



New Zealand BioSecure
A division of Southern Monitoring Services Limited

Online National Mosquito Surveillance Database

User Guide

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Introduction

The Online National Mosquito Surveillance Database is a single, centrally housed database for all District Health Board mosquito surveillance which is accessible via the internet. The database is securely stored by an independent IT company, supplying a degree of physical security that should protect it against all but the most extreme disasters. It is frequently backed up, and has a power supply with several backup contingencies, and is also protected by an industrial firewall which has continually updated virus protection.

The database is managed by the entomologists at the New Zealand BioSecure Entomology Laboratory (NZBEL) and maintained by an external IT company. Access to the database is only available to Ministry of Health approved services and is generally limited to District Health Board Public Health Units.

Database Operation

Mosquito surveillance collection data is entered as individual or multiple sample records by the sampler which, once saved, can be viewed individually online or various datasets selected and exported into Microsoft Excel. Entered and saved data can only be edited or deleted by users with the appropriate permissions.

Negative sample records must be entered routinely, they become automatically “Complete” once saved, as no further information needs to be added to them by the entomologists. Samplers are able to edit or add further information if required.

Positive sample records are “Incomplete” until the specimens have been identified in the laboratory, and the entomologists enter the results and save the “Complete” sample record.

All positive samples entered into the database, but not received by the Entomology Laboratory after 3 days, will be followed up via email or phone call to locate them. Samples should be entered on the day of collection.

The database year runs from July 1st to 30th June and is archived January 1st to December 31st. All samples entered each year are archived at end of the following July. Once archived, the sample records can no longer be altered.

Access

The database is accessed by “Health Boards”. These consist of the 12 actual health boards, and the NZB entomologists group. Each health board has a number of users which access the database via the internet.

Users

To access the data on the database, you must be a registered user. There are three database user levels: sample creator, health board admin and superusers, which are explained below.

The Sample Creator is the first user level. Sample creators are able to add new samples into the database, run ad hoc search queries and export data for external use. They are also able to edit or delete their own sample records until the records are archived. A health board may have one or many sample creators who access the database.

The next level is Health Board Admin. Each PHS usually has only one health board admin who has

the ability to add new users and suspend old users (for their health board only), in addition to the capabilities of the sample editor. The health board admin cannot edit or delete archived data.

The highest user level is the Superuser. This level is only available to the NZBEL entomologists and the database IT staff, who have access to all the data, and are responsible for managing the database, including updating pages, improving search functions and data archiving etc. They cannot alter the archived data records.

When a user is no longer required, e.g. an ex-employee, the status of the user can be suspended, and will no longer appear in the drop-down menus etc. PHU staff should email the laboratory taxonomy@nzbiosecure.net.nz to arrange this.

New Users

If you are not a registered user, and require access to the database, you should contact your local Health Board Admin or the NZBEL Entomologists via the taxonomy email (taxonomy@nzbiosecure.net.nz). They will provide you with an access username and password to access it. You should change your password once you have gained access – this can be accessed under your name located top right-hand corner (Figure 2).

Once registered, open your internet browser and navigate to database login page, at National Online Mosquito Database (Figure 1). It is recommended that you bookmark this page or create a shortcut from your desktop, to save typing the internet address each time you access the database. The site can also be accessed through the SMSL Website.

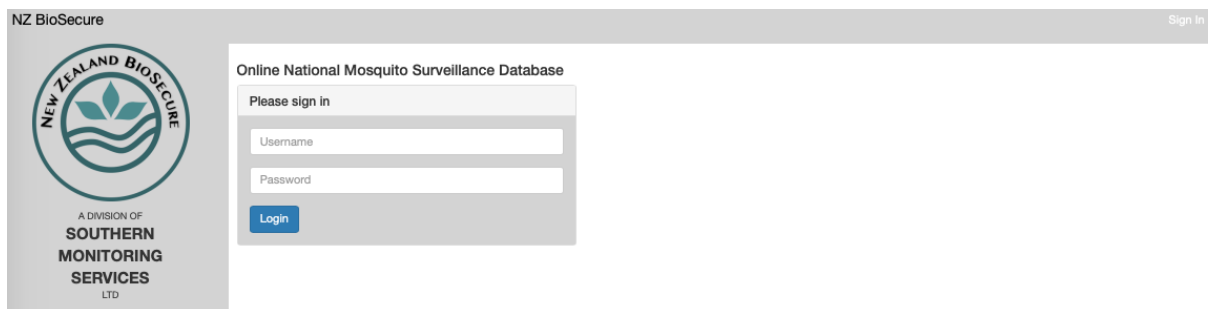


Figure 1. Login page for the National Online Mosquito Database.

Logging In

Enter your username and your password and click the “Login” button (Figure 1). The menu page will appear.

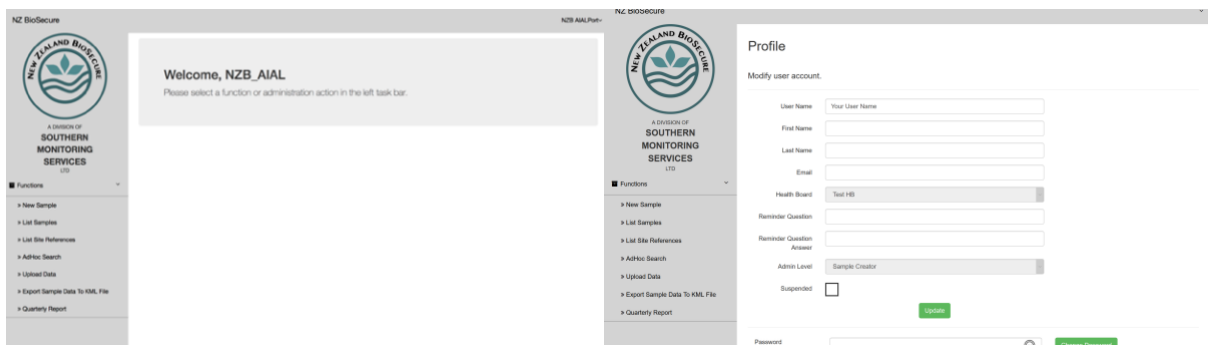


Figure 2. Left: National Online Mosquito Database main menu. Right: Profile

Entering Sample Information

Samples can be entered singularly or in multiple by uploading a csv file.

Entering New Samples

On the welcome page (Figure 2), select “New Sample” from the left-hand menu, a new “Create Sample” form will appear (Figure 3).

“Main Information”

Select your sampling officer details from the drop-down list. Your Health Board is automatically entered and cannot be changed.

Enter the location: The location filters the site references and only display the site references that are saved to them. The locations with TF after them are for transitional facilities located in the region.

Complete the “Collection Date”: Click on the collection date or calendar and choose the date. Then select “Next Page” to view Sample Data Tab (Figure 3).

