



OziExplorer Training and Help Manual

for use with
Soil Effectiveness
Evaluation Cards

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A. Starting Up

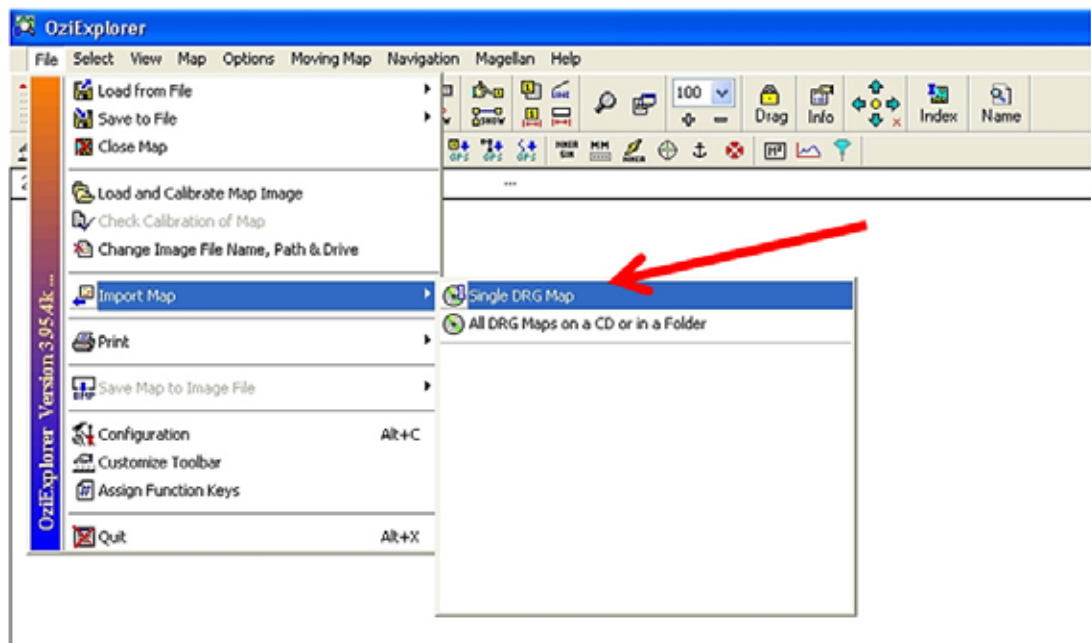
This section will describe how to load a geo-referenced image into OziExplorer, and use it to complete the Soils Resource Stewardship Monitoring cards (FS 1246). The software can be used to determine the size of features, areas, and to prepare a map showing the location of walkthroughs and survey transects. The image will also be useful after field checking for recording information obtained during the field survey and preparing a final map for the area.

B. Loading in the Image and Ozi Basics

Loading a Geo-referenced Image

OziExplorer can read several image formats as long as they have georeferencing. This includes geoTIFFs (.tif), TIFFs with world files (from ArcInfo) and ECWs.

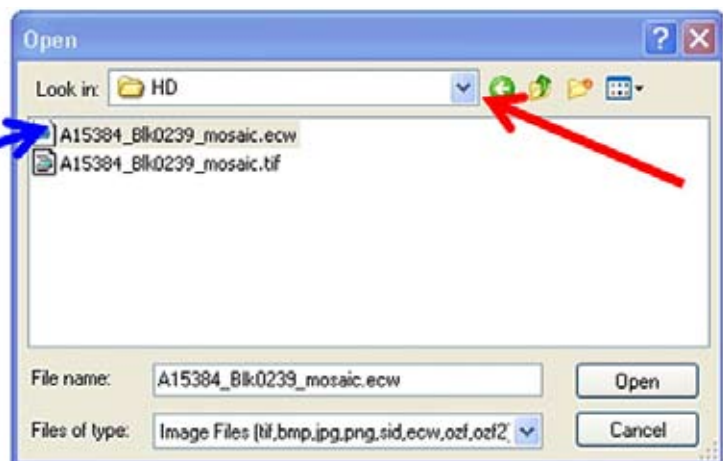
1. To load the image open File> Import Map> Single DRG map.



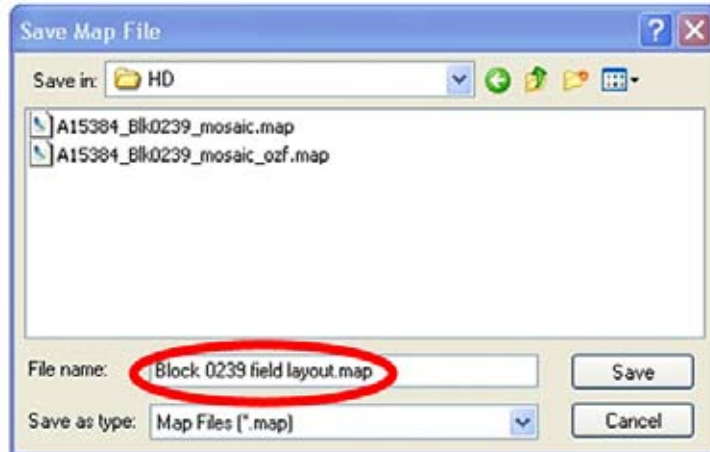
This will initiate a wizard that will guide you through a 3-step process.

- **Step 1:** Find the image file of the map you want to import. A navigation window will popup where you can use the dropdown menu to find the image file you want to view.

Once you have found the file choose the Open button.



- **Step 2:** Specify the name and path of the OziExplorer map file you want to create. In a new popup window you can use the dropdown menu to choose where you want to save and what you would like to name the new map file. After you are finished select the Save button. It is a good idea to keep the map and map image in the same folder so that they are easy to find.



- **Step 3:** Describe import defaults. To fill this in you will need to know some information about the datum and projection system of your image. For this example Map Datum was set at NAD83, Map projection is UTM and Map Grid Zone is 10.



These options can be changed using the dropdown menus. Select OK when you are done. You will get a message about not moving the image file. OziExplorer has created a map file which contains the georeferencing information and a *link* to the map image. If the map image is moved or deleted the map file will not work. Select Ok and the map will now be displayed.

Navigation

You can navigate around the window several ways.

1. Using the Map View window. This is an overview window where you can change your view by moving the display rectangle. Map View mode can be displayed by selecting the Map View button on the Main toolbar.
2. If the image is large enough there will be slider bars on the side of the display.
3. The arrow keys will move the screen display.
4. You can click and drag the map image to view a different section.



Zoom Levels

These can be changed a few ways.

1. The zoom dropdown window on the top menu bar or by the + and – symbols underneath it.



2. There are set zoom level buttons on the Main toolbar.



Loading Tracks and Waypoints

1. To load a previously saved track or waypoint select the Load button from the main menu and then the desired feature (ex tracks) > Load Tracks From File (Multi).
2. Navigate to the desired file(s) and select Open. To select multiple tracks hold down the shift key and select the first track and then the last track in the list that you want to display. The features should now be displayed on the map. If you can't see a feature type that you loaded then turn the feature "on."



Showing or Hiding Map Objects

Map objects such as comments, tracks and waypoints can be made invisible even after they are loaded onto the map. This can make the map look less cluttered. Features can be hidden or viewed by selecting View > Hide or Unhide and the target feature. Tracks and routes also have a Main toolbar button that does the same thing.



