



Entering and extracting flora plot data in BioNet Atlas for use in Plot to Plant Community Type Assignment Tool

User guide for accredited assessors

Department of Planning and Environment

Acknowledgement of Country

The Department of Planning and Environment acknowledges the Traditional Custodians of the lands where we work and live.

We pay our respects to Elders past, present and emerging.

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Who is this guide for?

This guide is for anyone wanting to use the Plot to PCT Assignment Tool to identify plant community types (PCTs) using standard floristic survey plots collected using the NSW '[Biodiversity assessment method](#)' (BAM 2020), specifically BAM accredited assessors. It can also be used by anyone wanting to enter standard floristic survey plots into the BioNet Atlas.

A summary of the high-level workflow that this guide partly addresses to support accredited assessors in part of their requirement under the BAM is shown in Figure 1, with the second, third and fourth steps being the focus in this guide.

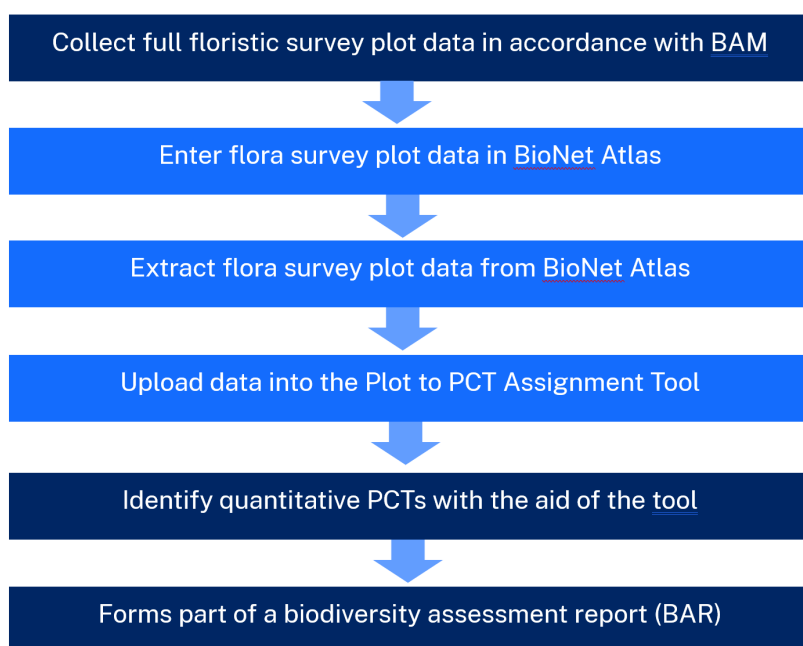


Figure 1 High-level workflow for collecting full floristic survey plot data to inform a biodiversity assessment report

This guide steps through the video resources available to enter and extract flora survey plot data from BioNet in a format compatible with the Plot to PCT Assignment Tool (the tool). It has been created to make the existing resources more discoverable by clearly identifying where each step occurs in the video timeline, and it also gives a summary of the steps involved.

The 3 stages: import, export, and upload to the tool

There are 3 main stages (all of which are covered in detail across 5 video tutorials):

- Stage A – entry of plot data into BioNet Atlas (see Figure 2)
- Stage B – extraction of plot data from BioNet Atlas (see Figure 3)
- Stage C – upload of data to the Plot to PCT Assignment Tool (see Figure 4).

For each stage, a list of the steps involved, a link to the relevant video tutorial(s) and the location of each step in the video timeline are provided below. For a description of the key tasks and important notes at each step, refer to the section ‘Summary guide for each of the steps’.

Stages and steps involved

Stage A – Enter standard full floristic plot data into BioNet Atlas

Resources

Steps 1 to 7:

- [Contributing systematic flora survey plot data to BioNet Atlas Part 1 \(on Vimeo\)](#)

Steps 8 to 10:

- [Contributing systematic flora survey plot data to BioNet Atlas Part 2 \(on Vimeo\)](#)

Step	Description of step	Video Part and timeline
Step 1	Dataset set-up Contact BioNet team to organise access and ‘Dataset’	1 – 8:14 to 9:50
Step 2	Login to BioNet Atlas	1 – 9:50 to 10:40
Step 3	Select ‘Data maintenance’ from Flora surveys menu	1 – 10:45 to 10:50
Step 4	Create survey Ensure Scoring systems and Plot design populated to reflect full floristic plot data was collected	1 – 10:50 to 15:40
Step 5	Create sites	1 – 15:40 to 22:44
Step 6	Create replicates	1 – 22:44 to 25:20
Step 7	Manually enter species (skip if adding via bulk upload – Steps 8 to 10)	1 – 25:20 to 29:20
Step 8	Enter species into spreadsheet (skip Steps 8 to 10 if manually entering species at Step 7)	2 – 2:09 to 12:03
Step 9	Submit sightings to BioNet Atlas	2 – 12:03 to 15:00
Step 10	BioNet team to import	2 – 15:00 to 15:08

Figure 2 Steps and resources involved in data entry (Stage A)

Stage B – Extract standard full floristic plot data from BioNet Atlas

Resources

Step 11 to 13:

- [Extracting flora survey plot data from BioNet Atlas Part 1 \(on Vimeo\)](#)

Steps 14 and 15:

- [Extracting flora survey plot data from BioNet Atlas Part 2 \(on Vimeo\)](#)

Step	Description of step	Video Part and timeline
Step 11	Select 'Data analysis' from Flora survey menu	1 – 14:40 to 15:20
Step 12	Create an Analysis set and add properties	1 – 9:50 to 10:40
Step 13	Select data and review	1 – 10:45 to 10:50
Step 14	Taxonomic selection and review	2 – 10:32 to 11:15
Step 15	Export files	2 – 11:15 to 15:58

Figure 3 Steps and resources involved in data extraction (Stage B)

Stage C – Upload standard full floristic plot data in the Plot to PCT Assignment Tool

Resources

- [Demonstration of the Plot to PCT Assignment Tool \(on Vimeo\)](#)
- ['Plot to PCT Assignment Tool user guide'](#)

Step	Description of step	Video Part and timeline
Step 17	Go to the Plot to PCT Assignment Tool	0:00 to 0:57
Step 17	Upload CSV file	0:58 to 1:04
Step 18	Analyse and interpret results	1:05 to 3:13

Figure 4 Steps and resources involved in loading data into the tool (Stage C)

Summary guide for each of the steps

This section provides a description of the key tasks and important notes at each of the steps. It is, however, recommended you refer to the videos as the primary source, particularly in the first instance, to ensure key information is not missed, and your data is in the correct format required for use in the Plot to PCT Assignment Tool. The video timeline at each step allows you to skip over steps you are familiar with and fast forward to the sections in the timeline you require or wish to repeat.

Pre-record data onto hard copy form

(Optional) Prior to your field survey, if you wish to use hard copy sheets, we have a Systematic flora survey field data sheet that you can print out and use in the field (Figure 5). This will help to ensure the plot data you collect is in the required format for BioNet.

BioNet Site No.:

Date	Field site no.		Recorder(s)				
Location (provide adequate descriptive location notes to locate site without grid reference)							
MGA grid reference	zone	datum	Easting (8 digits)	Northing (7 digits)	Accuracy(m) (GPS EPE)	Position in quadrat	
Plot size	___ x ___ m		Elevation (from GPS, metres asl)	Photo no.			
NVIS Level V (within 0.04 ha quadrat)							
Stratum	Growth form	Species name	Species % PFC	Field no.	For the entire stratum		
					Stratum % PFC	Stratum height to crown (m)	
					min	mode	max
Stratum	Growth form	Species name	Species % PFC	Field no.	For the entire stratum		
					Stratum % PFC	Stratum height to crown (m)	
					min	mode	max

Figure 5 Vegetation field survey form

Stage A Enter standard full floristic survey plot data into BioNet Atlas

To start entering your plot data into BioNet Atlas, refer to the first video tutorial:

- [Contributing systematic flora survey plot data to BioNet Atlas Part 1.](#)

This video demonstrates Steps 1 to 7. It covers an introduction to BioNet, how to login, set-up a Dataset and create survey, sites and replicates, including the option of manually entering your species records.

