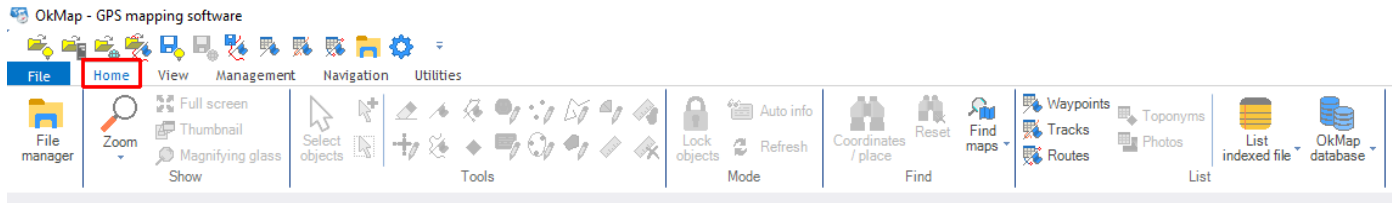


Creating and editing tracks in OkMap

10/11/2021

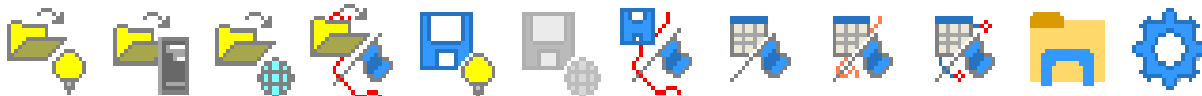
This guide assumes that you have already installed OkMap Desktop [see [Installing and setting up OkMap](#)] and know how to load a map and a pre-recorded track [see [Looking at tracks in OkMap](#)]

Finding your way around OMap

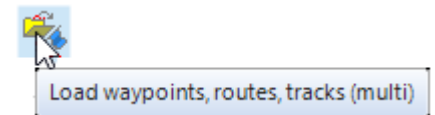


In OkMap you can see a permanently available tab labelled **File** and five others **Home - View - Management - Navigation - Utilities**. Initially, and for most of the time, you will be in the **Home** tab.

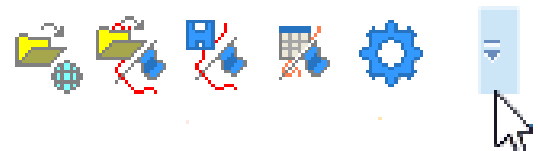
In the top row there are 12 icons which allow quick acces to certain operations.



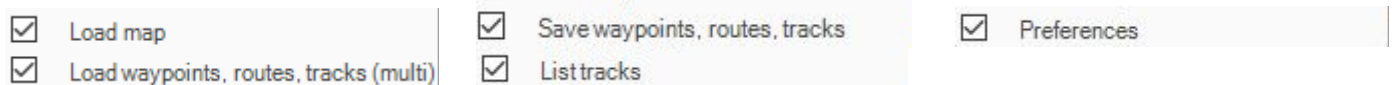
Hovering over any of these gives a written description of its purpose.



In practice there are only five of the twelve which are used with any frequency. Clicking on the icon at the end will allow you to show only these five.



Untick all options except for

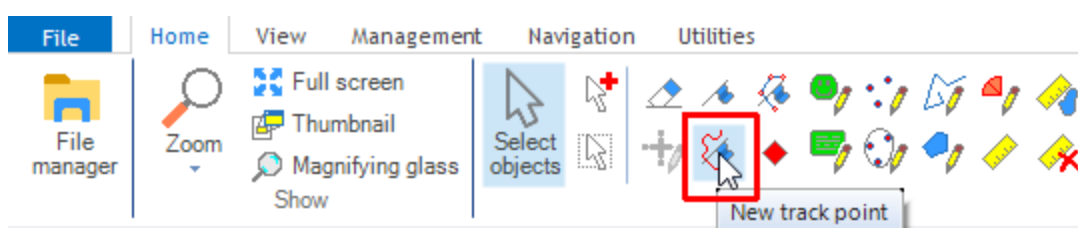


Before trying to make changes to a full recorded track work your way through the simple steps below. This will make it easier to understand the more complex example which follows.

Keyboard shortcuts

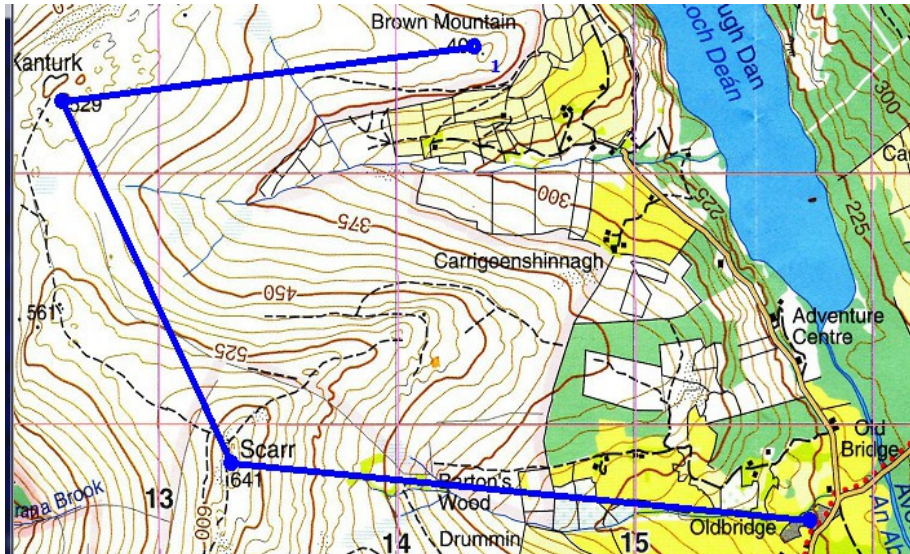
There are a number of keyboard shortcuts, using the **Ctrl** and **Alt** keys, available in OkMap. In use press and hold down the **Ctrl** (or **Alt**) key and then press the second key before releasing both.


Creating a new track




With a map loaded and visible going to the **New track point** icon  and clicking will change the mouse-pointer from the usual arrow to a cross-hairs.

