk (*) are mandatory

Tip!
Choosing the 'Assessment type' is an important step. Once you click, 'Next' this value will become read-only and it cannot be un-done.

Assessment type *	<input type="text" value="Part 4 Developments (General)"/>
Proposal name	<input type="text" value="Part 4 Developments (General)"/>
Assessment ID	<input type="text" value="Part 4 Developments (General)"/>
Assessment Revision	<input type="text" value="Part 4 Developments (General)"/>

Tip

- Remember to click ‘Next’ so the data entered flows through to the subsequent tabs and calculations.
- Once the information on all tabs has been completed, you may navigate through the populated tabs by clicking on the tab heading. If any data is modified, you must click the ‘Next’ button at the bottom of the page, and at the bottom of every subsequent tab to ensure the credits are calculated correctly and the reports are updated.

There are high level functions that act across all tabs to help you manage assessments and create output from the BAM-C. Refer to **Chapter 3** for information on these functions.



BAM Calculator

Actions: OPEN | SAVE | SAVE AS NEW REVISION | CANCEL | DELETE | FINALISE | PRINT ▾

00043684/BAAS01234/23/00044154 / Revision: 0

1. Assessment details 2. Site context 3. Vegetation 4. Habitat suitability: Predicted

Sections 4.1–4.9 below detail how to use each of the tabs in the BAM-C to enter details for a development/clearing assessment.

In this section

4.1 Assessment details (Tab 1)

4.2 Site context (Tab 2)

4.3 Vegetation (Tab 3)

4.4 Habitat suitability: Predicted (Tab 4)

4.5 Habitat suitability: Candidate (Tab 5)

4.6 Habitat survey (Tab 6)

4.7 Credits (Tab 7)

4.8 Credit classes (Tab 8)

4.9 Price (Tab 9)

Creating a development/ clearing assessment

4.1 Assessment details (Tab 1)

The ‘Assessment details’ tab is used to capture the type of development assessment and record the proposal name.

BAM Calculator

App last updated: 13/04/2023 10:00 (Version: 1.4.0.00)
BAM data last updated *: 22/06/2023 (Version: 61) * Disclaimer

OPEN **SAVE** **SAVE AS NEW REVISION** **CANCEL** **DELETE** **FINALISE** **PRINT**

00043684/BAAS01234/23/00043687 / Revision: 0

1. Assessment details ***** 2. Site context ***** 3. Vegetation ***** 4. Habitat suitability: Predicted ***** 5. Habitat suitability: Candidate ***** 6. Habitat survey ***** 7. Credits *****
 8. Credit classes ***** 9. Price *****

All fields marked with an asterisk (*) are mandatory

Tip!
Choosing the 'Assessment type' is an important step. Once you click, 'Next' this value will become read-only and it cannot be un-done.

Assessment type *	<input type="text"/>
Proposal name	<input type="text"/>
Assessment ID	00043684/BAAS01234/23/00043687
Assessment Revision	0

NEXT

1. Click on the 'Assessment details' tab to enter assessment details.

1. Assessment details

2. Use the 'Assessment type' drop-down to select the assessment type.

1. Assessment details ***** 2. Site context ***** 3. Vegetation ***** 4. Habitat suitability: Predicted ***** 5. Habitat suitability: Candidate ***** 6.
 7. Credits ***** 8. Credit classes ***** 9. Price *****

Fields marked with an asterisk (*) are mandatory

Tip!
Choosing the 'Assessment type' is an important step. Once you click, 'Next' this value will become read-only and it cannot be un-done.

Assessment type *	<input type="text"/>
Proposal name	<input type="text"/>
Assessment ID	00043684/BAAS01234/23/00043687
Assessment Revision	0

The dropdown menu shows the following options:

- Part 4 Developments (General)
- Part 4 Developments (Small Area)
- Major Projects
- Part 5 Activities
- Part 5 Development (Small Area)
- Biocertification
- Clearing (General)
- Scattered Trees

3. Use the 'Biodiversity Offsets Scheme entry trigger' drop-down to select the required entry trigger.
For more information on the entry trigger, refer to the [When does the Biodiversity Offsets Scheme apply \(https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/clear-and-develop-land/when-biodiversity-offsets-scheme-applies\)](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/clear-and-develop-land/when-biodiversity-offsets-scheme-applies) webpage.

Assessment type *	<input type="text"/> Part 4 Developments (General)
Biodiversity Offsets Scheme entry trigger *	<input type="text"/>
Proposal name	<input type="text"/>
Assessment ID	<input type="text"/>

The dropdown menu shows the following options:

- BOS Threshold: Biodiversity Values Map
- BOS Threshold: Area clearing threshold
- BOS Threshold: Biodiversity Values Map and area clearing threshold
- Test of significance

i Tip

- The 'Biodiversity Offsets Scheme entry trigger' is not available for major projects (state significant development or state significant infrastructure), Part 5 Activities or

Biocertification cases, as the entry trigger is not applicable to these types of assessments.

4. Add a unique description into the 'Proposal name' field.

Proposal name	Demonstration Assessment
Assessment ID	
Assessment Revision	0

i Tip

- The proposal name is a valuable identifier for the BAM-C assessment.
- A unique proposal name will help you distinguish differences between assessment revisions.

5. When all required information has been entered, click 'Next' to move to Tab 2.



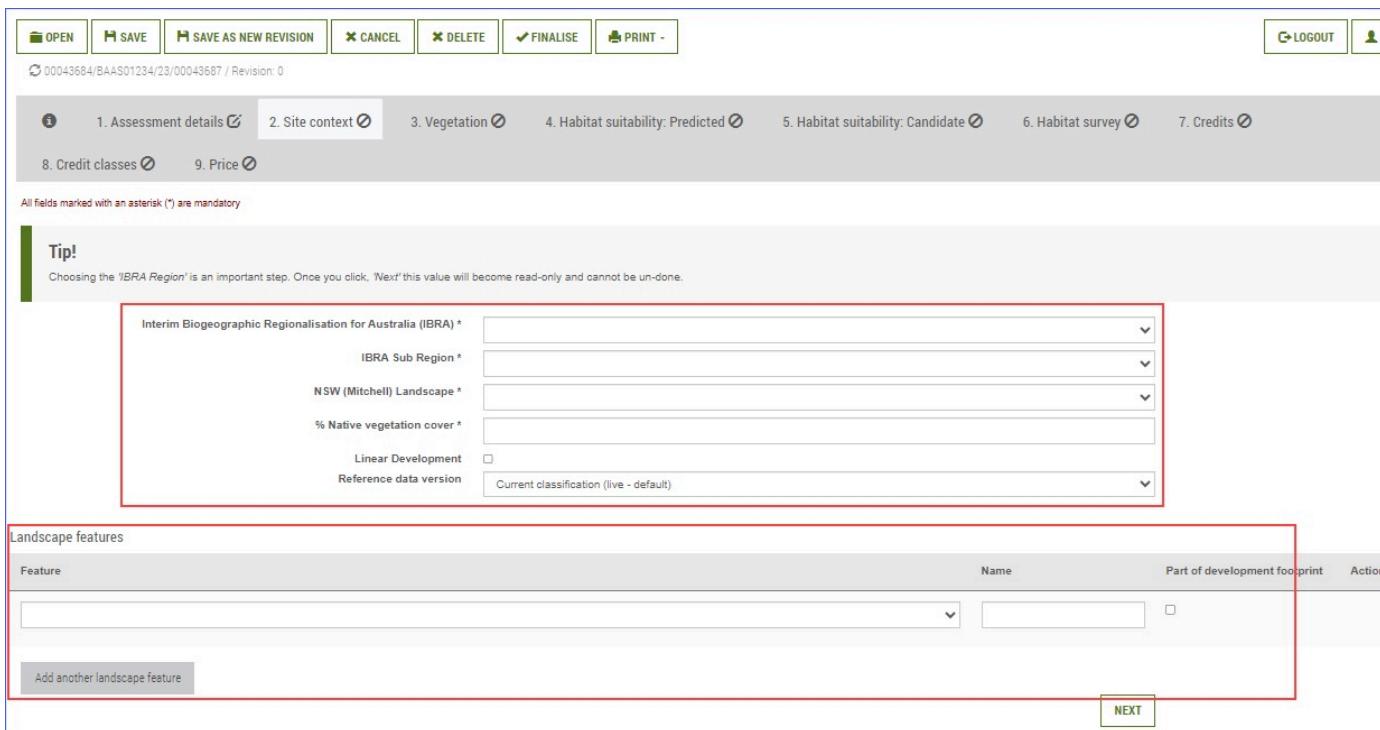
i Tip

- Once 'Next' is clicked, the assessment type for the assessment is locked.
- To change the assessment type, cancel or exit the assessment before saving and reopen the assessment.
- If the assessment has the incorrect assessment type and the case has been saved, delete the assessment and create a new assessment through BOAMS (using the same parent case).
- Click 'Next' to move to the next tab to ensure subsequent tabs contain the correct information and calculations.

Creating a development/ clearing assessment

4.2 Site context (Tab 2)

The 'Site context' tab is used to capture information relating to the biogeographic and landscape setting of the site. Information required for this tab is displayed below.

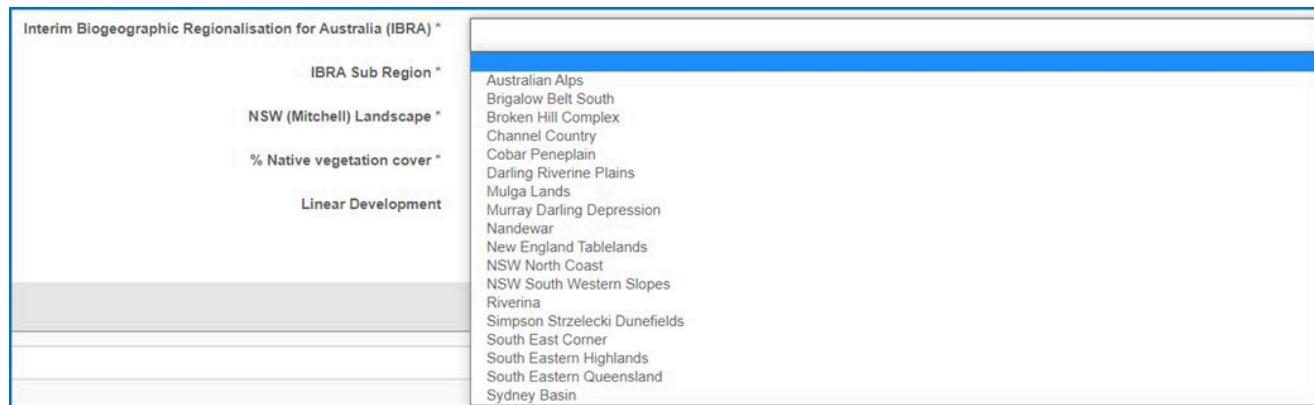


The screenshot shows the 'Site context' tab selected in the top navigation bar. Below it, a tip message states: 'Choosing the 'IBRA Region' is an important step. Once you click, 'Next' this value will become read-only and cannot be un-done.' The form includes fields for IBRA Sub Region, NSW (Mitchell) Landscape, % Native vegetation cover, Linear Development, and Reference data version. A section for 'Landscape features' is also visible.

1. The 'Site context' tab will be open if 'Next' was clicked on Tab 1.



2. Use the 'Interim Biogeographic Regionalisation for Australia (IBRA)' drop-down to select the IBRA region. If the assessment occurs across multiple IBRA regions, select the IBRA region where the largest proportion of impact/area will occur.



The screenshot shows a dropdown menu for selecting the 'Interim Biogeographic Regionalisation for Australia (IBRA)'. The options listed are: Australian Alps, Brigalow Belt South, Broken Hill Complex, Channel Country, Cobar Peneplain, Darling Riverine Plains, Mulga Lands, Murray Darling Depression, Nandewar, New England Tablelands, NSW North Coast, NSW South Western Slopes, Riverina, Simpson Strzelecki Dunefields, South East Corner, South Eastern Highlands, South Eastern Queensland, and Sydney Basin.

Tip

- In some circumstances, it may be necessary to assess a clearing or development proposal using multiple child cases. For example, a linear proposal that crosses multiple IBRA subregion boundaries (see **BAM 2020 (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>)**, Subsection 3.1.3(2)), or where a threatened ecological community (TEC) is determined to be present on site, but the dominant subregion is not associated with that TEC.
- See **Bioregions of NSW (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/bioregions/bioregions-of-nsw>)** for further information on the state's

bioregions (see [Appendix B](#)).

- See [BAM 2020 \(https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Chapter 3 for further information on establishing the site context.
- The IBRA subregion selection affects future selections of PCTs, TECs and species.

3. Use the 'IBRA Sub Region' drop-down to select the IBRA subregion in which most of the site is located. The drop-down is filtered based on the IBRA region selected in step 2.

Warning: Changes to this value might affect data in 'Habitat suitability', 'Habitat survey', 'Credits', 'Credit classes' and 'Price' tabs

IBRA Sub Region *

NSW Landscape

% Native vegetation cover *

Central Depression
Bulloo
Bulloo Dunefields
Central Depression
Core Ranges
Sturt Stony Desert

4. Use the 'NSW (Mitchell) Landscape' drop-down to select the landscape in which most of the proposal occurs.

NSW (Mitchell) Landscape *

% Native vegetation cover *

Linear Development

Adelong Granite Ranges
Adrah Hills and Ranges
Albury - Oaklands Hills and Foothills
Alpine Zone
Apsley Meta-sediments
Ardlethan Hills
Ashfield Plains
Ashford Karst
Ashford Mole Valleys
Attunga Karst
Baldwin Mountains
Ballina Coastal Ramp
Baradine - Coghill Channels and Floodplains
Baradine Alluvial Plains
Barnato Downs
Barnato Incised Streams
Barnato Isolated Hills
Barnato Lakes
Barnato Linear Dunes

i Tip

- NSW (Mitchell) landscape does not influence calculations of VI or credit calculations for development cases but is important for stewardship applications and is also used in reporting.
- See [Descriptions for NSW \(Mitchell\) Landscapes \(https://www.environment.nsw.gov.au/resources/conservation/landscapesdescriptions.pdf\)](https://www.environment.nsw.gov.au/resources/conservation/landscapesdescriptions.pdf) for further information (see [Appendix B](#)).

5. Enter a value for the percentage landscape native vegetation cover in the '% Native vegetation cover' field.

NSW (Mitchell) Landscape *

% Native vegetation cover *

28

Warning: Changes to this value might affect data in 'Habitat suitability', 'Habitat survey', 'Credits', 'Credit classes' and 'Price' tabs

i Tip

- See [**BAM 2020**](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Section 3.2 for further information on native vegetation cover.
- The % native vegetation cover value entered may affect the predicted and candidate fauna species lists. Refer to the definition of ‘Suitable habitat’ in the [**BAM 2020 Glossary**](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020) (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>) for more information.

6. Tick the ‘Linear Development’ checkbox if the development is linear-shaped. Linear-shaped development is generally narrow and extends across the landscape, for example, major roads and rail lines.

A screenshot showing a form field for 'Linear Development'. A blue rectangular box highlights the 'Linear Development' label and its corresponding checkbox. The checkbox is checked, indicated by a blue checkmark inside a red-bordered box. Below the checkbox is a dropdown menu labeled 'Reference data version' with 'Current' selected.

7. Reference data version – The revised Eastern NSW PCT Classification has been deployed into the BAM-C, and revisions to the remainder of the state will be rolled out over the coming years. The reference data version may have different options available depending on when the assessment was created and which IBRA region is selected.

Instructions are provided for the following scenarios:

- a. new assessments inside a revised NSW IBRA region
- b. existing assessments inside a newly revised NSW IBRA region
- c. new or existing assessments outside a newly revised NSW IBRA region.

a. New assessments inside a revised NSW IBRA region

All new assessments created after deployment of a revised NSW PCT classification will automatically use the revised NSW PCTs when an associated NSW IBRA region is selected. The only option in the ‘Reference data version’ drop-down will be ‘Current classification (live – default)’.

A screenshot showing a dropdown menu for 'Reference data version'. The menu has two items: 'Current classification (live - default)' and 'Current classification (live - default)'. The second item is highlighted with a blue background, indicating it is the selected option.

b. Existing assessments inside a newly revised NSW IBRA region

Reopening ‘Open’, ‘Locked’ or ‘Finalised’ assessments created before deployment of a newly revised NSW PCT classification will trigger an update with the revised NSW PCTs. This will trigger an alert detailing the changes that have occurred in the assessment.

Alert!

Reference data updated. Details of the changes to the application listed below (if available). Apart from these please visit Habitat tabs (Step 4 and 5) to see any possible new species additions.

Click on  in each section to see the items and fields affected by the change.

PCT
Delisted-PCT(s) no longer valid. Please visit 3.Vegetation tab and update the PCT(s). 
Benchmarks updated-Please visit the vegetation tab and recalculate the VI score of the zones impacted by this change. 

Candidate species
Updated-Navigate to Habitat tabs (Step 4 and 5) to see the modified changes 

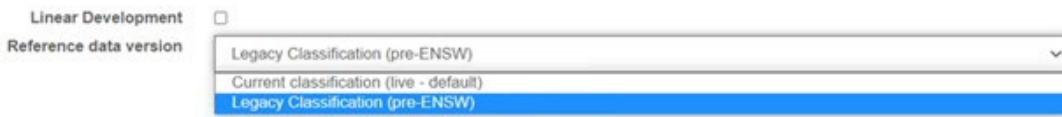
Eco credit species
Updated-Navigate to Habitat suitability tab (step 4) to see the modified changes 
Benchmarks Updated: Application of Version 1.2 benchmarks are subject to transitional arrangements for in-progress assessments. From 30 January 2023 to 30 June 2023 assessors may opt to manually modify benchmarks to apply the previous Version 1.1 benchmarks. For full details of the transitional arrangements, see the BOS webpage

OK

i Tip

- Take a screenshot of the alert showing the updates. Alerts will not display again once the case has been saved.

To use legacy PCTs during a transitional period, select the legacy classification in the ‘Reference data version’ drop-down. Alternatively, to use the revised NSW PCTs select ‘Current classification (live – default)’.



To progress an assessment with revised data, the following tabs may require amendment:

- Tab 3 –Vegetation
- Tab 4 –Habitat suitability: Predicted
- Tab 5 –Habitat suitability: Candidate
- Tab 6 –Habitat Survey

c. New or existing assessments outside a revised NSW IBRA region

New or existing assessments outside of a newly revised NSW IBRA region will not update with new NSW PCTs, as they are not relevant. The only available option in the ‘Reference data version’ drop-down will be ‘Current classification (live –default)’.



i Tip

- Further information on transitional arrangements is available from the [**New vegetation integrity benchmarks and plant community types**](#)

[**\(https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/nsw-plant-community-type-classification/pct-change-control\)**](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/nsw-plant-community-type-classification/pct-change-control) webpage (see **Appendix B**).

- When a transitional period ends, the only option in the ‘Reference data version’ drop-down will be ‘Current classification (live – default)’. At this time, revised NSW PCTs must be used for all assessments within the associated NSW IBRA regions.
- Clear your browser cache to ensure any newly revised NSW PCTs and the legacy reference data version display correctly in the drop-down.

Clearing the BAM-C cache – If you are having a problem selecting legacy PCTs (during a transitional period) in a case created before deployment of any revised NSW PCTs, clear your cache in the BAM-C. See **Appendix A** of this guide for instructions on clearing the cache.

i Tip

- If you cannot clear the cache to see the legacy classification in the ‘Reference data version’ drop-down, contact the **BOS Help Desk** (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/help-and-support/help-desk>) for assistance.

8. The ‘Landscape features’ field can be left blank when no listed landscape features are associated with the site. If a landscape feature is associated with the site, use the landscape ‘Feature’ drop-down to select the type of landscape feature associated with the site.

Landscape features

Feature *	Name *	Part of development footprint	Action
<input type="text" value="Wetlands"/> <input type="button" value="Add another landscape feature"/>	<input type="text" value="RiverName"/> <input type="checkbox"/>		<input type="button" value="Remove"/>
<input type="button" value="Native vegetation extent"/> <input type="button" value="Connectivity features"/> <input type="button" value="Areas of geological significance and soil hazard features"/> <input type="button" value="Any other landscape features that are required by the Secretary's Environmental Assessment Requirements (SEARs) for assessment at a development site for a major project"/> <input type="button" value="Areas of outstanding biodiversity value that have been identified under the BC Act"/>			

9. Enter the name of the landscape feature in the ‘Name’ field.

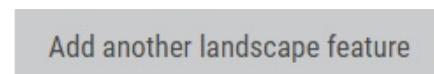
Landscape features

Feature	Name	Part of development footprint
<input type="text" value="Wetlands"/>	<input type="text" value="Test Wetland"/> <input type="checkbox"/>	

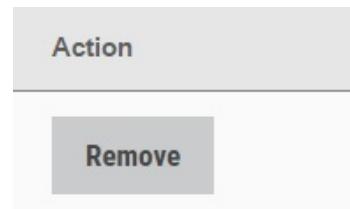
10. Tick the checkbox in the ‘Part of development footprint’ column if the feature is within the development footprint.

Part of development footprint
<input checked="" type="checkbox"/>

11. Click 'Add another landscape feature' to accept the entered data. This will add another landscape feature row, which can be left blank if there are no other landscape features.



12. If you need to remove a landscape feature, click 'Remove' in the 'Action' column.



13. When all required information has been entered, click 'Next' to move to Tab 3.

i **Tip**

- Once 'Next' is clicked, the IBRA region for the assessment is locked.
- To change the IBRA region, cancel or exit the assessment before saving and reopen the assessment.
- If the IBRA region is incorrect and the case has been saved, delete the assessment and create a new assessment through BOAMS (using the same parent case).
- Click 'Next' to move to the next tab to ensure subsequent tabs contain the correct information and calculations.

Creating a development/ clearing assessment

4.3 Vegetation (Tab 3)

The 'Vegetation' tab is used to record the PCT(s) present on the site and to capture individual plot data that is used to calculate the VI scores for each vegetation zone.

The method for recording PCTs and TECs at a site and calculating current vegetation condition of a site is the same for all assessment types. Refer to Chapter 4 of the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>) for further information.

In this subsection

4.3.1 Define the PCTs and TECs

4.3.2 Import vegetation zones

4.3.3 Manually enter vegetation zone data

4.3.4 Calculate vegetation integrity for sites with multiple management zones

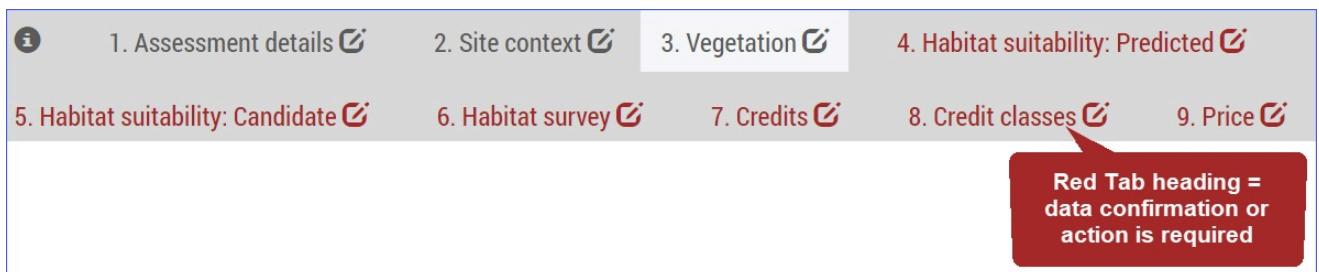
4.3.5 Calculate the future vegetation integrity score

4.3.1 Define the PCTs and TECs

1. The ‘Vegetation’ tab will be open if ‘Next’ was clicked on Tab 2. When reopening an assessment with existing information, click on Tab 3 to open it.

3. Vegetation

2. Note that if any of the tab headings are shaded in red, this indicates that action is required, or information needs to be entered/confirmed on that tab. Remember to click ‘Next’ to move through the tabs if any changes are made.



3. If the PCT name or number is known, the ‘Plant community type’ field can be added as the first step, which will automatically populate the formation and class fields.

If the PCT name or number is not known, use the ‘Formation’ drop-down to select the formation for the required PCT.

Formation

▼

- Rainforest
- Wet Sclerophyll Forests (Shrubby sub-formation)
- Freshwater wetlands
- Dry Sclerophyll Forests (Shrubby sub-formation)
- Forested Wetlands
- Grassy Woodlands
- Dry Sclerophyll Forests (Shrub/grass sub-formation)

Tip

- If the PCT or number is known, enter this first and the formation and class fields will be populated automatically.
- Only PCTs associated with the IBRA region and IBRA subregion will be available.
- Refer to the webpage About BioNet Vegetation Classification (Veg-C) (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/about-bionet-vegetation-classification>) for further information about PCTs and TECs (see Appendix B).

4. Use the 'Class' drop-down (if PCT name or number is not known) to select the required class. The classes available will be filtered to those associated with the formation if a formation was selected in step 3.

Plant community types (PCT) & ecological communities

Formation *	Class *	Plant community type *	PCT % c
<input type="text"/>	<input type="text"/>	<input type="text"/>	
<div style="border: 1px solid #ccc; padding: 5px; width: fit-content;"> Brigalow Clay Plain Woodlands Coastal Freshwater Lagoons Coastal Swamp Forests Coastal Valley Grassy Woodlands Cool Temperate Rainforests Dry Rainforests Eastern Riverine Forests Floodplain Transition Woodlands Gibber Transition Shrublands Hunter-Macleay Dry Sclerophyll Forests Inland Floodplain Shrublands Inland Floodplain Swamps Inland Floodplain Woodlands Inland Riverine Forests Inland Rocky Hill Woodlands Inland Saline Lakes Montane Bogs and Fens New England Dry Sclerophyll Forests New England Grassy Woodlands </div>			
ADD ANOTHER PCT			
IMPORT SITE			
#	Import		
1	<input type="button" value="Import"/>		

5. Use the 'Plant community type' drop-down to select the required PCT. The PCTs available will be filtered to those associated with the class if a class was selected in step 4.

Plant community type *	PCT % cleared	Associated TEC *	BC Act listing status	EPBC Act listing status	Action	Delete
<div style="border: 1px solid #ccc; padding: 5px; width: fit-content;"> 24 - Canegrass swamp tall grassland wetland of drainage depressions, lakes and pans of the inland plains 25 - Lignum shrubland wetland on floodplains and depressions of the Mulga Lands Bioregion, Channel Country Bioregion in the arid and semi-arid (hot) climate zones 27 - Weeping Myall open woodland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion 31 - Brigalow - Gidgee open woodland on clay plains west of the Culgoa River, Mulga Lands Bioregion 35 - Brigalow - Belah open forest / woodland on alluvium often gilgaied clay from Pilliga Scrub to Goondiwindi, Brigalow Belt South Bioregion 36 - River Red Gum tall to very tall open forest / woodland wetland on rivers on floodplains mainly in the Darling Riverine Plains Bioregion 37 - Black Box woodland wetland on NSW central and northern floodplains including the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion. 38 - Black Box low woodland wetland lining ephemeral watercourses or fringing lakes and clay pans of semi-arid (hot) and arid zones 39 - Coolabah - River Coobah - Lignum woodland wetland of frequently flooded floodplains mainly in the Darling Riverine Plains Bioregion 40 - Coolabah open woodland with chenopod/grassy ground cover on grey and brown clay floodplains 43 - Mitchell Grass grassland - chenopod low open shrubland on floodplains in the semi-arid (hot) and arid zones 45 - Plains Grass grassland on alluvial mainly clay soils in the Riverina Bioregion and NSW South Western Slopes Bioregion 49 - Partly derived Windmill Grass - copperburr alluvial plains shrubby grassland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion 50 - Couch Grass grassland wetland on river banks and floodplains of inland river systems 52 - Queensland Bluegrass +/- Mitchell Grass grassland on cracking clay floodplains and alluvial plains mainly the northern-eastern Darling Riverine Plains Bioregion 53 - Shallow freshwater wetland sedgeland in depressions on floodplains on inland alluvial plains and floodplains 54 - Buloke - White Cypress Pine woodland in the NSW South Western Slopes Bioregion 55 - Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions. 56 - Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW </div>				ADD VEG ZONE	X	

6. The % cleared value for the PCT will be displayed under 'PCT % cleared'. The % cleared value is an estimate of the extent to which a PCT has been cleared since European settlement and is used when assigning a non-threatened PCT to an offset trading group (OTG).

PCT % cleared
90

Tip

- Detailed information on each PCT and its geographic distribution is available as a downloadable and refreshable Power Query from NSW BioNet Resources (see [Appendix B](#)), ‘BioNet Vegetation Classification’ > ‘Power Queries’ > ‘Plant Community Type data’. Refer to the [Offset rules and ecosystem credits](#) (<https://www.environment.nsw.gov.au/publications/offset-rules-and-ecosystem-credits-guidance>) guidance for more information on % cleared and OTGs (see [Appendix B](#)).

7. Use the ‘Associated TEC’ drop-down to select the relevant TEC. If no TEC is associated with the PCT, select ‘Not a TEC’.

Associated TEC *	BC Act listing status	EPBC Act listing status	Action
Not a TEC			ADD VEG Z
White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NS White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland			
Not a TEC			

Tip

- Only TECs associated with the selected PCT (in BioNet) are shown in the drop-down. Where a TEC is present at the site but is unavailable in the drop-down list, it may be because the TEC is not associated with the IBRA region and IBRA subregion chosen.
- A detailed description of each TEC is available through the [Threatened biodiversity profile search](#) (<https://threatenedspecies.bionet.nsw.gov.au/>) app (see [Appendix B](#)).
- Detailed information on the PCT to TEC associations and the applicable subregions is available as a downloadable and refreshable Power Query from the [NSW BioNet Resources](#) (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/resources>) webpage (see [Appendix B](#)). ‘BioNet Vegetation Classification’ > ‘Power queries’ > ‘Threatened Ecological Community to Plant Community Types (PCT) Association data’.
- To request a review of a TEC association, contact the BOS Help Desk.

8. The state and Commonwealth listing status of a TEC will be displayed under the ‘BC Act listing status’ and ‘EPBC Act listing status’ headings, respectively.

BC Act listing status	EPBC Act listing status
Critically Endangered Ecological Community	Not Listed

9. Click ‘Add veg zone’.

ADD VEG ZONE

10. A vegetation zone record will be added to the following sections:

- ‘Vegetation zones (Current vegetation integrity score)’
- ‘Vegetation zones (Future vegetation integrity score)’.

Vegetation zones (Current vegetation integrity score)													
#	Import	PCT code	Condition class *	Vegetation zone name	Patch Size*	Area (ha)*	Location *	Composition condition score	Structure condition score	Function condition score	Current vegetation integrity score	Management zones	Delete
1		266	Classname e1	266_Classname e1	0								

Vegetation zones (Future vegetation integrity score)												
#	PCT code	Condition class	Vegetation zone name	Patch Size	Management zone	Area (ha)	Composition condition score	Structure condition score	Function condition score	Vegetation integrity (VI) score	Change in VI score	Total VI loss
1	266	Classname1	266_Classname 1	0								

Tip

- Adding a unique condition class name to each vegetation zone will help you distinguish the vegetation zones throughout the assessment, especially when both a TEC and non-TEC have been identified on site for the same PCT.
- The future VI score fields display the remaining VI values after the development or clearing has occurred at a site. Edit this section only if partial loss of VI is occurring, rather than total loss.

11. For PCTs with multiple vegetation zones, click ‘Add veg zone’ beside the applicable PCT to add another vegetation zone.

Plant community types (PCT) & ecological communities							
Formation *	Class *	Plant community type *	PCT % cleared	Associated TEC *	BC Act listing status	EPBC Act listing status	Action
Grassy Woodlands	Western Slopes Grassy Woodlands	266 - White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion	94	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland	Critically Endangered Ecological Community	Not Listed	 Modify default bench

12. A zone number will be generated for each vegetation zone and the relevant PCT number for each record displayed.

#	Import	PCT code
1		303:
2		302:

13. Click ‘Add another PCT’ (if required) and repeat the above steps for additional PCTs.

ADD ANOTHER PCT

14. If the required PCT is missing from the PCT list, click ‘Search PCT outside IBRA’ and enter the name or PCT number to search and then select the PCT. Repeat the above steps for adding vegetation zones.

ADD ANOTHER PCT	SEARCH PCT OUTSIDE IBRA	PCT name or ID	Cancel
-----------------	-------------------------	----------------	--------

i Tip

- You can only add PCTs that are associated with the selected IBRA region when you use the ‘Add Another PCT’ button.
- With the ‘Search PCT outside IBRA’ button you can add any approved PCT, not only those associated with the selected IBRA region.
- Some PCTs have no (or incomplete) benchmarks in Veg-C. For these PCTs, an error will be displayed, and the PCT cannot be used in the assessment.

15. To delete a PCT or a vegetation zone click the button on the right under ‘Delete’.

Plant community types (PCT) & ecological communities							
Formation *	Class *	Plant community type *	PCT % cleared	Associated TEC *	BC Act listing status	EPBC Act listing status	Action
Semi-arid Woodlands (Grassy sub-formation)	Riverine Plain Woodlands	27 - Weeping Myall open woodland of the Darling Riverine	86	Weeping Myall Woodlands	Not Listed	Endangered	ADD VEG ZONE  Modify default benchmarks

i Tip

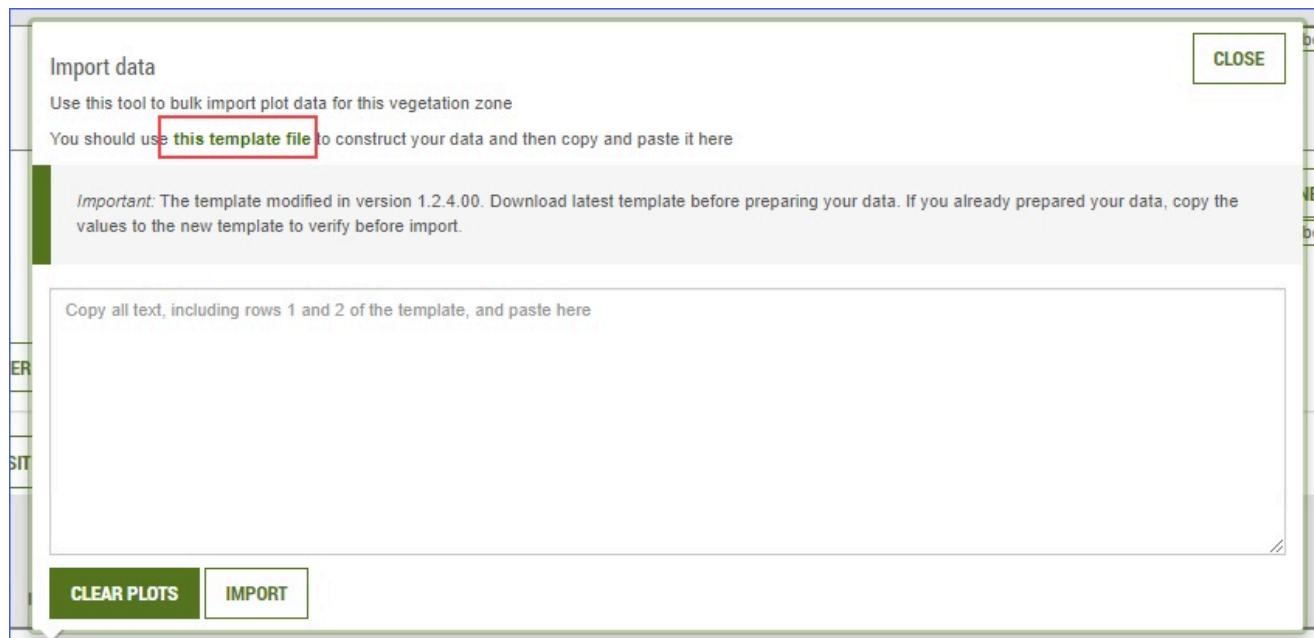
Vegetation zone and site data can be imported into the BAM-C in CSV file format (Subsection 4.3.2) or added manually (Subsection 4.3.3). See below for instructions.

4.3.2 Import vegetation zones

1. To import vegetation zone data, click the import icon beside the vegetation zone.



2. Download the CSV template by selecting ‘this template file’ in the import pop-up and an excel import data template will become available.



import_template (4).xlsx ^

3. Open and populate the template with observation values and save the template:

- row 1 of the template is reserved for headers
- row 2 of the template is reserved for example data
- users must enter plot data into the template from row 3 onwards

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	plot	pct	area	patchsize	conditionclass	zone	easting	northing	bearing	compTree	compShru	compGras	compForb	compFern	compOther
2	Text[Maximum 10 Number]	Number with 2 decimal Number		Text[Letters, number [54 or 55 or 56]]											
3	1	3032	1.10	145 ModCondition	56	475315	6678416.0	45	12	7	2	1	1	1	56.0
4	2	3032	0.30	145 GoodCondition	56	475316	6678414.0	40	10	4	2	0	1	0	46.0

4. Select and copy all column headings in rows 1 and 2 and the data from row 3 (and onwards if there is more than one plot). Make sure no blank columns or rows are selected.

U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
strucOther	funLargeT	funHollow	funLitterC	funLenFal	funTreeSt	funTreeSt	funTreeSt	funTreeSt	funTreeSt	funTreeRe	funHighThreat	creatExotic
Number w/ 1 decimal	Number	Number	Number w/ 1 decimal	[0,1]	[0,1]	[0,1]	[0,1]	[0,1]	[0,1]	Number w/ 1 decimal		
0.0	2	0	50.0	55.0	0	0	1	1	0	1	2.0	
0.0	1	2	75.0	22.0	0	1	1	0	0	1	9.0	
5												

5. Click the import icon to reopen the 'Import data' pop-up (if not already open).



6. Paste the copied data from the template into the 'Import data' pop-up and click 'Import'.

Import data

Use this tool to bulk import plot data for this vegetation zone

You should use [this template file](#) to construct your data and then copy and paste it here

Important: The template modified in version 1.2.4.00. Download latest template before preparing your data. If you already prepared your data, copy the values to the new template to verify before import.

plot	pct	area	patchsize	conditionclass	zone	easting	northing	bearing	compTree	compShrub	compGrass	compForbs	compFerns									
compOther	strucTree	strucShrub	strucGrass	strucForbs	strucFerns	strucOther	funLargeTrees	funHollowtrees	funLitterCover	funTreeRegen	funHighThreatExotic											
Text[Maximum 10 characters]	Number	Number with 2 decimal point	Number	Text[Letters, numbers, underscores and hyphens]	Please fill condition-class name in all plots [Maximum 20 characters]	[54 or 55 or 56]	Range in [0-359]	Number	Number	Number	Number											
Number	Number	Number with 1 decimal point	Number with 1 decimal point	Number with 1 decimal point	Number with 1 decimal point	Number with 1 decimal point	Number with 1 decimal point	Number with 1 decimal point	Number with 1 decimal point	Number with 1 decimal point	Number with 1 decimal point	[0,1]	[0,1]									
[0,1]	[0,1]	[0,1]	[0,1]	Number with 1 decimal point																		
1	3032	1.10	145	ModCondition	56	475315	6678416.0	45	12	7	2	1	1	56.0	20.0	8.0	1.0	2.0	1.0	5	3	35.0

CLEAR PLOTS **IMPORT**

7. A pop-up will open asking you to confirm that all existing plots will be deleted. Click ‘Yes’ to delete any previous plot data or ‘No’ to cancel and retain the existing plot data.

Confirm

All existing plots will be deleted.
Please confirm.

YES **NO**

8. If the import was not successful, or only partially successful, the ‘Import data’ pop-up will display an error message. Correct the error(s) in the CSV file, then copy and paste the corrected data, and re-import.

Import data

Use this tool to bulk import plot data for this vegetation zone

You should use [this template file](#) to construct your data and then copy and paste it here

Important: The template modified in version 1.2.4.00. Download latest template before preparing your data. If you already prepared your data, copy the values to the new template to verify before import.

plot	pct	area	patchsize	conditionclass	zone	easting	northing	bearing	compTree	compShrub	compGrass	compForbs	compFerns										
compOther	strucTree	strucShrub	strucGrass	strucForbs	strucFerns	strucOther	funLargeTrees	funHollowtrees	funLitterCover	funTreeRegen	funHighThreatExotic												
Text[Maximum 10 characters]	Number	Number with 2 decimal point	Number	Text[Letters, numbers, underscores and hyphens]	Please fill condition-class name in all plots [Maximum 20 characters]	[54 or 55 or 56]	Range in [0-359]	Number	Number	Number	Number												
Number	Number	Number	Number	Number	Number	Number with 1 decimal point	[0,1]	[0,1]															
[0,1]	[0,1]	[0,1]	[0,1]	Number with 1 decimal point																			
1	3032	1.10	145	Mod Condition	56	475315	6678416.0	45	12	7	2	1	1	56.0	20.0	8.0	1.0	2.0	1.0	5	3	35.0	
61.0	1	1	0	1	1	3.0																	
2	3032	0.30	145	ModCondition	56	475316	6678414.0	40	10	4	2	0	1	0	46.0	22.0	5.0	1.0	3.0	1.0	4	2	20.0
41.0	1	0	1	1	1	2.0																	

Invalid data found in the file. Row #2 of the template provides the expected data types and value ranges. Please verify your import data.

Column 'conditionclass' should only contain letters, numbers, underscores and hyphens

CLEAR PLOTS **IMPORT**

9. Click ‘Close’ to close the pop-up once the data has imported.

CLOSE

- The data will be imported into the relevant condition score pop-up fields and the scores will be calculated automatically. The condition score fields for each condition attribute will change from showing no score (indicated by an ellipsis) to showing a numeric score value.

Composition condition score	Structure condition score	Function condition score

Zone composition data										RECALCULATE	OK					
Composition condition score: 50.9										Plots	Calculation results					
#	Import	PCT code	Condition class *	Vegetation zone name	Patch Size	Item	Tree ^	Shrub ^	Grass & grass like ^	Forb ^	Fern ^	Other ^	current vegetation integrity	Management core	Management zones	Delete
1		303	ModCc	3032_Mod Condition	145	0.3				50.9	33.6	85	52.6			
2		302	Classn	3021_Clas sname1	0							

i Tip

- If assessing a non-woody PCT, do not specify any values for function attributes other than high threat weed (HTW) cover in the CSV import file.
- When copying the data from the template, ensure no extra columns are selected or an error will occur.

- To clear imported data, click the 'Import' icon to reopen the 'Import' pop-up.



- Click 'Clear plots'.

CLEAR PLOTS

- All imported data will be cleared and the condition score fields will revert to displaying no score ('...').

Composition condition score	Structure condition score	Function condition score
...

14. The above process can be performed for all vegetation zones at the site (rather than on a zone-by-zone basis) using ‘Import site’ and following the same process outlined in steps 1–12 above.