Total video runtime: **30 minutes**. Minimum video time to cover required steps: approx. **17 minutes** (if skipping introduction and manual entry of sightings, Step 7).

Background

If you are unfamiliar with BioNet Atlas and the terminology used for systematic flora surveys, watch the first 8 minutes of the video.

Step 1 Dataset set-up

Location on video timeline: Part 1 – 8:14 to 9:50

All records in BioNet Atlas are linked to specific Datasets. A BioNet Dataset is where security is applied in terms of who is able to add and edit records, and who is able to view the data. Datasets are created and managed by the BioNet team. Before you can commence data entry of your survey, contact the BioNet team so that we can set-up your Dataset.

1. Email the [BioNet team](#) with the following information:
 - a. Dataset name
 - b. name, email and phone number for the primary contact person
 - c. names of people who require edit access to this Dataset
 - d. names of recorders from the survey*.

* It is crucial to ensure names of all relevant recorders display in the Recorders drop-down **before** commencing data entry.

Step 2 Login to BioNet Atlas

Location on video timeline: Part 1 – 9:50 to 10:40

1. Go to the [BioNet Atlas login](#) and enter your credentials.
2. Alternatively, if you don't yet have a login, [apply for a sensitive species data licence](#).

Only one licence per consultancy is required. Multiple employees can obtain their own unique login details, which are linked under the single licence.

Step 3 Select 'Data maintenance'

Location on video timeline: Part 1 – 10:45 to 10:50

1. From the **Flora surveys** menu, select 'Data maintenance' (Figure 6).

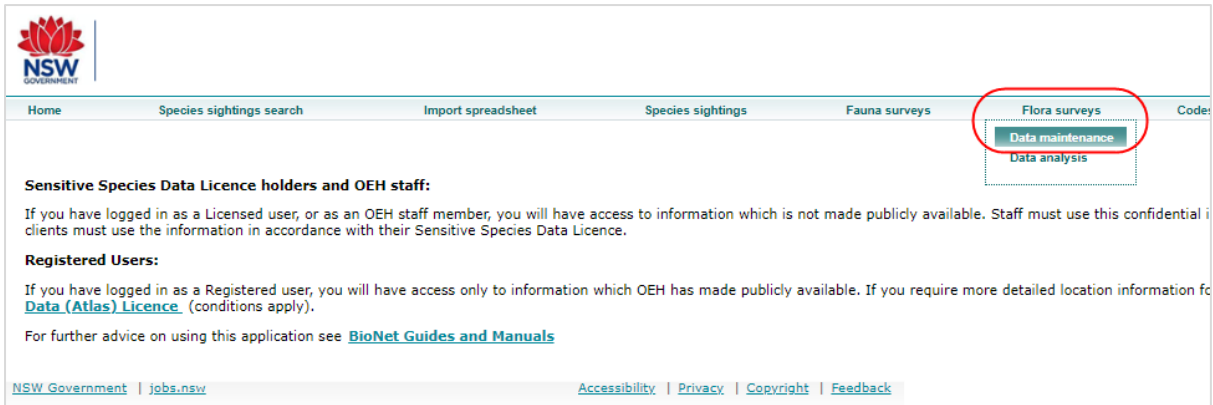


Figure 6 Flora surveys menu in BioNet Atlas

Step 4 Create survey

Location on video timeline: Part 1 – 10:50 to 15:40

1. Click 'New' (Figure 7).

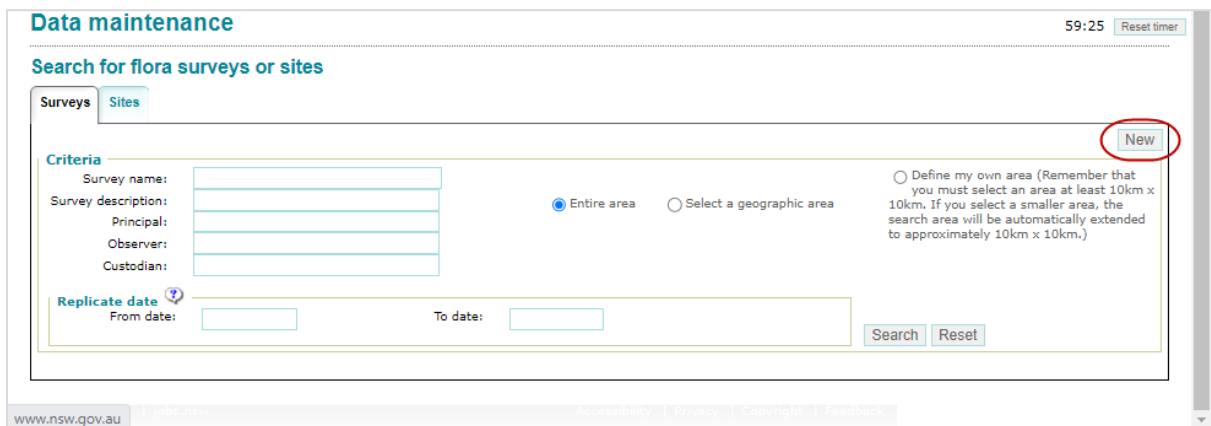


Figure 7 Location of the New button in the Surveys tab of the Data maintenance page

You will be taken to the **New flora survey** page (Figure 8).

Take particular care to enter as much detail as possible into the **General** tab, **Scoring systems** tab and the **Plot design** tab, to ensure the data remains attached to the method by which it is collected.

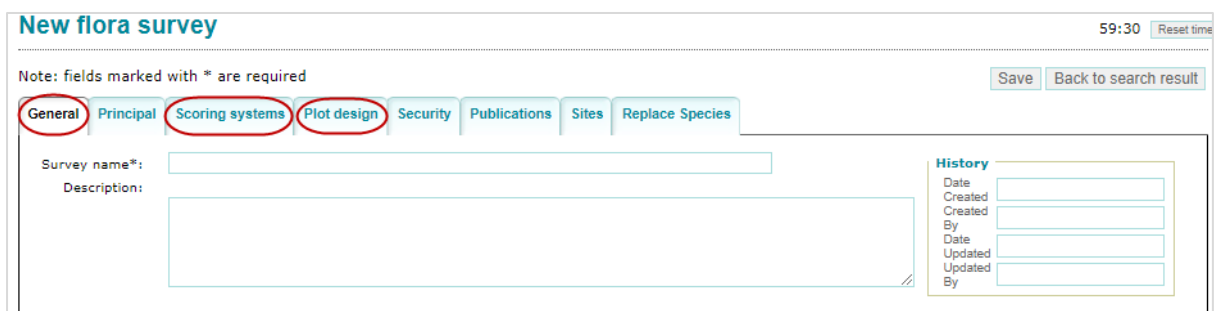


Figure 8 Tabs requiring detailed information in a New flora survey

2. **General** tab. Enter a unique survey name (Figure 9).

We strongly encourage you to enter information into the 'Description' field to ensure the data remains attached to the method by which it is collected.

New flora survey

Note: fields marked with * are required

General **Principal** Scoring systems Plot design Security Publications Sites Replace Species

Survey name*: LillyPilly Waterfall flora survey

Description: Systematic vegetation sampling at targeted locations, in line with BAM plot survey methodology

History

Date Created	
Created By	
Date Updated	
Updated By	

Figure 9 General tab of a New flora survey

3. **Principal** tab. Enter the main contact for the survey. Note you will only see names displayed that are linked to your BioNet sensitive species data licence. Wildcard is % (Figure 10).

New flora survey

Note: fields marked with * are required

General **Principal** Scoring systems Plot design Security Publications Sites Replace Species

Search for observers

Criteria

Surname: E%

Given names:

Search

Save Back to search result

New Search

Figure 10 Search for observers window which is available via the Principal tab

4. **Scoring systems** tab (Figure 11).

