ARCHAEOLOGICAL INVESTIGATIONS AT SHAW CAIRN, MELLOR MOOR, STOCKPORT

SUMMARY REPORT
2011

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1 SUMMARY

A programme of archaeological survey and excavation was undertaken during June/July 2011 at Shaw Cairn, Mellor Moor, Stockport. The cairn is a multi-phase monument that was the focus for the deposition of human inhumation and cremation burials during the Early Bronze Age. It was first excavated during 1976-88, and more recently in 2008-9. The aims of the 2011 fieldwork were to determine the character of the stone-built structures located in the environs of Shaw Cairn, and evaluate the evidence for human activity on the broader plateau on which it is sited.

Topographic and geophysical surveys failed to find evidence of the stone platform that was excavated in 2008-9. The surveys did show, however, that Shaw Cairn was not an isolated monument. In addition to the platform, there may have been at least two other mounds, both smaller than the main cairn, sited on the plateau.

The excavations produced both artefacts and features that may be earlier than or contemporary with Shaw Cairn. This comprise a group of stake-holes and an assemblage of worked stone, including both Later Mesolithic and Late Neolithic / Early Bronze Artefacts.

In conclusion, the report highlights that there is scope for further archaeological investigations in the environs of Shaw Cairn, particularly geophysical survey, test pitting and evaluative excavation.

2 INTRODUCTION

This document is a summary report on the programme of archaeological survey and excavation at Shaw Cairn, Mellor Moor, Stockport. Shaw Cairn is a multi-phase monument that was the focus for the deposition of human inhumation and cremation burials during the Early Bronze Age (c.2200-1700 BC). The report reviews the background, aims and methodology of the project, and summarises the quality and nature of the information retrieved.

2.1 Site location and land use

Shaw Cairn lies on Mellor Moor, Mellor parish, Stockport (SJ 9870 8752) (Figure 1). The cairn is located within an enclosed patch of heather moorland which, following enclosure in the eighteenth century, remained woodland plantation until c.1918 (Noble 2010, 6). There is a disused quarry on the western side of the moorland and the surrounding fields are in use as pasture for livestock.

The field in which the cairn is located, and the land immediately to the east and south, is privately owned by George and Nicky Burgess of Shaw Farm. The field is designated as 'access land' under the CROW Act (2000). There are public rights of way to the west and north.

2.2 Geology and topography

The cairn is sited on a natural prominence on the south-western edge of Mellor Moor, on a plateau of higher ground (c.320m AOD) that is bounded to the south and east by the River Goyt and Ladygate Brook. The underlying geology is sandstone: Pennine Lower Coal Measures Formation. The drift is glacial boulder clay.

2.3 Archaeological fieldwork at Shaw Cairn

A detailed review of the history of archaeological investigations of Shaw Cairn is available in the GMAU reports prepared by Victoria Mellor (2000) and Peter Noble (2010). What follows is a brief outline derived from these reports.

Initial fieldwork was undertaken at the site during 1976-1988. The records of these excavations are incomplete and the results were not published by the original field team. However, a recent study of the archive led to a general understanding of the depositional and structural history of the monument (Mellor 2000). The lack of specific information about the cairn's chronology and structural history was addressed by a programme of evaluative excavation undertaken in 2008 and 2009 by the Mellor Archaeological Trust in collaboration with the Greater Manchester Archaeological Unit.

The cairn was built in two phases. In the first phase, the 0.6 metre deep stone cairn, defined by an outer stone kerb, overlay a segmented cist, which probably contained an inhumation burial adorned with an amber spacer-plate necklace. In phase two, the cairn was enlarged by 1.5-3 metres around its circumference and again enclosed by a stone kerb. A sequence of 12-15 cremation burials were recovered from within the excavated portion of the cairn, some in stone settings and small cists. Pottery, including a near complete food vessel, and lithics (of which two were plano-convex knives) were found together with the cremations. A radiocarbon date of 2140-1940 cal. BC was obtained from the cist, which fits with the widely accepted chronology of both the food vessel and the amber necklace.

2.4 The landscape setting of Shaw Cairn

There has been some archaeological fieldwork in the immediate environs of the monument prior to the 2011 project.

Geophysical surveys were undertaken in three locations, covering c.0.75ha (Figure 2): gradiometer and resistivity survey in an irregularly shaped area on and to the north of the cairn in 2007 (Day 2007; TAS 2007); resistivity survey in an area, 60x30m, to the east of the enclosed moorland on a 'sub-oval prominence' in 2001 (UMAU 2002; see also Day 2008a); and gradiometer and resistivity survey in an area, 60x60m, immediately to the south of the enclosed moorland in 2008 (Day 2008b).

Several features of potential archaeological significance were interpreted from the geophysical surveys. These included traces of what was believed to be an enclosure to the east and south of the cairn, identified by resistivity, and a few areas of strong magnetic anomalies recognised on the gradiometer surveys. All the well-defined features were evaluated through excavation and none proved to be archaeologically significant.

Additional evaluation trenches were excavated to the north and immediately to the east of the cairn during 2008 and 2009. The northern trenches – 2008-6, 2009-4 and 2009-6 – were located with the aim of investigating a low platform of densely packed stones, with an estimated area of approximately 30x27m. The trenches demonstrated that the stones were part of a built structure, but they did not resolve the purpose of the feature or its relationship to the cairn. A small trench was excavated immediately outside the phase two kerb in order to assess the spatial distribution of a concentration of lithics identified around the eastern side of the cairn. Nearly 100 pieces of flint were recovered from the trench (Myers in Noble 2010). Much of the flint working is from layers that stratigraphically predate the construction of the monument, although typologically the assemblage is of a broadly comparable date –

Late Neolithic/Early Bronze Age – to the burials. (It is possible that a small component of the lithic assemblage recovered during the 1976-88 excavations may be of Early Mesolithic date.)

The fieldwork in the environs of the cairn has shown that the cairn was not built in isolation. There is evidence for at least one other structure on the hilltop (the stone platform), which may be contemporary with the burial monument. The analysis of the lithic assemblage demonstrates that there was human activity pre-dating the construction of the cairn, although it is not clear whether this is evidence for an earlier settlement on the hilltop or if it resulted from the specialised production of artefacts for deposition with the human burials.

