## Appendix D: Troubleshooting Tracmap

Findings from Tracmap Trial Unit Chch Feb 2016

### tracmap_resized.jpgImporting shapefiles into Tracmap

1. Make sure you’ve started a ‘job’ (either go to ‘Manage jobs’ to resume an old job or click on ‘new job’ to start a new one). You know that you’ve done this when you get the ‘geometry’ button in your menu.
2. The Geometry button lets you access current job geometry directly: outlines, void zones, lines, and markers which make up your current job’s GPS map. It is important when importing that you’re in the right menu.

To import voids you must have ‘void’ selected in the menu (see picture) Lines will get connected in the background to polygons if you are in outlines instead of lines

To import blocks, you must have outline selected.

1. Click on Menu – Import – From file and browse to the right file on the USB drive. You can select based on name or attribute before you import it onto the map.

!Important! When importing voids make sure they are saved separately from outlines in your geometry or are clearly named so they can be distinguished from job outlines.

* !Note! you can also import geometry as background maps, this means this won’t be available for guidance, just background information.
* Everything that you import must have a name in the attribute table

### Unit settings to double check if something’s wrong

1. Unit projection system

When the pilots say that they can’t see the shapefile you provided them with on Tracmap and you’re sure it’s in the right projection system, it can be that the unit is setup in the wrong projection system. To change this, go to Menu – Unit Setup – Map, and change it to the right projection system.

!Important! When changing the projection system of the unit all existing jobs, outlines, lines, and markers will be invalid under the new map projection and will be DELETED. As a solution you could export all job information onto a USB stick.

!Note1! The Export tool in Tracmap’s menu defaults to export as WGS84, regardless of what projection system the unit is set in (export is thus separate from the Unit settings).

!Note2! The unit can convert between NZTM and WGS84, if the unit’s projection system is set to NZTM, WGS84 shapefiles that are provided will still show.

1. Export settings

The export button allows export of the current job to USB or wireless without having to stop the job.

To check export settings, go to Unit Setup – Admin – Job Management: make sure export coverage as lines is ticked and zip shapefiles on job export is unticked

### Transferring data from one unit to another

When exporting from Tracmap. trz file gets exported as well. This is a file that holds the ‘job’ and all the information within it. When you stop a job, click on the USB Drive button in the menu and select a .trz file. This will allow the pilot to continue working on this job (even though if it has been started by another helicopter). However, for this to work both units must be in the same projection, and this file can be corrupted.

If the pilot just wants to see what another pilot has already covered as a background, use the .kmz file that gets exported from Tracmap as well. Convert this to .kml and import is as a background map (use background Map in menu).

### FYI (if you want to know more about what the pilots do)

Menu content:

* *Toggle spread button:* starts or stops current coverage, this is linked to a button in the pilot’s ‘joystick’ and relates directly to the opening of the bucket. This turns off when the unit gets turned off / swath width is changed.
* *Spread with button:* To alter your spread width while in flight

Numbers on the pilot’s screen:

* The overlap of different swaths is recorded on the screen
* *Check area counter*: counts area covered since start of the job or since reset counter is used
* *Real area*: ground area covered (i.e. the ‘dissolved’ buffers)
* *Nominal area*: total coverage = distance covered \* spread with (i.e. the ‘buffers summed up’)
* Difference between real area and nominal area is the amount of coverage overlap
* Void: no spread zone that the light bar warns the pilot to avoid.

Setting of flight lines:

* Pilots can fly along lines that have been imported by going to Job Geometry – lines- menu- fly along.
* When pilots start setting their flight line (or as they call it ‘AB line’) they can do this in two ways. Either they go to the ‘Select Edge’ button in the menu and line it up with the edge they think is the most suitable, or just leave Tracmap to calculate the most optimal. Otherwise they can set the heading as a manual option (e.g. 174 degrees) and the flight lines will start on 1 side.
* When multiple helicopters are flying, pilots make sure they use the same edge and orientation of flightlines, so they are exactly the same in all helicopters. These flightlines have numbers which makes it possible for the pilots to know where the other one has flown. E.g. in the morning one could start flying lines 1-40, the other one does 50-80. Once they’ve done those they’ll communicate how to fill in lines 40-50 and divide them between eachother based on the line number.

Limitations of Tracmap:

* Tracmap currently doesn’t support to import flight lines (i.e. flight lines we’ve calculated in Arc) to be used by the pilots. This has been added onto the list of future developments.