

# Viridans FIS-VFD Tutorial 13

## Task:

### Enter data for local species list.

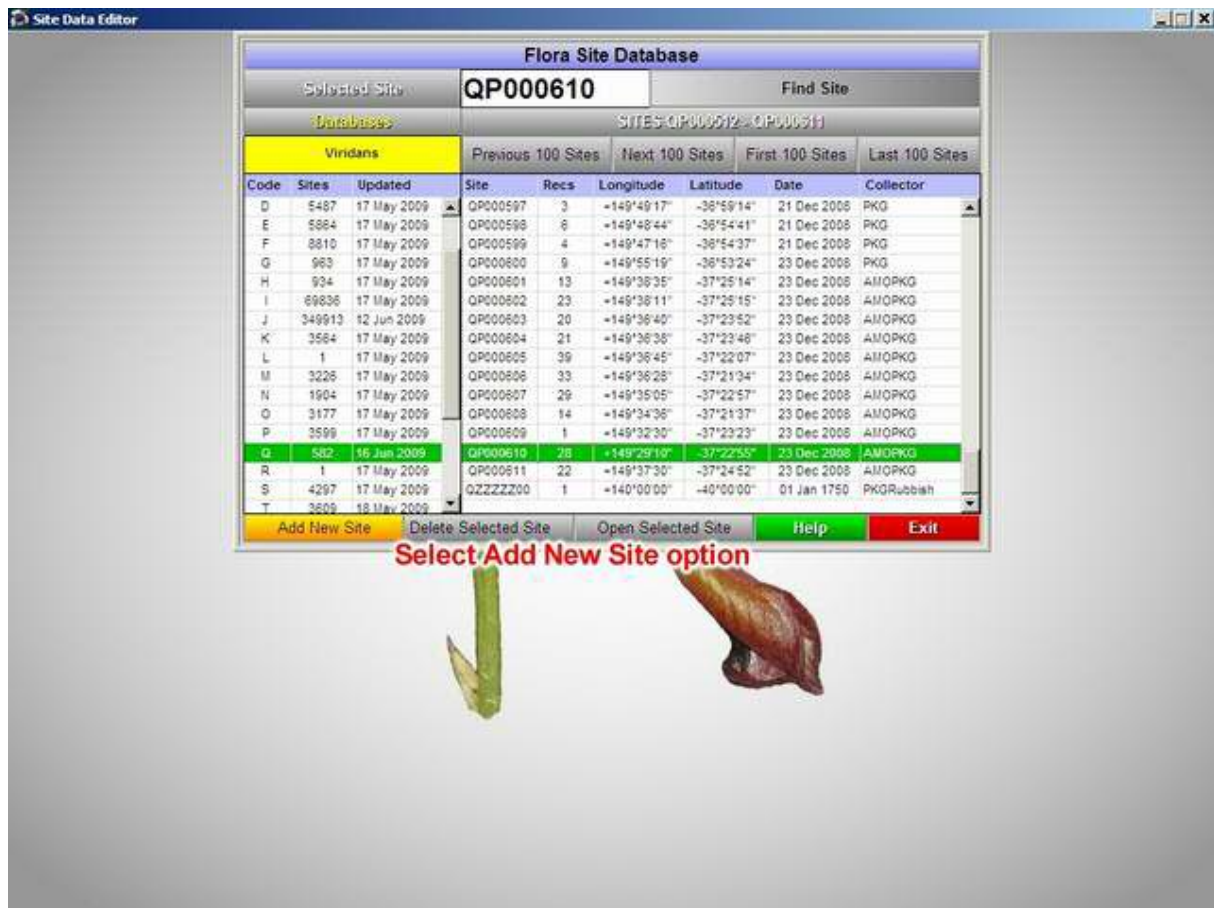
- Use data which has been created on a recording sheet (see Tutorial 12) and enter that data into the FIS.

## Botanical Data Entry:

Tutorial 12 outlined the method for generating a recording sheet that can be used for botanical data collection. The advantage of this sheet is that it can hold many plant names (each with a unique 9-character abbreviation) and their 4-digit codes. This means that the user does not need to write down plant names on the sheet (so data recording is more accurate and rapid) and that subsequent data entry can use the 4-digit codes rather than names, which is also faster.