15. Individual zones can be removed by clicking the button on the right under ‘Delete’.

#	Import	PCT code	Condition class *	Vegetation zone name	Patch Size*	Area (ha)*	Location *	Composition condition score	Structure condition score	Function condition score	Current vegetation integrity score	Management zones	Delete
1		303...	ModCc	3032_Mod Condition	145	0.3		50.9	33.6	85	52.6		

4.3.3 Manually enter vegetation zone data

This section describes how to manually enter the vegetation zone data into the BAM-C to calculate the VI score.

1. The ‘PCT code’ field is populated automatically when ‘Add veg zone’ is clicked.

#	Import	PCT code	Condition class *	Vegetation zone name	Patch Size*	Area (ha)*	Location *	Composition condition score	Structure condition score	Function condition score	Current vegetation integrity score	Management zones	Delete
1		303...	Class	3032_Cl assname	0								

2. Select ‘Condition class’ and enter a condition class label for the zone. The name must not include spaces, but hyphens or underscores can be used as an alternative (for example, do not enter ‘Mod TEC’ instead use ‘Mod-TEC’ or ‘Mod_TEC’).

Condition class *

Tip

Zone condition class is solely a label to help identify the zone and does not have any influence on VI or credit calculations.

3. A vegetation zone name will be generated automatically based on the condition class and PCT code and displays under the ‘Vegetation zone name’ heading.

A screenshot of a software interface showing a field labeled 'Vegetation zone name' containing the text '1300_Good'.

4. Select ‘Patch Size’ and enter the relevant patch size area (in hectares) for the zone.

A screenshot of a software interface showing a field labeled 'Patch Size' with a required asterisk (*) containing the number '20'.

Tip

- The patch size value is used to filter the list of fauna species presented in the predicted and candidate species tabs. Refer to the **BAM 2020** ([https://www.environment.nsw.gov.au/research-and-publications-publications-search/biodiversity-assessment-method-2020](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020)), Subsection 4.3.2 for more information on patch size.
- Making changes to the patch size value may affect data in the ‘Habitat suitability’, ‘Habitat survey’, ‘Credits’ and ‘Credit classes’ tabs.

5. Enter the area for the vegetation zone in the ‘Area (ha)’ field.

A screenshot of a software interface showing a field labeled 'Area (ha)' containing the number '10' with a scroll bar to its right.

Tip

- The area of a vegetation zone will determine the number of plots required. Refer to the **BAM 2020** ([https://www.environment.nsw.gov.au/research-and-publications-publications-search/biodiversity-assessment-method-2020](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020)), Subsection 4.3.4 (Table 3). The BAM-C automatically adds the number of plots required based on the ‘Area (ha)’ entered.
- Ensure there is at least one vegetation zone for each PCT. Use the scroll bar to the right of the vegetation zone list to confirm each PCT has a vegetation zone.
- The minimum vegetation zone ‘Area (ha)’ is 0.01 ha. If a zone is smaller than this, the BAM-C will automatically round it up to 0.01 ha (values of 0.005–0.009 ha will be rounded up). If the area is less than 0.005 ha, consider adding the area to another vegetation zone.
- The ‘Patch size’ should be equal to or greater than the vegetation zone ‘Area (ha)’ size.

6. Click the ‘Location’ icon and add plot location details.

Item	Zone *	Easting *	Northing *	Bearing *
Plot 1	56	475315	6678416	45

7. If additional plots are required, click ‘Add plot’. Once the required plot data has been added click ‘OK’. Note that adding a plot to the ‘Location’ field will also add a plot to the ‘Composition’, ‘Structure’ and ‘Function’ condition score fields.

Item	Zone *	Easting *	Northing *	Bearing *
Plot 1	56	475315	6678416	45
Plot 2	56	475317	6678420	125

8. Select ‘Composition condition score’ and enter composition data.

Zone composition data

Composition condition score: 35.4

Plots Calculation results

Item	Tree *	Shrub *	Grass & grass like *	Forb *	Fern *	Other *
Plot 1	7	2	4	1	1	0
Plot 2	8	0	2	1	3	1

3032_goo
nd 145 0.2 35.4

9. Click 'Recalculate' to update calculation of the composition score for the zone, or 'OK' to update and close the composition score pop-up.

RECALCULATE

10. Select the 'Calculation results' tab on the 'Zone composition data' pop-up to see the underlying data used to calculate the score.

Zone composition data

Composition condition score: 45.9

Plots Calculation results

Item	Tree	Shrub	Grass & grass like	Forb	Fern	Other
Benchmark	2	6	7	10	0	1
Observed mean (\bar{x})	3	3	3	3	3	3
Unweighted composition score (UCS_i)	100	59.1	45.5	22	0	100
Weighted composition score (WCS_i)	7.7	13.6	12.2	8.5	0	3.8
Dynamic weighting (w_i)	0.08	0.23	0.27	0.38	0	0.04

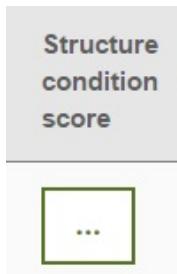
11. Click 'OK'.

Tip

The following calculations are shown in the composition condition section:

- Benchmarks – these values indicate benchmark reference values for the vegetation class/IBRA combination of the zone.
- Observed mean – this is the average of observed values entered for all plots for a specific growth form group.
- Unweighted composition score – BAM-C calculates and displays the unweighted condition score for the relevant growth form group. This calculation converts observed mean values to continuous unweighted condition scores using a Weibull (continuous probability) distribution.
- Weighted composition score – BAM-C calculates and displays the weighted condition score for the relevant growth form group. This calculation applies a dynamic weighting based on the proportional contribution of each growth form group benchmark function to the benchmark total function (sum of benchmark function across all growth form groups).
- Dynamic weighting – BAM-C calculates and displays a dynamic weighting based on the proportional contribution of each growth form group benchmark condition attribute to the benchmark total condition (sum of benchmark condition attributes across all growth form groups).
- Weightings for structure and function are calculated using a similar approach. For further information on these weightings and calculations refer to Appendix H of the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>).
- For further information on determining the VI score refer to Appendix H of the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>).

12. Select ‘Structure condition score’ to open the pop-up and repeat steps 8–11 above to calculate the structure score.



Zone structure data

Structure condition score: 52.8

RECALCULATE **OK**

Plots **Calculation results**

Item	Tree*	Shrub*	Grass & grass like*	Forb*	Fern*	Other*
Plot 1	87	23	10	2	3	0
Plot 2	56	34	12	1	2	1

3032_goo 145 0.2 35.4 **52.8** ...

i Tip

The same calculations as those described for composition are performed for structure (see **BAM 2020 (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>)**, Appendix H).

13. Select 'Function condition score' to open the pop-up and repeat steps 8–11 above to calculate the structure score.

Function condition score

...

Zone function data

Function condition score: 71.9

RECALCULATE **OK**

Plots **Calculation results**

Item	Tree regeneration <5cm diameter *	Stem classes					Number of large trees* (>50cm DBHOB)	Hollow bearing trees*	Litter cover*	Fall
		5-9	10-19	20-29	30-49	50-79				
Plot 1	Absei	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	3	32		
Plot 2	Prese	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5	3	44		

303_goo 145 0.2 35.4 **52.8** **71.9**

14. Select the 'Calculation results' tab to see the underlying data used to calculate the score.

Zone function data

[RECALCULATE](#)
[OK](#)

Function condition score: 38.8

[Plots](#)
[Calculation results](#)

Item	Number of large trees	Litter cover	Length of fallen logs	Stem size class	Tree regeneration <5cm diameter	High threat weed cover
Benchmark	6	81	51	4	Present	
Observed mean (\bar{x})	4	32	9	1	0	9
Weighted function score (WFS _i)	29.5	5.9	1.3	2.2	0	
Weighting (w _i)	0.35	0.15	0.2	0.15	0.15	

i Tip

- Some fields in the function tab will be restricted based on the PCT selected. For example, for grassland PCTs the fields relating to trees will be greyed out.
- Weightings for function are static rather than dynamic, as defined in BAM 2020, Appendix H.3.
- Unwanted plot(s) can be removed by deleting them in the ‘Location’ pop-up. If you delete a plot, the applicable plot data will also be deleted from the composition, structure and function fields.

15. After completing the composition, structure and function condition calculations, the current VI score will be displayed.



4.3.4 Calculate vegetation integrity for sites with multiple management zones(optional)

Management zones can be added to an assessment to identify areas of a vegetation zone that will have different levels of impact (referred to as partial loss). Refer to Subsection 4.1.2 of the [Biodiversity Assessment Method 2020 Operational Manual – Stage 2](#) (<https://www.environment.nsw.gov.au/publications/biodiversity-assessment-method-operational-manual-stage-2>) for information on how to generate the VI scores (see [Appendix B](#)).

1. To add a management zone to the assessment, click the icon under ‘Management zones’.

Composition condition score	Structure condition score	Function condition score	Current vegetation integrity score	Management zones	Delete
35.4	52.8	71.9	51.2		
74.5	17.9	...	36.6		

2. The ‘Area’ value is automatically populated based on the area of the vegetation zone. Add a name, then click ‘Add zone’ and then ‘OK’.

Management Zones

Add a new management zone with area to match vegetation zone area.

Name *:	Area *:	ADD ZONE
APZ	1.9	

Total vegetation area size = 1.9 ha

Name *	Area (ha) *	Remove
APZ	1.9	

Use 'Add Zone' to create a new management zone.

45.9 100 49.3 60.9

3. The sum of the areas of all management zones in a vegetation zone must equal the ‘Area (ha)’ field value for the vegetation zone. If you add a second management zone, enter another name and the area, then correct the area entered for the first management zone so the sum of both management zones is equal to the area of the vegetation zone. Click ‘Add zone’, and then ‘OK’.

Management Zones

Add a new management zone with area to match vegetation zone area.

Name *:	Area *:	ADD ZONE
Total Clr	0.5	

Total vegetation area size = 1.9 ha

Name *	Area (ha) *	Remove
APZ	1.4	

Management Zones

CANCEL **OK** OK

Name *:	Area *:	
Management zone name	0	
ADD ZONE		
Total vegetation area size = 1.9 ha		
Name *	Area (ha) *	Remove
APZ	1.4	
Total Clr	0.5	

- The management zones are displayed in the ‘Vegetation zones (Future vegetation integrity score)’ section. The composition, structure and function scores can be modified (from zero) for the management zone where only partial loss will occur.

Vegetation zones (Future vegetation integrity score)												
#	PCT code	Condition class	Vegetation zone name	Patch Size	Management zone	Area (ha)	Composition condition score	Structure condition score	Function condition score	Vegetation integrity (VI) score	Change in VI score	Total VI loss
1	3032	good	3032_goo d	145	APZ	1.4	0	0	0	0	-51.2	-51.2
					Total Clr	0.5	0	0	0	0	-51.2	-51.2

4.3.5 Calculate the future vegetation integrity score

In the ‘Vegetation zones (Future vegetation integrity score)’ section, ‘Composition condition score’, ‘Structure condition score’, ‘Function condition score’ and ‘Vegetation integrity (VI) score’ default to a score of zero.

The VI score is an estimate of the future condition of the site when compared to the benchmark score. For any area where partial loss (not full loss) is expected to occur, the future VI score can be modified from zero to display the expected VI score after development/clearing. Refer to Subsection 4.1.2 of the

Biodiversity Assessment Method 2020 Operational Manual – Stage 2

(<https://www.environment.nsw.gov.au/publications/biodiversity-assessment-method-operational-manual-stage-2>) for information on how to generate future VI scores.

- To enter an expected future condition score to reflect partial loss of VI, select the ‘Composition condition score’ field.

Composition condition score
0

i Tip

Unless a partial loss of VI is assumed, there is no need to enter data in the ‘Vegetation Zones (Future vegetation integrity score)’ section. The BAM-C assumes a zero value for future observations.

- Enter a value greater than zero in the relevant ‘Future mean (\bar{x})’ fields.

Item	Grass & grass like					
	Tree	Shrub	like	Forb	Fern	Other
Benchmark	12	9	3	3	6	10
Future mean (\bar{x}) *	6	0	0.5	0	1	0
Unweighted composition score (UCS_I)	59.1	0	5.5	0	5.5	0
Weighted composition score (WCS_I)	16.5	0	0.4	0	0.8	0
Dynamic weighting (w_I)	0.28	0.21	0.07	0.07	0.14	0.23

- Click ‘Recalculate’ to prompt calculation of the composition score for the zone.

RECALCULATE

- Click ‘OK’.

- To enter an expected future condition score to reflect partial loss of VI for structure condition, select the ‘Structure condition score’ field and follow steps 2–4 above.

- To enter an expected future condition score to reflect partial loss of VI for function condition, select the ‘Function condition score’ field and follow steps 2–4 above.

Function condition score
0

7. After completing the composition, structure and function condition calculations, the BAM-C will display the future VI score and the change in VI score (the difference between the current and future VI scores).

Vegetation zones (Current vegetation integrity score)													
#	Import	PCT code	Condition class *	Vegetation zone name	Patch Size*	Area (ha)*	Location *	Composition condition score	Structure condition score	Function condition score	Current vegetation integrity score	Management zones	Delete
1		303:	good	3032_good	145	1.9		35.4	52.8	71.9	51.2		
2		340:	good	3408_good	24	0.6		74.5	17.9	...	36.6		
Vegetation zones (Future vegetation integrity score)													
#	PCT code	Condition class	Vegetation zone name	Patch Size	Management zone	Area (ha)	Composition condition score	Structure condition score	Function condition score	Vegetation integrity (VI) score	Change in VI score	Total VI loss	
1	3032	good	3032_good	145	APZ Total Clr	1.4 0.5	17.6 0	25.1 0	18.3 0	20.1 0	-31.2 -51.2	-36.4	
2	3408	good	3408_good	24		0.6	0	0	...	0	-36.6	-36.6	

8. When all required information has been entered, click ‘Next’ to move to Tab 4.

Tip

Save your assessment regularly to ensure data is not lost.

Creating a development/ clearing assessment

4.4 Habitat suitability: Predicted (Tab 4)

The ‘Habitat suitability: Predicted’ tab is used to confirm the ecosystem credit species that are predicted to occur on or use the site. Ecosystem credit species are threatened species whose occurrence can generally be predicted by vegetation surrogates and/or landscape features, or that have a low probability of detection using targeted surveys. The TBDC identifies the threatened species assessed for ecosystem credits and the BAM-C automatically populates the list of ecosystem credit species. Targeted survey is not required to identify or confirm the presence of ecosystem credit species.

Species are predicted for a vegetation zone based on criteria in BAM 2020 (Subsection 5.2.1, Step 1). The BAM-C displays species satisfying these criteria. You must review the automatically populated information alongside BAM 2020, Subsections 5.2.1–5.2.2 to confirm the predicted species for assessment.

The information required in Tab 4 is displayed below.

	1. Assessment details	2. Site context	3. Vegetation	4. Habitat suitability: Predicted
	6. Habitat survey	7. Credits	8. Credit classes	9. Price
Predicted threatened species (Ecosystem credits)				
Species	Habitat constraints	Geographic limitations	Species is vagrant	Veg Zone - Confirmed predicted species *
<i>Artamus</i>				3032_good Yes M

1. The ‘Habitat suitability: Predicted’ tab will be open if ‘Next’ was clicked on Tab 3. When reopening an assessment with existing information, click on Tab 4 to open it.

4. Habitat suitability: Predicted

2. Review the ‘Habitat constraints’, ‘Geographic limitations’ and ‘Species is vagrant’ checkboxes relevant to each species to confirm that the indicated options are relevant to the site (BAM 2020, Subsections 5.2.1 and 5.2.2):

- a. If the indicated ‘Habitat constraints’ or ‘Geographic limitations’ options are not relevant, the box should be unchecked.
- b. In limited circumstances, a species may appear in the populated list due to a vagrant individual recorded in the IBRA subregion. In most cases, vagrant sightings will be marked as such on the BioNet Atlas and will not be included in the BAM-C. If you are confident a species is displaying in the populated list due to a vagrant BioNet Atlas record, the checkbox should be ticked.

Predicted threatened species (Ecosystem credits)				
Species	Habitat constraints	Geographic limitations	Species is vagrant	Veg Zone - Confirmed predicted species *
<i>Esacus magnirostris</i> Beach Stone-curlew (Foraging)	--	<input checked="" type="checkbox"/> Within 2 km of coast	<input type="checkbox"/>	3408_good Yes
<i>Falsistrellus tasmaniensis</i> Eastern False Pipistrelle	--	--	<input type="checkbox"/>	3032_good Yes
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle (Foraging)	3408_good <input checked="" type="checkbox"/> N/A Waterbodies <input checked="" type="checkbox"/> Within 1km of a rivers, lakes, large dams or creeks, wetlands and coastlines	--	<input type="checkbox"/>	3408_good Yes

Note: An asterisk beside a species name indicates the species has been added to the assessment, either as a new assessment or because of a change to a previous tab, for example, a change to PCT(s), % native vegetation cover or patch size.

i Tip

- Further details on habitat constraints (including the ‘other’ category) and geographic limitations are on the **BioNet Threatened Biodiversity Profiles** (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/about-bionet-atlas/threatened-biodiversity-profiles>) webpage (see **Appendix B**).
- If you are confident a species is displaying in the populated list due to a vagrant BioNet Atlas record, tick the ‘Species is vagrant’ checkbox. Please send supporting justification to the BOS Help Desk so the species can be reviewed.
- Hover over the information icon to see cross-references to information available in the BAM for ‘Species is vagrant’, ‘Veg Zone – Confirmed predicted species’ and ‘Sensitivity to gain’.

3. The ‘Confirmed predicted species’ default setting for development/clearing assessments is ‘Yes’ if:
 - a. all indicated ‘Geographic limitations’ and ‘Habitat constraints’ remain checked
 - b. ‘Species is vagrant’ is unchecked.

Veg Zone - Confirmed predicted species * **i**

776_Test1	Yes
776_Test2	Yes

4. If a predicted species has habitat constraint(s) and is associated with more than one vegetation zone, the BAM-C displays a habitat constraint for each zone, allowing you to select the zones the constraint applies to. Any geographic limitation applies to all zones.

Species ⓘ	Habitat constraints	Geographic limitations	Species is vagrant ⓘ	Veg Zone - Confirmed predicted species *
<i>Grantiella picta</i> Painted Honeyeater	<p>268_NonTEC <input type="checkbox"/> Other <input type="checkbox"/> Mistletoes present at a density of greater than five mistletoes per hectare</p> <p>268_TEC01 <input checked="" type="checkbox"/> Other <input checked="" type="checkbox"/> Mistletoes present at a density of greater than five mistletoes per hectare</p>	--	<input type="checkbox"/>	<p>268_NonTEC <input type="checkbox"/> 268_TEC01</p> <p>No <input type="button" value="Yes"/></p>
<i>Varanus rosenbergi</i> Rosenberg's Goanna	--	<p><input checked="" type="checkbox"/> South-east of a line that runs between Tarcutta and Galong</p>	<input type="checkbox"/>	<p>268_NonTEC <input type="checkbox"/> 268_TEC01</p> <p>Yes <input type="button" value="Yes"/></p>

i Tip

- Confirmed predicted species are assessed for ecosystem credits.

5. The 'Sensitivity to gain class', 'BC Act listing status' and 'EPBC Act listing status' will populate automatically.

Sensitivity to gain class ⓘ	BC Act listing status	EPBC Act listing status.
High Sensitivity to Gain	Critically Endangered	Critically Endangered
Moderate Sensitivity to Gain	Vulnerable	Not Listed
Moderate Sensitivity to Gain	Vulnerable	Endangered

6. To add an ecosystem credit species not in the BAM-C list, click 'Search predicted species' at the bottom of the page, and enter the species' name or profile ID. Any matching species will be presented in a list. Select the species name and click 'Add predicted species'.

SEARCH PREDICTED SPECIES

Blue

Please choose a species from the dropdown menu

- 10193 - *Cyclodomorphus melanops elongatus* (Mallee Slender Blue-tongue Lizard)
- 10580 - *Oxyura australis* (Blue-billed Duck)
- 10807 - *Tiliqua occipitalis* (Western Blue-tongued Lizard)
- 10806 - *Tiliqua multifasciata* (Centralian Blue-tongued Lizard)

SEARCH PREDICTED SPECIES10193 - *Cyclodomorphus me***ADD PREDICTED SPECIES**

7. When a species is added, an 'X' will appear to the left of the species name, indicating this species has been added by the assessor. This species can be removed by clicking on the 'X'.

 <i>Phoniscus papuensis</i>	--	--
  <i>Podargus ocellatus</i>	--	--

8. When all required information has been entered, click 'Next' to move to Tab 5.

Creating a development/ clearing assessment

4.5 Habitat suitability: Candidate (Tab 5)

The 'Habitat suitability: Candidate' tab is used to confirm the threatened species credit species that may occur on or use the site. Species credit species are those where the likelihood of occurrence of a species or elements of suitable habitat for that species cannot be confidently predicted by vegetation surrogates and landscape features, and can be reliably detected by survey.

The candidate species list is populated automatically based on criteria in BAM 2020 (Subsection 5.2.1, Step 1). The BAM-C presents species satisfying these criteria. You must review the automatically populated information alongside BAM 2020, Subsections 5.1.2–5.2.3 to confirm the candidate species for assessment.

The information required for Tab 5 is displayed below.

1. Assessment details	2. Site context	3. Vegetation	4. Habitat suitability: Predicted
5. Habitat suitability: Candidate	6. Habitat survey	7. Credits	8. Credit classes
Candidate threatened species (Species credits)			
Species	Habitat constraints	Habitat degraded	Geographic limitations
<i>Aepyprymnus</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Confirmed candidate species			
<input checked="" type="checkbox"/> Yes			

1. As 'Next' was clicked after completion of Tab 4 the 'Habitat suitability: Candidate' tab will be open.

When reopening an existing assessment, click on Tab 5 to open it.

5. Habitat suitability: Candidate

2. Review the 'Habitat constraints', 'Habitat degraded', 'Geographic limitations' and 'Species is vagrant' checkboxes relevant to each species to confirm that the indicated options are relevant to the site (BAM 2020, Subsections 5.2.1–5.2.3):

- If the indicated 'Habitat constraints' or 'Geographic limitations' options are not relevant, the box should be unchecked.
- If the 'Habitat degraded' option is relevant, that is, the habitat or microhabitat is degraded to the point that the species is unlikely to use the site, the box should be checked.
- In limited circumstances, a species may appear in the populated list due to a vagrant individual recorded in the IBRA subregion. In most cases, vagrant sightings will be marked as such on the BioNet Atlas and will not be included in the BAM-C. If you are confident a species is displaying in the populated list due to a vagrant BioNet Atlas record, tick the 'Species is vagrant' checkbox.

Candidate threatened species (Species credits)					
Species	Habitat constraints	Habitat degraded 	Geographic limitations	Species is vagrant 	Confirmed candidate species 
<i>Aepyprymnus rufescens</i> Rufous Bettong	--	<input type="checkbox"/>	--	<input type="checkbox"/>	Yes 
<i>Assa darlingtoni</i> Pouched Frog	<input checked="" type="checkbox"/> N/A Other <input checked="" type="checkbox"/> Leaf litter Fallen/standing dead timber including logs <input checked="" type="checkbox"/> Logs and debris	<input type="checkbox"/>	--	<input type="checkbox"/>	Yes 
<i>Atrichornis rufescens</i> Rufous Scrub-bird	--	<input type="checkbox"/>	<input checked="" type="checkbox"/> Above 600 m altitude	<input type="checkbox"/>	Yes 
★ <i>Burhinus grallarius</i> Bush Stone-curlew	<input checked="" type="checkbox"/> Fallen/standing dead timber including logs	<input type="checkbox"/>	--	<input type="checkbox"/>	Yes 

Note: An asterisk beside a species name indicates the species has been added to the assessment because of a change to a previous tab, for example, a change to PCT(s), % native vegetation cover or patch size.

Tip

- If you are confident a species is displaying in the populated list due to a vagrant BioNet Atlas record, tick the 'Species is vagrant' checkbox. Please send supporting justification to the BOS Help Desk so the species can be reviewed.

- Further details on habitat constraints (including the ‘other’ category) and geographic limitations can be found on the [BioNet Threatened Biodiversity Profiles](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/about-bionet-atlas/threatened-biodiversity-profiles) (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/about-bionet-atlas/threatened-biodiversity-profiles>) webpage (see [Appendix B](#)).

- The ‘Confirmed candidate species’ default setting for development/clearing assessments is ‘Yes’ if:
 - all indicated ‘Geographic limitations’ and ‘Habitat constraints’ remain checked
 - ‘Species is vagrant’ and ‘Habitat degraded’ are unchecked.



i Tip

Confirmed candidate species are assessed for species credits.

- The ‘Sensitivity to gain class’, ‘BC Act listing status’ and ‘EPBC Act listing status’ will populate automatically.

Sensitivity to gain class	BC Act listing status	EPBC Act listing status
High Sensitivity to Gain	Vulnerable	Not Listed
High Sensitivity to Gain	Vulnerable	Not Listed

- To include a species credit species not in the BAM-C list, select ‘Search candidate species’ at the bottom of the tab page, and enter the species name or profile ID. Any matching species will be presented in a list. Select the species name and click ‘Add candidate species’.

A screenshot of a search interface. At the top left is a button labeled 'SEARCH CANDIDATE SPECIES'. To its right is a search input field containing the text 'koal'. Below the search bar is a message: 'Please choose a species from the list below'. A list of search results is displayed, with the first result being '10616 - Phascolarctos cinereus (Koala)'.

At the bottom of the interface are three buttons: 'SEARCH CANDIDATE SPECIES' (disabled), '10616 - Phascolarctos cinereus (Koala)' (highlighted in blue), and 'ADD CANDIDATE SPECIES'.

- When a species is added, an ‘X’ will appear to the left of the species name, indicating this species has been added by the assessor. This species can be removed by clicking on the ‘X’.

Lathamus discolor Swift Parrot (Breeding)	<input checked="" type="checkbox"/> Other <input type="checkbox"/> <input checked="" type="checkbox"/> As per Important Habitat Map <input type="checkbox"/>	--
 Phascolarctos cinereus Koala	<input checked="" type="checkbox"/> Other <input type="checkbox"/> <input checked="" type="checkbox"/> Presence of koala use trees - refer to Survey Comments field in TBDC <input type="checkbox"/>	--

7. When all required information has been entered, click 'Next' to move to Tab 6.

Creating a development/ clearing assessment

4.6 Habitat survey (Tab 6)

The 'Habitat survey' tab records whether a candidate credit species is present at the clearing/development site (BAM 2020, Subsection 5.2.4 to Section 5.4) and whether its presence/absence was determined by survey, expert report or assumed presence.

The steps to complete Tab 6 are described below.

1. Assessment details		2. Site context		3. Vegetation		4. Habitat suitability: Predicted		5. Habitat suitability: Candid	
6. Habitat survey		7. Credits		8. Credit classes		9. Price			
Species	Species presence	Survey timetable		Unit of Measure	Area or Count	Veg Zone & Value	Biodiversity risk	Biodiversity risk weighting	
<i>Aepyprymnus rufescens</i> Rufous Bettong	Yes (surveyed)	<input checked="" type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input checked="" type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input type="checkbox"/> Sep <input checked="" type="checkbox"/> Oct <input checked="" type="checkbox"/> Nov <input type="checkbox"/> Dec <input type="checkbox"/> Survey month outside the specified months?		Area (ha)	<input type="checkbox"/> 3032_good <input type="checkbox"/> 3408_good	High	2		
<i>Atrichornis rufescens</i> Rufous Scrub-bird	Yes (surveyed)	<input checked="" type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug		Area (ha)	<input type="checkbox"/> 3032_good <input type="checkbox"/> 3408_good	High	2		

1. As 'Next' was clicked after completion of Tab 5, the 'Habitat survey' tab will be open. When reopening an existing assessment, click on Tab 6 to open it.



2. The list of candidate species from Tab 5 'Habitat suitability: Candidate' that were confirmed as potentially present based on the habitat and geographic limitations are listed in Tab 6.
3. 'Species presence' automatically defaults to 'Yes (surveyed)'. You can change how presence was confirmed using the drop-down. Options are 'Yes (surveyed)', 'Yes (expert report)' or 'Yes (assumed present)'. Alternatively, if the species is identified as absent based on either survey or an expert report, options are 'No (surveyed)' or 'No (expert report)'.
4. For a small number of species, the habitat constraint information in the TBDC refers to an important habitat map. If one of these species is being assessed, and the assessment area is within a mapped layer identified on an important habitat map, the species must be considered present ('Yes (assumed

present'). If the assessment area does not overlap any mapped layer, the species credit species is considered absent ('No (surveyed)'). Include reference to the important habitat map in the BAR.

Candidate threatened species (Species credits)

Species	Species presence 
<i>Acronychia littoralis</i> Scented Acronychia	<div style="border: 1px solid #ccc; padding: 5px;"> Yes (surveyed)  Yes (surveyed) Yes (expert report) Yes (assumed present) No (surveyed) No (expert report) </div>

Tip

Where 'Yes (surveyed)', 'Yes (expert report)' or 'Yes (assumed present)' has been selected, the 'Veg Zone and Value' column becomes editable.

5. If a species was surveyed for, use the checkboxes in the 'Survey timetable' field to indicate when the survey(s) were undertaken. The survey method must comply with any threatened species survey guides or advice that the department has published or provided within the TBDC. In the absence of any guide or advice, use a best-practice method.

Yes (surveyed) 

<input type="checkbox"/>	Jan	Feb	Mar	Apr
<input type="checkbox"/>	May	Jun	Jul	Aug
<input checked="" type="checkbox"/>	Sep	<input checked="" type="checkbox"/> Oct	<input type="checkbox"/> Nov	<input type="checkbox"/> Dec

Survey month outside the specified months?

6. Only survey during a month specified in the BAM-C unless there is a clear justification to survey outside the specified month(s). If the survey was conducted during a month outside the specified month(s), select 'Survey month outside the specified months', then use the checkboxes to indicate the month(s) that the survey was undertaken.

Yes (surveyed) 

<input checked="" type="checkbox"/>	Jan	<input checked="" type="checkbox"/> Feb	<input type="checkbox"/> Mar	<input type="checkbox"/> Apr
<input type="checkbox"/>	May	<input type="checkbox"/> Jun	<input type="checkbox"/> Jul	<input type="checkbox"/> Aug
<input type="checkbox"/>	Sep	<input type="checkbox"/> Oct	<input checked="" type="checkbox"/> Nov	<input type="checkbox"/> Dec

Survey month outside the specified months?

7. If 'Yes (expert report)', 'Yes (assumed present)' or 'No (expert report)' is selected in the 'Species presence' field, there is no option to select a month.

No (expert report) 

<input type="checkbox"/>	Jan	Feb	Mar	Apr
<input type="checkbox"/>	May	Jun	Jul	Aug
<input type="checkbox"/>	Sep	Oct	Nov	Dec

8. The 'Unit of Measure Area or Count', 'Biodiversity risk' and 'Biodiversity risk weighting' (BRW) for each species is also displayed.
9. For each species identified as present, tick the checkboxes under 'Veg Zone & Value' for all vegetation zones the species has been identified as being present within.

i Tip

- See [BAM 2020 \(https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Section 5.4 for further information on BRW.
- A species can be identified as present in multiple vegetation zones.

10. Enter the value that quantifies the species' distribution across the site, noting that the value entered will differ depending on the unit of measure (UoM):

- a. Where the UoM is 'Area (ha)' enter the area of the species polygon within each relevant vegetation zone. The development of the polygon must comply with any threatened species survey guides or advice that the department has published or provided within the TBDC. In the absence of any guide or advice, use best practice.

Area (ha)	<input checked="" type="checkbox"/> 3032_good * 1.6 <input type="checkbox"/> 3408_good <input checked="" type="checkbox"/> 3032_mod * 1.4 <input type="checkbox"/> 3032_poor
-----------	---

If the assessment area is within a mapped layer identified on an important habitat map, the species polygon must include the entire area of the zone that is mapped on the important habitat map.

- b. Where the UoM is 'Count', enter the number of individuals within the species polygon (an individual is defined in the BAM 2020 as 'a single, mature organism that is a threatened species').

Count	<input checked="" type="checkbox"/> 3032_good * 12 <input checked="" type="checkbox"/> 3408_good * 117 <input type="checkbox"/> 3032_mod <input type="checkbox"/> 3032_poor
-------	--

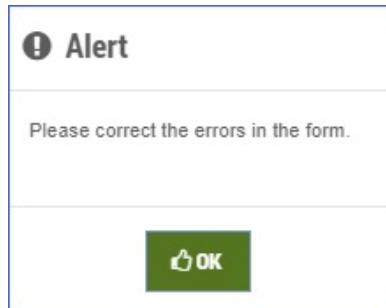
i Tip

- The minimum area that can be entered in BAM-C is 0.01 ha. If the area is between 0.005 ha and 0.009 ha the BAM-C will round the value up to 0.01 ha.
- Below 0.005 ha, values will be rounded to 0 ha and the assessment will not save. In this scenario either enter the area as 0.01 ha or combine the area with another identified area

within the polygon.

- The maximum area that can be entered in BAM-C is the total area of the vegetation zone from Tab 3.

11. When you click ‘Next’, an alert will display if any required fields have not been completed.



12. Details of any errors will be listed in a message at the top of the page. Click the ‘More details’ box for further details.

Errors!

Please address all the errors in this step. Note: you will not be able to finalise and submit the assessment until the errors are addressed.

More details..

Candidate threatened species (Species credits)

Species	Species presence ⓘ	Survey timetable	U A
---------	--------------------	------------------	--------

Errors!

Please address all the errors in this step. Note: you will not be able to finalise and submit the assessment until the errors are addressed.

Less details..

Area required for species 'Senna acclinis' and veg-zone '3408_good'

Select surveyed month(s) in 'Survey timetable' for species 'Hoplocephalus stephensi'?

13. When all required information has been entered, click ‘Next’ to move to Tab 7.

Creating a development/ clearing assessment

4.7 Credits (Tab 7)

The BAM 2020 uses biodiversity credits to measure the residual impacts of a proposal on biodiversity values.

The ‘Credits’ tab summarises the results of calculations of biodiversity credits. No user action is required for this tab.

Further details on the calculations performed are in Subsections 4.7.6 and 4.7.7 below.

1. Assessment details	2. Site context	3. Vegetation	4. Habitat suitability: Predicted	5. Habitat suitability: Candidate	6. Habitat survey	7. Credits
8. Credit classes	9. Price					
Ecosystem credits for plant communities types (PCT), ecological communities & threatened species habitat						
Zone	Vegetation zone name	Vegetation integrity loss	Area	Sensitivity to loss	Sensitivity to loss(Justification)	Species sensitivity to gain class
Northern Escarpment Sassafras-Booyong-Corkwood Rainforest						
1	3032_good	36.4	1.9 hectares	Low Sensitivity to Loss	Environment Protection and Conservation Act listing status	High Sensitivity to Gain
3	3032_mod	29.1	1.5 hectares	Low Sensitivity to Loss	Environment Protection and Conservation Act	High Sensitivity to Gain
Total: 91						
Species credits for threatened species						
Vegetation zone name	Habitat condition (vegetation integrity) loss	Area / Count	Sensitivity to loss	Sensitivity to loss(Justification)	Sensitivity to gain	Sensitivity to gain(Justification)
Atrichornis rufescens / Rufous Scrub-bird (Fauna)						
3032_good	36.4	1 hectares	High Sensitivity to Loss	Biodiversity Conservation Act listing status	High Sensitivity to Gain	Effectiveness of management in controlling threats
Subtotal: 18						
Hoplocephalus stephensi / Stephens' Banded Snake (Fauna)						
3032_good	36.4	1.6 hectares	Moderate Sensitivity to Loss	Biodiversity Conservation Act listing status	High Sensitivity to Gain	Species dependent on habitat attributes
3032_mod	29.1	1.4 hectares	Moderate Sensitivity to Loss	Biodiversity Conservation Act listing status	High Sensitivity to Gain	Species dependent on habitat attributes
29						
20						

i Tip

- The BAM-C may display a biodiversity credit output for EPBC Act only listed entities; however, biodiversity credits cannot be created or traded under the NSW scheme, and payments cannot be made into the Biodiversity Conservation Fund (BCF) for any EPBC Act only listed entity.
- Contact the Australian Government Department of Climate Change, Energy, the Environment and Water as the relevant agency for meeting any requirements of an EPBC Act approval.
- ‘EPBC Act only’ listed entity means a ‘threatened species’ or ‘threatened ecological community’ that is listed under the Environment Protection and Biodiversity Conservation Act 1999 (Cth) but not listed under the Biodiversity Conservation Act 2016 (NSW).

As ‘Next’ was clicked after completion of Tab 6 the ‘Credits’ tab will be open. When reopening an existing assessment, click on Tab 7 to open it.

7. Credits

In this subsection

4.7.6 Ecosystem credits for PCTs, TECs and threatened species habitat

4.7.7 Species credits for threatened species

4.7.6 Ecosystem credits for PCTs, TECs and threatened species habitat

The first section of Tab 7 displays the ecosystem credits for the PCTs and TECs. The ecosystem credits are calculated by applying the ‘Sensitivity to loss’ of the PCT or TEC and the highest ‘Sensitivity to gain’ of the ecosystem credit (predicted) species assumed to be present at Tab 4 (‘Veg Zone – Confirmed predicted species’ = ‘Yes’). Where a PCT or TEC provides no habitat for ecosystem credit species, the BAM-C adopts a ‘Sensitivity to gain’ of ‘Low’. Refer to the [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Appendix I for more information.

The BAM-C uses the loss to VI based on the impact, the area of the vegetation zone, the BRW, and a constant to calculate the number of ecosystem credits for each vegetation zone added at Tab 3. Refer to Equation 1 in the [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020) for more information.

Ecosystem credits for plant communities types (PCT), ecological communities & threatened species habitat									
Zone	Vegetation zone name	Vegetation integrity loss	Area	Sensitivity to loss	Sensitivity to loss(Justification)	Species sensitivity to gain class	Biodiversity risk weighting	Potential SAI	Ecosystem credits
Northern Escarpment Sassafras-Booyong-Corkwood Rainforest									
1	3032_good	36.4	1.9 hectares	Low Sensitivity to Loss	Environment Protection and Conservation Act listing status	High Sensitivity to Gain	2.5		43
3	3032_mod	29.1	1.5 hectares	Low Sensitivity to Loss	Environment Protection and Conservation	High Sensitivity to Gain	2.5		27
4	3032_poor	20.9	0.8 hectares	Low Sensitivity to Loss	Environment Protection and Conservation Act listing status	High Sensitivity to Gain	2.5		10
									Subtotal: 80
Northern Headland Grassland									
2	3408_good	36.6	0.6 hectares	High Sensitivity to Loss	Biodiversity Conservation Act listing status	High Sensitivity to Gain	2		11

Tip

- Use the scroll bar to see all ecosystem credits.
- See [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Sections 5.1 and 5.2 for further information on ecosystem credit species.
- See [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Subsections 10.1.1-10.1.2 and 10.2.1 for the calculation method of ecosystem credits.
- See [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Appendix I for more information on BRW.

4.7.7 Species credits for threatened species

The second section of Tab 7 displays the species credits for threatened species that have been confirmed present at the site (Tab 6 ‘Species presence’ = ‘Yes’).

For species with a UoM of ‘Area’, the BAM-C uses the loss to VI based on the impact, the area of the vegetation zone, the BRW, and a constant to calculate the number of species credits for each vegetation zone (PCT) added at Tab 3 that is associated with the species. Refer to Equation 2 in the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>) for more information.

For species with a UoM of ‘Count’, the BAM-C uses the number of individuals and the BRW to calculate the number of species credits. Refer to Equation 3 in the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>) for more information.

Species credits for threatened species									
Vegetation zone name	Habitat condition (vegetation integrity) loss	Area / Count	Sensitivity to loss	Sensitivity to loss(Justification)	Sensitivity to gain	Sensitivity to gain(Justification)	Biodiversity risk weighting	Potential SAI	Species credits
Hoplocephalus stephensi / Stephens' Banded Snake (Fauna)									
3032_good	36.4	1.6 hectares	Moderate Sensitivity to Loss	Biodiversity Conservation Act listing status	High Sensitivity to Gain	Species dependent on habitat attributes	2	False	29
3032_mod	29.1	1.4 hectares	Moderate Sensitivity to Loss	Biodiversity Conservation Act listing status	High Sensitivity to Gain	Species dependent on habitat attributes	2	False	20
Subtotal: 49									
Sophora tomentosa / Silverbush (Flora)									
3032_good	N/A	12 individuals	High Sensitivity to Loss	Biodiversity Conservation Act listing status	High Sensitivity to Gain	Effectiveness of management in controlling threats	2	False	24
3032_poor	N/A	1 individuals	High Sensitivity to Loss	Biodiversity Conservation	High Sensitivity to Gain	Effectiveness of management in	2	False	2

Tip

- Use the scroll bar to see all species credits.
- In some circumstances the TBDC may identify a threatened species that requires assessment for both ecosystem credits and species credits (referred to as dual credit species). For dual credit species, part of the habitat is assessed as a species credit (for example, breeding habitat or land mapped on an important habitat map layer). The remaining habitat for the species is assessed as an ecosystem credit (for example, foraging habitat).
- Equations for the calculation of species credits differ depending on their UoM.
- See **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Chapter 5 for further information on species credits.
- See **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Subsections

10.1.1, 10.1.3 and 10.2.2 for the calculation method for species credits.

- See [**BAM 2020**](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Appendix I for more information on BRW.

No user action is required for Tab 7 and there is no ‘Next’ button. Click on Tab 8 ‘Credit classes’ to open it.

Creating a development/ clearing assessment

4.8 Credit classes (Tab 8)

The BAM 2020 uses OTGs to offset non-threatened vegetation (PCTs). OTGs are groups of PCTs with the same vegetation class and threat status. Under the like-for-like rules, offsets for impacts to non-threatened vegetation may be met with one or more OTGs that have the same vegetation class with the same or a higher threat status.

Under the like-for-like rules, threatened vegetation (TECs) and threatened species must be offset with the same TEC/species.

Vegetation containing hollow bearing trees (HBT) must be offset with vegetation containing HBT.

Variation rules may apply.

The ‘Credit classes’ tab summarises the ecosystem and species credits and their like-for-like options.

Further details on the information available in Tab 8 are in Subsections 4.8.8 and 4.8.9 below.

No user action is required in this tab.

1. Assessment details 2. Site context 3. Vegetation 4. Habitat suitability: Predicted 5. Habitat suitability: Candidate

6. Habitat survey 7. Credits 8. Credit classes 9. Price

Note: Despite the biodiversity credit output displayed for any EPBC Act only listed entity, biodiversity credits cannot be created or traded under the NSW biodiversity offsets scheme and payments cannot be made into the Biodiversity Conservation Fund for any EPBC Act only listed entity.

You should contact the Commonwealth Department of Agriculture, Water and Environment as the relevant agency for meeting any requirements of an EPBC Act approval.

