

CPAT Report No 1247

Hindwell Farm Barrow II: Excavation 2013



THE CLWYD-POWYS ARCHAEOLOGICAL TRUST

Client name: Cadw
CPAT Project No: 1788
Project Name: Walton Basin
Grid Reference: SO 2522 6092
County/LPA: Powys

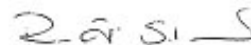
Report Title: Hindwell Farm Barrow II: Excavation 2013
CPAT Report No: 1247
Report status: Final
Confidential: No

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Completion date: 29 May 2014

Checked by: *Position:*
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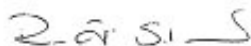
Signed:

Checked on: 2 June 2014



Approved by: *Position:*
R J Silvester Head of Field Services
Approved on: 2 June 2014

Signed:



Bibliographic reference:

Jones, N., 2014. *Hindwell Farm Barrow II: Excavation 2013*. Unpublished report. CPAT Report No. 1247.



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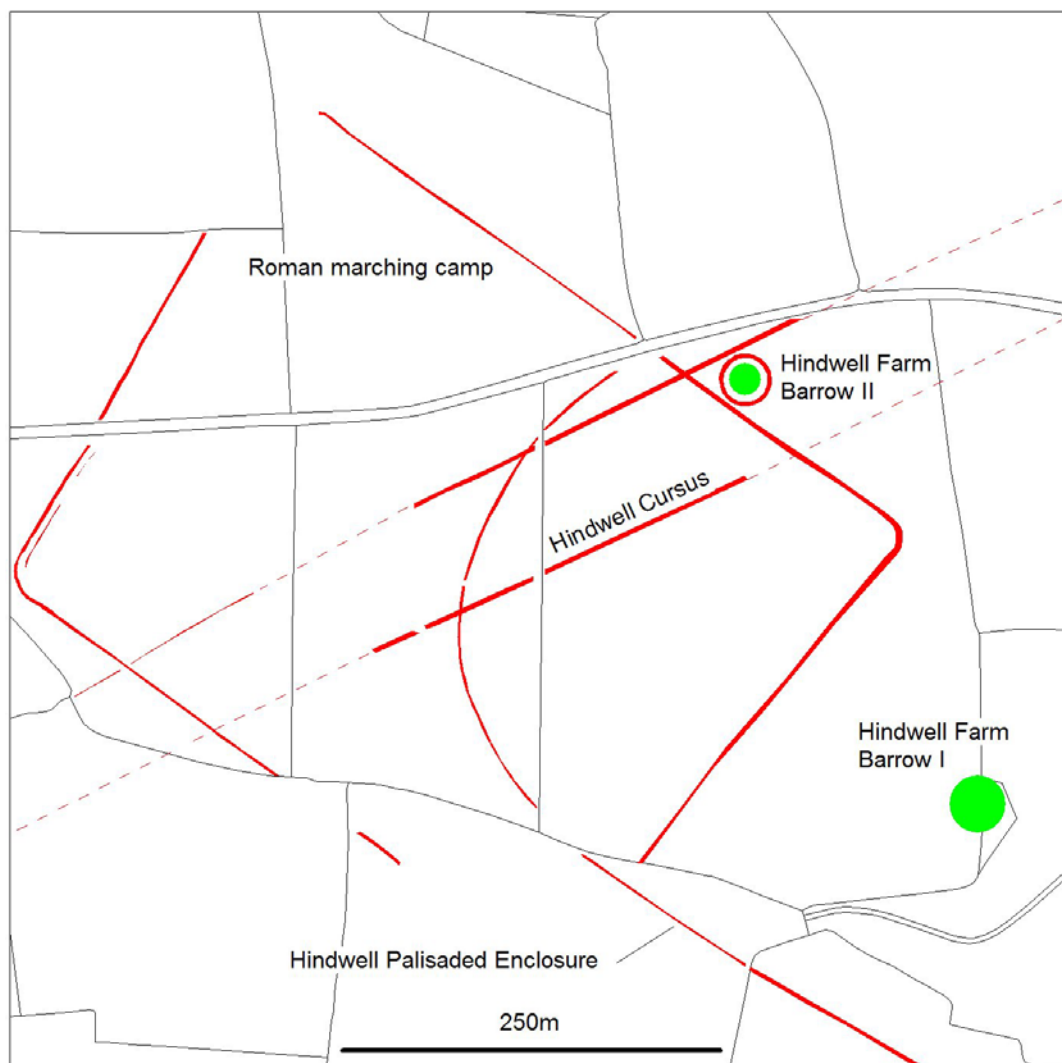
cover: CPAT staff and local volunteers investigating the Hindwell Farm II Barrow in 2013.
Photo CPAT 3680-0040