It is critical that the values here are filled out appropriately to ensure the data can be utilised in the Plot to PCT Assignment Tool. If you have collected data in accordance with BAM, then for **Species score**, choose 'Species actuals'. **Additional abundance score** can be left blank, but populate as appropriate.

New flora survey

Note: fields marked with * are required

General **Principal** **Scoring systems** Plot design Security Publications Sites Replace Species

Species score

Score method*: Species actuals

Score description: All cover percentages recorded as actual values

Additional abundance score

Score method: species actuals

Score description: actual numbers of stems/ramets observed in plot

Figure 11 Scoring systems tab in a New flora survey

5. **Plot design** tab. Select type of survey plots used and add 'Method notes' (Figure 12).

We strongly encourage you to add notes to the 'Method notes' box, particularly about the size and configuration of the quadrats and, if available, any detail on how per cent cover and abundance estimates were made.

A description is required where the method varies from the structured fields in the **Scoring systems** tab.

The screenshot shows the 'Plot design' tab selected in a 'New flora survey' form. The 'Type of survey plots used (Tick all that apply)' section has 'Known area' checked. The 'Method notes' text area contains the text: '20 x 20m quadrats as standard, survey capturing full floristics using separate cover and abundance measures as per the BAM method. Quadrat configuration map vary depending on the nature of the site (eg 10 x 40m for linear)'. The 'Save' and 'Back to search result' buttons are visible at the top right.

Figure 12 Plot design tab in a New flora survey

6. **Security** tab. Select the appropriate Dataset from the list (Figure 13).

Do not select 'DPIE Default Analyses'.

The screenshot shows the 'Security' tab selected in a 'New flora survey' form. The 'Dataset*' dropdown menu is open, showing 'DPIE Default Analyses' and 'Lilly Pilly Ecological Surveys'. The 'Lilly Pilly Ecological Surveys' option is circled in red. Other fields like 'Custodian', 'Contact name', 'Contact address', 'Contact phone', and 'Contact email' are visible but empty.

Figure 13 Security tab in the New flora survey, showing sample Datasets

7. **Publications** tab (optional).

8. Click 'Save' (Figure 14).

The screenshot shows the 'Save' button circled in red in the top right corner of the 'New flora survey' form. The 'Dataset*' dropdown is now set to 'Lilly Pilly Ecological Surveys'. The form displays contact information for the custodian: NSW Dept of Planning and Environment, Teresa Green, Lilly Pilly Ecological Consultants, with contact details for phone and email.

Figure 14 Location of the Save button in the Security tab

Step 5 Create sites

Location on video timeline: Part 1 – 15:40 to 20:44

1. Click on the **Sites** tab, then click 'New' (Figure 15).

The screenshot shows a web form titled 'Flora survey'. At the top, the 'Survey name' is 'LillyPilly Waterfall flora survey'. Below this, there are several tabs: 'General', 'Principal', 'Scoring systems', 'Plot design', 'Security', 'Publications', 'Sites', and 'Replace Species'. The 'Sites' tab is currently selected and circled in red. In the top right corner of the form, there is a 'New' button, also circled in red. Other visible elements include a 'Save' button and a 'Back to search result' button. The form contains various input fields for site details like 'Site number', 'Survey name', 'Principal', 'Observer', 'Custodian', 'Census key', 'PCT ID', and 'PCT Name'. There are also radio buttons for selecting an area and a date range selector.

Figure 15 Location of the New button in the Sites tab of a new flora survey

2. **Site number.** Enter a unique value (Figure 16).

Avoid generic names such as '1', or 'Site 1'. Avoid names that lead with a zero as this creates problems with handling the sites in Excel.

Create a site numbering protocol appropriate for your survey. For example, use a prefix and then add numbers for each site in your survey, for example, 'LillyPilly1', 'LillyPilly2'...etc.

Record the site numbers for later use if you elect to add the species details via the bulk upload process.

3. **Date recorded.** Enter the date of the survey (Figure 16).

The screenshot shows the 'Transect' tab selected in the 'Flora survey' form. The 'Site number*' field contains 'LillyPilly1' and the 'Date recorded*' field contains '01/05/2022'. Both fields are circled in red. Below these fields, there are tabs for 'Location', 'Physiography', 'Survey specific', 'Transect', 'Mapping', and 'Other'. The 'Transect' tab is active. Underneath, there is a 'Transect start' section with a dropdown menu set to 'GDA94'. Below that, there are columns for 'Projected co-ordinates' and 'Geographic co-ordinates', with sub-columns for 'Latitude' and 'Longitude'.

Figure 16 Sample 'Site number' and 'Date recorded' values when creating a new flora survey site

4. **Transect** tab. Opens by default. Unless specifically entering transect details, go to the **Location** tab (Figure 17).
5. **Location** tab. Click 'New' (Figure 17) to be taken to the **New location** window (Figure 18).

Flora survey site 57:45 [Reset timer](#)

Survey name: [LillyPilly Waterfall flora survey](#)

Note: fields marked with * are required [Save](#)

Site number*:

Date recorded*:

Location [Physiography](#) [Survey specific](#) [Transect](#) [Mapping](#) [Other](#)

[New](#)

Location Key:

Description:

Georeference

Co-ordinate system: GPS

Original unit type:

Location attributes

Geology type:

Structural formation:

Vegetation formation:

Figure 17 Location of the New button in the Location tab

For sites assigned to Datasets that are publicly available, the location description field will be publicly accessible, so avoid private information such as landholder names.

6. Enter description, coordinates, accuracy, if GPS used (Figure 18). 'Description' field should ideally be detailed enough to allow a site to be roughly located without coordinates. Enter coordinates in either coordinate system (Geographics or Projected). If entering Geographics in decimal degree, enter the full value into the 'Degrees - Latitude' and 'Degrees - Longitude' fields. On tabbing out of the cell, the system will populate all values in other Geographics fields, as well as Projected fields.
7. Click 'Save'.

New location [Save](#)

Note: fields marked with * are required

Description*

Georeference

Co-ordinate system: **GPS**

Original unit type*:

Projected co-ordinates

Zone*	<input type="text" value="56"/>
Easting*	<input type="text" value="331584"/>
Northing*	<input type="text" value="6255647"/>

Geographic co-ordinates

	Latitude	Longitude
Degrees*	<input type="text" value="-33"/>	<input type="text" value="151"/>
Minutes*	<input type="text" value="49"/>	<input type="text" value="10"/>
Seconds*	<input type="text" value="33.6"/>	<input type="text" value="48.4"/>
	<input type="text" value="-33.82600"/>	<input type="text" value="151.18011"/>

Accuracy(m)*

Location attributes

Geology type:

Structural formation:

Vegetation formation:

Confidence:

Slope of area:

Aspect of area:

Altitude:

History

Date created:

Created by:

Date Updated:

Updated by:

Figure 18 New location window with sample mandatory fields populated

8. **Physiography** tab/**Mapping** tab/**Other** tab (all optional).
9. Click 'Save' on the **Flora survey site** page (Figure 18).

On saving, note that back in the **Physiography** tab, the ‘Calculated environmental variables’ fields are auto-populated (Figure 19). These values are included in the output file when exporting data for the Plot to PCT Assignment Tool.

Environmental Type	Environmental Value
Annual Rainfall (mm)	996.03
Elevation (m)	702.08
Annual Mean Temperature (°C)	12.95

Figure 19 Location of the ‘Calculated environmental variables’ fields in the Physiography tab

Step 6 Create replicates

Location on video timeline: Part 1 – 20:44 to 25:20

Fields to enter replicate details will appear in the **Flora survey site** page once a new site has been saved (Figure 20). Survey sites are not linked to a survey until a replicate is created.

