Pest Free Kaipātiki
Kauri Dieback Management Plan Map Creation Guide

Welcome to the online interactive tutorial designed to help you create the maps you need for your Kauri Dieback Management Plan.

You will need two types of maps for your plan, an overview map of the reserve, and an extensive protocol map of your work area(s) in the reserve.

This tutorial will be using Auckland Council's Geomaps online software for map creation.

If you are more comfortable with another mapping software, then you may use that software and follow this guide for what is needed for each map.

If you are uncomfortable with all computer-based mapping softwares, then a hand drawn map is acceptable, however please still follow this guide for examples on what to include in your map(s).

To view the tutorials, click the links below:

Please work through each tutorial in order, as skills learnt in tutorial two are applicable to tutorial three.

| **Tutorial One**
Accessing Geomaps | **Tutorial Two**
Work Area Overview Map | **Tutorial Three**
Area Protocol Map |

Accessing Geomaps Tutorial

To access Auckland council geo maps, click on this link: Auckland Council Geo Maps.
Once you have accessed the page, click on the blue button that says "Open Geo Maps".
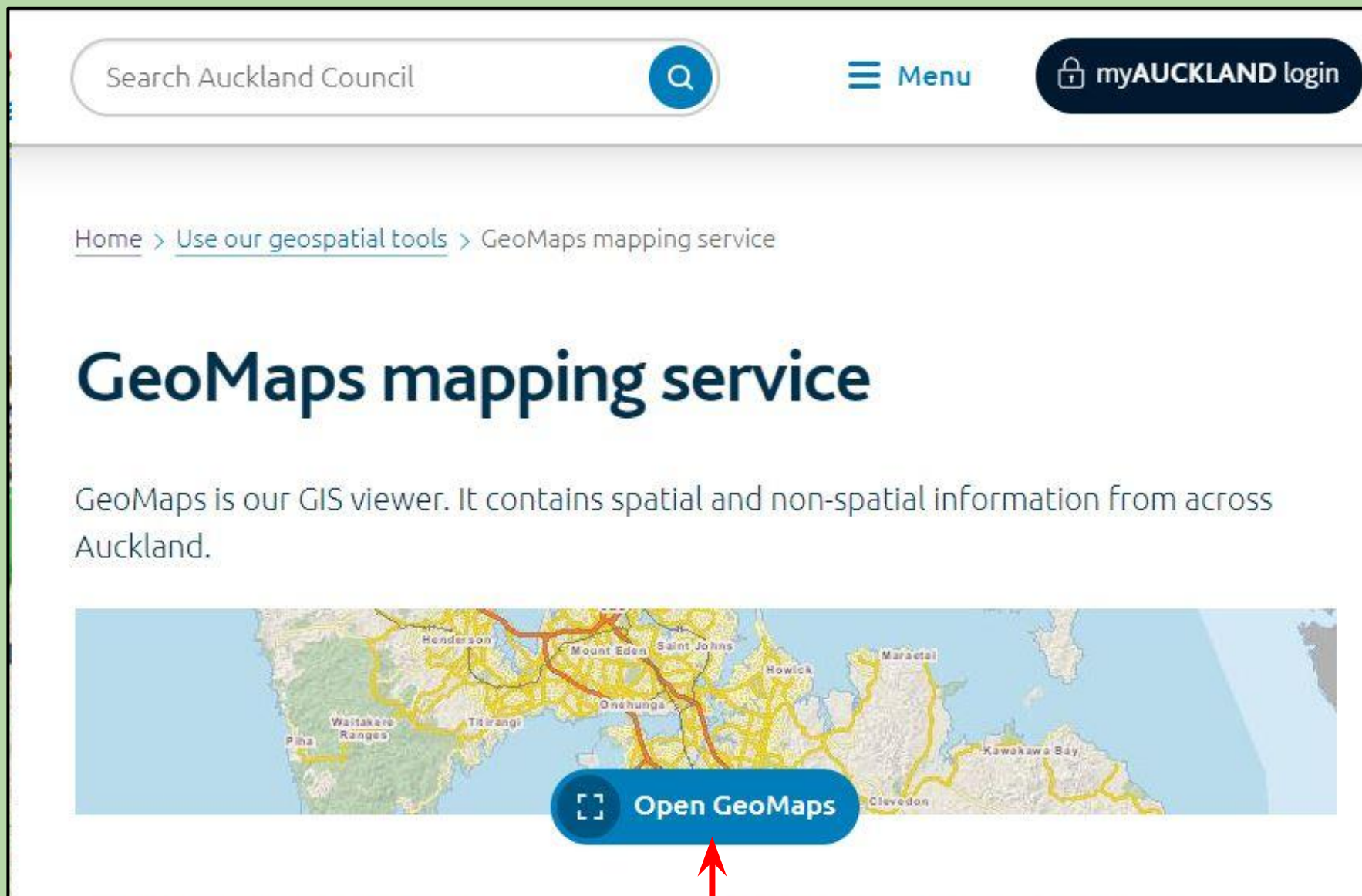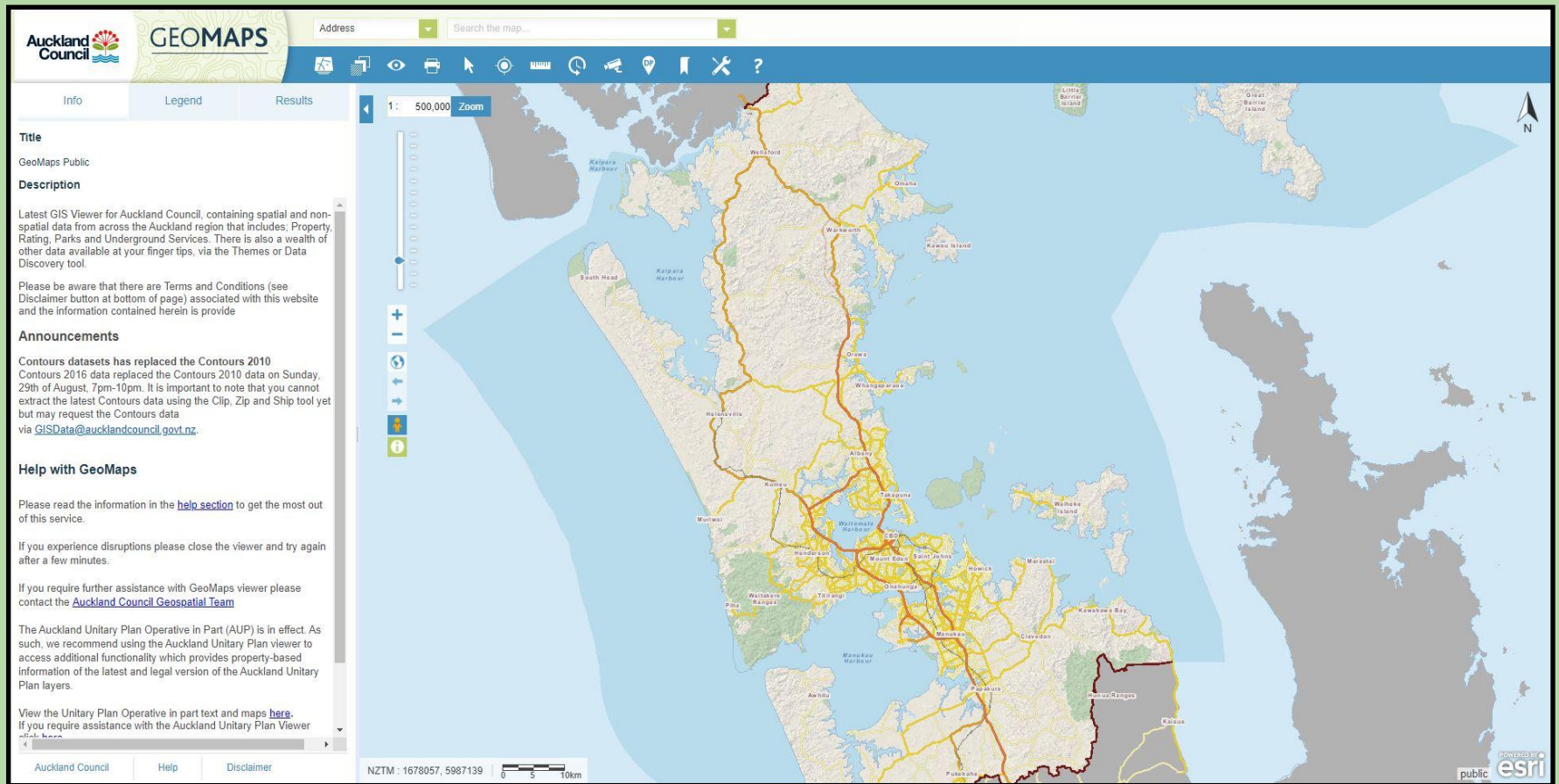