The following tutorial will take the user through a typical data entry task.





The first screen of the data entry program shows a two-part table. The panel on the left is a list of each of the lettered databases along with the number of sites in each and the most recent date for additions or corrections. The panel on the right shows the first hundred sites in the highlighted database along with the number of species in each, the date of collection and the collector's code.

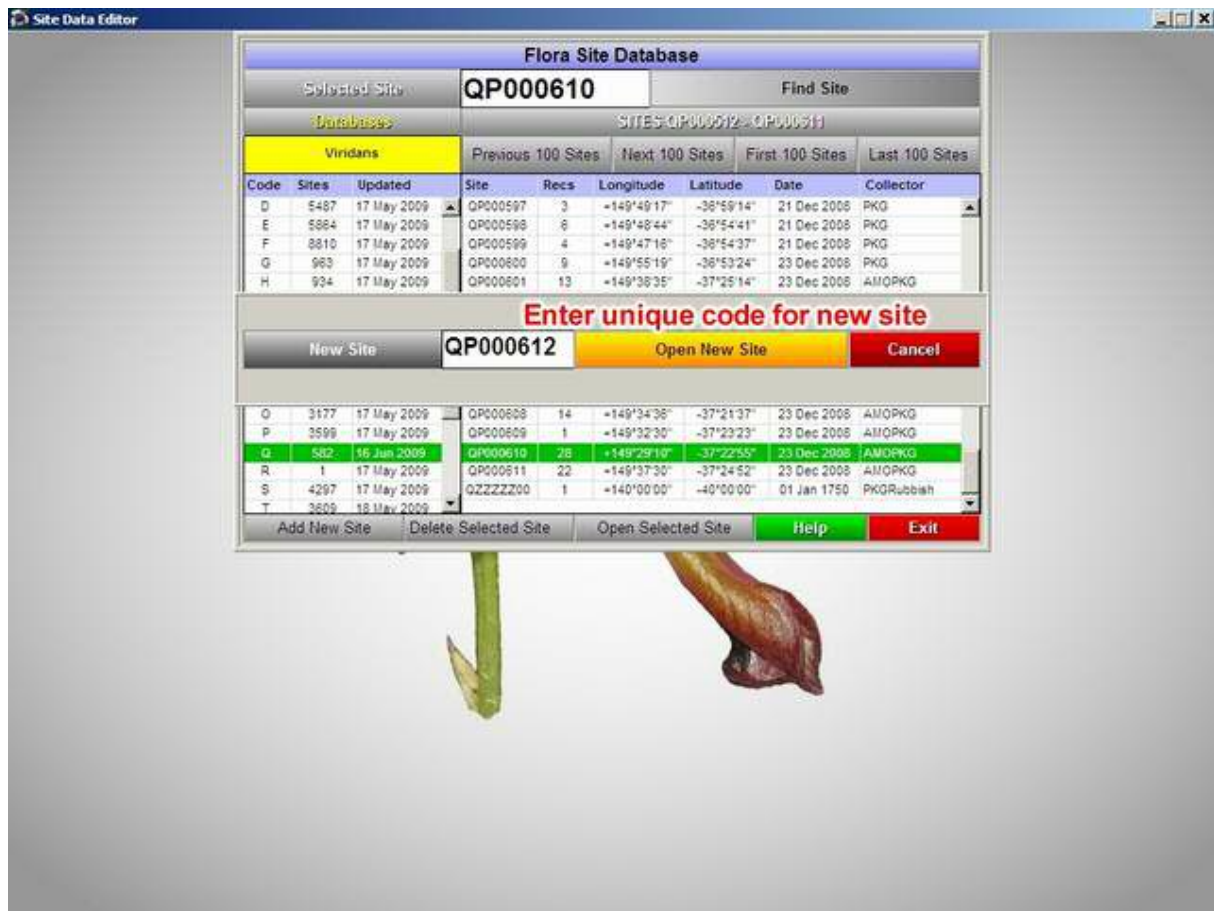
The ID for each species list or survey quadrat is always an 8-character code beginning with a letter. The individual letters refer to types of data and the DSE botanical survey groups should assign codes for users so that incoming data are unique. The available letter codes for users outside of DSE are M, N and O for quadrat survey data (from western Victoria, Melbourne Bays, and eastern Victoria), S, T and U for definable area lists, and I for incidental records.

