Printing QR and Bottle IDs in Sampler

Overview:

This document outlines the process for printing labels for use in the field and the nuances of the Label Printer. We print two types of labels:

1. QR codes are scanned to autofill the run name, site name and sample number in the field to avoid manual entry mistakes and keep track of your samples. Most technicians choose to stick these labels to the sample bags containing the bottles for a particular site. The main purpose of this label is to accurately connect a sample bottle to a particular site and Sample ID.

2. Bottle (barcode) labels need to be stuck to the bottles to be sent to ELS Laboratories. When these are scanned into Survey123 in the field and submitted, the lab is notified to expect a bottle with this barcode, and they will use it internally to keep track of the sample in the lab once they receive them. This process is called "just-in-time" registration as labs are only notified once the bottles are filled.

In the background, this process allows us to do the following:

- Ensure that the information entered when you set up your Sampler run is transferred directly into Survey123 for more accurate data entry.
- Ensure that the lab receives the correct sample that can be traced exactly to its sample point, further improving our data quality.
- Ensure that the lab keeps accurate track of the sample internally and provide us with data corresponding to the correct sample time and location.

From a technical point of view we make use of the Hilltop service called LabMail to pull information from Survey123 and send it along to the lab and back to sampler in the office, with no need for manual data entry. From there the field data and lab results can then be stored in the respective Provisiona_X.hts file.

Currently this process is implemented for Contact Recreation and Discrete Water Sampling (SOE runs). Lakes and Groundwater are under development.

The current Survey123 Forms are below and will need to be downloaded to your phone/device before going sampling:

1. Discrete Surface Water Sampling 20241010
2. Contact Recreation 20241011
3. Lakes Sampling 20241011
4. Groundwater Sampling 20241014

The Arawhata Sampling, Depth-Integrated, Hydrology 'Grab' are yet to be added as a form.

This system is still in development so you are expected to complete with paper records concurrently.

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Version No: 05	**Horizons Regional Council**	Section No: 15.9
Issue Date: 4/12/2024		Appendix No: 9
Portfolio: Data Delivery		Page: 2 of 13

horizons
regional council

Hydrology Operations Manual

horizons
regional council

Printing QR and Bottle IDs in Sampler

Set up the printer

NOTE: If you are using the Farm rather than your own PC, the printer should already be set up and you can skip ahead to the section titled "Set up your run" on page 7.
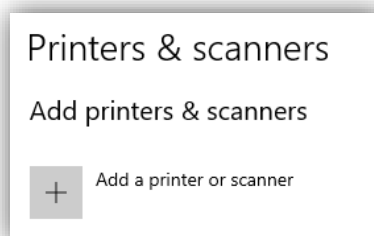
If you have not previously printed the QR codes or barcodes for on your computer you will need to set up the printer and font to do so:

On your PC navigate to (using the navigation bar) [🔍 Type here to search 💼] to

Printers & scanners – Add printers & scanners. The dialogue box below will pop up:
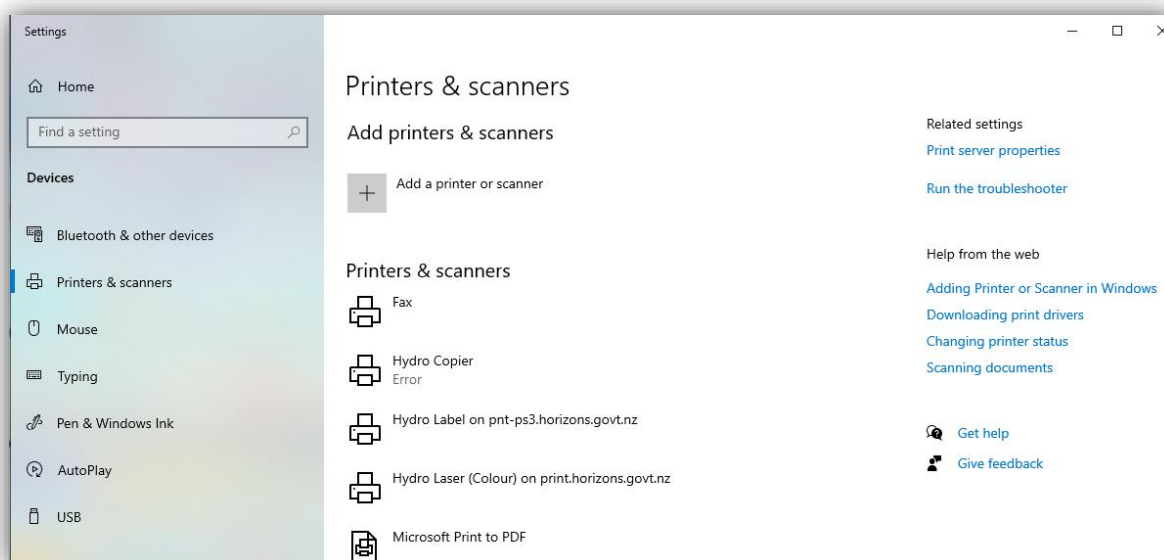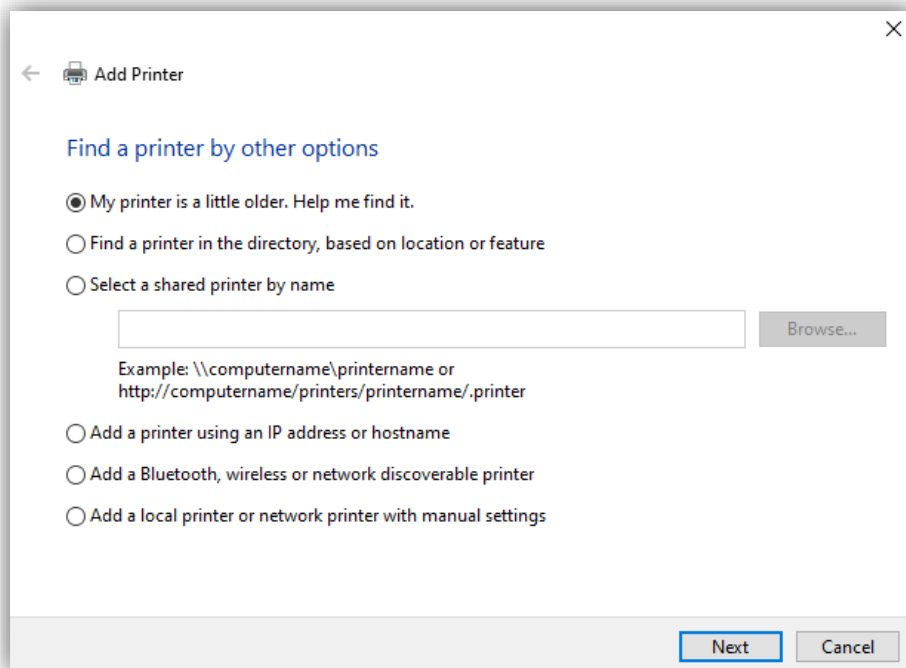

Select Add a printer & scanner:

From the next window which opens scroll to the bottom of the list and select

The printer that I want isn't listed

horizons regional council

Hydrology Operations Manual

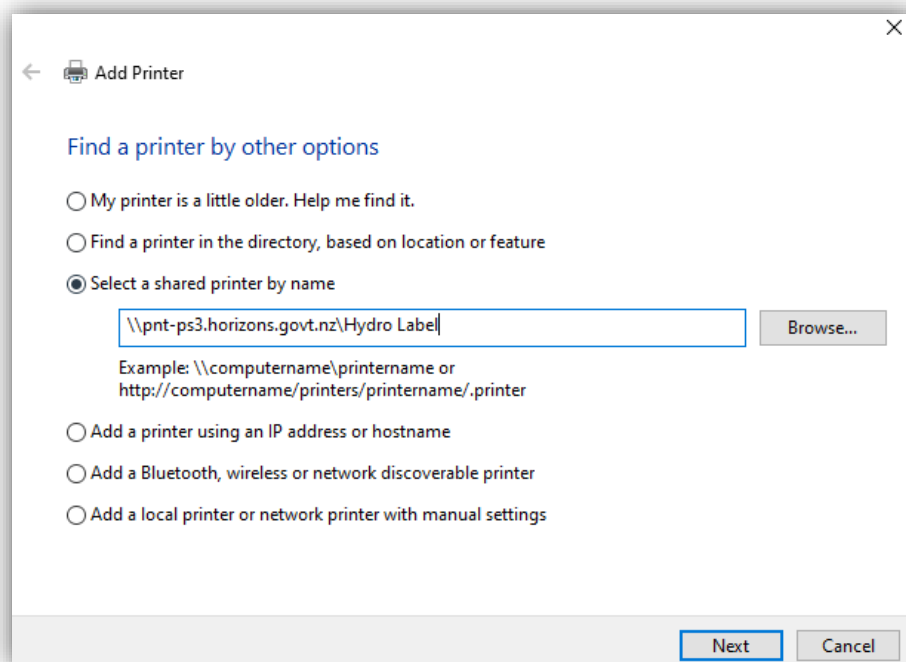**horizons** regional council

Printing QR and Bottle IDs in Sampler

A new dialogue box will open:

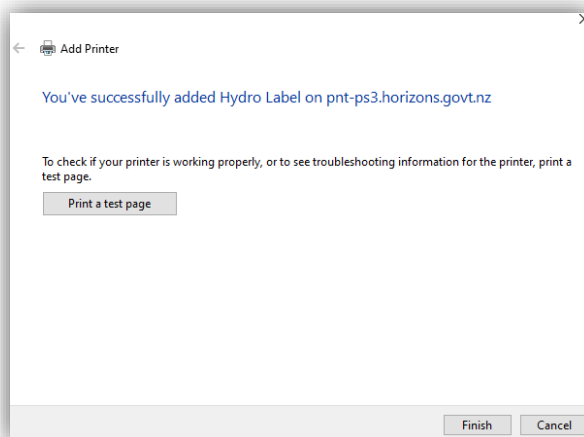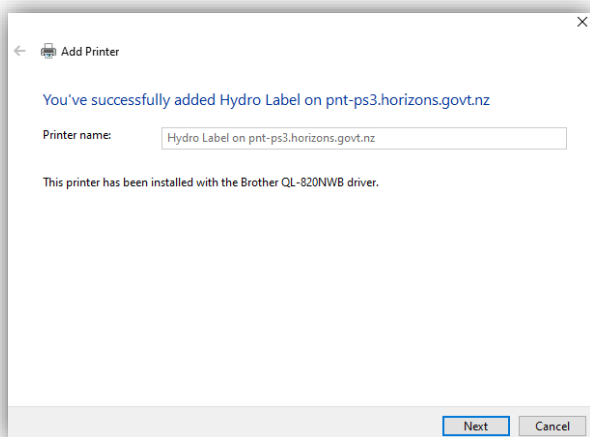Select "Select a shared printer by name" and type in : `\\pnt-ps3.horizons.govt.nz\Hydro Label`

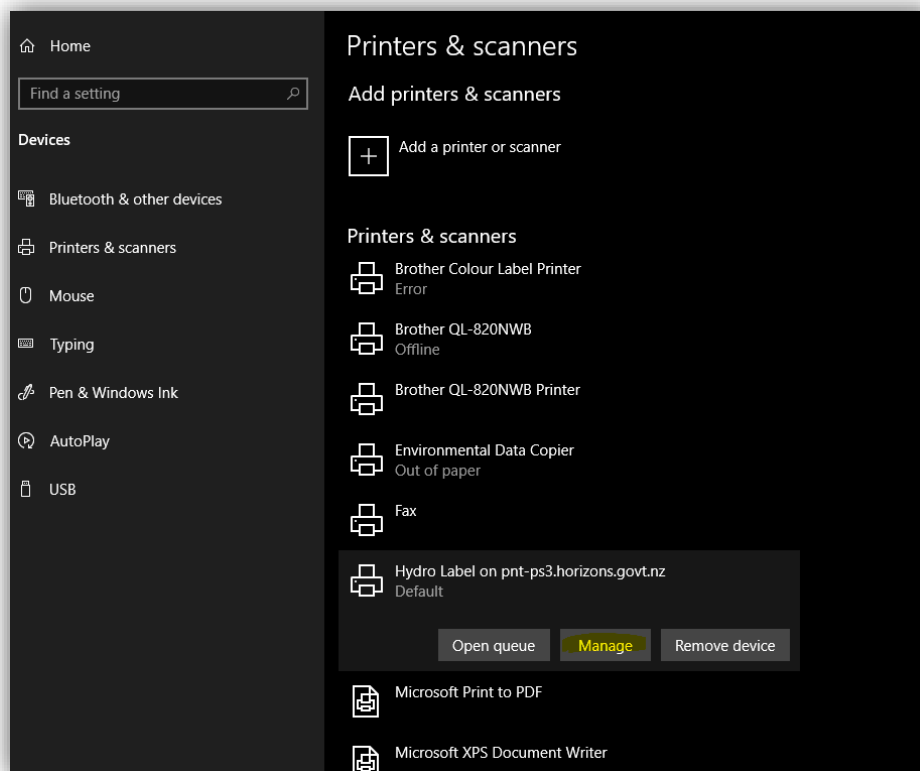As of 5/12/24: Instead add `\\DT-13943.horizons.govt.nz\Brother QL-820NWB - Shunter`

Hydrology Operations Manual

Printing QR and Bottle IDs in Sampler

Press Next, the Printer name should be **Hydro Label on pnt-ps3.horizons.govt.nz** as shown below <mark>(or Brother QL-820NWB – Shunter on DT-13943)</mark> – then select Next