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1 INTRODUCTION

- 1.1 Recent Cadw-funded project work in the Walton Basin under the aegis of the Prehistoric Funerary and Ritual Sites and the Roman Military Vici initiatives, combined with the results of earlier assessment work by the Trust under the direction of Dr Alex Gibson which was also funded by Cadw, continues to highlight the importance and complexity of this area of eastern Radnorshire. The area encapsulates the broader archaeology of the Welsh borderland and is, known to contain evidence for multiperiod activity from the early post-glacial period onwards. Recent studies have focused on the complex of prehistoric monuments around Hindwell and Walton, most of which date from the Neolithic, and include some of the largest sites of their type in Britain such as the Hindwell cursus and the Hindwell palisaded enclosure. The importance of the area as a base for Roman military campaigns is also becoming more apparent and the strategic significance of the routeway which passes through the basin into mid Wales remained influential well into the medieval period.



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Fig. 1 The location of Hindwell Farm Barrow II, lying within the Neolithic cursus and palisaded enclosure.

- 1.2 The gradual realisation that the archaeology of the Walton Basin is under varying degrees of threat from continued ploughing in this highly productive agricultural area, as well as from piecemeal development, led to the initiation of a new project which was initially approved for funding in 2012-13 and was designed to address a number of pressing management issues relating to agricultural usage and development affecting the important multi-period archaeological resource within the Walton Basin. The project developed a methodology for assessing the vulnerability and level of threat from agriculture to both upstanding and buried archaeology, based upon COSMIC 2, which has become known as *Archaeological Conservation in Rural Environments*, or ACRE (Jones 2014). This is the first practical agri-environment related archaeological assessment methodology to be developed in Wales and has the potential to be of significant value across the country as a whole as a mechanism for predicting the level of agricultural threat.

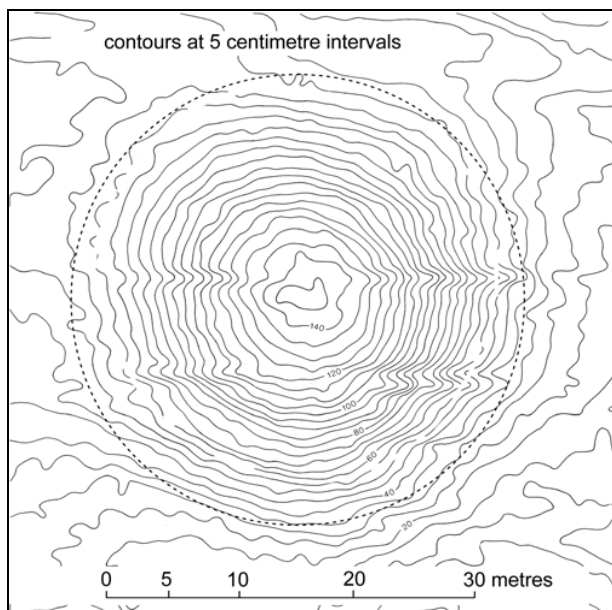
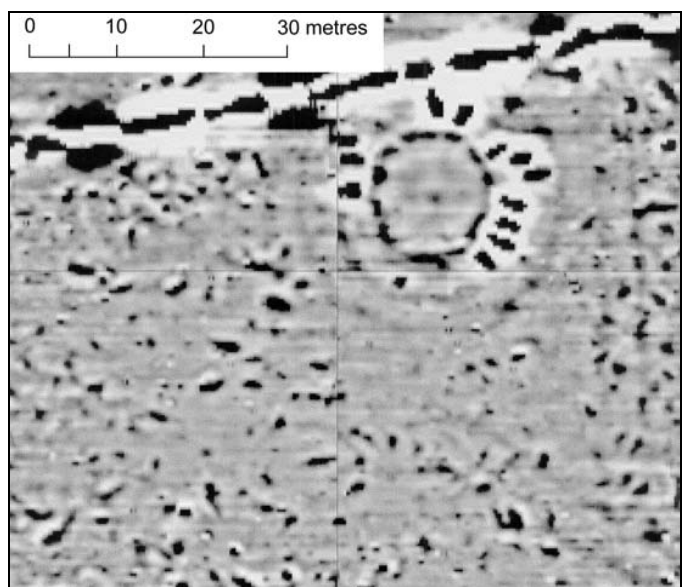