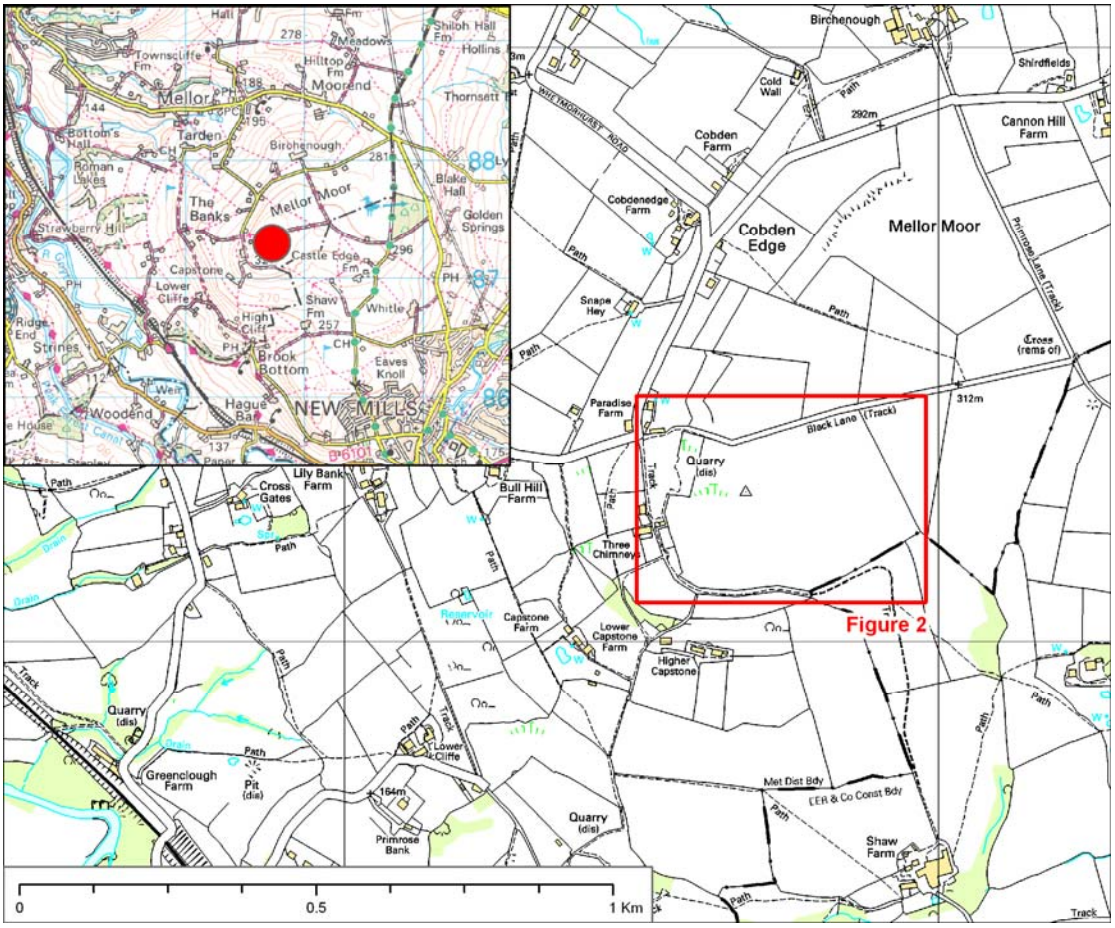

Figure 1. Maps showing the location of the study area. (Basemap: © Crown Copyright / database right 2011. An Ordnance Survey / EDINA supplied service.)

3 PROJECT AIMS

Recent fieldwork has offered tantalising hints that Shaw Cairn may be part of a larger, more complex monument, and that the hilltop on which it is sited was the focus for earlier, perhaps domestic, activity. A more sustained investigation of the landscape setting of the cairn may help to address the question of why the hilltop was chosen as the location for a richly adorned burial in the Early Bronze Age.

The fieldwork in 2011 had two aims:

1. Determine the extent and, if possible, the basic character of the stone-built structures located in the immediate environs of Shaw Cairn through a programme of geophysical and topographic survey.

2. Evaluate the evidence for human activity in the immediate environs of the cairn and on the broader plateau on which it is sited through a programme of geophysical survey, test pitting and evaluative excavation.

Figure 2. Maps showing the location of the areas investigated in 2011. The locations of Shaw Cairn and two further possible cairns / mounds are depicted as black circles. (Basemap: © Crown Copyright / database right 2011. An Ordnance Survey / EDINA supplied service.)

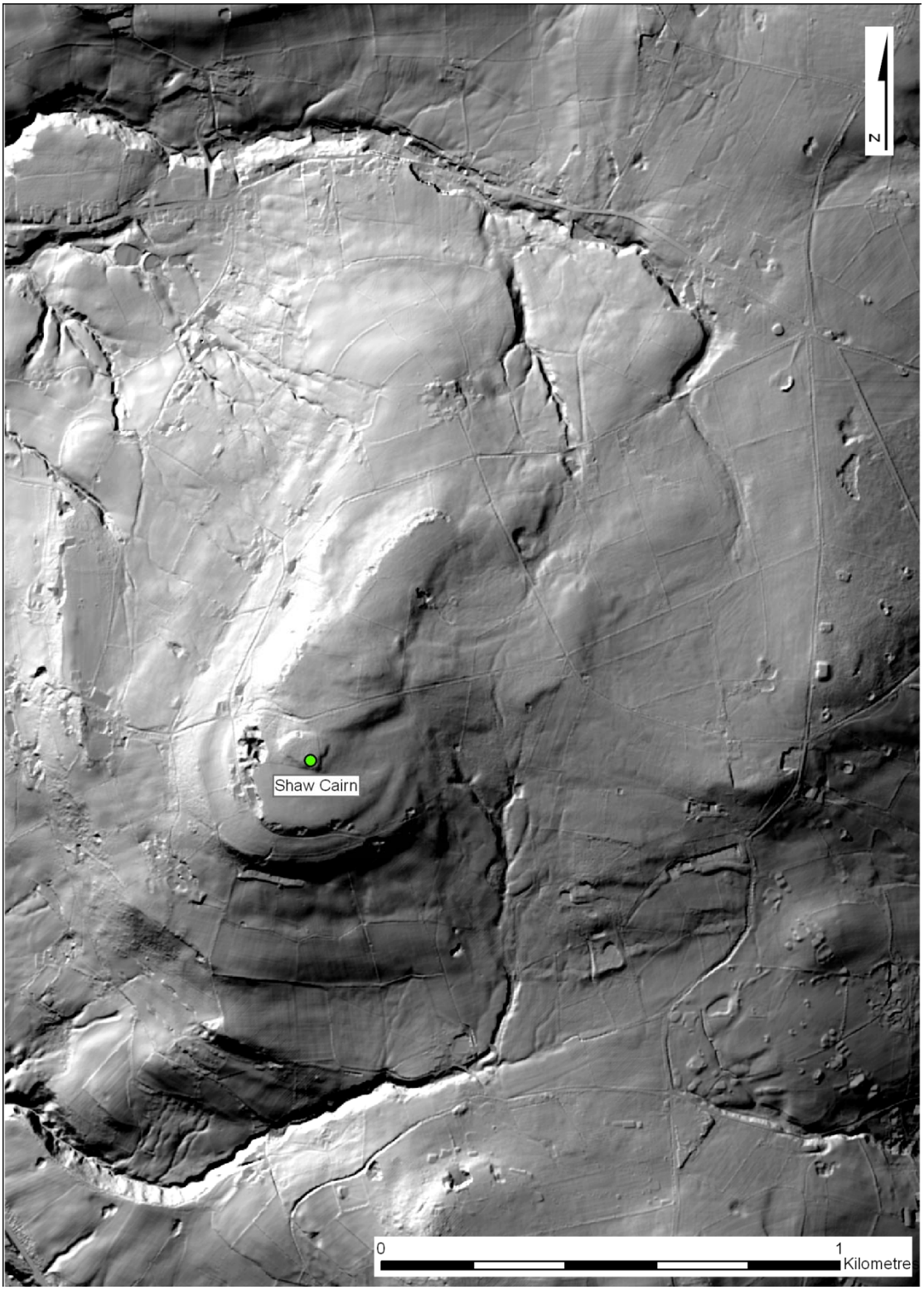

Figure 3. A hillshade model derived from 2m resolution DTM Lidar data supplied by the Environment Agency Geomatics Group (Data: © Environment Agency).