Date Created	10/07/2023 22:29:43
Created By	Teresa Green
Date Updated	10/07/2023 22:35:37
Updated By	Teresa Green

Figure 20 Location of the ‘Replicates’ field in the Flora survey site page

1. Click ‘New replicate’ (Figure 21).

Figure 21 Location of the New replicate button in the Flora survey site page

The value '1' is populated by default in the 'Replicate no.' field.

2. Enter a 'Start date' (Figure 22).

New replicate 58:40 [Reset timer](#)

Survey name: **LillyPilly Waterfall flora survey**
Site number: **LillyPilly1**

Note: fields marked with * are required

Replicate no.*: 1
Start date*: 01/05/2022 00:00:00 [Select date](#)

[Save](#)

Figure 22 Sample 'Start date' and location of the Save button in the New replicate page

For a replicate to be found during the bulk spreadsheet upload process, matching is done on the 'Site number' and the 'Start date' fields. So, if using the bulk upload spreadsheet, the 'Start date' and time of the replicate entered here need to exactly match the 'Start date' and time you record for each replicate in the upload spreadsheet. Time does not need to be provided (but is optional); the default time is 00:00:00.

3. Click 'Save' (Figure 22), to be taken to the **Replicate** page.

4. **General** tab. Enter the 'Recorders', 'Plot details', 'Plot size settings' and 'Size options' (Figure 23).

It is really important to complete the 'Plot details' fields. We strongly encourage you to enter details into the 'Comments' fields at this Replicate level as these are always useful for future uses of the data, for example, 'A tall open woodland on floodplain of black clays. Dominated by regenerating black box with a low sparse chenopod shrub layer and dense grassy ground cover. Site has been heavily grazed recently and not all grasses were identifiable.'

Replicate

Survey name: **LillyPilly Waterfall** [Change](#)
Site number: **LillyPilly1** (1)
Census key: CTQG23071000

History

Date Created	Created By
10/07/2023 22:45:05	Teresa Green
Date Updated	Updated By
14/07/2023 12:47:06	Lachlan Pettit

PCT Information

PCT ID: 0 PCT Name: Class: **Unclassified**

General **NVIS level v** Condition Land use Site history Disturbance Species Ground cover Graphics

Note: fields marked with * are required

Date range

Start date*: 01/05/2022 00:00:00 [Select date](#) End date*: 01/05/2022 00:00:00 [Select date](#)

Recorders

Results: 1 of 1

Recorder key	Surname	Given name(s)	Address	Review	Remove
DDMP23071000	Green	Teresa	Lilly Pilly Ecological Consultants 1 Lilly Pilly Lane, Lilly Pilly NSW 1111	Review	Remove

Plot details

Full floristics?

Plot size settings

Simple Unspecified Other

Size options

20x20m 20x30m Other

Plot Sizes

Comments

A tall open woodland on floodplain of black clays. Dominated by regenerating Black Box with a low sparse chenopod shrub layer and dense grassy ground cover. Site has been heavily grazed recently and not all grasses were identifiable.

May contain only 500 characters long.

[Update](#)

Figure 23 Sample data in the General tab of the new Replicate

- Click 'Update' (Figure 23). Then close the resulting BioNet Atlas pop-up. On saving, the plot size settings will be populated into a new table (Figure 24).

Results 1-1 of 1

Recorder key	Surname	Given name(s)	Address
ODMP23071000	Green	Teresa	Lilly Pilly Ecological Consultants 1 Lilly Pilly Lane, Lilly Pilly NSW 1

Plot details

Full floristics?

Plot size settings

Simple Unspecified Other

Size options

20x20m 20x50m Other

Plot Sizes

Plot number	Plot size	
1	20x20m	Remove

Figure 24 New plot sizes table created in the General tab on saving

- NVIS level v** tab (optional). If entering, click 'New', enter details for the dominant strata layer and save.
- Condition** tab/**Land use** tab/**Site history** tab/**Disturbance** tab/**Ground cover** tab (all optional).
- Graphics** tab – (optional) upload photos at replicate level or survey sheets.

Step 7 Manually enter species (optional)

Location on video timeline: Part 1 – 25:20 to 29:20

You can skip this step if you would prefer to do a bulk upload or your species records (see Steps 8 and 9).

If you have a large number of species per replicate, or a large number of replicates, we recommend using the bulk upload spreadsheet.

- Click on the **Species** tab (Figure 25).

Replicate

Survey name: [LillyPilly Waterfall](#)
Site number: [LillyPilly1 \(1\)](#)
Census key: CTQG23071000

PCT Information

PCT ID: PCT Name: Class:

General NVIS level v Condition Land use Site history Disturbance **Species** Ground cover Graphics

Survey score methods

Cover score method: **Species actuals**
Abundance score method: species actuals

Species options

Floristics Non-site spp.

Expand all Collapse all

Sub plot	Sighting Key	Status	Species name	Assigned name	Cover score	Abund score	Stratum	Growth form	Field no.		
<input type="text" value="1"/>	<input type="text"/>		<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text" value="-"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Height to crown		RBG no.	% Cover actual	Abund actual	Voucher
min	max				
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Figure 25 Location of the 'Cover score method' in the Species tab of the new Replicate

Note the **Cover score method** you previously selected in the **Scoring systems** tab of the **New flora survey** is automatically populated here (Figure 25).

To manually enter the species (Figure 26):

2. Double-click in the 'Species name' box to enter and select.
3. Enter '% Cover actual' and 'Abund actual'.
4. Enter any other additional details as appropriate, then click 'Add species'.
5. Repeat the steps to add additional species.
6. Finally, go back to the **General** tab and click 'Update'.

For data collected according to BAM methodology, the **Survey score method** is 'Species actuals', that is, all cover percentages recorded as actual values (which was previously entered into the Scoring systems tab of the Survey details). For this method, the fields '% Cover actual' and 'Abund actual' must be populated.

The 'Cover score' and 'Abund score' values are left blank.

Replicate

Survey name: LillyPilly Waterfall Change
Site number: LillyPilly1 (1)
Census key: CTQG23071000

PCT Information

PCT ID: PCT Name: Class: Unclassified

General NVIS level v Condition Land use Site history Disturbance **Species** Ground cover Graphics

Survey score methods

Cover score method: Species actuals
Abundance score method: species actuals

Species options

Floristics Non-site spp.

Expand all Collapse all

Sub plot	Sighting Key	Status	Species name	Assigned name	Cover score	Abund score	Stratum	Growth form	Field no.	
<input type="text" value="1"/>			<input type="text" value="4155"/> Eucalyptus pilularis	4155 Eucalyptus pilularis	<input type="text"/>	<input type="text"/>	<input type="text" value="-"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="Add species"/>

Height to crown RBG no. % Cover actual Abund actual Voucher

min max

Figure 26 Sample values for fields in the Species tab of the new Replicate, noting where the Cover score method is 'species actuals', the fields '% Cover abund' and 'Abund actual' must be populated

Step 8 Enter species into spreadsheet

As an alternative to manually entering the species, they can be uploaded in bulk.

To upload the sightings component of your plot data in bulk, refer to the video tutorial:

- [Contributing systematic flora survey plot data to BioNet Atlas Part 2.](#)

The video covers the process of bulk uploading the species sightings component of your survey data, that is, entering your species records into the standard Excel template and uploading into BioNet Atlas, including troubleshooting for potential errors.

Total video runtime: **15:50 minutes**. Minimum video time to cover required steps: approx. **13 minutes** (from 2:09 in the timeline).

1. Save a copy of the [flora survey datasheet](#) and click 'Enable content'.

Ensure the labels in Row 3 remain unchanged and **do not delete fields or rows**. Refer to the Reference and Flora tabs as needed when populating values for each record.

For a replicate to be found when you upload this file, the matching is done on the 'Site number' and 'First date' field, so these both need to match what was set up in the Step 5 Create sites.

