



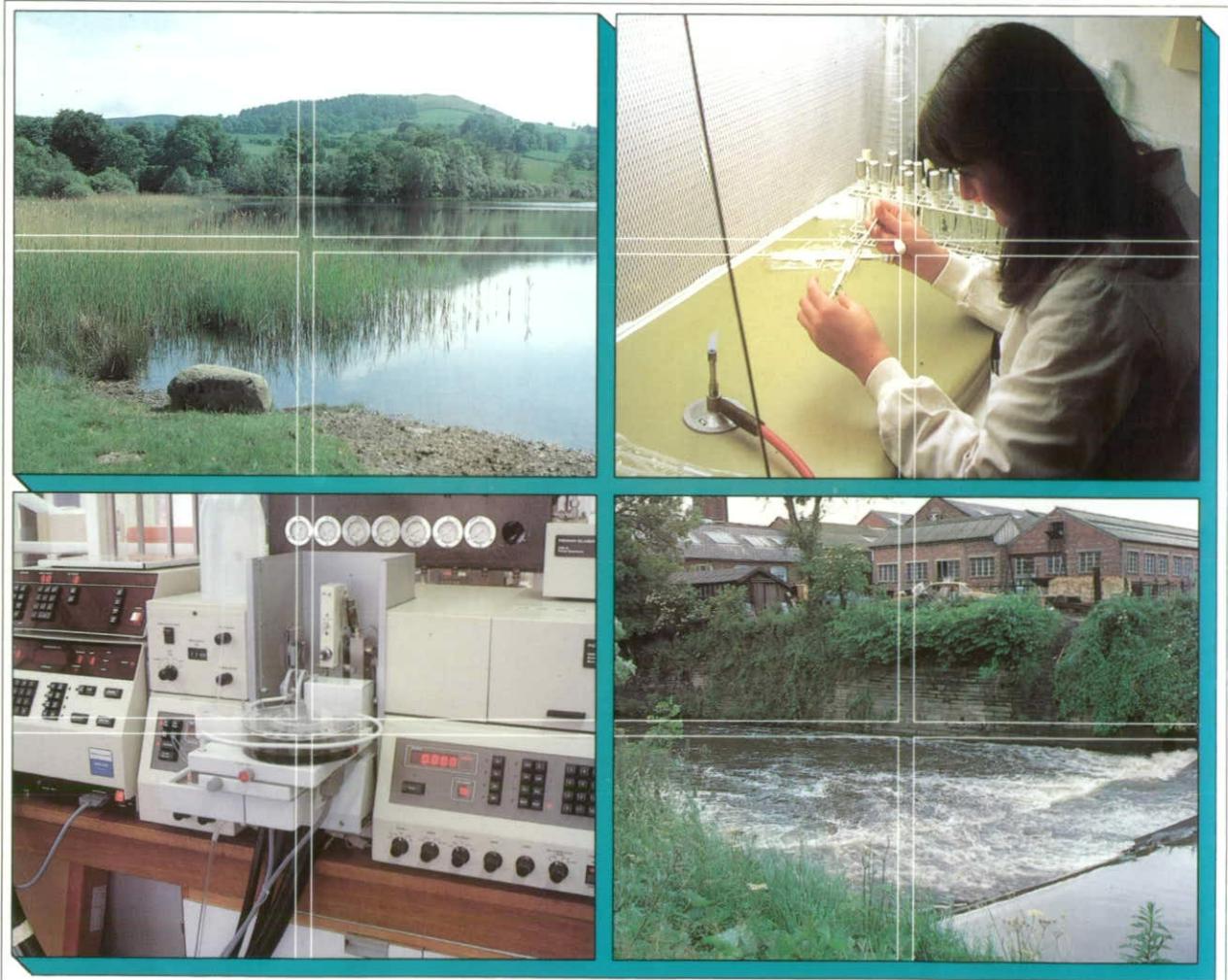
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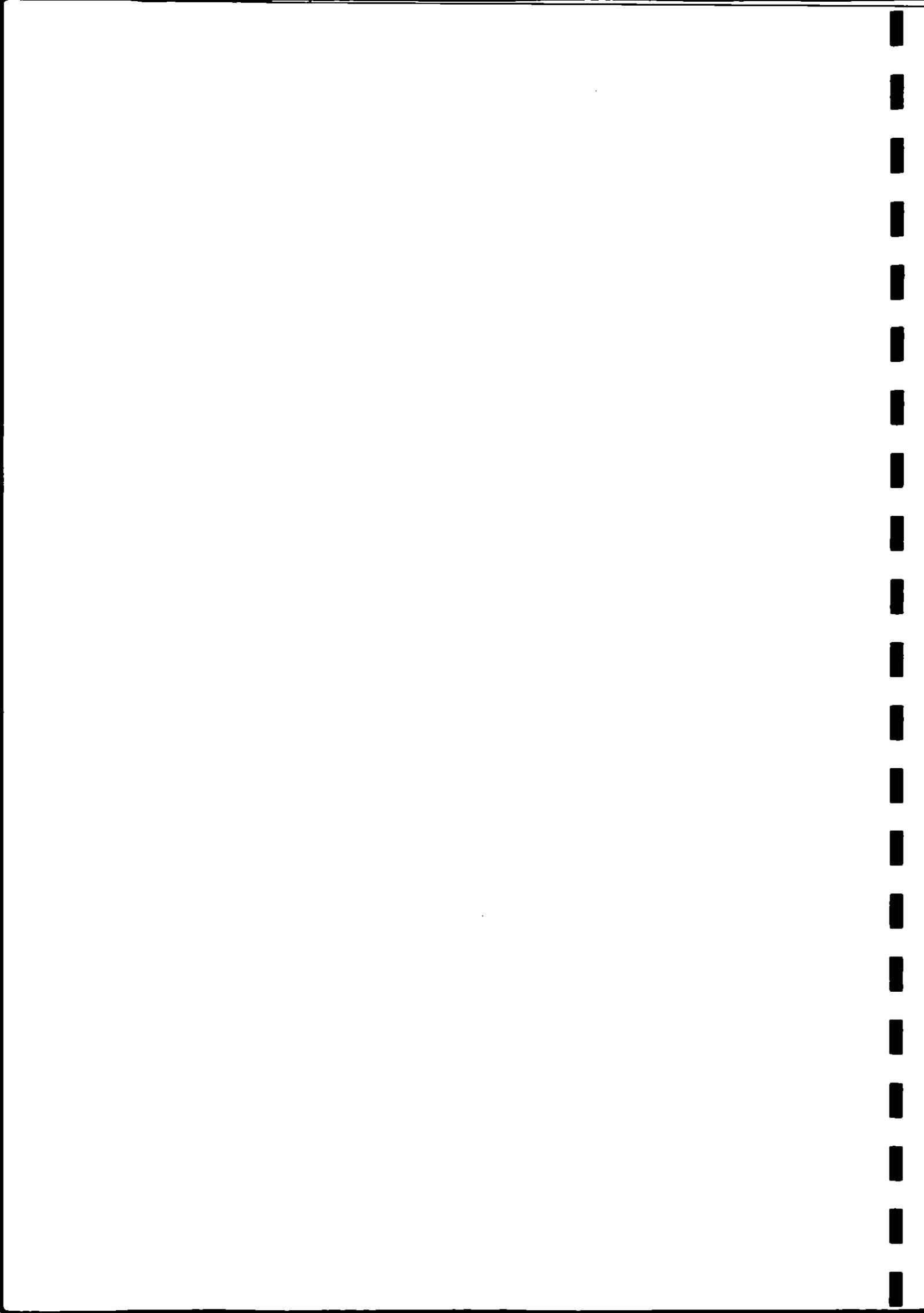
# River Habitat Survey Presentation Software Manual

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Report to:  
Report Reference No:

Environment Agency  
T04073H4/13







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**Centre for  
Ecology &  
Hydrology**

Institute of Freshwater Ecology  
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## **1. INTRODUCTION TO THE RIVER HABITAT SURVEY PRESENTATION SOFTWARE.**

The river habitat presentation software has been produced by the Institute of Freshwater Ecology for the Environment Agency, to provide a user friendly method of accessing the River Habitat Survey (RHS) database. The software is supplied on a CD-ROM which includes data from all the reference surveys completed during 1994-96 (4569 sites in England and Wales and an additional 779 from Scotland and 266 from Northern Ireland) as well as benchmark site surveys, overseas sites and surveys completed in the UK for various other purposes (catchment surveys, fisheries surveys etc.).

Using the RHS software it is possible to view the full survey data from any of the sites in the database, together with a photograph, and to extract and analyse data in a variety of forms. The program also allows the user to make sub-selections of the database using a criteria selector. These selections can include several clauses and the subsets of data can be plotted, output or compared with the full national coverage to aid analysis (selection clauses can be stored for later use and copied to other user groups).

### **1.1 Purpose of manual**

The purpose of this manual is to provide a brief introduction to using the software, via the Quick Tour (chapter 3) and also to provide a detailed reference of the features and options available (chapter 4). The software is designed to be as intuitive as possible to use and it is unlikely that the experienced user will need to refer to this manual, particularly as on-line help is also available when using the software (with Tooltips, Help and the glossary as well as the right mouse button)

### **1.2 Requirements for Software.**

The software requires an IBM compatible PC with a CD-ROM, running Windows 3.x, Windows 95 or better. Installation takes a minimum of 20Mb of hard disk space, but it is recommended that at least 25Mb is free to allow for insertion of additional data.

It is also recommended that the PC has at least 8Mb of RAM and is capable of running in 800 x 600 resolution with more than 256 colours otherwise the quality of the photograph images will be reduced.

## 2. INSTALLATION OF THE SOFTWARE.

These instructions apply to new installations of the River Habitat Software, and to upgrades of older versions.

(Note: The CD ROM drive is assumed to be D: on your machine. If it is another letter then substitute this for D: in the instructions.)

- a) Insert the CD ROM into the drive.  
Windows 3.x users; Select Run from the File menu on the menu bar of Program Manager.  
Windows 95 users; Select Run from the Start menu.
- b) Type D:\setup.exe and *click* the <OK> button.
- c) The set-up is controlled by InstallShield™ which provides straight forward on screen instructions to follow.
- d) At the Welcome screen *click* <Next> to continue the installation.
- e) Enter your name and company in the fields provided and *click* <Next>.
- f) To copy the files to a directory other than the default (C:\Rivhab) *click* <Browse>. *Click* <Next> to use the default directory or once you have changed the destination.
- g) Select a typical, compact or custom installation. The typical installation is recommended unless you have limited hard drive space (choose compact) or want to select which features to install (choose custom). *Click* <Next> to accept choice.
- h) Select the program folder from those listed or create a new one by typing in a different name and then *click* <Next>. (Note: This can take between 30 seconds and three minutes at the moment. We are currently resolving this delay.)
- i) The next screen displays the information you have entered so far. If it is all correct *click* <Next> to proceed with the copying, otherwise *click* <Back> to change details. (If you are replacing an older version of RivHab or updating the Borland engine an error message will appear during this process, just click okay as it does not affect the running of the software.)
- j) When the set-up is complete you can start the River Habitat software immediately by clicking with the left mouse button (LMB) to check the 'Yes, launch program' box and *clicking* on <Finish>, otherwise just *click* <Finish> to return to Windows.

