Assessors' guide to using the BioBanking Credit Calculator v.2

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1 Overview of the BioBanking Credit Calculator v.2

This document provides a guide for using the BioBanking Credit Calculator v.2 (the credit calculator). The credit calculator is the online application used by BioBanking Assessors to determine the number and type of credits needed to offset the impacts on biodiversity values at a development site, and the number and type of credits created at a biobank site. This manual should be used together with Sections 1, 2 and 3 of the *BioBanking Assessment Methodology and Credit Calculator Operational Manual* published by the Department of Environment and Climate Change in 2009.

In order to access and run version 2 of the credit calculator you will require an internet browser and an internet connection. Browsers that have been tested and are fully supported by OEH include Microsoft Internet Explorer, Mozilla Firefox and Apple Safari.

To access the credit calculator you need to navigate to www.environment.nsw.gov.au/asmslightprofileapp/default.aspx. You will require a username and password to access the credit calculator. Usernames and passwords are allocated by OEH to all accredited BioBanking Assessors.

Please note that if there is an interruption to the internet connection, or there is no activity on the site for 20 minutes, the credit calculator application will 'time out' and any unsaved information will be lost. Please be sure to save your work regularly.

Each work page has a save button and it is recommended that you save your work at the completion of entering data on each page. Please also note that when data is entered into the credit calculator there may be a slight delay while the credit calculator refreshes. Please ensure you wait for the credit calculator before entering additional data.

Please report any faults in the operation of the credit calculator to the BioBanking Service Centre by email to biobanking@environment.nsw.gov.au.

1.1 Logging in to the BioBanking Credit Calculator

To use the credit calculator navigate within your internet browser to www.environment.nsw.gov.au/asmslightprofileapp/default.aspx. Enter your username and password to proceed to the *My applications* page.

On the left hand side of this page is a menu that allows you to view and update your details, change your password, review your login history or logout of the credit calculator. To open the credit calculator select *BioBanking Credit Calculator* in the centre of the screen. If you need your password reset, please send an email to the BioBanking Service Centre and OEH will reset the password for you.

Figure 1: My applications page and opening the credit calculator

1.2 News and bulletins

The opening screen in the credit calculator contains a *News & bulletins* notice board that lists news and information about the credit calculator and BioBanking. You should check this page regularly for information on upcoming events such as changes to databases, upcoming assessor forums or other information relevant to the scheme.

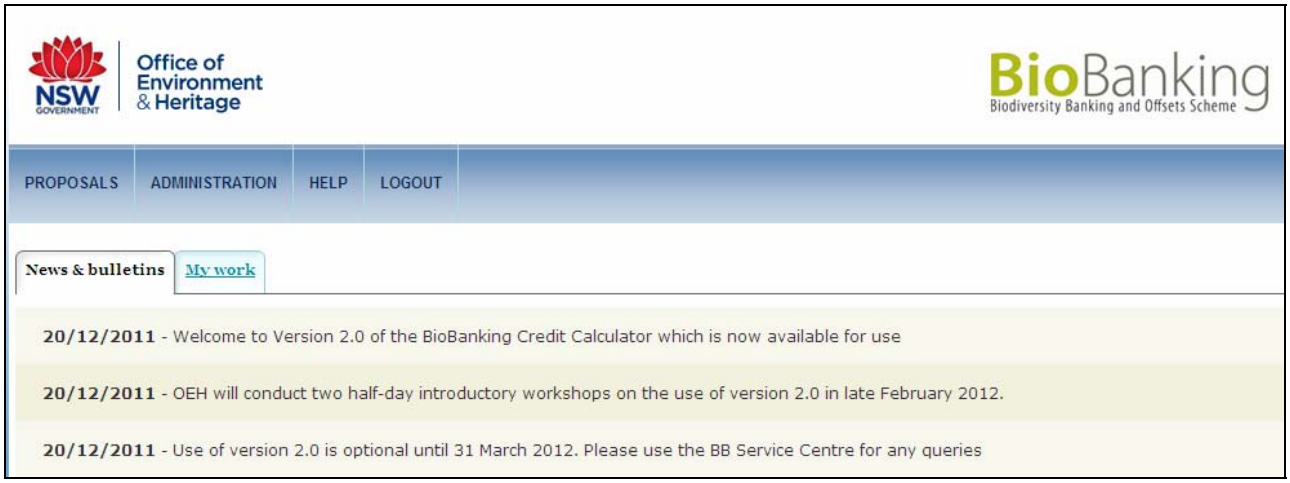


Figure 2: News and bulletins notice board

1.3 Changing and deleting data

Most of the data you enter into the credit calculator can be updated without having to re-enter all data associated with an assessment. If you wish to change or delete data already entered into the credit calculator, navigate to the appropriate page and amend or remove data as necessary. Any fields that are edited need to be saved to ensure the data in the field is updated.

Please note that changes to data may have flow-on effects. For example, updating any transect/plot data will require the site value scores to be recalculated, and then you must ensure associated steps in the tool are completed before calculating credits. Other data may alter the suite of species being assessed.

Data that cannot be changed once it has been entered includes the CMA name chosen (see Sections 1.5 and 2.5) and the CMA sub-region selected in the landscape value assessment. If the wrong CMA region is chosen for an assessment, the assessment must be re-started.

If the wrong CMA sub-region is selected, the assessment circle containing the incorrect CMA sub-region can be deleted. You can then add a new assessment circle, select the correct CMA sub-region and continue with the assessment. If vegetation zones have been linked to the deleted assessment circle, you will need to rebuild those links in the vegetation zone page.

Should you wish to cancel any unsaved changes to the data, there is a cancel button on each page. Once it is selected, a popup will appear asking if you are sure you want to cancel your changes. If yes, any unsaved data will be lost.

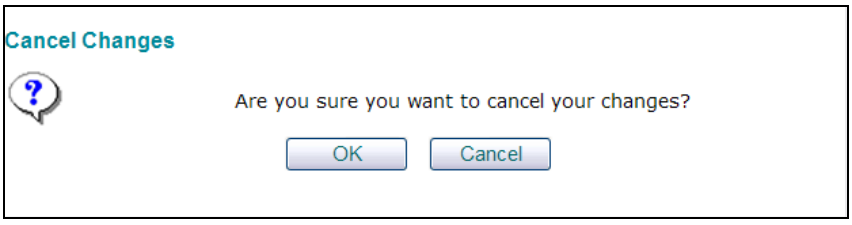


Figure 3: Cancel changes warning

1.4 Starting or continuing an assessment

The top of the screen within the credit calculator contains four navigation items, including *Proposals*, *Administration*, *Help* and *Logout*.

To begin a new assessment, select *Proposals–Create New*. This will open a blank *Assessment details* page to begin an assessment.

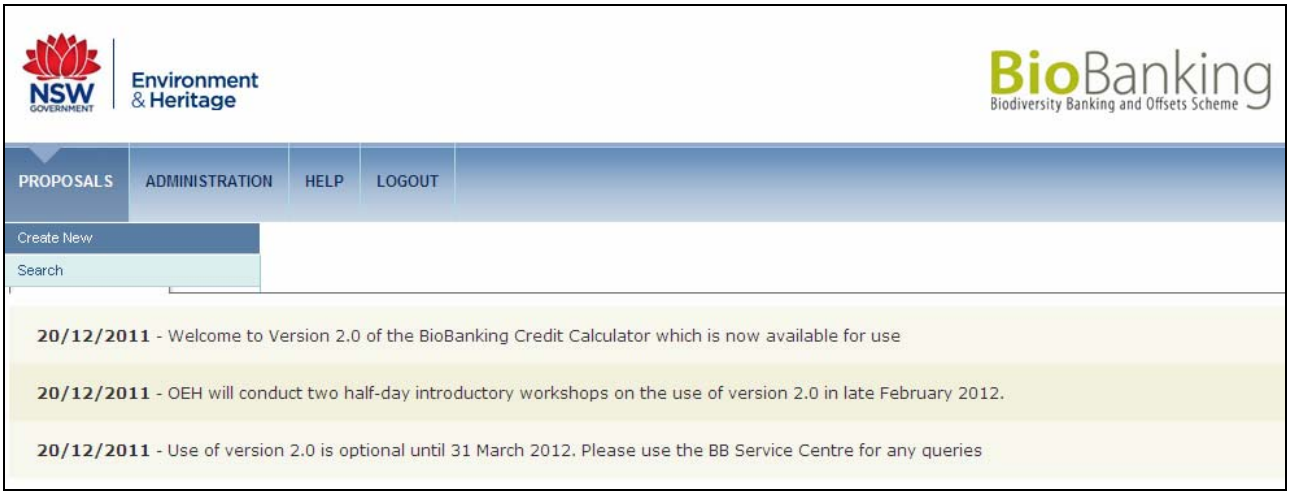


Figure 4: Creating a new proposal

To view or edit an existing assessment you can select the *My work* tab and select *View* or *Edit* to the right of the appropriate assessment.

Figure 5: My work tab

Alternatively, you can perform a search (Figure 6). To perform the search select *Proposals–Search* and enter at least one search criterion (more search criteria can be entered to further refine the search). Search criteria include *Assessment type*, *Status*, *Proposal ID*, *Proponent's last name*, *Proponent's first name* and *Proposal name*.

Once the assessment is located, select the radio button beside the appropriate assessment and select either *Edit* to edit an assessment, or *View* to review an assessment and print associated reports.

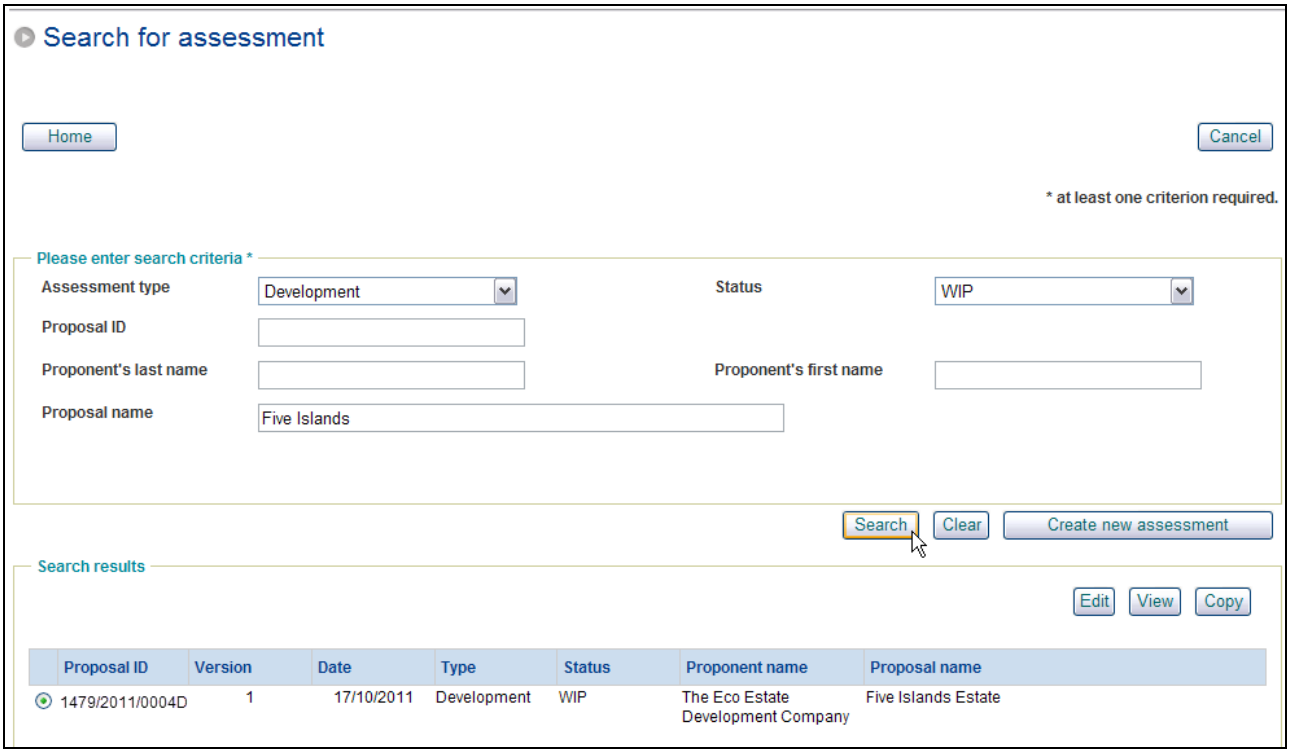


Figure 6: Searching for an existing assessment

In addition to editing or viewing an existing assessment, you can also copy it to run an alternative scenario, thus reducing data entry time. To copy an assessment select the radio button beside the appropriate assessment and select *Copy.* A new version of the assessment (version 2) will be created and will open automatically. An assessment can be copied up to four times. Select *Save & Close* to save the new version of the assessment, or *Cancel* to discard the new version. You will be asked to confirm whether you are sure you want to cancel without saving.

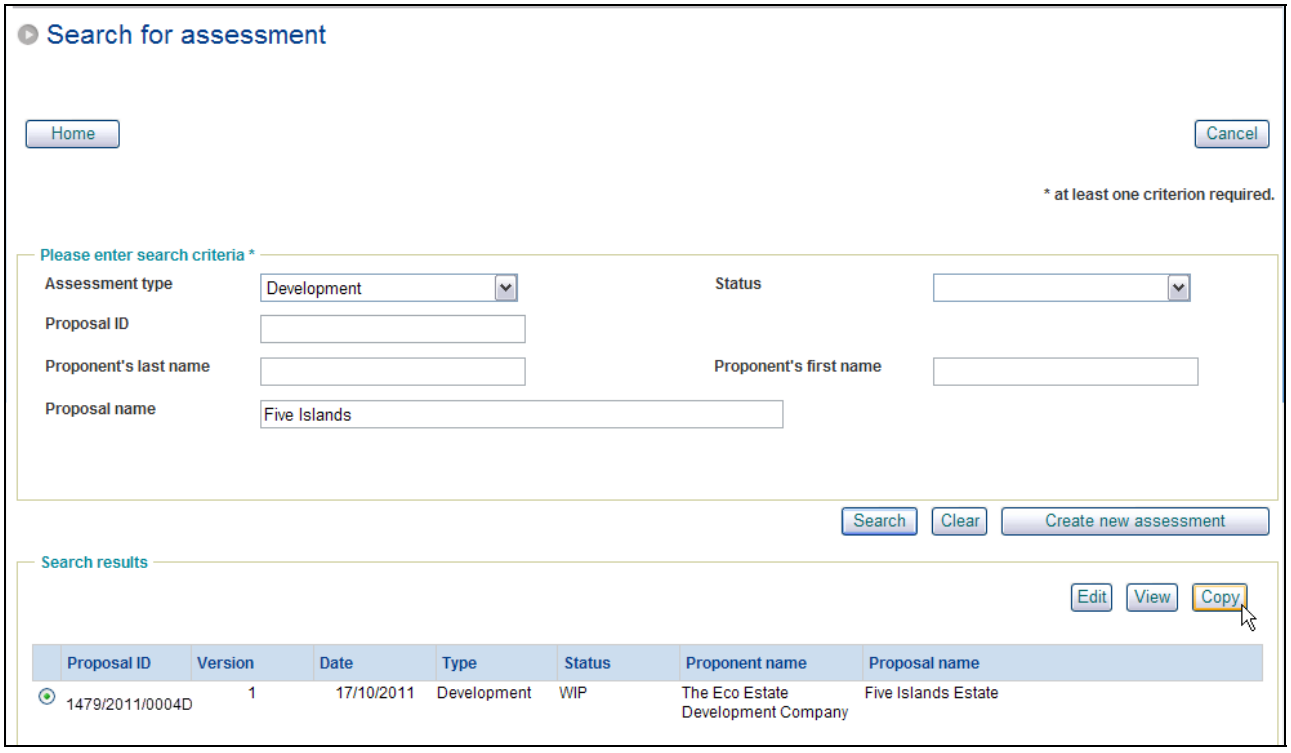


Figure 7: Copying an existing assessment

Throughout the credit calculator, where an asterisk (*) appears beside an attribute, data must be entered for that attribute before an assessment can proceed to the next page. Should you attempt to proceed with an assessment without completing all attributes marked with an asterisk, an error message will appear in red at the top of the page, and the highlighted fields must be completed before the assessment can progress.

The *Home* button is also available throughout the credit calculator, and will return you to the homepage of the credit calculator. Any changes will be lost if you select the *Home* button without saving, although you will be prompted to cancel the action and save your changes before they are lost.

1.5 Entering assessment details

The details of the assessment are entered into the *Assessment details* page (Figure 8). This information is needed to record the location and details of the assessment. Information collected includes the assessment type (development or biobank), proposal name, street address and Lot/DP details of the site. Additional details are also collected such as the catchment management authority (CMA), Mitchell Landscape and Local Government Area (LGA).

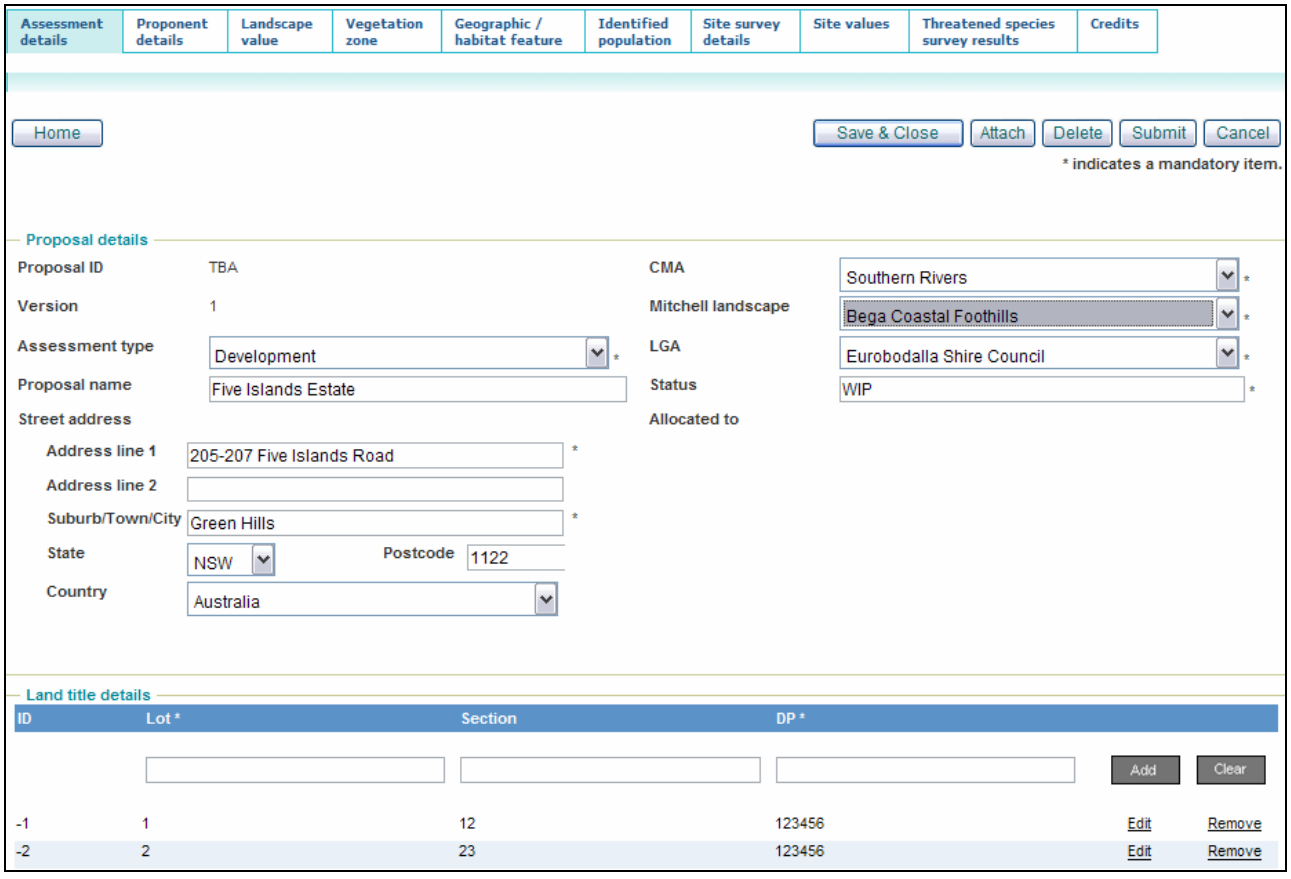


Figure 8: Assessment details page

The assessment type information (development or biobank), CMA, Mitchell Landscape and LGA information can be selected from drop-down lists, while the proposal name and street address information is entered as text. The CMA area that is chosen will filter the selection of CMA sub-regions available in the subsequent *Landscape value* page. The credit calculator will allow only one CMA area to be entered for each assessment. If the development site extends over two or more CMA areas, multiple assessments must be completed.

The Mitchell Landscape is used to determine the significance of the size of adjacent remnant vegetation. Mitchell Landscapes were mapped at a broad scale (1:250,000), so the actual Mitchell

Landscape in which an assessment occurs may not always be the landscape shown on the map. The Mitchell Landscape chosen from the drop-down list in the credit calculator can be different from the Mitchell Landscape indicated by the map in your GIS. Where the description of an adjacent Mitchell Landscape more accurately reflects the landscape in which the assessment mostly occurs, choose the adjacent Mitchell Landscape. If a development site lies across the boundary of two Mitchell Landscapes, choose the Mitchell Landscape in which most of the development occurs (see section 3.7.2 of the *BioBanking Assessment Methodology and Credit Calculator Operational Manual*).

You must enter Lot/DP details for the assessment. The Lot/DP number is entered by adding the details for each Lot followed by selecting *Add*. Where multiple Lot/DP numbers are entered hit *Add* between each Lot/DP.

Finally, the *Proposal ID* will initially be allocated TBA. This information will be completed automatically once the assessment is saved for the first time, and will include your four digit assessor's accreditation number, the year and a development/biobank case number (Accreditation Number/Year/Development Case Number). The *Status* of the assessment will be WIP (Work in Progress) while the assessment is being continued, but will change to *Submitted*, *Approved*, *Terminated*, *Withdrawn* or *Deleted* as the assessment progresses.

In order to save an assessment the *Proponent details* page must also be completed (see Section 1.6 below). After completing the *Assessment details* page select the *Proponent details* tab at the top of the page to continue data entry. If you do not wish to save your changes, select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving.

1.6 Entering proponent details

Further details of the assessment are to be entered into the *Proponent details* page (Figure 9). Information collected includes the proponent category (individual, company, partnership, etc.), name, business name, address information, phone and email information and company details. The information required will depend on the category initially selected (i.e. an individual will not require a business name). The assessor information in the bottom right corner will be completed automatically when the assessment is saved.

Once both the *Proponent details* and *Assessment details* page are completed the assessment can be saved. Select *Save & Close* to save the assessment. If you do not wish to save your changes, select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving.

After selecting *Save & Close,* you will be returned to your My Work page where you can then select the assessment and continue to edit it.

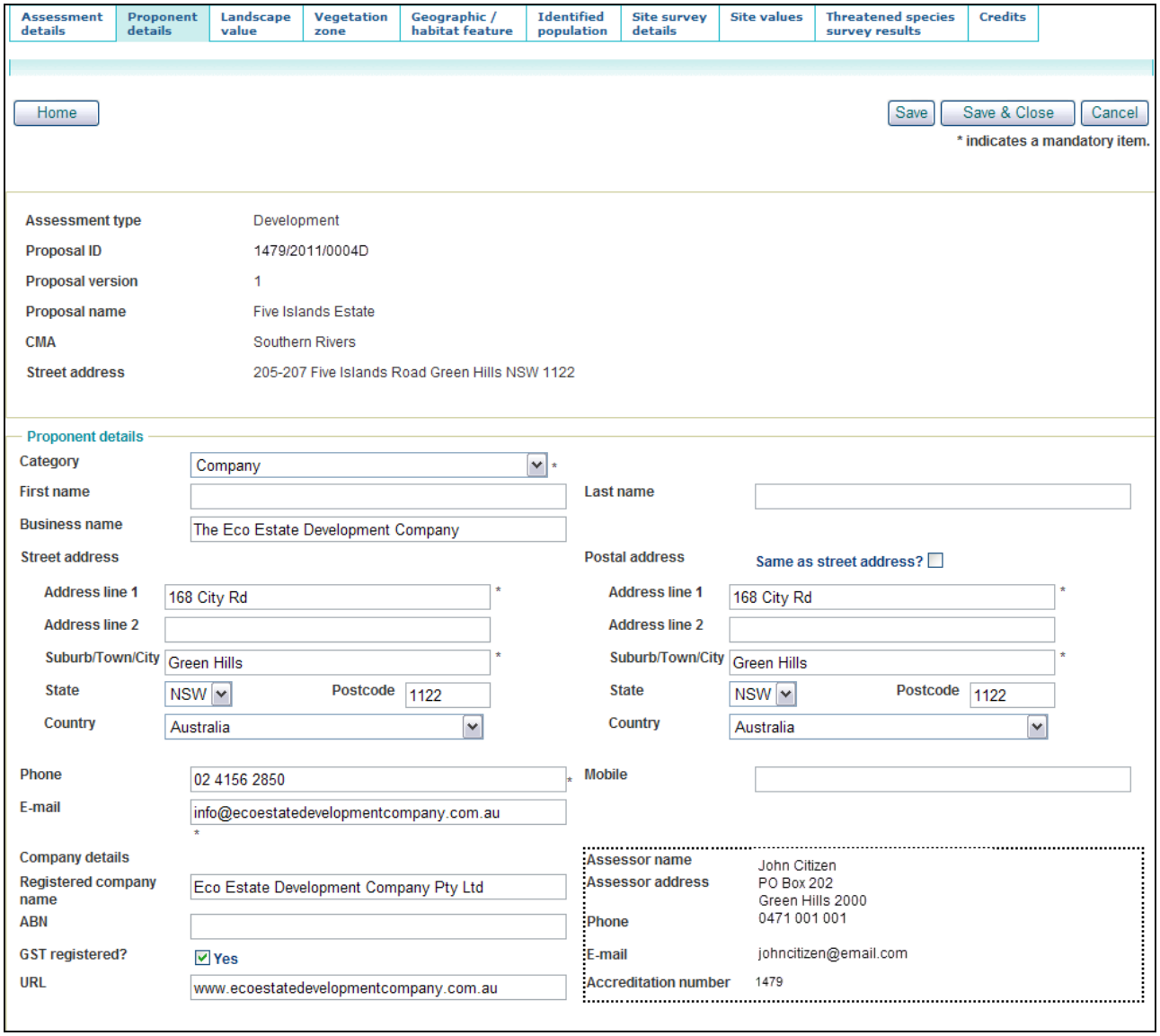


Figure 9: Proponent details page

2 Assessors' guide to operating the credit calculator – development sites

2.1 Entering landscape value

The *Landscape value* page is used to enter data for CMA sub-regions, assessment circles and connectivity, with the data contributing to the calculation of the landscape value score and the prediction of threatened species which require further assessment.

The information entered into the credit calculator at this stage is predominately sourced from mapping the site using GIS software. Select *Add* to create a new circle, or if you wish to edit or view an existing circle, select the radio button next to the appropriate circle and select *Edit* or *View.*

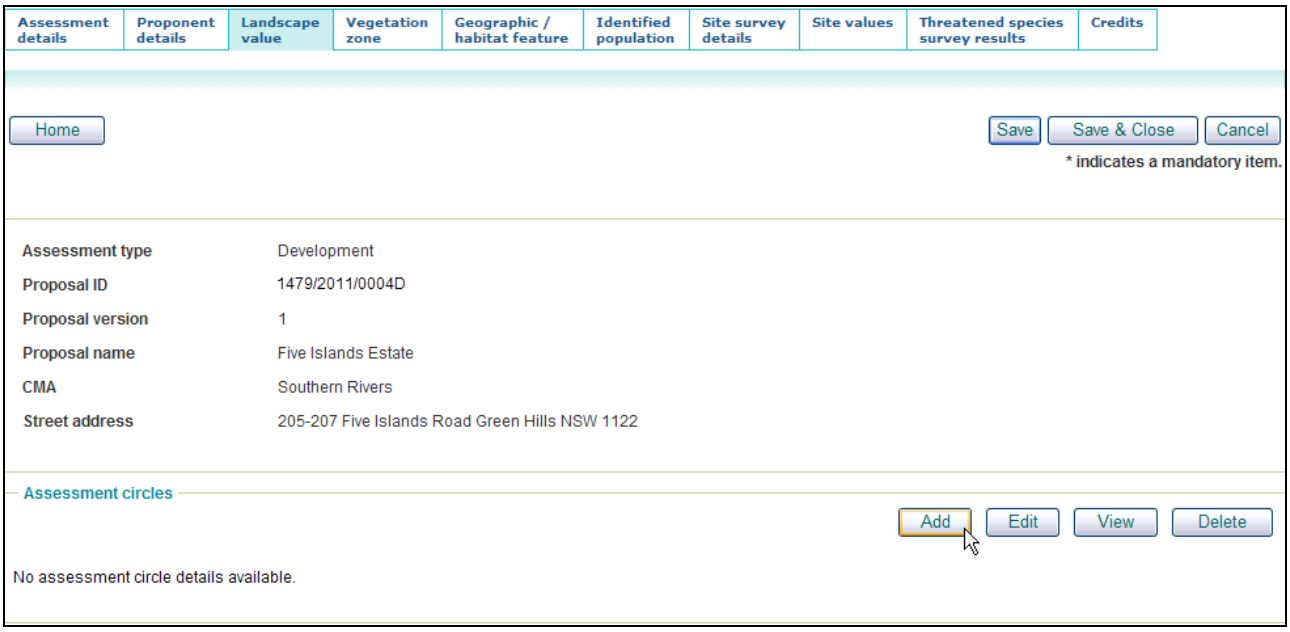


Figure 10: Landscape value page

To begin the data entry, first record the *Assessment circle name* (free text) and the *CMA sub-region*. The CMA sub-region is chosen from a drop-down list which is limited to the sub-regions in the CMA entered in the *Assessment details* page.

Next you record the before and after scores for the *% Native vegetation cover per 1000ha circle* and the *% Native vegetation cover per 100ha circle*. The % native vegetation cover measures the change in the overall percentage of native vegetation within the 1000-ha and 100-ha assessment circles in which the development occurs. The assessment of the 1000-ha circle is also a filter to identify threatened species that may occur on the site.

The *Before development* score is the current % native vegetation cover before development and is visually estimated in classes of 10% by using the drop-down lists for the 1000-ha circle and the 100-ha circle. The *After development* score is the % native vegetation cover remaining in each circle following the development. This is estimated in classes of 10% by using the drop-down list for each circle.

The score for *Connectivity value* is determined from the three-step process described in section 3.7.3 of the *BioBanking Assessment Methodology and Credit Calculator Operational Manual* published by the Department of Environment and Climate Change in 2009. The change in the linkage width is entered by choosing the appropriate linkage width class from the drop-down list. A linkage width must be chosen for the *Before development* box and for the *After development* box. The credit calculator will automatically calculate the number of thresholds that are crossed on the basis of the impact of the development.