Press finish. Now we need to set up your printer defaults. Back at the Printers & Scanners settings page, you need to scroll down to the "Printers & Scanners" subheading (not to be confused with "Add printers & scanners" section at the top). Click on the <mark>Brother – Shunter</mark> printer and then Manage
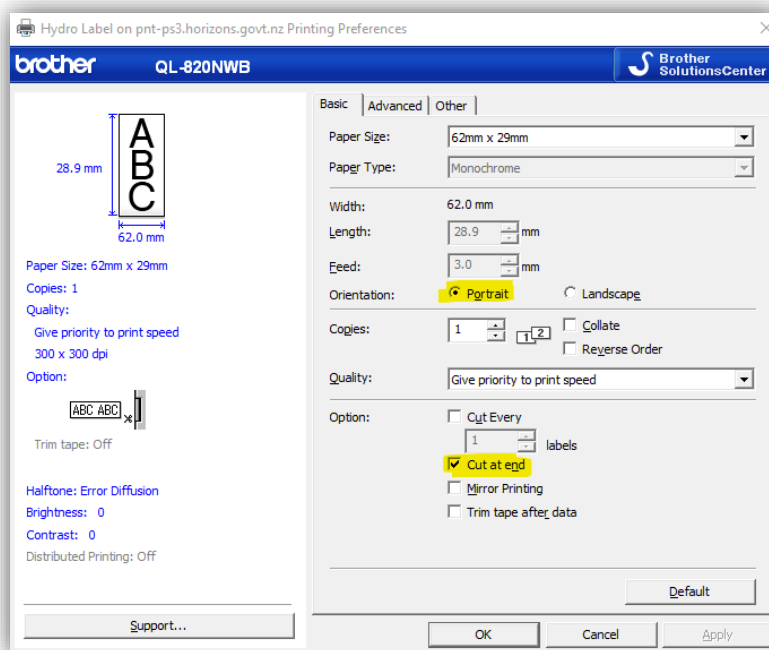
Hydrology Operations Manual

Printing QR and Bottle IDs in Sampler

Then click "Printing preferences":
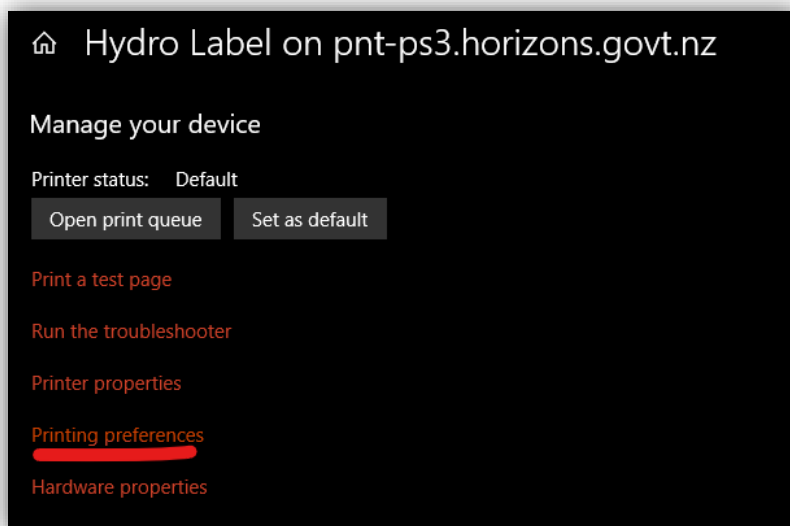
This will open the Brother configuration software where you can set your printer defaults. For the DK-11209 labels that we use, we need to set the default orientation to "Portrait", even though all our stickers appear to be in landscape. We also need to make sure that we set the printer to cut at the end of each batch, and not after each sticker. This way we have a long ribbon of stickers to deal with, and not a pile of individual stickers.

Select "Apply" and close the window.

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Hydrology Operations Manual

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Printing QR and Bottle IDs in Sampler

Load Barcode Font

NOTE: If you are using TSFarm rather than your own PC, the font should already be installed on your system. You can skip this step and move on to the next section.

To be able to print the bottle barcodes required for each bottle on the sample you will need to install the barcode font on your PC. You should only need to do this once.

Copy the following file path into the address bar in windows File Explorer (not an internet browser!):
\\hilltopnew\HilltopHRC\Forms\3of9Barcode.TTF

Alternatively if the direct link doesn't work, copy this folder location into File Explorer:
\\hilltopnew\HilltopHRC\Forms\
And double click the file **3of9Barcode.TTF**. Then click Install.