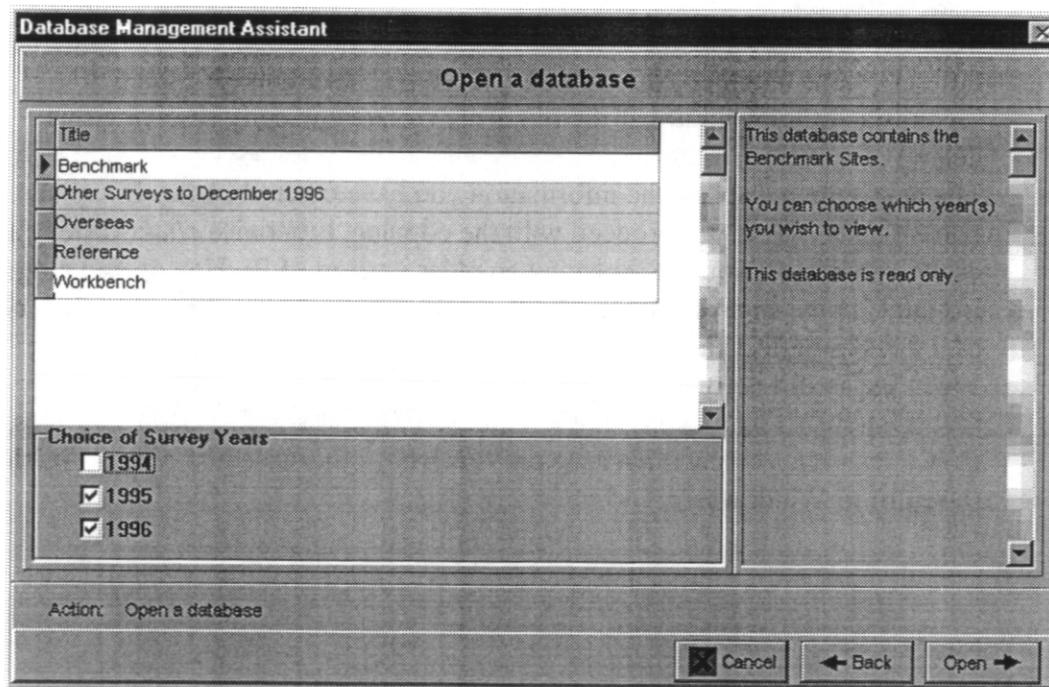
### 3. QUICK TOUR OF RIVER HABITATS PRESENTATION SOFTWARE.

This chapter provides a brief tour of the major features of the RHS presentation software using examples. Follow the instructions in italics to get the most from this chapter.

To begin the River Habitats Software *double click on the icon;*



Accept the terms and conditions and the first screen opens. This screen presents the option to open a database or a standard selection or to create a new database. *Click with the left mouse button (LMB) to check the <Open database> option and click <Next>.* The next screen is the Database Management Assistant (Figure 1) from where a database to use in the software is selected. *Select the reference database and make sure 1995 and 1996 are selected at the bottom of the screen as shown in Figure 1.*



**Figure 1. The Database Management Assistant window, used to select which database to work with.**

To enter the database *click the <Open selected database> button.* The reference database will be opened with the site notebook open, displaying Section A Site

Figure 2. The RHS screen when first opened. Site Notebook is open to Section A.

The RHS database includes photographs of each site. *Click the photograph icon;* 

A picture will be displayed (Figure 3). To enlarge the photograph to fill the full window press



When additional photographs are available for the site they can be viewed using  to move forward and  to move backwards.

## Quick Tour

Location Details (Figure 2). To view the other details for the current site simply *click* the file card corresponding to the section required, e.g. M Artificial Features.

The river name, site number and year of survey for the current site are displayed at the top of the notebook at all times (Figure 2). Details of the current database in use and any selections in operation are displayed in the bottom left of the screen. The icons along the top of the screen allow access to the other aspects of the software, such as site selection, mapping of data and production of reports (these will be explored in detail in chapter 4).

To view the next site in the database use the site navigation buttons in the bottom right of the screen (Figure 2). The  button will advance one site at a time whilst the  button will advance to the end of the database. (The equivalent buttons are available for moving backwards in the database). *Use the navigation button to advance to site number 2002.*

## Quick Tour

Location Details (Figure 2). To view the other details for the current site simply *click* the file card corresponding to the section required, e.g. M Artificial Features.

The river name, site number and year of survey for the current site are displayed at the top of the notebook at all times (Figure 2). Details of the current database in use and any selections in operation are displayed in the bottom left of the screen. The icons along the top of the screen allow access to the other aspects of the software, such as site selection, mapping of data and production of reports (these will be explored in detail in chapter 4).

To view the next site in the database use the site navigation buttons in the bottom right of the screen (Figure 2). The  button will advance one site at a time whilst the  button will advance to the end of the database. (The equivalent buttons are available for moving backwards in the database). *Use the navigation button to advance to site number 2002.*

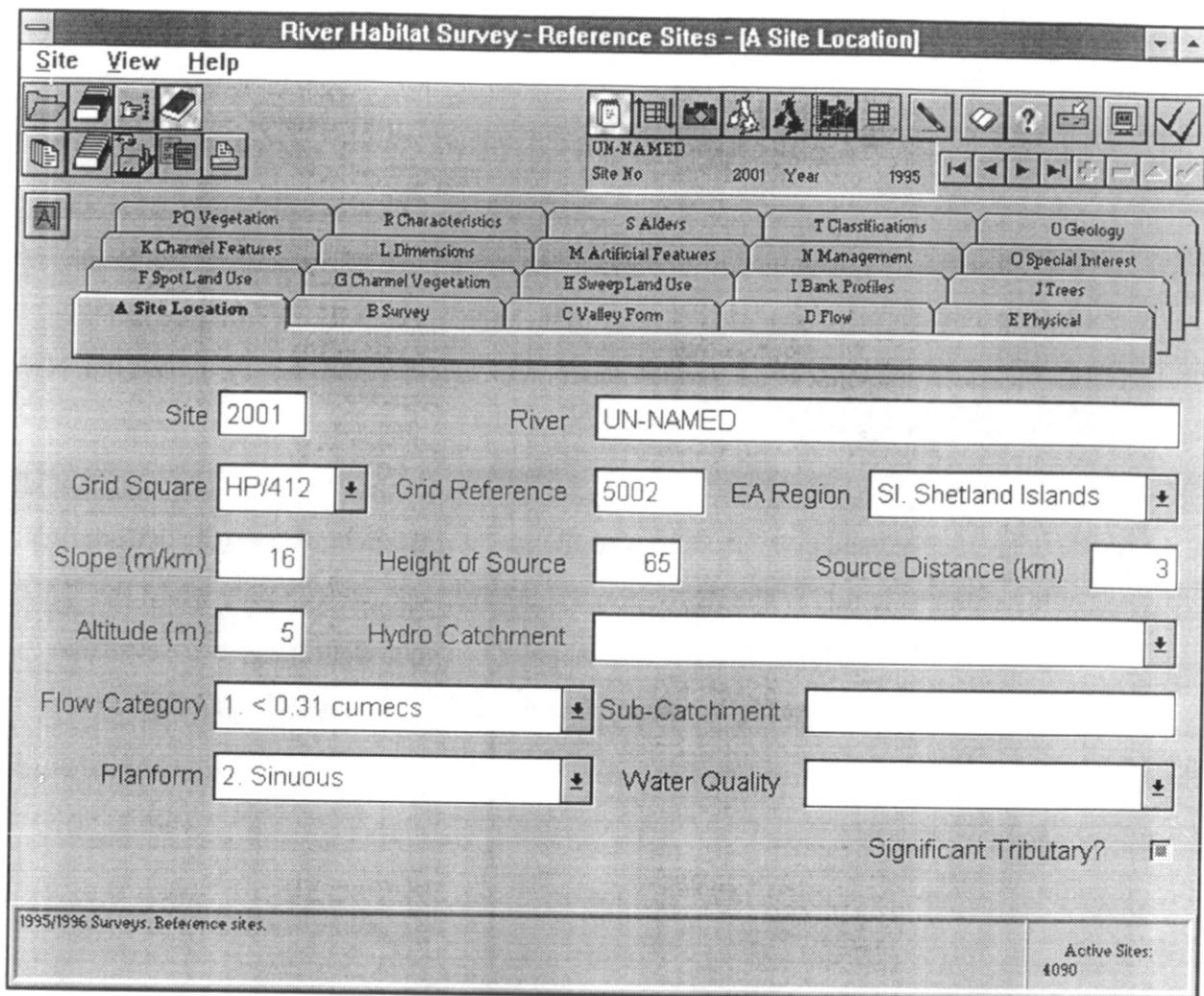


Figure 2. The RHS screen when first opened. Site Notebook is open to Section A.

The RHS database includes photographs of each site. *Click the photograph icon;* 

A picture will be displayed (Figure 3). To enlarge the photograph to fill the full window press



When additional photographs are available for the site they can be viewed using  to move forward and  to move backwards.

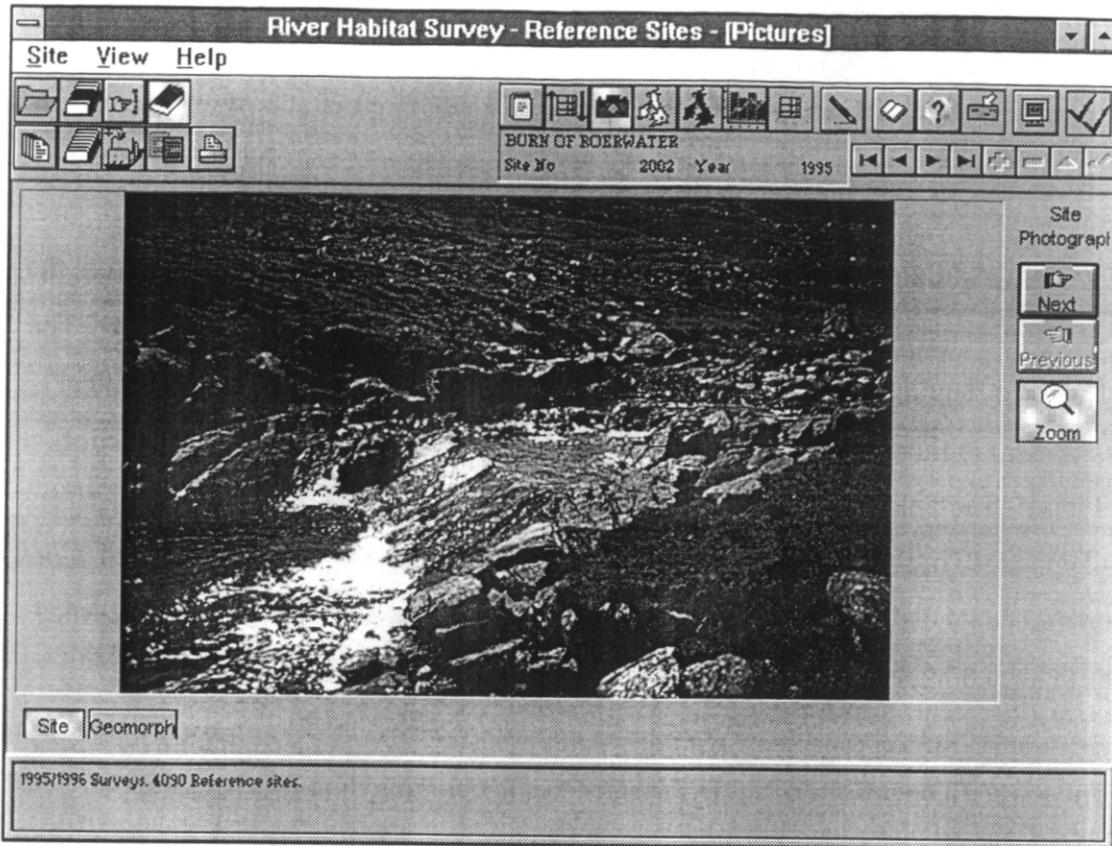


Figure 3. The site photograph display screen.

Click the notebook icon;  to return from the photograph view.

To view the geographical location of the RHS site click;  -a red dot in the Shetland Isles will be shown. Click <Close> to return to the site notebook.

In addition to progressing sequentially through the sites a particular site number can be viewed using; 

Click this icon, enter 6452 and click <OK>. The data for a site on the River Witham will be displayed.

One of the most powerful features of the software is the ability to restrict the dataset through a set of criteria. The characteristics of the smaller dataset can then be compared with the national reference set to establish key features and differences.

## Quick Tour

Click on the *select sites icon*;  to open the Selection Assistant (Figure 18). This window displays the selection clauses currently in operation on the database and is blank initially.

