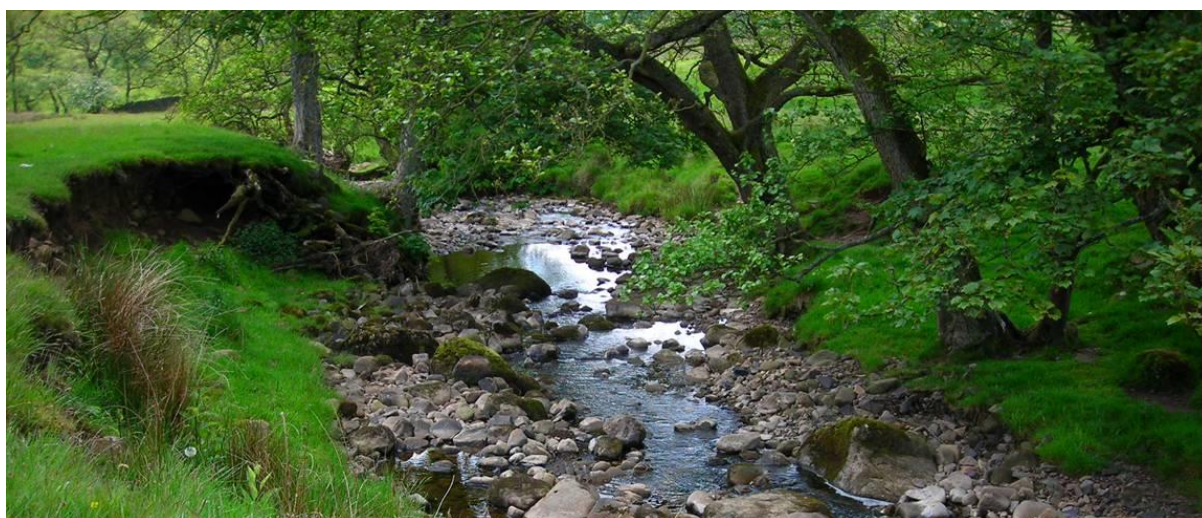**Centre for Ecology & Hydrology**
NATURAL ENVIRONMENT RESEARCH COUNCIL

# RAPID 3.0 user manual

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| Revision | Date | Author | Comments |
|---|---|---|---|
| 3.0 | July 2017 | H Dean | Updated to reflect changes in conversion from Access 2003 to Access 2007-2013 |
| 2.1 | 2008 | C. Davies | Updated to reflect changes to forms. |

# Contents

# 1.    Introduction

This manual provides instructions on how to use the RAPID 3.0 database. The RAPID database is used for entering data from the River Habitat Survey (RHS).

The 2003 RHS protocol is described in detail in the Guidance Manual provided when attending the Environment Agency training and accreditation course and therefore will not be covered in detail here.

All surveyors should receive RHS training and accreditation in the2003 version from the Environment Agency RHS team.

The design of RAPID and the format of data entry mimics the 2003 RHS form and therefore should be easily understood by an accredited RHS surveyor. RAPID is a Microsoft Access database designed to capture and store RHS data in the field using a Tablet PC. It can also be used as a desk-based application for entering and storing RHS data from paper field sheets.

By using a field digital data entry system to record the RHS data on site, rather than a paper form, you reduce the likelihood of errors associated with transferring data from paper copy to a database, and allow more effective use of staff time. There is also the added benefit of being able to validate the entered data while still on-site, thus improving data quality.

The functionality of RAPID 3.0 has not really changed from RAPID 2.1 but this latest version is now compatible with more recent versions of Access and is now provided as an .accdb file (rather than the previous .mdb file).

RAPID 3.0 is provided as a zip file containing three files:

- RAPID3.0_Manual.pdf
- RAPID3.0.accdb
- RAPID.ico

## 2.     Installation instructions

This section explains how RAPID 3.0 should be set up on your PC before first use.

1.      The following files should be copied to C:\Program Files\RAPID

RAPID3.0.accdb

RAPID.ico

2.      Make a short cut on your desktop to RAPID3.0.accdb.

3.      Change the icon of the shortcut by right clicking on the shortcut and selecting properties. Within the "Shortcut" tab, click on the "Change icon" button. Browse to the location of the icon file (RAPID.ico). Click "OK" and then "OK" again.

4.      The icon within the task bar and within the Access file should automatically show as the RAPID icon if the icon file has been saved in the location mentioned above.

5.      If the database file and icon file are stored in different locations to the one mentioned above, then the database can still be used. An error message may pop-up but this can be ignored (click "OK").

## 3.    Entering data

### 3.1    Opening the database

6.    To launch RAPID, double-click the RAPID 3.0 icon on the desktop. An opening window appears providing information about the application. Click the Terms and Conditions button to view the full Terms and Conditions of use and the Liability Disclaimer.

7.    Click the Continue button to proceed to the Main Menu.
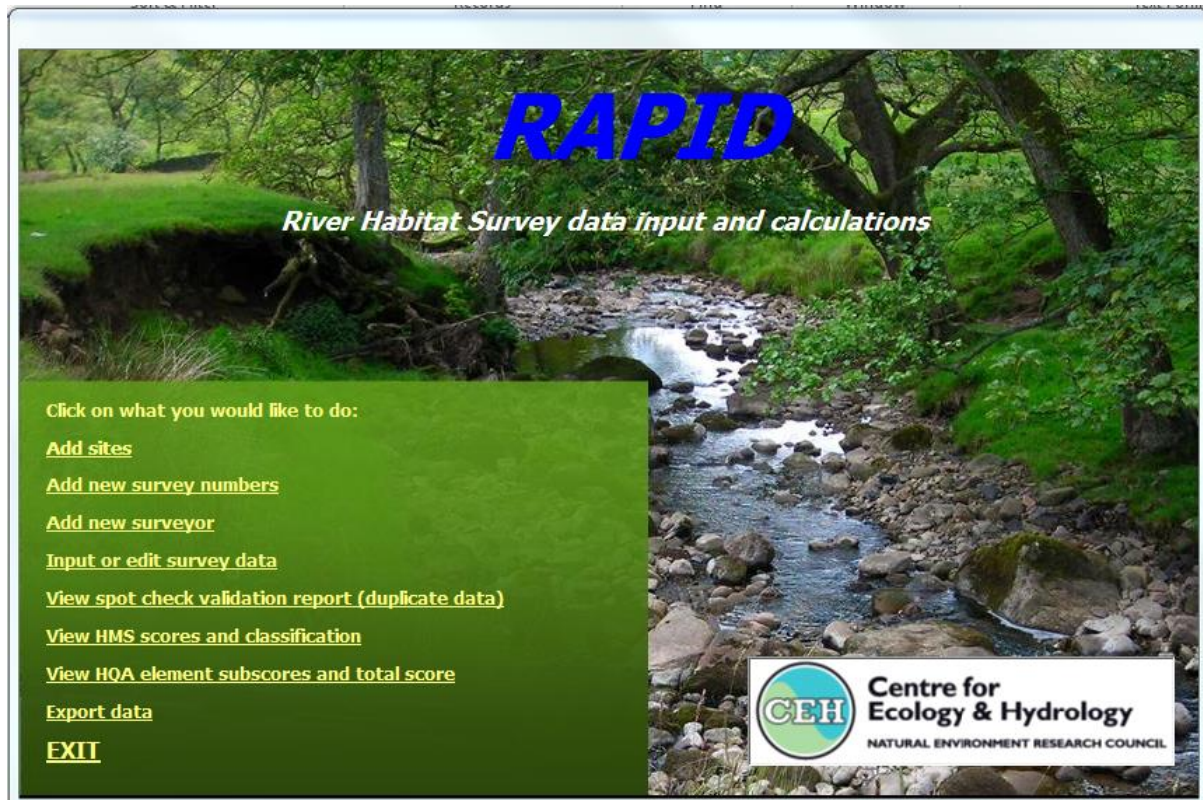


### 3.2    Main Menu

8.    The main menu provides nine options

- Add sites – this option adds details (river name, site name, site number) of a new river site to the database.

- Add new survey numbers – this option adds new survey numbers to the database, only for use when the river site has already been added to the database.

- Add new surveyor – this option adds new surveyors (name and RHS accreditation code) to the database.

- Input or edit survey data – this option is for adding RHS data.

- View spot check validation report – this options produces a report which highlights surveys where spot check features data have been double entered.

Double entries can affect subsequent Habitat Modification Scores (HMS) and Habitat Quality Assessment (HQA) results.

- View HMS scores and classification – this option calculates HMS sub-scores, total scores and classification for all completed surveys in the database.