Fig. 2 The barrow has been investigated by a variety of techniques. **Top left:** Contour survey conducted in 1995 showing that the barrow mound was about 36m in diameter and 1.1m high and also drawing attention to the gradual erosion caused by ploughing. **Bottom left:** This aerial photograph taken in 1996 reveals what appear to be two concentric ditches of about 24 and 30m in diameter. Photograph CPAT 96-c-0057. **Bottom right:** Geophysical survey in 1998 revealed a central pit up to 2m across, probably a primary grave, set inside an oval segmented feature measuring about 13m by 15m across, outside which is an irregular pattern of 12 or 13 radial anomalies which were thought to represent burnt pits or posts set in or below the mound (after Britnell 2013, 44).



- 1.3 The project continued in 2013-14, undertaking a number of small-scale excavations with local volunteers to collect a set of data based on the ACRE project methodology and test its application under field conditions. A site chosen as part of this assessment was one of the few

upstanding barrows within the Basin (PRN 309; SO 2522 6092), lying within the Neolithic cursus and palisaded enclosure (Fig. 1); the ACRE assessment had determined the barrow as being at high risk as a result of intensive cultivation and particularly so as an upstanding earthwork.

- 1.4 The barrow lies within the scheduled area of the Hindwell Palisaded Enclosure (SAM Rd 247) and consequently the work was subject to an application to Cadw for Scheduled Monument Consent.

2 EXCAVATION

- 2.1 The excavation consisted of a single machine-excavated trench measuring 25m by 3m which extended eastwards from the centre of the mound, removing the ploughsoil onto the surface of the first recognisable archaeological horizon. On top of the mound the ploughsoil (6) was only 0.18m thick and ploughscarring was evident on the surface of the barrow, while fragments of the turf mound (context 2 - see below) had clearly been disturbed and mixed with the ploughsoil. In the area of the surrounding ditch the depth of ploughsoil was greater at around 0.45m and here an underlying deposit of yellow-brown clay silt (22), up to 0.3m thick, comprising material redeposited from the mound by historic ploughing, was also removed by machine.



Fig. 3 View from the centre of the barrow towards the ditch, the outer edge of which is marked by the second scale. The edge of the turf mound can be seen in the foreground, beyond which lie successive dumps of gravelly material presumably derived from the ditch. Photo CPAT 3680-0065.

- 2.3 The centre of the mound was composed of gleyed and iron-panned clay silt (2), the nature of which suggested redeposited turf. This extended for around 5m from the centre, beyond which the surface of the barrow was composed of several deposits containing varying proportions of gravel (3, 4, 5, 6, 21 and 27) which had the appearance of having been dumped successively from the edge of the turf mound outwards. The makeup of the barrow had clearly been truncated by ploughing and at one point had also been cut by a shallow, undated pit (14).
- 2.4 The uppermost fill (26) of the ditch (13) surrounding the barrow had been sealed beneath the plough-spread mound, material (22) from which extended for at least 2m beyond the outer edge of the ditch. The ditch itself was around 2.5m wide, the inner edge lying approximately 14m from the centre of the barrow. Limited investigation of deposits against the inner ditch edge identified a possible buried soil (25), sealed beneath successive layers of mound material. The only dating evidence for this deposit was provided by a radiocarbon date (SUERC-52875) from a charred hazel nutshell of 5607-5480 cal. BC, which was presumably from residual charcoal.



Fig. 4 The inner edge of the ditch with the possible buried soil visible in the sondage beyond. The edge of the turf mound lies in front of the rear scale with the Roman field oven in the centre of the view. Photo CPAT 3680-0060

- 2.5 The trench had been deliberately positioned to investigate one of the anomalies identified by the 1998 geophysics which at the time had been interpreted as burnt pits or posts set in or below the mound (see Fig. 2). With the removal of the topsoil an area of intense burning and patches of charcoal were exposed around 8.5m from the centre of the mound. Further investigation revealed these to be associated with a small bi-partite oven comprising a main

chamber (16) with evidence for *in situ* burning and a smaller chamber (17) which had been affected less by heat. The main chamber measured 1.08m by 0.82m and survived to a depth of 0.12m, while the second measured 0.92m by 0.45m and was only 50mm deep (Fig. 5). There was no evidence for any formal structure associated with the oven, although two stones were found in the base of the main chamber, and both parts were filled by clay silts (10 and 18) containing significant quantities of charred material from which a radiocarbon date is anticipated.

