How to Create Transect and Reference Shoreline Files GeoJSON in QGIS

1. **QGIS**

    QGIS is an open-source geospatial information system software. It can be downloaded here. QGIS can be used to create both the transects and reference shoreline GeoJSON saved in user_inputs/<region>/<sitename> as <sitename>_transects.geojson and <sitename>_shoreline.geojson respectively.

2. **Transect GeoJSON**
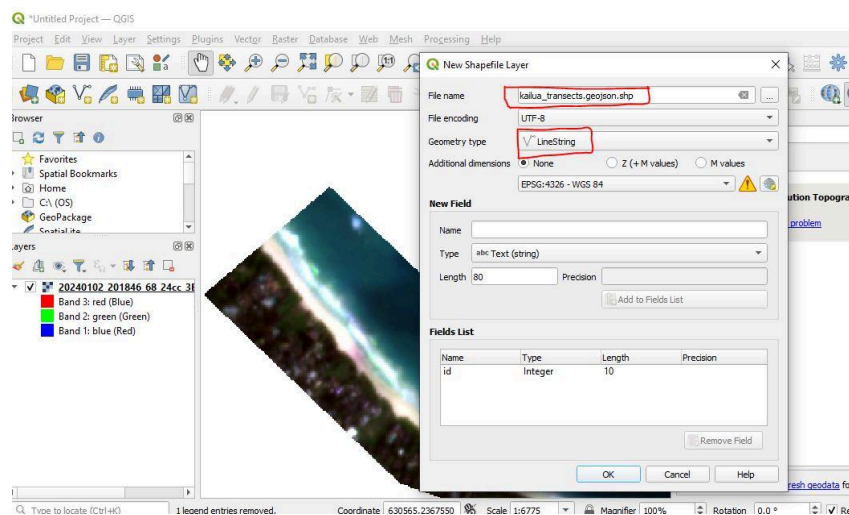
    2.1. **Create Layer**

    First, Drag and drop a tiff file (downloaded by the API here: data/<region>/<sitename>/*_3B_AnalyticMS_toar_clip.tif) of your choosing into QGIS.

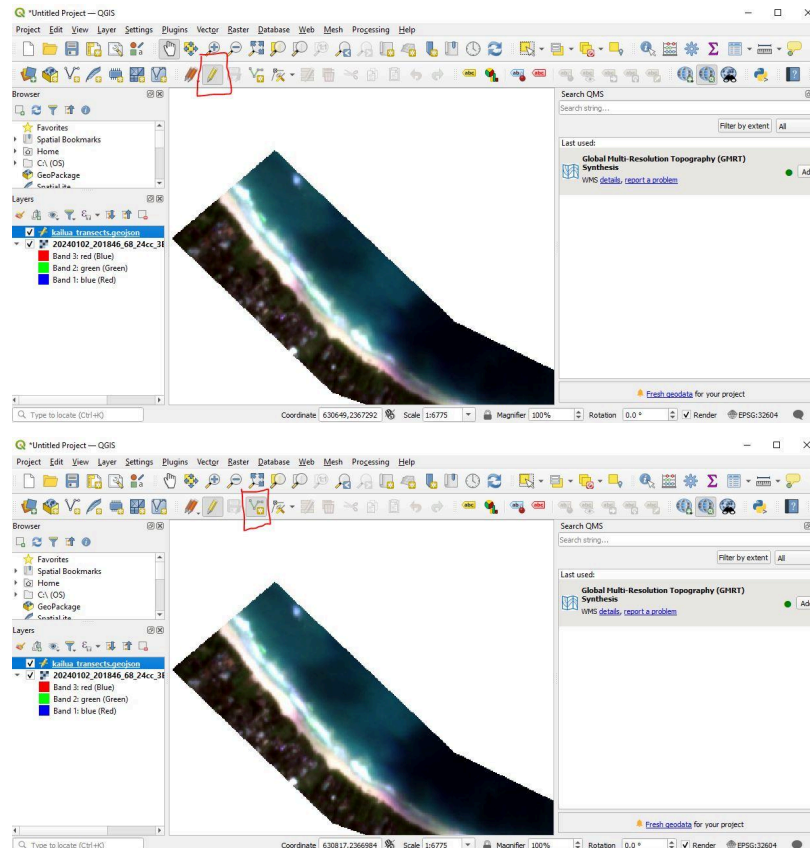   Next, click the "create shapefile layer" button shown below.
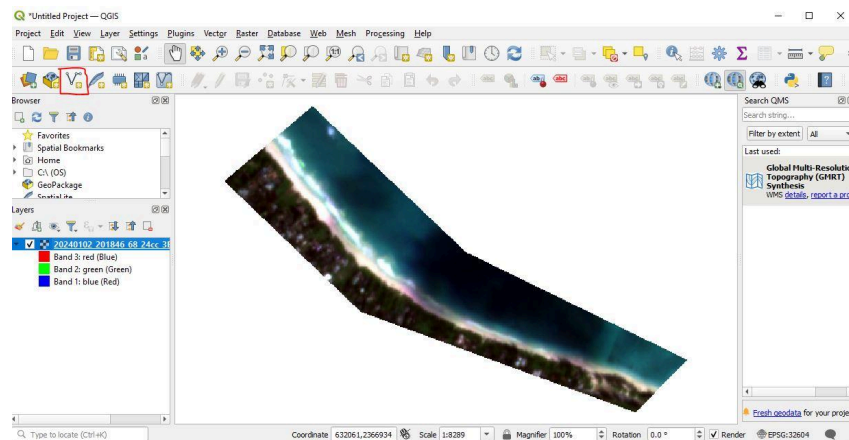
    Once clicked the dialog below will appear. Select LineString for geometry type and write filename (the filename will not be the final name so it is arbitrary).
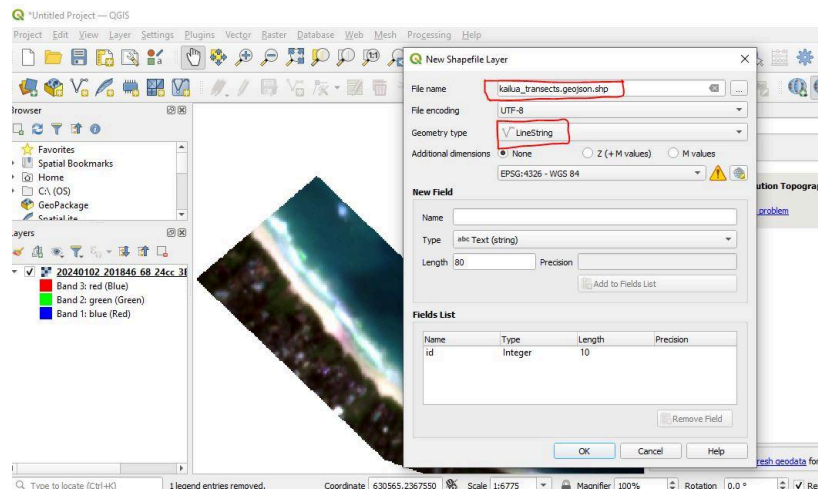