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Accessing Geomaps Tutorial

After the button has been clicked, accept the disclaimer and you will be taken to the mapping software. Example below.

This looks very daunting, but it's a very simple interface.

Overview Map Tutorial

The first thing we'll want to do is find the area you want to work in. This can be done easily by either using your mouse to scroll into Kaipātiki and finding the reserve manually.

You can also use the address search function up the top of the screen as seen below, and typing in a street name near the reserve, you will have to change the "Address" function to "Roads" first:

Tip: Addresses can sometimes be missing. Roads can also be missing or misnamed.

| Address | ▼ | Search the map... | ▼ |

| Roads | ▼ | Search the map... | ▼ |

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Overview Map Tutorial

The example reserve that will be used for this tutorial is **Kauri Point Domain**.

Balmain road is next to Kauri point domain, so Balmain road has been entered into the address bar, and it has then zoomed near to the reserve:
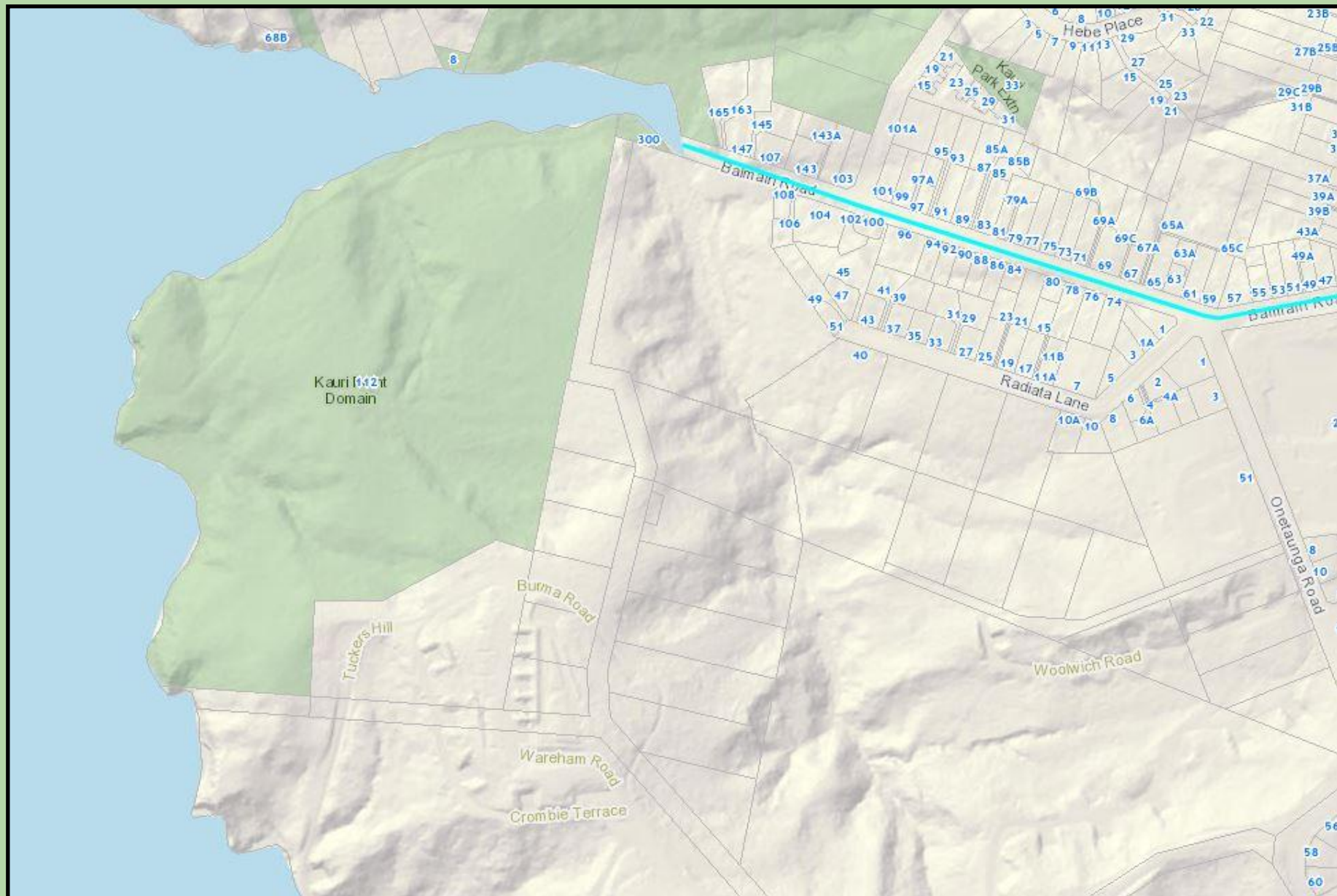
Overview Map Tutorial

To make things easier to view, we can remove the address numbers by clicking "legend" on the side bar, then unticking the box marked "address". This will provide easier viewing.
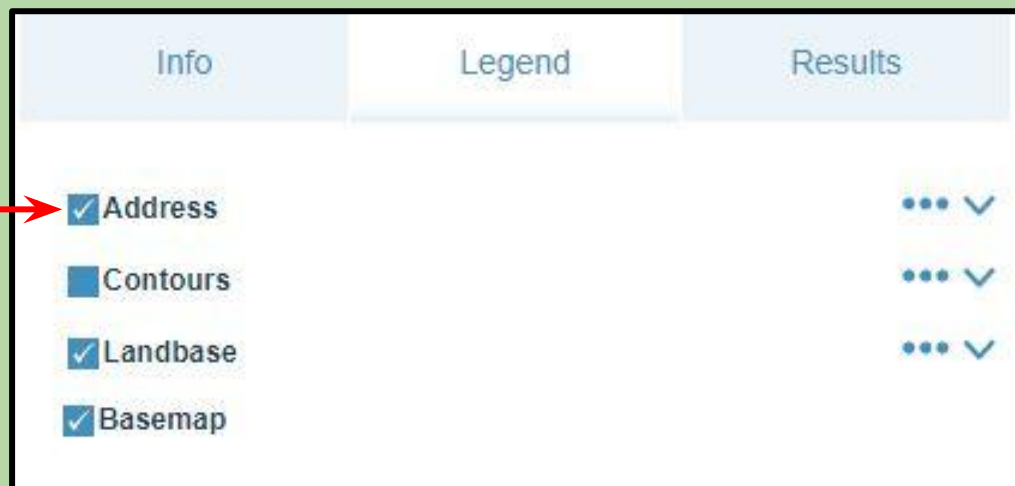

Un-Tick

Tip: The contours layer also seen here provides a great look into the topography of the area. This can help you see where valleys, hills, and cliffs are inside the reserve to aid in your map creation.
You do not need to provide topography in your overview map.