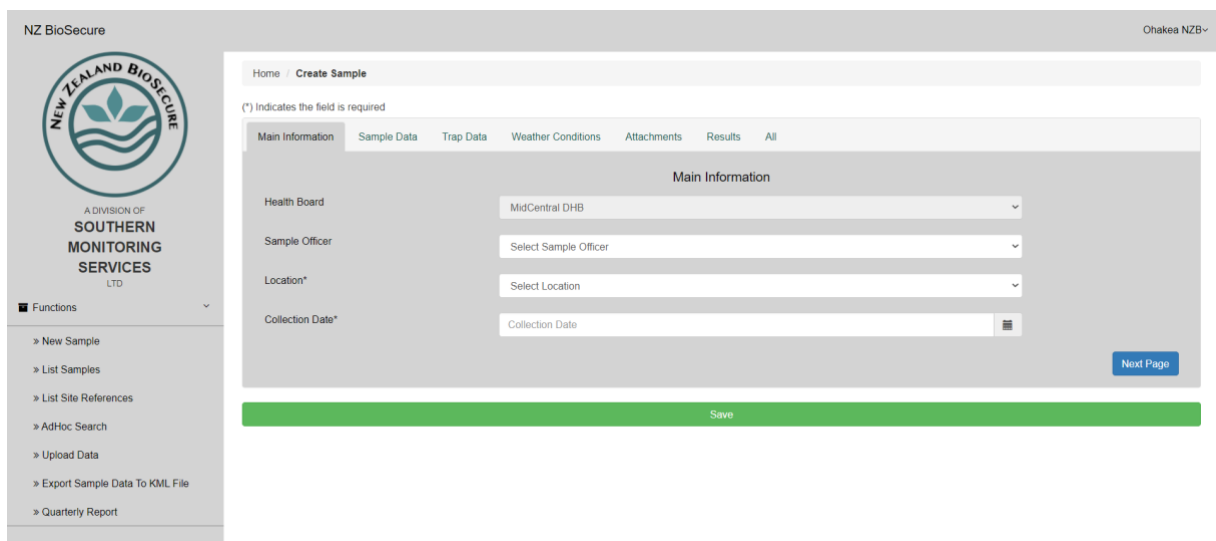
The screenshot shows the 'Create Sample' form in the NZ BioSecure system. The left sidebar contains the NZ BioSecure logo and a menu with options like 'New Sample', 'List Samples', and 'Upload Data'. The main content area is titled 'Main Information' and includes fields for 'Health Board' (set to 'MidCentral DHB'), 'Sample Officer' (a dropdown menu), 'Location*' (a dropdown menu), and 'Collection Date*' (a date picker). A 'Next Page' button is located at the bottom right of the form, and a green 'Save' button is at the bottom center.

Figure 3. New “Create a Sample” Main Information Tab

“Sample Data”

Several fields are compulsory. They are denoted by the (*) beside the field name (Figure 4). Fields may contain drop-down menus where you can select from a list. For example, click in the grey box “Select Site reference Number” and begin to type the site name, and select from the list of previously entered site references. The information related to this site will autocomplete, with the exception of “Total Dips” and “Positive Dips”, which will need to be completed for all larval samples. However, if you have a new site reference that is not already listed, select the green “Add Reference No.” (the green tab changes to “Cancel”) and enter the new site reference manually into the “Site Reference No” field. Once saved new references will appear in the list and do not require entering again. Continue entering sample data field.

Saved details for site references should include the following fields: “Trap Type”, “Reason for Sampling”, “Attractants”, “GPS East”, “GPS North”, “Habitat Category”, and “Sample Type”.

*) Indicates the field is required

Main Information **Sample Data** Trap Data Weather Conditions Attachments Results All

Sample Data

Sample Number*

Site Reference No.*

Reason for Sampling*

Positive/Negative Sample*

GPS East*

GPS North*

Total Dips

Positive Dips

Habitat Category*

Sample Type*

Control / Treat

Salinity

Figure 4. New “Sample Data” Tab

NB: The coordinates must be recorded and entered using Latitude and Longitude with degrees, minutes and seconds (Lat Lon (DMS)) under WGS84 datum following this example.

“GPS East”: 000 00 00.0000 E

“GPS North”: 00 00 00.000 S

It will read like the following on your GPS unit:

Longitude: 174° 54’ 57.836” E; GPS North: 41° 13’ 59.826” S

The coordinates should be entered using the following format in the online database e.g.

GPS East: 174 54 57.836 E; GPS North: 41 13 59.826 S.

Note that when entering the coordinates the following characters are not required (° ‘ ‘ -).

For larval samples, both the “Total Dips” and “Positive Dips” are required to be entered manually, and for all adult and larval samples collected from traps, the number of “Trap Nights” in the “Trap Data” tab must be entered.

NB: Enter habitat category: For traps select “Trap option”

NB. The “Positive/Negative” field will automatically display “Positive” and needs to be changed to “Negative” manually, where required.

“Trap Data”

When complete select “Next Page” Trap Data will be displayed (Figure 5).

Figure 5. New “Trap Data” Tab

NB. The “Trap” field will automatically display “Yes” and needs to be changed to “No” manually, where required.

Select the correct option from the drop-down list for “Trap”, “Trap Type”, “Attractants” and enter the number of trap nights.

“Weather Conditions”

The next tab is where information about the weather at the time of sampling is entered (Figure 6). This can be recorded using a weather app on a smart phone, or the MetService website. The information includes “Temperature”, “Precipitation”, “Cloud Cover” and “Wind Speed and direction”.

Figure 6. “Weather Conditions”

NB. Recording the weather is a requirement for the use of S-methoprene by the EPA and the conditions must be entered here or as a comment in the “Attachments” page.

“Attachments”

Select “Next Page” to upload “Attachments” (Figure 7).

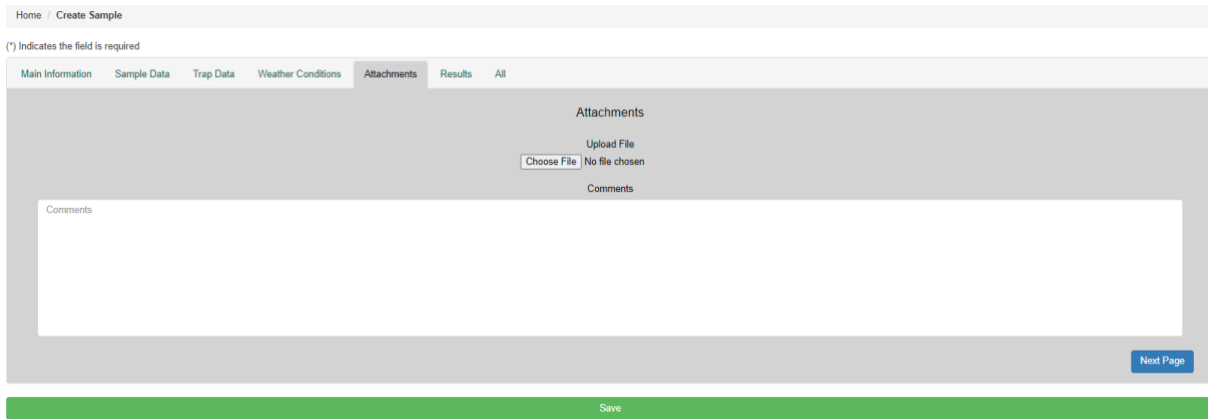


Figure 7. "Attachments"

You may attach a file, a photograph or report to samples, by selecting "Choose File". Your browser will direct to your file source for selection. When you save the sample form, the file will copy onto the database and be saved with the sample data. This is ideal for photos of potential breeding habitats found during 400m surveys. You can add comments in the comments section.

You can save your sample by selecting the Green "Save" Bar at the bottom of the page. If there are compulsory fields not entered a pop-up will occur (Figure 8) indicating missing data. Navigate to the correct tab and enter the missing data. Saving can occur at any page.

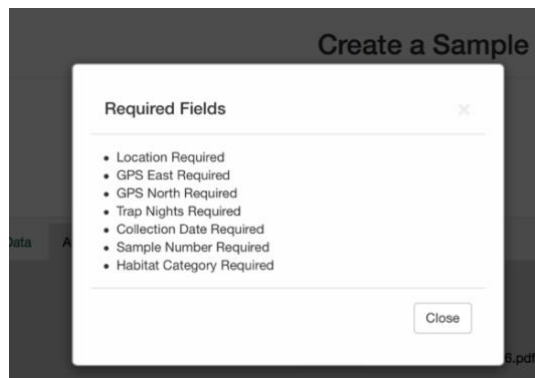


Figure 8. Missing data fields

"All"

Alternatively, all the sample information can be entered in the "All" tab (Figure 9).

