

The Landscape Research Centre

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Boltby Scar 2012: Research Design and Excavation Objectives



Figure 1: Boltby Scar Hillfort seen from the North: 3D model constructed from air-photographs.

Context

This Research Design builds upon previous research proposals and the results of the excavations undertaken in 2009, and 2011 and identifies the objectives of the 2012 season; this will be the final season of the present phase of excavation at Boltby and will try to resolve a series of outstanding questions – some pre-existing and others in response to the discoveries made in 2011. The excavations undertaken in 2011 confirmed that the larger part of the Hillfort, lying to east of the dry-stone wall that bisects the monument, was so effectively levelled by bulldozer in 1961 that any internal features are unlikely to survive. The very high levels of environmental preservation found in the enclosing ditch, and the fact that part of the levelled rampart had survived where it had sunk into a *gryke*, were highlights of previous work. These produced a more extensive

environmental story than might have been anticipated from a monument that was effectively truncated, as well as confirmation that the structure had incorporated a sophisticated turf-faced rampart.

More significant was the discovery that the Hillfort proper had been preceded by the construction of a palisaded enclosure with an entrance with a timber gateway that continued to be a feature of the later fort. However, investigation of substantial areas within the enclosure indicates that any related structural features were either so ephemeral that they had not survived the ravages of time or had been completely removed by the bulldozer and the plough.

The interim report from the 2011 season can be downloaded from the link below:

http://www.landscaperesearchcentre.org/Boltby_Scar_2011_Interim.pdf

Objective 1: To further enhance our understanding of the Neolithic and Early Bronze Age activity on the hill.

Large quantities of Mesolithic to Bronze Age worked flints have been recovered through ad-hoc and planned surface collection programmes, over large areas of the moors where climate change during the Bronze Age, perhaps the result of a cataclysmic event, led to increasing acidification of the soils and ultimately to a reduction in the arable potential of the moors which prevails today. Evidence recovered in the last two seasons raises some important questions regarding Neolithic activity in the area in general and at Boltby Scar in particular.

Evidence recovered through the environmental sampling programme and C¹⁴ dates derived from carbonised hazelnut shells confirm that there must have been domestic activity at Boltby during the Neolithic period; this evidence is to some degree borne out by the lithics assemblage although this is limited in scale, a reflection most likely of the impact of the bulldozing and subsequent ploughing over most of the hill to the east of the dry-stone wall that separates the upstanding from flattened sections of the monument.

Two C¹⁴ dates derived from hazelnut shells from the fort ditch are considered most likely to be residual (a date of 1970-1760 BC from the fill of the ditch sectioned in the southern part of the circuit ~area AC~ in 2009 and a date of 3340-3022BC from the lower fill of the western ditch terminal of the ditch at the hillfort entrance). If as seems most likely these dates are residual they still reflect domestic activity on the hill during the middle to late Neolithic. Far more significantly, a post-hole filled with burnt stone and multiple carbonised hazelnut shells and abundant charcoal and adjacent to the stone ring under Barrow 517AE returned a date of 3649-3517 BC (93.8%); in this case the nature of the sample with many hazelnut shells and a lot of charcoal cannot be residual. During excavation it had been suggested that this post-hole may have been part of a pyre structure although the domestic nature of the material in the sample may suggest otherwise. More significantly, burning on the surface of the disturbed stones of the stone ring was considered to have been related to the burnt feature; in which case this suggests that the stone ring is Middle Neolithic in date and that the first phase mound in the interior was not constructed until 1920-1730BC (94.4%), some 1500 years or so later! Clearly this evidence requires further investigation and it is proposed that we open a c.4x4m area adjacent to the Barrow, cutting back from last year's section with the half section of the post-hole still intact to see if there are others and try and establish a context for the post. It would also be necessary to extend the area to incorporate at least the outer face of the stone ring.

Of the two barrows that had stood within the enclosure, one was completely removed by the bulldozer and the other (Barrow AE) remains as an upstanding monument. The complex sequence of construction, use and antiquarian investigation identified by a combination of emptying the trench cut through the monument by G Wilmott in 1938/39, and very limited excavation of an adjacent part of the mound, shows that these monuments that survive as visible and physical components of the present landscape have long histories of use and re-use. This has a bearing upon our interpretation of both life and death on the edge of the moors during the late Neolithic and Bronze Age as well as antiquarian attitudes to these monuments as providers of objects. In an ideal world a total excavation and rebuild of the upstanding barrow would allow us to secure a detailed, dated and environmentally rich interpretation of one monument which more likely than not reflects activities at the numerous other barrows that were formerly situated along west facing margins of the North York Moors. These monuments, a number of which remain if somewhat truncated and miss-shaped by antiquarian investigations, contribute to the character of the contemporary landscape where they are situated at the margins of a prehistoric ridgeway that was ultimately defined by the construction of the Cleave Dyke, part of a multi-phase linear boundary system. The latter facilitated stock management along the line of what we should perhaps view as a long distance prehistoric drove-way. Boltby itself may have served a primary function as a secure stopping place along this drove-way and as such need not have supported a large resident population.

