

FishObs DPU v32 User Guide

June 2019

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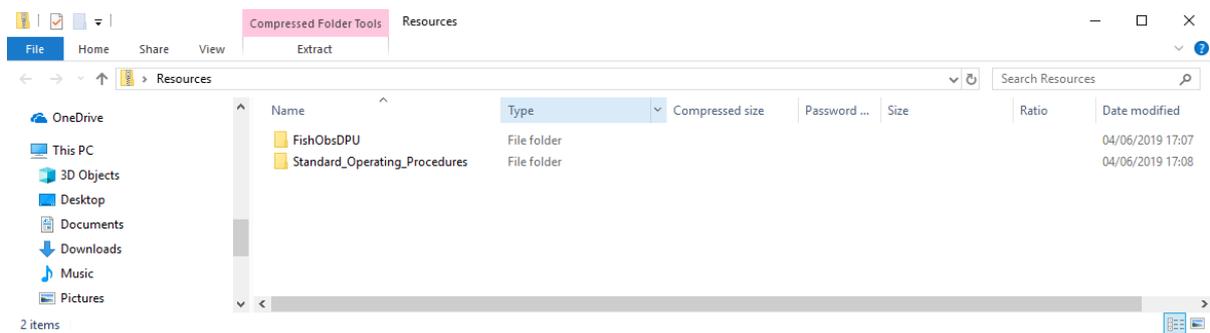
Notes:

You will not be required to use the 'Eggs', 'Parasites' or 'Scales' tab, so these are not covered in this document.

If you are using a DPU layout file provided by MSS-FFL some of these steps (i.e. creating sticky fields) will have already been done.

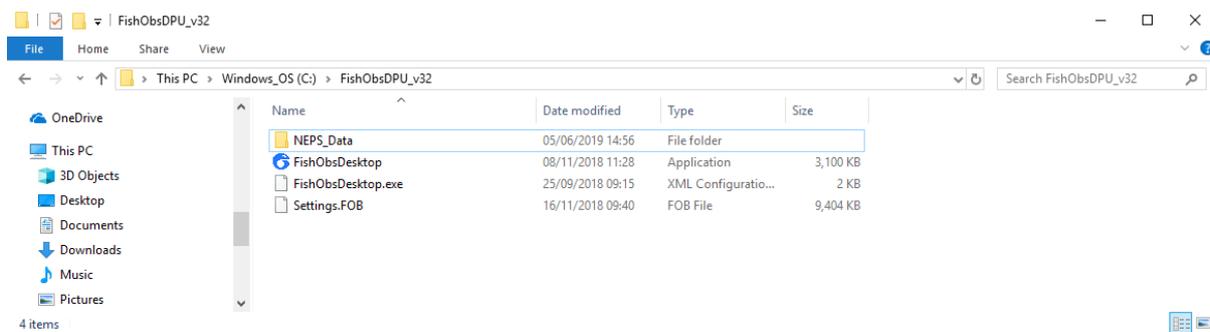
1. Installing FishObs DPU

Save the compressed FishObs folder on computers C drive.



Open the folder and highlight the contained “FishObsDPU” folder, then click “Extract” and “Extract all” and select the C drive of computer. You may want to create a new folder to save to DPU into e.g. ‘FishObsDPU_v32’.

(The compressed folder can now be deleted)



Opening this FishObs DPU v32 folder will reveal 4 items like shown above.

- FishObsDesktop is the DPU application.
- FishObsDesktop.exe.config and Settings.FOB are files that are used by the application and **must not** be deleted or altered
- NEPS_Data folder contains a template .xml file. This template prevents the need to set-up the DPU each time data is entered as column attributes (e.g. order, width, sticky) and unchanging default values (e.g. ‘Campaign’ and ‘Project’) have already been set in the .xml file.

A fifth item (folder called “Files”) will be created in this folder after the DPU application has been opened for the first time. This is where the DPU saves automatic backup files, and is where template files and site visit files can be saved to. If the DPU crashes, back-up files can be loaded into the DPU from this folder (select the relevant user folder and then the most recent back-up file).

The FishObs DPU is now installed and ready to use.

For ease, create a shortcut to your Desktop – Right click on FishObsDesktop and click ‘Send to’ / ‘Desktop (create shortcut)’

Open the DPU by clicking on the icon on your Desktop

2. Site Visit Tab

FishObsFieldDPU - OFFLINE - Version: 29

Scales	Site Measurements	Proj / Camp / Proto / Contact	Alerts	Options	Tips
Site Visit	Fish	Tissue Sample	Equipment	Eggs	Parasites

Site Visit Information

Start Date: 12/06/2018 09:10:13

End Date:

Group:

Comments:

Site Info:

Or Select a site:

Site ID: _____ Created By: _____

Sepa Catchment: _____ Sepa River: _____ Nasco River: _____

NGR X: _____ NGR Y: _____ NGR LET: _____

Latitude: _____ Longitude: _____ Location Code: _____

Site Length: _____ Location Precision: _____ HYDRO DISTANCE: _____

Country: _____

Open the DPU and select the date of the visit and the start / end time. Note that it is one DPU file per visit, so the start and end date will almost always be the same.

FishObsFieldDPU - OFFLINE - Version: 29

Scales	Site Measurements	Proj / Camp / Proto / Contact	Alerts	Options	Tips
Site Visit	Fish	Tissue Sample	Equipment	Eggs	Parasites

Site Visit Information

Start Date: 12/06/2018 09:10:13

End Date: 12/06/2018 09:10:13

Group:

Comments:

Site Info

[Create a New](#)

Site ID:

Sepa Catch:

NGR X:

Latitude:

Site Length:

Country:

Group List:

- DSFB.CAITHNESS
- FL.ECOL
- FL.ENV
- FL.FFR
- FL.GEN
- FL.INTERACTIONS
- FL.RES
- FL.SA
- FL_General
- MS.IT
- SFCC
- TRUST.CROM
- TRUST.DBI
- TRUST.DEE
- TRUST.FNL
- TRUST.SPEY
- TRUST.TWEED
- TRUST.WSFT

View Group Sites Only | Use Advanced Site Selector

River:

Y:

Created By:

Nasco River:

NGR LET:

Location Code:

HYDRO DISTANCE:

Select the Group e.g. 'DSFB.CAITHNESS'.

FishObsFieldDPU - OFFLINE - Version: 29

Scales	Site Measurements	Proj / Camp / Proto / Contact	Alerts	Options	Tips
Site Visit	Fish	Tissue Sample	Equipment	Eggs	Parasites

Site Visit Information

Start Date: 12/06/2018 09:10:13

End Date: 12/06/2018 09:10:13

Group: DSFB.CAITHNI

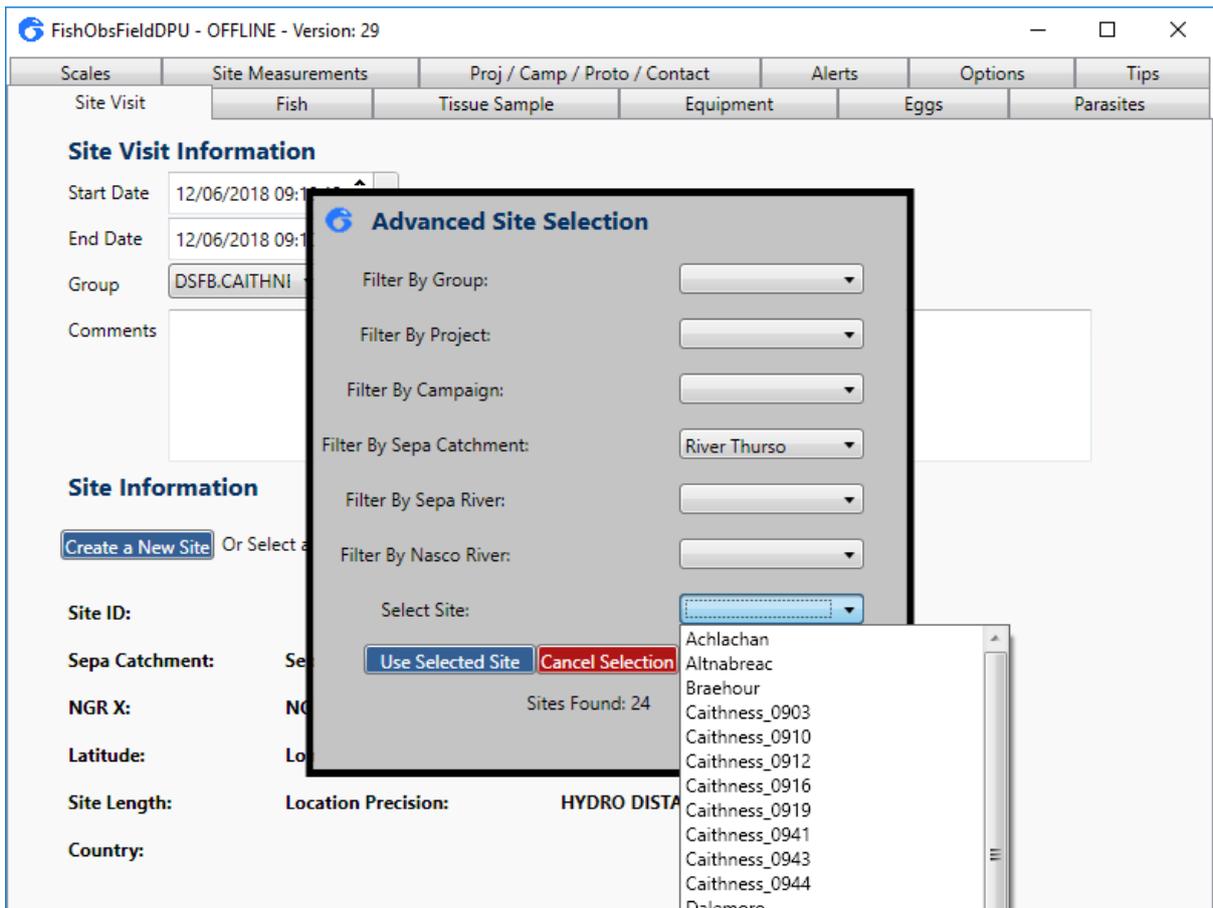
Comments:

Site Information

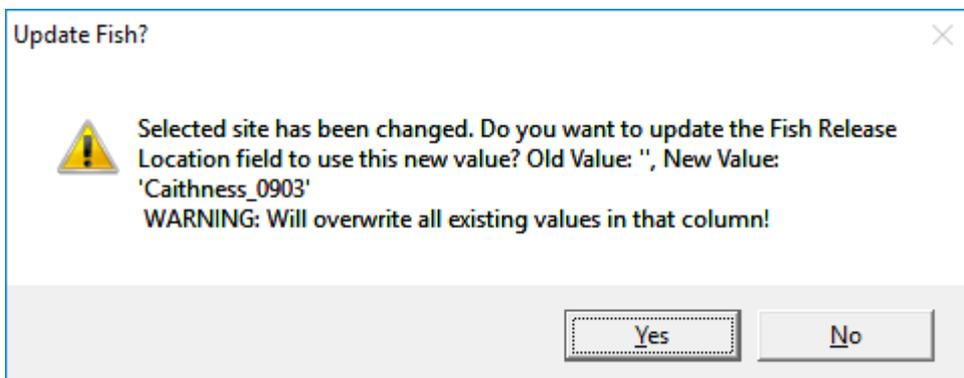
Or Select a site:

Site ID:	01 - Upper Esk - Water of Lee
Sepa Catchment:	02 - Upper Esk - Water of Mark
NGR X:	03 - Upper Esk - above Haugh
Latitude:	04 - Upper Esk - Effrock Burn
Site Length:	05 - Upper Esk - at Woodhaugh
Country:	06 - Upper Esk - Tarf at Burnfoot
	07 - Upper Esk - Easter Burn at Milton
	08 - Upper Esk - Upper Water of Tarf
	09 - Upper Esk - Tennent above mouth
	10 - Upper Esk - at Corhamcross
	11 - Upper Esk - at Holmhead
	12 - Upper Esk - above Haughend
	13 - Lower Esk - at Edzell

You can select a site from the drop down menu, or you can use the 'Advanced Site Selector' to filter the sites by river.



Select a SEPA catchment to filter the site list to that river system. Select your site and click 'Use Selected Site'.



This message will appear asking if you want to change the fish release location to match the capture location. Click 'Yes' as you will release the fish at the same site they were captured at.

FishObsFieldDPU - OFFLINE - Version: 29

Scales	Site Measurements	Proj / Camp / Proto / Contact	Alerts	Options	Tips
Site Visit	Fish	Tissue Sample	Equipment	Eggs	Parasites

Site Visit Information

Start Date: 12/06/2018 09:10:13

End Date: 12/06/2018 09:10:13

Group: DSFB.CAITHNI

Comments: Conditions: low and clear

Site Information

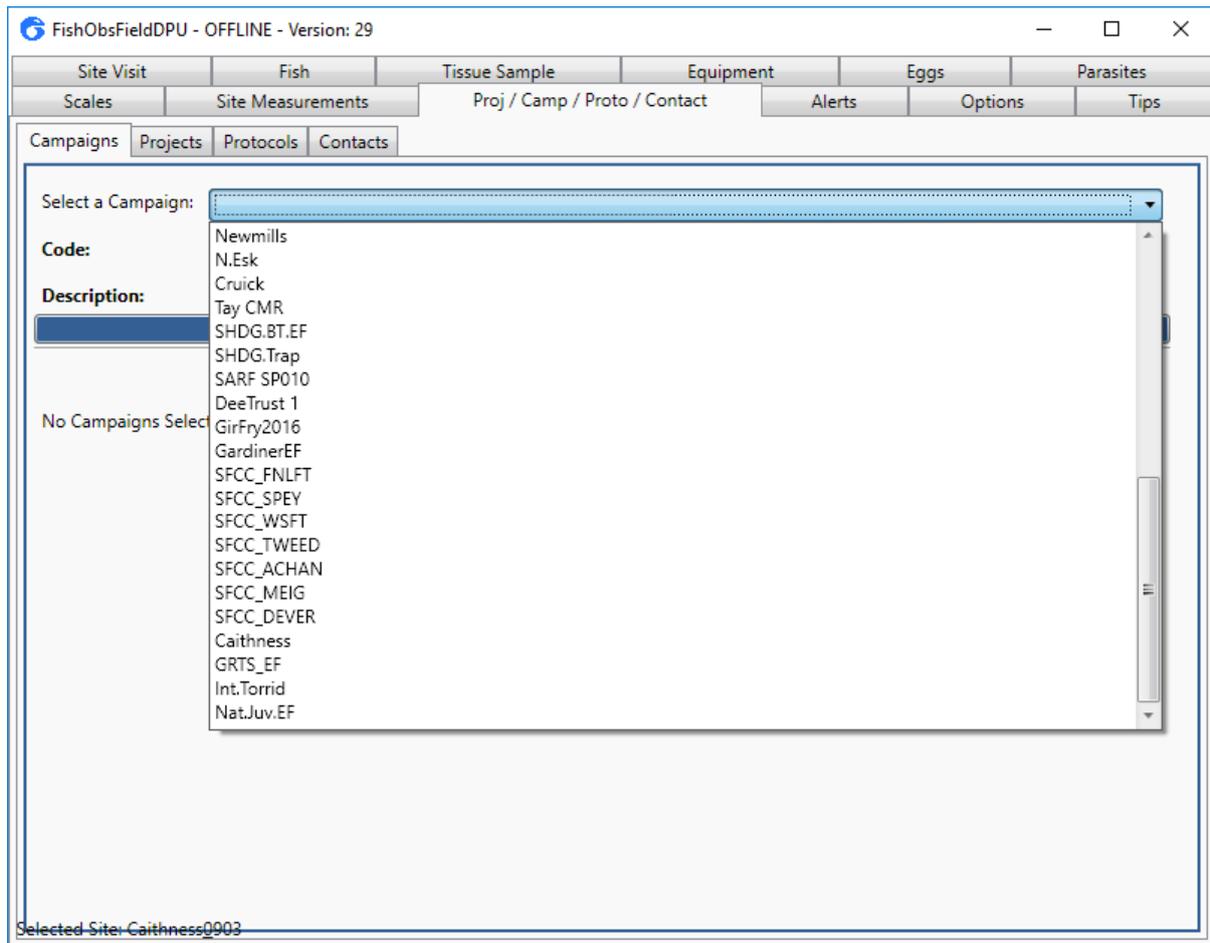
[Create a New Site](#) Or Select a site:
[View Selected Group Sites](#)
[Use Advanced Site Selector](#)

Site ID:	Caithness0903	Created By:	Ross Glover
Sepa Catchment:	River Thurso	Sepa River:	Little River/Loop Burn
Nasco River:	River Thurso	NGR X:	15129
NGR Y:	48632	NGR LET:	ND
Latitude:	58.41777	Longitude:	-3.4545237
Location Code:		Site Length:	0.0000
Location Precision:		Country:	Scotland
HYDRO DISTANCE:		Description:	Caithness 2018 GRTS site. Order 4, Annual Panel, 1 pass site