2. Enter values for the following mandatory fields (Figure 27):
 - a. 'Site number' – Enter the site number created in Step 5. If copying and pasting, be careful not to have any leading or trailing spaces.
 - b. 'First date' – While time is not mandatory, population of time here needs to be consistent with the datetime values inputted at the replicate level (Step 6).
 - c. 'Sub plot' and 'Stratum' – These fields must be populated for the upload to work. If you have not divided your plot into subplots, input '1' for all records in the

SubplotID field, otherwise record the relevant subplot number against each record. If you have not recorded Stratum enter 'StrataType' as '-'.

- d. 'Scientific name' – Note for a species not recognised in the Flora list (e.g. a new species, as opposed to a typo), remove the 'N/A' value from the 'Species code' and 'Common name' fields to enable the upload.
- e. '% Cover' – must be greater than or equal to 0.1.
- f. 'Abund actual' – must be greater than or equal to 1.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	
1	Updated 30/01/2023		First Date	Last Date	Sub plot	Type	Species code	Common Name	Scientific Name	Cover score	Abundance score	Stratum	Growth form	Height min	Height max	Cover	Abund actual	Estimate Cod	Source Code	Speci
2	Entry Order	Site Number	Date of sighting (dd/mm/yyyy hh:mm:ss).	If more than 1 day (dd/mm/yyyy hh:mm:ss).		Fauna (FA) or flora (FL).	Species code can be assigned by OEH, or see the reference worksheet.			See reference worksheet for definitions		See reference worksheet for definitions	See reference worksheet for definitions	Flora only; height (in metres)	Flora only; height (in metres)	Percent Cover	Number in individuals	Accuracy of count. See reference worksheet for definitions.	Source of the sighting; automatically populated as '4 - sighting'. Alter if specimen lodged or sighting is questionable (e.g. Anabat). See	Registr number specim been ic a herbi museu
3	EntryOrder	SiteNo	DateFirst	DateLast	SubplotID	Type	SpeciesCode	CommonName	ScientificName	CoverID	AbundTypeID	StrataType	GrowthHabits	LowerHeight	UpperHeight	Percent Cover	Number in individuals	EstimateCode	SourceCode	Speci
4		LillyPilly1	01/05/2022 00:00:00		1	FL	4155	Blackbutt	Eucalyptus pilularis							25.0	5			4
5																				

Figure 27 Location of essential fields and sample data in the Flora survey spreadsheet

- 3. Enter values for any other non-mandatory fields.
- 4. Once all records are entered and checked, save the file, then resave as a comma-delimited CSV file.

Step 9 Submit sightings

Location on video timeline: Part 2 – 12:03 to 15:00

- 1. From the **Import spreadsheet** menu, select 'Submit sightings' (Figure 28).



Figure 28 Location of the Import spreadsheet menu

- 2. Select the 'Systematic Survey Sighting Import' radio button (Figure 29).
- 3. Enter your scientific licence number (optional but recommended) (Figure 29).
- 4. Click 'Choose file' and select your CSV file, then click 'Submit' (Figure 29).

Submit sightings 55:13 [Reset timer](#)

Submission settings

Dataset

Supplied by

Scientific licence number

Import Type Standard Sighting Import Systematic Survey Sighting Import Census Import

File upload

File

Figure 29 Essential fields with sample data on the Submit sightings page

- 5. View the Sighting submission log
 - a. If the status is 'Invalid', view the log to determine which rows contain errors (Figure 30).

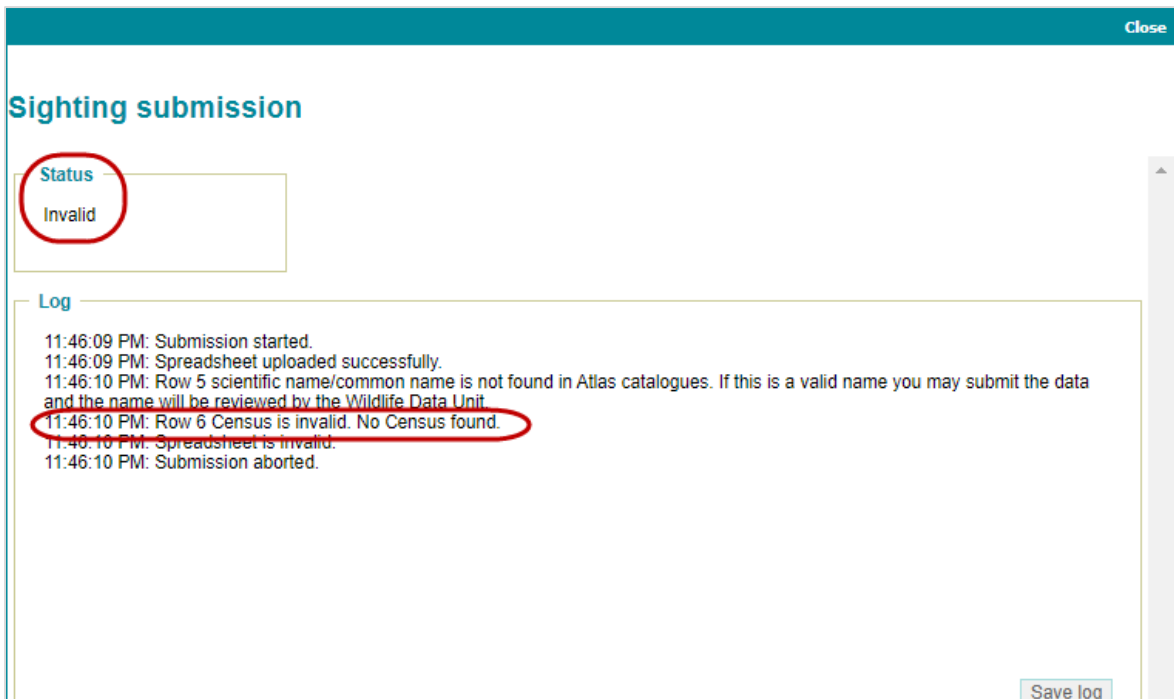


Figure 30 Example of an unsuccessful file submission

6. If there are errors, edit the Excel file, save a new CSV file, and repeat from Step 9.
7. If the status is 'Ready for import', the upload is successful (Figure 31).

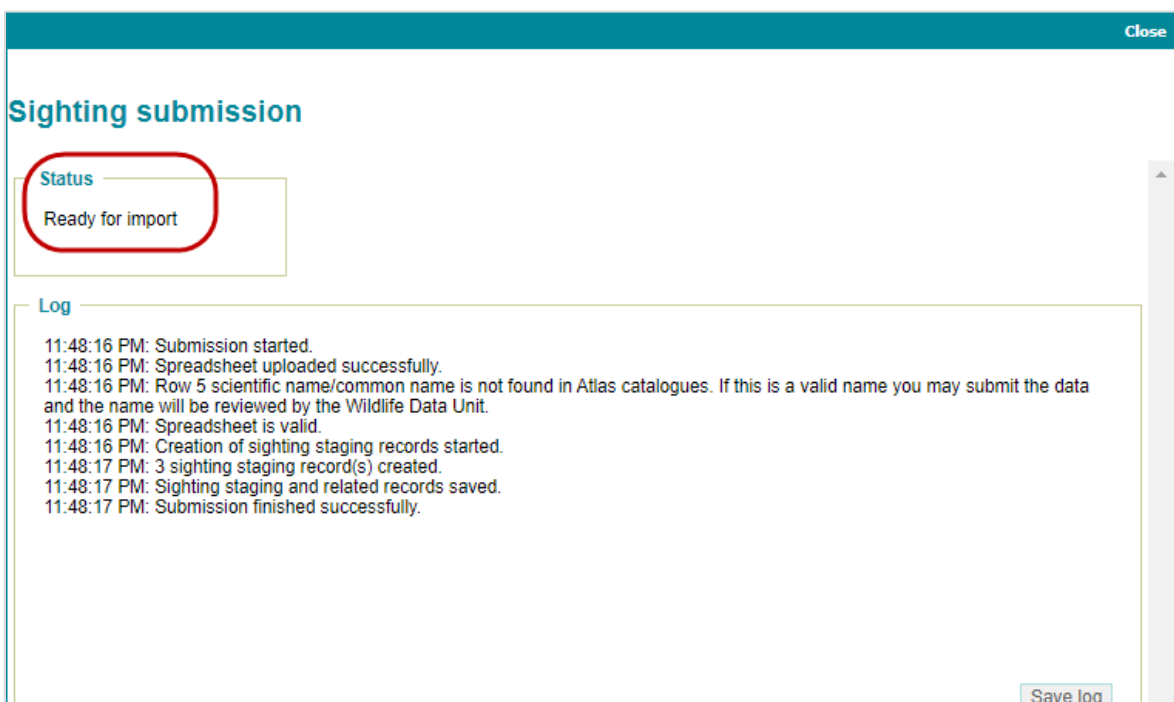


Figure 31 Example of a successful file submission

Step 10 BioNet team to import

Location on video timeline: Part 2 – 15:00 to 15:08

The BioNet team will import your uploaded file so that the records are available in reports. Allow a couple of days for this. You will receive an email alerting you that the

submitted survey data has been successfully imported. If urgent, or to follow up, email the BioNet team.

