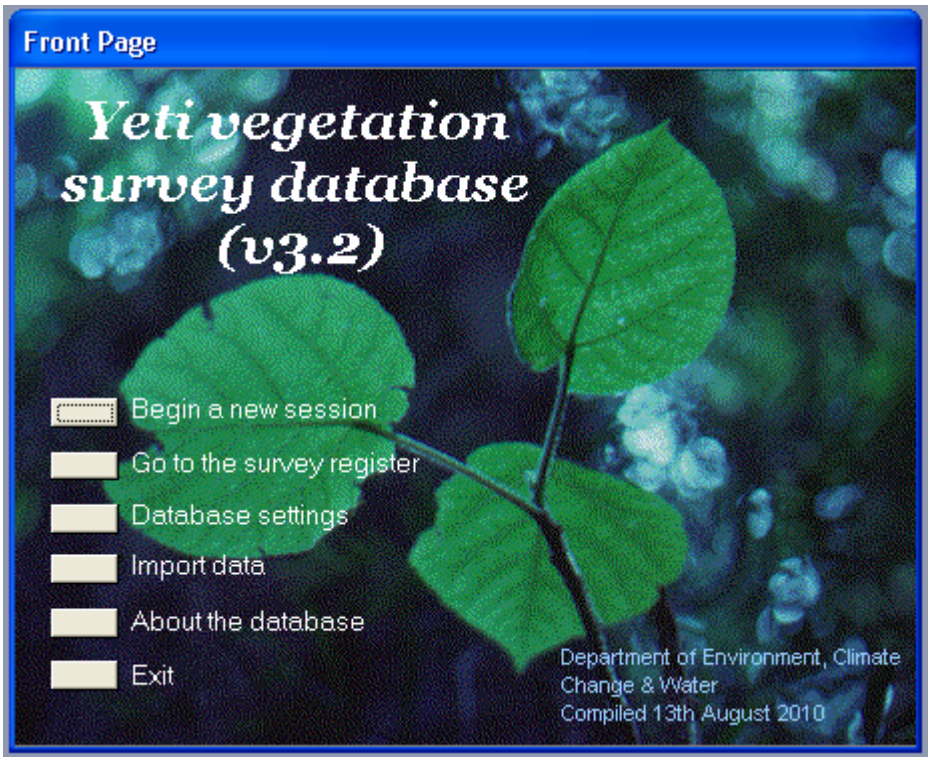
YETI 3.2 Vegetation Plot Database

User Manual



NSW Vegetation Information System: Survey Plot Module

June 2010

TABLE OF CONTENTS

1. Introduction

The YETI database (also referred to as the NSW Vegetation Plot Database) is an integral component of the development of the NSW Vegetation Information System (http://www.environment.nsw.gov.au/research/Vegetationinformationsystem.htm), a state-wide project that aims to integrate the range of vegetation data and information systems for New South Wales into a single, easily accessed system. YETI – the NSW Vegetation Plot component of NSWVIS - is a central authoritative database for systematic vegetation survey data that comprises over 50,000 vegetation survey (plot) records. It is designed to enable rapid access to vegetation plot data, in addition to enabling authorised users to enter, query and modify data from plot-based vegetation surveys in New South Wales.

This version of the database (YETI 3.2) builds on the previous YETI version and has been developed as a local database to enable field surveyors to access and record flora records and vegetation plot data. Flora records have also been recorded in the Wildlife Atlas, which also holds comprehensive fauna data for New South Wales. As part of the move to integrate data systems, YETI is being further developed as an integrated module within the NSW Wildlife Atlas. This will provide the opportunity to rationalise flora records, and a more efficient access for users seeking information on the distribution of flora and fauna in New South Wales. The NSW Vegetation Plot database will be complemented by the NSW Plant Community Type database (http://www.environment.nsw.gov.au/research/Visclassification.htm), the repository for information on the vegetation communities found across the State, and vegetation mapping products, which can be accessed via the VIS Map Viewer: http://imagery.maps.nsw.gov.au/VEG/?role=veg, hosted by the Land and Property Management Authority.

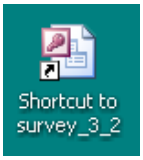
The YETI client has been modified to allow the recording of data recorded as part of the Vegetation MER program and hence to ensure alignment with the NSW Vegetation Type Standards. As part of the exercise, the YETI data model and application have been harmonised with the updated Type Standards to make data entry and maintenance as straightforward and painless as possible.

This user manual sets out the general procedures for setting up YETI, entering and editing data. For data entry or editing, an authorised log-in is required. If you wish to apply for authorised access, please send an email to the YETI Administrator.

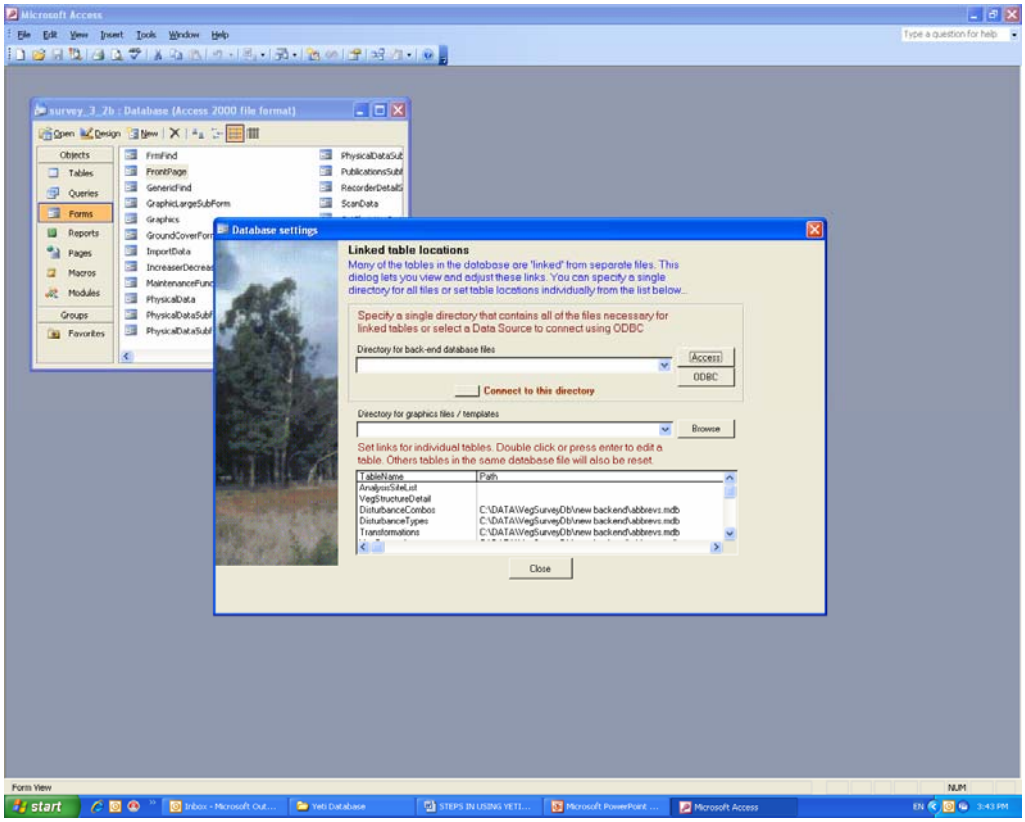
2. Getting Started

2.1 Setting Up YETI For The First Time

1. Double-click on shortcut to the file **Survey_3**_2 on desktop to open Yeti database

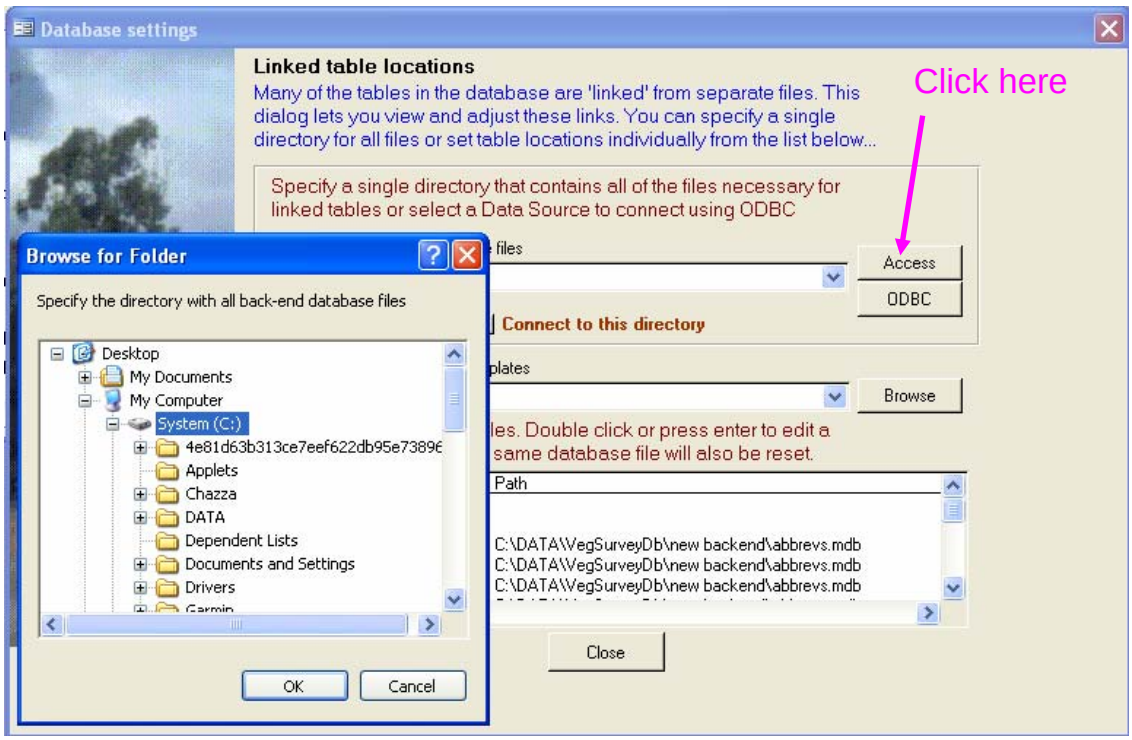


2. A Microsoft Access window will open containing a back-end file menu and a **Database Settings** window

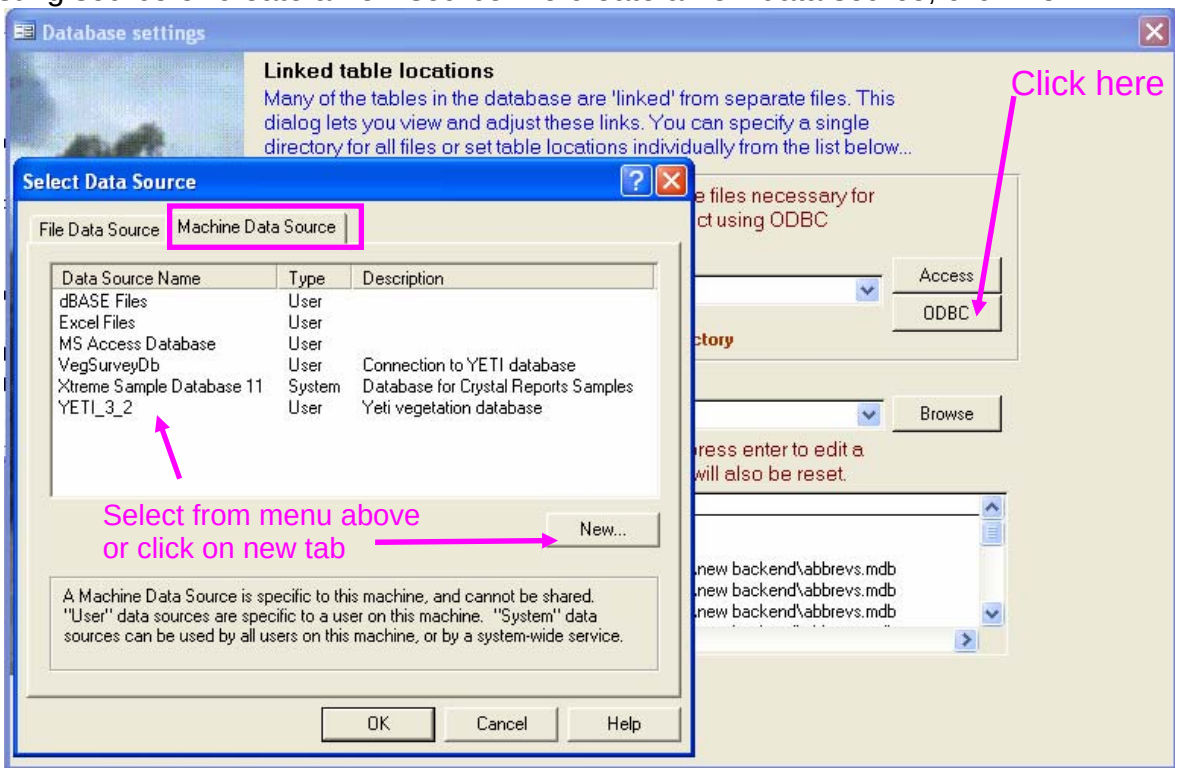


3. In the **Database Settings** window you need to specify where the backend files for YETI are located and create a link to them. Back end files can either be located on your computer, or on the ODBC network server.

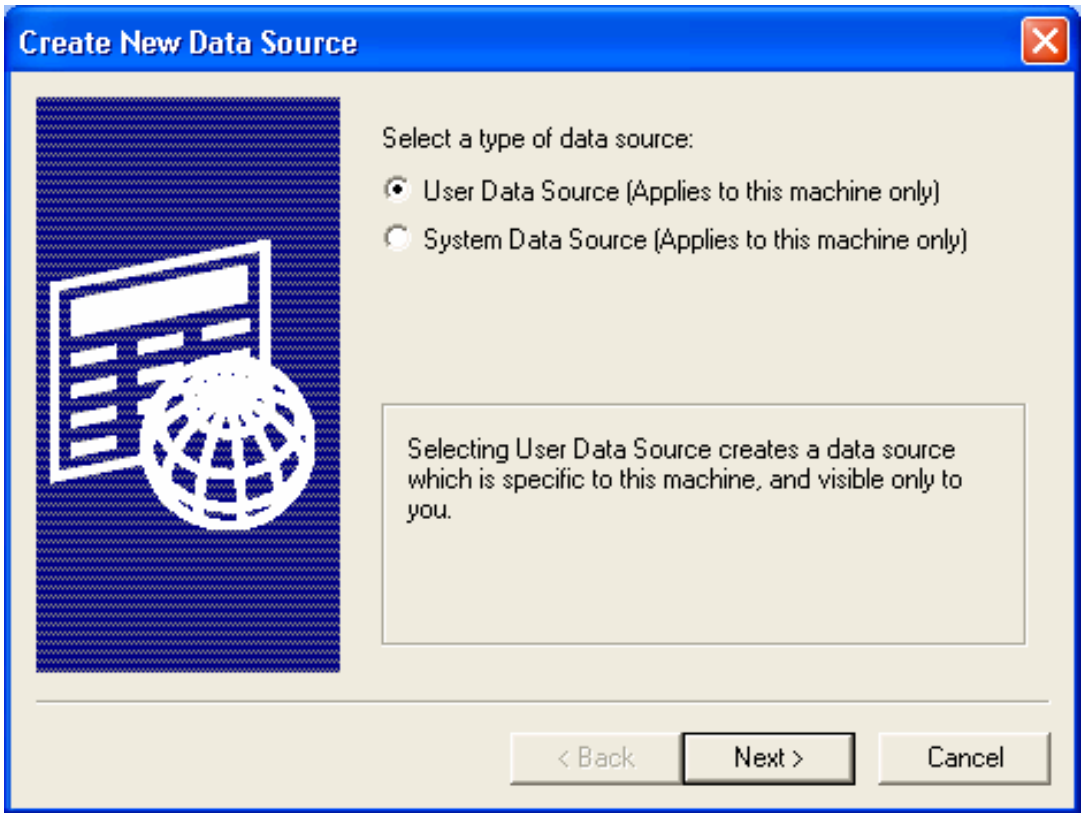
a). If the files are located on your computer, click the **Access** button and browse for folder:



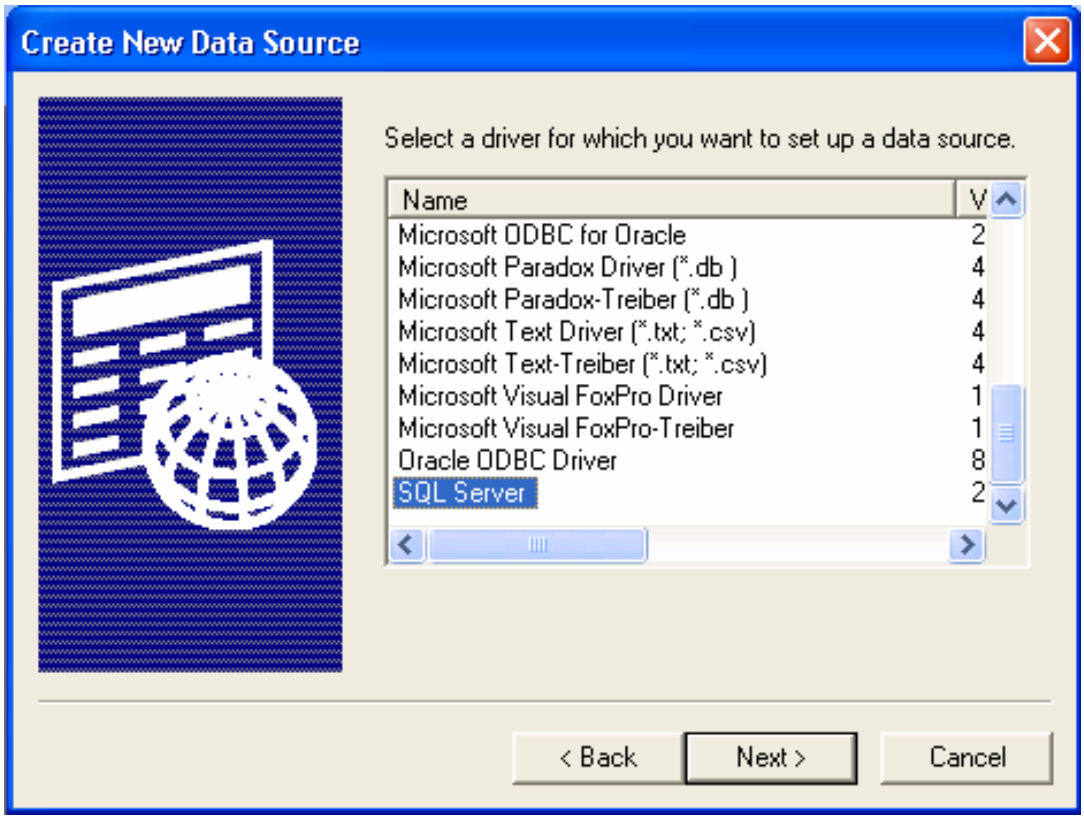
b). If the files are located on the ODBC network, click the **ODBC** button. In the **Select Data Source** window, click on **Machine Data Source** tab. You can either select from an existing source or create a new source. To create a new data source, click New:



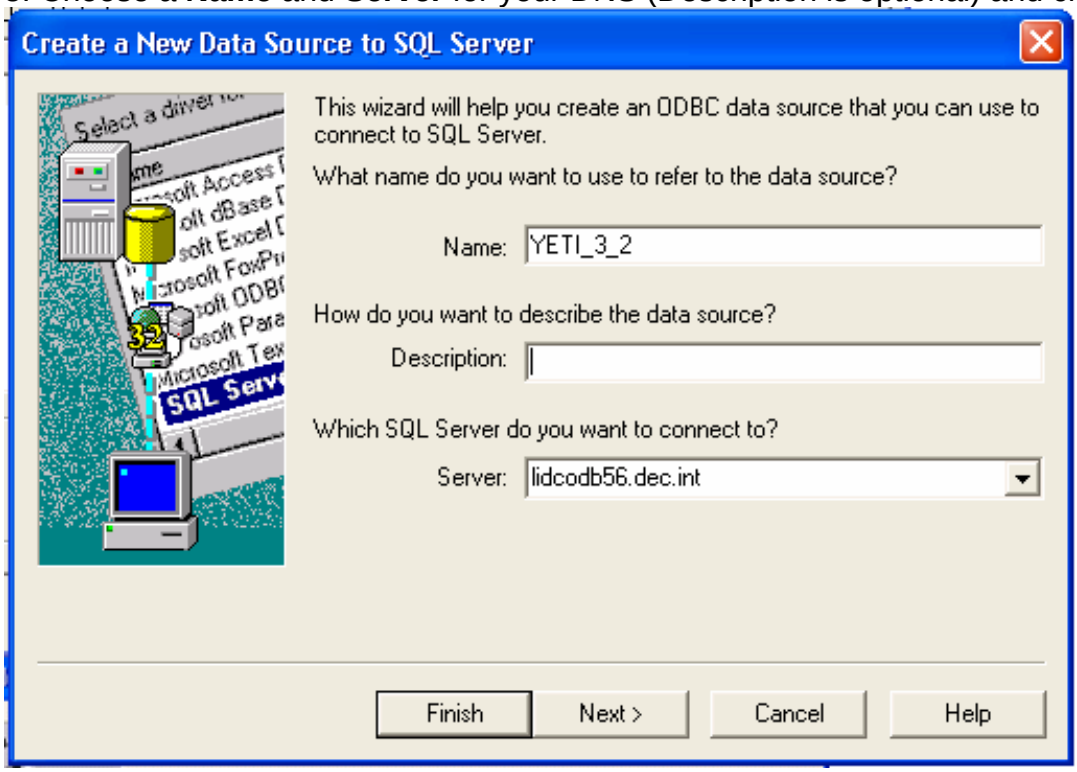
3. Select a **User Data Source** (Users on the DEC network cannot create System Data Sources) and then **Next**



4. Select the driver SQL Server and **Next** and then **Finish**

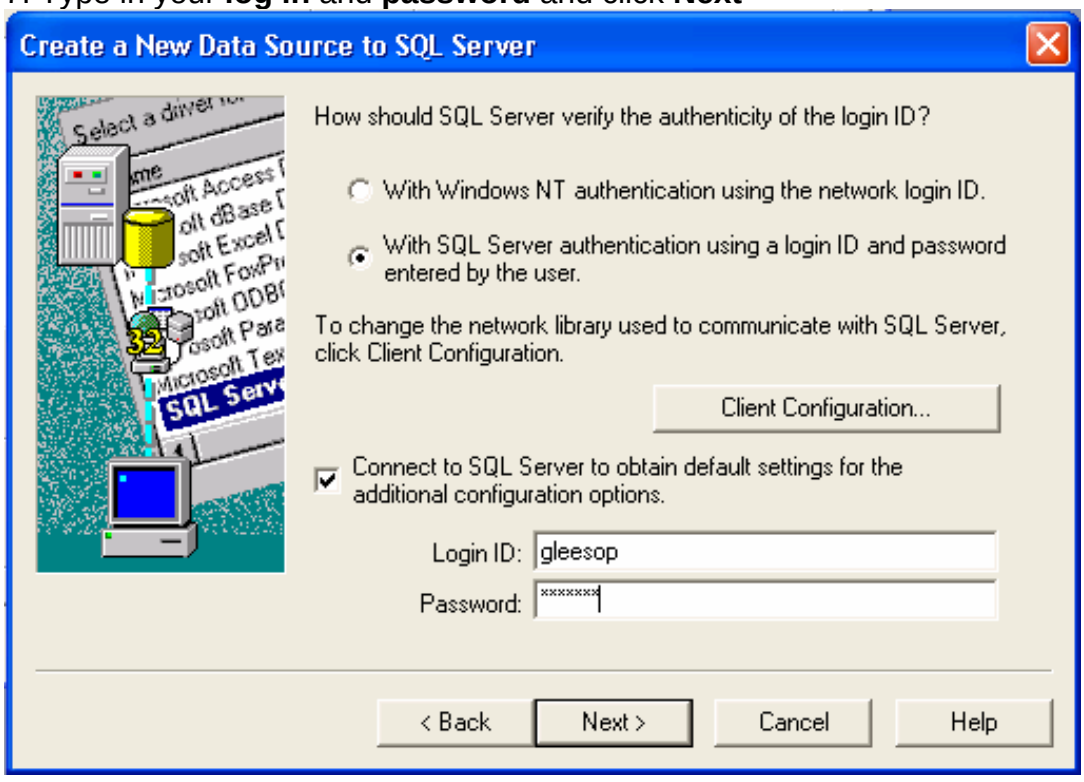


5. Choose a **Name** and **Server** for your DNS (Description is optional) and click **Next**

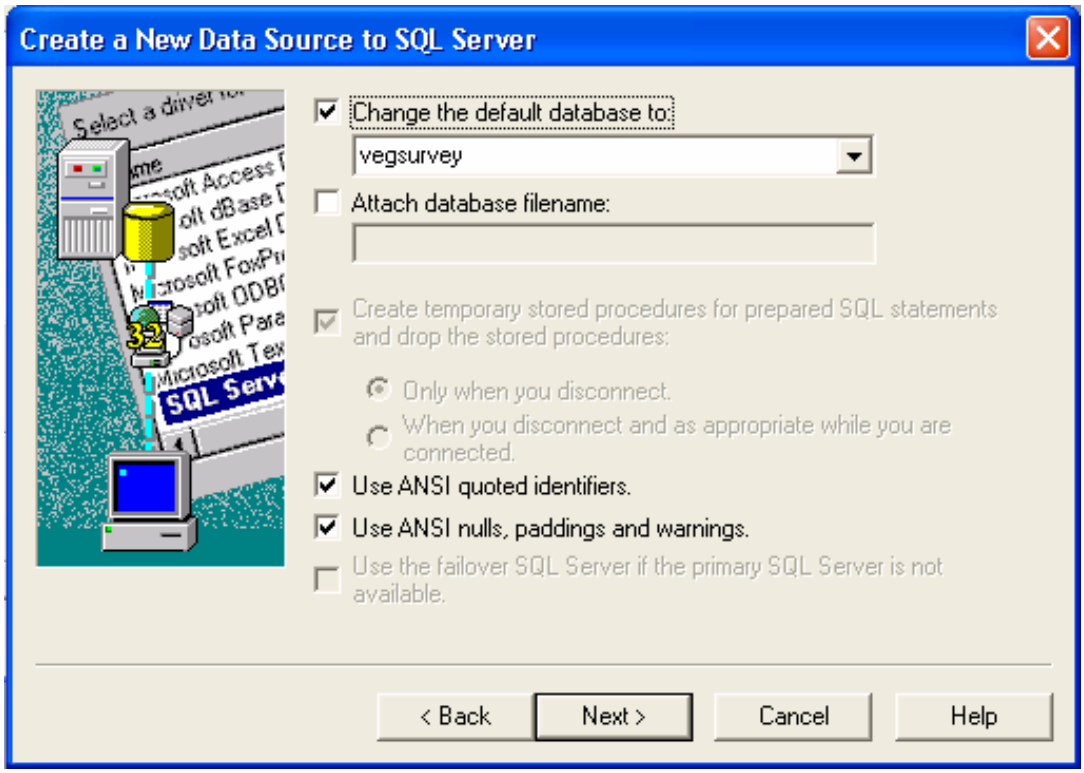


6. Select the option SQL Server authentication using a login ID and password entered by the user (Windows NT authentication is not available in DEC)

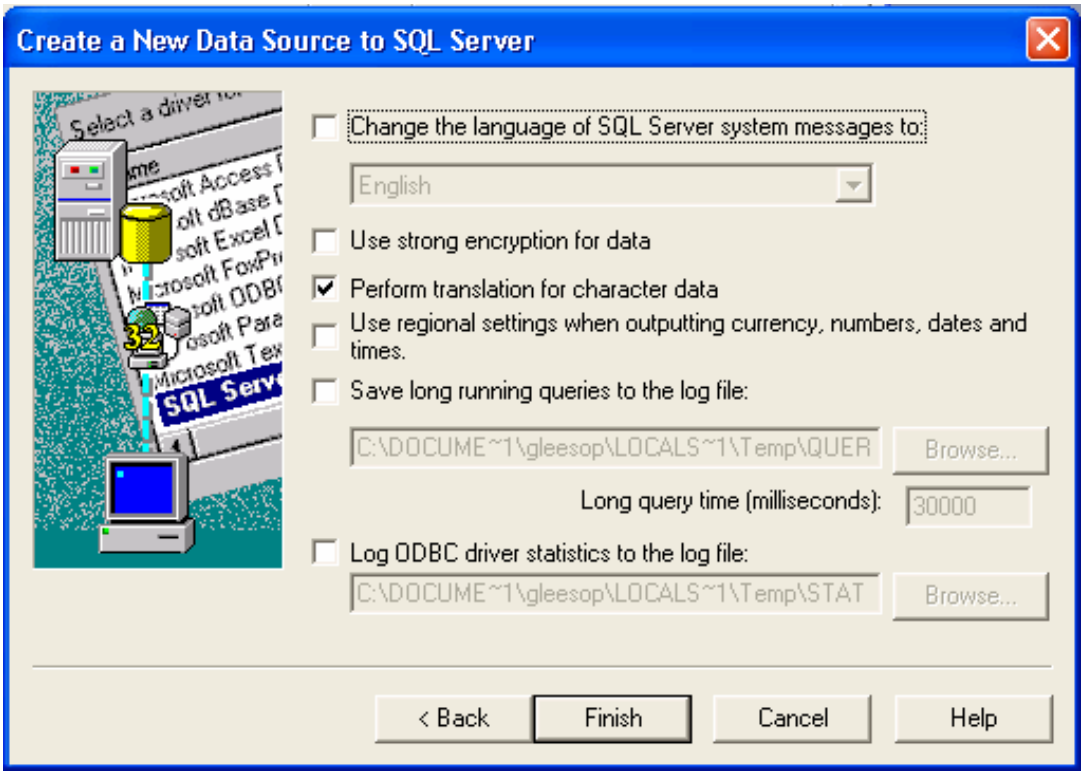
7. Type in your **log in** and **password** and click **Next**