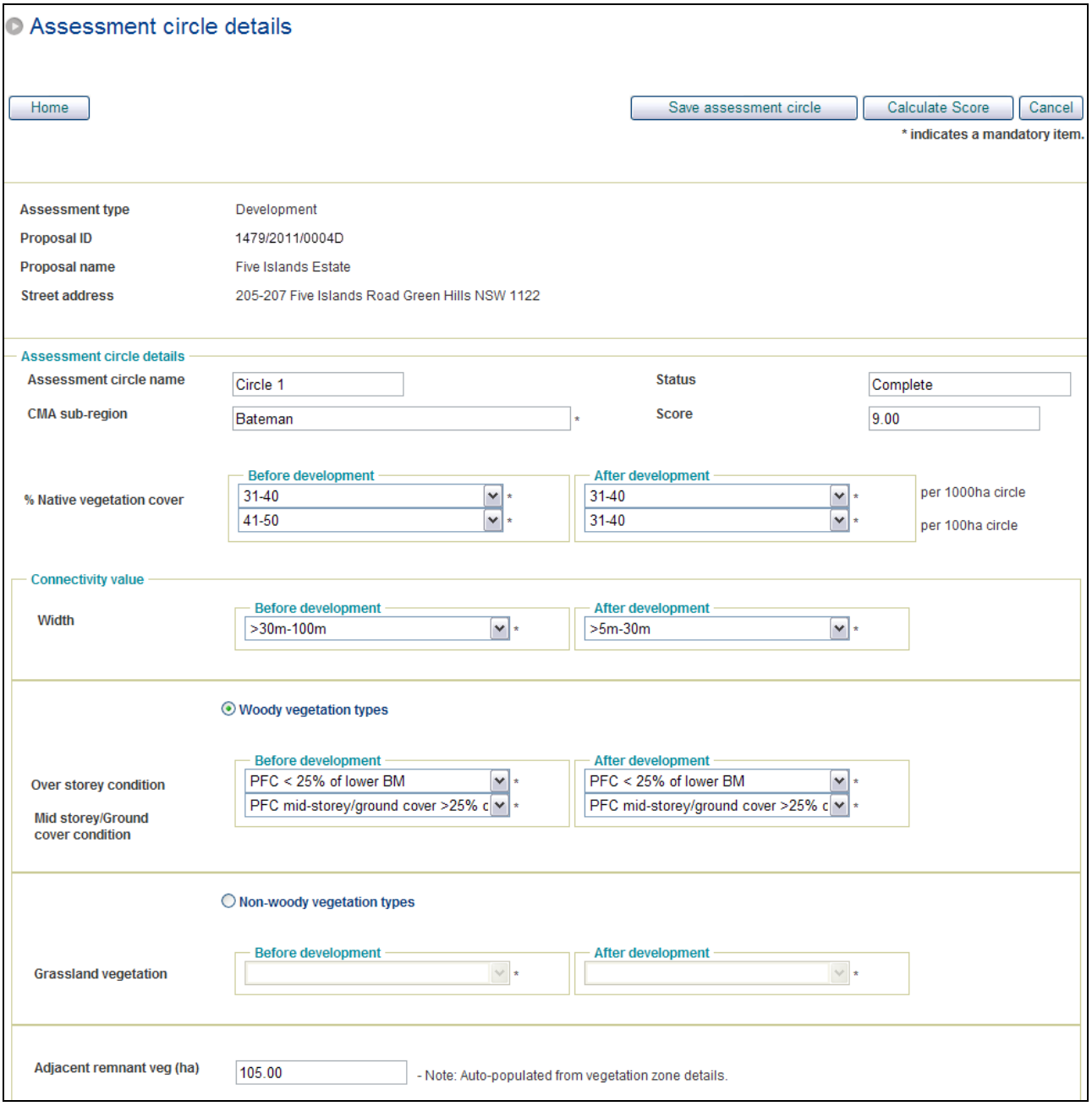


Figure 11: Assessment circle details page

To enter the connectivity condition value into the credit calculator, first choose which type of vegetation is being assessed by selecting the radio button for either *Woody vegetation types* or *Non-woody vegetation types*, according to whether the vegetation is naturally woody or non-woody.

For woody vegetation types, first select the average condition class from the drop-down list for both the *Over-storey condition* and *Mid-storey/Ground cover condition* strata. This information must be entered for both *Before development* and *After development* using the drop-down list for each field. The condition class for *After development* is selected by taking into account the impact of development on the overall remaining condition of each stratum.

The credit calculator will then automatically calculate the number of connectivity condition classes and linkage width classes that have been crossed as a result of the development to determine the final connectivity value score.

Once data entry is complete you can select *Add assessment circle* to return to the *Landscape value* screen. If you do not wish to save your changes, select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving. The *Calculate Score* button can be used to calculate the landscape score after making changes to the data entered. This will enable you to test the impact of different scenarios on the landscape when conducting an assessment. Please note that the landscape value score and the adjacent remnant veg area will be populated once the *Vegetation zone* screen has been completed.

A development site may require more than one 1000-ha assessment circle. A new 1000-ha assessment circle must be used whenever:

(a) the development site exceeds a single 1000-ha assessment circle, or

(b) the configuration of the development area does not fit into a single 1000-ha assessment circle, or

(c) the development site extends from one CMA sub-region into another CMA sub-region.

If you wish to add further assessment circles, click on the *Add* button at the bottom of the screen. The data described above is then entered for each new assessment circle. An assessment circle can be deleted from the assessment by selecting the radio button next to the appropriate circle and selecting *Delete.*

To save the new data entered for *Landscape value,* select *Save* to continue the assessment, or *Save & Close*. If you do not wish to save your changes select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving.

2.2 Entering vegetation zones

The *Vegetation zone* page is used to enter data for each vegetation zone on site including vegetation formation and type, condition class and to assign each vegetation zone to an assessment circle.

To begin the data entry first select the *Vegetation zone* tab at the top of the page, and select *Add* to add a vegetation zone. If you wish to view, edit or delete an existing vegetation zone, select the appropriate radio button and select *Edit, View* or *Delete.*

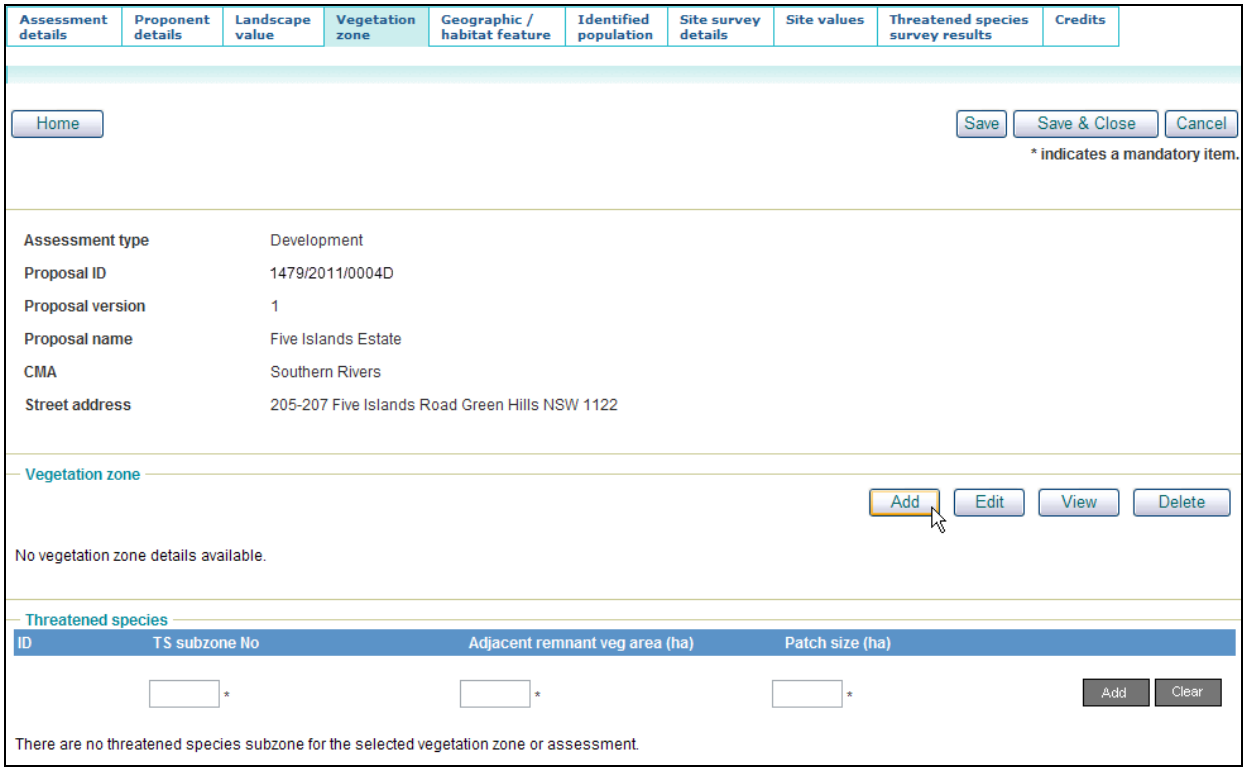


Figure 12: Vegetation zone page

2.2.1 Vegetation zone details

The *Vegetation zone details* page is used to add a new, or edit an existing vegetation zone. First select an assessment circle using the drop-down list beside *Assessment circle name*. The CMA sub-region will appear automatically. Next enter a *Vegetation zone number* (must be a number) and select *New* from the *Status* drop-down list.

Where more than one assessment circle is required, it is recommended that you continue numbering the *Vegetation zone number* from the previous assessment circle, rather than restarting from one (1).

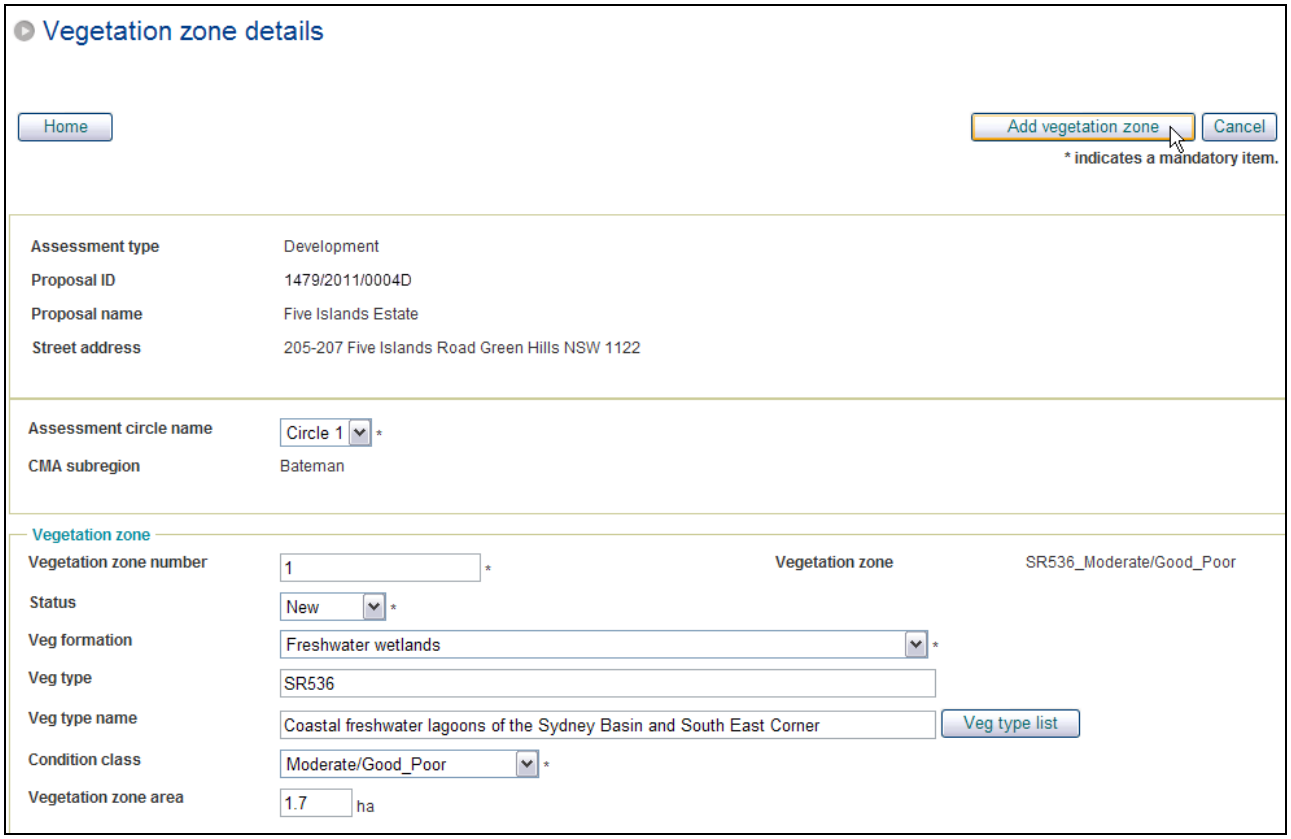


Figure 13: Vegetation zone details page

Select the *Vegetation formation* from the drop-down list, and then click the *Veg type list* button on the right side of the page. A search box will open (Figure 14), where you can enter a vegetation type name (whole or partial) and select *Search*. Alternatively, you can select *Search* without entering any vegetation type details and obtain a complete list of all vegetation types within the selected formation (the list will be restricted to the *Vegetation formation* selected earlier). Select the radio button to the left of the appropriate vegetation type and click *OK*.

Once the vegetation type is selected a condition class can now be selected. From the drop-down list next to *Condition class*, select either '*Low*', '*Moderate/Good*', '*Moderate/Good_Poor*', '*Moderate/Good_Medium*', '*Moderate/Good_High*' or '*Moderate/Good_Other*'. Finally, enter a *Vegetation zone area*.

Note: The condition class you choose does not influence the credit calculation. The condition class chosen here will only affect whether a red flag is triggered for a vegetation zone.

Once complete, select the *Add vegetation zone* button (for new vegetation zones) or *Save vegetation zone* (for existing vegetation zones) at the top right corner of the screen, or *Cancel* if you do not wish to save your changes. You will be asked to confirm whether you are sure you want to cancel without saving.

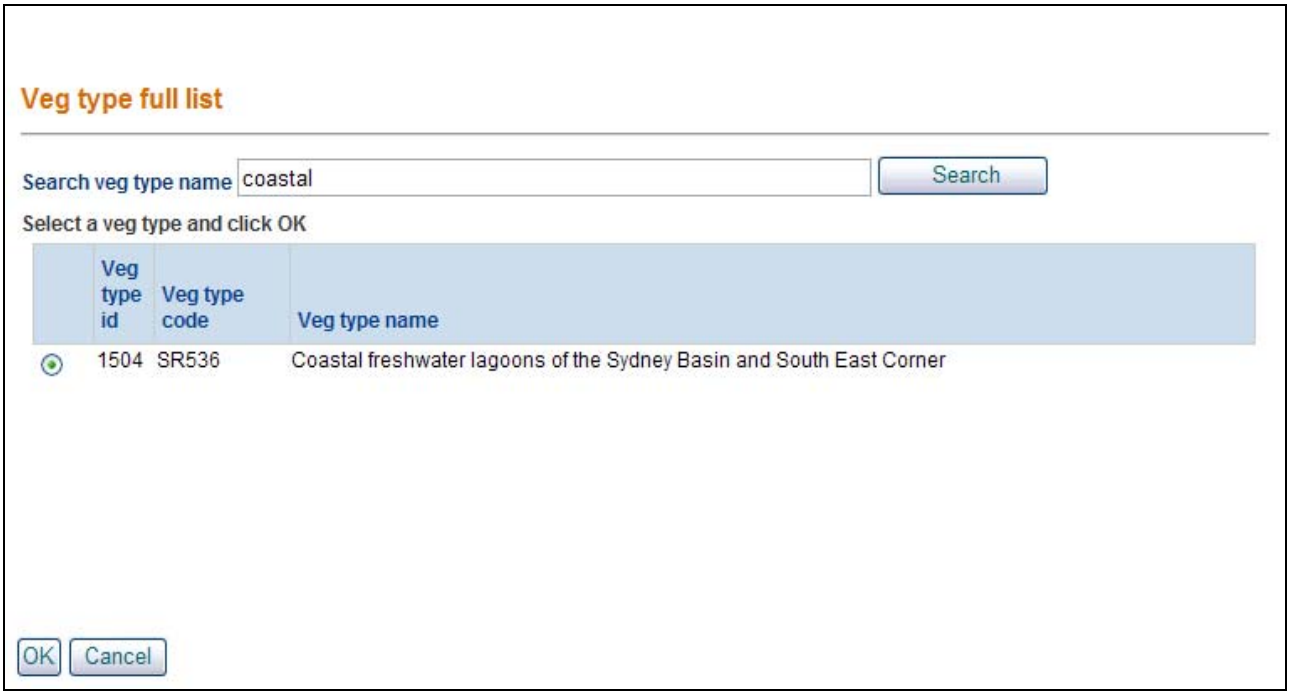


Figure 14: Vegetation type search page

2.2.2 Threatened species sub-zones

Threatened species sub-zones are used to filter threatened species that are to be assessed at the site. A minimum of one threatened species sub-zone must be added for each vegetation zone being assessed.

Threatened species sub-zone information is entered at the bottom of the *Vegetation zone* page (Figure 15). To enter the threatened species sub-zone data first select the radio button next to the vegetation zone to activate it, then enter the *TS subzone No*, *Adjacent remnant veg area (ha)* and the *Patch size (ha)* for the selected vegetation zone. Once this threatened species sub-zone data is entered, select *Add* to keep it, or *Clear* to discard it. Threatened species sub-zone information can be edited or deleted after entry if required by selecting *Edit* or *Delete* next to the appropriate threatened species sub-zone.

Each threatened species sub-zone must be identified with a name and/or number, allowing it to be tracked through later steps in the assessment. It is recommended that threatened species sub-zones are numbered according to the vegetation type code, which allows the threatened species sub-zone to be easily tracked through an assessment (e.g. SR642_poor).

To save the entered vegetation zone and threatened species sub-zone data, select *Save* and continue the assessment or select *Save & Close*. If you do not wish to save your changes select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving.

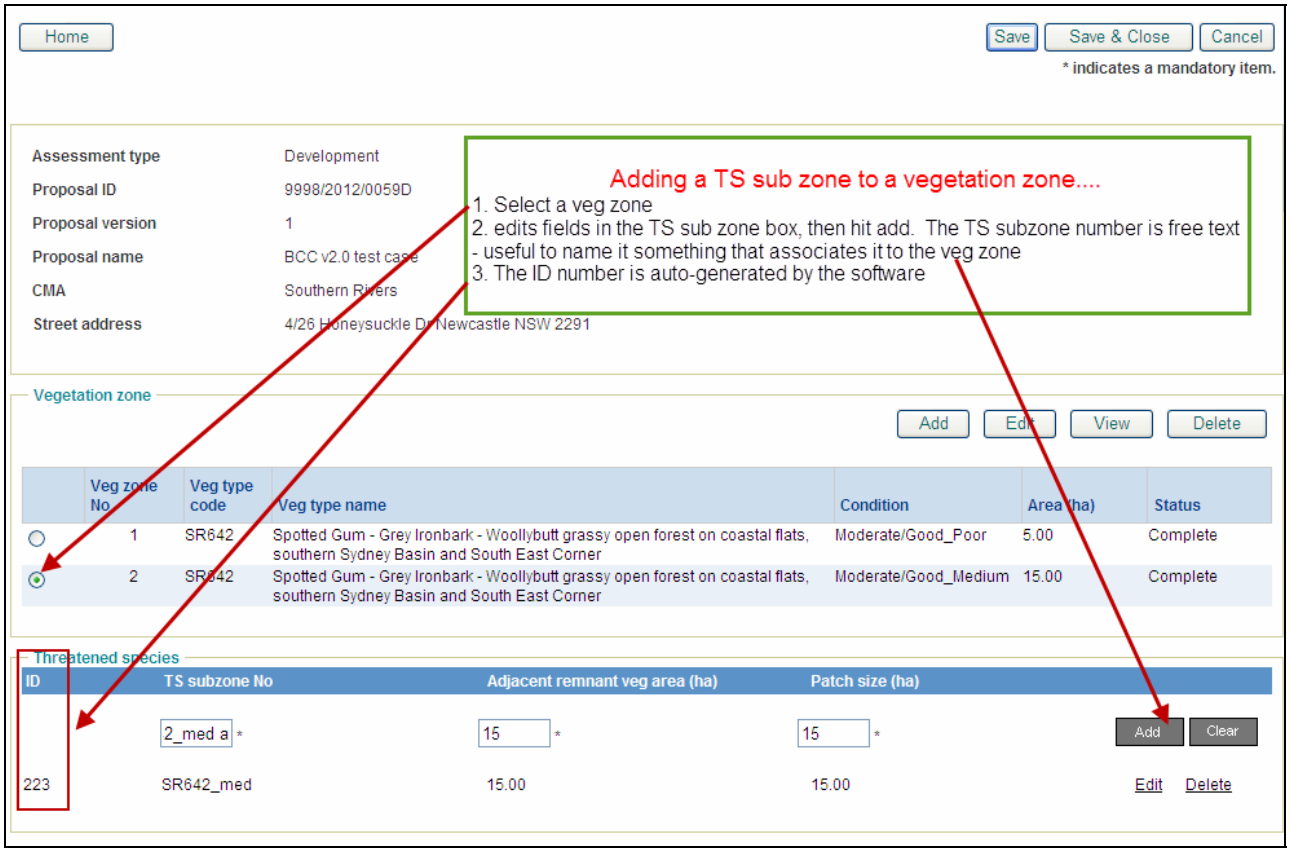


Figure 15: Threatened species sub-zones

2.3 Answering geographic/habitat feature questions

Based on the vegetation type and CMA sub-region entered in the previous pages, the credit calculator will automatically query the Threatened Species Profile Database to identify those species which require assessment at the development site for species credits. The initial assessment for these species is based on whether particular habitat features are present on the development site, or whether the development site is within a particular geographic area related to the species.

Information on whether the geographic or habitat feature is present on the site is entered at this step. The *Feature* is identified on the far right of the screen, with the species being considered for each feature also displayed using their common and scientific names (Figure 16).

You must determine if any of the features identified occur on the development or biobank site. If so, the *Impact?* tick box should remain ticked (the default setting is that the feature is ticked). If in doubt the box should be left ticked and retained in the list so the species will be considered in later stages of the assessment. This step allows the potential presence of the species to be assessed through a targeted survey or expert report.

To save the *Geographic/habitat feature* data entry select *Save* and continue the assessment or select *Save & Close*. If you do not wish to save your changes select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving.

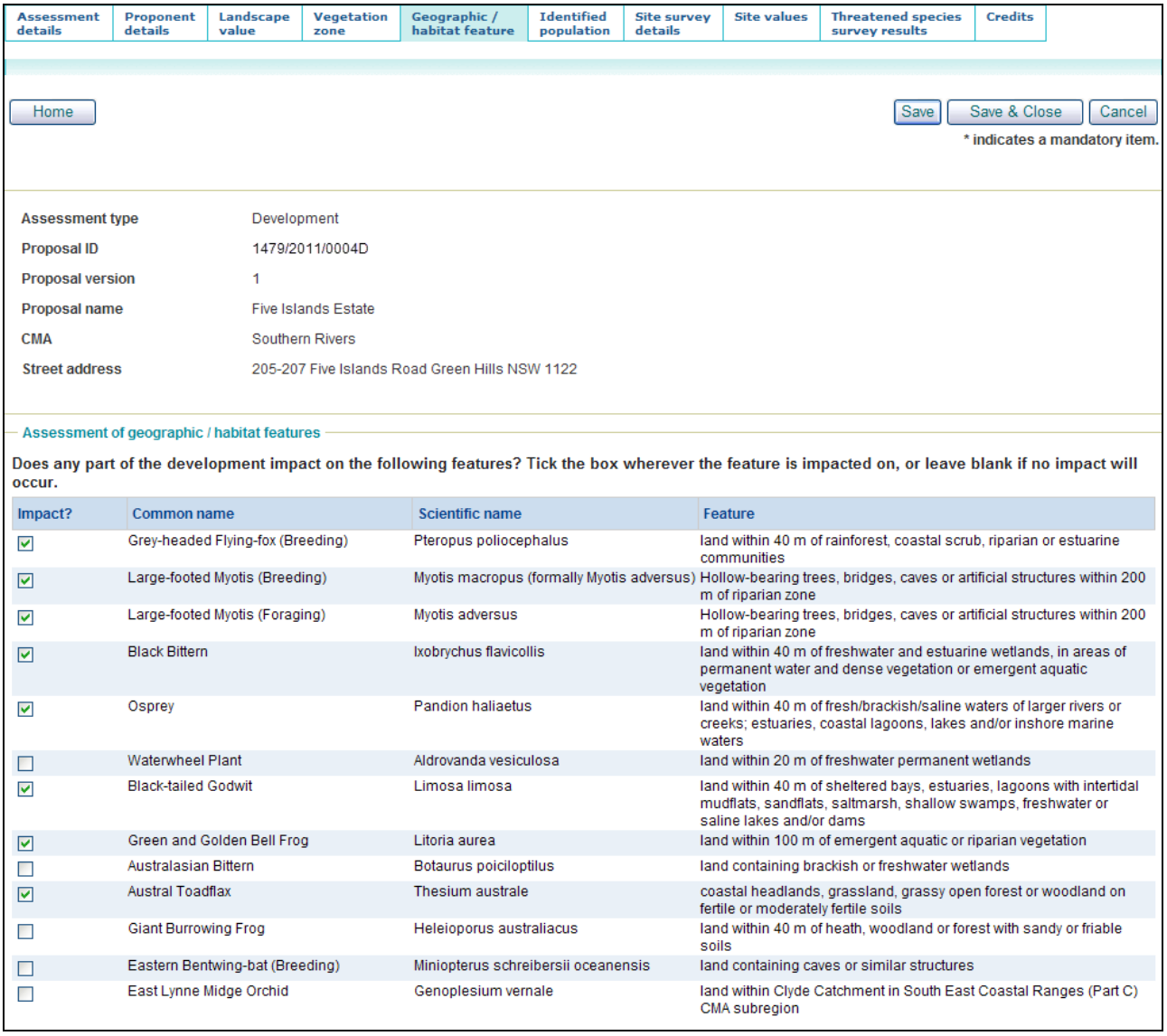


Figure 16: Geographic/habitat feature page

2.4 Assessing any identified populations

At present there are no identified populations, so you do not need to enter any information on the *Identified population* tab.

2.5 Site survey details

The survey requirements for the site are displayed for species credit species within the *Survey time matrix*. You can use the matrix to determine those species that can be surveyed within the same time periods, and identify the times of year when particular species cannot be surveyed, as shown in Figure 17.

To review threatened species that are predicted on site, select *Go to predicted threatened species* above the *Survey time matrix* or scroll to the bottom of the page. The *Predicted threatened species* are listed by *Scientific name* and *Common name*, and include those species that are assessed for ecosystem credits. The *Tg value* for each species is also listed.

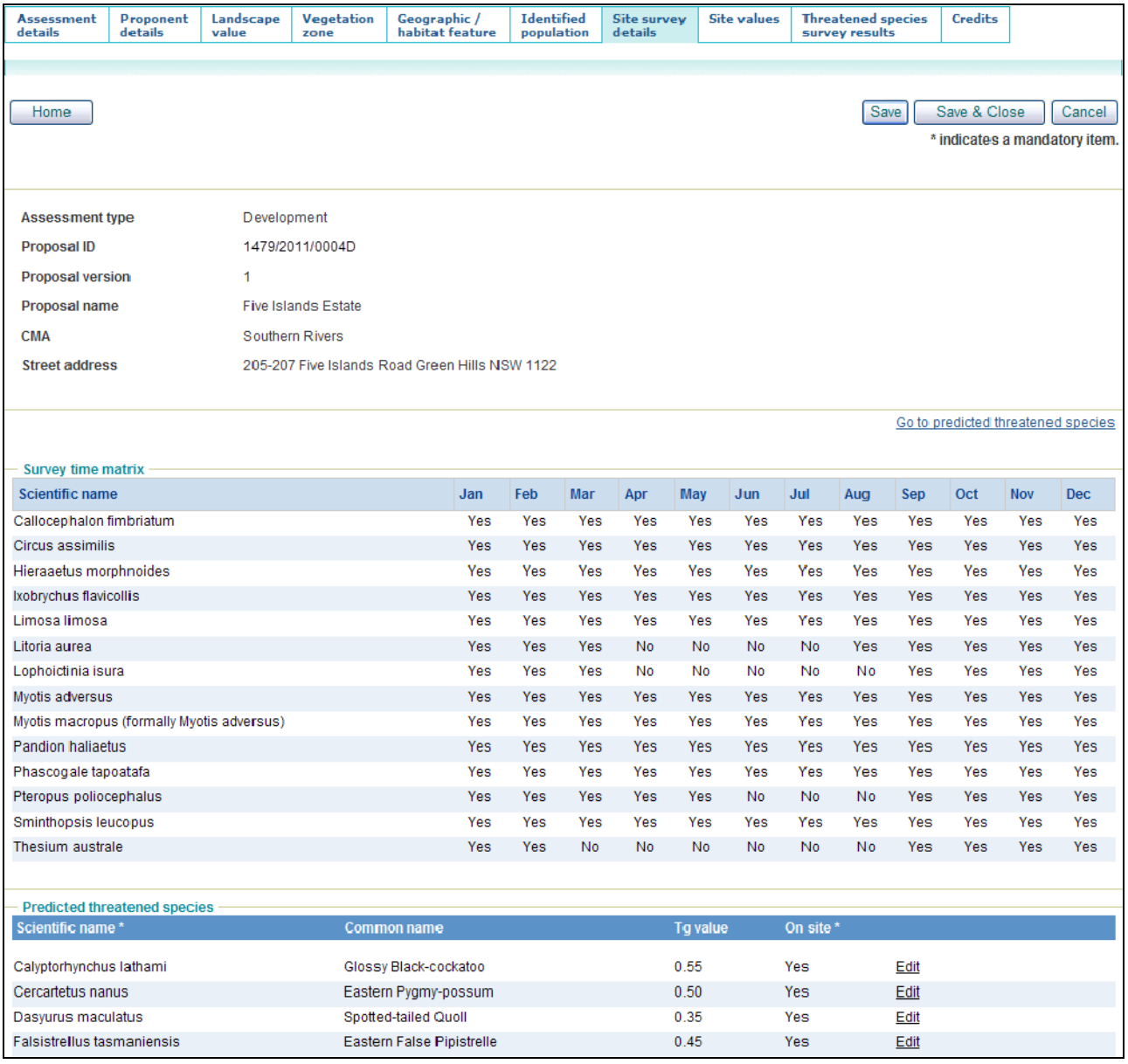


Figure 17: Survey time matrix and predicted threatened species

You can remove a species that is assessed for ecosystem credits from further assessment, or edit its Tg value, by selecting *Edit* next to the appropriate species. If you consider the species is not present on site, the *On site* box should be un-ticked. To change the Tg value you can edit the number that is within the *Tg value* box as shown in Figure 18. The credit calculator will record any changes made, for review by OEH. Once complete, select *Save*, or *Clear*, if you do not wish to save the changes.

Note: A Tg value may be changed for a species using the certified local data provisions under section 2.3 of the assessment methodology, where the edited Tg value more accurately reflects the local environmental conditions of the site. More appropriate local data requires approval from OEH and you must provide the reasons for using local data as part of the application for a biobank statement. Alternative Tg values for some species may be obtained from the Biobanking website at www.environment.nsw.gov.au/resources/biobanking/ThsppcharaCMA.xls.

To remove the predicted species from the assessment, you must justify and document all decisions made in the BioBanking Assessment Report.

A species can only be removed from further assessment at this step if none of the habitat components (breeding, foraging or roosting habitat) are present on site. Information on the habitat components for a species can be obtained from the OEH website at www.threatenedspecies.environment.nsw.gov.au/tsprofile/home_species.aspx. You must include the reasons for the species not being present on the development site (i.e. the habitat components are not present) as part of the application for a biobanking statement. Any species removed at this step, or whose Tg values are changed, are identified on the credit report.

A report that identifies the vegetation type with which each predicted species is associated can be accessed from *View* mode on the *My Work* tab of the credit calculator (refer to Section 4).

To save the *Site survey details* data entered select *Save* and continue the assessment or select *Save & Close*. If you do not wish to save your changes select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving.

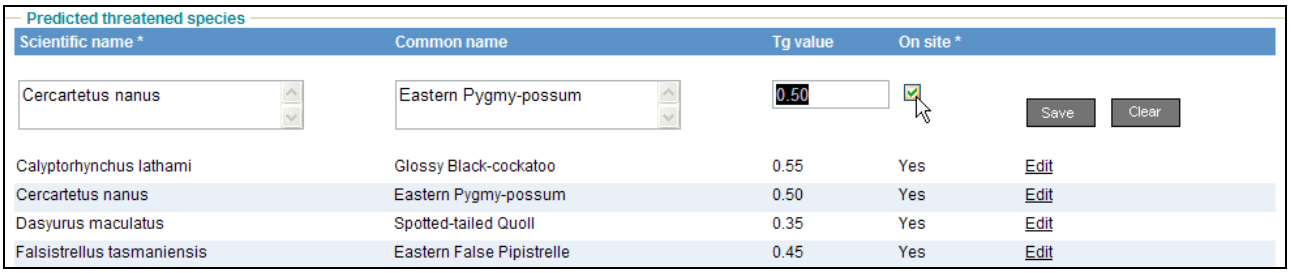


Figure 18: Editing a predicted threatened species

2.6 Entering site values

Once the field surveys have been completed, the results of the plots/transects can be entered into the credit calculator for each vegetation zone using the *Site values* page. As shown in Figure 19, the credit calculator will display the details of each vegetation zone, including:

- the vegetation type identification code and name
- its value for percent cleared in CMA
- whether it is an endangered ecological community (EEC)
- its red flag status
- its area (ha)
- a broad condition description
- the minimum number of transects/plots required
- number of transects/plots completed, and
- whether the management score assessment is completed.

