Watermeetings Hillfort and the Pendle Hill Landscape Partnership

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The Pendle Hill Landscape Partnership

The Pendle Hill Landscape Partnership is a multi-disciplinary project which aims to bring members of the local community together in a variety of tasks and research investigations into the areas surrounding Pendle Hill, in the county of Lancashire in the Northwest of England.

The project is run by the Forest of Bowland AONB, is funded by the Heritage Lottery scheme and I was employed as an intern archaeologist by the University of Central Lancashire, to investigate a number of sites of archaeological interest within the AONB boundary surrounding Pendle Hill.

After investigating a number of sites using Lidar (see fig 1), map regression, geophysical survey and aerial photography, it was decided that this seasons fieldwork would focus on geophysical survey using both resistivity and magnetometry techniques to investigate a possible Late Prehistoric fortified hilltop enclosure called Watermeetings.

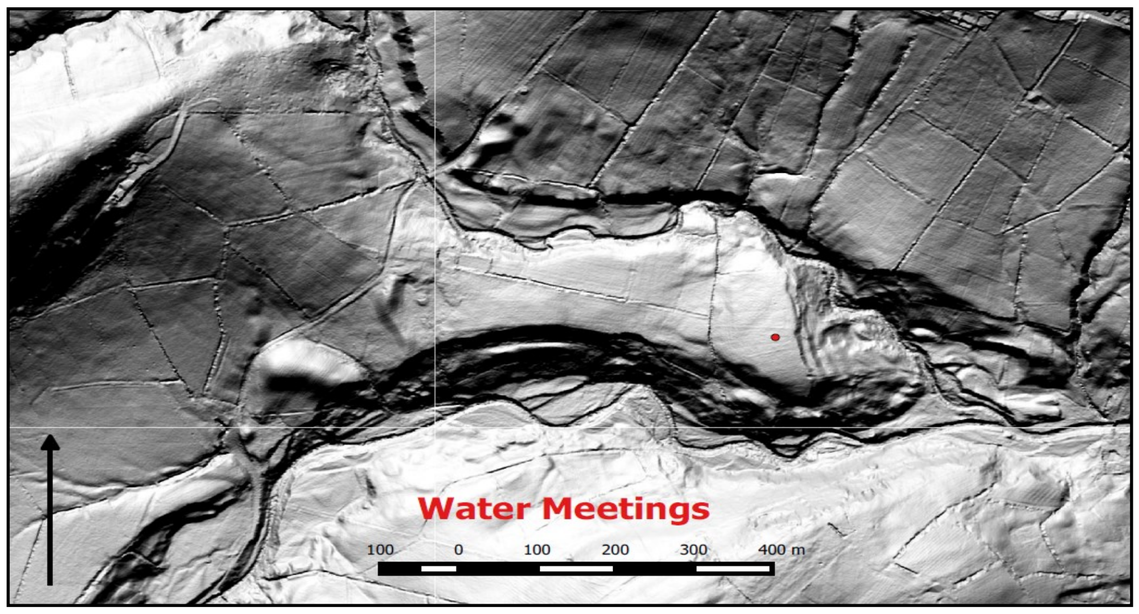

Figure 1– Lidar image of the promontory at Watermeetings..

Watermeetings

The area known as Watermeetings is located between the confluence of Pendle and Blacko Water and lies between the parish boundaries of Roughlee, Barrowford and Blacko (Clayton, 2010).

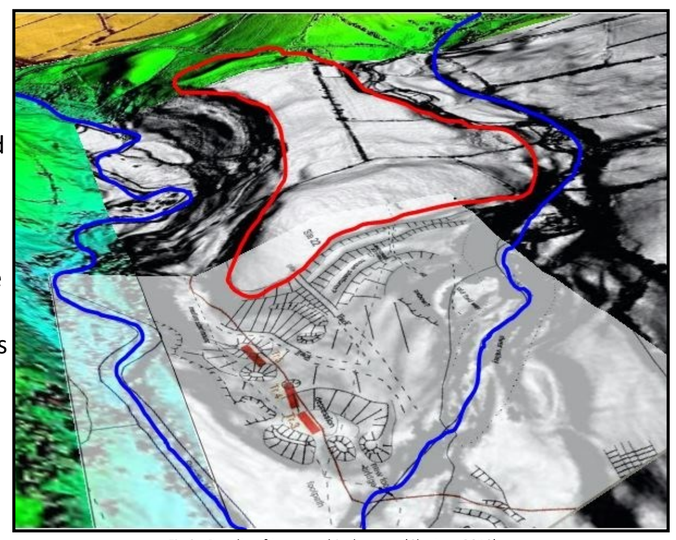

Fig 2– Results of topographical survey (Clayton, 2010)

The site of archaeological interest is a naturally raised promontory formed by the movement of the rivers throughout the ages. A series of ditch and bank earthworks enclosing the promontory (see fig 3) have been investigated by local historian John Clayton (see fig 2) and a landscape survey was carried out by Oxford Archaeology North. It was suggested that these earth-works are the remnants of the defensive ramparts of a Late Prehistoric hillfort but the earthworks could be river terracing which is a natural series of ridges formed by river movement (Clayton, 2010).