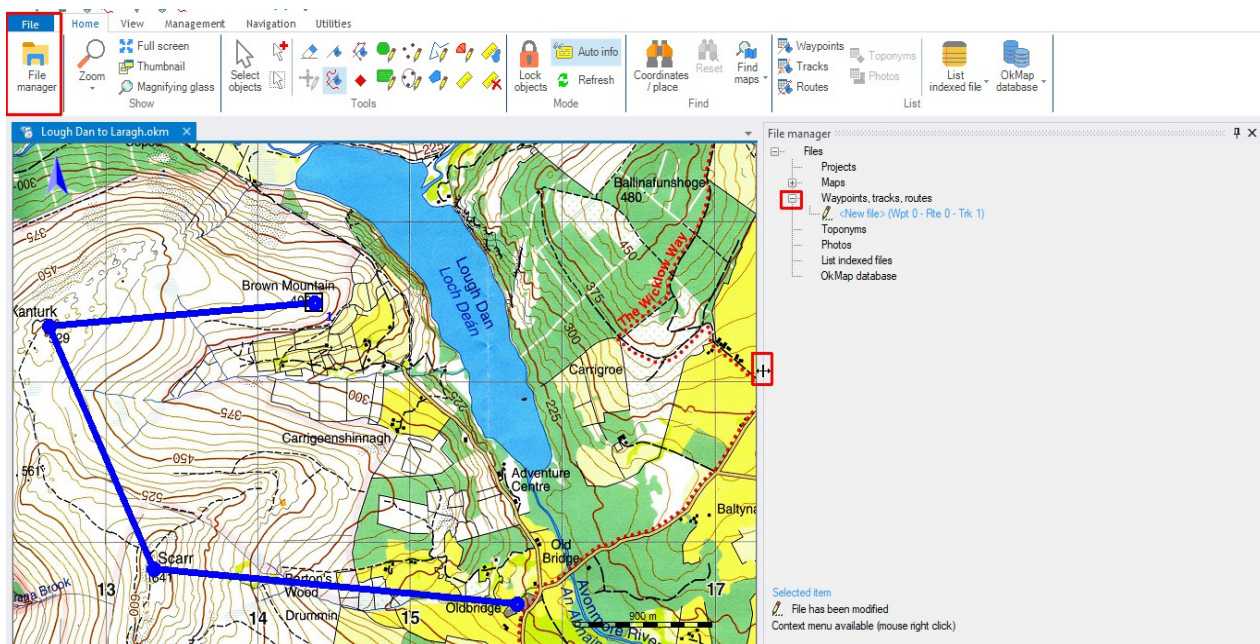
Clicking at a point on the map causes a blue dot to appear with the number **1** beside it. Clicking at another point makes a second blue dot appear joined to the first. The **1** moves to near this second point. Doing this a few more times will create a track.



Pressing **Alt-S** or clicking on  will end the creation of a track and change the cursor back to an arrow.

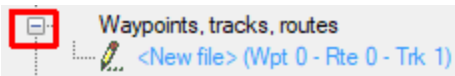
This track, named **1**, will still be **selected** i.e the trackpoints will be shown as blue dots.

Clicking on  will open the File manager window on the right of the screen.



Using File manager

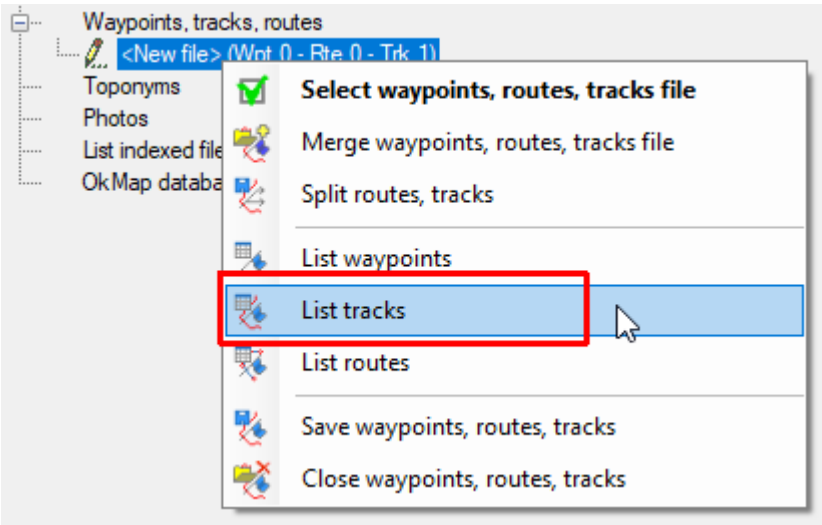
Clicking on the + sign beside **Waypoints, tracks, routes** in the menu will show that there is a **New file** containing one track and no waypoints or routes.



Right-clicking on the file will access a drop-down menu of options and clicking on

List tracks

will open the **Tracks list** window



Tracks list

Filters

Name

Comment

	Name	Selected	Comment	Description	Source	Link
▶ 1	1	<input checked="" type="checkbox"/>				
*		<input type="checkbox"/>				

< >

	Segment number	Point number	Name	Selected	Comment	Description	Source	Link	Symbol
▶ 1	1	1		<input type="checkbox"/>					
	2	1		<input type="checkbox"/>					
	3	1		<input type="checkbox"/>					
	4	1		<input checked="" type="checkbox"/>					
*				<input type="checkbox"/>					

< >

☐ Auto locate point

Context menu available (mouse right click)

OK

Cancel

Apply

Refresh

The **Name** of the track, 1 , can be changed - OkMap has a limit of 30 characters for the name.

	Name	Selected
▶ 1	Crow flies-Oldbridge-Brown	<input checked="" type="checkbox"/>

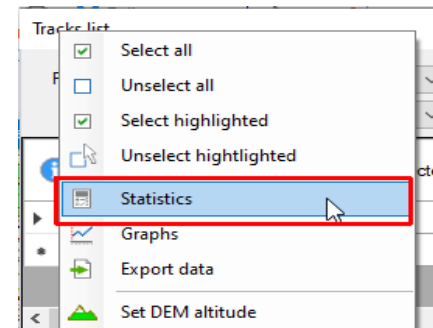


Clicking on **Apply** followed by **OK** at the bottom of the window will show this change.