- View HQA element sub-scores and total score – this option calculates the HQA sub-scores, total score and associated quality scores for all completed surveys in the database.

- Export data – this option allows the data from the database to be exported.

- Exit – this opens exits the RAPID database and shuts down Access.

## 3.3 Add sites

9. RAPID requires each site to have a unique Site Number, Stream Name and Site Name. You can view details of sites already entered in the database by using the record navigation bar at the bottom of the window to scroll through records.

10. A Site Number, Stream Name and Site Name must be added in the appropriate fields. BY default the Stream Name and Site Name are set to -9 (missing value). Clicking "Done" returns to the Main Menu.

Add new site

| **Site Number** | 389874 |
| **Stream Name** | Un-named |
| **Site Name** | Un-named |

To add more than one site, press return or tab again after completing each site.

Use the navigation bar below to see existing sites.

To delete a site, click the (record selector) bar at the side of the form (it will turn black) and press the delete key on the keypad.

**WARNING!**

If you delete a site, you will also delete any existing data for that site.

**To add new surveys for these sites, choose 'Add new survey numbers' on main menu**

Press DONE to return to the main menu

Done

Record: I◄ ◄ 1 of 1 ► ►I ►▒ ▼ Filtered  Search

## 3.4    Add new survey numbers

11.    RAPID requires each RHS survey carried out at a given site to have a unique Survey Number. In this way repeat surveys can be carried out at the same site over time.

12.    Select the site from the drop-down list and then enter the new survey number in the empty field. Survey numbers already in the database for the selected site can be viewed in the lower half of the window.



13.    Click "Done" and then "OK" to add the new survey number to the database and to return to the Main Menu.

14.    It is possible to abort adding a new survey number either by clicking "Done" and then "No". The Main Menu will then appear without having added or saving a new survey number to the database.

## 3.5    Add new surveyor

15.    To be able to add a surveyor during data entry, the surveyor name needs adding to the data. This is done by using the "Add new surveyor" form. When the form is opened, the surveyor name, in the format Surname, Firstname, needs adding along with their RHS accreditation code.

16.    Click "Done" when details have been added and to return to the Main Menu.

17.    The names of surveyors already entered can be viewed by using the navigation buttons at the bottom of the form (circled in yellow in the image below).

## 3.6    Input or edit survey data

18.    The data entry form consists of 4 pages, similar to the paper copy. Pages 1, 3 and 4 gather general survey information and data for the sweep-up part of the RHS. Page 2 is where the spot-check data is entered. Moving between the pages is done via the tabs on the input form (circled yellow in the image below).

19.    To begin data entry, select the site and survey from the drop-down list in the red box.

   If data has already been entered, then the rest of the boxes on the form will fill with the previously inputted. These data can be edited as required.

   If no data has previously been inputted then the boxes will be auto-populated with "-9", which stands for "missing value". These values should be overwritten with the actual data.

   Only one set of data can be entered for any combination of site and survey number. A new survey number will need adding for another survey at the same site.

   To scroll down to the bottom part of the form, use the vertical scroll bar.

### 3.6.1    Page 1

20.    *Section A Field Survey Details*: The GPS-derived NGR for spot-check 1, 6 and 50m beyond spot-check 10 must be entered. These data can be entered at any time but must be completed for the record to be fully complete.

   On entering the "Date" box, the date picker tool will activate. By clicking on the calendar icon, the correct date can be chosen. There is also an option for "Today".

The surveyor's name and RHS accreditation code should be selected from the drop-down list. The details of a new surveyor can be added by double-clicking on the "Surveyor" field.

There "Help" button provides definitions for both types of watercourse: part of a river or an artificial channel.



21. *Section B Valley Form*: This section does not differ in content from the paper form, but has a slightly different arrangement of the options.

22. *Section C Number of Riffles, Pools and Point Bars*: This section does not differ in content from the paper form.

23. *Section D Artificial Features*: This section does not differ in content from the paper form, but has a slightly different arrangement of options. First tick the box near the top-left of the section which will turn all the -9s in the section to zeros, then enter counts for those artificial features that are present, if any.

### 3.6.2 Page 2

24. The design of Page 2 differs from that of the paper form. Each of the 10 spot-checks and the summary channel vegetation and extra substrate section are on separate tabbed pages nested within Page 2. A blue bar underneath the tab numbers indicates which tab is currently selected. The drop-down boxes provide all valid options, both in code and with description, for each spot-check attribute, to aid data-entry. On the tabs for spot-checks 1, 6 and 10 there is a reminder to record the GPS readings. Whether spot-check 1 is at the up- or downstream end of the site is recorded in the drop-down box above the tabbed section and must be entered.

25. Each spot-check tab also features a "Check" button (circled yellow in the image below) which, when clicked, will confirm that there are no missing data or omissions for that spot-check. It is good practice to use this button before moving to the next spot-check to ensure that all the necessary data have been entered.

26. *Section E Physical Attributes*: This section does not differ in content from the paper form, but has a slightly different arrangement of the options. A maximum of two

codes for "Bank modifications" and "Marginal and bank features" on each bank can be entered. To add more than two codes use the survey notes. The same applies for channel modifications and features.

27.    It should be noted that all the boxes need an answer. So even if there is only one bank modification at this spot-check, the optional second drop-down should be changed to NO (none).

28.    *Section F Banktop Land-use and Vegetation Structure*: This section does not differ in content from the paper form, but has a slightly different arrangement of the options.



29.    *Section G Channel Vegetation Types*: This section does not differ in content from the paper form, but has a slightly different arrangement of the options.

All boxes need a response, even those for types not present, to actively record that they are absent.

If there is no channel vegetation, or less than 1% channel vegetation, at the spot-check, then select "No plants" from the "Update all to:" drop-down in the blue section header bar. This will enter NO in all the boxes.

If the water is too turbid to make a judgement on the presence of submerged vegetation forms then "Submerged plants not visible" from the "Update all to:" drop-down should be selected. This will enter NV in the boxes for the three submerged vegetation types.

If it is not possible to see the channel at the spot-check and no judgement can be made on the presence of vegetation in the channel, select "Whole channel not visible" from the 'Update all to:' drop-down. This will enter NV in boxes for all vegetation types.

30.    The last spot-check tab on page 2 ('Overall' tab) is for entering extra channel substrates that were not recorded in any of the 10 spot-checks but are present in >1% of the whole 500 m site. A summary of the substrates that were recorded at the 10 spot-checks is provided to the right of the drop-down boxes. If there are no extra substrates to record then all three boxes should be set to "NO" (none).



The Overall tab on Page 2 also contains a section for recording the overall presence of vegetation types present along the whole 500 m site. This could also include types not recorded in any of the spot-checks. Only record vegetation types that

cover >1% of the whole 500 m site. Next to each drop-down box there is a tally of the number of times that vegetation type has been recorded as present or extensive in the 10 spot-checks. This should assist in completing this section. Again all boxes will need a response in order to remove -9s.

### 3.6.3   Page 3

31.     *Section H Land-use within 50 m of Banktop*: This section does not differ in content from the paper form, and has an almost identical arrangement of the options. The box near the top-left of the section (circled yellow in the image below) should be ticked to turn all the -9s in the section to zeros. Data can then be entered for those land-uses that are present.



32.     *Section I Bank Profiles*: This section does not differ in content from the paper form, and has an almost identical arrangement of the options.  The box near the top-left of the section (also circled yellow in the image above) should be ticked to turn all the -9s in the section to zeros. Data can then be entered for those natural and artificial bank profiles that are present.

33.   *Section J Extent of Tress and Associated Features*: This section does not differ in content from the paper form, but does have a slightly different arrangement of the options.  If there are no trees or none of the associated features present at the RHS site then tick the box in the top left-hand corner of the section (circled yellow in the image below) to change all the -9s to zeros. Alternatively each of the drop-down boxes can be completed appropriately.

