Casting a Wide Net: Why Big Data is Important in Heritage

Gathering large amounts of data and using Geographical Information Systems (GIS) packages can, with the application of specialist heritage expertise at an early stage, add value and quality while reducing risk. There have been some assumptions of common practice over the last decade in various multi-disciplinary engineering/design firms.

- Each project will have a boundary from which a buffer can be created, normally referred to as a “study area”, which is determined by consulting with heritage stakeholders (The County Archaeologist or equivalent, Historic England/Historic Environment Scotland/CADW – hereafter referred to as “the Curator”) or established guidance documents such as the Design Manual for Roads and Bridges for road schemes.
- The study area is used as the geographical limit of information gathering and assessment of potential impacts.
- Heritage data gathering at early stages of a project, such as scoping, will usually be limited to statutory information (Listed Buildings, Scheduled Monuments etc.) most commonly accessed through the MAGIC website.
- Heritage specialists are usually engaged at early stages if the project is of significant scope (major infrastructure). Otherwise, they are brought on later, such as to prepare a heritage statement after this has been requested by the Curator.

Why might this practice be sub-optimal?

Looking at the MAGIC website: The information is not directly linked to Historic England’s Heritage List data, and thus can be out of date.

It still (at the time of writing) shows Registered Battlefields and Registered Parks and Gardens as not being statutory heritage assets, and does not show Protected Wrecks at all. Use the Heritage List data download or equivalent, directly from the relevant national Curator. With that out of the way, on to the more thorny and sensitive issue of scope and specialist involvement.

So, you have a study area, what now?

Firstly, designated heritage assets make up less than 10% of known heritage assets and known assets are VASTLY outnumbered by undiscovered or unrecorded assets. By only gathering statutory data, there is a risk of identifying highly sensitive assets too late to deal with through design and instead risk construction delays and costly archaeological fieldwork.

Secondly, by constraining the information gathering to the study area, there is a risk that the Curator will raise concerns over assets further away, which may have highly sensitive settings, such as designed landscapes or landmark structures. A recent programme of Historic England sponsored outreach training has shown that setting impacts like this can be showstoppers, even when the receptor is over 5km away.

The proposal - Going further afield

There is an instant aversion to looking beyond the study area. It’s an unnecessary expense, it’s beyond the scope, not needed to tick the box at this time.

Expense can be addressed easily. All the go-to data sources (Historic England/Scotland, CADW and local authority Historic Environment Records “HER”) hold their information in digital format and either provide the information for free or for an hourly charge based on the time taken to extract and format the data.
For example, a search of the Historic England Archive of non-designated heritage assets often costs the same whether for 200m$^2$ or for 200 hectares. Likewise, if you submit your study area to the HER, it is worth asking how much more data you can get before incurring extra cost.

**Once you have the data, what do you do with it?**

Using GIS, which most drafting technicians will have access to, and for which low cost or free web-based viewers exist, the information can be rapidly collated and sorted by many different variables. A heritage expert can, in very little time, get a good appreciation of the known heritage assets by historical period, type of asset etc. This interpreted information can also be rapidly presented in a meaningful way to the non-heritage specialist, so everyone can be on the same page when discussing issues.

**So what do you get for all this?**

If you have a narrow data set, it is very hard to predict what new assets you may find on your project. It depends on the amount of previous work that has been done in the study area, and that is often extremely un-even. By going further afield, the heritage specialist is able to present a more robust assessment of heritage potential, feeding through to the project timescale, forecast costs and inform design to avoid issues before they occur. There will also be less surprises in your statutory consultee’s letters, as your heritage expert will have warned you about the viewing platform on the roof of that Grade I Listed Building 3km away.

*Author: Paul Bennett, Heritage Consultant, Mouchel Consulting, February 2016.*