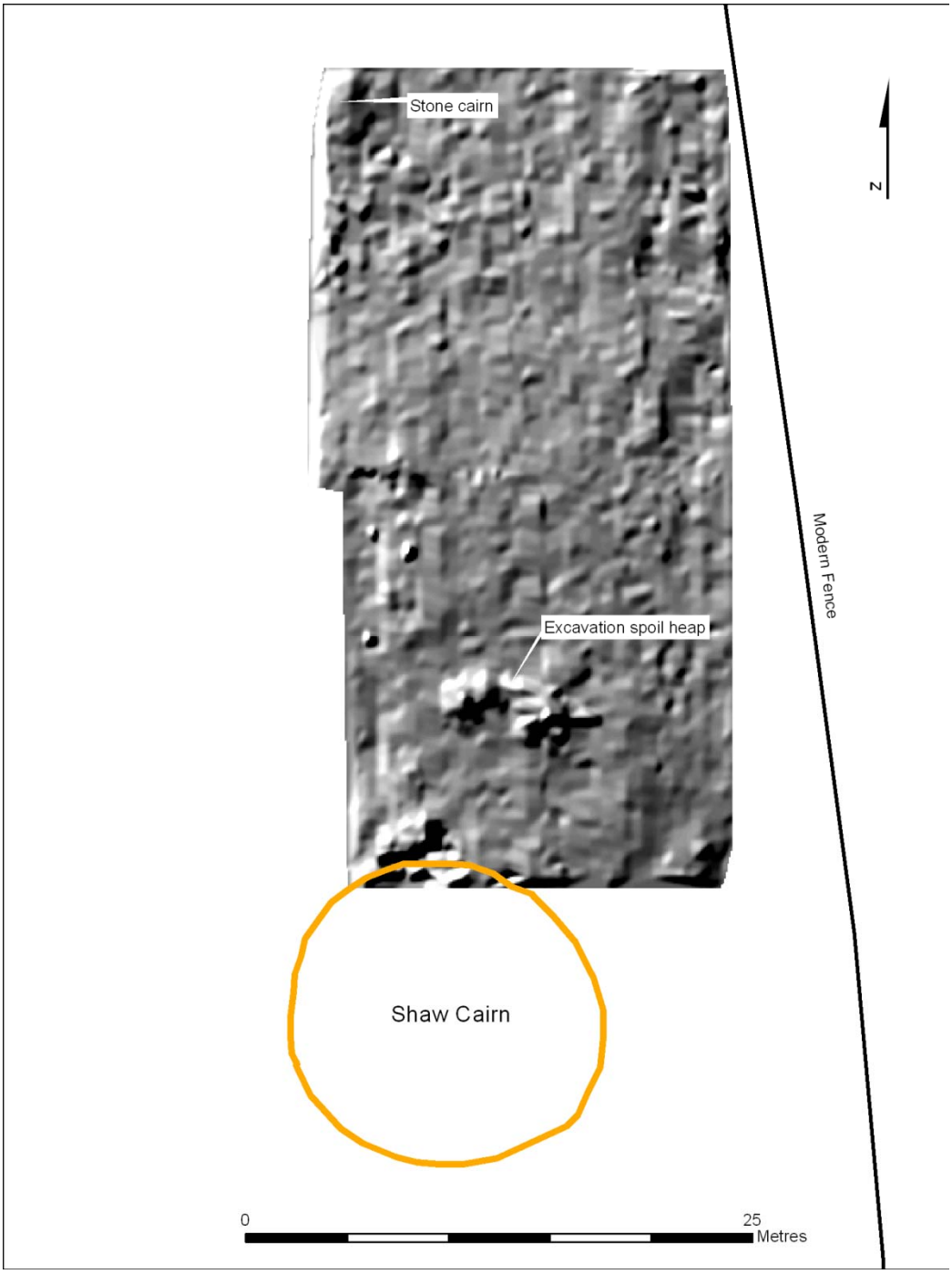

Figure 4. A hillshade model derived from a 0.5m resolution topographic survey of the ground immediately to the north of Shaw Cairn.

4 METHODOLOGY

The fieldwork was undertaken during 27 June to 8 July 2011. The fieldwork was supervised by Bob Johnston, University of Sheffield, with the assistance of Ana Jorge, Andrew Reid, Donald Reid and Maxine Wild. The field team comprised volunteers from Mellor Archaeological Trust and the University of Sheffield.

All excavation, recording and survey was carried out in accordance with the methodology presented in the project design (Johnston 2011).

5 TOPOGRAPHIC SURVEY

5.1 Methods

The topography of the cairn and its landscape was reconstructed at two scales. The wider landscape setting of the cairn was modelled using airborne laser scanning data, which was purchased from the Environment Agency Geomatics Group. ASCII DTM data at 2m resolution was acquired for an area of 6km² centred on the cairn. The data was tiled and TINs and hillshade rasters were produced using ArcGIS 9.3, following the guidelines presented in English Heritage (2010).

A detailed topographic survey of 810m² immediately to the north of the cairn was undertaken using a Leica 1200 series total station. Points were recorded on a 0.5m grid with additional points selected along prominent breaks of slope.

Additional point and line detail was also collected, including earthwork features, modern boundaries, and the locations of test pits and geophysical survey grids.

The digital survey data was processed with Leica Geo Office software and ArcGIS 9.3. The co-ordinates of control stations were georeferenced to the National Grid (OSGB36) by triangulating to modern field boundary junctions.

5.2 Results

The topographic model based on the Lidar data was of too coarse a resolution to support a detailed study of the cairn and its environs. The model does, nonetheless, offer a vivid impression of the distinctive setting of the cairn, at the highest prominence on a plateau defined by steep ground to the west (Cobden Edge) and south (Figure 3). A few earthwork features in the landscape surrounding the cairn were identified on the Lidar-derived model (Reid 2011). These have not been field-checked, and may be modern structures.

The topographic survey of an area immediately to the north of the cairn was undertaken with the aim of defining the extent of a low stone platform identified during the excavations in 2008-9. An area approximately 20x40m was sampled at 0.5m intervals (Figure 4). The edge of the cairn and the 1980s spoil heaps were visible on the survey, as was the gentle slope of the ground to the south. A low raised area, circular in plan, 4.5m in diameter, located in the northwest corner of the surveyed area, is possibly a small stone-built cairn. Unfortunately, there was no visible trace of the stone platform. If it has any surface profile, then it may be masked by the uneven ground – this unevenness accounts for the irregularity of the topographic model.

A visual survey of the field to the east of the cairn led to the identification of one further feature of possible archaeological interest. It is a low mound or platform, 7x10m, partly truncated on the north side by the modern field boundary that borders Black Lane (depicted on Figure 2).

6 GEOPHYSICAL SURVEY

6.1 Methods

Geophysical surveys were completed using a Geoscan RM15 resistance meter and a Geoscan FM256 fluxgate gradiometer. The surveys covered the flat or gently sloping ground of the field in which the cairn is sited and the agricultural field immediately to the south and east (Figure 2). The resistance survey was undertaken at a resolution of 1x1m within 20m grid squares. The gradiometer survey was undertaken with a 1m

traverse and 4 samples per metre within 20m grid squares. Grids were laid out using a total station or measured by hand, and their corners marked with bamboo canes and small plastic pegs. The data was downloaded and processed using Geoplot 3.0 for Windows. The methods and standards of fieldwork and analysis adhere to established professional guidelines (English Heritage 1995; Gaffney et al. 2002).

6.2 Results of gradiometer survey

The results of the gradiometer survey immediately to the north and west of Shaw Cairn are relatively quiet aside from a few dipole anomalies, the strongest of which (1 on Figure 5) is located approximately 28.4 metres to the northwest of the cairn. It has a magnetic range of -22.4nT to 44.65nT, which suggests it is the result of a piece of metal below the surface. The rest of the anomalies are of a similar nature, so can be explained in the same way. Two responses immediately to the west of the cairn exhibit a positive magnetic response of between 3.25nT and 3.65nT (2a and 2b). They may be pits on the edge of the cairn, or they may relate to archaeological investigations of the monument.

Several features occur in the survey area to the south of Shaw Cairn. The first of these is a curving line running from the southern edge of the field containing the cairn to the western extremities of the survey area (3 on Figure 5). The feature is reasonably faint, registering only between -24nT and -14nT, and it is 71 metres in length and 1 metre wide. The feature is difficult to see from the raw data, requiring a degree of processing before becoming visible. This casts doubt on whether or not it is archaeological. However, the feature becomes visible after the grids and traverses have been zeroed and before any filters are applied to the data, implying that the processing enhances its visibility. Towards the southwestern end, the curving feature is abutted by a linear feature of roughly the same strength, between -25nT and 26nT (4). To the west of feature 3 is a dipole response of negative to positive magnetism ranging from -39nT to 14.5nT (6). It is approximately 5 metres wide and 6 metres long. Given the strength of the response it is likely to represent a piece of metal buried quite deep or a smaller piece closer to the surface. To the northwest of the dipole feature is a circular anomaly of positive magnetism of 4.9nT surrounded by an area of negative magnetism of -24.4 nT, measuring approximately three metres in diameter. The morphology of the feature coupled with its negative magnetism suggests that it may represent a filled in pit, although establishing whether it is archaeological or more recent can only be confirmed through excavation.