Show/hide track button



Show/hide route button

Configuration

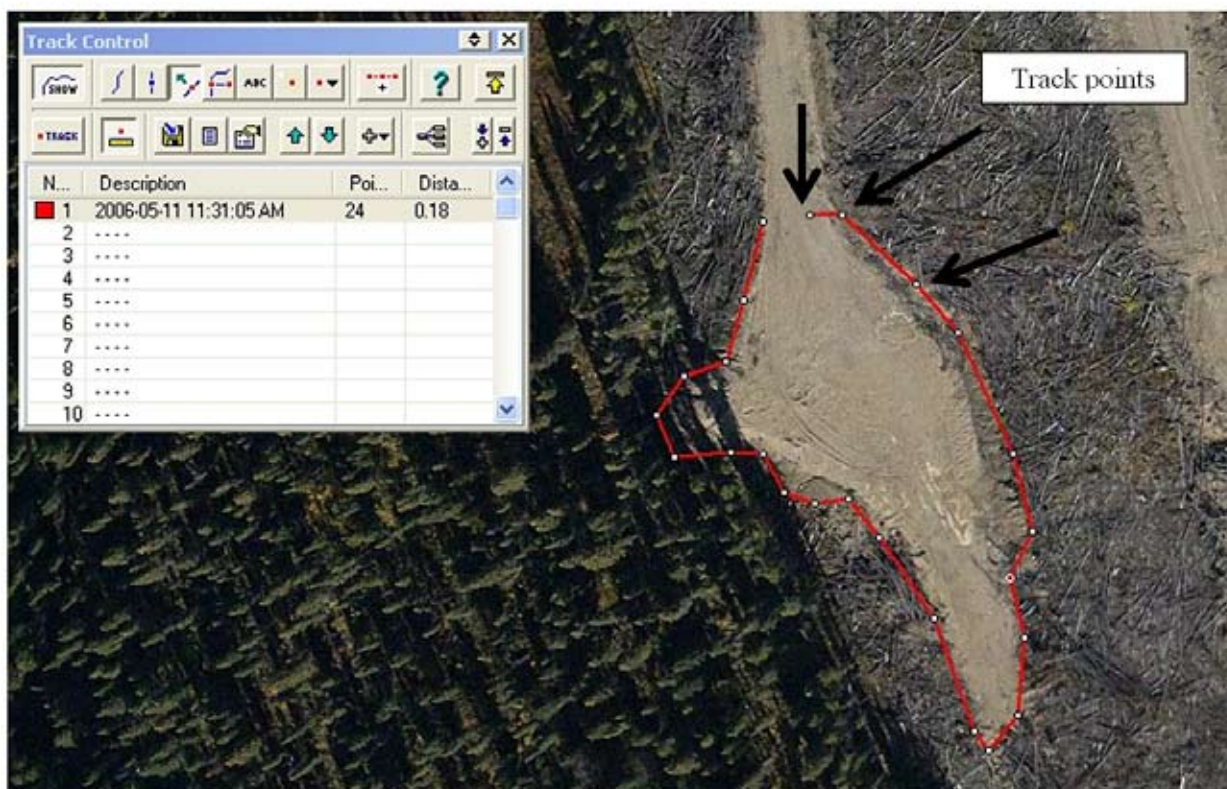
The general setup of OziExplorer can be altered in File > Configuration. Here you can change many settings including the map datum, display units and what folders to look in for maps.

Closing the Map

Before exiting OziExplorer or opening another map first close this map. This will close all track and waypoint files (otherwise they will be open on your next map) and prompt you to save any changes you have made during your session.

1. Choose File > Close Map and follow any prompts the program gives you.

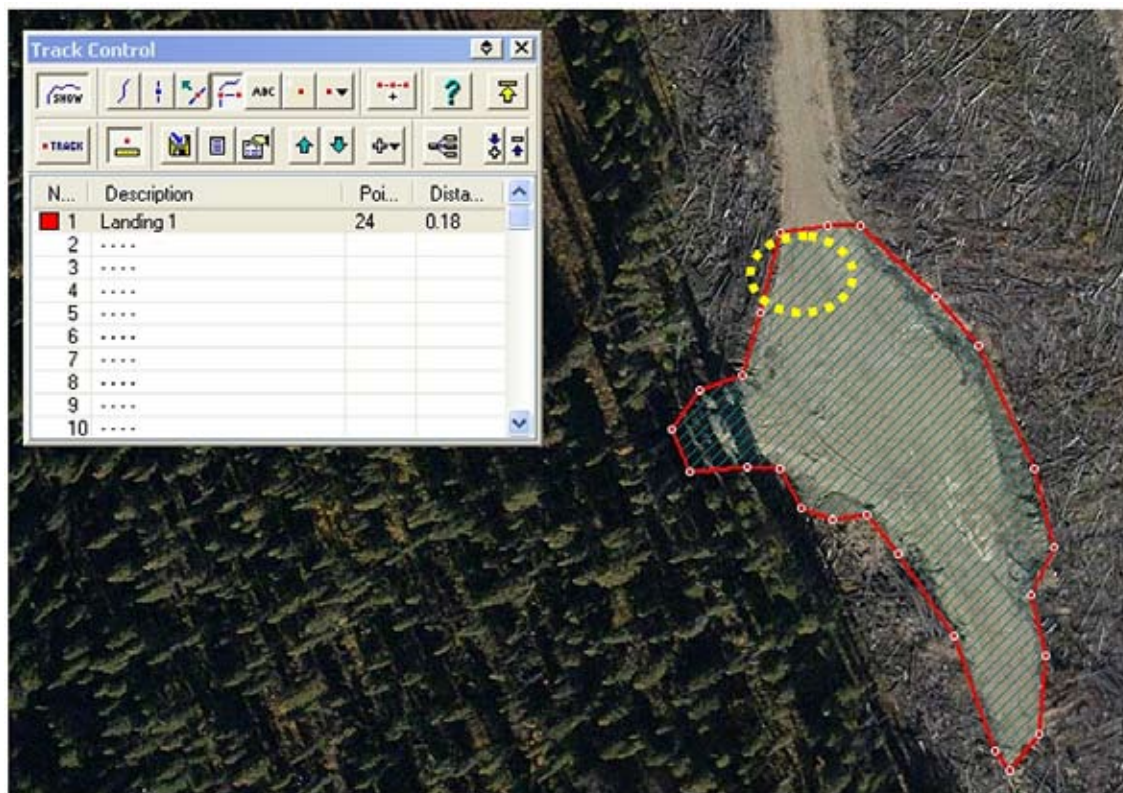
3. Delineate the area on the map using as many points as needed, and clicking the mouse to create each point along the track.



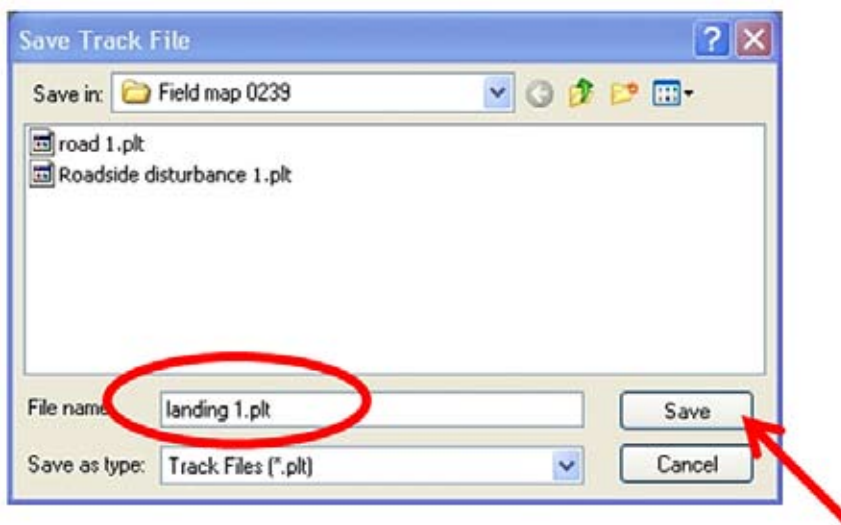
4. To name and save the track and to edit its properties select the Track Properties button.