Add survey data

**J) EXTENT OF TREES AND ASSOCIATED FEATURES (Sweep-Up)** *record even if <1%

To Update all to None, tick box ☐          TREES                    ASSOCIATED FEATURE

                                        Left    Right     Shading of channel                E ▾
                                         5 ▾     5 ▾      *Overhanging boughs               P ▾
                                                          *Exposed bankside roots           P ▾
                                                          *Underwater tree roots            P ▾
                                                          Fallen trees                      P ▾
                                                          Large woody debris                P ▾

**K) EXTENT OF CHANNEL AND BANK FEATURES (Sweep-Up)** *record even if <1%

To Update all to None, tick box ☐

| *Free fall flow | P ▾ | Exposed bedrock | 0 ▾ |
| Chute flow | P ▾ | Exposed boulders | P ▾ |
| Broken standing waves | P ▾ | Vegetated bedrock/boulders | 0 ▾ |
| Unbroken standing waves | P ▾ | Unvegetated mid-channel bar(s) | P ▾ |
| Rippled flow | E ▾ | Vegetated mid-channel bar(s) | 0 ▾ |
| *Upwelling | P ▾ | Mature island(s) | P ▾ |
| Smooth flow | P ▾ | Unvegetated side bar(s) | P ▾ |
| No perceptible flow | 0 ▾ | Vegetated side bar(s) | 0 ▾ |
| No flow (Dry) | 0 ▾ | Unvegetated point bar(s) | P ▾ |
| Marginal deadwater | P ▾ | Vegetated point bar(s) | 0 ▾ |
| Eroding cliff(s) | P ▾ | *Unvegetated silt deposit(s) | 0 ▾ |
| Stable cliff(s) | P ▾ | *Discrete unvegetated sand deposit(s) | 0 ▾ |
| | | *Discrete unvegetated gravel deposit(s) | 0 ▾ |

34.   *Section K Extent of Channel and Bank Features*: This section does not differ in content from the paper form, and has an almost identical arrangement of the options. The box near the top-left of the section (also circled yellow in the image above) should be ticked to turn all the -9s in the section to zeros. Data can then be entered for those features that are present.

### 3.6.4   Page 4

35.   *Section L Channel Dimensions*: This section does not differ in content from the paper form, and has a similar layout. Use the numerical drop-down lists to record the measured dimensions.

36.     *Section M Features of Special Interest*: This section does not differ in content from the paper form, and has an almost identical arrangement of the options. Tick the box near the top-left of the section (circled yellow in the image below) which will turn all the -9s in the section to zeros, then enter data for those features that are present.



37.     *Section N Choked Channel*: This section does not differ in content from the paper form, and has a similar layout.

38.     *Section O Notable Nuisance Plant Species*: This section does not differ in content from the paper form, and has an almost identical arrangement of the options. Tick the box near the top-left of the section (circled yellow in the image below) which will turn all the -9s in the section to zeros, then enter data for those plant species that are present.

39.     *Section P Overall Characteristics*: This section does not differ in content from the paper form. However it does have a different arrangement of the options. Tick the box near the top-left of the section (also circled yellow in the image below) which

will turn all the -9s in the section to zeros, then select from the drop-down menu those characteristics that are present.



Up to six different characteristics can be recorded within each category. If more are required then use the "Survey Notes" page.

40.	*Section S Alders*: This section does not differ in content from the paper form, and has a similar layout.

### 3.6.5   Survey notes

41.	The final page on the form is for notes made during the survey. This includes additional information from the spot checks that could not be included within the data entry form.

## 3.7   Validating data

42.	Once the survey data has been entered it must be validated, while still at the site (if appropriate) in order that any omissions can be accurately corrected. RAPID has an

in-built validation routine that can be activated by pressing the "Check Data" button in the top right of the form (circled yellow in the image below). RAPID will check, sequentially from the start of the form to the finish, for data fields that have been left empty by mistake and where possible, for inconsistencies in the data entered. RAPID will only display one error at a time (so that there is opportunity to correct the problem). Once the error has been corrected press the "Check Data" button again to find the next error (if there is one). Once the validation is successfully finished, RAPID produces a message 'This RHS survey appears to be complete'.



43.     To close the form and return to the Main Menu, click on the "Main menu" button (next to the "Check data" button).


## 3.8     View spot-check validation report

44.     As well as the "Check data" function within the data input forms, RAPID also has the facility to confirm that there has been no unnecessary double-entering of data in Section E of the RHS form. Section E records physical attributes of the left bank, right bank and channel at each spot-check.

For some of the attributes (bank modification, bank features, channel modification and channel features) it is possible to enter two codes. However, it would not be valid to enter the same code in both boxes for a given attribute, e.g. for left bank modifications it would be invalid to enter Poached (PC) in both boxes. The only code that is valid to be entered twice is None (NO).
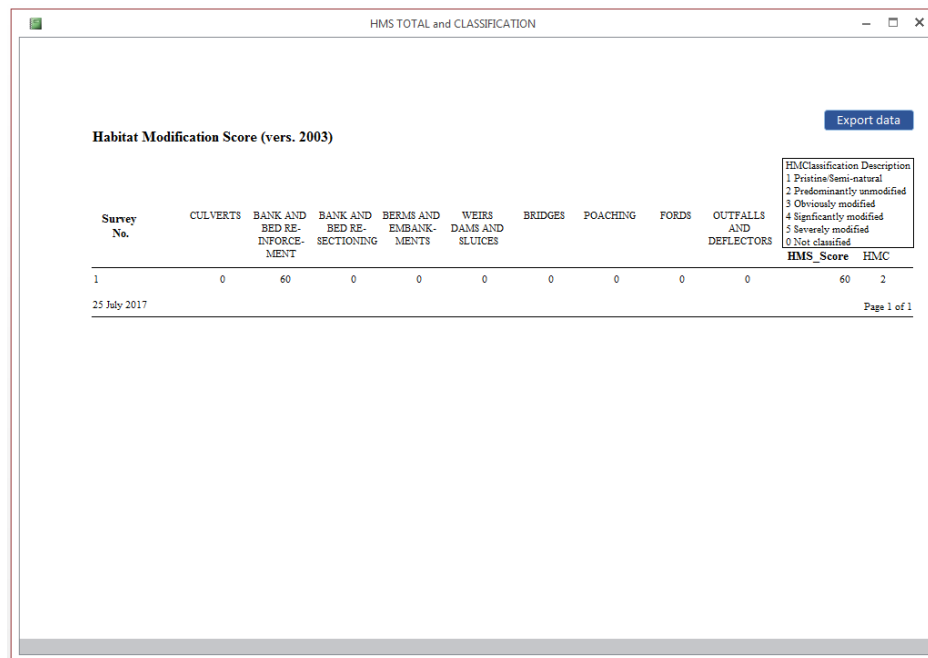
Running this option also validates the Channel Substrate data in Section E of the 'Overall' tab on Page 2 of the data input form. Here the surveyor is required to enter extra channel substrates that were not recorded in any of the 10 spot-checks but are present in >1% of the whole 500 m site. A summary of the substrates that were recorded at the 10 spot-checks is provided to the right of the drop-down boxes to remind the surveyor. However this validation does a further check to ensure that none of the additional substrates have already been recorded.

45. Selecting 'View spot-check validation report' from the Main Menu produces a report highlighting those surveys for which such invalid double-entering of data has taken place. Double-entered data can affect subsequent HMS and HQA results. It is important to run these validation-checks prior to calculating HMS and HQA results.