* EPBC Act only listed entity means a 'threatened species' or 'threatened ecological community' that is listed under the Environment Protection and Biodiversity Conservation Act 1999 (Cth) but not listed under the Biodiversity Conservation Act 2016 (NSW) (BC Act).

Ecosystem credit classes

Ecosystem credit summary

PCT	TEC	Area	HBT Cr	No HBT Cr	Credits
2101-Black Wattle - Hill Kanuka - Coachwood - Mountain Banksia - Soft Corkwood low closed forest on shallow soils of the Dorrigo Escarpment, NSW North Coast Bioregion	Not a TEC	1.8	31	0	31
3032-Northern Escarpment Sassafras-Booyong-Corkwood Rainforest	Lowland Rainforest of Subtropical Australia	4.2	80	0	80
3408-Northern Headland Grassland	Themeda grassland on seacliffs and coastal headlands in the NSW North Coast, Sydney Basin and South East Corner Bioregions	0.6	0	11	11

Credit classes for 2101

Like-for-like options

Class	Trading group	HBT	Credits	IBRA region
Northern Warm Temperate Rainforests	Northern Warm Temperate	Yes	31	Coffs Coast and Escarpment , Armidale Plateau, Chaelundi, Clarence Sandstones,

Select the 'Credit classes' tab to view ecosystem credit class information and species credit class information.

8. Credit classes

In this subsection

4.8.8 Ecosystem credit classes

4.8.9 Species credit classes

4.8.8 Ecosystem credit classes

The first section of Tab 8 displays a summary of the ecosystem credit classes, whether there is an associated TEC or not, and their like-for-like options based on the PCTs and/or TECs added at Tab 3.

For non-threatened vegetation ('Not a TEC'), the BAM-C displays the associated vegetation class and lists the PCTs within that class. The BAM-C also displays the associated OTGs and IBRA subregions available for making a like-for-like credit trade.

Refer to the **Offset rules and ecosystem credits**

(<https://www.environment.nsw.gov.au/publications/offset-rules-and-ecosystem-credits-guidance>)

guidance for more information (see **Appendix B**).

Ecosystem credit summary									
PCT	TEC		Area	HBT Cr	No HBT Cr	Credits			
27-Weeping Myall open woodland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion	Weeping Myall Woodlands		1.8	55	0	55			
27-Weeping Myall open woodland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion	Not a TEC		1.4	0	33	33			
Credit classes for 27									
Like-for-like options									
TEC		HBT	Credits	IBRA region					
Weeping Myall Woodlands This includes PCT's: 26, 27, 1766		Yes	55	Inland Slopes , Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.					
Credit classes for 27									
Like-for-like options									
Class	Trading group	HBT	Credits	IBRA region					
Riverine Plain Woodlands This includes PCT's: 26, 27, 4104	Riverine Plain Woodlands - ≥ 70% - <90% cleared group (including Tier 2 or higher threat status).	No	33	Inland Slopes , Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.					

Tip

See [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Subsection 10.2.1 and Section 10.3 for further information on offsetting ecosystem credits.

4.8.9 Species credit classes

The second section of Tab 8 displays a summary of the species credit classes for all candidate species confirmed present at the site, and their like-for-like options.

Species credit classes

Species credit summary

Species	Vegetation Zone/s names	Area / Count	Credits
<i>Atrichornis rufescens</i> / Rufous Scrub-bird	3032_good	1	18
<i>Hoplocephalus stephensii</i> / Stephens' Banded Snake	3032_good, 3032_mod	3	49
<i>Senna acclinis</i> / Rainforest Cassia	3032_good, 3408_good	1.2	22
<i>Sophora tomentosa</i> / Silverbush	3032_good, 3408_good, 3032_poor	15	30

Atrichornis rufescens / Rufous Scrub-bird

Like-for-like options

Spp	IBRA region
<i>Atrichornis rufescens</i> / Rufous Scrub-bird	Any in NSW

Spp	IBRA region
<i>Hoplocephalus stephensii</i> / Stephens' Banded Snake	Any in NSW

Tip

See [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Subsection 10.2.2 and Section 10.3 for further information on offsetting species credits.

Creating a development/ clearing assessment

4.9 Price (Tab 9)

The Biodiversity Offsets Payment Calculator (BOPC) was replaced by the BCF Charge System on 17 October 2022. The new BCF Charge System will now be used to determine the amount a proponent may pay into the BCF to meet a biodiversity offset obligation.

The Biodiversity Conservation Trust (BCT) is responsible for administering the new charge system.

More information about the new charge system, including how to request a quote from the BCF, is available on the BCT website.

5. Creating a small area assessment

'Appendix C: Streamlined assessment module – Small area' of the BAM 2020 is dedicated to assessing small areas and provides streamlined (simplified) assessment requirements.

There are 8 development-type assessments. This chapter in the guide only relates to Part 4/Part 5 small area assessments. Refer to [Chapter 4 of this guide for information on assessing general Part 4, Part 5 proposals, major projects, biocertification and general clearing](#), and [Chapter 6 for information on assessing scattered trees](#).

There are limitations on when a small area assessment can be used – all the following requirements must be met:

- It meets the scheme's area clearing thresholds, as shown in Table 3 below. Most small area assessments include only one PCT though the BAM-C allows 2 PCTs to be added as long as at least one is a TEC.
- There is no core koala habitat identified on the Biodiversity Values Map for the proposed site. Core koala habitat is identified in the relevant plan of management under Chapter 4 of the State Environmental Planning Policy (Biodiversity and Conservation) 2021 and shown on the Biodiversity Values Map.
- There is one dominant PCT, or there are 2 dominant PCTs, and at least one is a TEC. Note, the small area module can still be applied where the total assessment area meets the small area threshold but there are more than 2 TECs, or more than one PCT (but none are TECs). Add the dominant TEC(s) and/or PCT into the BAM-C, then include all areas of the smaller, non-dominant PCT(s) or TEC(s) into the vegetation zones of the dominant PCT and/or TEC(s).

All assessments that do not meet the above requirements must use a different assessment method and tool – refer to [Chapter 4](#) of this guide for the available alternatives.

Table 3: Area clearing limits applicable to the small area streamlined assessment module of the BAM 2020

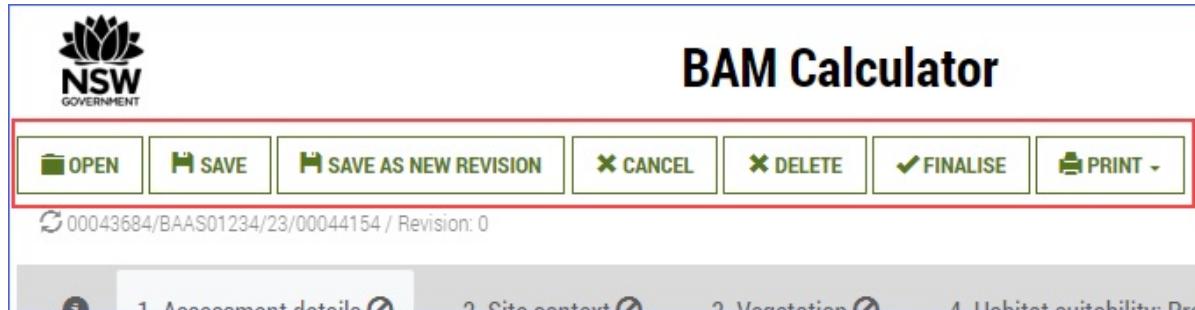
Minimum lot size associated with the property *	Maximum area clearing limit for the application of the small area module
Less than 1 ha	≤1 ha
Less than 40 ha but not less than 1 ha	≤2 ha
Less than 1,000 ha but not less than 40 ha	≤3 ha
1,000 ha or more	≤5 ha

* Shown in the lot size maps made under the relevant local environmental plan (LEP), or actual lot size where there is no minimum lot size provided for the relevant land under the LEP

The candidate species list will only display species at risk of an SAI.

When entering data in each tab of the BAM-C, proceed to the next tab by using the ‘Next’ button at the bottom of the page. The data added then flows through to the next tab in the BAM-C.

There are high-level functions that act across all tabs to help you manage assessments and create output from the calculator. Refer to [Chapter 3](#) of this guide for information on these functions.



i Tip

- When adding the same PCT twice, be sure to name the vegetation zone in a way that distinguishes one zone from another, for example, ‘TEC_good’ or ‘Non-TEC_poor’.
- See Appendix C of the [BAM 2020 \(https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020) for further information on the small area streamlined assessment module.
- Remember to click ‘Next’ so the data entered flows through to the subsequent tabs and calculations.

Sections 5.1–5.9 below detail how to use each of the tabs in the BAM-C to enter details for a small area assessment.

In this section

[**5.1 Assessment details \(Tab 1\)**](#)

[**5.2 Site context \(Tab 2\)**](#)

[**5.3 Vegetation \(Tab 3\)**](#)

[**5.4 Habitat suitability: Predicted \(Tab 4\)**](#)

[**5.5 Habitat suitability: Candidate \(Tab 5\)**](#)

[**5.6 Habitat survey \(Tab 6\)**](#)

[**5.7 Credits \(Tab 7\)**](#)

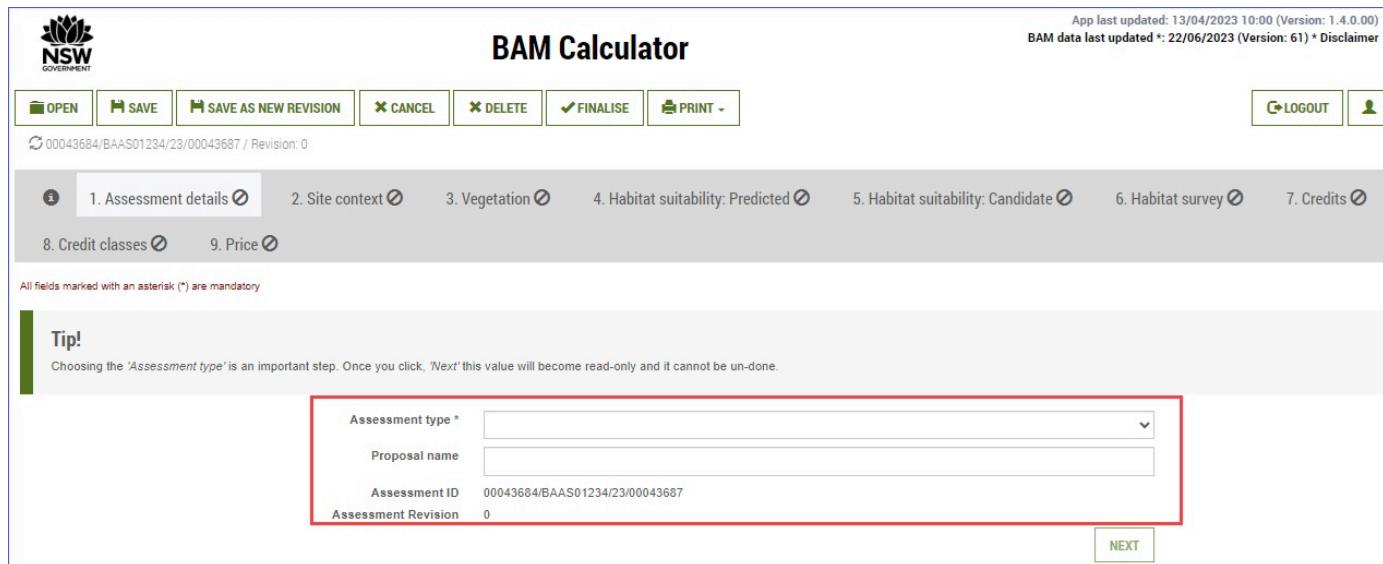
[**5.8 Credit classes \(Tab 8\)**](#)

5.9 Price (Tab 9)

Creating a small area assessment

5.1 Assessment details (Tab 1)

The ‘Assessment details’ tab is used to capture the type of development assessment and record the proposal name.

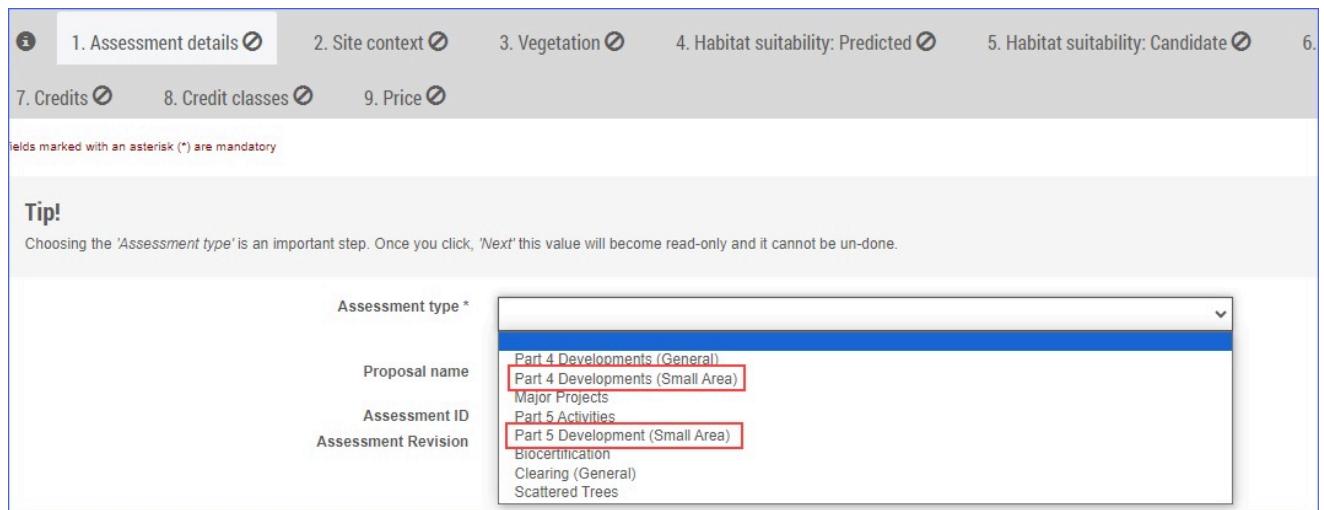


The screenshot shows the BAM Calculator interface with the 'Assessment details' tab selected. The top navigation bar includes links for OPEN, SAVE, SAVE AS NEW REVISION, CANCEL, DELETE, FINALISE, PRINT, LOGOUT, and a user profile icon. The main content area displays a list of tabs: 1. Assessment details (selected), 2. Site context, 3. Vegetation, 4. Habitat suitability: Predicted, 5. Habitat suitability: Candidate, 6. Habitat survey, 7. Credits, 8. Credit classes, and 9. Price. A tip message at the bottom left says: "Choosing the 'Assessment type' is an important step. Once you click, 'Next' this value will become read-only and it cannot be un-done." Below this is a form with fields for Assessment type (a dropdown menu), Proposal name (text input), Assessment ID (00043684/BAAS01234/23/00043687), and Assessment Revision (0). A red box highlights the Assessment type dropdown and its associated fields.

1. Click on the ‘Assessment details’ tab to enter assessment details.

1. Assessment details

2. Use the ‘Assessment type’ drop-down to select ‘Part 4 Developments (Small Area)’ or ‘Part 5 Development (Small Area)’.



The screenshot shows the BAM Calculator interface with the 'Assessment details' tab selected. The top navigation bar includes links for OPEN, SAVE, SAVE AS NEW REVISION, CANCEL, DELETE, FINALISE, PRINT, LOGOUT, and a user profile icon. The main content area displays a list of tabs: 1. Assessment details (selected), 2. Site context, 3. Vegetation, 4. Habitat suitability: Predicted, 5. Habitat suitability: Candidate, 6. Habitat survey, 7. Credits, 8. Credit classes, and 9. Price. A tip message at the bottom left says: "Choosing the 'Assessment type' is an important step. Once you click, 'Next' this value will become read-only and it cannot be un-done." Below this is a form with fields for Assessment type (a dropdown menu), Proposal name (text input), Assessment ID (00043684/BAAS01234/23/00043687), and Assessment Revision (0). A red box highlights the Assessment type dropdown and its associated fields. The dropdown menu shows options: Part 4 Developments (General), Part 4 Developments (Small Area), Major Projects, Part 5 Activities, Part 5 Development (Small Area), Biocertification, Clearing (General), and Scattered Trees. The 'Part 4 Developments (Small Area)' option is highlighted with a red border.

3. Use the ‘Biodiversity Offsets Scheme entry trigger’ drop-down to select the required entry trigger.

For more information on the entry trigger, refer to the [When does the Biodiversity Offsets Scheme apply \(https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/clear-and-develop-land/when-biodiversity-offsets-scheme-applies\)](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/clear-and-develop-land/when-biodiversity-offsets-scheme-applies) webpage (see Appendix B).

Assessment type *	Part 4 Developments (Small Area)
Biodiversity Offsets Scheme entry trigger *	
Proposal name	BOS Threshold: Biodiversity Values Map BOS Threshold: Area clearing threshold BOS Threshold: Biodiversity Values Map and area clearing threshold Test of significance
Assessment ID	
Assessment Revision	

i Tip

- The ‘Biodiversity Offsets Scheme entry trigger’ is not available for Part 5 Development (Small Area) cases as the entry trigger is not applicable to this type of assessment.

4. Add a unique description into the ‘Proposal name’ field.

i Tip

- The proposal name is a valuable identifier for the BAM-C assessment.
- A good proposal name will help you distinguish differences between assessment revisions.

5. When all required information has been entered, click ‘Next’ to move to Tab 2.

NEXT

i Tip

- Once ‘Next’ is clicked, the assessment type for the assessment is locked.
- To change the assessment type, cancel or exit the assessment before saving and reopen the assessment.
- If the assessment has the incorrect assessment type and the case has been saved, delete the assessment and create a new assessment through BOAMS (using the same parent case).
- Click ‘Next’ to move to the next tab to ensure subsequent tabs contain the correct information and calculations.

Creating a small area assessment

5.2 Site context (Tab 2)

The ‘Site context’ tab is used to capture information relating to the biogeographic and landscape setting of the site. Information required for this tab is displayed below.

File Save Cancel Finalise Logout

00043684/BAAS01234/23/00043687 / Revision: 0

1. Assessment details 2. Site context 3. Vegetation 4. Habitat suitability: Predicted 5. Habitat suitability: Candidate 6. Habitat survey 7. Credits

8. Credit classes 9. Price

All fields marked with an asterisk (*) are mandatory

Tip!
Choosing the 'IBRA Region' is an important step. Once you click, 'Next' this value will become read-only and cannot be un-done.

Interim Biogeographic Regionalisation for Australia (IBRA) *	<input type="text"/>
IBRA Sub Region *	<input type="text"/>
NSW (Mitchell) Landscape *	<input type="text"/>
% Native vegetation cover *	<input type="text"/>
Linear Development	<input type="checkbox"/>
Reference data version	<input type="text"/> Current classification (live - default)

Landscape features

Feature	Name	Part of development footprint	Action
<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	

Add another landscape feature

NEXT

1. The 'Site context' tab will be open if 'Next' was clicked on Tab 1.

2. Site context

2. Use the 'Interim Biogeographic Regionalisation for Australia (IBRA)' drop-down to select the IBRA region. If the assessment occurs across multiple IBRA regions, select the IBRA region where the largest proportion of impact/area will occur.

Interim Biogeographic Regionalisation for Australia (IBRA) *	<input type="text"/>
IBRA Sub Region *	<input type="text"/>
NSW (Mitchell) Landscape *	<input type="text"/>
% Native vegetation cover *	<input type="text"/>
Linear Development	<input type="checkbox"/>
Reference data version	<input type="text"/>

- Australian Alps
- Brigalow Belt South
- Broken Hill Complex
- Channel Country
- Cobar Peneplain
- Darling Riverine Plains
- Mulga Lands
- Murray Darling Depression
- Nandewar
- New England Tablelands
- NSW North Coast
- NSW South Western Slopes
- Riverina
- Simpson Strzelecki Dunefields
- South East Corner
- South Eastern Highlands
- South Eastern Queensland
- Sydney Basin

Tip

- See **Bioregions of NSW** (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/bioregions/bioregions-of-nsw>) for further information on bioregions of New South Wales (see **Appendix B**).

- See **BAM 2020 (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>)**, Chapter 3 for further information on establishing the site context.
- The IBRA subregion selection affects future selections of PCT, TEC and species.

3. Use the 'IBRA Sub Region' drop-down to select the IBRA subregion in which the site is located. The drop-down is filtered based on the IBRA region selected in step 2.

The screenshot shows a form titled 'Interim Biogeographic Regionalisation for Australia (IBRA) *'. On the left, there are several input fields: 'IBRA Sub Region *', 'NSW (Mitchell) Landscape *', '% Native vegetation cover *', 'Linear Development', and 'Reference data version'. To the right of these fields is a dropdown menu with a list of IBRA subregions. The list includes: Australian Alps, Brigalow Belt South, Broken Hill Complex, Channel Country, Cobar Peneplain, Darling Riverine Plains, Mulga Lands, Murray Darling Depression, Nandewar, New England Tablelands, NSW North Coast, NSW South Western Slopes, Riverina, Simpson Strzelecki Dunefields, South East Corner, South Eastern Highlands, South Eastern Queensland, and Sydney Basin. The 'Inland Slopes' option is highlighted with a blue background.

4. Use the 'NSW (Mitchell) Landscape' drop-down to select the landscape in which most of the proposal occurs.

The screenshot shows the same form as above, but with a warning message at the top: 'Warning: Changes to this value might affect data in 'Habitat suitability', 'Habitat survey', 'Credits', 'Credit classes' and 'Price' tabs'. Below the warning, the 'NSW (Mitchell) Landscape' dropdown menu is shown. It lists: Inland Slopes, Capertee Valley, Inland Slopes (which is selected and highlighted with a blue background), and Lower Slopes. At the bottom of the form, there is a note: 'Current classification (live - default)'.

i Tip

- NSW (Mitchell) landscape does not influence calculations of VI or credit calculations for small area assessments, but is used in reporting.
- See **Descriptions for NSW (Mitchell) Landscapes (<https://www.environment.nsw.gov.au/resources/conservation/landscapesdescriptions.pdf>)** for further information (see **Appendix B**).

5. Enter a value for the percentage landscape native vegetation cover in the '% Native vegetation cover' field.

NSW (Mitchell) Landscape *	<input type="text" value="NSW (Mitchell) Landscape"/> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> Adelong Granite Ranges Adrah Hills and Ranges Albury - Oaklands Hills and Footslopes Alpine Zone Apsley Meta-sediments Ardlethan Hills Ashfield Plains Ashford Karst Ashford Mole Valleys Attunga Karst Baldwin Mountains </div>
% Native vegetation cover *	<input type="text" value="0"/>
Linear Development	<input checked="" type="checkbox"/>
Reference data version	<input type="text" value="Current"/>

i Tip

- See [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Section 3.2 for further information on native vegetation cover.
- The % native vegetation cover value entered may affect the predicted and candidate fauna species lists. Refer to the definition of 'Suitable habitat' in the [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020) Glossary for more information.

6. Tick the 'Linear Development' checkbox if the development is linear-shaped. Linear-shaped development is generally narrow and extends across the landscape.

IBRA Sub Region *	<input type="text" value="IBRA Sub Region"/> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> Warning: Changes to this value might affect data in 'Habitat suitability', 'Habitat survey', 'Credits', 'Credit classes' and 'Price' tabs </div>
NSW (Mitchell) Landscape *	<input type="text" value="NSW (Mitchell) Landscape"/>
% Native vegetation cover *	<input type="text" value="0"/>

7. **Reference data version** - The revised Eastern NSW PCT Classification has been deployed into the BAM-C, and revisions to the remainder of the state will be rolled out over the coming years. The reference data version may have different options available depending on when the assessment was created and which IBRA region is selected.

Instructions are provided for the following scenarios:

- New assessments inside a revised NSW IBRA region
 - Existing assessments inside a newly revised NSW IBRA region
 - New or existing assessments outside a newly revised NSW IBRA region
- a. New assessments inside a revised NSW IBRA region**

All new assessments created after deployment of a revised NSW PCT classification will automatically use the revised NSW PCTs when an associated NSW IBRA region is selected. The only option in the 'Reference data version' drop-down will be 'Current classification (live – default)'.

% Native vegetation cover *	<input type="text" value="0"/>
Linear Development	<input checked="" type="checkbox"/>
Reference data version	<input type="text" value="Current"/>

b. Existing assessments inside a newly revised NSW IBRA region

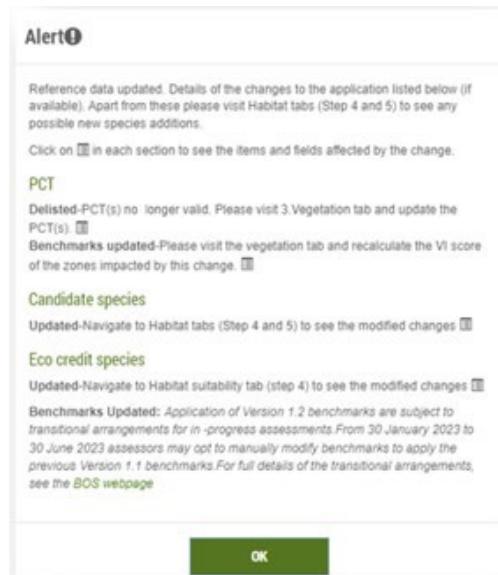
Reopening ‘Open’, ‘Locked’ or ‘Finalised’ assessments created before deployment of a newly revised NSW PCT classification will trigger an update with the revised NSW PCTs. This will trigger an alert detailing the changes that have occurred in the assessment.



i Tip

- Take a screenshot of the alert showing the updates. Alerts will not display again once the case has been saved.

To use legacy PCTs during a transitional period, select the legacy classification in the ‘Reference data version’ drop-down. Alternatively, to use the revised NSW PCTs select ‘Current classification (live – default)’.



To progress an assessment with revised data, the following tabs may require amendment:

- Tab 3 – Vegetation
- Tab 4 – Habitat suitability: Predicted
- Tab 5 – Habitat suitability: Candidate
- Tab 6 – Habitat Survey

c. New or existing assessments outside a revised NSW IBRA region

New or existing assessments outside of a newly revised NSW IBRA region will not update with new NSW PCTs, as they are not relevant. The only available option in the ‘Reference data version’ drop-down will be ‘Current classification (live – default)’.



**Tip**

- Further information on transitional arrangements is available from the [New vegetation integrity benchmarks and plant community types](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/nsw-plant-community-type-classification/pct-change-control) (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/nsw-plant-community-type-classification/pct-change-control>) webpage (see [Appendix B](#)).
- When a transitional period ends, the only option in the ‘Reference data version’ drop-down will be ‘Current classification (live – default)’. At this time, revised NSW PCTs must be used for all assessments within the associated NSW IBRA regions.
- Clear your browser cache to ensure any newly revised NSW PCTs and the legacy reference data version display correctly in the drop-down.

Clearing the BAM-C cache: If you are having a problem selecting legacy PCTs (during a transitional period) in a case created before deployment of any revised NSW PCTs, clear your cache in the BAM-C. See [Appendix A](#) of this guide for instructions on clearing the cache.

**Tip**

- If you cannot clear the cache to see the legacy classification in the ‘Reference data version’ drop-down, contact the BOS Help Desk for assistance.
- Once ‘Next’ is clicked, the IBRA region for the assessment is locked.
- To change the IBRA region, cancel or exit the assessment before saving and reopen the assessment.
- If the IBRA region is incorrect and the case has been saved, delete the assessment and create a new assessment through BOAMS (using the same parent case).

Creating a small area assessment

5.3 Vegetation (Tab 3)

The ‘Vegetation’ tab is used to record the PCT(s) present on the site and to capture individual plot data that is used to calculate the VI scores for each plot.

The method for recording PCTs and TECs at a site and calculating current vegetation condition of a site is the same for all assessment types. Refer to Chapter 4 of the [BAM 2020](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020) (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>) for further information.

Small area assessments can record a maximum of 2 PCTs. Where 2 PCTs require assessment, at least one PCT must be a TEC to use the small area assessment method. For any assessment that does not meet this requirement, refer to [Chapter 4](#) of this guide for the available alternatives.

**Tip**

- Where the total assessment area meets the small area threshold but there are more than 2 TECs, or more than one PCT (but none are TECs), the small area module can still be applied. Add the dominant TEC(s) and/or PCT into the BAM-C, then include all areas of the smaller, non-dominant PCT(s) or TEC(s) in the vegetation zones of the dominant PCT and/or TEC(s).

In this subsection

5.3.1 Define the PCTs and TECs

5.3.2 Import vegetation zones

5.3.3 Manually enter vegetation zone data

5.3.4 Calculate vegetation integrity for sites with multiple management zones (optional)

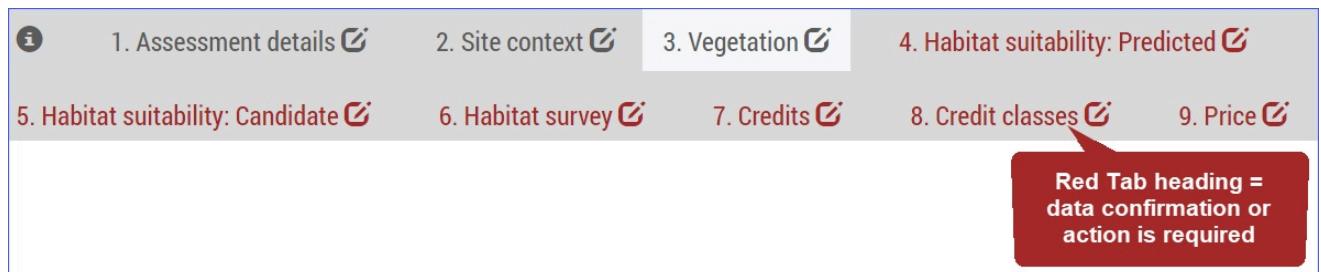
5.3.5 Calculate the future vegetation integrity score

5.3.1 Define the PCTs and TECs

- The ‘Vegetation’ tab will be open if ‘Next’ was clicked on Tab 2. When reopening an assessment with existing information, click on Tab 3 to open it.

3. Vegetation

- Note that if any of the tab headings are shaded in red, this indicates that action is required, or information needs to be entered/confirmed on that tab. Remember to click ‘Next’ to move through the tabs if any changes are made.



- If the PCT name or number is known, the ‘Plant community type’ field can be added as the first step, which will automatically populate the formation and class fields.
If the PCT name or number is not known, use the ‘Formation’ drop-down to select the formation for the required PCT.

Formation

Rainforest
Wet Sclerophyll Forests (Shrubby sub-formation)
Freshwater wetlands
Dry Sclerophyll Forests (Shrubby sub-formation)
Forested Wetlands
Grassy Woodlands
Dry Sclerophyll Forests (Shrub/grass sub-formation)

i **Tip**

- If the PCT or number is known, enter this first and the formation and class fields will be populated automatically.
- Only PCTs associated with the IBRA region and IBRA subregion will be available.
- Refer to the webpage **About BioNet Vegetation Classification (Veg-C)** (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/about-bionet-vegetation-classification>) for further information about PCTs and TECs (see **Appendix B**).

4. Use the ‘Class’ drop-down (if PCT name or number is not known) to select the required class. The classes available will be filtered to those associated with the formation if a formation was selected in step 3.

Plant community types (PCT) & ecological communities

Formation *	Class *	Plant community type *	PCT % c
<input type="text"/>	<input type="text"/>	<input type="text"/>	
ADD ANOTHER PCT		Brigalow Clay Plain Woodlands	
		Coastal Freshwater Lagoons	
		Coastal Swamp Forests	
		Coastal Valley Grassy Woodlands	
		Cool Temperate Rainforests	
		Dry Rainforests	
		Eastern Riverine Forests	
		Floodplain Transition Woodlands	
		Gibber Transition Shrublands	
		Hunter-Macleay Dry Sclerophyll Forests	
		Inland Floodplain Shrublands	
		Inland Floodplain Swamps	
		Inland Floodplain Woodlands	
		Inland Riverine Forests	
		Inland Rocky Hill Woodlands	
		Inland Saline Lakes	
		Montane Bogs and Fens	
		New England Dry Sclerophyll Forests	
		New England Grassy Woodlands	

IMPORT SITE **Veg**

#	Import
1	<input type="button"/>

5. Use the ‘Plant community type’ drop-down to select the required PCT. The PCTs available will be filtered to those associated with the class if a class was selected in step 4.

Plant community type *	PCT % cleared	Associated TEC *	BC Act listing status	EPBC Act listing status	Action	Delete
					ADD VEG ZONE	

24 - Canegrass swamp tall grassland wetland of drainage depressions, lakes and pans of the inland plains
 25 - Lignum shrubland wetland on floodplains and depressions of the Mulga Lands Bioregion, Channel Country Bioregion in the arid and semi-arid (hot) climate zones
 27 - Weeping Myall open woodland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion
 31 - Brigalow - Gidgee open woodland on clay plains west of the Culgoa River, Mulga Lands Bioregion
 35 - Brigalow - Belah open forest / woodland on alluvial often gilgai clay from Pilliga Scrub to Goondiwindi, Brigalow Belt South Bioregion
 36 - River Red Gum tall to very tall open forest / woodland wetland on rivers on floodplains mainly in the Darling Riverine Plains Bioregion
 37 - Black Box woodland wetland on NSW central and northern floodplains including the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion.
 38 - Black Box low woodland wetland lining ephemeral watercourses or fringing lakes and clay pans of semi-arid (hot) and arid zones
 39 - Coolabah - River Coobah - Lignum woodland wetland of frequently flooded floodplains mainly in the Darling Riverine Plains Bioregion
 40 - Coolabah open woodland wetland with chenopod/grassy ground cover on grey and brown clay floodplains
 43 - Mitchell Grass grassland - chenopod low open shrubland on floodplains in the semi-arid (hot) and arid zones
 45 - Plains Grass grassland on alluvial mainly clay soils in the Riverina Bioregion and NSW South Western Slopes Bioregion
 49 - Partly derived Windmill Grass - copperburr alluvial plains shrubby grassland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion
 50 - Couch Grass grassland wetland on river banks and floodplains of inland river systems
 52 - Queensland Bluegrass +/- Mitchell Grass grassland on cracking clay floodplains and alluvial plains mainly the northern-eastern Darling Riverine Plains Bioregion
 53 - Shallow freshwater wetland sedge/land in depressions on floodplains on inland alluvial plains and floodplains
 54 - Buloke - White Cypress Pine woodland in the NSW South Western Slopes Bioregion
 55 - Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions.
 56 - Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW

6. The % cleared value for the PCT will display under ‘PCT % cleared’. The % cleared value is an estimate of the extent to which a PCT has been cleared since European settlement and is used when assigning a non-threatened PCT to an OTG.

PCT % cleared
90

Tip

- Detailed information on each PCT and its geographic distribution is available as a downloadable and refreshable Power Query from [**NSW BioNet Resources**](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/resources) (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/resources>) (see [Appendix B](#)).
- Refer to the [**Offset rules and ecosystem credits**](https://www.environment.nsw.gov.au/publications/offset-rules-and-ecosystem-credits-guidance) (<https://www.environment.nsw.gov.au/publications/offset-rules-and-ecosystem-credits-guidance>) guidance for more information on % cleared and OTGs (see [Appendix B](#)).

7. Use the ‘Associated TEC’ drop-down to select the relevant TEC. If no TEC is associated with the PCT, select ‘Not a TEC’.

Associated TEC *	BC Act listing status	EPBC Act listing status	Action
Not a TEC			ADD VEG Z

White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NS
 White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland
Not a TEC

Tip

- Only TECs with an association with the selected PCT (in BioNet) are shown in the drop-down. Where a TEC is present at the site but is unavailable in the drop-down list, it may be

because the TEC is not associated with the IBRA region and IBRA subregion chosen.

- A detailed description of each TEC is available through the **Threatened biodiversity profile search (<https://threatenedspecies.bionet.nsw.gov.au/>)** app (see **Appendix B**).
- Detailed information on the PCT to TEC associations and the applicable subregions is available as a downloadable and refreshable Power Query from the **NSW BioNet Resources (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/resources>)** webpage (see **Appendix B**). ‘BioNet Vegetation Classification’ > ‘Power queries’ > ‘Threatened Ecological Community to Plant Community Types (PCT) Association data’.
- To request a review of a TEC association, contact the BOS Help Desk.

8. The state and Commonwealth listing status of a TEC will be displayed under the ‘BC Act listing status’ and ‘EPBC Act listing status’ headings, respectively.

BC Act listing status	EPBC Act listing status
Critically Endangered Ecological Community	Not Listed

9. Click ‘Add veg zone’.

ADD VEG ZONE

10. A vegetation zone record will be added to sections:

- ‘Vegetation zones (Current vegetation integrity score)’
- ‘Vegetation zones (Future vegetation integrity score)’.

Vegetation zones (Current vegetation integrity score)													
#	Import	PCT code	Condition class	Vegetation zone name	Patch Size	Area (ha)	Location	Composition condition score	Structure condition score	Function condition score	Current vegetation integrity score	Management zones	Delete
1	<input type="button" value="Import"/>	266	<input type="button" value="Classname"/>	266_Classname1	0		<input type="button" value="Location"/>	<input type="button" value="..."/>	<input type="button" value="..."/>	<input type="button" value="..."/>		<input type="button" value="Management zones"/>	<input type="button" value="Delete"/>

Vegetation zones (Future vegetation integrity score)												
#	PCT code	Condition class	Vegetation zone name	Patch Size	Management zone	Area (ha)	Composition condition score	Structure condition score	Function condition score	Vegetation integrity (VI) score	Change in VI score	Total VI loss
1	266	Classname1	266_Classname1	0			<input type="button" value="..."/>	<input type="button" value="..."/>	<input type="button" value="..."/>			

i Tip

- Adding a unique condition class name to each vegetation zone will help you distinguish the vegetation zones throughout the assessment, especially when both a TEC and non-TEC have been identified on site for the same PCT.
- The future VI score fields display the remaining VI values after the development or clearing has occurred at a site. Only edit this section if partial loss of VI is occurring, rather than total loss.

11. For PCTs with multiple vegetation zones, click ‘Add veg zone’ beside the applicable PCT to add another vegetation zone.

Plant community types (PCT) & ecological communities							
Formation *	Class *	Plant community type *	PCT % cleared	Associated TEC *	BC Act listing status	EPBC Act listing status	Action
Grassy Woodlands	Western Slopes Grassy Woodlands	266 - White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion	94	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland	Critically Endangered Ecological Community	Not Listed	ADD VEG ZONE Modify default behavior

12. A zone number will be generated for each vegetation zone and the relevant PCT number for each record displayed.

#	Import	PCT code
1		303: ▾
2		302 ▾

13. Click ‘Add another PCT’ (if required) and repeat the above steps to add additional PCTs.

ADD ANOTHER PCT

14. If the required PCT is missing from the PCT list, click ‘Search PCT outside IBRA’ and enter the name or PCT number to search and then select the PCT. Repeat the above steps for adding vegetation zones.

ADD ANOTHER PCT	SEARCH PCT OUTSIDE IBRA	PCT name or ID	Cancel
------------------------	--------------------------------	----------------	--------

i Tip

- For small area assessments PCTs are generally restricted to one PCT, however, 2 can be added if at least one is a TEC.
- You can only add PCTs that are associated with the selected IBRA region when you use the ‘Add Another PCT’ button.
- With the ‘Search PCT outside IBRA’ button you can add any approved PCT, not only those associated with the selected IBRA region.

- Some PCTs have no (or incomplete) benchmarks in Veg-C. For these PCTs, an error will display and the PCT cannot be used in the assessment.

15. To delete a PCT or a vegetation zone click the button on the right under 'Delete'.

Plant community types (PCT) & ecological communities								
Formation *	Class *	Plant community type *	PCT % cleared	Associated TEC *	BC Act listing status	EPBC Act listing status	Action	Delete
Semi-arid Woodlands (Grassy sub-formation)	Riverine Plain Woodlands	27 - Weeping Myall open woodland of the Darling Riverine	86	Weeping Myall Woodlands	Not Listed	Endangered	<button>ADD VEG ZONE</button>	<button>X</button> Modify default benchmarks

i Tip

Vegetation zone and site data can be imported into the BAM-C in CSV file format (Subsection 5.3.2) or added manually (Subsection 5.3.3). See below for the instructions.

5.3.2 Import vegetation zones

1. To import vegetation zone data, click the import icon beside the vegetation zone.



2. Download the CSV template by selecting 'this template file' in the import pop-up and an excel import data template will become available.

Import data

Use this tool to bulk import plot data for this vegetation zone

You should use [this template file](#) to construct your data and then copy and paste it here

Important: The template modified in version 1.2.4.00. Download latest template before preparing your data. If you already prepared your data, copy the values to the new template to verify before import.

Copy all text, including rows 1 and 2 of the template, and paste here

CLEAR PLOTS **IMPORT**

import_template (4).xlsx ^

3. Open and populate the template with observation values and save the template:
– row 1 of the template is reserved for headers

- row 2 of the template is reserved for example data
- users must enter plot data into the template from row 3 onwards.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
plot	pct	area	patchsize	conditionclass	zone	easting	northing	bearing	compTree	compShrub	compGrass	compForbs	compFerns	compOther	strucTree
Text[Maximum 10 Number]	Number with 2 decimal point	Text[Letters, numbers, underscores and hyphens]	Text[Letters, numbers, underscores and hyphens]	Range in [54 or 55 or 56]	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number
1	3032	1.10	145	ModCondition	56	475315	6678416.0	45	12	7	2	1	1	1	56.0
2	3032	0.30	145	GoodCondition	56	475316	6678414.0	40	10	4	2	0	1	0	46.0

4. Select and copy all column headings in rows 1 and 2 and the data from row 3 (and onwards if there is more than one plot). Make sure no blank columns or rows are selected.