Click **<+ Add a clause>** to start the Selection Clause Assistant (Figure 19). From the list of fields *choose* 'R Characteristics: Animals - Dipper' and then *click* **<Next>**. The next field requires an operator from those provided, in this case *click* **<=>** and then **<Next>**. On the third screen the condition is entered, *select* 'True' and finally *click* 'Finish'. The Selection Assistant (Figure 18) now displays 'R Characteristics: Animals - Dipper = True', i.e. only sites at which dippers were recorded will be included. *Click* on **<Accept>** to use the criteria. A total of 103 reference sites have dippers recorded, as indicated in the bottom right of the screen.

The River Habitat Software provides facilities for plotting data for the full set of selected sites. *Click the statistics icon*; 

The Statistics Assistant is displayed (Figure 21). In the 'Choose a variable' field *select* 'E Physical: Channel - Predominant Substrate' and *click* **<Next>**. *Now click with the LMB to check* the 'Frequency Plot' button (default) *click* **<Next>** again. The next screen provides a list of possible additional variables to plot (none in this case) so *click* **<Next>** once more. At the next screen *LMB click* on the 'Current site selection' button (default) then *click* **<Next>** and then **<Finish>** again to produce the chart.

The display now shows the frequency of each of the substrates (Figure 4). The default view is a line plot so *click*  to change to a bar chart. The most frequent substrate is cobbles, which is as expected for the fast flowing streams which dippers are usually associated with.

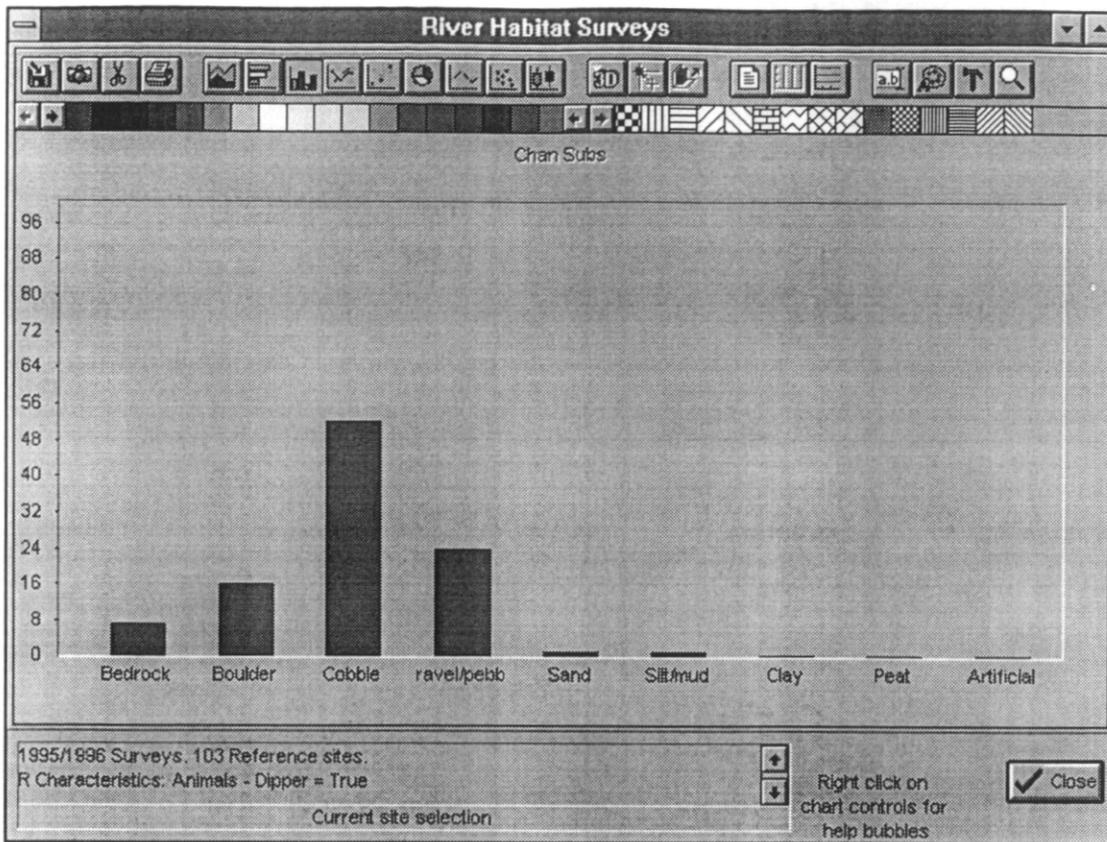
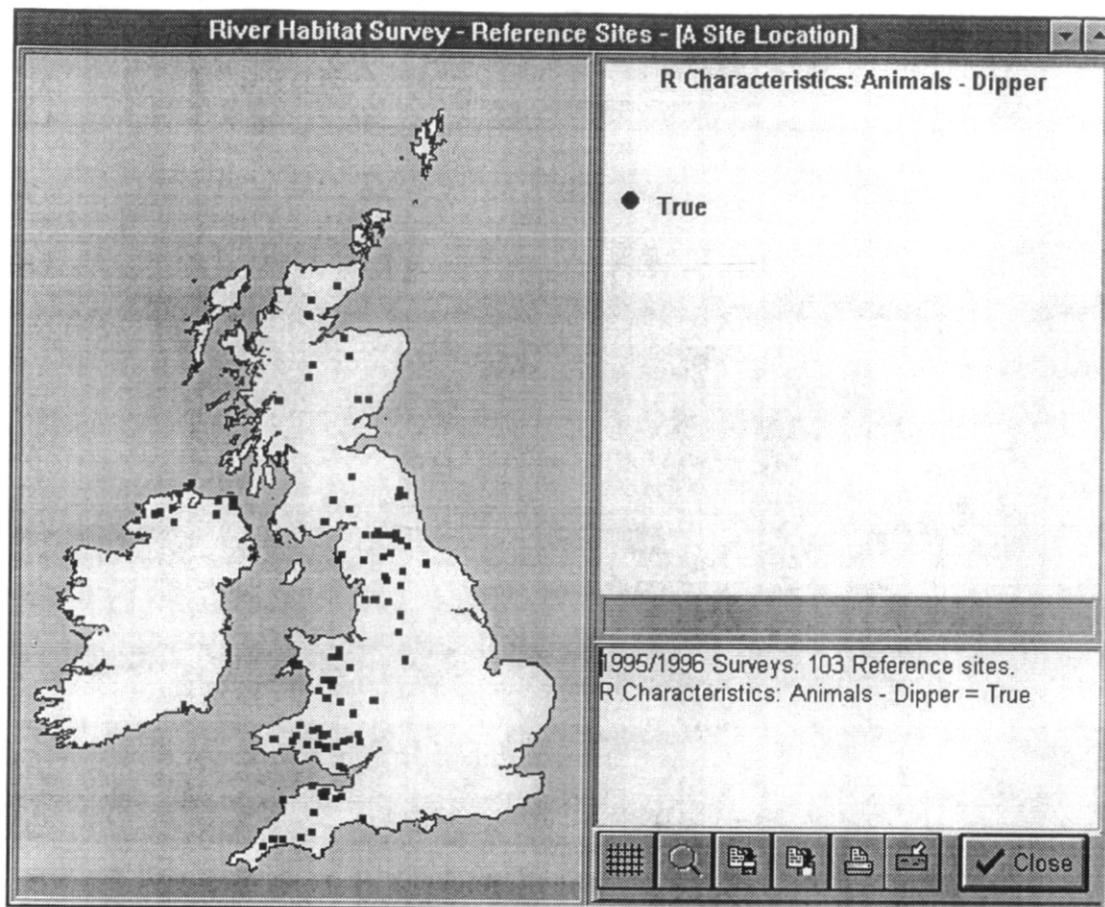


Figure 4. Frequency plot of predominant channel substrate at sites with dippers (note that field names are truncated if too long for the axis, e.g. Gravel/pebble in this plot).

Another feature of the RHS software is the ability to plot the national distribution of features. *Click the Maps icon*;  to open the map requirements assistant (Figure 20). The 'data to map' field should contain 'R Characteristics: Animals - Dipper' so *click <Next>*, then select the 'All sites in current selection' button and *click <Next>*. The next screen gives the option to choose which values to plot. Since the current selection is for sites with dippers present there will be no 'false' data to display so *double click* on false to prevent it being plotted. Now *click <Next>* and then *<Plot>*. The resulting map (Figure 5) shows all the reference sites at which dippers have been observed, principally in the east and west of the UK.



**Figure 5. Distribution of sites with dippers recorded.**

The distribution can be seen in more detail by clicking on the map which displays a red hatched square. This can then be enlarged. *Click* near to Exmoor, north Devon to show the red square and then *click* on  to see the detail for this area (Figure 6). The rivers in the section are shown, colour coded according to their RHS segment type, together with the sites and site numbers. By clicking on a site it is possible to display the notebook data for that site automatically.

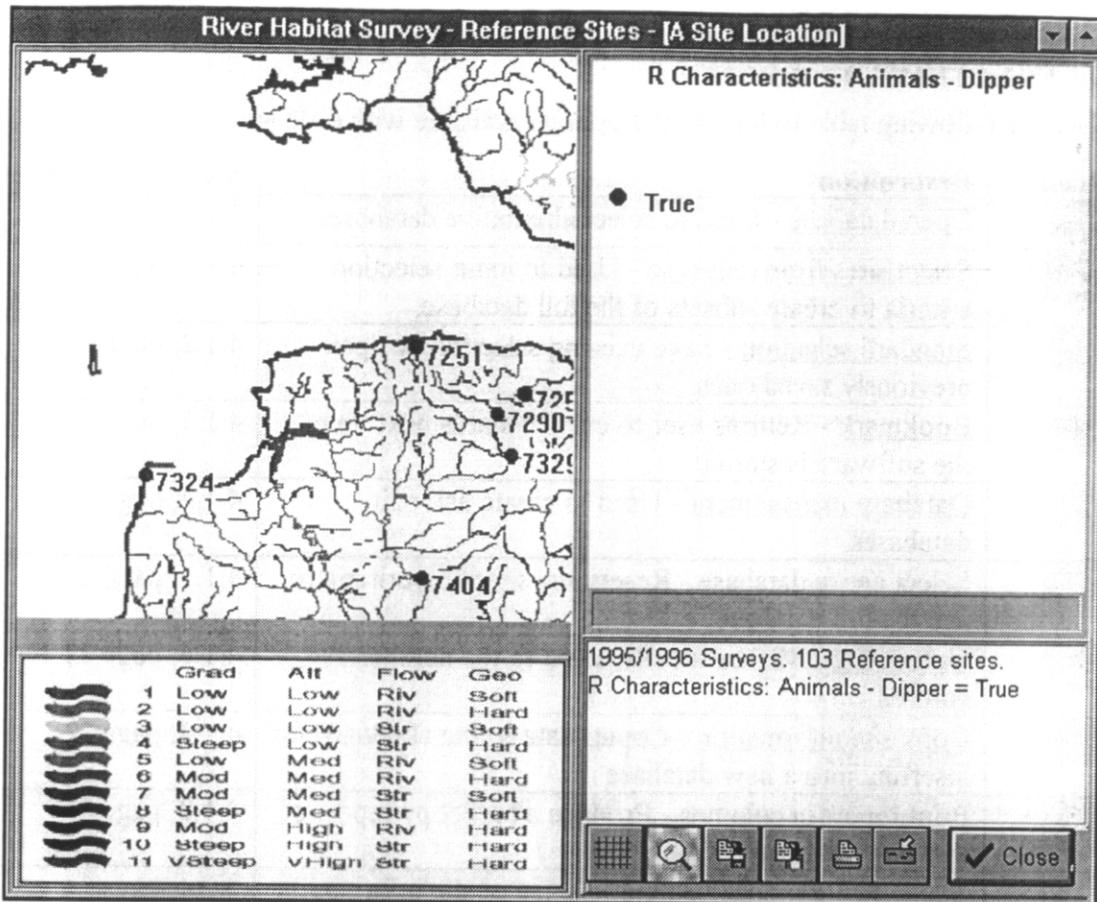


Figure 6. Detail view of site distribution map showing occurrences of dippers in a part of north Devon. The rivers are coloured according to their RHS segment type.