Returning to the **Tracks list**, right-clicking on the **Name** and selecting **Statistics** will give the information about the number of **Segments**, **Points** and the **Distance traveled (km)**

In this case there is only one segment but a recorded track in which the recording has been paused at intervals may consist of several segments.

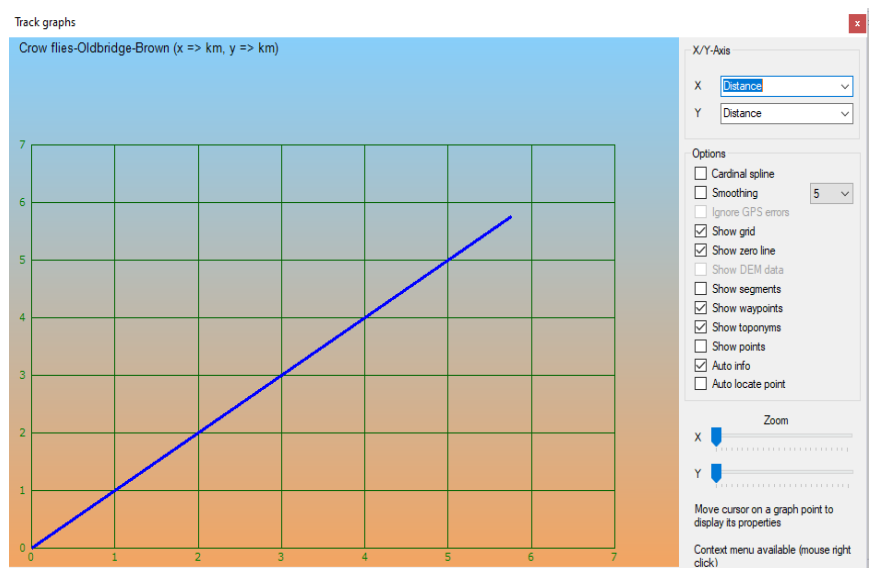
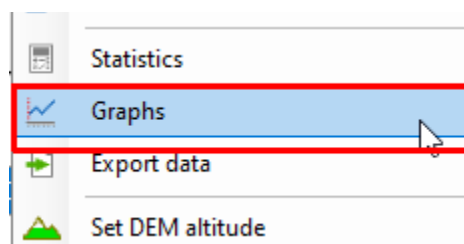


Track statistics

View	<input checked="" type="radio"/> Vertical <input type="radio"/> Horizontal	Order by	<input checked="" type="radio"/> Measure unit <input type="radio"/> Type
Track name	Type	Name	Value
1 Crow flies-Oldbridge-Brown	Track	Description	
2		Comment	
3		Segments	1
4		Points	4
5	Distances	Distance traveled (km)	5.76
6		Distance traveled flat (km)	

Selecting **Graphs** instead of **Statistics** will usually show a graph of the elevation recorded at each point.

In this case no elevation has been recorded.



This can be seen by scrolling from left to right as shown below so that for each point its **Coordinates**, **Elevation** and the **Date time** of recording are shown.

	Segment number	Point number	Coordinates	Elevation (m)	Date time	Mag. var.	Geoid height	Fix
1	1	1	O 15643 01629					
2	1	2	O 13258 01846					
3	1	3	O 12528 03332					
4	1	4	O 14228 03516					
*								

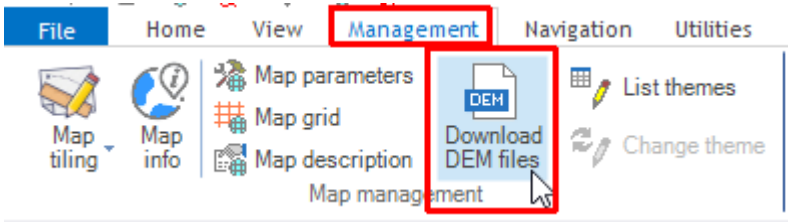
☐ Auto locate point
Context menu available (mouse right click)

OKCancelApplyRefresh

Digital Elevation Model [DEM] files

DEM files store the elevations of points on the Earth's surface and can be downloaded from a various web sites.

In the **Management** tab of OkMap clicking on **Download DEM files** will suggest a file to be downloaded which will contain the elevations of points on the map displayed.



Download DEM files

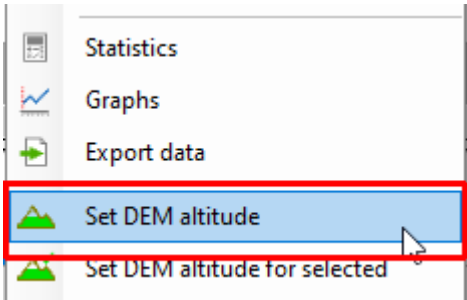
	Path	File	Size	Status	Download %
1	/srtm/version2_1/SRTM3/Eurasia	N53W007.hgt	796,203	Not available locally	.


If the **Status** is **Not available locally** clicking on **Download** at the bottom of the window will start the process. It may take a minute or two.



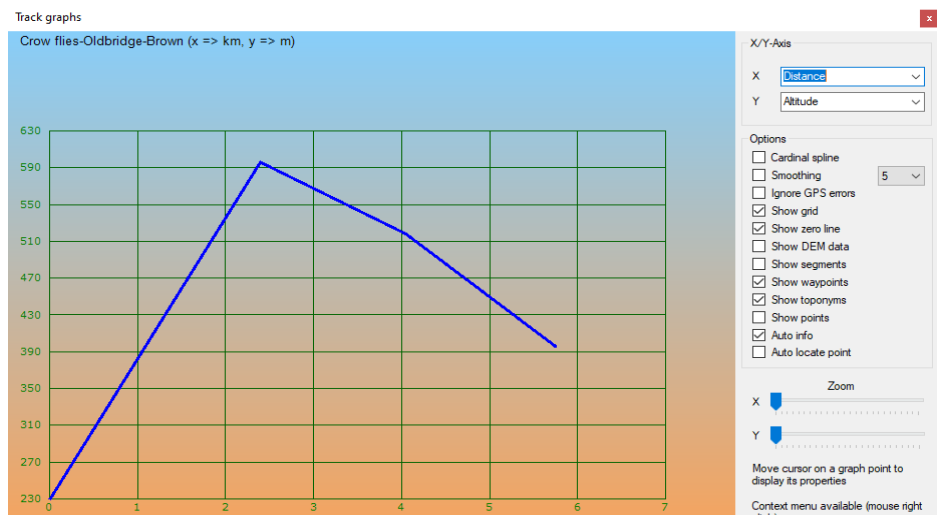
Once the download is complete and the **Tracks list** window is on view again then right-clicking on the **Name** allows **Set DEM altitude** to be selected.