- 2.6 The area surrounding the oven also contained signs of *in situ* burning (9) which may have been associated with an earlier oven. The edge of a second oven (8) was identified against the southern baulk of the excavation.



Fig. 5 One of 12 or 13 presumed Roman field ovens which had been cut into the mound. The main chamber (16) is to the right and shows signs of *in situ* burning while the shallow pit to the left (17) was for stoking and raking out the oven. Photo CPAT 3680-0047

- 2.7 There were no charred plant remains present in the bulk soil samples from the oven and stokehole, although they did contain hazel nutshell fragments and the remains of heath-grass and sedges grass, perhaps resulting from material used to seal, or clamp, the oven. Charcoal recovered from the oven and stokehole was predominantly of Maloideae, hazel and ash, indicating their use as fuel. The hazel fragments, however, were mainly of stemwood, rather than branchwood, possibly indicating its use not only as firewood but also in the structure of the oven. Two radiocarbon dates (SUERC 52855-6) were forthcoming from the feature, one from the oven and the other from the stokehole, both being derived from charred hazel nutshells and these have been calibrated at cal. AD 7-132 and 51 cl. BC to cal. AD 67 respectively.

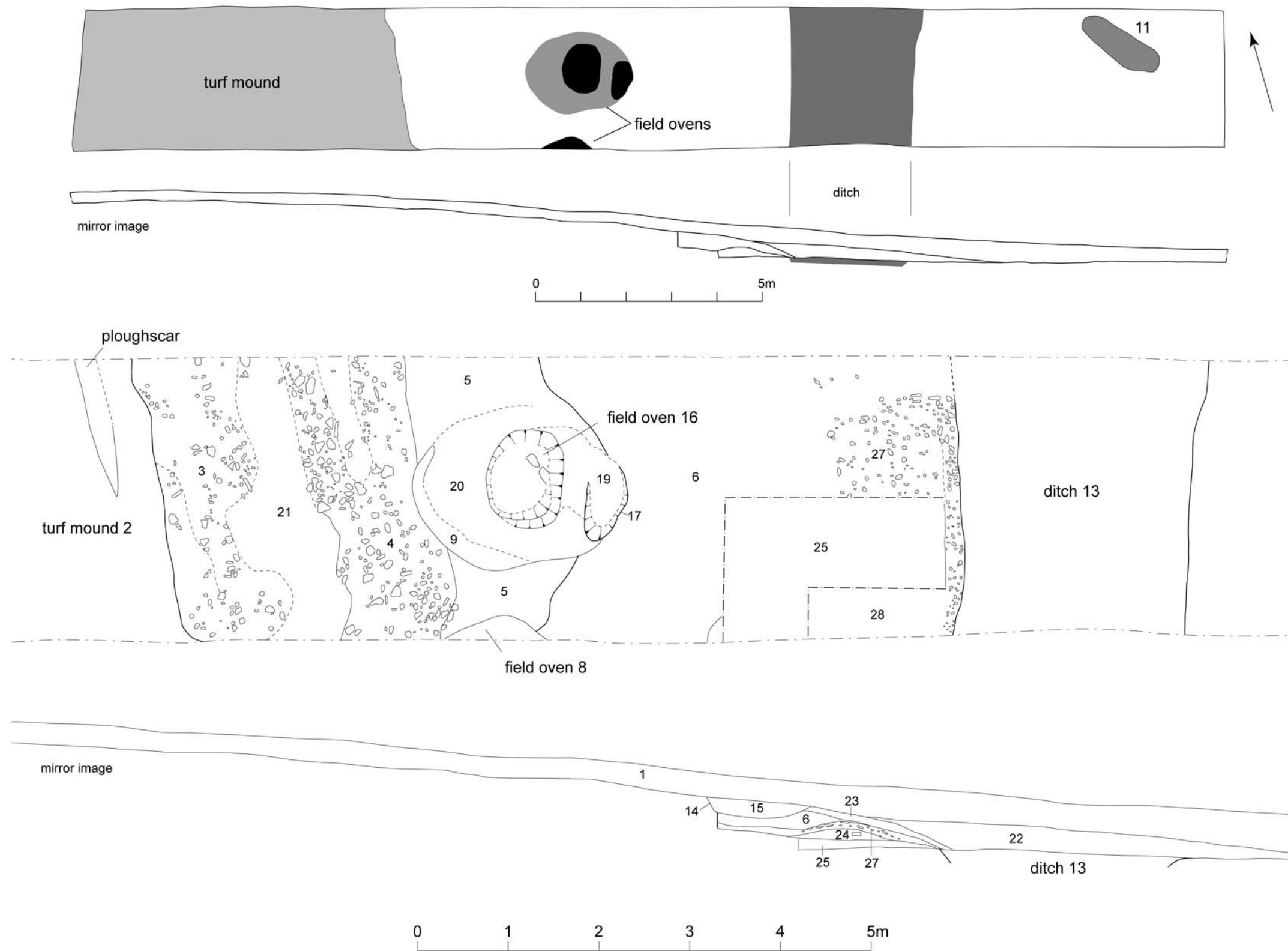


Fig. 6 Overall plan and section of the excavation with further detail of the central area of the trench

- 2.8 A single, undated feature was identified outside the ditch, consisting of an elongated pit (11), 1.94m long, 0.62m wide and 0.30m deep, cut into the natural gravel and filled with orange silty clay (12). Its function could not be established.

3 FINDS

Flint, identified by Pippa Bradley

- 3.1 The excavation produced only three fragments of flint, all from the topsoil: two small flakes and a flint chip.

Prehistoric pottery

- 3.2 Find 126, context 7. A single sherd of pottery was recovered from the surface of the barrow, the form of which is similar to the lug handle of a small crucible (Bill Britnell pers comm.; Musson *et al.* 1992, fig. 3, no. 28).

Roman coin identified by Mark Walters

- 3.3 The excavations produced a Roman denarius of Augustus, which was recovered from the ploughsoil following a metal detector survey of the excavation spoil. The coin was in good condition with a little wear and was consistent with a deposition date in the early to mid first century AD. Cleaning and conservation was undertaken by Phil Parkes, Senior Conservator, Cardiff School of History Archaeology and Religion.