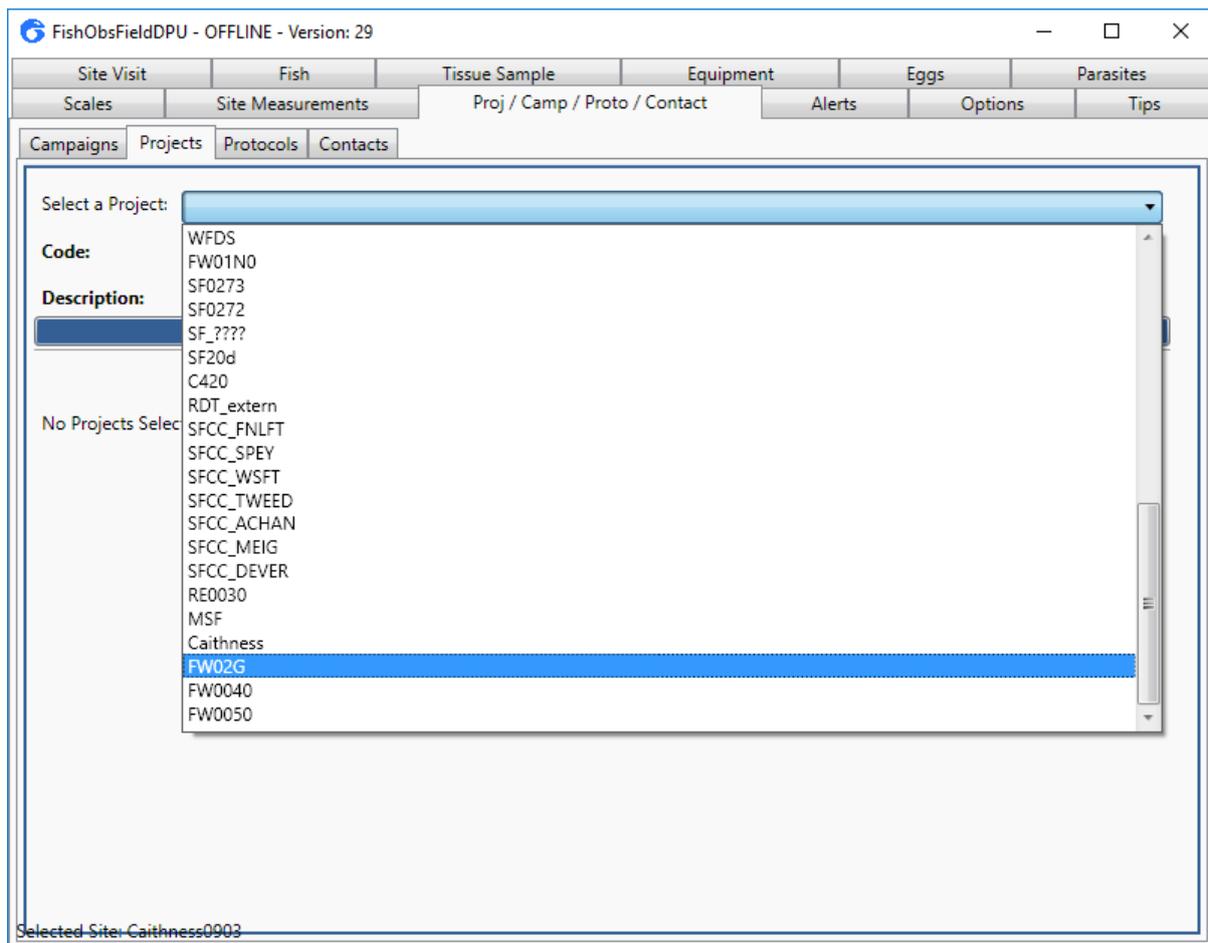
Selected Site: Caithness0903

You can enter any relevant comments about the site visit in the 'Comments' box. This is free text and can capture information that cannot be stored elsewhere, e.g. weather / flow conditions.

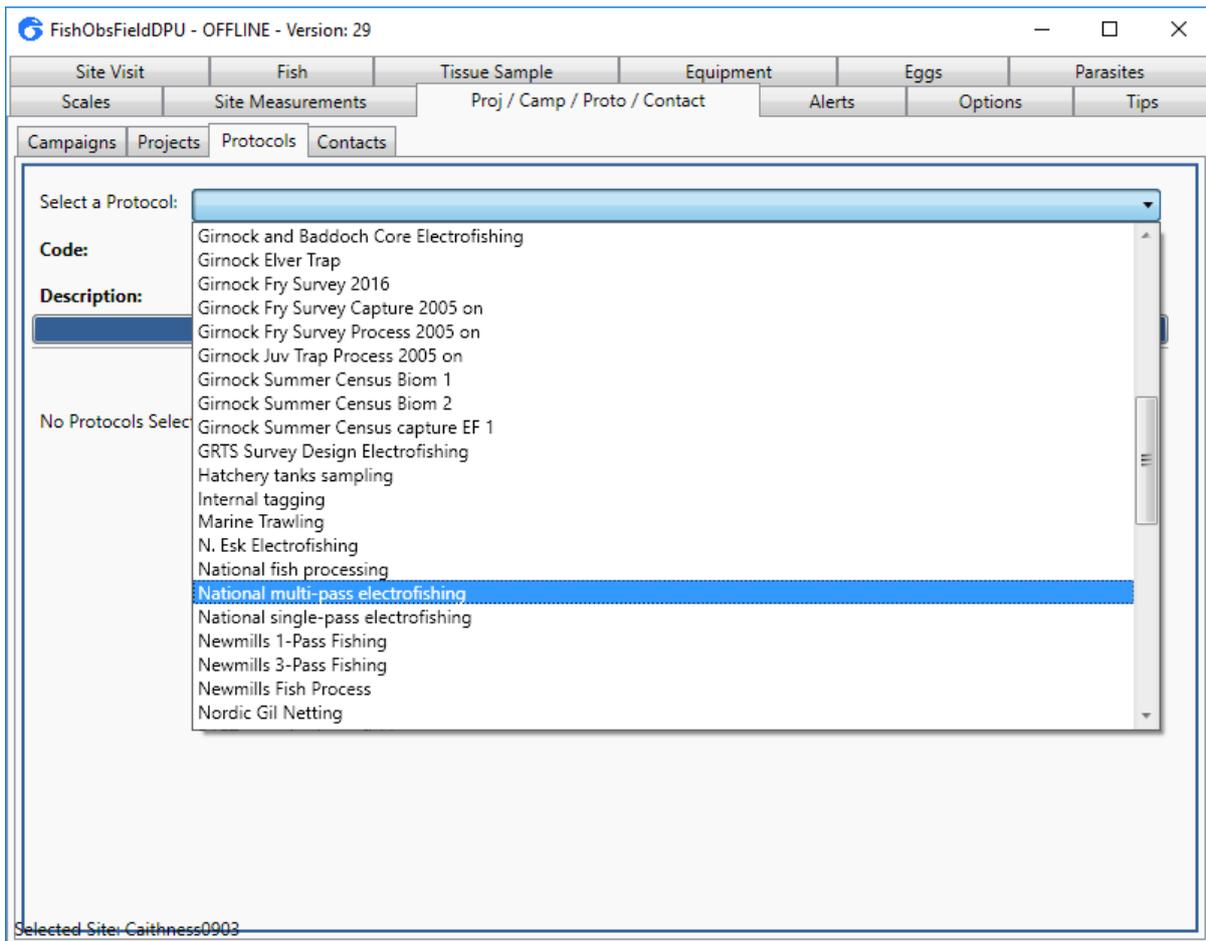
3. Proj / Camp / Proto / Contact Tab



Click on the 'Proj / Camp / Proto Contact' tab and select a campaign from the drop-down list, in this case it will be 'Nat.Juv.EF'. A description of the campaign will appear. Note: this list is not in alphabetical order. Click 'Use this Campaign'.



Click on the 'Projects' tab and select the project, which in this case is 'FW02G', and click 'Use this Project'



Click on the 'Protocols' tab and select the protocols. You must select an electrofishing protocol (single or multi-pass) and a fish processing protocol. In this case these all start with 'National'.

FishObsFieldDPU - OFFLINE - Version: 29

Site Visit | Fish | Tissue Sample | Equipment | Eggs | Parasites
 Scales | Site Measurements | Proj / Camp / Proto / Contact | Alerts | Options | Tips
 Campaigns | Projects | Protocols | Contacts

Select a Protocol:

Code: _____ Name: _____

Description: _____

[Use this Protocol](#)

Selected Protocols

Protol Name: National multi-pass electrofishing

Protocol Met?