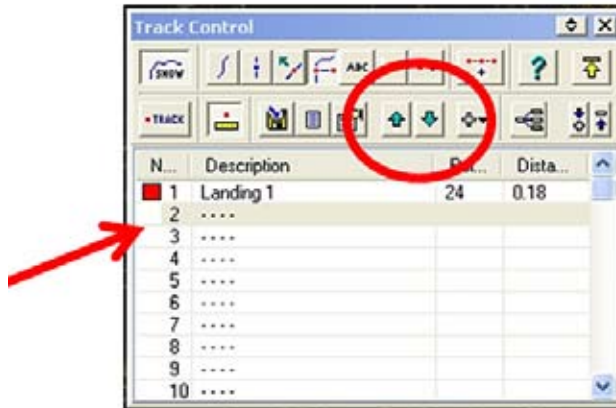
In this example the track is delineating an area which can be represented with a polygon. By selecting polygon as the track type the track is automatically closed (the end point snaps to the start point).



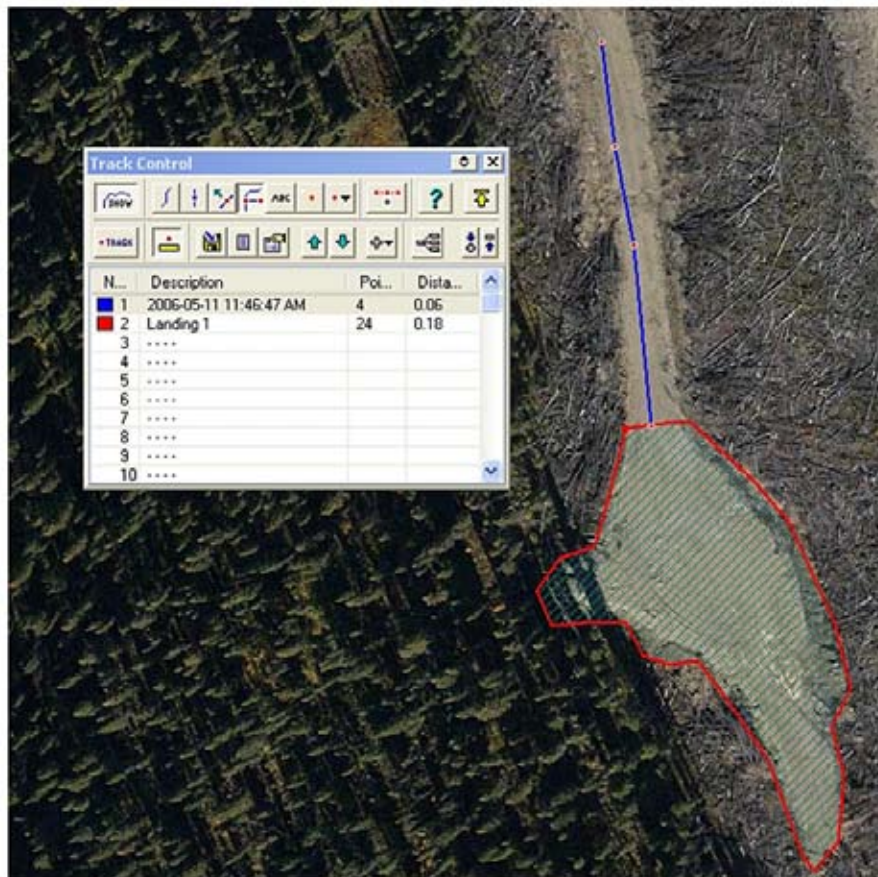
5. After you are finished editing the track properties select the Save button. You will be prompted to find a location for and to name the track file.



6. To create a second track, select a blank track line in the track control (red arrow) and then bring the new (blank) track to the top of the list using the blue arrow button (circled). This makes the blank line the active track. The track in the first position in the track control is always the active track and *the active track is the only track that can be edited*.



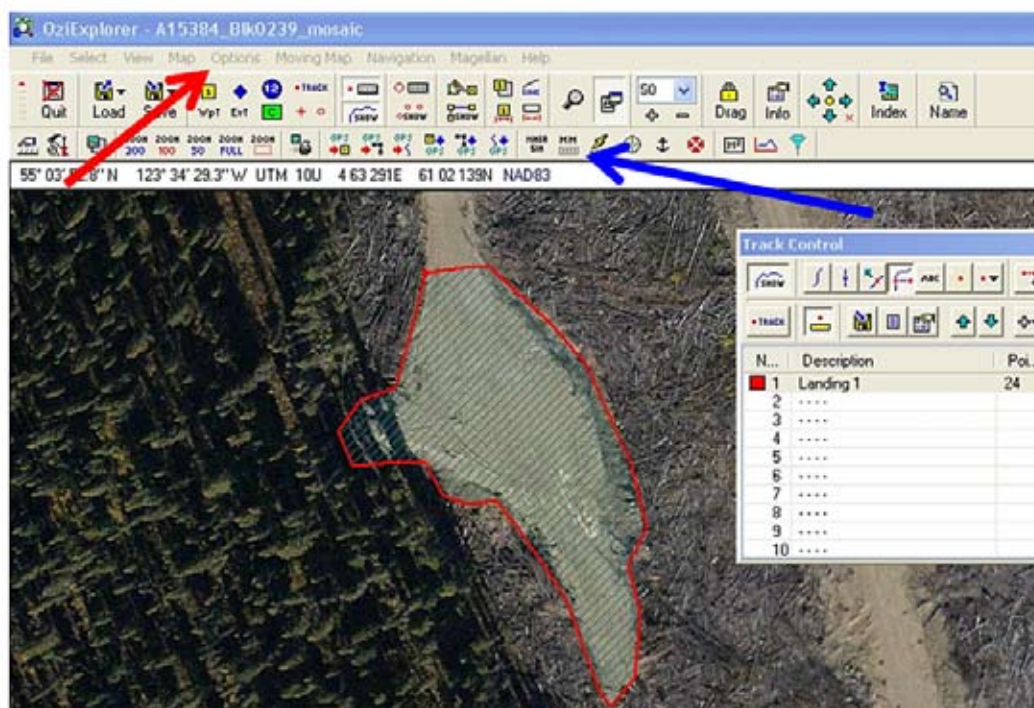
7. You can now repeat this process to create other tracks.