The quick tour has provided a guide to many of the features of the River Habitat Survey Software. The following sections contain full details of each of the features of the software.

#### 4. FUNCTIONS REFERENCE.

Use the following table to lookup the options available with each icon;

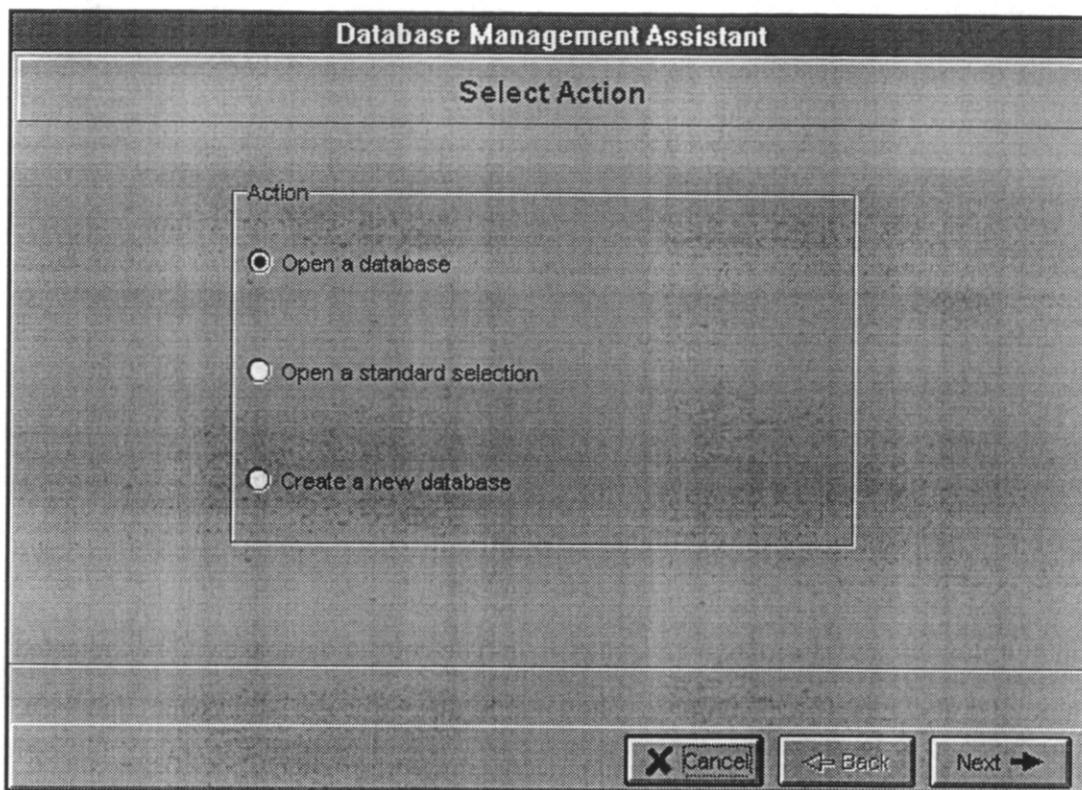
Icon	Description	Section and page
	<u>Open database</u> - Used to select alternative databases.	4.1.1, page 15
	<u>Select sites from database</u> - Used to input selection criteria to create subsets of the full database.	4.3.1, page 27
	<u>Standard selection</u> - Save existing selection or open previously saved ones.	4.1.2, page 16
	<u>Bookmark</u> - Returns user to current status next time the software is started.	4.1.3, page 19
	<u>Database management</u> - Used to create and edit databases.	4.1.4, page 19
	<u>Select entire database</u> - Resets any selection criteria to use the full database	4.1.5, page 22
	<u>Goto a site</u> - Moves site displayed to the number entered.	4.1.6, page 22
	<u>Copy site information</u> - Copies data to the clipboard for inserting into a new database	4.1.7, page 22
	<u>Print report in columns</u> - Produce a hardcopy report of the data requested.	4.1.8, page 22
	<u>Site data notebook</u> - Default display of site information divided into sections.	4.2.1, page 24
	<u>Site navigation grid</u> - Used to select sites by number, year, river, region and catchment names.	4.2.2, page 25
	<u>Site photographs</u> - Displays photographs for the current site.	4.2.3, page 25
	<u>Show location of current site</u> - Displays a UK map with the site location marked.	4.2.4, page 26
	<u>Maps</u> - Generates distribution maps of the selected data category.	4.3.2, page 29
	<u>Statistics</u> - Produce graphs of the data.	4.3.3, page 31
	<u>Create data grid</u> - Creates a list of occurrences of one or more variables.	4.3.4, page 34
	<u>Text processor</u> - A simple word processor for making notes.	4.1.9, page 23
	<u>Glossary facility</u> - On-line description of all data categories and sections.	4.4.1, page 36
	<u>Help</u> - On-line help.	4.4.2, page 36
	<u>Tooltips</u> - Displays brief description of any icon or section that the mouse pointer is held over.	4.4.3, page 37
	<u>Display properties</u> - Alter the screen layout and window size.	4.1.10, page 23
	<u>Quit RivHab</u> - Quit the software.	4.1.11, page 23

## 4.1 General Functions

### 4.1.1 Open database



Use this option to change the database currently in use. Selecting this icon will open the Select Action screen (Figure 7).



**Figure 7. The Select Action Screen, displayed before the database management to provide the choice of opening a standard selection or creating a new database.**

Selecting the default, open a database, will present the Open a database window (Figure 8). The other options are covered in sections 4.1.2 and 4.1.4.

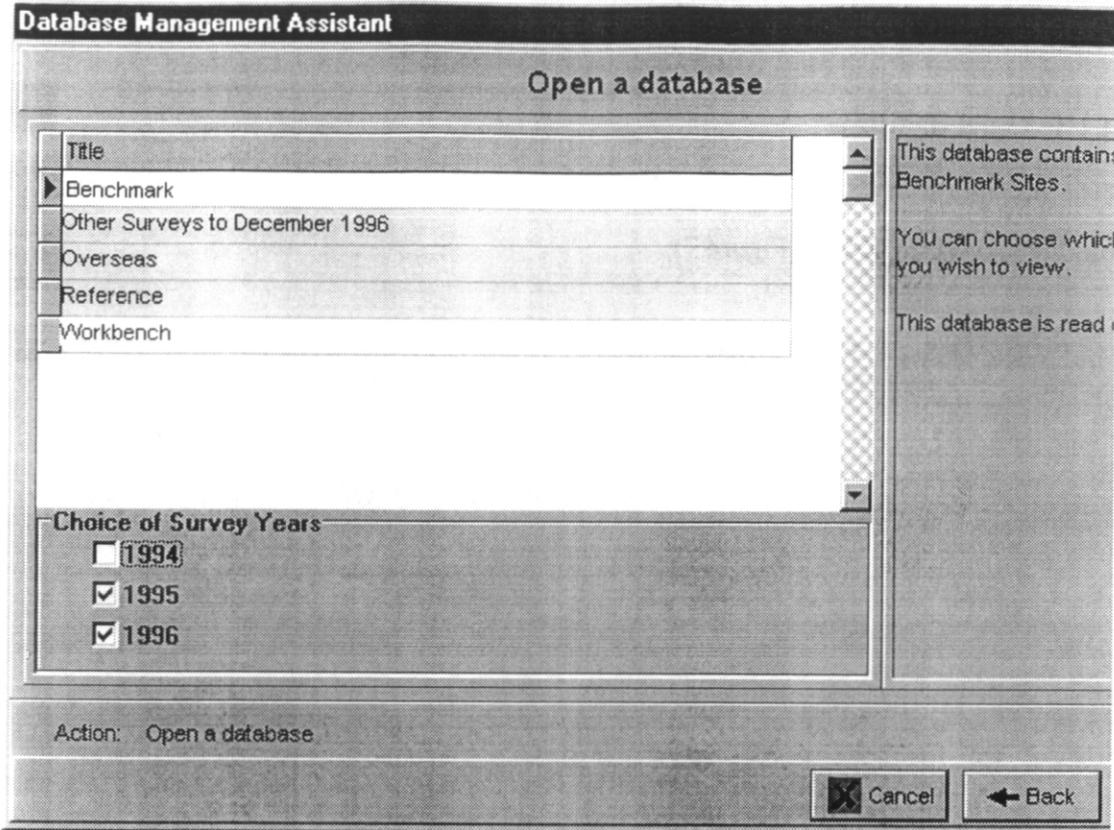


Figure 8. The Database Management Assistant.

Highlight the required database by clicking on it. The chosen database will be indicated by a pointer and a change in colour, as shown in Figure 8 for the 'Reference' database. Some databases have more than one year of data and any combination of these can be selected from the boxes at the bottom of the screen.

Select **<Open selected database>** to open the database or **<Cancel>** to return to the current database.

**<Open standard selection>** allows any previously saved selections to be opened. For full details see section 4.1.2.

#### 4.1.2 Standard selection

Once a selection has been made on the database using the 'Select sites from database' option (section 4.3.1) it can be saved for use at a later stage to avoid the need to redo

the criteria. To reuse or save a selection, use the Standard Selections Assistant (Figure 9).

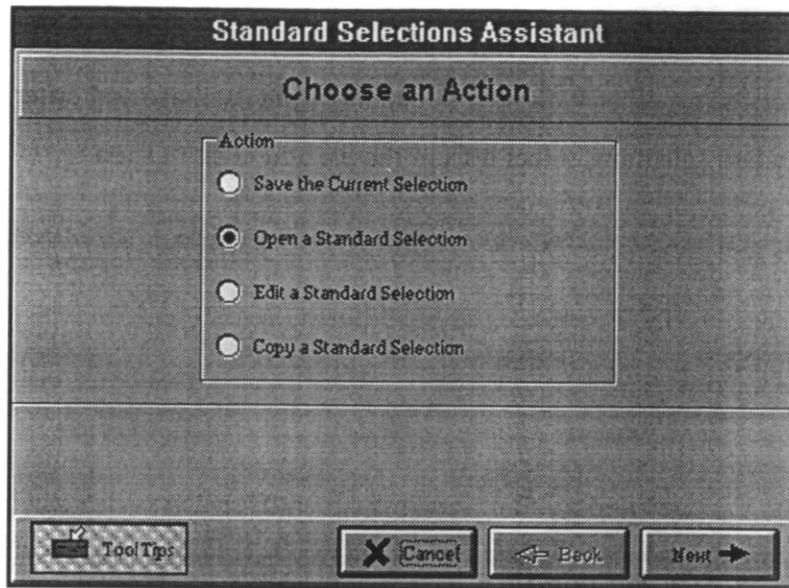


Figure 9. The Standard Selections Assistant.

- **<Save the Current Selection>** will open a window prompting for a name for the current selection (Figure 10). The name can be upto 64 characters and contain any text string, including spaces.

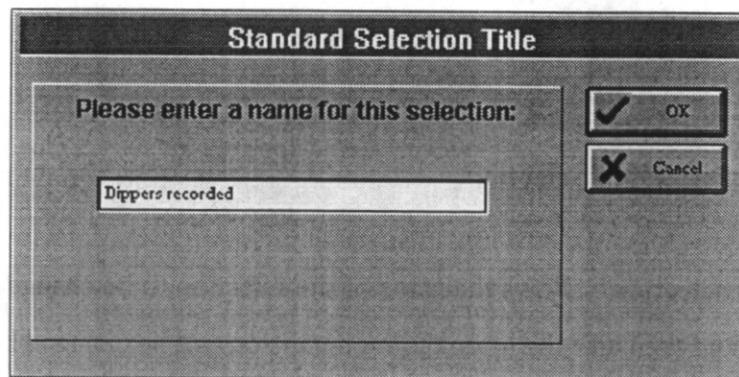


Figure 10. Saving the current selection.

A saved selection includes all the details from the current database including the criteria in operation but also the database and years chosen. To apply a standard selection procedure to another database, (e.g. to apply the dippers selection to the

Benchmark surveys 1995) the **<Copy standard selection>** function should be used (see below).

- **<Open a Standard Selection>** will open the window shown in Figure 11. This lists all the saved selections together with the full details of the database and criteria they use. To open a standard selection, select it from the list and click **<Open>**.