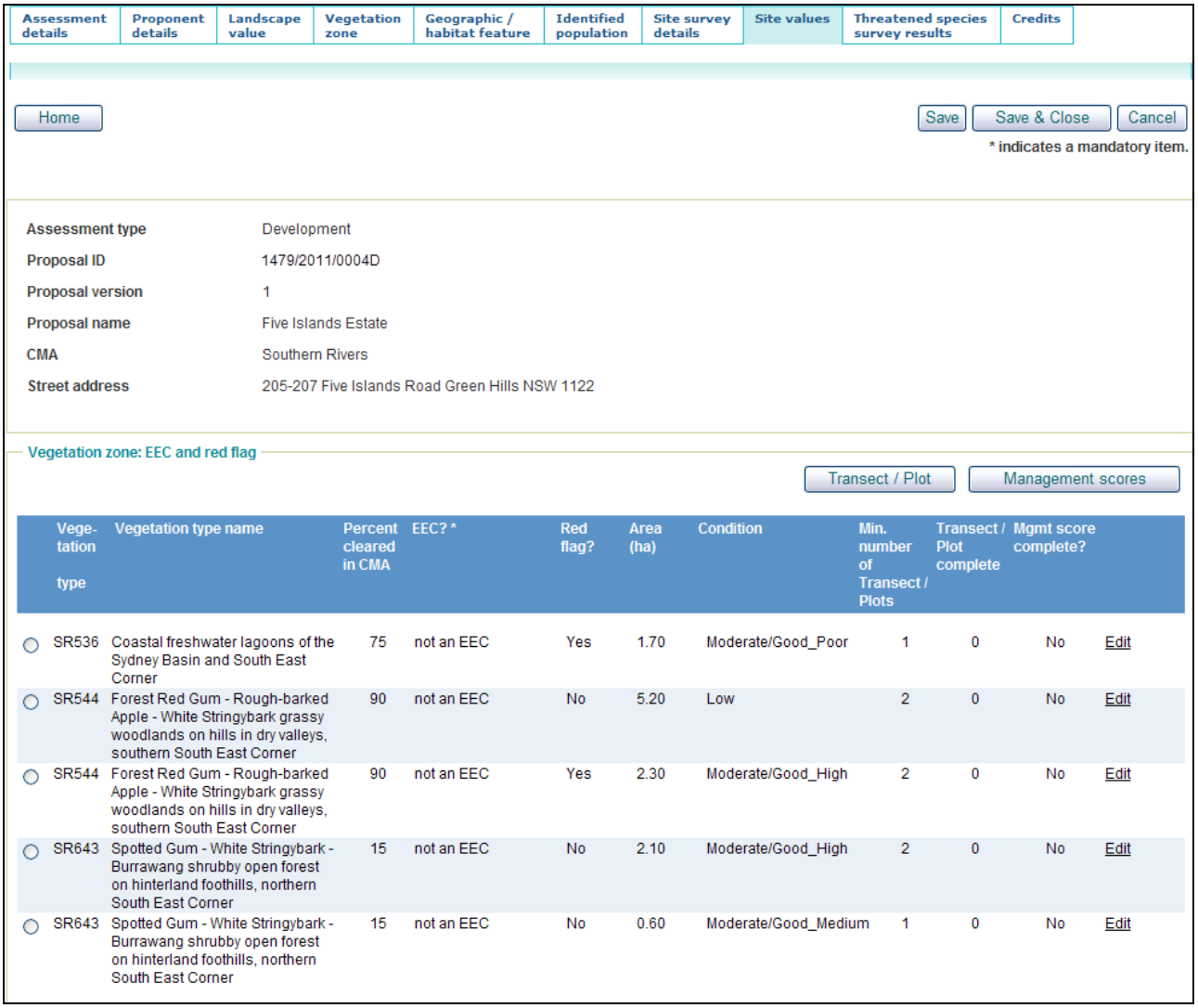


Figure 19: Site values page

2.6.1 Vegetation zone EEC and red flag status

You must determine if the vegetation type meets the definition of an EEC. Select the radio button for each vegetation zone, and then select *Edit* if you think the vegetation zone equates to an EEC (Figure 20). A search box will open where you can enter an EEC name (whole or partial) and select *Search*. Alternatively, you can select *Search* without entering any EEC details and obtain a complete list of EECs linked to the vegetation type currently being edited. The radio button corresponding to the relevant EEC can then be selected, followed by the *OK* button.

The *Percent cleared in CMA* value can also be edited if you can demonstrate that more appropriate local data is available for the vegetation type. Once complete, select *Save*, or *Clear* if you wish to discard the data just entered. The reasons for altering the *Percent cleared in CMA* value must be documented in the assessment report as part of the application for a biobanking statement.

Note: The *Percent cleared in CMA* value may be changed for a vegetation type using the certified local data provisions under section 2.3 of the assessment methodology, where the *Percent cleared in CMA* value more accurately reflects the local environmental conditions of the site. More appropriate local data requires approval from OEH and you must provide the reasons for using local data in the assessment report as part of the application for a biobank statement.

Once this information has been entered, the credit calculator will indicate whether a red flag is triggered for the vegetation zone. If a red flag has been triggered for a vegetation zone, the

assessment can still continue and the red flag will be listed in the final report. If the assessment is part of an application for a biobanking statement, the red flag variation criteria will need to be included in the assessment report as part of the application for a biobank statement.

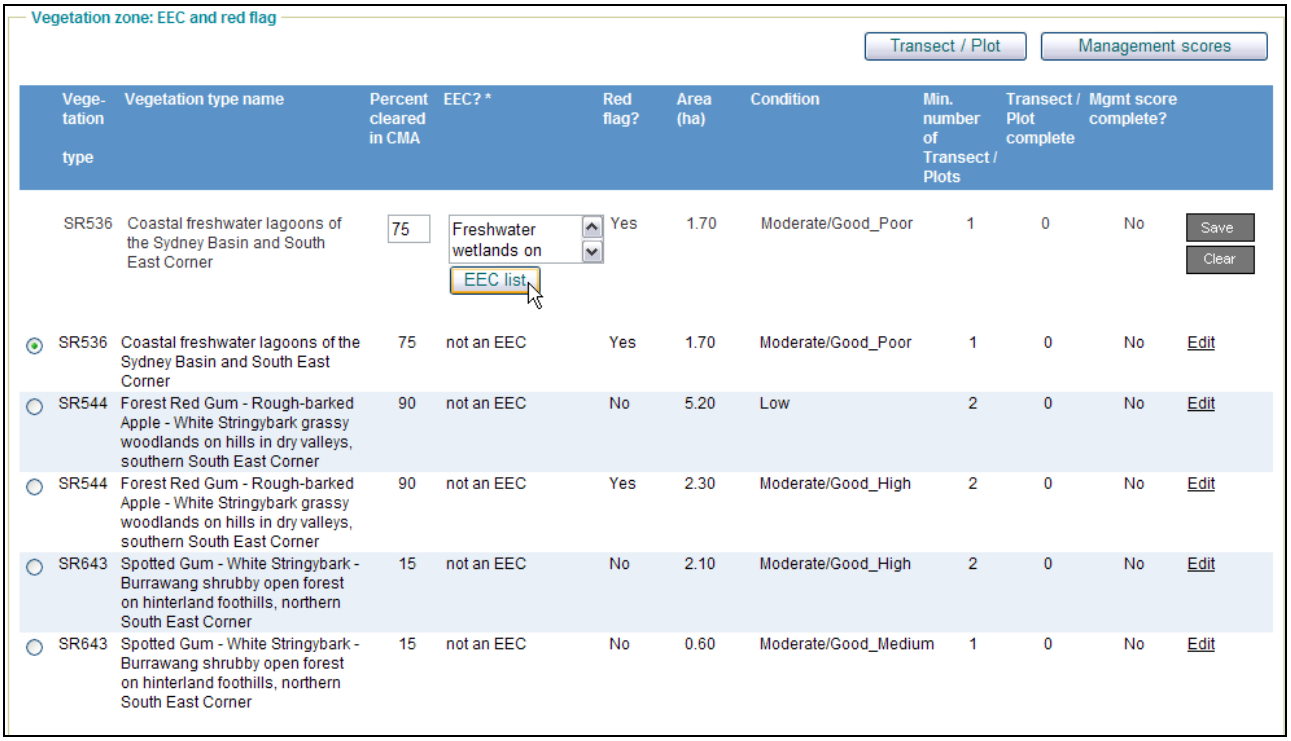


Figure 20: EEC status and percent cleared in CMA

2.6.2 Benchmark data and vegetation transect/plot details

To enter new benchmark information or transect/plot data for a vegetation zone select the radio button for the vegetation zone and click the *Transect/Plot* button above the list. The resulting *Vegetation transect/plot details* page displays the vegetation zone name and vegetation type, followed by the benchmarks for the vegetation type and the vegetation transect/plot data entry section (Figure 21).

Editing benchmarks

The benchmark data shown are taken from the NSW Benchmarks Database. Benchmark data can be obtained from the NSW Benchmarks Database, from local reference sites or from published information. If using local benchmark data, the data can be entered into the credit calculator by selecting *Edit* adjacent to the benchmark information (Figure 22). An *Edit Benchmark Data* page will appear where you can change the benchmarks relating to one or more of the attributes captured in the field (Figure 22). The credit calculator will indicate that local benchmark data have been used, and the use of local benchmark data will require the approval of the Director General.

The calculation for the site value score includes multipliers for '*native over-storey cover x proportion of over-storey species occurring as regeneration'* and '*number of trees with hollows x total length of fallen logs*' (refer to Section 3.5.2 of the BioBanking Assessment Methodology). The multipliers may be removed from the calculation of site value when assessing vegetation types from the following formations: Grasslands, Heathlands, Alpine Complex, Freshwater Wetlands, Saline Wetlands and Arid Shrublands. A *Remove multipliers* tick box is provided for this purpose when you are assessing these formations and it is recommended that you use it. The *Remove multipliers* option will only be available when assessing vegetation types within the formations listed above.

To save the benchmarks data entered, select *Save*, or otherwise select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving.

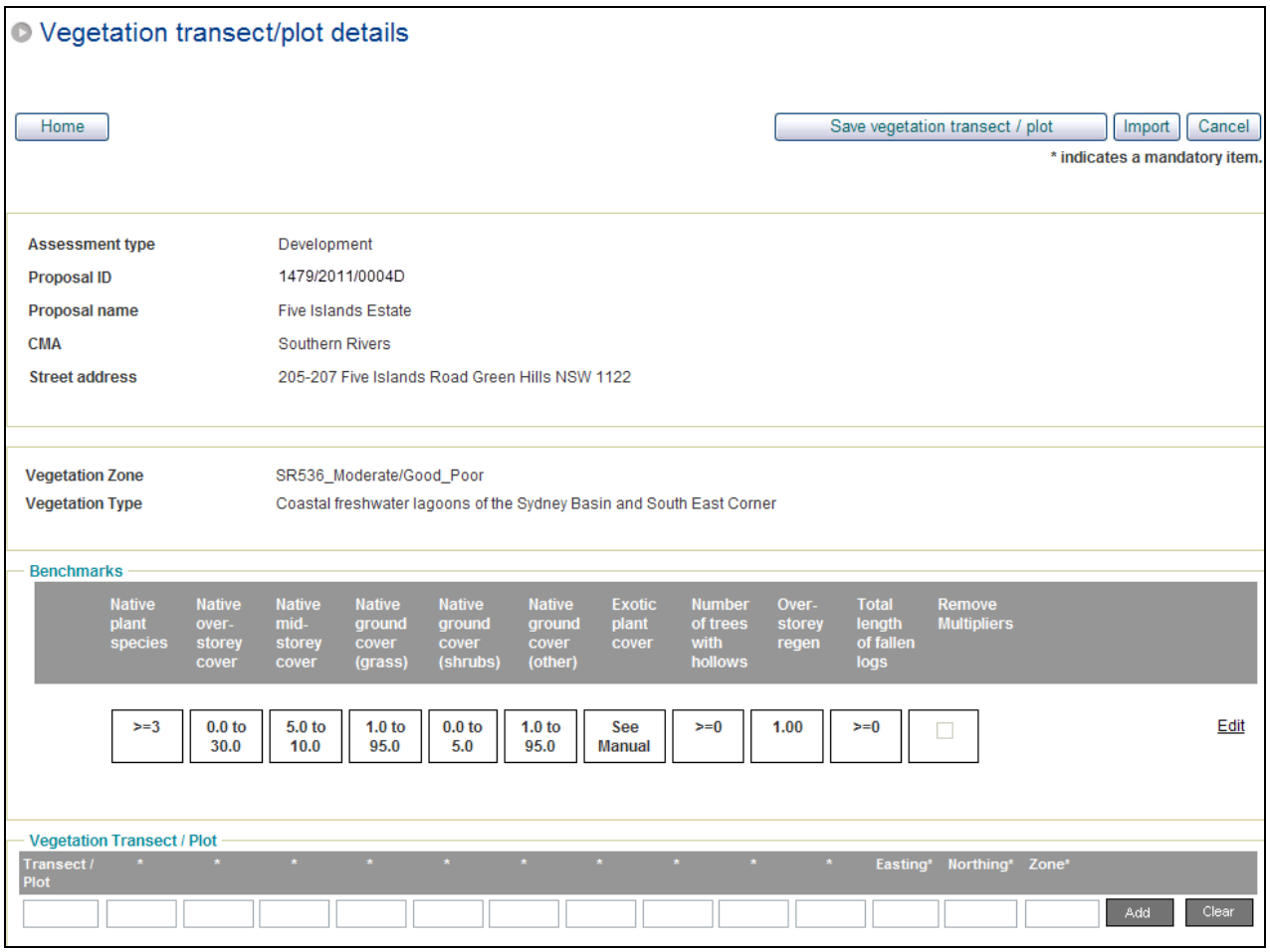


Figure 21: Vegetation transect/plot details page

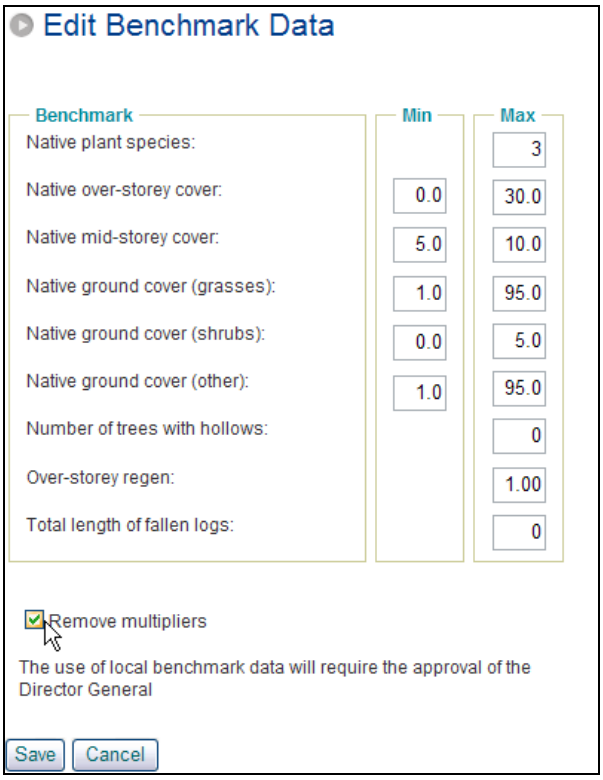


Figure 22: Editing benchmark data

Entering transect/plot data

Enter the site attribute data collected for transects and plots into the appropriate boxes at the bottom of the page. Once each plot is completed select *Add* to add the plot for the vegetation zone, or *Clear* to remove the information entered (Figure 23). The completed plots will be displayed below the data entry area, and can be edited or deleted by selecting *Edit* or *Remove.*

Where the value entered for *Over-storey regen* (regeneration) is not the same for each transect/plot, an error message will alert you that the value must be the same for the entire zone, as regeneration is assessed for the whole zone.

Once data entry is complete for the transects and plots, select *Save vegetation transect/plot* to save the data entered or *Cancel* to discard your changes. You will be asked to confirm whether you are sure you want to cancel without saving. Use of the *Import* button is explained below. The *Transect/Plot complete* information under *Vegetation zone: EEC and red flag* should now contain the number of plots entered for each vegetation zone (see Figure 20).

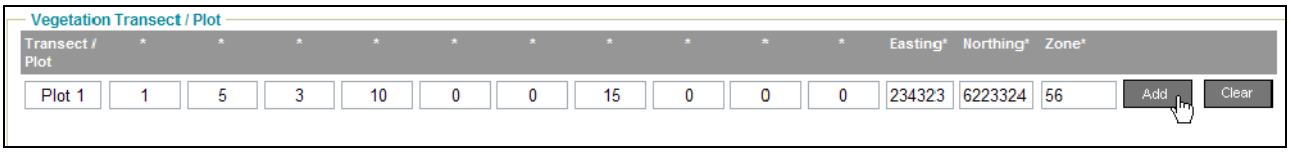


Figure 23: Entering transect/plot data

Importing transect/plot data

Transect/plot data can also be imported for each individual vegetation zone by clicking on the *Import* button at the top of the screen. This may help to minimise the amount of data entry required if data have already been entered into a spreadsheet. Note that this will delete any existing data already entered into the credit calculator. Transect/plot data can only be imported with the data arranged in a specific layout and saved in a file that is in CSV format.

1. Download a copy of the 'plotstemplate.csv' file from the BioBanking website, and rename it 'vegetation zone name.csv' (any name can be used). When saving the file, you should use a name that will easily link it to the vegetation zone, particularly where the site involves many vegetation zones.
2. Open the empty 'vegetation zone name.csv' file with Microsoft Excel™.
3. Enter all the transect and plot data into the 'vegetation zone name.csv' file:
   (a) Columns labelled 'PlotName', 'Easting', 'Northing' and 'Zone' – these allow free text entry, but the fields must not be left empty.
   (b) Columns labelled 'NPS', 'NOS', 'NGCG', 'NGCS', 'NGCO', 'EPC', 'NTH', 'OR', 'FL' – each field must contain a number (e.g. 18, 8, 4, 2).
4. After you have entered data into the file, perform a quick validation of your data (note that these data can still be adjusted once they have been imported into the credit calculator).
5. To save the files in Excel, allow Excel to request you to save the file, and then simply overwrite the existing file.
6. Open the *Vegetation transect/plot details* page for the appropriate vegetation zone and click on the *Import* button at the top of the page. Browse to the appropriate location and select the .csv file, and select *OK*. This will import all transect/plot data for this vegetation zone. This process should be repeated for each vegetation zone. If you do not wish to import the data select *Cancel*.
7. If the import fails red text will be displayed at the top of the screen providing a description of the problem.

Once data entry is complete for the transects/plots select *Save vegetation transect/plot* to save the data entered or *Cancel* to discard it. You will be asked to confirm whether you are sure you want to cancel without saving. The *Transect/Plot complete* information under *Vegetation zone: EEC and red flag* should now contain the number of plots entered for each vegetation zone.

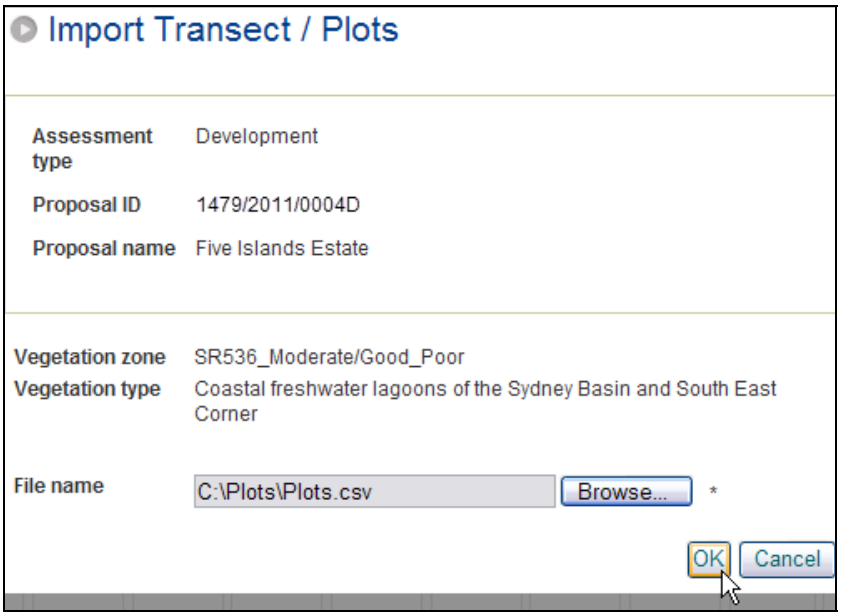


Figure 24: Importing transect/plot data

2.6.3 Entering management zones and linking threatened species sub-zones

Management zones allow you to stratify a vegetation zone into different management units by assigning a different area or extent of impact for each management zone. This allows efficient simulation of different development assessments based on the extent of impact from the development on biodiversity values.

To enter management scores for each vegetation zone select the radio button beside each and select the *Management scores* button. The resulting M*anagement zones* page displays the vegetation zone name, vegetation type and the total area of the vegetation zone (Figure 25). At the bottom of the page is an area to enter data for each *Management zone,* and a reference area containing the threatened species sub-zones entered earlier.

To enter the data related to a management zone follow the steps below:

1. Enter a management zone number/name in the *Management zone* box. It is recommended that you use an easily identifiable code/name (e.g. MZ1 – APZ, MZ2 – Clearing, etc.).
2. Enter the area of the management zone in the *Area* box.
3. Select *Add* if you wish the information to be saved. Select *Clear* if you do not want to save the information entered. When *Add* is selected the management zone will be listed below the data entry boxes, with a radio button now visible.
4. Add all management zones related to the vegetation zone in the same way. The combined area of the management zones must equal the area of the vegetation zone.

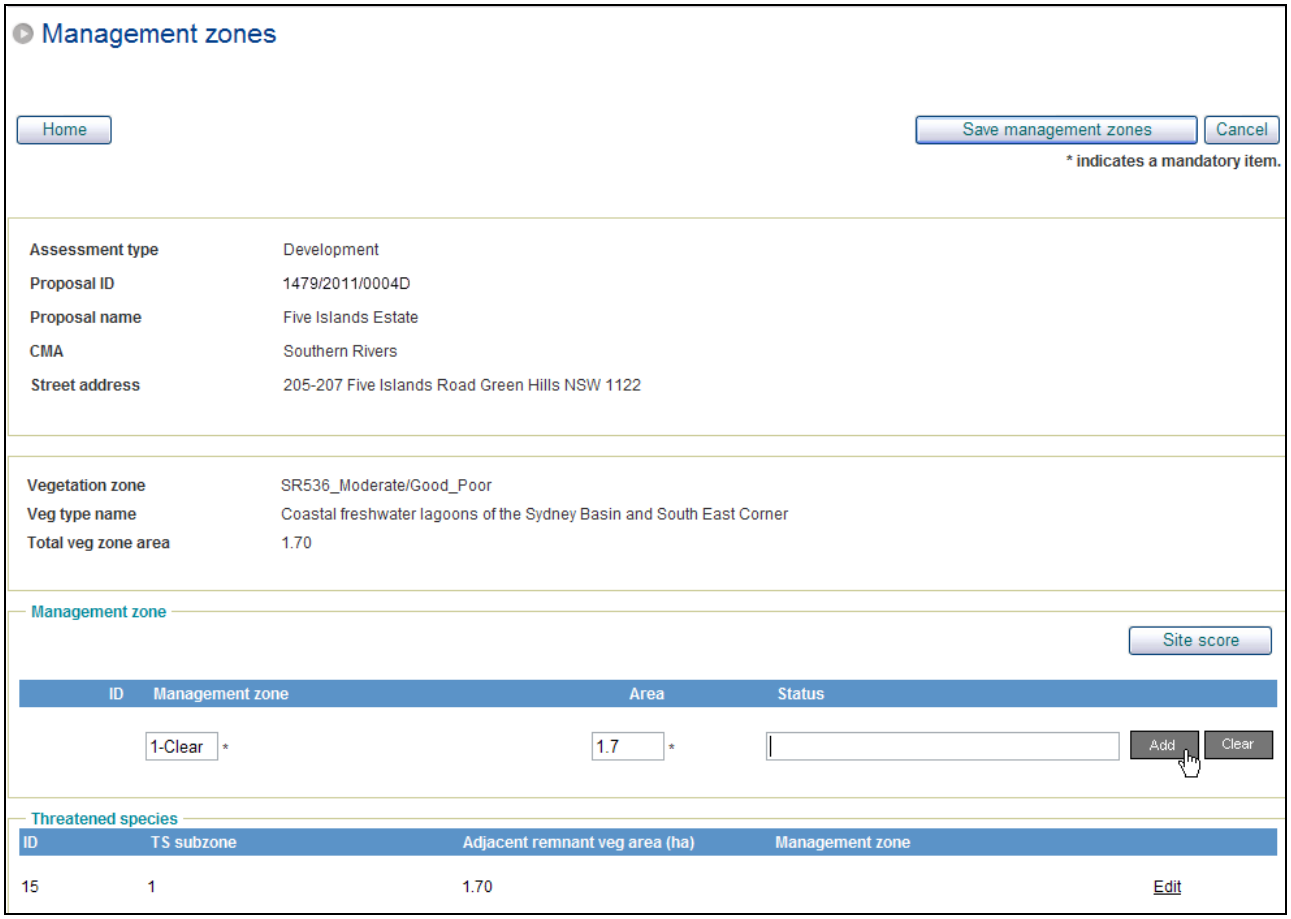


Figure 25: Entering management zones

To link threatened species sub-zones to a management zone select *Edit* next to the appropriate threatened species sub-zone, then select the correct *Management zone* from the drop-down list. Each management zone must be linked to a threatened species sub-zone. Select *Save* if you wish the information to be saved. Select *Clear* if you do not want to save the information entered.

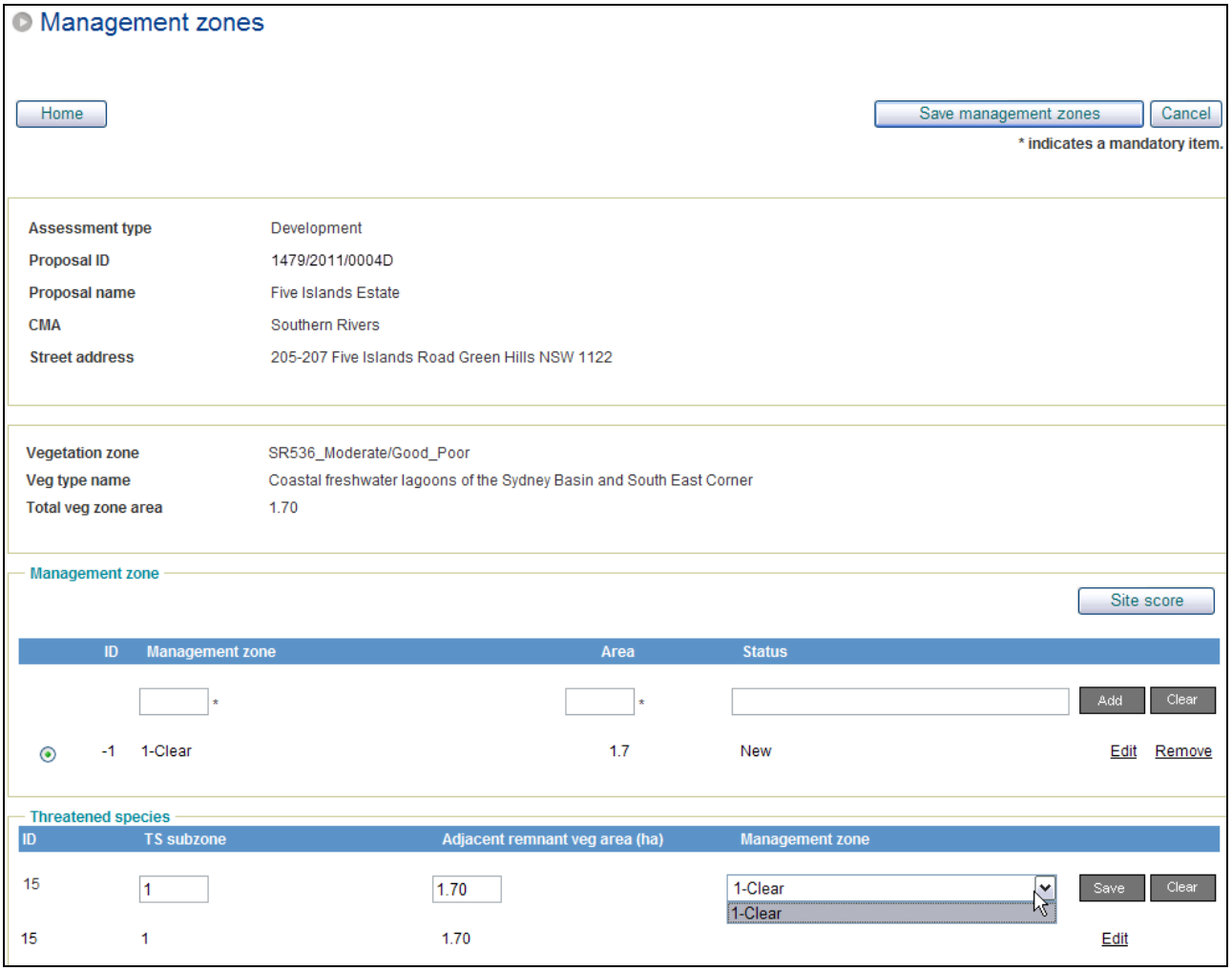


Figure 26: Linking management zones and threatened species sub-zones

2.6.4 Entering site scores

After a management zone is added the site score screen must be opened before it can be saved. This allows the assessor to view the current site value score for the vegetation zone, and make any edits to the future site value score for the management zone. To view the site value score select the radio button next to the appropriate management zone and select *Site score*. The resulting *Management zone details* page will contain the vegetation zone and vegetation type name, total vegetation zone area, the management zone name and its area. Scroll down further to view the score for each site attribute (Figure 27).

The *Current score (0–3)* for each site attribute is calculated from the transect/plot data that was entered previously for the vegetation zone, and a total current site value provided under the *Current Site Value Score (out of 100)*.

The *Score with development (0–3)* will also be displayed, and will default to zero assuming that the development of the site will involve complete clearing. You can adjust the scores in the *Score with development (0–3)* column for each of the 10 attributes, based on the condition of the vegetation after development. If the site is to be completely cleared, retain all scores at zero. However, if the management zone is only going to be thinned or partially impacted (such as for an APZ), the score for each site attribute should be amended to a more appropriate level. Guidelines for reducing the score for an APZ are in Appendix 4 of the *BioBanking Assessment Methodology and Credit Calculator Operational Manual* (DECC 2009).

The final loss of site value is then shown under the heading *Decrease in Site Value Score*. This score represents the loss of site value for that management zone.

Once data entry is complete select *Save zone score* to save the data and exit the page. If you wish to clear the data entered select *Clear*, or if you wish to exit the page without saving, select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving. Exiting this page will return you to the *Management zones* page, where site values must be viewed for all management zones.

To save the management zones select *Save management zones.* If you do not wish to save your changes select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving. You will be returned to the *Site values* page, and the above process of entering transect/plot data and management scores must be completed for all vegetation zones and management zones.

