

Mapping the historic landscape

The aim of the modern aerial archaeologist is to create a map of the prehistoric and historic landscape by mapping all archaeological features visible on aerial photographs. So how do we do it?

All available photographs, both oblique and vertical, are examined and any archaeological features are identified. We would normally use a stereoscope to do this. Pairs of photographs are taken with an overlap in which a point on the ground is visible on both images, each taken a small distance apart. This is true of all vertical photographs and on some oblique images as well. When the pair of photographs is looked at stereoscopically, a three-dimensional image can be seen. In a stereoscopic view the landscape appears in exaggerated relief which makes it easier to see slight earthwork features.

Once an archaeological site has been identified, the photograph is scanned and then digitally manipulated in order to remove all the distortions due to height and camera angle. This process is known as rectification or transformation and requires a number of control points to be chosen from the aerial photograph (for example corners of fields or buildings) each of which need to be marked on the corresponding map of the area. These control points are then used to transform the image into a corrected plan view using specialist computer software.

The archaeological features can then be digitally plotted from the rectified images in the computer using a drawing package (we use AutoCAD). As each successive photograph is scanned, rectified and plotted, so a map of the historic and prehistoric landscape gradually emerges.



Using a stereoscope to view a pair of vertical photographs