**Quadrats** are standard, measured areas (often circles or squares with sides of 10 m or so) for data collection from which all species are identified and given a cover value. They are normally collected as part of a vegetation survey.

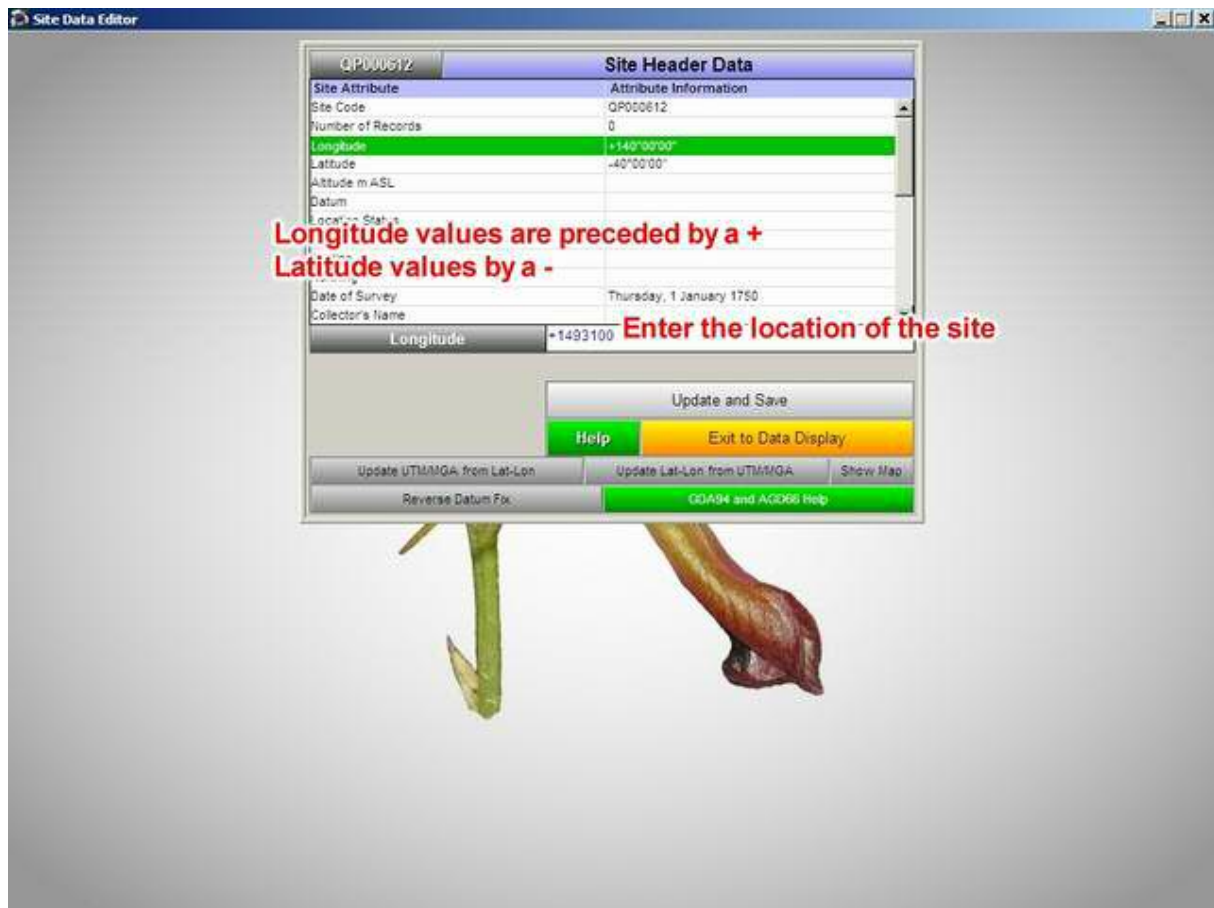
**Definable Area Lists** are lists of plants from any area which can be defined on a map (a small reserve, a paddock, a roadside verge). The lists are not necessarily complete, the area is not necessarily measured to any degree of accuracy, and cover values are usually not assigned.