46. The validation results are presented as a database report. By right-clicking on the report it is possible to print the report or export the results to a variety to different files types including MS Excel (.xlsx/.xls) and text (.txt/.csv).
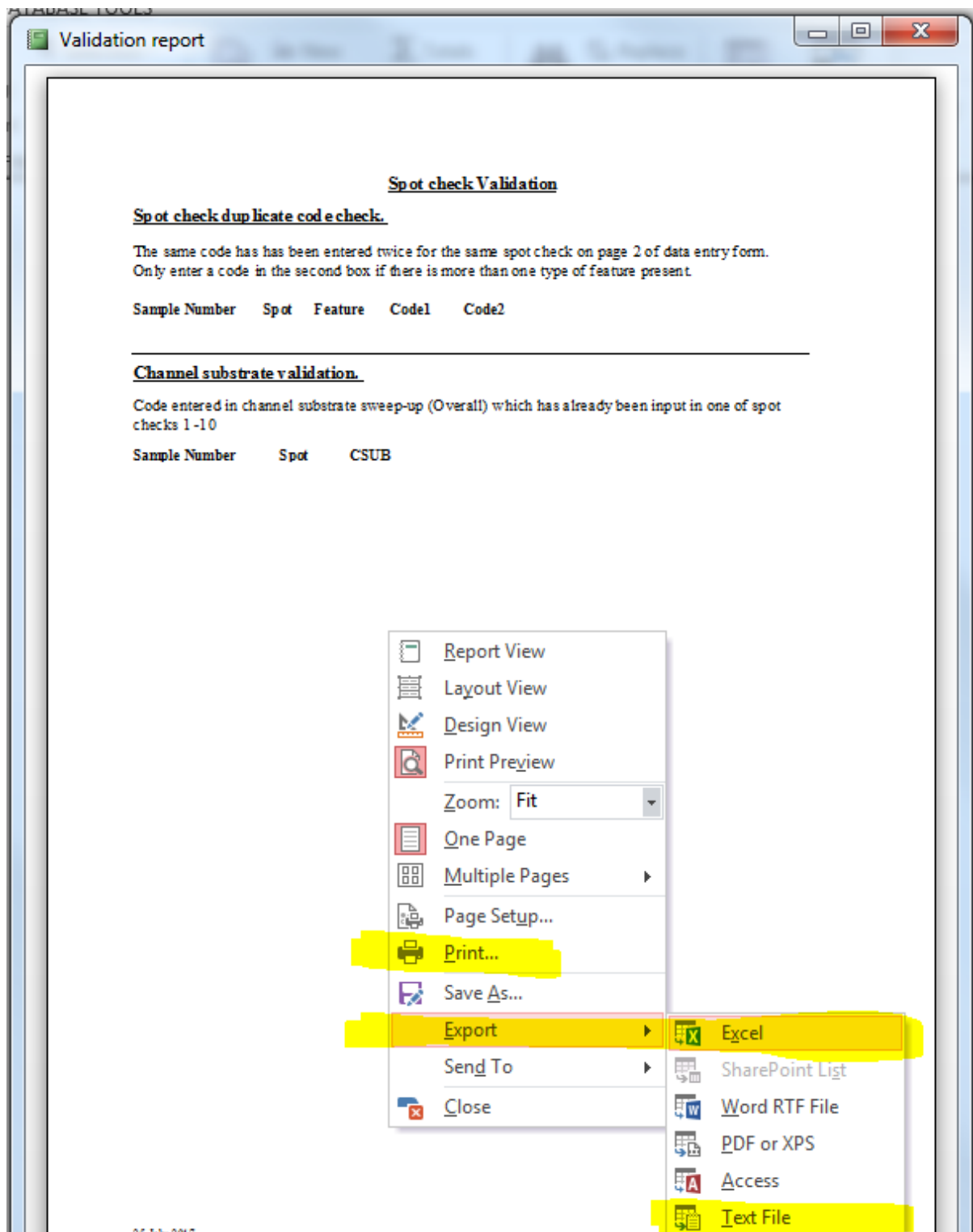
## 3.9   View HMS scores and classification

47.   This option calculates the HMS sub-scores, total score and classification for all completed surveys in the database.  The HMS results are presented as a database report. There is an option to export the results to Excel by clicking on the "Export data" button.



## 3.10   View HQA element subscores and total scores

48.   This option calculates the HQA sub-scores, total score and associated quality scores for all completed surveys in the database. The HQA results are presented as a database report. There is an option to export the results to Excel by clicking on the "Export data" button

## 3.11 Export data

49. This option exports a copy of the main survey data and the spot-check data to an Excel file on the desktop.



### 3.11.6 Column heading descriptions for RAPIDSurveyData.xlsx

| Column heading | Column description |
| --- | --- |
| Site_Number | Site number |
| Stream_Name | Stream or river name |
| Site_Name | Site name |
| Sample_Number | Sample number |
| DATE_ | Sample date (DD/MM/YYYY) |
| SURVEYOR | Surveyor name |
| ADV_COND | Adverse conditions affecting survey?<br>Y        yes<br>N        no |
| ADV_CON | If ADV_COND is Y, this will explain what the adverse conditions are |
| BED_VIS | Is bed of river visible?<br>0        Barely or not<br>P        Partially<br>E        +/- Entirely |
| PHOTO | Number of photos |
| PHOTO_REF | Photo references |

| Column heading | Column description |
|---|---|
| SURVFROM | Site surveyed from: <br> L  Left bank only <br> LC  Left bank and channel only <br> R  Right bank only <br> RC  Right bank and channel only <br> C  Channel only <br> LR  Left bank and right bank only <br> LRC  Left bank, right bank and channel |
| VAL_FORM | Predominant valley form: <br> 1  shallow vee <br> 2  deep vee <br> 3  gorge <br> 4  concave/bowl <br> 5  asymmetrical valley <br> 6  no obvious valley sides <br> 7  U-shaped valley |
| FLAT_VAL_BOT | Distinct flat valley bottom? <br> N  No <br> Y  Yes |
| NAT_TERR | Natural terraces? <br> N  No <br> Y  Yes |
| N_RIFFLE | Number of riffles |
| N_POOLS | Number of pools |
| N_UNV_PB | Number of unvegetated point bars |
| N_VEG_PB | Number of vegetated point bars |
| SPOTCHCK | Spot check 1 at Up- or Down-stream end? <br> U  Upstream <br> D  Downstream |
| L_BR_SN | Land use within 50m of left banktop (500m Sweep-Up) - Broadleaf/mixed woodland (semi-natural) <br> 0  None <br> P  Present <br> E  >= 33% bank length |
| R_BR_SN | Land use within 50m of right banktop (500m Sweep-Up) - Broadleaf/mixed woodland (semi-natural) <br> 0  None <br> P  Present <br> E  >= 33% bank length |
| L_BR_PL | Land use within 50m of left banktop (500m Sweep-Up) - Broadleaf/mixed plantation <br> 0  None <br> P  Present <br> E  >= 33% bank length |

| Column heading | Column description |
|---|---|
| R_BR_PL | Land use within 50m of right banktop (500m Sweep-Up) - Broadleaf/mixed plantation<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_CON_PL | Land use within 50m of left banktop (500m Sweep-Up) - Coniferous Plantation<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_CON_PL | Land use within 50m of right banktop (500m Sweep-Up) - Coniferous Plantation<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_CONIF | Land use within 50m of left banktop (500m Sweep-Up) - Coniferous woodland (semi-natural)<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_CONIF | Land use within 50m of right banktop (500m Sweep-Up) - Coniferous woodland (semi-natural)<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_SCRUB | Land use within 50m of left banktop (500m Sweep-Up) - Scrub and shrubs<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_SCRUB | Land use within 50m of right banktop (500m Sweep-Up) - Scrub and shrubs<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_ORCHA | Land use within 50m of left banktop (500m Sweep-Up) – Orchard<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_ORCHA | Land use within 50m of right banktop (500m Sweep-Up) – Orchard<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_WETLND | Land use within 50m of left banktop (500m Sweep-Up) - Wetland<br>0     None<br>P     Present<br>E     >= 33% bank length |

| Column heading | Column description |
|---|---|
| R_WETLND | Land use within 50m of right banktop (500m Sweep-Up) - Wetland<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_HEATH | Land use within 50m of left banktop (500m Sweep-Up) - Moorland/heath<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_HEATH | Land use within 50m of right banktop (500m Sweep-Up) - Moorland/heath<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_OW_ART | Land use within 50m of left banktop (500m Sweep-Up) - Artificial open water<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_OW_ART | Land use within 50m of right banktop (500m Sweep-Up) - Artificial open water<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_OW_NAT | Land use within 50m of left banktop (500m Sweep-Up) - Natural open water<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_OW_NAT | Land use within 50m of right banktop (500m Sweep-Up) - Natural open water<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_R_PAS | Land use within 50m of left banktop (500m Sweep-Up) - Rough unimproved grassland/pasture<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_R_PAS | Land use within 50m of right banktop (500m Sweep-Up) - Rough unimproved grassland/pasture<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_IMP_GR | Land use within 50m of left banktop (500m Sweep-Up) - Improved/semi-improved grassland<br>0     None<br>P     Present<br>E     >= 33% bank length |

| Column heading | Column description |
|---|---|
| R_IMP_GR | Land use within 50m of right banktop (500m Sweep-Up) - Improved/semi-improved grassland<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_HERBS | Land use within 50m of left banktop (500m Sweep-Up) - Tall herbs/rank vegetation<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_HERBS | Land use within 50m of right banktop (500m Sweep-Up) - Tall herbs/rank vegetation<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_ROCKSCREE | Land use within 50m of left banktop (500m Sweep-Up) - Rock, scree or sand dunes<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_ROCKSCREE | Land use within 50m of right banktop (500m Sweep-Up) - Rock, scree or sand dunes<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_URBAN | Land use within 50m of left banktop (500m Sweep-Up) - Suburban/urban development<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_URBAN | Land use within 50m of right banktop (500m Sweep-Up) - Suburban/urban development<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_TILLED | Land use within 50m of left banktop (500m Sweep-Up) - Tilled land<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_TILLED | Land use within 50m of right banktop (500m Sweep-Up) - Tilled land<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_IRRIG | Land use within 50m of left banktop (500m Sweep-Up) - Irrigated land<br>0     None<br>P     Present<br>E     >= 33% bank length |

