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Archaeological Services

An Archaeological Excavation
Thurmaston Lane,
Humberstone, Leicester

NGR: SK 626 065 centre

Tim Higgins



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**An Archaeological Excavation
On Land east of Thurmaston Lane
Humberstone, Leicester**

NGR: SK 626 065

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An Archaeological Excavation on Land east of Thurmaston Lane, Humberstone, Leicester (SK 626 065)

Tim Higgins

Summary

Excavations in April – May 2014 at land east of Thurmaston Lane, Humberstone (SK 626 065) have revealed further evidence of an Iron Age ‘aggregated’ settlement, represented by a spread of ‘open’ settlement along the southern line of a significant linear boundary. The site clearly represents a continuation of settlement activity previously recorded immediately east within Area B of the Manor Farm Excavations. This in turn is likely to be contemporary with elements of excavations within Area A and also the earlier excavations undertaken at Elms Farm to the east. The settlement appears to be long lived, beginning in the Late Bronze Age/Early Iron Age with the main phases of the settlement dated to the Middle and Late Iron Age, finally coming to an end in the early 1st century AD. This particular area of the settlement activity would appear to fall with the Middle to Late Iron Age. Within this phase of work five roundhouses were revealed which has shown a continued trend from the previous Elms Farm and Manor Farm excavations where the buildings are characterised by an encircling eaves drip gully with little evidence for the structure itself. Three roundhouses were large, their projected diameters (combining excavation results with the geophysical survey) measuring between 15m to 17m. The remaining two roundhouses were smaller with a diameter of 8m. The spacing or arrangement of the various roundhouses and enclosure ditches would suggest possibly two phases. Phase 1 appears to comprise Roundhouses 3, 4 6 and 7 and their overall characteristic suggests that their various ditches and gullies were all allowed to naturally fill with silt. The second phase perhaps comprised of Enclosures A, B and C with Roundhouse 5 and all appeared to be deliberately back filled with more domestic refuse charcoal and burnt stones.

Records will be deposited with the Leicester City Museums Service under the Accession no. A15.2014.

Introduction

This report presents the results of archaeological excavations and a topographic survey undertaken across part of an area of extensive Iron Age settlement on land at land east of Thurmaston Lane, Humberstone, Leicester (centred on NGR SK 626 065; Fig. 1). The archaeological work was undertaken in response to plans for a new residential development on the site. Initial potential of the site had been highlighted by previous archaeological evaluation in the northern area of the site as well as the known extensive Iron Age settlement located immediately to the east (Thomas 2008a, Area B) that both suggested the continuation of settlement activity into the proposed development area. The majority of the development area was also covered with the remains of ridge and furrow agricultural systems that had apparently lain undisturbed since the medieval period. Subsequent evaluative work on the area including geophysical survey (Butler 2009) and trial trenching (Harvey 2010) confirmed the presence of Iron Age occupation remains within the southern area of the site, including a long boundary ditch, circular buildings

and pits. Limited sample excavation of features revealed in the trenches yielded artefactual evidence of habitation including pottery and animal bone. Planning permission was granted for the new residential development and The Leicester City Council Archaeologist, as archaeological advisor to the planning authority, requested that an earthwork survey and open area excavation be undertaken in order to record any archaeological remains of significance. This work was carried out by University of Leicester Archaeological Services (ULAS) in April and May 2014.

Site Description, Topography and Geology

The proposed development area is located north of Manor Farm, Humberstone, approximately 5km east of Leicester city centre. It consists of an irregular, roughly linear block of land covering an area of c.1.55ha., located within the northern part of a field that is bounded to the north by Hamilton Way and by Thurmaston Lane to the west (Figs. 1 and 2). The development area lies on a glacial clays, at a height of 90-99m OD, overlying Lower Lias clays and limestone. To the south and north the ground falls off into the valleys of the Scraftoft and Melton Brooks respectively. The field was under pasture and contained a well preserved ridge and furrow field system across the majority of the application area.

