

# Lidar Surveys Reveal Devon's Hidden Archaeological Features



Aerial mapping company Bluesky has used aircraft-mounted lasers to create 3D maps of potentially important archaeological sites in Devon, England, UK. Funded by Historic England (formerly English Heritage), the Lidar surveys were commissioned by Devon County Council's Historic Environment team with support from the Blackdown Hills Area of Outstanding Natural Beauty (AONB) and The East Devon AONB. Using a range of visualisation techniques, the Bluesky Lidar data will be modelled to provide accurate representations of earthwork remains, providing new information for known monuments and revealing previously unknown sites. The Bluesky Lidar data has already been used to provide valuable information in advance of a public consultation on road improvement works on the A30 trunk road.

Lidar data is a valuable tool in archaeological landscape studies as it provides a very accurate model of the ground surface, commented Cain Hegarty, project manager at AC Archaeology and part of Devon County Council's Historic Environment Team. The data can be re-visualised in a number of ways to give multiple views of the same site, and in wooded areas can be used to reveal features that are often inaccessible to archaeological field surveys and opaque to traditional aerial surveys, he added.

Due to its quality and detail, the Bluesky Lidar data can also be used to provide accurate georeference for archaeological features – visible on historic aerial photography but not on more recent images. The data also has the potential to provide further insight into the historic landscape through techniques such as viewshed analysis, Hegarty continued.

## Previously under-mapped

The three locations captured by Bluesky were in the East Devon and Blackdown Hills AONB, all previously under-mapped and under-studied but thought to be of great archaeological potential. The first transect of Lidar targeted the western scarp of the Blackdown Hills, an area known to have been important in the Roman iron industry and locally significant for whetstone mining. The second study area was the naturally and culturally important landscapes of the Pebblebed Heaths, while the third and largest transect extended from Sidmouth north-east to the Blackdown Hills, taking in the route of the A30.

The Lidar surveys were carried out as part of the Historic England's National Mapping Programme (NMP), developed for the identification, mapping and recording of archaeological sites and landscapes from aerial photographs and other remotely sensed data. The archaeological survey is being carried out by historic environment consultancy specialists, AC Archaeology, with the new information being recorded directly into Devon County Council's Historic Environment Record (HER). The NMP methodology and standards provide the means for expert aerial interpreters to identify and record information to a consistent standard, in order to enhance the understanding of past land use and aid the identification and analysis of archaeological landscapes and monuments.