Version No:	05	**Horizons Regional Council**	Section No:	15.9
Issue Date:	4/12/2024		Appendix No:	9
Portfolio:	Data Delivery		Page:	7 of 13

horizons regional council

Hydrology Operations Manual

horizons regional council

Printing QR and Bottle IDs in Sampler

Setting up your run
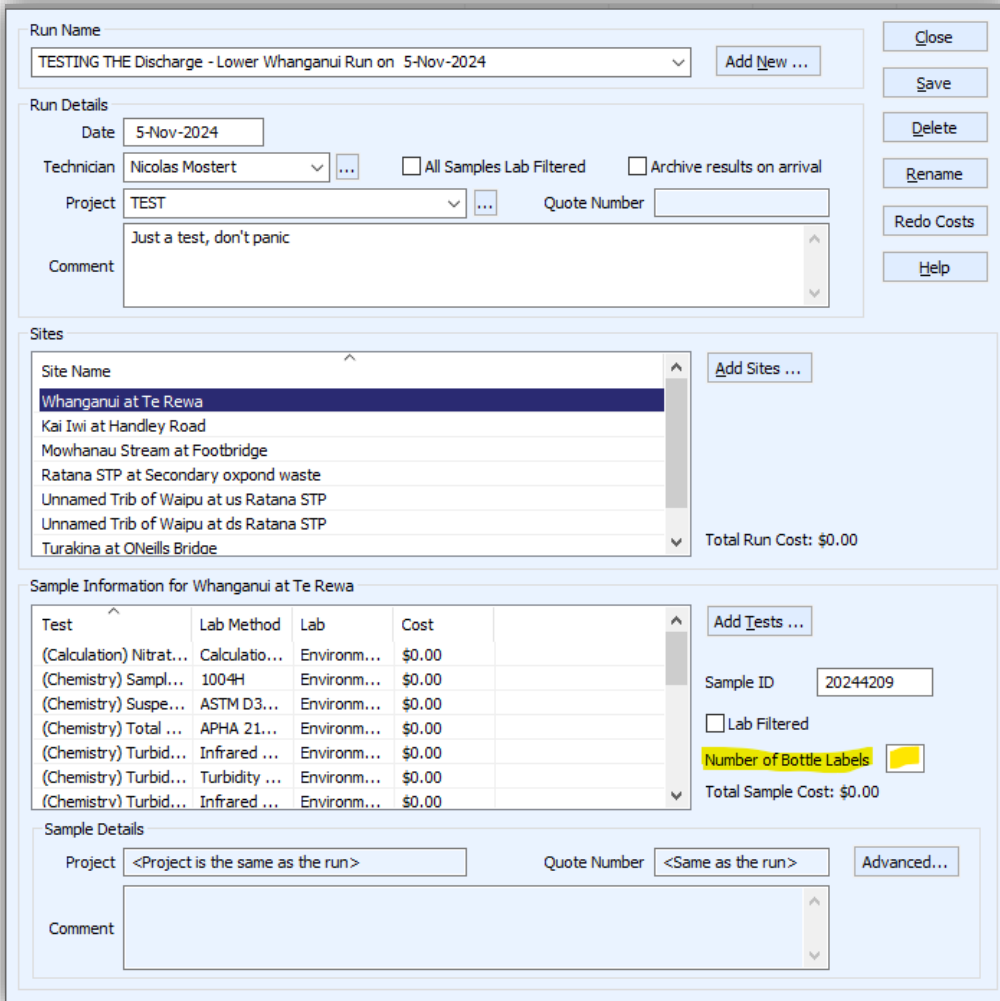
The current version of Sampler to use with the QR Scanner to pre-registration with ELS Laboratories \\hilltopnew\HilltopHRC\Sampler.exe. You may wish to make a shortcut of this app to your desktop.

(Note: This will change to **Hilltop\HilltopHRC\..** as we move away from development)

Take note of the number of ELS bottles per sample. This information can be found on the ELS Bottle Guide in the green column.

As you set up your run in Sampler as normal, enter the **total number of bottles** for each sample. This number will determine how many bottle labels will print at the end.

If your run has already been set up, you can hit the "Edit Run" button on the run page in Sampler and enter it afterwards. Remember to press Save!

Printing the QR labels

Once your run is set up and you're ready to print labels, you can print the QR labels first. There is one unique label per site, printed in duplicate. You should end up with two times as many labels as you have sites.

The idea is to put a label on the bag that your bottles go into for a site. The multiples are for if you have more than one bag per site, or if something horrible happens to your labels.