Within the time and resources available, much more extensive investigation of the barrow would be inappropriate. However, by cutting a single 2m wide trench through the less disturbed northern portion of the mound the identified construction sequence can be tested and further dating material recovered. It had been hoped to extend this trench right through the centre of the barrow, and what is most likely the earliest robbing trench cut into the centre of the mound. This would, when combined with the Wilmott trench, give full sections through the monument across the north-south and east-west alignments, (the reverse approach to conventional barrow excavation where sections are maintained through baulks established at right-angles dividing the monument into quadrants). It is proposed to empty the backfilled Wilmott trench by machine and then cut the northern trench by hand. We may have to be flexible as the most important area here is to resolve the questions relating to the Middle Neolithic post-hole/burnt pit. It might be appropriate to go ahead and empty the Willmot trench and reserve the cutting of the northern trench section until we are sure of the scale of work needed to resolve the questions relating to the earlier evidence on the western side of the barrow first. There may be a good case for opening two or three small cuttings to assess the circuit and nature of the stone ring beneath the barrow rather than devote a lot of energy to recovering more sectional information for the mound proper.

Objective 2: To expose and plan the full extent and relationship between the palisade, the hill-fort ditch and determine if there was more than one entrance.

The identification of the Bronze Age palisaded enclosure in trenches cut in 2009 and 2011 shows that the 'defences' of the hill-fort were multi-phase; the levelling of the monument compromised the stratigraphic integrity of the palisaded enclosure and there is clearly a need to learn more about the early enclosure. It is certainly essential to try and prove the supposed relationship between the palisaded enclosure and the fort proper and to try and recover a secure stratigraphic sequence. This can only be done by excavating within the upstanding and surviving part of the monument where the topography indicates that there is a surviving element of a counterscarp ditch outside the ditch. Adjacent to the drystone wall that cuts across the site an eroded horse track has cut through the upstanding bank and it is proposed that to minimise disturbance to the

upstanding features a trench is opened up on the line of the track, cutting 1.5m back into the eroded rampart section. This trench which should be less than 10m in length will allow us both to compare the evidence for the turf revetting and construction of the upstanding bank with that recovered from the areas examined in 2011, (particularly where the bank had sunk into a gryke) and to examine the counterscarp bank and palisade trench; this may also offer another chance to recover conclusive dating evidence from beneath the rampart, counterscarp bank and palisade. It may be possible to recover the evidence needed without completely emptying the ditch at this point.

Within the bulldozed area it is proposed to expose the full circuit of the palisade slot by machine to map the feature in detail, determine if there were other entrances and try to recover dating evidence. Since the feature has already been truncated, this approach is viable both in terms of what can be achieved in a short time and to satisfy the underlying research questions.

As part of this work it is proposed to investigate what appears to be the crop-mark of the Willmott trench where he retrieved a pair of Late Neolithic gold hair loops and identified a 'hearth' in the base of the ditch. The objectives here are quite simple – to map the route of the palisade, to record structural details of the palisade if they survive, to identify other entrances and hopefully recover much needed dating evidence. If Willmott's trench can be identified then the ditch section should be emptied in case any part of the reported hearth survives intact, with a view to recovering dating evidence. It is not proposed to open any new major ditch sections.

Should another entrance(s) be identified, which is possible in the area near the Willmott trench where the geophysical contrast was so low that the ditch could not be convincingly mapped, a decision will have to be made on site on the basis of time and available resources as to the extent that the entrance(s) can be examined beyond cleaning for mapping purposes. It is possible given the very difficult soil conditions that prevail on the southern side of the fort that it may be very difficult to follow the line of the palisade in this area in which case we may be unable to trace the full circuit.



Figure 2: Boltby Scar 3D model with the Z-Axis magnified x 5 to emphasise the surface of the preserved section

Objective 3: To examine a sample area within the preserved section of the monument to seek any evidence of hillfort or indeed pre-hillfort domestic or other activity.

Structural evidence from the interior of the fort was not forthcoming in 2011, and given that the western extension of Willmot's trench through the barrow could not be detected we have to assume that any evidence of activity in the bulldozed part of the fort was hopelessly compromised. We do not have the luxury of exposing large areas to months of weathering in the hope of seeing structural components in the damaged area and even then the lack of other evidence suggests this might be a fruitless exercise. The only way to balance this position and try to identify internal activity is to investigate a portion of the undamaged monument. The 3D model calculated from air photography and an informed walk across the preserved area indicates that the gryke extends through the preserved area and it is proposed to open a small c.4x4m area within this depression to see if evidence that informs our understanding of the interior survives here. It is proposed that the vegetation be killed off in this area and that the area be trowelled from the surface with a view to recovering material culture evidence and hopefully some structural evidence. Any evidence recovered here will have a bearing upon how we assess the impact of the bulldozer and ploughing activity over most of the fort. It is entirely possible, given the environmental and soil history of Boltby Scar, that all evidence of domestic and other activity exists within 20 cm of the present ground surface and thus would have been completely compromised by ploughing, let alone by the bulldozer. This can only be assessed in the preserved area. By focusing our attention of the area above the *gryke* where the ground has sunk it is possible that there may be a concentration of material.

