

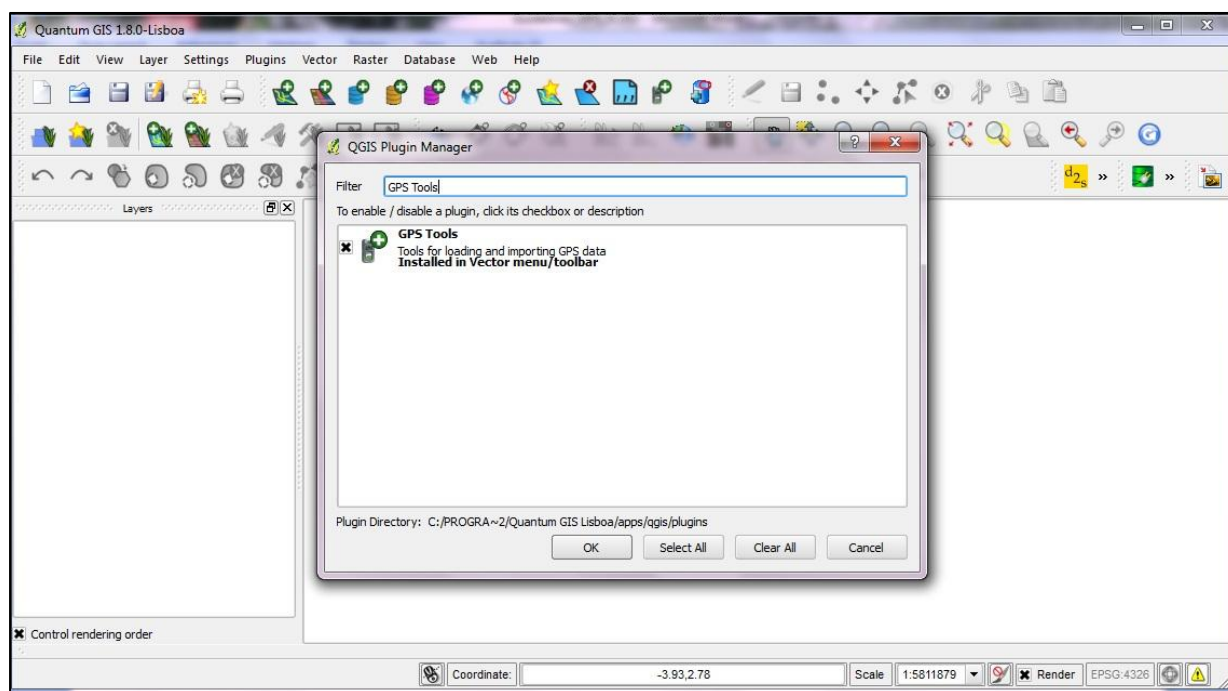
APPENDIX 3



Downloading data points from a GPS device to QuantumGIS

Aims: Provide the guidance to download and/or to import data points gathered from a handheld GPS receiver into a QuantumGIS framework. Secondly, describe the procedures to save the set of data points as a *shapefile* (feature layer).