Overview Map Tutorial

Now you're ready to start mapping out your reserve. The best way to start out is to create an outline of your reserve. This is already mostly done for us in the geomap software, all we have to do is create an outline. In the top bar, click the measuring ruler button. This will open a new menu, click the "Draw Polygon" button, you can change the line thickness and colour to your preference, in the image below, red has been chosen.
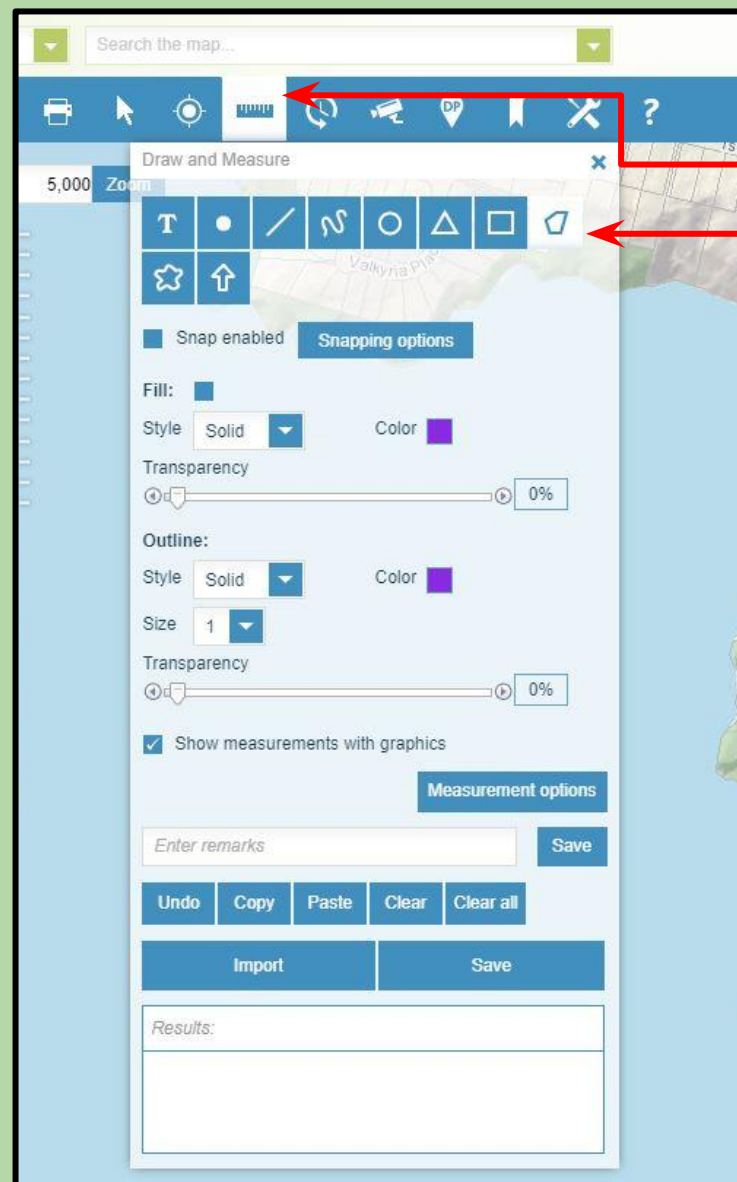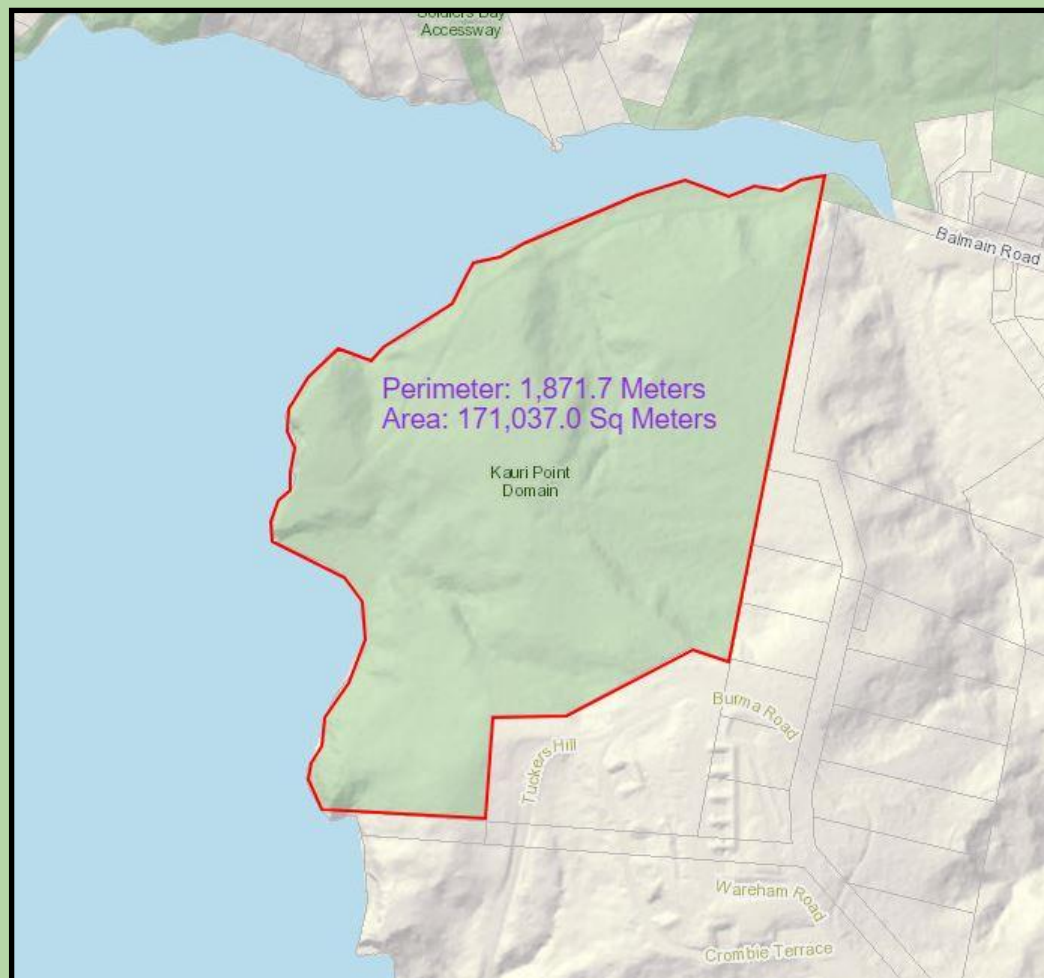

Click

Click

Overview Map Tutorial

Leaving the measuring tool box open, start clicking along the boundary line of the reserve. AC Geo Maps already has property boundaries shown by default, represented by the thin grey lines. Reserves are also coloured green, although some private property (seen below) can also be this colour, but is not part of the reserve. Click along these lines around the reserve, as shown below. After this is done, you have your basic outline!