U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
strucOther	funLargeTrees	funHollow	funLitterCover	funLenFallenLogs	funTreeStem5to9	funTreeStem10to19	funTreeStem20to29	funTreeStem30to49	funTreeStem50to79	funTreeRegen	funHighThreatExotic	creatExotic
Number with 1 decimal point	Number	Number with 1 decimal point	Number with 1 decimal point	[0,1]	[0,1]	[0,1]	[0,1]	[0,1]	[0,1]	Number with 1 decimal point	Number with 1 decimal point	Number with 1 decimal point
0.0	2	0	50.0	55.0	0	0	1	1	0	1	2.0	
0.0	1	2	75.0	22.0	0	1	1	0	0	1	9.0	

5. Click the import icon to reopen the ‘Import data’ pop-up (if not already open).



6. Paste the copied data from the template into the ‘Import data’ pop-up and click ‘Import’.

Import data

Use this tool to bulk import plot data for this vegetation zone

You should use [this template file](#) to construct your data and then copy and paste it here

Important: The template modified in version 1.2.4.00. Download latest template before preparing your data. If you already prepared your data, copy the values to the new template to verify before import.

```
plot pct area patchsize conditionclass zone easting northing bearing compTree compShrub compGrass compForbs compFerns
compOther strucTree strucShrub strucGrass strucForbs strucFerns strucOther funLargeTrees funHollowtrees funLitterCover
funLenFallenLogs funTreeStem5to9 funTreeStem10to19 funTreeStem20to29 funTreeStem30to49 funTreeStem50to79
funTreeRegen funHighThreatExotic
Text[Maximum 10 characters] Number Number with 2 decimal point Number Text[Letters, numbers, underscores and hyphens] Please fill
condition-class name in all plots [Maximum 20 characters] [54 or 55 or 56] Range in [0-359] Number Number Number Number
Number Number Number with 1 decimal point Number
with 1 decimal point Number with 1 decimal point Number Number Number with 1 decimal point Number with 1 decimal point [0,1] [0,1]
[0,1] [0,1] Number with 1 decimal point
1 3032 1.10 145 ModCondition 56 475315 6678416.0 45 12 7 2 1 1 56.0 20.0 8.0 1.0 2.0 1.0 5 3 35.0
```

CLEAR PLOTS **IMPORT**

7. A pop-up will open asking you to confirm that all existing plots will be deleted. Click ‘Yes’ to delete any previous plot data or ‘No’ to cancel and retain the existing plot data.

Confirm?

All existing plots will be deleted.
Please confirm.

YES **NO**

8. If the import was not successful, or only partially successful, the ‘Import data’ pop-up will display an error message. Correct the error(s) in the CSV file, copy and paste the corrected data, and re-import.

The screenshot shows a 'Import data' dialog box. At the top, there's a note about using a template file. Below it, a table of data is shown with several errors highlighted by red boxes and messages:

- A red box highlights the 'conditionclass' column with the message: 'Contains a 'space''.
- A red box highlights the 'ModCondition' column with the message: 'Column 'conditionclass' should only contain letters, numbers, underscores and hyphens'.
- An error message at the bottom states: 'Invalid data found in the file. Row #2 of the template provides the expected data types and value ranges. Please verify your import data.'

At the bottom of the dialog are two buttons: 'CLEAR PLOTS' and 'IMPORT'.

9. Click ‘Close’ to close the pop-up once the data has imported.

CLOSE

10. The data will be imported into the relevant condition score pop-ups and the scores will be calculated automatically. The condition score fields for each condition attribute will change from showing no score (indicated by an ellipsis) to showing a numeric score value.

The screenshot shows the 'Zone composition data' pop-up. It displays a table of data with columns: #, Import, PCT code, Condition class ^, Vegetation zone name, Patch Size, and several score columns (Tree, Shrub, Grass & grass like, Forb, Fern, Other). The first row (Import 303, PCT code ModCc) has scores: Tree 12, Shrub 7, Grass & grass like 2, Forb 1, Fern 1, Other 1. The second row (Import 302, PCT code Classn) has scores: Tree 10, Shrub 4, Grass & grass like 2, Forb 0, Fern 1, Other 0. The total composition condition score is 50.9.



Tip

- If assessing a non-woody PCT, do not specify any values for function attributes other than HTW cover in the CSV import file.
- When copying the data from the template ensure no extra columns are selected or an error will occur.

11. To clear imported data, click the ‘Import’ icon to reopen the ‘Import’ pop-up.



12. Click ‘Clear plots’.



13. All imported data will be cleared, and the condition score fields will revert to displaying no score (“...”).

Composition condition score	Structure condition score	Function condition score
...

14. The above process can be performed for all zones at the site (rather than on a zone-by-zone basis) using ‘Import site’ and following the same process outlined in steps 1–12 above.



15. Individual zones can be removed by clicking the button on the right under ‘Delete’.

#	Import	PCT code	Condition class *	Vegetation zone name	Patch Size*	Area (ha)*	Location *	Composition condition score	Structure condition score	Function condition score	Current vegetation integrity score	Management zones	Delete
1		303.	ModCc	3032_Mod Condition	145	0.3		50.9	33.6	85	52.6		

5.3.3 Manually enter vegetation zone data

This section describes how to manually enter the vegetation zone data into the BAM-C to calculate the VI score.

1. The ‘PCT code’ field is populated automatically when ‘Add veg zone’ is clicked.

#	Import	PCT code	Condition class *	Vegetation zone name	Patch Size*	Area (ha)*	Location *	Composition condition score	Structure condition score	Function condition score	Current vegetation integrity score	Management zones	Delete
1		 303	 Class	3032_Cl assname	0								

2. Select ‘Condition class’ and enter a condition class label for the zone. The name must not include spaces, but hyphens or underscores can be used as an alternative (for example, do not enter ‘Mod TEC’, instead use ‘Mod-TEC’ or ‘Mod_TEC’).

Condition class *

 Tip

Zone condition class is solely a label to help identify the zone and does not have any influence on VI or credit calculations.

3. A vegetation zone name will be generated automatically based on the condition class and PCT code and displays under the ‘Vegetation zone name’ heading.

Vegetation zone name

4. Select ‘Patch Size’ and enter the relevant patch size area (in hectares) for the zone.

Patch Size *

 Tip

- The patch size value is used to filter the list of fauna species presented in the predicted and candidate species tabs. Refer to the [BAM 2020](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020) (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Subsection 4.3.2 for more information on patch size.
- Making changes to the ‘patch size’ value may affect data in the ‘Habitat suitability’, ‘Habitat survey’, ‘Credits’ and ‘Credit classes’ tabs.

5. Enter the area for the vegetation zone in the ‘Area (ha)’ field.

Area (ha)

i Tip

- The area of a vegetation zone will determine the number of plots required. Refer to the [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Subsection 4.3.4 (Table 3). The BAM-C automatically adds the number of plots required based on the 'Area (ha)' entered.
- Ensure there is at least one vegetation zone for each PCT. Use the scroll bar to the right of the vegetation zone list to confirm each PCT has a vegetation zone.
- The minimum vegetation zone 'Area (ha)' accepted is 0.01 ha. If an area is smaller than this, the BAM-C will automatically round it up to 0.01 ha (values of 0.005–0.009 ha will be rounded up). If the area is less than 0.005 ha, consider adding the area to another vegetation zone.
- The 'Patch size' should be equal to or greater than the 'Area (ha)' size (when the total 'Area' of the vegetation zone).

6. Click the 'Location' icon and add plot location details.

Location *



Location

Item	Zone *	Easting *	Northing *	Bearing *
Plot 1	56	475315	6678416	45

ADD PLOT **OK**

7. If additional plots are required, click 'Add plot'. Once the required plot data has been added click 'OK'. Note that adding a plot to the 'Location' field will also add a plot to the 'Composition', 'Structure' and 'Function' condition score fields.

Location

Item	Zone *	Easting *	Northing *	Bearing *
Plot 1	56	475315	6678416	45
Plot 2	56	475317	6678420	125

ADD PLOT **OK**

8. Select 'Composition condition score' and enter composition data.

Composition condition score

Composition condition score: 35.4

Plots **Calculation results**

Zone composition data

Item	Tree *	Shrub *	Grass & grass like *	Forb *	Fern *	Other *
Plot 1	7	2	4	1	1	0
Plot 2	8	0	2	1	3	1

RECALCULATE **OK**

3032_goo
ad 145 0.2 **35.4**

9. Click 'Recalculate' to update calculation of the composition score for the zone, or 'OK' to update and close the composition score pop-up.

RECALCULATE

10. Select the 'Calculation results' tab on the 'Zone composition data' pop-up to see the underlying data used to calculate the score.

Item	Tree	Shrub	Grass & grass like	Forb	Fern	Other
Benchmark	2	6	7	10	0	1
Observed mean (x̄)	3	3	3	3	3	3
Unweighted composition score (UCS _i)	100	59.1	45.5	22	0	100
Weighted composition score (WCS _i)	7.7	13.6	12.2	8.5	0	3.8
Dynamic weighting (w _i)	0.08	0.23	0.27	0.38	0	0.04

11. Click 'OK'.

Tip

The following calculations are shown in the composition condition section:

- **Benchmarks** – these values indicate benchmark reference values for the vegetation class/IBRA combination of the zone.
- **Observed mean** – this is the average of observed values entered for all plots for a specific growth form group.
- **Unweighted composition score** – BAM-C calculates and displays the unweighted condition score for the relevant growth form group. This calculation converts observed mean values to continuous unweighted condition scores using a Weibull (continuous probability) distribution.
- **Weighted composition score** – BAM-C calculates and displays the weighted condition score for the relevant growth form group. This calculation applies a dynamic weighting based on the proportional contribution of each growth form group benchmark function to the benchmark total function (sum of benchmark function across all growth form groups).
- **Dynamic weighting** – The BAM-C calculates and displays a dynamic weighting based on the proportional contribution of each growth form group benchmark condition attribute to the benchmark total condition (sum of benchmark condition attributes across all growth form groups).
- Weightings for structure and function are calculated using a similar approach. For further information on these weightings and calculations refer to Appendix H of the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>).

- For further information on determining the VI score refer to Appendix H of the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>).

12. Select ‘Structure condition score’ to open the pop-up and repeat steps 8–11 above to calculate the structure score.

Structure condition score

...

Zone structure data

Structure condition score: 52.8

Plots Calculation results

Item	Tree*	Shrub*	Grass & grass like*	Forb*	Fern*	Other*
Plot 1	87	23	10	2	3	0
Plot 2	56	34	12	1	2	1

32_g0
145
0.2

35.4
52.8
...
...

RECALCULATE
OK

Tip

The same calculations as those described for composition are performed for structure (see **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Appendix H).

13. Select ‘Function condition score’ to open the pop-up and repeat steps 8–11 above to calculate the function score.

Function condition score

...

Zone function data

Function condition score: 71.9

Plots Calculation results

Item	Tree regeneration <5cm diameter *	Stem classes					Number of large trees* (>50cm DBHOB)	Hollow bearing trees*	Litter cover*	Length of fallen logs	Litter fall
		5-9	10-19	20-29	30-49	50-79					
Plot 1	Absei	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	3	32			
Plot 2	Prese	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5	3	44			

303 good 3032_goo 145 0.2 35.4 52.8 71.9

14. Select the ‘Calculation results’ tab to see the underlying data used to calculate the score.

Zone function data

Function condition score: 38.8

Plots Calculation results

Item	Number of large trees	Litter cover	Length of fallen logs	Stem size class	Tree regeneration <5cm diameter	High threat weed cover
Benchmark	6	81	51	4	Present	
Observed mean (\bar{x})	4	32	9	1	0	9
Weighted function score (WFS _i)	29.5	5.9	1.3	2.2	0	
Weighting (w _i)	0.35	0.15	0.2	0.15	0.15	

Tip

- Some fields in the function tab will be restricted based on the PCT selected. For example, for grassland PCTs the fields relating to trees will be greyed out.
- Weightings for function are static rather than dynamic, as defined in BAM 2020, Appendix H.3.
- Unwanted plot(s) can be removed by deleting them in the ‘Location’ pop-up. If you delete a plot, the applicable plot data will also be deleted from the composition, structure and function fields.

15. After completing the composition, structure and function condition calculations, the current VI score will be displayed.



5.3.4 Calculate vegetation integrity for sites with multiple management zones (optional)

Management zones can be added to an assessment to identify areas of a vegetation zone that will have different levels of impact (referred to as partial loss). Refer to Subsection 4.1.2 of the [Biodiversity Assessment Method 2020 Operational Manual – Stage 2](#) (<https://www.environment.nsw.gov.au/publications/biodiversity-assessment-method-operational-manual-stage-2>) for information on generating VI scores for partial loss (see [Appendix B](#)).

1. To add a management zone to the assessment, click the icon under 'Management zones'.

Composition condition score	Structure condition score	Function condition score	Current vegetation integrity score	Management zones	Delete
35.4	52.8	71.9	51.2		
74.5	17.9	...	36.6		

2. The 'Area' value is automatically populated based on the area of the vegetation zone. Add a name, then click 'Add zone' and then 'OK'.

A screenshot of a 'Management Zones' dialog box. At the top, it says 'Management Zones' and has 'CANCEL' and 'OK' buttons. Below that, a message says 'Add a new management zone with area to match vegetation zone area.' There are two input fields: 'Name *' with 'APZ' and 'Area *' with '1.9'. A large red box highlights the 'ADD ZONE' button. Below the inputs, a message says 'Total vegetation area size = 1.9 ha'. A table shows existing management zones: Name 'APZ', Area (ha) '1.9', and Remove button. At the bottom, a message says 'Use 'Add Zone' to create a new management zone.' The bottom part of the screen shows a list of vegetation zones with icons and names: 45.9, 100, 49.3, 60.9, and a grid icon.

3. The sum of the areas of all management zones in a vegetation zone must equal the ‘Area (ha)’ field value for the vegetation zone. If you add a second management zone, enter another name and the area, then correct the area entered for the first management zone so the sum of both management zones is equal to the area of the vegetation zone. Click ‘Add zone’, and then ‘OK’.

Management Zones

Add a new management zone with area to match vegetation zone area.

Name *:	Area *:	ADD ZONE
Total Clr	0.5	

Total vegetation area size = 1.9 ha

Name *	Area (ha) *	Remove
APZ	1.4	X

Management Zones

Name *: Area *:

Management zone name	0	ADD ZONE
----------------------	---	-----------------

Total vegetation area size = 1.9 ha

Name *	Area (ha) *	Remove
APZ	1.4	X
Total Clr	0.5	X

4. The management zones are displayed in the ‘Vegetation zones (Future vegetation integrity score)’ section. The composition, structure and function scores can be modified (from zero) for the management zone where only partial loss will occur.

Vegetation zones (Future vegetation integrity score)												
#	PCT code	Condition class	Vegetation zone name	Patch Size	Management zone	Area (ha)	Composition condition score	Structure condition score	Function condition score	Vegetation integrity (VI) score	Change in VI score	Total VI loss
1	3032	good	3032_good	145	APZ	1.4	0	0	0	0	-51.2	-51.2
					Total Clr	0.5	0	0	0	0	-51.2	

5.3.5 Calculate the future vegetation integrity score

In the ‘Vegetation zones (Future vegetation integrity score)’ section, ‘Composition condition score’, ‘Structure condition score’, ‘Function condition score’ and ‘Vegetation integrity (VI) score’ default to a score of zero.

The VI score is an estimate of the future condition of the site when compared to the benchmark score. For any area where partial loss (not full loss) is expected to occur, the future VI score can be modified from zero to display the expected VI score after development/clearing. Refer to Subsection 4.1.2 of the **Biodiversity Assessment Method 2020 Operational Manual – Stage 2** (<https://www.environment.nsw.gov.au/publications/biodiversity-assessment-method-operational-manual-stage-2>) for information on how to generate future VI scores.

1. To enter an expected future condition score to reflect partial loss of VI, select the ‘Composition condition score’ field.

A screenshot of a digital interface showing a 'Composition condition score' field. The field is a light grey rectangle with a thin black border. Inside, the number '0' is displayed in a small, dark font. The entire interface has a light grey background.

i Tip

- Unless assuming a partial loss of VI, there is no need to enter data in the ‘Future vegetation integrity score’ section. The BAM-C assumes a zero value for future observations.

2. Enter a value greater than zero in the relevant ‘Future mean (x)’ fields.

A screenshot of a 'Management Zones' dialog box. At the top, it says 'Management Zones' and has 'CANCEL' and 'OK' buttons. Below that, it says 'Add a new management zone with area to match vegetation zone area.' There are two input fields: 'Name *:' with 'APZ' and 'Area *:' with '1.9'. A red box highlights the 'ADD ZONE' button. Below these, it says 'Total vegetation area size = 1.9 ha'. A table below shows one row with 'Name *' 'APZ', 'Area (ha) *' '1.9', and 'Remove'. At the bottom, it says 'Use 'Add Zone' to create a new management zone.' and shows a series of buttons: a location icon, '45.9', '100', '49.3' (which is highlighted with a red box), '60.9', and a green square icon.

3. Click ‘Recalculate’ to prompt calculation of the composition score for the zone.

The screenshot shows the 'Management Zones' dialog box. At the top, it says 'Add a new management zone with area to match vegetation zone area.' Below this, there are fields for 'Name *' (Total Clr) and 'Area *' (0.5), with an 'ADD ZONE' button. A message at the bottom states 'Total vegetation area size = 1.9 ha'. Below the main input area is a table with columns for 'Name *', 'Area (ha) *', and 'Remove'. It contains one row with 'APZ' and '1.4'. There is also an 'X' icon to remove the row.

4. Click 'OK'.

5. To enter an expected future condition score to reflect partial loss of VI for structure condition, select the 'Structure condition score' field and follow steps 2–4 above.

This screenshot is identical to the previous one, showing the 'Management Zones' dialog box with the 'APZ' entry and the 'OK' button highlighted with a red box.

6. To enter an expected future condition score to reflect partial loss of VI for function condition, select the 'Function condition score' field and follow steps 2–4 above.

Vegetation zones (Future vegetation integrity score)												
#	PCT code	Condition class	Vegetation zone name	Patch Size	Management zone	Area (ha)	Composition condition score	Structure condition score	Function condition score	Vegetation integrity (VI) score	Change in VI score	Total VI loss
1	3032	good	3032_goo d	145	APZ	1.4	0	0	0	0	-51.2	-51.2
					Total Clr	0.5	0	0	0	0	-51.2	

7. After completing the composition, structure and function calculations, the BAM-C will display the future VI score and the change in VI score (the difference between the current and future VI scores).



8. When all required information has been entered, click 'Next' to move to Tab 4.

Tip

Save your assessment regularly to ensure data is not lost.

Creating a small area assessment

5.4 Habitat suitability: Predicted (Tab 4)

The ‘Habitat suitability: Predicted’ tab is used to confirm the threatened ecosystem credit species that are predicted to occur on or use the site. Ecosystem credit species are threatened species whose occurrence can generally be predicted by vegetation surrogates and/or landscape features, or that have a low probability of detection using targeted surveys. The TBDC identifies the threatened species assessed for ecosystem credits and the BAM-C automatically populates the list of ecosystem credit species. Targeted survey is not required to identify or confirm the presence of ecosystem credit species.

Species are predicted for a vegetation zone based on criteria in BAM 2020 (Subsection 5.2.1, Step 1). The BAM-C displays species satisfying these criteria.

Criteria for small area assessments are the same as for other development or clearing assessments. You must review the automatically populated information alongside BAM 2020, Subsections 5.2.1–5.2.2 to confirm the predicted species for assessment.

The information required in Tab 4 is displayed below.

1. Assessment details	2. Site context	3. Vegetation	4. Habitat suitability: Predicted
6. Habitat survey	7. Credits	8. Credit classes	9. Price
Predicted threatened species (Ecosystem credits)			
Species	Habitat constraints	Geographic limitations	Species is vagrant
Artamus	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			Veg Zone - Confirmed predicted species *
			3032 good

1. The ‘Habitat suitability: Predicted’ tab will be open if ‘Next’ was clicked on Tab 3. When reopening an assessment with existing information, click on Tab 4 to open it.

4. Habitat suitability: Predicted

2. Review the ‘Habitat constraints’, ‘Geographic limitations’ and ‘Species is vagrant’ checkboxes relevant to each species to confirm that the indicated options are relevant to the site (BAM 2020, Subsections 5.2.1 and 5.2.2):
 - a. If the indicated ‘Habitat constraints’ or ‘Geographic limitations’ options are not relevant, the box should be unchecked.
 - b. In limited circumstances, a species may appear in the populated list due to a vagrant individual recorded in the IBRA subregion. In most cases, vagrant sightings will be marked as such on the BioNet Atlas and will not be included in the BAM-C. If you are confident a species is displaying in the populated list due to a vagrant BioNet Atlas record, the checkbox should be ticked.

Predicted threatened species (Ecosystem credits)

Species ⓘ	Habitat constraints	Geographic limitations	Species is vagrant ⓘ	Veg Zone - Confirmed predicted species *	
★ <i>Esacus magnirostris</i> Beach Stone-curlew (Foraging)	--	<input checked="" type="checkbox"/> Within 2 km of coast	<input type="checkbox"/>	3408_good	Yes ▾
<i>Falsistrellus tasmaniensis</i> Eastern False Pipistrelle	--	--	<input type="checkbox"/>	3032_good	Yes ▾
★ <i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle (Foraging)	3408_good	<input checked="" type="checkbox"/> N/A Waterbodies <input checked="" type="checkbox"/> Within 1km of a rivers, lakes, large dams or creeks, wetlands and coastlines	<input type="checkbox"/>	3408_good	Yes ▾

Note: An asterisk beside a species name indicates the species has been added to the assessment, either as a new assessment or because of a change to a previous tab, for example, a change to PCT(s), % native vegetation cover or patch size.

i Tip

- Further details on habitat constraints (including ‘other’ category) and geographic limitations are on the **BioNet Threatened Biodiversity Profiles** (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/about-bionet-atlas/threatened-biodiversity-profiles>) webpage (see **Appendix B**).
- If you are confident a species is displaying in the populated list due to a vagrant BioNet Atlas record, tick the ‘Species is vagrant’ checkbox. Please send supporting justification to the BOS Help Desk so the species can be reviewed.
- Hover over the information icon to see cross-references to information available in the BAM for ‘Species is vagrant’, ‘Veg Zone – Confirmed predicted species’ and ‘Sensitivity to gain’.

3. The ‘Confirmed predicted species’ default setting for development/clearing assessments is ‘Yes’ if:
- a. all indicated ‘Geographic limitations’ and ‘Habitat constraints’ remain checked
 - b. ‘Species is vagrant’ is unchecked.

Veg Zone - Confirmed predicted species * ⓘ

776_Test1	Yes
776_Test2	Yes

4. If a predicted species has habitat constraint(s) and is associated with more than one vegetation zone, the BAM-C displays a habitat constraint for each zone, allowing you to retain a constraint for one zone and not another. Any geographic limitation applies to all zones.

Species ⓘ	Habitat constraints	Geographic limitations	Species is vagrant ⓘ	Veg Zone - Confirmed predicted species * ⓘ
<i>Grantiella picta</i> Painted Honeyeater	<p>268_NonTEC</p> <p><input type="checkbox"/> Other</p> <p><input type="checkbox"/> Mistletoes present at a density of greater than five mistletoes per hectare</p> <p>268_TEC01</p> <p><input checked="" type="checkbox"/> Other</p> <p><input checked="" type="checkbox"/> Mistletoes present at a density of greater than five mistletoes per hectare</p>	--	<input type="checkbox"/>	<p>268_NonTEC</p> <p>268_TEC01</p> <div style="border: 2px solid red; padding: 2px;"> <p>No</p> <p>Yes</p> </div>
<i>Varanus rosenbergi</i> Rosenberg's Goanna	--	<p><input checked="" type="checkbox"/> South-east of a line that runs between Tarcutta and Galong</p>	<input type="checkbox"/>	<p>268_NonTEC</p> <p>268_TEC01</p> <div style="border: 2px solid blue; padding: 2px;"> <p>Yes</p> <p>Yes</p> </div>

ⓘ Tip

Confirmed predicted species are assessed for ecosystem credits.

5. The 'Sensitivity to gain class', 'BC Act listing status' and 'EPBC Act listing status' will populate automatically but Tab 4 does not display the species' SAll status.

Sensitivity to gain class 	BC Act listing status	EPBC Act listing status.
High Sensitivity to Gain	Critically Endangered	Critically Endangered
Moderate Sensitivity to Gain	Vulnerable	Not Listed
Moderate Sensitivity to Gain	Vulnerable	Endangered

6. To add an ecosystem credit species that is not in the list generated by the BAM-C, click ‘Search predicted species’ at the bottom of the page, and enter the species’ name or profile ID. Any matching species will be presented in a list. Select the species’ name and click ‘Add predicted species’.

SEARCH PREDICTED SPECIES

Please choose a species from the dropdown list below:

- [10193 - Cyclodomorphus melanops elongatus \(Mallee Slender Blue-tongue Lizard\)](#)
- [10580 - Oxyura australis \(Blue-billed Duck\)](#)
- [10807 - Tiliqua occipitalis \(Western Blue-tongued Lizard\)](#)
- [10806 - Tiliqua multifasciata \(Centralian Blue-tongued Lizard\)](#)

7. When a species is added, an ‘X’ will appear to the left of the species’ name, indicating this species has been added by the assessor. This species can be removed by clicking on the ‘X’.

	<i>Phoniscus papuensis</i>	--	--
Golden-tipped Bat			
		<i>Podargus ocellatus</i>	--
		Marbled Frogmouth	

8. When all required information has been entered, click ‘Next’ to move to Tab 5.

Creating a small area assessment

5.5 Habitat suitability: Candidate (Tab 5)

The ‘Habitat suitability: Candidate’ tab is used to confirm the threatened species credit species that may occur on or use the site. Species credit species are those where the likelihood of occurrence of a species or elements of suitable habitat for that species cannot be confidently predicted by vegetation surrogates and landscape features, and can be reliably detected by survey.

The candidate species list is populated automatically based on criteria in BAM 2020 (Subsection 5.2.1, Step 1) but is limited to displaying species that are at risk of serious and irreversible impacts (SAII). These species have a status of SAII in the TBDC. Any additional threatened species, regardless of their SAII status, which are identified on the site (that is, incidentally observed during a site visit) must be manually added to the species list at Tab 5.

You must review the automatically populated information alongside BAM 2020, Subsections 5.1.2–5.2.3, to confirm the candidate species for assessment.

The information required for Tab 5 is displayed below.

1. Assessment details	2. Site context	3. Vegetation	4. Habitat suitability: Predicted
5. Habitat suitability: Candidate	6. Habitat survey	7. Credits	8. Credit classes
9. Price			

Candidate threatened species (Species credits)

Species	Habitat constraints	Habitat degraded	Geographic limitations	Species is vagrant	Confirmed candidate species
<i>Aepyprymnus</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Aepyprymnus Yes

- As ‘Next’ was clicked after completion of Tab 4 the ‘Habitat suitability: Candidate’ tab will be open. When reopening an existing assessment, click on Tab 5 to open it.

5. Habitat suitability: Candidate

- The BAM-C candidate species list will only display species that are at risk of an SAII.

Tip

- Small area assessments will only display species credit species at risk of an SAII.
- Refer to **Serious and irreversible impacts of development on biodiversity** (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/clear-and-develop-land/serious-irreversible-impacts>) for the current SAII species list (see **Appendix B**).

- Review the ‘Habitat constraints’, ‘Habitat degraded’, ‘Geographic limitations’ and ‘Species is vagrant’ checkboxes relevant to each species to confirm that the indicated options are relevant to the site (BAM 2020, Subsections 5.2.1–5.2.3):
 - If the indicated ‘Habitat constraints’ or ‘Geographic limitations’ options are not relevant, the box should be unchecked.
 - If the ‘Habitat degraded’ option is relevant, that is, the habitat or microhabitat is degraded to the point that the species is unlikely to use the site, the box should be checked.
 - In limited circumstances, a species may appear in the populated list due to a vagrant individual recorded in the IBRA subregion. In most cases, vagrant sightings will be marked as such on the BioNet Atlas and will not be included in the BAM-C. If you are confident a species is displaying in the populated list due to a vagrant BioNet Atlas record, tick the ‘Species is vagrant’ checkbox.

Candidate threatened species (Species credits)

Species	Habitat constraints	Habitat degraded	Geographic limitations	Species is vagrant	Confirmed candidate species
<i>Aepyprymnus rufescens</i> Rufous Bettong	--	<input type="checkbox"/>	--	<input type="checkbox"/>	Yes <input type="button" value="▼"/>
<i>Assa darlingtoni</i> Pouched Frog	<input checked="" type="checkbox"/> N/A Other <input checked="" type="checkbox"/> Leaf litter Fallen/standing dead timber including logs <input checked="" type="checkbox"/> Logs and debris	<input type="checkbox"/>	--	<input type="checkbox"/>	Yes <input type="button" value="▼"/>
<i>Atrichornis rufescens</i> Rufous Scrub-bird	--	<input type="checkbox"/>	<input checked="" type="checkbox"/> Above 600 m altitude	<input type="checkbox"/>	Yes <input type="button" value="▼"/>
★ <i>Burhinus grallarius</i> Bush Stone-curlew	<input checked="" type="checkbox"/> Fallen/standing dead timber including logs	<input type="checkbox"/>	--	<input type="checkbox"/>	Yes <input type="button" value="▼"/>

Note: An asterisk beside a species name indicates the species has been added to the assessment because of a change to a previous tab, for example, a change to PCT(s), % native vegetation cover or patch size.

i Tip

- If you are confident a species is displaying in the populated list due to a vagrant BioNet Atlas record, tick the ‘Species is vagrant’ checkbox. Please send supporting justification to the BOS Help Desk so the species can be reviewed.
- Further details on habitat constraints (including the ‘other’ category) and geographic limitations can be found on the **BioNet Threatened Biodiversity Profiles** (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/about-bionet-atlas/threatened-biodiversity-profiles>) webpage (see **Appendix B**).

4. The ‘Confirmed candidate species’ default setting for development/clearing assessments is ‘Yes’ if:

- all indicated ‘Geographic limitations’ and ‘Habitat constraints’ remain checked
- ‘Species is vagrant’ and ‘Habitat degraded’ are unchecked.

Confirmed candidate species
Yes <input type="button" value="▼"/>

i Tip

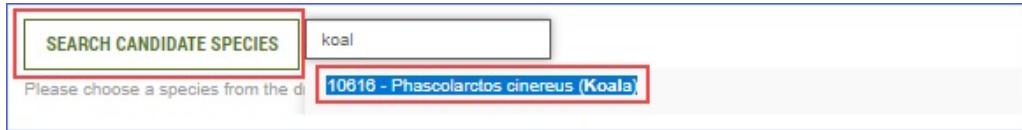
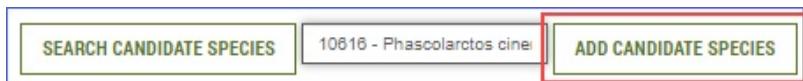
Confirmed candidate species are assessed for species credits.

5. The ‘Sensitivity to gain class’, ‘BC Act listing status’ and ‘EPBC Act listing status’ will populate automatically, however, Tab 5 does not display the species’ SAI status. SAI status is displayed in the Tab 7 ‘Potential SAI’ field.

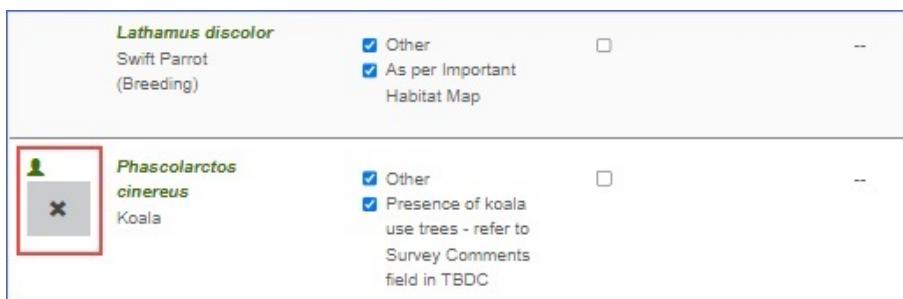
Confirmed candidate species 	Sensitivity to gain class	BC Act listing status	EPBC Act listing status
Yes 	High Sensitivity to Gain	Critically Endangered	Critically Endangered
Yes 	Moderate Sensitivity to Gain	Endangered	Endangered
Yes 	Moderate Sensitivity to Gain	Endangered	Critically Endangered

6. Any threatened species, regardless of SAI status, which is incidentally observed while at the site but is not in the list generated by the BAM-C, must be manually added. Click ‘Search candidate species’ at the bottom of the tab page and enter the species’ name.

Any matching species will be presented in a list. Select the species’ name and click ‘Add candidate species’.

7. When a species is added, an ‘X’ will appear to the left of the species’ name, indicating this species has been added by the assessor. This species can be removed by clicking on the ‘X’.



8. When all required information has been entered, click ‘Next’ to move to Tab 6.

Creating a small area assessment

5.6 Habitat survey (Tab 6)

The ‘Habitat survey’ tab is used to record if a candidate credit species is present at the clearing/development site (BAM 2020, Subsection 5.2.4 to Section 5.4) and whether its presence/absence was determined by survey, expert report or assumed presence.

The steps to complete Tab 6 are described below.

1. Assessment details		2. Site context		3. Vegetation		4. Habitat suitability: Predicted		5. Habitat suitability: Candidate	
6. Habitat survey		7. Credits		8. Credit classes		9. Price			
Species	Species presence	Survey timetable				Unit of Measure	Veg Zone & Value	Biodiversity risk	Biodiversity risk weighting
<i>Anthochaera phrygia</i> Regent Honeyeater	Yes (surveyed)	Jan	Feb	Mar	Apr	Area (ha)	<input type="checkbox"/> 75_TEC <input type="checkbox"/> 75_NonTEC	Very High	3
		May	Jun	Jul	Aug				
		Sep	Oct	Nov	Dec				

- As ‘Next’ was clicked after completion of Tab 5, the ‘Habitat survey’ tab will be open. When reopening an existing assessment, click on Tab 6 to open it.



- The list of candidate species from Tab 5 ‘Habitat suitability: Candidate’ that were confirmed as potentially present based on the habitat and geographic limitations are listed in Tab 6. This includes any species that were manually added to Tab 5.

Species	Species presence	Survey timetable				Unit of Measure	Veg Zone & Value	Biodiversity risk	Biodiversity risk weighting
<i>Caladenia arenaria</i> Sand-hill Spider Orchid	Yes (surveyed)	Jan	Feb	Mar	Apr	Area (ha)	<input type="checkbox"/> 75_TEC <input type="checkbox"/> 75_NonTEC	Very High	3
		May	Jun	Jul	Aug				
		Sep	Oct	Nov	Dec				
		<input type="checkbox"/> Survey month outside the specified months?							
<i>Lathamus discolor</i> Swift Parrot	Yes (surveyed)	Jan	Feb	Mar	Apr	Area (ha)	<input type="checkbox"/> 75_TEC <input type="checkbox"/> 75_NonTEC	Very High	3
		May	Jun	Jul	Aug				
		Sep	Oct	Nov	Dec				
		<input type="checkbox"/> Survey month outside the specified months?							
<i>Phascolarctos cinereus</i> Koala	Yes (surveyed)	Jan	Feb	Mar	Apr	Area (ha)	<input type="checkbox"/> 75_TEC <input type="checkbox"/> 75_NonTEC	High	2
		May	Jun	Jul	Aug				
		Sep	Oct	Nov	Dec				
		<input type="checkbox"/> Survey month outside the specified months?							

- ‘Species presence’ automatically defaults to ‘Yes (surveyed)’. You can change how presence was confirmed using the drop-down. Options are ‘Yes (surveyed)’, ‘Yes (expert report)’ or ‘Yes (assumed present)’. Alternatively, if the species is identified as absent based on either survey or an expert report, options are ‘No (surveyed)’ or ‘No (expert report)’.
- For a small number of species, the habitat constraint information in the TBDC refers to an important habitat map. If one of these species is being assessed, and the assessment area is wholly or partially within a mapped layer identified on an important habitat map, the species must be considered present (‘Yes (assumed present)’). If the assessment area does not overlap any mapped layer, the

species credit species is considered absent ('No (surveyed)'). Include reference to the important habitat map in the BAR.

Species	Species presence 
<i>Lathamus discolor</i>	<input type="button" value="Yes (assumed present)"/> <input type="button" value="Yes (surveyed)"/> <input type="button" value="Yes (expert report)"/> Yes (assumed present) <input type="button" value="No (surveyed)"/> <input type="button" value="No (expert report)"/>
<i>Phascolarctos cinereus</i>	<input type="button" value="Yes (assumed present)"/> <input type="button" value="Yes (surveyed)"/> <input type="button" value="Yes (expert report)"/> <input type="button" value="No (surveyed)"/> <input type="button" value="No (expert report)"/>

Tip

Where 'Yes (surveyed)', 'Yes (expert report)' or 'Yes (assumed present)' has been selected, the 'Veg Zone and Value' column becomes editable.

5. If a species was surveyed for, use the checkboxes in the 'Survey timetable' field to indicate when the survey(s) were undertaken. The survey method must comply with any threatened species survey guides or advice that the department has published or provided within the TBDC. In the absence of any guide or advice, use a best-practice method.

Yes (surveyed) 	<input type="checkbox" value="Jan"/> Jan <input type="checkbox" value="Feb"/> Feb <input type="checkbox" value="Mar"/> Mar <input type="checkbox" value="Apr"/> Apr <input type="checkbox" value="May"/> May <input type="checkbox" value="Jun"/> Jun <input type="checkbox" value="Jul"/> Jul <input type="checkbox" value="Aug"/> Aug <input checked="" type="checkbox" value="Sep"/> Sep <input checked="" type="checkbox" value="Oct"/> Oct <input type="checkbox" value="Nov"/> Nov <input type="checkbox" value="Dec"/> Dec <input type="checkbox"/> Survey month outside the specified months?
---	--

6. Only survey during a month specified in the BAM-C unless there is a clear justification to survey outside the specified month(s). If the survey was conducted during a month outside the specified month(s), select 'Survey month outside the specified months', then use the checkboxes to indicate the month(s) that the survey was undertaken.

Yes (surveyed) 	<input checked="" type="checkbox" value="Jan"/> Jan <input checked="" type="checkbox" value="Feb"/> Feb <input type="checkbox" value="Mar"/> Mar <input type="checkbox" value="Apr"/> Apr <input type="checkbox" value="May"/> May <input type="checkbox" value="Jun"/> Jun <input type="checkbox" value="Jul"/> Jul <input type="checkbox" value="Aug"/> Aug <input type="checkbox" value="Sep"/> Sep <input type="checkbox" value="Oct"/> Oct <input type="checkbox" value="Nov"/> Nov <input type="checkbox" value="Dec"/> Dec <input checked="" type="checkbox"/> Survey month outside the specified months?
--	---

7. If 'Yes (expert report)', 'Yes (assumed present)' or 'No (expert report)' is selected in the 'Species presence' field, there is no option to select a month.

No (expert report) 	<input type="checkbox" value="Jan"/> Jan <input type="checkbox" value="Feb"/> Feb <input type="checkbox" value="Mar"/> Mar <input type="checkbox" value="Apr"/> Apr <input type="checkbox" value="May"/> May <input type="checkbox" value="Jun"/> Jun <input type="checkbox" value="Jul"/> Jul <input type="checkbox" value="Aug"/> Aug <input type="checkbox" value="Sep"/> Sep <input type="checkbox" value="Oct"/> Oct <input type="checkbox" value="Nov"/> Nov <input type="checkbox" value="Dec"/> Dec
--	---

8. The UoM, 'Biodiversity risk' and 'Biodiversity risk weighting' for each species is displayed but cannot be edited.
9. For each species identified as present, tick the checkboxes under 'Veg Zone & Value' for all vegetation zones the species has been identified as being present within.

i Tip

- See [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Appendix I for further information on BRW.
- A species can be identified as present in multiple vegetation zones.

10. Enter the value that quantifies the species' distribution, noting that the value entered will differ depending on the UoM:

- Where the UoM is 'Area (ha)' enter the area of the species polygon. The development of the polygon must comply with any threatened species survey guides or advice that the department has published or provided within the TBDC. In the absence of any guide or advice, use best practice.

Area (ha)	<input checked="" type="checkbox"/> 3032_good * <input type="text" value="1.6"/> <input type="checkbox"/> 3408_good <input checked="" type="checkbox"/> 3032_mod * <input type="text" value="1.4"/> <input type="checkbox"/> 3032_poor
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If the assessment area is wholly or partially within a mapped layer identified on an important habitat map, the species polygon must include the entire area of the zone that is mapped on the important habitat map.

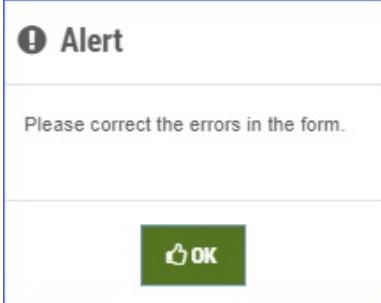
- Where the UoM is 'Count', enter the number of individuals within the species polygon (an individual is defined in the BAM 2020 as 'a single, mature organism that is a threatened species').

Count	<input checked="" type="checkbox"/> 3032_good * <input type="text" value="12"/> <input checked="" type="checkbox"/> 3408_good * <input type="text" value="117"/> <input type="checkbox"/> 3032_mod <input type="checkbox"/> 3032_poor
-------	--

i Tip

- The minimum area that can be entered in BAM-C is 0.01 ha. If the area is between 0.005 ha and 0.009 ha the BAM-C will round the value up to 0.01 ha.
- Below 0.005 ha, values will be rounded to 0 ha and the assessment will not save. In this scenario either combine the area with another area, or enter the area as 0.01 ha.
- The maximum area that can be entered in BAM-C is the area of the vegetation zone from Tab 3.

11. When you click 'Next', an alert will display if any required fields have not been completed.



12. Details of any errors will be listed in a message at the top of the page. Click the 'More details' box for further details.

Errors!

Please address all the errors in this step. Note: you will not be able to finalise and submit the assessment until the errors are addressed.

More details..

Candidate threatened species (Species credits)

Species	Species presence ⓘ	Survey timetable	U A
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Errors!

Please address all the errors in this step. Note: you will not be able to finalise and submit the assessment until the errors are addressed.

Less details..

Area required for species 'Senna acclinis' and veg-zone '3408_good'

Select surveyed month(s) in 'Survey timetable' for species 'Hoplocephalus stephensi'

13. When all required information has been entered, click 'Next' to move to Tab 7.

Creating a small area assessment

5.7 Credits (Tab 7)

The BAM 2020 uses biodiversity credits to measure the residual impacts of a proposal on biodiversity values.

The 'Credits' tab summarises the results of calculations of biodiversity credits. No user action is required for Tab 7.

Further details on the calculations performed are in Subsections 5.7.6 and 5.7.7 below.