This will then fill the **Elevation** column as shown below.



		Segment number ▲	Point number	Coordinates	Elevation (m)	Date time
▶ 1		1	1	O 15643 01629	▼ 229.0	
2		1	2	O 13258 01846	▼ 596.0	
3		1	3	O 12528 03332	▼ 518.0	
4		1	4	O 14228 03516	▼ 395.0	
*					▼	

Selecting the **Graphs** option will now show a proper elevation graph.



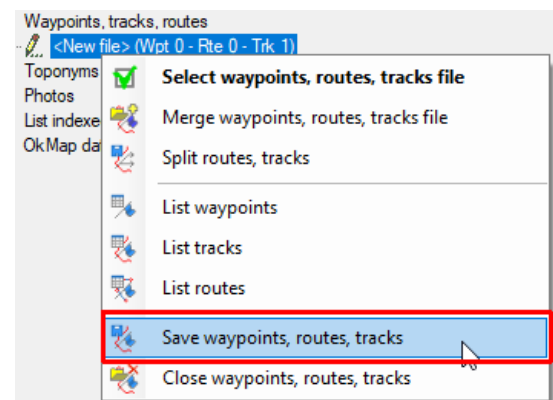
Saving and closing the track

Right-clicking on the file in File manager and selecting **Save waypoints, routes, tracks** will bring up a standard File save window.

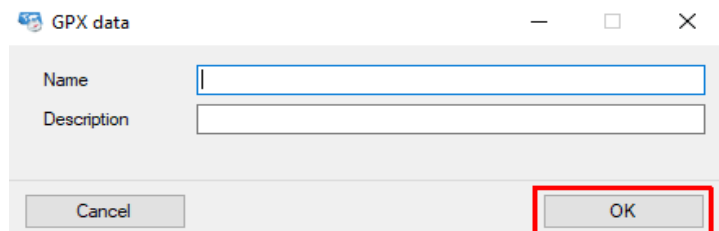
Typing in a name for the file e.g.

Oldbridge-Scarr-Kanturk-Brown.gpx

Note: this will be the name for the **file** which contains the **track** called **Crow flies-Oldbridge-Brown**. This file could contain further tracks.



and clicking **OK** on the next window without typing anything into the **Name** and **Description** boxes will save the file.



Having saved the file then selecting **Close waypoints, routes, tracks** will finish the process.

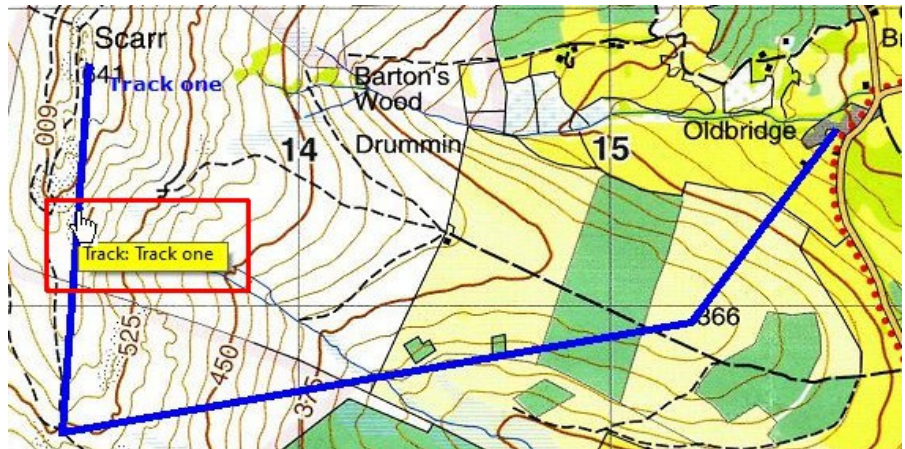
Editing tracks

Selecting and deselecting a track

Moving the mouse-pointer onto a track will change it from an arrow to a hand and the track name is shown.

Clicking will then select the track and show the trackpoints as dots.

Clicking at any point on the map which is **not** on the track will **deselect** the track – the dots disappear.



Two or more tracks can be selected by holding down the **Ctrl** key while selecting the tracks.

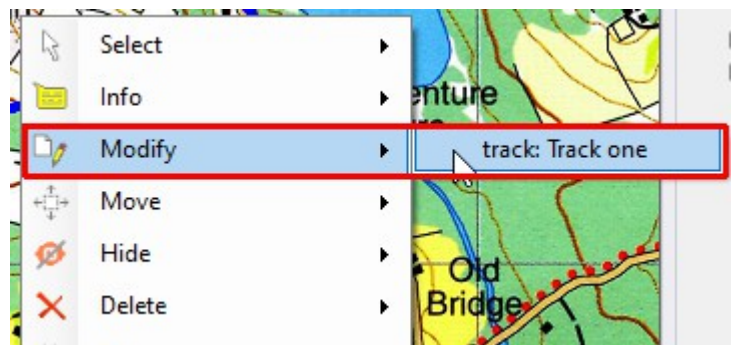
Modifying a track – renaming it and changing its colour

Right-clicking on a track brings up a context menu.