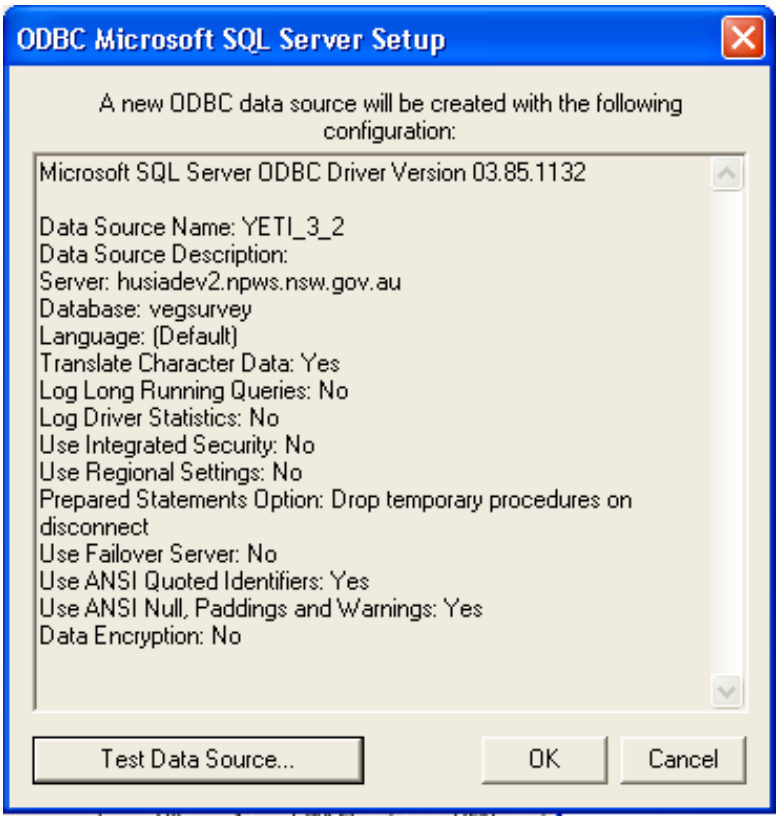
8. Tick the box **Change the default database to**: and make sure you are linked to **vegsurvey** then click **Next**



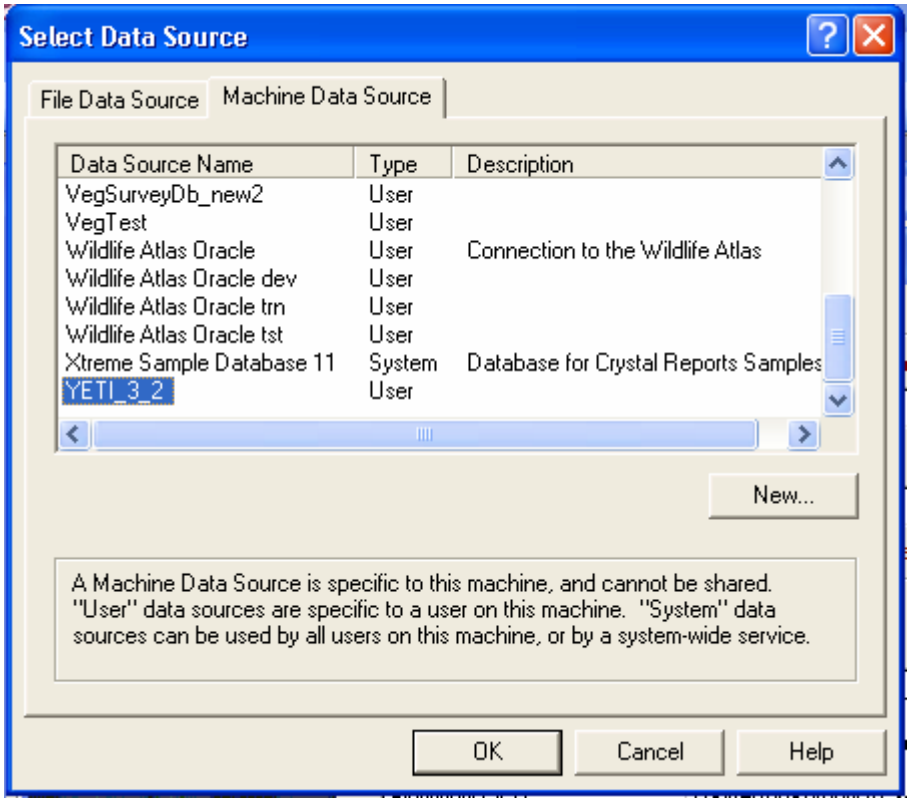
9. Click **Finish**



10. Click **Test Data Source** to ensure everything is Ok



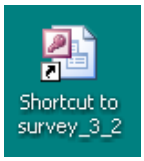
11. Finally Click **Ok** and then select your newly created data source from the list and click **Ok**



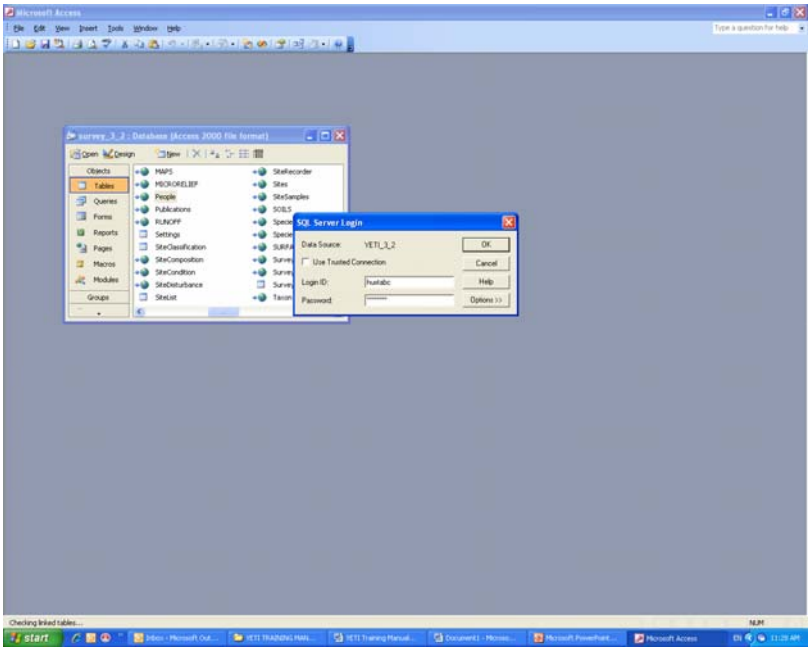
12. You will be asked to login again and the database will check links to all the files.

2.2 Logging Into YETI

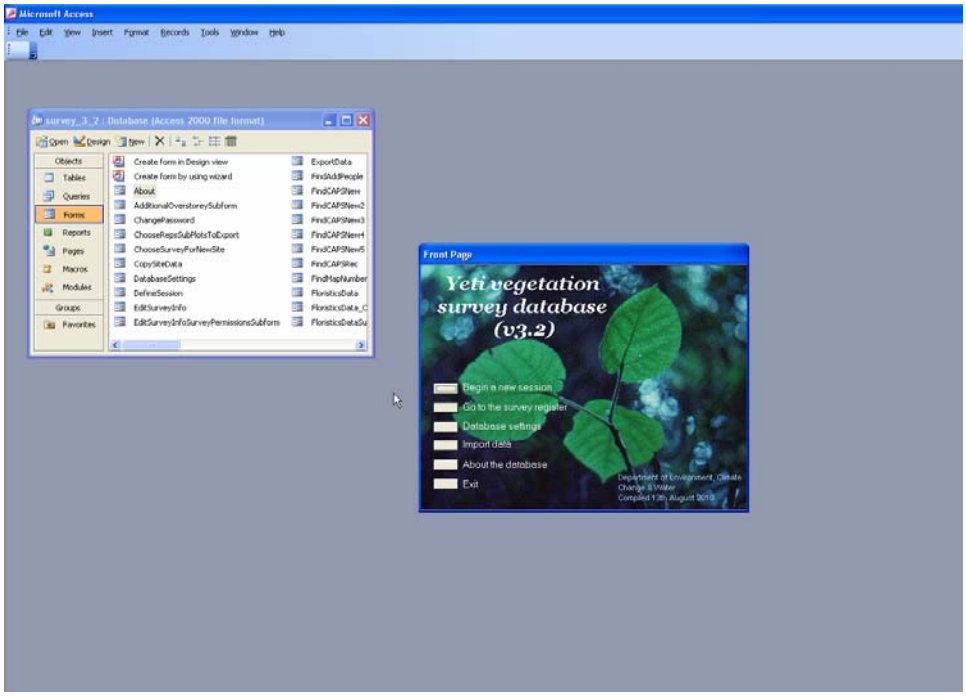
1. Click on shortcut on desktop to open Yeti database



2. In SQL Server Login window, enter your Login ID and Password & click **OK**

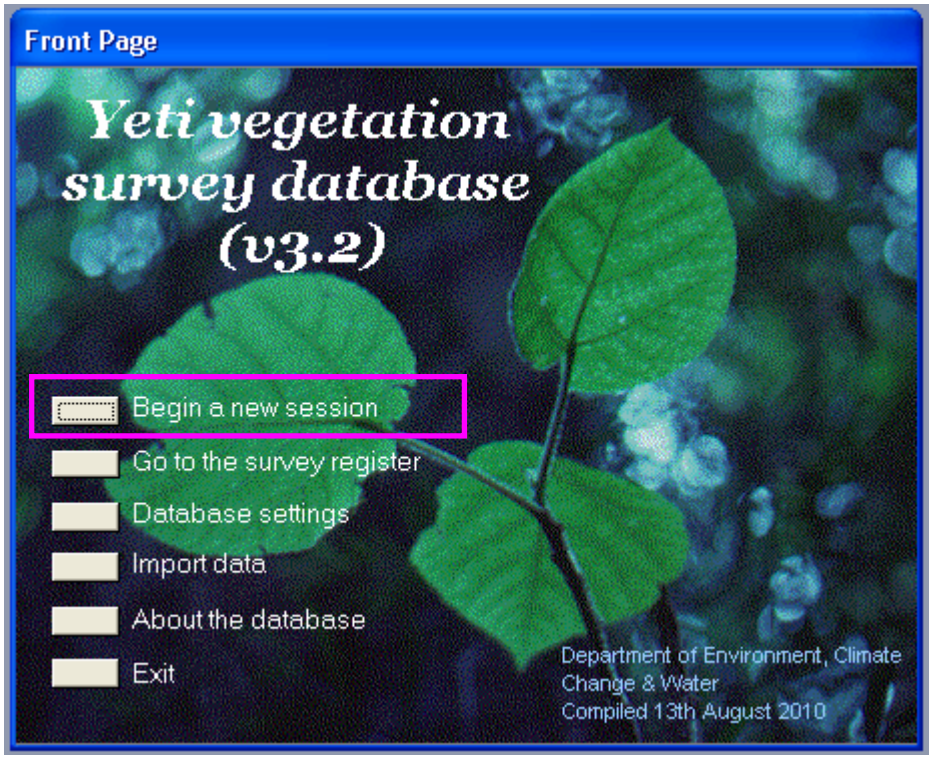


3. The Main Window will open. It shows front-end menu (Front Page) as well as back-end menus. This section deals with the front-end.

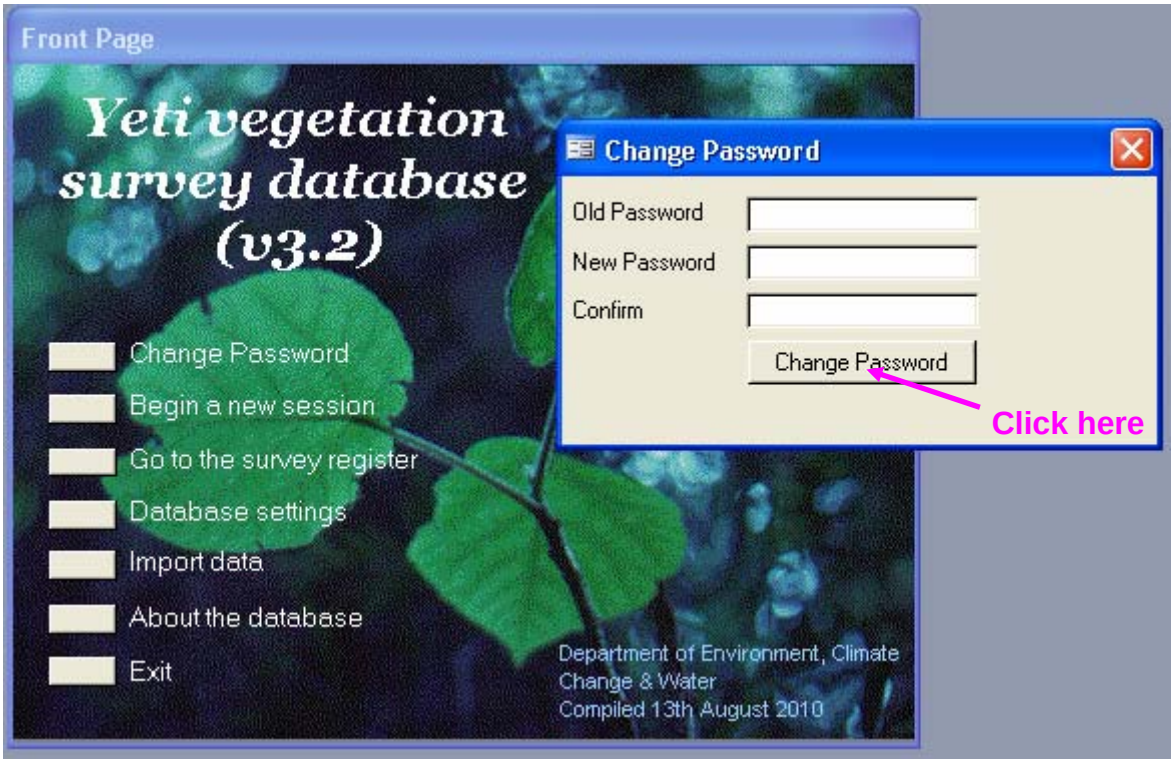


2.3 How To Change Your Password

1. In Front Page Window, click on **Change Password** button:



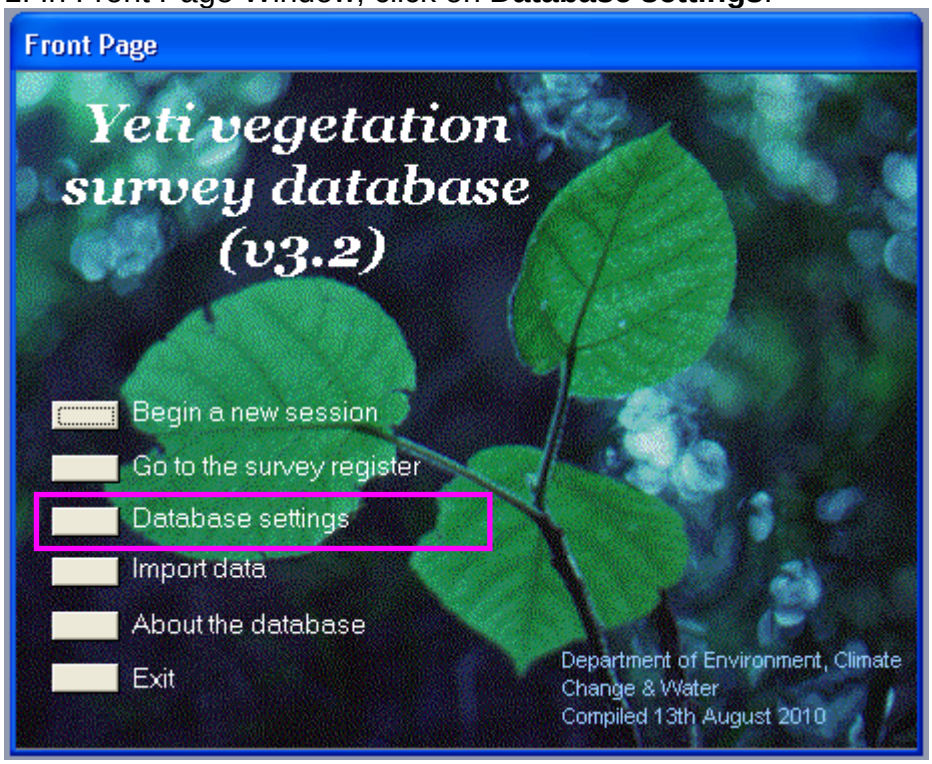
2. Type in old and new passwords & click "*Change Password*" button:



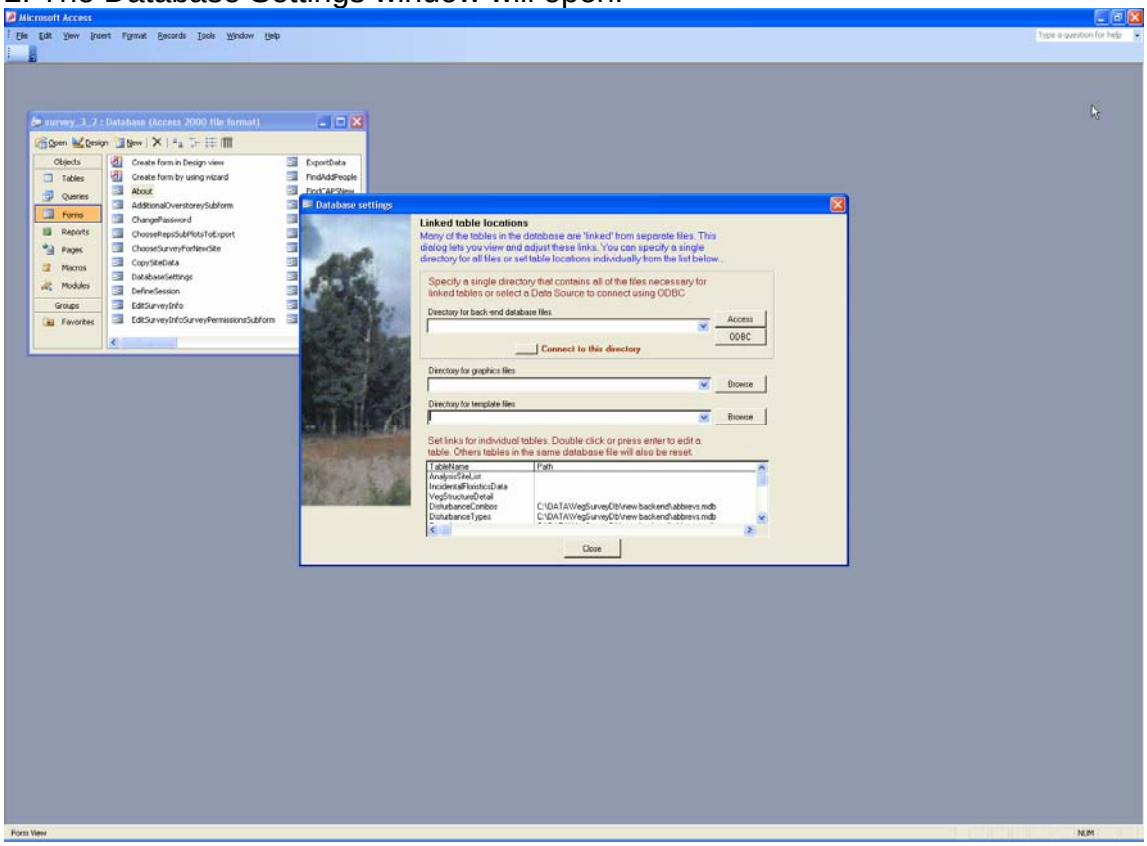
After changing your password it is recommended that you Exit from the application and then restart, logging in with the new password.

2.4 Setting and Changing Database Settings

1. In Front Page Window, click on **Database settings**:

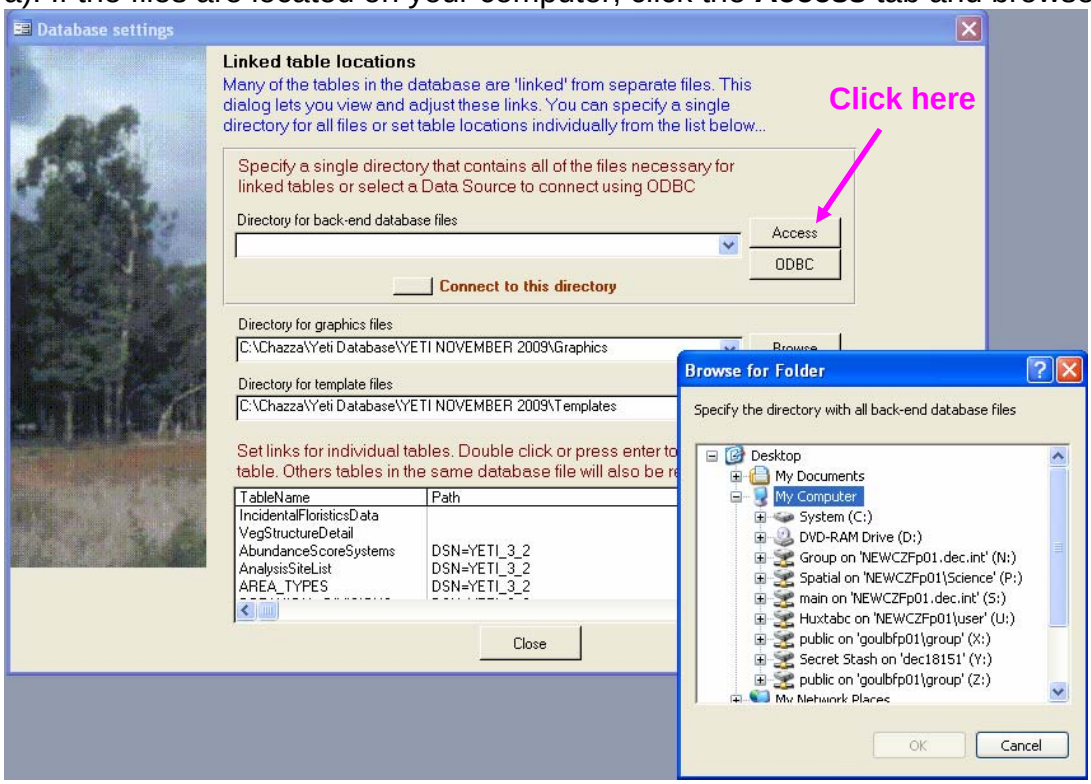


2. The Database Settings window will open:

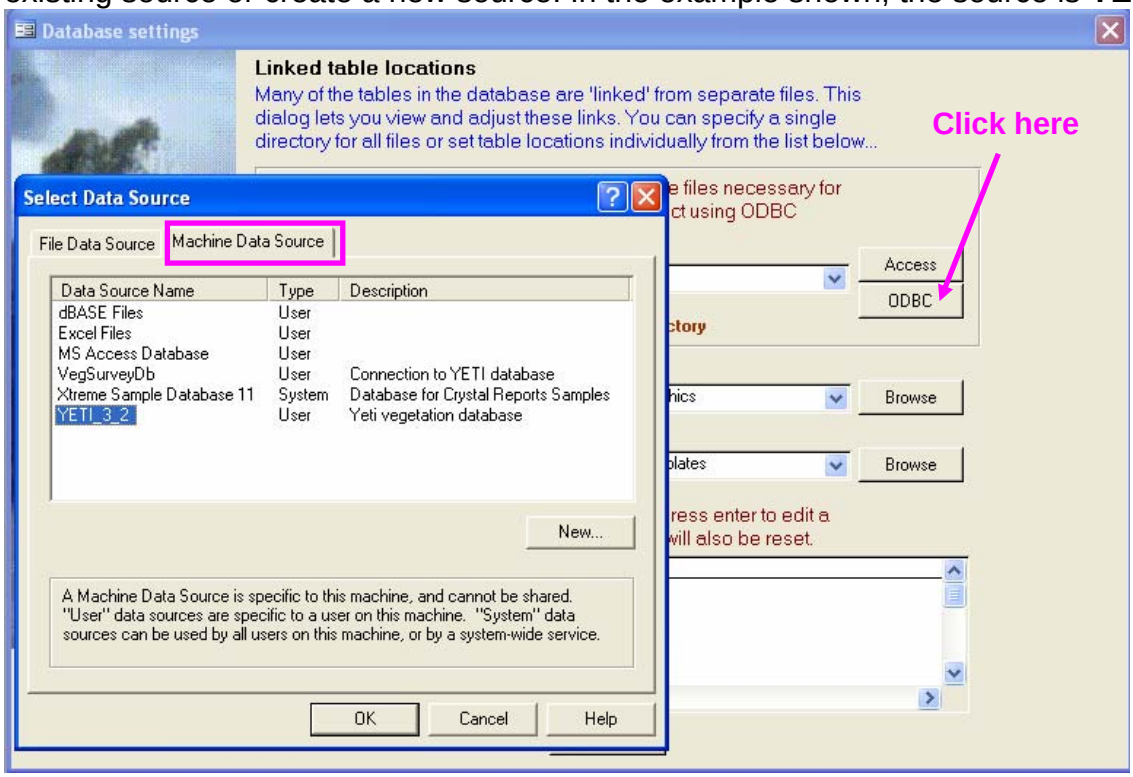


3. You need to specify where the back end files for YETI are located and create a link to them. Back end files can either be located on your computer, or on the SQL Server database accessed using an ODBC DSN

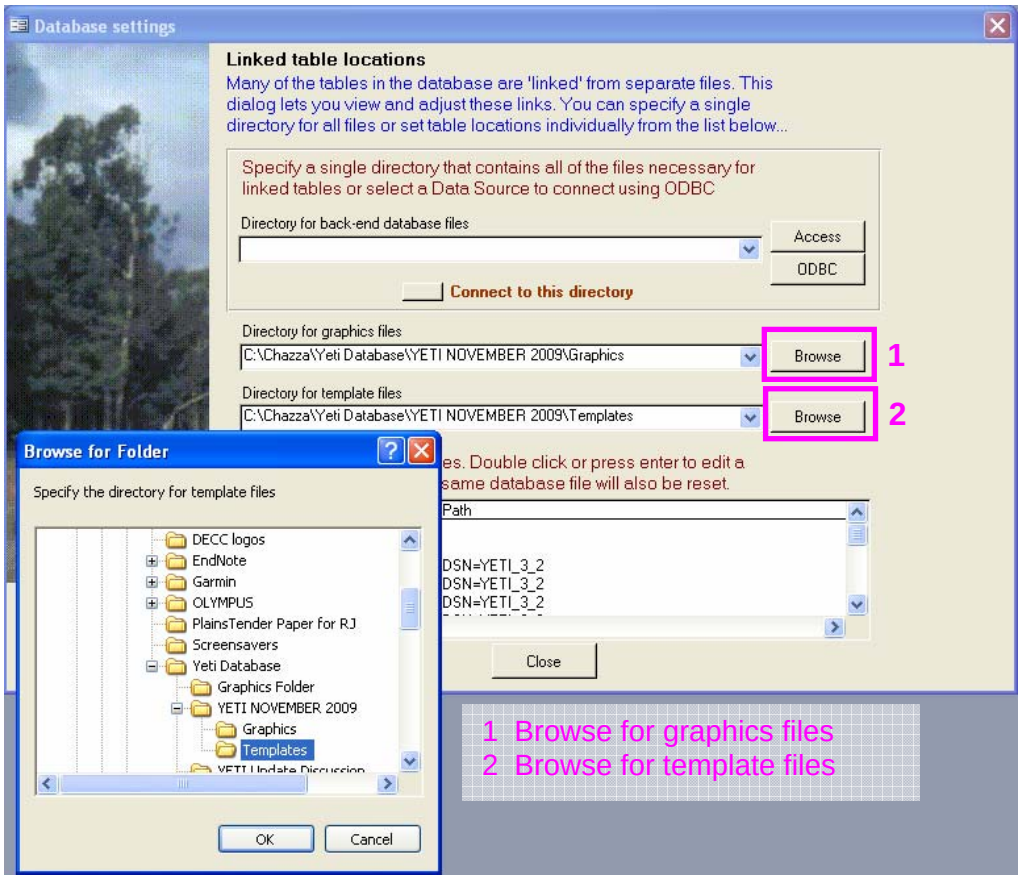
a). If the files are located on your computer, click the **Access** tab and browse for folder:



b). If the files are located on the ODBC network, click the **ODBC** tab. In the **Select Data Source** window, click on **Machine Data Source** tab. You can either select from an existing source or create a new source. In the example shown, the source is **YETI_3_2**.