1. Assessment details	2. Site context	3. Vegetation	4. Habitat suitability: Predicted	5. Habitat suitability: Candidate	6. Habitat survey	7. Credits
8. Credit classes	9. Price					
Ecosystem credits for plant communities types (PCT), ecological communities & threatened species habitat						
Zone	Vegetation zone name	Vegetation integrity loss	Area	Sensitivity to loss	Sensitivity to loss(Justification)	Species sensitivity to gain class
Northern Escarpment Sassafras-Booyong-Corkwood Rainforest						
1	3032_good	36.4	1.9 hectares	Low Sensitivity to Loss	Environment Protection and Conservation Act listing status	High Sensitivity to Gain
3	3032_mod	29.1	1.5 hectares	Low Sensitivity to Loss	Environment Protection and Conservation Act	High Sensitivity to Gain
Total: 91						
Species credits for threatened species						
Vegetation zone name	Habitat condition (vegetation integrity) loss	Area / Count	Sensitivity to loss	Sensitivity to loss(Justification)	Sensitivity to gain	Sensitivity to gain(Justification)
Atrichornis rufescens / Rufous Scrub-bird (Fauna)						
3032_good	36.4	1 hectares	High Sensitivity to Loss	Biodiversity Conservation Act listing status	High Sensitivity to Gain	Effectiveness of management in controlling threats
Subtotal: 18						
Hoplocephalus stephensi / Stephens' Banded Snake (Fauna)						
3032_good	36.4	1.6 hectares	Moderate Sensitivity to Loss	Biodiversity Conservation Act listing status	High Sensitivity to Gain	Species dependent on habitat attributes
3032_mod	29.1	1.4 hectares	Moderate Sensitivity to Loss	Biodiversity Conservation Act	High Sensitivity to Gain	Species dependent on habitat attributes
29						
20						

i Tip

- Despite the biodiversity credit output displayed for any EPBC Act only listed entity, biodiversity credits cannot be created or traded under the NSW scheme, and payments cannot be made into the BCF for any EPBC Act only listed entity.
- Contact the Australian Government Department of Climate Change, Energy, the Environment and Water as the relevant agency for meeting any requirements of an EPBC Act approval.
- 'EPBC Act only' listed entity means a 'threatened species' or 'threatened ecological community' that is listed under the Environment Protection and Biodiversity Conservation Act 1999 (Cth), but not listed under the Biodiversity Conservation Act 2016 (NSW).

1. As 'Next' was clicked after completion of Tab 6 the 'Credits' tab will be open. When reopening an existing assessment, click on Tab 7 to open it.

7. Credits

In this subsection

5.7.6 Ecosystem credits for PCTs, TECs and threatened species habitat

5.7.7 Species credits for threatened species

5.7.6 Ecosystem credits for PCTs, TECs and threatened species habitat

The first section of Tab 7 displays the ecosystem credits for the PCTs and TECs. The ecosystem credits are calculated by applying the ‘Sensitivity to loss’ of the PCT or TEC and the highest ‘Sensitivity to gain’ of the ecosystem credit (predicted) species assumed to be present at Tab 4 (‘Veg Zone – Confirmed predicted species’ = ‘Yes’). Where a PCT or TEC provides no habitat for ecosystem credit species, the BAM-C adopts a ‘Sensitivity to gain’ of ‘Low’. Refer to the [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Appendix I for more information.

The BAM-C uses the loss to VI based on the impact, the area of the vegetation zone, the BRW, and a constant, to calculate the number of ecosystem credits for each vegetation zone added at Tab 3. Refer to Equation 1 in the [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020) for more information.

Ecosystem credits for plant communities types (PCT), ecological communities & threatened species habitat									
Zone	Vegetation zone name	Vegetation integrity loss	Area	Sensitivity to loss	Sensitivity to loss(Justification)	Species sensitivity to gain class	Biodiversity risk weighting	Potential SAI	Ecosystem credits
Yellow Box - White Cypress Pine grassy woodland on deep sandy-loam alluvial soils of the eastern Riverina Bioregion and western NSW South Western Slopes Bioregion									
1	75_TEC	64	1.9 hectares	Very High Sensitivity to Loss	Population size	High Sensitivity to Gain	2.5	True	76
Subtotal: 76									
Yellow Box - White Cypress Pine grassy woodland on deep sandy-loam alluvial soils of the eastern Riverina Bioregion and western NSW South Western Slopes Bioregion									
2	75_NonTEC	48.2	0.5 hectares	Very High Sensitivity to Loss	PCT Cleared - 92%	High Sensitivity to Gain	2.5		15
Subtotal: 15									
Total: 91									

i Tip

- Use the scroll bar to see all ecosystem credits.
- See [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Sections 5.1 and 5.2 for further information on ecosystem credit species.
- See [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Subsections 10.1.1–10.1.2 and 10.2.1 for the calculation method of ecosystem credits.
- See [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Appendix I for more information on BRW.

5.7.7 Species credits for threatened species

The second section of Tab 7 displays the species credits for threatened species that cannot be predicted to occur at a site based on the vegetation (PCT), and have been confirmed present at the site (Tab 6 ‘Species presence’ = ‘Yes’).

For species with a UoM of ‘Area’, the BAM-C uses the loss to VI based on the impact, the area of the vegetation zone, the BRW, and a constant, to calculate the number of species credits for each vegetation zone (PCT) added at Tab 3 that is associated with the species. Refer to Equation 2 in the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>) for more information.

For species with a UoM of ‘Count’, the BAM-C uses the number of individuals and the BRW to calculate the number of species credits. Refer to Equation 3 in the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>) for more information.

Species credits for threatened species									
Vegetation zone name	Habitat condition (vegetation integrity) loss	Area / Count	Sensitivity to loss	Sensitivity to loss(Justification)	Sensitivity to gain	Sensitivity to gain(Justification)	Biodiversity risk weighting	Potential SAI	Species credits
Caladenia arenaria / Sand-hill Spider Orchid (Flora)									
75_TEC	64	0.4 hectares	Very High Sensitivity to Loss	Geographic Distribution	Moderate Sensitivity to Gain	Effectiveness of management in controlling threats	3	True	19
									Subtotal: 19
Lathamus discolor / Swift Parrot (Fauna)									
75_TEC	64	1.1 hectares	Very High Sensitivity to Loss	Environment Protection and Conservation Act listing status	Moderate Sensitivity to Gain	Effectiveness of management in controlling threats	3	True	53
									Subtotal: 53

Tip

- Use the scroll bar to see all species credits.
- In some circumstances, the TBDC may identify a threatened species that requires assessment for both ecosystem credits and species credits (referred to as dual credit species). For dual credit species, part of the habitat is assessed as a species credit (for example, breeding habitat or land mapped on an important habitat map layer). The remaining habitat for the species is assessed as an ecosystem credit (for example, foraging habitat).
- Equations for the calculation of species credits differ depending on their UoM.
- See **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Chapter 5 for further information on species credits.
- See **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Subsections 10.1.1, 10.1.3 and 10.2.2 for the calculation method for species credits.
- See **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Appendix I for more information on BRW.

No user action is required for Tab 7 and there is no ‘Next’ button. Click on Tab 8 ‘Credit classes’ to open it.

Creating a small area assessment

5.8 Credit classes (Tab 8)

The BAM 2020 uses OTGs to offset non-threatened vegetation (PCTs). OTGs are groups of PCTs with the same vegetation class and threat status. Under the like-for-like rules, offsets for impacts to non-threatened vegetation may be met with one or more OTGs that have the same vegetation class with the same or a higher threat status.

Under the like-for-like rules, threatened vegetation (TECs) and threatened species must be offset with the same TEC/species.

Vegetation containing HBT must be offset with vegetation containing HBT.

Variation rules may apply.

The ‘Credit classes’ tab summarises the ecosystem and species credits and their like-for-like options.

Further details on the information available in Tab 8 are in Subsections 5.8.8 and 5.8.9 below. No user action is required for Tab 8.

The screenshot shows the 'Credit classes' tab interface. At the top, there are nine navigation tabs: 1. Assessment details, 2. Site context, 3. Vegetation, 4. Habitat suitability: Predicted, 5. Habitat suitability: Candidate, 6. Habitat survey, 7. Credits, 8. Credit classes (which is selected and highlighted in grey), and 9. Price. Below the tabs, there are two main sections:

- Ecosystem credit classes**: This section includes an 'Ecosystem credit summary' table and a 'Credit classes for 75' table. The 'Credit classes for 75' table has a 'Like-for-like options' column, which contains detailed information about Riverine Sandhill Woodlands and their IBRA regions.
- Species credit classes**: This section includes a 'Species credit summary' table. It lists species names, their vegetation zones, areas/counts, and credits.

PCT	TEC	Area	HBT Cr	No HBT Cr	Credits
75-Yellow Box - White Cypress Pine grassy woodland on deep sandy-loam alluvial soils of the eastern Riverina Bioregion and western NSW South Western Slopes Bioregion	Not a TEC	0.5	15	0	15

Class	Trading group	HBT	Credits	IBRA region
Riverine Sandhill Woodlands This includes PCT's: 48, 75	Riverine Sandhill Woodlands - ≥ 90% cleared group (including Tier 1 or higher threat status).	Yes	15	Inland Slopes, Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Species	Vegetation Zone/s names	Area / Count	Credits
<i>Anthochaera phrygia</i> / Regent Honeyeater	75_TEC, 75_NonTEC	1.4	65
<i>Caladenia arenaria</i> / Sand-hill Spider Orchid	75_TEC	0.4	19

1. Select the ‘Credit classes’ tab to view ecosystem credit class information and species credit class information.

8. Credit classes

In this subsection

5.8.8 Ecosystem credit classes

5.8.9 Species credit classes

5.8.8 Ecosystem credit classes

The first section of Tab 8 displays a summary of the ecosystem credit classes, whether there is an associated TEC or not, and their like-for-like options based on the PCTs and/or TECs added at Tab 3.

For non-threatened vegetation ('Not a TEC'), the BAM-C displays the associated vegetation class and lists the PCTs within that class.

The BAM-C also displays the associated OTGs and IBRA subregions available for making a like-for-like credit trade. Refer to the **Offset rules and ecosystem credits**

(<https://www.environment.nsw.gov.au/publications/offset-rules-and-ecosystem-credits-guidance>) guidance for more information (see **Appendix B** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>)).

Tip

See **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Subsection 10.2.1 and Section 10.3 for further information on offsetting ecosystem credits.

5.8.9 Species credit classes

The second section of Tab 8 displays a summary of the species credit classes for all candidate species confirmed present at the site, and their like-for-like options.

Species credit summary			
Species	Vegetation Zone/s names	Area / Count	Credits
<i>Anthochaera phrygia</i> / Regent Honeyeater	75_TEC, 75_NonTEC	1.4	65
<i>Caladenia arenaria</i> / Sand-hill Spider Orchid	75_TEC	0.4	19
<i>Lathamus discolor</i> / Swift Parrot	75_TEC	0.4	19
<i>Phascolarctos cinereus</i> / Koala	75_TEC	0.01	1

<i>Anthochaera phrygia</i> / Regent Honeyeater	
Like-for-like options	
Spp	IBRA region
<i>Anthochaera phrygia</i> / Regent Honeyeater	Any in NSW
<i>Caladenia arenaria</i> / Sand-hill Spider Orchid	
Like-for-like options	
Spp	IBRA region
<i>Caladenia arenaria</i> / Sand-hill Spider Orchid	Any in NSW



Tip

See [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Subsection 10.2.2 and Section 10.3 for further information on offsetting species credits.

Creating a small area assessment

5.9 Price (Tab 9)

The BOPC was replaced by the BCF Charge System on 17 October 2022. The new BCF Charge System will now be used to determine the amount a proponent may pay into the BCF to meet a biodiversity offset obligation.

The BCT is responsible for administering the new charge system.

More information about the new charge system, including how to request a quote from the BCT, is available on the [BCT website \(<https://www.bct.nsw.gov.au/>\)](https://www.bct.nsw.gov.au/).

6. Creating a scattered trees assessment

'Appendix B: Streamlined assessment module – Scattered trees assessment' of the BAM 2020 is dedicated to assessing trees that meet the definition of 'scattered' and provides streamlined (simplified) assessment requirements.

There are 8 development-type assessments. This chapter only relates to scattered tree assessments.

Refer to **Chapter 4** for information on assessing general Part 4, Part 5 proposals, major projects, biocertification and general clearing, and Chapter 5 for information on assessing small areas.

There are limitations on when a scattered tree assessment can be used – all the following requirements must be met:

- It meets the BAM 2020 definition of scattered trees, refer to **Section 6.1** for more information.
- None of the trees are listed as a threatened species under either the BC Act or EPBC Act.
- None of the trees provide habitat for candidate (species credit) species (flora or fauna) in accordance with BAM 2020, Chapter 5. This includes species from the candidate species list populated by the BAM-C or any species incidentally observed (or evidence, such as scats or shells) using a tree as habitat.
- None of the trees provide habitat for predicted (ecosystem credit) fauna species in accordance with BAM 2020, Chapter 5, that are at risk of a SAI.
- No part of the canopy of any tree being assessed overlaps a mapped layer on the Biodiversity Values Map, important habitat maps, or the sensitive or vulnerable land layers on the Native Vegetation Regulatory Map.
- There are no shrubs or tree regrowth (less than 5 cm DBH) within the area of assessment.
- Any native species in the ground cover layer of the assessment area must be listed on the widely cultivated native species list, noting that assessment should be made during the time of year when the proportion of native ground cover is likely to be at its maximum compared to that of exotic ground cover. Refer to **Streamlined assessment module planted native vegetation (<https://www.environment.nsw.gov.au/publications/streamlined-assessment-module-planted-native-vegetation>)** for the species list (see **Appendix B**).

If any of the above limitations are not met, a different assessment pathway must be used to assess the trees. Refer to **Chapters 4** and **5** of this guide for alternative development assessment types.

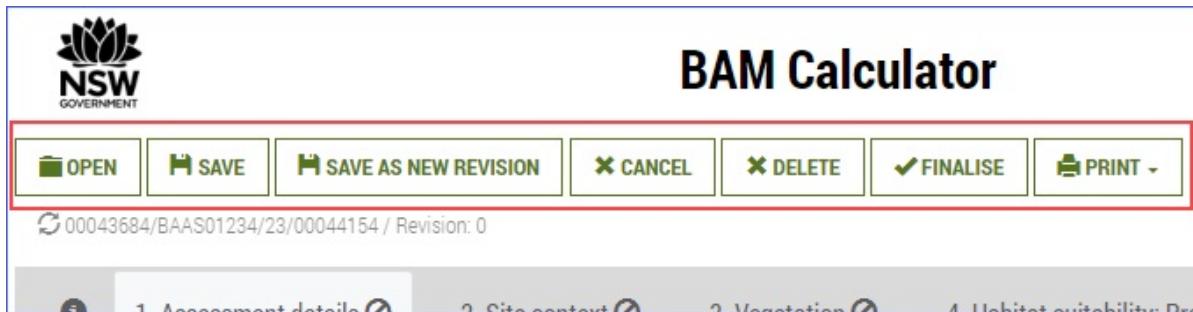
When entering data in each tab, proceed to the next tab by using the 'Next' button at the bottom of the page. The data added then flows through to the next tab in the BAM-C.

Tip

- If the vegetation in the area being assessed as scattered trees does not meet one or more of the scattered tree limitations listed above, use another assessment type in the BAM-C.
- For further information on the scattered trees module see **BAM 2020 (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>)**, **Appendix B**.

- Remember to click ‘Next’ so the data entered flows through to the subsequent tabs and calculations.
- As tabs are completed it is possible to navigate between completed tabs.

There are high-level functions that act across all tabs to help you manage assessments and create output from the BAM-C. Refer to [Chapter 3](#) of this guide for information on these functions.



Sections 6.1–6.9 below detail how to use each of the tabs in the BAM-C to enter details for a scattered trees assessment.

In this section

[6.1 Assessment details \(Tab 1\)](#)

[6.2 Site context \(Tab 2\)](#)

[6.3 Vegetation \(Tab 3\)](#)

[6.4 Habitat suitability: Predicted \(Tab 4\)](#)

[6.5 Habitat suitability: Candidate \(Tab 5\)](#)

[6.6 Habitat survey \(Tab 6\)](#)

[6.7 Credits \(Tab 7\)](#)

[6.8 Credit classes \(Tab 8\)](#)

[6.9 Price \(Tab 9\)](#)

Creating a scattered trees assessment

6.1 Assessment details (Tab 1)

The ‘Assessment details’ tab is used to capture the type of development assessment being conducted, record the proposal name, and how the assessment proposal meets the definition of scattered trees as per Appendix B.1 of BAM 2020.

Assessment type *	Scattered Trees
Biodiversity Offsets Scheme entry trigger *	BOS Threshold: Area clearing threshold
Proposal name	Trees on southern boundary
Assessment ID	00044199/BAAS01234/23/00044200
Assessment Revision	0

The site can be assessed using Scattered Trees module if the vegetation meets the definition:

- have a percent foliage cover that is less than 25% of the benchmark for tree cover for the most likely plant community type and are on category 2-regulated land and surrounded by category 1-exempt land on the Native Vegetation Regulatory Map under the LLS Act, or
- have a DBH of greater than or equal to 5 cm and are located more than 50 m away from any living tree that is greater than or equal to 5 cm DBH, and are completely separated by 100% exotic vegetation, human-made surfaces or bare ground, or
- are three or fewer trees that have a DBH of greater than or equal to 5 cm and are within a distance of 50 m of each other, that in turn, are greater than 50 m away from the nearest living tree that is greater than or equal to 5 cm DBH, and are completely separated by 100% exotic vegetation, human-made surfaces or bare ground.

The assessment of ground cover should be made during the time of year when the proportion of native ground cover on the subject land is likely to be at its maximum compared to that of exotic ground cover

1. Click on the 'Assessment details' tab to enter assessment details.

1. Assessment details

2. Use the 'Assessment type' drop-down to select 'Scattered Trees'.

Assessment type *	Scattered Trees
Proposal name	
Assessment ID	
Assessment Revision	

A dropdown menu showing the following options:

- Part 4 Developments (General)
- Part 4 Developments (Small Area)
- Major Projects
- Part 5 Activities
- Part 5 Development (Small Area)
- Biocertification
- Clearing (General)
- Scattered Trees**

3. Use the 'Biodiversity Offsets Scheme entry trigger' drop-down to select the required entry trigger.

For more information on the entry trigger, refer to the [When does the Biodiversity Offsets Scheme apply \(https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/clear-and-develop-land/when-biodiversity-offsets-scheme-applies\)](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/clear-and-develop-land/when-biodiversity-offsets-scheme-applies) webpage (see [Appendix B \(https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020)).

Assessment type *	Scattered Trees
Biodiversity Offsets Scheme entry trigger *	BOS Threshold: Biodiversity Values Map
Proposal name	
Assessment ID	
Assessment Revision	

A dropdown menu showing the following options:

- BOS Threshold: Biodiversity Values Map
- BOS Threshold: Area clearing threshold
- BOS Threshold: Biodiversity Values Map and area clearing threshold
- Test of significance
- Clearing application under Division 6 of the LLS Act
- Major Project
- Part 5 Activity

4. Add a unique description into the 'Proposal name' field.

Assessment type *	Scattered Trees
Offsets Scheme entry trigger *	BOS Threshold: Area clearing threshold
Proposal name	Trees on southern boundary
Assessment ID	00044199/BAAS01234/23/00044200
Assessment Revision	0

i Tip

- The proposal name is a valuable identifier for the BAM-C assessment.
- A unique proposal name will help you distinguish the differences between assessment revisions.

5. Select the scattered trees definition applicable to the site. One of these definitions must be selected to move to the next tab. You must use another assessment type if none of these definitions are relevant. Where multiple definitions apply, select the most appropriate:

- a. have a per cent foliage cover less than 25% of the benchmark for tree cover for the most likely PCT and are on category 2-regulated land and surrounded by category 1-exempt land on the Native Vegetation Regulatory Map under the Local Land Services Act 2013 (LLS Act)
- b. have a diameter at breast height (DBH) of greater than or equal to 5 cm and are located more than 50 m away from any living tree that is greater than or equal to 5 cm DBH, and the land between the scattered trees is comprised of vegetation that are all ground cover species on the widely cultivated native species list, or exotic species, human-made surfaces or bare ground
- c. are 3 or fewer trees that have a DBH of greater than or equal to 5 cm and are within 50 m of each other, that in turn, are greater than 50 m away from the nearest living tree that is greater than or equal to 5 cm DBH, and are completely separated by 100% and the land between the scattered trees is comprised of vegetation that are all ground cover species on the widely cultivated native species list, or exotic vegetation, human-made surfaces or bare ground.

Note that for proposals on rural land (administered by the LLS Act), the BAM 2020 definitions B.1(a.), B.1(b.) and B.1(c.) are applicable. For proposals on non-rural land, only the BAM 2020 definitions B.1(b.) and B.1(c.) apply as B.1(a.) is not applicable to non-rural land.

- have a percent foliage cover that is less than 25% of the benchmark for tree cover for the most likely plant community type and are on category 2-regulated land and surrounded by category 1-exempt land on the Native Vegetation Regulatory Map under the LLS Act, or
- have a DBH of greater than or equal to 5 cm and are located more than 50 m away from any living tree that is greater than or equal to 5 cm DBH, and are completely separated by 100% exotic vegetation, human-made surfaces or bare ground, or
- are three or fewer trees that have a DBH of greater than or equal to 5 cm and are within a distance of 50 m of each other, that in turn, are greater than 50 m away from the nearest living tree that is greater than or equal to 5 cm DBH, and are completely separated by 100% exotic vegetation, human-made surfaces or bare ground.

The assessment of ground cover should be made during the time of year when the proportion of native ground cover on the subject land is likely to be at its maximum compared to that of exotic ground cover

i Tip

- On rural land (administered by the LLS Act), any one of the 3 definitions in step 5 above can apply. On non-rural land, only definitions b and c can apply, as definition a is not applicable to non-rural land.
- Any proposed clearing of native vegetation that does not meet the definition of scattered trees must be assessed using another assessment type in BAM-C.
- The scattered trees module is not intended for use where scattered trees are species credit species. If such species are known to be present, these trees must be assessed using a different assessment pathway.

6. When all required information has been entered, click ‘Next’ to move to Tab 2.

NEXT

i Tip

- Once ‘Next’ is clicked, the assessment type for the assessment is locked.
- To change the assessment type, cancel or exit the assessment before saving and reopen the assessment.
- If the assessment has the incorrect assessment type and the case has been saved, delete the assessment and create a new assessment through BOAMS (using the same parent case).
- Click ‘Next’ to move to the next tab to ensure subsequent tabs contain the correct information and calculations.

Creating a scattered trees assessment

6.2 Site context (Tab 2)

The ‘Site context’ tab is used to capture information relating to the biogeographic and landscape setting of the site. Information required for this tab is displayed below.

App last updated: 13/04/2023 10:00 (Version: 1.4.0.00)
BAM data last updated *: 22/06/2023 (Version: 61) * Disclaimer

BAM Calculator

Actions: OPEN | SAVE | SAVE AS NEW REVISION | CANCEL | DELETE | FINALISE | PRINT

00043684/BAAS01234/23/00043687 / Revision: 0

Steps: 1. Assessment details 2. Site context 3. Vegetation 4. Habitat suitability: Predicted 5. Habitat suitability: Candidate 6. Habitat survey 7. Credits 8. Credit classes 9. Price

All fields marked with an asterisk (*) are mandatory

Tip!
Choosing the 'Assessment type' is an important step. Once you click, 'Next' this value will become read-only and it cannot be un-done.

Assessment type *

Proposal name

Assessment ID 00043684/BAAS01234/23/00043687
Assessment Revision 0

NEXT

1. The 'Site context' tab will be open if 'Next' was clicked on Tab 1.



2. Use the 'Interim Biogeographic Regionalisation for Australia (IBRA)' drop-down to select the IBRA region. If the assessment occurs across multiple IBRA regions, select the IBRA region where the largest proportion of impact/area will occur.

Interim Biogeographic Regionalisation for Australia (IBRA) *

IBRA Sub Region *

NSW (Mitchell) Landscape *

% Native vegetation cover *

Linear Development

Australian Alps
Brigalow Belt South
Broken Hill Complex
Channel Country
Cobar Peneplain
Darling Riverine Plains
Mulga Lands
Murray Darling Depression
Nandewar
New England Tablelands
NSW North Coast
NSW South Western Slopes
Riverina
Simpson Strzelecki Dunefields
South East Corner
South Eastern Highlands
South Eastern Queensland
Sydney Basin

Tip

See [Bioregions of NSW](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/bioregions/bioregions-of-nsw) (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/bioregions/bioregions-of-nsw>) for further information on the state's bioregions (see [Appendix B](#)).

See [BAM 2020](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020) (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Chapter 3 for further information on establishing the site context.

The IBRA subregion selection affects future selections of PCTs, TECs and species.

3. Use the 'IBRA Sub Region' drop-down to select the IBRA subregion in which most of the site is located. The drop-down is filtered based on the IBRA region selected in step 2.

alisation for Australia (IBRA) *

IBRA Sub Region *

NSW (Mitchell) Landscape *

Reference data version

Warning: Changes to this value might affect data in 'Habitat suitability', 'Credits', 'Credit classes' and 'Price' tabs

Barrington
Carrai Plateau
Cataract
Chaelundi
Coffs Coast and Escarpment
Comboyne Plateau
Dalnerton
Ellerston
Guy Fawkes
Karuah Manning
Macleay Gorges
Macleay Hastings
Mummel Escarpment
Rocky River Gorge
Tomalla
Upper Hunter
Upper Manning
Washpool
Yuraygir

4. Use the 'NSW (Mitchell) Landscape' drop-down to select the landscape in which most of the proposal occurs.

IBRA Sub Region *

NSW North Coast

IBRA Sub Region *

Karuah Manning

NSW (Mitchell) Landscape *

Reference data version

Adelong Granite Ranges
Adrah Hills and Ranges
Albury - Oaklands Hills and Foothills
Alpine Zone
Apsley Meta-sediments
Ardlethan Hills
Ashfield Plains
Ashford Karst
Ashford Mole Valleys
Attunga Karst
Baldwin Mountains
Ballina Coastal Ramp
Baradine - Coghill Channels and Floodplains
Baradine Alluvial Plains
Barnato Downs
Barnato Incised Streams
Barnato Isolated Hills
Barnato Lakes
Barnato Linear Dunes

i Tip

NSW (Mitchell) landscape does not influence calculations of VI or credit calculations, but is used in reporting.

See Descriptions for **NSW (Mitchell) Landscapes**

(<https://www.environment.nsw.gov.au/resources/conservation/landscapesdescriptions.pdf>) for further information (see **Appendix B**).

When using the streamlined scattered trees module, you do not need to assess the percentage of native vegetation cover within the 1,500 m buffer.

Reference data version

The revised Eastern NSW PCT Classification has been deployed into the BAM-C, and revisions to the remainder of the state will be rolled out over the coming years. The reference data version may have different options available depending on when the assessment was created and which IBRA region is selected.

Instructions are provided for the following scenarios:

- new assessments inside a revised NSW IBRA region
- existing assessments inside a newly revised NSW IBRA region
- new or existing assessments outside a newly revised NSW IBRA region.

a. New assessments inside a revised NSW IBRA region

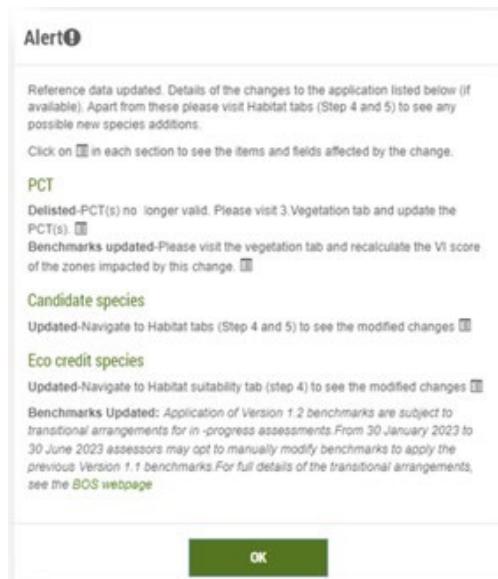
All new assessments created after deployment of a revised NSW PCT classification will automatically use the revised NSW PCTs when an associated NSW IBRA region is selected.

The only option in the ‘Reference data version’ drop-down will be ‘Current classification (live – default)’.



b. Existing assessments inside a newly revised NSW IBRA region

Reopening ‘Open’, ‘Locked’ or ‘Finalised’ assessments created before deployment of a newly revised NSW PCT classification will trigger an update with the revised NSW PCTs. This will trigger an alert detailing the changes that have occurred in the assessment.



i Tip

Take a screenshot of the alert showing the updates. Alerts will not display again once the case has been saved.

To use legacy PCTs during a transitional period, select the legacy classification in the ‘Reference data version’ drop-down. Alternatively, to use the revised NSW PCTs select ‘Current classification (live – default)’.

The screenshot shows a dropdown menu titled 'Reference data version'. The options listed are 'Current classification (live - default)' and 'Legacy Classification (pre-ENSW)'. The first option is highlighted with a blue background, indicating it is the selected choice.

To progress an assessment with revised data, the following tabs may require amendment:

- Tab 3 –Vegetation
- Tab 4 –Habitat suitability: Predicted
- Tab 5 –Habitat suitability: Candidate
- Tab 6 –Habitat Survey

3. New or existing assessments outside a revised NSW IBRA region

New or existing assessments outside of a newly revised NSW IBRA region will not update with new NSW PCTs, as they are not relevant. The only available option in the ‘Reference data version’ drop-down will be ‘Current classification (live –default)’.

The screenshot shows a dropdown menu titled 'Reference data version'. The options listed are 'Legacy Classification (pre-ENSW)', 'Current classification (live - default)', and 'Legacy Classification (pre-ENSW)'. The third option is highlighted with a blue background, indicating it is the selected choice.

Tip

Further information on transitional arrangements is available from the [**New vegetation integrity benchmarks and plant community types**](#) (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/nsw-plant-community-type-classification/pct-change-control>) webpage (see [**Appendix B**](#)).

When a transitional period ends, the only option in the ‘Reference data version’ drop-down will be ‘Current classification (live –default)’. At this time, revised NSW PCTs must be used for all assessments within the associated NSW IBRA regions.

Clear your browser cache to ensure any newly revised NSW PCTs and the legacy reference data version display correctly in the drop-down.

Clearing the BAM-C cache – If you are having a problem selecting legacy PCTs (during a transitional period) in a case created before deployment of any revised NSW PCTs, clear your cache in the BAM-C. See [**Appendix A**](#) of this guide for instructions on clearing the cache.

Tip

If you cannot clear the cache to see the legacy classification in the ‘Reference data version’ drop-down, contact the BOS Help Desk for assistance.

6. When all required information has been entered, click ‘Next’ to move to Tab 3.

Tip

Once ‘Next’ is clicked, the IBRA region for the assessment is locked.

To change the IBRA region, cancel or exit the assessment before saving and reopen the assessment.

If the IBRA region is incorrect and the case has been saved, delete the assessment and create a new assessment through BOAMS (using the same parent case).

Click ‘Next’ to move to the next tab to ensure subsequent tabs contain the correct information and calculations.

Creating a scattered trees assessment

6.3 Vegetation (Tab 3)

The ‘Vegetation’ tab records the PCT(s) present on the site and records details of the scattered trees in the proposal. Refer to Appendix B.2 and B.3 of the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>) for further information.

The vegetation fields required for a scattered trees assessment are displayed below.

Formation *	Class *	Plant community type *	PCT % cleared	Associated TEC *	BC Act listing status	EPBC Act listing status	Action	Delete																						
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>			<button>ADD PCT GROUP</button>	<button>Modify default benchmarks</button>																						
<input type="button" value="ADD ANOTHER PCT"/> <input type="button" value="SEARCH PCT OUTSIDE IBRA"/>																														
Scattered tree PCT Groups <table border="1"> <thead> <tr> <th>#</th> <th>PCT code</th> <th>No. of trees*</th> <th>Species</th> <th>Large tree threshold size</th> <th>DBHOB category*</th> <th>Contains hollows*</th> <th>Negligible biodiversity value</th> <th>Class</th> <th>Assessment required</th> <th>Delete</th> </tr> </thead> <tbody> <tr> <td></td> </tr> </tbody> </table>									#	PCT code	No. of trees*	Species	Large tree threshold size	DBHOB category*	Contains hollows*	Negligible biodiversity value	Class	Assessment required	Delete											
#	PCT code	No. of trees*	Species	Large tree threshold size	DBHOB category*	Contains hollows*	Negligible biodiversity value	Class	Assessment required	Delete																				

In this subsection

6.3.1 Define the PCTs and TECs

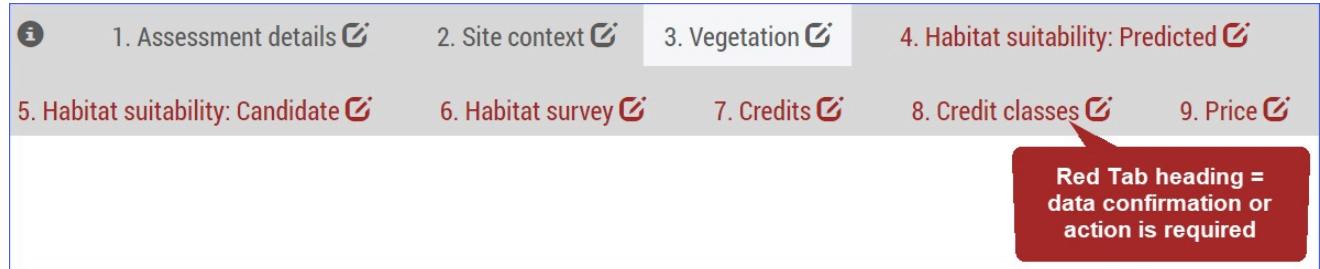
6.3.2 Scattered tree PCT groups

6.3.1 Define the PCTs and TECs

1. The ‘Vegetation’ tab will be open if ‘Next’ was clicked on Tab 2. When reopening an assessment with existing information, click on Tab 3 to open it.

3. Vegetation

2. Note that if any tab headings are shaded in red, action is required, or information needs to be entered/confirmed on that tab. Remember to click ‘Next’ to move through the tabs if any changes are made.



3. Whilst individual trees are being assessed, a representative PCT for the trees being assessed is required as this identifies the large tree threshold. The PCT chosen is then used when calculating the tree class and number of credits.

If the PCT name or number is known, the ‘Plant community type’ field can be added as the first step, automatically populating the formation and class fields.

If the PCT name or number is not known, use the ‘Formation’ drop-down to select the formation for the PCT.

Tip

- If the PCT or number is known, enter this first, and the formation and class fields will be populated automatically.
- Only PCTs associated with the IBRA region and IBRA subregion will be available.
- Refer to the webpage About **BioNet Vegetation Classification (Veg-C)** (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/about-bionet-vegetation-classification>) for further information about PCTs and TECs (see **Appendix B**).

4. Use the ‘Class’ drop-down (if PCT name or number is not known) to select the required class. The classes available will be filtered to those associated with the formation if a formation was selected in step 3.

Formation *	Class *	Plant community type *
Wet Sclerophyll Forests (Grassy sub-formation)	<input type="button" value="▼"/>	<input type="button" value="▼"/>
<input type="checkbox"/> Northern Hinterland Wet Sclerophyll Forests <input type="checkbox"/> Northern Tableland Wet Sclerophyll Forests		
<input type="button" value="ADD ANOTHER PCT"/>		<input type="button" value="SEARCH PCT OUTSIDE IBRA"/>

5. Use the 'Plant community type' drop-down to select the required PCT. The PCTs available will be filtered to those associated with the class if a class was selected in step 4.

Class *	Plant community type *	PCT % cleared	Associated TEC *																	
Northern Hinterland Wet Sclerophyll Forests	<input type="button" value="▼"/>	<input type="button" value="▼"/>																		
<input type="button" value="SEARCH PCT OUTSIDE IBRA"/> <table border="1" style="margin-left: 20px; border-collapse: collapse;"> <tr><td>3063 - Craven Grey Box Wet Forest</td></tr> <tr><td>3069 - Far North Hinterland Grey Box-Grey Gum Wet Forest</td></tr> <tr><td>3144 - Craven Grey Box Grassy Forest</td></tr> <tr><td>3167 - Northern Hinterland Blackbutt-Forest Oak Wet Forest</td></tr> <tr><td>3170 - Northern Hinterland White Mahogany Moist Grassy Forest</td></tr> <tr><td>3179 - Yessabah Limestone Moist Forest</td></tr> <tr><td>3233 - Far North Hinterland Grey Gum Grassy Forest</td></tr> <tr><td>3234 - Hunter Coast Lowland Spotted Gum Moist Forest</td></tr> <tr><td>3236 - Hunter Valley Hills Wet Vine Forest</td></tr> <tr><td>3240 - Lower North Escarpment Red Gum Grassy Forest</td></tr> <tr><td>3241 - Lower North White Mahogany-Spotted Gum Moist Forest</td></tr> <tr><td>3242 - Lower North Ranges Turpentine Moist Forest</td></tr> <tr><td>3243 - Lower North Sheltered Valley Red Gum Forest</td></tr> <tr><td>3244 - Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest</td></tr> <tr><td>3245 - West Mount Royal Slopes Grassy Forest</td></tr> <tr><td>3247 - North Brother Rocky Slopes Moist Forest</td></tr> <tr><td>3248 - Northern Blackbutt-Turpentine Shrub Forest</td></tr> </table>				3063 - Craven Grey Box Wet Forest	3069 - Far North Hinterland Grey Box-Grey Gum Wet Forest	3144 - Craven Grey Box Grassy Forest	3167 - Northern Hinterland Blackbutt-Forest Oak Wet Forest	3170 - Northern Hinterland White Mahogany Moist Grassy Forest	3179 - Yessabah Limestone Moist Forest	3233 - Far North Hinterland Grey Gum Grassy Forest	3234 - Hunter Coast Lowland Spotted Gum Moist Forest	3236 - Hunter Valley Hills Wet Vine Forest	3240 - Lower North Escarpment Red Gum Grassy Forest	3241 - Lower North White Mahogany-Spotted Gum Moist Forest	3242 - Lower North Ranges Turpentine Moist Forest	3243 - Lower North Sheltered Valley Red Gum Forest	3244 - Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	3245 - West Mount Royal Slopes Grassy Forest	3247 - North Brother Rocky Slopes Moist Forest	3248 - Northern Blackbutt-Turpentine Shrub Forest
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3234 - Hunter Coast Lowland Spotted Gum Moist Forest																				
3236 - Hunter Valley Hills Wet Vine Forest																				
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3243 - Lower North Sheltered Valley Red Gum Forest																				
3244 - Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest																				
3245 - West Mount Royal Slopes Grassy Forest																				
3247 - North Brother Rocky Slopes Moist Forest																				
3248 - Northern Blackbutt-Turpentine Shrub Forest																				
of trees*	Species																			

6. The % cleared value for the PCT will be displayed under 'PCT % cleared'. The % cleared value is an estimate of the extent to which a PCT has been cleared since European settlement and is used when assigning a non-threatened PCT to an OTG.

PCT % cleared
90

i Tip

- Detailed information on each PCT and its geographic distribution is available as a downloadable and refreshable Power Query from [NSW BioNet Resources](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/resources) (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/resources>) (see [Appendix B](#)), 'BioNet Vegetation Classification' > 'Power Queries' > 'Plant Community Type data'.
- Refer to the [Offset rules and ecosystem credits](https://www.environment.nsw.gov.au/publications/offset-rules-and-ecosystem-credits-guidance) (<https://www.environment.nsw.gov.au/publications/offset-rules-and-ecosystem-credits-guidance>) guidance for more information on % cleared and OTGs (see [Appendix B](#)).

7. Select the 'Associated TEC' drop-down. If the scattered trees are part of a TEC, select the relevant TEC. Select 'Not a TEC' if no TEC is associated with the PCT. Adding a TEC has no impact on the number of credits generated but will affect the offsetting requirements.

Associated TEC *	BC Act listing status	EPBC Act listing status	Action
Not a TEC			ADD VEG 2
White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NS White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland			
Not a TEC			

i **Tip**

- Only TECs associated with the selected PCT (in BioNet) are shown in the drop-down. Where a TEC is present at the site but is unavailable in the drop-down list, it may be because the TEC is not associated with the IBRA region and IBRA subregion chosen.
- A detailed description of each TEC is available through the [Threatened biodiversity profile search \(https://threatenedspecies.bionet.nsw.gov.au/\)](https://threatenedspecies.bionet.nsw.gov.au/) app (see [Appendix B](#)).
- Detailed information on the PCT to TEC associations and the applicable subregions is available as a downloadable and refreshable Power Query from the [NSW BioNet Resources \(https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/resources\)](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/resources) webpage (see [Appendix B](#)). ‘BioNet Vegetation Classification’ > ‘Power queries’ > ‘Threatened Ecological Community to Plant Community Types (PCT) Association data’.
- If a scattered tree is identified as a threatened species, you cannot use the scattered trees module.

8. The state and Commonwealth listing status of a TEC will be displayed under the ‘BC Act listing status’ and ‘EPBC Act listing status’ headings, respectively.

BC Act listing status	EPBC Act listing status
Critically Endangered Ecological Community	Not Listed

9. Click ‘Add PCT Group’.

ADD PCT GROUP

10. Where there is more than one tree being assessed, the trees will need to be split into multiple PCT groups where:
- there are different tree species being assessed
 - the tree species falls into different tree classes as per Table 11 of the BAM 2020.
11. To add another PCT group for a PCT, click ‘Add PCT group’ again, beside the applicable PCT.
12. A scattered trees PCT group record will be added to the ‘Scattered tree PCT Groups’ section.

Scattered tree PCT Groups										
3242-Lower North Ranges Turpentine Moist Forest										
#	PCT code	Species	Large tree threshold size	DBHOB category*	Contains hollows*	No. of trees*	Negligible biodiversity value	Class	Assessment required	Delete
1	3242		80				No			

13. Click ‘Add another PCT’ (if required) and repeat the above steps to add additional PCTs.

ADD ANOTHER PCT

14. If the required PCT is missing from the PCT list, click ‘Search PCT outside IBRA’, enter the name or PCT number to search, and then select the PCT. Repeat the above steps for adding PCT groups.

ADD ANOTHER PCT	SEARCH PCT OUTSIDE IBRA	PCT name or ID	Cancel
---------------------------------	---	----------------	------------------------

Tip

- You can only add PCTs that are associated with the selected IBRA region when you use the ‘Add Another PCT’ button.
- With the ‘Search PCT outside IBRA’ button you can add any approved PCT, not only those associated with the selected IBRA region.
- Some PCTs have no (or incomplete) benchmarks in Veg-C. For these PCTs, an error will be displayed, and the PCT cannot be used in the assessment.

15. To delete a PCT or a scattered tree PCT group, click the button on the right under ‘Delete’.

Plant community types (PCT) & ecological communities								
Formation *	Class *	Plant community type *	PCT % cleared	Associated TEC *	BC Act listing status	EPBC Act listing status	Action	Delete
Grassy Woodlands	Floodplain Transition Woodlands	74 - Yellow Box - River Red Gum tall grassy riverine woodland of NSW	73	White Box - Yellow Box - Blakely's Red Gum Grassy	Critically Endangered Ecological Community	Not Listed	ADD PCT GROUP	

6.3.2 Scattered tree PCT groups

The BAM 2020, Appendix B.5 states that every class 2 and class 3 scattered tree needs to be assessed to determine whether it is an HBT. All trees with hollows need to be clearly identified on a map.

The offset requirements for scattered trees differ depending on the tree class (including whether it contains hollows or not). Refer to the [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Table 11 for more information. Separate scattered tree PCT groups must be created for each tree species.