Home / Create Sample

*) Indicates the field is required

Main Information Sample Data Trap Data Weather Conditions Attachments Results All

Main Information

Health Board: MidCentral DHB

Sample Officer: Select Sample Officer

Location*: Select Location

Collection Date*: Collection Date

Sample Data

Sample Number*: Sample Number

Site Reference No.*: Select Site Reference No. Add Reference No.

Reason for Sampling*: Select Sample Reason

Positive/Negative Sample*: Positive

GPS East*: i.e. Longitude 00 00 00.000 E

GPS North*: i.e. Latitude 00 00 00.000 S

Total Dips: e.g. Tyre = 1

Positive Dips: e.g. Pos Tyre = 1, Neg Tyre = 0

Habitat Category*: Select Habitat Category

Sample Type*: Select Sample Type

Control / Treat: Select Control / Treat

Salinity: Salinity

Trap Data

Trap*: Yes

Trap Type: Select Trap Type

Figure 9. All tab

Saving the Sample Information

When all the information for the sample has been entered, click the “Save” button at the bottom of the page to save the record. The sample is then saved onto the database.

If your sample does not save, i.e. you do not have a “Sample Saved” displayed at the top of the page (Figure 10). Click on the “back” icon on your internet browser and try clicking “Save” again. Repeat until the “Sample Saved” message appears on the screen. Failing this, contact your Health Board Admin or the NZBEL entomologists for assistance.

The sample has been saved to the database!

Figure 10. This legend will appear if the samples have been saved

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	SAMPLE_OFFICER	COLLECTION_DATE	LOCATION	SURVEILLANCE_SITE	REFER_SITE	POSITIVE_N	SAMPLE_N	TOT_POSITIVE	CONTROL_TRAP	TRAP_TYPE	TRAP_REASON	FUNCTIONALITY	ATTRACTANT	HABITAT_CODE	SAMPLE_TYPE	COMMENTS		
2	Smith John	20201016082006	Heartland H	EnhancedSi	Heartland H	Negative	JS005	1	0	S-Methopri	Yes	Tyre Trap	4	Enhanced S Water		Trap Optior Larvae and/or Pupae		
3	Smith John	20201016082006	Heartland H	EnhancedSi	Heartland H	Negative	JS006	3	0	S-Methoprene		Not a Trap	4	Enhanced S Water		Permanent Larvae and/ Big pond		
4	Smith John	20201016082006	Heartland H	EnhancedSi	Heartland H	Negative	JS007				Yes	CO2 Baited	2	Enhanced S CO2 & Light		Trap Optior Adult		
5	Smith John	20201016082006	Heartland H	EnhancedSi	Heartland H	Negative	JS008				Yes	BG Trap - Ai	2	Enhanced S BG Lure		Trap Optior Adult		
6	Smith John	20201016082006	Heartland H	EnhancedSi	Heartland H	Negative	JS009				Yes	CO2 Baited	2	Enhanced S CO2 & Light		Trap Optior Adult		
7	Smith John	20201016082006	Heartland H	EnhancedSi	Heartland H	Positive	JS010	1	1	S-Methopri	Yes	Tyre Trap	4	Enhanced S Water		Trap Optior Larvae and/or Pupae		
8	Smith John	20201016082006	Heartland H	EnhancedSi	Heartland H	Negative	JS011				Yes	BG Trap - Ai	2	Enhanced S BG Lure		Trap Optior Adult		
9	Smith John	20201016082006	Heartland H	EnhancedSi	Heartland H	Positive	JS012	1	1	S-Methopri	Yes	Tyre Trap	4	Enhanced S Water		Trap Optior Larvae and/or Pupae		
10	Smith John	20201016082006	Heartland H	EnhancedSi	Heartland H	Positive	JS013	3	2	S-Methoprene		Not a Trap	4	Enhanced S Water		Permanent Larvae and/ Big pond		
11	Smith John	20201016082006	Heartland H	EnhancedSi	Heartland H	Negative	JS014				Yes	CO2 Baited	2	Enhanced S CO2 & Light		Trap Optior Adult		
12																		
13																		

Figure 12. Example of CSV file with headers and related values the database can read

The cells containing the “Collection Date” must be formatted as number without decimals (Figure 13a & 13 b). To do this, select all the dates in your file, right click and select “Format Cells” (Figure 13a) then select “Number”, and enter 0 for the “Decimal Places” (Figure 13b).

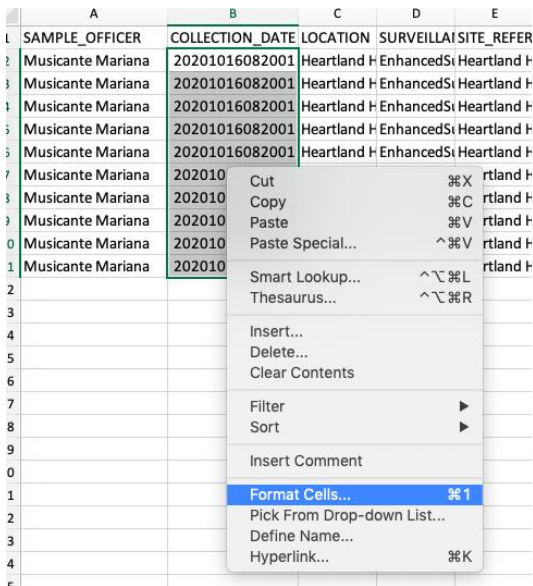


Figure 13a. Changing cell formats

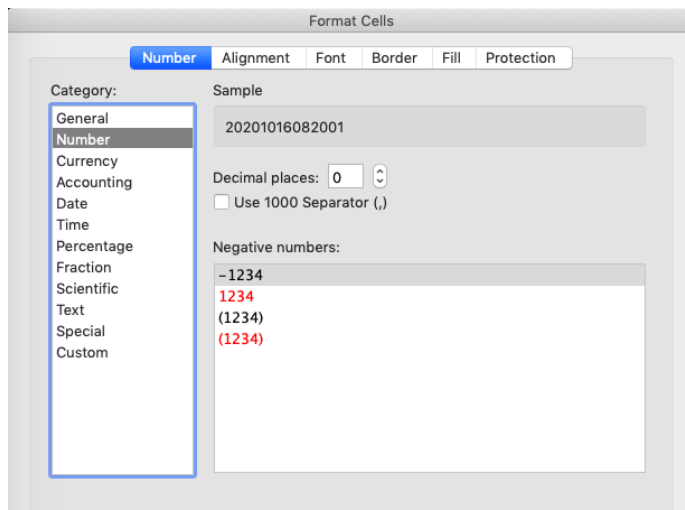


Figure 13b. Formatting the cells to numbers without decimals

Save the changes made, ensure your file is saved as a CSV. You can leave the document open while uploading so you do not have to open it again if you receive an error message while uploading the file. In a Mac computer you must leave the document open while uploading the CSV file or the date formatting will revert to the incorrect format.

Login and select “Upload Data” from the left-hand column on the menu page (Figure 14).