4. As the graphics files are not stored in the SQL Server backend as yet, the database will ask you where the graphics files are located. Simply browse to the folder and click **OK**. Do the same for any template files for generating survey data sheets and site reports:

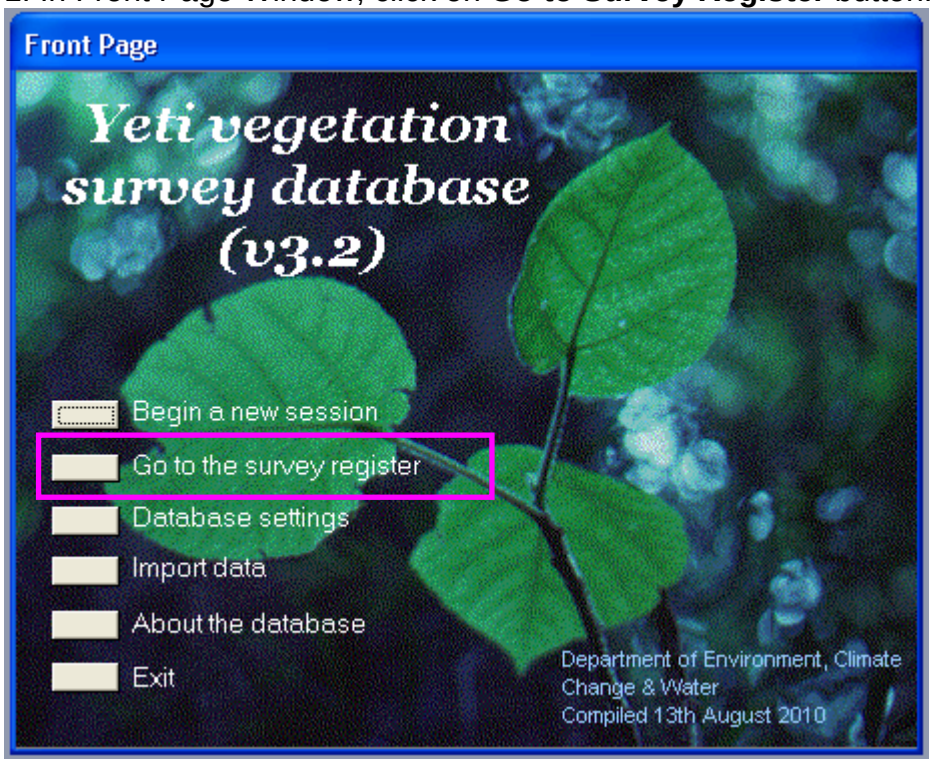


NOTE: It is recommended that the graphics (which includes site photographs and PDF copies of the field site sheets) should be stored on a network drive, in a folder clearly identified for the purpose. This retains them in the corporate dataset (meaning that they should also be backed up regularly) and also minimises the opportunity for them to be lost when a user no longer has access to that machine (as a result of redeployment, IT replacement or temporary appointment finishing). It also will improve the opportunities for collating site photographs when the system is set up to maintain records from a single point / server

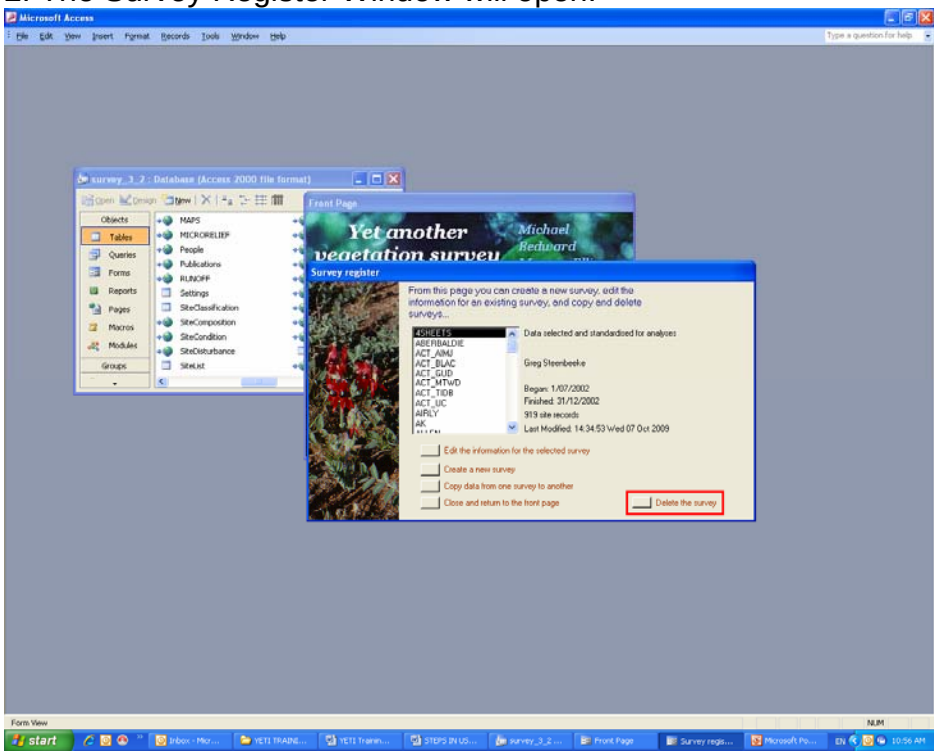
3. The Survey Register

3.1 How to Open the Survey Register

1. In Front Page Window, click on **Go to Survey Register** button:

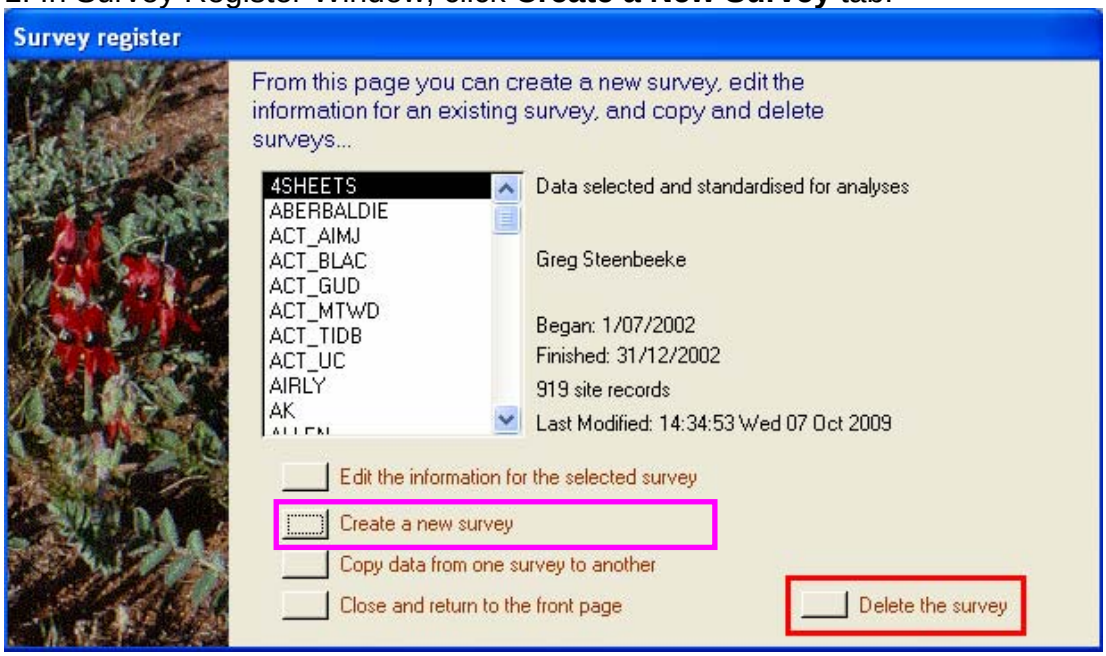


2. The Survey Register Window will open:

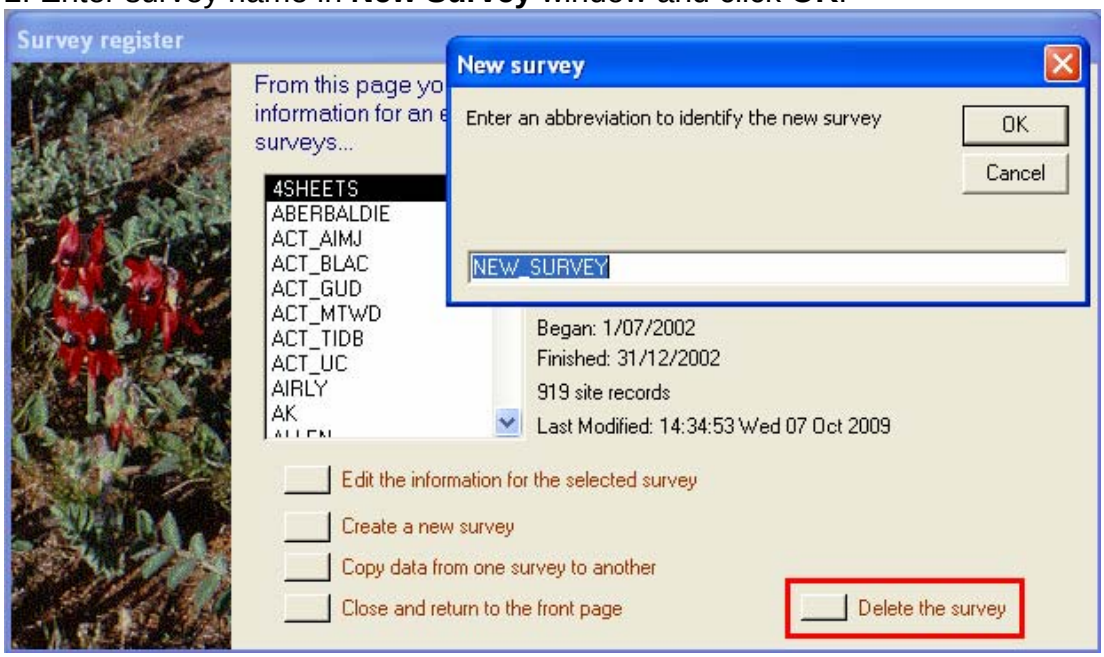


3.2 How to Create a New Survey

1. In Survey Register Window, click **Create a New Survey** tab:



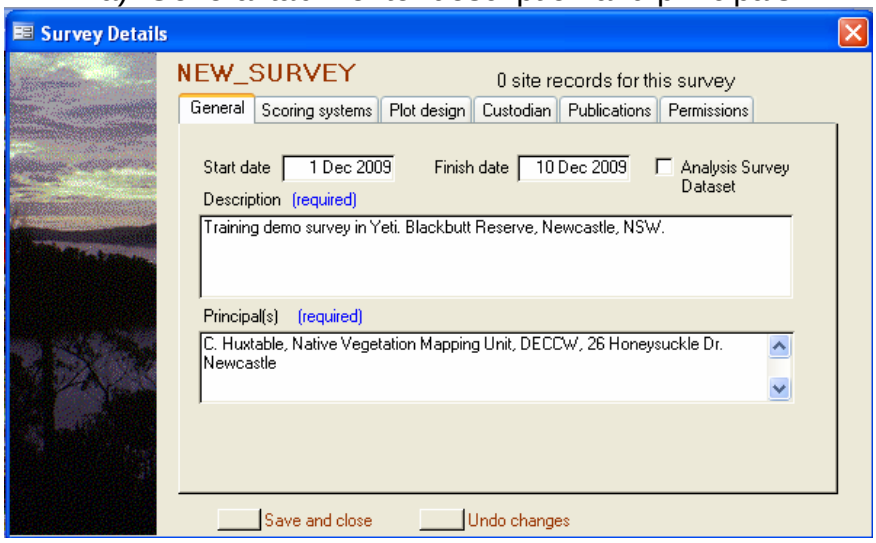
2. Enter survey name in **New Survey** window and click **OK**:



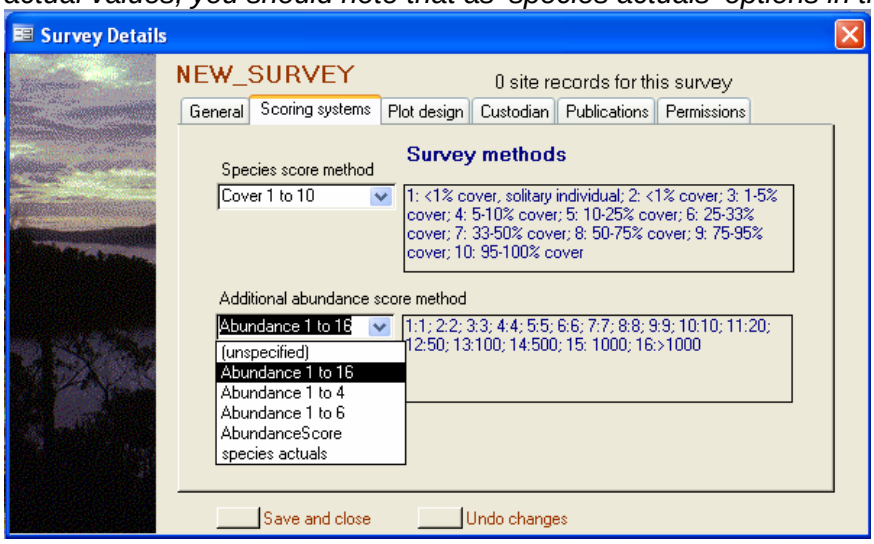
NOTE: Survey names should be 10 characters or less in length (preferably 8) and should only use the alphanumeric characters (A-B, 0-9) and underscore (_).

3. Enter details of new survey:

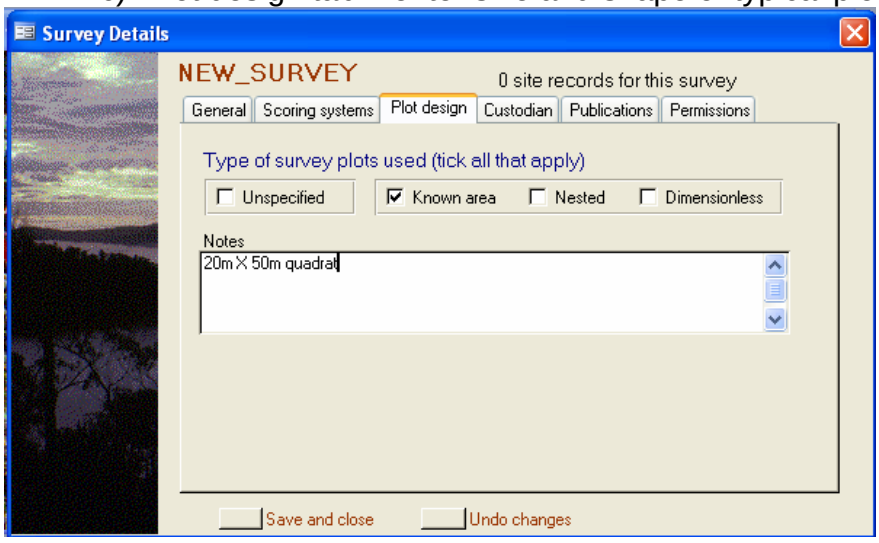
a). General tab – enter description and principals



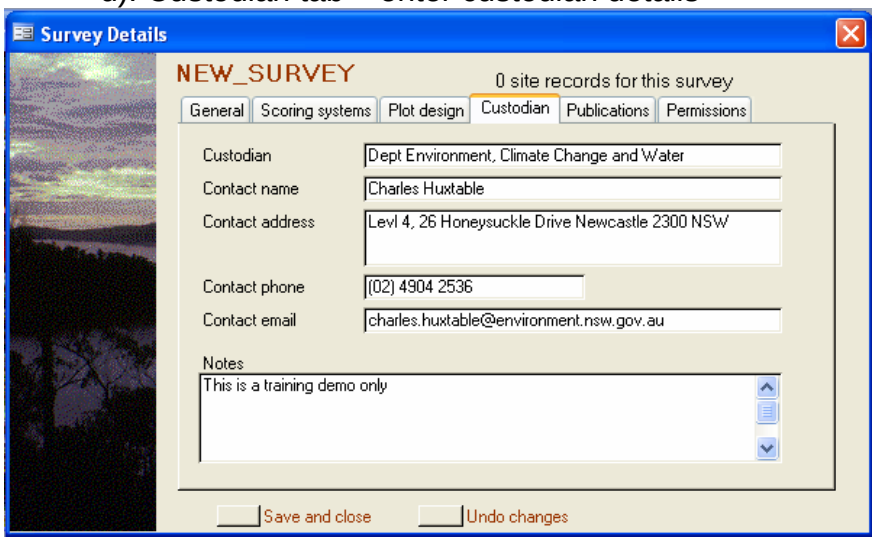
b). Scoring system tab – select scoring system from drop down menus. *If using actual values, you should note that as 'species actuals' options in the pull-down lists.*



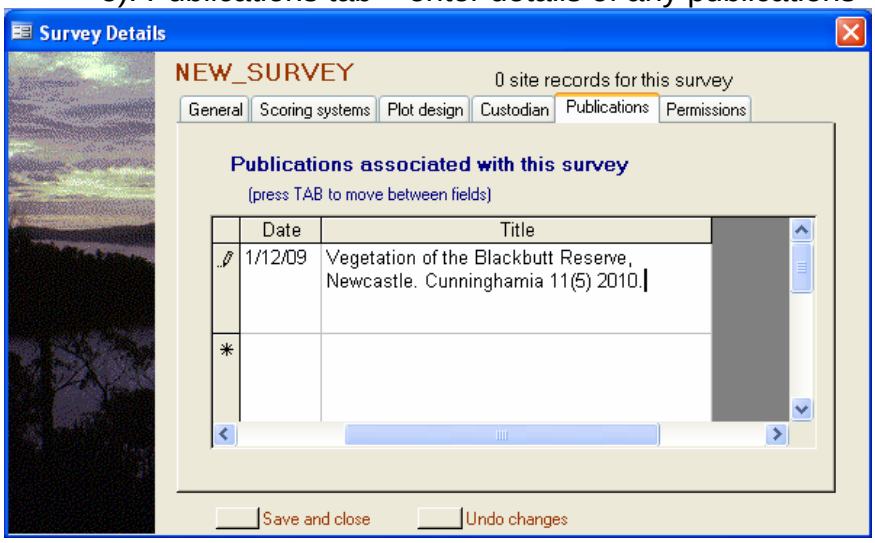
c). Plot design tab – enter size and shape of typical plot for this survey:



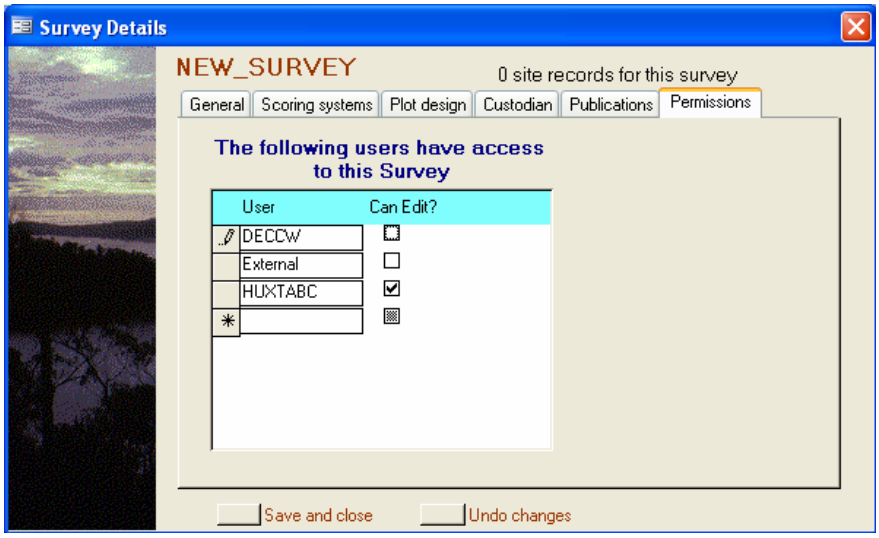
d). Custodian tab – enter custodian details



e). Publications tab – enter details of any publications



f). Permissions tab – here you can see who can view and edit a survey. *Note: By default all new surveys will be viewable by DECCW and External groups and editable by the individual who created the survey. If you wish this to be changed you must contact the DECCW Administrator.*

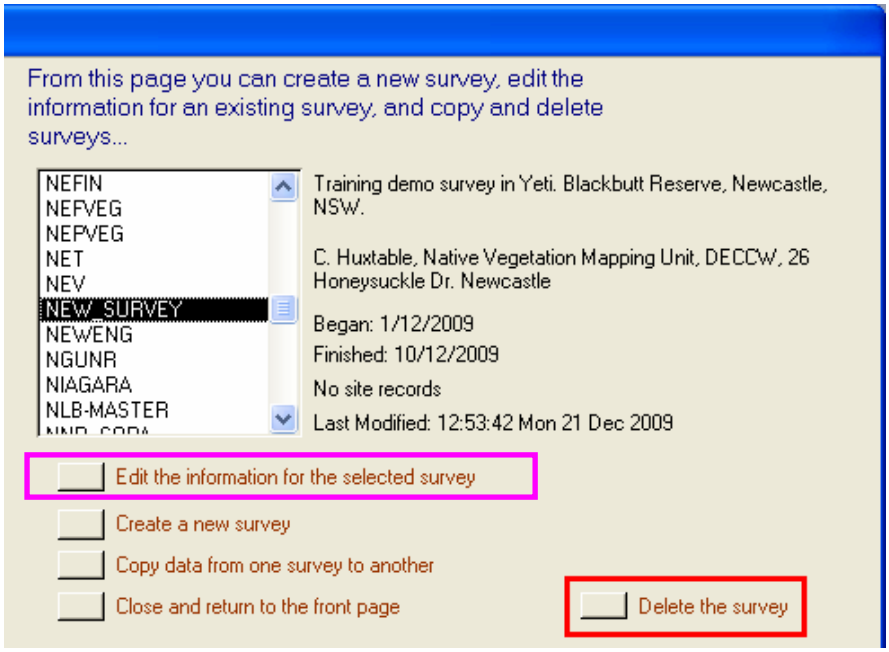


3.3 How to Edit Information for an Existing Survey

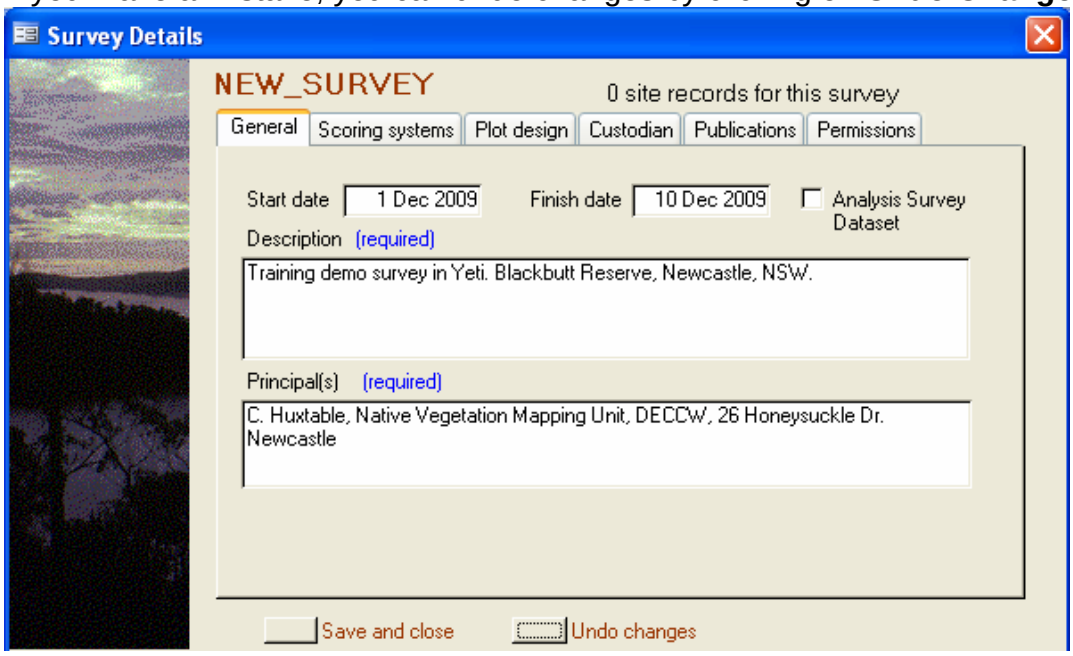
NB Edit functions require editing permission

1. In Survey Register Window, select the appropriate survey from list

2. Click **Edit Information for the Selected Survey** button:



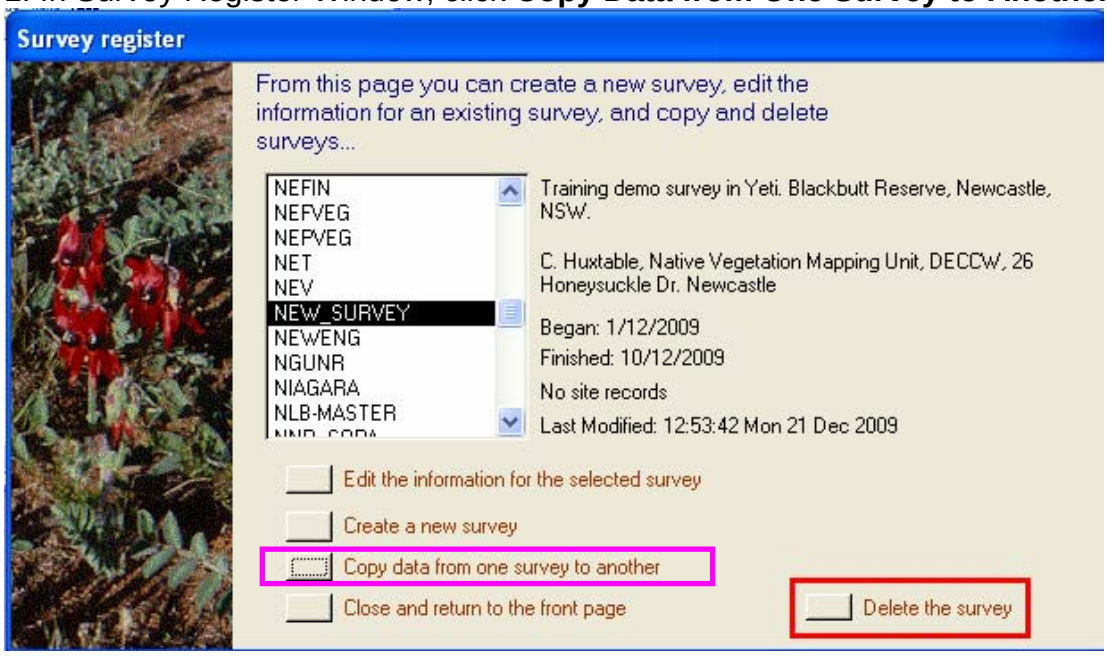
3. Edit information in Survey Details window as per above.
If you make a mistake, you can undo changes by clicking on **Undo Changes** button:



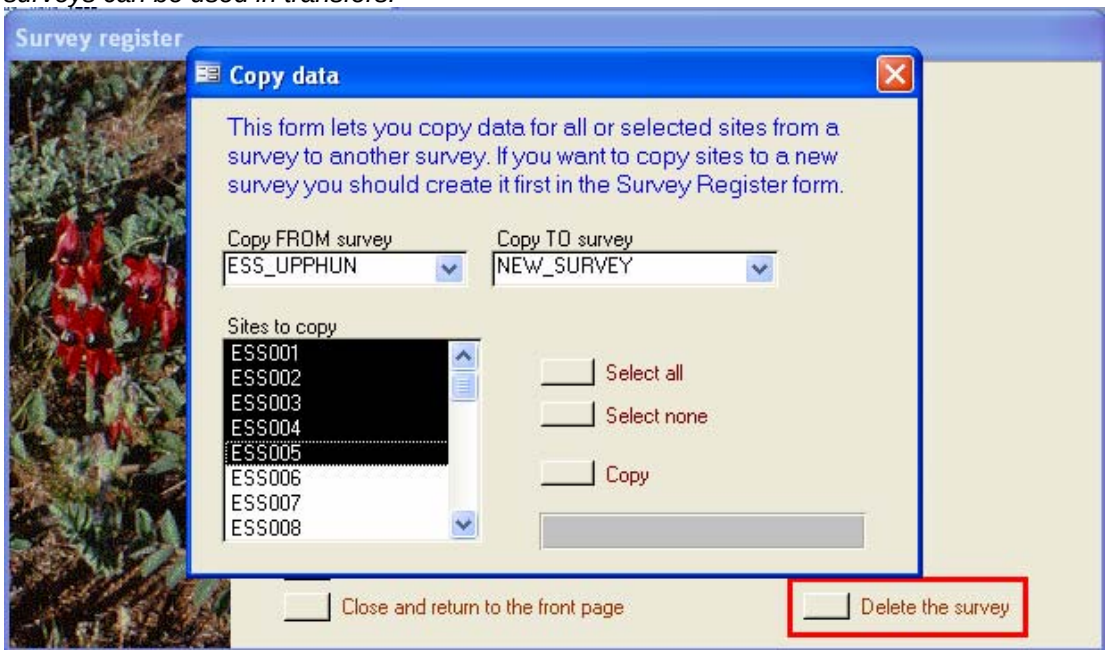
3.4 How to Copy Data from One Survey to Another

NB Data copy functions require editing permission

1. In Survey Register Window, click **Copy Data from One Survey to Another** button



2. In **Copy Data** window, select survey from which data is to be copied and select sites to be copied, then select survey to which data is to be copied to. *Note – only existing surveys can be used in transfers.*

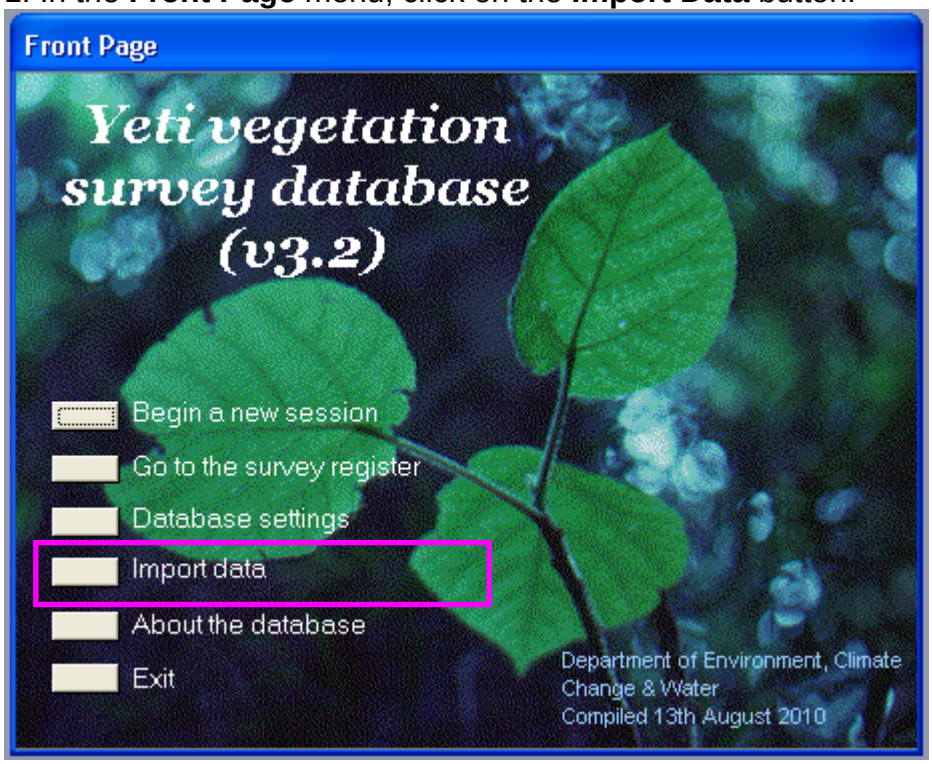


3. Click on **Copy** button.

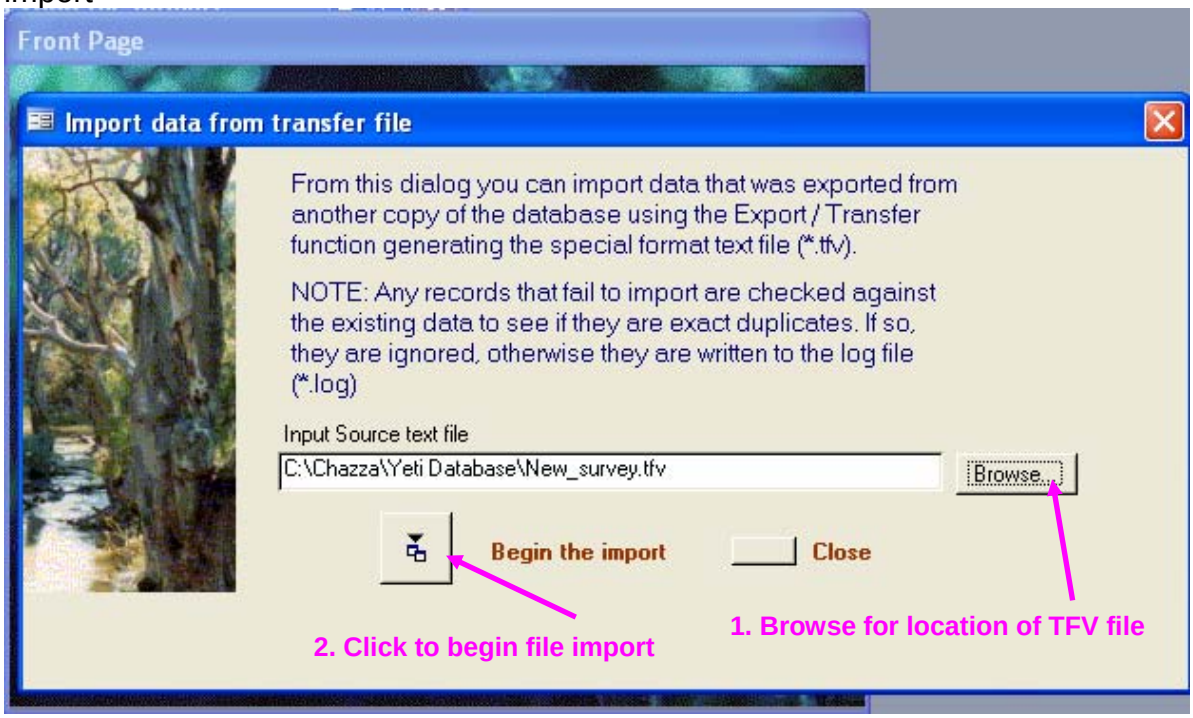
4. When finished in Survey Register, click **Close and return to the front page** button.