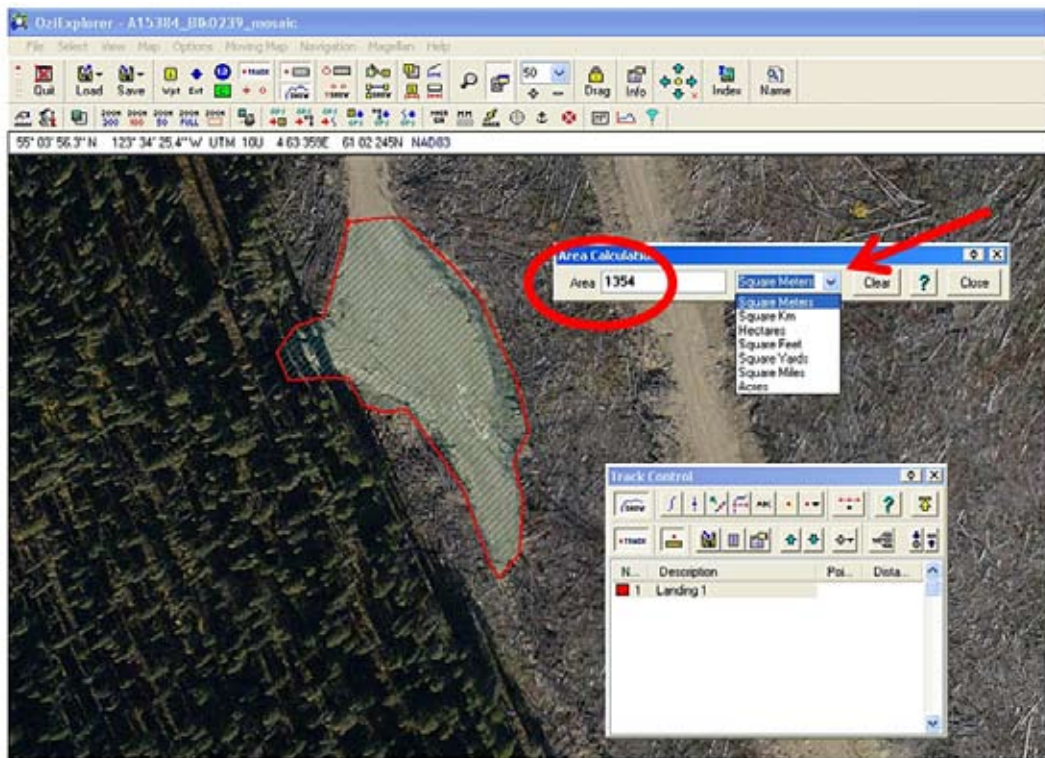
Measuring the Area of a Polygon

The area you would like to measure needs to be bounded by a polygon track (see Creating Tracks).

1. Make the target polygon the active track (see step 6 of Creating a Track), here the target polygon is the red Landing polygon.
2. There are two ways to activate the measure tool, by selecting Options > Area Calculation or by selecting the **Measure Area** button on the Main menu.



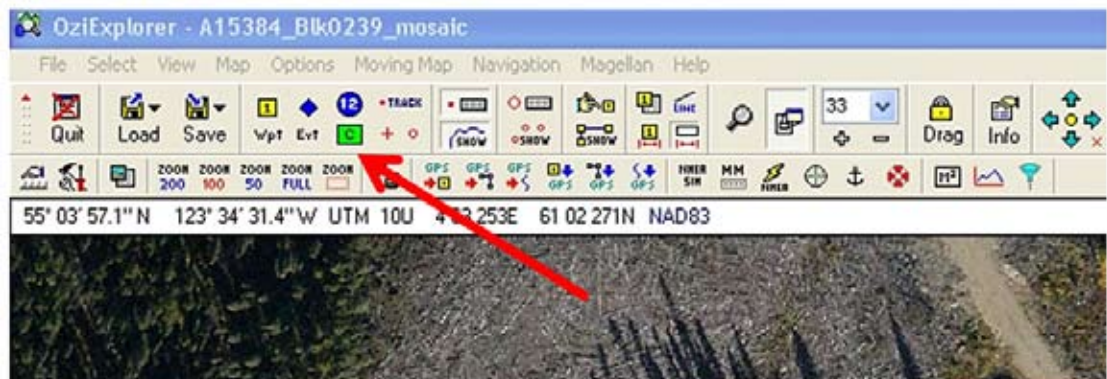
3. A new Area Calculation window will appear. Change the display units to Square Meters by using the dropdown menu. This area measurement should be recorded in Indicator 1.



Creating Map Labels

Once the feature has been marked and measured a label should be created on the map. This should include the feature name and size.

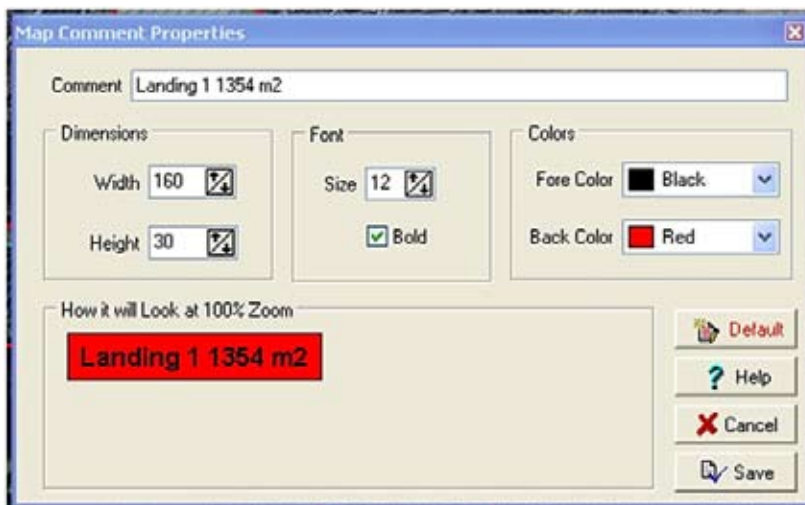
1. Press the Position and **Set Map Comments on Map** button from the Main menu.



2. Click near the feature you want to label. This will place a green label on the map.



3. To change the text, double click on the label. This will bring up a Map Comment Properties window where you can change the size of the text and the box, the colour and the comment text.



4. After you have edited the label select the Save button. This will change the appearance of the label on the map.



5. Turn the Comment function off by selecting the Set Map Comments on Map button again.



NOTE: You can edit the position of the label. First unlock the Drag feature (select the Drag button) and then click and drag the label to its new position.

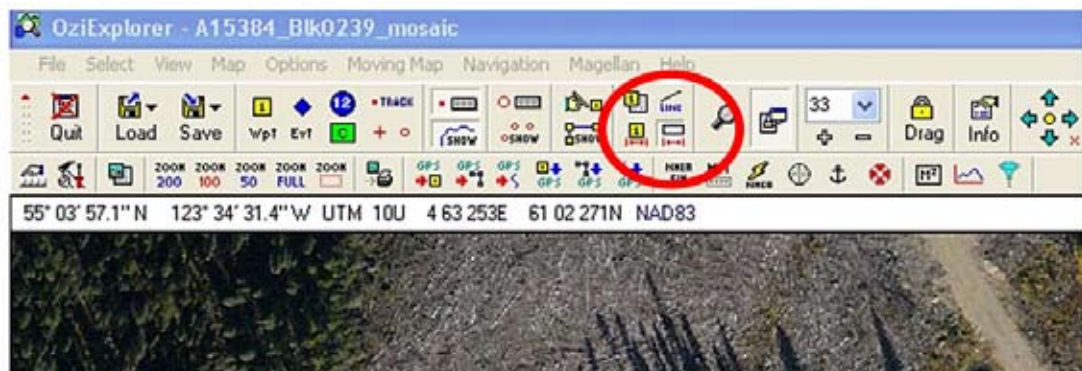


Defining Roads

After determining the area of landings and burrow pits, the area of rehabilitated and un-rehabilitated roads is measured using tracks and the measure distance tool.