The most prominent anomaly in the survey area to the east of the cairn is a dipole feature, -5.85nT to 76.75nT, measuring 4.5 metres by 6.4 metres (7 on Figure 5). The strength of the response indicates that it is a piece of metal buried below the surface. Approximately five metres to the west of the large dipole feature is another primarily positive magnetic anomaly, which is oval in shape, 5.6 metres by 9.7 metres across, with a range of 1.25nT to 4.75nT (8). Alongside these two more obvious features are two possible circular anomalies. The northern circle (9) is the clearest, measuring 13 metres in diameter with a positive magnetic response of 4.3nT. The second circle (10) is not as clear, but it is roughly the same size as the first and shows a similar magnetic response of 3.9nT. Both features are sited on a relatively steeply sloping part of the field; this location and their relatively poor definition on the survey suggest they have low potential to be of archaeological significance.

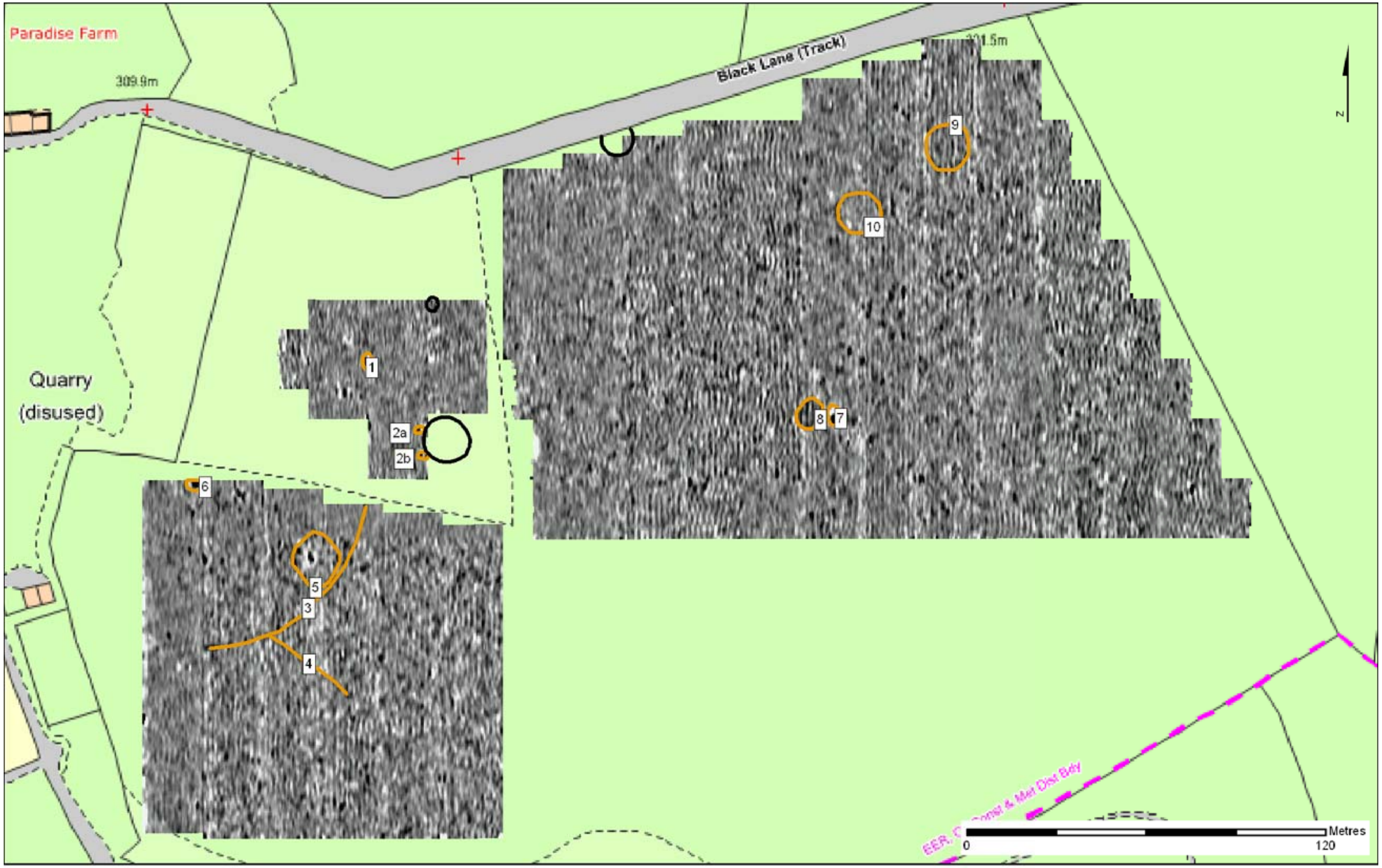

Figure 5. Plots showing the results of the processed gradiometer survey data. Features referred to in section 6.2 are annotated and depicted as orange lines. The original survey plots are presented in Appendix 3. (Basemap: © Crown Copyright / database right 2011. An Ordnance Survey / EDINA supplied service.)