Remove

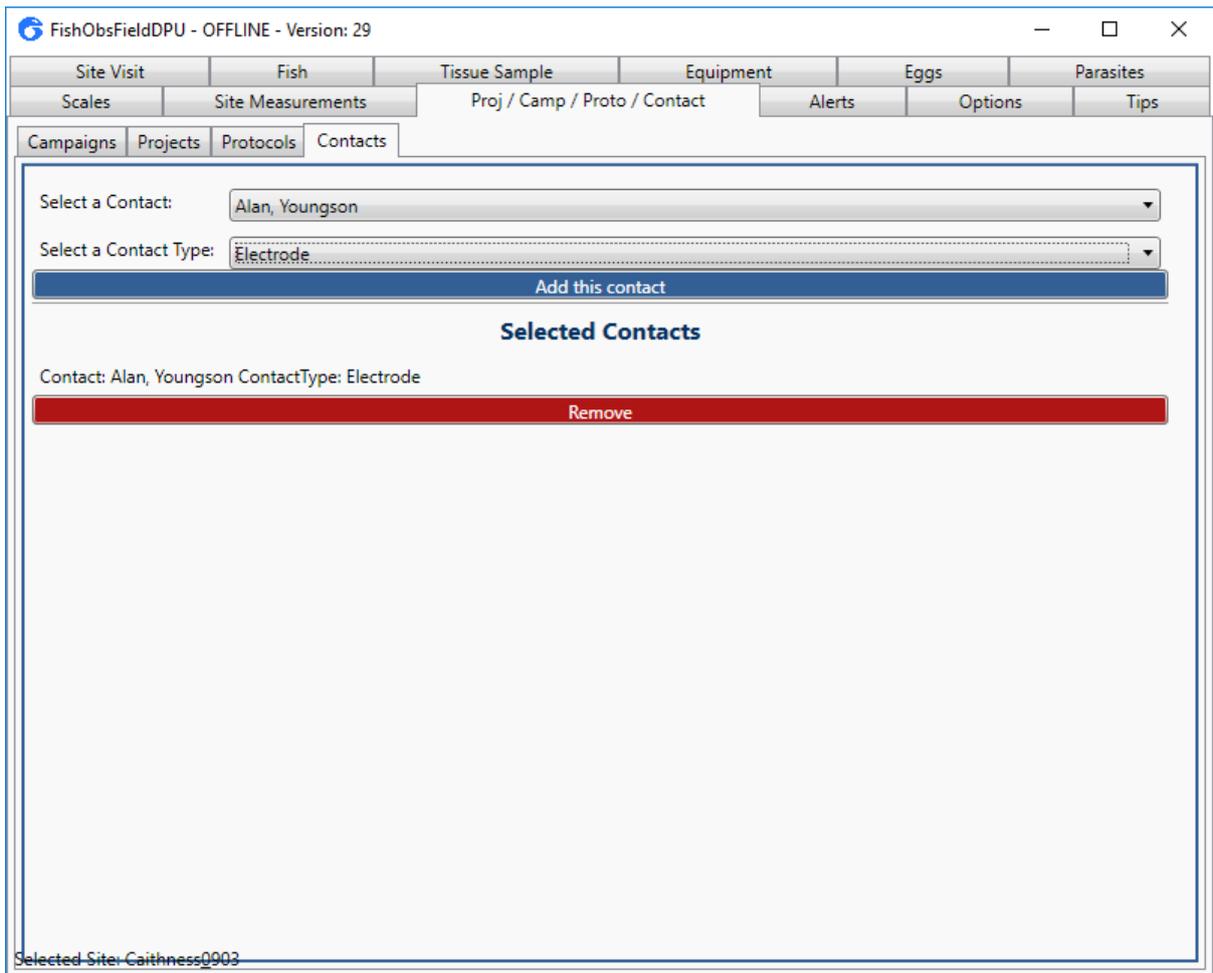
Protol Name: National fish processing

Protocol Met?

Remove

Selected Site: Caithness0903

Click 'Use this Protocol'. Note: you can uncheck the 'Protocol Met?' box if for any reason the protocol has not followed (e.g. only fished a 50m² site and not the minimum 100m² included in the protocol).



Add core staff members via the 'Contacts' tab. This should at minimum contain the name of the individual who was using the electrode (i.e. the lead electrofisher)

4. Habitat Tab

FishObsFieldDPU - OFFLINE - Version: 30

Scales	Site Measurements	Proj / Camp / Proto / Contact	Alerts	Options	Tips	
Site Visit	Habitat	Fish	Tissue Sample	Equipment	Eggs	Parasites

Habitat Details

Substrate Type	Percentage
BE - Bedrock	<input type="text" value="20"/>
BO - Boulder	<input type="text"/>
CO - Cobble	<input type="text" value="40"/>
PE - Pebble	<input type="text" value="30"/>
GR - Gravel	<input type="text" value="5"/>
SA - Sand	<input type="text" value="5"/>
SI - Silt	<input type="text"/>
HO - High Organic	<input type="text"/>
TOTAL	100

Flow Type	Percentage
SM - Still Marginal	<input type="text"/>
DP - Deep Pool	<input type="text"/>
SP - Shallow Pool	<input type="text" value="50"/>
DG - Deep Glide	<input type="text"/>
SG - Shallow Glide	<input type="text"/>
RU - Run	<input type="text"/>
RI - Riffle	<input type="text"/>
TOTAL	50

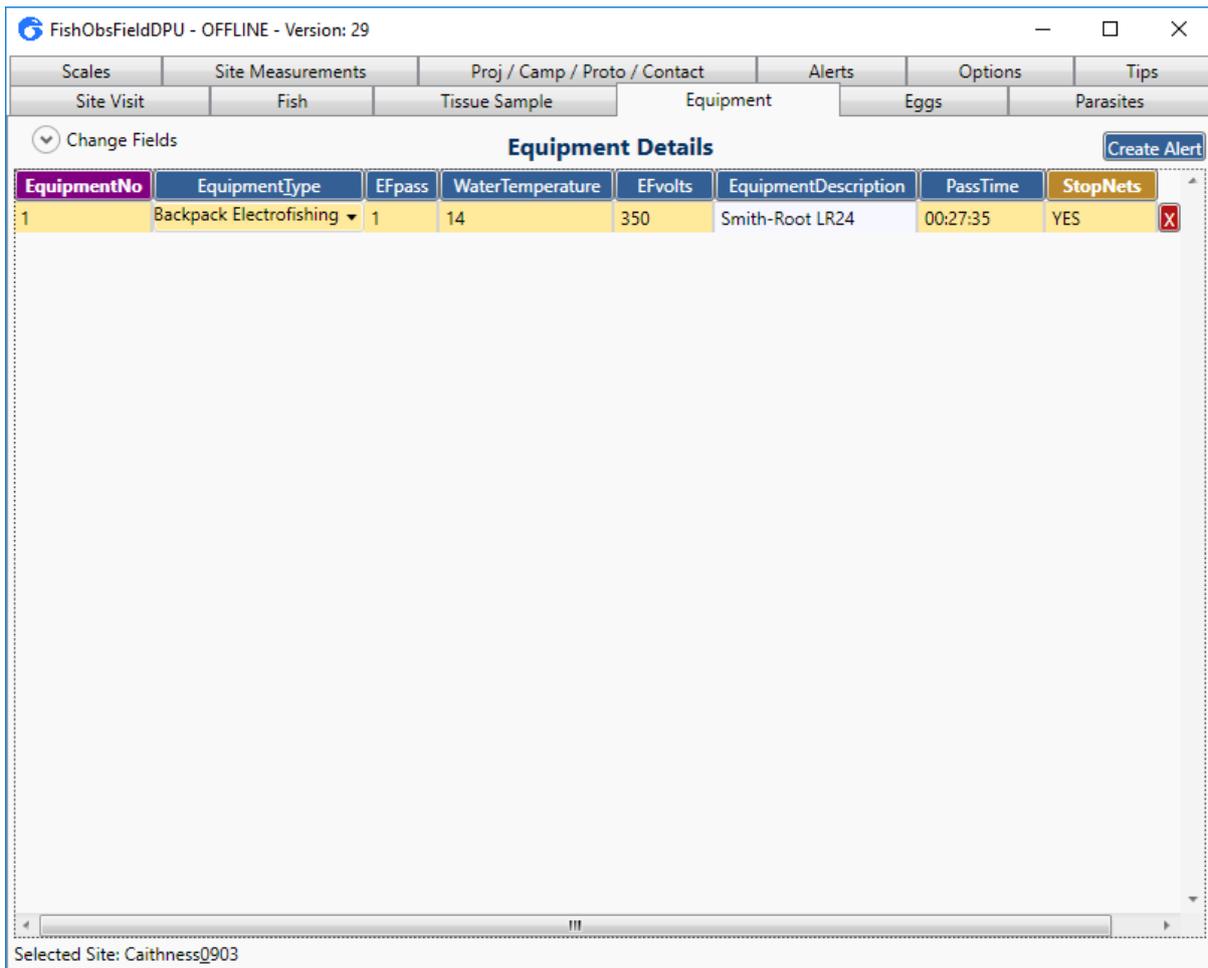
T Water flow fast, broken standing waves at surface, audible

Add the percentages of each habitat and flow type. Note these must sum to 100%. You can hover over a type and it will show the flow or substrate description.