Tip: You can hold down left click on your mouse to drag the map around, even while drawing the polygon.

Tip: After the polygon is completed, GeoMaps will give you the polygons area and perimeter measures. You can add this to your management plan if you wish. You can also click the text, and click "clear" to remove it.

Overview Map Tutorial

Your overview map should include the outline done previously, an aerial basemap, trapping lines, and any work areas. Let's start by activating the aerial base layer. In the top toolbar, click the leftmost button, "Switch Basemap". Then click Aerial basemap. This will change it to an aerial shot of the reserve.
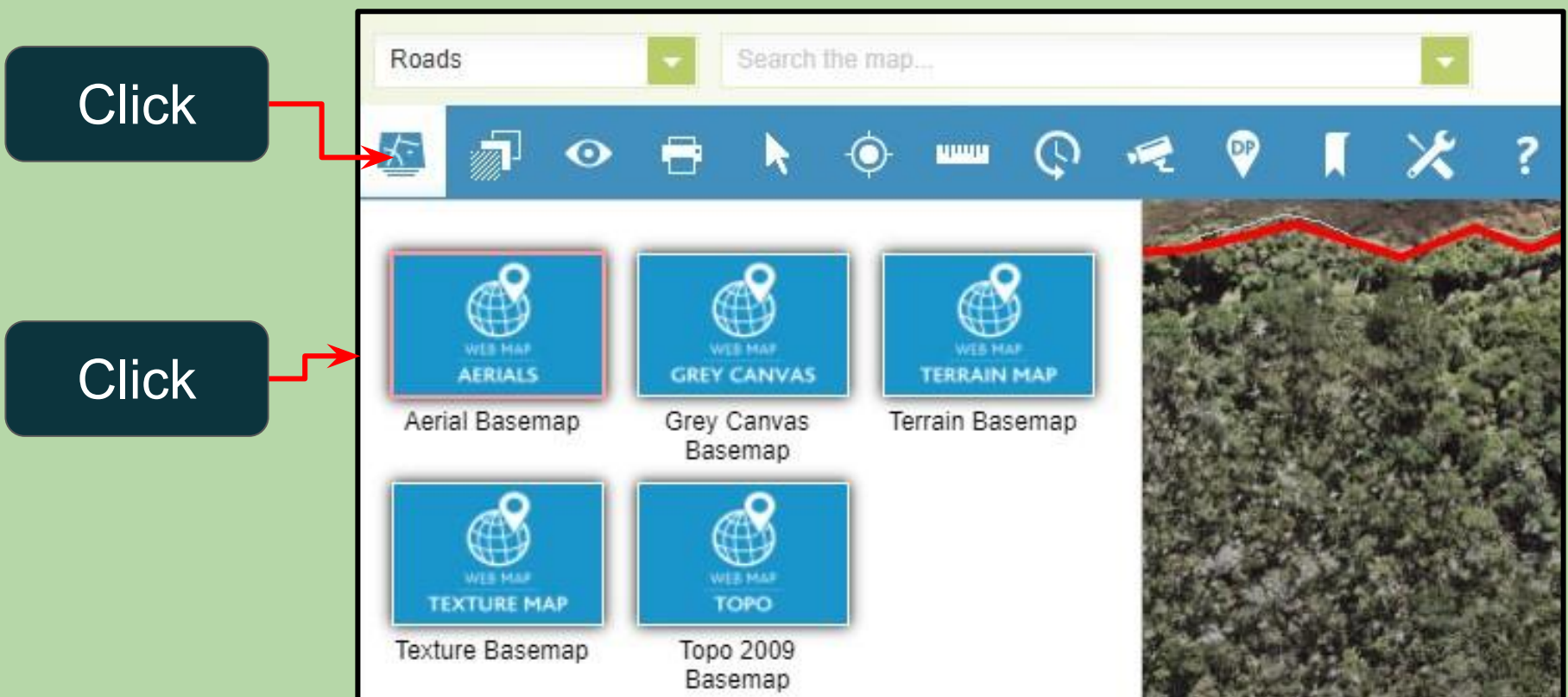
Click

Click

Tip: Click "Terrain Basemap" to go back to original view if needed.

Overview Map Tutorial

You should end up with something that looks like this:

Perimeter: 1,871.7 Meters
Area: 171,037.0 Sq Meters

Kauri Point Domain
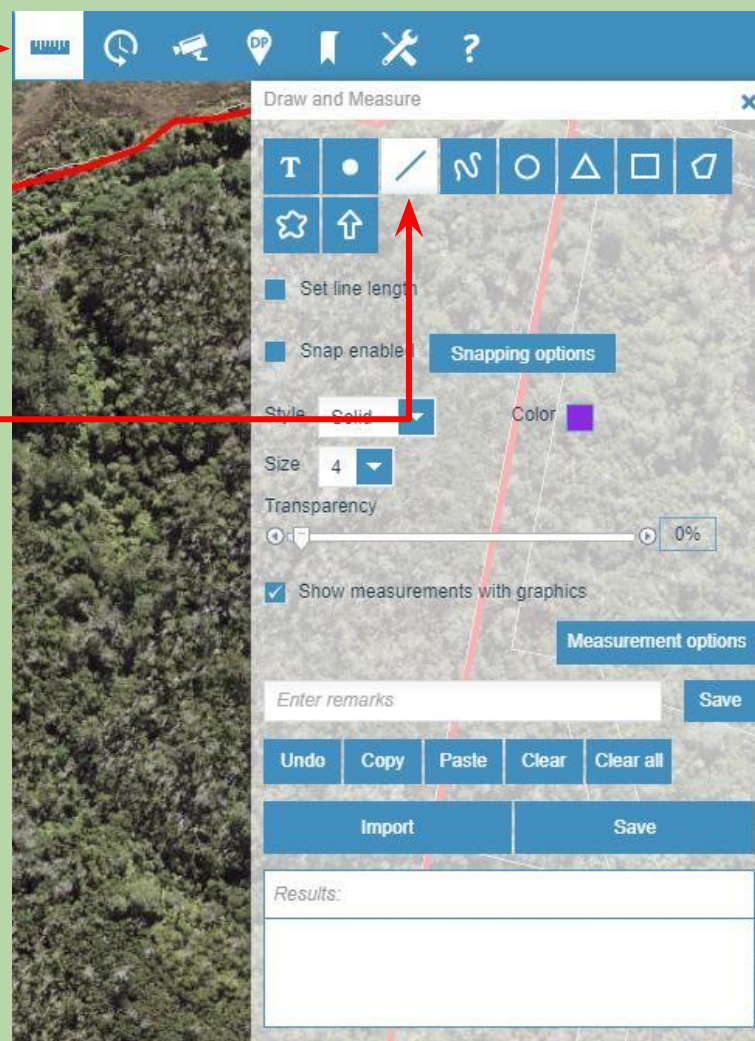
Overview Map Tutorial

Aerial imaging allows us to get our bearings, so hopefully you can recognise areas that you are working in and where the trapping lines (etc) would be. Using this imagery, we can add in our trapping line or work area to the map we've just made.

Click the measuring button again, and use any of the buttons to create a feature. In the image below the line button was used to create a trapping line, and coloured blue. If you had to create a work area, you may use the polygon feature again.


Tip: The size dropdown menu allows you to change the width of the line, this works for all of the shape types (I.E The polygon was size 2, while the trapping line is size 6).

