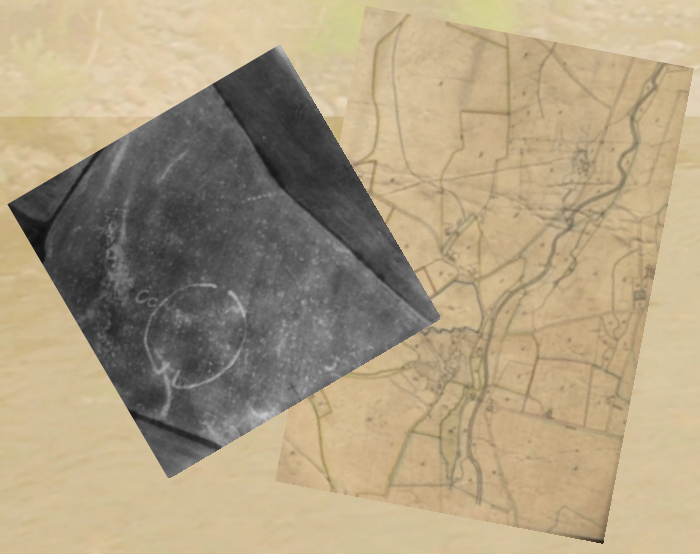
Desk-Based Assessment

A desktop assessment is defined by the IFA as "A programme of assessment of the known or potential archaeological resource within a specified area or site" (Institute of Field Archaeologists Standards and Guidance).

A Desk-Based Assessment is often the first step required in the planning process and is sometimes commissioned by clients to include with the initial application. It involves a full documentary investigation of the archaeological potential of a site and will be used frequently by the planning authorities to determine the need for further archaeological investigation. The archaeological importance of a site is usually measured against criteria set out in Planning Policy Guidance Notes 15 and 16 and English Heritage guidance (see EH web site - address on the back page).

A desk-based assessment will involve careful analysis of any previous archaeological work undertaken in the area.



Desk-based assessments make use of all available documentary evidence, such as aerial photographs, old maps, historic environment records and published information (Aerial photograph ©Tim Gates).

A Desk-Based Assessment will typically include information from maps and plans of the area, both modern and historical, all relevant data from the Sites and Monuments Record (now known as Historic Environment Records - HERs), the National Monuments Record (NMR), aerial photograph evidence, geological information, and any archaeological literature relating to previous investigations on or near the site. The Desk-Based Assessment will also consider the potential impact that proposed development will have on the area under study.

Desk-based assessments are relatively inexpensive as they do not include fieldwork other than perhaps visits to a record office, library and/or site visits that may include a walkover survey.

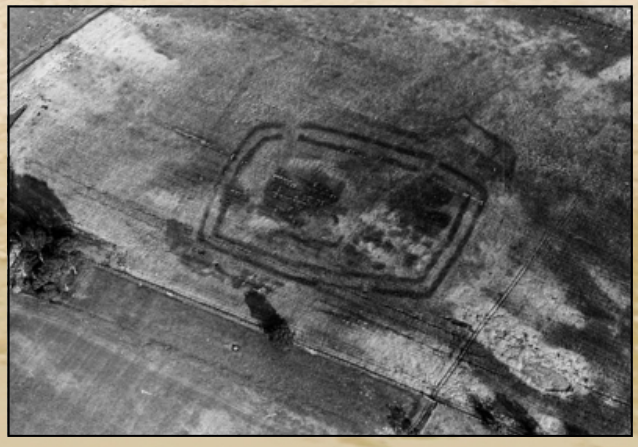
Previous publications are consulted and all documentary data synthesised.

Aerial Photography

Aerial photography has proved the single most effective method for discovering new sites. With the ability to photograph and analyse huge areas in a short space of time it provides an efficient means of observing the landscape and detecting discolourations in soils and crops as well as upstanding remains which are difficult to see at ground level. Aerial photography is most productive in dry conditions when there is a high soil moisture deficit. Crop marks and soil marks show best under these conditions and the years 1976 and 1994 were spectacularly productive for this reason.

Aerial photograph showing crop marks of an Iron Age/Romano-British enclosure on the banks of the River Tweed, Northumberland (© Tim Gates).

Archaeological sites can show as crop marks and parch marks when viewed from the air. Archaeological features show as a result of differential crop ripening or moisture content in the overlying soil. Using good quality oblique photographs of archaeological sites, specialists can transcribe archaeological remains as corrected plots on to Ordnance Survey base maps. Once the existence of a site has been fixed in a particular location, sensitive areas can be defined.



Crop marks of substantial buried remains which leave no clues at ground level of their existence (© Tim Gates).

Different types of archaeological site have characteristic shapes allowing buried sites to be classified according to type and general date. As part of this project all the sites identifiable on aerial photographs have been transcribed on to Ordnance Survey base maps resulting in 254 new national monument records and enhancement of 218 existing records. Of the 472 records created or amended, 268 were not previously recorded in the digital records of the Northumberland HER. Aerial photography is less responsive to small features such as post holes, stake holes and small pits, but will generally show large sites well unless blanketed by thick deposits of alluvial or colluvial sediments.

Aerial photography is a mid-range expense but highly cost-effective given the huge return for the short periods of flying time, photography and transcription involved. In order to be most cost-effective it is best to target flying for specific times of the year when the soil moisture deficit is likely to be at its maximum. In north Northumberland this is usually in late July. Checking aerial photographs and transcribing archaeological sites on to maps is usually undertaken as part of the desk-based assessment phase, but in the case of the area covered by this project all known sites (as of 2004) have already been transcribed and are included on the accompanying DVD.

Crop marks overlying buried ditch deposits can be seen as a darker green against the yellow crop (© Tim Gates).