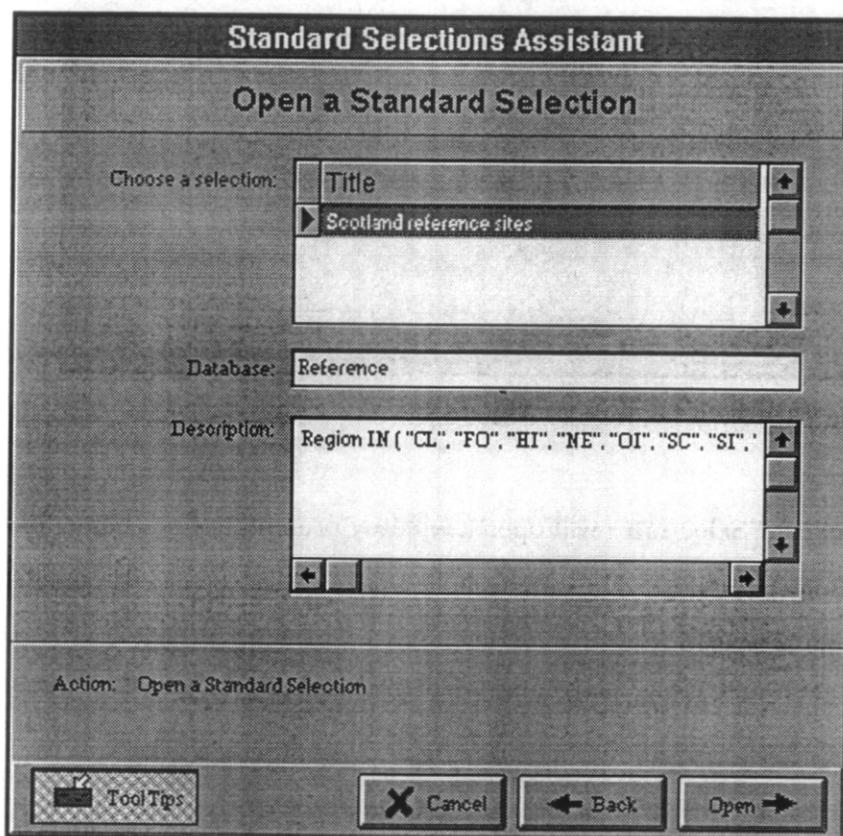


Figure 11. Open a standard selection.

- **<Edit a standard selection>** allows the name of the selection to be changed if desired. Select this option and then edit the name. Other details cannot be changed here. To change the database for the selection use the **<Copy a standard selection>** option, and to alter the criteria use the selection assistant (section 4.3.1).
- **<Copy a standard selection>** can be used to apply a selection procedure to a different database without having to re-enter the criteria. Selecting this option will open a window similar to the open screen (Figure 11) from which a selection can be copied.

Click <Copy> and then select the database to copy the selection to. Click <Next> and then enter a unique name for the copied selection.

- <Cancel> will close the standard selections window and return the user to the previous screen, unless the <Open standard selections> option was chosen before opening a database when starting the RHS software, in which case the software will be closed.

#### 4.1.3 Bookmark

The bookmark facility allows the user to return to the same place next time they start the software, avoiding having to make selections of the database, years or selection criteria. The bookmark is OFF when the blue book is shown, as above, and on when an open book is indicated.

#### 4.1.4 Database management

The database manager provides options for creating new databases and editing or deleting existing ones. The options are selected from the database management assistant (Figure 12).

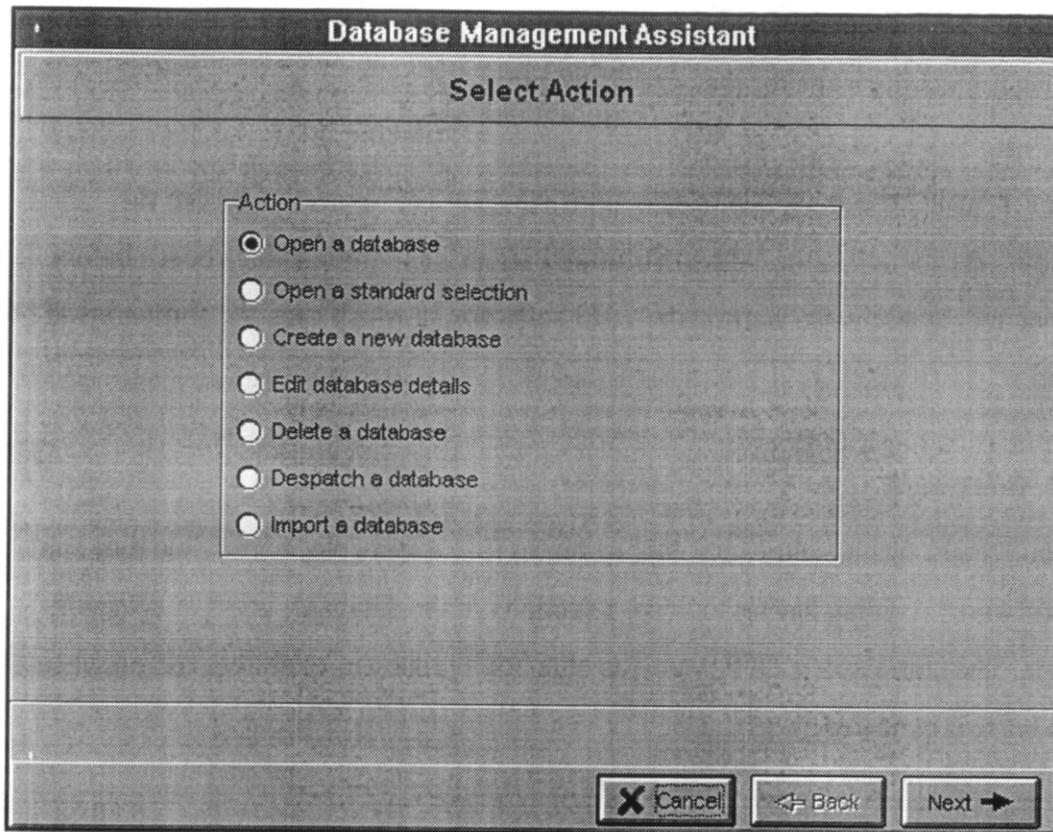


Figure 12. The Database Management Assistant.

- **<Open a database>** will present the database options presented in section 4.1.1, Figure 8 to select the desired database to use.
- **<Open a standard selection>** will present the options outlined in section 4.1.2.
- **<Create a new database>** will create a blank database for entering new data or copying existing data into. Figure 13 shows the screen where the title for the new database and any descriptive notes are entered. *Click* on the **<Display new database on Create>** box with the left mouse button to open this database once it is created.

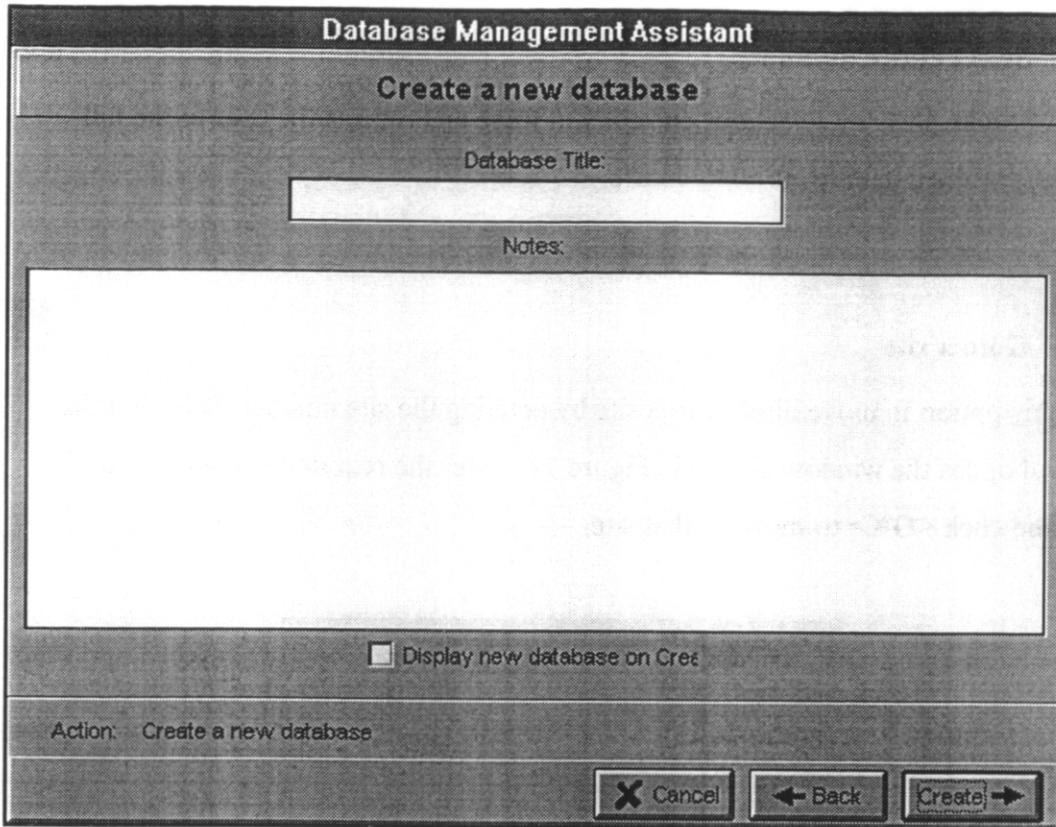


Figure 13. The screen for creating a new database. Enter a name and a description if desired.

- <Edit database details> allows the names of any user created databases to be changed, as well as the associated notes.
- <Delete a database> select any of the user defined databases for deletion if they are no longer required.
- <Despatch a database> will output the database file so that it can be copied to other users. Select the desired database and click <Despatch>.
- <Import a database> will import any databases previously saved using the despatch option.

#### 4.1.5 Select entire database



This option resets any selections currently in force and returns the user to the full dataset for the database currently in use.

#### 4.1.6 Goto a site



Use this option to move directly to a site by entering the site number. Selecting this control opens the window shown in Figure 14. Enter the required site number in the box and click <OK> to move to that site.

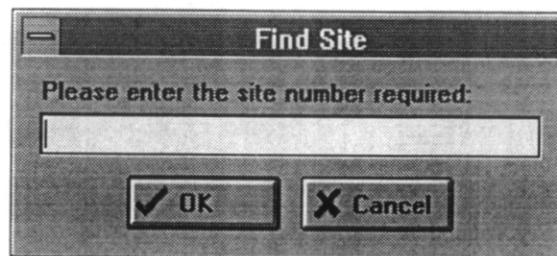


Figure 14. Find site window. Enter the required site number in the box to move directly to it.

#### 4.1.7 Copy site information



This function copies site details from one database to another, so that data can be combined with new surveys or from different databases and then despatched to other users if required.

Choose to copy details from the current site or for the full current selection, click <Next> and then select the target database. Data can only be copied to already existing databases and only to the workbench or user defined ones (i.e. not to reference, benchmark, overseas or other).

#### 4.1.8 Print report in columns



This facility allows site data to be output to a printer. Clicking the icon prompts the user to confirm that they wish to print a report. If this is confirmed the fields to be

included in the report are selected, either by double clicking, dragging and dropping or with a single click and the add button. Similarly fields can be removed from the list. Next the column headings and widths must be confirmed or changed, the font style and size set and the printer and margins set. At each stage click <Next> to move on to the next option and <Finish> to print the report.

#### 4.1.9 Text processor



This is a simple word processor that allows field names and values to be inserted into sentences. The text created in this way can be saved or printed for use elsewhere.

#### 4.1.10 Display properties



The software includes options for the layout of the screen display. The default is simple, with one option displayed at once, but on high resolution screens it may be preferable to use the complex display, which has the site notebook, site navigator, site location map and photo open at once.

To switch between views select this icon and then choose either simple or complex view and click <Okay>. The window size can also be set with this function if desired.

#### 4.1.11 Quit RivHab



Clicking on this icon quits the River Habitat Presentation software, prompting the user to confirm first.