| Column heading | Column description |
|---|---|
| R_IRRIG | Land use within 50m of right banktop (500m Sweep-Up) - Irrigated land<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_PARK | Land use within 50m of left banktop (500m Sweep-Up) - Parkland<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_PARK | Land use within 50m of right banktop (500m Sweep-Up) - Parkland<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_NOTVIS | Land use within 50m of left banktop (500m Sweep-Up) - Not visible<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_NOTVIS | Land use within 50m of right banktop (500m Sweep-Up) - Not visible<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_VERT_U | Left bank profile (sweep-up) - Vertical/undercut<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_VERT_T | Left bank profile (sweep-up) - Vertical with toe<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_STEEP | Left bank profile (sweep-up) - Steep (>45 deg)<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_GENTLE | Left bank profile (sweep-up) - Gentle<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_COMPOS | Left bank profile (sweep-up) - Composite<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_NBERM | Left bank profile (sweep-up)- Natural berm<br>0     None<br>P     Present<br>E     >= 33% bank length |

| Column heading | Column description |
|---|---|
| R_VERT_U | Right bank profile (sweep-up) - Vertical/undercut<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_VERT_T | Right bank profile (sweep-up) - Vertical with toe<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_STEEP | Right bank profile (sweep-up) - Steep (>45 deg)<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_GENTLE | Right bank profile (sweep-up) - Gentle<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_COMPOS | Right bank profile (sweep-up) - Composite<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_NBERM | Right bank profile (sweep-up) - Natural berm<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_RESECT | Left bank profile (sweep-up) - Resectioned (reprofiled)<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_REI_WB | Left bank profile (sweep-up) - Reinforced - whole<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_RE_TOP | Left bank profile (sweep-up) - Reinforced - top only<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_RE_TOE | Left bank profile (sweep-up) - Reinforced - toe only<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_ART_TW | Left bank profile (sweep-up) - Artificial two-stage<br>0     None<br>P     Present<br>E     >= 33% bank length |

| Column heading | Column description |
|---|---|
| L_POACH | Left bank profile (sweep-up) - Poached bank<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_EMBANK | Left bank profile (sweep-up) - Embanked<br>0     None<br>P     Present<br>E     >= 33% bank length |
| L_SET_EM | Left bank profile (sweep-up) - Set-back embankment<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_RESECT | Right bank profile (sweep-up) - Resectioned (reprofiled)<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_REI_WB | Right bank profile (sweep-up) - Reinforced - whole<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_RE_TOP | Right bank profile (sweep-up) - Reinforced - top only<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_RE_TOE | Right bank profile (sweep-up) - Reinforced - toe only<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_ART_TW | Right bank profile (sweep-up) - Artificial two-stage<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_POACH | Right bank profile (sweep-up) - Poached bank<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_EMBANK | Right bank profile (sweep-up) - Embanked<br>0     None<br>P     Present<br>E     >= 33% bank length |
| R_SET_EM | Right bank profile (sweep-up) - Set-back embankment<br>0     None<br>P     Present<br>E     >= 33% bank length |

| Column heading | Column description |
|---|---|
| L_TREE | Extent of trees (sweep up) – left bank<br>0     None<br>1     Isolated/scattered<br>2     Regularly spaced, single<br>3     Occasional clumps<br>4     Semi-continuous<br>5     Continuous |
| R_TREE | Extent of trees (sweep up) – right bank<br>0     None<br>1     Isolated/scattered<br>2     Regularly spaced, single<br>3     Occasional clumps<br>4     Semi-continuous<br>5     Continuous |
| T_SHADNG | Associated features - Shading of channel<br>0     None<br>P     Present<br>E     Extensive (>= 33%) |
| T_OVERBO | Associated features - Overhanging boughs<br>0     None<br>P     Present<br>E     Extensive (>= 33%) |
| T_EXPORO | Associated features - Exposed bankside roots<br>0     None<br>P     Present<br>E     Extensive (>= 33%) |
| T_UNDROO | Associated features - Underwater tree roots<br>0     None<br>P     Present<br>E     Extensive (>= 33%) |
| T_FALLEN | Associated features - Fallen Trees<br>0     None<br>P     Present<br>E     Extensive (>= 33%) |
| T_DEBRIS | Associated features - Large woody debris<br>0     None<br>P     Present<br>E     Extensive (>= 33%) |
| WATERFAL | Extent of channel and bank features - Free fall flow<br>0     None<br>P     Present<br>E     Extensive (>= 33%) |

| Column heading | Column description |
|---|---|
| CASCADES | Extent of channel and bank features - Chute flow<br>0     None<br>P     Present<br>E     Extensive (>= 33%) |
| RAPIDS | Extent of channel and bank features - Broken standing waves<br>0     None<br>P     Present<br>E     Extensive (>= 33%) |
| RIFFLES | Extent of channel and bank features - Unbroken standing waves<br>0     None<br>P     Present<br>E     Extensive (>= 33%) |
| RUNS | Extent of channel and bank features - Rippled flow<br>0     None<br>P     Present<br>E     Extensive (>= 33%) |
| BOILS | Extent of channel and bank features - Upwelling<br>0     None<br>P     Present<br>E     Extensive (>= 33%) |
| GLIDES | Extent of channel and bank features - Smooth flow<br>0     None<br>P     Present<br>E     Extensive (>= 33%) |
| POOLS | Extent of channel and bank features - No perceptible flow<br>0     None<br>P     Present<br>E     Extensive (>= 33%) |
| NOFLOW | Extent of channel and bank features - No flow (Dry)<br>0     None<br>P     Present<br>E     Extensive (>= 33%) |
| MARGDEAD | Extent of channel and bank features - Marginal deadwater<br>0     None<br>P     Present<br>E     Extensive (>= 33%) |
| ERCLIFF | Extent of channel and bank features - Eroding cliff(s)<br>0     None<br>P     Present<br>E     Extensive (>= 33%) |
| STCLIFF | Extent of channel and bank features - Stable cliff(s)<br>0     None<br>P     Present<br>E     Extensive (>= 33%) |

| Column heading | Column description |
|---|---|
| EXPOBEDK | Extent of channel and bank features - Exposed bedrock<br>0    None<br>P    Present<br>E    Extensive (>= 33%) |
| EXPOBOUL | Extent of channel and bank features - Exposed boulders<br>0    None<br>P    Present<br>E    Extensive (>= 33%) |
| V_BED_BOUL | Extent of channel and bank features - Vegetated bedrock/boulders<br>0    None<br>P    Present<br>E    Extensive (>= 33%) |
| UNVG_MCB | Extent of channel and bank features - Unvegetated mid-channel bar(s)<br>0    None<br>P    Present<br>E    Extensive (>= 33%) |
| VEG_MCB | Extent of channel and bank features - Vegetated mid-channel bar(s)<br>0    None<br>P    Present<br>E    Extensive (>= 33%) |
| M_ISLAND | Extent of channel and bank features - Mature island(s)<br>0    None<br>P    Present<br>E    Extensive (>= 33%) |
| UNVEG_SB | Extent of channel and bank features - Unvegetated side bar(s)<br>0    None<br>P    Present<br>E    Extensive (>= 33%) |
| VEG_SB | Extent of channel and bank features - Vegetated side bar(s)<br>0    None<br>P    Present<br>E    Extensive (>= 33%) |
| U_VEG_PB | Extent of channel and bank features - Unvegetated point bar(s)<br>0    None<br>P    Present<br>E    Extensive (>= 33%) |
| VEG_PB | Extent of channel and bank features - Vegetated point bar(s)<br>0    None<br>P    Present<br>E    Extensive (>= 33%) |
| DISCSILTDEP | Extent of channel and bank features - Unvegetated silt deposit(s)<br>0    None<br>P    Present<br>E    Extensive (>= 33%) |