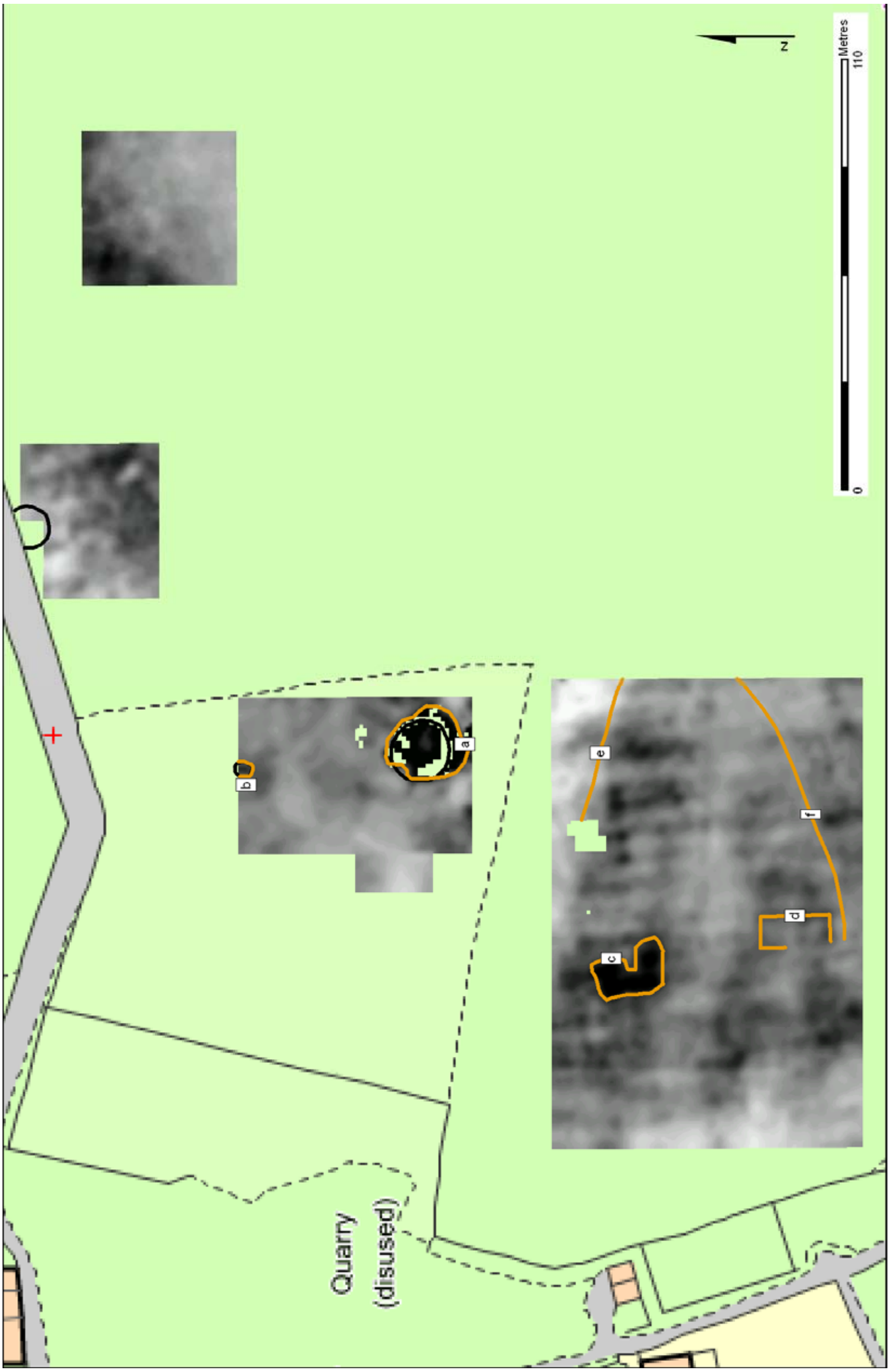

Figure 6. Plots showing the results of the processed resistivity survey data. Features referred to in section 6.3 are annotated and depicted as orange lines. The original survey plots are presented in Appendix 3. (Basemap: © Crown Copyright / database right 2011. An Ordnance Survey / EDINA supplied service.)

6.3 Resistivity

The resistivity survey in the area of Shaw Cairn was undertaken with the objective of locating the extents of the stone platform excavated in 2008-9 (see above, section 2.4). Evidence for the platform was not identified during the survey. Shaw Cairn did, unsurprisingly, produce a strong high resistance response of 640ohms (a on Figure 6). A second high resistance feature was identified at the northern edge of the survey area (b). It is an area of high resistance, 546ohms, measuring 2.2 by 2 metres, with a possible maximum extent of 7 by 10 metres across. The feature corresponds to a low mound identified during the topographic survey (see above, section 5.2). The resistivity results confirm this is a stone-built feature.

There are several potential reasons for the inability of the resistivity meter to identify the stone platform. One is that the spacing between the mobile probes (0.5 metres) results in an approximate penetration depth for the survey of 0.75 metres. With the stone feature situated quite near the surface and only 0.2 metres deep at the most, it may be that the survey is effectively producing readings from below the feature. A re-survey of the area with a 0.25 metre probe spacing, thereby halving the penetration depth, would test this hypothesis. Another possible explanation is that the stones comprising the platform are not densely packed enough to cause adequate variation in soil moisture to affect the resistance in comparison with the surrounding ground.

The resistivity survey to the south of the cairn produced clearer results than the gradiometer. The area is crossed by multiple north-south aligned linear features, which cover much of the survey area. These are best interpreted as cultivation ridges, although it is notable that the cultivation remains identified in the test pits were aligned east-west (see below, section 7.2). The largest discrete feature is an area of high resistance, 14 metres across at its widest point and 25 metres in length, measuring 349.5 Ω (c on Figure 6). Despite seeming to have badly defined edges, its size and shape imply it may be archaeologically significant, although a possible geological origin cannot be discounted. Probably the most clearly defined feature within this area is a rectangular high resistance anomaly, 292.5Ω, 17 metres long and 5.8 metres wide (d). There are also two possible linear features on the east side of the survey area (e and f): e is a low resistance anomaly measuring 227.5Ω and 23 metres in length; f is a low resistance anomaly, 238.5Ω, 70 metres in length.

Two smaller resistivity surveys were carried out in the field to the east of Shaw Cairn over features identified during the gradiometer and topographic surveys: a low earthwork mound partially overlain by the northern boundary of the field (see above, section 5.2), and a circular anomaly located on steeply sloping ground on the northeast side of the field (10 on Figure 6). The resistivity survey did not identify any clear features in these areas.

7 TEST PITS AND EVALUATIVE EXCAVATION

7.1 Methods

Eleven test pits were be excavated in the field immediately to the south of the cairn (Figure 2). The pits were 1x1m in size, and located 20m apart east-west and 10m apart north-south. The pits were excavated stratigraphically. The turf overburden was removed by spade/mattock, and the layer(s) beneath it were trowelled clean and examined for evidence of archaeological deposits. When no features are identified, the layers were removed stratigraphically using trowels and mattock/shovel. All excavated soils/sediments were dry sieved through a 6mm mesh. A record of the soil

profile (including depth of horizons, interfaces, colour, composition, proportion of stones etc.) was made for each pit using a standard form. Test pits were back filled and reinstated once the recording was completed.

Three small evaluation trenches were excavated to investigate features identified on the geophysical surveys and in one of the test pits (Figure 2). Trench 1 measured 3x2m and was an extension of test pit 7. Trenches 2 and 3 were 2x1.5 and 2x2m in size, respectively, and both were located on features identified during the gradiometer survey. The trenches were deturfed by hand, and all archaeological features and deposits were then excavated stratigraphically. Discrete features were half-sectioned in the first instance to determine and record their form, and then fully excavated. Stake holes were fully excavated and their profile was drawn post-excavation. All archaeological features encountered were recorded using a standard single-context recording system. A full written, drawn and photographic record of all material revealed in the trenches was made during the course of the investigation. Trenches were back filled and reinstated once the recording was completed.

Figure 7. A map showing the distribution of worked stone from the excavation trenches and test pits (the numbers inside white circles are the quantities of finds per trench/test pit). (Basemap: © Crown Copyright / database right 2011. An Ordnance Survey / EDINA supplied service.)

7.2 Test pits

The test pits were excavated in order to recover artefacts, record soil profiles, and identify archaeological features. A tabulated summary of the test pit records is provided in Appendix 1.

Artefacts were recovered from three test pits: numbers 4 (3 flints), 6 (1 flint) and 7 (3 flints). All of the finds were chips and flakes of flint, with a flint blade and a rod microlith found in test pit 7. There are too few finds and test pits for a meaningful analysis of the spatial distribution of the artefacts (Figure 7).

The soil profiles varied considerably in colour and composition between the pits. This variation can only be partly accounted for by differences in individuals' recording methods, since a standard soil composition chart and a Munsell soil colour chart were used. The A-horizon varied in depth from 140-200mm (mean 160mm), and the pits were excavated to a mean depth of approximately 240mm (this was roughly 10mm into the top of the C horizon). The general profile was a dark grey/brown to black A horizon, sometimes overlying a lighter, sometimes yellowish, more compacted B horizon (not always present), with a yellowish or reddish C horizon. The soils were generally sandy in composition with some patches of clay. Sandstone clasts were common, and the sandstone bedrock was identified in one test pit (10).

Possible archaeological features were identified in seven test pits. Four stake-holes were uncovered in test pit 7, and the pit was subsequently extended to form Trench 1 (see 7.3, below). The features identified in the other test pits were putative and in some cases well-defined plough marks and ridges, and lenses of charcoal. These features were all identified at the interface between the A and B/C horizons. The landowner remembers trees being cleared from this ground before it was then ploughed, and it is probable that these features are a consequence of this activity.