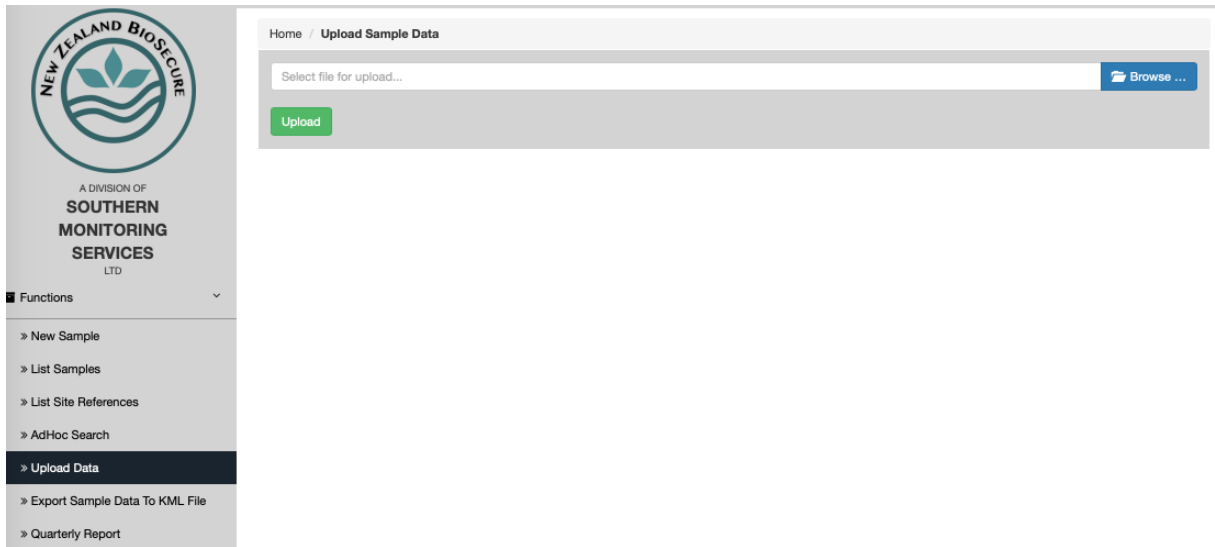


Figure 14. Upload Data

Select “Browse”, to locate your file, and choose. Select “Upload”.

A popup will display confirming upload success (Figure 15). If certain fields are not entered correctly, you will get an error message. Common issues when uploading CSV files are discussed in the next section.

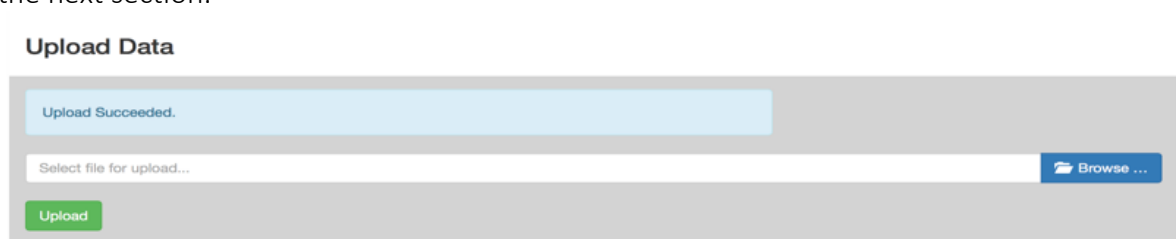


Figure 15. “Upload Succeeded”

To crosscheck your samples have been entered correctly, go to “Adhoc Search” and search for the date your samples have been obtained. Open one or two of the samples and check that all of the fields have been filled in.

CSV upload common issues and how to fix them

Name format for “Sample Officer” is incorrect. When this happens, a popup will appear in the database (Figure 15). To solve this issue, replace the “Sample Officer” name format in your CSV with the one displayed in the popup (Figure 15).

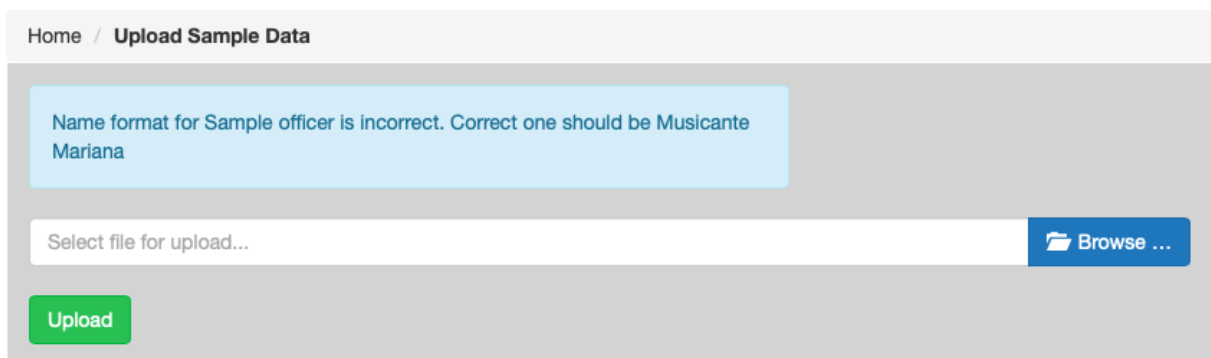


Figure 15. The Sample Officer format is incorrect

NB: The Sample Officer format has changed since November 2020. The correct format is last name followed by first name. Example: Smith John

The Collection date format is incorrect. When the Collection Date is entered incorrectly a popup will display pointing out the problem (Figure 16). To solve this issue, check the following: The date is expressed following the example provided above (yyyyMMddHHmmss); The date cell contains 14 digits in total; The cells containing the date in the CSV file have been formatted as number without decimals (Figures 13a and 13b).

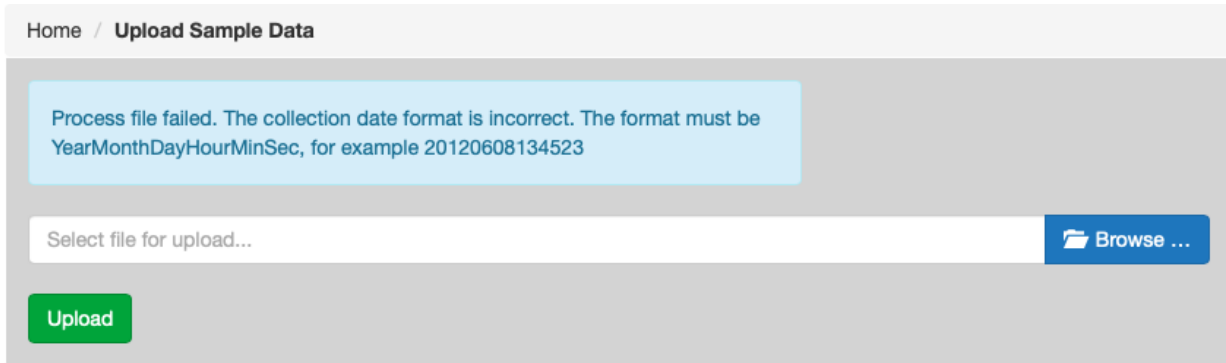


Figure 16. The Collection Date format is incorrect

Site References

The database utilises an automated system for reducing the amount of data entry required for samples from fixed trap sites. The site details are manually entered into the database once, and then become automatically linked to the "Site Reference No." field. From then on, the site detail fields are automatically filled in, once the appropriate "Site Reference No." has been selected from the drop-down list.

NB: Once a "Site Reference No: has been assigned to a "Location" by a sample creator, the "Location" cannot be changed. To modify the "Location" assigned to a particular "Site Reference No" you will need to contact the Lab.

Listing Site References

Click on the 'List Site References' link on the left Menu, and all the site references for your Health Board will be displayed. From this page, you may add to the information relating to a particular site reference by clicking on 'Edit' adjacent to it (Figure 17).

The screenshot shows the 'List Site References' page. On the left is a sidebar for 'NEW ZEALAND BIOSECURE' with a 'Functions' menu containing options like 'New Sample', 'List Samples', 'List Site References', 'AdHoc Search', and 'Upload Data'. The main content area has a breadcrumb 'Home / Site References', a 'Create New Site Reference' button, a search bar for 'Site Reference No.', a dropdown for 'Admin', and a 'Search' button. Below this is a 'References Per Page' dropdown set to '20'. A table lists site references with columns for 'Health Board' and 'Site Reference No.', and an 'Edit' button for each row.