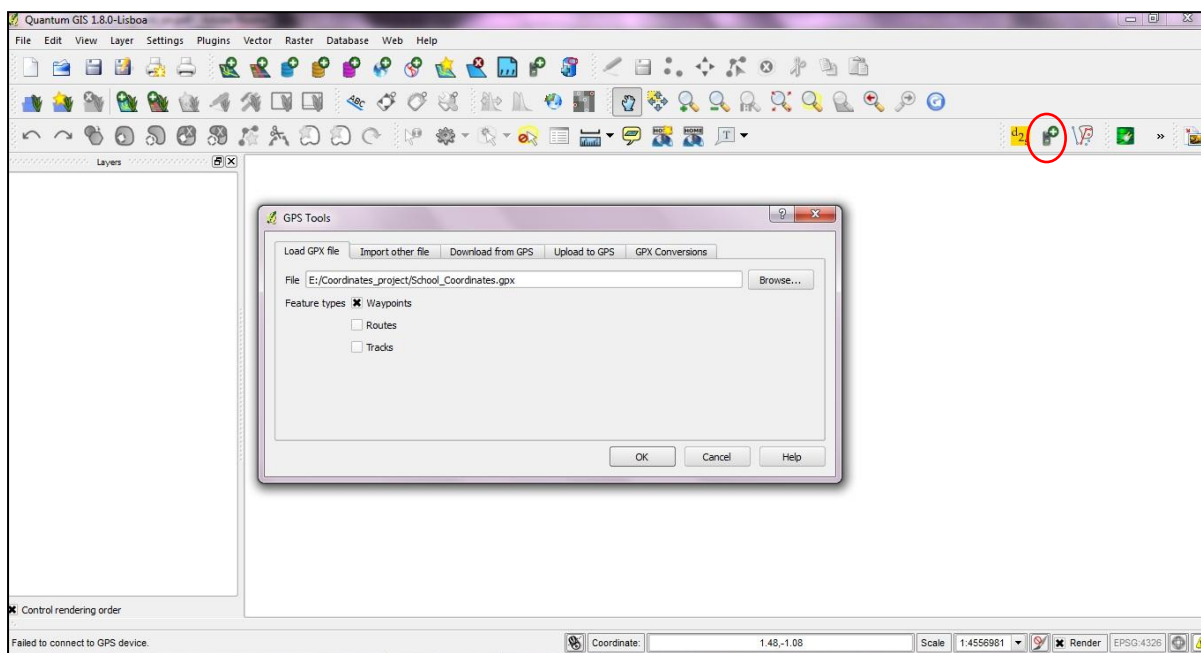
There are different ways to manage a waypoint list within QGIS:

1. **Loading data from a file.** To load a GPX file your first need to load the plugin 'GPS Tools' that you may find in the QuantumGIS plugins repository (<http://plugins.qgis.org/>), though in the latest version released this plugin is already included in the interface.
- To load the plugin 'GPS Tool', go to **Plugins > QGIS Plugin Manager > GPS Tool**.

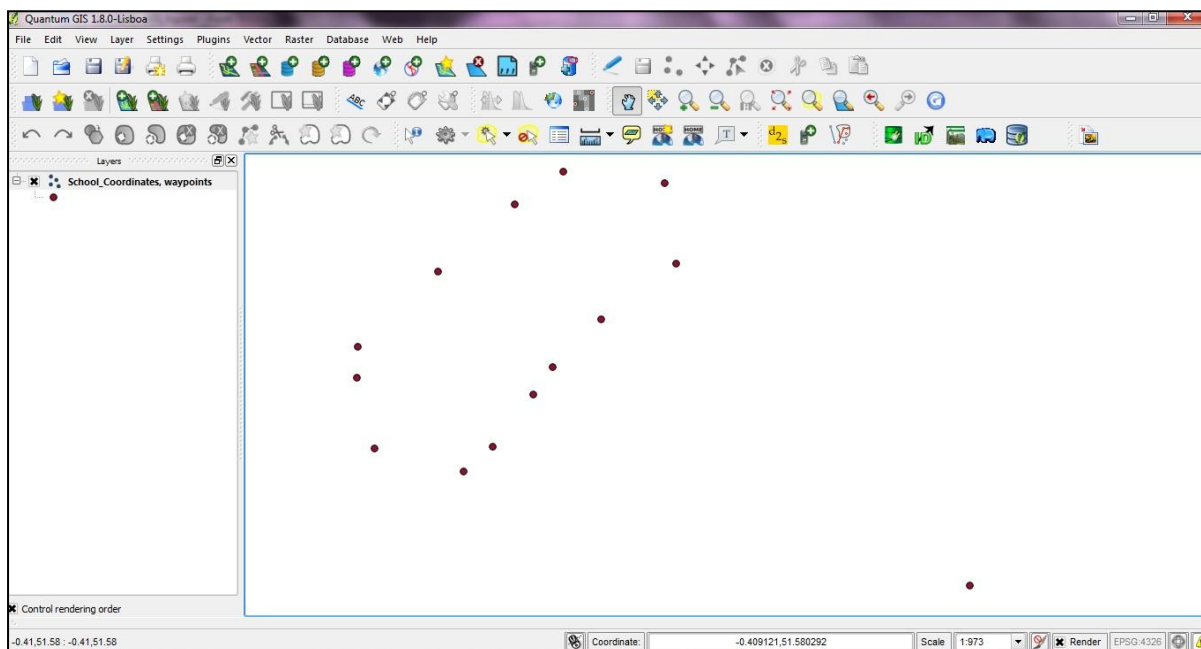


- When this plugin is loaded a button with a small handheld GPS device will show up in the Tool bar .
- Click on the  **GPS Tools** icon and open the **Load GPX file** tab.