4. How To Import Data Into YETI

1. In the **Front Page** menu, click on the **Import Data** button:



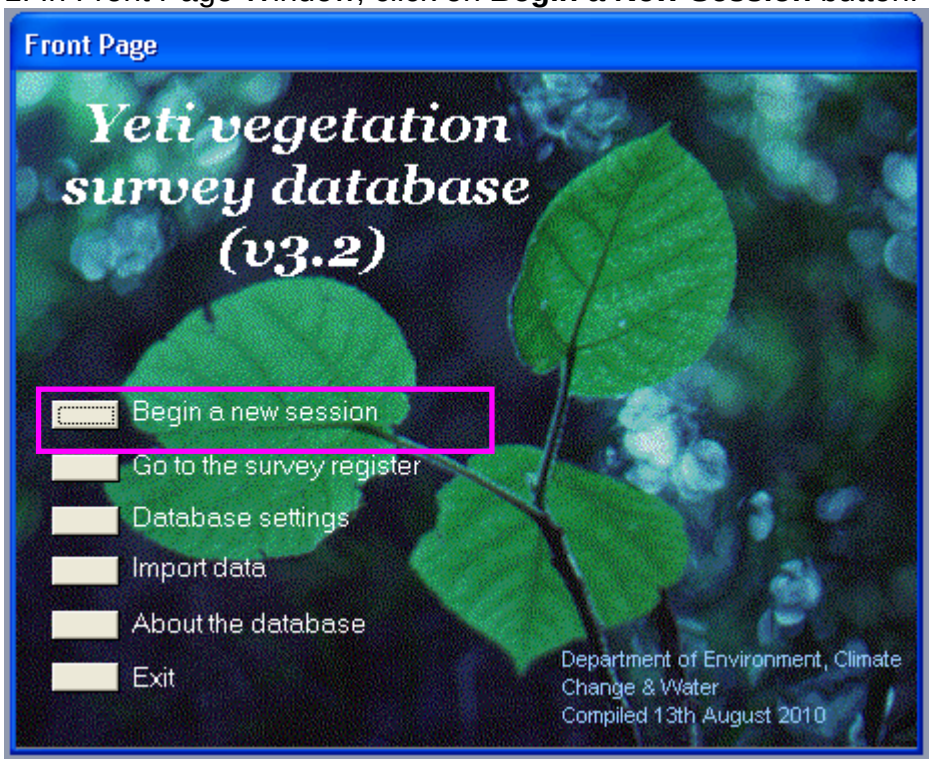
2. Click **Browse** button to locate TFV file, then click **Begin Import** button to begin the import



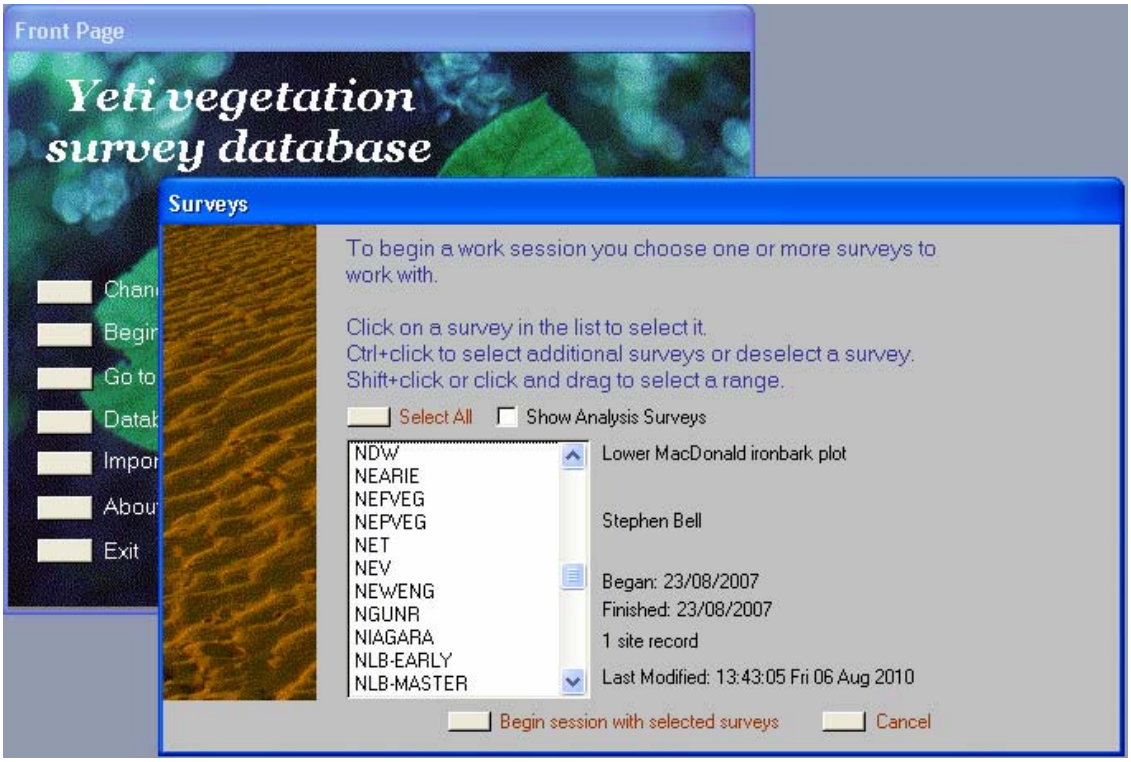
5. Working Within Sessions

5.1 How To begin A New Session

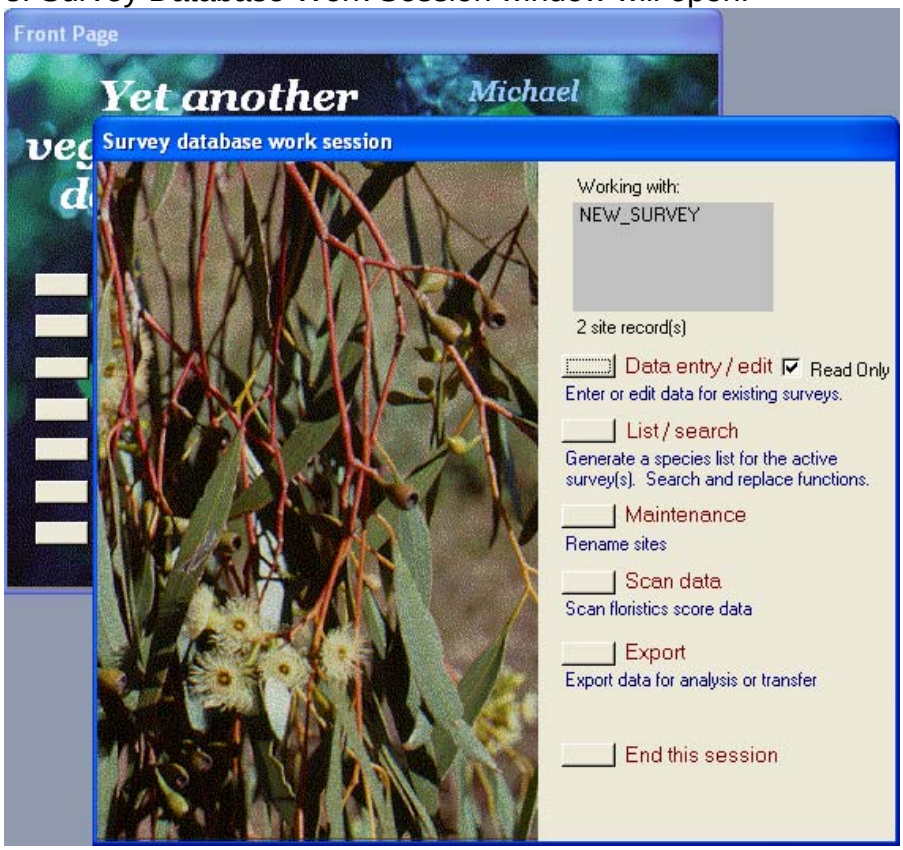
1. In Front Page Window, click on **Begin a New Session** button:



2. Select one or more surveys from list and click **Begin Session with Selected Lists** button:



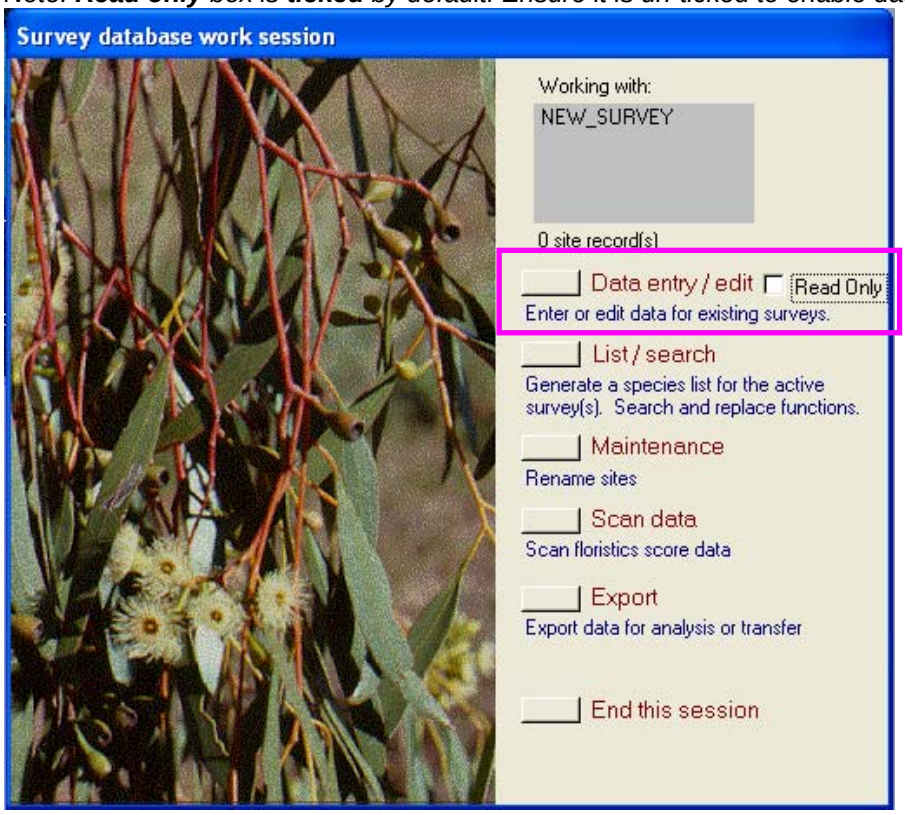
3. Survey Database Work Session window will open:



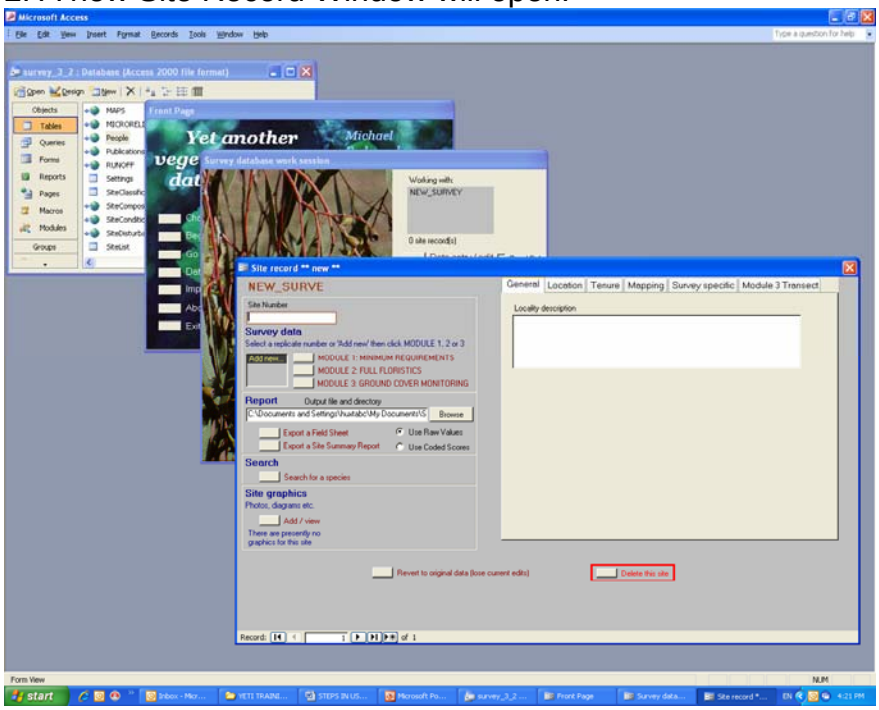
5.2 How to enter new data or edit existing data into a survey

NB Enter or edit data requires editing permission.

1. In Survey Database Work Session window, click on **Data entry/edit** button
*Note: **Read only** box is **ticked** by default. Ensure it is un-ticked to enable data entry and editing*:



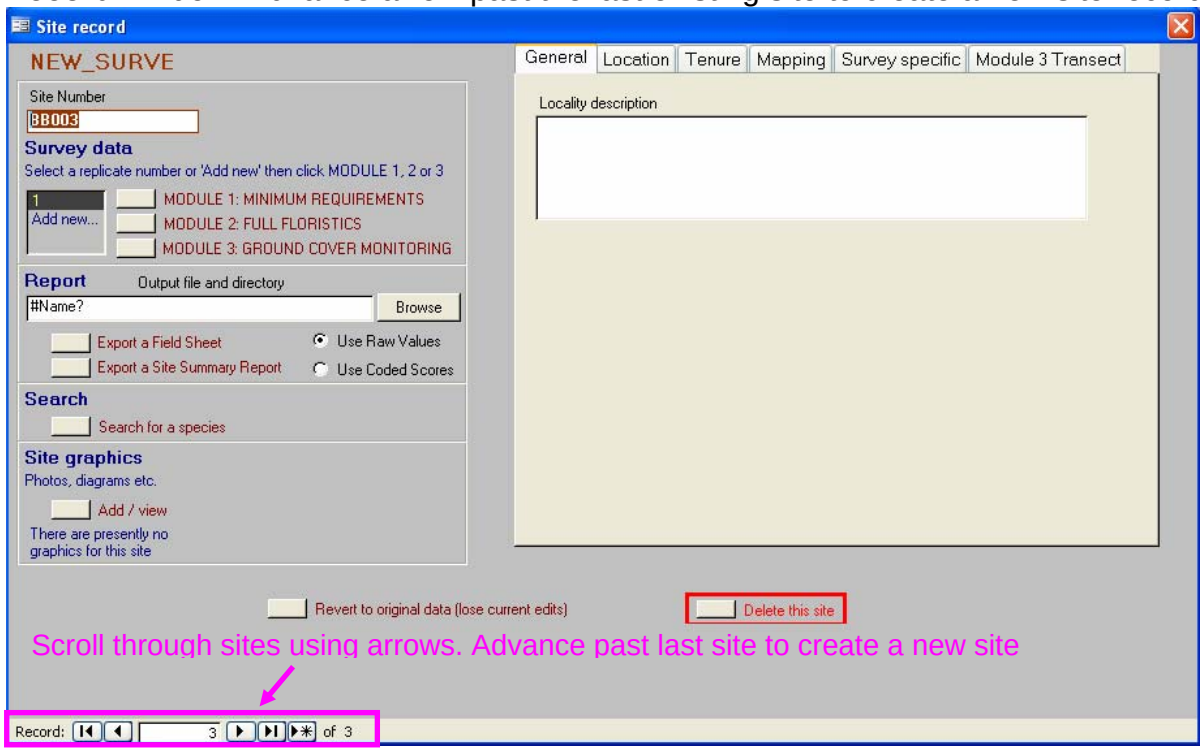
2. A new Site Record Window will open:



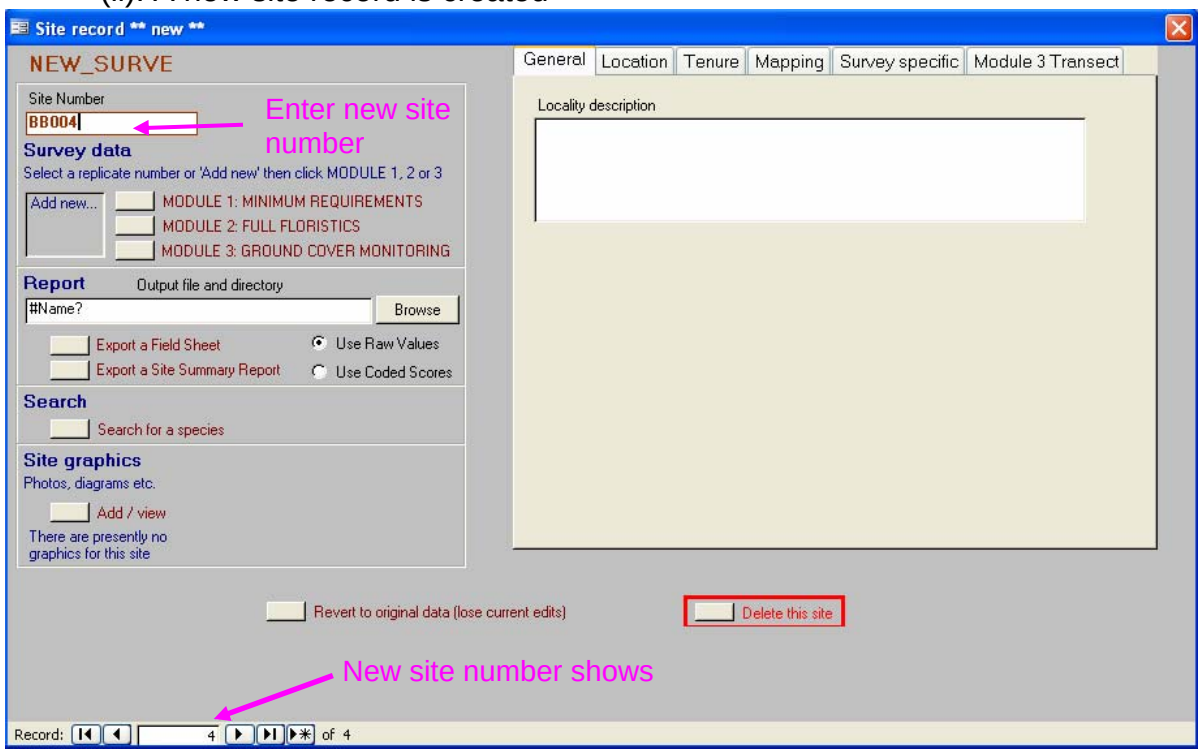
3. Entering general site data in main window

a). Create a new site record.

(i). You can navigate among sites using the arrows at the bottom left of the **Site Record** window. Advance arrow past the last existing site to create a new site record:

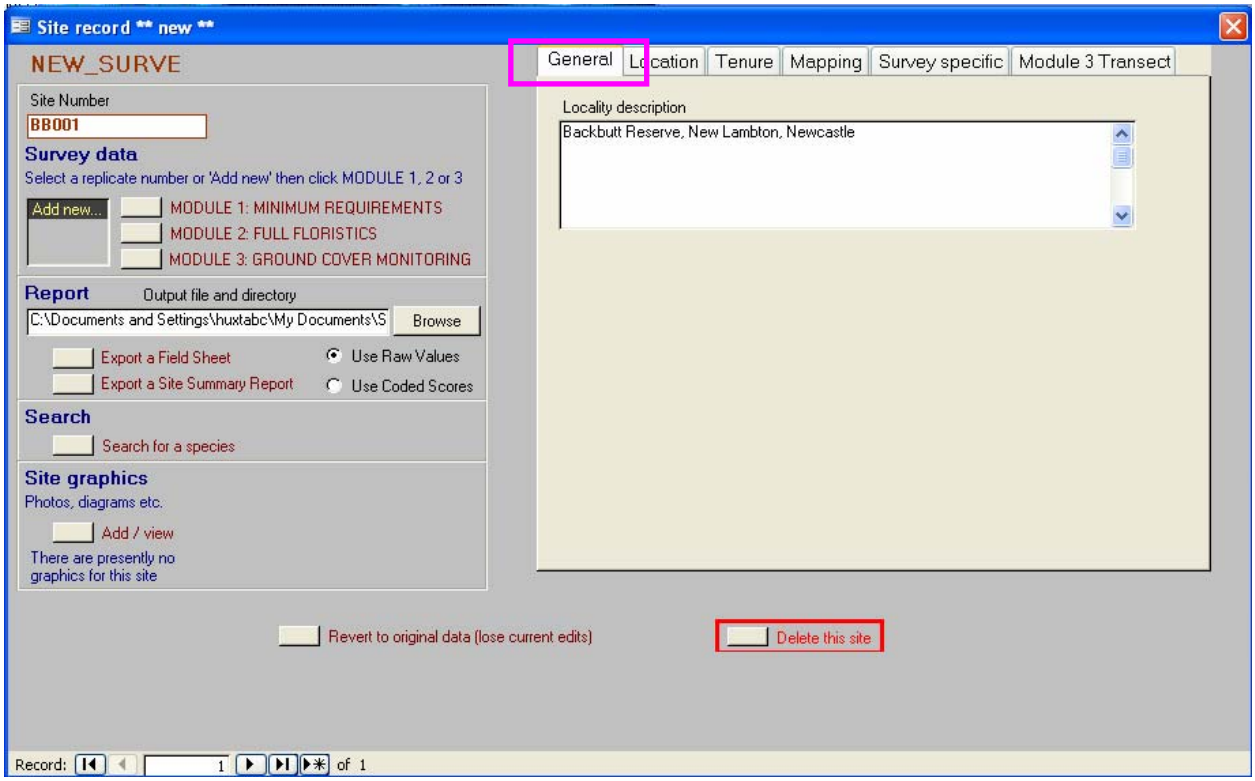


(ii). A new site record is created

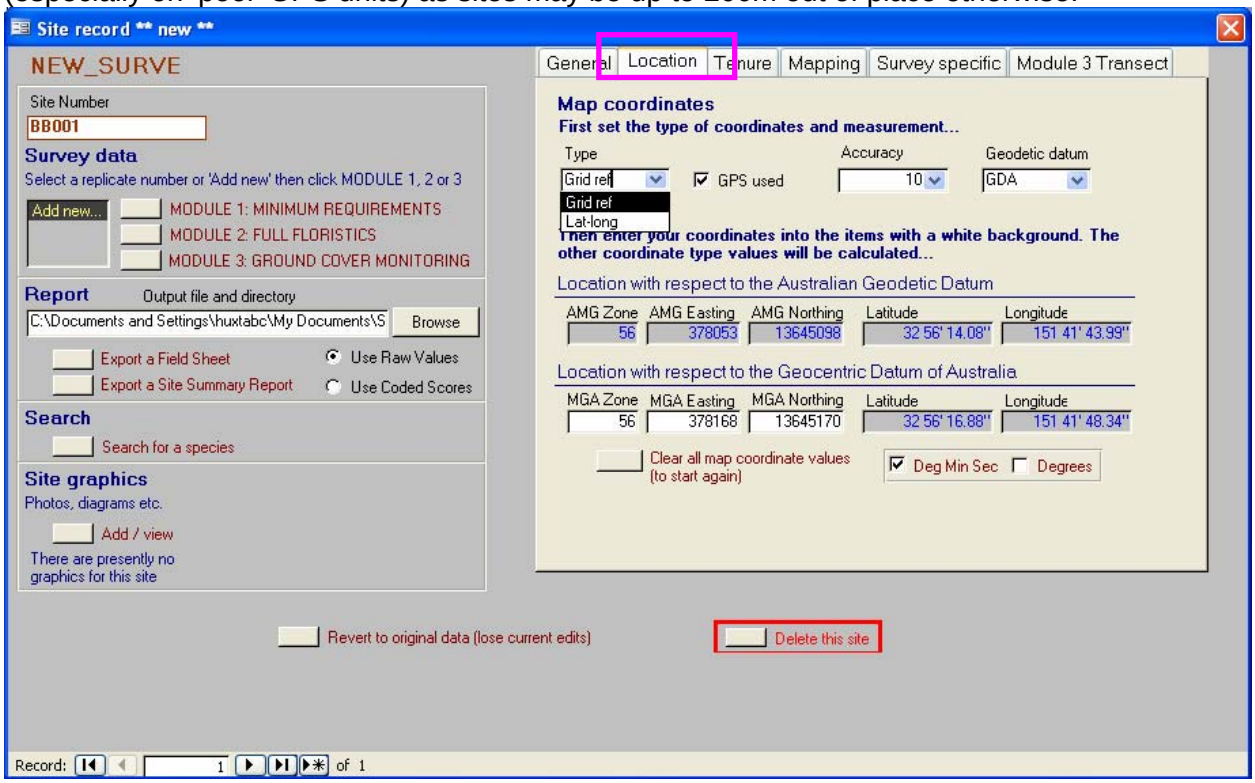


NOTE: Site numbers should be no more than 8 characters in length and can use the alphanumeric and underscore (A-Z, 0-9, _) characters. Names longer than this will usually be truncated by analysis programs and may make data labels unable to be identified clearly. A recommended method has been proposed for the site naming protocol.

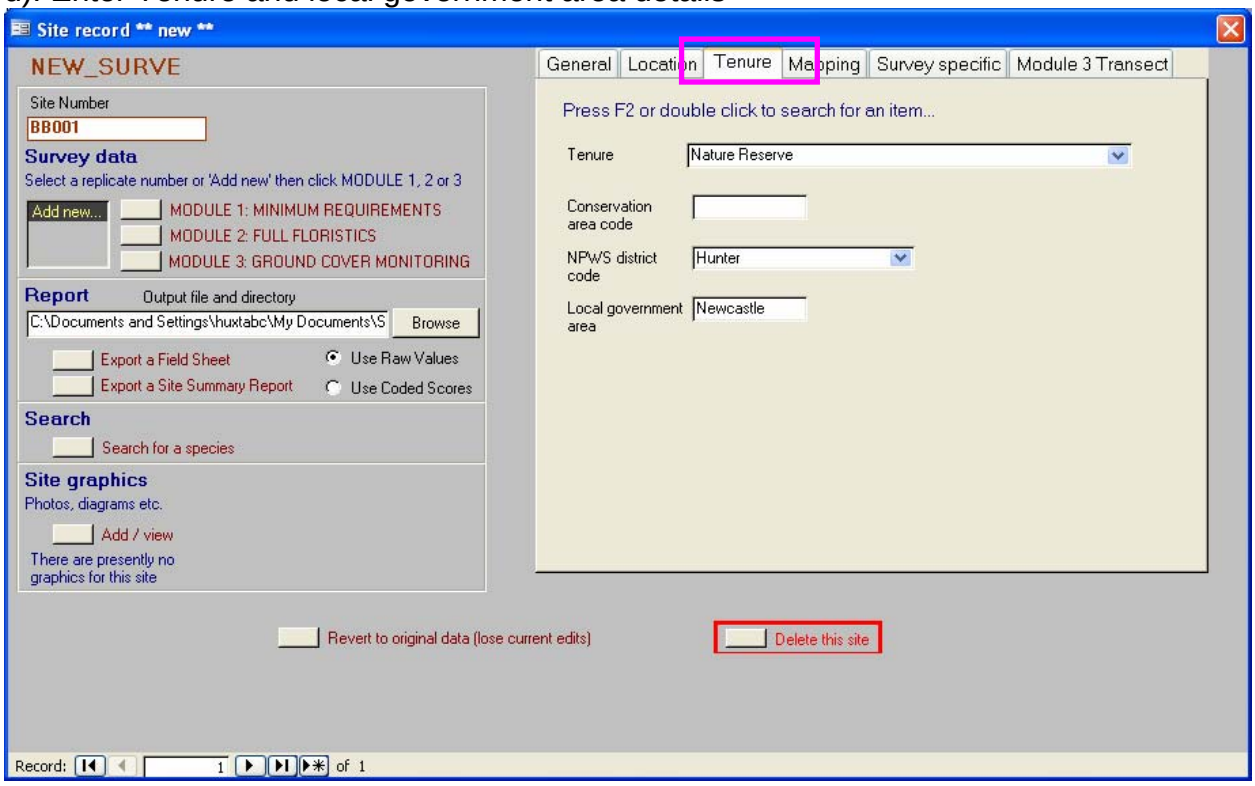
b). Enter General locality description. Some distance and direction information is usually helpful in allowing others to interpret your site location if coordinates are incorrectly transferred or recorded.