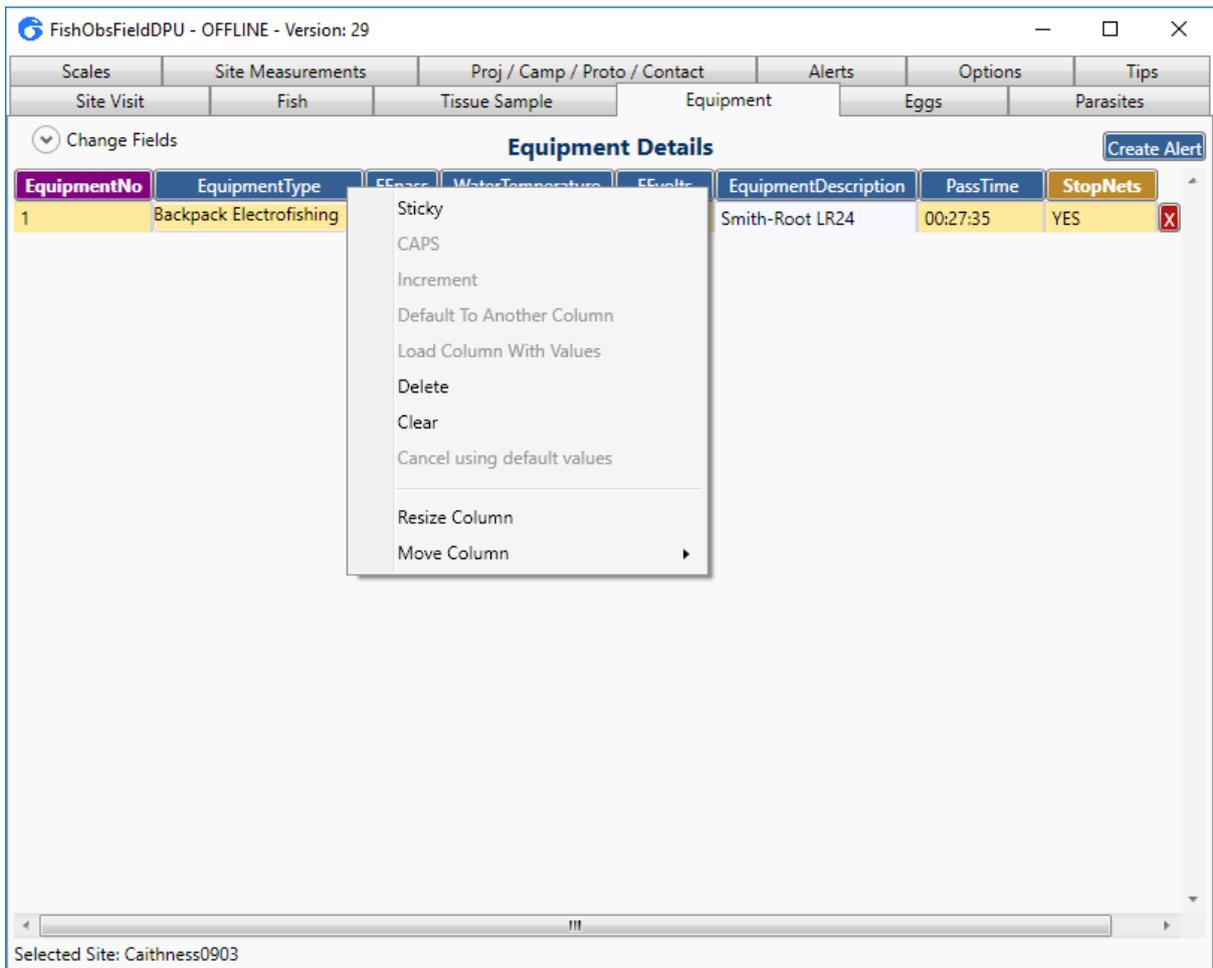
5. Equipment Tab

The screenshot shows the FishObsFieldDPU software interface. The title bar reads "FishObsFieldDPU - OFFLINE - Version: 29". The main menu includes "Scales", "Site Measurements", "Proj / Camp / Proto / Contact", "Alerts", "Options", and "Tips". Below this, there are sub-tabs: "Site Visit", "Fish", "Tissue Sample", "Equipment", "Eggs", and "Parasites". The "Equipment" tab is selected. On the left, a "Change Fields" dialog is open, listing various fields with checkboxes. The "EquipmentNo" field is highlighted in orange. A tooltip for the "Equip" field is visible, stating "Temperature (numeric value only) in Celsius of the water." The main data area shows a table with columns: "EquipmentN", "NetLocation", "EquipmentType", "EFamps", "EFcond", "EFpass", and "WaterTempera". The first row contains the value "1" under "EquipmentN". A "Create Alert" button is located in the top right corner of the data area. At the bottom left, it says "Selected Site: Caithness0903".

Click on the 'Equipment' tab and click on the 'Change Fields' button. By checking or unchecking the boxes, you can select which fields you will display on the DPU. If you hover over a field, it will display information about it.



Select the fields you wish to enter data for, and then click on the 'Change Fields' button to hide the list. You can now enter the necessary information. 'EquipmentNo' allows fish records on the 'Fish' tab to be linked to records on the 'Equipment' tab, so both numbers should match. In the case of 3-pass electrofishing, the equipment numbers would be 1, 2, or 3 representing each pass, and any fish caught would be assigned an 'EquipmentLink' number on the 'Fish' tab of 1, 2, or 3 to match up with the rows in this tab.



Right-clicking on a column header will open a menu that allows you to make the field 'Sticky' which will copy the entry down onto every subsequent row. You can use this for fields that won't change or rarely change during a site visit, e.g. date. Note: Stickied column headers appear dark blue, normal columns are light blue, and rows that are incremented (i.e. increase by 1 for each new row) appear purple.

FishObsFieldDPU - OFFLINE - Version: 29

Scales | Site Measurements | Proj / Camp / Proto / Contact | Alerts | Options | Tips

Site Visit | Fish | Tissue Sample | Equipment | Eggs | Parasites

Change Fields

Equipment Details

Create Alert

EquipmentNo	EquipmentType	EFpass	WaterTemperature	EFvolts	EquipmentDescription	PassTime	StopNets
1	Backpack Electrofishing	1	14	350	Smith-Root LR24	00:27:35	YES
2	Backpack Electrofishing	2	14	350	Smith-Root LR24	00:15:12	YES
3	Backpack Electrofishing	3	14	350	Smith-Root LR24	00:09:50	YES

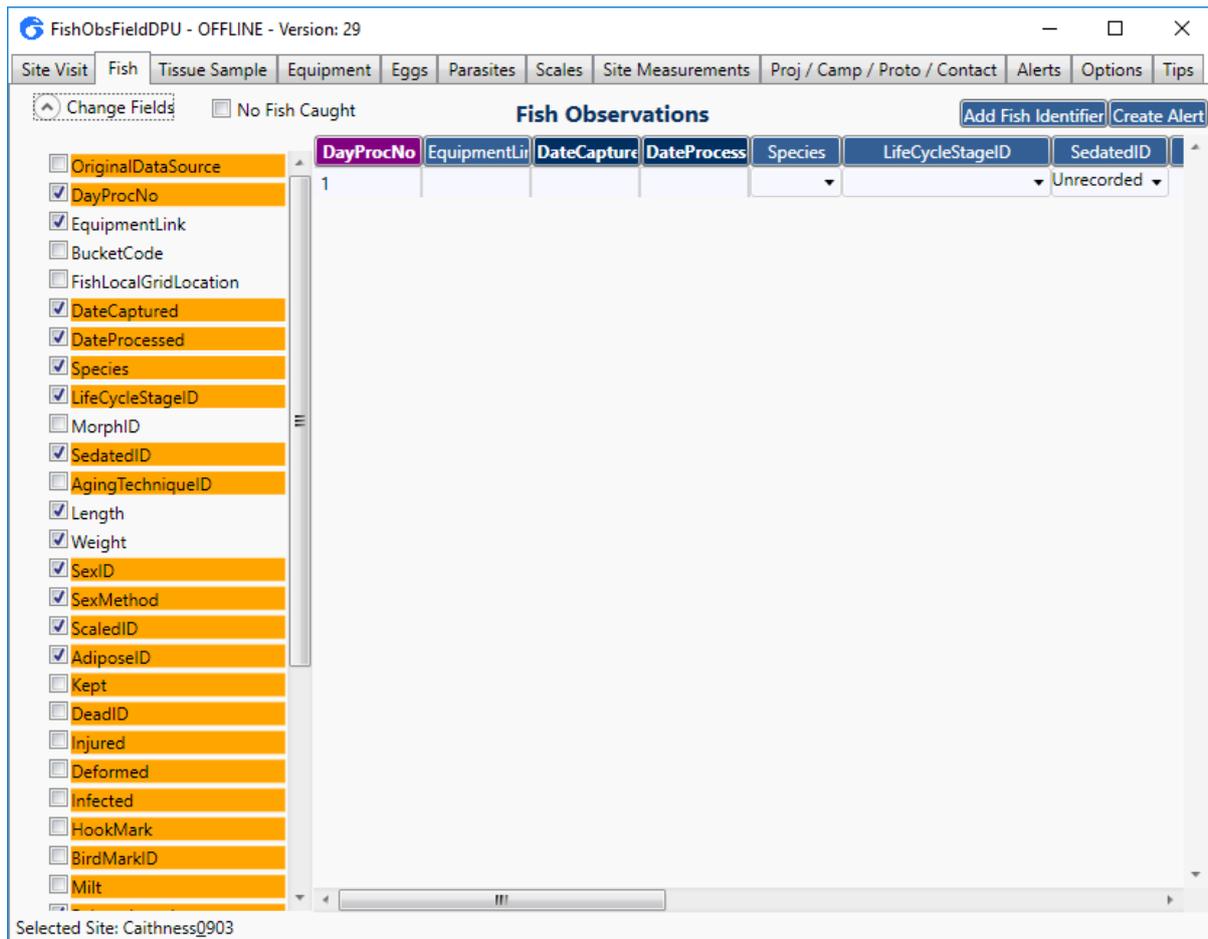
Selected Site: Caithness0903

Enter information about each of the electrofishing passes, including the total time taken for the pass, time the anode was activated (if available) and whether stop nets were used. The 'StopNets' field is currently free text, but you should use 'YES' or 'BOTH' to denote nets were used, 'TOP' if you only use a net at the top of the site, or 'NO' if you do not use stop nets.