Open the run and click the Notify Lab button in the left-hand menu:
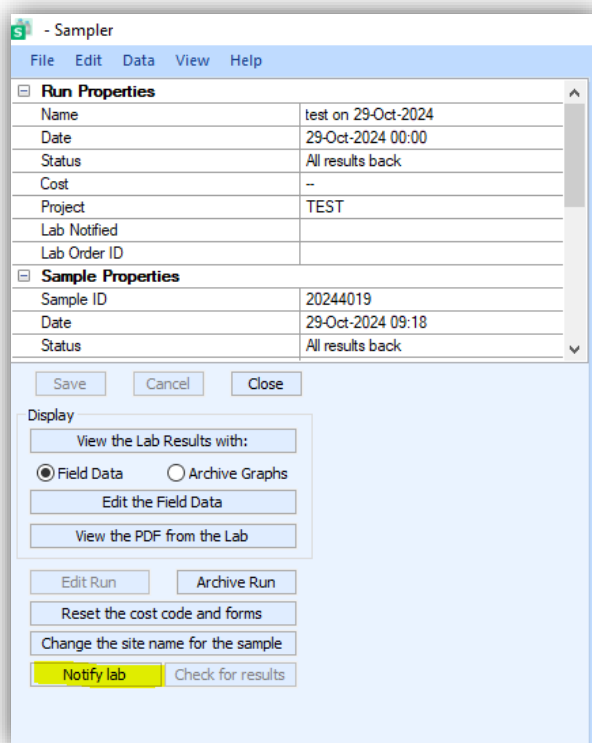
This will generate a QR Code Ute sheet and Labels to be used for scanning and registering your sample run and sample IDs into survey123. If you prefer to use only the pdf you can print and scan the pdf and not the QR Stickers.

To print these you will need to navigate to: \\ares\Hydrology\Sampler_Label_Output\ (Copy and paste this address into windows File Explorer)

Where 2 pdf's have been created under the name of the Sample run in the format:
- RUN_DATE_[NAME OF PERSON WHO SET UP RUN]_qr_Labels_labels.pdf
- RUN_DATE_[NAME OF PERSON WHO SET UP RUN]_qr_sheet_a4.pdf

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Hydrology Operations Manual

horizons regional council

Printing QR and Bottle IDs in Sampler

The Labels_labels can then printed on the <mark>Brother – Shunter</mark> Printer (Located in the Hydro office, Sorren's desk) by opening the PDF in Chrome or Edge (in order of preference). Simply right-click on the file and open with the browser of your choice.

If you're using Chrome or Edge you shouldn't have to change any settings if everything went well, but **remember to ensure that you are printing to the** <mark>Brother – Shunter</mark> **printer!** These labels don't work too well when printed on A4 paper.

NOTE: By default the pdf files will likely open in Adobe Reader. I strongly suggest you do not print using Adobe Reader as it is a horrible garbage fire made by garbage people and it will mess up your labels.