27 BC-AD 14. AR Denarius. Rome mint. P. Licinius Stolo, moneyer. Struck 17 BC.

Obverse: AVGVSTVS TR • POT, his bare head right

Reverse: P • STOLO above, III • VIR below, Flamen's cap (*apex flaminis*) between two studded oval shields (*ancilia*).

References: RIC I 343; RSC 438; BMCRE 74-5 = BMCRR Rome 4592-3; BN 296-99.

Roman pottery

- 3.4 Find 124, context 1. A small bodysherd of undecorated samian was recovered from the topsoil.

4 PALAEOENVIRONMENTAL ANALYSIS by Lorne Elliott

- 4.1 Bulk soils samples from three contexts were submitted to Archaeological Services, University of Durham, for processing and the analysis of charred plant remains and charcoal, as well as the selection and identification of material suitable for radiocarbon dating. A full report is available in the site archive (Elliott 2014).

Plant macrofossil analysis

Methods

- 4.2 The bulk samples were manually floated and sieved through a 500 μ m mesh. The residues were examined for floral and faunal remains and industrial residues, and were scanned using a magnet for ferrous fragments. The flots were examined at up to x60 magnification for charred and waterlogged botanical remains using a Leica MZ7.5 stereomicroscope. Identification of these was undertaken by comparison with modern reference material held in the Environmental Laboratory at Archaeological Services Durham University. Plant nomenclature follows Stace (1997), while habitat classifications follow Preston *et al.* (2002).

Results

- 4.3 Varying quantities of charcoal occurred in all of the samples. Charred monocot stems and/or rhizomes were recorded in the buried soil (25) beneath the barrow and the fill (10) of the presumed Roman oven (16). The samples comprised uncharred weed seeds of blackbindweed, fool's parsley, fat-hen and fumitories, although the well-drained nature of the site and the presence of roots and earthworm cases suggests that these are modern intrusions.
- 4.4 Charred plant macrofossils were surprisingly sparse from the oven and stokehole fills, with a few fragments of nutshell and the remains of heath-grass and sedges grass, perhaps resulting from material used to seal, or clamp, the oven. The small quantities prevent any meaningful interpretations concerning the use of the oven, although the weed remains are typical of sandy or peaty, often damp heathy grassland (Stace 1997; Preston *et al.* 2002).
- 4.5 The presence of charred fragments of hazel nutshell from the oven and stokehole may suggest their use as a wild-gathered food, or they may have been brought in with wood used for fuel. Hazelnut fragments were the only charred plant remains from the buried soil.