What is a Hillfort?

A hillfort is a type of earthwork enclosure which began to be seen across the Britain in the Late Bronze Age and by the Iron Age had dominated the landscape across the British Isles. Hillforts are defined by a series of bank and ditch defensive earthworks which enclose a hilltop, and archaeological excavations have discovered a variety of different forms of structures and functions that were carried out within them. The hillforts of Lancashire are usually associated with elevated positions looking down upon watercourses, which would have been important trade routes in the prehistoric period. It is likely that these fortified positions were constructed to take control of these trade routes.

Fig 3-Aerial drone image of surviving ramparts to the west of the promontory at Watermeetings

References

Clayton, J. 2006. *Valley of the Drawn Sword*. Barrowford Press: Lancashire.

Clayton, J. 2010. *Watermeetings: Blacko/Roughlee/Barrowford.* Unpublished Preliminary site report.

Woods, M. 2016. *Using a Gradiometer Survey, What Evidence can be found for Human Activity at Portfield Camp Hillfort and how does the Prehistoric Archaeology of Portfield Camp Relate to the Wider Landscape?* Unpublished dissertation.

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Methodology

The aim of this investigation was to use both Resistivity and Magnetometry; two types of geophysical survey, to find evidence to prove the hypothesis that the promontory at Watermeetings was the site of a Late Bronze Age/Iron Age hillfort.

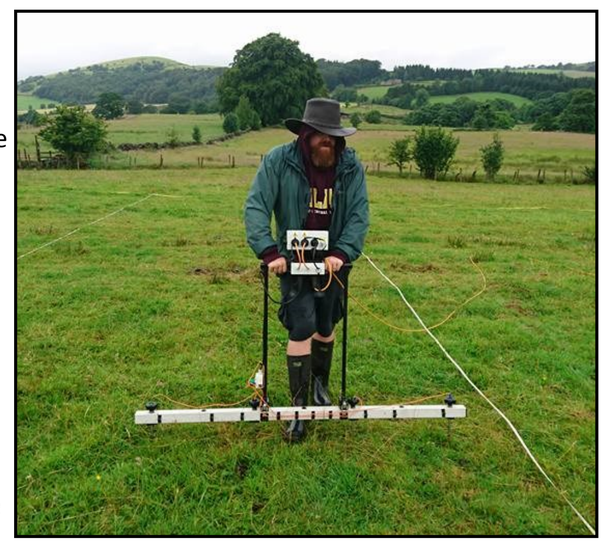

Fig 4-Resisitivity survey being carried out at Watermeetings

A Bartington 601 Fluxgate gradiometer uses electro-magnetic waves to pick up disturbances in the microscopic metal particles within the earth. This technique is useful for discovering ditches, post holes and areas of burning. An RM15 resistivity probe with data logger and multi-plexer (see fig 4) was used to measure the electrical resistance within the earth. This technique is useful for identifying ditches, stone walls and roads. (Woods, 2016). The field to be surveyed was marked out in 30 x 30 metre grids and the same grids were used for both types of survey to maintain spatial control when overlaying and interpreting the data. The data was then processed using Geoplot and overlaid onto a satellite image of the site using Photoshop.

Results

The results from the magnetometry survey (see fig 5) show a faint circular anomaly to the north west corner of the survey with a linear anomaly running north-south to the west of the hilltop. A large magnetic anomaly can be seen on the southern tip of the promontory, it is likely that this area is a patch of burning. Recti-linear features can just be made out but the data from this survey is confusing, probably down to the underlying limestone geology and the site being seeded with metal fragments through plough actions. It is also likely that this site is not only multi-phase (meaning it was re-used and re-arranged during the its life as a hillfort) but also multi-period with the land being re-used in later centuries.

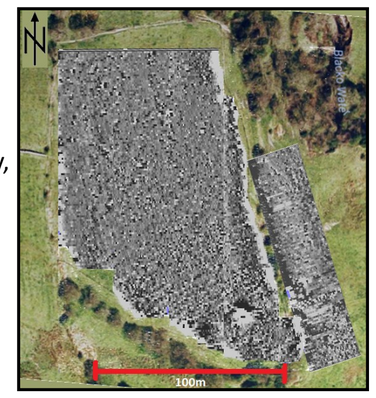

Fig 5-Results of magnetometry survey at Watermeetings

The results from the resistivity survey (see fig 6) show a much clearer picture of the underlying features at Watermeetings. The large white linear anomaly appears to be a large well-defined stone inner rampart with an entrance causeway to the north of this feature and a complex horn-work entrance way to the west. A recti-linear feature can be seen to the south of this stone wall which could be a tower structure incorporated into the defences or a building constructed in later periods.