Stage B Extract plot data from BioNet in a format compatible with the Plot to PCT Assignment Tool

Refer to the video tutorial:

- [Extracting flora survey plot data from BioNet Atlas Part 1.](#)

This part of the video demonstrates Steps 11, 12 and 13. It covers setting up an analysis set, and selecting and reviewing census data. The video covers 3 scenarios to extract data, though only one scenario (Example 2) relates to extracting survey data in a format required for use in the Plot to PCT Assignment Tool.

Total video runtime: **25 minutes**. Minimum video time to cover required steps: approx. **3 minutes 15 seconds** (if skipping to Example 2 only).

Step 11 Select 'Data analysis'

Location on video timeline: Part 1 – 14:40 to 15:20

Example 2 runs through searching on all censuses for a predefined list of surveys and sites.

1. From the **Flora surveys** menu, select 'Data analysis' (Figure 32).

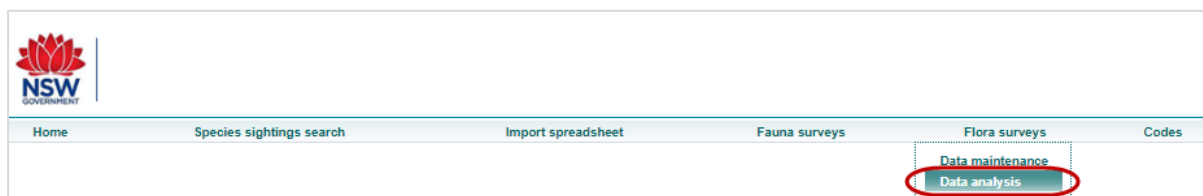


Figure 32 Location of the 'Data analysis' option under the Flora surveys menu

The **Data analysis** page displays the sequence of steps at the top of the page, with the active step in the sequence (from 1 to 7) highlighted blue (Figure 33). Steps are completed in order, but not all steps are mandatory.

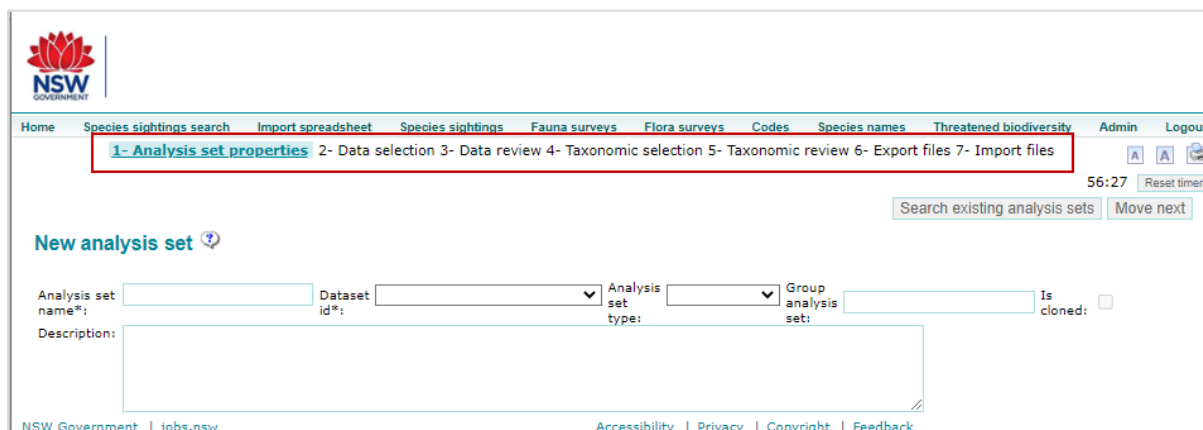


Figure 33 Location of the sequence of steps available in the Data analysis section

Step 12 Create an Analysis set and add properties

Location on video timeline: Part 1 – 15:20 to 15:35

You need to create an Analysis set to identify and secure your search, enabling the details of your query to be saved.

1. Enter the following (Figure 34):
 - a. 'Analysis set name' – enter any name you like (it doesn't have to be unique).
 - b. 'Dataset ID' – select a Dataset from the drop-down list.
 - c. 'Analysis set type' – choose 'Flora'.

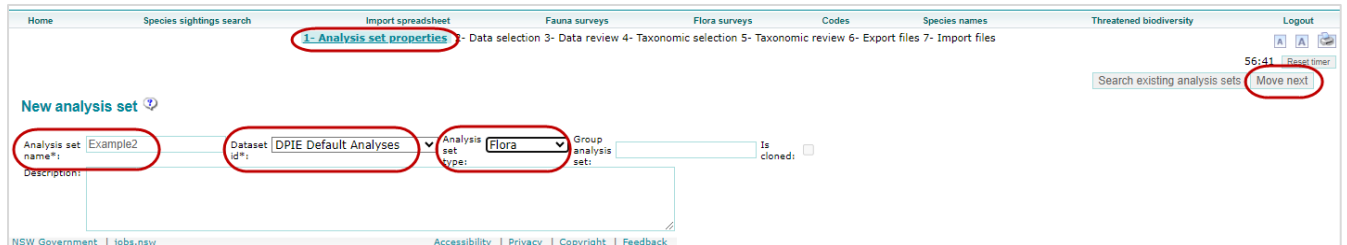


Figure 34 Location of the mandatory steps to populate in step '1- Analysis set properties' of the data analysis sequence

2. Click 'Move next' (Figure 34).

Step 13 Data selection and review

Location on video timeline: Part 1 – 15:35 to 17:55

Now you need to select your data.

1. In Excel, create a new file with the fields 'Survey name' and 'Site no' and paste the values in for your survey/sites (note the values need to exactly match the plots that are already stored in BioNet, making sure there are no leading or trailing spaces), then save as a CSV file (Figure 35).

	A	B	C	D
1	Survey name	Site no		
2	Blue Mountains threatened flora quadrats	AGBR01		
3	Blue Mountains threatened flora quadrats	AGBR02		
4	Blue Mountains threatened flora quadrats	AGFP01		
5	Blue Mountains threatened flora quadrats	AGFP02		
6	Blue Mountains threatened flora quadrats	AGLR01		
7	Blue Mountains threatened flora quadrats	MEG01		
8	Blue Mountains threatened flora quadrats	MEG02		

Figure 35 Sample survey and site data

2. In BioNet Atlas, at step **2- Data selection** in the sequence, click on the **Survey & site codes** tab (Figure 36).

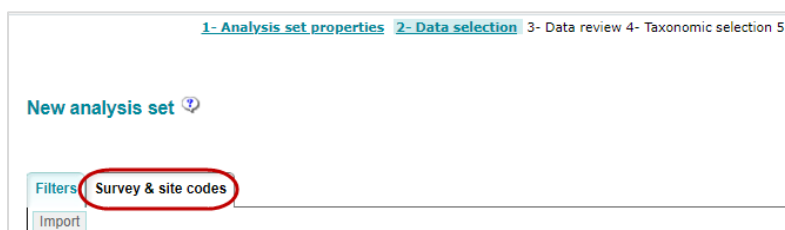


Figure 36 Location of the Survey & site codes tab in step 2- Data selection of the data analysis sequence

- Click 'Import' then select 'Choose file' to select your CSV file, and then click 'Import' (Figure 37).