If you insist on using Adobe Reader ensure Print actual size is selected as shown below
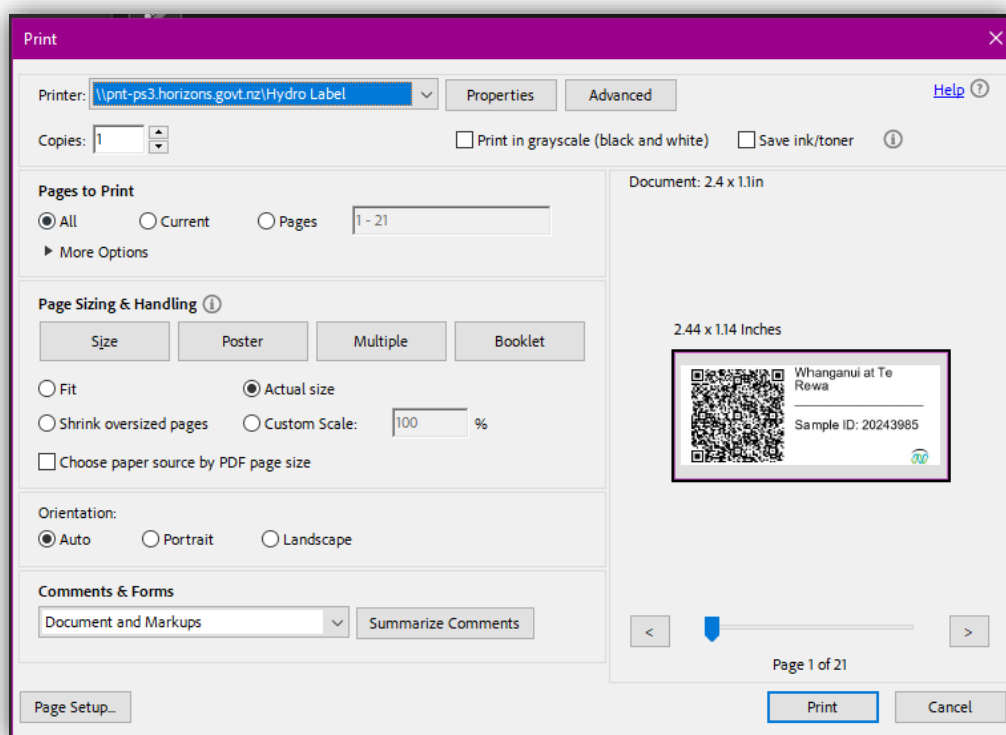
The second pdf file, an A4 sheet, can be printed on regular A4 printer paper. You can print this however you want.
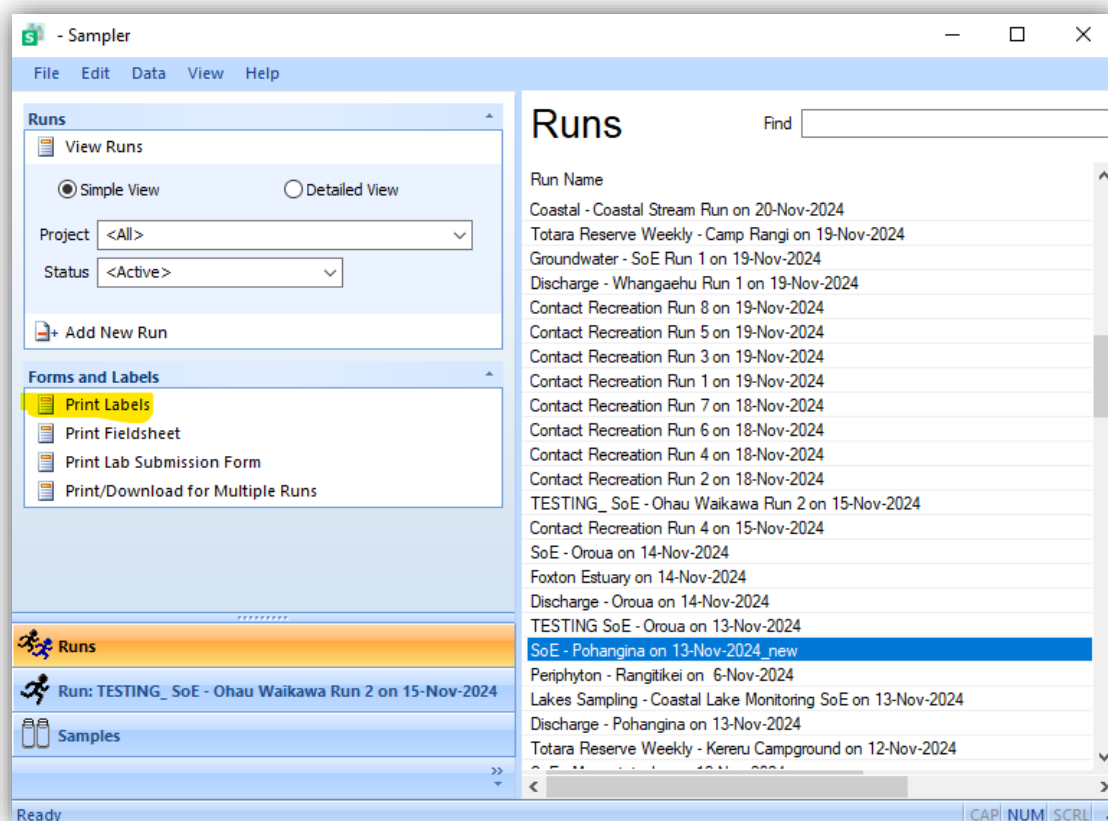
Hydrology Operations Manual

Printing QR and Bottle IDs in Sampler

Printing Bottle Bar Code Labels

The Bottle Labels now need to be printed for the Sample run. Each bottle gets a label attached to it. You should have the same number of bottles at each site, or you specified the number of bottles for each site during your run setup. You can print additional if you foresee any issues/potential losses.

Barcodes are printed to be scanned for each bottle – "Bottle ID" to supply the Lab with the just-in-time-registration results required to send to ELS.

To print these labels, go back to the Runs view in sampler. With a run selected in the right window, click on "Print Labels" in the middle left panel.

This will open up a print dialog for your run.

| horizons regional council | **Hydrology Operations Manual** | horizons regional council |

Printing QR and Bottle IDs in Sampler

Make sure that the "Label Layout" field is set to "Single Label", and that the "Run" field is correct.