A series of circular and recti-linear anomalies can be seen within the enclosure and these readings are indicative of ancient Iron Age roundhouses and field boundaries. A structure which is located just outside the defensive ditch could be a guardhouse. Linear trackways can be seen running through the enclosure but excavation will be required to ground truth the anomalies discovered through this survey and to establish a chronology of events by finding dateable artefacts from sealed stratigraphic layers.

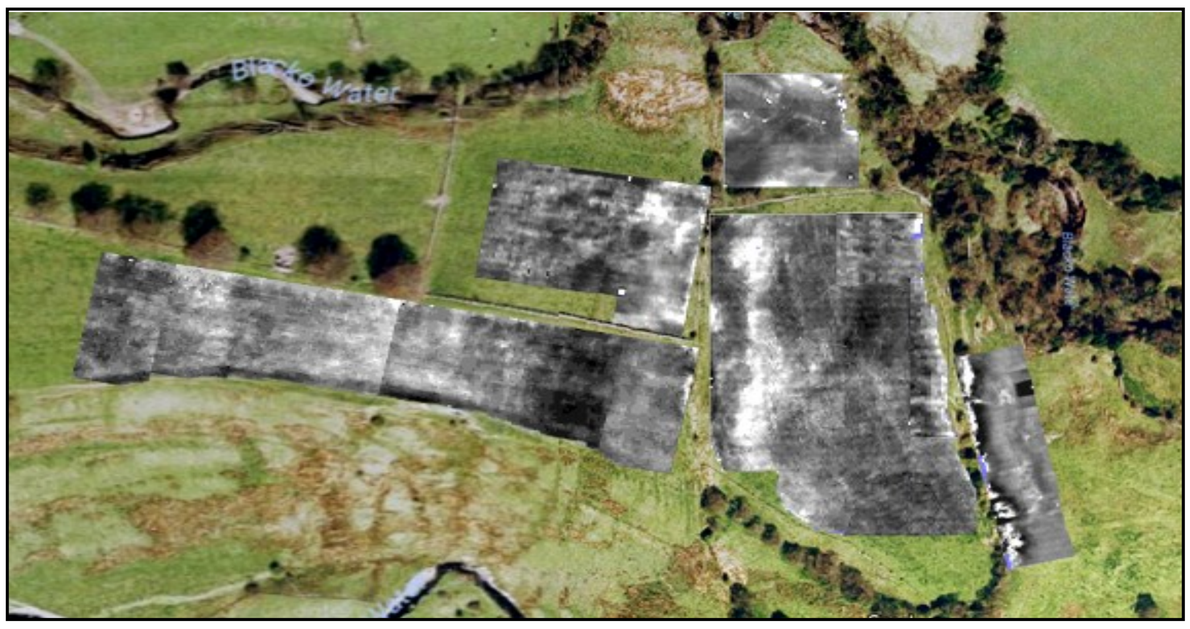

Fig 6-Results of resistivity survey at Watermeetings.

Conclusion

It is clear from the results of the resistivity survey that the site at Watermeetings is a Late Prehistoric hill-fort. Indications of settlement within the enclosure and a large stone built inner rampart are comparable with a number of sites including Portfield Camp in Whalley, Lancashire, where a stone lined rampart was discovered through excavation. It would appear that the hillfort was constructed in two phases, first the enclosure of White Lees meadow to the east was fortified, then the entire promontory was fortified up to the site of the modern day farm., probably in response to a growing population. The interior of both enclosures contain anomalies associated with structures, field boundaries and defensive earthworks that are comparable with similar sites in the Pendle landscape , such as Portfield Camp and Castercliffe and the discoveries found from this geophysical survey have added a great deal to our knowledge about these earthworks and the use of the landscape in Lancashire in the later prehistoric periods.

The Iron Age period in Lancashire is notoriously understudied and the results of the fieldwork carried out as part of the Pendle Landscape Partnership and UCLan internship has already discovered a large, apparently high status, multi-phase defended hill top settlement which dates to either the Late Bronze Age or Iron Age. Excavation is required to find an accurate date and further analysis by overlaying the data obtained from the two types of survey is currently being carried out to obtain a better understanding of our Iron Age ancestors and how they constructed the hillforts of Lancashire.

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