| Column heading | Column description |
|---|---|
| DISCSANDTDEP | Extent of channel and bank features - Discrete unvegetated sand deposit(s)<br>0      None<br>P      Present<br>E      Extensive (>= 33%) |
| DISCGRAVDEP | Extent of channel and bank features - Discrete unvegetated gravel deposit(s)<br>0      None<br>P      Present<br>E      Extensive (>= 33%) |
| Spot-check 1 Grid Ref | Spot-check 1 grid reference |
| Spot-check 6 Grid Ref | Spot-check 6 grid reference |
| End of Site Grid Ref | Spot-check 1 grid reference |
| Part_of_RivOrArt | Is the site part of a river or an artificial channel?<br>R      River<br>A      Artificial Channel |
| WIERSLUICESMAJ | Artificial features – number of sluices (major) |
| WIERSLUICESINT | Artificial features – number of sluices (intermediate) |
| WIERSLUICESMIN | Artificial features – number of sluices (minor) |
| CULVERTS | Artificial features – number of culverts |
| BRIDGEMAJ | Artificial features – number of bridges (major) |
| BRIDGINT | Artificial features – number of bridges (intermediate) |
| BRIDGMIN | Artificial features – number of bridges (minor) |
| OUTINT_MAJ | Artificial features – number of outfalls/intakes (major) |
| OUTINT_INT | Artificial features – number of outfalls/intakes (intermediate) |
| OUTINT_MIN | Artificial features – number of outfalls/intakes (minor) |
| FORDS_MAJ | Artificial features – number of fords (major) |
| FORDS_INT | Artificial features – number of fords (intermediate) |
| FORDS_MIN | Artificial features – number of fords (minor) |
| DEFLECT_MAJ | Artificial features – number of deflectors/groynes/croys (major) |
| DEFLECT_INT | Artificial features – number of deflectors/groynes/croys (intermediate) |
| DEFLECT_MIN | Artificial features – number of deflectors/groynes/croys (minor) |
| OTHERMAJ | Artificial features – number of other artificial features (major) |
| OTHERINT | Artificial features – number of other artificial features (intermediate) |
| OTHERMIN | Artificial features – number of other artificial features (minor) |
| OTH_STATE | Explanation of any other artificial features |
| C_RE_ALI | Is channel obviously realigned?<br>1      No<br>2      Yes, <33% of Site<br>3      >=33% of site |

| Column heading | Column description |
|---|---|
| C_O_DEEP | Is channel obviously over-deepened?<br>1     No<br>2     Yes, <33% of Site<br>3     >=33% of site |
| W_IM_WD | Is water impounded by weir/dam?<br>1     No<br>2     Yes, <33% of Site<br>3     >=33% of site |
| L_BKTOP97 | Banktop height (m) |
| L_BANKFULL | Banktop = Bankfull?<br>N     No<br>Y     Yes |
| L_EMBA_H | Embanked height (m) |
| BKFULWIDTH | Embanked height (m) |
| WATER_WI | Water width (m) |
| WATER_DE | Water width (m) |
| R_BKTOP97 | Banktop height (m) |
| R_BANKFULL | Banktop = Bankfull?<br>N     No<br>Y     Yes |
| R_EMBA_H | Embanked height (m) |
| TRASH_HI | If trashline lower than banktop, indicate height above water (m) |
| TRASH_WI | Trashline bank - bank width (m) |
| BED_MAT | Bed material at site<br>1     Consolidated<br>2     Unconsolidated (loose)<br>3     Unknown |
| LOC_MEAS | Location of measurements<br>RIF     Riffle<br>RUN     Run or Glide<br>POL     Pool<br>OTH     Other |
| MEAS_OTH | Explanation of other location of measurements |
| SP_BRAID | Features of interest - Braided channels<br>0     None<br>P     Present<br>E     >= 33% banklength |
| SP_SIDECH | Features of interest - Side channel(s)<br>0     None<br>P     Present<br>E     >= 33% banklength |

| Column heading | Column description |
|---|---|
| SP_WFALL6 | Features of interest - Natural waterfall(s) > 5m high<br>0     None<br>P     Present<br>E     >= 33% banklength |
| SP_WFALL4 | Features of interest - Natural waterfall(s) < 5m high<br>0     None<br>P     Present<br>E     >= 33% banklength |
| SP_NATCAS | Features of interest - Natural cascade(s)<br>0     None<br>P     Present<br>E     >= 33% banklength |
| SP_VLB | Features of interest - Very large boulders (>1m)<br>0     None<br>P     Present<br>E     >= 33% banklength |
| SP_DEBRI | Features of interest - Debris dam(s)<br>0     None<br>P     Present<br>E     >= 33% banklength |
| SP_LEAFY | Features of interest - Leafy debris<br>0     None<br>P     Present<br>E     >= 33% banklength |
| SP_QUAKE | Features of interest - Quaking bank(s)<br>0     None<br>P     Present<br>E     >= 33% banklength |
| SP_SINK | Features of interest - Sink hole(s)<br>0     None<br>P     Present<br>E     >= 33% banklength |
| SP_BACKW | Features of interest - Backwater(s)<br>0     None<br>P     Present<br>E     >= 33% banklength |
| SP_BFDEP | Features of interest - Floodplain boulder deposits<br>0     None<br>P     Present<br>E     >= 33% banklength |
| SP_NAT_O | Features of interest - Natural open water<br>0     None<br>P     Present<br>E     >= 33% banklength |

| Column heading | Column description |
|---|---|
| SP_WATME | Features of interest - Water meadow(s)<br>0     None<br>P     Present<br>E     >= 33% banklength |
| SP_FEN | Features of interest - Fen(s)<br>0     None<br>P     Present<br>E     >= 33% banklength |
| SP_BOG | Features of interest - Bog(s)<br>0     None<br>P     Present<br>E     >= 33% banklength |
| SP_CARR | Features of interest - Wet woodland(s)<br>0     None<br>P     Present<br>E     >= 33% banklength |
| SP_MARSH | Features of interest - Marsh(es)<br>0     None<br>P     Present<br>E     >= 33% banklength |
| SP_FLUSH | Features of interest - Flush(es)<br>0     None<br>P     Present<br>E     >= 33% banklength |
| SP_FRING | Features of interest - Fringing reed-bank(s)<br>0     None<br>P     Present<br>E     >= 33% banklength |
| SP_OTHER_STATE | Explanation of other features of interest |
| CHOKED | Is 33% or more of the channel choked with vegetation?<br>N     No<br>Y     Yes |
| G_HOG_FT | Giant Hogweed - Bankface<br>0     None<br>P     Present<br>E     >= 33% banklength |
| G_HOG_50 | Giant Hogweed - Banktop to 50m<br>0     None<br>P     Present<br>E     >= 33% banklength |
| JAP_K_FT | Japanese Knotweed - Bankface<br>0     None<br>P     Present<br>E     >= 33% banklength |

| Column heading | Column description |
|---|---|
| JAP_K_50 | Japanese Knotweed - Banktop to 50m<br>0     None<br>P     Present<br>E     >= 33% banklength |
| HIM_B_FT | Himalayan Balsam - Bankface<br>0     None<br>P     Present<br>E     >= 33% banklength |
| HIM_B_50 | Himalayan Balsam - Banktop to 50m<br>0     None<br>P     Present<br>E     >= 33% banklength |
| NNPS1_FT | Other notable nuisance plant species- Bankface<br>0     None<br>P     Present<br>E     >= 33% banklength |
| NNPS1_50 | Other notable nuisance plant species - Banktop to 50m<br>0     None<br>P     Present<br>E     >= 33% banklength |
| OTHER1 | Explanation of other notable nuisance plant species |
| MAJ_IM_1 | Overall characteristics - Major impacts (1)<br>0     None<br>ABS     Abstraction<br>AFF     Afforestation<br>DAM     Dam<br>DRO     Drought<br>F_M     Fisheries management<br>HOU     Housing<br>HELEC     Hydroelectric power<br>IND     Industry<br>LAN     Landfill<br>LIT     Litter<br>MIL     Mill<br>MIN     Mining<br>OVE     Overdeepening<br>POL     Pollution<br>QUA     Quarrying<br>RAI     Rail<br>ROA     Road<br>SEW     Sewage<br>SIL     Silting<br>TIP     Tipping<br>WLOG     Waterlogging |

| Column heading | Column description |
|---|---|
| MAJ_IM_2 | Overall characteristics - Major impacts (2) |
| | 0      None |
| | ABS     Abstraction |
| | AFF     Afforestation |
| | DAM    Dam |
| | DRO    Drought |
| | F_M     Fisheries management |
| | HOU    Housing |
| | HELEC  Hydroelectric power |
| | IND     Industry |
| | LAN    Landfill |
| | LIT      Litter |
| | MIL     Mill |
| | MIN    Mining |
| | OVE    Overdeepening |
| | POL    Pollution |
| | QUA   Quarrying |
| | RAI     Rail |
| | ROA    Road |
| | SEW   Sewage |
| | SIL     Silting |
| | TIP     Tipping |
| | WLOG  Waterlogging |
| MAJ_IM_3 | Overall characteristics - Major impacts (3) |
| | 0      None |
| | ABS     Abstraction |
| | AFF     Afforestation |
| | DAM    Dam |
| | DRO    Drought |
| | F_M     Fisheries management |
| | HOU    Housing |
| | HELEC  Hydroelectric power |
| | IND     Industry |
| | LAN    Landfill |
| | LIT      Litter |
| | MIL     Mill |
| | MIN    Mining |
| | OVE    Overdeepening |
| | POL    Pollution |
| | QUA   Quarrying |
| | RAI     Rail |
| | ROA    Road |
| | SEW   Sewage |
| | SIL     Silting |
| | TIP     Tipping |
| | WLOG  Waterlogging |