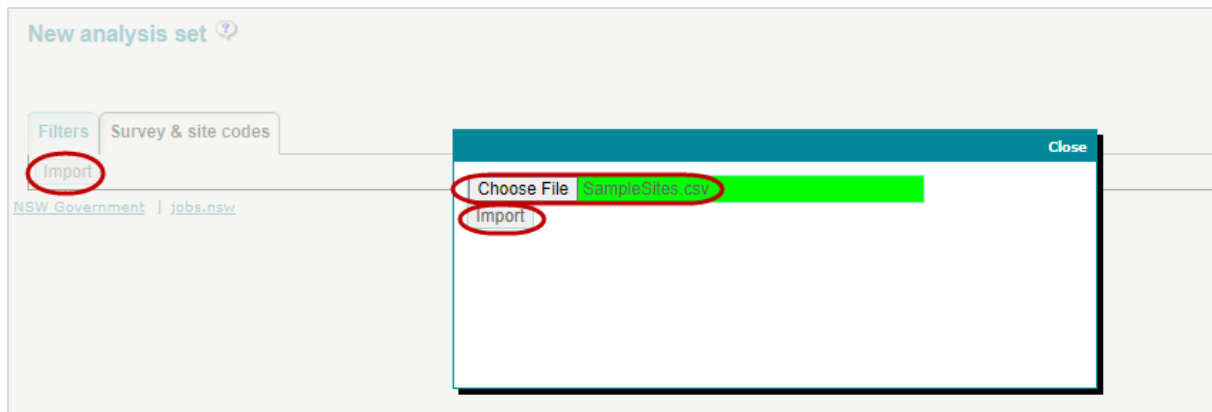


Figure 37 Location of the essential field and buttons to click when importing your CSV file of surveys and sites

This has then selected the censuses that match your survey and site numbers, taking you to step **3- Data review** in the sequence. You do not need to apply any filters here.

For the next 2 steps, refer to the video tutorial:

- [Extracting flora survey plot data from BioNet Atlas Part 2.](#)

This video demonstrates Steps 14 and 15. The video covers taxonomic selections and exporting the file.

Total video runtime: **16 minutes**. Minimum video time to cover required steps: approx. **6 minutes and 30 seconds** (starting at 10:32 in the timeline, if skipping to Example 2 only).

Step 14 Taxonomic selection and review

Location on video timeline: Part 2 – 10:32 to 11:15

- In step **3- Data review**, click 'Move next' (Fig. 38).

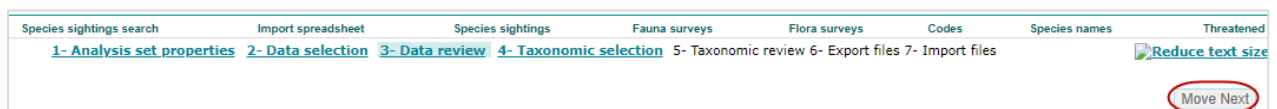


Figure 38 Location of the Move next button at step 3- Data review in the data analysis sequence

- In step **4 – Taxonomic selection**, select the assignment technique 'PCT classification taxonomic assignment' from the drop-down menu (Figure 39).
- Click 'Generate Taxonomic List' (Figure 39).



Figure 39 Location of the appropriate taxonomic selection and Generate taxonomic list button at step 4- Taxonomic selection in the data analysis sequence

Step 15 Export files

Location on video timeline: Part 2 – 11:15 to 15:58

1. Click on step **6- Export files** from the sequence (Figure 40).



Figure 40 Location of step 6- Export files in the data analysis sequence

2. Leave the default settings as they are and click 'Generate' (Figure 41).

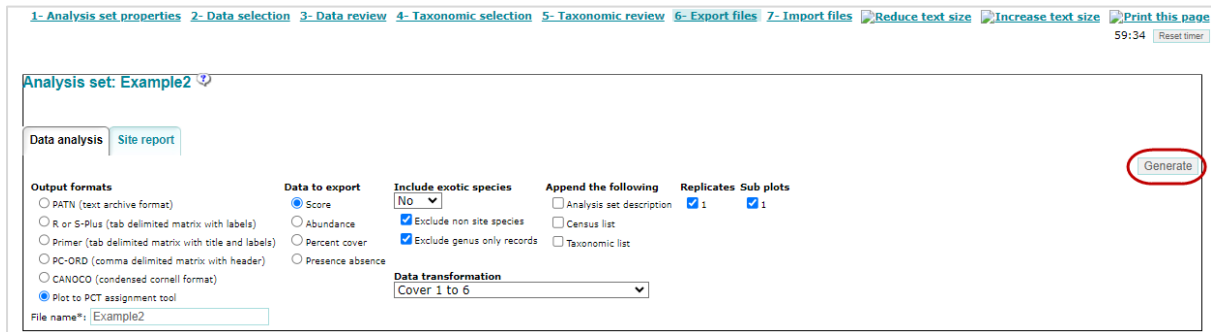


Figure 41 Location of the Generate button in step 6- Export files of the data analysis sequence

3. Click 'Download' to obtain the zipped CSV file (Figure 42).

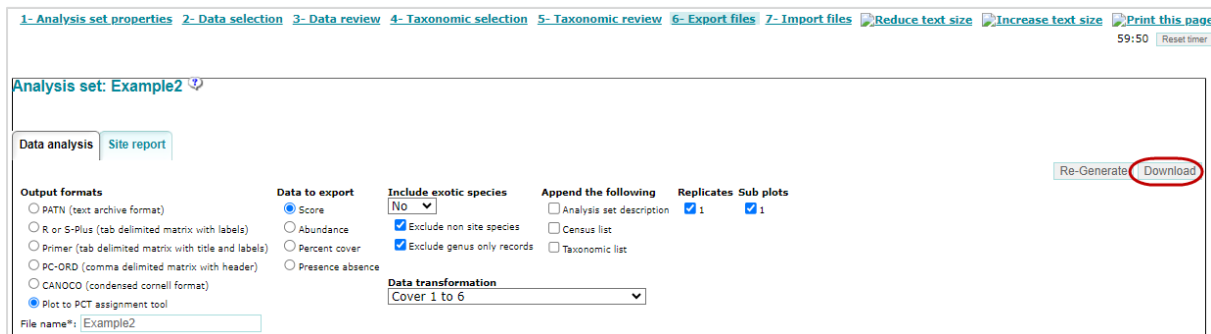


Figure 42 Location of the Download button in step 6- Export files of the data analysis sequence

4. Right mouse-click on the zip file in the bottom left of your screen, then click 'Open' to open the CSV file in file explorer (Figure 43).

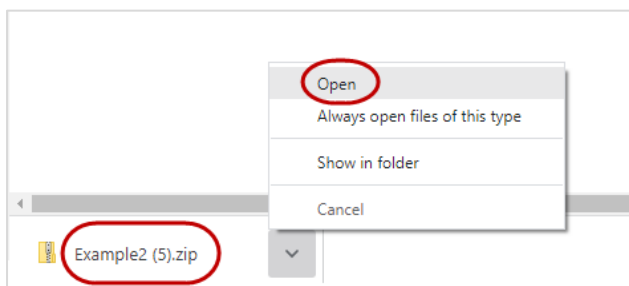


Figure 43 Location of the sample zip file and Open selection for the exported file

5. Double-click on the CSV file to open. The file contains a matrix of scores (Figure 44).

Site no	Acacord	Acacalni	Acacalnr	Acacoxyc	Acacsuav	Acacterm	Acaculic	Actiheli	Actimino	Adiaaeth	Allodist	Allolitt	Angocost	Aotueric	Astrlong	Baebrev	Bankeric	Bankserr	Bankspin	Billscan	Blecnuc	
AGBR01	2	0	0	0	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
AGBR02	2	2	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0
AGFP01	2	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	2	1	0	0	0	0
AGFP02	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	1	1	0	0	0
AGLR01	2	0	1	1	1	0	1	1	2	0	0	0	0	0	1	0	0	0	0	2	0	0
MEG01	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
MEG02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Figure 44 Sample export csv file in format compatible with the Plot to PCT Assignment Tool

6. If you scroll to the columns on the right-hand side, you'll see the coordinates (latitude and longitude) and 3 columns for the environmental variables (Figure 45).