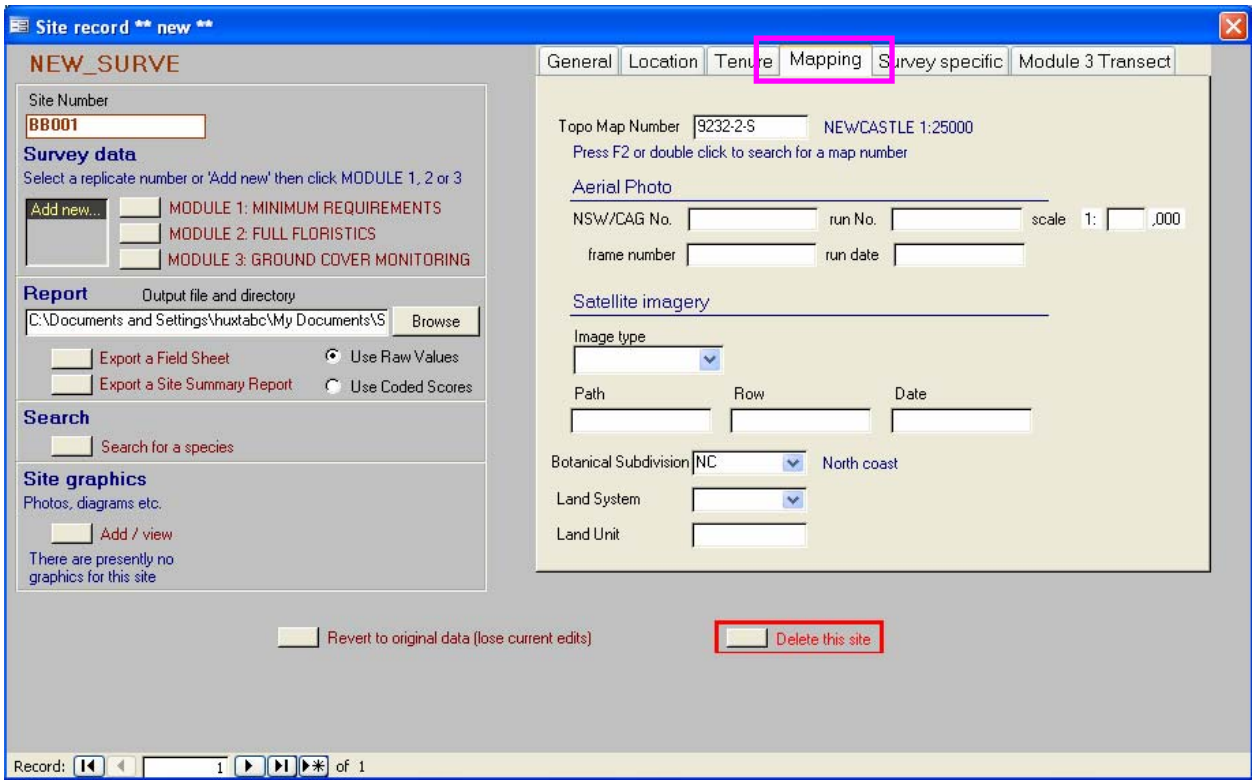
c). Enter site coordinates: select grid reference or latitude and longitude. In the example below, GDA has been selected. *Note that after you enter one full set of coordinates, other fields will be auto-populated*: Ensure you know which datum (AGD66 or GDA94) is being used (especially on 'pool' GPS units) as sites may be up to 200m out of place otherwise.



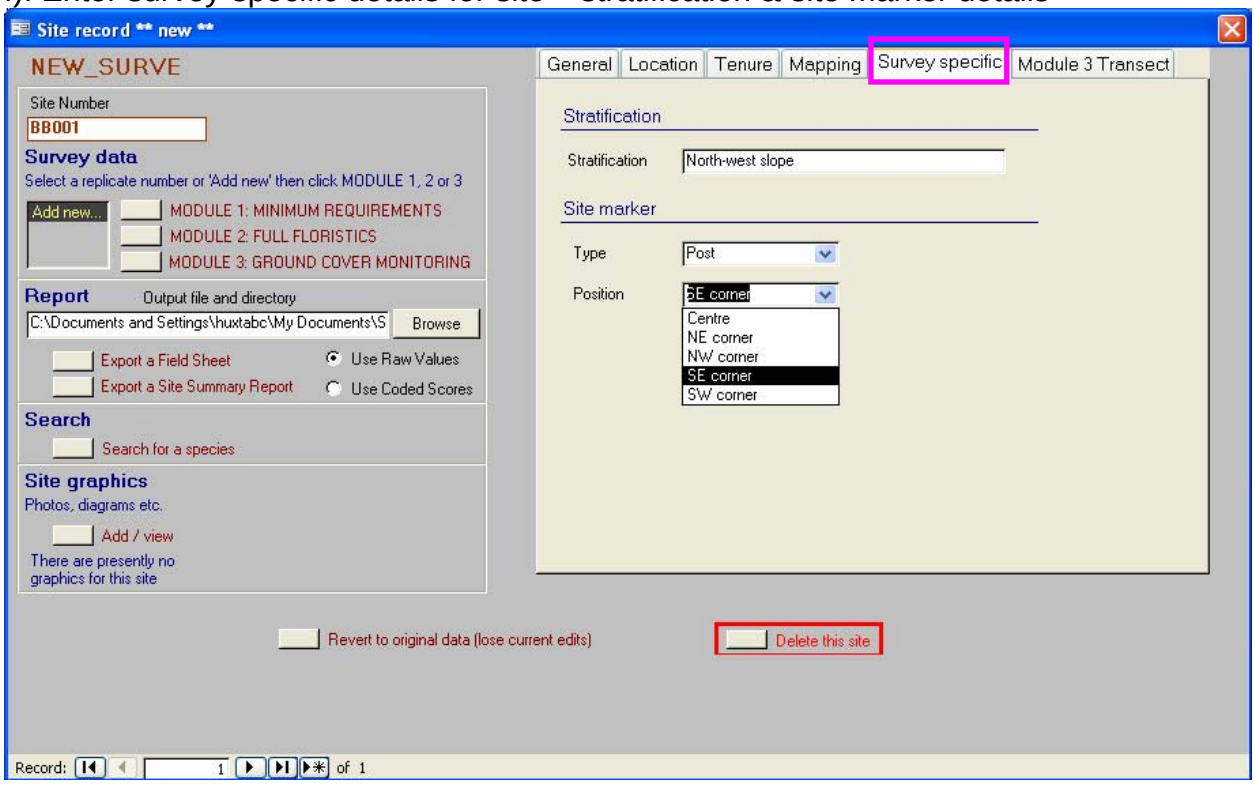
d). Enter Tenure and local government area details



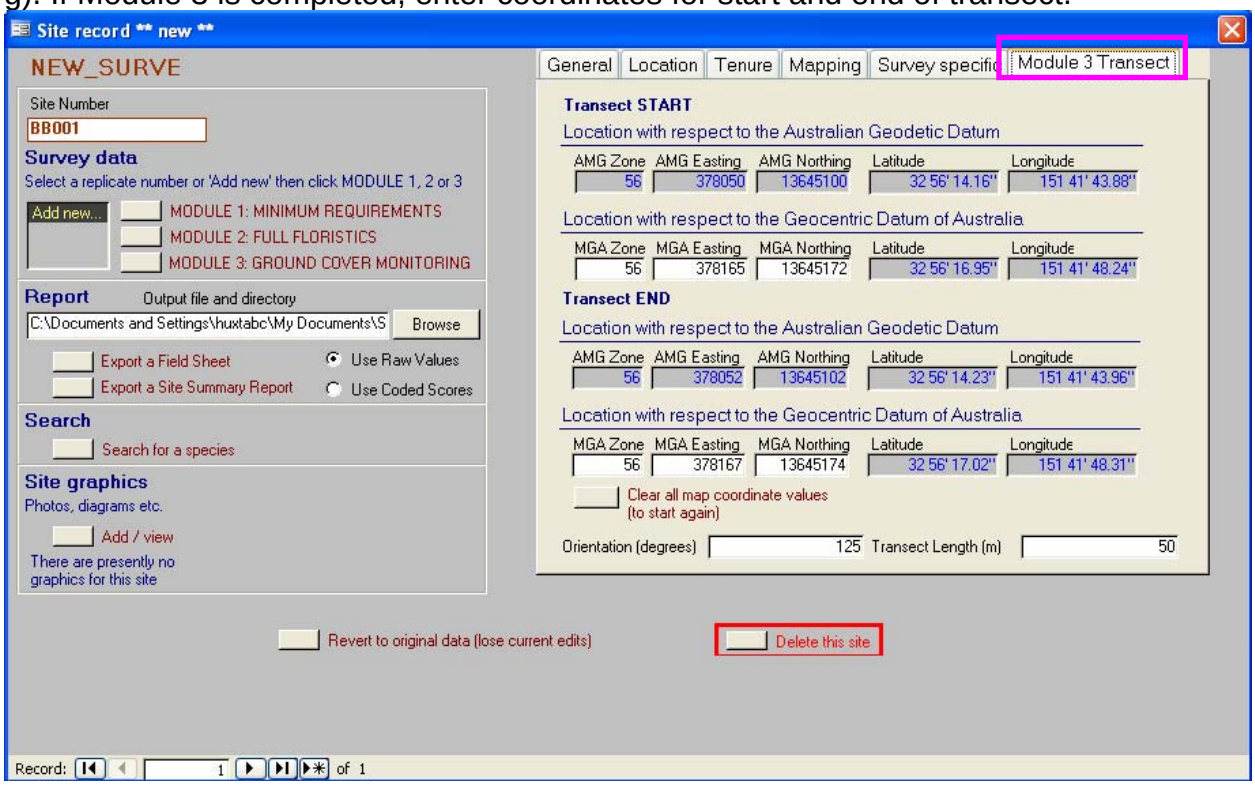
e). Enter any details of maps and imagery connected to the site – especially if used in site selection.



f). Enter survey-specific details for site – stratification & site marker details

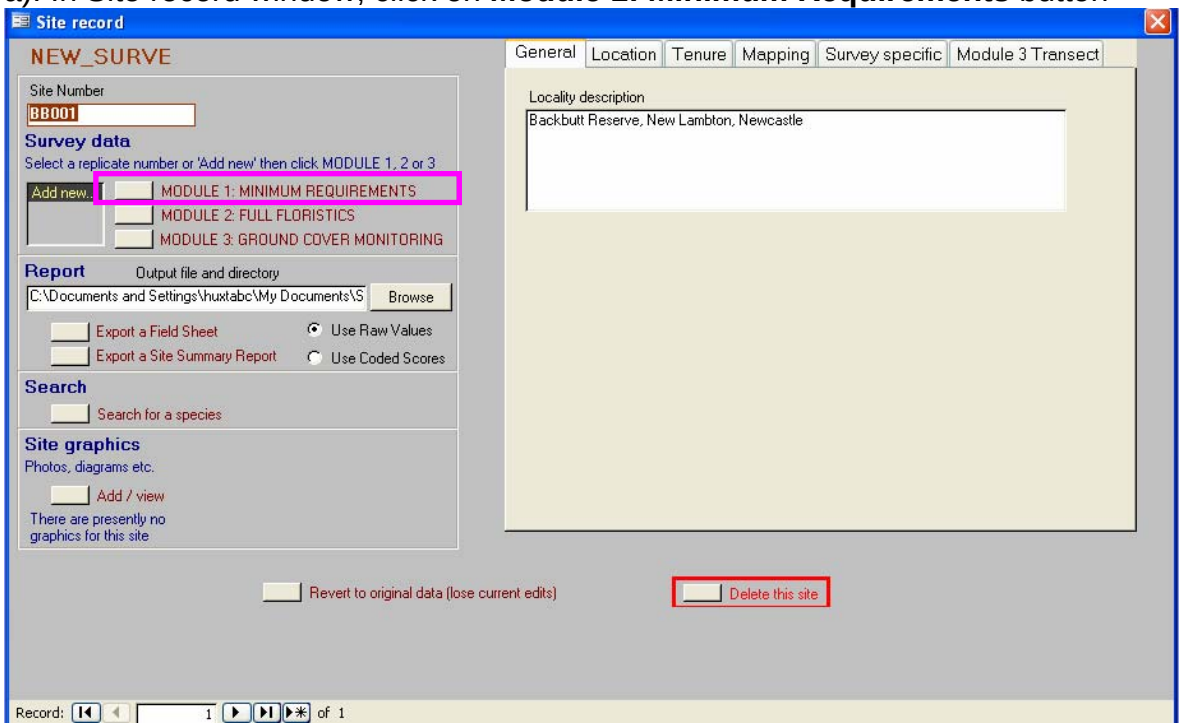


g). If Module 3 is completed, enter coordinates for start and end of transect.



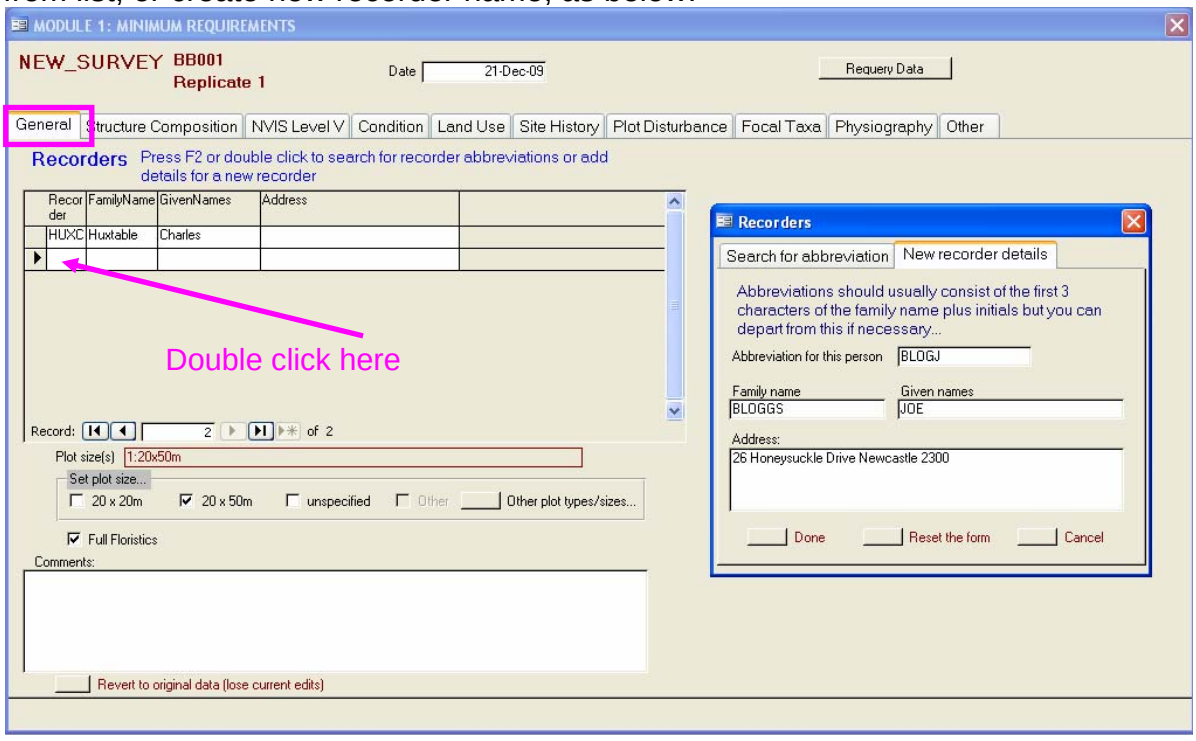
5.3 Entering or editing data in Module 1 (Minimum Requirements)

a). In Site record window, click on **Module 1: Minimum Requirements** button

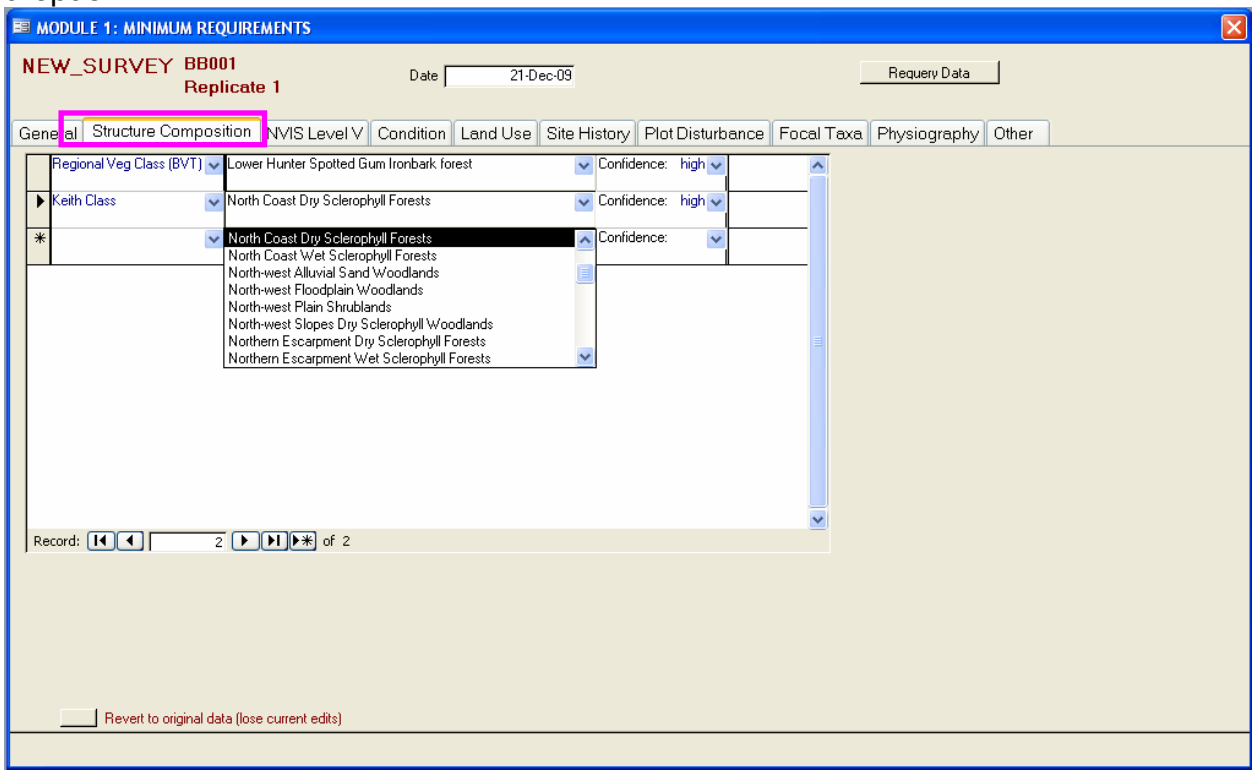


b). Module 1 Window will open.

c). Click on **General** button and fill out information in window. Select recorder name from list, or create new recorder name, as below:

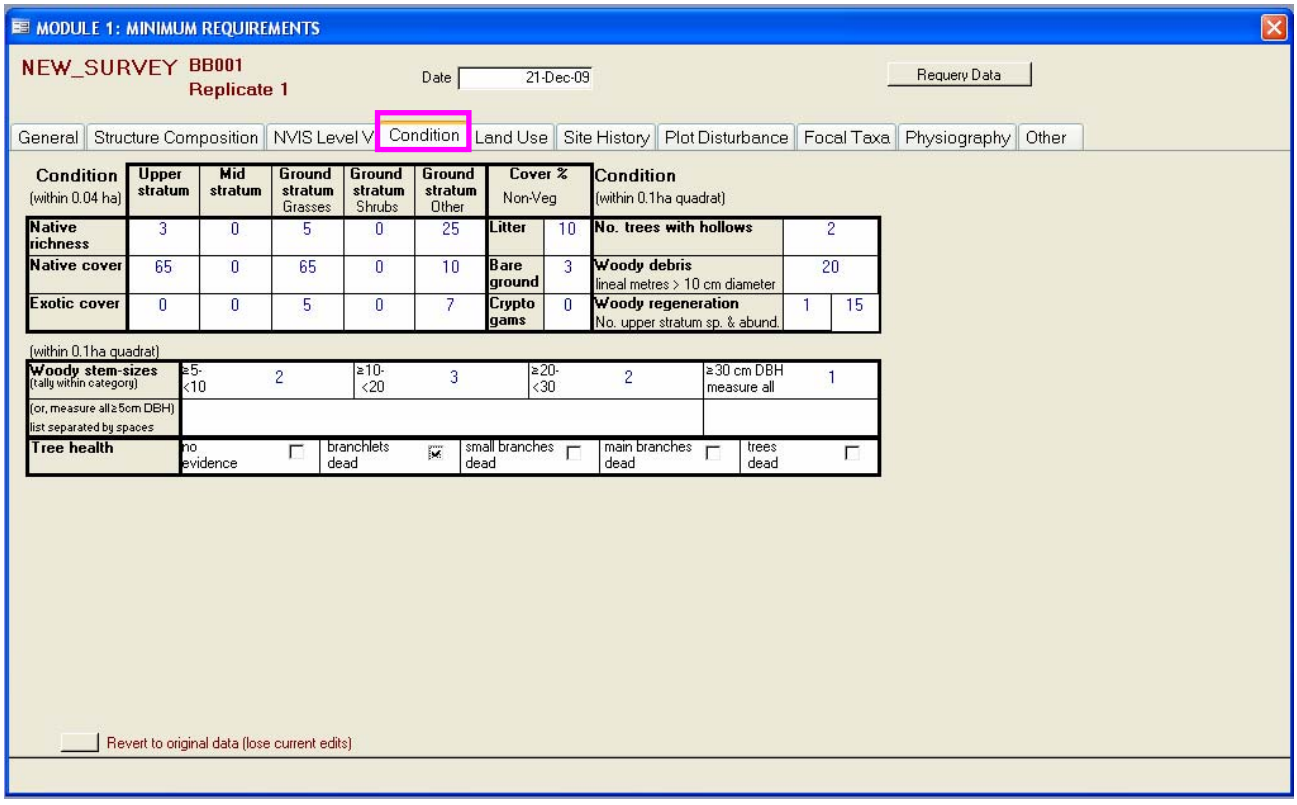


d). Click **Structure Composition** tab and enter 1 or more structural vegetation classes (type in or select from drop down menu). For each class, select confidence level from dropdown.

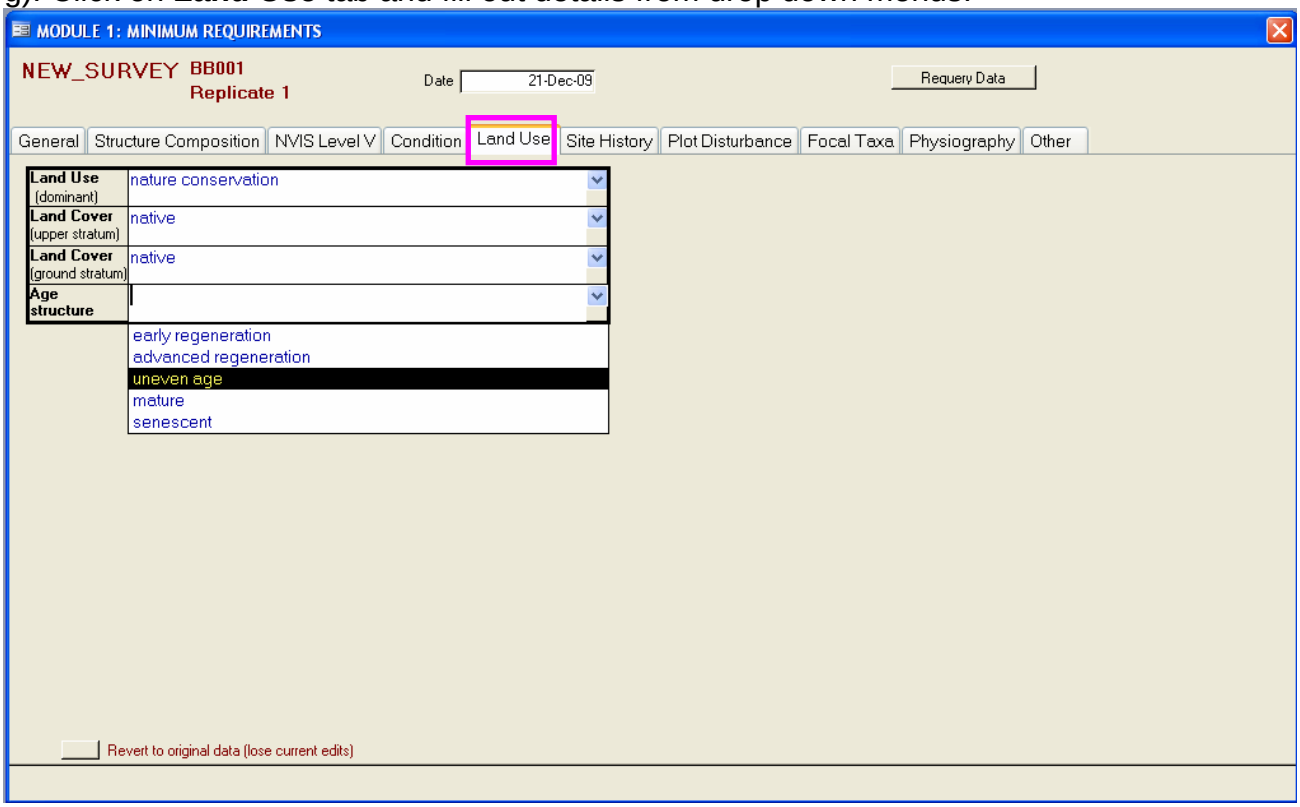


e). Entering NVIS Level IV Data *This is covered along with data entry for Module 2 in Section 5.4 of this manual.*

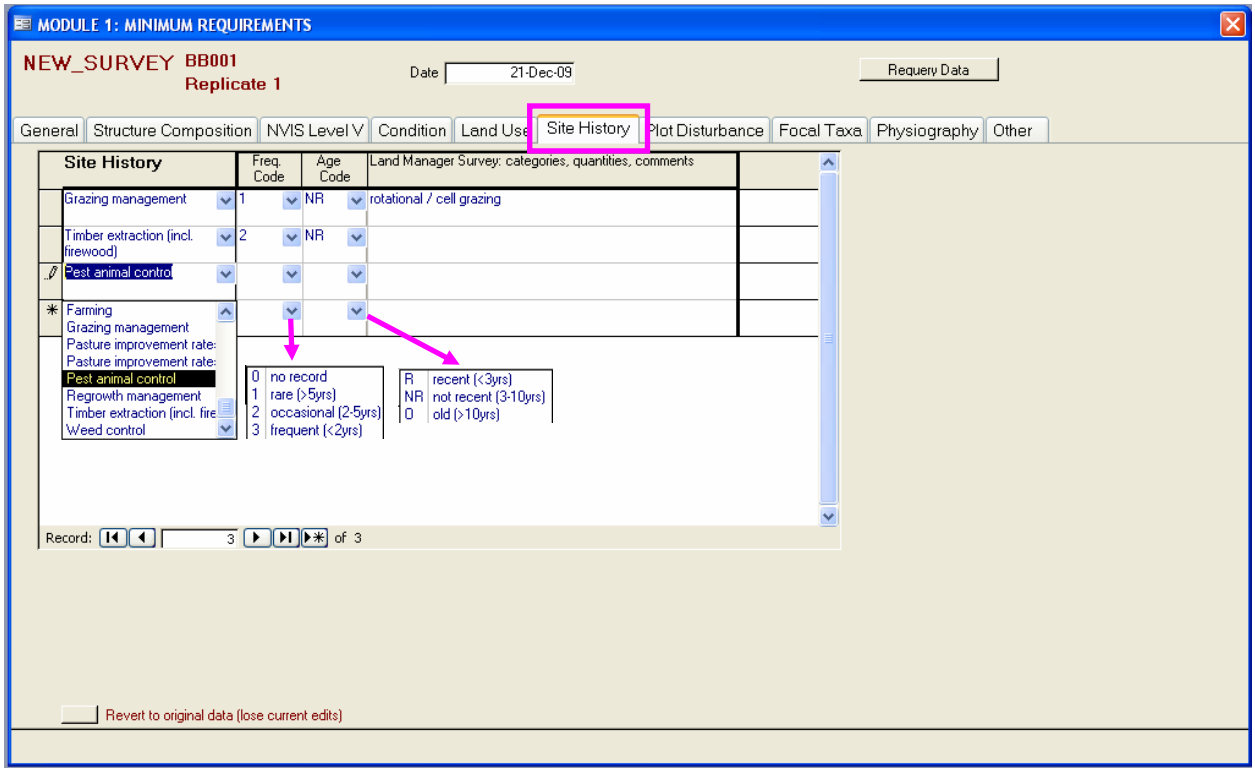
f). Click on **Condition** tab and fill out details. *Note: This table can more easily be filled out after Module 2 (Full Floristics) is completed.*



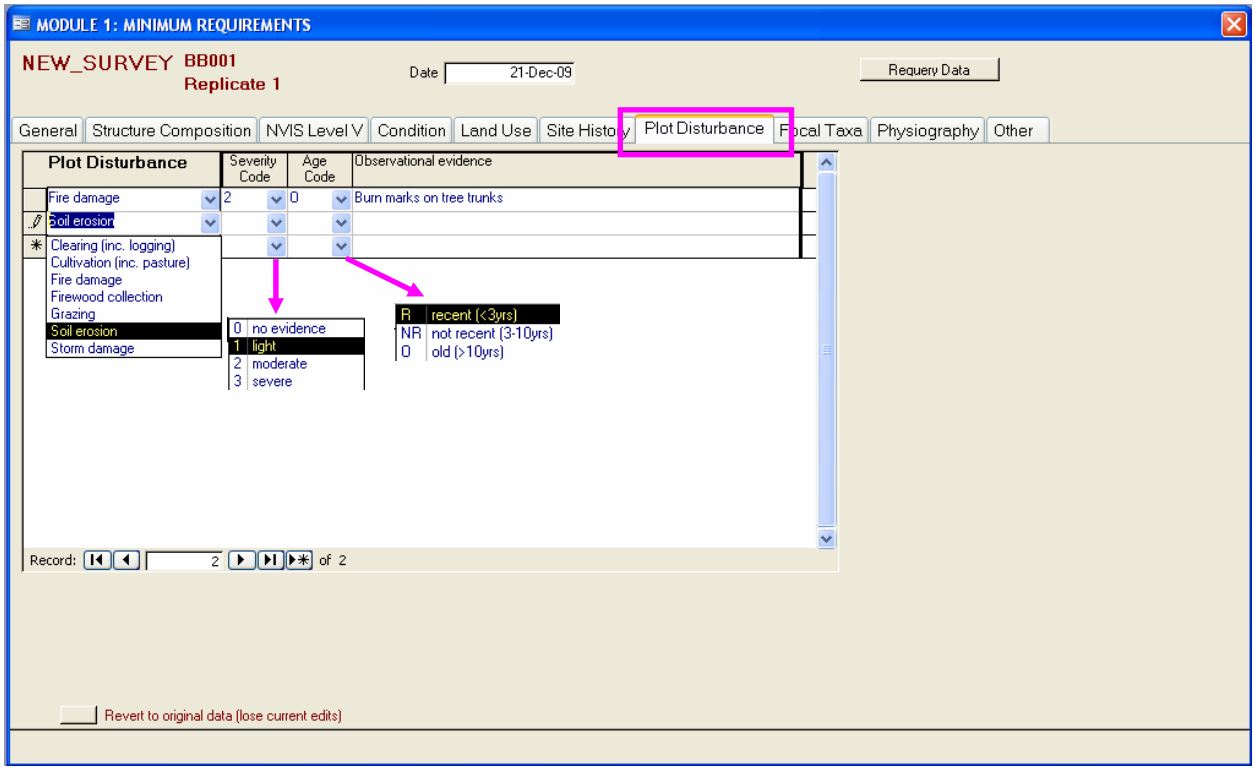
g). Click on **Land Use** tab and fill out details from drop down menus:



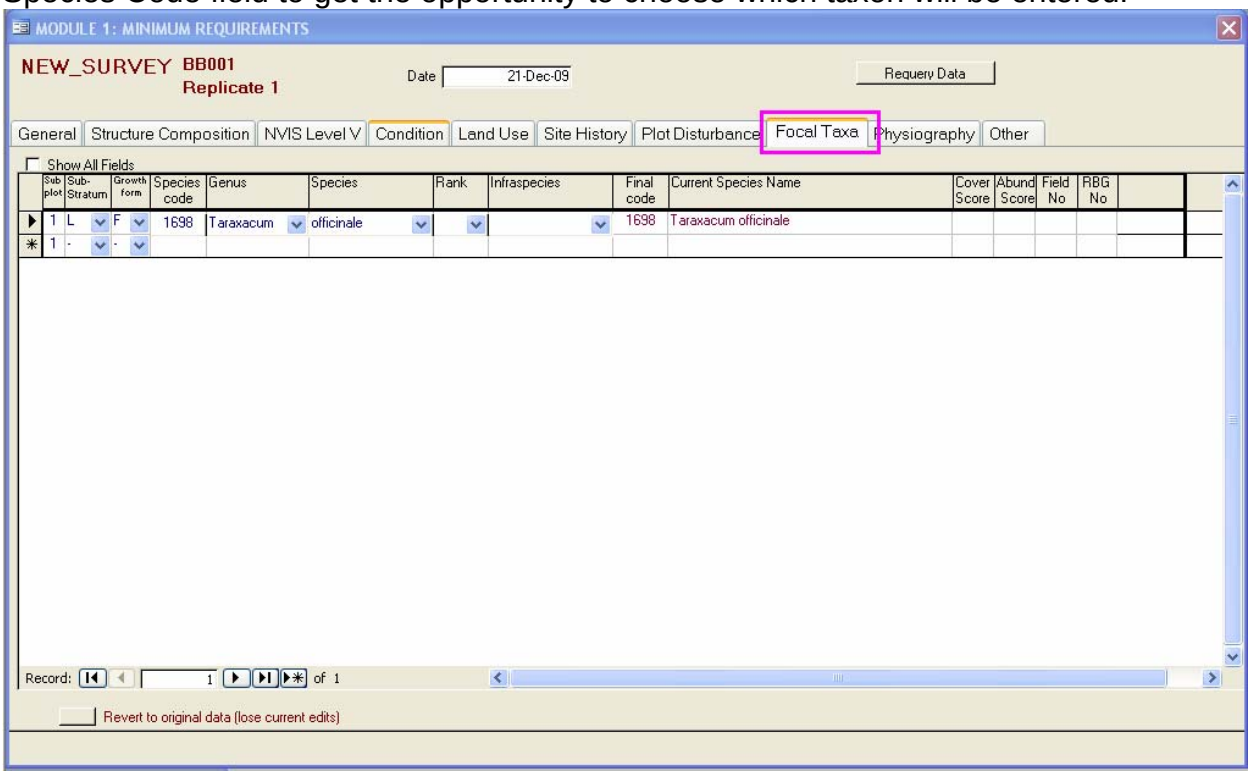
h). Click on **Site History** tab and fill out details using drop down menus:



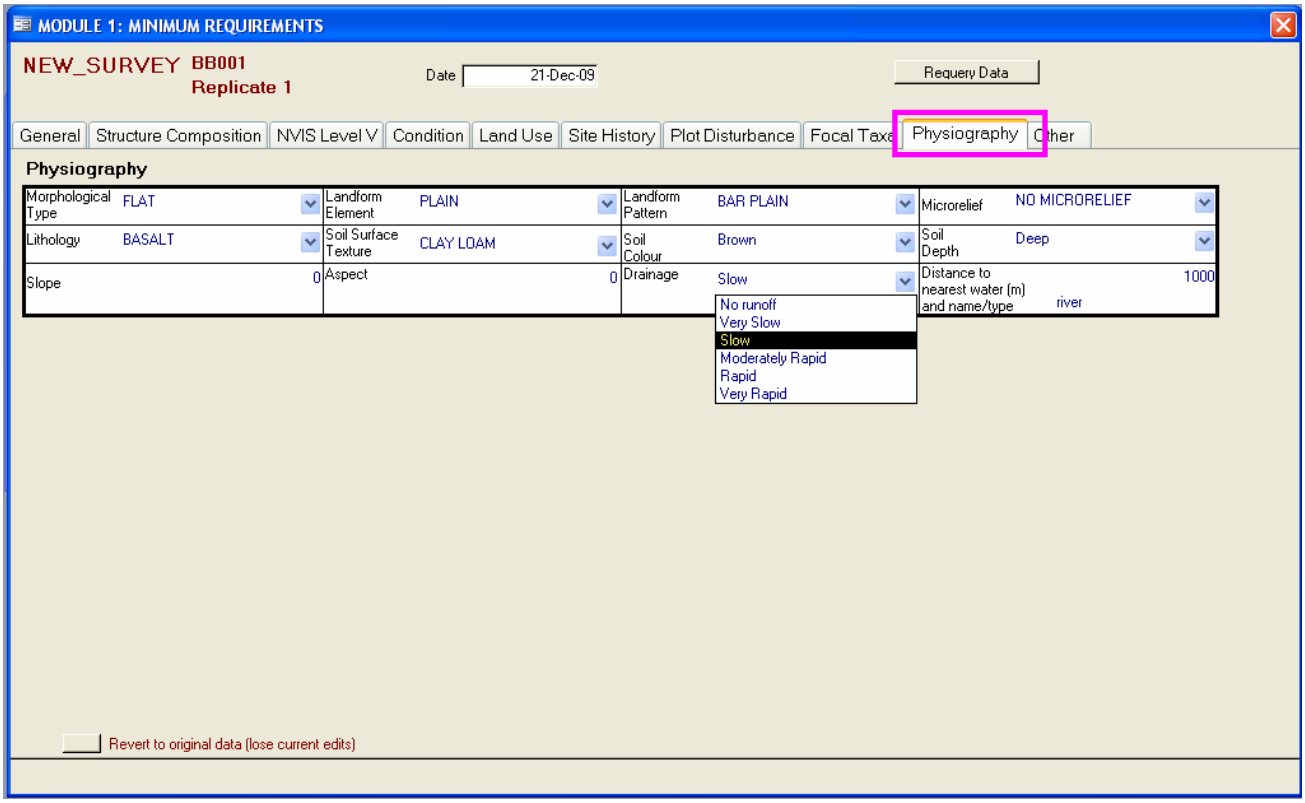
i). Click on **Plot Disturbance** tab and fill out details using drop down menus:



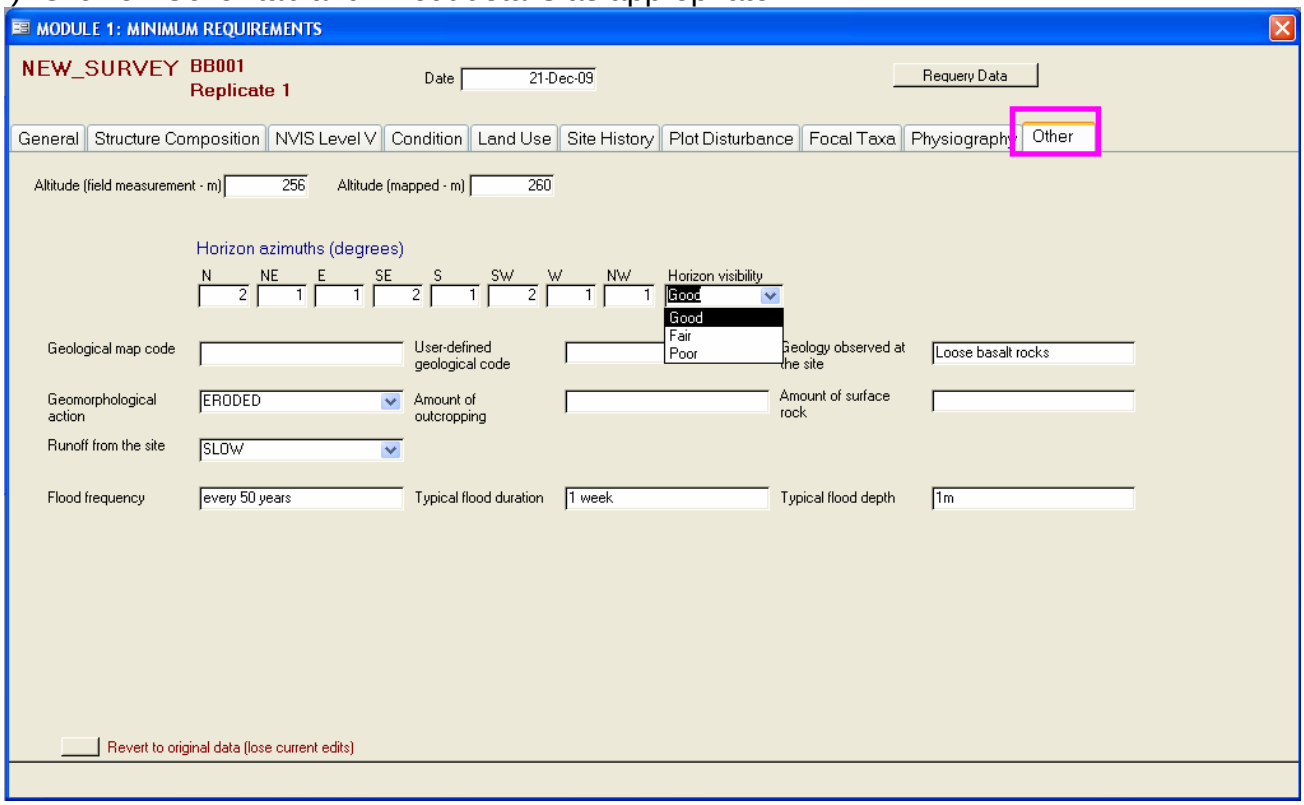
j). Click on **Focal Taxa** tab and fill out details using drop down menus as for species in NVIS V table and Module 2. Note: you can also specify Focal Taxa in the Module 2 Floristics Table. Alternatively, double click in Species Code field or press F2 when in the Species Code field to get the opportunity to choose which taxon will be entered.



k). Click on **Physiography** tab and fill out details using drop down menus:

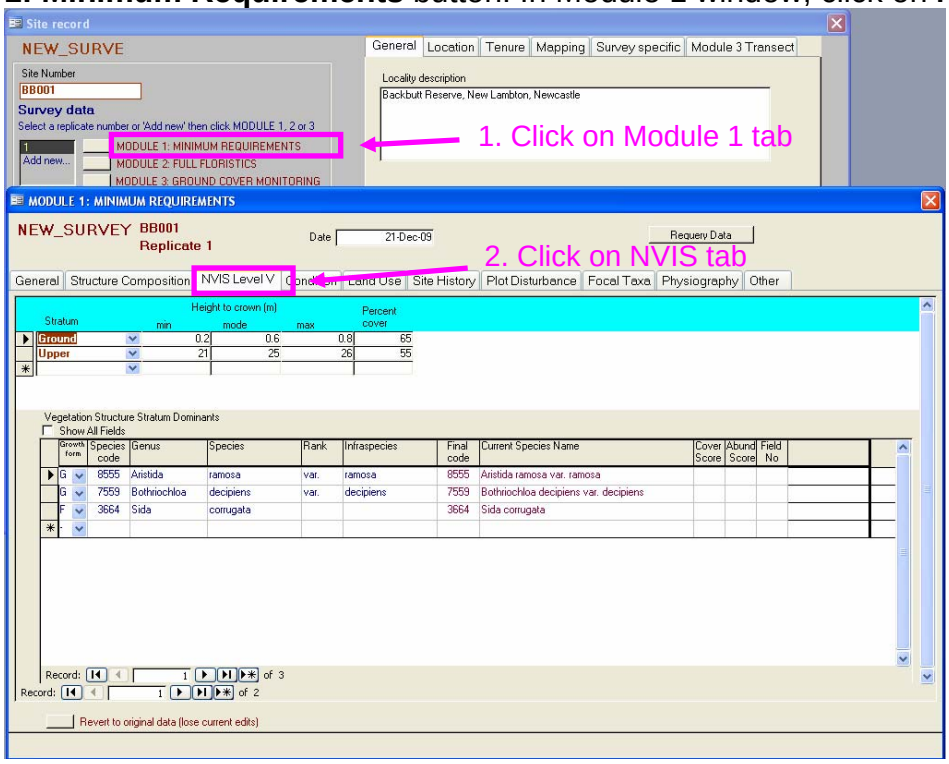


l). Click on **Other** tab and fill out details as appropriate

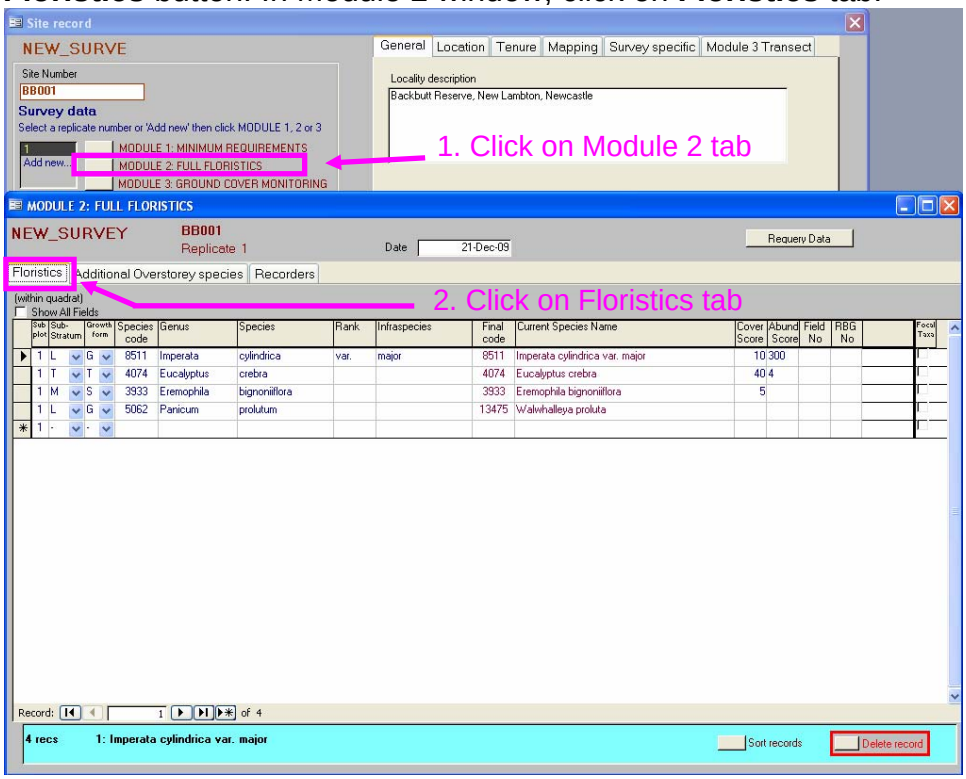


5.4 Entering Vegetation Data (Module 1 NVIS V Table and Module 2)

1. How to open Module 1 NVIS V Table. In the Site Record window, click on **Module 1: Minimum Requirements** button. In Module 1 window, click on **NVIS Level V** tab:



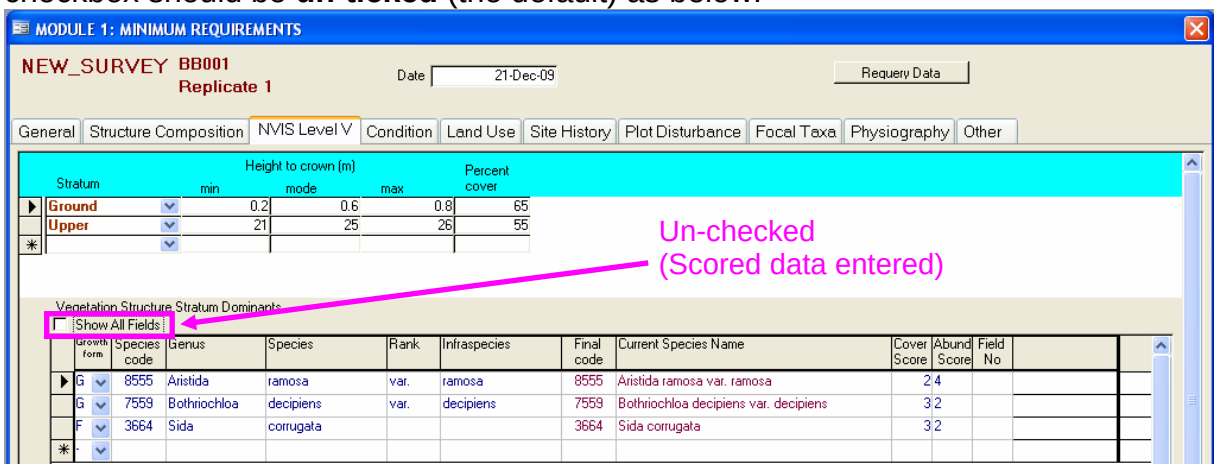
2. How to open Module 2. In the Site Record window, click on **Module 2: Full Floristics** button. In Module 2 window, click on **Floristics** tab:



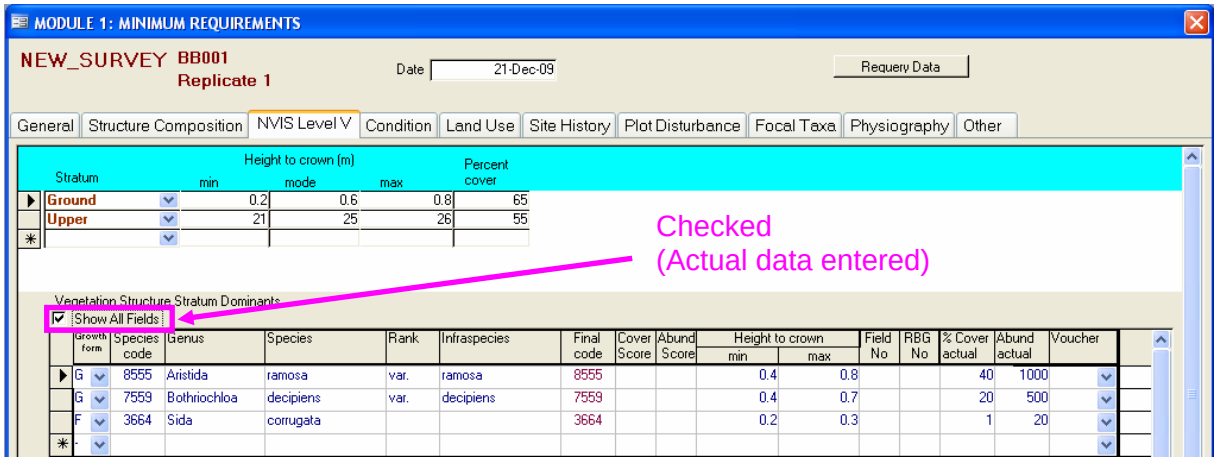
3. Specifying scored or actual values for vegetation data entry

NVIS V Table in Module 1.

If you are entering **scored data** for cover and/or abundance, the **Show All Fields** checkbox should be **un-ticked** (the default) as below:

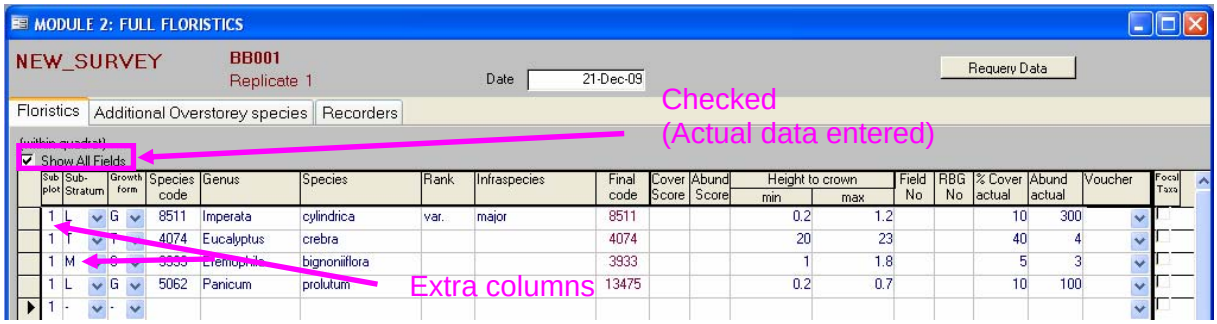


If you are entering **actual (raw) data** for cover and/or abundance, the **Show All Fields** checkbox should be **ticked** as below. Note that **% Cover actual, Abund Actual** and **Min and Max Height to crown** columns are now showing. The **Current Species Name** column is not showing although the **Final Code** column remains visible:



Module 2 Floristics Records

Module 2 Floristics table is identical except that there are 2 more columns to the left of the **Growth Form Column**:



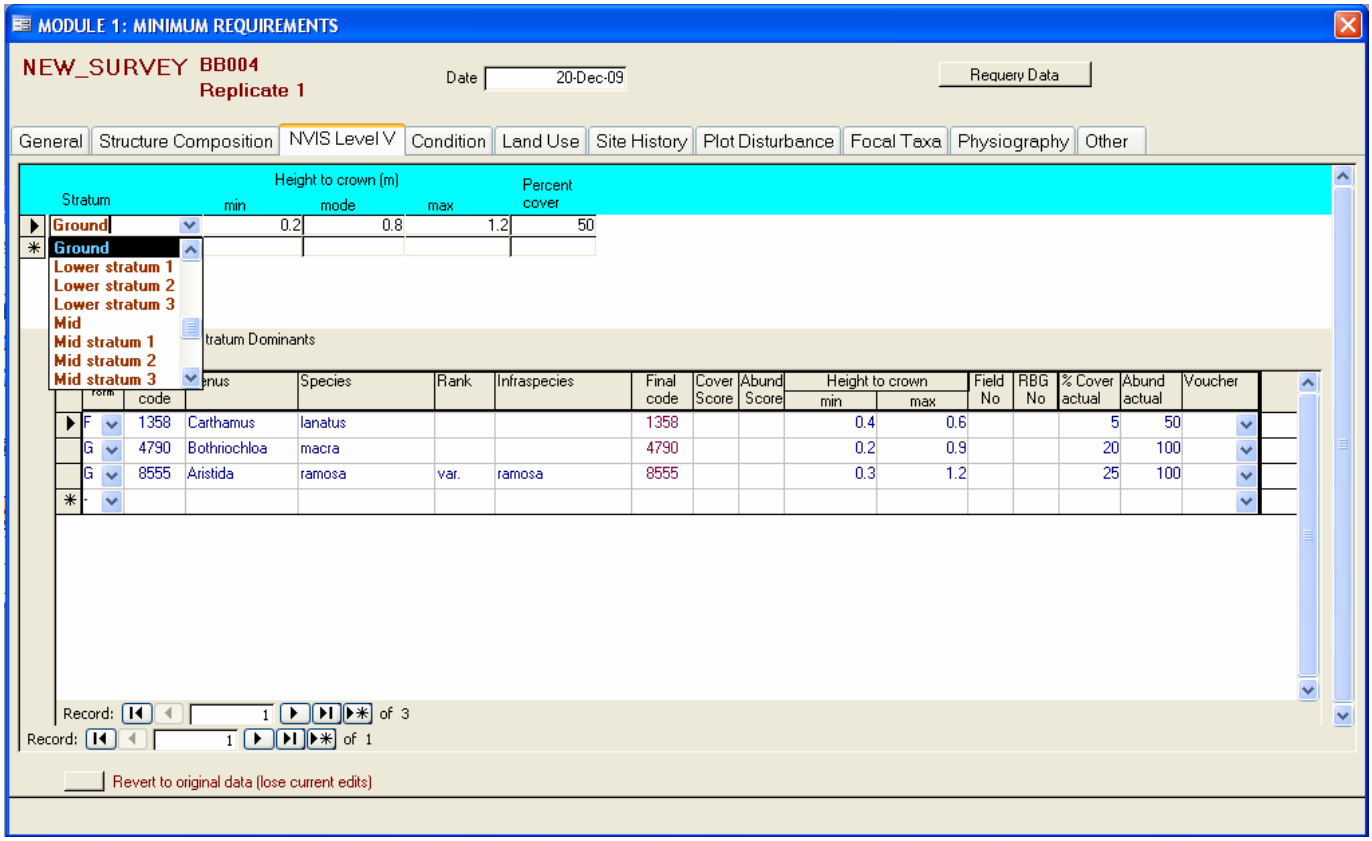
4. Differences between Module 1 NVIS V Table and Module 2

The main difference is that the NVIS Table requires that the vegetation strata present at the site be listed and that each stratum be defined in terms of its height range (min, mode and max height **in metres**. In addition, NVIS V requires that the dominant species in each stratum be recorded. In Module 2, all species at the site are listed with an associated field for the stratum in which it occurs.

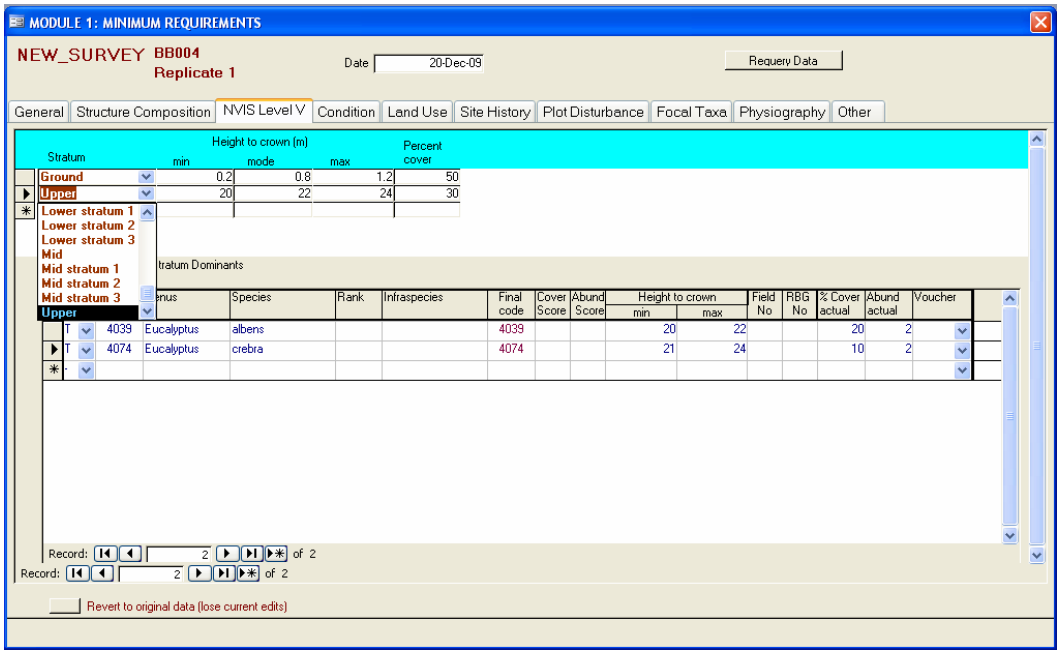
NVIS level V generally allows for 3 main strata – Lower, Mid and Upper – although YETI will allow for division within these to sub-stratum level. NVIS V also generally specifies that a maximum of 3 dominant species should be listed for each stratum, although again YETI will allow more to be entered. This structural data should be entered into NVIS V Table in the following way:

5. Entering structural data into Module 1 NVIS V Table

a). Starting in the Module 1 NVIS V window, select the first stratum from the drop-down menu at the top of the table. The **Ground** stratum is used in the example below. Fill out data for min, mode and height to crown and percent cover **for the selected stratum** The next step is to enter the 3 dominant species for the **Selected** stratum (**the steps for this are the same as for Module 2 Floristics, and are described in detail in Step 6).**



b). Select the next stratum present and repeat as for previous stratum. **Note that the lower section of the window only shows the dominant species for the stratum which has been selected in the upper section the window.**

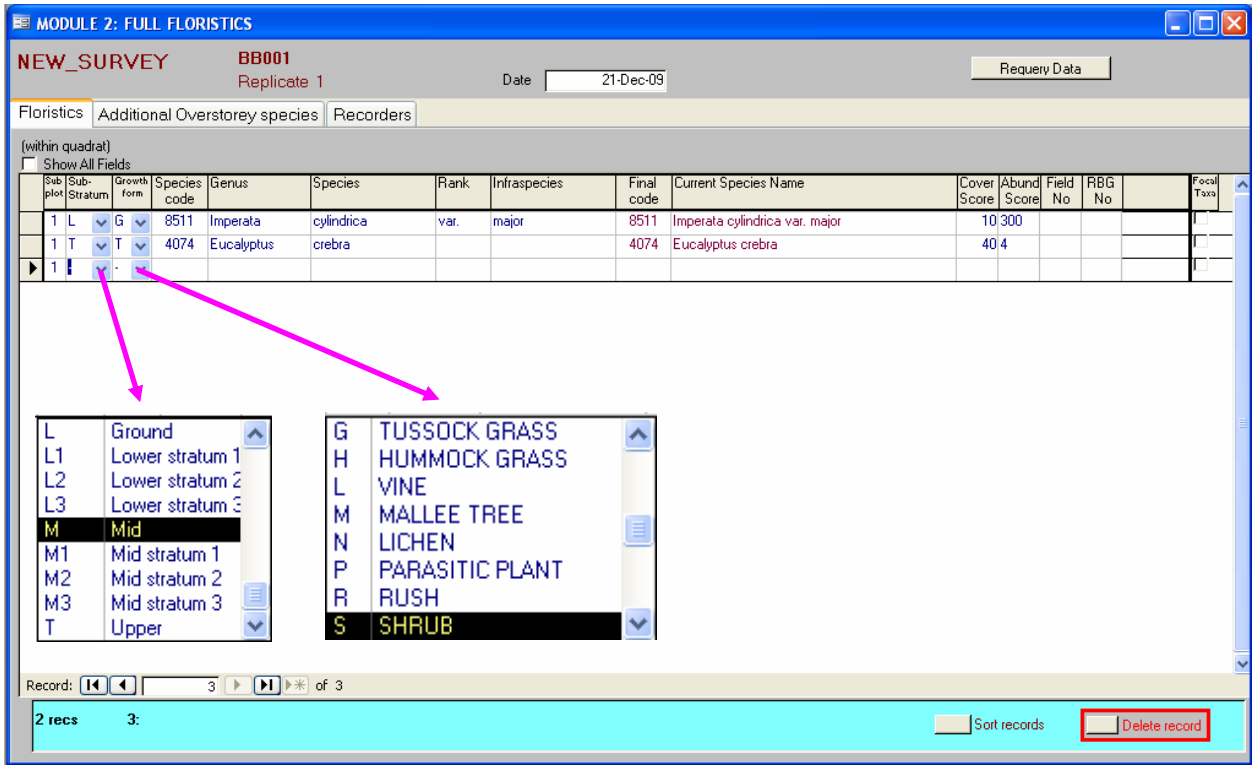


6. Entering species data

The examples below use Module 2 Floristics window, however all steps from b) onwards apply to Module 1 NVIS V table also.

a) For your first species, enter sub-plot (**1** by default) and select substratum from the drop-down menu (Module 2 only).