Table 1: Charred plant remains

Feature	oven 16	stokehole 17	buried soil
Find No.	127	128	129
Context	10	18	25
(h) <i>Danthonia decumbens</i> (Heath-grass) caryopsis	3	-	-
(t) <i>Corylus avellana</i> (Hazel) nutshell frag.	3	1	4
(w) Cyperaceae undifferentiated (Sedge family) nutlet	1	-	-
(x) Poaceae undifferentiated (Grass family) <2mm caryopsis	1	-	-

[h-heathland; t-tree/shrub; w-wet/damp ground; x-wide niche]

Charcoal analysis**Methods**

- 4.6 Charcoal identifications were made on fragments >4mm following Boardman (1995). The samples were 100% analysed and the <4mm fraction was scanned for the presence of any additional taxa. The transverse, radial, and tangential sections were examined at up to x600 magnifications using a Leica DM/LM microscope. Analysis was undertaken following Marguerie and Hunot (2007) and included examination of the number of tree rings, tree ring curvature, and where possible the diameter of roundwood was measured. The presence of pith, bark, tyloses, insect degradation, reaction wood, work marks and alteration by fusion or radial cracks were also recorded. Identifications were assisted by the descriptions of Schweingruber (1990), Hather (2000) and modern reference material held in the Environmental Laboratory at Archaeological services Durham University. The different species were weighed and bagged separately, and material available for radiocarbon dating was cleaned of adhering material and wrapped in foil.
- 4.7 The analysis was undertaken in accordance with the palaeoenvironmental research aims and objectives outlined in the regional archaeological research framework and resource agendas (Caseldine 2004; Huntley 2010).

Results

- 4.8 The samples from the oven and stokehole produced large quantities of predominantly ash and Maloideae charcoal with hazel also frequently recorded in within the oven. Much of this material was present in the <4mm fraction. Whether this is a result of certain activities during burning or due to the fragmentary nature of the ash charcoal and post-depositional processes is uncertain. Much of the ash charcoal appeared to be the remains of large calibre branchwood or stemwood. Many of the fragments comprised very narrow growth rings indicating slow growth. The hazel fragments from (10) were predominantly of stemwood, rather than branchwood, possibly indicating its use not only as firewood but also in the structure of the oven.
- 4.9 Small quantities of charcoal were noted in this context. Oak, birch, gorse/broom and cherries were identified. The small fragment sizes prevented further interpretations.
- 4.10 The predominance of Maloideae, hazel and ash charcoal may suggest the deliberate selection of these species for their fuel quality, since all of these types produce good firewood. Much of the charcoal and charred plant macrofossil remains recovered from the samples are from species typical of open scrub and often damp heathy grassland. Obvious signs of woodland management were absent from the samples.

Table 2: Data from charcoal analysis

Feature	oven 16	stokehole 17	buried soil
Find No.	127	128	129
Context	10	18	25
<i>Charcoal (g/number of fragments)</i>			
<i>Alnus glutinosa</i> (Alder)	-	0.057 (2F)	-
<i>Betula</i> sp (Birches)	-	-	0.016 (2F)
<i>Corylus avellana</i> (Hazel)	0.920 (35F)	0.042 (1F)	-
Fabaceae (Gorse, broom, greenweeds)	0.201 (8F)	-	0.031 (4F)
<i>Frangula alnus</i> (Alder buckthorn)	-	-	-
<i>Fraxinus excelsior</i> (Ash)	1.899 (64F)	1.142 (48F)	-
Maloideae (Hawthorn, apple, whitebeams)	4.365 (88F)	0.291 (12F)	-
<i>Prunus spinosa</i> (Blackthorn)	0.057 (2F)	-	-
<i>Prunus</i> sp (Cherries)	0.104 (2F)	-	0.023 (2F)
<i>Quercus</i> sp (Oaks)	0.095 (3F)	0.016 (1F)	0.031 (3F)
Salicaceae (Willow/poplar)	-	-	-
Indeterminate >4mm	-	-	-
% of fragments > 4mm analysed	100	100	100
Charcoal analysed >4mm (g)	7.641	1.548	0.101
Number of analysed fragments >4mm	202	64	11
Charcoal <4mm (g)	24.348	11.837	-

[F = number of charcoal fragments]

5 RADIOCARBON DATING

- 5.1 Three charcoal samples were submitted for AMS dating to the SUERC laboratory in East Kilbride following their identification by Lorne Elliot, Archaeological Services, University of Durham. The calibration ranges have been determined from the University of Oxford Radiocarbon Accelerator Unit calibration programme (OxCal4).