7.3 Evaluation trenches

7.3.1 Trench 1

Trench 1 measured 3x2m, and was excavated as an extension to test pit 7 following the discovery of stake holes cut into the sub-soil. In total, 14 stake-holes were identified and excavated. They were overlain by the A horizon (1001) and cut into a compact yellow sandy clay, C-horizon (1003). The holes were round to oval in plan, c.40-90mm across, and 40-160mm in depth, with a concave or tapered base. The fill of the stake-holes was a dark brown clayey silt. The majority of the stake-holes follow two alignments, forming a Y-shape, with four outliers (1014, 1020, 1026, 1032) (Figure 8). There were no finds from within the stake-holes, although worked stone was recovered from 1001 and the interface with 1003.

A deposit of yellowish red sandy clay with frequent flecks of charcoal (1018) filled a roughly oval depression, 1x0.24m, on the eastern edge of the trench. The depression was cut into the subsoil (1003) and seemed to be 'capped' by a layer of stones. On initial excavation, the feature was interpreted as a possible hearth. However, its edges were difficult to define and the base had an irregular surface that looks unlike a 'made' feature. It might, alternatively, be associated with the twentieth-century clearance of trees from the field.

Three narrow, irregular, linear cuts, lying parallel with one another and aligned east-west, were identified in the northeast corner of the trench (1016). These are similar in shape and fill to the features identified in the test pits, and they are interpreted as the result of modern deep ploughing.

7.3.2 Trench 2

Trench 2 was 2x1.5m in size and located to investigate a linear anomaly identified during the gradiometer survey. The stratigraphy within the trench was similar to profiles recorded in the test pits: black silt to a depth of 110mm overlay a 50mm thick layer of yellowish red sandy subsoil. No archaeological features were identified in the trench. Two finds of worked stone were recovered during sieving (see 7.5). A comparison of the location of the trench, surveyed after excavation, and the geo-referenced geophysical survey plot shows that the trench may have marginally

missed the anomaly – the trench was located by hand taking measurements from a print-copy of the geophysics plot.

7.3.3 Trench 3

Trench 3 was 2x2m and placed to investigate an anomaly identified during the gradiometer survey. The stratigraphy within the trench was similar to that recorded in the test pits, although deeper: a 200-250mm depth of dark grey clayey silt (3001), overlying a 10-80mm depth of reddish brown clayey silt (3002), with a red clayey silt subsoil (3003). No archaeological features were identified in the trench. There were 22 finds of worked stone, the majority of which were recovered from 3001 (see 7.5).

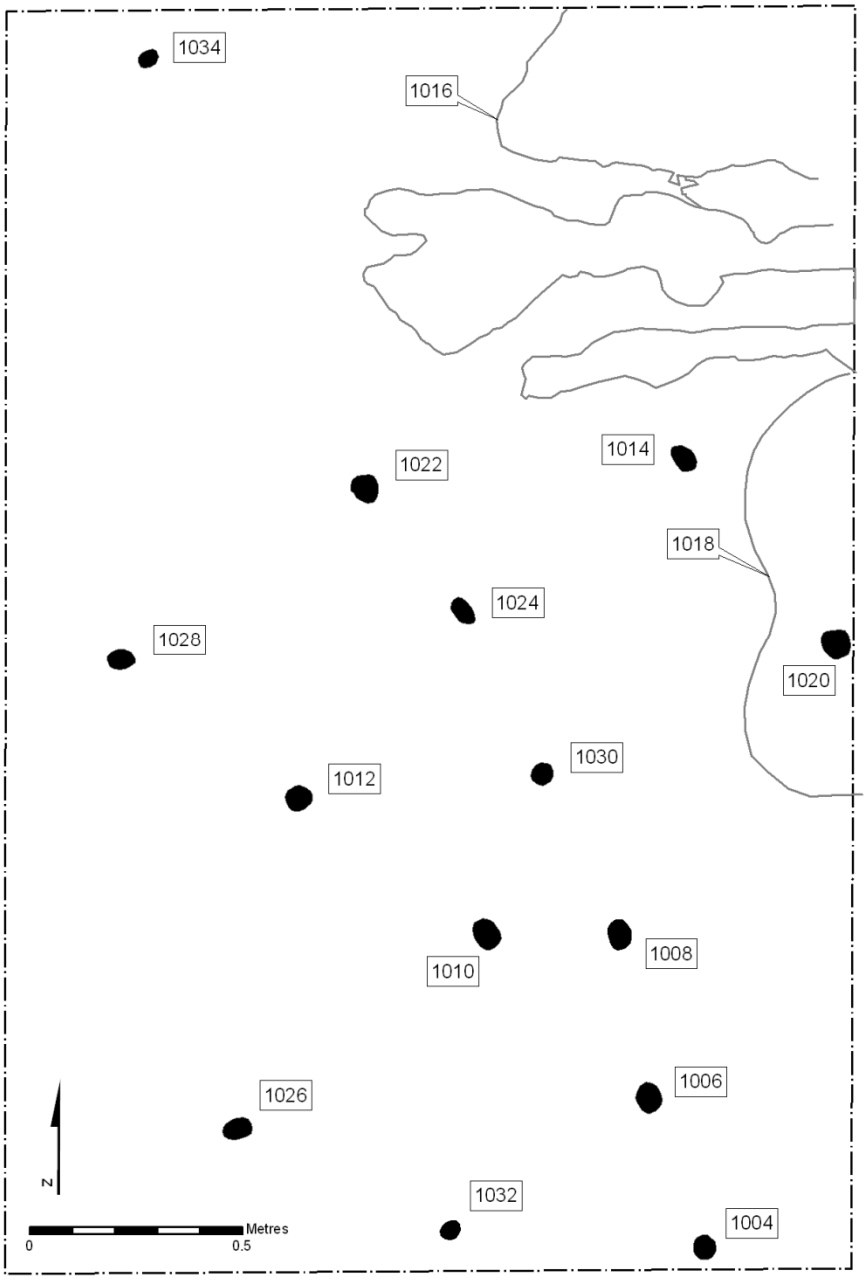

Figure 8. Plan of Trench 1 showing the locations of the stakeholes.

7.4 Sampling of 1970s/80s spoil

The spoil heaps from the 1970s and 1980s excavations are still visible as low mounds of earth on the southern side of Shaw Cairn. A sample of the spoil was sieved through 6mm mesh to assess if any finds were missed during the earlier excavations. Small fragments of prehistoric pottery and a burnt flint flake were recovered; they are described below (7.5 & 7.6). The sieved spoil was used to reinstate the 1970s/80s excavation trenches.

7.5 Worked stone

Thirty-nine pieces of worked stone were recovered during the investigations (Appendix 3). They were examined by Andrew Reid, with advice from Andrew Myers (GMAU). The majority of the worked stone is made from flint, with two pieces of quartzite and a single find of black Derbyshire chert.

Ten finds of worked stone came from Trench 1, 7 of which were recovered from sieving. All the finds are from the A horizon (1001) or on the interface with the subsoil. The most interesting piece is a Later Mesolithic rod microlith, with retouching on both edges, and made on a semi-translucent flint (find #3). The other finds include three blade fragments, tertiary and secondary flakes, a possible core or bifacial thinning flake, and a chip. Two pieces of worked flint were heavily burnt.

Twenty-two pieces of worked stone were recovered from Trench 3. The majority were flint, including a very fine quality barb of a Late Neolithic Petit Tranchet Derivative arrowhead made from brown semi-translucent flint (find #5), and a Late Neolithic scraper (find #7). A small flake refitted with the scraper, and both pieces showed signs of having been exposed to heat. The other finds included flakes, chips and two pieces of quartzite. Many of the flakes had been burnt.

Worked stone was also recovered from Trench 2, test pits 6 and 4, and the sieved 1970s/80s spoil, but none were diagnostic tools. All the pieces were made flint, apart from a chunk of black Derbyshire chert from Trench 2 (find #27).