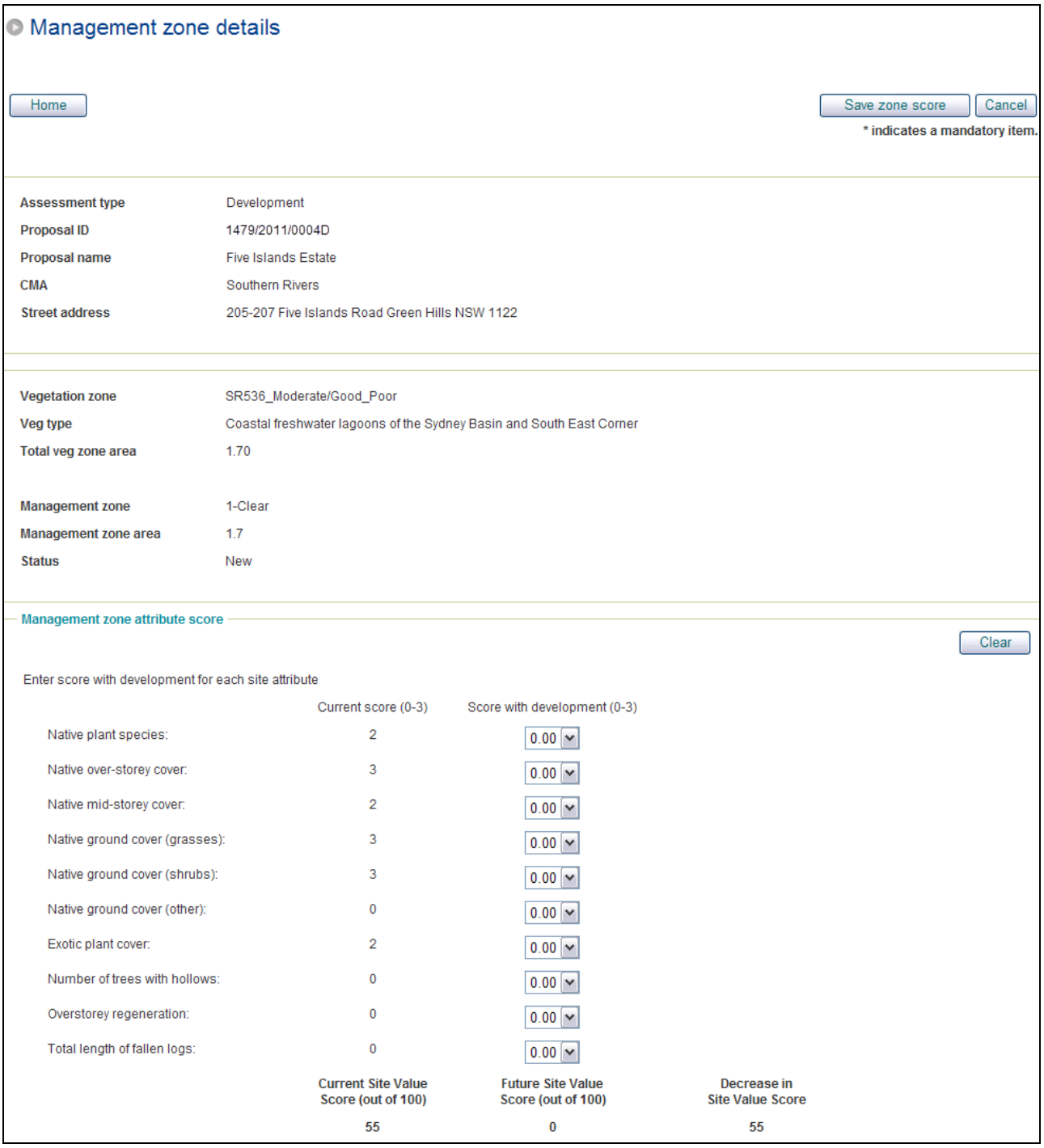


Figure 27: Entering site scores

2.7 Threatened species survey results

The results from targeted surveys for threatened species can now be entered into the credit calculator by navigating to the *Threatened species survey results* page (Figure 28). For each species listed you must record whether the species is to be impacted by the development. This is done by selecting *Edit* beside each species. You must tick the box under *Impacted by development?* if the species will be impacted. If the species won't be impacted then leave the box un-ticked. Next you need to record the *Id method* from the drop-down list by selecting either *Survey*, *Assumed Presence* or *Expert Report*.

If a species is to be impacted by the development, indicate the number of individuals (for flora), or the area of habitat in hectares (for fauna) under the *Loss* column. The unit of measure (*UOM*) will be completed automatically. Enter the *Survey date*, and if applicable update the information on *Negligible loss* or *Tg value* if appropriate local data is to be used for the species. Any changes to this data will be recorded by the credit calculator and will require justification, and subsequent approval by OEH.

When your edits are complete select the *Save* button beside the species, or if you do not wish to keep the edits select *Clear*.

If you intend to submit the case as an application for a biobanking statement, the method of identification and survey date will need to be completed for each species not impacted by the development. All fields will need to be completed for those species which are impacted on by the development. Any fields that have not been completed will be listed in an error report when you try to submit the case to OEH.

Where an expert report has been used to identify that a species is not present on the site, the expert report will need to be approved by OEH before a biobanking statement is issued. The report should be provided as part of the BioBanking Assessment Report for the site. The BioBanking Credit Report will indicate that the expert report will need to be included as part of the application.

If a threatened species is recorded on the site but it was not predicted to occur there, the species must be added to the list by selecting the *Species list* button. A species search box is opened where the species' name can be searched (Figure 29). To select the species, activate the appropriate radio button and click *OK.* To cancel, select *Cancel*.

Once you have selected the species to be added, complete the information required as described above. When your edits are complete select *Save*, or if you do not wish to keep the edits select *Clear*. If you have added the species in error press *Remove* (only those species added manually can be removed).

To save the *Threatened species survey results* data entered select *Save* and continue the assessment or select *Save & Close*. If you do not wish to save your changes select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving.

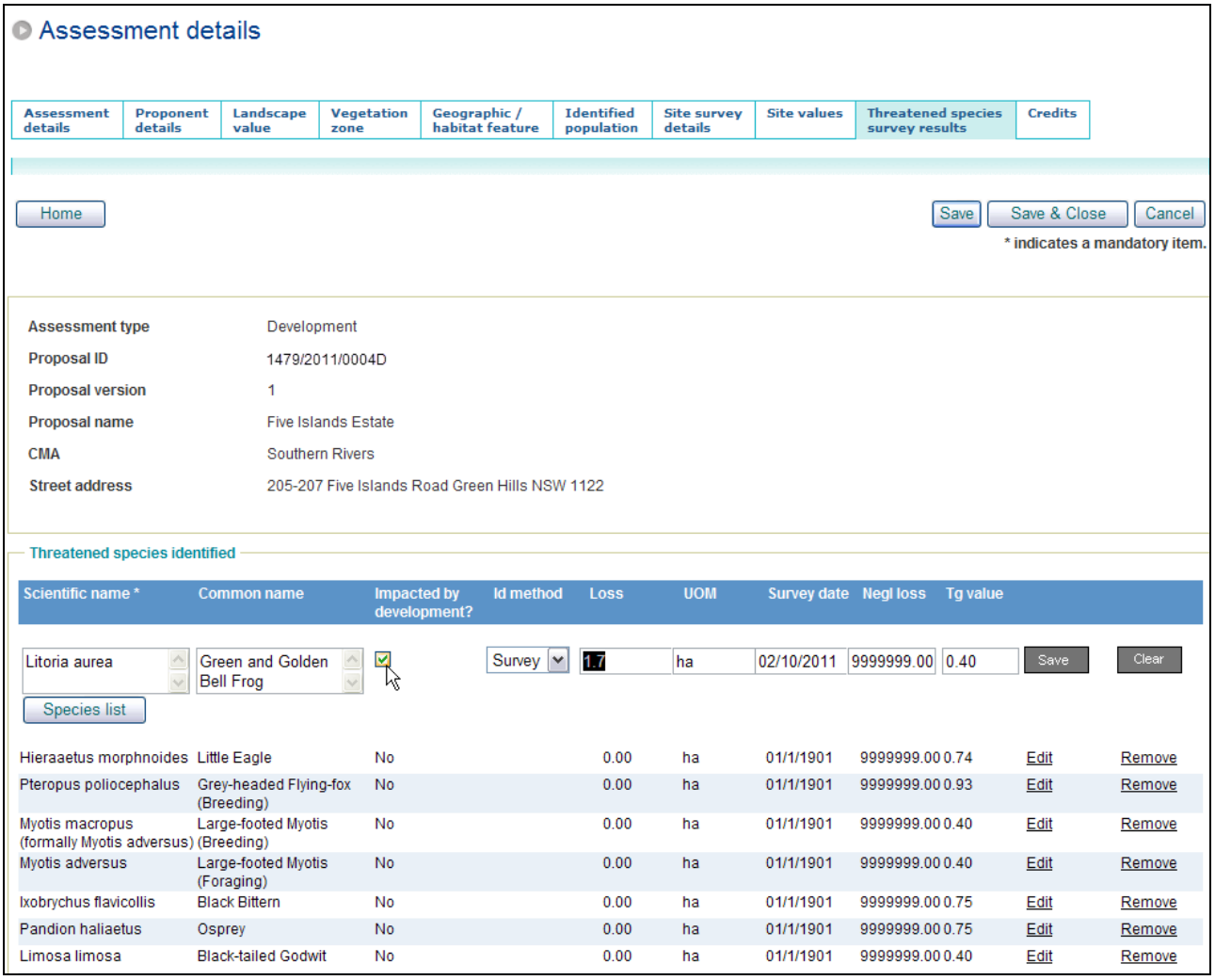


Figure 28: Entering threatened species survey results

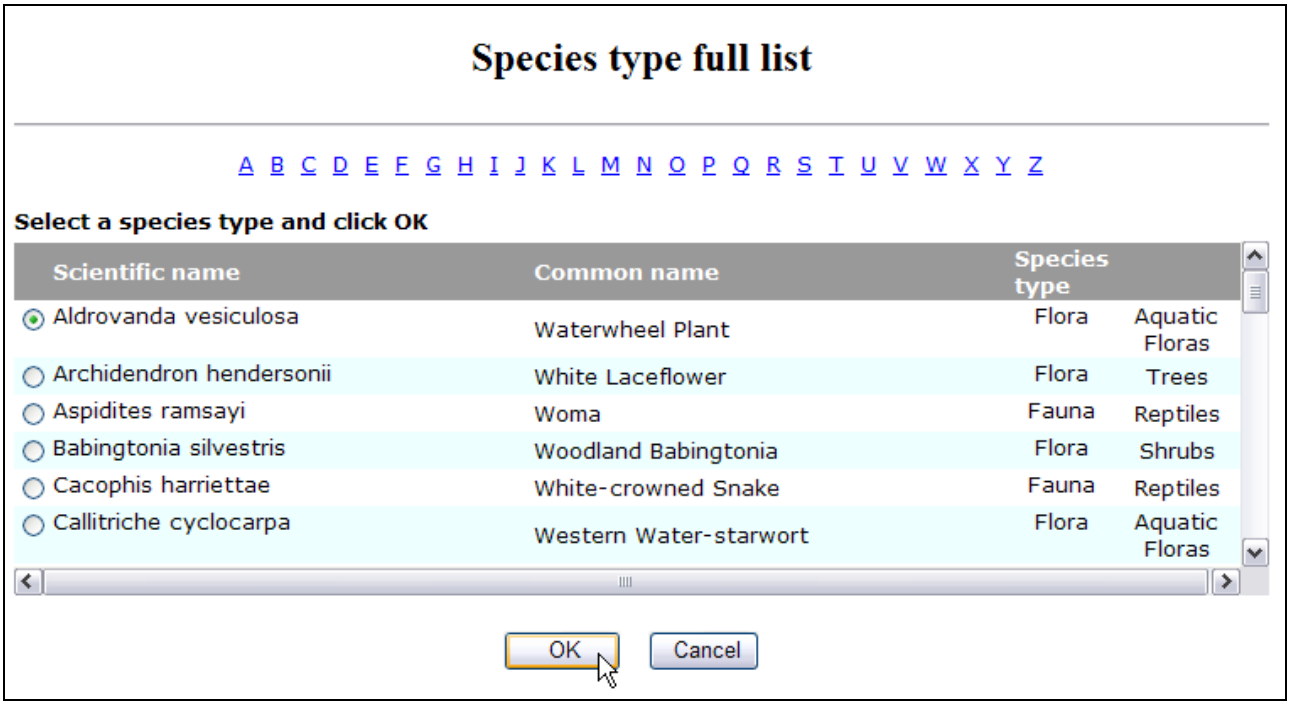


Figure 29: Adding a threatened species

2.8 Credits

The final step in the assessment is to review the credits required for the development based on the data entered into the credit calculator. The details of the assessment are listed first, followed by the *Ecosystem credits* and *Species credits.*

The results for ecosystem credits are listed for each management zone. Details provided include vegetation code, vegetation name, whether a red flag has been triggered, management zone area, site value score, credits required for biodiversity, credits required for threatened species, the threatened species with the highest credit requirements and its Tg value, and the final credit requirement.

The information for species credit species includes scientific name, common name, whether a red flag has been triggered, species Tg value and final credit requirement.

If data has been changed for the assessment, select the *Calculate credits* button to update the credit results. To exit the screen select *Save* or *Save & Close*. If you do not wish to save your changes select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving.

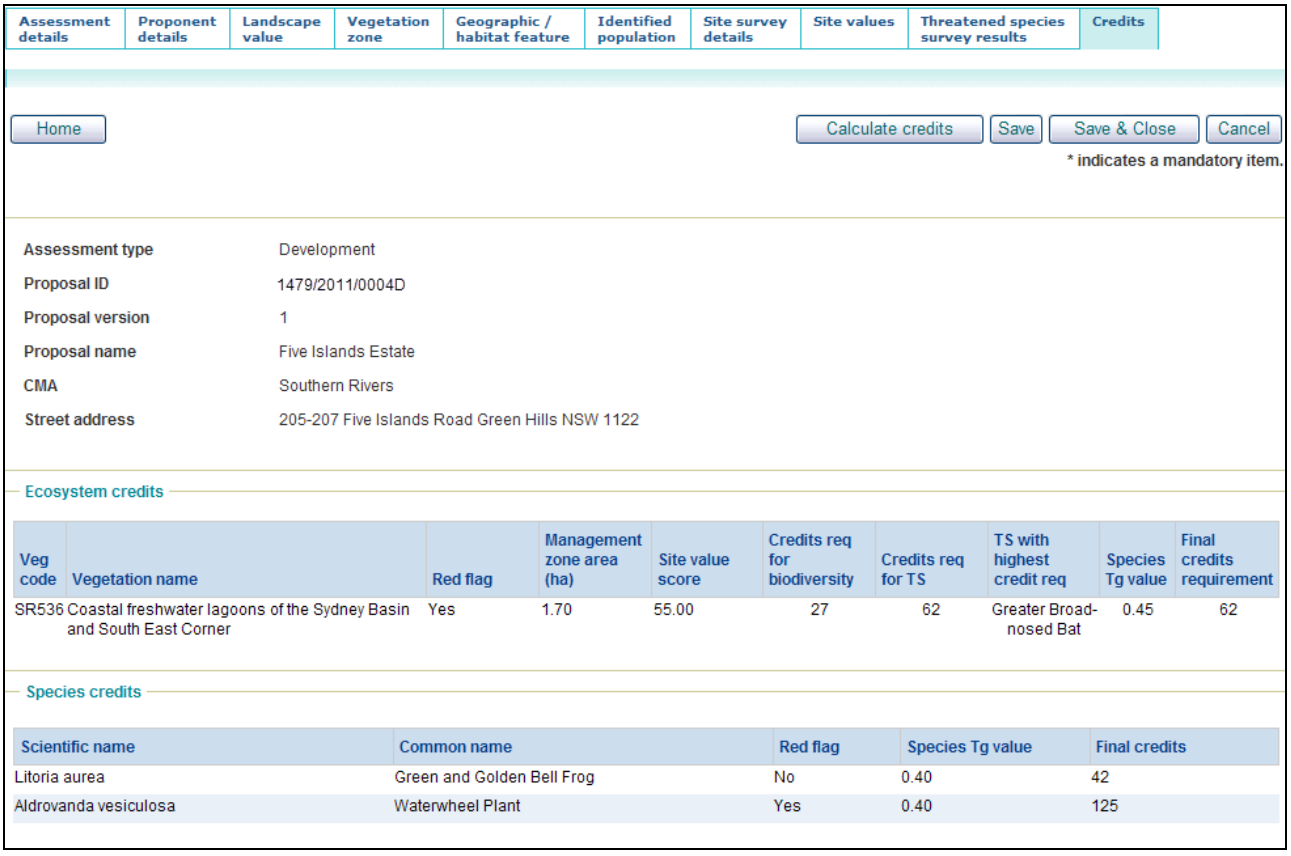


Figure 30: Credit results

3 Assessors' guide to operating the credit calculator – biobank sites

3.1 Entering landscape value

The *Landscape value* page is used to enter data for CMA sub-regions, assessment circles and connectivity, with the data contributing to the calculation of the landscape value score and the prediction of threatened species which require further assessment.

The information entered into the credit calculator at this stage is predominately sourced from mapping the site using GIS software. First select *Add* to create a new circle, or if you wish to edit or view an existing circle select the radio button next to the appropriate circle and select *Edit* or *View.*

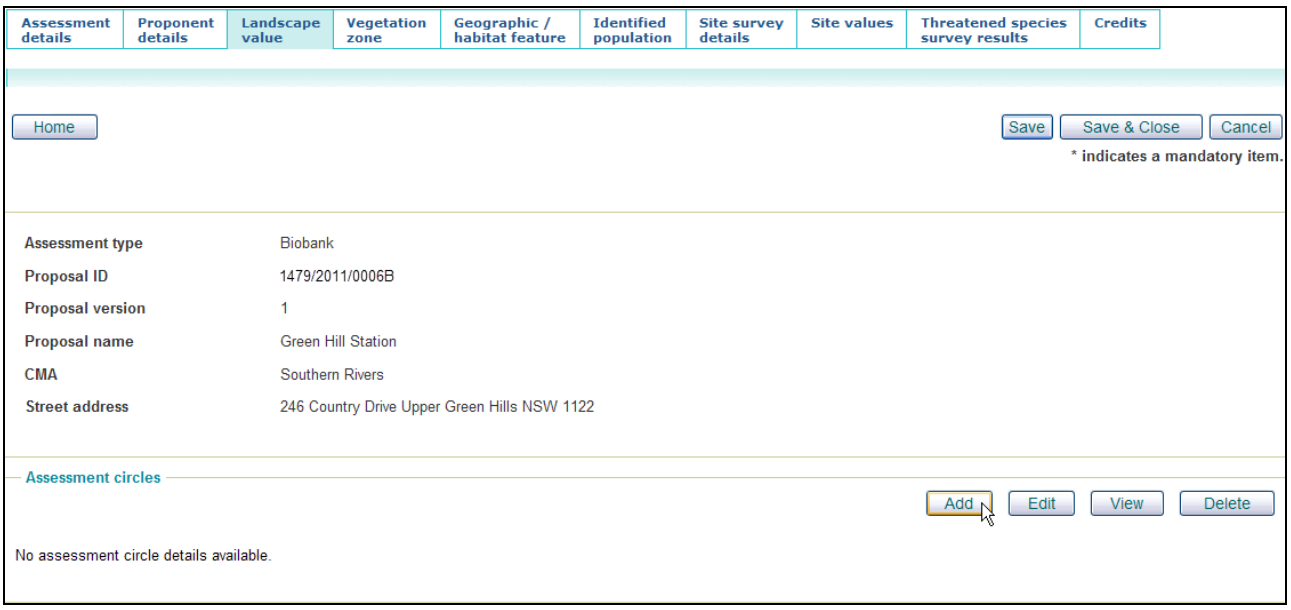


Figure 31: Landscape value page

To begin the data entry first record the *Assessment circle name* and the *CMA sub-region* in the spaces provided. The CMA sub-region is chosen from a drop-down list that is limited by the CMA chosen from the earlier site details screen.

Record the scores for the *% Native vegetation cover per 1000ha circle* and the *% Native vegetation cover per 100ha Circle*. The % native vegetation cover measures the change in the overall percentage of native vegetation within the 1000-ha and 100-ha assessment circles in which the biobank site occurs. The assessment of the 1000-ha circle is also a filter to identify threatened species that may occur on the site.

The *Before biobank* score is the current % native vegetation cover before the biobank site, and is visually estimated in classes of 10% by using the drop-down lists for the 1000-ha circle and the 100-ha circle. The *After biobank* score is the % native vegetation cover remaining in each circle following the biobank site. This is estimated in classes of 10% by using the drop-down list for each circle.

The score for *Connectivity value* is determined from the three-step process described below. The change in the linkage width is entered by choosing the appropriate linkage width class from the drop-down list. A linkage width must be chosen for the *Before biobank* box and for the *After biobank* box. The credit calculator will automatically calculate the number of thresholds that are crossed on the basis of the improvement of the biobank site.

To enter the connectivity condition value into the credit calculator, first choose which type of vegetation is being assessed by selecting the radio button for either *Woody vegetation types* or *Non-woody vegetation types*, according to whether the vegetation is naturally woody or non-woody.

For woody vegetation types, first select the average condition class from the drop-down list for both the *Over-storey condition* and *Mid-storey/Ground cover condition* strata. This information must be entered for both *Before biobank* and *After biobank* using the drop-down list for each field. The condition class for *After biobank* is selected by taking into account the improvement of the biobank site on the overall remaining condition of each stratum.

The credit calculator will then automatically calculate the number of connectivity condition classes and linkage width classes that have been crossed as a result of the biobank site to determine the final connectivity value score.

Once data entry is complete you can select *Save assessment circle* to return to the *Landscape value* screen. If you do not wish to save your changes, select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving. The *Calculate Score* button can be used to calculate the landscape score after making changes to the data entered. This will enable you to test the impact of different scenarios on the landscape when conducting an assessment. Please note that the landscape value score and the adjacent remnant veg area will be populated once the *Vegetation zone* screen has been completed.

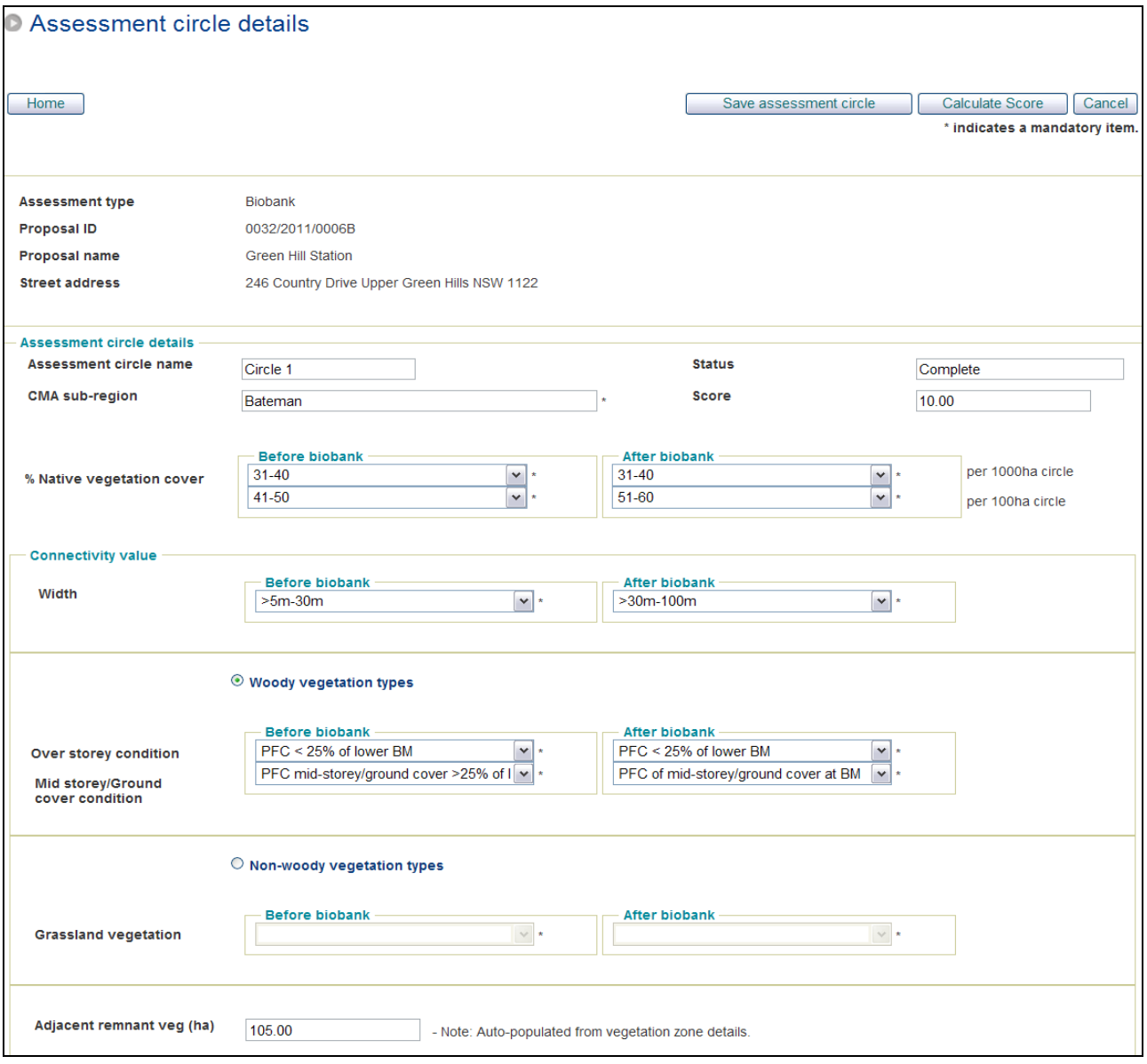


Figure 32: Assessment circle details page

A biobank site may require more than one 1000-ha assessment circle. A new 1000-ha assessment circle must be used whenever:

(a) the biobank site exceeds a single 1000-ha assessment circle, or

(b) the configuration of the biobank site does not fit into a single 1000-ha assessment circle, or

(c) the biobank site extends from one CMA sub-region into another CMA sub-region.

If you wish to add further assessment circles, click on the *Add* button at the bottom of the screen. The data described above is then entered for each new assessment circle. An assessment circle can be deleted from the assessment by selecting the radio button next to the appropriate circle and selecting *Delete.*

To save the new *Landscape value* data select *Save* to continue the assessment, or *Save & Close*. If you do not wish to save your changes select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving.

3.2 Entering vegetation zones

The *Vegetation zone* page is used to enter data for each vegetation zone on site including vegetation formation and type, condition class and to assign each vegetation zone to an assessment circle.

To begin the data entry first select the *Vegetation zone* tab at the top of the page, and select *Add* to add a vegetation zone. If you wish to view, edit or delete an existing vegetation zone, select the appropriate radio button and select *Edit, View* or *Delete.*

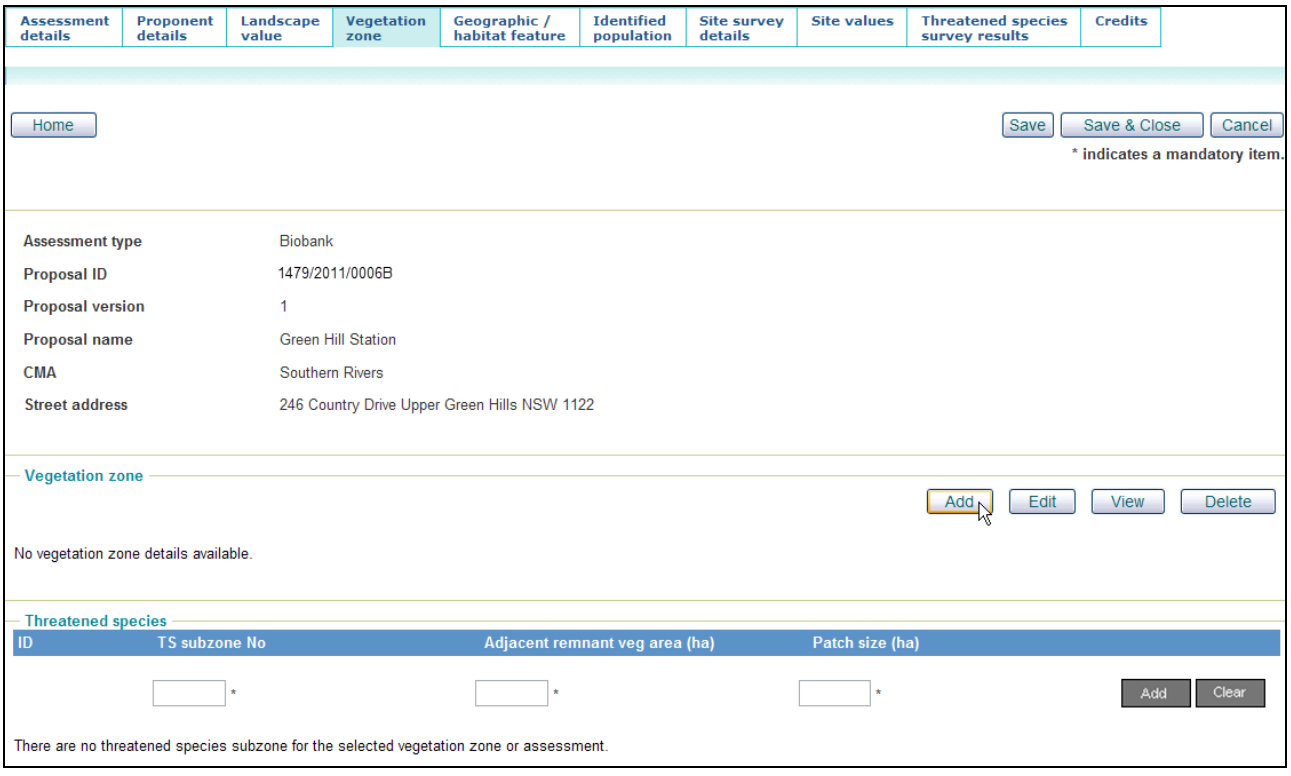


Figure 33: Vegetation zone page

3.2.1 Vegetation zone details

The *Vegetation zone details* page is used to add a new, or edit an existing vegetation zone. First select an assessment circle using the drop-down list beside *Assessment circle name*. The CMA sub-region will appear automatically. Next enter a *Vegetation zone number* (must be a number) and select *New* from the *Status* drop-down list.

Where more than one assessment circle is required, it is recommended that you continue numbering the *Vegetation zone number* from the previous assessment circle, rather than restarting from one (1).

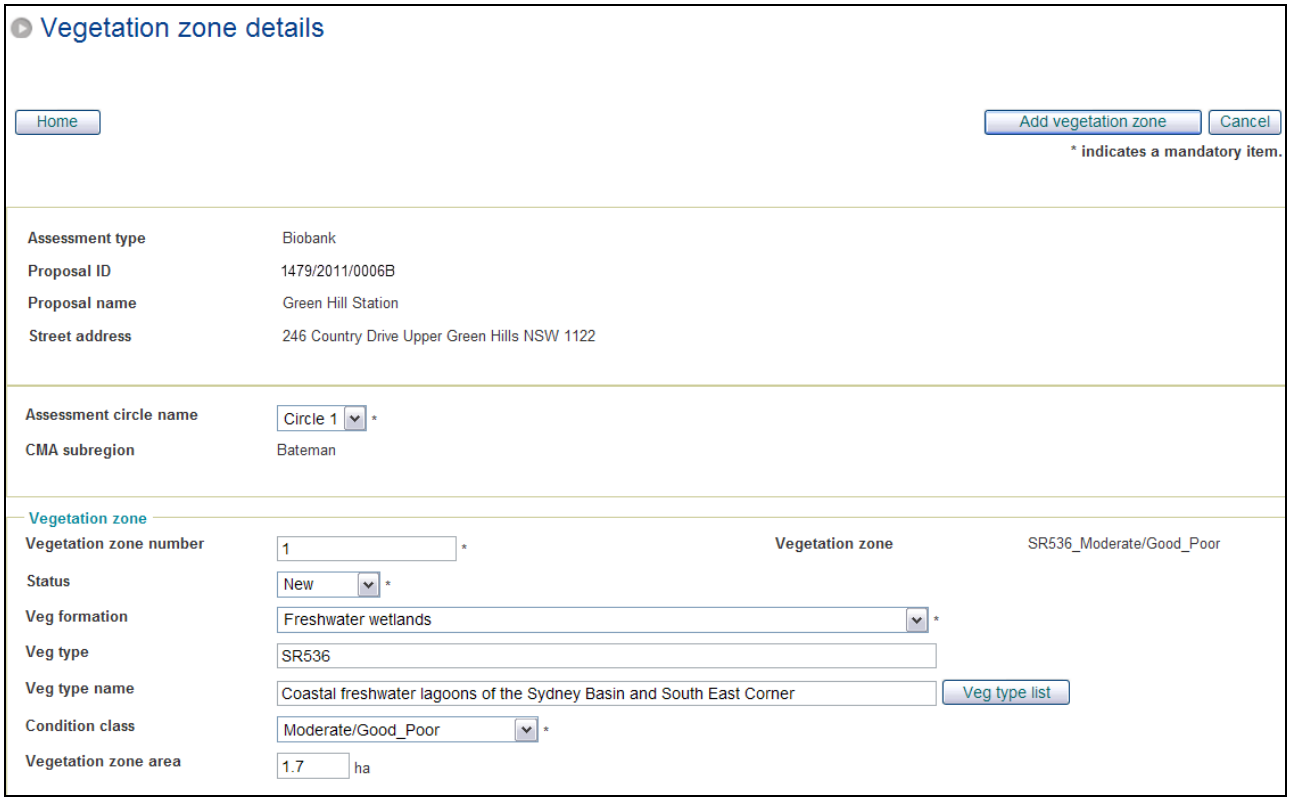


Figure 34: Vegetation zone details page

Select the *Vegetation formation* from the drop-down list, and then click the *Veg type list* button on the right side of the page. A search box will open where you can enter a vegetation type name (whole or partial) and select *Search*. Alternatively, you can select *Search* without entering any vegetation type details and obtain a complete list of all vegetation types within the selected formation (the list will be restricted to the *Vegetation formation* selected earlier). Select the radio button to the left of the appropriate vegetation type and click *OK*.

