

Construct a database or dataset of selected archaeological material / records, provide metadata statements in line with current Archaeology Data Service guidance, and a commentary explaining and justifying its structure and the categorisation / classification of the data.

For the purpose of this commentary, I will be referring to the dataset titled

Dataset_PGTargetsNYorkshire_Andrews_2309525_HPAR7004_02 which is found in the supplementary data submission.

Within my role as an Archaeological Aerial Investigator, I am tasked with gathering data through reconnaissance flights across the North of England at different times of the year and for different purposes (Andrews, 2023). When planning a flight, I often need to take into consideration the amount of coverage that sites have had in the past, to decide which sites to prioritise. With such a high volume of sites to cover, keeping track of how well each site has been covered, can be difficult. One of the main aims of the dataset was to create a table that can store the details of a variety of site types to establish which sites have priority over others when planning future flights. One way of achieving this aim is through including a range of information provided by Historic England that would both inform my decisions of choosing which sites to target for future flights and hold useful information for understanding the site whilst conducting aerial surveys. The data within the spreadsheet must also be easily extractable, to be able to use the information in different formats for use while conducting aerial surveys. Overall, the dataset needed to be versatile both in format and the information that it was able to contain, but also to be reusable as a template for different flights to be planned at different times of the year. To delve into how this dataset

was created I will explain why certain information was included in the dataset and provide a detailed analysis of how the data is arranged. All of the data collected (apart from personal notes and whether the sites had water bodies or not) was taken from various databases, reports and GIS maps created and managed by Historic England including the Heritage at Risk Register (Historic England, 2023), The National Heritage List for England (NHLE)(Historic England, 2024c) and Historic England's Aerial Photograph Explorer (Historic England, 2024a) which is available as an online GIS platform.

For each site listed on the NHLE, a unique list entry number is given, which in this dataset works as the *Unique Identifier* for each site, something which can speed up searching for an individual site if referencing the NHLE, by using the filter functionality within the Excel table. The next column in the dataset is the *Site Name*, which is assigned by the NHLE, thus providing a clear and concise naming convention, helping avoid mistakes when naming the site, as suggested by the ADS help and guidance (Niven, 2011). Also included in the dataset is the location information for each site which is split into two types, the National Grid Reference as recorded on the NHLE and the Northing and Easting which can be converted from the National Grid Reference. The National Grid Reference which is readily available and accurately recorded within the NHLE entries, means the information can be accessed quickly, however, this format of location is not recognised by most GIS software so it is important to convert this information so that the data can be reused for other purposes including conducting aerial surveys. This is one of the reasons that the data is stored in an Excel spreadsheet rather than a database as it makes the information easily extractable and reusable for other formats and purposes. The next column titled *Main Designation* is the designation assigned within the NHLE by Historic England. The column has a drop-down feature which only allows the set definitions that Historic England assigns each site to be

input. There is an 'other' option for a scenario when this table might be reused and include a site which does not fall under any of these designations i.e. the location of an undesignated earthwork which I still want to use in a GIS software as part of a flight plan. This ensures the table works for a variety of site types but still keeps data clear and concise, again for use of the filter functionality which would be useful if I wanted to select only scheduled monuments to target for the next flight plan. The table also includes two columns for the *County* and *District* that the sites fall within as described on the NHLE, this is mainly useful for filtering multiple counties/ districts if I intend to target a certain area. Another important piece of information taken from the NHLE is the grade designated to each site, if this applies to the site type, as they are not all graded. The grade is important, especially with Parks and Garden sites, as holding information about site significance could help inform decisions on which are of higher priority when choosing targets. This will be discussed in further detail later in the commentary.