1. After ‘Add PCT Group’ for a PCT is clicked a record will be created under ‘Scattered tree PCT Groups’.

Scattered tree PCT Groups

3242-Lower North Ranges Turpentine Moist Forest

#	PCT code	Species	Large tree threshold size	DBHOB category*	Contains hollows*	No. of trees*	Negligible biodiversity value	Class	Assessment required	Delete
1	3242		80	<input type="button" value="▼"/>	<input type="checkbox"/>	<input type="checkbox"/>	No			

2. A tree group number will be generated, and the relevant PCT number for each group is displayed.

3242-Lower North Ranges Turpentine		
#	PCT code	Species
1	3242	

3. For each scattered tree PCT group added, select the 'Species' field and search for the tree species associated with the PCT for that group.

Species identified as being associated with the PCT will be marked with an asterisk and will appear at the top of the species list. You can confirm which tree species are associated with the PCT from within BioNet Veg-C.

74-Yellow Box - River Red Gum tall grassy riverine woodland of NSW South Western Slopes Bioregion and Riverina Bioregion					
#	PCT code	Species	Large tree threshold size	DBHOB category*	Contains hollows*
1	74	euc	50	<input type="button" value="▼"/>	<input type="checkbox"/>
Select the species from below list. Species indicative of this PCT are marked with *.					
<input checked="" type="checkbox"/> Eucalyptus camaldulensis * <input checked="" type="checkbox"/> Eucalyptus melliodora * <input checked="" type="checkbox"/> Eucalyptus microcarpa * <input checked="" type="checkbox"/> Eucalyptus populnea subsp. bimbil * <input type="checkbox"/> Eucalyptus acaciiformis <input type="checkbox"/> Eucalyptus acmenoides <input type="checkbox"/> Eucalyptus aenea <input type="checkbox"/> Eucalyptus agglomerata <input type="checkbox"/> Eucalyptus aggregata <input type="checkbox"/> Eucalyptus albens					

PCTID : 74	VCAID : 74	PCT Name : Yellow Box - River Red Gum tall grassy woodlands Western Slopes Bioregion and Riverina		
Classification Type : Qualitative PCT Definition Status : Approved PCT Benchmark Calculation level : Class/IBRA PCT % Cleared Status : Approved PCT Threatened Ecological Communities Association Classification confidence level : 2 High Author				
Vegetation community details	Scientific description	Distribution information	Extent	Threatened Biodiversity, TECs & Benchmarks
Species by Stratum				
Guide to Structural Terms Diagnostic species : Diagnostic species method: --choose-- Species upper stratum : <ul style="list-style-type: none"> Eucalyptus melliodora (Yellow Box) Eucalyptus camaldulensis (River Red Gum) Eucalyptus microcarpa (Western Grey Box) Eucalyptus populnea subsp. <i>bimbeli</i> (Bimble Box) Allocasuarina luehmannii (Bullock Oak) Casuarina cristata (Belah) Callitris glaucophylla (White Cypress Pine) 				

4. A warning pop-up will appear if the species selected is not associated with the selected PCT.

Confirm?

This species is not indicative for this PCT. Are you certain you wish to continue with this species?

YES

NO

5. If the selected species is a species credit species (a threatened species), it cannot be assessed using the scattered trees module and a warning pop-up will appear.

Confirm?	
The selected tree species is a species credit species-threatened species and cannot be assessed as part of the Paddock Tree module. Please conduct the assessment using one of the BAM Development modules. Are you certain you wish to continue with this species?	
YES	NO

i Tip

- If a scattered tree is identified as a threatened species, you cannot use the scattered trees module.

6. The benchmark ‘Large tree threshold size’ for the PCT will be displayed based on the PCT benchmark information in Veg-C. This will be the largest ‘DBHOB category’.

Large tree threshold size
50

7. The large tree threshold size value can be modified by selecting ‘Modify default benchmarks’ under ‘Add PCT group’.



8. Click ‘Unlock’, then modify the large tree threshold size. Click ‘Update’ to confirm the change, or ‘Cancel’ to retain the original threshold size.

Large tree threshold size (50)
<input type="text" value="50"/>
<input type="button" value="Unlock"/> <input type="button" value="Update"/> <input type="button" value="Cancel"/>

9. Use the ‘DBHOB category’ drop-down to select the DBH category that applies to the tree group. If the tree group contains trees that meet more than one DBHOB category you should split the trees into separate groups and assess each separately.

< 20cm >= 20cm and <50cm > 50cm

10. Tick the ‘Contains hollows’ checkbox if the trees contain hollows. If the tree group contains some trees with hollows (regardless of size) and some without, you should split the trees into separate groups and assess each separately.

Contains hollows*
<input checked="" type="checkbox"/>

11. Enter the number of trees in the tree group in the ‘No. of trees’ column.

No. of trees*
5

12. ‘Negligible biodiversity value’ for the tree group will populate automatically with ‘Yes’ or ‘No’, depending on previous selections. Refer to the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Table 11, for more information.

Negligible biodiversity value
No

13. The class value of the tree group will populate automatically with ‘1’, ‘2’ or ‘3’, depending on previous selections. Refer to the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Table 11, for more information.

Class
2

14. Based on the class of the tree group, the BAM-C will identify if further assessment is required. Refer to the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Appendix B.3 and Table 11 for more information.

74-Yellow Box - River Red Gum tall grassy riverine woodland of NSW South Western Slopes Bioregion and Riverina Bioregion										
#	PCT code	Species	Large tree threshold size	DBHOB category*	Contains hollows*	No. of trees*	Negligible biodiversity value	Class	Assessment required	Delete
1	74	Eucalyptus melliodora	50	>= 20cm and <50cm	<input type="checkbox"/>	12	No	2	Visual assessment for hollows, presence of important habitat features and habitat suitability for threatened species	
2	74	Eucalyptus melliodora	50	< 20cm	<input type="checkbox"/>	35	Yes	1	No	
3	74	Eucalyptus melliodora	50	>= 50cm	<input checked="" type="checkbox"/>	9	No	3	Visual assessment for hollows, presence of important habitat	

Assessment required
<p>Visual assessment for hollows, presence of important habitat features and habitat suitability for threatened species</p>

Assessment required
No

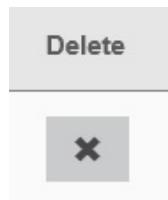
i Tip

- Save your assessment regularly to ensure data is not lost.
- Refer to [**BAM 2020**](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Appendix B.5 for more information on the classes, and calculating the offset requirements for scattered trees.

15. Repeat the above steps for all PCT groups.

Scattered tree PCT Groups									
74-Yellow Box - River Red Gum tall grassy riverine woodland of NSW South Western Slopes Bioregion and Riverina Bioregion									
#	PCT code	Species	Large tree threshold size	DBHOB category*	Contains hollows*	No. of trees*	Negligible biodiversity value	Class	Assessmer
1	74	Eucalyptus melliodora 	50	>= 20cm 	<input type="checkbox"/>	12	No	2	Visual asset important habitat for threatened species
2	74	Eucalyptus melliodora 	50	< 20cm 	<input type="checkbox"/>	35	Yes	1	No
3	74	Eucalyptus melliodora 	50	>= 50cm 	<input checked="" type="checkbox"/>	9	No	3	Visual asset important habitat for threatened species
79-River Red Gum shrub/grass riparian tall woodland or open forest wetland mainly in the upper slopes sub-region of the NSW South Western Slopes Bioregion and western South Eastern High									
#	PCT code	Species	Large tree threshold size	DBHOB category*	Contains hollows*	No. of trees*	Negligible biodiversity value	Class	Assessmer
1	79	Eucalyptus camaldulensis 	50	>= 50cm 	<input checked="" type="checkbox"/>	18	No	3	Visual asset important habitat for threatened species

16. If you need to delete the data for a PCT group, click the button on the right under 'Delete'.



17. When all required information has been entered, click 'Next' to move to Tab 4.

Creating a scattered trees assessment

6.4 Habitat suitability: Predicted (Tab 4)

Ecosystem credit species are threatened species whose occurrence can generally be predicted by vegetation surrogates and/or landscape features, or that have a low probability of detection using targeted surveys. The TBDC identifies the threatened species assessed for ecosystem credits, and the BAM-C automatically populates the list of ecosystem credit species.

The confirmation of ecosystem credit species is not required for scattered tree assessments as their presence/absence does not impact the number of credits generated.

No action is required for Tab 4.

i **Tip**

- The number and type of ecosystem credit (predicted) species do not impact the number of credits generated for a scattered tree assessment, so there is no need to assess them.
- Remember to click ‘Next’ to progress to Tab 5 so the data from previous tabs flows through to the subsequent tabs and calculations.

Creating a scattered trees assessment

6.5 Habitat suitability: Candidate (Tab 5)

The ‘Habitat suitability: Candidate’ tab is used to confirm the threatened species credit species that may occur on or use the site. Species credit species are those where the likelihood of occurrence of a species or elements of suitable habitat for that species cannot be confidently predicted by vegetation surrogates and landscape features and can be reliably detected by survey.

The candidate species list is populated automatically based on criteria in the BAM 2020 (Subsection 5.2.1, Step 1) but is limited to displaying species that are at risk of an SAI. Any additional threatened species that are identified on the site (that is, incidentally observed during a site visit) must be manually added to the species list at Tab 5.

You must review the automatically populated information alongside the BAM 2020, Subsections 5.1.2–5.2.3 to confirm the candidate species for assessment.

The information required for Tab 5 is displayed below.

1. Assessment details	2. Site context	3. Vegetation	4. Habitat suitability: Predicted	
6. Habitat survey	7. Credits	8. Credit classes	9. Price	
Predicted threatened species (Ecosystem credits)				
Species	Habitat constraints	Geographic limitations	Species is vagrant	Veg Zone - Confirmed predicted species *
<i>Artamus</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3032 good Yes M

1. As ‘Next’ was clicked after completion of Tab 4, the ‘Habitat suitability: Candidate’ tab will be open. When reopening an existing assessment, click on Tab 5 to open it.

4. Habitat suitability: Predicted

i Tip

- Scattered tree assessments will only display species credit species at risk of an SAI.
- Refer to [Serious and irreversible impacts of development on biodiversity \(<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/clear-and-develop-land/serious-irreversible-impacts>\)](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/clear-and-develop-land/serious-irreversible-impacts) for the current species SAI list (see [Appendix B](#)).

2. Review the ‘Habitat constraints’, ‘Habitat degraded’, ‘Geographic limitations’ and ‘Species is vagrant’ checkboxes relevant to each species to confirm that the indicated options are relevant to the site (BAM 2020, Subsections 5.2.1–5.2.3):
- If the indicated ‘Habitat constraints’ or ‘Geographic limitations’ options are not relevant, the box should be unchecked.
 - If the ‘Habitat degraded’ option is relevant, the box should be checked.
 - In limited circumstances, a species may appear in the populated list due to a vagrant individual recorded in the IBRA subregion. In most cases, vagrant sightings will be marked as such on the BioNet Atlas and will not be included in the BAM-C. If you are confident a species is displaying in the populated list due to a vagrant BioNet Atlas record, tick the ‘Species is vagrant’ checkbox.

Candidate threatened species (Species credits)					
Species	Habitat constraints	Habitat degraded ⓘ	Geographic limitations	Species is vagrant ⓘ	Confirmed candidate species ⓘ
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	<input checked="" type="checkbox"/> Other <input checked="" type="checkbox"/> As per Important Habitat Map	<input type="checkbox"/>	--	<input type="checkbox"/>	Yes ▾
<i>Caladenia arenaria</i> Sand-hill Spider Orchid	--	<input type="checkbox"/>	--	<input type="checkbox"/>	Yes ▾
<i>Lathamus discolor</i> Swift Parrot (Breeding)	<input checked="" type="checkbox"/> Other <input checked="" type="checkbox"/> As per Important Habitat Map	<input type="checkbox"/>	--	<input type="checkbox"/>	Yes ▾

Note: An asterisk beside a species name indicates the species has been added to the assessment because of a change to a previous tab, for example, a change to PCT(s), % native vegetation cover, or patch size.

i Tip

- If you are confident a species is displaying in the populated list due to a vagrant BioNet Atlas record, tick the ‘Species is vagrant’ checkbox. Please send supporting justification to the BOS Help Desk so the species can be reviewed.
- Further details on habitat constraints (including the ‘other’ category) and geographic limitations can be found on the **BioNet Threatened Biodiversity Profiles** (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/about-bionet-atlas/threatened-biodiversity-profiles>) webpage (see **Appendix B**).

3. The ‘Confirmed candidate species’ default setting for development/clearing assessments is ‘yes’ if:
- all indicated ‘Geographic limitations’ and ‘Habitat constraints’ remain checked
 - ‘Species is vagrant’ and ‘Habitat degraded’ are unchecked.

Confirmed candidate species ⓘ
Yes ▾

4. The ‘Sensitivity to gain class’, ‘BC Act listing status’ and ‘EPBC Act listing status’ will populate automatically, however, Tab 5 does not display the species’ SAI status.

Confirmed candidate species	Sensitivity to gain class	BC Act listing status	EPBC Act listing status.
Yes	High Sensitivity to Gain	Critically Endangered	Critically Endangered
Yes	Moderate Sensitivity to Gain	Endangered	Endangered
Yes	Moderate Sensitivity to Gain	Endangered	Critically Endangered

5. Any threatened species that is incidentally observed while at the site, but that is not in the list generated by the BAM-C, must be manually added. Click ‘Search candidate species’ at the bottom of the tab page and enter the species’ name or profile ID. Any matching species will be presented in a list. Select the species’ name and click ‘Add candidate species’.

SEARCH CANDIDATE SPECIES koal
Please choose a species from the list
10616 - **Phascolarctos cinereus (Koala)**

SEARCH CANDIDATE SPECIES ADD CANDIDATE SPECIES

6. When a species is added, an ‘X’ will appear to the left of the species’ name, indicating this species has been added by the assessor. This species can be removed by clicking on the ‘X’.
7. When all required information has been entered, click ‘Next’ to move to Tab 6.

Lathamus discolor Swift Parrot (Breeding)	<input checked="" type="checkbox"/> Other	<input type="checkbox"/>	--
	<input checked="" type="checkbox"/> As per Important Habitat Map		
 Phascolarctos cinereus Koala	<input checked="" type="checkbox"/> Other	<input type="checkbox"/>	--
	<input checked="" type="checkbox"/> Presence of koala use trees - refer to Survey Comments field in TBDC		

Creating a scattered trees assessment

6.6 Habitat survey (Tab 6)

The scattered tree assessment module must not be used if any species credit (candidate) species are confirmed to be using the tree(s) as habitat (or there is evidence they are using the tree(s), such as scats or shells). You will need to use an alternative assessment method. Refer to [Chapters 4 and 5](#) for alternative development assessment types.

The steps to complete Tab 6 are described below.

1. Assessment details	2. Site context	3. Vegetation	4. Habitat suitability: Predicted	5. Habitat
6. Habitat survey	7. Credits	8. Credit classes	9. Price	
Species	Species presence	Survey timetable	Unit of Measure Area or Count	Biodiversity risk weighting
<i>Anthochaera phrygia</i> Regent Honeyeater	Yes (surveyed)	Jan Feb Mar Apr May Jun Jul Aug	Area (ha)	Very High 3

1. As ‘Next’ was clicked after completion of Tab 5, the ‘Habitat survey’ tab will be open. When reopening an existing assessment, click on Tab 6 to open it.

6. Habitat survey

2. The list of candidate species from Tab 5 ‘Habitat suitability: Candidate’ that were confirmed as potentially present based on the habitat and geographic limitations are listed in Tab 6. This includes any species that were manually added to Tab 5.

Candidate threatened species (Species credits)

Species	Species presence	Survey timetable	Unit of Measure Area or Count	Biodiversity risk	Biodiversity risk weighting
<i>Lathamus discolor</i> Swift Parrot	Yes (surveyed)	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec <input type="checkbox"/> Survey month outside the specified months?	Area (ha)	Very High	3
<i>Rhizanthella slateri</i> Eastern Australian Underground Orchid	Yes (surveyed)	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec <input type="checkbox"/> Survey month outside the specified months?	Area (ha)	Very High	3

An alert pop-up will appear if the ‘Habitat survey’ tab lists any candidate species.

! Alert

If candidate species are recorded as present, the scattered tree module must not be applied. This species must be assessed using chapter 5 of the BAM and BAM-C development module.



Tip

- Any trees that are identified as providing habitat for a species credit species must be assessed using the BAM 2020, Chapter 5, and the scattered trees module must not be used.
3. ‘Species presence’ automatically defaults to ‘Yes (surveyed)’. You can change how presence was confirmed using the drop-down. Options are ‘Yes (surveyed)’, ‘Yes (expert report)’ or ‘Yes (assumed present)’. Alternatively, if the species is identified as absent based on either survey or an expert report, options are ‘No (surveyed)’ or ‘No (expert report)’.
4. For a small number of species, the habitat constraint information in the TBDC refers to an important habitat map. If one of these species is being assessed, and the assessment area is wholly or partially within a mapped layer identified on an important habitat map, the species must be considered present (‘Yes (assumed present)’). If the assessment area does not overlap any mapped layer, the species credit species is considered absent (‘No (surveyed)’). Include reference to the important habitat map in the BAR.
- | Species | Species presence  |
|-----------------------------|---|
| <i>Lathamus discolor</i> | <input type="button" value="Yes (assumed present)"/>
<input type="button" value="Yes (surveyed)"/>
<input type="button" value="Yes (expert report)"/>
<input checked="" type="button" value="Yes (assumed present)"/>
<input type="button" value="No (surveyed)"/>
<input type="button" value="No (expert report)"/> |
| <i>Rhizanthella slateri</i> | <input type="button" value="Yes (assumed present)"/>
<input type="button" value="Yes (surveyed)"/>
<input type="button" value="Yes (expert report)"/>
<input type="button" value="No (surveyed)"/>
<input type="button" value="No (expert report)"/> |
5. If a species was surveyed for, use the checkboxes in the ‘Survey timetable’ field to indicate when the survey(s) were undertaken. The survey method must comply with any threatened species survey guides or advice the department has published or provided within the TBDC. In the absence of any guide or advice, use a best-practice method.
6. If any species are found to be using the tree(s) as habitat, the ‘Next’ button in the BAM-C will be disabled and the case cannot be finalised. Use a different assessment pathway to assess the trees. Refer to **Chapters 4 and 5** of this guide for alternative development assessment types.
- | Species | Species presence  | Survey timetable | Area or Count | Biodiversity risk | Biodiversity risk weight | | | | | | | | | | | | |
|---|---|---|---------------|--|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|-----------|---|
| <i>Anthochaera phrygia</i>
Regent Honeyeater | <input type="button" value="Yes (assumed present)"/>
<input checked="" type="button" value="Yes (assumed present)"/> | <table border="1"> <tr> <td>Jan</td> <td>Feb</td> <td>Mar</td> <td>Apr</td> </tr> <tr> <td>May</td> <td>Jun</td> <td>Jul</td> <td>Aug</td> </tr> <tr> <td>Sep</td> <td>Oct</td> <td>Nov</td> <td>Dec</td> </tr> </table> | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Area (ha) | Very High | 3 |
| Jan | Feb | Mar | Apr | | | | | | | | | | | | | | |
| May | Jun | Jul | Aug | | | | | | | | | | | | | | |
| Sep | Oct | Nov | Dec | | | | | | | | | | | | | | |
| <i>Lathamus discolor</i>
Swift Parrot | <input type="button" value="No (surveyed)"/>
<input checked="" type="button" value="No (surveyed)"/> | <table border="1"> <tr> <td>Jan</td> <td>Feb</td> <td>Mar</td> <td>Apr</td> </tr> <tr> <td>May</td> <td>Jun</td> <td>Jul</td> <td>Aug</td> </tr> <tr> <td>Sep</td> <td>Oct</td> <td>Nov</td> <td>Dec</td> </tr> </table>
<input type="checkbox"/> Survey month outside the specified months? | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | | Very High | 3 |
| Jan | Feb | Mar | Apr | | | | | | | | | | | | | | |
| May | Jun | Jul | Aug | | | | | | | | | | | | | | |
| Sep | Oct | Nov | Dec | | | | | | | | | | | | | | |
| | | | | <input type="button" value="CLEAR"/> <input type="button" value="NEXT"/> | | | | | | | | | | | | | |
7. If no species credit species (or the species credit component of a dual credit species) are using the tree(s) as habitat, change the ‘Species presence’ field to ‘No (surveyed)’ or ‘No (expert report)’. This will enable the ‘Next’ button.

Species	Species presence 	Survey timetable				Area or Count	Biodiversity risk	Biodiversity risk weight
		Jan	Feb	Mar	Apr			
<i>Anthochaera phrygia</i> Regent Honeyeater	No (expert report) 	Jan	Feb	Mar	Apr		Very High	3
		May	Jun	Jul	Aug			
		Sep	Oct	Nov	Dec			
<i>Lathamus discolor</i> Swift Parrot	No (expert report) 	Jan	Feb	Mar	Apr		Very High	3
		May	Jun	Jul	Aug			
		Sep	Oct	Nov	Dec			

8. Note that the UoM, ‘Biodiversity risk’ and ‘Biodiversity risk weighting’ for each species is displayed but cannot be edited.
9. When all required information has been entered, click ‘Next’ to move to Tab 7.

Creating a scattered trees assessment

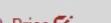
6.7 Credits (Tab 7)

The BAM 2020 uses biodiversity credits to measure the residual impacts of a proposal on biodiversity values.

The ‘Credits’ tab summarises the results of calculations of credits for each scattered tree PCT group with biodiversity value. Note that any tree group with negligible biodiversity value will not generate credits and will not display on the ‘Credits’ tab.

No user action is required for Tab 7.

Further details on the calculations performed are in Subsection 6.7.3 below.

1. Assessment details 	2. Site context 	3. Vegetation 	4. Habitat suitability: Predicted 	5. Habitat suitability: Candidate 
6. Habitat survey 	7. Credits 	8. Credit classes 	9. Price 	
Ecosystem credits for scattered tree clearing				
Class	Number of trees	Contain hollows	Ecosystem credits required per tree	Credits required
79-River Red Gum shrub/grass riparian tall woodland or open forest wetland mainly in the upper slopes sub-region of the NSW South Western Slopes Bioregion and western South Eastern Highlands Bioregion	18	Yes	1.00	18
				Subtotal: 18
74-Yellow Box - River Red Gum tall grassy riverine woodland of NSW South Western Slopes Bioregion and Riverina Bioregion	12	No	0.50	6
	9	Yes	1.00	9
				Subtotal: 15
				Total: 33

1. As ‘Next’ was clicked after completion of Tab 6 the ‘Credits’ tab will be open. When reopening an existing assessment, click on Tab 7 to open it.

7. Credits 

6.7.3 Ecosystem credits for PCTs and TECs

Tab 7 displays the ecosystem credits for all tree groups from Tab 3 that have biodiversity value.

The BAM-C uses the number of trees in the group and the scattered tree class to calculate the number of ecosystem credits for each scattered tree PCT group added at Tab 3. Refer to Equation 7 in the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>) for more information.

Ecosystem credits for scattered tree clearing				
Class	Number of trees	Contain hollows	Ecosystem credits required per tree	Credits required
79-River Red Gum shrub/grass riparian tall woodland or open forest wetland mainly in the upper slopes sub-region of the NSW South Western Slopes Bioregion and western South Eastern Highlands Bioregion				
3	18	Yes	1.00	18
				Subtotal: 18
74-Yellow Box - River Red Gum tall grassy riverine woodland of NSW South Western Slopes Bioregion and Riverina Bioregion				
2	12	No	0.50	6
3	9	Yes	1.00	9
				Subtotal: 15
				Total: 33

Tip

- Use the scroll bar to see all ecosystem credits.
- For further information on calculating scattered tree credits, refer to **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Appendix B.5.

No user action is required for Tab 7 and there is no ‘Next’ button. Click on Tab 8 ‘Credit classes’ to open it.

Creating a scattered trees assessment

6.8 Credit classes (Tab 8)

The BAM 2020 uses OTGs to offset non-threatened vegetation (PCTs). OTGs are groups of PCTs with the same vegetation class and threat status. Under the like-for-like rules, offsets for impacts to non-threatened vegetation may be met with one or more OTGs that have the same vegetation class with the same or a higher threat status.

Under the like-for-like rules, threatened vegetation (TECs) must be offset with the same TEC.

Vegetation containing HBT must be offset with vegetation containing HBT.

Variation rules may apply.

The ‘Credit classes’ tab summarises the ecosystem credits and their like-for-like options.

Further details on the information available in Tab 8 are provided below.

No user action is required in this tab.

1. Assessment details 2. Site context 3. Vegetation 4. Habitat suitability: Predicted 5. Habitat suitability: Candidate

6. Habitat survey 7. Credits 8. Credit classes 9. Price

Ecosystem credit classes

Ecosystem credit summary

PCT	TEC	HBT Cr	No HBT Cr	Credits
74-Yellow Box - River Red Gum tall grassy riverine woodland of NSW South Western Slopes Bioregion and Riverina Bioregion	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands	9	6	15
79-River Red Gum shrub/grass riparian tall woodland or open forest wetland mainly in the upper slopes sub-region of the NSW South Western Slopes Bioregion and western South Eastern Highlands Bioregion	Not a TEC	18	0	18

Credit classes for 74

Like-for-like options

TEC	Class	HBT	Credits	IBRA region
White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt	Class 2	No	6	Inland Slopes, Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fens

1. Select the ‘Credit classes’ tab to view ecosystem credit class information.

8. Credit classes

2. Tab 8 displays a summary of the ecosystem credit classes, whether there is an associated TEC or not, and their like-for-like options based on the PCTs and/or TECs added at Tab 3.

For non-threatened vegetation ('Not a TEC'), the BAM-C displays the associated vegetation class and lists the PCTs within that class. The BAM-C also displays the associated OTGs and IBRA subregions available for making a like-for-like credit trade. Refer to the [Offset rules and ecosystem credits \(https://www.environment.nsw.gov.au/publications/offset-rules-and-ecosystem-credits-guidance\)](#) guidance for more information (see [Appendix B](#)).

Ecosystem credit classes

Ecosystem credit summary

PCT	TEC	HBT Cr	No HBT Cr	Credits
74-Yellow Box - River Red Gum tall grassy riverine woodland of NSW South Western Slopes Bioregion and Riverina Bioregion	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla	9	6	15
79-River Red Gum shrub/grass riparian tall woodland or open forest wetland mainly in the upper slopes sub-region of the NSW South Western Slopes Bioregion and western South Eastern Highlands Bioregion	Not a TEC	18	0	18
Credit classes for 74				
Like-for-like options				
TEC	Class	HBT	Credits	IBRA region
White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla	Class 2 No	6	Inland Slopes , Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.	
White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highla	Class 3 Yes	9	Inland Slopes , Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.	
Credit classes for 79				
Like-for-like options				
Class	Trading group	Class	HBT	Credits
Inland Riverine Forests	Inland Riverine Forests - ≥ 50% - < 70% cleared group	Class 3 Yes	18	Inland Slopes , Bogan-Macquarie, Bondo, Capertee Uplands, Capertee Valley, Crookwell, Hill End, Kerrabee, Lower Slopes, Murray Fans, Murrumbateman, Orange, Pilliga, Talbragar Valley and Wollemi. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Tip

See the [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Subsection 10.2.1 and Section 10.3 for further information on offsetting ecosystem credits.

Creating a scattered trees assessment

6.9 Price (Tab 9)

The BOPC was replaced by the BCF Charge System on 17 October 2022. The new BCF Charge System will now be used to determine the amount a proponent may pay into the BCF to meet a biodiversity offset obligation.

The BCT is responsible for administering the new charge system.

More information about the new BCF Charge System, including how to request a quote from the BCT, is available on the BCT website.

7. Creating a stewardship (for offset sites) assessment

This chapter covers stewardship assessments. Refer to [Chapter 4](#) of this guide for information on assessing general Part 4, Part 5 proposals, major projects, biocertification and general clearing, [Chapter 5](#) for assessing small areas, and [Chapter 6](#) for assessing scattered trees.

The [BAM 2020 Stage 3](https://www.environment.nsw.gov.au/publications/biodiversity-assessment-method-2020-operational-manual-stage-3) (<https://www.environment.nsw.gov.au/publications/biodiversity-assessment-method-2020-operational-manual-stage-3>), provides a consistent method for the assessment of the biodiversity values of a stewardship site and how those values will change under conservation management.

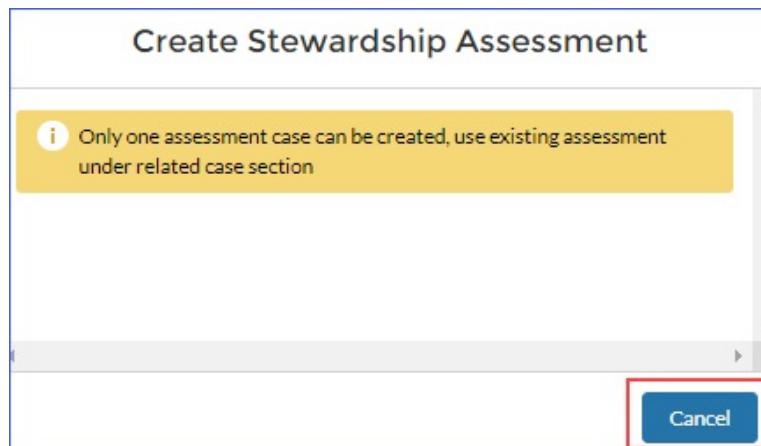
All fields marked with an asterisk (*) are mandatory

Tip!
Choosing the 'Assessment type' is an important step. Once you click, 'Next' this value will become read-only and it cannot be un-done.

Assessment type *	<input type="text" value="Stewardship (for offset sites)"/>
Proposal name	<input type="text" value=""/>
Assessment ID	00045236/BAAS01234/24/00045245
Assessment Revision	0

Each stewardship parent case in BOAMS is limited to one BAM-C assessment (child) case and one stewardship application form. When trying to create a stewardship assessment child case in BOAMS (by clicking 'Create Assessment'), if an assessment child case already exists an error will occur:

- 'Only one assessment case can be created, use existing assessment under related case section'.
- If this occurs, click 'Cancel'.



- On the parent case in the 'Related Cases' section, select the 'Application number' for the previously created assessment case. Either open the BAM-C and continue to use the existing child case or delete the child case. Refer to [Subsection 2.5.2](#) of this guide for instructions on deleting child cases.

Applic...	Case Type	Case Nu...	Status
00044...	Steward...	000441...	In-Progr...
00044...	Assessm...	000441...	In-Progr...

[View All](#)

Application Type Assessment	Type Stewardship	Status In-Progress	Related Parent Cases 00044159
--------------------------------	---------------------	-----------------------	----------------------------------

When entering data in each tab of the BAM-C, proceed to the next tab by using the ‘Next’ button at the bottom of the page. The data added then flows through to the next tab in the BAM-C.

Tip

- Remember to click ‘Next’ so the data entered flows through to the subsequent tabs and calculations.
- As tabs are completed it is possible to navigate between completed tabs.

High-level functions act across all tabs in the BAM-C to help you manage assessments and create output from the calculator. Refer to [Chapter 3](#) of this guide for information on these functions.

Sections 7.1–7.8 below detail how to use each of the tabs in the BAM-C to enter details for a stewardship assessment.

In this section

[7.1 Assessment details \(Tab 1\)](#)

[7.2 Site context \(Tab 2\)](#)

[7.3 Vegetation \(Tab 3\)](#)

[7.4 Habitat suitability: Predicted \(Tab 4\)](#)

7.5 Habitat suitability: Candidate (Tab 5)

7.6 Habitat survey (Tab 6)

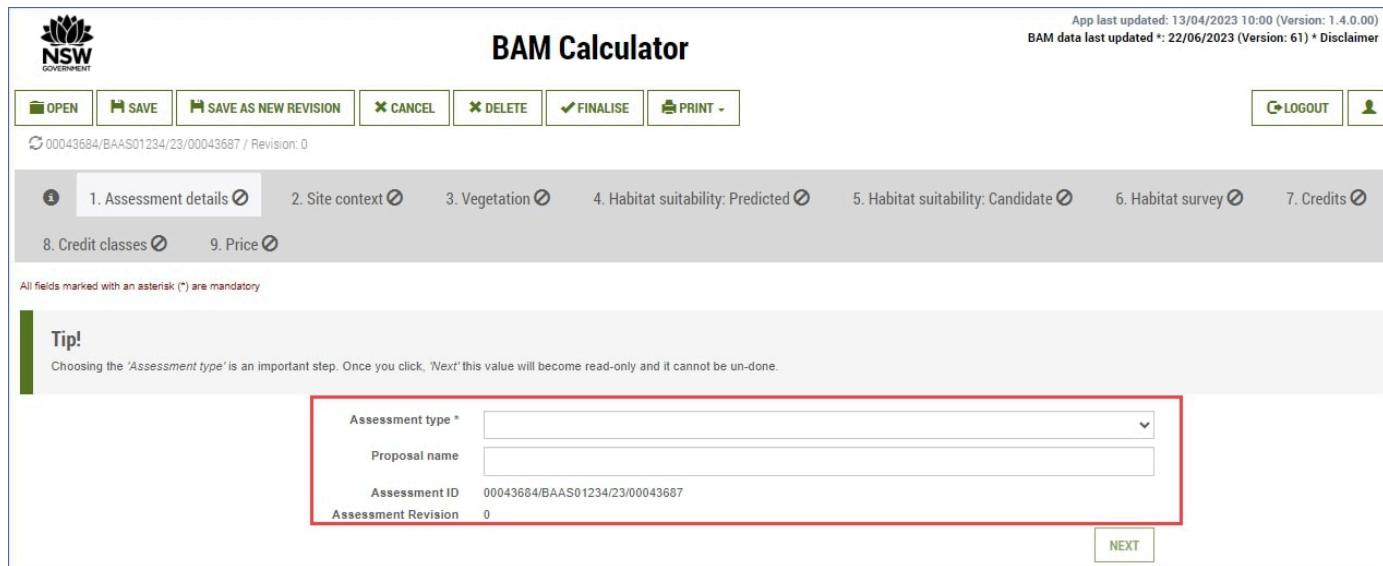
7.7 Credits (Tab 7)

7.8 Credit classes (Tab 8)

Creating a stewardship (for offset sites) assessment

7.1 Assessment details (Tab 1)

The ‘Assessment details’ tab captures the type of assessment being conducted and records the proposal name.

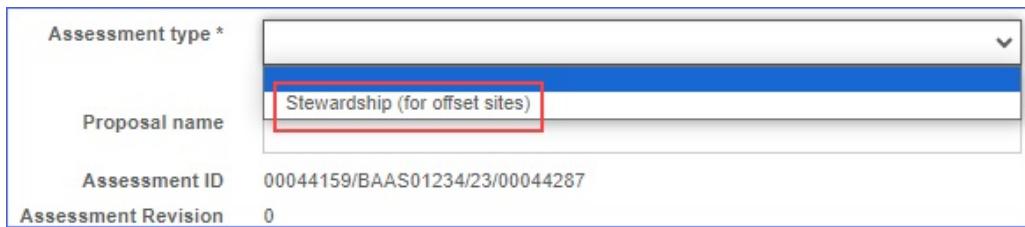


The screenshot shows the BAM Calculator interface with the 'Assessment details' tab selected. The top navigation bar includes links for OPEN, SAVE, SAVE AS NEW REVISION, CANCEL, DELETE, FINALISE, PRINT, LOGOUT, and PROFILE. The main content area displays a grid of numbered steps: 1. Assessment details, 2. Site context, 3. Vegetation, 4. Habitat suitability: Predicted, 5. Habitat suitability: Candidate, 6. Habitat survey, 7. Credits, 8. Credit classes, and 9. Price. A tip message at the bottom left says: "Choosing the 'Assessment type' is an important step. Once you click, 'Next' this value will become read-only and it cannot be un-done." Below this is a red-bordered form section containing fields for Assessment type (dropdown), Proposal name (text input), Assessment ID (00043684/BAAS01234/23/00043687), and Assessment Revision (0). A 'NEXT' button is visible on the right.

1. Click on the ‘Assessment details’ tab to enter assessment details.

1. Assessment details

2. Use the ‘Assessment type’ drop-down to select the ‘Stewardship (for offset sites)’ assessment type.



The screenshot shows the 'Assessment details' form with the 'Assessment type' dropdown set to 'Stewardship (for offset sites)'. Other fields include 'Proposal name' (empty), 'Assessment ID' (00044159/BAAS01234/23/00044287), and 'Assessment Revision' (0).

3. Enter a unique description in the ‘Proposal name’ field.



The screenshot shows the 'Assessment details' form with the 'Proposal name' field filled with 'Demonstration Assessment'. Other fields include 'Assessment ID' (00044159/BAAS01234/23/00044287) and 'Assessment Revision' (0).

i Tip

- The proposal name is a valuable identifier for the BAM-C assessment.
- A unique proposal name helps you distinguish differences between assessment revisions.

4. When all required information has been entered, click ‘Next’ to move to Tab 2.

NEXT

i Tip

- Once ‘Next’ is clicked the assessment type for the assessment is locked.
- Click ‘Next’ to move to the next tab to ensure the subsequent tabs contain the correct information and calculations.

Creating a stewardship (for offset sites) assessment

7.2 Site context (Tab 2)

The ‘Site context’ tab is used to capture information relating to the biogeographic and landscape setting of the site. The information required for this tab is displayed below.

1. The ‘Site context’ tab will be open if ‘Next’ was clicked on Tab 1.



2. Use the ‘Interim Biogeographic Regionalisation for Australia (IBRA)’ drop-down to select the IBRA region. If the assessment occurs across multiple IBRA regions, select the IBRA region where the largest proportion of stewardship area will occur.

Interim Biogeographic Regionalisation for Australia (IBRA) *

IBRA Sub Region *

NSW (Mitchell) Landscape *

% Native vegetation cover *

Linear Development

- Australian Alps
- Brigalow Belt South
- Broken Hill Complex
- Channel Country
- Cobar Peneplain
- Darling Riverine Plains
- Mulga Lands
- Murray Darling Depression
- Nandewar
- New England Tablelands
- NSW North Coast
- NSW South Western Slopes
- Riverina
- Simpson Strzelecki Dunefields
- South East Corner
- South Eastern Highlands
- South Eastern Queensland
- Sydney Basin

i Tip

- See [Bioregions of NSW](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/bioregions/bioregions-of-nsw) (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/bioregions/bioregions-of-nsw>) for further information on the state’s bioregions (see [Appendix B](#)).
- See [BAM 2020](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020) (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Chapter 3, for further information on establishing the site context.
- The IBRA subregion selection affects future selections of PCTs, TECs and species.

3. Use the ‘IBRA Sub Region’ drop-down to select the IBRA subregion in which most of the site is located. The drop-down is filtered based on the IBRA region selected in Step 2.

Interim Biogeographic Regionalisation for Australia (IBRA) *

IBRA Sub Region *

NSW Landscape

% Native vegetation cover *

Warning: Changes to this value might affect data in 'Habitat suitability', 'Habitat survey' 'Credits' 'Credit classes' and 'Price' tabs

- Central Depression
- Bulloo
- Bulloo Dunefields**
- Central Depression
- Core Ranges
- Sturt Stony Desert

4. Use the ‘NSW (Mitchell) Landscape’ drop-down to select the landscape in which most of the proposal occurs.

NSW (Mitchell) Landscape *

% Native vegetation cover *

Reference data version

Liverpool Range Valleys and Foothslopes

- Kybeyan Range
- Lachlan - Bland Channels and Floodplains
- Lachlan Channels and Floodplains
- Lachlan Depression Plains
- Lachlan Gorge
- Lachlan Lakes, Swamps and Lunettes
- Lachlan Plains
- Lachlan Sandplains
- Lachlan Scalded Plains
- Lachlan Terrace Gravels
- Lake George Complex
- Lake Illawarra Alluvial Plains
- Lake Illawarra Barrier
- Lamington Volcanic Slopes
- Lapstone Slopes
- Leadley Hills
- Lees Pinch Foothills

i Tip

- NSW (Mitchell) landscape does not influence calculations of VI or credit calculations, but is used in reporting.
- See Descriptions for **NSW (Mitchell) Landscapes** (<https://www.environment.nsw.gov.au/resources/conservation/landscapesdescriptions.pdf>) for further information (see **Appendix B**).

5. Enter a value for the percentage landscape native vegetation cover in the '% Native vegetation cover' field.

NSW (Mitchell) Landscape *

% Native vegetation cover *

28

Warning: Changes to this value might affect data in 'Habitat suitability', 'Habitat survey', 'Credits', 'Credit classes' and 'Price' tabs

i Tip

- See **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Section 3.2 for further information on native vegetation cover.
- The % native vegetation cover value entered may affect the predicted and candidate fauna species lists. Refer to the definition of 'Suitable habitat' in the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>) Glossary for more information.

6. **Reference data version** - The revised Eastern NSW PCT Classification has been deployed into the BAM-C, and revisions to the remainder of the state will be rolled out over the coming years. The reference data version may have different options available depending on when the assessment was created and which IBRA region is selected.

Instructions are provided for the following scenarios:

- a. new assessments inside a revised NSW IBRA region
- b. existing assessments inside a newly revised NSW IBRA region
- c. new or existing assessments outside a newly revised NSW IBRA region.

a. New assessments inside a revised NSW IBRA region

All new assessments created after deployment of a revised NSW PCT classification will automatically use the revised NSW PCTs when an associated NSW IBRA region is selected.

The only option in the 'Reference data version' drop-down will be 'Current classification (live – default)'.

Linear Development

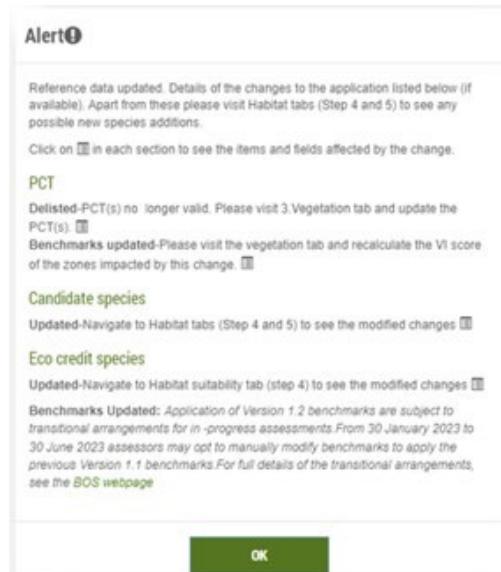
Reference data version

Current classification (live - default)

Current classification (live - default)

b. Existing assessments inside a newly revised NSW IBRA region

Reopening ‘Open’, ‘Locked’ or ‘Finalised’ assessments created before deployment of a newly revised NSW PCT classification will trigger an update with the revised NSW PCTs. This will trigger an alert detailing the changes that have occurred in the assessment.

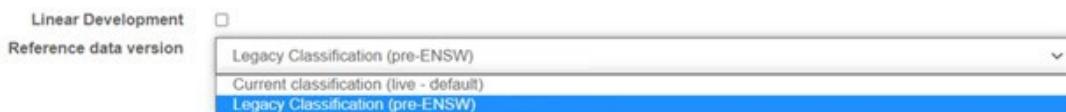


i Tip

- Take a screenshot of the alert showing the updates. Alerts will not display again once the case has been saved.