Now that we have our basic overview map, we're going to export it for use in our management plan. First you'll need to centre your view on the reserve, and zoom in as much as possible while still having the polygon in full view. Click the printer icon on the top toolbar, next to the eye.
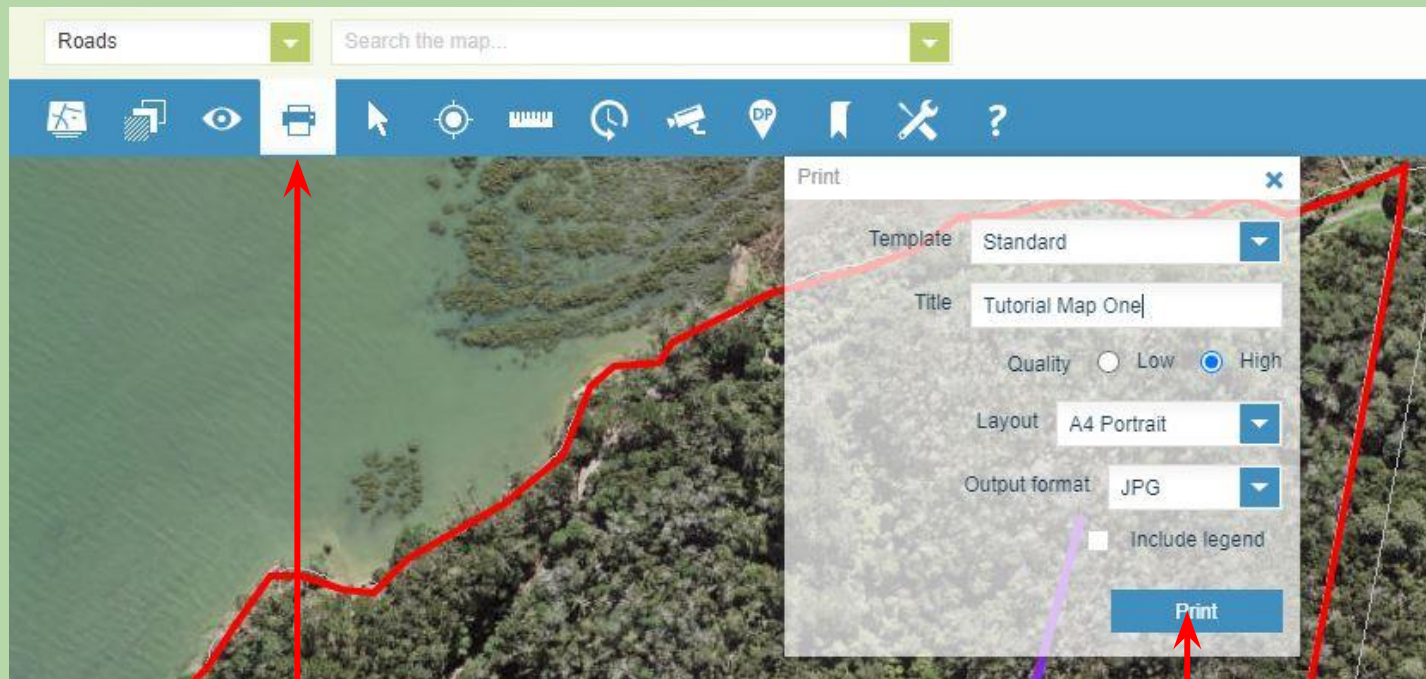

Click

Click

Then, simply give the map a title, choose high quality, change the layout to whatever suits best for the reserve (in this case A4 portrait was chosen), change output format to jpg, then click print. You will have to wait a short time for the map to load, then an "open" option will appear, click this option. Your map should open in a new tab and be downloadable.

Overview Map Tutorial

The next step is to set up your map download. Give the map a title, choose high quality, change the layout to whatever suits best for the reserve (in this case A4 portrait was chosen), change output format to jpg, then click print. You will have to wait a short time for the map to load, then an "open" option will appear, click this option. Your map should open in a new tab and be downloadable.

If the image appears unusable, such as below, you can try other options. Below the map has printed off with a section of the reserve missing.
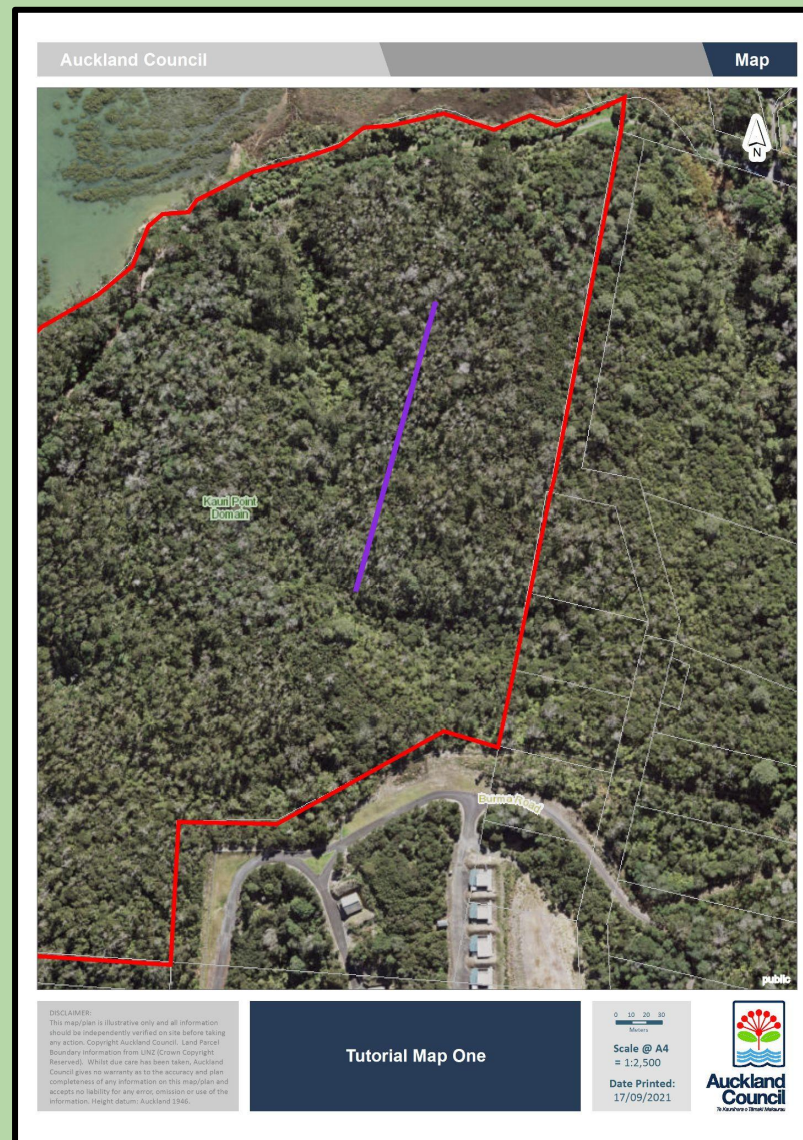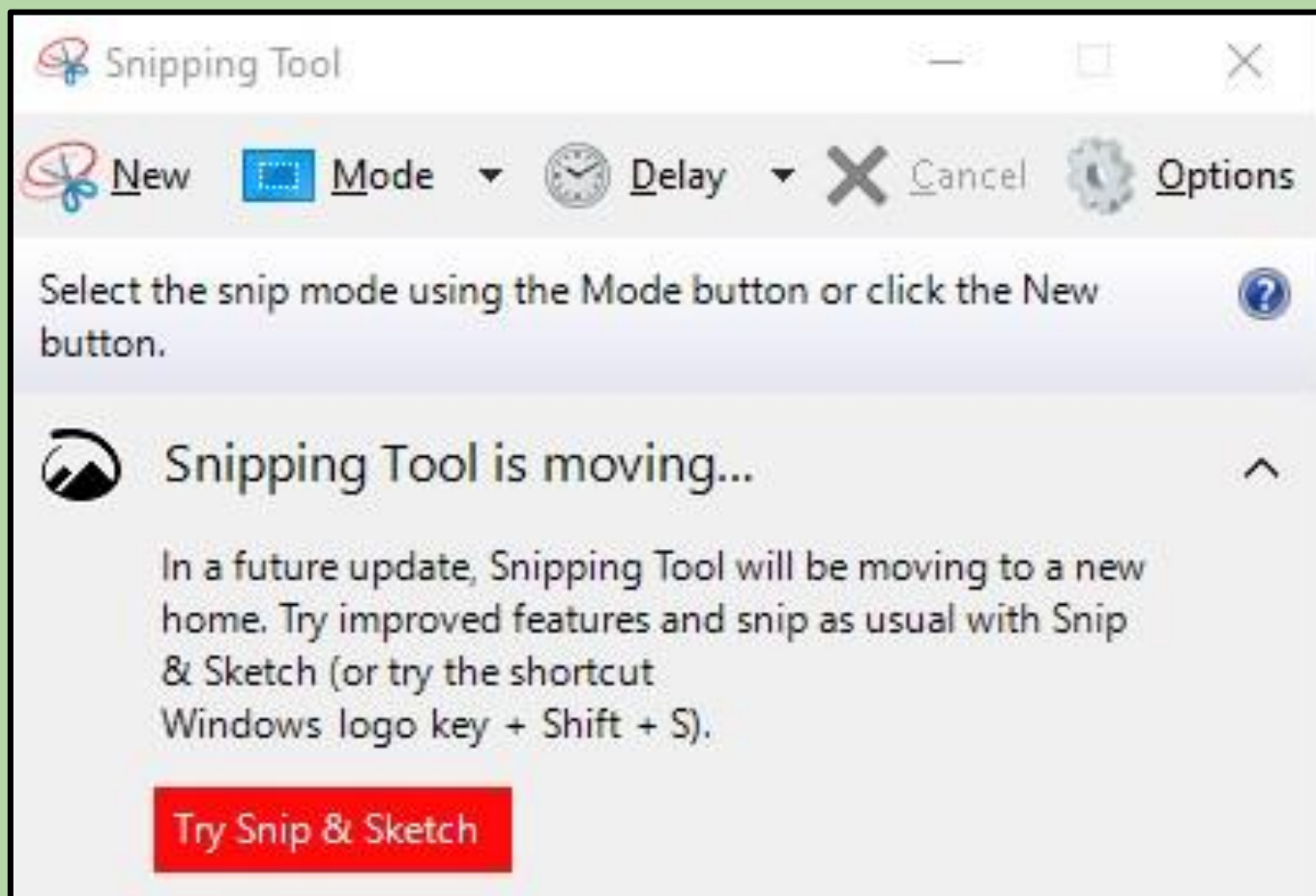
Overview Map Tutorial