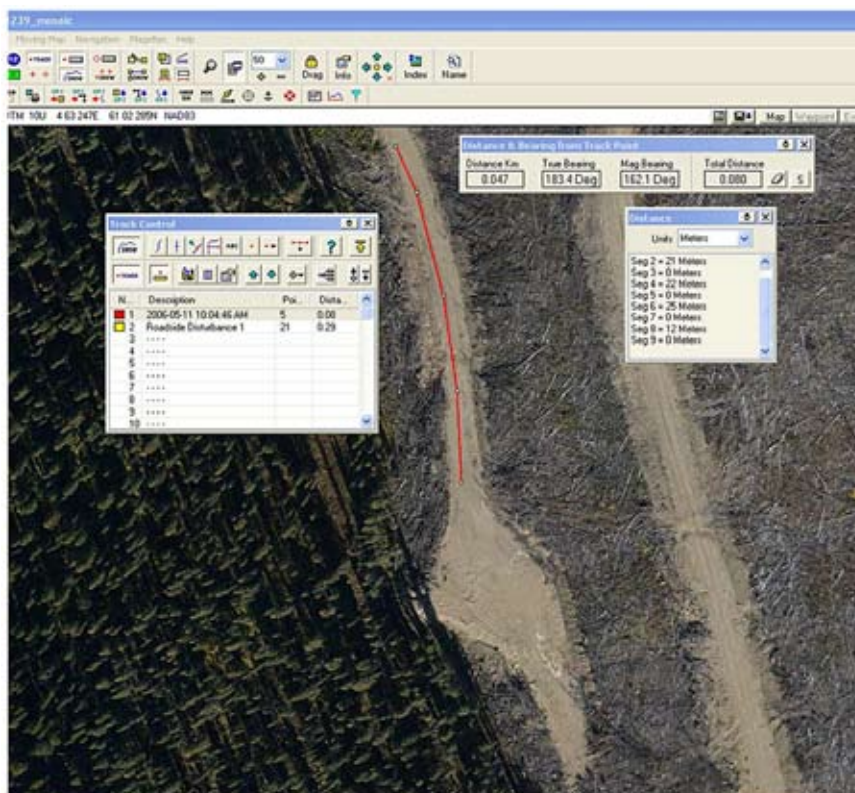
1. Turn on the measure distance tool by selecting the **Distance & Bearing Display** button.



This will bring up a new window.

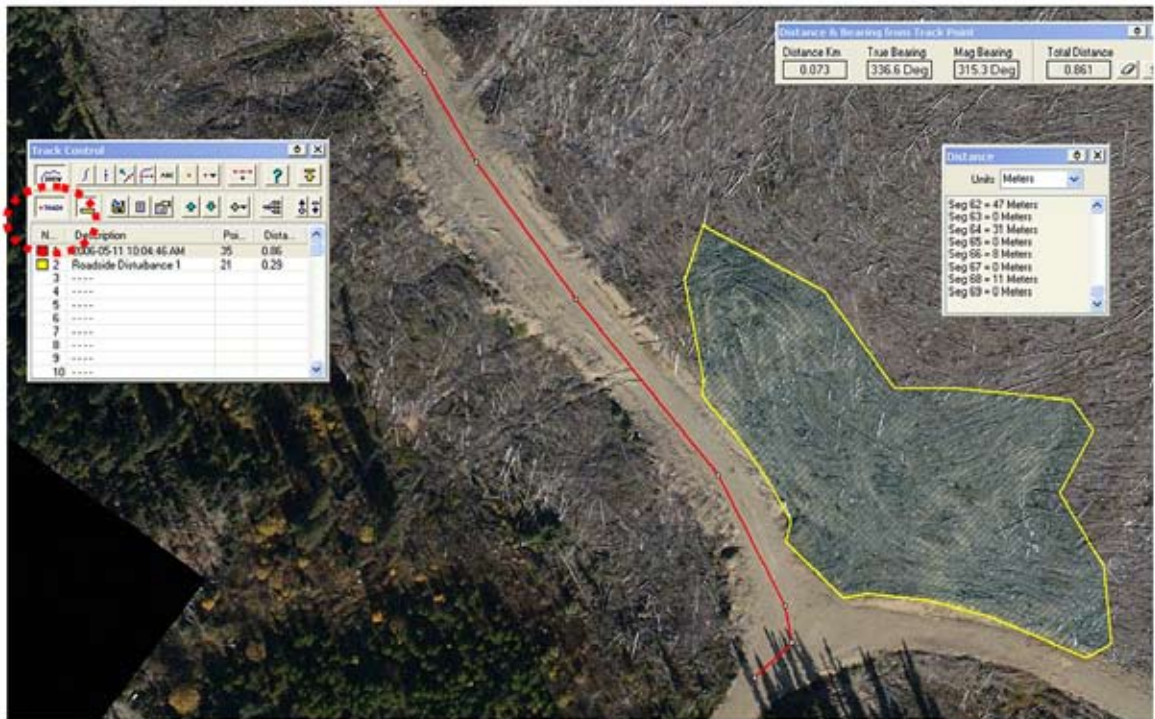
Distance & Bearing from Track Point			
Distance Km	True Bearing	Mag Bearing	Total Distance
0.201	110.8 Deg	89.5 Deg	0.000

2. Create a new track line feature following on the road (see Creating Tracks).

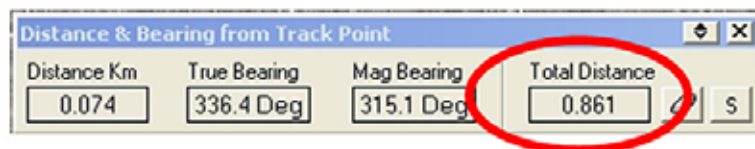


3. Move the screen by using the arrow keys or by dragging the screen (left click and hold then drag the screen) to keep digitizing the feature.

4. Stop when you have reached the end of the feature (ex the road runs out or reaches a block boundary) and turn off the Create Track Points function (use the button on the Track Control Panel).

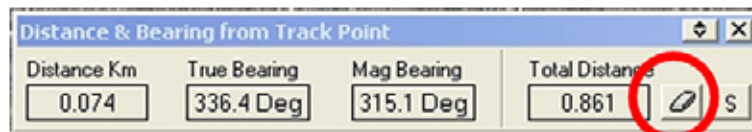


5. Name and Save the new road track (see Creating Tracks).
6. Record the Total Distance from the Distance & Bearing Display window. Here the total length of the road track is 0.861 km.



NOTE: Be careful with the distance and with the create track tools enabled. If you click anywhere on the map the distance will be recorded in the total distance and that point will be joined with your existing track. If this happens you will need to delete the track point and re-measure the track distance.

7. You now have the total length of the road section, to get the area you need to measure the width of the road. This can be done with the Distance & Bearing tool or with waypoints (see Creating Waypoints and Calculating Distances). To use the Distance & Bearing tool make sure the Create Track Points tool is off and then zero the Total Distance. Press the **Eraser** button on the Distance window.



- Position your cursor over the edge of the road and click, this will be the starting position for the distance measurement. Move to the opposite roadside and click. This new distance will be the width of the road.



- Calculate the road area (width x length) in metres and record it along with the name of the feature in Indicator 1 and on a map label.

NOTE: On a long section of road you would want to use the average width (take a few measurements and then average them) for your area calculation.

Clearing a Track File

- To remove a track file from the screen select the Track Properties button and choose clear. This does not delete the track from memory just removes it from the Track Control and the map.



Deleting a Track File

- Use Windows Explorer to navigate to the desired file and delete it.