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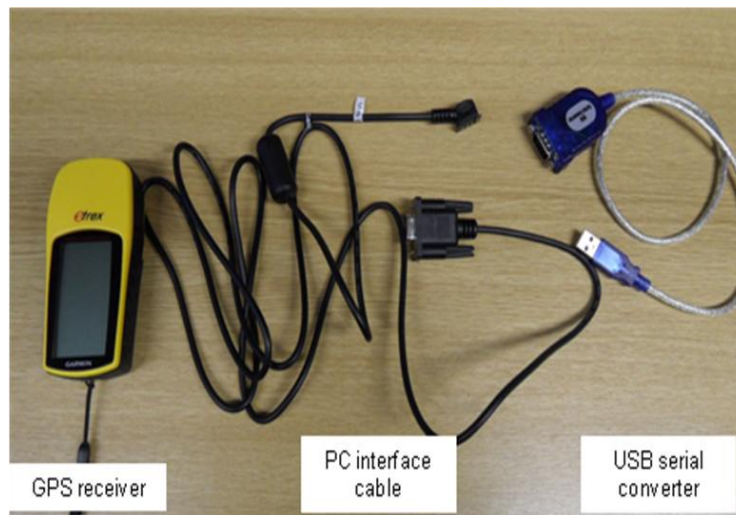
- Browse to the folder which contains the GPX file and select it. Use the browse button to select the GPX file, and then use the checkboxes to select the feature types you want to load from that GPX file. Each feature type (waypoint, track and routes) will be loaded in a separate layer (i.e. waypoint list as a point layer) when you click OK.



2. Downloading GPS data directly from a device. QGIS can use *GPSTabel* to download data from a GPS device directly as new vector layers.

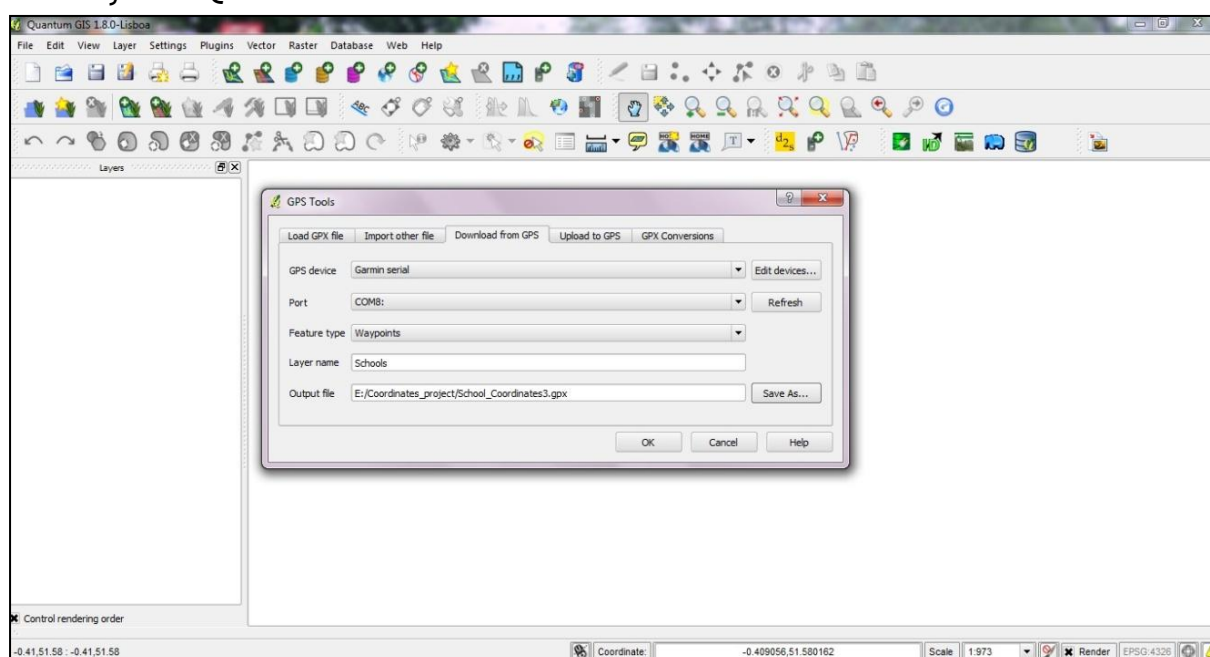
- For that, we use the **Download from GPS** tab of the GPS Tools dialog box.

