THE VIEW FROM ABOVE: RECENT SURVEY WORK AT CAUS CASTLE AND CASTLE PULVERBATCH

Over the past couple of years, a series of non-intrusive surveys have been undertaken on two castle sites in Shropshire, funded generously by the Castle Studies Trust. Small grants have enabled a programme of extensive and intensive survey to be undertaken at both Caus Castle, Westbury and Castle Pulverbatch.

The surveys at both sites have employed a nested methodology – large scale topographic survey (using a Unmanned Aerial Vehicle [UAV], or drone), focused conventional analytical earthwork survey and detailed geophysical survey. The underlying principle has been that, by comparing and contrasting the results of different survey techniques, maximum information can be gained about these sites.

Unmanned Aerial Vehicles, commonly referred to as drones, have become, in recent years, an increasingly important part of the survey arsenal of the landscape archaeologist. In the present fieldwork, systematic survey by drone has not only allowed low-level aerial visualization but, by using "structure from motion" technology has allowed us to create a full 3d topographic models from overlapping images taken from the drone's camera. This has allowed detailed analysis of earthworks, and is of particular use when used alongside other, more conventional techniques of remote sensing.

The tree-covered motte and inner bailey, surrounded by the castle's outer enclosure at Caus. © Shropshire Council, 2010.

Work at Caus Castle, a site of private land, was largely concentrated on the inter-relationship between the motte and bailey castle, probably built by Roger fitz Corbet in the late 11th or early 12th century, and the associated borough, with burgesses recorded from a range of documentary sources in the 12th and 13th centuries. Earthwork evidence of the borough itself was quite slight, although some possible house platforms did survive. Earthwork survey, both from the drone and on

the ground, allowed the analysis of the hitherto under-examine inner bailey of the castle – mapping the inner courtyard in detail, as well as pointing to some possible garden earthworks, possibly associated with works carried out by the Thynne family in the early 17th century. In addition, earthwork survey evidence has provided a re-analysis of the relationship between the inner bailey and outer enclosure of the castle.

In 2017, based upon the model developed at Caus, a programme of geophysical survey and UAV survey took advantage of recent management work to clear parts of the survey, spearheaded by the Friends of Castle Pulverbatch. Castle Pulverbatch is recognised as being one of the finest examples of a motte and bailey castle in the county. The castle comprises a roughly circular motte with a base diameter of 35m standing up to 8m high constructed on the edge of a ridge to make best use of the natural topography. When in use, a timber tower is likely to have stood on the top of the motte. There are local traditions of stonework surviving on the summit of the motte, though there is no trace of this now. Detailed resistivity and magnetometry survey was undertaken of all available areas in both the inner bailey on the northeast side of the motte, and the large outer bailey that lies to the northwest. Analysis of the results suggest in situ building material, particularly within the inner bailey, coinciding with earthwork features seen on the drone survey.

UAV image of Castle Pulverbatch, in context of the village which has been suggested as a planned settlement. © Aerial-Cam, 2017.

Initial reports have been prepared for these programme surveys, and have been lodged with the HER; articles for regional and national journals are now in preparation. Photogrammetric models produced by the drone survey described above can be seen and explored online – follow the links from SAHS website.

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