**Incidental Records** may consist of a location for a single species or a small number of species. Typical data are locations for trees on roadsides, specific weeds in paddocks, rare species anywhere. Cover values are seldom assigned and a full list of associated species is not included.

The process for adding a new site to the FIS starts with clicking the **Add New Site** button. (If you wish to alter a site already in the database you click the **Open Selected Site** button, or if you wish to remove an entire site click the **Delete Selected Site** button).



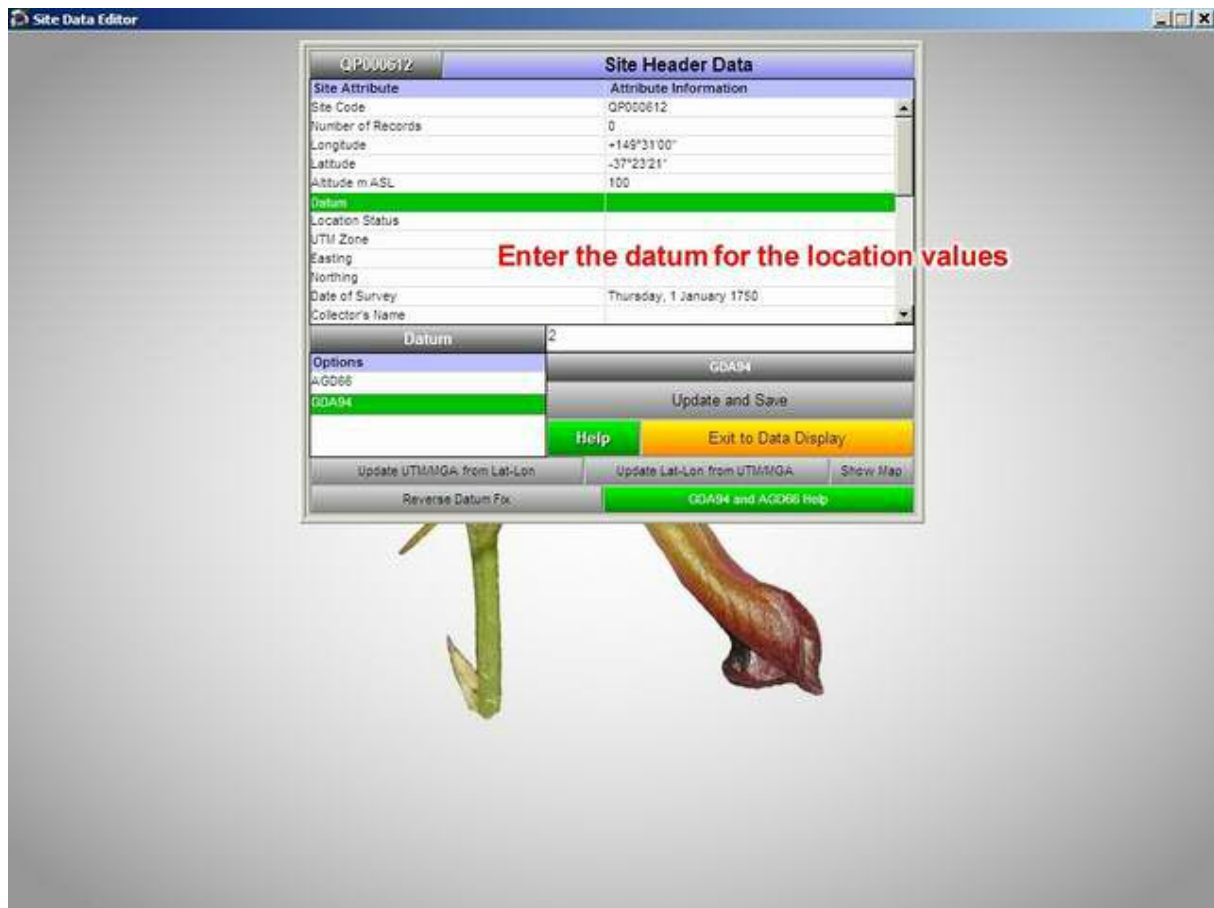
If the site is already in the database you will be prompted to enter another code.