To use legacy PCTs during a transitional period, select the legacy classification in the ‘Reference data version’ drop-down.

Alternatively, to use the revised NSW PCTs select ‘Current classification (live – default)’.



To progress an assessment with revised data, the following tabs may require amendment:

- Tab 3 –Vegetation
- Tab 4 –Habitat suitability: Predicted
- Tab 5 –Habitat suitability: Candidate
- Tab 6 –Habitat Survey.

c. New or existing assessments outside a revised NSW IBRA region

New or existing assessments outside of a newly revised NSW IBRA region will not update with new NSW PCTs, as they are not relevant. The only available option in the ‘Reference data version’ drop-down will be ‘Current classification (live – default)’.



i Tip

- Further information on transitional arrangements is available from the [**New vegetation integrity benchmarks and plant community types**](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/nsw-plant-community-type-classification/pct-change-control) (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/nsw-plant-community-type-classification/pct-change-control>) webpage (see [Appendix B](#)).
- When a transitional period ends, the only option in the ‘Reference data version’ drop-down will be ‘Current classification (live – default)’. At this time, revised NSW PCTs must be used for all assessments within the associated NSW IBRA regions.
- Clear your browser cache to ensure any newly revised NSW PCTs and the legacy reference data version display correctly in the drop-down.

Clearing the BAM-C cache – If you have a problem selecting legacy PCTs (during a transitional period) in a case created before deploying any revised NSW PCTs, clear your cache in the BAM-C. See [Appendix A](#) of this guide for instructions on clearing the cache.

i Tip

- If you cannot clear the cache to see the legacy classification in the ‘Reference data version’ drop-down, contact the BOS Help Desk for assistance.

7. The ‘Landscape features’ field can be left blank when no listed landscape features are associated with the site. If a landscape feature is associated with the site, use the landscape ‘Feature’ drop-down to select the type of landscape feature associated with the site.

Landscape features

Feature *	Name *	Part of development footprint	Action
<input type="text" value="Wetlands"/> <input type="text" value="Rivers and streams"/> <input checked="" type="text" value="Wetlands"/> <input type="text" value="Native vegetation extent"/> <input type="text" value="Connectivity features"/> <input type="text" value="Areas of geological significance and soil hazard features"/> <input type="text" value="Any other landscape features that are required by the Secretary's Environmental Assessment Requirements (SEARs) for assessment at a development site for a major project"/> <input type="text" value="Areas of outstanding biodiversity value that have been identified under the BC Act."/> <input type="button" value="Add another landscape feature"/>	<input type="text" value="RiverName"/> <input type="checkbox"/>		<input type="button" value="Remove"/>

8. Enter the name of the landscape feature in the ‘Name’ field.

Landscape features

Feature	Name	Part of development footprint
<input type="text" value="Wetlands"/>	<input type="text" value="Test Wetland"/> <input type="checkbox"/>	

9. Tick the checkbox in the ‘Part of stewardship site’ column if the feature is within the stewardship site.

Part of development footprint



10. Click 'Add another landscape feature' to accept the entered data. This will add another landscape feature row, which can be left blank if no further landscape features exist.

Add another landscape feature

11. If you need to remove a landscape feature, click 'Remove' in the 'Action' column.

Action

Remove

12. When all required information has been entered, click 'Next' to move to Tab 3.



Tip

- Once 'Next' is clicked, the IBRA region for the assessment is locked.
- To change the IBRA region, cancel or exit the assessment before saving and reopen the assessment.
- If the IBRA region is incorrect and the case has been saved, delete the assessment and create a new assessment through BOAMS (using the same parent case).
- Click 'Next' to move to the next tab to ensure subsequent tabs contain the correct information and calculations.

Creating a stewardship (for offset sites) assessment

7.3 Vegetation (Tab 3)

The 'Vegetation' tab records the PCTs on the site and captures individual plot data that is used to calculate the VI scores for each plot with and without management.

The method for recording PCTs and TECs at a site and calculating current vegetation condition of a site is the same for all assessment types. Refer to [Chapter 4](#)
[\(https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020)
of the BAM 2020 for further information.

In this subsection

[7.3.1 Define the PCTs and TECs](#)

[7.3.2 Import vegetation zones](#)

[7.3.3 Manually enter vegetation zone data](#)

[7.3.4 Calculate vegetation integrity for sites with partial loss](#)

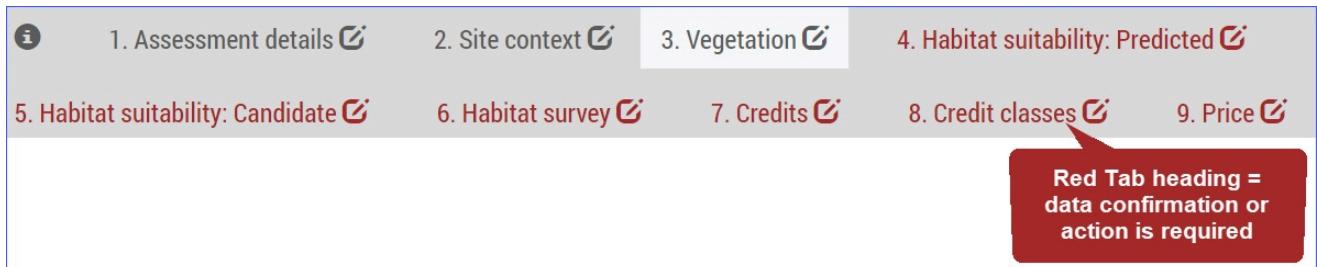
7.3.5 Calculate future VI scores

7.3.1 Define the PCTs and TECs

1. The ‘Vegetation’ tab will be open if ‘Next’ was clicked on Tab 2. When reopening an assessment with existing information, click on Tab 3 to open it.

3. Vegetation

2. Note that if any tab headings are shaded in red, action is required, or information needs to be entered/confirmed on that tab. Remember to click ‘Next’ to move through the tabs if any changes are made.



3. If the PCT name or number is known, the ‘Plant community type’ field can be added as the first step, automatically populating the formation and class fields.

If the PCT name or number is not known, use the ‘Formation’ drop-down to select the formation for the required PCT.

The screenshot shows a dropdown menu titled 'Formation'. The list contains the following items: Rainforest, Wet Sclerophyll Forests (Shrubby sub-formation), Freshwater wetlands, Dry Sclerophyll Forests (Shrubby sub-formation), Forested Wetlands, Grassy Woodlands, and Dry Sclerophyll Forests (Shrub/grass sub-formation). The 'Rainforest' item is currently selected, indicated by a blue background.

Tip

- If the PCT or number is known, enter this first and the formation and class fields will be populated automatically.
- Only PCTs associated with the IBRA region and IBRA subregion will be available.
- Refer to the webpage [About BioNet Vegetation Classification \(Veg-C\)](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/about-bionet-vegetation-classification-(veg-c)) ([https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/about-bionet-vegetation-classification-\(veg-c\)](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/about-bionet-vegetation-classification-(veg-c))) for further information about PCTs and TECs (see [Appendix B](#)).

4. Use the 'Class' drop-down (if PCT name or number is not known) to select the required class. The classes available will be filtered to those associated with the formation if a formation was selected in step 3.

Plant community types (PCT) & ecological communities

Formation *	Class *	Plant community type *	PCT % c
<input type="text"/>	<input type="text"/>	<input type="text"/>	
<div style="border: 1px solid #ccc; padding: 5px; width: fit-content;"> Brigalow Clay Plain Woodlands Coastal Freshwater Lagoons Coastal Swamp Forests Coastal Valley Grassy Woodlands Cool Temperate Rainforests Dry Rainforests Eastern Riverine Forests Floodplain Transition Woodlands Gibber Transition Shrublands Hunter-Macleay Dry Sclerophyll Forests Inland Floodplain Shrublands Inland Floodplain Swamps Inland Floodplain Woodlands Inland Riverine Forests Inland Rocky Hill Woodlands Inland Saline Lakes Montane Bogs and Fens New England Dry Sclerophyll Forests New England Grassy Woodlands </div>			
<input type="button" value="ADD ANOTHER PCT"/> <input type="button" value="IMPORT SITE"/>			
#	Import		
1	<input type="button" value="Import"/>		

5. Use the 'Plant community type' drop-down to select the required PCT. The PCTs available will be filtered to those associated with the class if a class was selected in step 4.

Plant community type *	PCT % cleared	Associated TEC *	BC Act listing status	EPBC Act listing status	Action	Delete
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="ADD VEG ZONE"/>	<input type="button" value="X"/>
<div style="border: 1px solid #ccc; padding: 5px; width: fit-content;"> 24 - Canegrass swamp tall grassland wetland of drainage depressions, lakes and pans of the inland plains 25 - Lignum shrubland wetland on floodplains and depressions of the Mulga Lands Bioregion, Channel Country Bioregion in the arid and semi-arid (hot) climate zones 27 - Weeping Myall open woodland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion 31 - Brigalow - Gidgee open woodland on clay plains west of the Culgoa River, Mulga Lands Bioregion 35 - Brigalow - Belah open forest / woodland on alluvium often gilgaied clay from Pilliga Scrub to Goondiwindi, Brigalow Belt South Bioregion 36 - River Red Gum tall to very tall open forest / woodland wetland on rivers on floodplains mainly in the Darling Riverine Plains Bioregion 37 - Black Box woodland wetland on NSW central and northern floodplains including the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion. 38 - Black Box low woodland wetland lining ephemeral watercourses or fringing lakes and clay pans of semi-arid (hot) and arid zones 39 - Coolabah - River Coobah - Lignum woodland wetland of frequently flooded floodplains mainly in the Darling Riverine Plains Bioregion 40 - Coolabah open woodland wetland with chenopod/grassy ground cover on grey and brown clay floodplains 43 - Mitchell Grass grassland - chenopod low open shrubland on floodplains in the semi-arid (hot) and arid zones 45 - Plains Grass grassland on alluvium mainly clay soils in the Riverina Bioregion and NSW South Western Slopes Bioregion 49 - Partly derived Windmill Grass - copperburr alluvial plains shrubby grassland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion 50 - Couch Grass grassland wetland on river banks and floodplains of inland river systems 52 - Queensland Bluegrass +/- Mitchell Grass grassland on cracking clay floodplains and alluvial plains mainly the northern-eastern Darling Riverine Plains Bioregion 53 - Shallow freshwater wetland sedgeland in depressions on floodplains on inland alluvial plains and floodplains 54 - Buloke - White Cypress Pine woodland in the NSW South Western Slopes Bioregion 55 - Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions. 56 - Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW </div>						

6. The % cleared value for the PCT will be displayed under 'PCT % cleared'. The % cleared value is an estimate of the extent to which a PCT has been cleared since European settlement and is used when assigning a non-threatened PCT to an OTG.

PCT % cleared
90

Tip

- Detailed information on each PCT and its geographic distribution is available as a downloadable and refreshable Power Query from [**NSW BioNet Resources**](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/resources) (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/resources>) (see [Appendix B](#)), ‘BioNet Vegetation Classification’ > ‘Power Queries’ > ‘Plant Community Type data’.
- Refer to the [**Offset rules and ecosystem credits**](https://www.environment.nsw.gov.au/publications/offset-rules-and-ecosystem-credits-guidance) (<https://www.environment.nsw.gov.au/publications/offset-rules-and-ecosystem-credits-guidance>) guidance for more information on % cleared and OTGs (see [Appendix B](#)).

7. Use the ‘Associated TEC’ drop-down to select the relevant TEC. If no TEC is associated with the PCT, select ‘Not a TEC’.

Associated TEC *	BC Act listing status	EPBC Act listing status	Action
Not a TEC			ADD VEG Z
White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NS White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland			Not a TEC

i Tip

- Only TECs associated with the selected PCT (in BioNet) are shown in the drop-down. Where a TEC is present at the site but is unavailable in the drop-down list, it may be because the TEC is not associated with the IBRA region and IBRA subregion chosen.
- A detailed description of each TEC is available through the [**Threatened biodiversity profile search**](https://threatenedspecies.bionet.nsw.gov.au/) (<https://threatenedspecies.bionet.nsw.gov.au/>) app (see [Appendix B](#)).
- Detailed information on the PCT to TEC associations and the applicable subregions is available as a downloadable and refreshable Power Query from the [**NSW BioNet Resources**](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/resources) (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/resources>) webpage (see [Appendix B](#)). ‘BioNet Vegetation Classification’ > ‘Power queries’ > ‘Threatened Ecological Community to Plant Community Types (PCT) Association data’.
- To request a review of a TEC association, contact the BOS Help Desk.

8. The state and Commonwealth listing status of a TEC will be displayed under the ‘BC Act listing status’ and ‘EPBC Act listing status’ headings, respectively.

BC Act listing status	EPBC Act listing status
Critically Endangered Ecological Community	Not Listed

9. Click ‘Add veg zone’.

ADD VEG ZONE

10. A vegetation zone record will be added to the following sections:

- ‘Vegetation zones (Current vegetation integrity score)’
- ‘Vegetation zones (Future vegetation integrity score, without management)’
- ‘Vegetation zones (Future vegetation integrity score, with management)’.

Vegetation zones [Current vegetation integrity (VI) score]														
#	Import	PCT code	Condition class *	Vegetation zone name	Patch Size*	Area (ha) *	High risk lands	Location *	Composition condition score	Structure condition score	Function condition score	Current VI score	Management zones	Delete
1		2079	▼ Test	2079_Test	1	1	<input type="checkbox"/>		95.4	19.4	52.5	46		
2		3314	▼ Test	3314_Test	1	1	<input type="checkbox"/>		80.6	14.9	53	39.9		

Vegetation zones [Future vegetation integrity (VI) score, without management]													
#	PCT code	Condition class	Vegetation zone name	Patch Size	Area (ha)	Composition condition score	Structure condition score	Function condition score	VI score	Total change in VI score			
1	2079	Test	2079_Test	1	1	94.3	18.6	52.3	45.1	-0.9			
2	3314	Test	3314_Test	1	1	77.4	14.3	52.7	38.8	-1.1			

Vegetation zones [Future vegetation integrity (VI) score, with management]															
#	PCT code	Condition class	Vegetation zone name	Patch Size	Management zone	Area (ha)	High Threat Weed Cover	Composition condition score	Structure condition score	Function condition score	VI score	CL or conservation obligation	Security Benefit Score	Change in VI score	Total VI Gain
1	2079	Test	2079_Test	1		1	<input type="checkbox"/> 5	97.9	44.4	62	64.6	<input type="checkbox"/>	0	19.5	19.5
2	3314	Test	3314_Test	1		1	<input type="checkbox"/> 5	88.7	28.3	63.6	54.2	<input type="checkbox"/>	0	15.5	15.5

CLEAR **NEXT**

i Tip

- Adding a unique condition class name to each vegetation zone will help you distinguish the vegetation zones throughout the assessment, especially when both a TEC and non-TEC have been identified on site for the same PCT.

11. For PCTs with multiple vegetation zones, click ‘Add veg zone’ beside the applicable PCT to add another vegetation zone.

Plant community types (PCT) & ecological communities							
Formation *	Class *	Plant community type *	PCT % cleared	Associated TEC *	BC Act listing status	EPBC Act listing status	Action
Grassy Woodlands	Western Slopes Grassy Woodlands	266 - White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion	94	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland	Critically Endangered Ecological Community	Not Listed	ADD VEG ZONE <small>Modify default... cancel</small>

12. A zone number will be generated for each vegetation zone and the relevant PCT number for each record displayed.

#	Import	PCT code
1		303: ▼
2		302 ▼

13. Click 'Add another PCT' (if required) and repeat the above steps for additional PCTs.

ADD ANOTHER PCT

14. If the required PCT is missing from the PCT list, click 'Search PCT outside IBRA', enter the name or PCT number to search, and then select the PCT. Repeat the above steps for adding vegetation zones.

ADD ANOTHER PCT	SEARCH PCT OUTSIDE IBRA	PCT name or ID	Cancel
-----------------	-------------------------	----------------	--------

i Tip

- You can only add PCTs that are associated with the selected IBRA region when you use the 'Add Another PCT' button.
- With the 'Search PCT outside IBRA' button you can add any approved PCT, not only those associated with the selected IBRA region.
- Some PCTs have no (or incomplete) benchmarks in Veg-C. For these PCTs, an error will be displayed, and the PCT cannot be used in the assessment.

15. To delete a PCT or a vegetation zone click the button on the right under 'Delete'.

Plant community types (PCT) & ecological communities							
Formation *	Class *	Plant community type *	PCT % cleared	Associated TEC *	BC Act listing status	EPBC Act listing status	Action
Semi-arid Woodlands (Grassy sub-formation)	Riverine Plain Woodlands	27 - Weeping Myall open woodland of the Darling Riverine	86	Weeping Myall Woodlands	Not Listed	Endangered	ADD VEG ZONE  Modify default benchmarks

i Tip

- Vegetation zone and site data can be imported into the BAM-C in CSV file format (see Subsection 7.3.2) or added manually (see Subsection 7.3.3). See below for instructions.

7.3.2 Import vegetation zones

1. To import vegetation zone data, click the import icon beside the vegetation zone.



2. Download the CSV template by selecting 'this template file' in the import pop-up and an excel import data template will become available.

Import data

Use this tool to bulk import plot data for this vegetation zone

You should use [this template file](#) to construct your data and then copy and paste it here

Important: The template modified in version 1.2.4.00. Download latest template before preparing your data. If you already prepared your data, copy the values to the new template to verify before import.

Copy all text, including rows 1 and 2 of the template, and paste here

CLEAR PLOTS **IMPORT**

import_template (4).xlsx ^

3. Open and populate the template with observation values and save the template:

- row 1 of the template is reserved for headers
- row 2 of the template is reserved for example data
- users must enter plot data into the template from row 3 onwards. Data for additional plots (for the same vegetation zone) can be imported by adding plot data to rows 4 onwards.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1 plot	pct	area	patchsize	conditionclass	zone	easting	northing	bearing	compTree	compShrub	compGrass	compForb	compFern	compOther	structTree
2 Text[Maximum 10	Number	Number with 2 decimal	Number	Text[Letters, number [54 or 55 or 56]		Range in [Number	Number	Number	Number	Number	Number	Number	Number	Number	Number
3 1	3032	1.10	145 ModCondition	56	475315	6678416.0	45	12	7	2	1	1	1	1	56.0
4 2	3032	0.30	145 GoodCondition	56	475316	6678414.0	40	10	4	2	0	1	0	1	46.0

4. Select and copy all column headings in rows 1 and 2 and the data from row 3 (and onwards if there is more than one plot). Make sure that no blank columns or rows are selected.

U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
1 strucOther	funLargeTree	funHollow	funLitterC	funLenFall	funTreeSt	funTreeSt	funTreeSt	funTreeSt	funTreeSt	funTreeRe	funHighThreat	exotic
2 Number	Number	Number	Number	Number	[0,1]	[0,1]	[0,1]	[0,1]	[0,1]	[0,1]	Number with 1 decimal	
3 0.0	2	0	50.0	55.0	0	0	1	1	0	1	2.0	
4 0.0	1	2	75.0	22.0	0	1	1	0	0	1	9.0	
5												

5. Click the import icon to reopen the ‘Import data’ pop-up (if not already open).



6. Paste the copied data from the template into the ‘Import data’ pop-up and click ‘Import’.

Import data

Use this tool to bulk import plot data for this vegetation zone

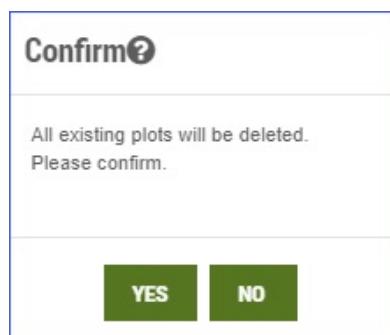
You should use [this template file](#) to construct your data and then copy and paste it here

Important: The template modified in version 1.2.4.00. Download latest template before preparing your data. If you already prepared your data, copy the values to the new template to verify before import.

plot	pct	area	patchsize	conditionclass	zone	easting	northing	bearing	compTree	compShrub	compGrass	compForbs	compFerns									
compOther	strucTree	strucShrub	strucGrass	strucForbs	strucFerns	strucOther	funLargeTrees	funHollowtrees	funLitterCover	funTreeRegen	funHighThreatExotic											
Text[Maximum 10 characters]	Number	Number with 2 decimal point	Number	Text[Letters, numbers, underscores and hyphens]	Please fill condition-class name in all plots [Maximum 20 characters]	[54 or 55 or 56]	Range in [0-359]	Number	Number	Number	Number											
Number	Number	Number with 1 decimal point	Number with 1 decimal point	Number with 1 decimal point	Number with 1 decimal point	Number with 1 decimal point	Number with 1 decimal point	Number with 1 decimal point	Number with 1 decimal point	Number with 1 decimal point	Number with 1 decimal point	[0,1]	[0,1]									
[0,1]	[0,1]	[0,1]	[0,1]	Number with 1 decimal point																		
1	3032	1.10	145	ModCondition	56	475315	6678416.0	45	12	7	2	1	1	56.0	20.0	8.0	1.0	2.0	1.0	5	3	35.0

CLEAR PLOTS **IMPORT**

7. A pop-up will open asking you to confirm that all existing plots will be deleted. Click ‘Yes’ to delete any previous plot data or ‘No’ to cancel and retain the existing plot data.



8. If the import was unsuccessful or only partially successful, the ‘Import data’ pop-up will display an error message. Correct the error(s) in the CSV file, then copy and paste the corrected data, and re-import.

Import data

Use this tool to bulk import plot data for this vegetation zone

You should use [this template file](#) to construct your data and then copy and paste it here

Important: The template modified in version 1.2.4.00. Download latest template before preparing your data. If you already prepared your data, copy the values to the new template to verify before import.

plot	pct	area	patchsize	conditionclass	zone	easting	northing	bearing	compTree	compShrub	compGrass	compForbs	compFerns										
compOther	strucTree	strucShrub	strucGrass	strucForbs	strucFerns	strucOther	funLargeTrees	funHollowtrees	funLitterCover	funTreeRegen	funHighThreatExotic												
Text[Maximum 10 characters]	Number	Number with 2 decimal point	Number	Text[Letters, numbers, underscores and hyphens]	Please fill condition-class name in all plots [Maximum 20 characters]	[54 or 55 or 56]	Range in [0-359]	Number	Number	Number	Number												
Number	Number	Number	Number	Number	Number	Number with 1 decimal point	[0,1]	[0,1]															
[0,1]	[0,1]	[0,1]	[0,1]	Number with 1 decimal point																			
1	3032	1.10	145	Mod Condition	56	475315	6678416.0	45	12	7	2	1	1	56.0	20.0	8.0	1.0	2.0	1.0	5	3	35.0	
61.0	1	1	0	1	1	3.0																	
2	3032	0.30	145	ModCondition	56	475316	6678414.0	40	10	4	2	0	1	0	46.0	22.0	5.0	1.0	3.0	1.0	4	2	20.0
41.0	1	0	1	1	1	2.0																	

Invalid data found in the file. Row #2 of the template provides the expected data types and value ranges. Please verify your import data.

Column 'conditionclass' should only contain letters, numbers, underscores and hyphens

CLEAR PLOTS **IMPORT**

9. Click ‘Close’.



CLOSE

10. The data will be imported into the relevant condition score pop-up fields and the scores will be calculated automatically. The condition score fields for each attribute will change from showing no score (indicated by an ellipsis) to a numeric score value.

Composition condition score	Structure condition score	Function condition score
		

Zone composition data								RECALCULATE	OK							
Composition condition score: 50.9																
Plots Calculation results																
#	Import	PCT code	Condition class *	Vegetation zone name	Patch Size	Item	Tree ^	Shrub ^	Grass & grass like ^	Forb ^	Fern ^	Other ^	current vegetation integrity	Management core	Management zones	Delete
1		303	ModCc	3032_Mod Condition	145	0.3										
2		302	Classn	3021_Clas sname1	0											

Tip

- If assessing a non-woody PCT, do not specify any values for function attributes other than HTW cover in the CSV import file.
- When copying the data from the template, ensure no extra columns are selected or an error will occur.
- The import template will not create management zones or detect all types of high risk lands. If the import template is used, ensure these fields are manually completed if relevant.

11. To clear imported data, click the ‘Import’ icon to reopen the ‘Import’ pop-up.



12. Click ‘Clear plots’.



CLEAR PLOTS

13. All imported data will be cleared and the condition score fields will revert to displaying no score (...).

Composition condition score	Structure condition score	Function condition score
...

14. The above process can be performed for all zones at the site (rather than on a zone-by-zone basis) using the ‘Import site’ button and following the same process outlined in steps 1–12 above.



15. Individual zones can be removed by clicking the button on the right under ‘Delete’.

#	Import	PCT code	Condition class *	Vegetation zone name	Patch Size*	Area (ha)*	Location *	Composition condition score	Structure condition score	Function condition score	Current vegetation integrity score	Management zones	Delete
1		303.		3032_Mod Condition	145	0.3		50.9	33.6	85	52.6		

7.3.3 Manually enter vegetation zone data

This section describes how to manually enter the vegetation zone data into the BAM-C to calculate the current VI score.

1. The ‘PCT code’ field is populated automatically when the ‘Add veg zone’ is clicked.

#	Import	PCT code	Condition class *	Vegetation zone name	Patch Size*	Area (ha)*	Location *	Composition condition score	Structure condition score	Function condition score	Current vegetation integrity score	Management zones	Delete
1		303.		3032_Cl assname	0	 			

2. Select ‘Condition class’ and enter a condition class label for the zone. The name must not include spaces, but hyphens or underscores can be used as an alternative (for example, do not enter ‘Mod TEC’, instead use ‘Mod-TEC’ or ‘Mod_TEC’).

Condition class *

Tip

- Zone condition class is solely a label to help identify the zone and does not influence VI or credit calculations.

3. A vegetation zone name will be generated automatically based on the condition class and PCT code and displays under the ‘Vegetation zone name’ heading.

Vegetation zone name
1300_Good

4. Select ‘Patch Size’ and enter the relevant patch size area (in hectares) for the zone.

Patch Size *
20

Tip

- The patch size value is used to filter the list of fauna species presented in the predicted and candidate species tabs. Refer to the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Subsection 4.3.2 for more information on patch size.
- Making changes to the ‘patch size’ value may affect data in the ‘Habitat suitability’, ‘Habitat survey’, ‘Credits’ and ‘Credit classes’ tabs.

5. Enter the area for the vegetation zone in the ‘Area (ha)’ field.

Area (ha)
10

6. The BAM-C will automatically select ‘High risk lands’ if the site is located in an NSW (Mitchell) landscape that is $\geq 30\%$ cleared, or the native vegetation is listed as an endangered or critically endangered community. However, you can also tick the ‘High risk lands’ checkbox if the site meets other criteria identified in BAM 2020, Subsection 11.4.1(6a-f).

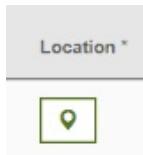


Tip

- The area of a vegetation zone will determine the number of plots required. Refer to the **BAM 2020** ([https://www.environment.nsw.gov.au/research-and-publications/search/biodiversity-assessment-method-2020](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020)), Subsection 4.3.4 (Table 3). The BAM-C automatically adds the number of plots required based on the ‘Area (ha)’ entered.
- Ensure there is at least one vegetation zone for each PCT. Use the scroll bar to the right of the vegetation zone list to confirm each PCT has a vegetation zone.

- The minimum vegetation zone ‘Area (ha)’ is 0.01 ha. If a zone is smaller than 0.01 ha, the BAM-C will automatically round-up the area to 0.01 ha (values of 0.005–0.009 ha will be rounded up). If the area is less than 0.005 ha, consider adding the area to another vegetation zone.
- The ‘Patch size’ should be equal to or greater than the ‘Area (ha)’ size (when the total ‘Area’ of the vegetation zone represents native vegetation).

7. Click the ‘Location’ icon and add plot location details.



Location

Item	Zone *	Easting *	Northing *	Bearing *
Plot 1	56	475315	6678416	45

ADD PLOT **OK**

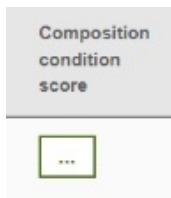
8. If additional plots are required, click ‘Add plot’. Once the required plot data has been added click ‘OK’. Note that adding a plot to the ‘Location’ field will also add a plot to the ‘Composition’, ‘Structure’ and ‘Function’ condition score fields.

Location

Item	Zone *	Easting *	Northing *	Bearing *
Plot 1	56	475315	6678416	45
Plot 2	56	475317	6678420	125

ADD PLOT **OK**

9. Select ‘Composition condition score’ and enter composition data.



Zone composition data

Composition condition score: 35.4

Plots Calculation results

Item	Tree *	Shrub *	Grass & grass like *	Forb *	Fern *	Other *
Plot 1	7	2	4	1	1	0
Plot 2	8	0	2	1	3	1

3032_goo
nd 145 0.2 35.4 ...

10. Click 'Recalculate' to update calculation of the composition score for the zone, or 'OK' to update and close the composition score pop-up.

RECALCULATE

11. Select the 'Calculation results' tab on the 'Zone composition data' pop-up to see the underlying data used to calculate the score.

12. Click 'OK'.

Zone composition data

Composition condition score: 45.9

Plots **Calculation results**

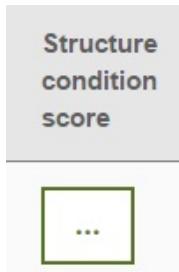
Item	Tree	Shrub	Grass & grass like	Forb	Fern	Other
Benchmark	2	6	7	10	0	1
Observed mean (\bar{x})	3	3	3	3	3	3
Unweighted composition score (UCS_i)	100	59.1	45.5	22	0	100
Weighted composition score (WCS_i)	7.7	13.6	12.2	8.5	0	3.8
Dynamic weighting (w_i)	0.08	0.23	0.27	0.38	0	0.04

i Tip

- The following calculations are shown in the zone:

- Benchmarks – these values indicate benchmark reference values for the vegetation class/IBRA combination of the zone.
- Observed mean – this is the average of observed values entered for all plots for a specific growth form group.
- Unweighted composition score – BAM-C calculates and displays the unweighted condition score for the relevant growth form group. This calculation converts observed mean values to continuous unweighted condition scores using a Weibull (continuous probability) distribution.
- Weighted composition score – BAM-C calculates and displays the weighted condition score for the relevant growth form group. This calculation applies a dynamic weighting based on the proportional contribution of each growth form group benchmark function to the benchmark total function (sum of benchmark function across all growth form groups).
- Dynamic weighting – BAM-C calculates and displays a dynamic weighting based on the proportional contribution of each growth form group benchmark condition attribute to the benchmark total condition (sum of benchmark condition attributes across all growth form groups).
- Weightings for structure and function are calculated using a similar approach. For further information on these weightings and calculations refer to Appendix H of the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>).
- For further information on determining the VI score refer to Appendix H of the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>).

13. Select ‘Structure condition score’ to open the pop-up and repeat steps 9–12 to calculate the structure score.



Zone structure data

Structure condition score: 52.8

RECALCULATE OK

Plots Calculation results

Item	Tree*	Shrub*	Grass & grass like*	Forb*	Fern*	Other*
Plot 1	87	23	10	2	3	0
Plot 2	56	34	12	1	2	1

32_... 145 0.2 35.4 52.8 ...

i Tip

- The same calculations as those described for composition are performed for structure (see [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Appendix H).

14. Select 'Function condition score' to open the pop-up and repeat steps 9–12 to calculate the function score.

Function condition score

...

Zone function data

Function condition score: 71.9

RECALCULATE OK

Plots Calculation results

Item	Tree regeneration diameter *	Stem classes					Number of large trees* (>50cm DBHOB)	Hollow bearing trees*	Litter cover*	fall
		5-9	10-19	20-29	30-49	50-79				
Plot 1	Abse	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	3	32		
Plot 2	Prese	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5	3	44		

303. good 3032_... 145 0.2 35.4 52.8 71.9

15. Select the 'Calculation results' tab to see the underlying data used to calculate the score.

Zone function data

[RECALCULATE](#)
[OK](#)

Function condition score: 38.8

[Plots](#)
[Calculation results](#)

Item	Number of large trees	Litter cover	Length of fallen logs	Stem size class	Tree regeneration <5cm diameter	High threat weed cover
Benchmark	6	81	51	4	Present	
Observed mean (\bar{x})	4	32	9	1	0	9
Weighted function score (WFS _i)	29.5	5.9	1.3	2.2	0	
Weighting (w _i)	0.35	0.15	0.2	0.15	0.15	

i Tip

- Some fields in the function tab will be restricted based on the PCT selected. For example, for grassland PCTs the fields relating to trees will be greyed out.
- Weightings for function are static rather than dynamic, as defined in BAM 2020, Appendix H.3.
- Unwanted plot(s) can be removed by deleting them in the ‘Location’ pop-up. If you delete a plot, the applicable plot data will also be deleted from the composition, structure and function fields.

16. After completing the composition, structure and function calculations, the current VI score will be displayed.



7.3.4 Calculate vegetation integrity for sites with multiple management zones (optional)

Management zones can be added to an assessment to identify areas of a vegetation zone that will have different levels or types of management.

- To add a management zone to the assessment, click the icon under ‘Management zones’.

Composition condition score	Structure condition score	Function condition score	Current vegetation integrity score	Management zones	Delete
35.4	52.8	71.9	51.2		
74.5	17.9	...	36.6		

2. The 'Area' value is automatically populated based on the area of the vegetation zone. Add a name, then click 'Add zone' and then 'OK'.

Management Zones

Add a new management zone with area to match vegetation zone area.

Name *:	Area *:	ADD ZONE
APZ	1.9	

Total vegetation area size = 1.9 ha

Name *	Area (ha) *	Remove
APZ	1.9	

Use 'Add Zone' to create a new management zone.

45.9 **100** **49.3** 60.9

3. The sum of the areas of all management zones in a vegetation zone must equal the 'Area (ha)' field value for the vegetation zone. If you add a second management zone, enter another name and the area, then correct the area entered for the first management zone so the sum of both management zones is equal to the area of the vegetation zone. Click 'Add zone', and then 'OK'.

Management Zones

Add a new management zone with area to match vegetation zone area.

Name *:	Area *:	ADD ZONE
Total Clr	0.5	

Total vegetation area size = 1.9 ha

Name *	Area (ha) *	Remove
APZ	1.4	

Management Zones

Name *: Management zone name Area *: 0 ADD ZONE

Total vegetation area size = 1.9 ha

Name *	Area (ha) *	Remove
APZ	1.4	X
Total Clr	0.5	X

4. The management zones are displayed in the ‘Vegetation zones (Future vegetation integrity (VI) score, with management)’ section. The composition, structure and function scores can then be modified based on the management differences, for example, with and without active restoration.

Vegetation zones (Future vegetation integrity score)												
#	PCT code	Condition class	Vegetation zone name	Patch Size	Management zone	Area (ha)	Composition condition score	Structure condition score	Function condition score	Vegetation integrity (VI) score	Change in VI score	Total VI loss
1	3032	good	3032_goo d	145	APZ	1.4	0	0	0	0	-51.2	-51.2
					Total Clr	0.5	0	0	0	0	-51.2	

7.3.5 Calculate the future vegetation integrity score, without management

In the ‘Vegetation zones (Future vegetation integrity score, without management)’ section, ‘Composition condition score’, ‘Structure condition score’, ‘Function condition score’ and ‘VI score’ will populate automatically. The calculation of these values is dependent on the annual rates of decline for the VI attributes, the presence of HTW, and the risk category of the land.

Refer to the **Biodiversity Assessment Method 2020 Operational Manual – Stage 3** (<https://www.environment.nsw.gov.au/publications/biodiversity-assessment-method-2020-operational-manual-stage-3>), Subsection 2.2.1 for more information on averted loss, and the homepage of the BAM-C for the intrinsic rates of increase and annual rate of decline (see **Appendix B**).

Welcome to the Biodiversity Assessment Calculator

The 'OEH BAM Calculator' is an online application of the Biodiversity Assessment Method (BAM). The calculator uses the rules and calculations outlined in the BAM, and allows the user to apply the BAM at a site and observe the results of the assessment.

The BAM and the calculator provides:

- a consistent method for the assessment of the impact on biodiversity on a proposed development or major project, or clearing site
- a scientific and repeatable calculation of how the biodiversity impacts need to be offset for biodiversity impacts (quantified as biodiversity credits) as required to achieve a standard of 'no net loss' of biodiversity
- a consistent method for the assessment of the biodiversity values of a stewardship site and how those values will change under conservation management

Biodiversity Assessment Calculator

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1. In some instances, the composition score can be modified when HTW are present. For more information, refer to the '[Annual rate of decline](#)' tab within the [Rates of increase/rates of decline document on the homepage of the BAM-C](#) (<https://bamcalc.lmbc.nsw.gov.au/>).

	A	B	C	D	E
Composition	Shrub richness	0.3	0.15		
	Grass and grass-like richness	0.3	0.15	Rate can be doubled if high threat exotic vegetation is present in the vegetation zone	
	Forb richness	0.3	0.15	Rate can be doubled if high threat exotic vegetation is present in the vegetation zone	
	Fern richness	0.3	0.15		
	Other richness	0.3	0.15		
Structure	Tree cover	0.5	0.25		
	Shrub cover	0.3	0.15		
	Grass and grass-like cover	0.3	0.15	Rate can be doubled if high threat exotic vegetation is present in the vegetation zone,	
	Forb cover	0.3	0.15	Rate can be doubled if high threat exotic vegetation is present in the vegetation zone	

2. Select the 'Composition condition score' to modify the default composition condition rate of decline.



3. To modify the default rate of decline, click ‘Modify default rate of decline’. Data input fields under the default rate of decline row will be displayed.

Click ‘Unlock’, enter the required modified rate of decline, and then click ‘Update’ to set the new rate of decline.

Zone composition data						
Composition condition score: 29.5						
PCT code	Condition class	Item	Tree	Shrub	Grass & grass like	Forb
138		Rate of decline (% per annum)	0.3	0.3	0.6	0.6
Modify default rate of decline						
Future value without offset						
Future condition without offset						
Weighted condition without offset						
Classname1		1387_Classname1	145	1.9	29.5	21.1
					40.3	29.3

i Tip

- You can vary the annual rate of decline for an attribute in circumstances defined in the Intrinsic rates of increase/annual rate of decline table provided in the BAM-C ‘Information’ tab. Refer to the (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>)BAM 2020, Section 11.4 for more information.

4. Click ‘Recalculate’ to update the calculations or ‘OK’ to update and close the pop-up.

i Tip

The following calculations are shown in this pop-up:

- Rate of decline: the annual rate of decline for the growth form group. See **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Chapter 11.
- The BAM-C calculates and displays the predicted future condition (composition/structure/function) value for the growth form group. This calculation reapplys the logistic growth curve (Weibull curve) and the dynamic weighting approach to the attribute value without management to determine the future predicted condition score for composition, structure and function.
- See **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Appendix H, Equations 28–30. These equations are used to calculate the future VI score without management.

5. In some instances, the structure score may be modified when HTW are present. For more information, refer to the **‘Annual rate of decline’ tab within the Rates of increase/rates of decline document on the homepage of the BAM-C.** (<https://bamcalc.lmbc.nsw.gov.au/>)

To modify the default structure condition rate of decline, select the ‘Structure condition score’.

Structure condition score
26.2

6. Click 'Modify default rate of decline'.

Data input fields under the default 'Rate of decline' row will be displayed.

Click 'Unlock', enter the modified rate of decline, and then click 'Update' to confirm the new rate of decline.

SEARCH PCT OUTSIDE TORA	Zone structure data												
Structure condition score: 21.1													
PCT code	Condition class *	Vegetation zone name	Item	Tree	Shrub	Grass & grass like	Forb	Fern	Other				
138	Classname1	1387_Classname1	Rate of decline (% per annum)	0.5	0.3	0.6	0.6	0.3	0.3				
<input type="button" value="Modify default rate of decline"/> <input type="button" value="Unlock"/> <input type="button" value="Update"/> <input type="button" value="Cancel"/>								Current VI score					
Future value without offset								8.1	8.5	8	8	8.5	8.5
Future condition without offset								3.4	40.7	16.8	100	100	100
Weighted condition without offset								1.7	7.1	4.2	5.8	0.8	1.7
Condition class		Vegetation zone name	Classname1	1387_Classname1	145	1.9	29.5	21.1	40.3	29.3			

7. Click 'Recalculate' to update the calculations, or 'OK' to update and close the pop-up.

8. To modify the default rate of decline for function condition select 'Function condition score'.

Function condition score
69.3

9. Click 'Modify default rate of decline'. Data input fields under the default rate of decline row will be displayed.

Click 'Unlock', enter the required modified rate of decline, and click 'Update' to confirm the new rate of decline.

Vegetation integrity (VI) score, without management	Zone function data											
Function condition score: 40.3												
Vegetation zone name	Patch Size*	Item	Number of large trees	Litter cover	Length of fallen logs	Tree regeneration <5cm diameter	Stem diversity					
1387_Classname1	145	Rate of decline (% per annum)	1	0.3	0.5	0.3	0.3					
<input type="button" value="Modify default rate of decline"/> <input type="button" value="Unlock"/> <input type="button" value="Update"/>												
Future value without offset								1.6	1.9	1.8	0.9	0.9
Future condition without offset								67.1	0.1	0.1	99.3	12.7
Weighted condition without offset								23.5	0	0	14.9	1.9
Condition class		Patch Size	Classname1	145	1.9	29.5	21.1	40.3	29.3			

10. Click ‘Recalculate’ to update the calculations, or ‘OK’ to update and close the pop-up.
11. After completing the composition, structure and function calculations, the future VI score after 20 years without management is calculated and displayed in the ‘VI score’ field. The changes in VI between current and future without management scores (also known as averted loss) will be displayed in the ‘Total change in VI score’ column.

Vegetation zones [Future vegetation integrity (VI) score, without management]										
#	PCT code	Condition class	Vegetation zone name	Patch Size	Area (ha)	Composition condition score	Structure condition score	Function condition score	VI score	Total change in VI score
1	1387	Classname1	1387_Classname1	145	1.9	29.5	21.1	40.3	29.3	-4

7.3.6 Calculate the future vegetation integrity score, with management

In the ‘Vegetation zones (Future vegetation integrity score, with management)’ section, the ‘composition condition score’, ‘structure condition score’ and ‘function condition score’ will be calculated automatically and displayed. These can be modified, where appropriate, if active restoration is being undertaken.

The ‘Security Benefit Score’ and ‘VI score’ will also be calculated and displayed but cannot be modified. The ‘High Threat Weed Cover’ and ‘CL or conservation obligation’ fields are editable.