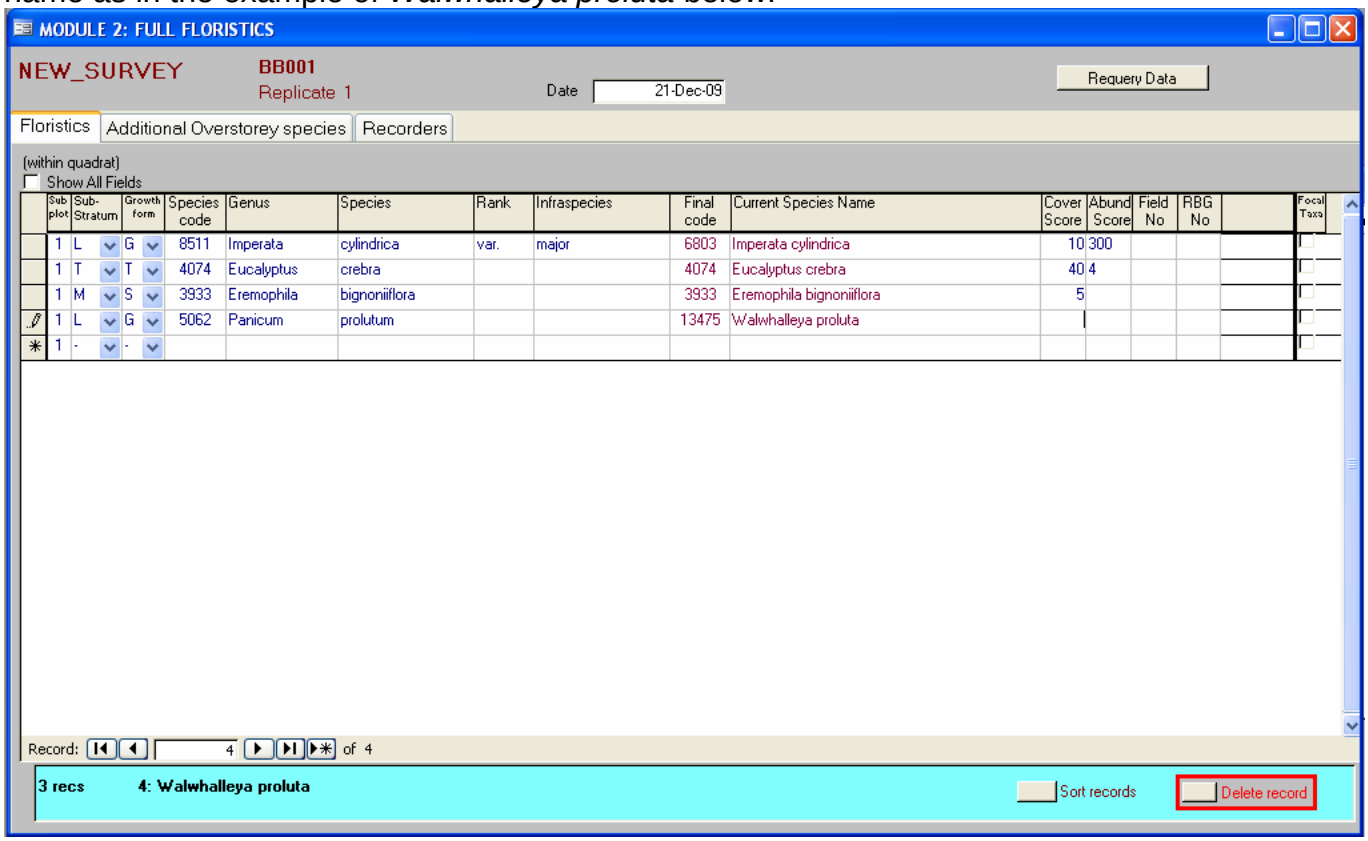
b). Select growth form from drop-down menu



c). Enter the species (or CAPS) code for the species you are entering. If you don't know the code, tab into the Genus column and enter the first few characters of the genus until the correct one appears, or alternately scroll through the dropdown. Once a genus has been chosen, hit the Tab key to move into the species dropdown which will now display only those species epithets valid for the Genus chosen. Tab across and choose Infraspecific Rank and Infraspecific name if appropriate.

d). Note, you can also bring up a separate CAPS form by double clicking in the Species code control. However, this is no longer the most efficient way to enter data.

e). Cells in the **Final Code** and (if **Show All Fields** is unchecked) **Current Species Name** columns will also be auto-populated. If there is a more up-to date name for a species or taxon chosen, YETI will detect it and enter the new CAPS code and species name as in the example of *Walwhalleya proluta* below:

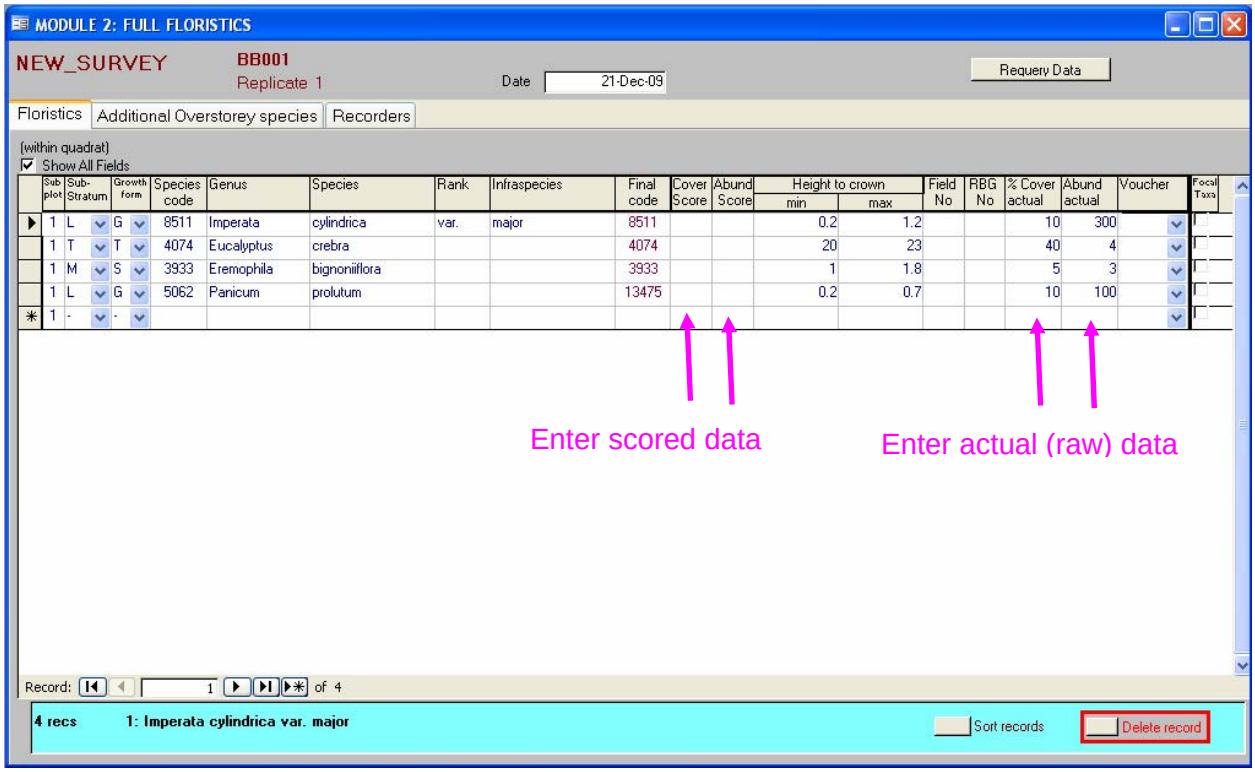


Note that the number of records (species) entered as well as the name of the current selection (in this case *Walwhalleya proluta*) is shown at the bottom of the window. If you find you have made a mistake, you can delete the record by first placing the cursor in any selectable cell for the particular record you wish to delete, and clicking on the red **Delete record** tab at the bottom right of the window. You can change the record by re-entering the species code, by following the steps in (ii) (above), in either case just that field (and related data) will be updated.

f). Enter values for cover and/abundance. Ensure that, if you are entering actual values (rather than scores):

(i). the **Show All Fields** box is checked (see previous)

(ii). Enter your data into the **% Cover Actual** and/or **Abund Actual** columns, rather than **Cover Score** and **Abund Score** columns (still showing).

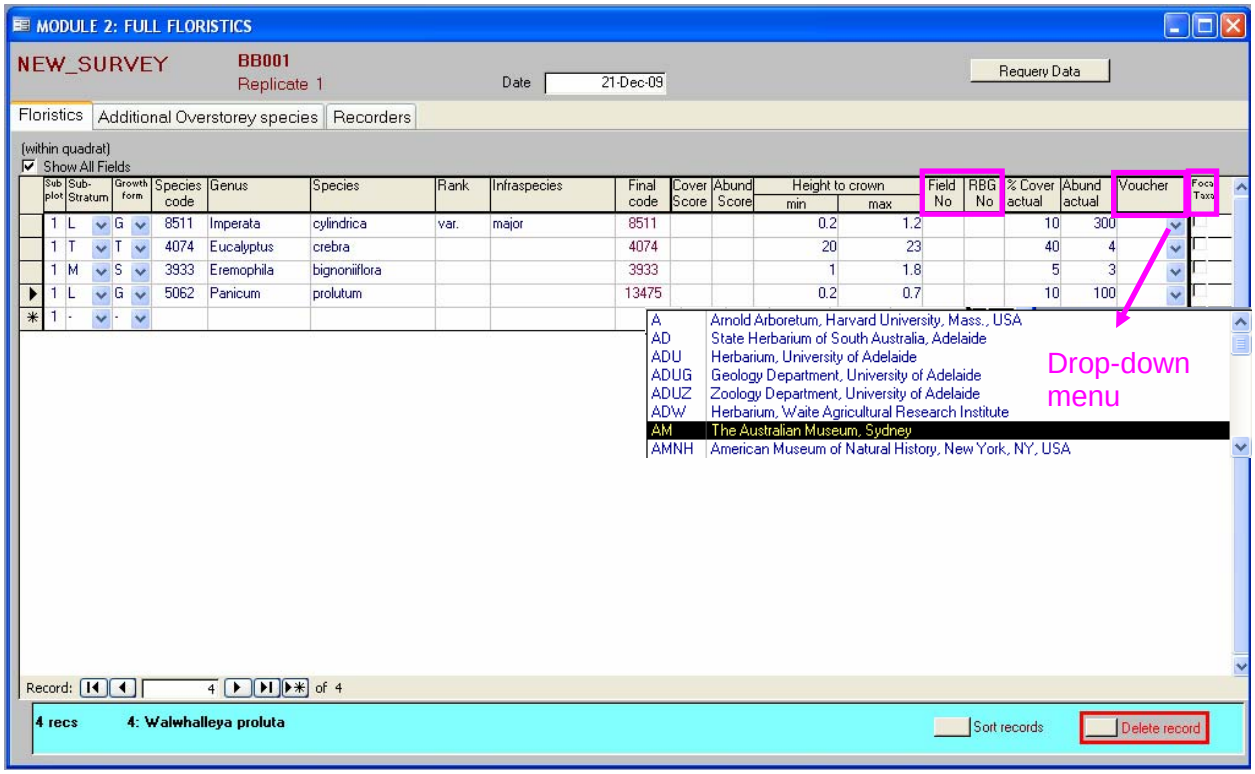


g). Enter a unique **Field No.** if a sample was taken of that species.

h). Enter a unique **RBG No.** if that sample was submitted to the RBG for ID.

i). If a voucher specimen was collected, you can select the institution to which the sample was submitted from a drop-down menu in the **Voucher** column.

j). You can specify **Focal Taxa** by ticking the box in the right-most column in Module 2 Floristics. This is as an alternative to completing the **Focal Taxa** section in **Module 1.**

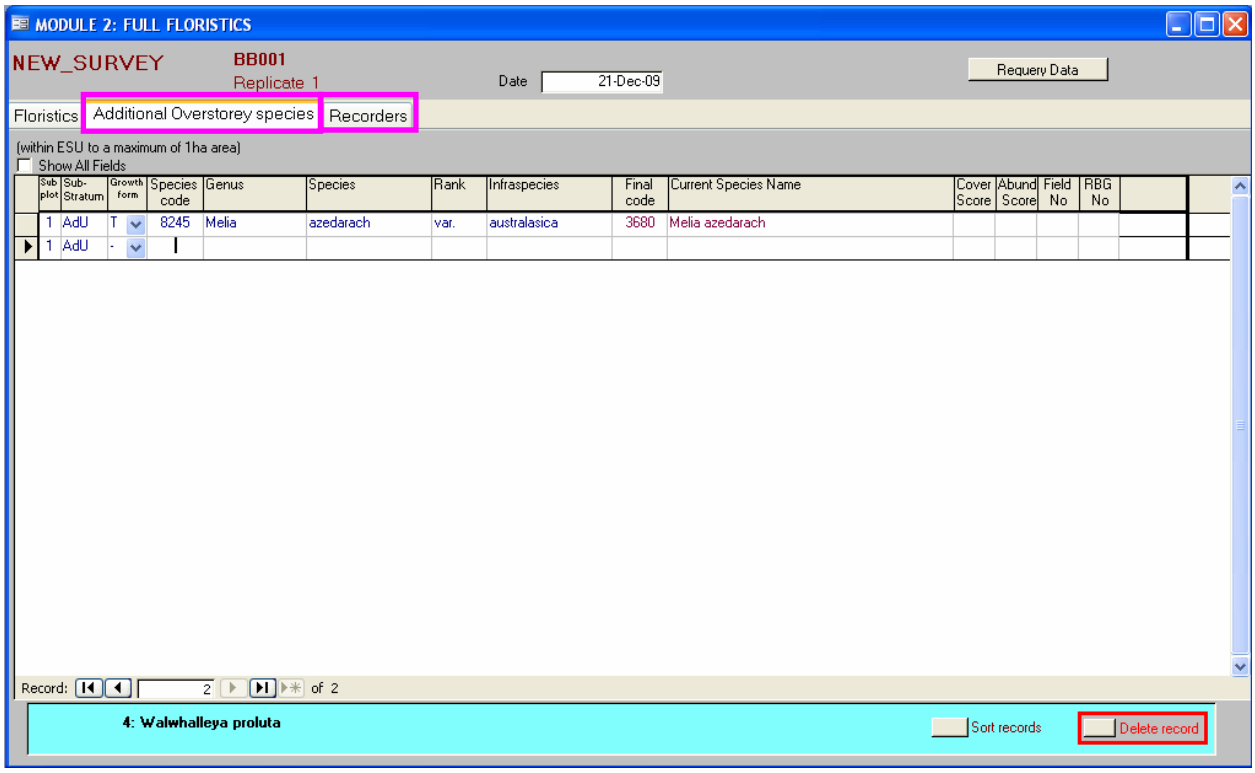


7. Enter Additional Overstorey Species

If you undertake an opportunistic survey in the environs outside your quadrat, you can enter additional species by clicking on the **Additional Overstorey Species** tab and entering data as for above. While this tab is labelled Overstorey, species from any stratum may be captured (but will all be 'tagged' as AdU).

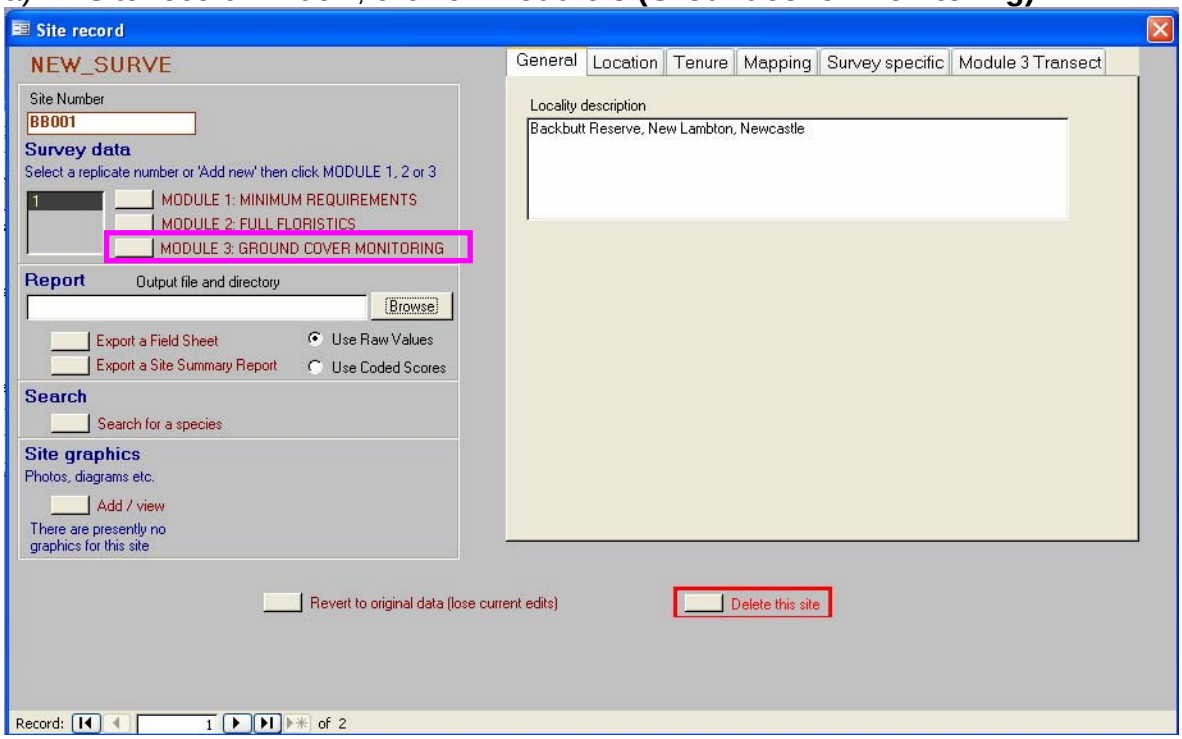
8. Check Recorder Details

This should have been autopopulated from information entered in Module 1. Edit as necessary following instructions as per Module 1.



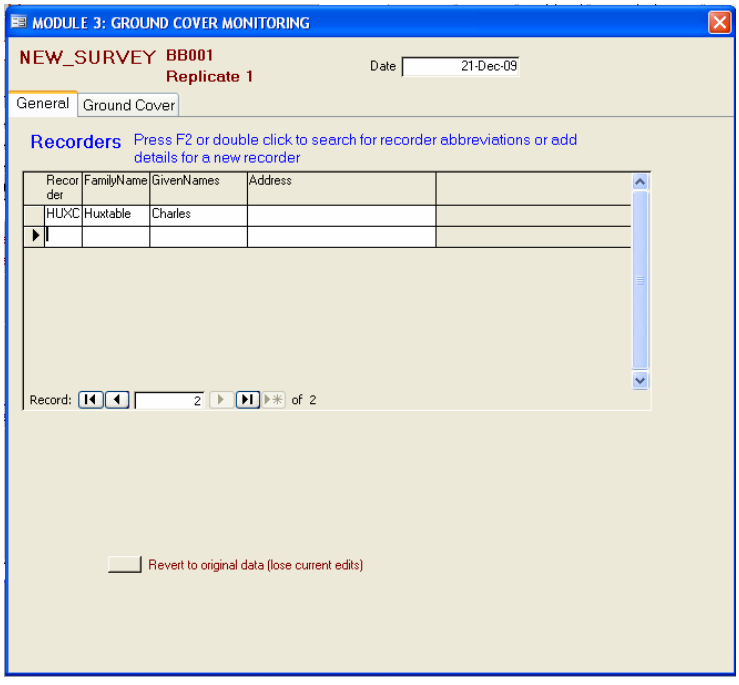
5.5 Entering or editing data in Module 3 (Groundcover monitoring)

a). In Site record window, click on **Module 3 (Groundcover monitoring):**

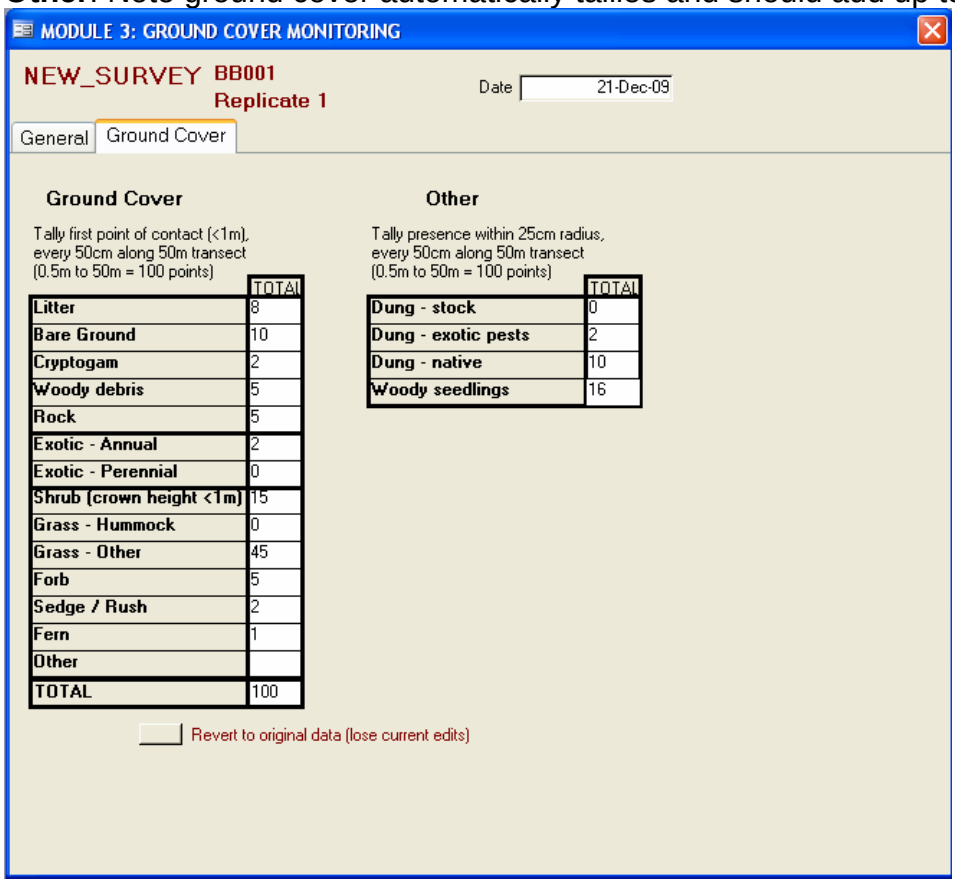


b). Module 3 Window will open.

c). In the **General** tab window, check that recorder details and date are correct. This should have been autopopulated from information entered in Module 1. Edit as necessary following instructions as per Module 1.

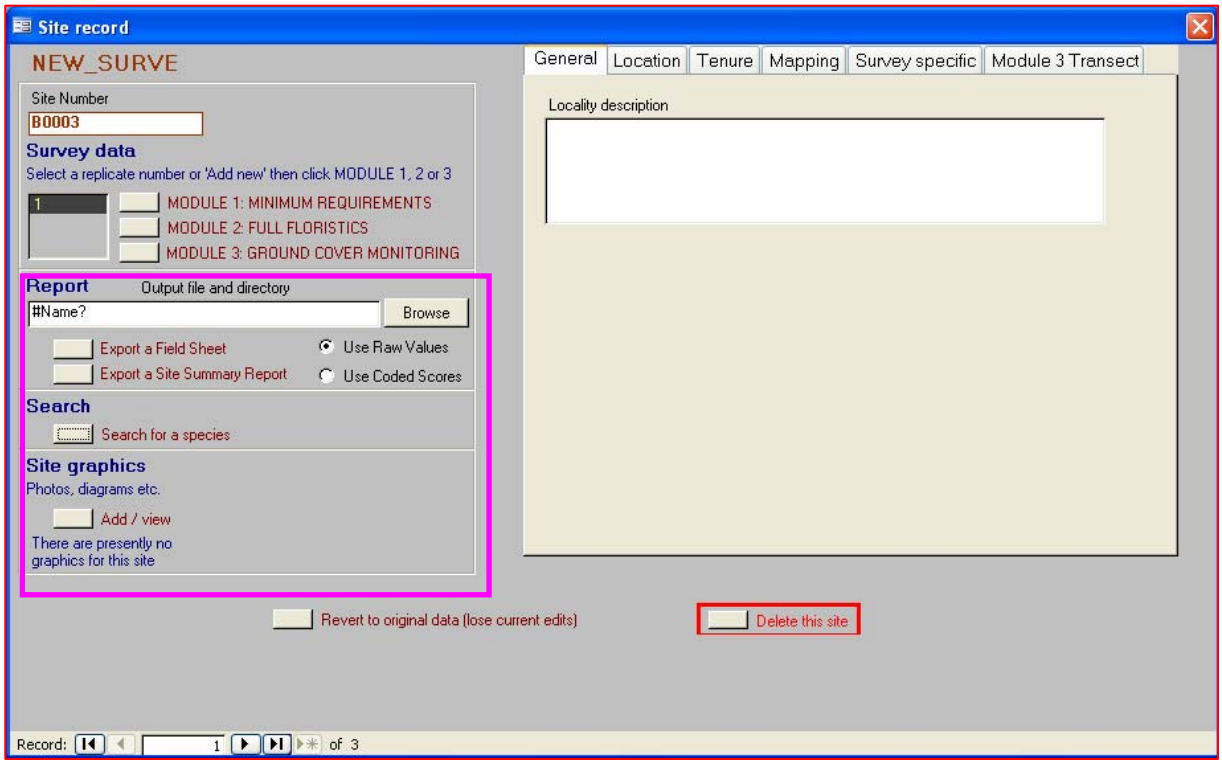


d). Click on **Ground Cover** tab and fill out relevant details for **Ground Cover** and **Other**. Note ground cover automatically tallies and should add up to 100):

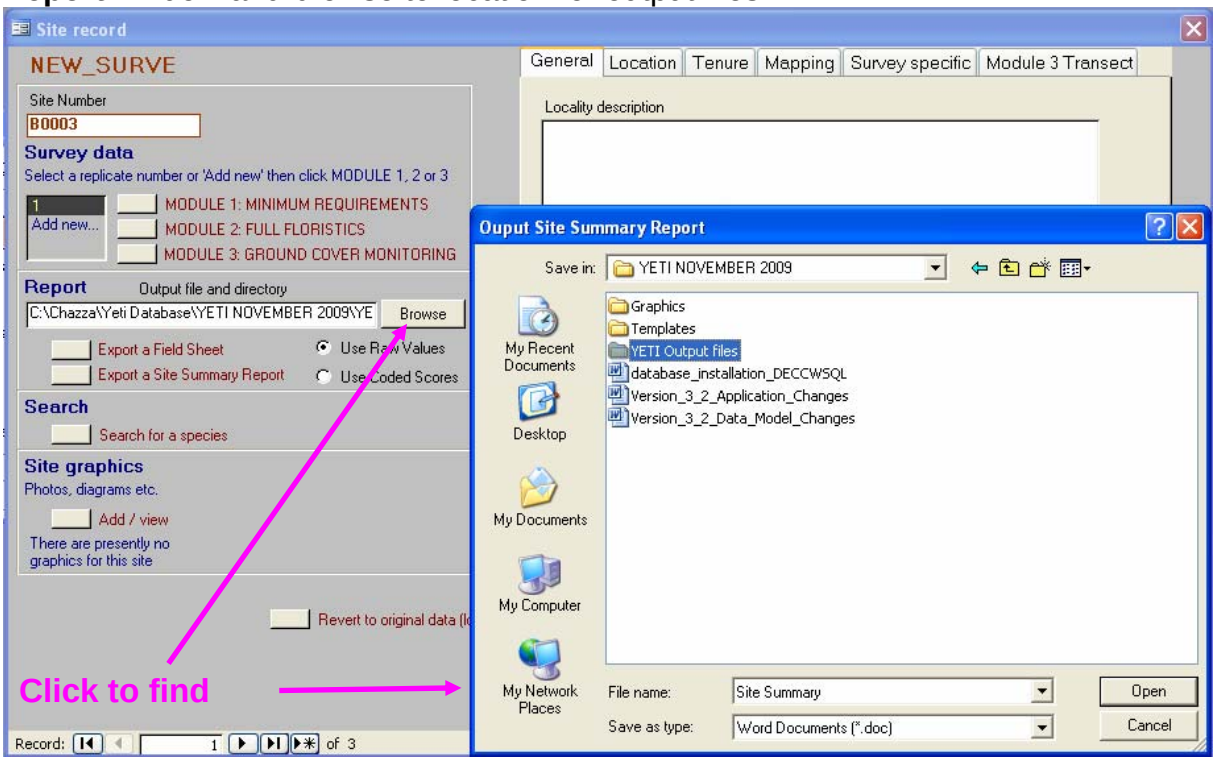


NOTE: This is only for actual groundcover. Any biotic components that form a ground-layer stratum should either match this table or be maintained separately in the NVIS V data recorded in Module 1.