- You have to connect the GPS receiver to the computer (PC) using a special PC interface cable which should have been supplied by the manufacturer along with the GPS units. Otherwise, you would have to contact with some provider in order to get a PC interface cable compatible with your GPS receiver.

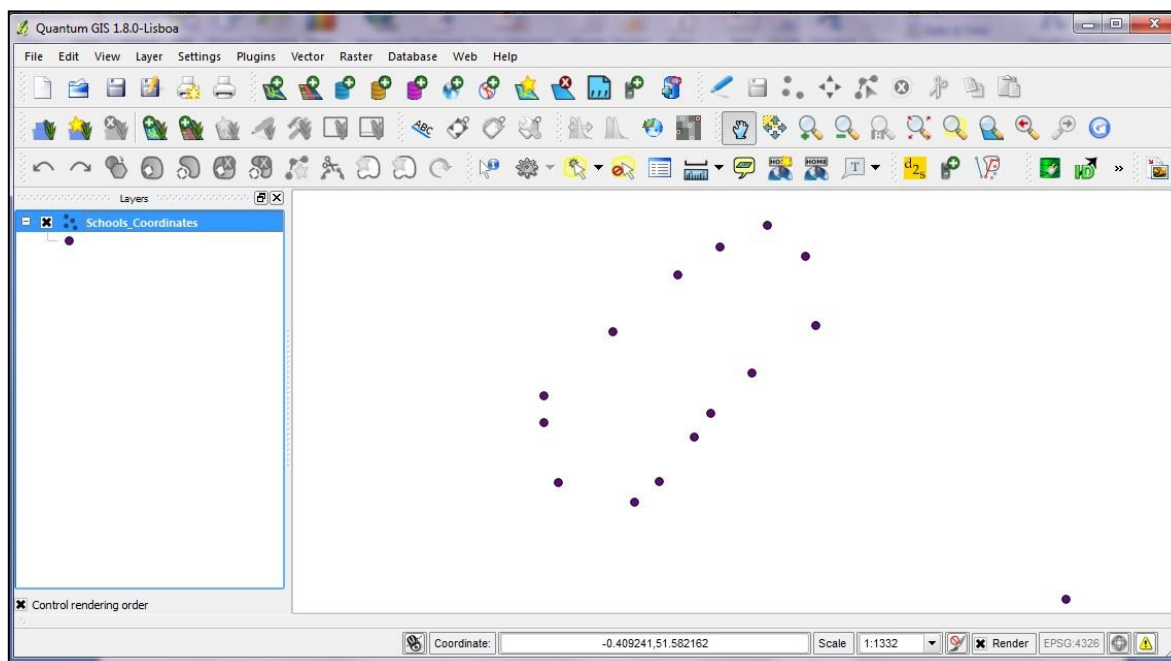


As most of modern computers, mostly laptops, are currently provided only with USB connections, you might have to use a USB serial converter when the PC interface cable uses a serial port (RS-232).