SUERC-52855

Context 127, fill of field oven

Material: charred hazel nutshell

Conventional radiocarbon age: 1927±29

Calibrated results at 68.2% probability: AD 33-123

Calibrated results at 95.4% probability: AD 7-132

SUERC-52856

Context 128, fill of field oven stokehole

Material: charred hazel nutshell

Conventional radiocarbon age: 1997±28

Calibrated results at 68.2% probability: 39 BC –AD 48

Calibrated results at 95.4% probability: 51 BC –AD 67

SUERC-52857

Context 129, buried soil below mound

Material: charred hazel nutshell

Conventional radiocarbon age: 6573±28

Calibrated results at 68.2% probability: 5537–5486 BC

Calibrated results at 95.4% probability: 5607–5480 BC

6 CONCLUSIONS

- 6.1 The excavation has provided further evidence for the impact of regular ploughing on upstanding earthwork monuments, validating the conclusions of the ACRE study (Jones 2014) which had identified the barrow as being under the highest level of potential threat. Ploughscars were identified on the surface of the mound and redeposited material from the primary turf mound was identified within the ploughsoil. It should be noted, however, that the agricultural regime has recently changed in favour of direct drilling, while the scheduled area is now generally excluded from cultivation.
- 6.2 Despite the generally non-intrusive nature of the excavation the results have provided significant new evidence which has allowed a reinterpretation of the monument. The project has also further strengthened links with the local community, providing an opportunity for volunteers to participate in and gain a greater understanding of archaeological techniques and the range of monuments in the Walton Basin.

The round barrow

- 6.3 The primary mound was constructed of turf and measured around 13.5m north/south by 12.5m east/west, covering a central pit around 2m across. Geophysical survey has identified series of elongated anomalies which appear to be associated with a narrow slot surrounding the turf mound. This suggests the presence of some form of revetment, although this was not readily apparent from an examination of the mound's surface alone.

- 6.4 The barrow was later enlarged with the excavation of a 2.5m-wide ditch, the upcast from which was dumped against the turf mound in a sequence of deposits that were later truncated by ploughing. The height of the barrow may also have been raised, although there is no surviving evidence to confirm this. In its later form the monument had an external diameter of around 33.5m to the outer edge of the ditch, the mound being 28.5m across. Cropmark evidence in particular has suggested a second, inner ditch, with a diameter of around 24m, although the excavation produced no evidence to confirm this and it is possible that the cropmark reflects changes in the composition of the barrow mound. The excavation identified a succession of deposits which had been truncated by ploughing, giving the appearance of concentric bands, such that the cropmark may have been formed in response to a deposit of moisture retentive clay contrasting with the more gravelly make up of the majority of the later mound. Centuries of ploughing have significantly reduced the height of the mound, spreading the material across the ditch to create an earthwork with an apparent diameter of around 41m.

Roman activity

- 6.5 A series of 12 or 13 areas of burning were identified by the geophysical survey, one of which was investigated in the recent excavation. The radiocarbon dates suggest that these represent Roman field ovens, presumably associated with the large marching camp (PRN 313) which lies a matter of meters to the south-west of the barrow and presumably dating from the early campaigns into Wales between AD 48 and AD 60/61.
- 6.6 The form of the ovens is very similar to those excavated at Llanbeblig, near Caernarfon, which have been dated to AD 65-80 and are thought to be associated with a temporary construction camp adjacent to the fort at *Segontium*. As at Hindwell there was no evidence for any superstructure, the dome of the ovens presumably being constructed of twigs, clay and turf. Several stones were noted in some of the ovens which, although possibly part of the displaced oven structure, could also have been placed in the base of the oven to retain heat (Kenney and Parry 2013, 253-261).

