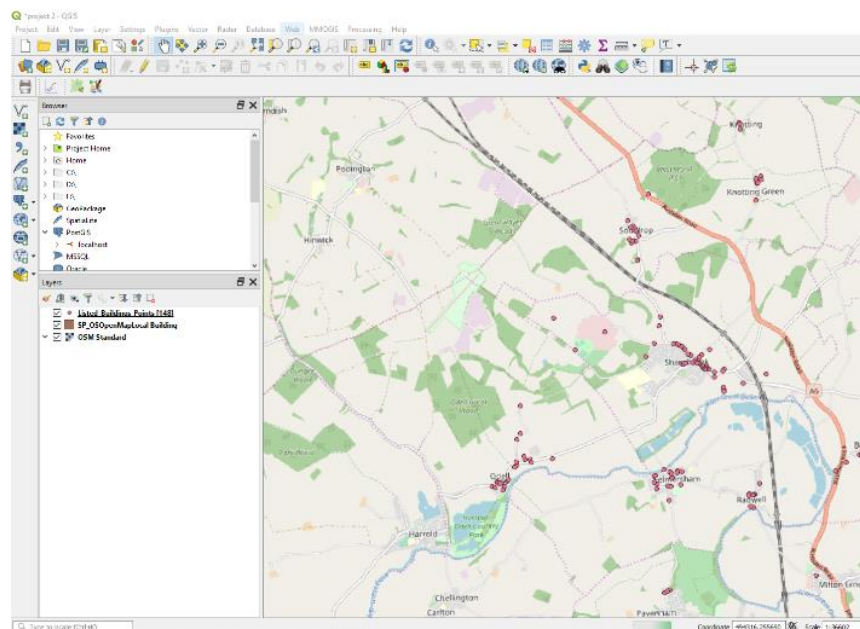


BLHA Spring Workshop on GIS

BLHA Spring Workshop 2019 was held at Sharnbrook in April. The number of members attending was disappointing, but this did not distract from a full and productive day.

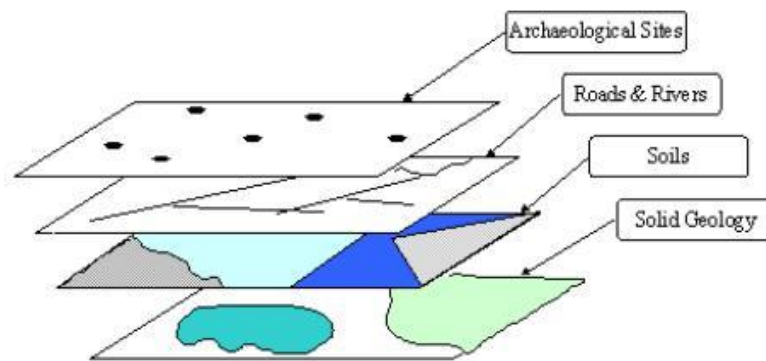
The focus was on using GIS (Geographic Information System) software to support local history research. Rather than repeat the talk given to the last BLHA conference, an introduction to GIS theory and possible applications was given by Matt Tuohy who is using GIS in his research for a PhD at Leicester as well as working with the HER department in Bedford Borough.

The software used is called QGIS and is an open source program which is free to download and install. Experience with other Windows based programs was beneficial to understanding the layout and functionality of the QGIS desktop. Installation of the software and downloading plugins, when needed, proved to be straightforward.



The participants were introduced to various sources of basemap from OpenStreetMap or similar online services. This was reinforced by topographical maps from Ordnance Survey Opendata. The first section was concluded by adding a third layer comprising Listed Building Information from the HER department. All three layers were rendered so they appear on a composite map. Clicking on an item in a selected layer will give information about that item. It was seen that it is possible to display the HER record and even add datalinks to that page to show your own research. The HER Departments at both Bedford Borough and Central Beds have confirmed that they will provide, under licence to BLHA members, data subsets for the area around any specified Parish. This will include Monuments, Listed Buildings, PAS finds from fieldwalking and metal-detecting.

The next section simulated a series of excavations as we used a handheld GPS to record the coordinates of several trenches in which Iron Age and Roman Pottery had been found. The task was to record the coordinates in a spreadsheet and to use this as a data source for QGIS. The trenches were defined as points onto a new layer and then filtered by pottery type using a simple SQL statement so the results for the IA and Rb layers were distinguishable.



Lunch was a hurried affair as we got back to the nuances of the National Grid!

We then wanted to add an image layer. We had an old, hand-drawn estate map of Colworth and had to use a plugin to fit it to the modern map. The technique called georeferencing matches points on the estate map to positions on the basemap. The program then finds the best fit to overlay the image as a new layer. This technique can be used for survey drawings, aerial photographs or LIDAR image datasets.

Statistical analysis of the data is now possible within QGIS. A new plugin called Data Plotly was used to create histograms of the trench data. The particular value of this approach is that as you float the cursor above a bar on the graph you not only see the data value but the feature is simultaneously highlighted on the map.

The technical part of the workshop was concluded with a session on reporting. This covered the use of the standard Report Designer which is useful for creating project updates and the special plugin QGIS2Web for creating interactive maps for uploading to websites. We used the trench data to create a pottery distribution map where the online user could choose which pottery types to display.

The workshop was concluded with a discussion on how we could use these various techniques to support our specific project needs. We soon found that we could map our data about Anglo-Saxon finds in the Great Ouse valley. We also could define how we would georeference specific churches and then add architectural attribute data e.g. the type of stone and then use QGIS plus filters to show a map of the status of the different sites. Finally, we explored how we might use a series of layers to create a timeline for demonstrating the research of a House history.

Now we know we can create maps from a simple spreadsheet that contains coordinate values the opportunities for mapping our research are just there waiting to be tackled and fortunately the costs are minimal.