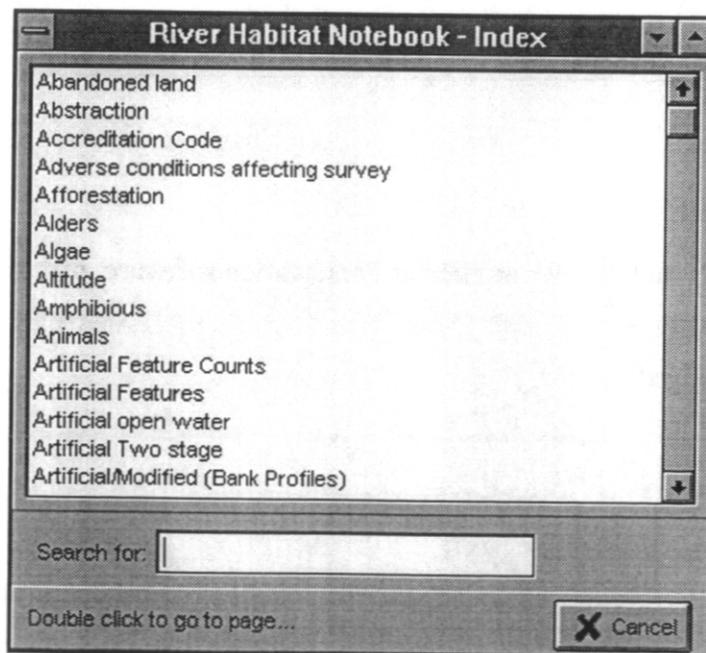
## 4.2 Data Display Functions

### 4.2.1 Site data notebook

This is the principle data display screen. Each section of the RHS field survey sheet (A-S) is included as a separate 'file card', together with some additional data including Habitat Modification Index. To switch between file cards click on the appropriate tab at the top of the screen or use the right mouse button to display a list, from which the required section can be selected.

To see the next or previous ones use the navigation buttons;  . The similar buttons with a vertical bar move directly to the first or last site in the selection.

The RHS Presentation software provides a Find Field facility for use with the site notebook. The icon , on the left hand side of the notebook, will display an alphabetical list of all the fields in the database (Figure 15). To find the required field either scroll the list or type the name in the search for box. Double click on the field name to move the site notebook to the correct section.



**Figure 15. The Find Field facility for the site notebook. Scroll the list or type the field name and double click to open the correct section of the notebook.**

### 4.2.2 Site navigation grid

An alternative method for finding a site within the database is to use the site navigation grid (Figure 16). The full list of sites is displayed in numeric order, together with the survey year, river name, region and catchment. Select a site by clicking on the correct row in the table, which can be scrolled to view the full set. Switching to the photographs or site notebook will now display the details for the chosen site.

Site	RHSYear	River	Region	Catchment
1	1994	Dean Burn	NY	North Low
2	1994	North Low	NY	North Low
3	1994	Bowmont Water	NY	Tweed
4	1994	Till	NY	Tweed
5	1994	Hetton Burn	NY	Tweed
6	1994	Low	NY	Waren Burn
7	1994	Cavey Burn	NY	Tweed
8	1994	Till	NY	Tweed
9	1994	Long Nanny	NY	Long Nanny
10	1994	Embleton Burn	NY	Embleton Burn
11	1994	Coquet	NY	Coquet
12	1994	Breamish	NY	Tweed
13	1994	Breamish	NY	Tweed
14	1994	Aln	NY	Aln
15	1994	Unknown	NY	Unknown

Figure 16. The site navigation grid.

### 4.2.3 Site photographs

This facility will display any photographs available for the current site (see Figure 3). If there are no photographs for the site, or the CD has not been inserted, the screen will display the 'No picture for this site' message. Further pictures, if available, can be viewed using the <Next> and <Previous> icons, and the image can be expanded to fill the window using <Zoom>.

As with the site notebook there are navigation buttons in the top right of the screen to move between images, or the site navigator can be used.

As well as displaying site photographs there are photographs of the major RHS features which can be seen by clicking on <Geomorph>. Click the right mouse button

over the picture to see a menu of the features with photographs and click on the desired one. Most features have more than one photograph, either a standard and a detail or a first and second example, which can be switched between by selecting the appropriate button at the bottom of the screen.

#### 4.2.4 Show location of current site



Use this function to see the location of the site within the UK (Figure 17). An outline map of the UK is displayed, with the site location marked with a red dot.

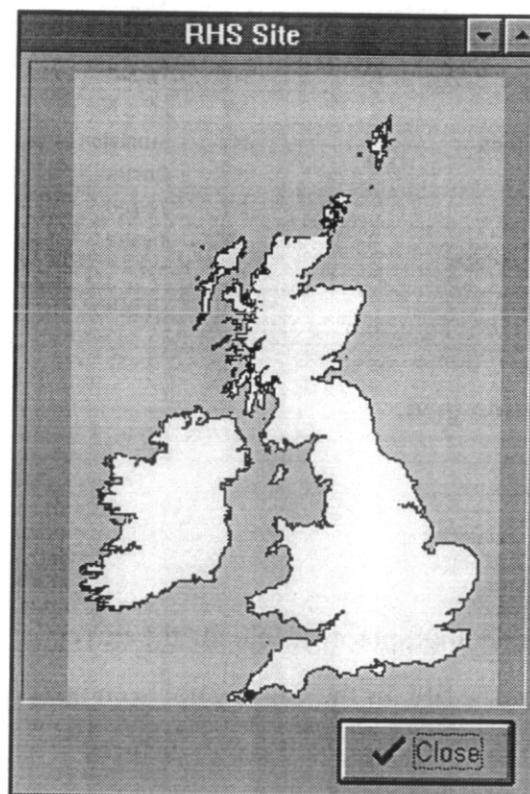


Figure 17. The site location map. The location is marked by a red dot.

### 4.3 Analysis Functions

#### 4.3.1 Select sites from database

When you open a database it is possible to choose which dataset and which years are used but to restrict the data further requires the Selection Assistant, activated by this icon. This facility allows the user to set clauses so that only data fulfilling the specified criteria are used in any subsequent analysis, such as sites over 200m altitude or with extensive bank resectioning.

The first screen of the Selection Assistant (Figure 18) displays any selections currently in operation. To add a new one click **<Add a clause>**.

The Selection Clause Assistant (Figure 19) first requires that the field is chosen, then the operator and finally the value, clicking **<Next>** between each selection.

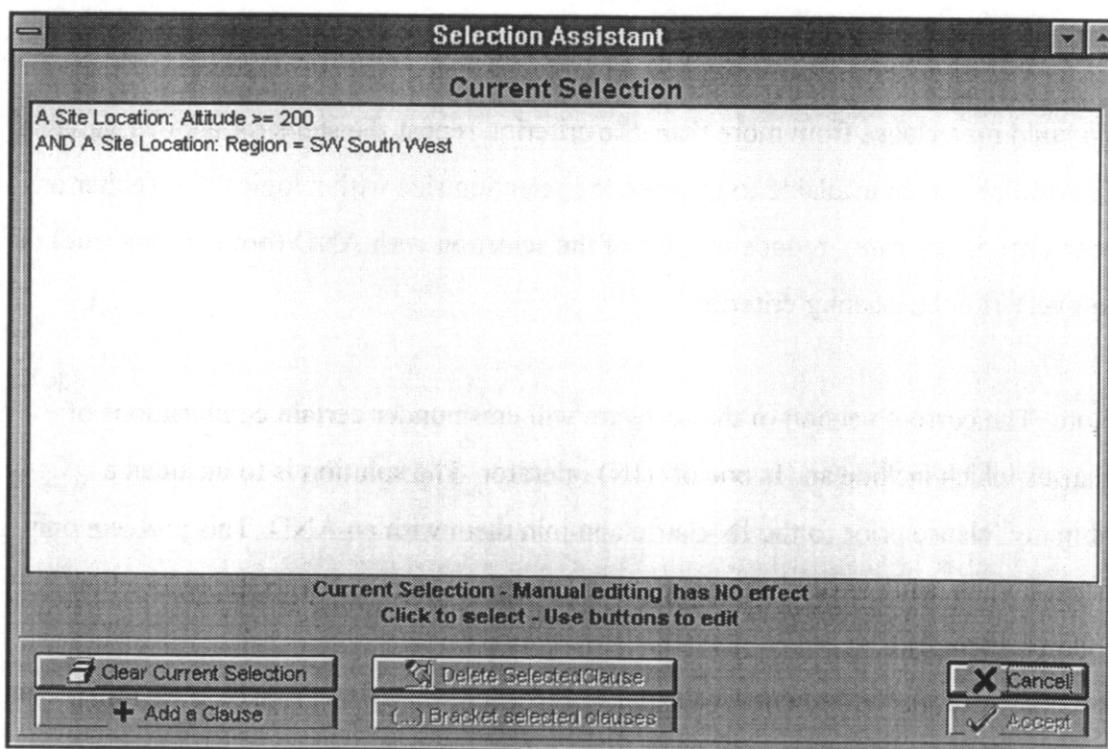


Figure 18. Selection Assistant, displaying the clauses currently in operation and providing options to add or remove clauses.

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To choose the field there is a drop down list sorted alphabetically by section. Click on the desired field and then <Next>.

One of several operators are available, depending on the data type. These are;

Equal to	=
Not equal to	≠
Less than or equal to	≤
Less than	<
Greater than or equal to	≥
Greater than	>
One of a list of values	Is One Of

The final stage is to select the value(s) from the third screen, either by typing or choosing from the list provided, then clicking <Finish>. The new selection is then displayed in the Selection Assistant window.

If you are using a field which has 0, P, or E codes and want to include all sites where it occurs use the  $\neq 0$  construct. Just selecting = P will ignore any sites where the feature was recorded as extensive

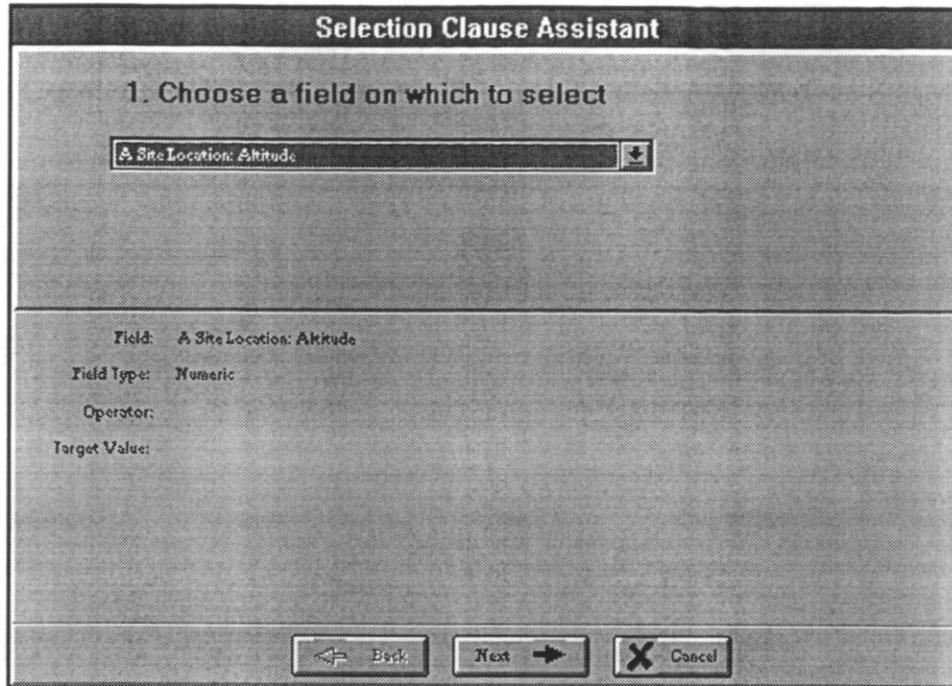
To build up a clause from more than one criterion repeat the steps for another variable. The choice is then available to increase the selection size with a logical OR (either or both criteria are true), reduce the size of the selection with AND (both criteria true) or to overwrite the existing criterion.