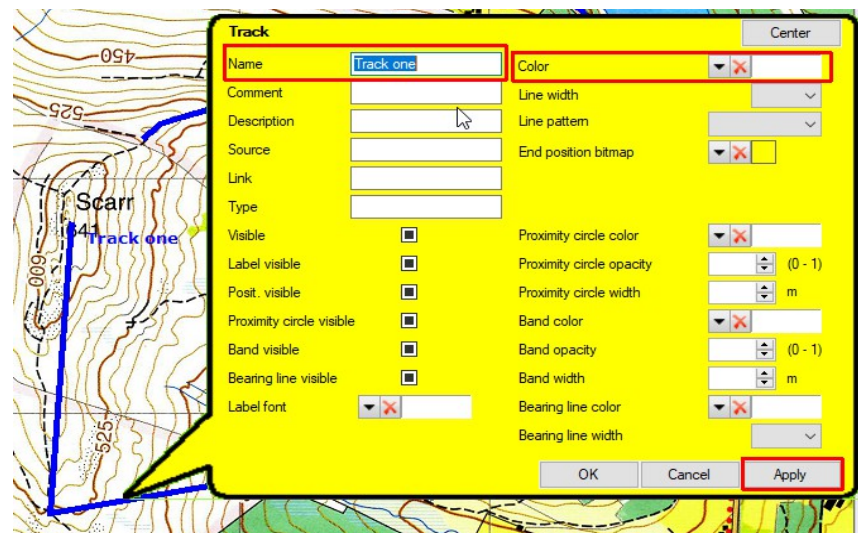
Selecting

Modify > track: Track one

will bring up a window in which you can change various properties including its **Name**.



You can also change the track **Color** – to red, say.




It is important to click first on **Apply** and then **OK** to effect any changes made.

Creating a second track.

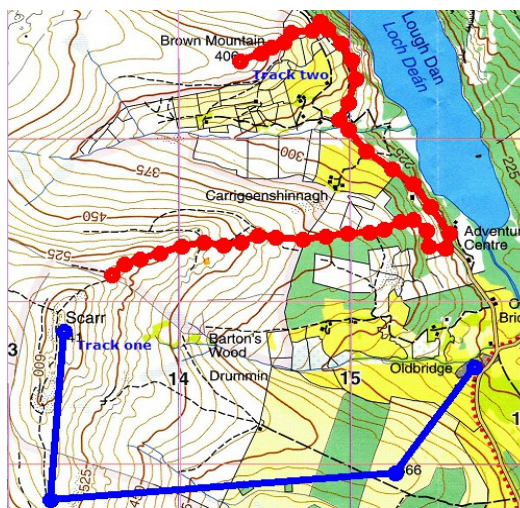
Make sure that the first track is **deselected** - i.e the trackpoints are **not** shown – by clicking anywhere not on the track. If this is not done any new trackpoint will be added to the end of the first track.

Change the cursor back to a cross hairs by going to the **New track point** icon 

Click on the starting point for your new track and create a separate new track whose name, by default, will again be **1** [if you hadn't renamed the first track the default second track would be **2**].

Finishing with **Alt-S** or by clicking on  the track can then be renamed and its colour changed.

The result might look like this - perhaps **Track one** is being followed by a crow while **Track two** is being followed by a group of hikers.

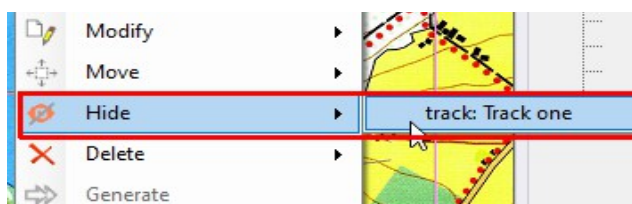


Hiding and unhiding tracks

Selecting a track and right clicking on it brings up a context menu. Go to

Hide > track: Track one

click and it will be hidden.

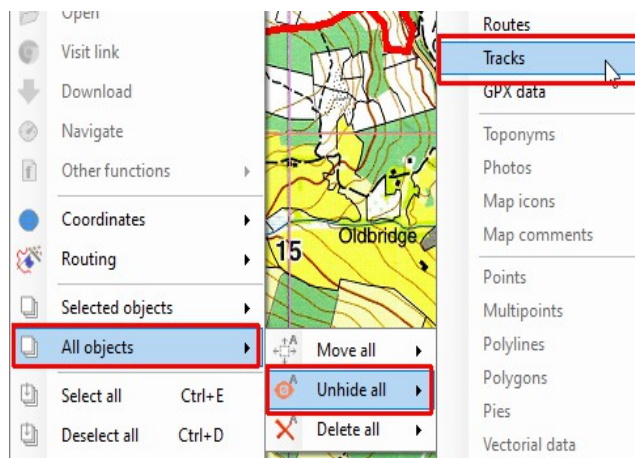


Right-clicking anywhere on the screen which is not part of a track brings up the context menu.

Going to

All objects > Unhide all > Tracks

and clicking will reveal all previously hidden tracks.

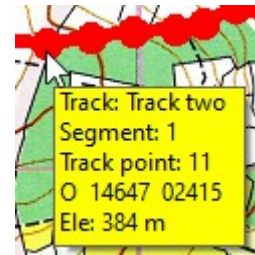


Selecting trackpoints

Select the track to show the trackpoints as dots.

A single trackpoint can be selected by moving the arrow until a small window pops up with details about the point and then clicking on the point.

A black square is drawn around it to show it has been selected.



You can also just click on the point without waiting for the window to pop up.

To select a group of trackpoints hold down the **Shift** key and use the mouse-pointer to draw a box around the required points.

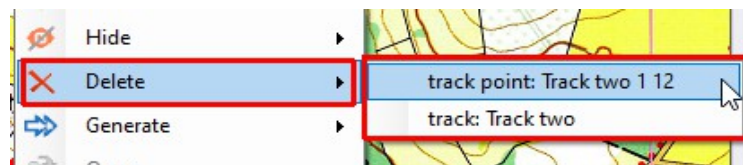


Alternatively select the points one by one while holding down the **Ctrl** key.

Deleting trackpoints or tracks

Right click on the selected trackpoint and select

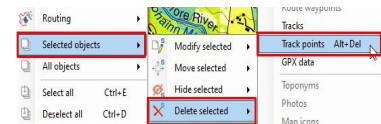
Delete > track point: <.....>



Note: there is also the option to delete the complete track.

To delete a selected group of trackpoints right-click on one of them and select

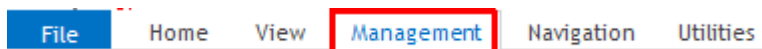
Selected objects > Delete selected > Track points



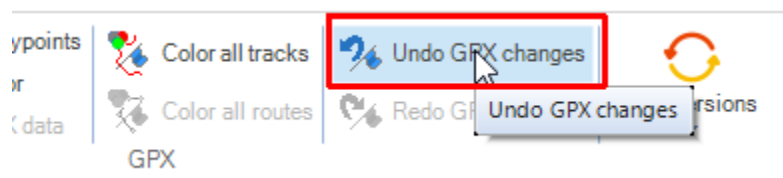
Undoing an editing action

Before continuing it is important to know how to try to recover from a mistake.