NOTE: This dialog asks you "How many labels do you require per sample?". If you have specified the number of bottles on a per-site basis in a previous step in this guide, this number will have no effect.*

ALSO NOTE: The "Print" button on this dialog seems to make some strange assumptions about print setup, and may produce un-expected results, as Sampler 'remembers' your last print job settings. <mark>Use "Print Preview" every time until further notice.</mark>

Now you can press print preview. If everything works well, you should see the label looking like this:
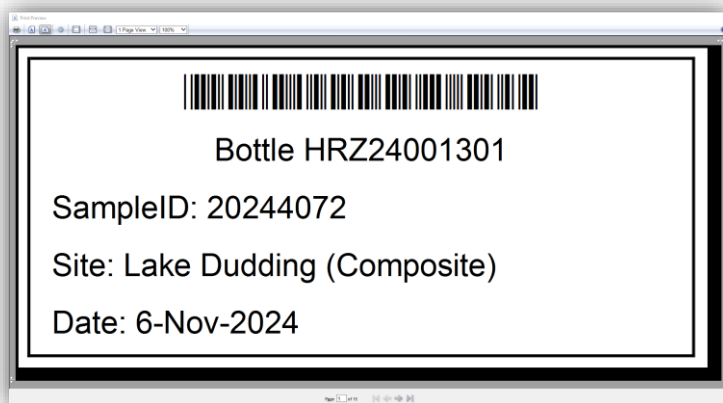
If this is NOT what you're seeing (e.g it's in portrait mode), check your settings. Make sure that you have the correct printer selected (<mark>Brother – Shunter</mark>*). Check your default printer settings by following along in an earlier section in this guide.* consider printing two or three labels first if this is your first time.

Great job! Now you should have a pile of stickers on your desk. Go stick them on bags and bottles.

*If you want to save time and you are sure that all samples in your run have exactly the same number of bottles, you can leave the number of bottles field blank in the Run setup dialog and insert the number here.

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Hydrology Operations Manual

horizons regional council

Printing QR and Bottle IDs in Sampler

# Issues with Printing from Hydro Label

The latest windows update means Sampler is currently "remembering" the default settings of your last print job (if you are regularly in the field and do not print anything else you are OK), however the default will remember your last print job – i.e. pdf or word document.

Follow the steps above, or copy below, select Print Labels, check Print Preview, if this looks any different from:
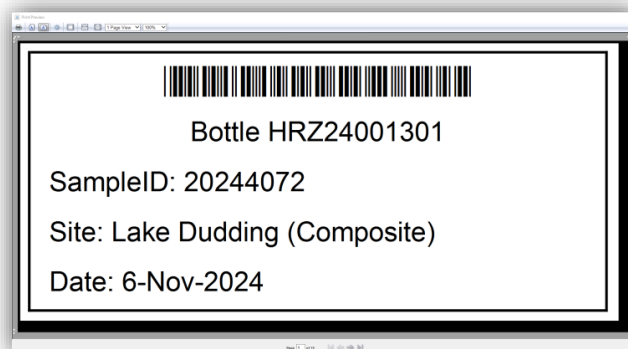
Select Print then navigate to the Hydro Label printer (from the default of your last printer), select preferences and follow the configuration settings:

For the DK-11209 labels that we use, we need to set the default orientation to "Portrait", even though all our stickers appear to be in landscape. We also need to make sure that we set the printer to cut at the end of each batch, and not after each sticker. This way we have a long ribbon of stickers to deal with, and not a pile of individual stickers everywhere.
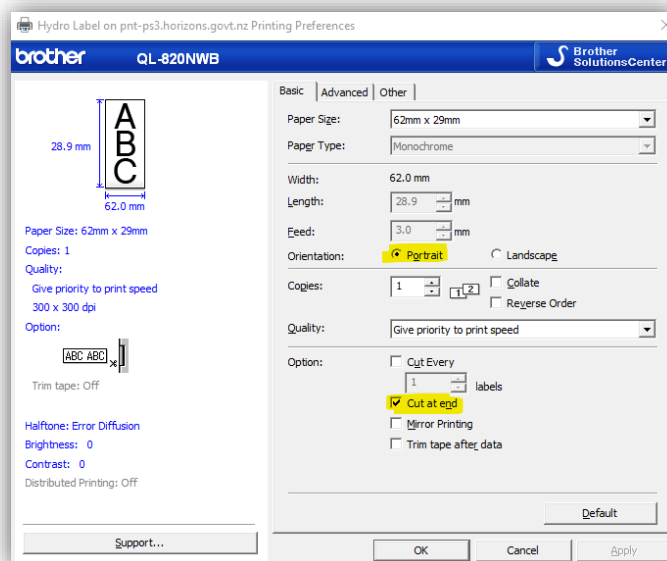
Press "Apply" and close the window.

<u>Print a test</u> – you may need to print one to get the settings to effect a change in the settings.

Version No: 05		Section No: 15.9
Issue Date: 4/12/2024	**Horizons Regional Council**	Appendix No: 9
Portfolio: Data Delivery		Page: 13 of 13

Hydrology Operations Manual

Printing QR and Bottle IDs in Sampler

In the Field

You should have no problems scanning the QR code.

By default, Survey123's barcode scanner doesn't recognise the barcode type that we use. After hitting the button to scan your barcode, hit the settings cog in the top right corner and select the "Code-39" barcode type. That should do it.