Figure 9. Find 39 – horizontal, linear impressions made with a twisted cord (scale 30mm)

7.6 Ceramics (Ana Jorge)

The assemblage consists of six very small pottery fragments (<2 cm), recovered from the spoil heap of the 1970s/80s excavation during sieving (find #39, 40, 41, 42, 43 and 44). They are very similar in fabric, surface treatment, surface colour and, when

present, decoration, indicating that they could belong to the same vessel. The fact that four of the fragments were collected from the same area of the spoil heap further supports this hypothesis. They are all body sherds except #43, which seems to correspond to a damaged lip fragment. Sherd #40 has a slightly sinuous profile, suggestive of a neck or shoulder. Wall thickness could only be measured for the two sherds with preserved internal surfaces: the probable lip/rim fragment #43, which is 5.3 mm thick, and the probable neck or shoulder fragment #40, which is 6.8 mm thick.

All fragments are characterised by a relatively homogeneous fabric with rare minute mica (<0.2 mm) and few sub-angular grains of sandstone (1-4 mm), all of which seem natural to the clay. External surfaces are smooth and light reddish brown (5YR 6/4, #39) to light brown (7.5 YR 6/4, e.g. #40), while the cores are very dark grey (5YR 3/1 to 7.5 YR 3/1), suggesting incomplete oxidisation during firing. Fragment #43 is more homogeneous in colour, being 7.5 YR 6/4 throughout, which is consistent with the more even oxidisation of a thinner wall.

The largest three fragments are decorated with horizontal, linear impressions made with a twisted cord (Figure 9). Two parallel lines can be observed in sherd #39. They are unevenly distributed across the surface of the sherd, suggesting that the vessel would have been decorated in bands of cord impressions or more complex patterns including multiple cord impressions. Such motifs and patterns are compatible with those characteristic of some regional Beakers and Food Vessels and in particular with Food Vessel #53 found during the 1976-1988 excavations (Mellor 2000: 83, Plate 53).

8 CONCLUSIONS

The investigations in 2011 had two aims:

1. Determine the extent and, if possible, the basic character of the stone-built structures located in the immediate environs of Shaw Cairn through a programme of geophysical and topographic survey.
2. Evaluate the evidence for human activity in the immediate environs of the cairn and on the broader plateau on which it is sited through a programme of geophysical survey, test pitting and evaluative excavation.

8.1 The monumental setting

The topographic and geophysical surveys in the areas immediately around Shaw Cairn failed to find evidence of the stone platform that was excavated in 2008-9. The uneven ground surface makes it difficult to see slight variations in the topography, and this unevenness also accounted for the irregularity in the digital terrain model. Alternative geophysical survey techniques may bring results, but the most reliable method of characterising the platform would be excavation.

Two possible archaeological features were identified during the topographic survey; one has been confirmed as a stone structure by geophysical survey. It is possible, therefore, that Shaw Cairn was not an isolated monument. In addition to the platform, there may have been at least two other mounds, both smaller than the main cairn, sited on the plateau.

8.2 Human occupation on the hilltop

The geophysical surveys identified a few anomalies of possible archaeological significance. Evaluative excavation of two anomalies did not reveal any archaeological

features, although in one case the trench was inadvertently located a short way off the anomaly. There is value, therefore, in excavating a few more trenches to more fully evaluate the geophysical survey.

The excavations produced both artefacts and features that may be earlier than or contemporary with Shaw Cairn. One of the test pits revealed a group of stake-holes, which were subsequently excavated in a larger trench. The stake-holes were filled with a sediment that was very different in character to the overlying plough soil, suggesting that they were of an early date – rather than modern. An ill-defined stony feature associated with some charcoal may be the remains of a hearth, but it is more likely to be a consequence of modern disturbance.

The assemblage of worked stone recovered from the excavation trenches and test pits mostly comprises undiagnostic pieces of flint, with some chert and quartzite. The assemblage is comparable to the material recovered during the excavation of the cairn, where there was a mixture of earlier (Later Mesolithic) and contemporary (Late Neolithic / Early Bronze Age) material. It is notable that the diagnostically earlier artefacts, the microlith and perhaps the blade fragments, were recovered from Trench 1, while the later artefacts, the scraper and PTD arrowhead, came from Trench 3. The assemblage is, nonetheless, small and so further fieldwork would be required in order to evaluate this pattern.

Overall, there is ample evidence for prehistoric human occupation on the plateau around the cairn, particularly considering the size of the excavated areas. The stake-holes indicate that features are preserved cut into the subsoil. Unfortunately, shallow features and surfaces are unlikely to survive in the area south of Shaw Cairn given extensive signs of twentieth-century ploughing and disturbance. The deeper sediments identified in Trench 3, located in a shallow re-entrant, may provide the context for preserving undisturbed features and surfaces.

9 RECOMMENDATIONS FOR FUTURE WORK

1. The stone platform could be further investigated with a resistivity survey using a 0.25m array – which should respond to features at the shallower depths expected for the platform. This should be supplemented with further carefully targeted evaluation trenches, which could be located to define the edges of the platform and to assess its composition. Realistically, a larger area excavation would be required to ensure any likelihood of defining the platform's function and its relationship to Shaw Cairn.
2. The additional cairns/mounds identified in 2011 could be deturfed, cleaned and recorded to determine if they are archaeological features. Sample excavation of the deposits may be worth considering.
3. Four of the features identified during the geophysical survey are potentially of archaeological interest: two linear features in the field to the south of Shaw Cairn (3 and f on Figures 5 and 6), the large high resistance feature in the same survey area (c on Figure 6), and the positive magnetic anomaly in the field east of the cairn (8 on Figure 5). It would be helpful to evaluate their potential through excavation.
4. The test pits have proven their worth in recovering artefacts and identifying subsurface features. An extension of the test pit transects to the east and south of Shaw Cairn would be a suitable method for continuing this strategy, and evaluating the spatial patterning of prehistoric occupation on the plateau. The 1x1m pits are relatively slow to excavate, and so it may be worth considering a trial of 0.5x1m

pits, particularly in areas with relatively dense concentrations of material (i.e. around Trench 3).

5. The stake-holes identified in Trench 1 are of considerable potential, particularly given their indirect association with Later Mesolithic worked stone. There would therefore be value in excavating a larger area in plan around Trench 1 to discover if the lines of stakes continue and if they are associated with other features or artefacts.

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12 APPENDIX 1 – TEST PITS

Test Pit Number (see Figure 2)	Depth of A-Horizon (mm)	Excavated depth of pit (mm)	Soil Profile	Features	Finds
1	140	350	Turf; v. dk grey silty sand; dk brown silty sand; reddish brown coarse sand	narrow vertical 'cut' from A horizon down, interpreted as plough mark or root disturbance	none
2	150	330	Turf; v. dk grey sandy silt; brownish grey sandy silt; reddish brown coarse sandy silt	possible burnt sandstone and flecks of charcoal below A horizon	none
3	140	230	Turf; black coarse sand; dk reddish brown coarse sand	suggestion of 'cut' in west-facing section, nothing noted in plan	none
4	190	250(P)	Turf; black sand; dk reddish brown silty clay	three parallel furrows and ridges, aligned east-west, cut into clay subsoil	3 flints
5	160	250(P)	Turf; dk reddish grey sand; yellowish red sandy clay	none	none
6	150	190	Turf; black silty sand; strong brown clayey sand	none	1 flint
7 (Trench 1)	190	220	Turf; black clayey silt; dk greyish brown silt; reddish brown clay	four small stakeholes, 50-160mm in depth (test pit extended to form trench 1)	3 flint (+7 from trench)
8	200	250(P)	Turf; strong brown sand; yellowish brown sand	two possible plough marks aligned east west	none
9	150	210	Turf; v dk brown silty sand; yellowish brown coarse sand	thin lens of charcoal below A horizon	none
10	140	190	Turf; v dk grey	none	none

			clayey silt; yellowish brown clayey silt; sandstone		
11	150	200	Turf; dk reddish grey sand; reddish yellow sand	none	none