An empty site file will be created with the ID code just entered and a default location (the south-western corner of the mapped region for the database) and a default date (January 1<sup>st</sup>, 19750). You may not change the site ID at this stage (although you may exit the program and delete the site later on) but you must change the location data, the date and add the datum, the location accuracy and a collectors code.

The default location is in longitude and latitude, both represented as degrees, minutes and seconds - without breaks- and with longitude preceded by a + and latitude with -. Each longitude must include seven digits and latitude must include six. That is, even if the minutes or seconds are single digits you must add preceding zero. For example, **145° 1' 2"** and **37°10'** must be written as **+1450102** and **-371000**.

You may also enter the location as an MGA (Map Grid of Australia) value but this should include a complete six-digit easting, seven-digit northing and the zone. After this location has been entered you must also click the **Update Lat-Lon from UTM/MGA** button so that the Latitude and Longitude fields are filled.



## AGD66 and GDA94 - Australian Mapping Datum

Most printed maps in Australia use as their datum a standard established in 1966 called **AGD66** (Australian Geodetic Datum 1966). This works well for navigation within Australia and provides useful and accurate location data for both Latitude-Longitude readings and Transverse Mercator coordinates (AMG - Australian Map Grid). **(Note: This is a mandatory field).**

### Not a World Standard

This datum does not, however, conform precisely to international systems and differs from UTM coordinates (*Universal Transverse Mercator - based on the World Geodetic System 1984 or **WGS84***) used by air and sea navigational equipment and most Global Positioning Systems (GPS) by about 200 m.

### How it Affects Mapping

This means that if you use a GPS set to WGS84 (*which is the default for most GPSs*) for determining your geographic location and then plot that point on one of the older, printed topographic maps, the point will be placed about 120 m to the **east** and 170 m to the **north** of where it should be. Conversely if you use a printed map to determine the geographic location and plot that point on a map using the WGS84 datum it will be placed about 120 m to the **west** and 170 m to the **south** of where it should be.

### The GDA94 Solution

The Geocentric Datum of Australia 1994 (**GDA94**) was established to correct this discrepancy and it conforms almost completely to the WGS84 datum. Viridans software is now using GDA94 as the basis for its maps and site locations so it is

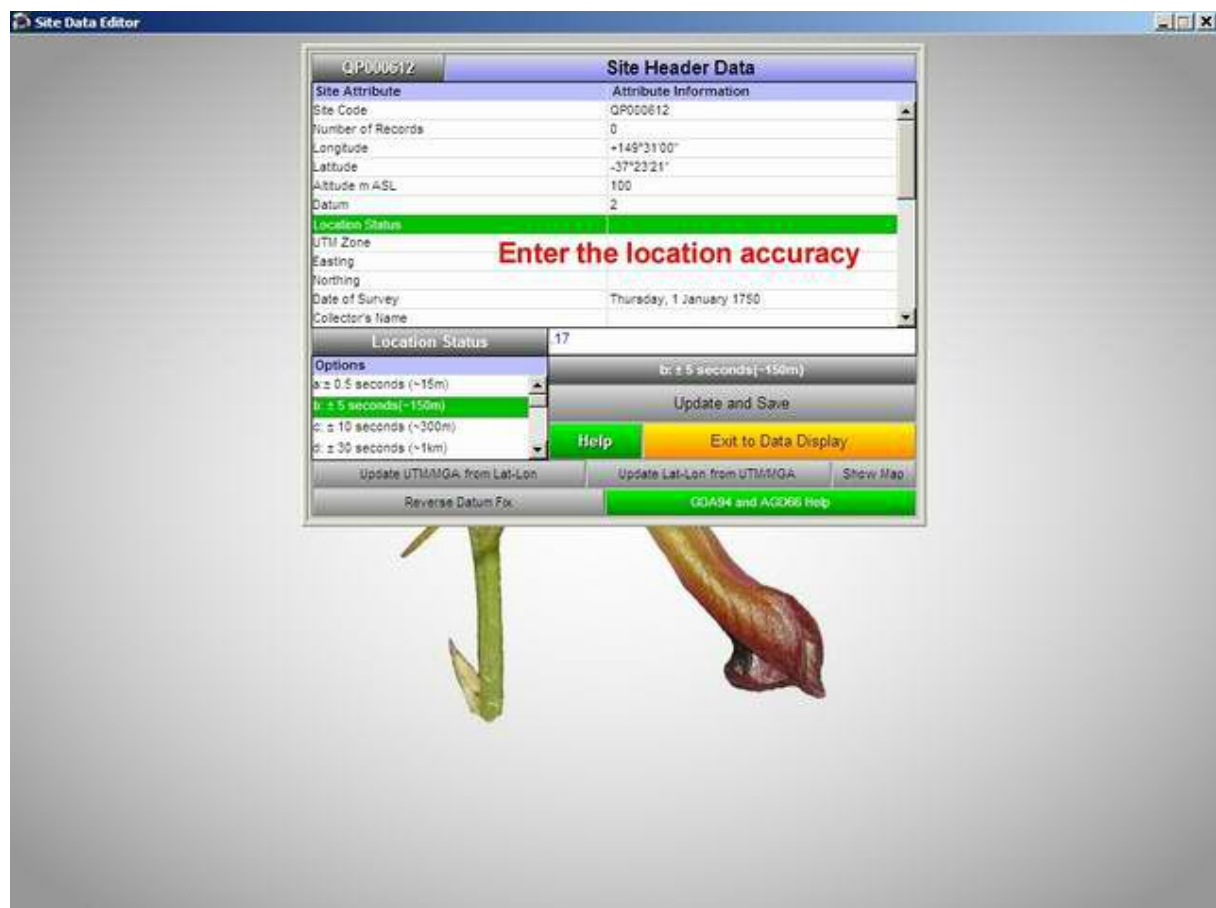
necessary for all users who are entering or editing site data to know which datum was used for any site location.