Health Board	Site Reference No.	Edit
MidCentral DHB	Arrivals terminal A	Edit
MidCentral DHB	Arrivals terminal	Edit
MidCentral DHB	Fire fighting tank	Edit
MidCentral DHB	NZB_OHA_Tyre 1 Spotless	Edit

Figure 17. List Site References

To add a new site reference, click on the blue button “Create New Site Reference” link from the “List Site References” (Figure 17). Fill in the appropriate fields and click save (Figure 18). The new site reference will automatically appear in the dropdown menu for the next new sample you enter. Don’t forget to add the correct location to the site reference. The database filters the site references by location when creating a new sample. The location can only be altered by the lab once the site reference is saved.

The screenshot shows the 'Create Site Reference' form. It includes the following fields: 'Health Board' (dropdown: MidCentral DHB), 'Site Reference No.' (text: Site Reference), 'GPS East' (text: i.e. Longitude 000 00 00.000 E), 'GPS North' (text: i.e. Latitude 00 00 00.000 S), 'Trap Type' (dropdown: Select Trap Type), 'Reason for Sampling' (dropdown: Select Sample Reason), 'Attractants' (dropdown: Select Attractant), 'Trap' (dropdown: Yes), 'Habitat Category' (dropdown: Select Habitat Category), 'Sample Type' (dropdown: Select Sample Type), 'Salinity' (text: Salinity), 'Sample Location' (dropdown: Select Location), and 'Control / Treat' (dropdown: Select Control / Treat). At the bottom are 'Save' and 'Back to Main List' buttons.

Figure 18. Creating a new Site Reference

Searching for Samples in the Database

Listing Samples

The “List Samples” link on the menu page column allows you to view your Health Boards samples that are in the database. You can list your samples based on their “Status” (All, Complete or Incomplete), “+VE Sample” (All, Positive, Negative) or “Entry Method” (All, Uploaded or Manual) or Location. (Figure 19).

In “List Samples” be as selective as possible to find the samples, make your selections and click “Search”. Your samples will appear in a summary table, from which clicking the green button you can check the results or edit your samples (Figure 20).

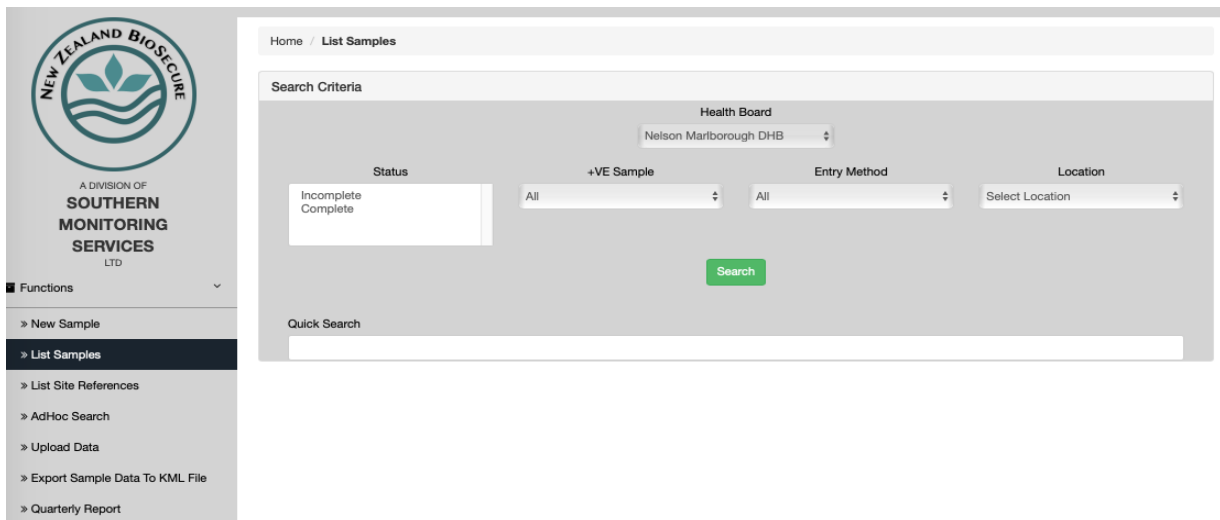


Figure 19. List Samples Link.

The screenshot shows the search results table with the following data:

Sample Number	Location	Status	Positive or Negative	Sample Date	Create Date	Attached File	Check results	Delete
SJ9975	Christchurch Port	Complete	Negative	21/11/2018	21/11/2018		Check results	Delete
SJ9976	Christchurch Port	Complete	Negative	21/11/2018	21/11/2018		Check results	Delete
SJ9977	Christchurch Port	Complete	Negative	21/11/2018	21/11/2018		Check results	Delete
SJ9978	Christchurch Port	Complete	Negative	21/11/2018	21/11/2018		Check results	Delete
SJ9979	Christchurch Port	Complete	Negative	21/11/2018	21/11/2018		Check results	Delete
SJ9980	Christchurch Port	Complete	Positive	21/11/2018	21/11/2018		Check results	Delete
SJ9981	Christchurch Port	Complete	Negative	21/11/2018	21/11/2018		Check results	Delete

Figure 20. List samples.

You can also search for a specific sample using the sample number in the “Quick Search” box in the “List Samples” tab (Figure 21).