| Column heading | Column description |
|---|---|
| MAJ_IM_4 | Overall characteristics - Major impacts (4) |
| | 0       None |
| | ABS    Abstraction |
| | AFF    Afforestation |
| | DAM   Dam |
| | DRO   Drought |
| | F_M   Fisheries management |
| | HOU   Housing |
| | HELEC  Hydroelectric power |
| | IND    Industry |
| | LAN    Landfill |
| | LIT     Litter |
| | MIL     Mill |
| | MIN    Mining |
| | OVE    Overdeepening |
| | POL    Pollution |
| | QUA   Quarrying |
| | RAI    Rail |
| | ROA    Road |
| | SEW   Sewage |
| | SIL    Silting |
| | TIP    Tipping |
| | WLOG  Waterlogging |
| MAJ_IM_5 | Overall characteristics - Major impacts (5) |
| | 0       None |
| | ABS    Abstraction |
| | AFF    Afforestation |
| | DAM   Dam |
| | DRO   Drought |
| | F_M   Fisheries management |
| | HOU   Housing |
| | HELEC  Hydroelectric power |
| | IND    Industry |
| | LAN    Landfill |
| | LIT     Litter |
| | MIL     Mill |
| | MIN    Mining |
| | OVE    Overdeepening |
| | POL    Pollution |
| | QUA   Quarrying |
| | RAI    Rail |
| | ROA    Road |
| | SEW   Sewage |
| | SIL    Silting |
| | TIP    Tipping |
| | WLOG  Waterlogging |

| Column heading | Column description |
|---|---|
| MAJ_IM_6 | Overall characteristics - Major impacts (6) |
| | 0 None |
| | ABS Abstraction |
| | AFF Afforestation |
| | DAM Dam |
| | DRO Drought |
| | F_M Fisheries management |
| | HOU Housing |
| | HELEC Hydroelectric power |
| | IND Industry |
| | LAN Landfill |
| | LIT Litter |
| | MIL Mill |
| | MIN Mining |
| | OVE Overdeepening |
| | POL Pollution |
| | QUA Quarrying |
| | RAI Rail |
| | ROA Road |
| | SEW Sewage |
| | SIL Silting |
| | TIP Tipping |
| | WLOG Waterlogging |
| EV_R_M_1 | Overall characteristics - Evidence of Recent Management (1) |
| | 0 None |
| | BKMOW Bank mowing |
| | DREDG Dredging |
| | ENHAN Enhancement |
| | GRAVE Gravel extraction |
| | RREHB River rehabilitation |
| | WEEDC Weed cutting |
| | OTHER Other |
| EV_R_M_2 | Overall characteristics - Evidence of Recent Management (2) |
| | 0 None |
| | BKMOW Bank mowing |
| | DREDG Dredging |
| | ENHAN Enhancement |
| | GRAVE Gravel extraction |
| | RREHB River rehabilitation |
| | WEEDC Weed cutting |
| | OTHER Other |

| Column heading | Column description |
|---|---|
| EV_R_M_3 | Overall characteristics - Evidence of Recent Management (3)<br>0     None<br>BKMOW Bank mowing<br>DREDG Dredging<br>ENHAN Enhancement<br>GRAVE Gravel extraction<br>RREHB River rehabilitation<br>WEEDC Weed cutting<br>OTHER Other |
| EV_R_M_4 | Overall characteristics - Evidence of Recent Management (4)<br>0     None<br>BKMOW Bank mowing<br>DREDG Dredging<br>ENHAN Enhancement<br>GRAVE Gravel extraction<br>RREHB River rehabilitation<br>WEEDC Weed cutting<br>OTHER Other |
| EV_R_M_5 | Overall characteristics - Evidence of Recent Management (5)<br>0     None<br>BKMOW Bank mowing<br>DREDG Dredging<br>ENHAN Enhancement<br>GRAVE Gravel extraction<br>RREHB River rehabilitation<br>WEEDC Weed cutting<br>OTHER Other |
| EV_R_M_6 | Overall characteristics - Evidence of Recent Management (6)<br>0     None<br>BKMOW Bank mowing<br>DREDG Dredging<br>ENHAN Enhancement<br>GRAVE Gravel extraction<br>RREHB River rehabilitation<br>WEEDC Weed cutting<br>OTHER Other |

| Column heading | Column description |
|---|---|
| ANIMAL_1 | Overall characteristics – Animals (1)<br>0      None<br>DIP     Dipper<br>D_F     Dragon/damselflies<br>G_W    Grey wagtail<br>HER    Heron<br>KIN     Kingfisher<br>MINK   Mink<br>OTT    Otter<br>S_M    Sand martin<br>W_V    Water vole |
| ANIMAL_2 | Overall characteristics – Animals (2)<br>0      None<br>DIP     Dipper<br>D_F     Dragon/damselflies<br>G_W    Grey wagtail<br>HER    Heron<br>KIN     Kingfisher<br>MINK   Mink<br>OTT    Otter<br>S_M    Sand martin<br>W_V    Water vole |
| ANIMAL_3 | Overall characteristics – Animals (3)<br>0      None<br>DIP     Dipper<br>D_F     Dragon/damselflies<br>G_W    Grey wagtail<br>HER    Heron<br>KIN     Kingfisher<br>MINK   Mink<br>OTT    Otter<br>S_M    Sand martin<br>W_V    Water vole |
| ANIMAL_4 | Overall characteristics – Animals (4)<br>0      None<br>DIP     Dipper<br>D_F     Dragon/damselflies<br>G_W    Grey wagtail<br>HER    Heron<br>KIN     Kingfisher<br>MINK   Mink<br>OTT    Otter<br>S_M    Sand martin<br>W_V    Water vole |

| Column heading | Column description |
|---|---|
| ANIMAL_5 | Overall characteristics – Animals (5) |
| | 0      None |
| | DIP      Dipper |
| | D_F      Dragon/damselflies |
| | G_W      Grey wagtail |
| | HER      Heron |
| | KIN      Kingfisher |
| | MINK      Mink |
| | OTT      Otter |
| | S_M      Sand martin |
| | W_V      Water vole |
| ANIMAL_6 | Overall characteristics – Animals (6) |
| | 0      None |
| | DIP      Dipper |
| | D_F      Dragon/damselflies |
| | G_W      Grey wagtail |
| | HER      Heron |
| | KIN      Kingfisher |
| | MINK      Mink |
| | OTT      Otter |
| | S_M      Sand martin |
| | W_V      Water vole |
| ALDERS | Alders present |
| | 0      None |
| | P      Present |
| | E      Extensive (>=33%) |
| D_ALDERS | Diseased alders present |
| | 0      None |
| | P      Present |
| | E      Extensive (>=33%) |
| COMMENTS | Other significant observations |
| Memo | Other notes made during the survey |

### 3.11.7 Column heading descriptions for RAPIDSpotCheckData.xlsx

| Column heading | Column description |
|---|---|
| Site_Number | Site number |
| Stream_Name | Stream or river name |
| Site_Name | Site name |
| Sample_Number | Sample number |
| Spot | Spot check number (C01 to C11) |

| Column heading | Column description |
|---|---|
| LB_MAT | Left bank material<br>EA     earth (crumbly)<br>BE     bedrock<br>BI     bio-engineering materials<br>BO     boulder<br>BR     brick/laid stone<br>CC     concrete<br>CL     sticky clay<br>CO     cobble<br>FA     fabric<br>GA     gabion<br>GS     gravel/sand<br>PE     peat<br>RR     rip-rap<br>SP     sheet piling<br>TD     tipped debris<br>WP     wood piling<br>NV     not visible |
| LB_MD1 | Left bank modifications (1)<br>NO     none<br>RS     resectioned (reprofiled)<br>RI     reinforced<br>PC     poached<br>PC(B)   poached (bare)<br>BM     artificial berm<br>EM     embanked<br>NK     not known |
| LB_MD2 | Left bank modifications (2)<br>NO     none<br>RS     resectioned (reprofiled)<br>RI     reinforced<br>PC     poached<br>PC(B)   poached (bare)<br>BM     artificial berm<br>EM     embanked<br>NK     not known |