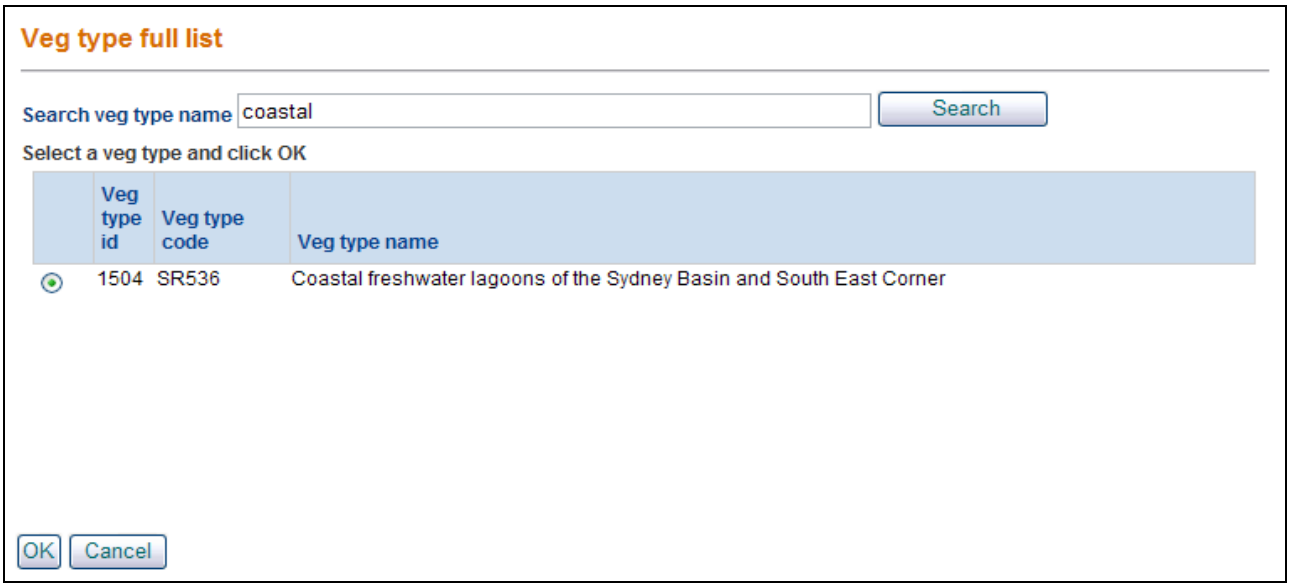


Figure 35: Vegetation type search page

Once the vegetation type is selected a condition class can now be selected. From the drop-down list next to *Condition class*, select either '*Low'*, '*Moderate/Good'*, '*Moderate/Good_Poor'*, '*Moderate/Good_Medium'*, '*Moderate/Good_High'* or '*Moderate/Good_Other'*. Finally, enter a *Vegetation zone area*.

Once complete, select the *Add vegetation zone* button (for new vegetation zones) or *Save vegetation zone* (for existing vegetation zones) at the top right corner of the screen, or *Cancel* if you do not wish to save your changes. You will be asked to confirm whether you are sure you want to cancel without saving.

3.2.2 Threatened species sub-zones

Threatened species sub-zones are used to filter threatened species that are to be assessed at the site. A minimum of one threatened species sub-zone must be added for each vegetation zone being assessed.

Threatened species sub-zone information is entered at the bottom of the *Vegetation zone* page. To enter the threatened species sub-zone data first select the radio button next to the vegetation zone to activate it, then enter the *TS subzone No*, *Adjacent remnant veg area (ha)* and the *Patch size (ha)* for the selected vegetation zone. Once this threatened species sub-zone data is entered, select *Add* to keep it, or *Clear* to discard it. Threatened species sub-zone information can be edited or deleted after entry if required by selecting *Edit* or *Delete* next to the appropriate threatened species sub-zone.

Each threatened species sub-zone must be identified with a number, allowing it to be tracked through later steps in the assessment. If multiple threatened species sub-zones are required for a vegetation zone it is suggested that they be numbered using a numeral and character combination, such as 1a, 1b, 1c, 2a, 2b, 2c, etc.

To save the entered vegetation zone and threatened species sub-zone data, select *Save* and continue the assessment or select *Save & Close*. If you do not wish to save your changes select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving.

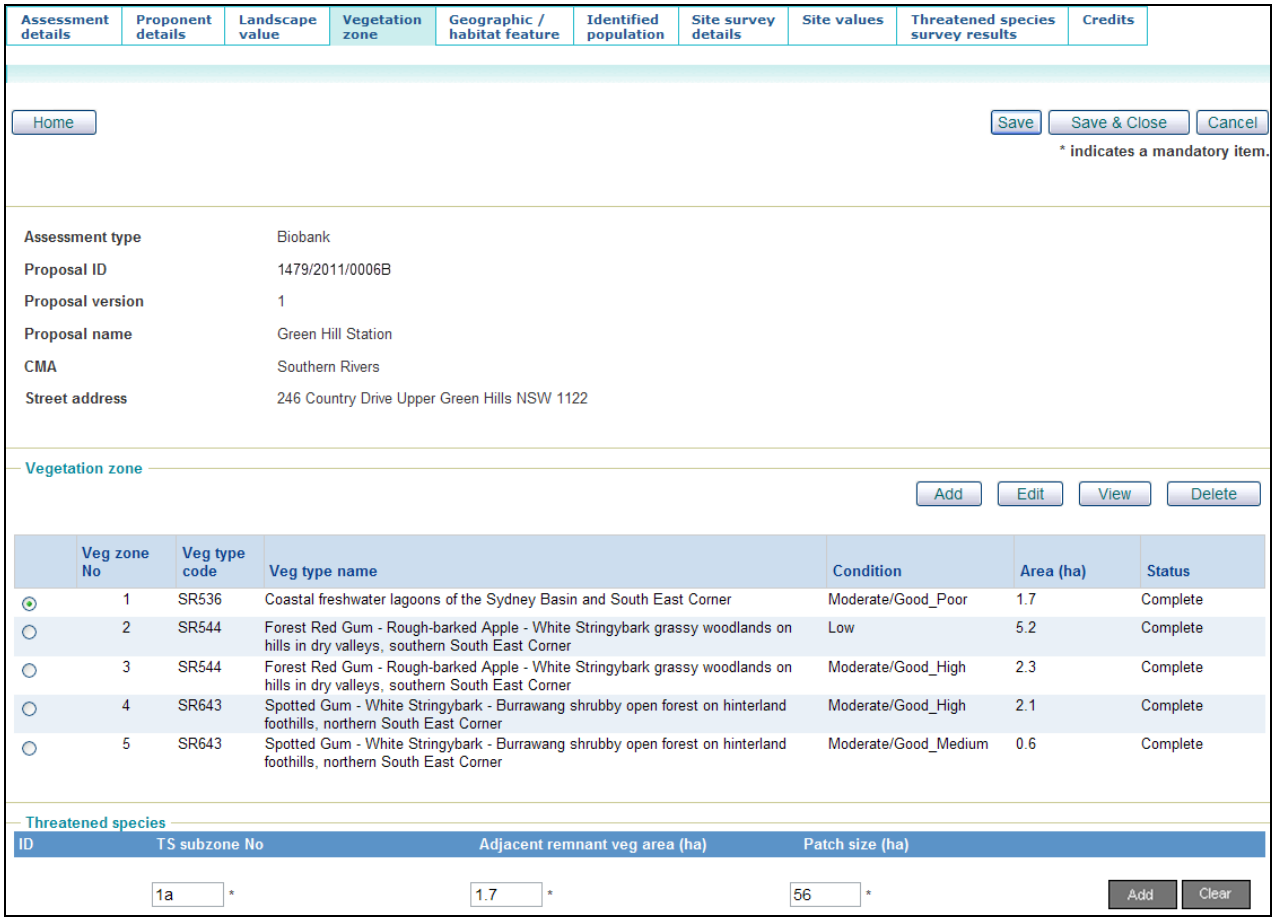


Figure 36: Threatened species sub-zones

3.3 Answering geographic/habitat feature questions

The assessment of threatened species that create species credits is optional at biobank sites. If the proponent of the biobank site is not seeking species credits, this page can be skipped.

Once all the data for the previous pages are entered, the credit calculator will automatically query the Threatened Species Profile Database to identify those species that could be assessed at the biobank site. For some of the species identified additional information is required to determine if the species is likely to be present. The additional information relates to particular geographic or habitat features that may be present on the site.

The *Geographic/habitat feature* page asks *Do any of the following features occur on the area to be assessed?*...The *Feature* is identified on the far right of the screen, with the species being considered for each feature also displayed using their common and scientific names.

The assessor must determine if the feature identified occurs within the biobank site. If so the *Impact?* tick box should remain ticked. If in doubt the box should be left ticked and retained in the list so the species will be considered in the assessment. This approach allows the potential presence of the species to be assessed through a targeted survey or expert report.

To save the *Geographic/habitat feature* data entry select *Save* and continue the assessment or select *Save & Close*. If you do not wish to save your changes select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving.

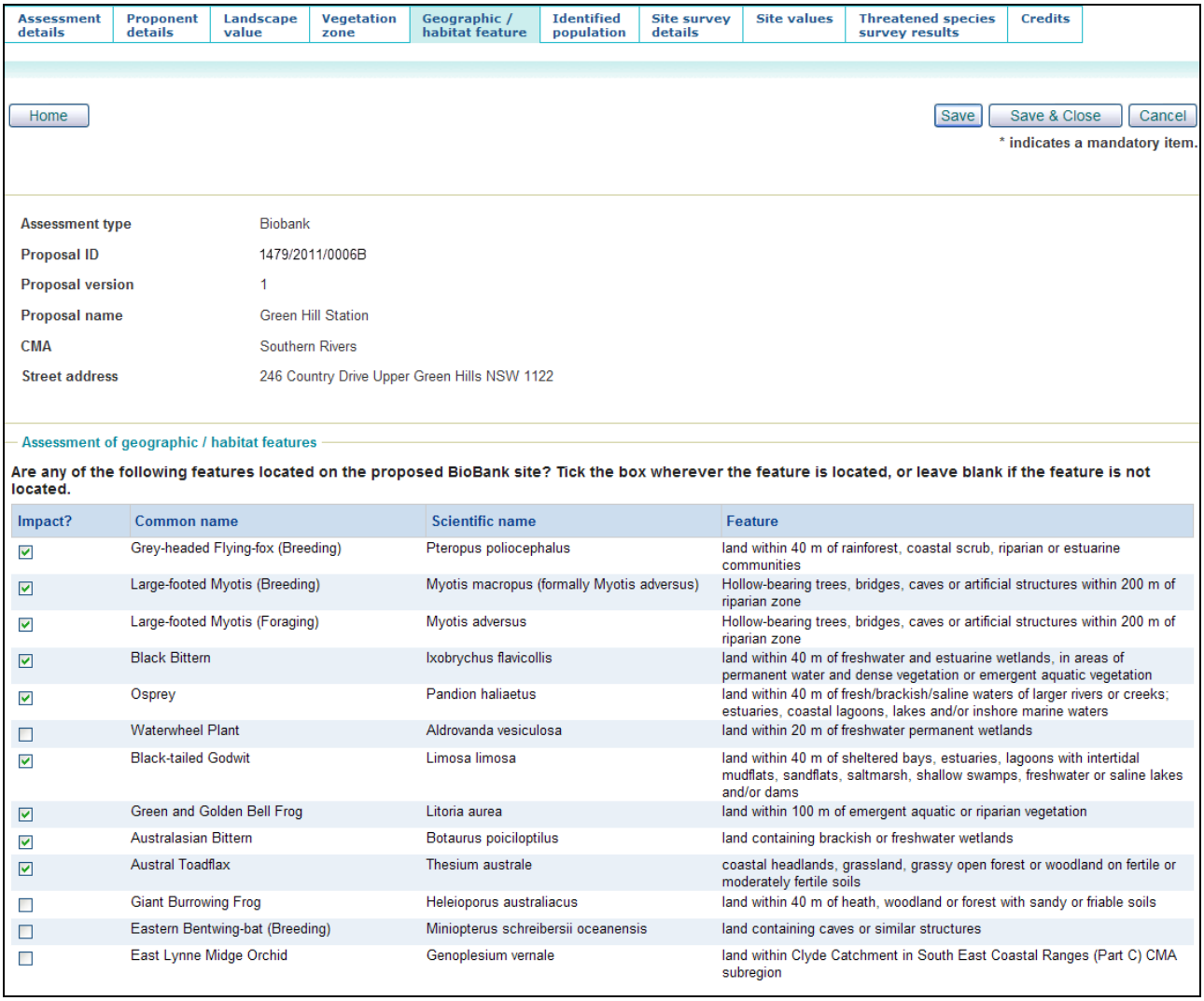


Figure 37: Geographic/habitat feature page

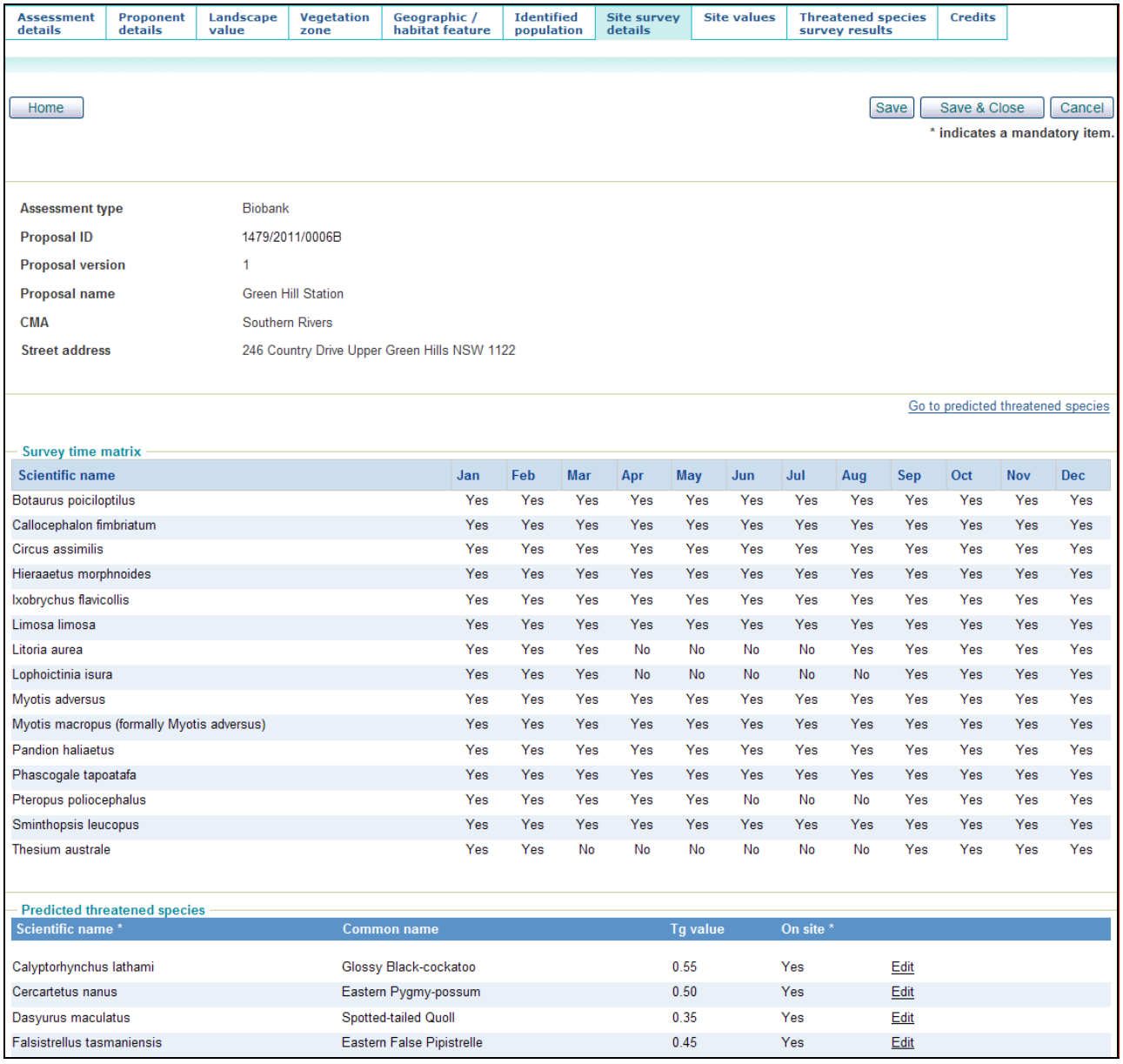
3.4 Assessing any identified populations

At present there are no identified populations, so you do not need to enter any information on the *Identified population* tab.

3.5 Site survey details

The survey requirements for the site are displayed for species credit species within the *Survey time matrix*. You can use the matrix to determine those species that can be surveyed within the same time periods, and identify the times of year when species cannot be surveyed.

To review threatened species that are predicted on site, select *Go to predicted threatened species* above the *Survey time matrix* or scroll to the bottom of the page. The *Predicted threatened species* are listed by *Scientific name* and *Common name*, and include those species that are considered within ecosystem credits. The *Tg value* for each species is also listed.



Scientific name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Botaurus poiciloptilus	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Callocephalon fimbriatum	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Circus assimilis	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hieraaetus morphnoides	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ixobrychus flavicollis	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Limosa limosa	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Litoria aurea	Yes	Yes	Yes	No	No	No	No	Yes	Yes	Yes	Yes	Yes
Lophoictinia isura	Yes	Yes	Yes	No	No	No	No	No	Yes	Yes	Yes	Yes
Myotis adversus	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Myotis macropus (formally Myotis adversus)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pandion haliaetus	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Phascogale tapoatafa	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pteropus poliocephalus	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
Sminthopsis leucopus	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Thesium australe	Yes	Yes	No	No	No	No	No	No	Yes	Yes	Yes	Yes

Scientific name *	Common name	Tg value	On site *	
Calyptorhynchus lathami	Glossy Black-cockatoo	0.55	Yes	Edit
Cercartetus nanus	Eastern Pygmy-possum	0.50	Yes	Edit
Dasyurus maculatus	Spotted-tailed Quoll	0.35	Yes	Edit
Falsistrellus tasmaniensis	Eastern False Pipistrelle	0.45	Yes	Edit

Figure 38: Survey time matrix and predicted threatened species

To save the *Site survey details* data entered select *Save* and continue the assessment or select *Save & Close*. If you do not wish to save your changes select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving.

3.6 Entering site values

Once the field surveys have been completed, the results of the plots/transects can be entered into the credit calculator for each vegetation zone using the *Site values* page. Listed at the bottom of the page are all the vegetation zones entered for the assessment and the details of each vegetation zone, including vegetation type, vegetation type name, percent cleared in CMA, endangered ecological community (EEC) and red flag status, area, condition and the minimum number of transects/plots required and transects/plots completed, and whether the management score is complete.

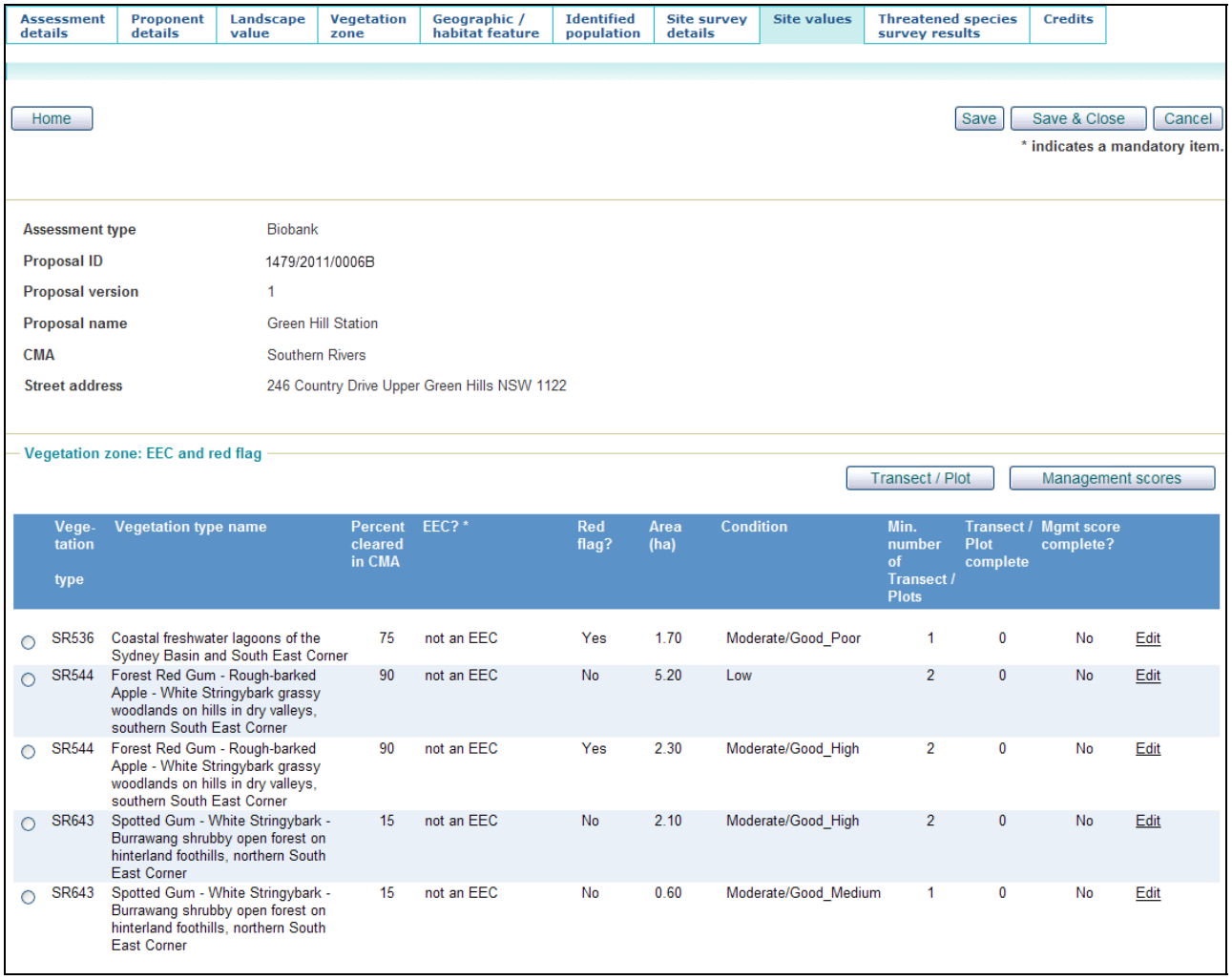


Figure 39: Site values page

3.6.1 Vegetation zone EEC and red flag status

You must determine if the vegetation type meets the definition of an EEC. Select the radio button for each vegetation zone, and then select *Edit* if you think the vegetation zone equates to an EEC. A search box will open where you can enter an EEC name (whole or partial) and select *Search*. Alternatively, you can select *Search* without entering any EEC details and obtain a complete list of EECs linked to the vegetation type currently being edited. The radio button corresponding to the relevant EEC can then be selected, followed by the *OK* button.

The *Percent cleared in CMA* value can also be changed if you can demonstrate that more appropriate local data is available for the vegetation type. Once complete, select *Save*, or *Clear* if you wish to discard the data just entered.

Once this information has been entered, the credit calculator will indicate whether a red flag is triggered for the vegetation zone. If a red flag has been triggered for a vegetation zone, the assessment can still continue and the red flag will be listed in the final report.

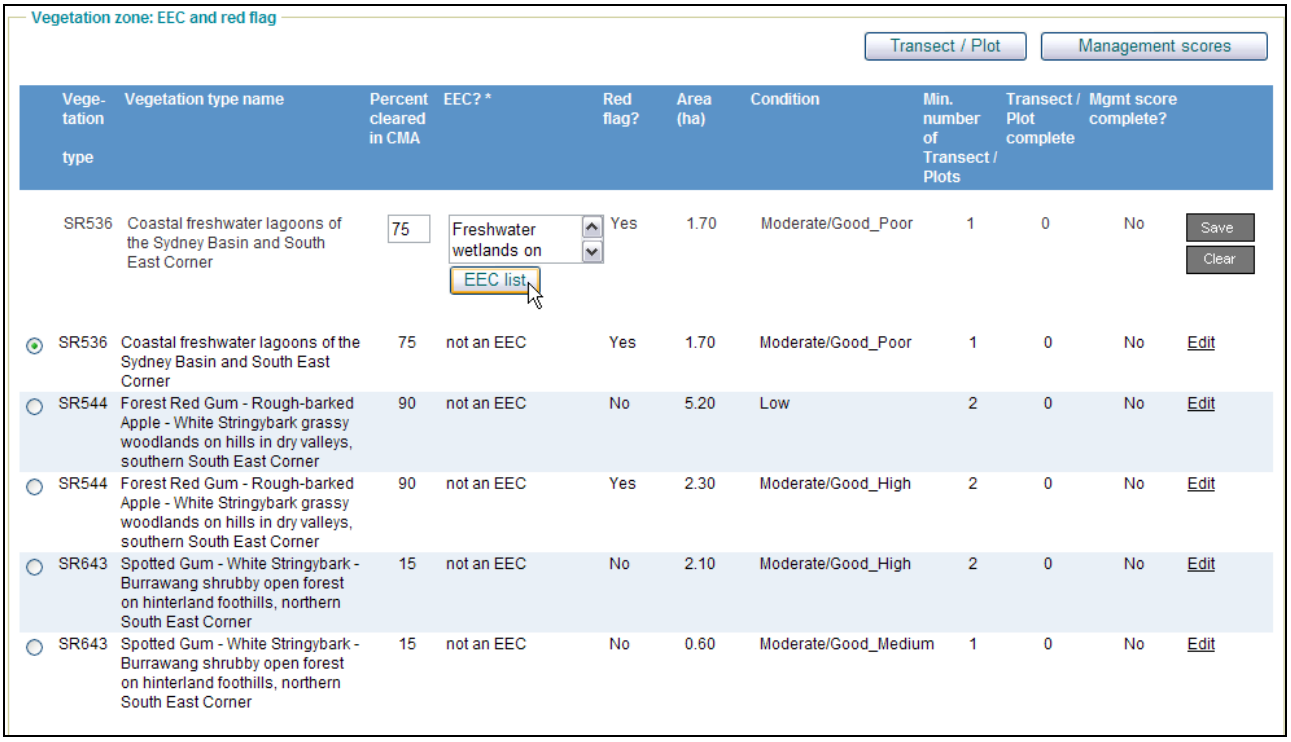


Figure 40: EEC status and percent cleared in CMA

3.6.2 Benchmark data and vegetation transect/plot details

To enter new benchmark information or transect/plot data for each vegetation zone select the radio button for each vegetation zone and click the *Transect/Plot* button above the list. The resulting *Vegetation transect/plot details* page displays the vegetation zone name and vegetation type, followed by the benchmarks for the vegetation type and the vegetation transect/plot data entry section.

Editing benchmarks

The benchmark data shown are taken from the NSW Benchmarks Database. Benchmark data can be obtained from the NSW Benchmarks Database, from local reference sites or from published information. If using local benchmark data, the data can be entered into the credit calculator by selecting *Edit* adjacent to the benchmark information. An *Edit Benchmark Data* page will appear where you can change the benchmarks relating to one or more of the attributes captured in the field. The credit report for the biobank agreement will indicate that local benchmark data have been used, and the use of local benchmark data will require the approval of the Director General.

The calculation for the site value score includes multipliers for '*native over-storey cover x proportion of over-storey species occurring as regeneration'* and '*number of trees with hollows x total length of fallen logs*' (refer to Section 3.5.2 of the Biobanking Assessment Methodology). The multipliers may be removed from the calculation of site value when assessing vegetation types from the following formations: Grasslands, Heathlands, Alpine Complex, Freshwater Wetlands, Saline Wetlands and Arid Shrublands. A *Remove multipliers* tick box is provided for this purpose when you are assessing these formations (Figure 42).

To save the benchmarks data entered, select *Save*, or otherwise select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving.

