## MyLocator3 Vertical Transform Export



Presented here is a proposal to incorporate improved vertical accuracy by allowing the MyLocator3 user to use and apply a local Geoid model.

Our GNSS device has a limited resolution Geoid model and by using a targeted Geoid model, it is expected the vertical accuracy will be improved.

The targeted Geoid model files are in GeoTIFF format. These are essentially a 2D map representing height values over a specific latitude and longitude range.

https://en.wikipedia.org/wiki/GeoTIFF





PROJ.org Datum grid Content Delivery Network (CDN): <a href="https://cdn.proj.org">https://cdn.proj.org</a>

This CDN provides approximately 300 Cloud Optimised GeoTIFF datasets and contains shift grids for horizontal and vertical coordinate transformations.

When the user has selected an appropriate GeoTIFF file, the (improved accuracy) Geoid model can be applied.





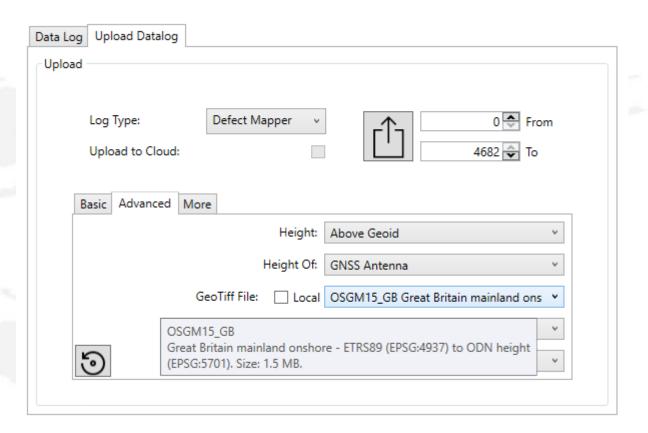
## **MyLocator3 Datalog UI**

MyLocator3 Datalog UI

Add a selection option for GeoTIFF files as shown. When selected, the data will be automatically retrieved and applied.

Resetting to defaults will select 'None' as the GeoTIFF file.

The GeoTIFF file list can be updated automatically from the server.





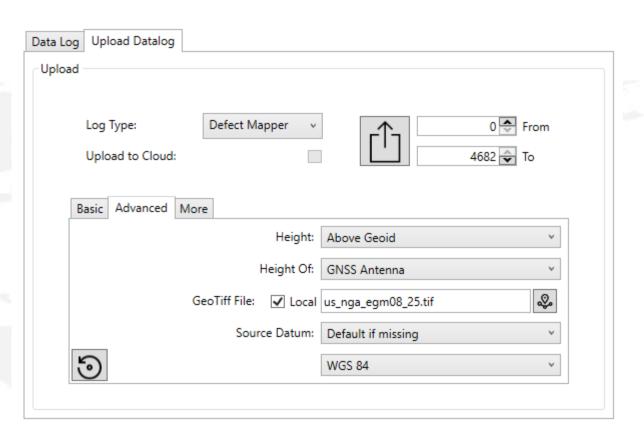


## **MyLocator3 Datalog UI**

MyLocator3 Datalog UI

Add an option to select and use a local GeoTIFF file as shown. When selected, the data will be automatically applied.

Resetting to defaults will select 'None' as the GeoTIFF file.







- 1. When using a selected GeoTIFF file, the export should replace the logged Geoid Separation value with the value from the CDN. The file column header should indicate the selected GeoTIFF file. For example: Geoid Separation/RAF18b(m).
- 2. When using a selected GeoTIFF file, the export should replace the logged Altitude value with the (corrected) value from the CDN.
- 3. If the selected GeoTIFF file is not appropriate for the logged coordinates, then the logged values will be used unmodified.