| Column heading | Column description |
|---|---|
| LB_FE1 | Left bank – marginal and bank features (1)<br>NO     none<br>EC     eroding cliff<br>SC     stable cliff<br>EC(S)     eroding cliff (sandy substrate)<br>SC(S)     stable cliff (sandy substrate)<br>PB     unvegetated point bar<br>VP     vegetated point bar<br>SB     unvegetated side bar<br>VS     vegetated side bar<br>NB     natural berm<br>NV     not visible |
| LB_FE2 | Left bank – marginal and bank features (2)<br>NO     none<br>EC     eroding cliff<br>SC     stable cliff<br>EC(S)     eroding cliff (sandy substrate)<br>SC(S)     stable cliff (sandy substrate)<br>PB     unvegetated point bar<br>VP     vegetated point bar<br>SB     unvegetated side bar<br>VS     vegetated side bar<br>NB     natural berm<br>NV     not visible |
| CH_SUB | Channel substrate<br>GP     gravel/pebble<br>GP(G)     gravel/pebble (predominantly gravel)<br>GP(P)     gravel/pebble (predominantly pebble)<br>BE     bedrock<br>BO     boulder<br>CL     clay<br>CO     cobble<br>EA     earth<br>PE     peat<br>SA     sand<br>SI     silt<br>AR     artificial<br>NV     not visible |

| Column heading | Column description |
|---|---|
| CH_FLW | Channel flow type<br>NP     no perceptible flow<br>SM    smooth<br>RP     rippled<br>UW   unbroken standing waves<br>BW   broken standing waves<br>CF     chaotic flow<br>CH    chute<br>FF     free fall<br>UP    upwelling<br>DR    no flow (dry)<br>NV    not visible |
| CH_MD1 | Channel modifications (1)<br>NO    none<br>NK    not known<br>RS     resectioned<br>CV    culverted<br>RI     reinforced<br>DA    dam/weir/sluice<br>FO    ford (man-made) |
| CH_MD2 | Channel modifications (2)<br>NO    none<br>NK    not known<br>RS     resectioned<br>CV    culverted<br>RI     reinforced<br>DA    dam/weir/sluice<br>FO    ford (man-made) |
| CH_FE1 | Channel features (1)<br>NO    none<br>RO    exposed boulders<br>MB    unvegetated mid-channel bar<br>VB    vegetated mid-channel bar<br>MI    mature island<br>VR    vegetated rock<br>EB    exposed bedrock<br>TR    trash (urban debris)<br>NV    not visible |

| Column heading | Column description |
|---|---|
| CH_FE2 | Channel features (2)<br>NO     none<br>RO     exposed boulders<br>MB    unvegetated mid-channel bar<br>VB     vegetated mid-channel bar<br>MI     mature island<br>VR     vegetated rock<br>EB     exposed bedrock<br>TR     trash (urban debris)<br>NV     not visible |
| CH_WET | Braided rivers: number of wet sub channels |
| CH_DRY | Braided rivers: number of dry sub channels |
| RB_MAT | Right bank material<br>EA     earth (crumbly)<br>BE     bedrock<br>BI      bio-engineering materials<br>BO     boulder<br>BR     brick/laid stone<br>CC     concrete<br>CL     sticky clay<br>CO     cobble<br>FA     fabric<br>GA     gabion<br>GS     gravel/sand<br>PE     peat<br>RR     rip-rap<br>SP     sheet piling<br>TD     tipped debris<br>WP    wood piling<br>NV     not visible |
| RB_MD1 | Right bank modifications (1)<br>NO     none<br>RS     resectioned (reprofiled)<br>RI     reinforced<br>PC     poached<br>PC(B) poached (bare)<br>BM    artificial berm<br>EM    embanked<br>NK     not known |

| Column heading | Column description |
|---|---|
| RB_MD2 | Right bank modifications (2)<br>NO none<br>RS resectioned (reprofiled)<br>RI reinforced<br>PC poached<br>PC(B) poached (bare)<br>BM artificial berm<br>EM embanked<br>NK not known |
| RB_FE1 | Right bank – marginal and bank features<br>NO none<br>EC eroding cliff<br>SC stable cliff<br>EC(S) eroding cliff (sandy substrate)<br>SC(S) stable cliff (sandy substrate)<br>PB unvegetated point bar<br>VP vegetated point bar<br>SB unvegetated side bar<br>VS vegetated side bar<br>NB natural berm<br>NV not visible |
| RB_FE2 | Right bank – marginal and bank features<br>NO none<br>EC eroding cliff<br>SC stable cliff<br>EC(S) eroding cliff (sandy substrate)<br>SC(S) stable cliff (sandy substrate)<br>PB unvegetated point bar<br>VP vegetated point bar<br>SB unvegetated side bar<br>VS vegetated side bar<br>NB natural berm<br>NV not visible |

| Column heading | Column description |
|---|---|
| USE5_L | Land-use within 5m of left banktop |
| | IG     improved/semi-improved grassland |
| | RP    rough unimproved grassland/pasture |
| | BL    broadleaf/mixed woodland (semi-natural) |
| | BP    broadleaf/mixed plantation |
| | TH    tall herbs/rank vegetation |
| | SH    scrub & shrubs |
| | CP    coniferous plantation |
| | CW   coniferous woodland (semi-natural) |
| | OR   orchard |
| | SU   urban/suburban development |
| | PG   parkland or gardens |
| | TL    tilled land |
| | IL     irrigated land |
| | WL   wetland (e.g. bog, marsh, fen) |
| | OW  natural open water |
| | AW  artificial open water |
| | MH  moorland/heath |
| | RD   rock, scree or sand dunes |
| | NV   not visible |
| L_BTOP | Left banktop structure within 1 m |
| | B     bare |
| | U     uniform |
| | S     simple |
| | C     complex |
| | NV   not visible |
| L_BFAC | Left bankface structure |
| | B     bare |
| | U     uniform |
| | S     simple |
| | C     complex |
| | NV   not visible |
| R_BFAC | Right bankface structure |
| | B     bare |
| | U     uniform |
| | S     simple |
| | C     complex |
| | NV   not visible |
| R_BTOP | Right banktop structure within 1 m |
| | B     bare |
| | U     uniform |
| | S     simple |
| | C     complex |
| | NV   not visible |

| Column heading | Column description |
|---|---|
| USE5_R | Land-use within 5m of right banktop |
| | IG improved/semi-improved grassland |
| | RP rough unimproved grassland/pasture |
| | BL broadleaf/mixed woodland (semi-natural) |
| | BP broadleaf/mixed plantation |
| | TH tall herbs/rank vegetation |
| | SH scrub & shrubs |
| | CP coniferous plantation |
| | CW coniferous woodland (semi-natural) |
| | OR orchard |
| | SU urban/suburban development |
| | PG parkland or gardens |
| | TL tilled land |
| | IL irrigated land |
| | WL wetland (e.g. bog, marsh, fen) |
| | OW natural open water |
| | AW artificial open water |
| | MH moorland/heath |
| | RD rock, scree or sand dunes |
| | NV not visible |
| CV_B_L | Channel vegetation types - Liverworts/mosses/lichens |
| | NO none |
| | P present |
| | E extensive (>= 33% area) |
| | NV not visible |
| CV_HER | Channel vegetation types - Emergent broad-leaved herbs |
| | NO none |
| | P present |
| | E extensive (>= 33% area) |
| | NV not visible |
| CV_REE | Channel vegetation types - Emergent reeds/sedges/rushes/grasses/horsetails |
| | NO none |
| | P present |
| | E extensive (>= 33% area) |
| | NV not visible |
| CV_FOL | Channel vegetation types - Floating-leaved (rooted) |
| | NO none |
| | P present |
| | E extensive (>= 33% area) |
| | NV not visible |
| CV_FRF | Channel vegetation types - Free-floating |
| | NO none |
| | P present |
| | E extensive (>= 33% area) |
| | NV not visible |

| Column heading | Column description |
|---|---|
| CV_AMP | Channel vegetation types - Amphibious<br>NO     none<br>P     present<br>E     extensive (>= 33% area)<br>NV     not visible |
| CV_SBT | Channel vegetation types - Submerged linear-leaved<br>NO     none<br>P     present<br>E     extensive (>= 33% area)<br>NV     not visible |
| CV_SBL | Channel vegetation types - Submerged broad-leaved<br>NO     none<br>P     present<br>E     extensive (>= 33% area)<br>NV     not visible |
| CV_FLL | Channel vegetation types - Submerged fine-leaved<br>NO     none<br>P     present<br>E     extensive (>= 33% area)<br>NV     not visible |
| CV_FIA | Channel vegetation types - Filamentous algae<br>NO     none<br>P     present<br>E     extensive (>= 33% area)<br>NV     not visible |

## 3.12 Exit

50. Clicking on exit closes the database and the Access application window.