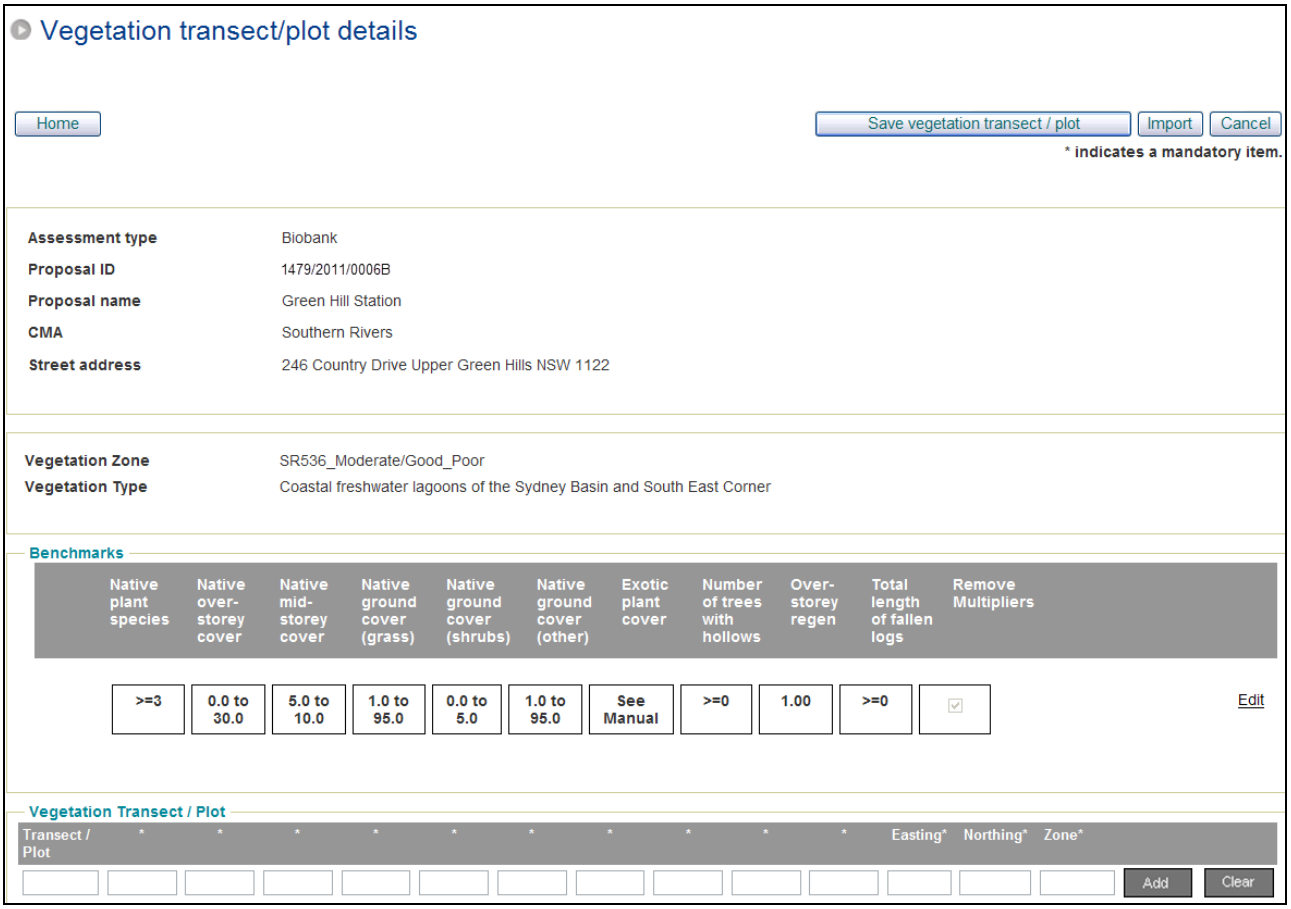


Figure 41: Vegetation transect/plot details page

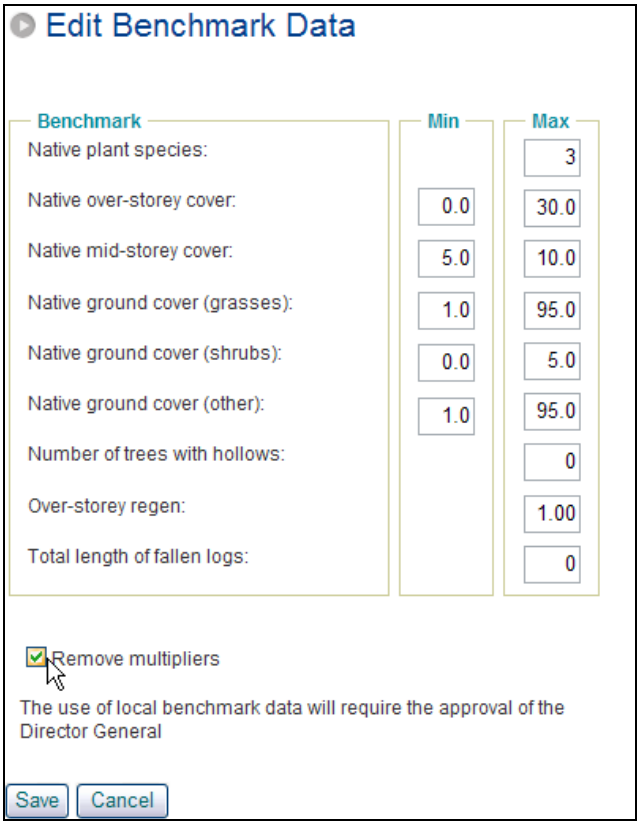


Figure 42: Editing benchmark data

Entering transect/plot data

Enter the site attribute data collected for transects and plots into the appropriate boxes at the bottom of the page. Once each plot is completed select *Add* to add the plot for the vegetation zone, or *Clear* to remove the information entered. The completed plots will be displayed below the data entry area, and can be edited or deleted by selecting *Edit* or *Remove.*

Where the value entered for *Over-storey regen* (regeneration) is not the same for each transect/plot, an error message will alert you that the value must be the same for the entire zone, as regeneration is assessed for the whole zone.

Once data entry is complete for the transects/plots, select *Save vegetation transect/plot* to save the data entered or *Cancel* to discard your changes. You will be asked to confirm whether you are sure you want to cancel without saving. Use of the *Import* button is explained below. The *Transect/Plot complete* information under *Vegetation zone: EEC and red flag* should now contain the number of plots entered for each vegetation zone.

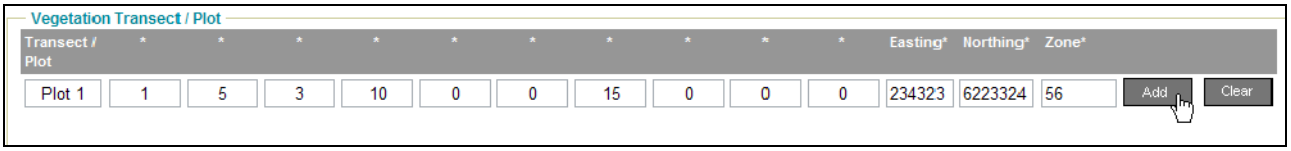


Figure 43: Entering transect/plot data

Importing transect/plot data

Transect/plot data can also be imported for each individual vegetation zone by clicking on the *Import* button at the top of the screen. This may help to minimise the amount of data entry required if data have already been entered into a spreadsheet. Note that this will add to any existing data already entered into the credit calculator. Transect/plot data can only be imported with the data arranged in a specific layout and saved in a file that is in CSV format.

1. Download a copy of the '[plotstemplate.csv]' file from the BioBanking website, and rename it 'vegetation zone name.csv' (any name can be used). When saving the file, you should use a name that will easily link it to the vegetation zone, particularly where the site involves many vegetation zones.
2. Open the empty 'vegetation zone name.csv' file with Microsoft Excel™.
3. Enter all the transect and plot data into the 'vegetation zone name.csv' file:
   (a) Columns labelled 'PlotName', 'Easting', 'Northing' and 'Zone' – these allow free text entry, but the fields must not be left empty.
   (b) Columns labelled 'NPS', 'NOS', 'NGCG', 'NGCS', 'NGCO', 'EPC', 'NTH', 'OR', 'FL' – each field must contain a number (e.g. 18, 8, 4, 2).
4. After you have entered data into the file, perform a quick validation of your data (note that these data can still be adjusted once they have been imported into the credit calculator).
5. To save the files in Excel, allow Excel to request you to save the file, and then simply overwrite the existing file.
6. Open the *Vegetation transect/plot details* page for the appropriate vegetation zone and click on the *Import* button. Browse to the appropriate location and select the .csv file, and select *OK*. This will import all transect/plot data for this vegetation zone. This process should be repeated for each vegetation zone. If you do not wish to import the data select *Cancel*.
7. If the import fails red text will be displayed at the top of the screen providing a description of the problem.

Once data entry is complete for the transects/plots select *Save vegetation transect/plot* to save the data entered or *Cancel* to discard the changes. You will be asked to confirm whether you are sure you want to cancel without saving. The *Transect/Plot complete* information under *Vegetation zone: EEC and red flag* should now contain the number of plots entered for each vegetation zone.

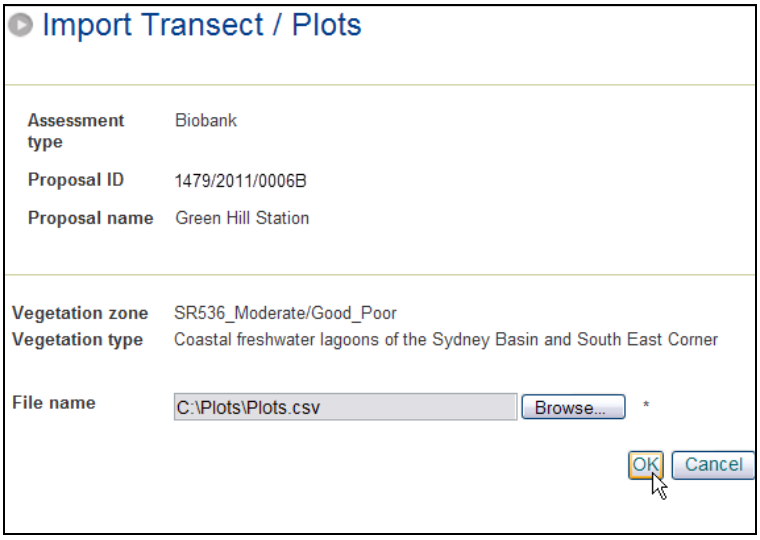


Figure 44: Importing transect/plot data

3.6.3 Entering management zones and linking threatened species sub-zones

Management zones allow you to stratify a vegetation zone into different management units by assigning a different area for each management zone. This allows efficient simulation of different biobank assessments based on the extent of improvement from the biobank site on biodiversity values.

To enter management scores for each vegetation zone select the radio button beside each and select the *Management scores* button. The resulting M*anagement zones* page displays the vegetation zone name, vegetation type and the total area of the vegetation zone (Figure 45). At the bottom of the page is an area to enter data for each *Management zone,* and a reference area containing the threatened species sub-zones entered earlier.

To enter the data related to a management zone follow the steps below:

1. Enter a management zone number/name in the *Management zone* box. It is recommended that you use an easily identifiable code/name (e.g. MZ1 – APZ, MZ2 – Clearing, etc.).
2. Enter the area of the management zone in the *Area* box.
3. Select *Add* if you wish the information to be saved. Select *Clear* if you do not want to save the information entered. When *Add* is selected the management zone will be listed below the data entry boxes, with a radio button now visible.
4. Add all management zones related to the vegetation zone in the same way. The combined area of the management zones must equal the area of the vegetation zone.

To link threatened species sub-zones to a management zone select E*dit* next to the appropriate threatened species sub-zone, then select the correct *Management zone* from the drop-down list (Figure 46). Each management zone must be linked to a threatened species sub-zone. Select *Save* if you wish the information to be saved. Select *Clear* if you do not want to save the information entered.

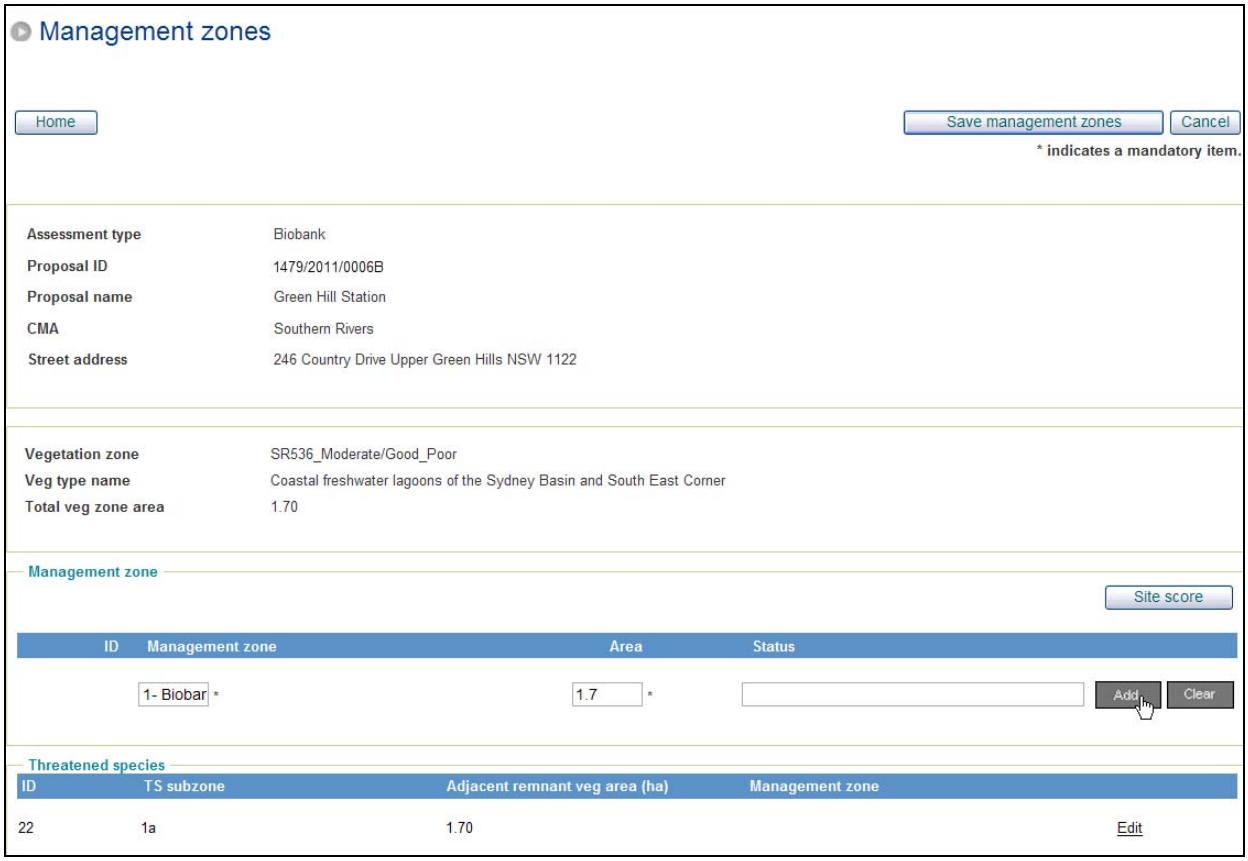


Figure 45: Entering management zones

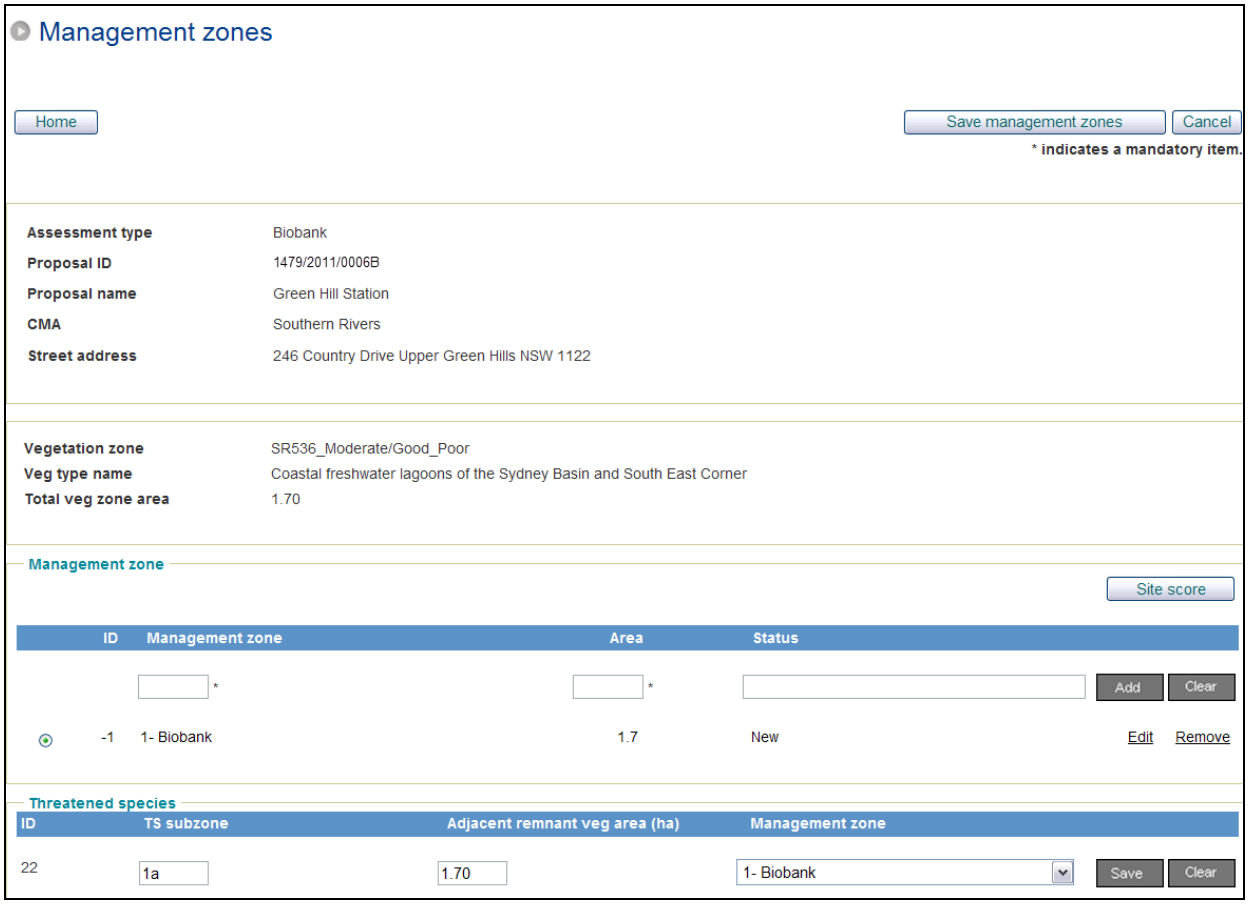


Figure 46: Linking management zones and threatened species sub-zones

3.6.4 Entering site scores

After a management zone is added the site score screen must be opened before it can be saved. This allows the assessor to view the current site value score for the vegetation zone, and make any edits to the future site value score for the management zone. The resulting *Management zone details* page will contain the vegetation zone and vegetation type name, total vegetation zone area, management zone name and its area. Scroll down further to view the score for each site attribute and the overall site attribute score.

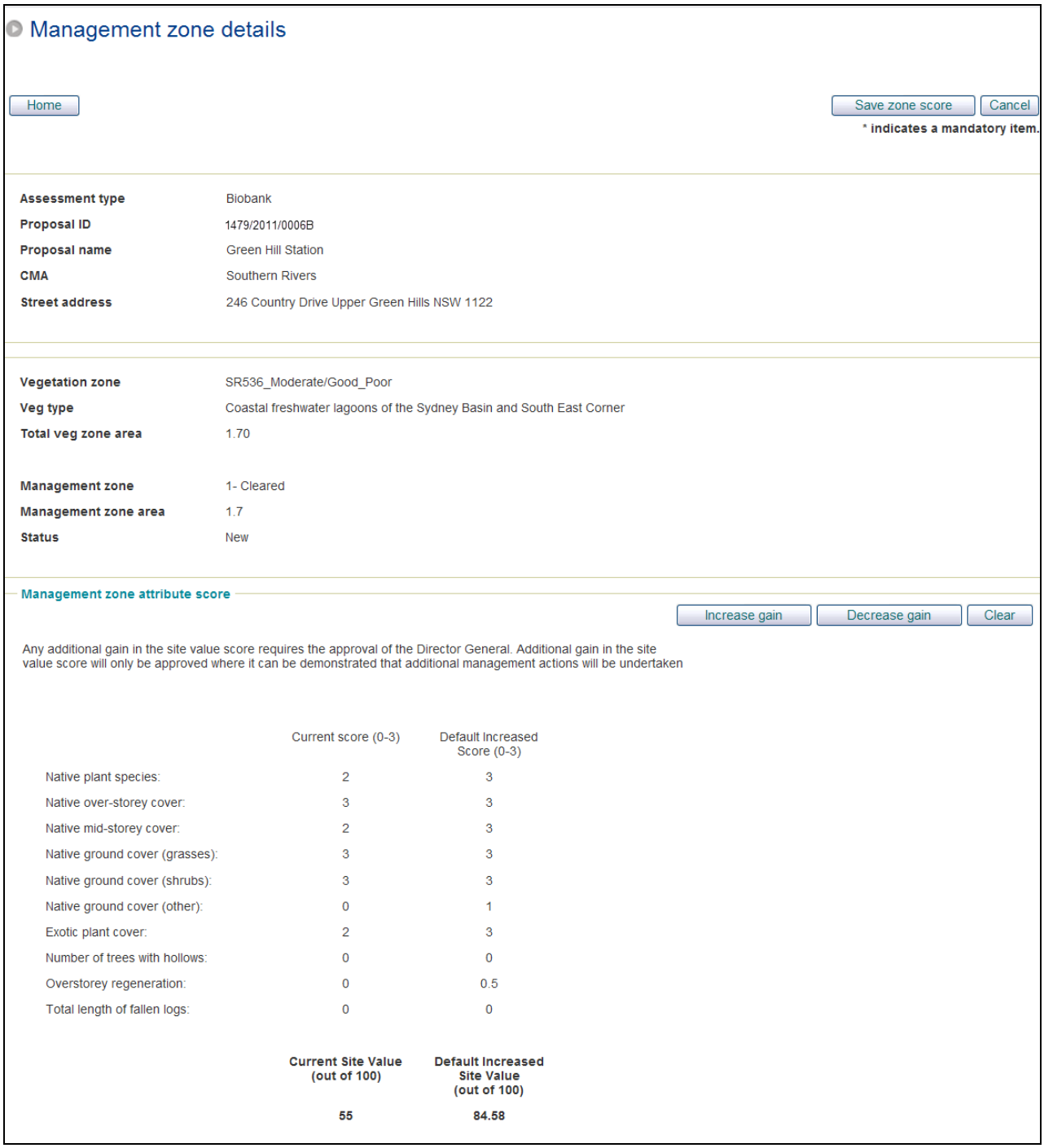


Figure 47: Entering site scores

The *Current score (0–3)* for each site attribute is calculated from the transect/plot data that was entered previously for the vegetation zone, and a total current site value provided under the *Current Site Value Score (out of 100)*.

The *Default Increased Score (0–3)* will also be displayed for each site attribute, and will display the default increase in site value from the management actions conducted at the biobank site.

In certain circumstances, the *Default Increased Score* may be increased where additional or tailored management actions are being applied to a site. In these circumstances, the score for a particular site attribute may be increased to a level greater than the *Default Increased Score*.

To increase the *Default Increased Score*, first select the *Increase gain* button to open up the new screen (Figure 48). For each attribute select the appropriate *Score with management (0–3)* using the drop-down lists provided. The extent of the increase for any site attribute is limited on the basis of the current condition of the attribute. Any increase in the extent of improvement above the default values is limited to the guidelines in Appendix 5 of the *BioBanking Assessment Methodology and Credit Calculator Operation Manual* (DECC 2009) and must be approved by the Director General before the Minister will enter into a biobanking agreement for the site. Indicate a brief *Reason for score changes*, and also provide full justification in the BioBanking Assessment Report, demonstrating how the additional management will improve the condition of the vegetation beyond that predicted by the methodology. If you wish to cancel the *Increase gain* select *Clear*.

The gain in site value may also be reduced if restrictions such as an easement for powerlines or an APZ prevent the predicted gain in site value being realised. In this case, select the *Decrease gain* button to open the new screen. For each attribute select the appropriate *Score with management (0–3)* using the pull down menus provided. The extent of the decrease for any site attribute is limited to the current condition of the attribute. Indicate a brief *Reason for score changes*. If you wish to cancel the *Decrease gain* select *Clear*.

Once data entry is complete select *Save zone score* to save the data and exit the page. If you wish to clear the data entered, select *Clear*, or if you wish to exit the page without saving select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving. Exiting this page will return you to the *Management zones* page, where site values must be viewed for all management zones.

To save the management zones select *Save management zones.* If you do not wish to save your changes select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving. You will be returned to the *Site values* page, and the above process of entering transect/plot data and management scores must be completed for all vegetation zones and management zones.

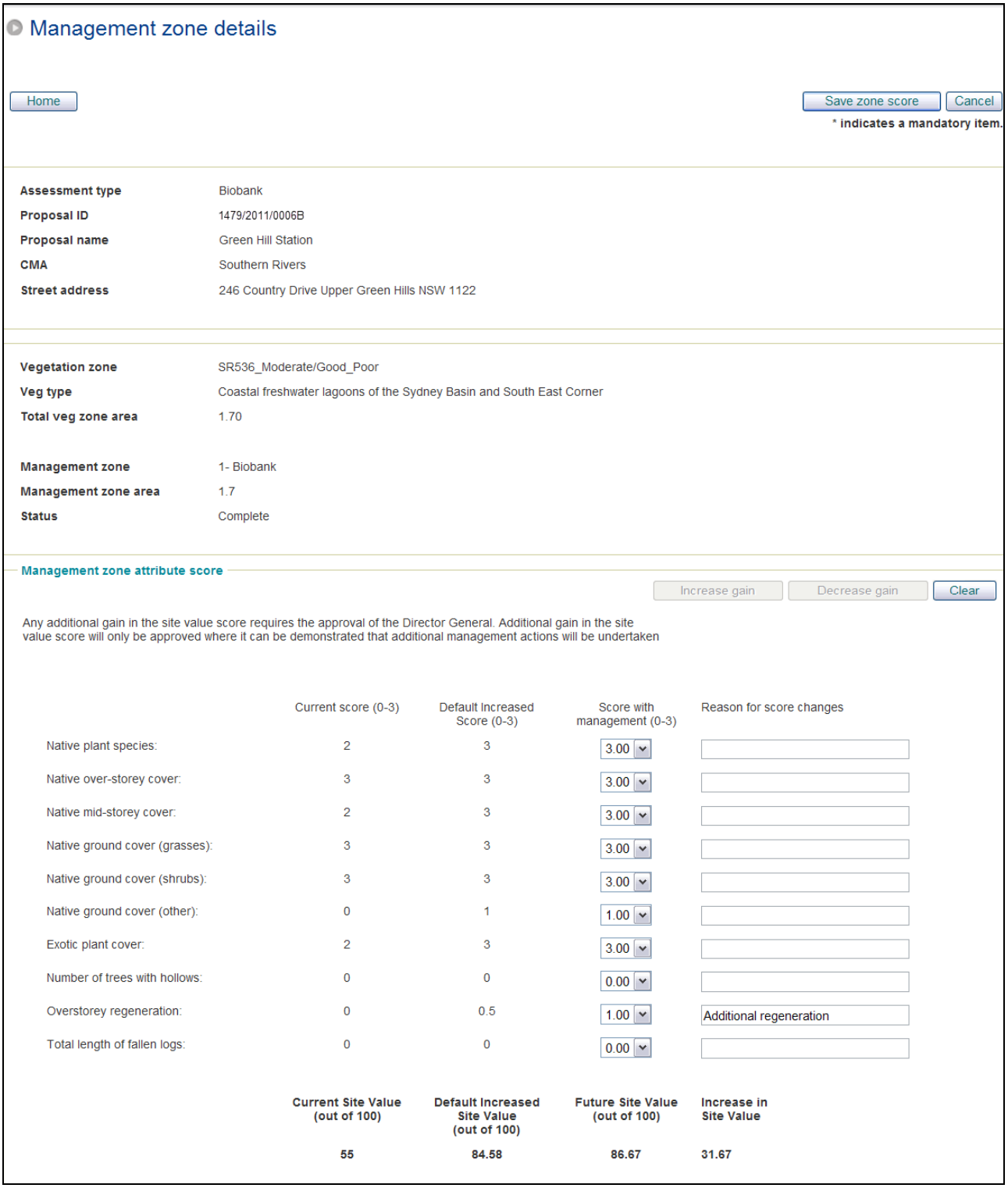


Figure 48: Increasing/decreasing site value

3.7 Threatened species survey results

If the proposed biobank site is not being used to create species credits, the proponent is not required to carry out any targeted surveys.

Where the biobank site is proposed to create species credits, the results from targeted surveys for threatened species can now be entered into the credit calculator by navigating to the *Threatened species survey results* page. For each species listed you must record whether the species is to be protected by the biobank site. This is done by selecting *Edit* beside each species. You must tick the box under *Managed at site?* if the species will be protected and managed at the biobank site. If the species won't be protected and managed then leave the box un-ticked. Next you need to record the *Id method* from the drop-down list by selecting either *Survey* or *Expert Report*.

If a species is to be protected and managed by the biobank site indicate the number of individuals (for flora), or the area of habitat in hectares (for fauna) under the *Size of gain* column. The unit of measure (*UOM*) will be completed automatically. Enter the *Survey date*, and the name of the *Mgmt zone* that most closely covers the area of the species polygon. If the gain in site value has not been determined, or the location of the species does not relate to a management zone, leave the *Mgmt zone* field blank and enter a *Percent gain* for the species. The default increase is 60% (see section 3.12 of the *BioBanking Assessment Methodology and Credit Calculator Operational Manual* (DECC 2009) for more information).

When your edits are complete select the *Save* button beside the species, or if you do not wish to keep the edits select *Clear*.

Where an expert report has been used to identify that a species is present on the site, the expert report will need to be approved by OEH as part of the approval of the biobank agreement. The expert report should be provided as part of the BioBanking Assessment Report for the site. The BioBanking Credit Report will indicate that the expert report will need to be included as part of the application.

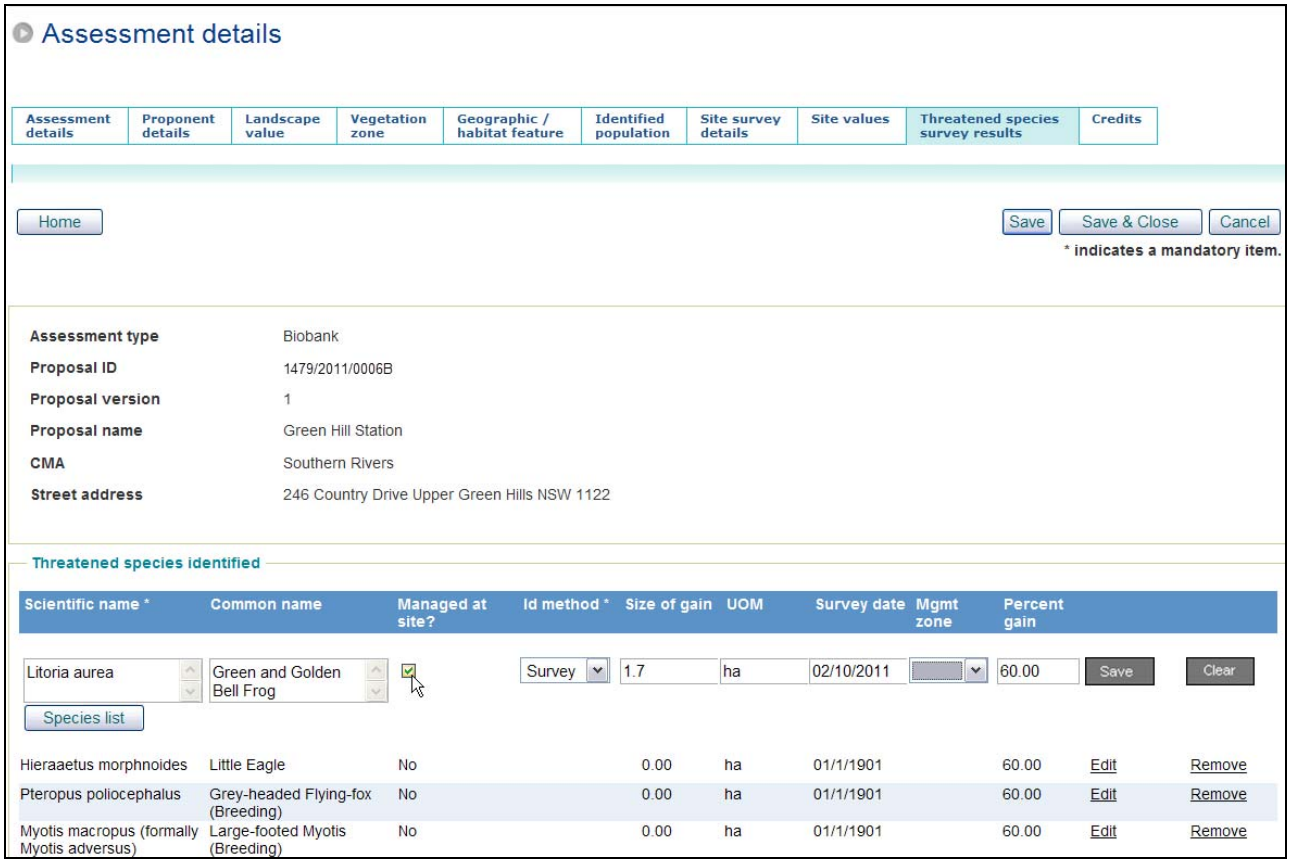


Figure 49: Entering threatened species survey results

If a threatened species is recorded on the site when it was not predicted to occur there, the species can be used to create species credits by adding the species to the assessment by selecting the *Species list* button. A species search box is opened where the species' name can be searched. To select the species, activate the appropriate radio button and click *OK.* To cancel, select *Cancel*.

Once you have selected the species to be added, complete the information required as described above. When your edits are complete select *Add*, or if you do not wish to keep the edits select *Clear*. If you have added the species in error press *Remove* (only those species added manually can be removed).

To save the *Threatened species survey results* data entered select *Save* and continue the assessment or select *Save & Close*. If you do not wish to save your changes select *Cancel*. You will be asked to confirm whether you are sure you want to cancel without saving. If no threatened species surveys were undertaken on the biobank site, simply *Save* and continue the assessment or select *Save & Close*.