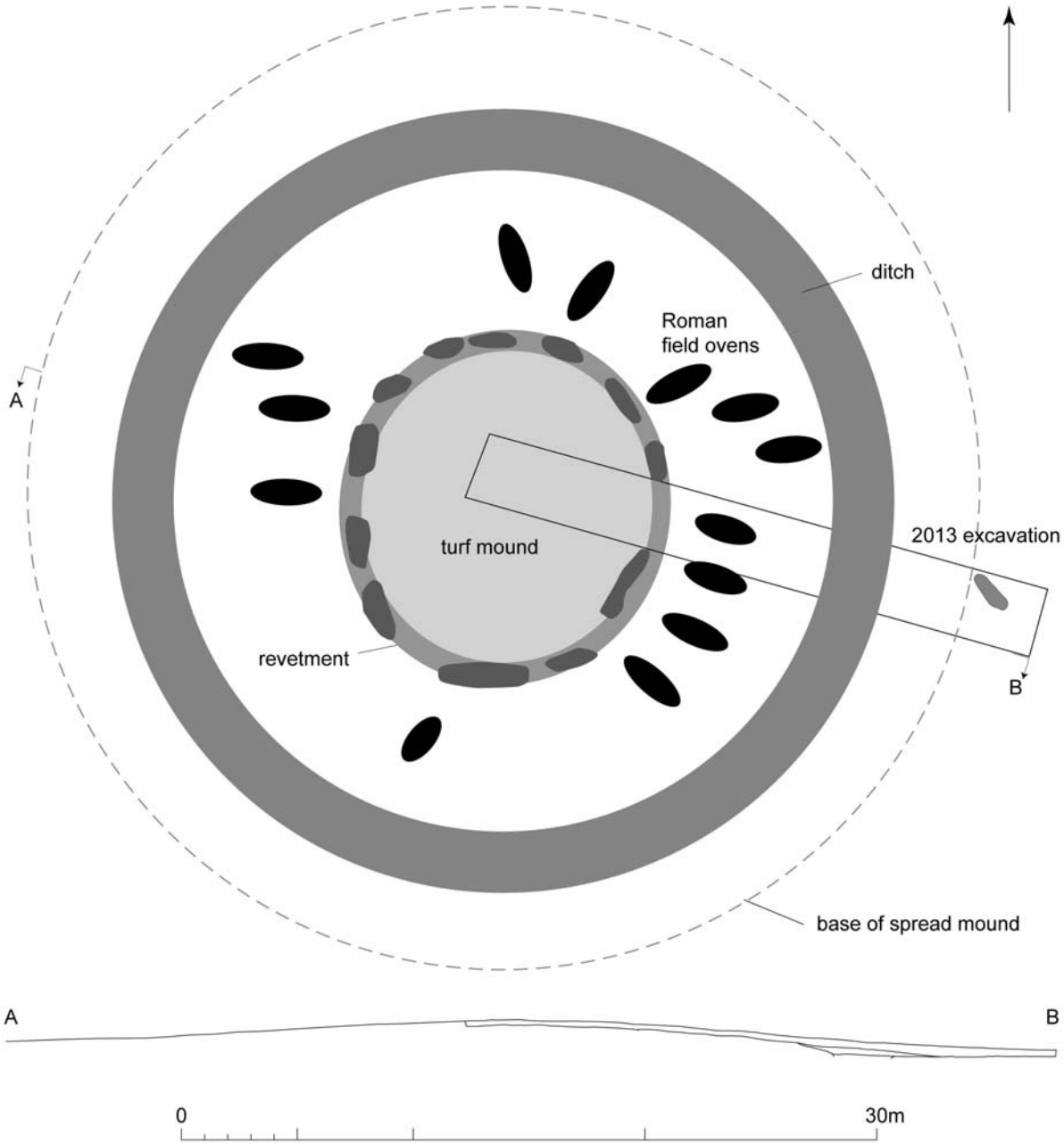


Fig. 7 Interpretative plan of the barrow based on evidence from geophysical survey, cropmarks and excavation

7 ACKNOWLEDGEMENTS

- 7.1 The writer would particularly like to thank the landowner, Mr John Goodwin, for permission to carry out the work together with his colleagues Jenny Britnell, Richard Hankinson, Wendy Owen and Sophie Watson, and volunteers Bill Britnell, Ian Cole, Celia Jones and Paul Wood for their assistance with the excavation. Thanks are also due to Lorne Elliot and Dr Charlotte O'Brien, Archaeological Services, University of Durham.

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