    2.2. **Draw Transects**

Select the pencil button and then the digitizing toolbar button to the right of it to begin drawing.
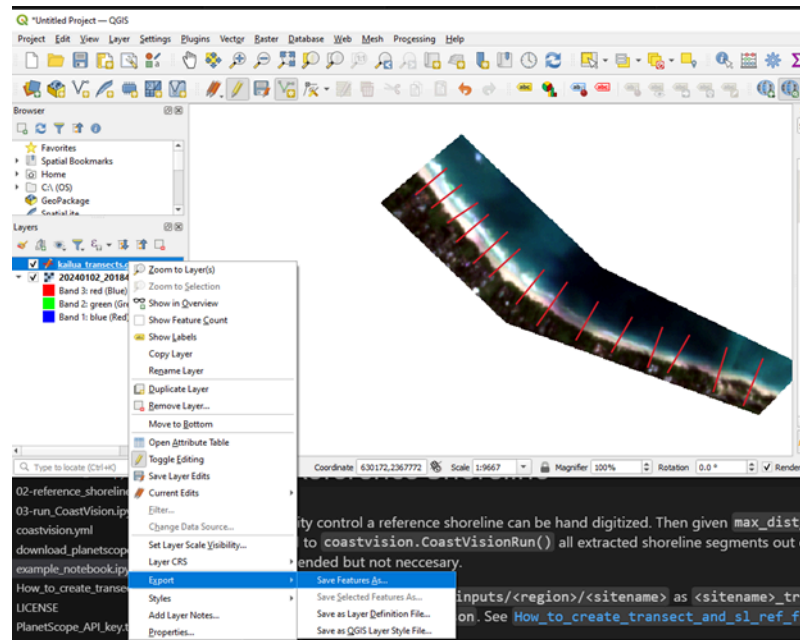

For each transect left click at the desired *landward* end of the transect then again at the seaward end. Then right-click to complete the transect.
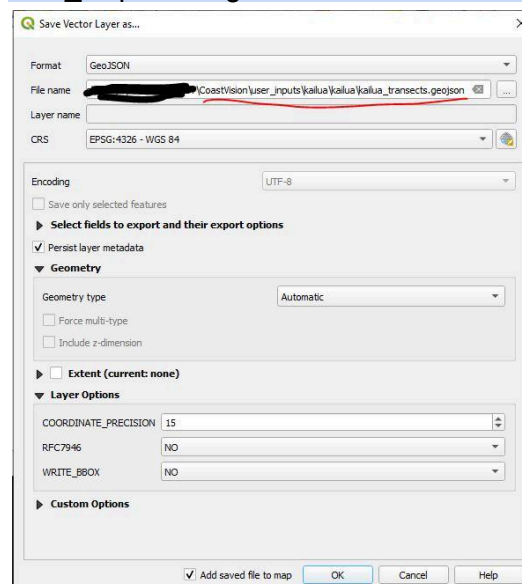

2.3.   Export File

Once all transects have been drawn right-click on the layer on the left-hand menu. Then select "Export" and then "Save Features As..."

After selecting this save a save file popup will open. Save the file
user_vinputs/<region>/<sitename>/<sitename>_transects.geojson.

⚠️ When Choosing CRS choose the projection that the TIFF image you are
using is in. See below. ⚠️

3. Reference Shoreline
For the reference shoreline the steps are the same except instead of making multiple line segments (transects) just create one line string that is the entire reference shoreline and save it as user_vinputs/<region>/<sitename>/<sitename>_shoreline.geojson.