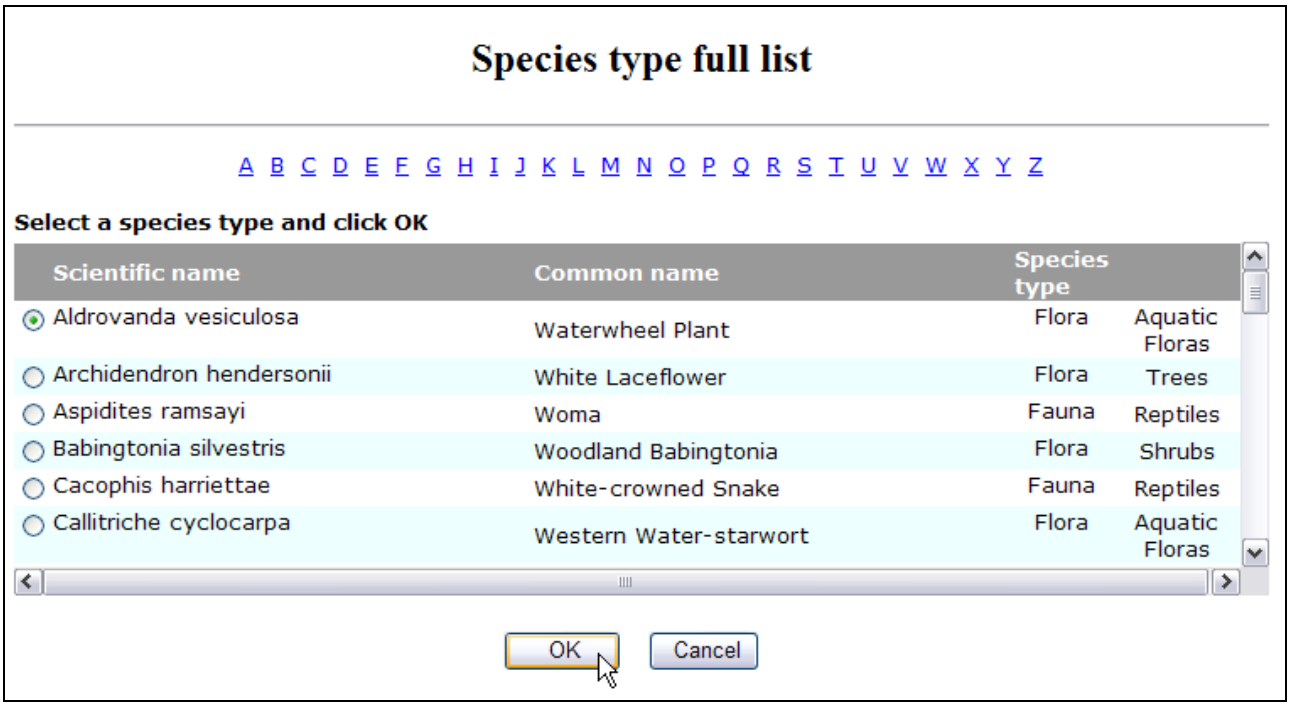


Figure 50: Adding a threatened species

3.8 Credits

The final step in the assessment is to review the credits generated by the biobank site based on the data entered into the credit calculator (Figure 51). The details of the assessment are listed first, followed by the *Ecosystem credits* and *Species credits.*

The results for ecosystem credits are listed for each management zone. Details provided include vegetation code, vegetation name, management zone name and area, current value score, future site value, gain (in site value) and the number of credits generated.

The information for species credit species includes scientific name, common name, species Tg value and final credits generated. The *Management actions* button can be selected (after first selecting a radio button next to a species) to view any additional management actions required to generate species credits for that species.

If data has been changed for the assessment, select the *Calculate credits* button to update the credit results. To exit the screen select Save or Save & Close. If you do not wish to save your changes select Cancel. You will be asked to confirm whether you are sure you want to cancel without saving.

Figure 51: Credit results

4 Producing reports for an assessment

To produce reports for an assessment *Save & Close* the assessment and re-open it in *View* mode. To open in *View* mode select the *View* button for a case using the *My Work* tab. Alternatively a search can be preformed. To perform the search select *Proposals–Search* and enter at least one search criterion (more search criteria can be entered to further refine the search). Once the desired assessment is located, select *View* to review it and print associated reports.

To produce a report, select the *Reports* button from any page in the credit calculator. A *Select reports* page will be displayed, where you can select the report required (Figure 52). Tick the box next to the required report and select *Print* to view the report. Please note that only one report can be viewed at a time, and a delay may be noticed on viewing the first report; please be patient. Subsequent reports should be generated faster.

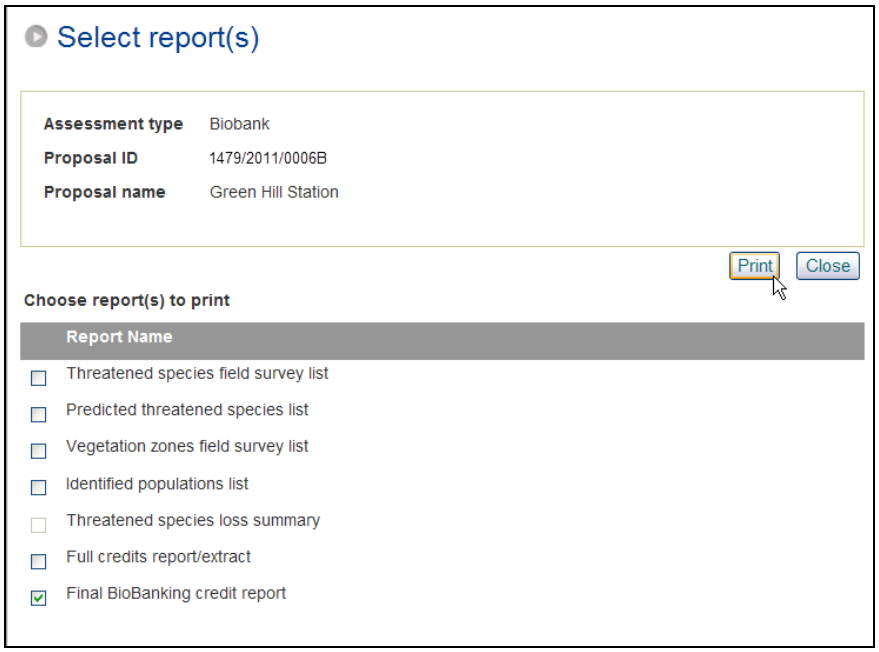


Figure 52: Report screen from which the user can select, save or print reports for an assessment

The reports that can be produced include:

- Threatened species field survey list (contains a list of the species that require survey and the appropriate survey months for each species)
- Predicted threatened species list (contains a list of the species that are predicted on site and therefore do not require survey). The species are identified by vegetation zone
- Vegetation zones field survey list (contains a list of the vegetation zones that require survey, including vegetation type and condition, area (hectares), the number of TS sub-zones and the minimum number of plots required for the zone)
- Identified populations list (a list of identified populations within the assessment area)
- Threatened species loss summary
- Full credits report/extract (a detailed report containing all information related to the calculation of the ecosystem credits, including the landscape score, vegetation zone and type name, current and future site value, gain in site value and total credits created by the biobank site)

- Final BioBanking Credit Report (contains details relating to the proponent of the biobank site and the name and accreditation number of the assessor). A copy of the BioBanking Credit Report should be submitted as part of the application for a biobanking statement. The report shows:
  - the number and type of biodiversity credits generated by the biobank site
  - the credit profile for each group of ecosystem credits, showing the number of credits generated, the CMA sub-region, vegetation formation and vegetation type, minimum surrounding vegetation and minimum patch size
  - the credit profile for species credits, showing the number of species credits generated and the additional management actions required
  - whether any local data, such as updated Tg values, increased/decreased site value scores or local benchmark values have been used.

Reports can be produced at any stage throughout the assessment, however please note that reports will only be available up to the stage in the tool the assessment has reached (for instance, if an assessment is not yet finished, the final credit report will not be available).

5 Submitting an assessment

Once an assessment is complete, the assessment details and all supporting documentation can be submitted online to OEH for approval. Once an assessment has been submitted for approval, the status of the assessment will change from WIP (work in progress) to submit. Once submitted, you will not be able to make any further edits to the proposal. Further details of how to submit an assessment follow.

5.1.1 Attaching additional documents

If you need to attach additional documents to an assessment, you should do this prior to submitting the assessment to OEH for approval.

To attach documents to your assessment open your assessment in *Edit* mode. Navigate to the *Assessment details* page and select the *Attach* button in the top right hand corner. Browse for your document and select the appropriate radio button. Type a description of the document into the text box, and then click *Save*. The document will be added to the assessment, and more documents can then be added using the same method. Select *Close* when you are finished.

If you wish to delete attached documents, open your assessment in *Edit* mode. Navigate to the *Assessment details* page and select the *Attach* button in the top right hand corner. Select the radio button next to the attachment you wish to delete, and click *Delete*. Select *Close* when you are finished.

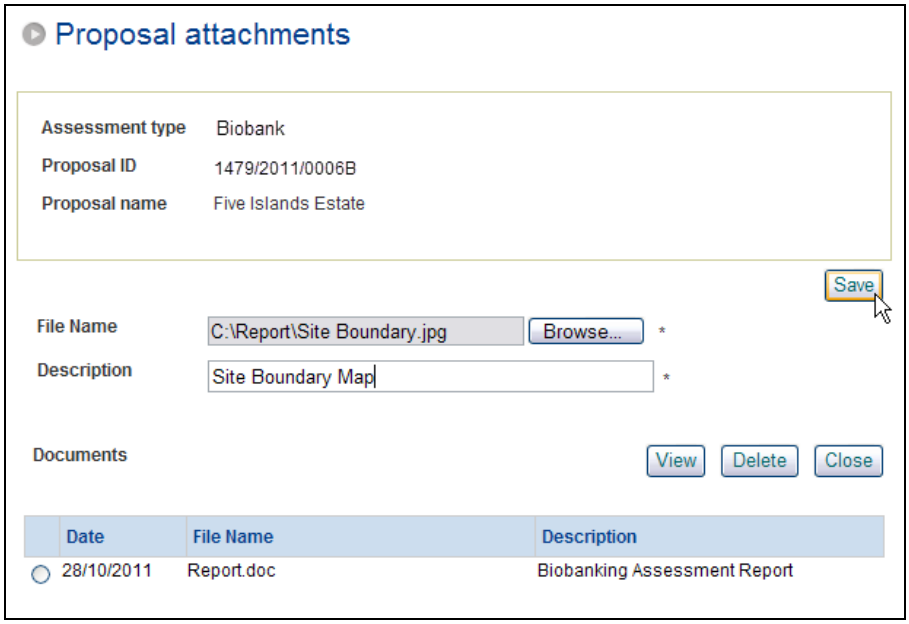


Figure 53: Attaching a document

5.1.2 Submitting results to OEH

When you are satisfied that the assessment is complete and any additional documents have been attached, it is time to submit the assessment to OEH for approval. To do this open your assessment in *Edit* mode. Navigate to the *Assessment details* page and select the *Submit* button in the top right hand corner. A *Submit the assessment for approval* box will appear (Figure 54), where you can confirm submission (*OK* button) or cancel submission (*Cancel* button).

Once a case has been submitted to OEH, the status of the case will change in your *My work* tab from *Work in progress (WIP)* to *submitted*. Please note that you cannot make any edits to an assessment that has been submitted, although you will be able to view the assessment.

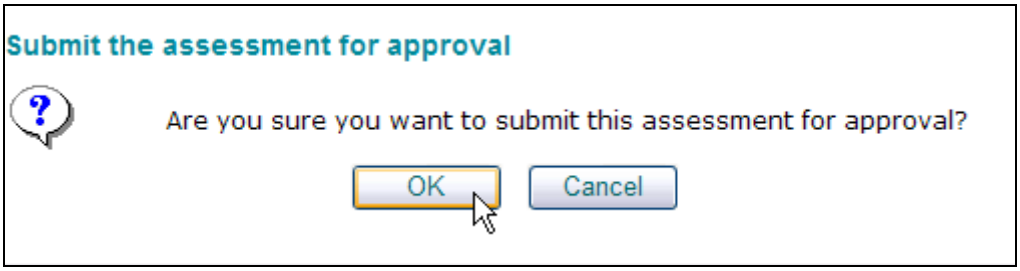


Figure 54: Submitting an assessment

Once the case has been received OEH will review the data entered, and any attached documents. OEH will only start the review once all necessary documentation is submitted with an application for a biobanking agreement or statement. You should liaise with the applicant to ensure all necessary information is submitted to OEH.

When submitting the assessment you must provide (in hard copy and soft copy):

- BioBanking Assessment Report including a list of dominant indigenous species for over-storey, mid-storey and ground cover for each vegetation type and, where required:
  - expert reports
  - local benchmark data
  - request for increase in gain of site value
- BioBanking Credit Report
- maps (soft copy as A4 jpgs) of:
  - biobank site boundary or development footprint
  - vegetation zones
  - management zones
  - photo points (biobanking agreement application)
  - and where required:
    - existing waste
    - existing erosion
    - existing structures (in waterways)
- separate shape files should be supplied for all the maps mentioned above plus:
  - plots and transects
  - assessment circles
  - species polygons
  - polygons for adjacent remnant area
  - the location or habitat area of sensitive species, and the management area related to that sensitive species (as this information cannot be displayed publicly).

All maps must include:

- a title (as per the names above)
- the site's name, location and lot/DP numbers
- the scale
- the date it was prepared
- a legend.

Boundaries and zones must be confirmed on the site using a GPS. This information should be digitised onto an ortho-rectified aerial photo or SPOT-5 image. Maps must be easily readable and submitted to OEH as a Geographic Information System (GIS) file that is ESRI compatible.

Shape files must use GDA94 datum. Name each shape file as: 'biobank site name_descriptor'. For example, 'Hill Farm_photo points' or 'Hill Farm_management zones'.

Photo points should be named A, B, C, D, E, F, G, etc. Photo points should be located in areas where change is expected, i.e. where replanting, natural regeneration, intensive weeding or other active management actions are to be carried out. As a rough guide, include at least one photo point in each management zone where active management actions will be undertaken.

Boundaries and zones must be confirmed on the site using a GPS. This information should be digitised onto an ortho-rectified aerial photo or SPOT-5 image. Maps must be easily readable and submitted to OEH as a Geographic Information System (GIS) file that is ESRI compatible.

Shape files must use GDA94 datum. Name each shape file as: 'biobank/development site name_descriptor'. For example, 'Hill Farm_photo points' or 'Hill Farm_management zones'.

Requirements for submitting a biobanking agreement application – landowners:

- proof of ownership
- management actions using the template (provided in Word format)
- Biodiversity Credits Pricing Spreadsheet
- application fee
- signed application form
- LPMA approved Deposited Plan if full survey requested
- for additionality, copy of any agreements relating to management actions already required on the site, e.g. Conservation Agreement, PVP, management plan
- in-principle consent from property interest holders and their contact details.

Appendix 1 – Tips and shortcuts

These tips and tricks will help you use v.2 of the credit calculator.

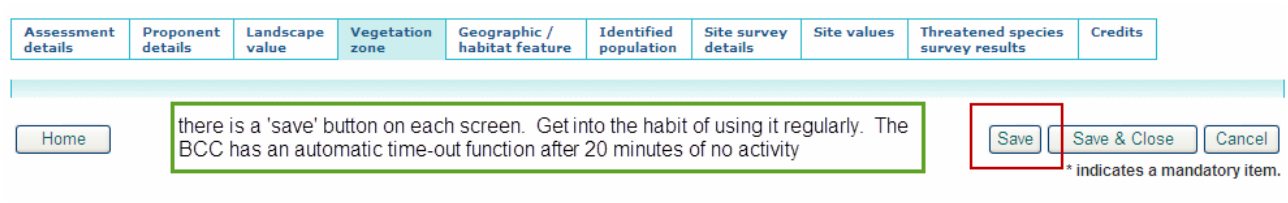


Figure 55: Saving your assessment

Save & Close will return you to the home page, saving your changes. *Cancel* will take you to the home screen without saving changes.

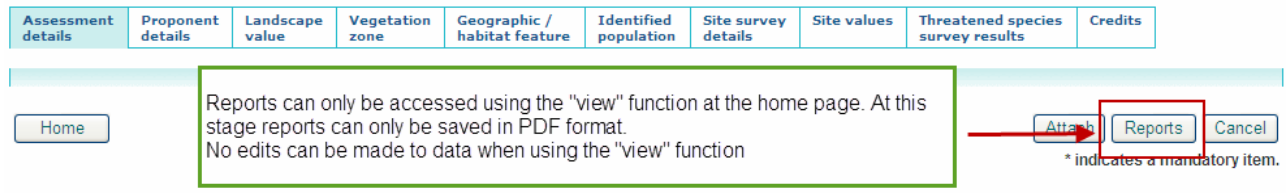


Figure 56: Generating reports

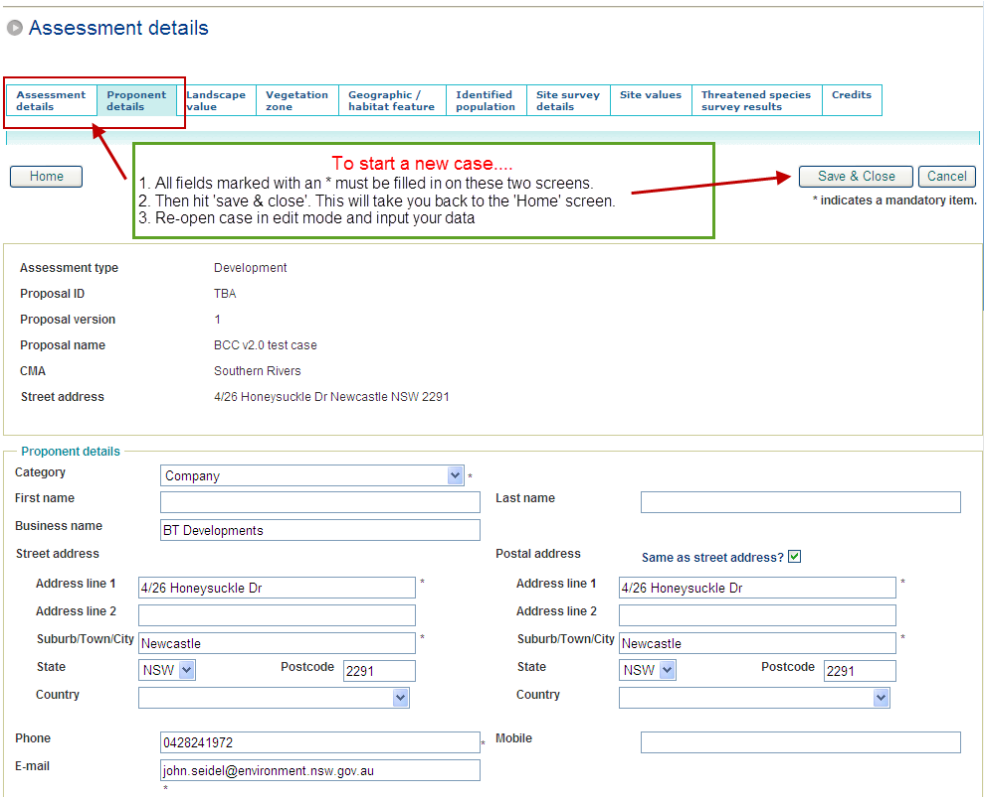


Figure 57: Starting a new case

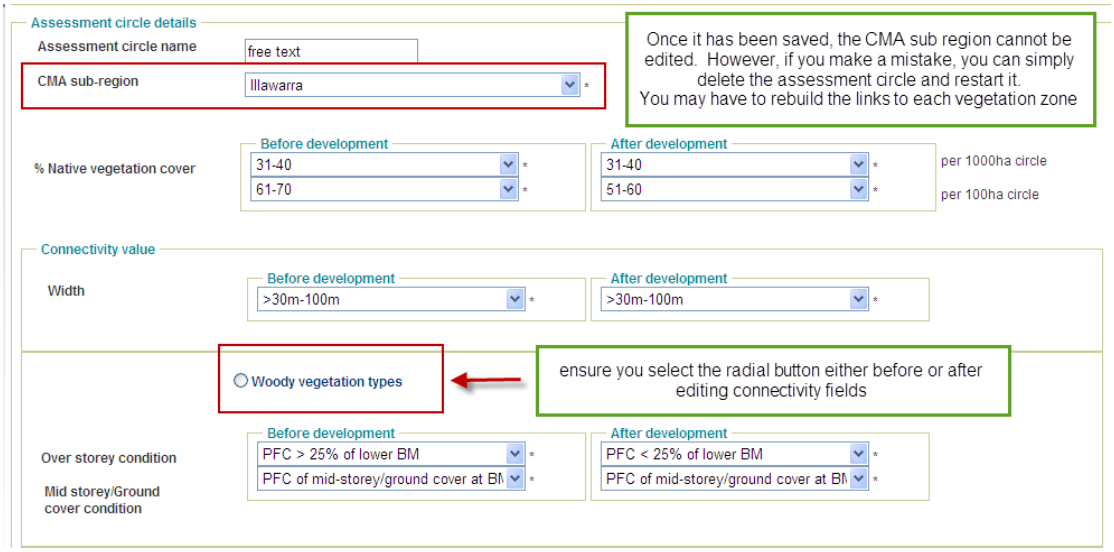


Figure 58: Editing assessment circles

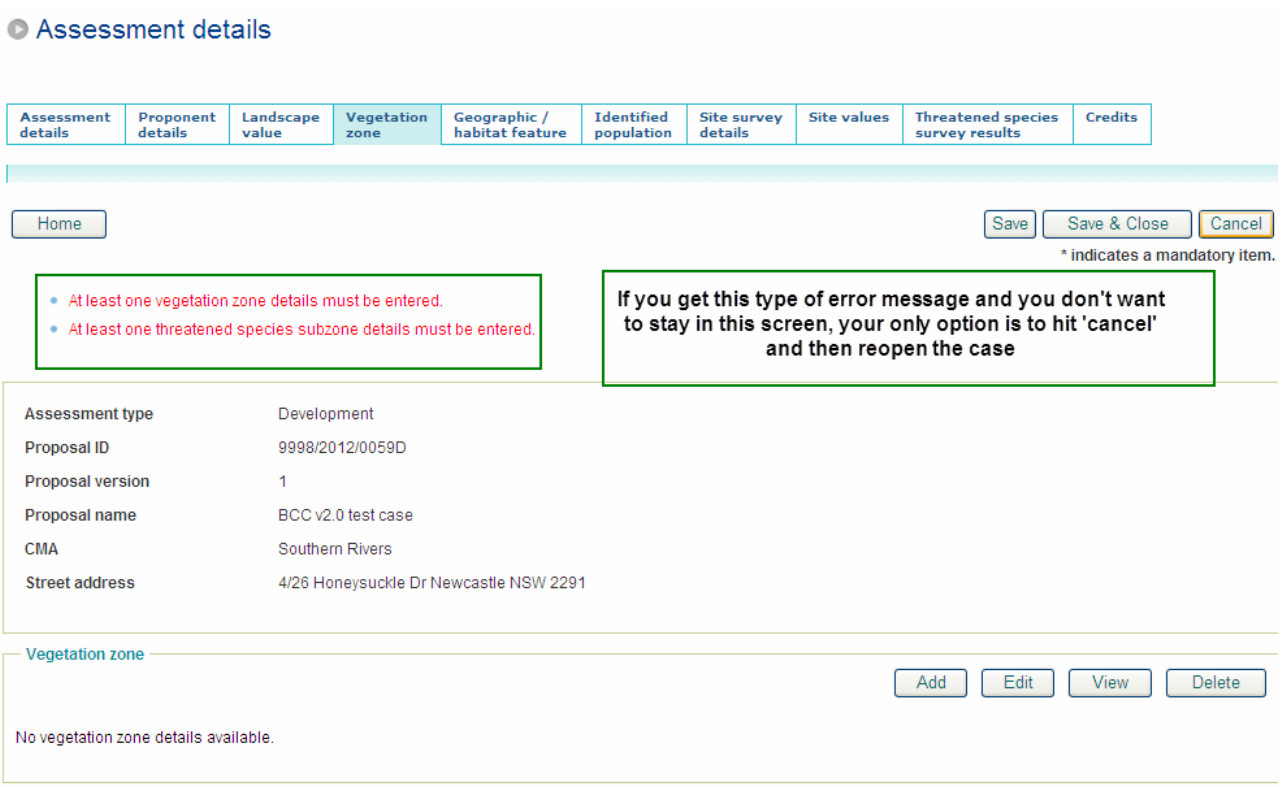


Figure 59: Moving on from the wrong page

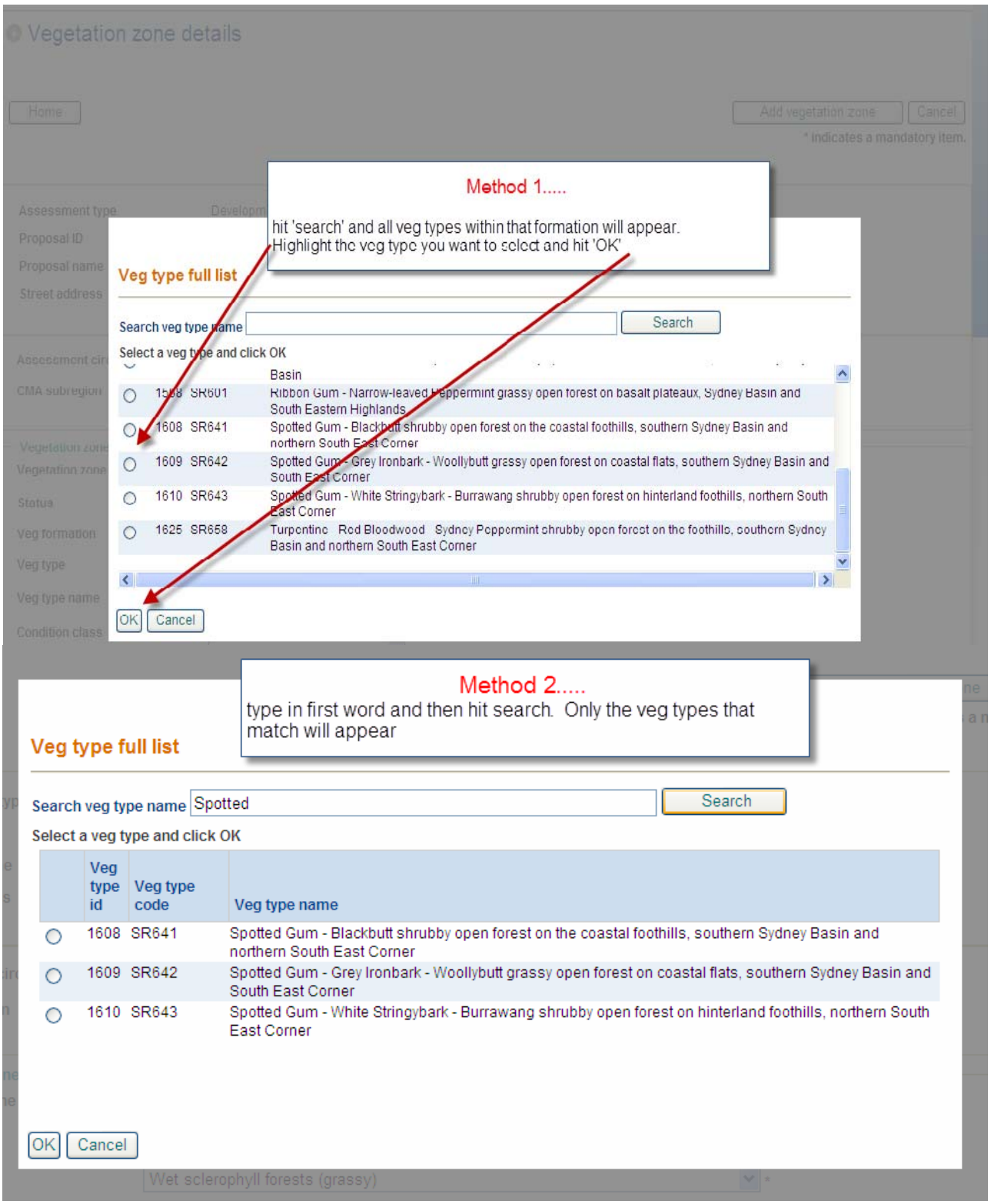


Figure 60: Two ways to select the veg type for your vegetation zone

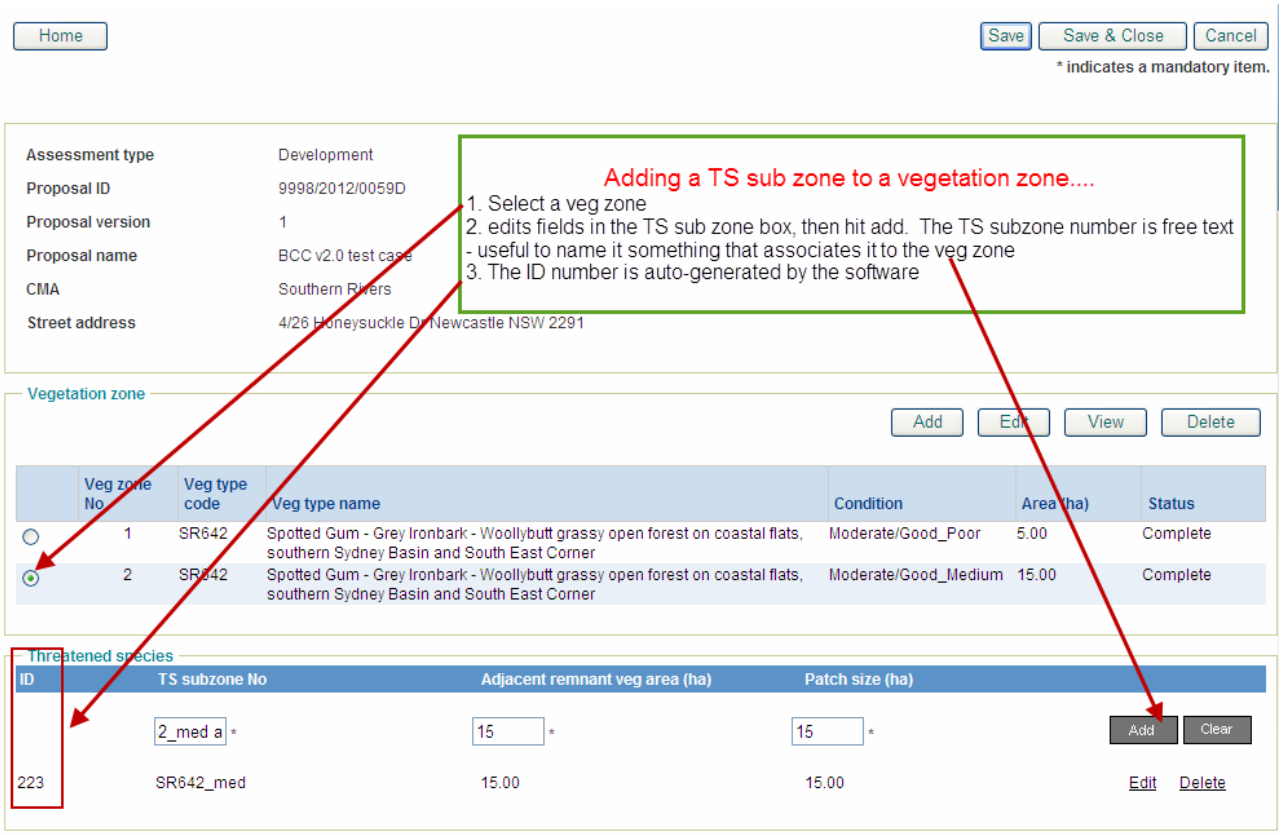


Figure 61: Adding a threatened species sub zone

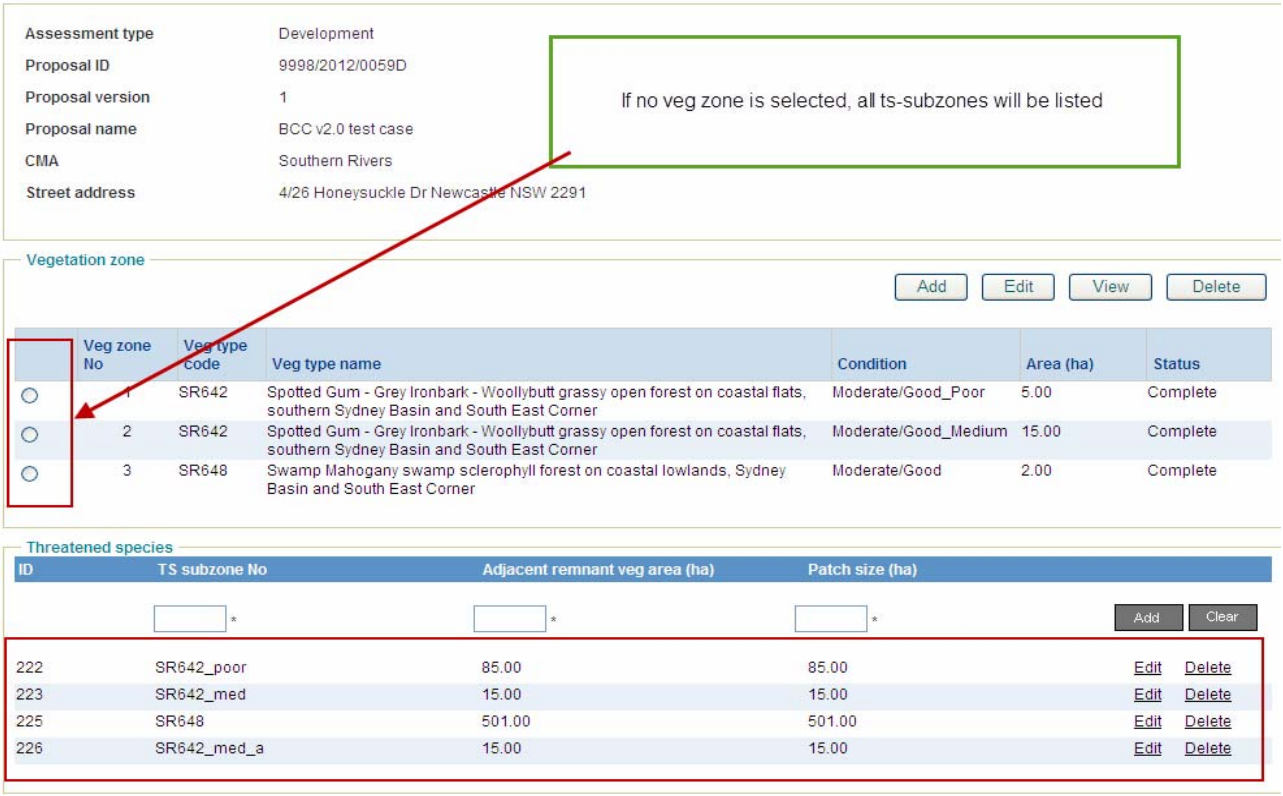


Figure 62: Displaying all the threatened species sub-zones associated with a vegetation zone