Some sites are slightly more complex than others and contain more than one designated site type; Parks and Gardens can often have scheduled monuments and listed buildings within their designated areas, for example, Duncombe Park which is a registered Park and Garden but also has listed buildings and a Scheduled monument within the designated area (Sayers, 1999). This was therefore a consideration of the dataset and another column I chose to include. The *Other Designations on Site* column, similar to the *Main Designation* column, has a drop-down box with the added option for *Multiple* features if more than one type is present. This information is slightly more complicated to obtain as although most NHLE entries mention if there are scheduled monuments in the designated areas, the descriptions are often lengthy and less obvious to find, which in turn adds time to the data entry process. A quicker way of bypassing this lengthy process is to consult the

internal GIS database, which shows the shapefiles of each different site type in a map format making the information easier to find, but this isn't a service that is available for external parties and it is only available to those working for Historic England. The next column is useful if the *Multiple* option is selected, as this doesn't allude to the type of designated features within the main designation, so to make this option more useful whilst completing aerial surveys, the next column contains information about whether the multiple designations include any scheduled monuments as these are often surveyed for condition monitoring as a major part of the aerial survey investigation role (Historic England, 2024). The next column is also extremely useful from an aerial survey perspective as it describes the scheduled monuments, summarising the description provided by the NHLE. The NHLE uses terms defined by the FISH Thesaurus (Forum on Information Standards in Heritage, 2021) which makes it a less subjective source than someone's personal interpretation of a monument. There are some negatives to the NHLE records, as not all of the records are up to date, many are "old county numbers" from an old scheduling record and hold very little information, for example, the Roman buildings and field system scheduled monument which sits within Thorpe Perrow Park and Garden designated area (Historic England, N.D). This could lead to inconsistencies in the information entered within the dataset, however, for the purpose of this dataset I didn't find any issues with the subtle difference in entry, as only basic information is required to identify features when conducting aerial surveys. If the template for this dataset were to be used for another survey method and the NHLE was to be used as the source of information, this could cause issues if more detail is required.

Different from the previous columns, the data within the *Water Bodies* column was retrieved through observation, to add more detail about the sites that may be useful for future projects. This column was included after having conversations with the National

Landscape Advisors for Historic England; it was identified that further coverage of water bodies within Park and Garden contexts could be of importance for some of their future projects (Please see Appendix 1). This table could be shared with colleagues in other teams and worked on collaboratively to create a list of targets or specific features that they need more coverage on, which could be complemented by including extra information that would be useful whilst conducting aerial surveys, another reason for formatting the dataset in Excel as it achieves the aim of increasing the dataset versatility. One drawback to sharing the dataset could be the likelihood of inconsistencies within the input data, including spelling errors, reordering of words in phrases and word-heavy inputs (Binding and Tudhope, 2016, p.7-8). A way of controlling external team input would be to have drop-down options so only specific answers can be input; currently, the *Water Bodies* column has two options, *Yes* or *No*, to control input. This information was obtained through observations made from ordnance survey maps, which still allows for some subjectivity in deciding which water bodies are included, I took the viewpoint that only man-made and designed lakes and ponds would be included and not rivers, but others may want to include rivers.

When deciding which sites need more coverage, I always consult Historic England's Aerial Photograph Explorer (Historic England, 2024a), the online GIS platform allows me to see all of the aerial images that are available for each site across England. By analysing designated Park and Garden areas on the map I can see how many aerial photographs are available for each site and when they were last taken. The next column labelled *Modern Aerial Photographs* allows only for *Yes* or *No* in the drop-down box, stating whether the site has any modern images at all. If *No* is selected the next column labelled *Year last Photographed* is left blank, however, if *Yes* is selected, the images must all be examined to find the most up-to-date images available, this is where the year is input. Finally, if there are