Note: The current version of the software will crash under certain combinations of clauses which include an 'Is one of' (IN) operator. The solution is to included a 'dummy' clause prior to the IN clause and join them with an AND. This problem only occurs when using several clauses to build complex criteria. For example, use the following template;

('A-Site Altitude' > 200 OR 'A-Distance to source' < 10) AND 'A-Site Number' > 0  
AND 'A-Region' IN (WE, AN, TH)

↑  
Dummy clause

↑  
'Is one of' (IN) operator joined with an AND



**Figure 19. Selection Clause Assistant, from which the categories and criteria for selection are entered.**

Separate criteria can be bracketed if needed, for example to change the meaning of an AND - OR conjunction. Select the clauses to be bracketed and click **<Bracket selected clauses>**. If desired brackets can be nested to create very complex criteria.

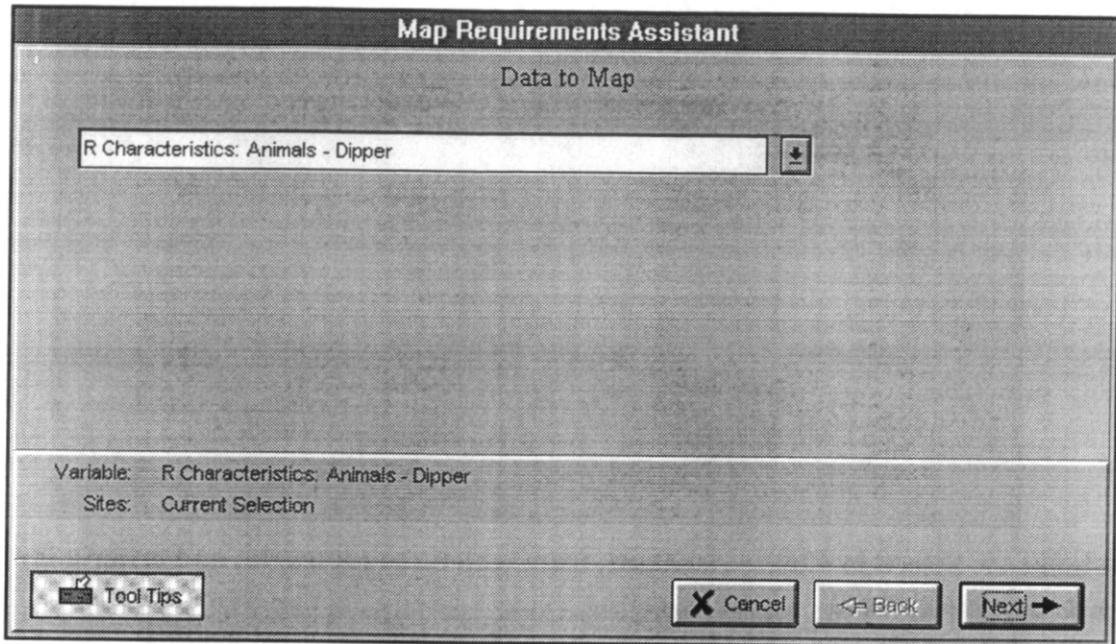
The **<Delete selected clause>** button will remove any highlighted criteria from the current clause.

Click **<Accept>** to enforce the clause.

### 4.3.2 Maps

The map function can be used to plot a distribution of a chosen variable. This can be used to see the national distribution from the full dataset of, for example, site altitude, or for a subset by first setting a selection clause. For example to see the distribution of sites with otters recorded as present it is clearer to create a selection for otters and then plot their distribution, otherwise the presence's are swamped by the absences on the national distribution.

The Map Requirements Assistant (Figure 20) first requires a variable to map. Select this from the drop down list and the click <Next>.



**Figure 20. Map requirements assistant, used for selecting the characteristics for plotting.**

Next choose whether to plot all the sites in the selection or just the current site and click <Next>. The full list of variables to be plotted is then displayed (e.g. the altitude bands, geology codes, or True/False). It is possible to remove any of these from the plot list, for example all altitudes above 250m, to clarify the distribution. Click <Plot> to produce the distribution.

Once the plot has been produced it is possible to zoom into a region to see greater detail such as site numbers and the river network. Click the grid square icon  and then one of the grid squares, which becomes red hatched. Clicking the zoom icon  will display a distribution for the selected 100km square (see Figure 6).

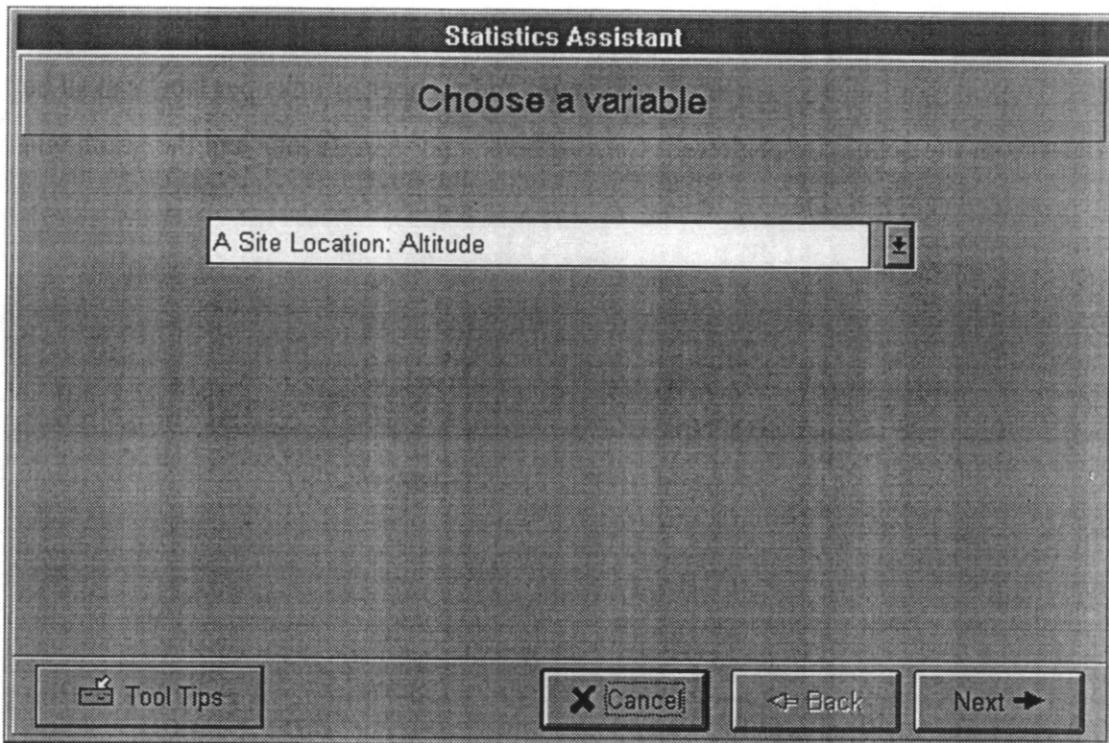
The rivers are coloured according to their segment type, which are derived from altitude, geology, flow category and slope and reflect the energy of the river. The site numbers are also displayed and it is possible to select a particular site as the current one by clicking on it. The site notebook will then display the data for that site.

### 4.3.3 Statistics



The Statistics Assistant is used to create frequency plots of the data or alternatively to generate a two variable cross match, which tallies the number of sites which fall into categories determined by the chosen variables.

The first prompt is to choose a variable to plot from the drop down list (Figure 21). As with the other assistants this is sorted alphabetically by section.



**Figure 21. Statistics assistant, from which the options for plotting are selected.**

The software provides two options for data analysis, a frequency plot or a two variable cross match. The frequency plot will produce a histogram of the data as an exportable chart (Figure 22) whilst the two variable cross match produces a table of matches between the two variable categories (Figure 23).

#### 4.3.3.1 Frequency Plot.

Having selected the first variable and to produce a frequency plot the next choice is to add other variables to the plot. A list of compatible data types is displayed. To choose

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any of these either double click on them, click once and then press <Add> or drag and drop into the right hand list.

The next screen offers a choice of the scope of the data to plot. The default is to plot the current selection but the other options are to plot the full data set, a comparison of the current selection against the UK reference sites or to plot just the UK reference sites. Left mouse button click on the box next to the desired option.

For some data the software will present an option to set the scale and range of the x-axis. The category width, minimum, maximum and number of ticks per label can all be adjust from the defaults if preferred. Click <Next> and then <Plot> and the graph will be produced (Figure 22)

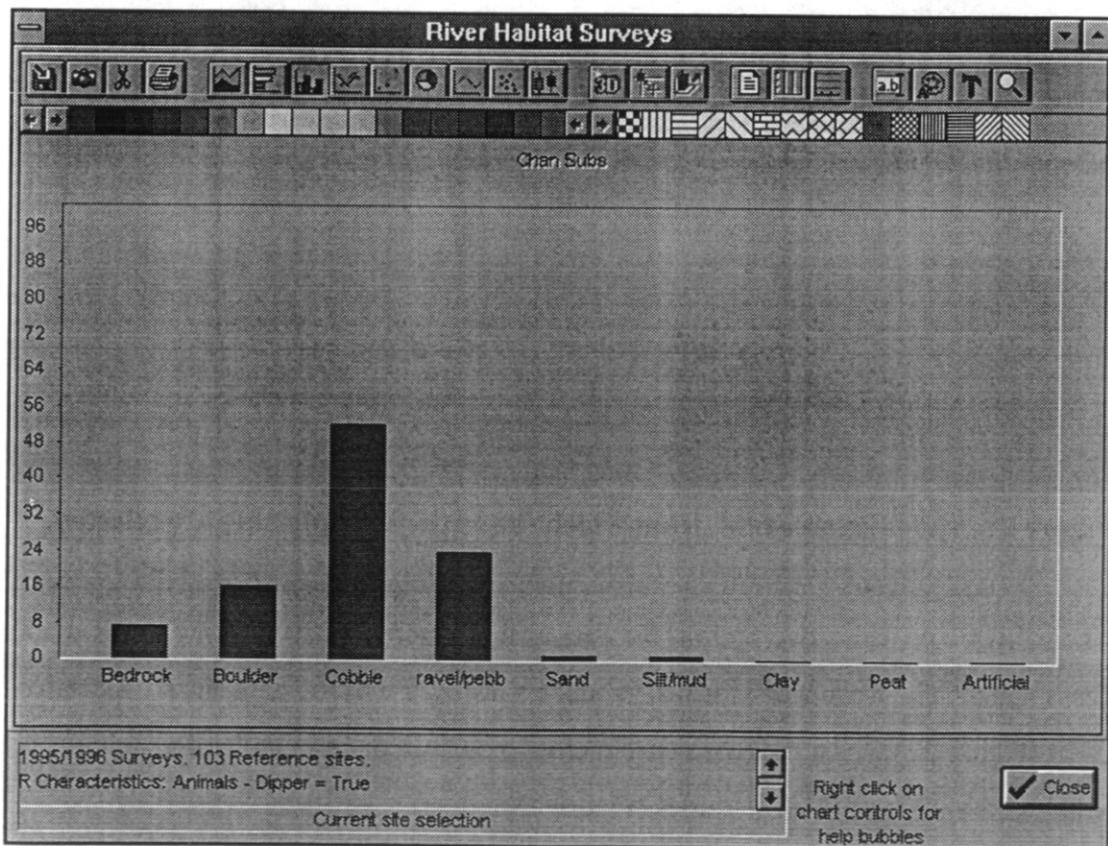


Figure 22. The chart generated using the frequency plot option.

### Features available from the chart window.

**Export chart:**  Saves the chart as a .CHF file.

**Copy chart:**  Copies the chart to the clipboard as a bitmap image, for pasting

into word processors or other packages.

**Copy data:**  Copies the data itself, not the chart, for use in spreadsheets or other software.

**Print chart:**  Produces a printout of the chart.

**Chart types:** 

These options change the chart type. From left they are - Area, Bar, Column, Line, Point, Pie, Fitted line, XY scatter and Hi-Low charts.