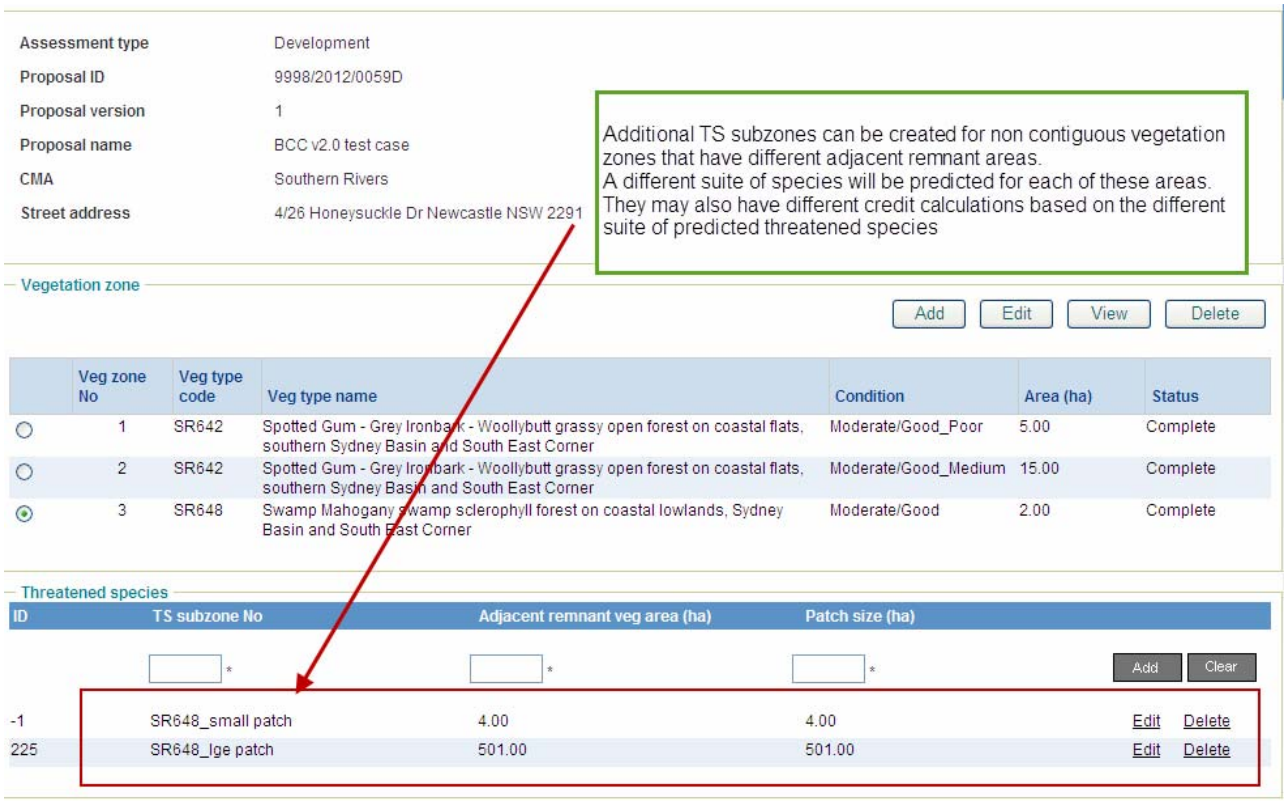


Figure 63: Assigning threatened species sub-zones to a vegetation zone with different sizes of adjacent remnant area

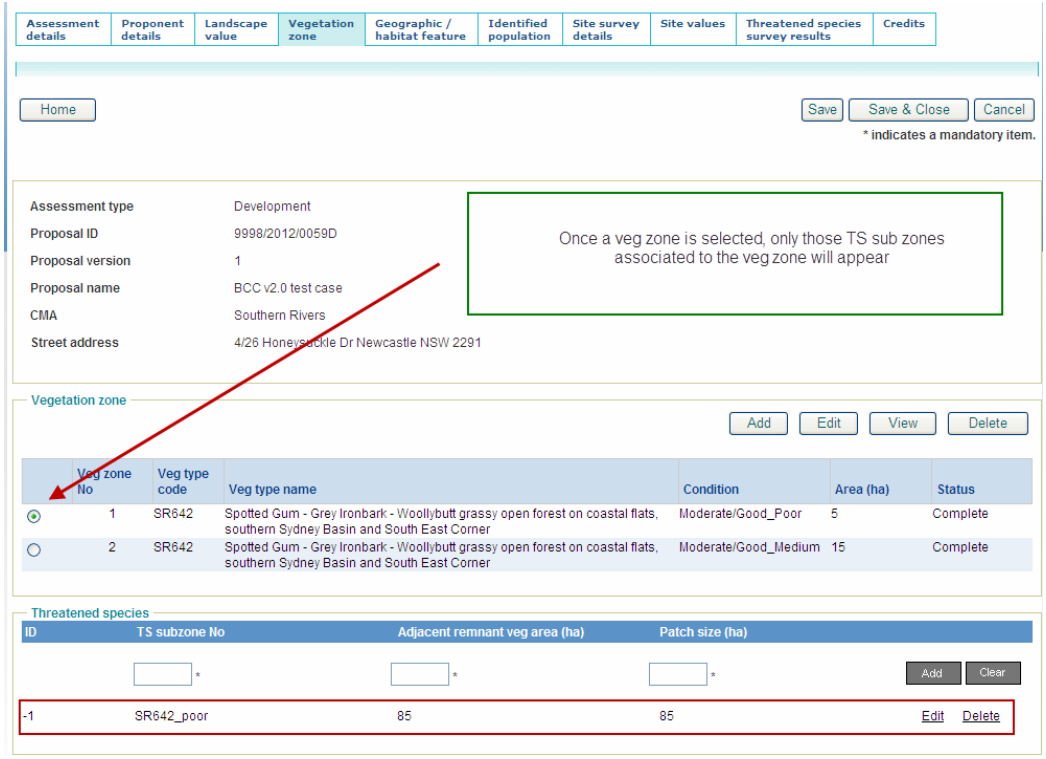


Figure 64: Displaying only the threatened species sub-zone/s associated with a chosen vegetation zone

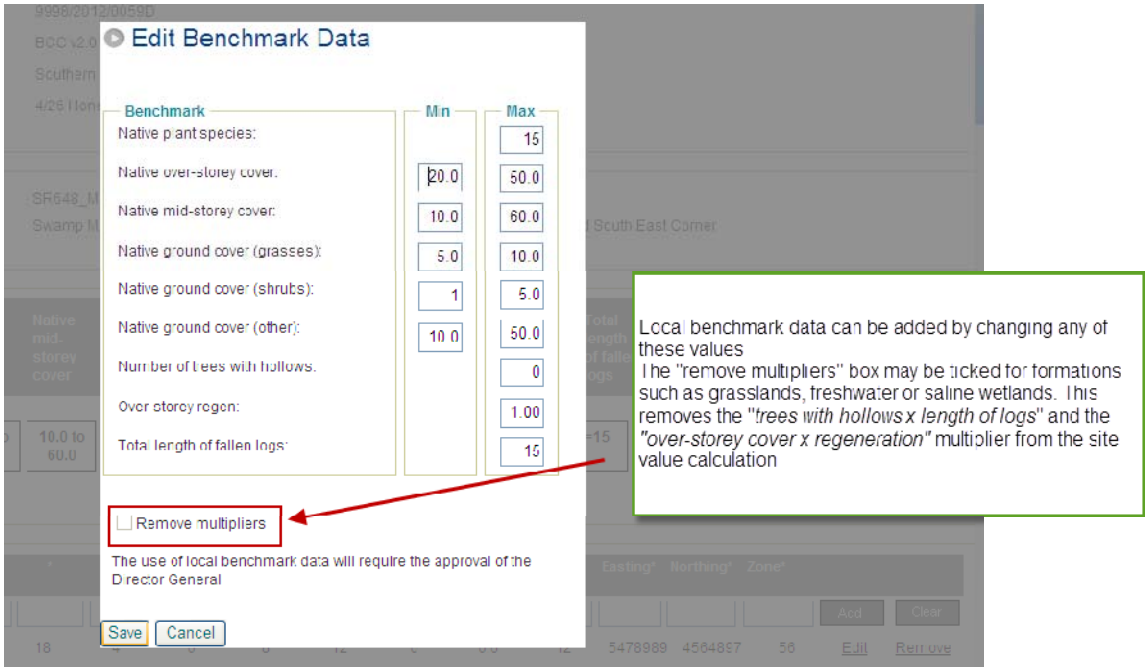


Figure 65: Assessing site value in formations where over-storey habitat features are absent or less important

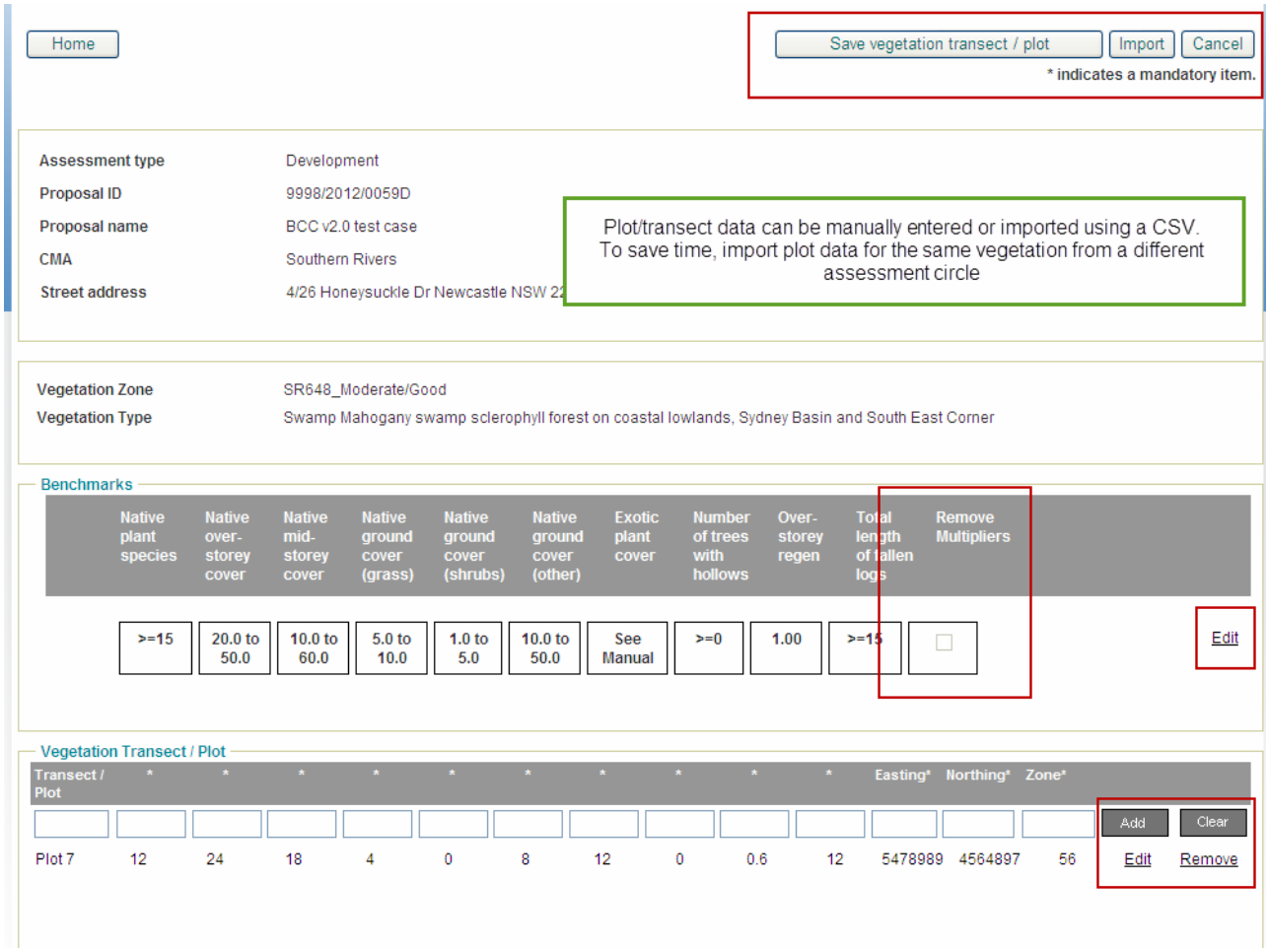


Figure 66: Reducing data entry for plots and transects for cases with multiple vegetation zones and assessment circles

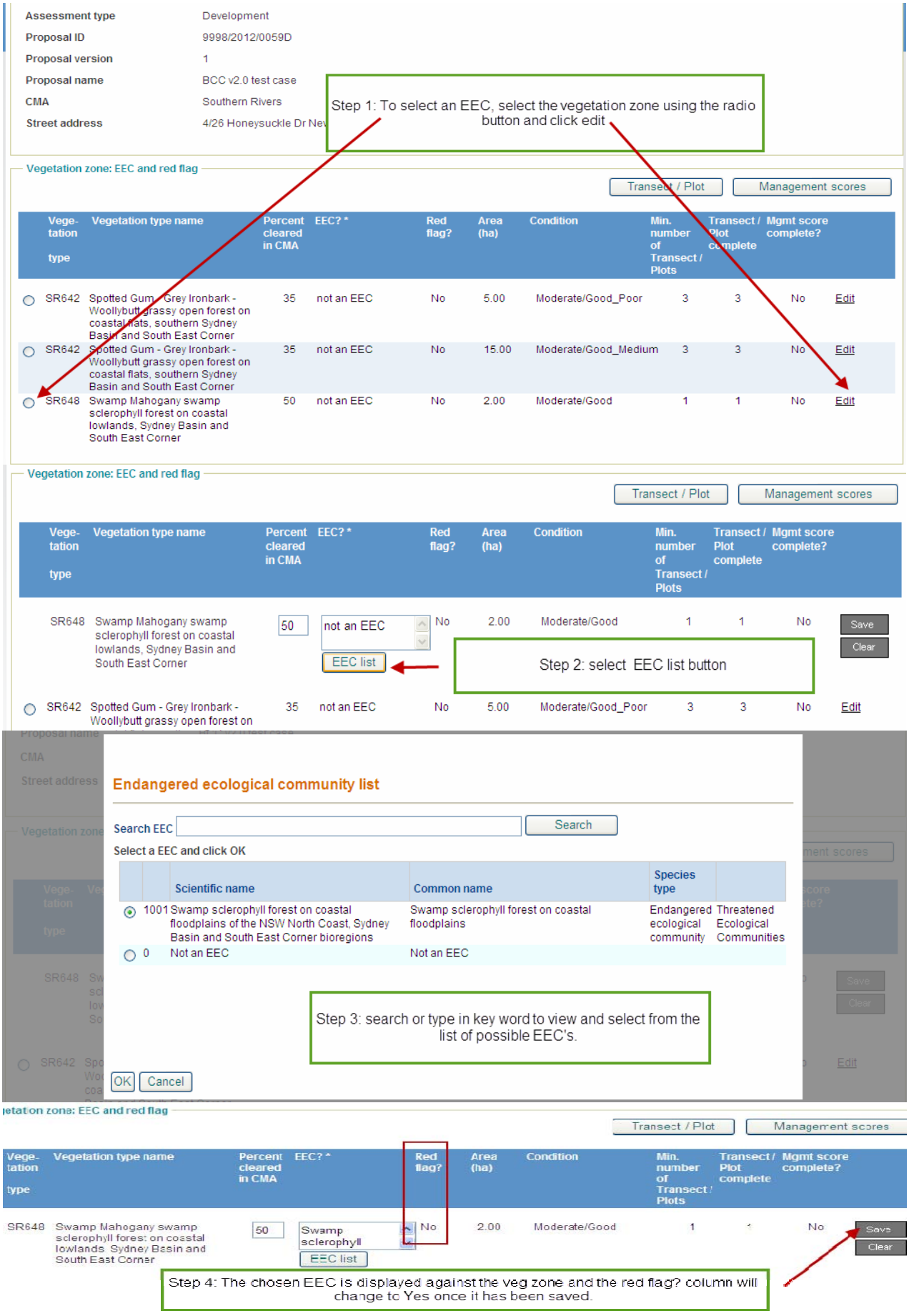


Figure 67: Assigning an EEC to a vegetation zone

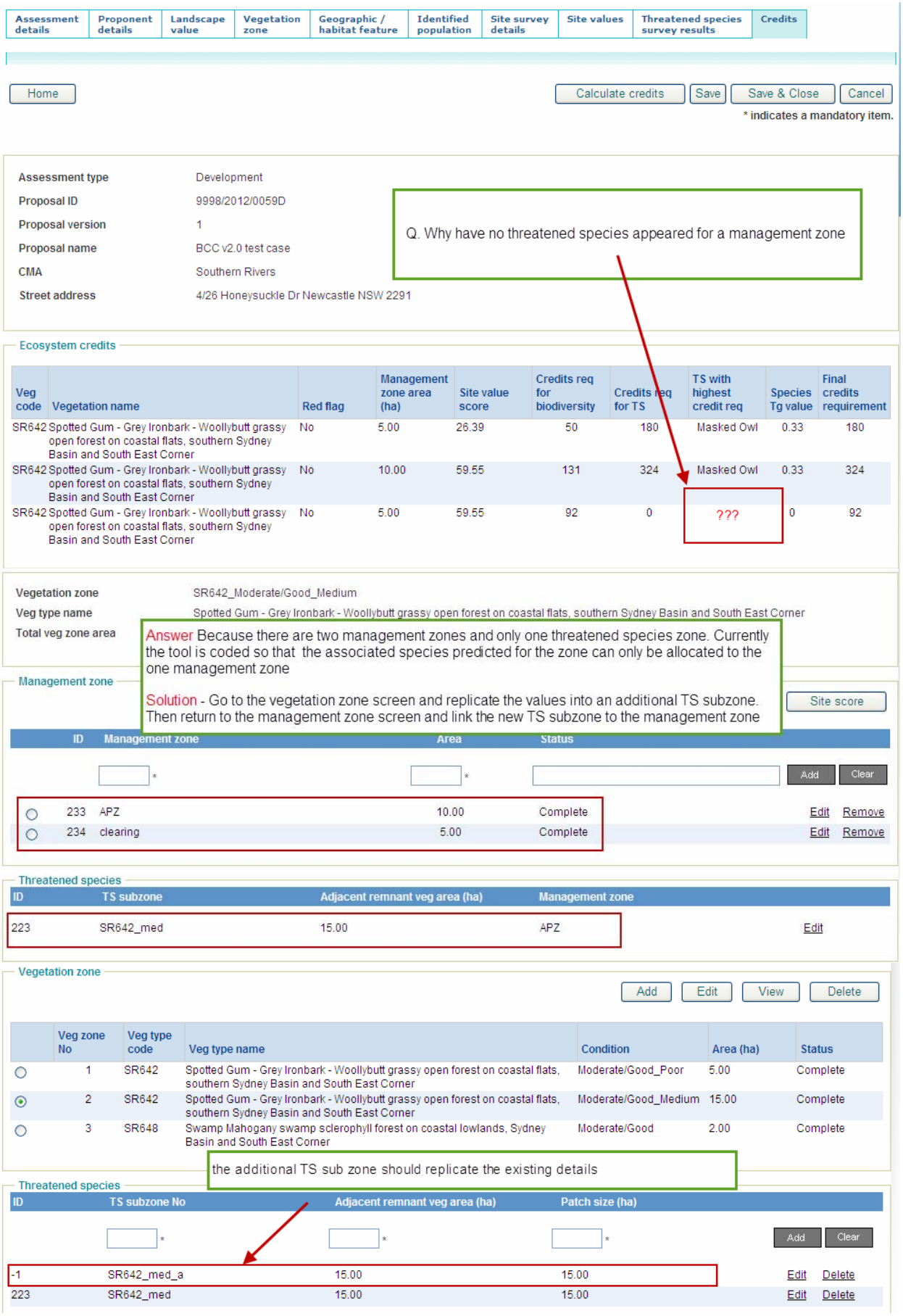


Figure 68: What to do if no threatened species appear for a management zone on the credits screen – step 1

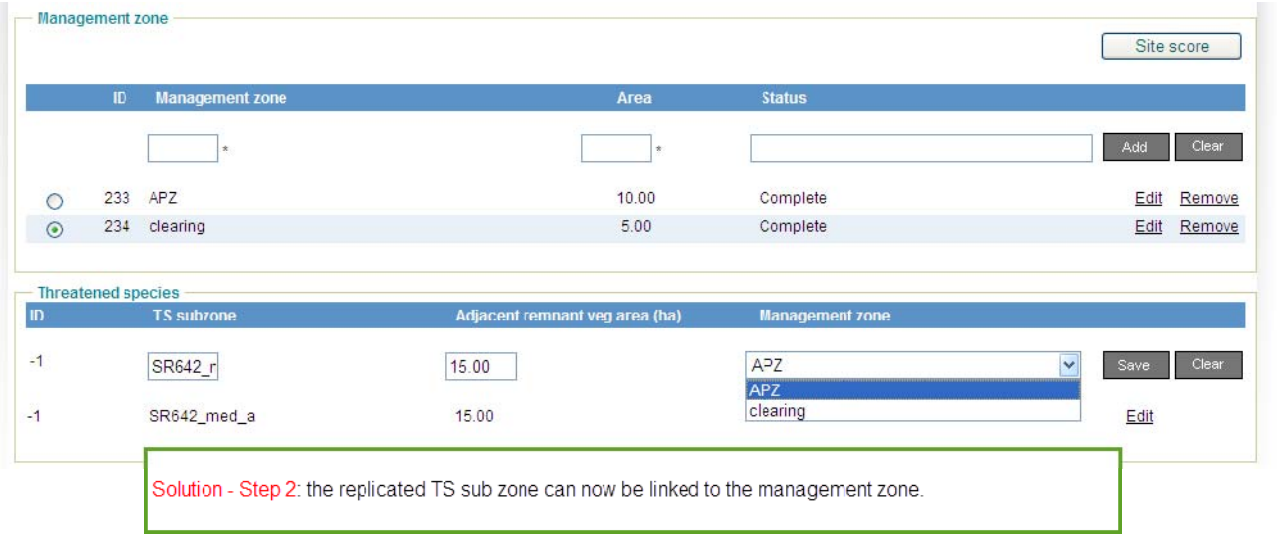


Figure 69: What to do if no threatened species appear for a management zone on the credits screen – step 2

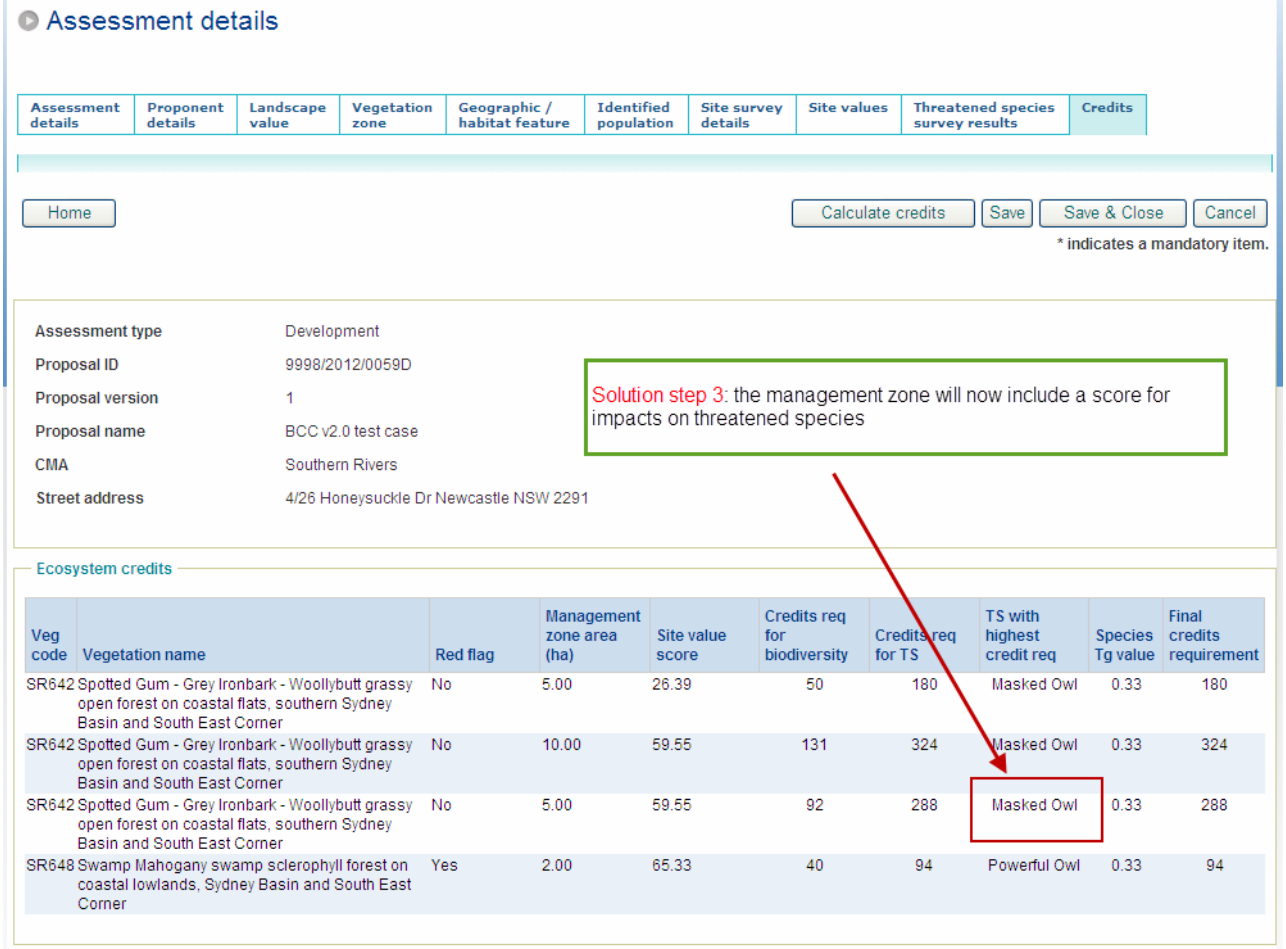


Figure 70: What to do if no threatened species appear for a management zone on the credits screen – step 3

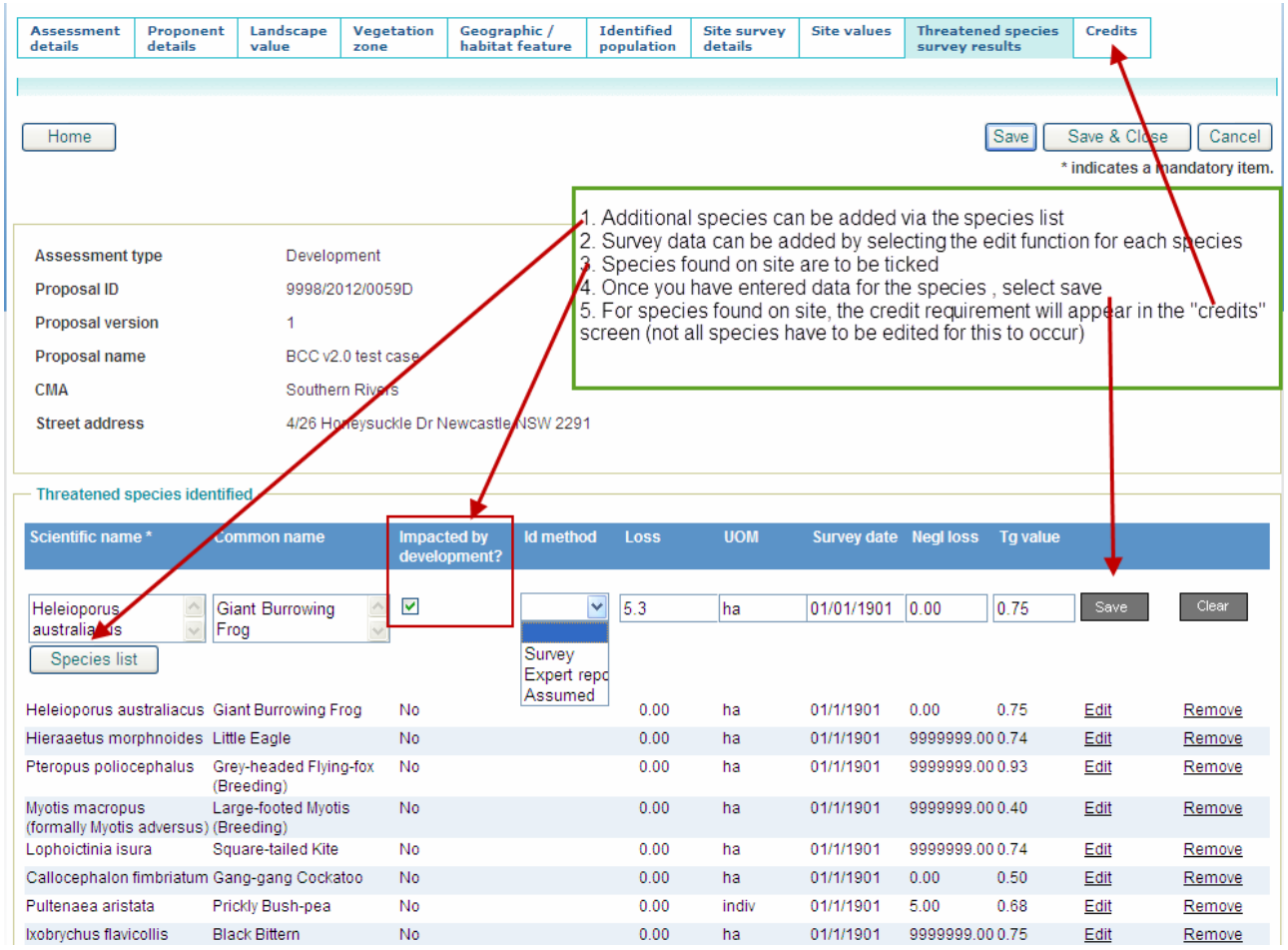


Figure 71: Entering data for species assessed for species credits