images of the site, it can be useful to get an idea of how many there are available, as having less than five may not be very useful for research purposes. Without having a huge list of different numbers being input, I chose five drop-down options to select from so that if I wanted to search for all of the sites with less than five, this would be possible through the filter functionality. The columns *How Many Photographs* and *Year Last Photographed* were used to decide the grade given in the *Coverage Priority* column. When deciding how to grade each site, an input message pops up reading '*Red=No Aerial images/Non within last Ten+ years, Amber= Less than Five photographs/Non within last Five years, Green= Photographed within last Five years*' meaning that sites with *Red* input should be considered of higher priority. Having some parameters in place to help inform the grading decision, helps reduce subjectivity and create consistency in the decisions that are made, similar but less complicated to the criteria used to decide which sites are placed on the HAR Register (Historic England, 2023, p. III-IV). A rule was added to this column to change colour depending on which written colour was input, this is mainly to make the priority more apparent when viewing the dataset and does not add meaning to the data, therefore if the format of the table is changed and the rule is lost, the integrity of the data won't be affected as suggested by the ADS help and guidance concerning non-data content (Niven, 2011).

Another form of priority which could inform if a site needs more coverage is if the site is on the Heritage At Risk (HAR) Register (Historic England, 2023). The next column of information was derived from the most up-to-date list of sites on the HAR register to inform if the site is on the HAR Register (Historic England, 2023), with a drop-down option of *Yes* or *No*. The next column *What Level of Vulnerability?* has a limited number of drop-down options which reflect the terms defined within the risk assessment decided by Historic England of either *None*, *Low*, *Medium* or *High* (Historic England, 2023, p. VIII), ensuring the

filter functionality works but also that the colour-changing rule, which again makes it easier to see which should be targeted, functions correctly. Using the information provided on the HAR Register, also describes which features are at risk, which is useful information to have while surveying, emphasizing which features may need extra coverage due to recent changes in their condition. This was the main reason for including this extra level of detail under the *Which Features are at Risk?* column focusing on the responsibilities of my role to tackle condition monitoring of sites at risk (Historic England, 2024b). The last column is for any extra notes that may be of use either for choosing which sites to target or whilst surveying the site, this may include details about which features have not been photographed or need more images.

There is no set column for ultimately making the decision on which sites are of higher priority than others, but rather a collection of different reasons that a site may need to be targeted, this does allow for subjectivity in the final decision, but practically it brings all the most useful information together into one place, which also shows how such decisions were founded giving a clear justification. One way this dataset could be of further use would be to keep it updated every time survey flights are conducted as part of the post-processing phase, this would enable future usability, keeping data on which sites were recently photographed up to date and changing their priority grading accordingly as well as monitoring the HAR register to see if any sites have been added or removed. This dataset has the potential to aid in keeping up-to-date records on the coverage of a range of different site types and for different locations.

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Appendix 1:

Aerial photography and designed landscapes

Cc: [REDACTED]

Damian, Robyn,

It was good to have a chat through some ideas for aerial photography with you.

Some thoughts below based on our discussion;

- Waterbodies – the large waterbodies (25,000 m³) that are already the subject of the Reservoirs Acts should be fairly obvious from the air. So should their dams and control structures. I suspect that many in parks and gardens will have already been captured.

What we would be particularly interested in are the smaller ones (10,000 m³ (football pitch size)). The method of impounding might be less obvious from the air and control mechanisms may be no more than a sluice board and a spillway. These will be difficult to spot. And initially we are interested in waterbodies in registered parks and gardens, and any associated with country houses where the surrounding landscape isn't registered.

In this respect, some geographical intelligence will be useful in advance. For example, there would be no point in looking for smaller reservoirs associated with country houses in the Cheshire Plain. Many waterbodies here will be naturally occurring meres or designed waterbodies that are not 'impounded' (there's no dam and spillway, they're just created within the natural topography of the site). But it would require on site investigation to verify this.

We might want to start by looking at waterbodies in parks and gardens in AONB and National Parks? I'll have a bit more of a think about this over the next couple of days and see if I can come up with a bit more focus on certain areas.

Extract from an email between myself (Robyn Andrews), my manager (Damian Grady) and the National Landscape Advisers within Historic England.