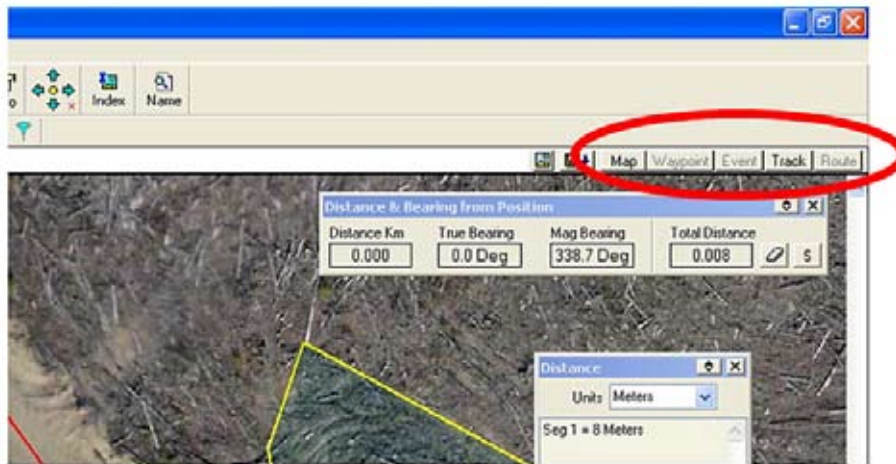
Deleting a Track Point

- Make the target track the Active Track (see step 5 of Creating a Track).
- Use the Select Points button from the Track toolbar menu to select the point(s) you want to delete.
- Right click on the target point and choose Delete from the popup menu.



4. To make the change permanent choose the Save Track File button on the Main Menu.

Track



D. Indicator 2. Estimating in-block area affected or potentially affected by landslides, drainage diversion or significant erosion from roads, landings or trails.

For this section delineate disturbed areas with the same procedure as delineating landings and burrow pits from Indicator 1.

E. Indicator 3. Estimating in-block area affected by disturbance to natural drainage patterns as a result of forestry operations.

For this section delineate disturbed areas with the same procedure as delineating landings and burrow pits from Indicator 1.

F. Indicator 4. Description of the in-block soil disturbance hazards, areas affected by dispersed soil disturbance, potentially inordinate disturbance, and roadside work areas.

For section 4.2 delineate disturbed areas with the same procedure as delineating landings and burrow pits from Indicator 1.

For section 4.3 create transects using routes made of waypoints.

Creating Waypoints and Calculating Distances

Waypoints are used as a point of reference for GPS, and mark specific locations of interest. For example a point of commencement (POC) for a survey could be defined as a waypoint, or any spot of interest along a transect.

To Create a Waypoint

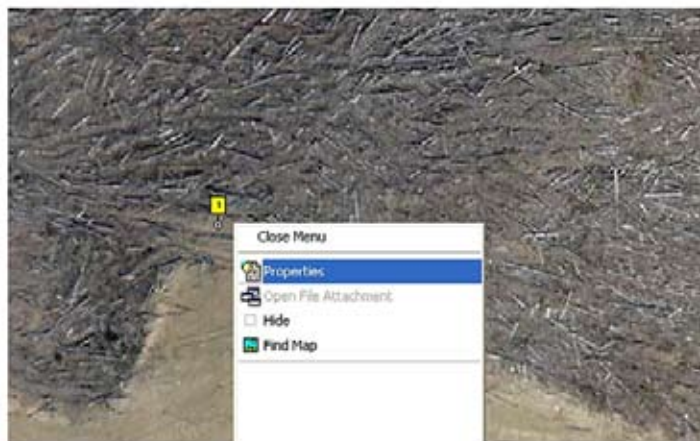
1. Activate waypoint function by clicking on the Waypoint button. The cursor will now say waypoint.
2. Place the cursor on location of interest, and click to create a waypoint. This adds a new waypoint on the map screen.



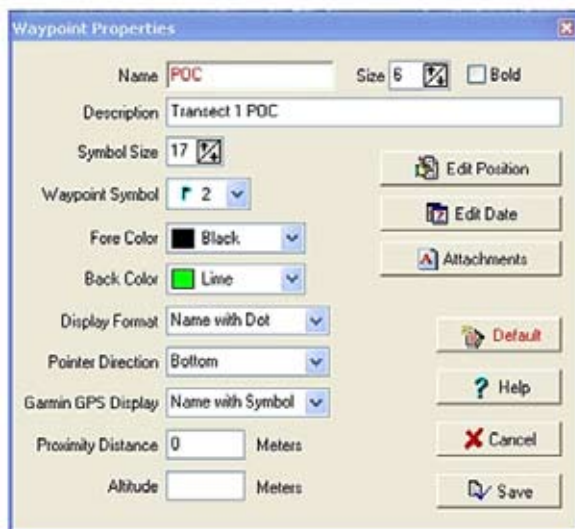
3. Wherever you would like to add a waypoint right click to add a point.



4. To edit the properties of a waypoint right click on the base of the point (not the label). This brings up a popup menu. Select the Properties function.



5. This brings up a window where you can add a name and description and change the colour and style of the waypoint. From this window you can also edit the coordinates and save the waypoint.



6. Selecting the Save button saves the point to the screen.



To make it permanent select the Save Waypoint File button on the Main menu. When the text is red, there are changes to the Waypoint file that can be saved.

Waypoint

NOTE: You can change the properties of waypoints by using the Waypoint List.

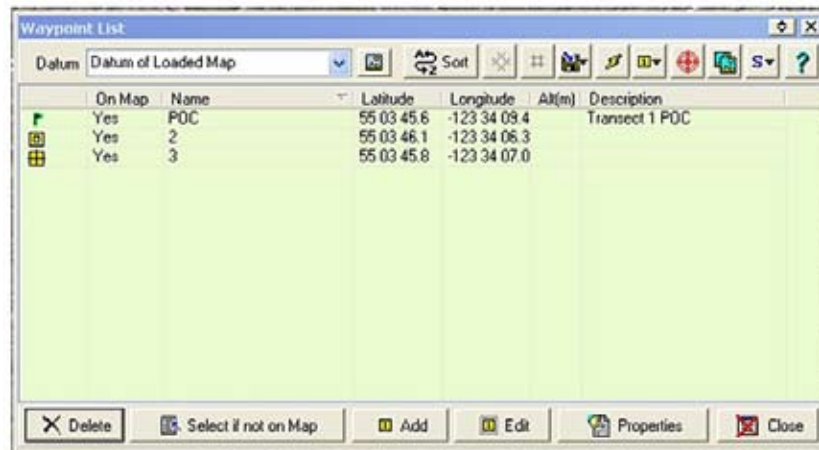
Deleting Waypoints

1. Right click on the target waypoint.
2. On the pop up menu select Delete. This will clear the waypoint from the screen. To save any changes to the waypoint file select the Save Waypoint File button.



Viewing and Printing the Waypoint List

1. Every time a waypoint is created it is added to a master waypoint list. You can view this list by selecting View > Lists > Waypoints from the Main menu.



This brings up a window showing the coordinates and description of each waypoint. You can edit the properties of each waypoint from this window.