### Conversion from AGD66 to GDA94

If your location data is based on AGD66 (e.g. you determined it from an older topographic map) then you should select that option in the **Datum** field. When the site data is saved the software will convert the location data from AGD66 to GDA94 and change the **Datum** field to GDA94.

### Correcting Mistakes

If you, or someone else, has made a mistake with a data entry and have registered a site as an AGD66 location when in fact it was located using GDA94, the site will be plotted on maps about 200 m to the north-east of where it should be. You may reverse the process by clicking the **Reverse Datum Fix** button and the location will be corrected.



Each site must be recorded with regard to the accuracy of its location and the size of the collecting area. If the area where a species list is made is, for example 4 hectares in area, the accuracy of the location must take that into account and a location accuracy value of 'b' (5 seconds [~150 m]) should be used. If the method of locating the site was one which used a low-resolution map (e.g. 1:250,000 scale) then that would mean a lower accuracy. If the site was located using a modern GPS or a 1:25,000 scale topographic map, and the collecting area was small (e.g. less than 0.5 ha), then the best site accuracy 'a' (0.5 seconds [~15m]) is appropriate. **(Note: This is a mandatory field).**

Site Data Editor

QP000612 Site Header Data

Site Attribute	Attribute Information
Site Code	QP000612
Number of Records	0
Longitude	+149°31'00"
Latitude	-37°23'21"
Altitude m ASL	100
Datum	2
Location Status	.17
UTM Zone	55
Easting	722797
Northing	5555968
Date of Survey	Thursday, 1 January 1750
Collector's Name	


Date of Survey: 23/12/2008

**Enter the collection date in the format dd/mm/yyyy** Update and Save

Help Exit to Data Display

Update UTM/MGA from Lat-Lon Update Lat-Lon from UTM/MGA Show Map

Reverse Datum Fix. QDA94 and AGD86 Help



Site Data Editor

QP000612 Site Header Data

Site Attribute	Attribute Information
Number of Records	0
Longitude	+149°31'00"
Latitude	-37°23'21"
Altitude m ASL	100
Datum	2
Location Status	.17
UTM Zone	55
Easting	722797
Northing	5555968
Date of Survey	Tuesday
Collector's Name	AMOPKG