Site no	Seneline	Stylgram	Synclgom	Vellyra	Violhede	Xanttrid	Zierlaev	Latitude	Longitude	Elevation	RainfallAnn	TempAnn
AGBR01	0	2	1	0	0	1	0	-33.5583	150.5519	389.78	1017.84	15.59
AGBR02	0	0	1	0	0	0	0	-33.5416	150.5595	436.05	1157.38	14.82
AGFP01	0	0	0	1	0	0	1	-33.618	150.5664	420.21	1151.68	14.81
AGFP02	0	0	0	0	0	1	0	-33.6193	150.5661	428.9	1191.8	14.55
AGLR01	0	0	1	0	0	2	1	-33.6512	150.5235	508.66	1211.75	14.13
MEG01	0	0	0	0	2	0	0	-33.7336	150.2698	599.5	985.44	13.21
MEG02	2	0	0	0	0	0	0	-33.7331	150.2684	590.27	978.66	13.26

Figure 45 Sample export csv file in format compatible with the Plot to PCT Assignment Tool, showing the 3 environmental variable columns (Elevation, RainfallAnn and TempAnn EM, EN, EO)

Stage C Upload standard full floristic survey plot data in the Plot to PCT Assignment Tool

Detail on how to upload your data and analyse your plot data into the Plot to PCT Assignment Tool is covered in the '[Plot to PCT Assignment Tool user guide](#)', and a demonstration is provided in the video tutorial:

- [Demonstration of the Plot to PCT Assignment Tool](#).

The video covers loading your CSV (BioNet export) file, and then analysing your results.

Total video runtime: **3:15 minutes**.

Step 16 Go to the Plot to PCT Assignment Tool

Location on video timeline: 00:00 to 0:57

1. Go to the [Plot to PCT Assignment Tool](#).

Step 17 Upload CSV file

Location on video timeline: 0:58 to 1:04

1. Click on the **Data Input** tab (Figure 46).
2. Click 'Browse' and upload your CSV file from BioNet (Figure 46).

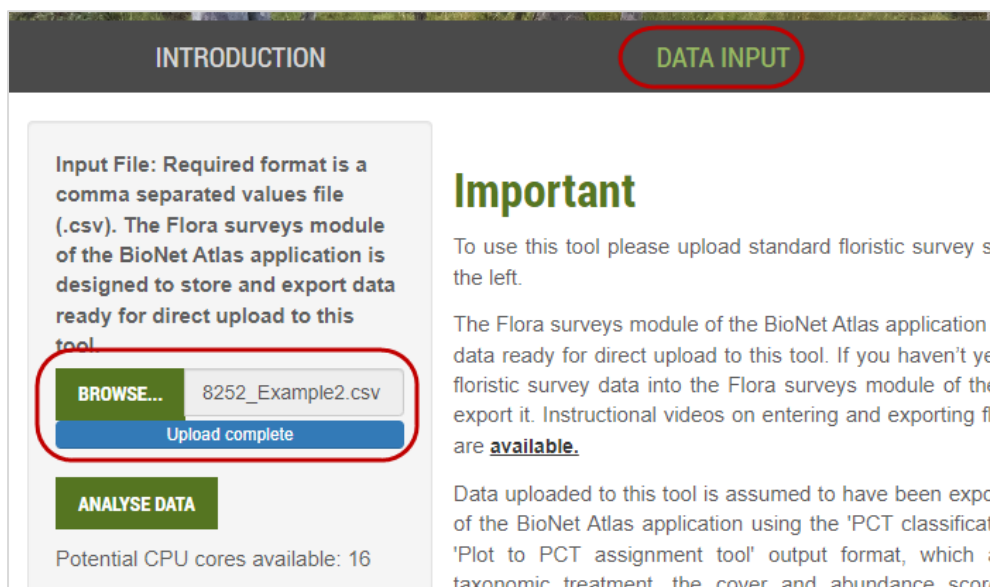


Figure 46 Location of the Browse button with sample file in the Data Input tab

Step 18 Analyse and interpret results

Location on video timeline: 1:05 to 3:13

1. Click 'Analyse Data', then the **PCT Matching Results** tab (Figure 47).

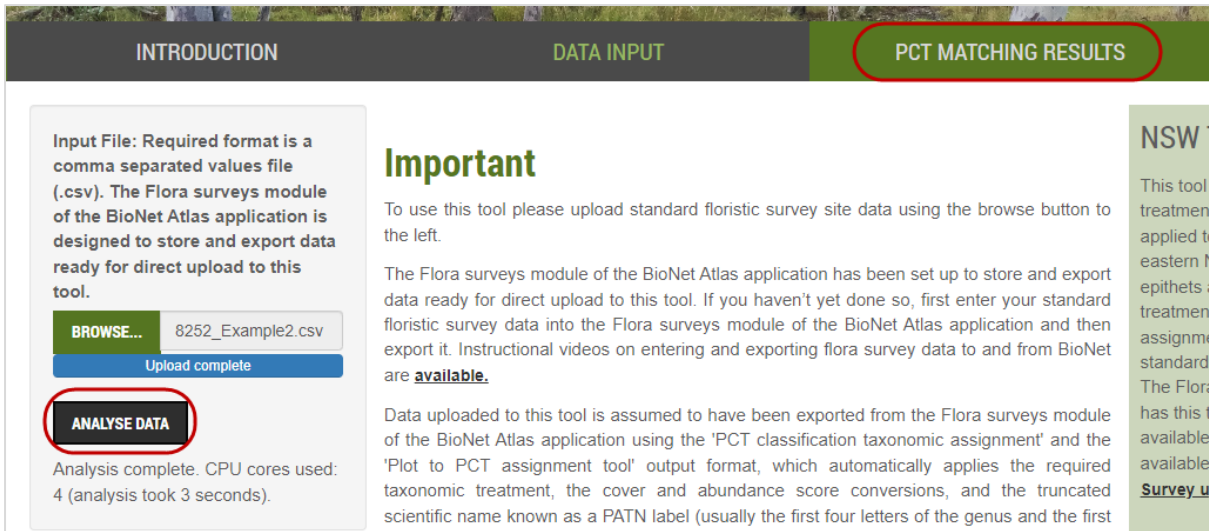


Figure 47 Location of the Analyse data button and PCT matching results tab

2. Refer to the [Plot to PCT Assignment Tool](#) homepage for resources (video and user guide) for a detailed run-through of analysing and interpreting the results.

More information (support resources)

Video tutorials

Stage A:

- [Contributing systematic flora survey plot data to BioNet Atlas Part 1 \(on Vimeo\)](#)
- [Contributing systematic flora survey plot data to BioNet Atlas Part 2 \(on Vimeo\)](#)

Stage B:

- [Extracting flora survey plot data from BioNet Atlas - Part 1.mp4 \(on Vimeo\)](#)
- [Extracting flora survey plot data from BioNet Atlas - Part 2.mp4 \(on Vimeo\)](#)

Stage C:

- [Demonstration of Plot to PCT assignment tool \(on Vimeo\)](#)

Other resources

- [NSW BioNet homepage](#)
- ['BioNet user manual 2019: for all users'](#)
- [Plot to PCT Assignment Tool homepage](#)
- ['Plot to PCT Assignment Tool user guide: eastern NSW PCT classification version 1.1'](#)

Contact

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