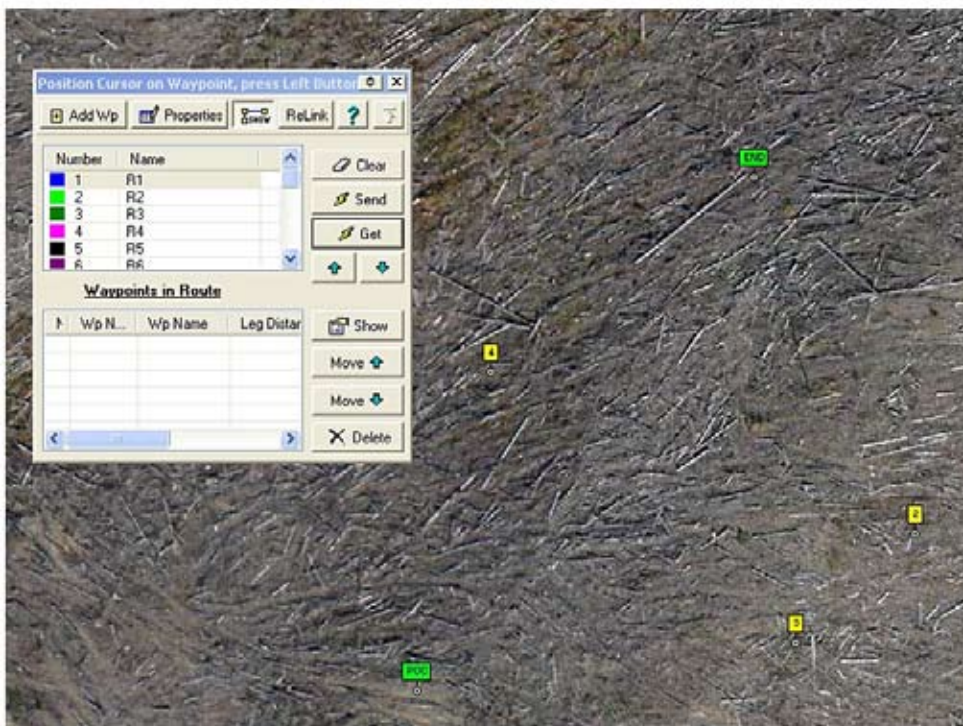
2. To print this list go to File > Print > Print Waypoint List from the Main menu. This brings up a window where you can choose waypoint printing options.



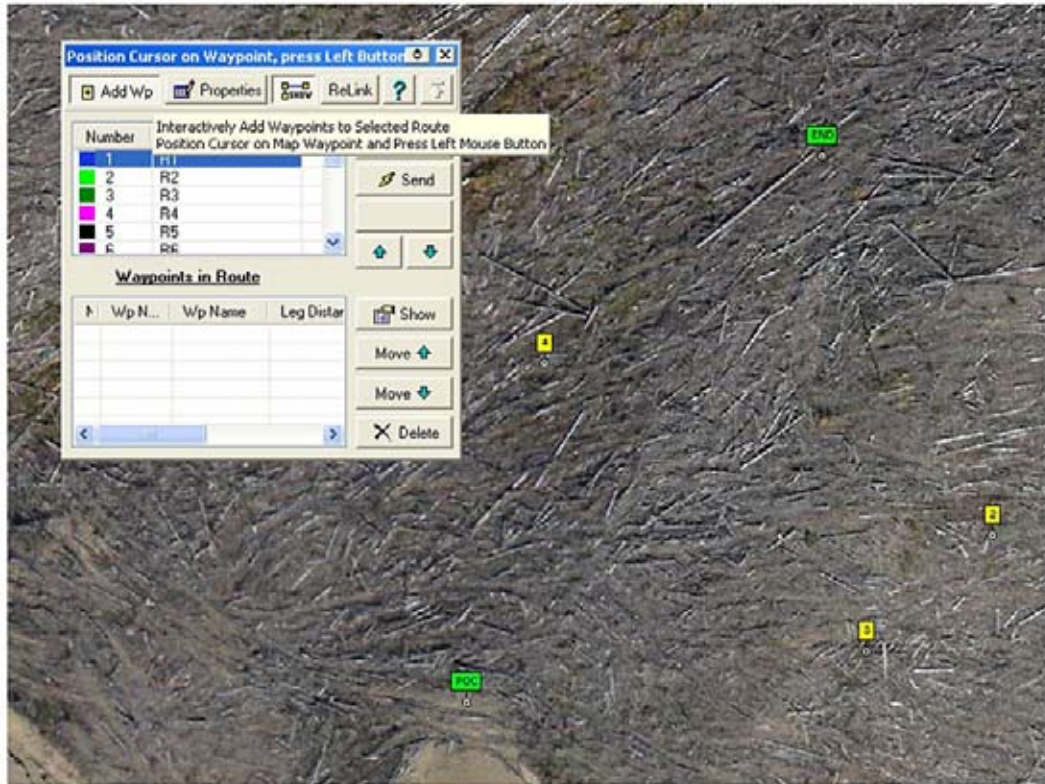
Creating a Route

A route is created when waypoints are linked. Routes are used to mark transects for Indicator 4.3.

1. Mark point of commencement (POC) and each stop (or change of direction) along the path using waypoints as explained under section E, Creating Waypoints.
2. Once the waypoints are displayed on the map, activate the route editor feature under View » Route Editor or by selecting the Show/Hide Route Editor button on the Main menu toolbar.

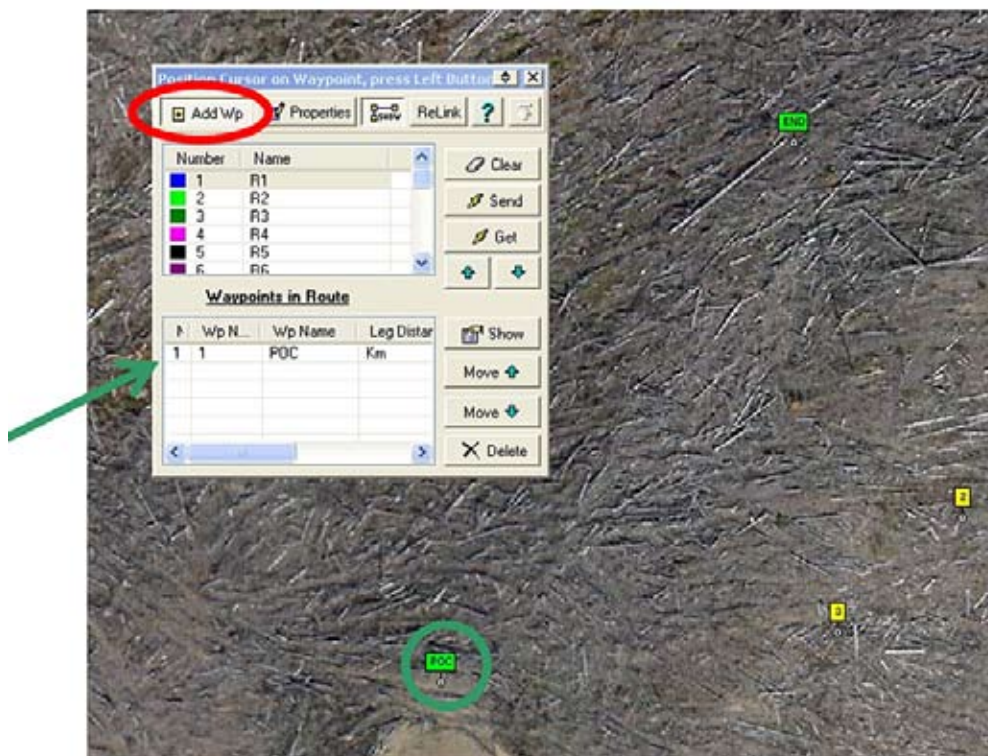


3. Select a route from the upper list (here R1) and depress the Add Wp to add waypoints in a route.
HINT: If you select and hold a button in OziExplorer you will often get a description of what function the button performs. When you do this with the Add Wp button you receive instructions on how to add a waypoint to a route.