13 APPENDIX 2 – LIST OF ARTEFACTS

Finds Number	Trench	Context	Interpretation
1	1	1001	Tertiary Blade made from Banded Flint with some edge damage
2	1	1001	Tertiary Bladed flake with some edge damage but no sign of intentional retouch
3	1	1001(Base)	Late Mesolithic rod microlith with intentional retouching on both margins Semi Translucent Flint
4	3	3001(Base)	Tertiary Flake made from Banded Flint with no signs of intentional retouch
5	3	3001(Base)	Very fine quality barb of a Late Neolithic Petit Tranchet Derivative (PTD) made from brown semi-translucent flint
6	3	3001	Flint chip which has possibly been burnt
7	3	3001	Late Neolithic Scraper which has been exposed to heat but not directly burnt within a fire
8	3	3001	Secondary thinning flake made from brown translucent flint
9	3	3001	Burnt, incomplete flake made from brown translucent flint
10	3	3002	Tertiary flake made from brown translucent flint
11	3	3003	Tertiary flake made from brown translucent flint
12	3	3001	Part of Late Neolithic Scraper (Find no 7)
13	3	3001	Teritiary Flake, burnt flint (May refit to 7)
14	3	3001	Teritiary Flake, burnt flint (May refit to 7)
15	3	3001	Teritiary Flake, burnt flint (May refit to 7)
16	3	3001	Teritiary Flake, burnt flint (May refit to 7)
17	3	3001	Teritiary Flake, burnt flint (May refit to 7)
18	3	3001	Teritiary Flake, burnt flint (May refit to 7)
19	3	3002	Tertiary flake made from Grey semi - translucent flint
20	1	1001	Unused blade made from opaque flint with some edge damage
21	1	1001	Chip
22	1	1001	Heavily burnt secondary flint
23	1	1001	Blade midsection made from grey semi translucent flint with no intentional retouch
24	1	1001	Heavily burnt flint
25	1	1001	Core or possibly an episode of bifacial thinning which has gone wrong
26	1	1000	Chunk, white opaque flint
27	2	2001	Chunk of black Derbyshire Chert
28	2	2001	Heavily burnt flint
29	3	3001	Secondary small flake made from translucent flint
30	3	3001	Tertiary small flake made from translucent flint with some signs of burning
31	3	3001	Chip, opaque mottled grey/white flint
32	3	3001	Tertiary chip, translucent flint
33	3	3001	Quartzite
34	3	3001	Quartzite pebble

35	670,205	N/A	Secondary chunk, brown translucent flint
36	630,215	N/A	Teritiary flake made from brown flint, possibly from thinning
37	630,215	N/A	Tertiary chip opaque grey flint
38	630,215	N/A	Tertiary Flake made from opaque grey flint
39	SIEVED SPOIL	N/A	Prehistoric Pottery
40	SIEVED SPOIL	N/A	Prehistoric Pottery
41	SIEVED SPOIL	N/A	Prehistoric Pottery
42	SIEVED SPOIL	N/A	Prehistoric Pottery
43	SIEVED SPOIL	N/A	Prehistoric Pottery
44	SIEVED SPOIL	N/A	Prehistoric Pottery
45	SIEVED SPOIL	N/A	Heavily burnt flake, possibly from thinning
46	SIEVED SPOIL	N/A	Flint flake
47	SIEVED SPOIL	N/A	Flint flake
48	SIEVED SPOIL	N/A	Flint flake

14 APPENDIX 3 – GEOPHYSICAL SURVEY PLOTS

Figure 10. Plot showing the results of the processed gradiometer survey data. (Basemap: © Crown Copyright / database right 2011. An Ordnance Survey / EDINA supplied service.)

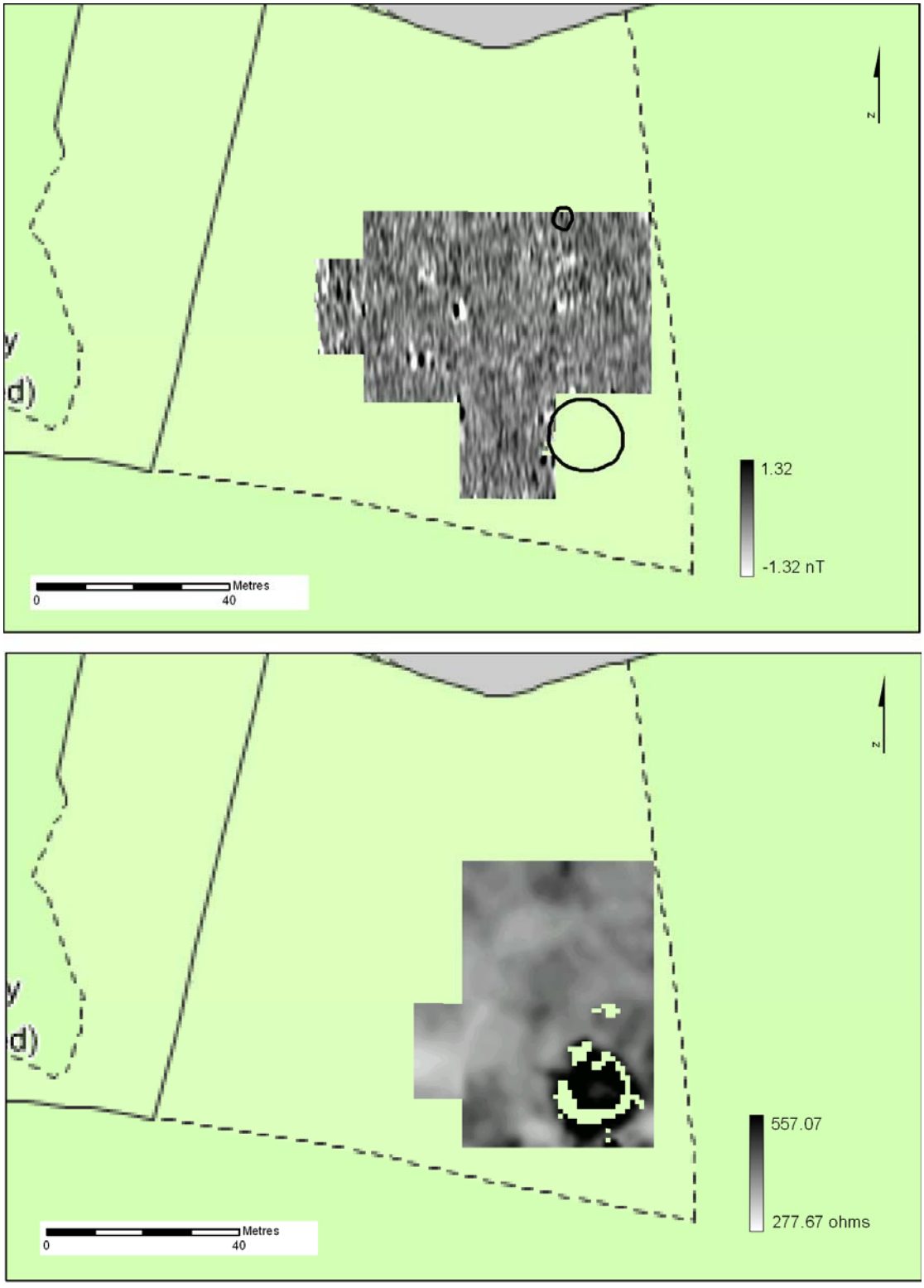

Figure 11. Plots showing the results of the processed gradiometer (top) and resistivity (bottom) survey data. (Basemap: © Crown Copyright / database right 2011. An Ordnance Survey / EDINA supplied service.)

Figure 12. Plot showing the results of the processed resistivity survey data. (Basemap: © Crown Copyright / database right 2011. An Ordnance Survey / EDINA supplied service.)