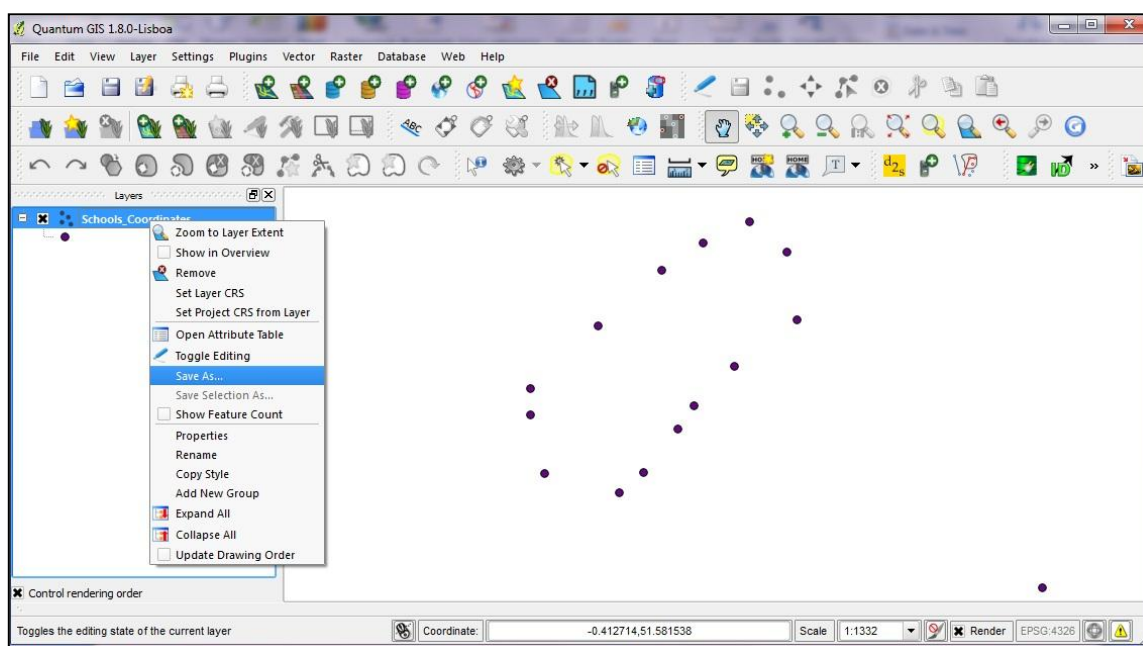
- Here, we select the type of GPS device, the port that it is connected to (or **usb** if your GPS supports this), the feature type that you want to download, the GPX file where the data should be stored, and the name of the new layer.
- When you click **OK** the data will be downloaded from the device and appear as a layer in QGIS.



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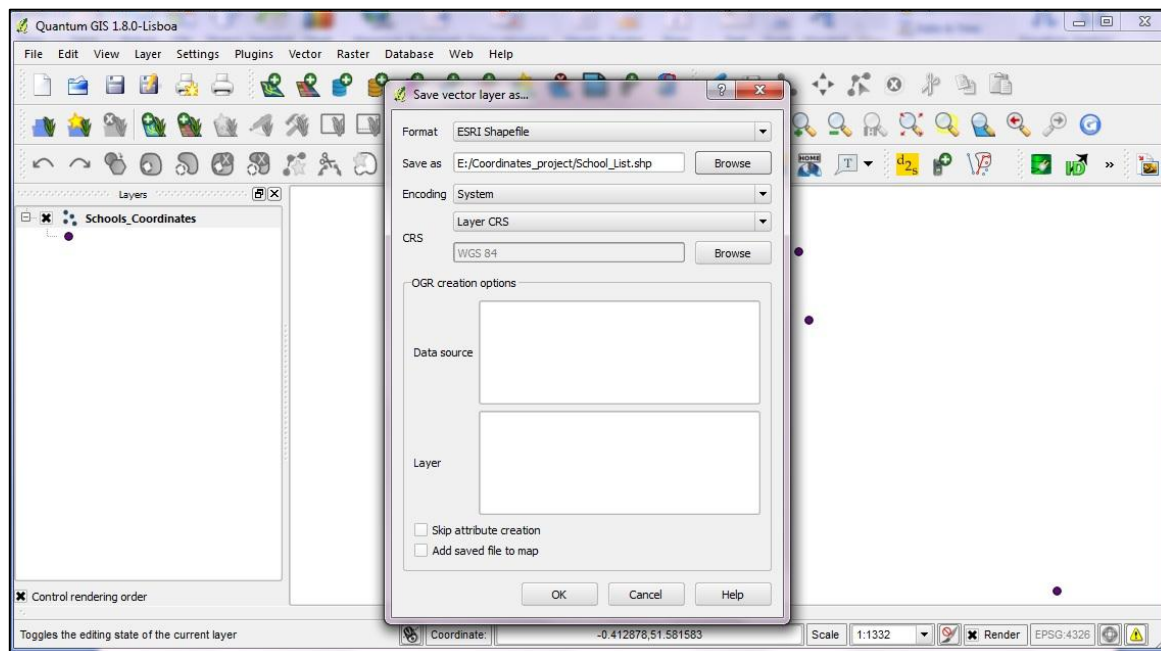