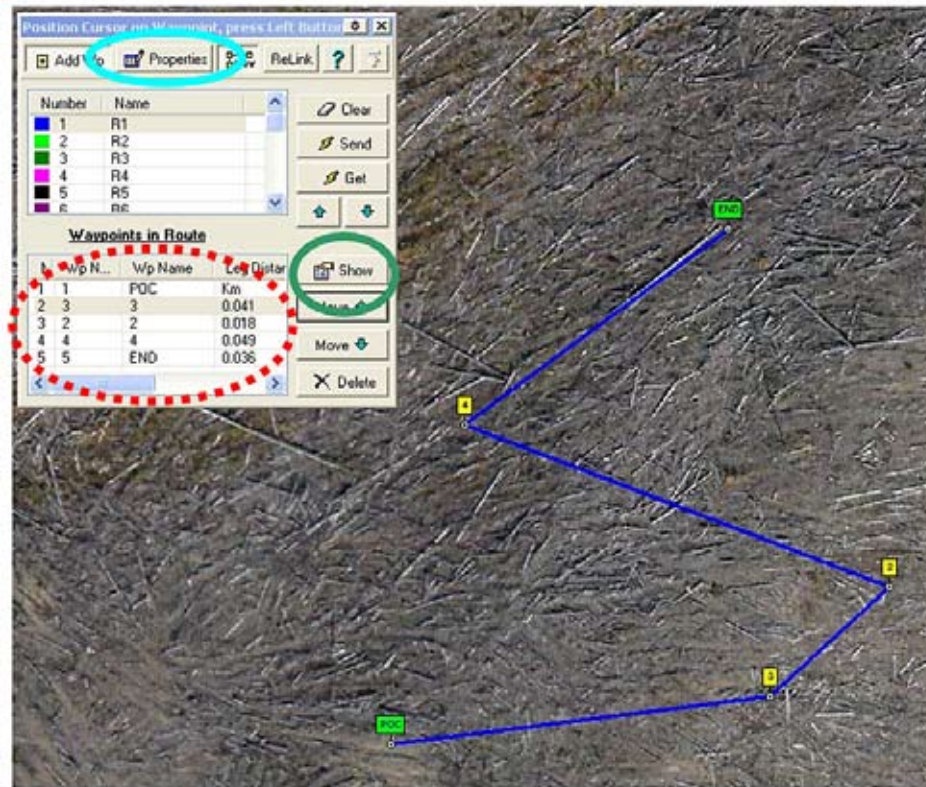


4. The **Add Waypoint** feature allows you to click on top of waypoints to trace a route. To add waypoints to your route position your cursor on first waypoint (e.g., the POC) on the map and then press left button.

This will add your waypoint (here the POC) to your route.



5. Repeat this process with each successive waypoint along the route until you have reached the end of the transect.



The waypoints do not have to be added in numerical order. In the example point 3 was added to the route before route 2 so that the route path does not cross itself.

6. Save the new route by clicking on the Save Route button on the Main toolbar.

Route

7. You can view and edit the route properties by clicking on the Properties button at the top of that route editor window. This brings up a new window where you can edit the order and number of the waypoints as well as the transect name, description and colour.



Route Properties

Name: Color:

Description:

Waypoints Available:

- 0001 - POC
- 0002 - 2
- 0003 - 3
- 0004 - 4
- 0005 - END

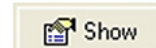
Waypoints in Route:

- 0001 - POC
- 0003 - 3
- 0002 - 2
- 0004 - 4
- 0005 - END

Buttons: Add >, Insert >, < Select All, < Unselect, Unselect >, X

Buttons: ? OK Cancel

8. A detailed list of the waypoints in the route is generated with the Show button.



Route Editor

Buttons: Add Wp, Properties, Show, Relink, ?

Number	Name
1	R1
2	R2
3	R3
4	R4
5	R5
6	R6

Buttons: Clear, Send, Get, Move Up, Move Down, Delete

Waypoints in Route

Wp N...	Wp Name	Leg Dist...

Buttons: Show, Move Up, Move Down, Delete

Route Detail

Route Number : TRANSECT 1

Route Description : Disturbance Transect 1

N...	Wp Num	Wp Name	Leg Distance	Acc. Dist...	True	Magnetic
1	1	POC	Km	Km	Bearing	Bearing
2	3	3	0.041	0.041	82.3	61.0
3	2	2	0.018	0.059	46.8	25.6
4	4	4	0.049	0.108	290.5	269.2
5	5	END	0.036	0.144	52.9	31.6

Buttons: Navigate To, Close

This transect information can be used to fill in Indicator 4.3.

Section 4.4 and 4.5 can be filled in using the same methods as used in Indicator 1, delineating landings and burrow pits.

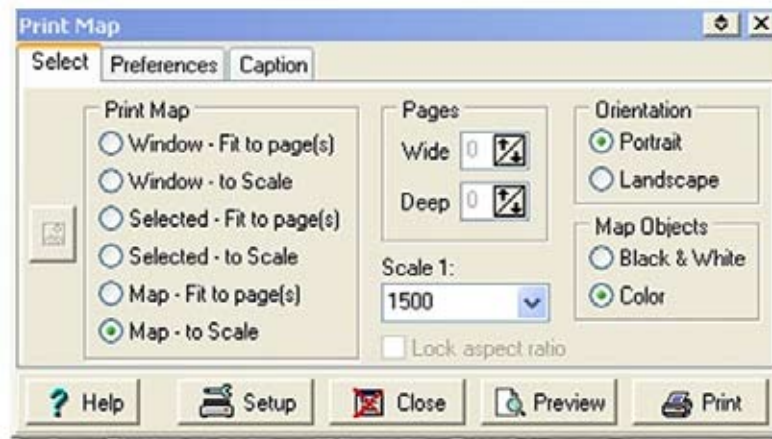
G. Indicator 5. Description of green tree retention in cutblock.

For this section delineate disturbed areas with the same procedure as delineating landings and burrow pits from Indicator 1.

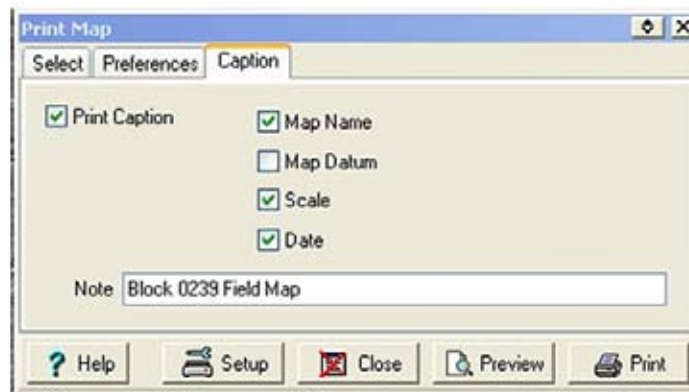
H. Printing

The final field map can be printed directly from OziExplorer. There are many printing options including printing a portion of your map, the whole map or just what is displayed on the screen. These areas can be fitted to a paper size or printed with a scale.

1. Choose File > Print > Print Map Image from the Main menu. This will bring up a window where you can choose what area to print, define a scale (with the drop down list or by typing it in), the orientation of the printed map and if you want waypoints and comments in colour (the rest of the map will be colour anyways).



2. Use the Setup button to choose a printer and page settings.
3. The Caption tab allows you to select what you would like included at the top of your map. Map Name is the file name of your map, scale is expressed as a ratio (you choose the scale on the Select tab). All this information is printed as one line of text at the top of your map. You can add comments in the note box. This will be printed as a second line of text.



4. The Preview button on the Select tab will open a new window (you can change the size of the print preview with the Zoom button).



5. When you are ready Select a Print button.