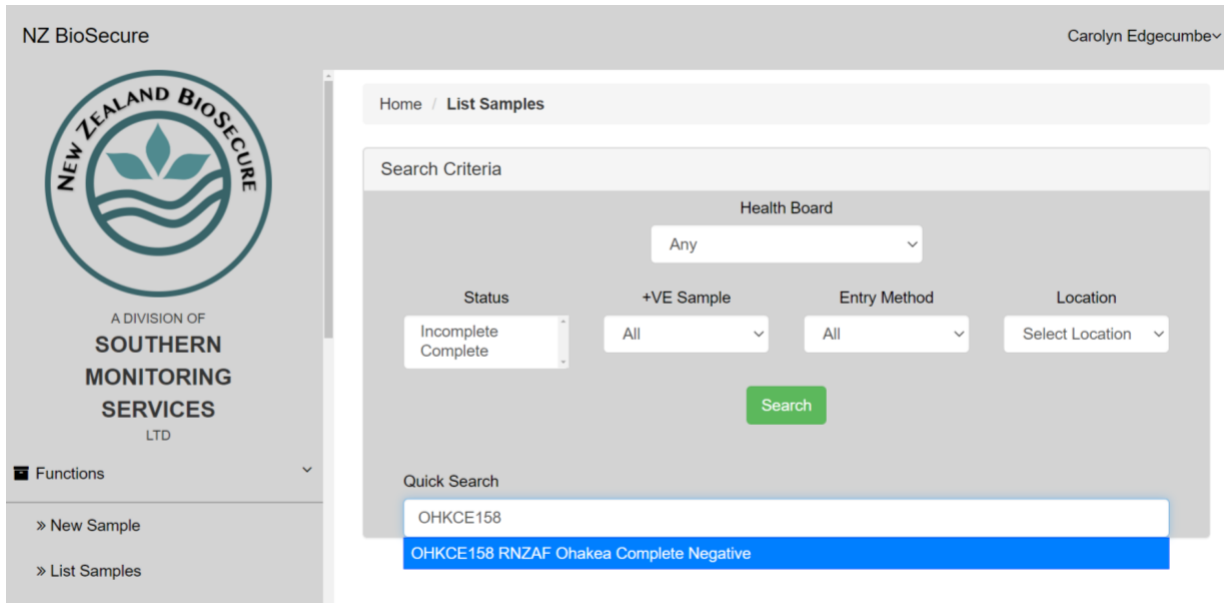
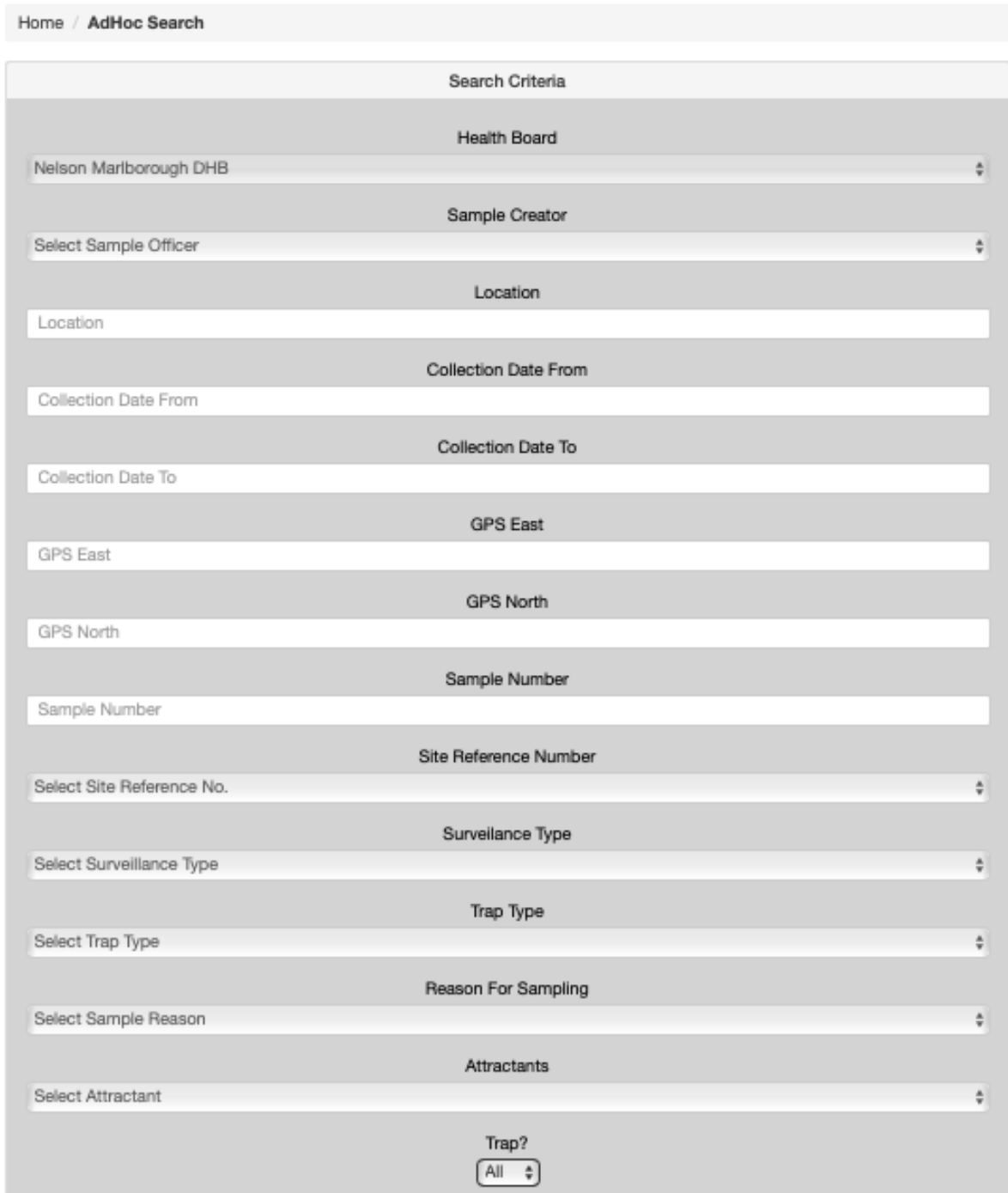


Figure 21. Using the Quick Search bar

You can export datasets to your computer, by clicking from the “AdHoc Search” “Export CSV”. And also “Export Sample Data to KLM File”. Refer to the Exporting Datasets section for more detail on this (Page 18).

AdHoc searches

On the Menu page, click on “AdHoc Search” link to produce the Search Samples page (Figure 22).



The screenshot shows a web interface for 'AdHoc Search'. At the top, there is a breadcrumb trail: 'Home / AdHoc Search'. Below this is a form titled 'Search Criteria' with the following fields:

- Health Board:** A dropdown menu with 'Nelson Marlborough DHB' selected.
- Sample Creator:** A dropdown menu with 'Select Sample Officer' selected.
- Location:** A text input field containing 'Location'.
- Collection Date From:** A text input field containing 'Collection Date From'.
- Collection Date To:** A text input field containing 'Collection Date To'.
- GPS East:** A text input field containing 'GPS East'.
- GPS North:** A text input field containing 'GPS North'.
- Sample Number:** A text input field containing 'Sample Number'.
- Site Reference Number:** A dropdown menu with 'Select Site Reference No.' selected.
- Surveillance Type:** A dropdown menu with 'Select Surveillance Type' selected.
- Trap Type:** A dropdown menu with 'Select Trap Type' selected.
- Reason For Sampling:** A dropdown menu with 'Select Sample Reason' selected.
- Attractants:** A dropdown menu with 'Select Attractant' selected.
- Trap?:** A dropdown menu with 'All' selected.

Figure 22. In the AdHoc Search menu refine your search

Most fields from the sample records are included in this page, as they can be used to search and select the sample records. A single field or a combination of several fields can be used for searching. This is often the easiest way to search for samples.

Examples of searches; all samples collected on a particular date; all positive samples collected by a particular sampling officer during the month of April.

NB: A period of time must be entered into the date fields to obtain the search results.

Once you have entered your criteria, click “Search” and you will be given the listing options as above in the Listing samples section. You can also export this dataset by clicking the “Export to CSV” button.

Refer to the Exporting Datasets section below for more detail on this.

Exporting Datasets

Data can be exported readily. The system is windows optimised and is the preferred option.

Ad Hoc Search: Export Option

After you have entered the search parameters for the data you wish to export (using the same process as an Ad Hoc Search), click on “Export to CSV” or Export XLS (Figure 23). The CSV/XLS should automatically download to your PC. Once downloaded it can be imported into excel for viewing.

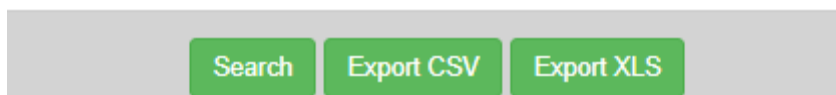


Figure 23. “Ad hoc Search” results. Export to CSV or Export XLS

Opening Exported Datasets in Microsoft Excel

Datasets exported as CSV files, can be imported into Microsoft Excel, for use in data analysis etc. This may not be automated, as the commonly used separator characters are often used in the data fields, the data may need to be imported manually depending on software versions.

Once you have exported the CSV file to a known location on your computer, open a new file in Microsoft Excel. Click on the “Data” menu, or “File” select the “Import” or similar option (e.g. Get data From Text) or “CSV file” (Figure 24).