- Two new features will be created; a GPX file, which will automatically be stored in the folder specified, and a temporal feature, which will only be displayed as a layer in the QGIS framework. The latter should be stored as a shapefile (.shp format) to be used in future projects, otherwise only the GPX file will be maintained.
- Right-click on the layer name to open **Layer properties** dialog box and click on **Save as** option.



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- **Save as** dialog box will be opened, enabling you to set the name of the new layer and format (.shp).

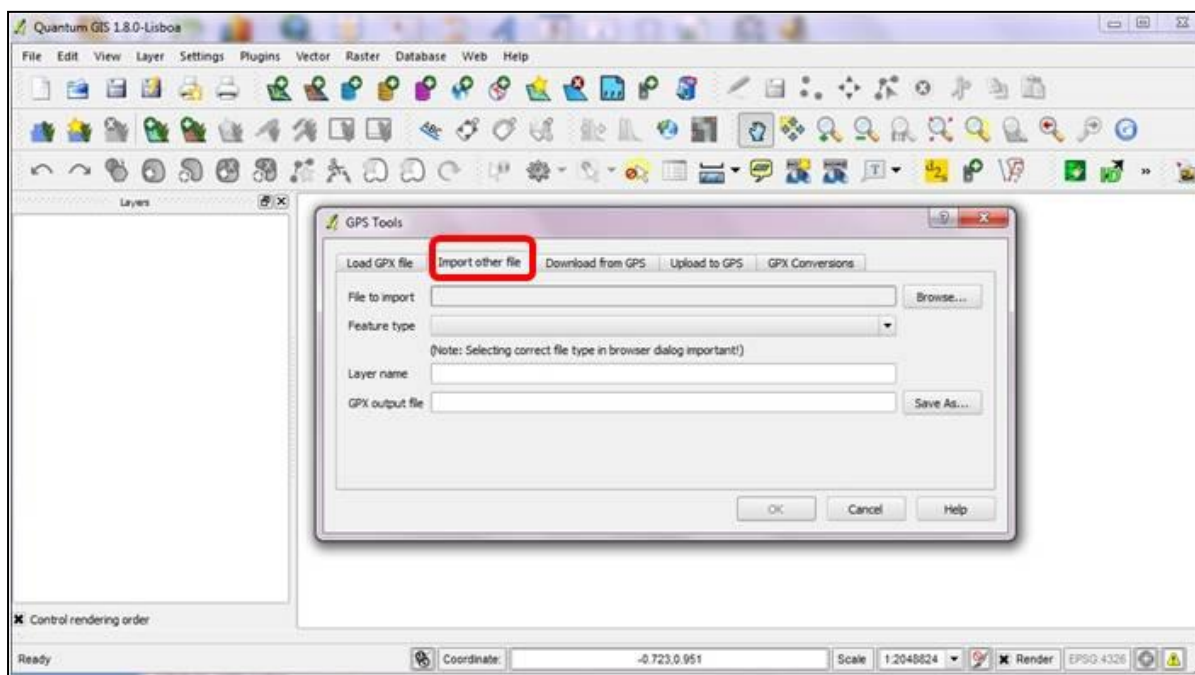


3. **Import GPS data.** To import GPS data from a file that is not a GPX file, you use *the Import other file* tab in the **GPS Tools** dialog box.

- In this tab, you can select the file that you want to import (and the file type), which feature type you want to import from it, where you want to store the converted GPX file and what the name of the new layer should be.



Notice that not all GPS data formats will support all three feature types, so for many formats you will only be able to choose between one or two types.



References

- Manual Using a handheld GPS receiver in field data collection
<http://www.thiswormyworld.org/resources/training-resources>
- *QuantumGIS* download and tutorial
<http://www.qgis.org/>