To fix this, you can try different settings on the print function, and change the focus of the map. In the below image, the print setting was changed to A3 Portrait, and the map was dragged to the left.

You can also use the snip function found on most windows computers to download your map.

On your keyboard press the "windows" key. Then simply type in "snip". A program should appear called "snipping tool". Open this, and use it to take a snip of the map. Click "new" and drag a box around the map you have created.

Overview Map Tutorial

Now click "File" and then "save as" then simply save into your designated location.
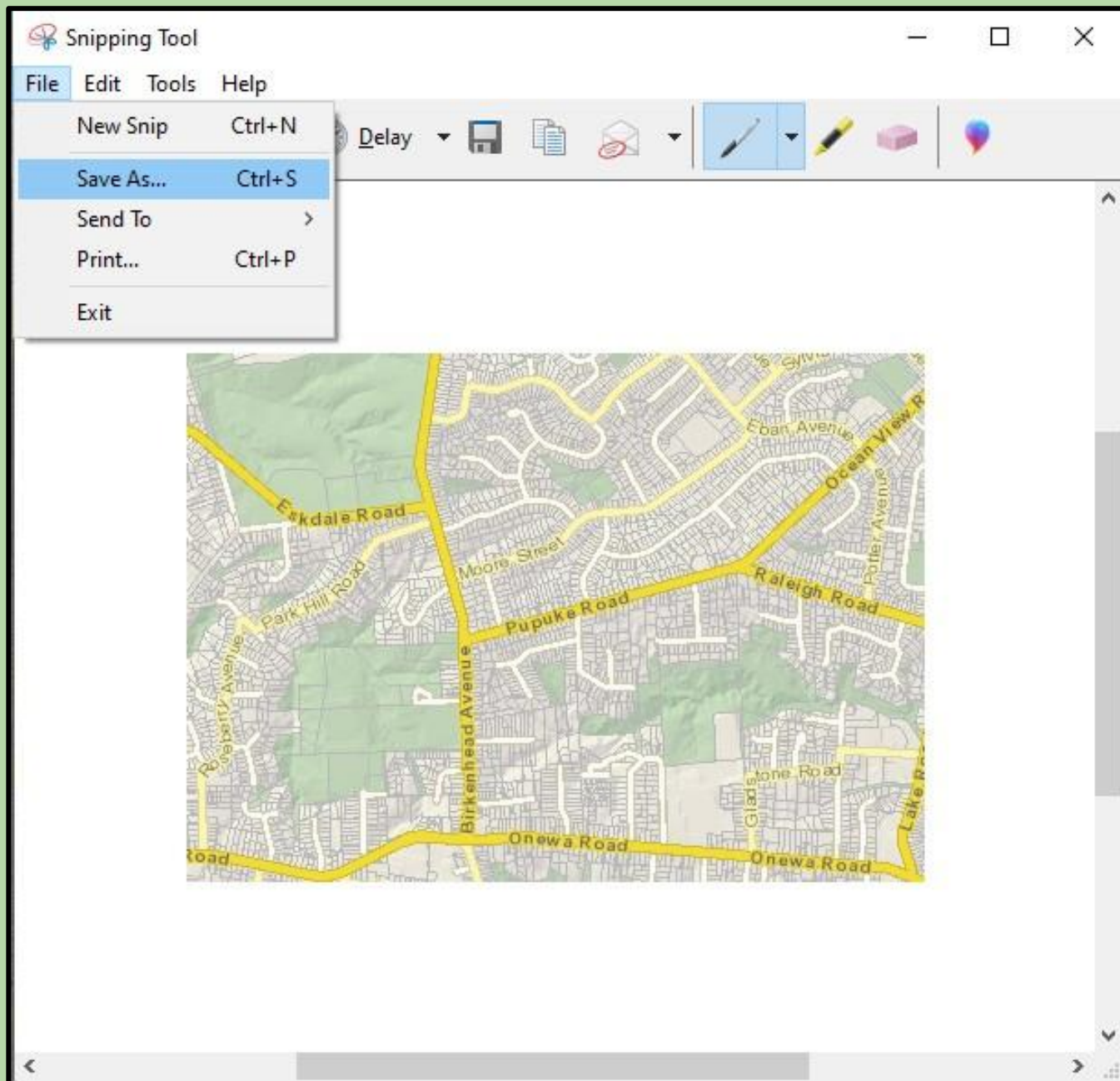
Protocol Map Tutorial

The second map you need to create for your management plan is a specific location kauri protection map. This map will include the following, if you have them:

- *Kauri tree locations*
- *Kauri protection zones*
- *Entry and exit points you will use to the reserved*
- *Tracks*
- *Cleaning points for footwear*
- *Baitlines*
- *Traps*
- *Animal pest control monitoring lines*
- *Other*

The idea behind this map is to show exactly how you will be conducting yourself while in your work areas. It needs to be clear and concise, while also showing that you will be adhering to the SOP's taught to you at the workshop.