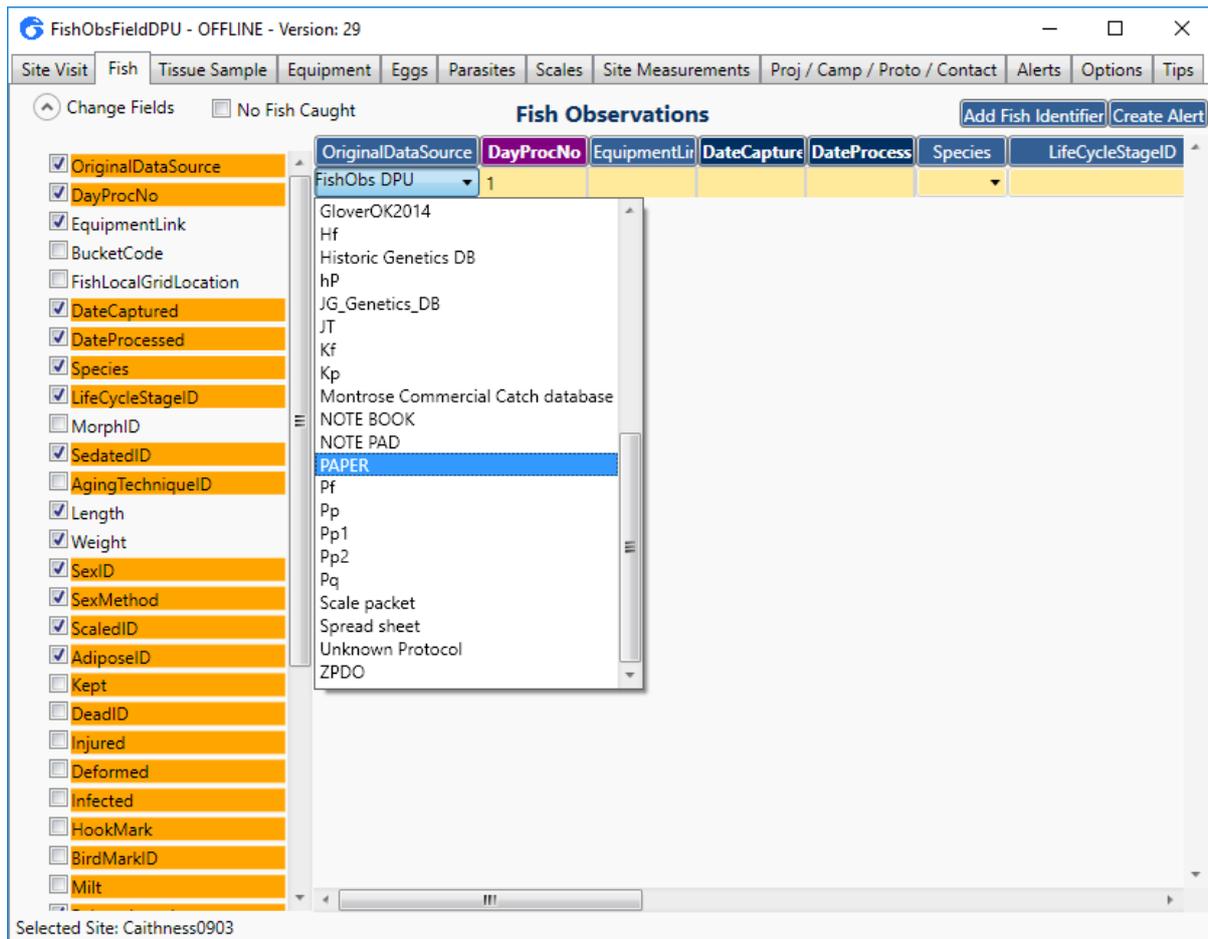
6. Fish Tab

The screenshot shows the FishObsFieldDPU software interface. The title bar reads "FishObsFieldDPU - OFFLINE - Version: 29". The interface has a menu bar with the following items: Scales, Site Measurements, Proj / Camp / Proto / Contact, Alerts, Options, and Tips. Below the menu bar is a sub-menu bar with the following items: Site Visit, Fish, Tissue Sample, Equipment, Eggs, and Parasites. The "Fish" tab is currently selected. In the main area, there is a "Change Fields" button with a dropdown arrow, a checked checkbox labeled "No Fish Caught", and the text "Fish Observations" in bold. On the right side, there are two buttons: "Add Fish Identifier" and "Create Alert". At the bottom left, it says "Selected Site: Caithness0903".

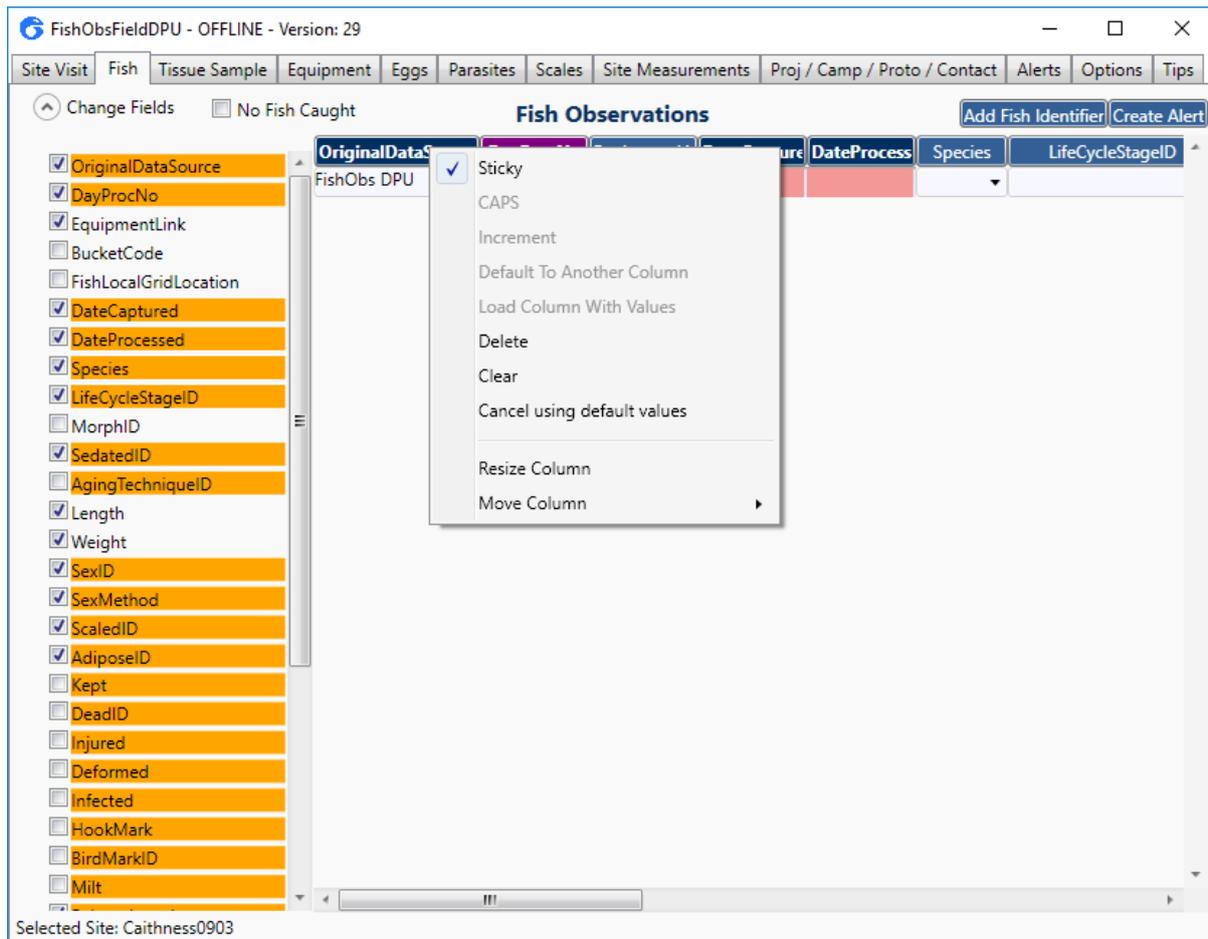
Click on the 'Fish' tab – this is where all the fish data will be entered. When you initially click on the tab, the default is for a visit with no fish caught. You should make a file even when no fish are caught to keep a comprehensive record of site visits.



If you are completing a file for a visit where fish were caught, uncheck the 'No Fish Caught' box and click on the 'Change Fields' button again to select which fields you want to see. Note that fields can be filled in and chosen not to be displayed, and will still be saved. This is useful for fields that will not change during the course of a visit (e.g. date captured or date processed) which can be 'stickied' and hidden.