First switch from the **Home** tab to the Management tab

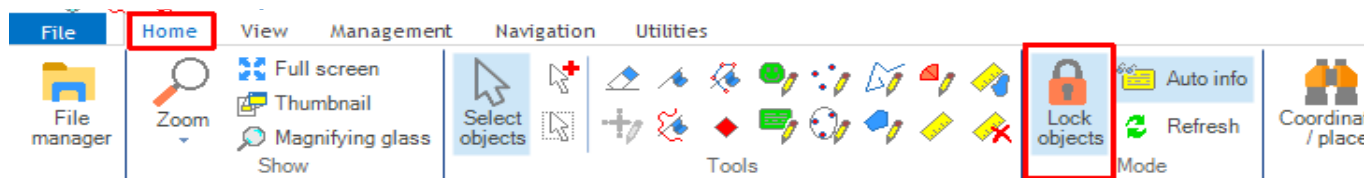


and then click on **Undo GPX changes** which can be found to the right.



Return to the **Home** tab.

Moving trackpoints or tracks - locking and unlocking objects



Initially objects on the map, such as trackpoints and tracks, are **locked** to the map. To confirm this go to the **Home** tab and check that the **Lock objects** icon has a pale blue [= **selected**] background

By holding down the left-button the mouse-pointer changes to a hand which can move the map **and** the objects together up/down or left/right.



Changing the pale blue background to white [= **unselected**] by clicking on the **Lock objects** icon will **unlock** all objects on the map



Pressing **Alt - L** will do the same. Repeating either process will toggle between the **locked/unlocked** states.

Now, if the left-button is held down, when the mouse-pointer is on a trackpoint it changes to a move cursor and the point can then be moved into a new position.



Similarly if the mouse-pointer is on a selected track, with all the trackpoints showing, the whole track can be moved.

This can easily happen inadvertently.

In this case it's probably best not to try to move the track back with the mouse-pointer. It can be tricky to find the original position. Instead just follow the above instructions for **Undoing an editing action** to undo the last action.

Note: While objects are locked on the map the map itself together with all objects can still be moved provided the mouse-pointer is not on a track or a trackpoint.

Editing using the Tracks list window

Tracks list

Filters: Name Comment

	Name	Selected	Comment	Description	Source	Link
1	Track one	<input type="checkbox"/>				
2	Track two	<input type="checkbox"/>				
*		<input type="checkbox"/>				

	Segment number	Point number	Coordinates	Elevation (m)	Name	Selected	Comment
1	1	1	O 13205 02431	489.0		<input type="checkbox"/>	
2	1	2	O 13278 02498	466.0		<input type="checkbox"/>	
3	1	3	O 13369 02528	453.0		<input type="checkbox"/>	
4	1	4	O 13485 02565	443.0		<input type="checkbox"/>	
5	1	5	O 13612 02608	431.0		<input type="checkbox"/>	

☐ Auto locate point
Context menu available (mouse right click)

OK Cancel Apply Refresh

	Name	Selected	Comment	Description	Source	Link
1	Track one	<input type="checkbox"/>				
2	Track two	<input checked="" type="checkbox"/>				
*		<input type="checkbox"/>				

The upper half of this window shows a list of all the tracks created. In this case there are two i.e **Track one** and **Track two**

A track can be deleted if its row is highlighted, as shown above, and the **Delete** key **on the computer** is pressed.

	Segment number	Point number	Coordinates	Elevation (m)	Name	Selected	Comment
1	1	1	O 13205 02431	489.0		<input type="checkbox"/>	
2	1	2	O 13278 02498	466.0		<input type="checkbox"/>	
3	1	3	O 13369 02528	453.0		<input type="checkbox"/>	
4	1	4	O 13485 02565	443.0		<input type="checkbox"/>	
5	1	5	O 13612 02608	431.0		<input type="checkbox"/>	

☐ Auto locate point
 Context menu available (mouse right click)

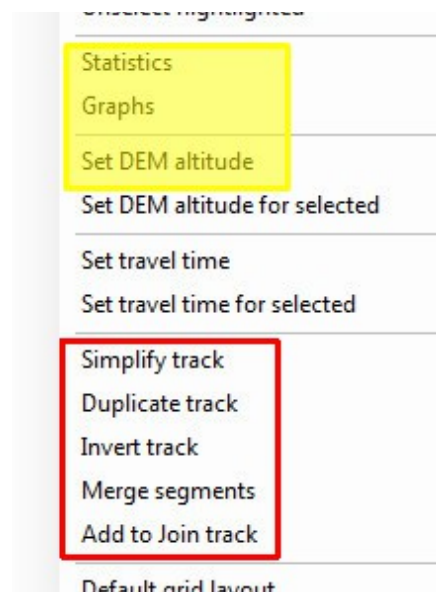
OK Cancel Apply Refresh

The lower half of this window shows a list of all the trackpoints of the track selected in the upper half. Again any point or points can be deleted if the rows concerned are highlighted and the **Delete** key **on the computer** is pressed.

Right-clicking on a track **Name** in the upper window brings up a context window.

The options **Statistics**, **Graphs** and **Set DEM altitude** have been considered above.

There are five more commonly used options.



Joining two tracks

Consider the two tracks - **Track one** for the crow and **Track Two** for the group of hikers - shown on P.8

If the crow decides to join the hikers we can combine these into a single track as follows.

Right-click on **Track one** to bring up the context menu and select **Add to Join track** . You will see a new track called **JOIN** in the window. Click on **Apply**.

Now right-click on **Track two** select **Add to Join track** and click on **Apply**.

You will now have three tracks - **Track one**, **Track two** and (overlapping these two) **JOIN**.

In the **Tracks list** window delete **Track one** and **Track two** (as described above) leaving the single track **JOIN**.

If you look at the lower half of the **Tracks list** window you will see the track **JOIN** consists of two separate **segments** on the map.

Merging segments

Right clicking on **JOIN**, selecting **Merge segments** and clicking on **Apply** will create a new track called **U.JOIN**.

This will have only one segment with the last point of the first segment connected to the first point of the second segment.