Collector's Name: AMOPKG

Options: AA Anne Opie and Paul Gullan

AAA Paul Gullan  
AA Anne Opie and Paul Gullan  
A Bould  
A Thatcher


Update and Save

Help Exit to Data Display

Update UTM/MGA from Lat-Lon Update Lat-Lon from UTM/MGA Show Map

Reverse Datum Fix. QDA94 and AGD86 Help

**Enter a short code for the collector(s)**



Site Data Editor

QP000612 **Site Header Data**

Site Attribute	Attribute Information
Number of Records	0
Longitude	+149°31'00"
Latitude	-37°23'21"
Altitude m ASL	100
Datum	2
Location Status	.17
UTM Zone	55
Easting	722797
Northing	5858988
Date of Survey	Tuesday, 23 December 2008
Collector's Name	AMOPKG
Site Area m2	

Collector's Name: AMOPKG

Options: AA Anne Opie and Paul Gullan

AAA Paul Gullan

AA Anne Opie

A Bould

A Thatcher

Update

Show Map

**Click Exit to Data Display (big gold button)**

**Missing or Incorrect Data**

POTENTIAL DATA DEFICIENCIES FOR THIS RECORDING SITE  
Site has no AREA defined.

OK

**If important information is left out you will be prompted**

**If mandatory information is left out (e.g. datum, location accuracy) you will not be allowed to proceed.**

Site Data Editor

Site Code	NumRec	Longitude	Latitude	UTM Zone	Easting	Northing	Altitude m ASL	Date of Survey	Vegetation	Site Area
QP000612	0	+149°31'00"	-37°23'21"	55	722797	5858988	100	23-Dec-2008		

Edit Header Show Map Show Site Photos

Sp.Code	N	S	O	Scientific Name	Common Name	C/A
---------	---	---	---	-----------------	-------------	-----

Sort By:  Species Code  Scientific Name  Common Name

**Click Add New Record**

Edit Selected Record Delete Selected Record Add New Record Check Records Help Exit

**Once the required header information has been entered you may now add a list of species found at the site**

Site Data Editor

QP000612 Species Data

Record Attribute	Field Name	Field Information
Site Code	QUADD	QP000612
Species Code	SPECNIUM	9910
Abundance	COVERABUND	-

Enter the numeric code for the first species in your list (this should be on your recording sheet)

Species Code 1249

Add Record Update and Save


Help Return and Confirm Cancel

Latin Name Eucalyptus baueriana Next Latin

Common Name Blue Box

Number of Records in Site 0 Get Species

Check that the name appearing here corresponds to the abbreviation on your recording sheet



Site Data Editor

QP000612 Species Data

Record Attribute	Field Name	Field Information
Site Code	QUADD	QP000612
Species Code	SPECNIUM	1249
Abundance	COVERABUND	+

Select a cover value from the options (if you don't have a value choose +)

Abundance 2

Options

- Cover <1%
- 1 Cover 1-5%
- 2 Cover 5-25%
- 3 Cover 25-50%
- 4 Cover 50-75%
- 5 Cover 75-95%
- 6 Cover 95-100%
- 7 Cover 5-25%

Add Record Update and Save


Help Return and Confirm Cancel

Latin Name Eucalyptus baueriana Next Latin

Common Name Blue Box Previous Latin

Number of Records in Site 0 Get Species Next Common

Previous Common



Site Data Editor

QP000612 Species Data

Record Attribute	Field Name	Field Information
Site Code	QUADD	QP000612
Species Code	SPECNUM	0025
Abundance	COVERABUND	+

**Continue adding species  
There is no maximum or minimum number**


Abundance: 1

Options: 1 Cover 1-5%

Buttons: Add Record, Update and Save, Help, Return and Confirm, Cancel

Latin Name: Acacia dealbata  
Common Name: Silver Wattle  
Number of Records in Site: 1

**Click Return and Confirm when you are done**



Site Data Editor

Site Code	NumRec	Longitude	Latitude	UTM Zone	Easting	Northing	Altitude m ASL	Date of Survey	Vegetation	Site Area
QP000612	2	+149°31'00"	-37°23'21"	55	722797	5858988	100	23-Dec-2008		

Buttons: Edit Header, Show Map, Show Site Photos

Sp.Code	N	S	O	Scientific Name	Common Name	C/A
0025				Acacia dealbata	Silver Wattle	+
1248				Eucalyptus baueriana	Blue Box	2