**3-D chart:**  Turns any of the standard charts into 3-D versions.

**3-D options:**  These options are only activated when the 3-D chart option is selected. The left option changes the angle of the chart to optimise the view, and the right hand one adds a Z axis to the graph.

**Show legend:**  Displays a legend if more than one variable or dataset are used for the chart.

**Show gridlines:**  Displays horizontal gridlines (equivalent available for vertical gridlines)

**Edit titles:**  Allows the chart title, and x and y axis labels to be edited.

**Change fonts:**  Alter the font type, size and style for all parts of the chart.

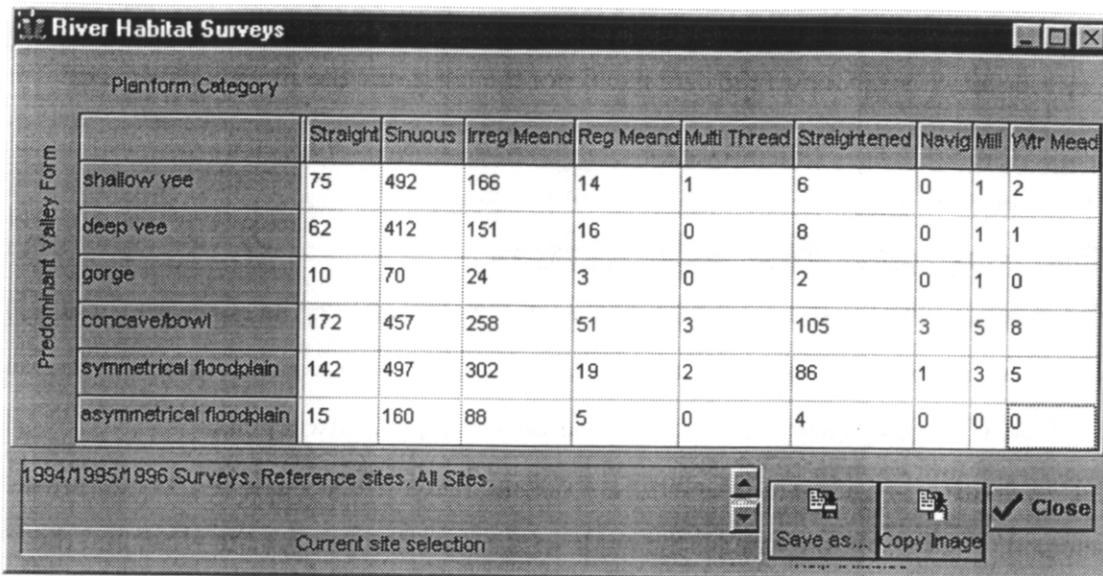
**Tools:**  Display the palette and pattern bars, the legend and/or the data table.

**Change chart options:**  Alter the axis scales, 3-D display, colour scheme, marker style etc.

The chart window can be resized to enlarge or reduce the graph if desired but if there is not enough space to display the x-axis tick labels they will be truncated and displayed in red (as in gravel/pebble in Figure 22).

#### 4.3.3.2 Two variable cross match.

Having chosen the first variable the software requires a cross match variable to be selected. Select this from the drop down list and then click <Next>. Choose whether to use the current selection, the entire database or the UK standard sites for the table and the click <Next>. The result is displayed as a table (Figure 23).



**Figure 23. The two variable cross match table (planform category and predominant valley form in this example)**

This data can be output as either a bitmap (picture) to a file or to the clipboard, or as a text file which can be used in other applications. Click <Save as..> to output to a file or <Copy image> to output to the clipboard. If the save option is selected the software will prompt to save as a text file. Click <Yes> for text or <No> for a picture file.

#### 4.3.4 Create data grid

This function produces a table of values for the selected variables. Select the desired variables by double clicking, dragging and dropping or by highlighting and clicking <Add>.

When the required variables are chosen, click <Next> and the table will be produced. The data are listed as one site per row for cross reference (Figure 24). (This cannot currently be exported to any other package but this feature should be implemented in the next version).

Altitude	from Source	Planform
90	19	1
40	20	3
20	5	2
220	10	1
280	2	1
120	24	1
80	14	1
120	1	1
10	75	4
240	10	1
250	5	2
150	20	2

Click and drag columns to move or resize them

← Back    Next →    X Close

**Figure 24.** The data grid (showing site altitude, distance from source and planform category in this example).

#### 4.4 Help Functions

The following functions provide on-line help.

##### 4.4.1 Glossary facility



This facility gives a description of all the sections of the software and can be searched (Figure 25). The sections are arranged in a directory structure for easy navigating and can be opened to reveal all the subdirectories.

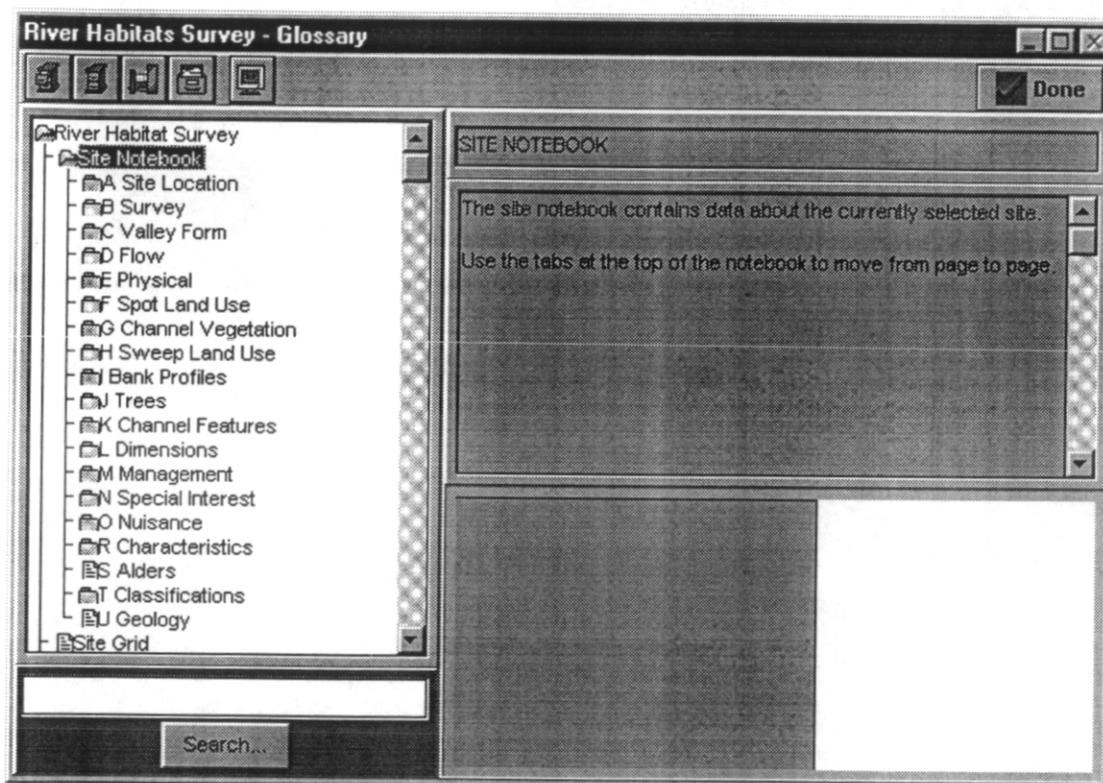


Figure 25. The Glossary window

To use the search facility enter a word in the box and click <Search>. If the word is found the information about that section will be displayed.

##### 4.4.2 Help



The help facility provides a brief outline of the software together with some guidance on how to use the features. It can be searched in the same way as other windows help

files and includes key words which are highlighted as links or to give explanations when clicked on (hypertext).

#### 4.4.3 Tooltips



Selecting this button enables the tooltips facility. If the mouse pointer is held over any part of the software for a few seconds a yellow box containing a brief explanation of that object will be displayed. This is invaluable for identifying the icons when the user is unfamiliar with the software.

## 5. ADDING AND EDITING DATA.

As previously mentioned it is possible to create new databases (see in section 4.1.4) and to copy site details to them (section 4.1.7). It is also possible to edit this data and to add new surveys in the user defined databases (but not in the others, except workbench).

### 5.1 Editing data.

Open the database containing the data to be edited. Find the fields to be altered on the correct section file cards and make any changes necessary. To save these changes use the *tick icon* ('accept this edit', top right of screen). This process can be repeated as often as necessary on each site in the database.

### 5.2 Adding new site data.

Additional sites can be entered onto user defined databases, or the workbench. Click the <+> icon to add a new site.

The software prompts for a unique site number to be entered and then presents a blank site sheet. Fill in all the details on each file card and then click the accept edit icon to save the new site.

Most data must be in capital letters for the software to recognise them. The exceptions are text such as comments, river names, surveyor names etc. but for consistency we recommend that the only section not completed in capitals is the comments box (some older forms where input with the comments as capitals but the protocol is to use sentence case now.)

The software does not provide any automatic verification facilities so it will not notify you of any incorrect codes entered. It is therefore necessary for you to check all your data entry.

### 6. COMMENTS, SUGGESTIONS AND NOTIFICATION OF ERRORS IN SOFTWARE.

Please provide a copy of these pages to all users of the software as we would appreciate as much feedback as possible for future development (6 monthly updates are currently planned).

Region/Area: \_\_\_\_\_ Name:(optional) \_\_\_\_\_  
Division/Section: \_\_\_\_\_ Date: \_\_\_\_\_

**What did you use the software for ? (tick as many as apply)**

- |                                     |                          |   |                          |
|-------------------------------------|--------------------------|---|--------------------------|
| Entering new surveys                | <input type="checkbox"/> | Information on a river/catchment                                    | <input type="checkbox"/> |
| Looking up specific sites           | <input type="checkbox"/> | Assessment of habitat quality                                       | <input type="checkbox"/> |
| Comparison of sites                 | <input type="checkbox"/> | Targeting further work  | <input type="checkbox"/> |
| For a regional picture of RHS sites | <input type="checkbox"/> | Identification of key features for e.g. certain species/river types | <input type="checkbox"/> |
| Other (give details)                | <input type="checkbox"/> | _____   |                          |

**Which features of the software did you use ? (tick as many as apply)**

- |                      |                          |                         |                          |                       |                          |
|----------------------|--------------------------|-------------------------|--------------------------|-----------------------|--------------------------|
| Site Notebook        | <input type="checkbox"/> | Site Navigator          | <input type="checkbox"/> | Photographs           | <input type="checkbox"/> |
| Maps                 | <input type="checkbox"/> | Statistics (graphs)     | <input type="checkbox"/> | Data grid             | <input type="checkbox"/> |
| Selection Assistant  | <input type="checkbox"/> | Create new database     | <input type="checkbox"/> | Export data/graph/map | <input type="checkbox"/> |
| Text processor       | <input type="checkbox"/> | Glossary                | <input type="checkbox"/> | On-line help          | <input type="checkbox"/> |
| Manual - Quick Tour  | <input type="checkbox"/> | Manual - Other sections | <input type="checkbox"/> | Display properties    | <input type="checkbox"/> |
| Other (give details) | <input type="checkbox"/> | _____                   |                          |                       |                          |

**Did the software perform all the tasks required for your work ?**      Yes    No  
If No then what couldn't it do? \_\_\_\_\_

**Are there any features which you would like to see added to a new version of the software?**      Yes    No

If Yes then please provide a description (these will be copied to the Agency RHS co-ordinator (MN in NW region) \_\_\_\_\_

**Was the software easy to use ?**      Yes    No  
If No then why not ? \_\_\_\_\_

Comments form

**Were there any features you didn't like ?**

Yes No

If No then please indicate which one(s) and say why. \_\_\_\_\_

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**Any other comments/suggestions** (please suggest modifications or new features even if you believe they are already in hand). \_\_\_\_\_

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**NOTIFICATION OF ERRORS.** If you encounter any errors when using the software please provide us with full details of what the error is and how it occurred. The more details you provide the better the chances of us repeating and then correcting the problem.

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**Please return completed forms to;**  
Michael Gravelle / Hugh Dawson  
Institute of Freshwater Ecology  
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