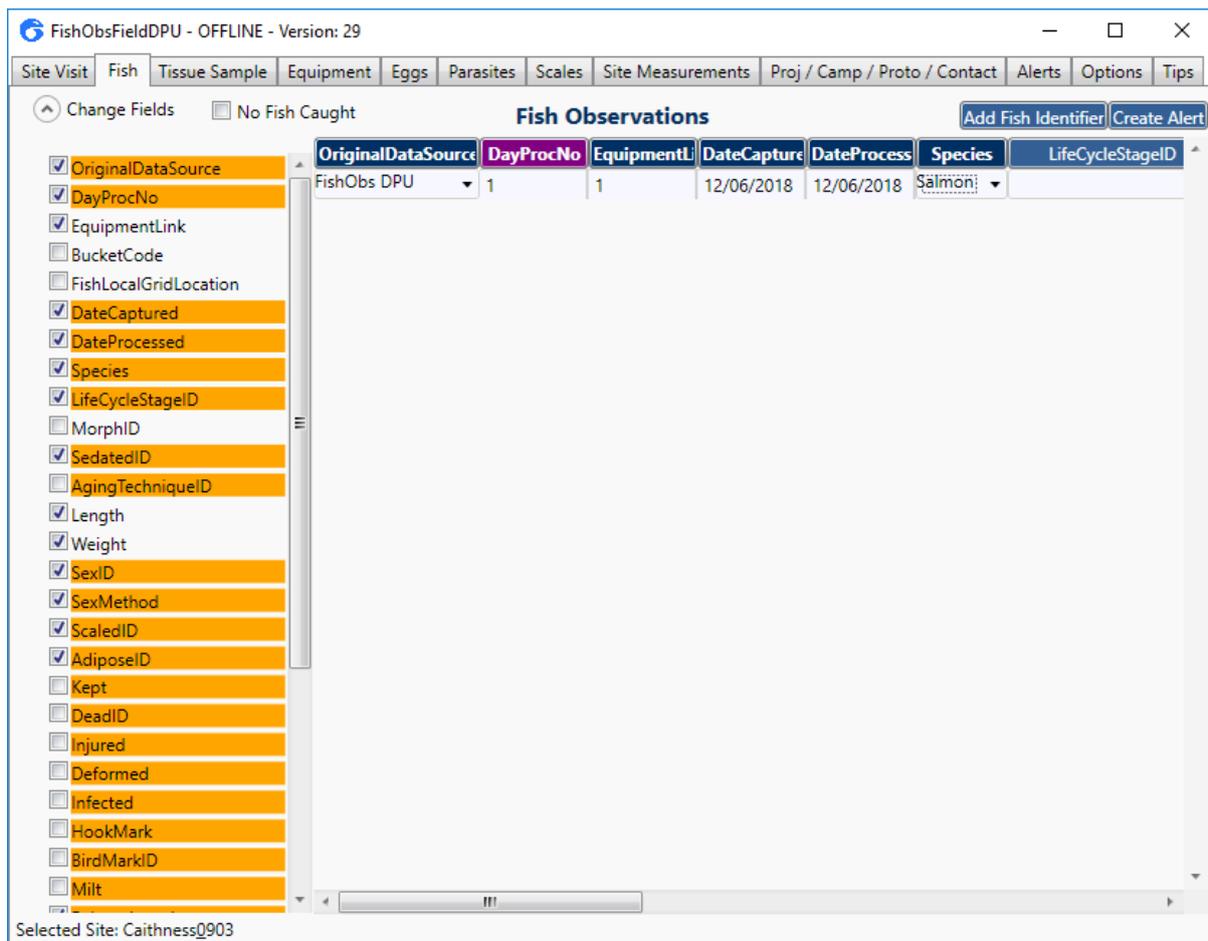


Check the box next to 'OriginalDataSource' and select where the data are being entered from. If you are typing data in from paper sheets, select 'PAPER' as the datasource. Note that the 'OriginalDataSource' defaults to 'FishObs DPU', and it should be left as this if you are entering data straight onto the DPU as it is being collected.

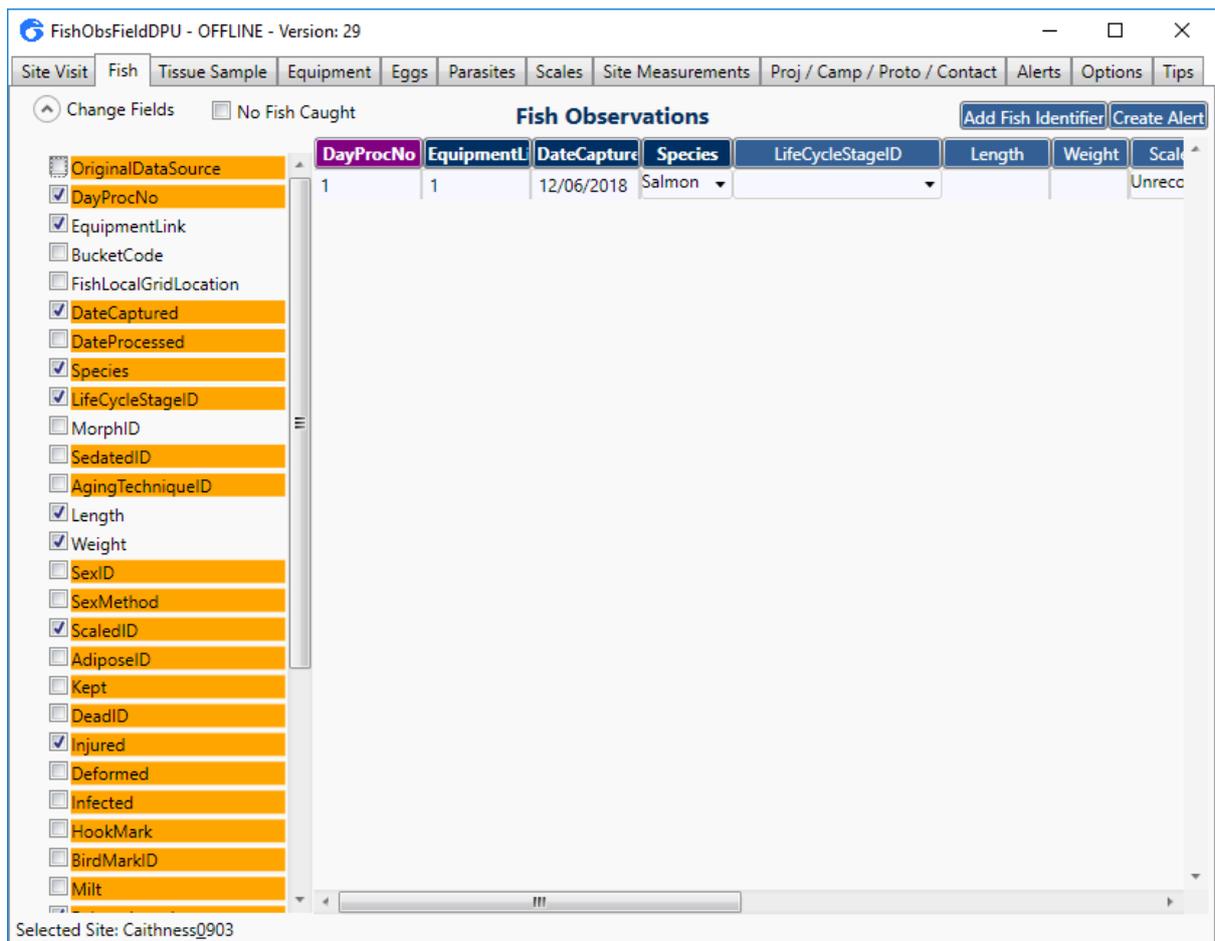


Columns can be 'Stickied' which automatically copies the contents of the column onto the next row. This is very useful where fields are not likely to change often when recording or entering data, e.g. date captured and date processed will not change, species and life stage may stay the same for long periods of time, and fish will always be sedated with clove oil.