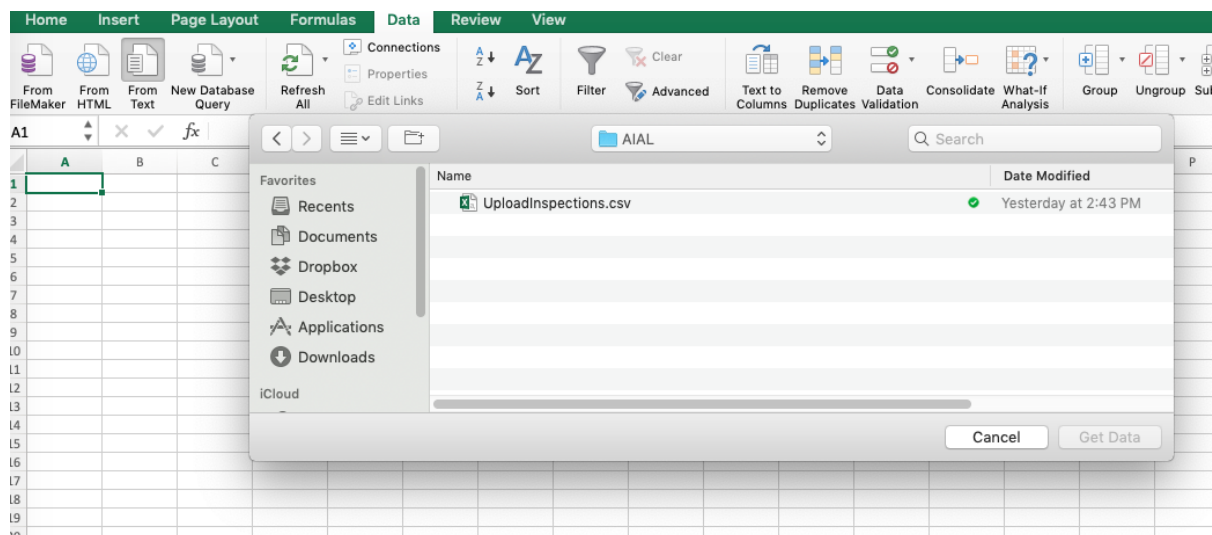


Figure 24. Import CSV

A window will appear and prompt you to browse to the CSV file you wish to open in Excel. Once selected it will open a wizard that you can follow which assists with opening the file (Figures 25 & 26).

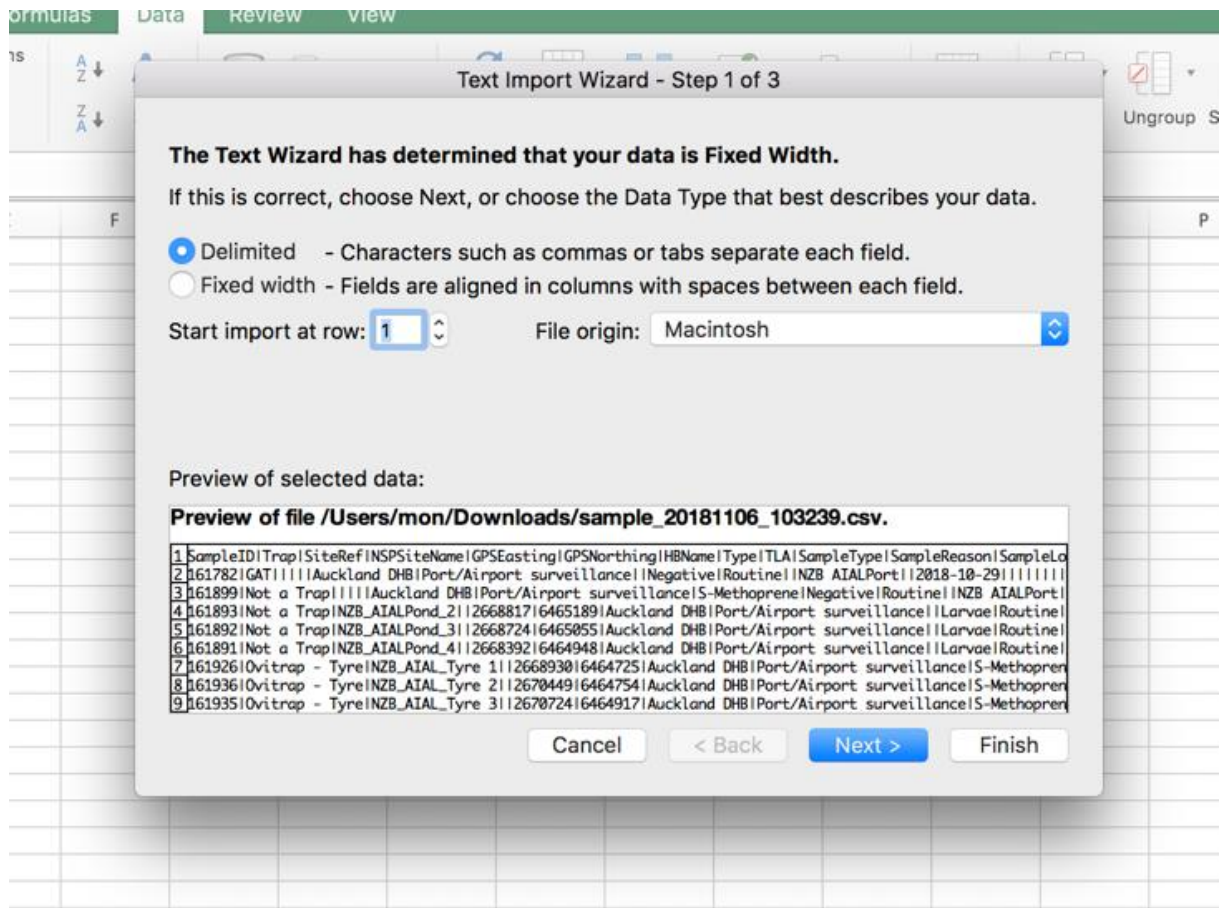


Figure 25. Select “Delimited” and then click “Next”

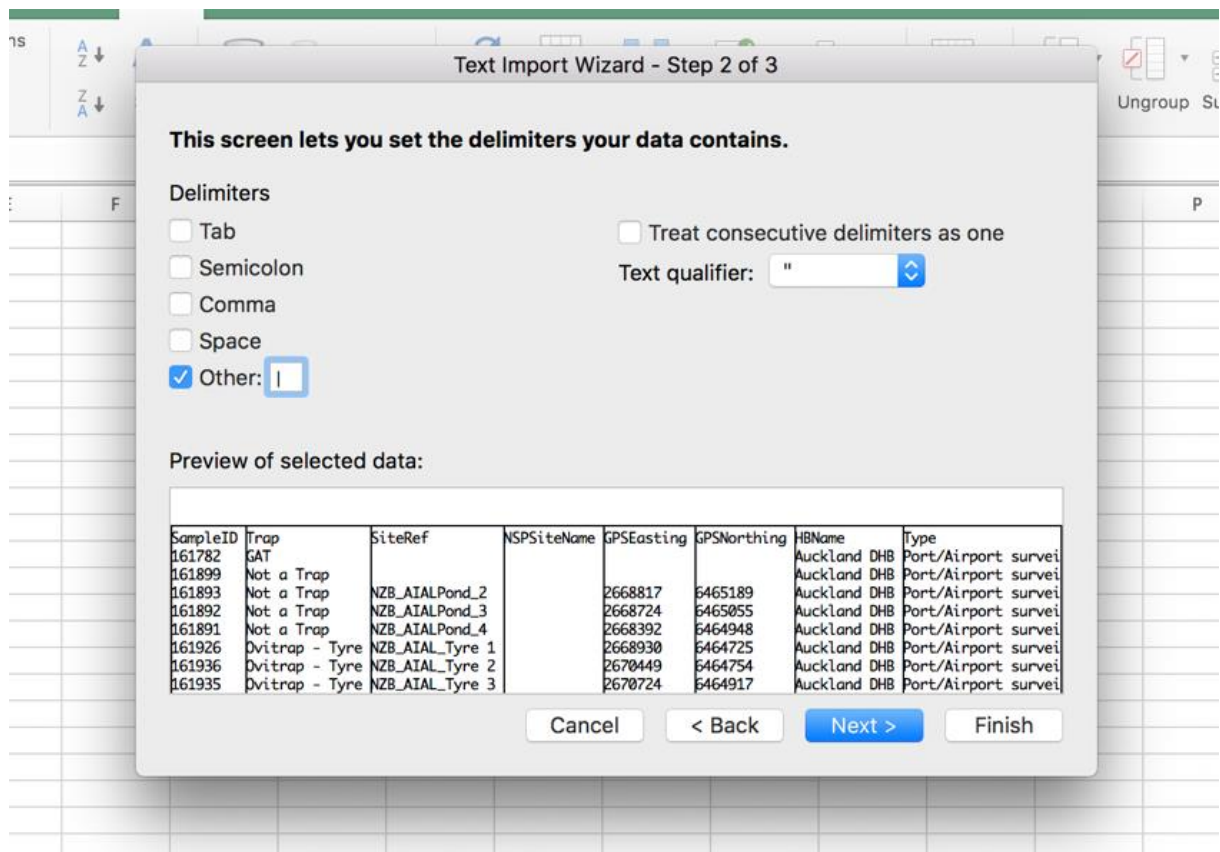


Figure 26. Uncheck the “Tab” box, check the “Other” box and add type in “|” (this is usually the shift \ button, above 'enter' on the keyboard). Click “Next”

Click “Finish” to add the data to your worksheet where you can review and analyse. Save it as a Microsoft Excel spreadsheet file.