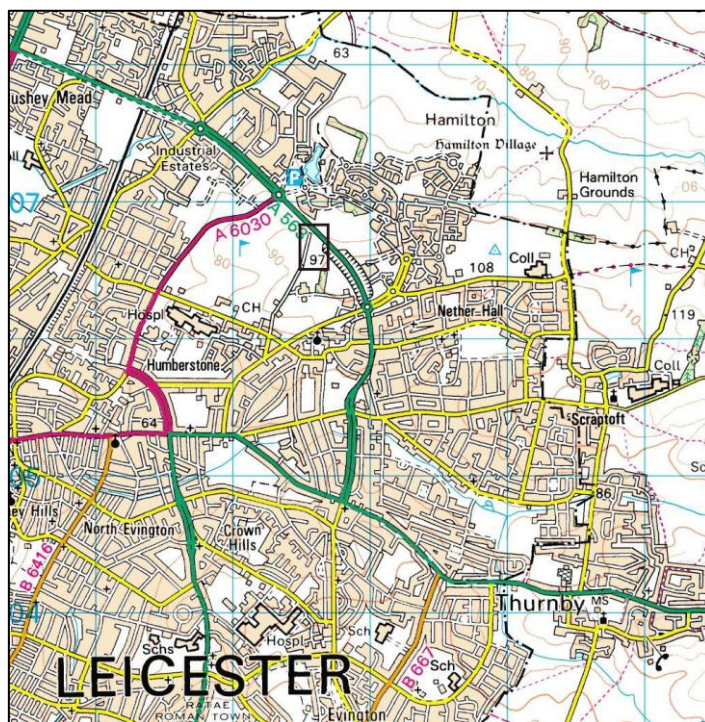


Figure 1: Site Location.

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Historical Background

Humberstone was within the old Hundred of East Goscote and first appeared as *Hunboerht's stan* (stone) and possibly has connotations of pagan worship in connection with the „Humber Stone“ which is situated south-west of Humberstone Farm (NGR SK

6234 0710). A huge red granite stone some six feet wide which now sits flat in the ground but is believed to have once stood up to eight feet high. In Domesday (1086) the settlement is referred to as *Humerstone* and was held by Hugh de Grandmesnil and was recorded as comprising of 9 ploughlands and worth 40s (Morgan. 1979, 13:24). There were two manor houses in Humberstone, the Martival-Hesilrige manor situated west of the church, and the other, Hotoft manor, dating at least to the 12th century, west of this (Rahtz 1959).

Archaeological Background

The site is located within a wider area of known Late Bronze Age and Iron Age activity in the eastern hinterland of Leicester (Fig. 1). Immediately east of the site excavations at Manor Farm have revealed an extensive area of Iron Age ‘aggregated’ occupation consisting of a sequence of large stock enclosures and a linear spread of ‘open’ settlement adjacent to a linear boundary ditch. Settlement on the site was evidently long-lived with occupation beginning in the Late Bronze Age/Early Iron Age although the main phases of the site dated to the Middle and Late Iron Age, finally coming to an end in the late 1st century BC or early 1st century AD (Thomas 2008a). Further east of the Manor Farm site, excavations at Elms Farm, revealed a substantial and long-lived mid-late Iron Age settlement (Charles et al 2000) that is likely represents part of the same spread of occupation. It is suggested that the earlier phase of this settlement was located within the remains of a Bronze Age enclosure, with buildings and enclosures fitting comfortably within the earlier earthworks. To the south-east an area of Late Bronze Age to Early Iron Age occupation and stock management has also been recently excavated (Beamish and Shore 2008). To the north of the site, recent archaeological work in advance of housing development has indicated areas of ditching and a possible enclosure (Richards 2004, 2005). Chance finds during the construction of the Quakesick Spinney housing development, including pottery and a gold stater of the local Iron Age tribe, the *Corieltavi*, were associated with a hearth and indicate a further area of later prehistoric occupation in the area. Late Iron Age occupation in the wider locality is also known at Crown Hills (Chapman 2000), and probably at Rushey Mead, where a crouched inhumation in a pit has been recorded (Pollard 2001). The site has been subject to geophysical survey (Butler 2009), which concluded that there was a high potential that the Iron Age settlement activity observed on the Manor Farm site continued west into the application area. The results suggested a continuation of the linear pattern of settlement activity concentrated along southern side of a boundary ditch, including up to ten roundhouses and two other structures although the majority of this activity appeared to be located immediately south of proposed development area. Later medieval/early post-medieval ridge and furrow was also recorded within the geophysical survey, corresponding with the surviving earthworks on the site. The potential archaeological features located within the actual application boundary consisted of the majority of the boundary ditch, the northern parts of two clear anomalies indicating a roundhouse structures and two fainter curvilinear anomalies that may be evidence of further roundhouse structures, one of which was located to the north of the boundary ditch.