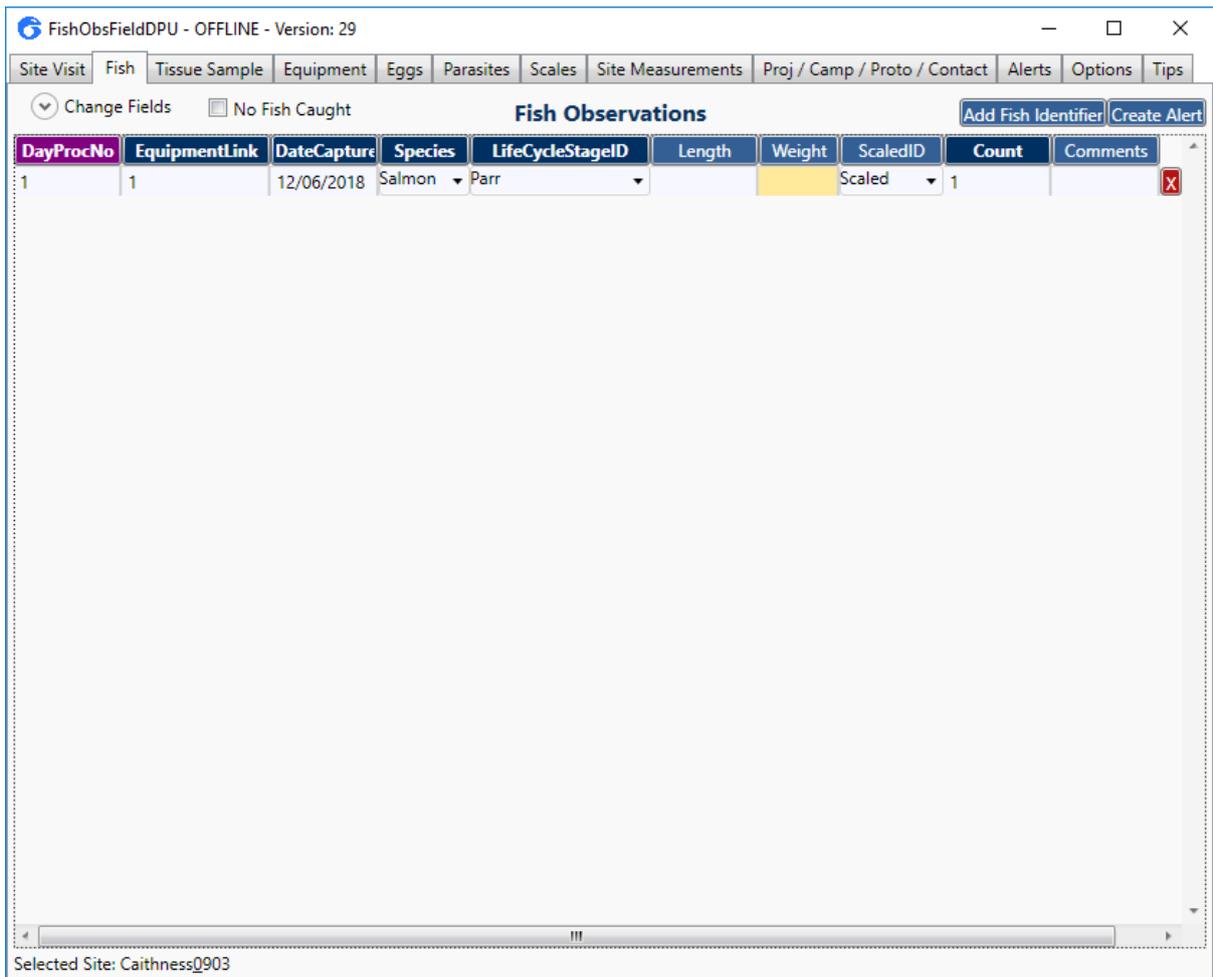
To sticky a column, right click on the column and click on 'Sticky'. This should either be done when setting up a template (see section 9) or on the very first row when entering data so that the necessary information gets copied down.



Enter the date captured and date processed. These are most likely the same date, unless you caught fish one day and held them overnight to be processed, in which case the date processed would be one day later than the date captured. Select the species from the drop down list. This column is usually stickied. When changing species, there is no need to click the drop down list, you can use the arrow keys to move between cells and press the first letter of the species you wish to choose on the keyboard, e.g. 's' = salmon, 'e' = eel.



You can then enter some data in the first row that will remain constant throughout the visit which will allow you to reduce the number of columns you have on-screen. E.g. you can enter the date captured and date processed, sticky the columns, and hide one or both of the fields, or you can enter MS222 as the sedated ID and hide that column, etc.



You can hide the 'Change Fields' menu, drag the columns to reorder them, and change the column widths to fit the window for ease of use. You are now ready to start entering data.

FishObsFieldDPU - OFFLINE - Version: 29

Site Visit | Fish | Tissue Sample | Equipment | Eggs | Parasites | Scales | Site Measurements | Proj / Camp / Proto / Contact | Alerts | Options | Tips

Change Fields No Fish Caught **Fish Observations** Add Fish Identifier Create Alert

DayProcNo	EquipmentLink	DateCapture	Species	LifeCycleStageID	Length	ScaledID	Count	Comments	TissueSampleLink
1	1	12/06/2018	Salmon	Parr	86	Scaled	1		TissueSampleLink X
2	1	12/06/2018	Salmon	Parr	88	Scaled	1		TissueSampleLink X
3	1	12/06/2018	Salmon	Parr	93	Scaled	1		TissueSampleLink X
4	1	12/06/2018	Salmon	Parr	101	Scaled	1		TissueSampleLink X
5	1	12/06/2018	Salmon	Fry	40	NOT	1		TissueSampleLink X
6	1	12/06/2018	Salmon	Fry	43	NOT	1		TissueSampleLink X
7	1	12/06/2018	Salmon	Fry		NOT	28		TissueSampleLink X
8	1	12/06/2018	Trout	Parr	142	Scaled	1		TissueSampleLink X
9	2	12/06/2018	Salmon	Parr	86	Scaled	1		TissueSampleLink X
10	2	12/06/2018	Salmon	Parr	94	Scaled	1		TissueSampleLink X
11	2	12/06/2018	Salmon	Fry	41	NOT	1		TissueSampleLink X
12	2	12/06/2018	Eel	Yellow	247	NOT	1		TissueSampleLink X
13	3	12/06/2018	Salmon	Parr	84	Scaled	1		TissueSampleLink X
14	3	12/06/2018	Salmon	Parr	78	Scaled	1		TissueSampleLink X
15	3	12/06/2018	Lamprey	Unrecorded	115	Scaled	1		TissueSampleLink X

Selected Site: Caithness0903

Example data:

- Individual fish have a length and a count of 1
- Multiple counts of fish appear as a row with the species and stage and a total count, e.g. row 7
- Some species do not have life stages (e.g. lamprey) and should be set to 'Unrecorded' or 'Unknown', e.g. row 15
- Comments are free text and should be used to record additional data that cannot be captured in the standard columns (i.e. photos taken of the fish)
- Lengths are recorded in millimetres, and weights are recorded in grams (even for adult fish)

7. Tissue Sample Tab

TissueSampleID	DayProcNo	TissueSampleNumber	TissueType	TissueBoxNumber	FishObsLink
1	1	T4534	CaudalFin	T4501-T4550	FishObsLink X
2	9	T4535	CaudalFin	T4501-T4550	FishObsLink X
3	10	T4536	CaudalFin	T4501-T4550	FishObsLink X

Where you are taking tissue samples from salmon parr for genetic analysis, you should click the blue 'TissueSampleLink' button at the right of the row associated with the fish (can be shown or hidden in 'Change Fields' on the Fish tab). This will take you to the 'Tissue Sample' tab. You can set this page up in the same way as the other tabs, and you should fill in all the necessary information. Again you can sticky fields that do not change often such as 'TissueBoxNumber' which will be written on the side of the polystyrene sample box containing the tubes. The number on the individual tubes should be entered in 'TissueSampleNumber'. This column can be set to 'increment' (e.g. increase by 1 for each new row), thus if you have work sequentially through the sample tube box (so that the genetics sample tube numbers follow on from each other, starting with the lowest number) you will not need to enter each 'TissueSampleNumber' this will be added automatically each time 'TissueSampleLink' is clicked. If samples are not collected in order 'TissueSampleNumber' must be corrected in the Tissue Sample tab.

Once complete, clicking on the blue 'FishObsLink' button on the right will take you back to that fish on the 'Fish' tab. The DayProcNo (day processing number) is automatically taken from the Fish tab.

8. Site Measurements Tab

MeasurementID	Measurement	MeasurementType	Units	MeasurementNumber	MeasuredAlongID	Comments
1	24.8	Length	Metres	1		
2	8.2	WetWidth	Metres	2	1	
3	7.6	WetWidth	Metres	3	1	

You should enter the individual site measurements on this tab. Enter the measurement and select the type (Length, WetWidth, BankFull) and the units. The measurement number should be set to increment. 'MeasuredAlongID' refers to the 'MeasurementID' along which any subsequent measurements were taken, e.g. the widths are measured along the length, which is 'MeasurementID' 1.

9. Options Tab



The 'Options' tab is where you can save or load files, clear the data, or recover data from a backup if the computer crashes (backups are created every time you move onto a new line, and are saved in the FishObs folder – see 'Tips' tab for location of this folder).

When saving a file, you have the option of saving a data file (.xml), an Excel file (.xlsx) or a layout file (.lay). Once you have the DPU set up to capture data, you can save it as a layout file which retains all the information about the column attributes (order, widths, stickied, etc), but does not save any visit information including campaign, project, or protocols, or default column values (sedated method, etc). It is easier saving a layout file and opening this each time than setting up all the columns, **however** a better idea is to set-up the DPU the way you want, including entering all of your default values (e.g. anaesthetic type, equipment type and number of electrofishing passes) and then saving the .xml file (standard DPU file extension) as it also saves the contents of the cells. You can then open the .xml file with the DPU and you only need to enter basic site visit information before recording fish data.

When you have recorded all the fish data from a site visit, save the file as an xml file. Note than saving an xml file results in both an xml and an xlsx file being created so you can view the data in Excel if you wish.

You can also load data from an xlsx file, however column attributes (stickied, etc) are not stored in the Excel file.