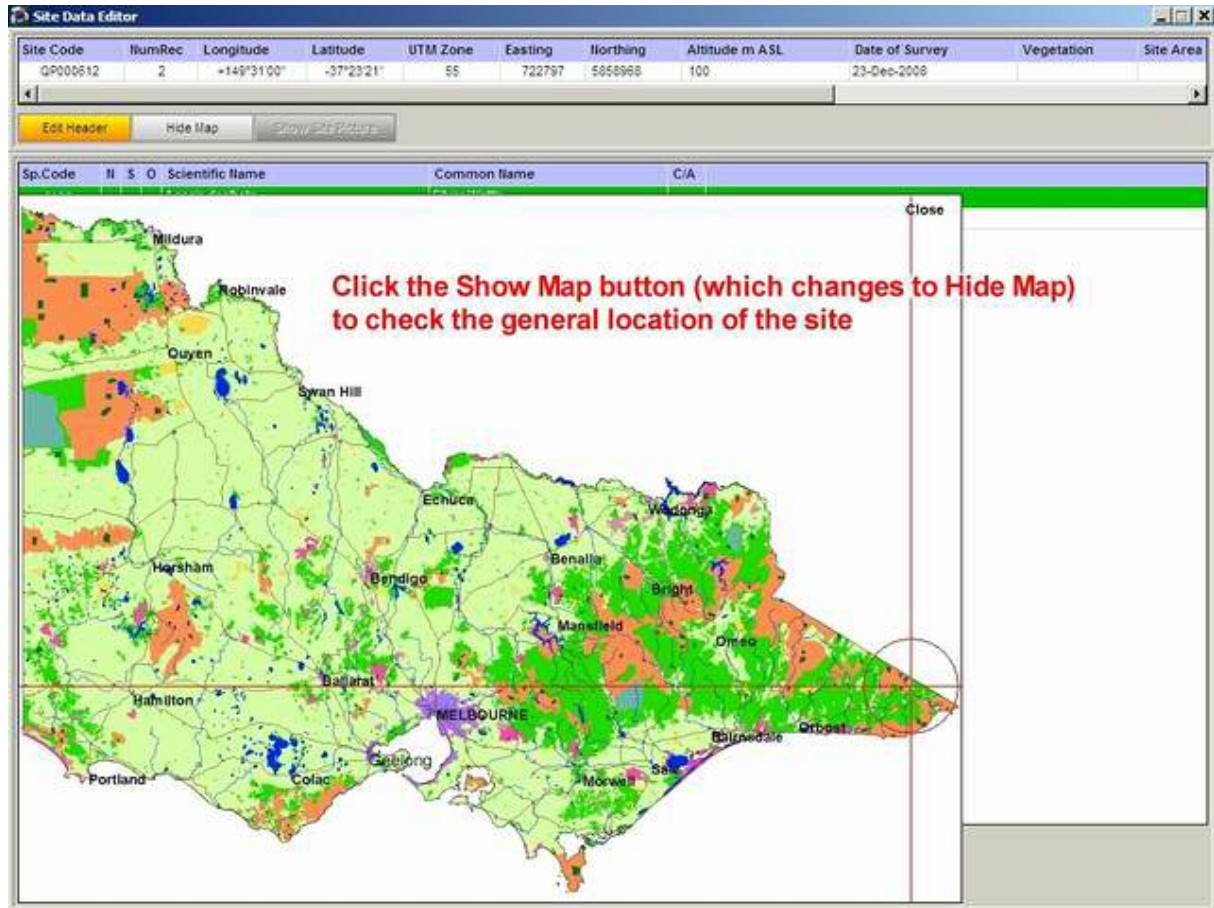
**You may add (or delete) species at any time  
You may alter the species codes  
You may check the location data and edit other header information**

Sort By:  Species Code  Scientific Name  Common Name

**When you are satisfied click the Exit button**

Buttons: Edit Selected Record, Delete Selected Record, Add New Record, Check Record, Help, Exit

At any point in the data entry process the user may check the data that has been entered and alter it if necessary. For example, for the data display screen you may click on the **Show Map** button which will display a low-resolution map with the current site plotted. This should be enough to determine whether the location is at least in the correct part of the state (a common location error comes from miscoding a degree value, e.g. entering 142° instead of 145° will cause an error of nearly 300 km).



The alterations can be made at any time and the user can exit from the program and return to it later for alterations, additions or deletions.