Datasets that are exported as XLS can be opened without delimiting the data.

Exporting to KML

Exporting sample data to KML enables a google earth viewing of sample data and results.

NB: In order for the data to be displayed accurately, the GPS data entered must be accurate and the coordinate information needs to follow the format described in page 6.

Select the export option from the menu (Figure 27) and complete the search parameters, as minimum collection dates must be selected. Then select the “Export KML” tab at the bottom of the page, a file will automatically be download (Figure 28).

Figure 27. Export Sample Data to KLM

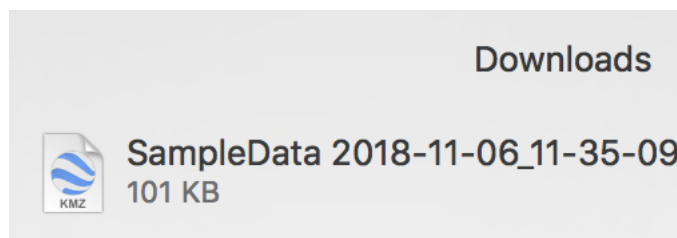
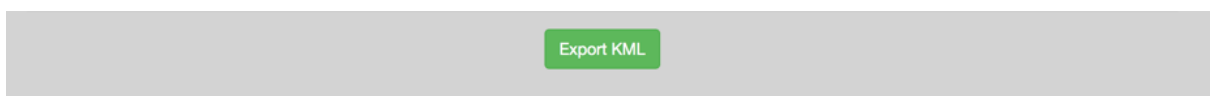


Figure 28. Export KLM button & File Downloaded

Open the downloaded file with google earth and the samples will automatically load. Red pins – Exotic Species, Yellow Pins – non-exotic positive results and Green Pins – Negative (Figure 30).

NB By clicking in the pin the sample information, including results are displayed (Figure 29).

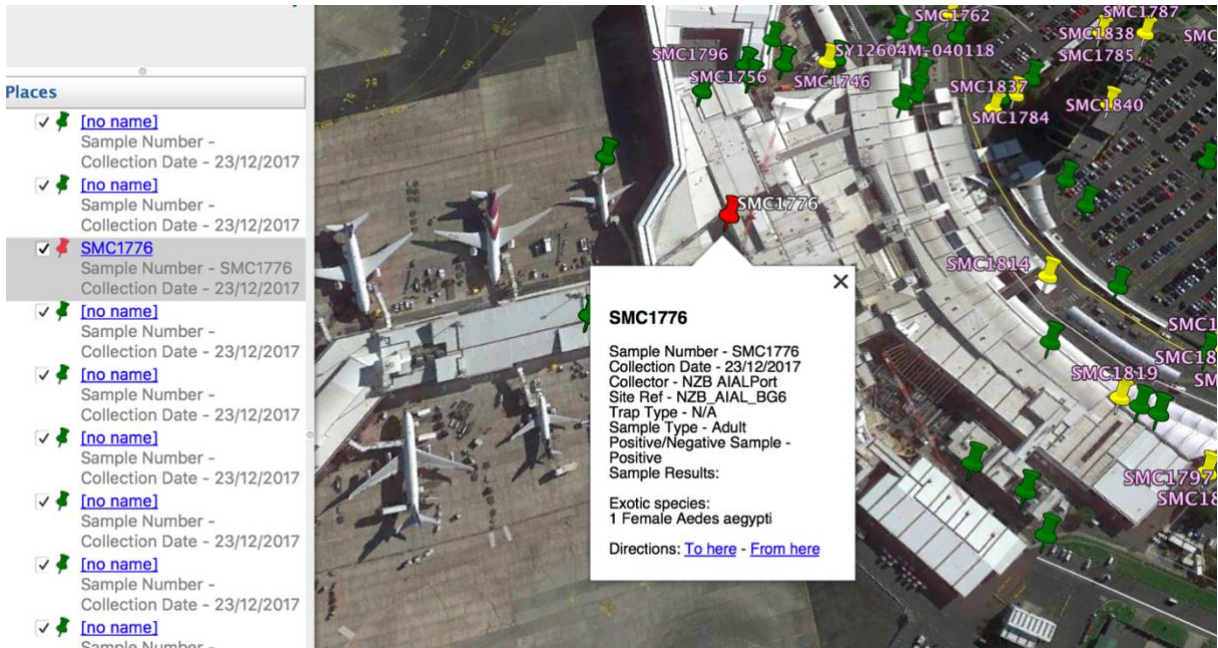


Figure 29. KLM Samples displayed

The following clearly depicts what an error in entered GPS data looks like when exported as a KLM (Figure 30). Please ensure GPS data is recorded in the correct format and for the correct location.



Figure 30. Incorrect GPS Co-ordinate example

Finishing a Session

When you have finished with the database, click on your name at the top right of the current screen and you will be returned to the menu page. Click “Logout” to terminate your connection (Figure 31).

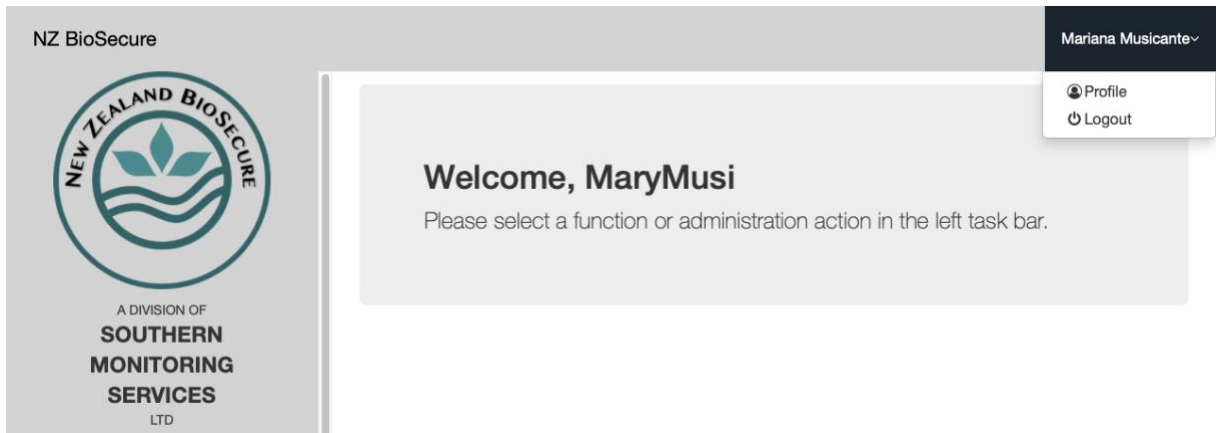


Figure 31. Logout.

Thank You

If you have any queries, please
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