Vegetation zones [Future vegetation integrity (VI) score, with management]														
#	PCT code	Condition class	Vegetation zone name	Patch Size	Management zone	Area (ha)	High Threat Weed Cover <input type="checkbox"/>	Composition condition score	Structure condition score	Function condition score	CL or conservation obligation	Security Benefit Score	Change in VI score	Total VI Gain
1	1387	Classname1	1387_Classname1	145		1.9	<input type="text" value="12"/>	40.9	41.8	51.4	<input type="checkbox"/>	0	15.2	15.2

The current list of HTW is published on the homepage of the BAM-C as a BioNet Power Query export from the BioNet Species Names database.

1. Assessment details 2. Site context 3. Vegetation 4. Habitat suitability: Predicted 5. Habitat suitability: Candidate 6. Habitat survey 7. Credits 8. Credit classes

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Additional information on the BAM data

Benchmark values for Plant Community Types

The benchmark data in the BAM Calculator have been prepared for more than 650 bioregional vegetation classes. Bioregional vegetation classes are an amalgamation of IBRA regions and Keith Vegetation Classes.

Benchmarks describe the reference state to which sites are compared to assess the biodiversity values of native vegetation and threatened species habitat. The reference state relates to best-on-offer sites which are those sites within the contemporary landscape with higher numbers of native plant species, greater structural complexity and replete with functional components, relative to other sites of the same vegetation type.

Richness and foliage cover benchmarks have been created by modelling data from more than 36,000 full-floristic 0.04 ha plots (approximately 1.25 million records) and represent the 75th percentile of the data distributions for richness and cover of trees, shrubs, grasses & grass-like, forbs ferns and other growth forms. They assume average prior rainfall

Biodiversity Assessment Method Calculator User Guide

Biodiversity Assessment Method (BAM) Calculator User guide

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Version 1.1 Benchmarks – archived data

High threat weeds list

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Each HTW is categorised as either 'manageable' or 'not manageable', and this categorisation is displayed in the BioNet Power Query.

F	G	H	I
Current Scientific Name Code	Current Scientific Name	Current Vernacular Name	High Threat Weed
11940	Acacia nilotica	Gum Arabic Tree	High Threat Weed - not manageable
1014	Acer negundo	Box Elder	High Threat Weed - manageable
5263	Acetosa sagittata	Rambling Dock	High Threat Weed - not manageable
5263	Acetosa sagittata	Rambling Dock	High Threat Weed - not manageable
5265	Acetosella vulgaris	Sheep Sorrel	High Threat Weed - not manageable

- Where 'manageable' HTW occur in the vegetation zone and they will be actively managed, as detailed in the management plan, plus there is evidence to support their successful control, the HTW score may be modified to display only the percentage of 'non-manageable' HTW. Refer to [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Appendix G.7.6, and Subsection 2.2.2 of the [Biodiversity Assessment Method Operational Manual – Stage 3 \(<https://www.environment.nsw.gov.au/publications/biodiversity-assessment-method-2020-operational-manual-stage-3>\)](https://www.environment.nsw.gov.au/publications/biodiversity-assessment-method-2020-operational-manual-stage-3) for more information:

- Tick the 'High Threat Weed Cover' checkbox, which unlocks the field.

(VI) score, with management]								
Vegetation zone name	Patch Size	Management zone	Area (ha)	High Threat Weed Cover <input checked="" type="checkbox"/>	Composition condition score	Structure condition score	Function condition score	VI score
1387_Classna me1	145		1.9		12	40.9	41.8	51.4 44.5

- b. Edit the HTW value to display the percentage cover of ‘non-manageable’ HTW plus any ‘manageable’ HTW not being actively managed.

(VI) score, with management]								
Vegetation zone name	Patch Size	Management zone	Area (ha)	High Threat Weed Cover <input checked="" type="checkbox"/>	Composition condition score	Structure condition score	Function condition score	VI score
1387_Classna me1	145		1.9	3 %	43.2	45.7	51.4	46.7

If the condition score fields already contain data, these will automatically update based on the revised risk weighting for HTW as outlined in BAM 2020, Equations 35 and 36.

Note, the values contributing to the composition and structure scores should be unlocked and modified to reflect the predicted outcomes of the active management being undertaken. For instructions, refer to the steps below.

- Where active restoration is being undertaken, it may be appropriate to modify the ‘Future value with active restoration gain’ for one or more growth form groups in the zone composition data fields. Refer to [BAM 2020 \(https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Subsection 11.3.2 for more information.

To alter the composition score, select the ‘Composition condition score’ field and click ‘Unlock’ under ‘Future value with active restoration gain’. Data input fields for capturing future value with active restoration gain will become editable. Enter the proposed future value and click ‘Lock’ to update the proposed value.

- Click ‘Recalculate’ to update the calculations, or ‘OK’ to update and close the pop-up.

Zone composition data

Composition condition score: 40.9

Item	Tree	Shrub	Grass & grass like	Forb	Fern	Other
Benchmark	5	9	9	12	1	3
Current value	3	3	3	2	2	2
Future value with offset	3.45	3.45	3.71	2.22	2	2.1
Future value with active restoration gain						
Unlock						
Final Risk Weighting	0.3	0.3	0.3	0.3	0.3	0.3
Future value with offset(After Restoration)	... 86.7	... 36.9	... 42.4	... 7.1	... 100	... 87.6
Future condition with offset (unweighted)	11.1	8.5	9.8	2.2	2.6	6.7
Weighted future condition with offset						
lassname	1387_Clas sname1	145	1.9	12	40.9	41.8
					51.4	44.5
						0
						15.2

Current VI Management zones

33.3	
------	--

Security Benefit Score Change in VI score

-4	-4
----	----

i Tip

- The BAM-C calculates and displays the current mean of observed values of the relevant growth form group over all plots (from the ‘Current vegetation integrity score’ pop-up). Equation 25 or Equation 26 is then used to calculate the future VI score with management.
- See [BAM 2020 \(https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Appendix H: Determining the vegetation integrity score.

4. Where active restoration is being undertaken, it may be appropriate to modify the ‘Future value with active restoration gain’ for one or more growth form groups in the zone structure data fields. Refer to the [BAM 2020 \(https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Subsection 11.3.2 for more information.

To alter the structure score, select the structure condition score and click ‘Unlock’ under ‘Future value with active restoration gain’. Data input fields for specifying future value with active restoration gain will be enabled. Enter the proposed future value and click ‘Lock’ to update the proposed value.

Zone structure data

Structure condition score: 41.8

Item	Tree	Shrub	Grass & grass like	Forb	Fern	Other
Benchmark	60	21	30	7	1	2
Current value	9	9	9	9	9	9
Future value with offset	14	12.3	15	9	9	9
Future value with active restoration gain	<input type="text"/>					
Final Risk Weighting	0.3	0.3	0.3	0.3	0.3	0.3
Future value with offset (After Restoration)
Future condition with offset (unweighted)	12.4	73.5	59.1	100	100	100
Weighted future condition with offset	6.1	12.8	14.7	5.8	0.8	1.7
Patch Size	145	1.9	12	40.9	41.8	51.4
						44.5
						0
						15.2

RECALCULATE **OK**

VI Management zones

Tir

Change in VI score

- Click 'Recalculate' to update the calculations, or 'OK' to update and close the pop-up.
- Where active restoration is being undertaken, it may be appropriate to modify the 'Future value with active restoration gain' for one or more function attributes. Refer to the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Subsection 11.3.2 for more information.

To alter the function score, select the function condition score and click 'Unlock' under 'Future value with active restoration gain'. Data input fields for specifying future value with active restoration gain will be enabled. Enter the proposed future value and click 'Lock' to update the proposed value.

		Zone function data								
		Function condition score: 51.4								
Vegetation zone name	Patch Size*	Number of large trees		Litter cover		Length of fallen logs		Tree regeneration <5cm diameter		Stem diversity
		Benchmark	3	60		62		Present	4	
Current value	2	2		2		1	1			
Future value with offset	2.12	7.36		4.02		1	1.46			
Future value with active restoration gain										
<input type="button" value="Unlock"/>										
Final Risk Weighting	0	0.3		0.3		0.3	0.3			
Future value with offset(After Restoration Gain)			
Future condition with offset (unweighted)	88.3	2.6		0.5		100	33.5			
Weighted future condition with offset	30.9	0.4		0.1		15	5			
Patch Size	Management zone									
45	1.9	<input type="text" value="12"/>	<input type="text" value="40.9"/>	<input type="text" value="41.8"/>	<input style="outline: 2px solid red; border: 1px solid black; padding: 2px; border-radius: 5px; background-color: #ffffcc; color: black; font-weight: bold; font-size: 10pt; text-align: center; width: 40px; height: 20px; margin-right: 10px;" type="text" value="51.4"/>	<input type="text" value="44.5"/>	<input type="text" value="0"/>	15.2	15.2	

- Click 'Recalculate' to update the calculations, or 'OK' to update and close the pop-up.
- After completing the composition, structure and function calculations, the future VI score (with management), security benefit score, change in VI scores between current and future with management, and total gain will be displayed.
- The 'Security Benefit Score' will be applied if the vegetation zone meets the criteria set out in the BAM, Section 11.5, that it:
 - has a current VI score of ≥ 60
 - has a current HTW cover of $\leq 10\%$
 - is not already secured under an existing conservation obligation
 - is not Crown land.

Vegetation zones [Future vegetation integrity (VI) score, with management]														
#	PCT code	Condition class	Vegetation zone name	Patch Size	Management zone	Area (ha)	High Threat Weed Cover <input type="checkbox"/>	Composition condition score	Structure condition score	Function condition score	CL or conservation obligation	Security Benefit Score	Change in VI score	Total VI Gain
1	1387	Classname 1	1387_Clas sname1	145		1.9	<input type="text" value="12"/>	<input type="text" value="40.9"/>	<input type="text" value="41.8"/>	<input style="outline: 2px solid red; border: 1px solid black; padding: 2px; border-radius: 5px; background-color: #ffffcc; color: black; font-weight: bold; font-size: 10pt; text-align: center; width: 40px; height: 20px; margin-right: 10px;" type="text" value="51.4"/>	<input type="text" value="44.5"/>	0	15.2	15.2

- Tick the 'CL [Crown land] or conservation obligation' checkbox if appropriate. Refer to the **BAM 2020 (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>)**, Section 11.9, to identify the types of actions or measures that are applicable.



i Tip

- Definitions relating to existing conservation obligations and management actions:
 - ‘Existing conservation obligation’ does not include management actions that are undertaken voluntarily and are not secured by any legal obligation.
 - ‘Publicly owned land’ means land owned by, or under the control of, the state, the Commonwealth or a public authority under a long-term lease, licence, or other arrangement. It does not include land that is under a perpetual lease, or land that is being managed by a person or a body (other than the state, the Commonwealth, or a public authority).
- See **BAM 2020 (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>)**, Section 11.9.

11. When all required information has been entered, click ‘Next’ to move to Tab 4.

i Tip

- The security benefit score is an addition to the overall gain achieved at a site and is applied to zones in high to very high condition.
- Save your assessment regularly to ensure data is not lost.

Creating a stewardship (for offset sites) assessment

7.4 Habitat suitability: Predicted (Tab 4)

Ecosystem credit species are threatened species whose occurrence can generally be predicted by vegetation surrogates and/or landscape features, or that have a low probability of detection using targeted surveys. The TBDC identifies the threatened species assessed for ecosystem credits and the BAM-C automatically populates the list of ecosystem credit species.

The confirmation of ecosystem credit species is not required for stewardship assessments as their presence/absence has no impact on the number of credits generated.

No action is required for Tab 4.

Tip

- The number and type of ecosystem credit (predicted) species have no impact on the number of credits generated for a stewardship assessment, so there is no need to assess them.
- Remember to click ‘Next’ to progress to Tab 5 so the data from previous tabs flows through to the subsequent tabs and calculations.

Creating a stewardship (for offset sites) assessment

7.5 Habitat suitability: Candidate (Tab 5)

The ‘Habitat suitability: Candidate’ tab is used to confirm the threatened species credit species that may occur on or use the site. Species credit species are those where the likelihood of occurrence of a species or elements of suitable habitat for that species cannot be confidently predicted by vegetation surrogates and landscape features and can be reliably detected by survey. The candidate species list is automatically generated based on criteria in BAM 2020 (Subsection 5.2.1, Step 1).

Unlike development or clearing cases, assessment of candidate species on stewardship sites is optional. Refer to the [BAM 2020 \(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Subsection 5.2.3(1) for more information. Assessors may choose not to assess any candidate species, or only some of the species.

Should you wish to include the assessment of candidate species, the steps are displayed below. If you want to continue the assessment without assessing any candidate species, you still need to click ‘Next’ to ensure the data and calculations from previous tabs flow through to the ‘Credits’ and ‘Credit classes’ tabs.

1. Assessment details		2. Site context		3. Vegetation		4. Habitat suitability: Predicted	
5. Habitat suitability: Candidate		6. Habitat survey		7. Credits		8. Credit classes	
Candidate threatened species (Species credits)							
Species	Habitat constraints	Habitat degraded	Geographic limitations	Species is vagrant	Confirmed candidate species	Sensitivity to gain class	
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	<input checked="" type="checkbox"/> Other <input checked="" type="checkbox"/> As per Important Habitat Map	<input type="checkbox"/>	--	<input type="checkbox"/>	No	High Sensitivity to Gain	
<i>Calyptorhynchus lathami</i> Glossy Black-	<input checked="" type="checkbox"/> Hollow bearing trees <input checked="" type="checkbox"/> Living or	<input type="checkbox"/>	--	<input type="checkbox"/>	No	High Sensitivity to Gain	

- As ‘Next’ was clicked after completion of Tab 4, the ‘Habitat suitability: Candidate’ tab will be open. When reopening an existing assessment, click on Tab 5, to open it.

5. Habitat suitability: Candidate

2. For any candidate species included in the assessment, review the ‘Habitat constraints’, ‘Habitat degraded’, ‘Geographic limitations’ and ‘Species is vagrant’ checkboxes to help determine species unlikely to be at the stewardship site. Refer to **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>), Subsections 5.2.1–5.2.3 for more information.

Candidate threatened species (Species credits)

Species	Habitat constraints	Habitat degraded ⓘ	Geographic limitations	Species is vagrant ⓘ	Confirmed candidate species ⓘ
<i>Acronychia littoralis</i> Scented Acronychia	--	<input type="checkbox"/>	<input checked="" type="checkbox"/> Within 5 km of coast	<input type="checkbox"/>	Yes ▾
<i>Allocasuarina deurgensis</i> Dwarf Heath Casuarina	--	<input type="checkbox"/>	<input checked="" type="checkbox"/> Within 15 km of coast	<input type="checkbox"/>	Yes ▾
<i>Burhinus grallarius</i> Bush Stone-curlew	<input checked="" type="checkbox"/> Fallen/standing dead timber including logs	<input type="checkbox"/>	--	<input type="checkbox"/>	Yes ▾

i Tip

- Further details on habitat constraints (including the ‘other’ category) and geographic limitations can be found on the **BioNet Threatened Biodiversity Profiles** (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/about-bionet-atlas/threatened-biodiversity-profiles>) webpage (see **Appendix B**).

3. The ‘Confirmed candidate species’ default setting for stewardship assessments is ‘No’. For any candidate species that will be assessed for presence at the site, change the ‘Confirmed candidate species’ field to ‘Yes’.

Candidate threatened species (Species credits)						
Species	Habitat constraints	Habitat degraded ⓘ	Geographic limitations	Species is vagrant ⓘ	Confirmed candidate species ⓘ	Sensitivity to gain class
<i>Anthochaera phrygia</i> Regent Honeyeater (Breeding)	<input checked="" type="checkbox"/> Other <input checked="" type="checkbox"/> As per Important Habitat Map	<input type="checkbox"/>	--	<input type="checkbox"/>	No ▾	High Sensitivity Gain
<i>Calyptorhynchus lathami</i> Glossy Black-Cockatoo (Breeding)	<input checked="" type="checkbox"/> Hollow bearing trees <input checked="" type="checkbox"/> Living or dead tree with hollows greater than 15cm diameter and greater than 8m above ground	<input type="checkbox"/>	--	<input type="checkbox"/>	Yes ▾	High Sensitivity Gain
★ <i>Cercartetus nanus</i> Eastern Pygmy-possum	--	<input type="checkbox"/>	--	<input type="checkbox"/>	Yes ▾	High Sensitivity Gain
<i>Chalinolobus dwyeri</i> Large-eared Pied Bat	<input checked="" type="checkbox"/> Cliffs <input checked="" type="checkbox"/> Within two kilometres of coastal areas	<input type="checkbox"/>	--	<input type="checkbox"/>	No ▾	Very High Sensitivity Gain

Note: An asterisk beside a species name indicates the species has been added to the assessment because of a change to a previous tab, for example, a change to PCT(s), % native vegetation cover, or patch size.

i Tip

- For stewardship assessments, the default setting for the ‘Confirmed candidate species’ is ‘No’.
- Confirmed candidate species are assessed for species credits.

4. The ‘Sensitivity to gain class’, ‘BC Act listing status’, and ‘EPBC Act listing status’ will populate automatically.

Sensitivity to gain class	BC Act listing status	EPBC Act listing status
High Sensitivity to Gain	Vulnerable	Not Listed
High Sensitivity to Gain	Vulnerable	Not Listed

5. To include a species credit species not in the BAM-C list, click ‘Search candidate species’ at the bottom of the tab page and enter the species’ name or profile ID. Any matching species will be presented in a list. Select the species’ name and click ‘Add candidate species’.

SEARCH CANDIDATE SPECIES koal
Please choose a species from the list
10616 - **Phascolarctos cinereus (Koala)**

SEARCH CANDIDATE SPECIES 10616 - Phascolarctos cinereus ADD CANDIDATE SPECIES

When a species is added, an ‘X’ will appear to the left of the species’ name, indicating this species has been added by the assessor. This species can be removed by clicking on the ‘X’.

Lathamus discolor Swift Parrot (Breeding)	<input checked="" type="checkbox"/> Other	<input type="checkbox"/>	--
Phascolarctos cinereus Koala	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Presence of koala use trees - refer to Survey Comments field in TBDC	--

6. When all required information has been entered, click ‘Next’ to move to Tab 6.

Creating a stewardship (for offset sites) assessment

7.6 Habitat survey (Tab 6)

The ‘Habitat survey’ tab records whether a candidate credit species is present at the stewardship site (BAM 2020, Subsection 5.2.4 to Section 5.3) and whether its presence/absence was confirmed by survey or expert report.

Unlike development or clearing cases, no risk weighting is applied to stewardship assessments, so these fields are not displayed.

If you are assessing any candidate species, the steps to complete Tab 6 are below. If you are not assessing any candidate species, you still need to click ‘Next’ to ensure the data and calculations from previous tabs flow through to the ‘Credits’ and ‘Credit classes’ tabs.

6. Habitat survey

Candidate threatened species (Species credits)			
Species	Species presence	Survey timetable	Unit of Measure Area or Count
<i>Calyptorhynchus lathami</i> Glossy Black-Cockatoo	Yes (surveyed)	<input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input checked="" type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug	Area (ha) <input type="checkbox"/> 1387_Classname1

- As ‘Next’ was clicked after completion of Tab 5, the ‘Habitat survey’ tab will be open. When reopening an existing assessment, click on Tab 6 to open it.
- The list of candidate species from Tab 5 ‘Habitat suitability: Candidate’ that were confirmed ‘Yes’ as potentially being present are listed in Tab 6.
- The ‘Species presence’ for stewardship sites automatically defaults to ‘N/A’. The drop-down can be changed to reflect the results of survey(s) or advice from an expert report. The options available in the drop-down field are ‘Yes (surveyed)’, ‘Yes (expert report)’, ‘No (surveyed)’ or ‘No (expert report)’.
- For a small number of species, the habitat constraint information in the TBDC refers to an important habitat map. If one of these species is being assessed, and the assessment area is wholly or partially within a mapped layer identified on an important habitat map, the species can be considered present (‘Yes (assumed present)’). If the assessment area does not overlap any mapped layer, the species credit species is considered absent (‘No (surveyed)’).

Species	Species presence	Survey timetable												
<i>Calyptorhynchus lathami</i> Glossy Black-Cockatoo	N/A <input type="checkbox"/> Yes (surveyed) <input type="checkbox"/> Yes (expert report) <input type="checkbox"/> No (surveyed) <input type="checkbox"/> No (expert report)	<table border="1"> <tr> <td>Jan</td><td>Feb</td><td>Mar</td><td>Apr</td></tr> <tr> <td>May</td><td>Jun</td><td>Jul</td><td>Aug</td></tr> <tr> <td>Sep</td><td>Oct</td><td>Nov</td><td>Dec</td></tr> </table>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Jan	Feb	Mar	Apr											
May	Jun	Jul	Aug											
Sep	Oct	Nov	Dec											
<i>Cercartetus nanus</i> Eastern Pygmy-possum	N/A <input type="checkbox"/> Yes (surveyed) <input type="checkbox"/> Yes (expert report) <input type="checkbox"/> No (surveyed) <input type="checkbox"/> No (expert report)	<table border="1"> <tr> <td>Jan</td><td>Feb</td><td>Mar</td><td>Apr</td></tr> <tr> <td>May</td><td>Jun</td><td>Jul</td><td>Aug</td></tr> <tr> <td>Sep</td><td>Oct</td><td>Nov</td><td>Dec</td></tr> </table>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Jan	Feb	Mar	Apr											
May	Jun	Jul	Aug											
Sep	Oct	Nov	Dec											
<i>Phascolarctos</i>	N/A	<input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr												



Tip

- Where ‘Yes (surveyed)’ or ‘Yes (expert report)’ has been selected, the inputs of the ‘Unit of Measure’ and ‘Veg Zone & Value’ columns will be activated.

5. If either ‘Yes (surveyed)’ or ‘No (surveyed)’ is selected, the checkboxes in the ‘Survey timetable’ field are activated. Use these checkboxes to indicate when the survey(s) were undertaken. The survey method must comply with any threatened species survey guides or advice the department has published or provided within the TBDC. In the absence of any guide or advice, use a best-practice method.

Jan	Feb	Mar	Apr
May	Jun	Jul	Aug
<input checked="" type="checkbox"/> Sep	<input checked="" type="checkbox"/> Oct	<input type="checkbox"/> Nov	<input type="checkbox"/> Dec
<input type="checkbox"/> Survey month outside the specified months?			

6. Only survey during a month specified in the BAM-C unless there is a clear justification to survey outside the specified month(s). If the survey was conducted during a month outside the specified month(s), select ‘Survey month outside the specified months’, then use the checkboxes to indicate the month(s) the survey was undertaken.

Jan	<input checked="" type="checkbox"/> Feb	<input type="checkbox"/> Mar	<input type="checkbox"/> Apr
<input type="checkbox"/> May	<input type="checkbox"/> Jun	<input type="checkbox"/> Jul	<input type="checkbox"/> Aug
<input type="checkbox"/> Sep	<input checked="" type="checkbox"/> Oct	<input checked="" type="checkbox"/> Nov	<input type="checkbox"/> Dec
<input checked="" type="checkbox"/> Survey month outside the specified months?			

7. If either ‘Yes (expert report)’ or ‘No (expert report)’ is selected in the ‘Species presence’ field, there is no option to input a survey timetable.

Jan	Feb	Mar	Apr
May	Jun	Jul	Aug
Sep	Oct	Nov	Dec

8. The UoM for each species is displayed but cannot be edited.

9. For each species identified as present, tick the checkboxes under ‘Veg Zone & Value’ for all vegetation zones the species has been identified as being present within.

i Tip

- A species can be identified as present in multiple vegetation zones.

10. Enter the value that quantifies the species’ distribution, noting that the value entered will differ depending on the UoM:

- Where the UoM is ‘Area (ha)’ enter the area of the species polygon. The development of the polygon must comply with any threatened species survey guides or advice that the department has published or provided within the TBDC. In the absence of any guide or advice, use best practice.

Area (ha)	<input checked="" type="checkbox"/> 3032_good * 1.6
	<input type="checkbox"/> 3408_good
	<input checked="" type="checkbox"/> 3032_mod * 1.4
	<input type="checkbox"/> 3032_poor

If the assessment area is within a mapped layer identified on an important habitat map, the species polygon can include up to the entire area of the zone that is mapped on the important habitat map.

- b. Where the UoM is ‘Count’, enter the number of individuals within the species polygon (an individual is defined in the BAM 2020 as ‘a single, mature organism that is a threatened species’).

Count	<input checked="" type="checkbox"/> 3032_good * 12
	<input checked="" type="checkbox"/> 3408_good * 117
	<input type="checkbox"/> 3032_mod
	<input type="checkbox"/> 3032_poor

i Tip

- The minimum area that can be entered in BAM-C is 0.01 ha. If the area is between 0.005 ha and 0.009 ha the BAM-C will round the value up to 0.01 ha.
- Below 0.005 ha, values will be rounded to 0 ha and the assessment will not save. In this scenario either combine the area with another area, or enter the area as 0.01 ha.
- The maximum area that can be entered in BAM-C is the area of the vegetation zone from Tab 3.

11. When you click ‘Next’, an alert will display if any required fields have not been completed.

! Alert
Please correct the errors in the form.
OK

12. Details of any errors will be listed in a message at the top of the page. Click the ‘More details’ box for further details.

Errors!

Please address all the errors in this step. Note: you will not be able to finalise and submit the assessment until the errors are addressed.

[More details...](#)
Candidate threatened species (Species credits)

Species	Species presence	Survey timetable	U A
---------	------------------	------------------	--------

Errors!

Please address all the errors in this step. Note: you will not be able to finalise and submit the assessment until the errors are addressed.

[Less details...](#)

Area required for species 'Senna acclinis' and veg-zone '3408_good'

Select surveyed month(s) in 'Survey timetable' for species 'Hoplocephalus stephensi'

13. When all required information has been entered, click 'Next' to move to Tab 7.

Creating a stewardship (for offset sites) assessment

7.7 Credits (Tab 7)

The BAM 2020 uses biodiversity credits to measure the predicted improvement in biodiversity values at a stewardship site.

The 'Credits' tab summarises the results of calculations of biodiversity credits. No user action is required for Tab 7.

Further details on the calculations performed are in Subsections 7.7.7 and 7.7.8 below.

1. Assessment details	2. Site context	3. Vegetation	4. Habitat suitability: Predicted	
5. Habitat suitability: Candidate	6. Habitat survey	7. Credits	8. Credit classes	
Ecosystem credits for plant communities types (PCT), ecological communities & threatened species habitat				
Zone	Vegetation zone name	Vegetation integrity gain	Area	Ecosystem credits
Narrow-leaved Ironbark grassy woodland of the Brigalow Belt South bioregion				
1	1387_good	17.6	52.4 hectares	230
2	1387_mod	12.5	63.7 hectares	200
				Subtotal: 430
				Total: 430
Species credits for threatened species				
Vegetation zone name	Habitat condition (vegetation integrity) gain	Area / Count	Species credits	
Calyptorhynchus lathami / Glossy Black-Cockatoo (Fauna)				
1387_good	17.6	35 hectares	154	
1387_mod	12.5	27.5 hectares	86	
				Subtotal: 240
Cercartetus nanus / Eastern Pygmy-possum (Fauna)				
1387_good	17.6	51.4 hectares	226	

Tip

- Despite the BAM-C displaying biodiversity credit output for any EPBC Act only listed entity, biodiversity credits cannot be created or traded under the NSW scheme.
- Contact the Australian Government Department of Climate Change, Energy, the Environment and Water as the relevant agency for meeting any requirements of an EPBC Act approval.
- ‘EPBC Act only’ listed entity means a ‘threatened species’ or ‘threatened ecological community’ that is listed under the Environment Protection and Biodiversity Conservation Act 1999 (Cth), but not listed under the Biodiversity Conservation Act 2016 (NSW).

1. As ‘Next’ was clicked after completion of Tab 6 the ‘Credits’ tab will be open. When reopening an existing assessment, click on Tab 7 to open it.

7. Credits

In this subsection

7.7.7 Ecosystem credits for PCTs and TECs

7.7.8 Species credits for threatened species

7.7.7 Ecosystem credits for PCTs and TECs

The first section of Tab 7 displays the ecosystem credits for the PCT and TECs.

The vegetation condition is measured using the VI score for each vegetation zone. The BAM-C uses the VI score, the area of the vegetation zone, and a constant, to calculate the number of ecosystem credits for each vegetation zone added at Tab 3. Refer to Equation 4 in the **BAM 2020** (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>) for more information.

Ecosystem credits for plant communities types (PCT), ecological communities & threatened species habitat				
Zone	Vegetation zone name	Vegetation integrity gain	Area	Ecosystem credits
Fuzzy Box Woodland on alluvial brown loam soils mainly in the NSW South Western Slopes Bioregion				
3	201_mod	7.6	1.8 hectares	3
				Subtotal: 3
Narrow-leaved Ironbark grassy woodland of the Brigalow Belt South bioregion				
1	1387_good	17.6	52.4 hectares	230
2	1387_mod	12.5	63.7 hectares	200
				Subtotal: 430
				Total: 433

i Tip

- Use the scroll bar to see all ecosystem credits.
- See **BAM 2020 (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>)**, Sections 5.1 and 5.2 for further information on ecosystem credit species.
- See **BAM 2020 (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>)**, Section 11.6 for further information on the calculation of ecosystem credits at a stewardship site.

7.7.8 Species credits for threatened species

The second section of Tab 7 displays the species credits for threatened species that cannot be predicted to occur at a site based on the vegetation (PCT), and have been confirmed present at the site (Tab 6 ‘Species presence’ = ‘Yes’).

For species with a UoM of ‘Area’, the BAM-C uses the VI gain, the area of the vegetation zone, and a constant, to calculate the number of species credits for each vegetation zone (PCT) added at Tab 3 that is associated with the species. Refer to Equation 5 in the **BAM 2020 (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>)** for more information.

For species with a UoM of ‘Count’, the BAM-C uses the number of individuals, the estimated intrinsic rate of increase for the species, and the management timeframe (20 years) to calculate the number of species credits. Refer to Equation 6 in the **BAM 2020 (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>)** for more information.

Species credits for threatened species			
Vegetation zone name	Habitat condition (vegetation integrity) gain	Area / Count	Species credits
Calyptorhynchus lathami / Glossy Black-Cockatoo (Fauna)			
1387_good	17.6	35 hectares	154
1387_mod	12.5	27.5 hectares	88
			Subtotal: 240
Cercartetus nanus / Eastern Pygmy-possum (Fauna)			
201_mod	7.6	1.2 hectares	2
1387_good	17.6	51.4 hectares	226
			Subtotal: 228

i Tip

- Use the scroll bar to see all species credits.
- In some circumstances, the TBDC may identify a threatened species that requires assessment for ecosystem credits and species credits (referred to as dual credit species). For dual credit species, part of the habitat is assessed as a species credit (for example, breeding habitat or land mapped on an important habitat map layer). The remaining habitat for the species is assessed as an ecosystem credit (for example, foraging habitat).

- Equations for the calculation of species credits differ depending on their UoM.
- See [BAM 2020 \(https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Chapter 5 for further information on species credits.
- See [BAM 2020 \(https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020\)](https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020), Section 11.7 for further information on the calculation of species credits at a stewardship site.

No user action is required for Tab 7 and there is no ‘Next’ button. Click on Tab 8 ‘Credit classes’ to open it.

Creating a stewardship (for offset sites) assessment

7.8 Credit classes (Tab 8)

The BAM uses OTGs to offset non-threatened vegetation (PCTs). OTGs are groups of PCTs with the same vegetation class and threat status. Under the like-for-like rules, offsets for impacts to non-threatened vegetation may be met with one or more OTGs that have the same vegetation class with the same or a higher threat status.

Under the like-for-like rules, threatened vegetation (TECs) and threatened species must be offset with the same TEC/species.

Vegetation containing HBT must be offset with vegetation containing HBT.

Variation rules may apply.

The ‘Credit classes’ tab summarises the ecosystem and species credits and their like-for-like options.

Further details on the information available in Tab 8 are in Subsections 7.8.9 and 7.8.10 below.

No user action is required in this tab.

1. Assessment details	2. Site context	3. Vegetation	4. Habitat suitability: Predicted	5. Habitat suitability: Candidate				
6. Habitat survey	7. Credits	8. Credit classes						
Note: Despite the biodiversity credit output displayed for any EPBC Act only listed entity, biodiversity credits cannot be created or traded under the NSW biodiversity offsets scheme and payments cannot be made into the Biodiversity Conservation Fund for any EPBC Act only listed entity.								
You should contact the Commonwealth Department of Agriculture, Water and Environment as the relevant agency for meeting any requirements of an EPBC Act approval.								
* EPBC Act only listed entity means a 'threatened species' or 'threatened ecological community' that is listed under the Environment Protection and Biodiversity Conservation Act 1999 (Cth) but not listed under the Biodiversity Conservation Act 2016 (NSW) (BC Act).								
Ecosystem credit classes								
Ecosystem credit summary								
PCT	TEC		Area	HBT Cr	No HBT Cr	Credits		
201-Fuzzy Box Woodland on alluvial brown loam soils mainly in the NSW South Western Slopes Bioregion	Fuzzy Box Woodland on alluvial Soils of the South Western Slopes, Darling Riverine Plains and Brigalow Belt South Bioregions		1.8	3	0	3		
1387-Narrow-leaved Ironbark grassy woodland of the Brigalow Belt South bioregion	Not a TEC		116.1	230	200	430		
Credit classes for 201								
TEC		HBT	Credits	IBRA region				
Fuzzy Box Woodland on alluvial Soils of the South Western Slopes, Darling Riverine Plains and Brigalow Belt South Bioregions		Yes	3	Liverpool Range				
Formation								
Formation	Trading group	HBT		IBRA region				
Grassy Woodlands		Yes (including)		IBRA region: Brigalow Belt South				

1. Select the 'Credit classes' tab to view information on the ecosystem and species credit classes.

8. Credit classes

i Tip

- See **BAM 2020 (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>)**, Chapter 11 for information on calculating gain at a stewardship site.

In this subsection

7.8.9 Ecosystem credit classes

7.8.10 Species credit classes

7.8.9 Ecosystem credit classes

The first section of Tab 8 displays a summary of the ecosystem credit classes, whether there is an associated TEC or not, and their like-for-like options based on the PCTs and/or TECs added at Tab 3.

For non-threatened vegetation ('Not a TEC'), the BAM-C displays the associated vegetation class and lists the PCTs within that class. The BAM-C also displays the associated OTGs and IBRA subregions available for making a like-for-like credit trade. Refer to the **Offset rules and ecosystem credits**

(<https://www.environment.nsw.gov.au/publications/offset-rules-and-ecosystem-credits-guidance>)

guidance for more information (see **Appendix B**).

Ecosystem credit summary						
PCT	TEC		Area	HBT Cr	No HBT Cr	Credits
201-Fuzzy Box Woodland on alluvial brown loam soils mainly in the NSW South Western Slopes Bioregion	Fuzzy Box Woodland on alluvial Soils of the South Western Slopes, Darling Riverine Plains and Brigalow Belt South Bioregions		1.8	3	0	3
1387-Narrow-leaved Ironbark grassy woodland of the Brigalow Belt South bioregion	Not a TEC		116.1	230	200	430
Credit classes for 201						
TEC		HBT	Credits	IBRA region		
Fuzzy Box Woodland on alluvial Soils of the South Western Slopes, Darling Riverine Plains and Brigalow Belt South Bioregions		Yes	3	Liverpool Range		
Formation						
Formation	Trading group	HBT		IBRA region		
Grassy Woodlands		Yes (including artificial)		IBRA region: Brigalow Belt South		
Credit classes for 1387						
Class	Trading group	HBT	Credits	IBRA region		
North-west Slopes Dry Sclerophyll Woodlands	North-west Slopes Dry Sclerophyll Woodlands - ≥ 50% - < 70% cleared group	Yes	230	Liverpool Range		
North-west Slopes Dry Sclerophyll Woodlands	North-west Slopes Dry Sclerophyll Woodlands - ≥ 50% - < 70% cleared group	No	200	Liverpool Range		
Formation						
Formation	Trading group	HBT		IBRA region		
Dry Sclerophyll Forests (Shrub/grass sub-formation)	North-west Slopes Dry Sclerophyll Woodlands - ≥ 50% - < 70% cleared group	Yes (including artificial)		IBRA region: Brigalow Belt South		

7.8.10 Species credit classes

The second section of Tab 8 displays a summary of the species credit classes for all candidate species confirmed present at the site, and their like-for-like options.

Species credit summary

Species	Vegetation Zone/s names	Area / Count	Credits		
<i>Calyptorhynchus lathami</i> / Glossy Black-Cockatoo	1387_good, 1387_mod	62.6	240		
<i>Cercartetus nanus</i> / Eastern Pygmy-possum	1387_good, 201_mod	52.7	228		
<i>Calyptorhynchus lathami</i> / Glossy Black-Cockatoo					
Spp	IBRA region				
<i>Calyptorhynchus lathami</i> / Glossy Black-Cockatoo	Any in NSW				
Kingdom					
Fauna	Listing status	IBRA region			
Fauna	Vulnerable	Liverpool Range			
<i>Cercartetus nanus</i> / Eastern Pygmy-possum					
Spp	IBRA region				
<i>Cercartetus nanus</i> / Eastern Pygmy-possum	Any in NSW				
Kingdom					
Fauna	Listing status	IBRA region			
Fauna	Vulnerable	Liverpool Range			

Appendix A – Clearing the BAM-C cache

If you are having a problem selecting legacy PCTs (during a transitional period) in a case created before deployment of any revised NSW PCTs, and the transitional arrangements are still in place, clear your cache in the BAM-C.

To clear your cache when using Chrome or Microsoft Edge:

1. Open the case in BAM-C.
2. Open the developer tools by selecting the 3 dots in the top right corner of BAM-C (note, an alternative way to open these tools is to click F12 on your keyboard):
 - a. Select ‘More tools’ and then ‘Developer tools’.
 - b. If using Microsoft Edge, you might also be prompted to click ‘Open DevTools’.
 - c. Opening the developer tools will enable developer mode. This provides additional functionality to the webpage, including the option to clear the cache.
3. Right-click on the reload button and select ‘Empty cache and hard reload’.
 - The page will refresh. Sometimes this also prompts a page reload error message to appear.
4. Close the BAM-C.
5. Reopen the case in BAM-C.

As long as the transitional arrangements are still in place, you should now be able to select the applicable legacy classification from the ‘Reference data version’ drop-down.

Appendix B – Resources

For general enquiries about the Biodiversity Offsets Scheme or application of this guide, contact the department online at **Biodiversity Offsets Scheme Help Desk**
[\(https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/help-and-support/help-desk\)](https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/help-and-support/help-desk).

Supporting information

- **About BioNet Vegetation Classification** (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/biodiversity-offsets-scheme>)
- **Biodiversity Assessment Method 2020 (BAM 2020)**
(<https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020>)
- **Biodiversity Assessment Method 2020 Operational Manual – Stage 1**
(<https://www.environment.nsw.gov.au/publications/biodiversity-assessment-method-2020-operational-manual-stage-1>)
- **Biodiversity Assessment Method 2020 Operational Manual – Stage 2**
(<https://www.environment.nsw.gov.au/publications/biodiversity-assessment-method-operational-manual-stage-2>)
- **Biodiversity Assessment Method 2020 Operational Manual – Stage 3**
(<https://www.environment.nsw.gov.au/publications/biodiversity-assessment-method-2020-operational-manual-stage-3>)
- **Biodiversity Assessment Method Calculator public version**
(<https://www.lmbc.nsw.gov.au/bamcalc>)
- **Biodiversity Conservation Fund Charge System** (<https://www.bct.nsw.gov.au/info/biodiversity-conservation-fund-charge-system>)
- **Biodiversity Offsets and Agreement Management System (BOAMS)**
(<https://customer.lmbc.nsw.gov.au/assessment/s/userlogin?startURL=%2Fassessment%2Fs%2F>)
- **BOAMS Guide for Accredited Assessors**
(<https://www.environment.nsw.gov.au/publications/biodiversity-offsets-and-agreement-management-system-guide-accredited-assessors>)
- **BOAMS Guide for Community Users**
(<https://www.environment.nsw.gov.au/publications/biodiversity-offsets-and-agreement-management-system-boams-guide-community-users>)
- **BOAMS registered user access** (<https://customer.lmbc.nsw.gov.au/assessment/s/userlogin>)
- **BOAMS create an account** (<https://customer.lmbc.nsw.gov.au/s/login/?startURL=%2Fapplication%2Fs%2F&ec=302>)
- **Biodiversity Values Map** (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/clear-and-develop-land/biodiversity-values-map-and-threshold-tool>)

- **BioNet Threatened Biodiversity Profiles** (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/about-bionet-atlas/threatened-biodiversity-profiles>)
- **BioNet Vegetation Classification (Veg-C)** (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/about-bionet-vegetation-classification>)
- **Bioregions of New South Wales** (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/bioregions/bioregions-of-nsw>)
- **Biodiversity Offsets Scheme updates** (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/news-and-updates>)
- **Descriptions for NSW (Mitchell) Landscapes [PDF 1.3MB]**
(<https://www.environment.nsw.gov.au/resources/conservation/landscapesdescriptions.pdf>)
- **Native Vegetation Regulatory Map** (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/native-vegetation-regulatory-map>)
- **New vegetation integrity benchmarks and plant community types**
(<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/nsw-plant-community-type-classification/pct-change-control>)
- **NSW BioNet resources** (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/resources>)
- **Offset rules and ecosystem credits** (<https://www.environment.nsw.gov.au/publications/offset-rules-and-ecosystem-credits-guidance>)
- **Serious and irreversible impacts of development on biodiversity**
(<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/clear-and-develop-land/serious-irreversible-impacts>)
- **Streamlined assessment module planted native vegetation**
(<https://www.environment.nsw.gov.au/publications/streamlined-assessment-module-planted-native-vegetation>)
- **Threatened biodiversity profile search** (<https://threatenedspecies.bionet.nsw.gov.au/>)
- **When does the Biodiversity Offsets Scheme apply**
(<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/clear-and-develop-land/when-biodiversity-offsets-scheme-applies>)

Legislation

- **Biodiversity Conservation Act 2016 (NSW)**
(<https://legislation.nsw.gov.au/view/html/inforce/current/act-2016-063>)
- **Biodiversity Conservation Act 2016 (NSW) Schedule 2**
(<https://legislation.nsw.gov.au/view/html/inforce/current/act-2016-063#sch.2>)
- **Environment Protection and Biodiversity Conservation Act 1999 (Cth)**
(<https://www.legislation.gov.au/C2004A00485/2021-03-28/text>)
- **EPBC Act 1999 (Approved List)** (<https://www.dccew.gov.au/environment/epbc/our-role/approved-lists>)
- **Local Land Services Act 2013** (<https://legislation.nsw.gov.au/view/html/inforce/current/act-2013-051>)

- **State Environmental Planning Policy (Biodiversity and Conservation) 2021
(<https://legislation.nsw.gov.au/view/html/inforce/current/epi-2021-0722>)**