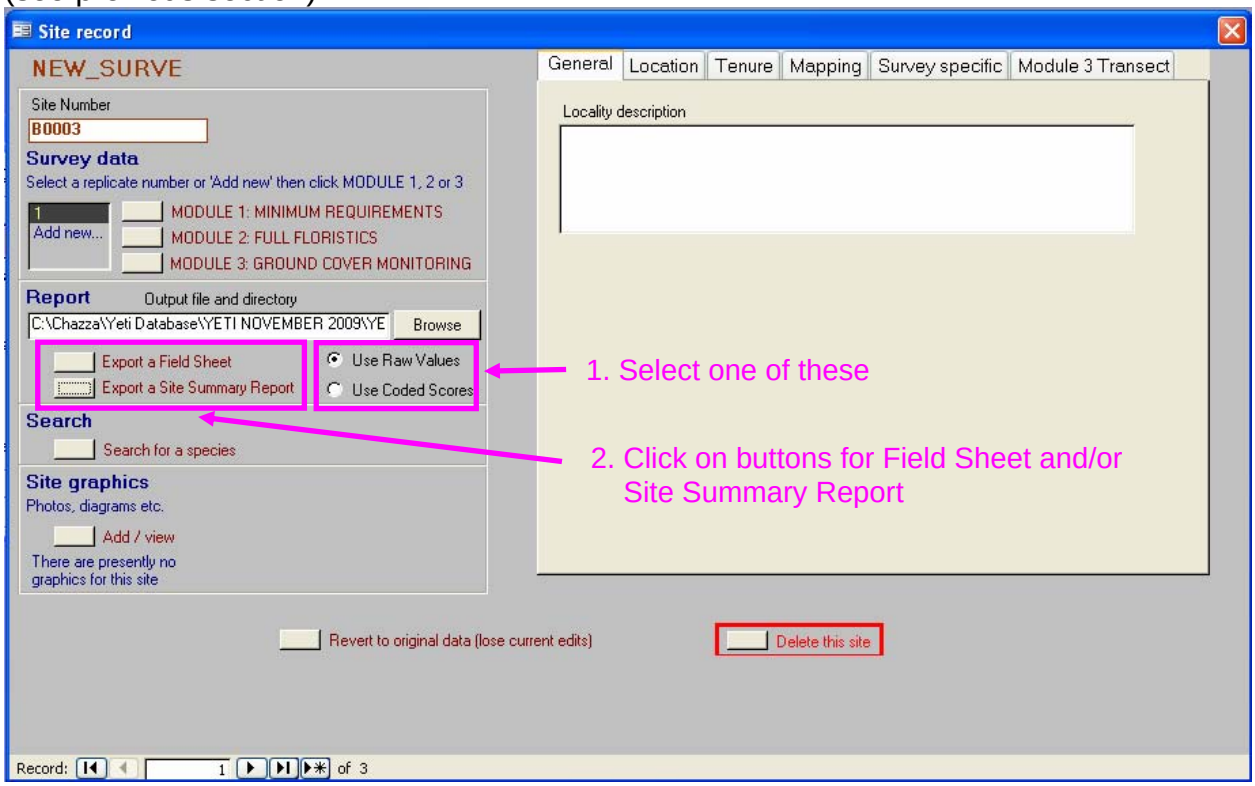
5.6 Other functions while operating within site records



1. Setting directory for output of field sheets and reports. Click on **Browse** tab next to **Report** window and browse to location for output files.

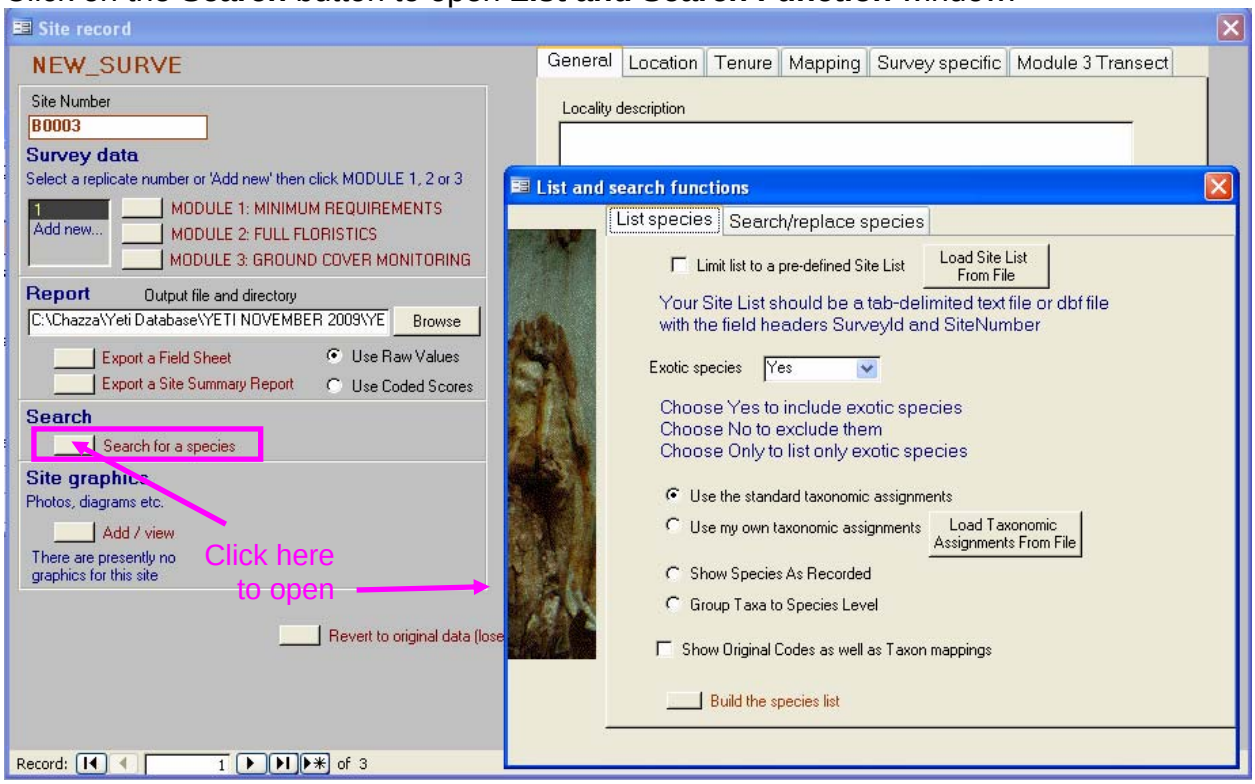


2. Exporting Field Sheets and Site Summary reports. You must first select either **Use Raw Values** or **Use Coded Scores** for output files, depending on the data type used (see previous section):

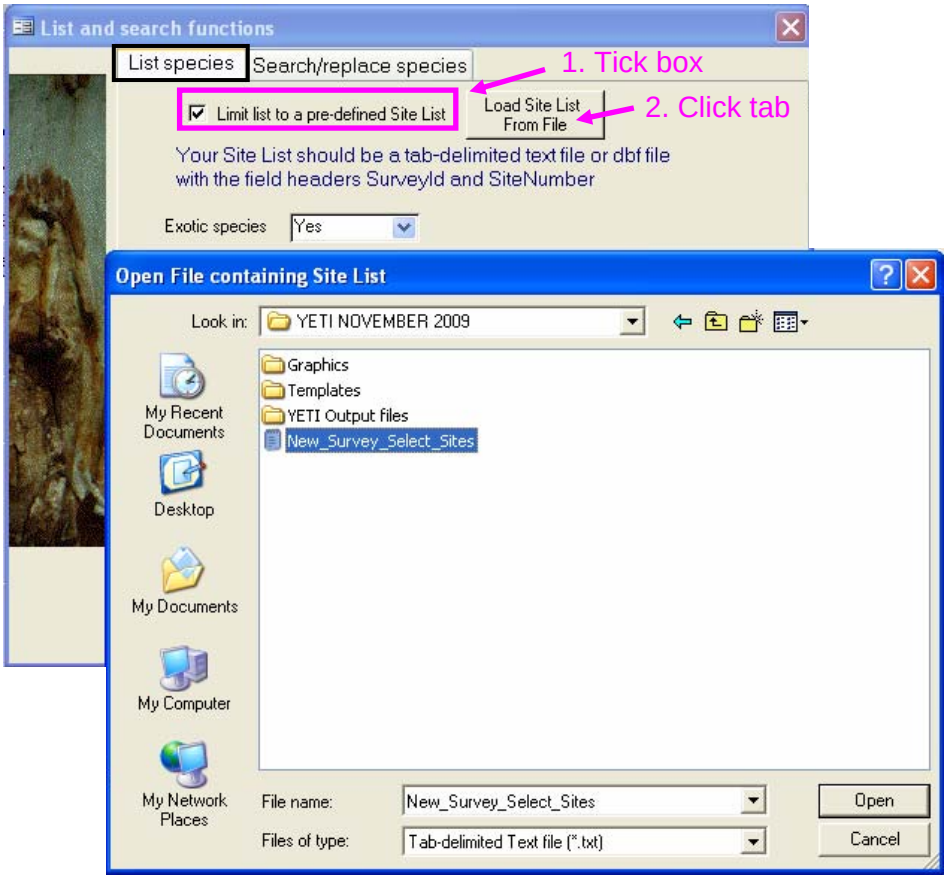


3. Creating a species list or searching for a species. (*Note: you can also do this from within **Survey Database Work Session** window. In both cases searches and lists are generated, by default, from all sites within the active survey*).

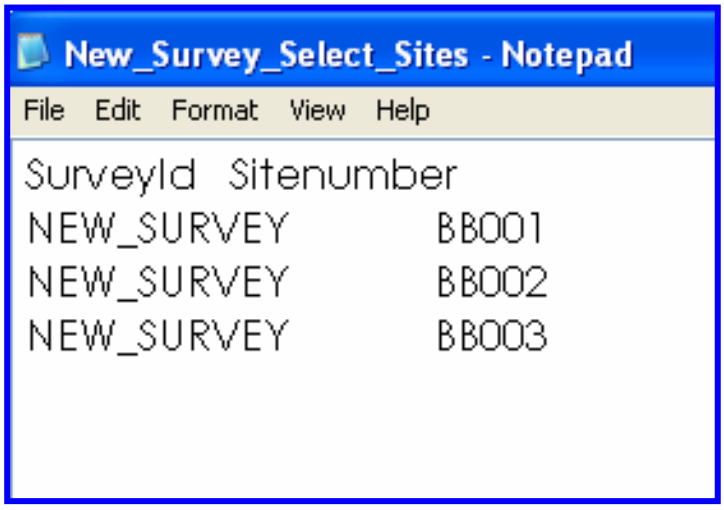
Click on the **Search** button to open **List and Search Function** window:



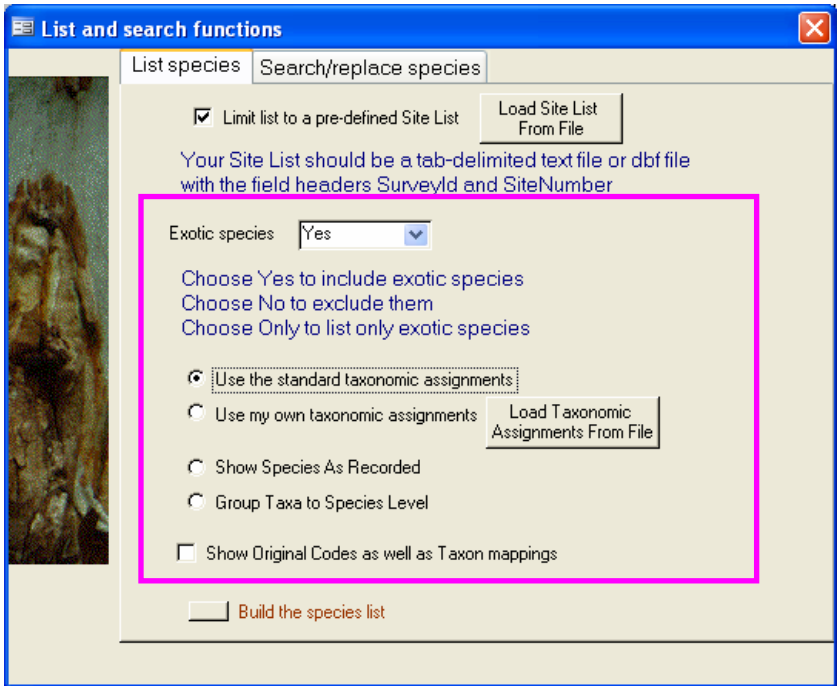
To generate a species list, click the **List Species** tab. By default, the species list is generated from all the sites in the active survey. You can also limit the search to specific sites, which requires that a tab delimited text file (e.g. Notepad) or dbf file be previously created. Such files can be stored anywhere, however keeping them near your template and graphics folders may be convenient.



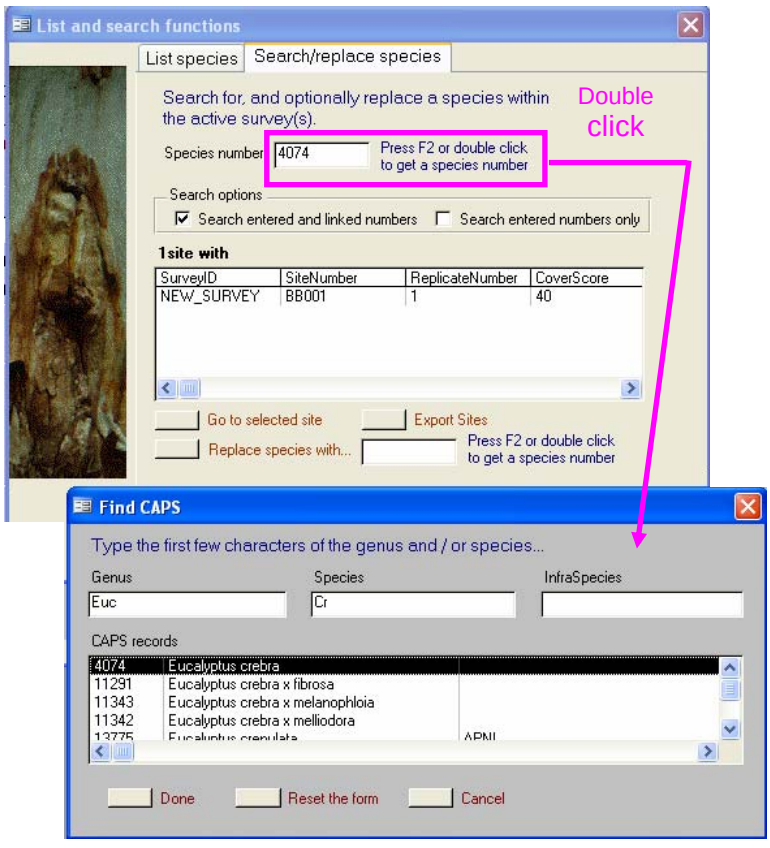
Files should have field headers **SurveyId** and **SiteNumber**. The example below is a Notepad file called **New_Survey_Select**_Sites listing sites **BB001, BB002** and **BB003** in the Survey **NEW_SURVEY**:



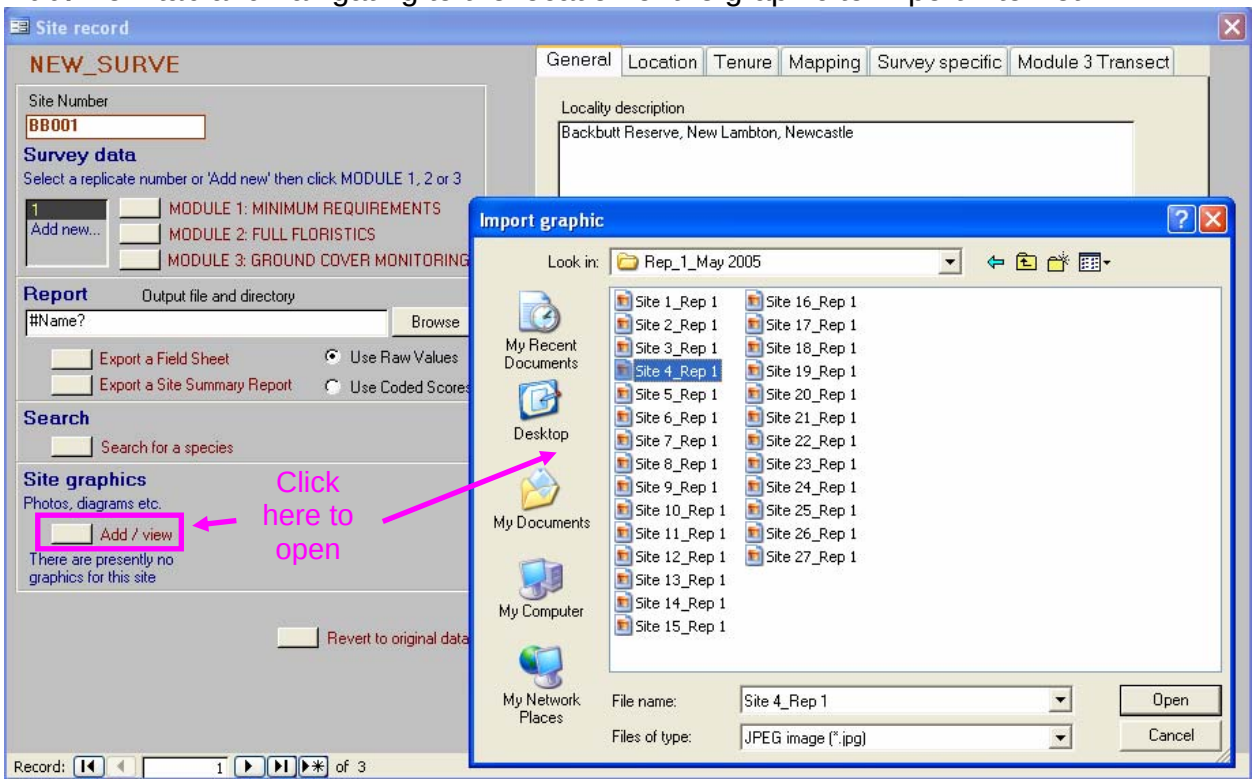
In the **List and Search Function** window, you can also select whether you want to include all species, only native species or only exotic species in your list. You can also choose the taxonomic assignment of the species list output. Options shown below:



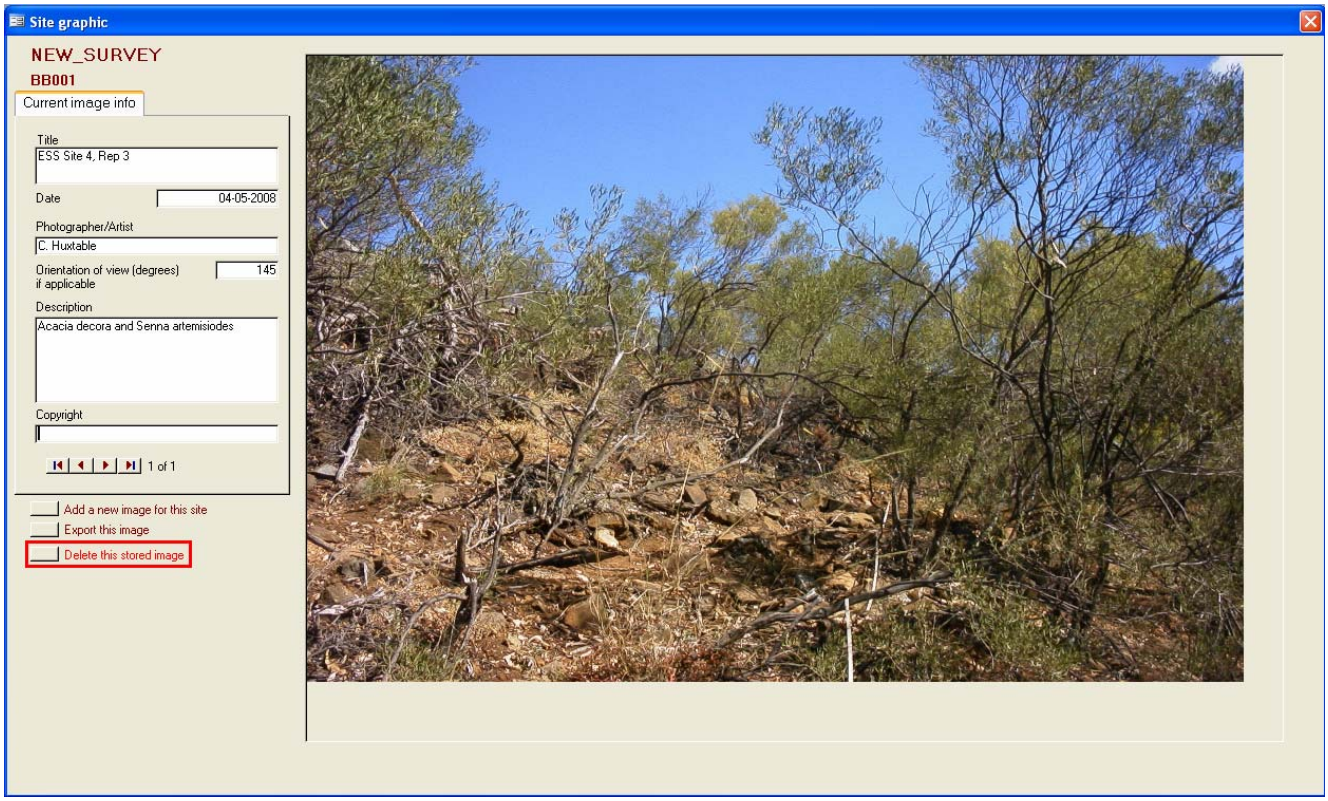
If you want to search for a species or rename a species, click on the **Search/Replace** tab. Either type in CAPS number or double-click to search for which species you are to search. You can then choose to go to a site with the selected species and/or replace the species with another. This may occur where a misidentification needs to be corrected.



4. Add or view site graphics.
You can add or view site graphics such as a photo by clicking on the **Site Graphics Add/View** tab and navigating to the location of the graphic to import into Yeti:



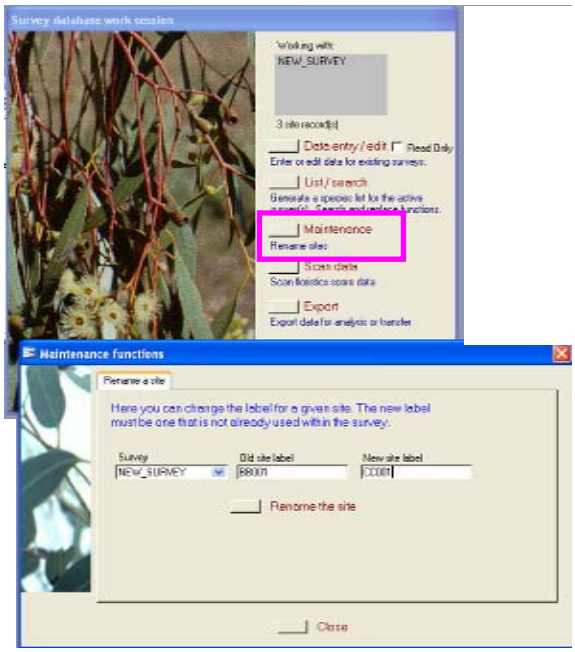
When graphic is imported, you can add image information as below. You can also add a new image for the active site or export the image by clicking the appropriate tab.



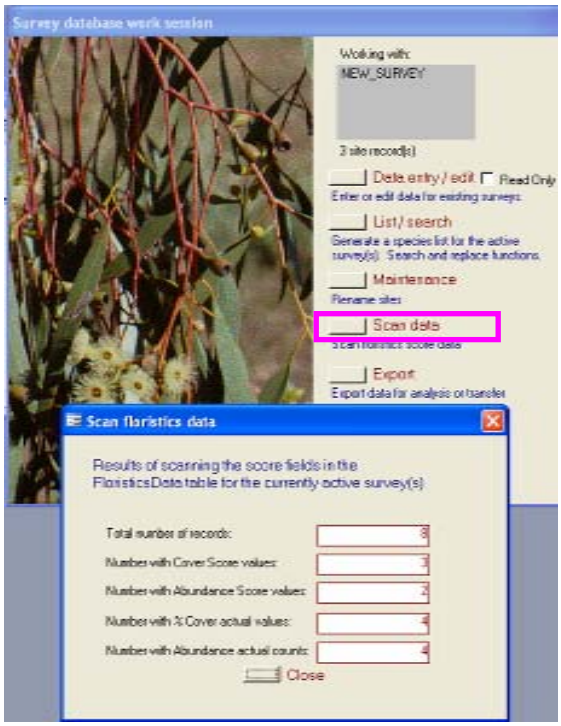
5.7 Other operations within a work session

1. List/Search – see **Other Functions While Operating Within Site Records: Section 3**

2. Maintenance
You can change the name of a site by clicking on the **Maintenance** tab, entering details as shown in example below and clicking **Rename the site** button.

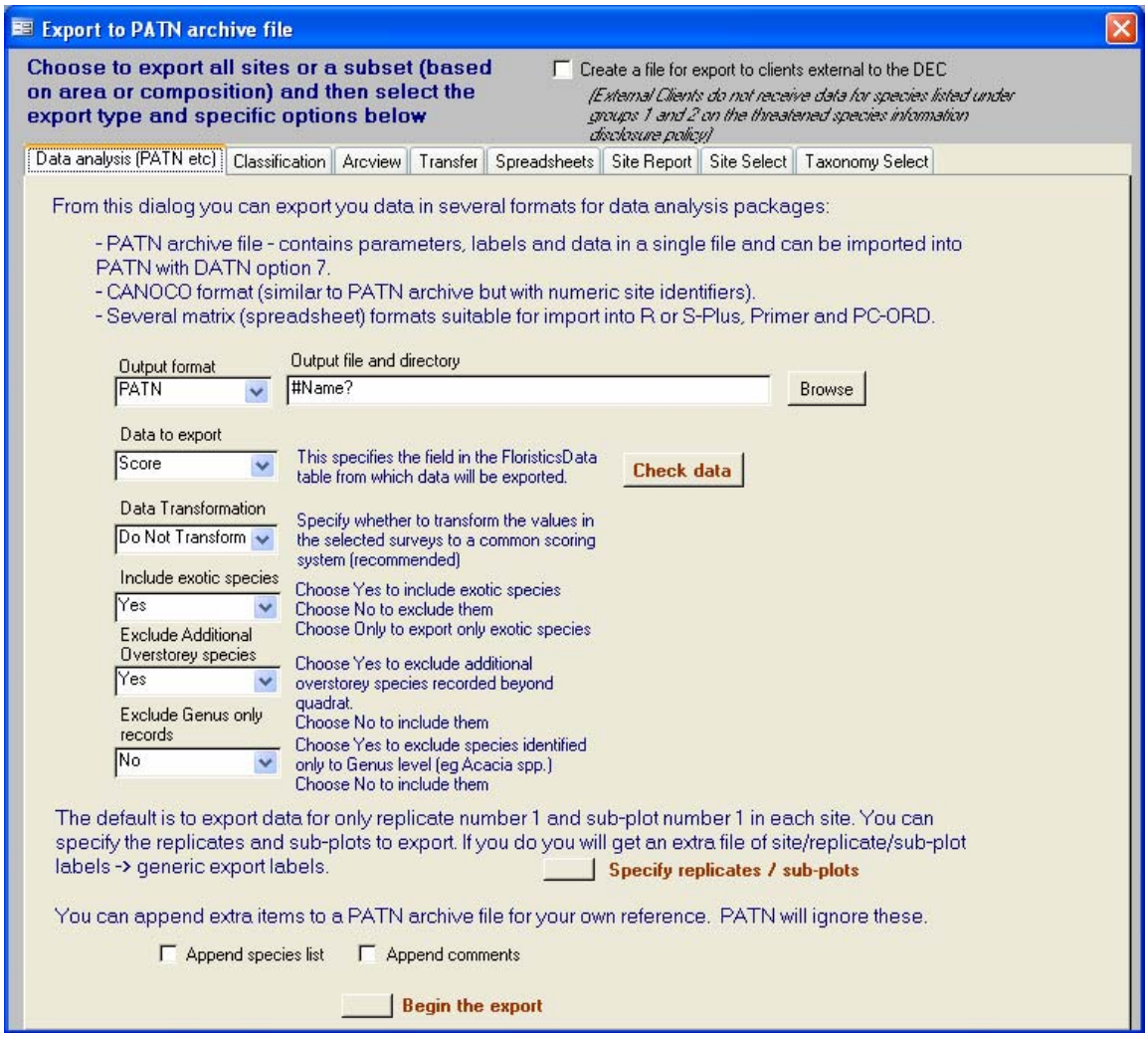


3. Scan Data: You can quickly check some simple statistics of the data in the active survey by clicking on the **Scan Data** button:



6. Export Data from YETI

There are a range of ways that you can export data from YETI. In the **Survey Database Work Session** window, click on the **Export** button (see frame above). The following window will open:



This window gives you various options for exporting data in a range of formats including:

- Data analysis – formats for PATN, R or S-Plus, Primer, PC-Ord and CANOCO
- Export data using a pre-defined Classification system
- Export Database IV file for ArcView GIS
- Export data in a tab-delimited TFV file that can be exported into another copy of YETI
- Export data into an Excel spreadsheet
- Export all Field Sheets and/or Site Summary Reports for an entire survey
- Site Select dialog limits the sites used in all export functions based on an area of interest or a predefined list
- Taxonomy select dialog allows you to select the taxonomic assignment that you want to apply to the output. Includes an option for using your own predefined taxon assignment, which is accessed from a file previously created.