This map will also be one of the main ways to show new volunteers for your work area how to conduct themselves. As such, it needs to be clear enough for anyone to read and understand.

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Protocol Map Tutorial

For this tutorial we'll be using the top corner of Eskdale Reserve as an example. To start, we're going to create a similar map to the overview map. The difference is, we'll only be drawing a polygon in the immediate area we are working in, instead of showing the entire reserve. Example below.
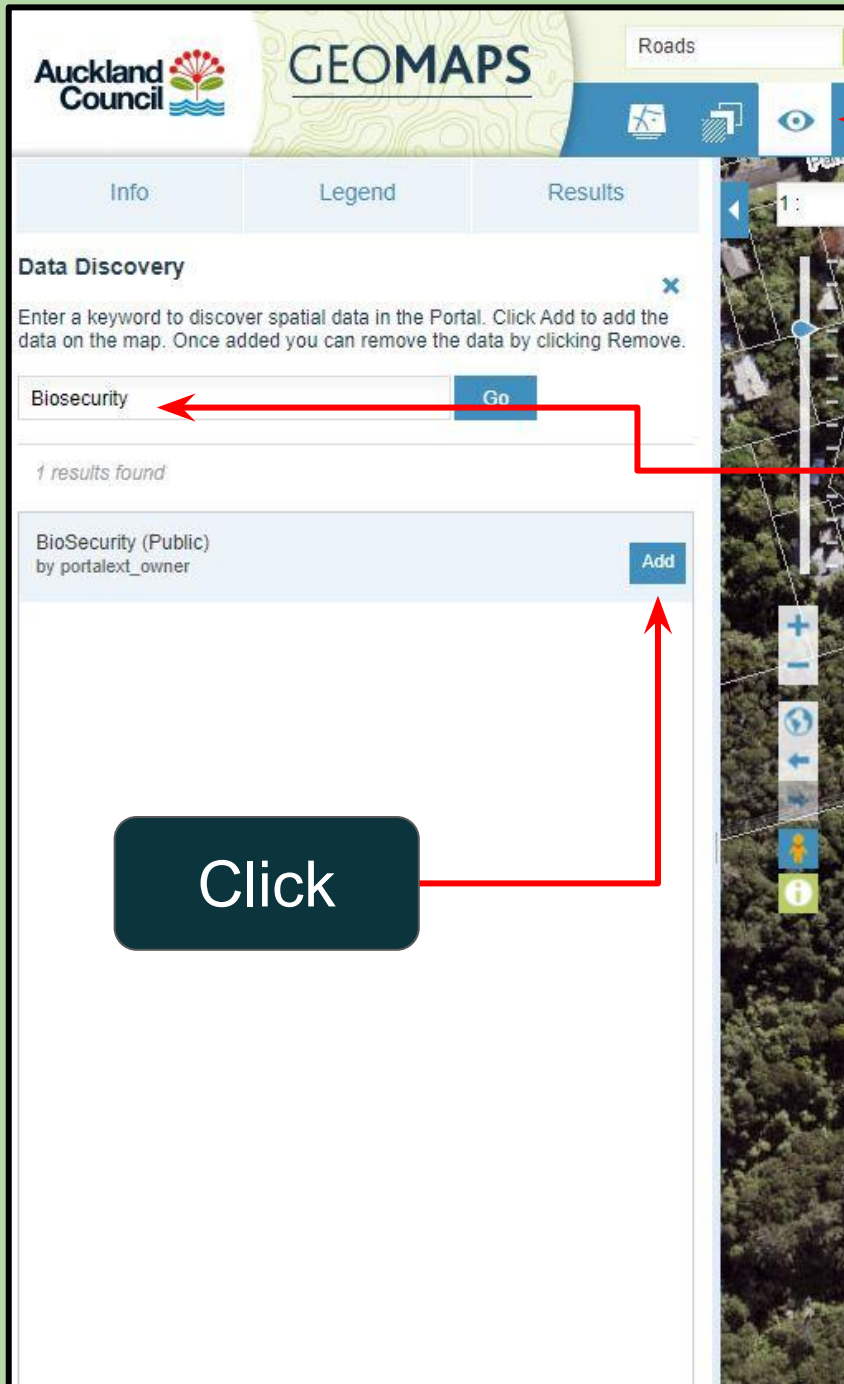
Protocol Map Tutorial

Kauri locations are needed on the protocol map. This needs to be done manually in order to find the kauri that are directly in your paths and will need kauri hygiene areas set up. To make things easier, Auckland Council has a map layer that shows the locations and conditions of kauri trees across Kaipātiki, you can use this to aid with finding the kauri manually. Some of the kauri trees are missing from this map, so remember that you need to follow the standard SOP's while walking through your reserve. This means that you need clean footwear and a dry day when you do your initial survey of your work area.

Click next page to see how to add this layer to your map.

Tip: Remember, it is best to reroute your work around kauri instead of through them.

Protocol Map Tutorial

To view this data, click on the eye button on the top toolbar, this will open a new Data Discovery tab on the left side of the screen. In the search bar, type in "biosecurity" and click add.
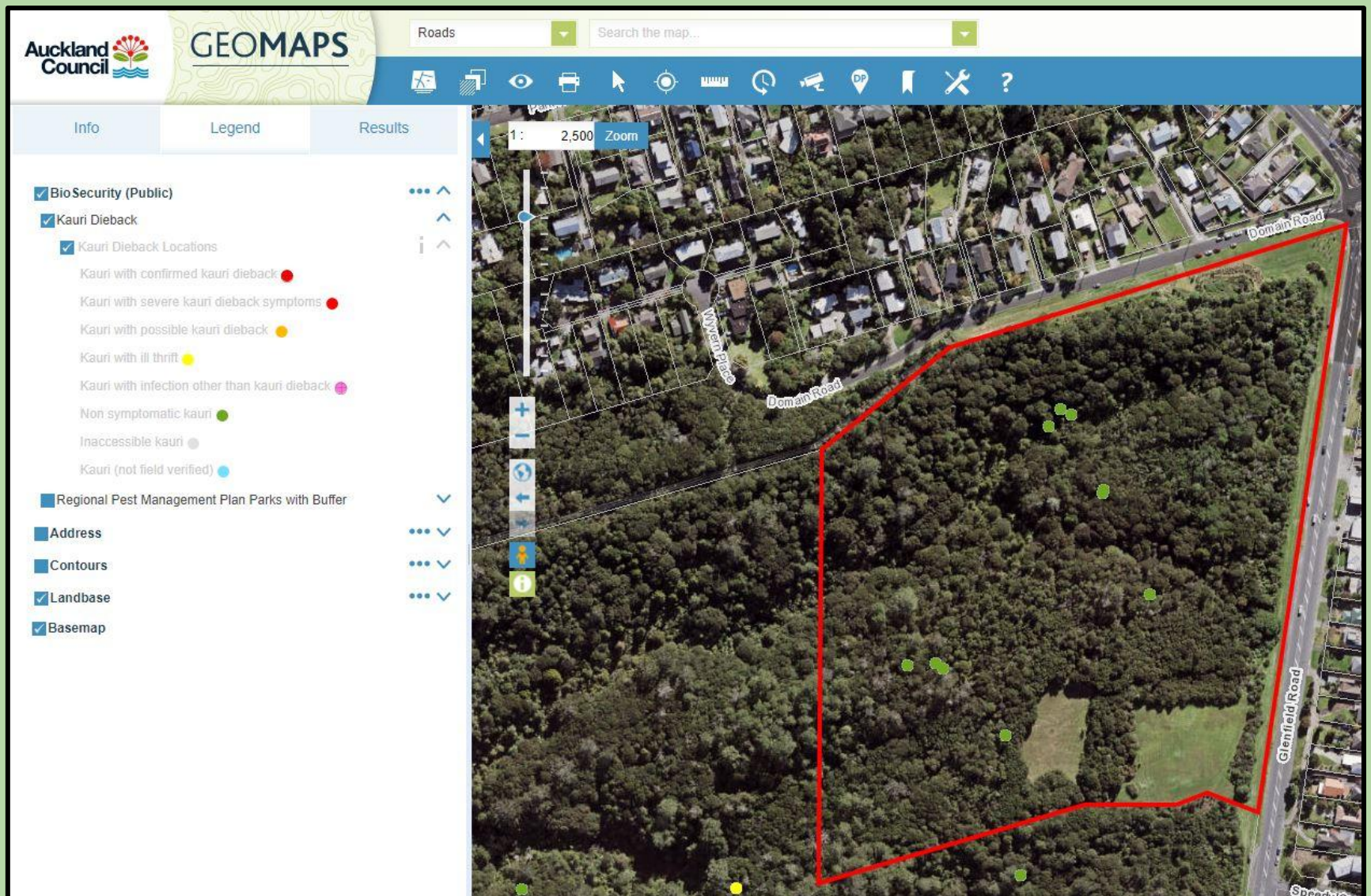