JOIN can now be deleted and **U.JOIN** can be renamed appropriately, say **Oldbridge to Brown**.

[Be careful of the order in which you “lay down” the **JOIN** track. **Merging** will connect the end point of the first track “laid down” to the start of the second “laid down”. If they are “laid down” in the wrong order it will soon be apparent.]


Inverting and copying track

The **Oldbridge to Brown** track created above is the track followed by the crow from Oldbridge to Brown Mountain. Right-clicking and selecting **Invert track** will create a track called **I.Oldbridge to Brown** which is the same as **Oldbridge to Brown** but in reverse.

You will probably want to rename it as **Brown to Oldbridge**

Selecting **Duplicate track** instead of **Invert track** will create **C.Oldbridge to Brown**, a copy of the track.

Simplifying a track

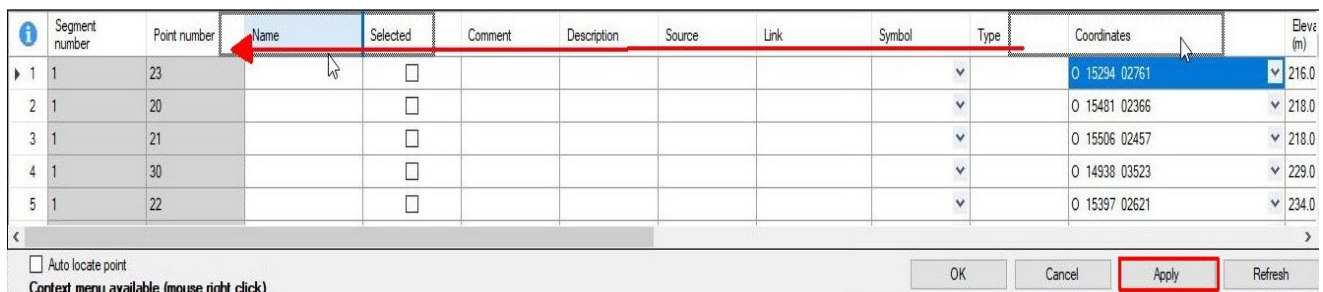
A recorded track may contain over a thousand points. To make editing easier select **Simplify track** which creates **S.Oldbridge to Brown**, a file with fewer points. The number of points can be set under **Preferences** [click on ] in the **Tracks** tab

Moving the Coordinates and Elevations columns

Maximize the **Tracks list** window so that it is as wide as possible.

The first two columns, **Segment number** and **Point number**, are fixed.

If the **Coordinates** column is not visible use the scroll bar at the bottom of the window to make it so. Move the cursor to the top of the column, press and hold down the left mouse button and drag the column to its new position.



	Segment number	Point number	Name	Selected	Comment	Description	Source	Link	Symbol	Type	Coordinates	Elevation (m)
▶	1	23		<input type="checkbox"/>						▼	O 15294 02761	▼ 216.0
	2	20		<input type="checkbox"/>						▼	O 15481 02366	▼ 218.0
	3	21		<input type="checkbox"/>						▼	O 15506 02457	▼ 218.0
	4	30		<input type="checkbox"/>						▼	O 14938 03523	▼ 229.0
	5	22		<input type="checkbox"/>						▼	O 15397 02621	▼ 234.0

☐ Auto locate point
Context menu available (mouse right click)

OK Cancel **Apply** Refresh

Release the mouse button and the column will now be shown in its new position.

Repeat for the **Elevation** column then click on **Apply**.

Now in future these two columns will appear in these positions whenever the **Tracks list** is opened.

An example

When editing a GPX file to modify a track you should always work on **copy** of the file leaving the original unchanged.

It's a good idea to create a folder called something like **Temp files** in your **GPX files** folder.

Copy the original file to be edited, **Knockree to Maulin to Knockree.gpx**, say, into this folder and then rename it as **Knockree to Maulin to Knockree- new.gpx**

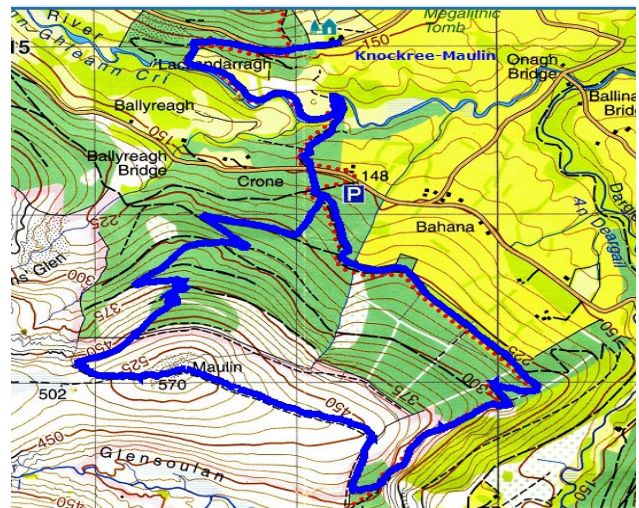
The original will be unchanged and you can now work on this copy.

When you have finished and are completely satisfied save the final version into the **GPX files** folder not the **Temp files** folder which you can delete.

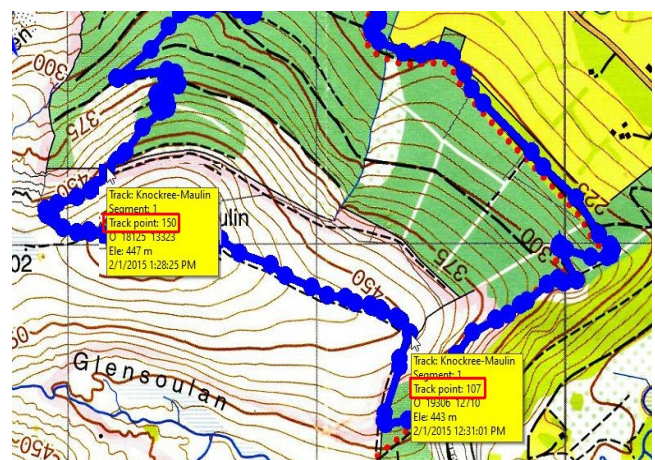
In this example part of a track from Knockree to Crone and over Maulin, is shown.