Objective 4: The ?Long Barrow, ?Round Barrow or ?Building towards the southern limit of the preserved area.

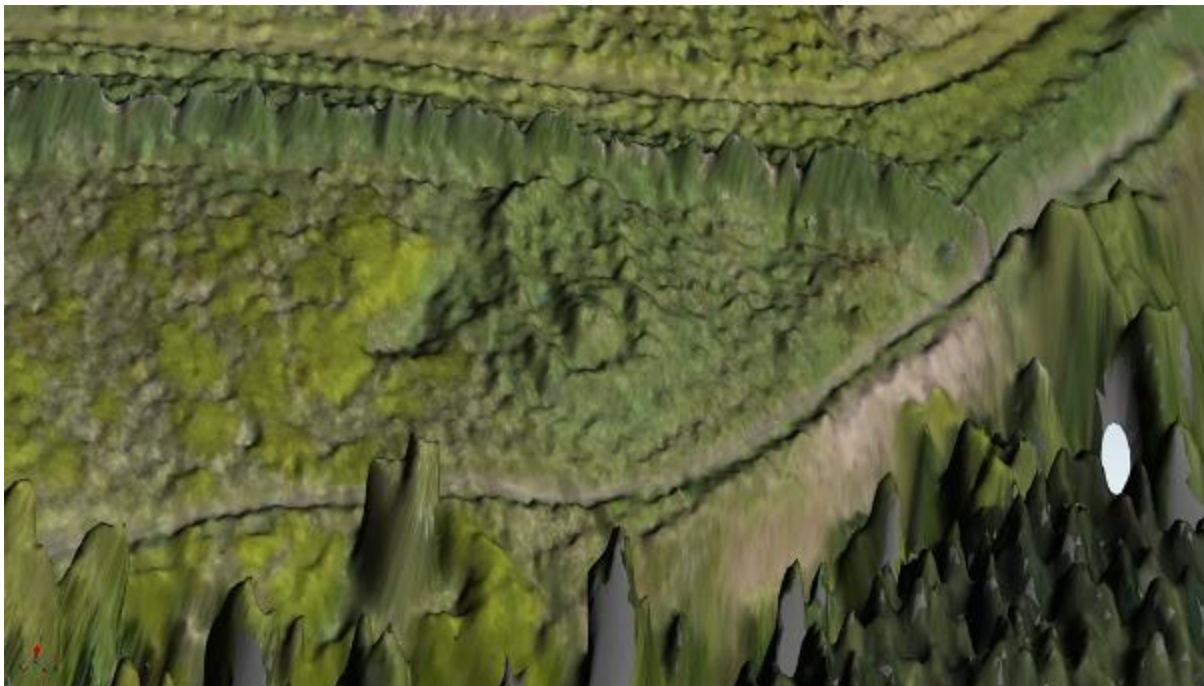


Figure 3: Boltby Scar £D model with magnified Z-Axis and side lighting applied to expose the rectangular structure in the southern part of the 'preserved' section of the hillfort.

Towards the southern part of the 'preserved' part of the hillfort a rectangular feature is visible on the ground, in Willmot's 1930's sketch plan and the recent English Heritage topographic survey; this feature has in the past been described as a possible Long Barrow or a robbed Round Barrow.

Investigation on the ground and through study of the 3D model constructed using the 2011 air photography suggests that this is more likely to be the remains of a stone building measuring c10x4m, with a possible cistern lying to the north of the structure. Given the commanding view that a building in this position has over the Vale of Mowbray it could be of almost any date. It is proposed that a 4x4m area be excavated to expose the north-west corner of the feature with a view to identifying the form and date of this feature. The choice of an area covering one corner is to avoid any risk of compromising possible entrances in the long walls that could occur with a trench across the centre. If this is indeed a stone building the exposure of one corner would allow us to examine the nature of any surviving stonework and provide internal access to a well protected part of the interior of the structure. Wheel ruts which cut through the entrance to the hillfort point straight towards this feature and might support an interpretation of this structure as of Post-Medieval date; targeted excavation is the only way to secure a date for this feature; whatever the date an understanding of this feature is essential if we are to develop a fully rounded understanding of the site as a whole.

Location of the Trenches



Figure 4: Boltby Scar with the proposed trench locations superimposed on an orthophoto showing the 2011 excavations placed within Google Earth.

The proposed location of the various trenches to be opened in 2012 is shown in figure 4. In order to make excavation easier and very much cleaner and thus easier to understand it is proposed that the areas to be opened within the preserved area of the site, owned by the Forestry Commission, should be treated with roundup or some similar vegetation killer during early April. This is essential as the archaeological evidence may well lie directly beneath the present ground surface which is of course densely filled with a thick root-mat. Anything which can be done to weaken the root mat will facilitate excavation considerably.

Prof Dominic Powlesland DUniv, FSA
on behalf of the trustees of the LRC