Click

Type "Biosecurity" then click "Go"

Click

Protocol Map Tutorial

After you have added the layer, click Legend on the left side toolbar. You'll see "BioSecurity (Public)" has been added to the layers. Tick the blue box next to its name, and click the arrow to drop down the layer info. Tick the blue box next to "Kauri Dieback" and again click the arrow to drop down more layer info.Tick the blue box next to "Kauri Dieback Locations". You should see the map now has kauri locations and their dieback status visible, as below.

Using the ruler on the top add some more features to show different aspects of your map, click the button below to see some examples of what you should add.

List of Features

If you find it easier, at this point you can download the map as a pdf, print it off, and hand draw features onto the map.

Remember that each feature type needs a unique graphic to represent it, and this should be represented in a legend. You can also name different parts of the map. On the next page you will see we have named our trap line TP1, and our weeding area WA1. This is so we can refer to them in our management plan. It is especially important if you have multiple weeding areas, general work areas, trapping lines, etc.

Protocol Map Tutorial - Tips

- Unfortunately Geomaps does not have an option to add your unique features into a legend for the map. You instead will have to create this using an external program, such as Paint, simply download the map in its current state and edit. On the next page is a map made for Eskdale Reserve, with a rather interesting trapping line in place (imaginary). The legend was created using paint.

- You may be wondering what to do if you have multiple different work areas around the same reserve. Please don't make one giant protocol map that contains everything, as this can look very messy and hard to read. Instead you can simply make multiple protocol maps of different work areas.

Protocol Map Tutorial
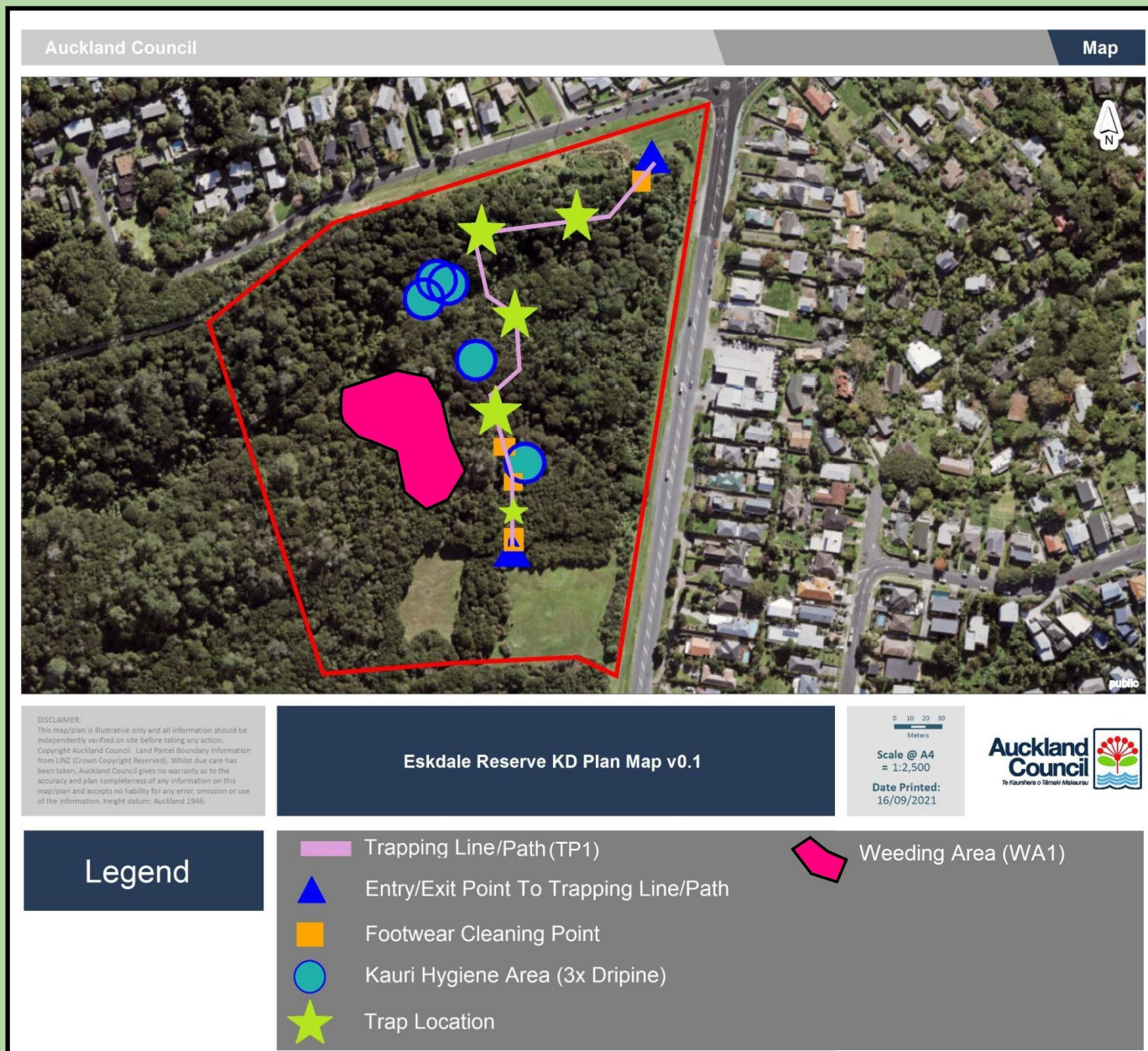
Above is a simple but usable map for a kauri dieback management plan. The more kauri trees there are, the more complex the map will be. If you have no kauri trees, it may be much simpler.

If you need anymore help please email enquiries@pestfreekaipatiki.org.nz

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