The **Name** of this track is **Knockree – Maulin**,

Suppose that you want to go around Maulin instead of over it.





By zooming in and hovering over the points you can determine that the section to be replaced is between **Track point 107** and **Track point 150**.



The first job is to create two new tracks, one from the start at Knockree to point **107** where the ascent of Maulin starts and the other from point **150** back to the finish at Knockree.

Using the **File manager** create two duplicates of the track **Knockree – Maulin** and rename ones **start** and the other as **finish**. **Delete** the track **Knockree – Maulin**

	Name	Selected	Comment	Description
1	finish	<input checked="" type="checkbox"/>		
2	start	<input checked="" type="checkbox"/>		
*		<input type="checkbox"/>		

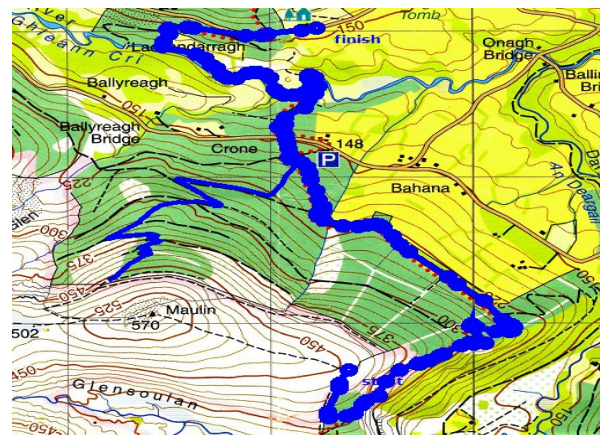
	Segment number	Point number	Coordinates	Elevation (m)	Name
106	1	106	O 19263 12619	432.0	
107	1	107	O 19306 12710	443.0	
108	1	108	O 19270 12751	443.0	
109	1	109	O 19251 12764	445.0	
110	1	110	O 19195 12785	451.0	
111	1	111	O 19185 12794	452.0	

With the **start** track selected highlight the points from **108** to the end by first highlighting row 108 and, holding down the **Shift** key, scroll down to the end before releasing it.
Now delete these points by pressing the **Delete** key on the computer. Click on **Apply**.

In a similar manner, with the **finish** track selected delete all the points from **1** to **149** and click on **Apply**.


Click on **OK** to see the **start** and **finish** tracks

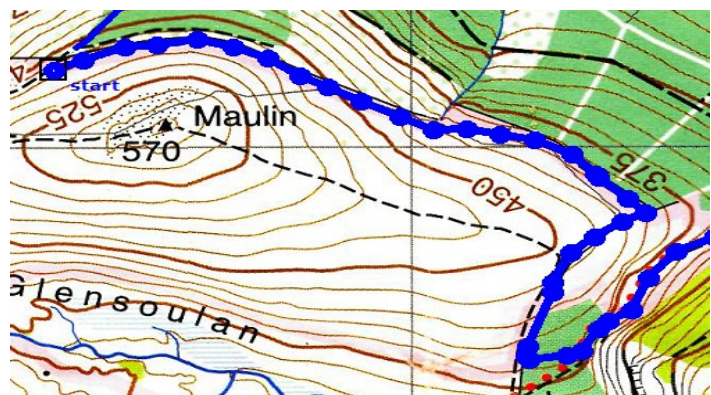
Here the **start** track has been selected and all its trackpoints are shown.



Now it's necessary to extend the **start** track to join the **finish** track along the chosen route around Maullin.

Zoom in, making sure the **start** track is still selected so that any new point added will be from the end of the **start** track.

Click on the new track point icon  and start adding points between the end of **start** and the beginning of **finish**.



In the File manager add **start** to **JOIN** followed by **finish**. Then delete both **start** and **finish** and **merge** the two segments of **JOIN** before **setting DEM altitudes**. Finally rename it and save the file.

Some other options in File manager

Combining two or more GPX files

If you have two tracks saved in two different GPX files you might want to combine them into one file before doing any editing.

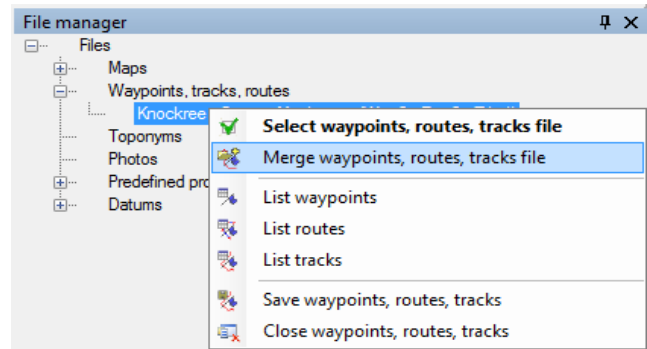
Load the first file, **Test track one.gpx**, say.

In File manager right click on it and choose

Merge waypoints, routes, tracks file

This will open a file selector box and you can select the file to merge, **Test track two.gpx**, say.

Save the resultant file with a new name, **Test two tracks .gpx**, say.

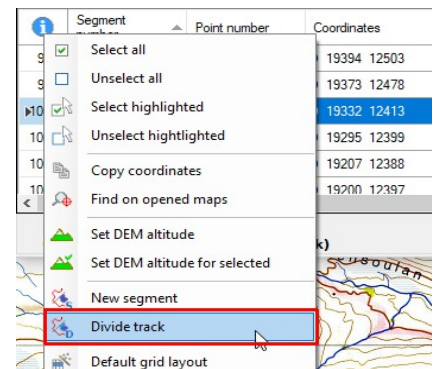


Dividing a track into two separate tracks

On **Test track** by selecting trackpoint **100**, say, right-clicking, choosing **Divide track** and clicking on **Apply** you will divide **Test track** into two tracks.

Test track now contains all the trackpoints from **1** to **100**

A second track will have been created, called **N.Test track**, that contains all the rest of the points which will have been renumbered starting from **1**.



Deleting points which are off the map

File manager is useful when you forget to stop recording your track and, as a result, have recorded your drive back too. Typically this mean you want to delete a lot of points which are off the map you are using.

In this case find and make a note of the number of the point where your hike ended - you'll probably have to zoom in a lot to see it.

Now use File manager to select all the rows from this point to the end and delete them.