The northern part of the site had been subject to previous evaluation by University of Leicester Archaeological Services (ULAS) between April-May 1999 as a part of an earlier project (Gossip 1999, Fig. 2). Five trenches were located against the northern field boundary on a roughly north-south alignment. None of the trenches located archaeological deposits although Trench 34 (1999), the first of the sequence of trenches excavated recorded that the trench was excavated to a maximum of 1.2m at its northern

end. It is uncertain whether the reddish brown clay encountered beneath the topsoil represented an overall change in the natural substratum or whether this was a build-up of colluvium on the north-facing slope (1999, 17). A smaller Trench (Trench 33) was excavated further south that recorded a linear feature or possibly a series of intercutting linear features that correlated with the boundary ditch suggested by the geophysical survey. A second evaluation phase was undertaken by ULAS between May and June 2010 in order to investigate some of the anomalies highlighted by the geophysical survey as well as to adequately sample the 'archaeologically blank' areas across the remainder of the site (Harvey 2010). Two evaluation (Trenches 4 and 5) trenches confirmed the location of the east to west linear anomaly that proved to be a succession of up to four re-cut ditches, corresponding well with the recorded archaeology from the earlier evaluation. The evaluation recorded archaeological deposits directly south of the boundary ditch including part of a large penannular gully in Trench 5. This clearly represented evidence of a well preserved eaves drip gully for a roundhouse. Trench 4 revealed a pit and a curvilinear feature that potentially exhibited characteristics of post settings along it, suggesting a structural element. This feature had not been previously interpreted from the geophysical survey but could be identified when the raw data plan was overlaid with the evaluation plan. Trench 7 was located along the southern boundary of the application area, to the south of the boundary ditch. However it failed to clearly identify any archaeological activity in this area of the site.

An excavation followed have revealed further evidence of an Iron Age 'aggregated' settlement, represented by a spread of 'open' settlement along the southern line of a significant linear boundary (Harvey 2011). The site clearly represented a continuation of settlement activity previously recorded immediately east within Area B of the Manor Farm Excavations (Thomas 2008a and b). This in turn is likely to be contemporary with elements of excavations within Area A and also the earlier excavations undertaken at Elms Farm to the east. The settlement appears to be long lived, beginning in the Late Bronze Age/Early Iron Age with the main phases of the settlement dated to the Middle and Late Iron Age, finally coming to an end in the early 1st century AD. This particular area of the settlement activity would appear to fall within the Middle to Late Iron Age although it is possible that the linear boundary may date back to the earlier phases of activity. A large section of the linear boundary was investigated and it appeared to have at least three phases of re-modelling. The feature started as a small ditch with no clear evidence of associated settlement, becoming larger and containing richer backfills suggesting occupation activity within the immediate vicinity and finally becoming a much smaller gully feature, perhaps marking the decline and abandonment of the site. It was clear that the boundary was an important marker given the clear lack of activity recorded to the north of the feature in comparison to the activity recorded immediately to the south of it. Portions of two roundhouse structures were revealed to the south of this boundary. The easternmost of these features has a large enclosing ditch with a backfill that was rich in finds including pottery and animal bone (including a handle made from red deer antler) as well as metal working waste and human remains. Some of the pottery from this feature dated to the latest phase of activity within the early 1st century AD. A zoned area of activity was also identified to the rear of this roundhouse that may have been associated with pottery production. A topographic survey was also undertaken across the development area that recorded part of a well preserved medieval ridge and furrow field system that included a number of double ridges, suggesting the system became fossilised at a relatively early date.

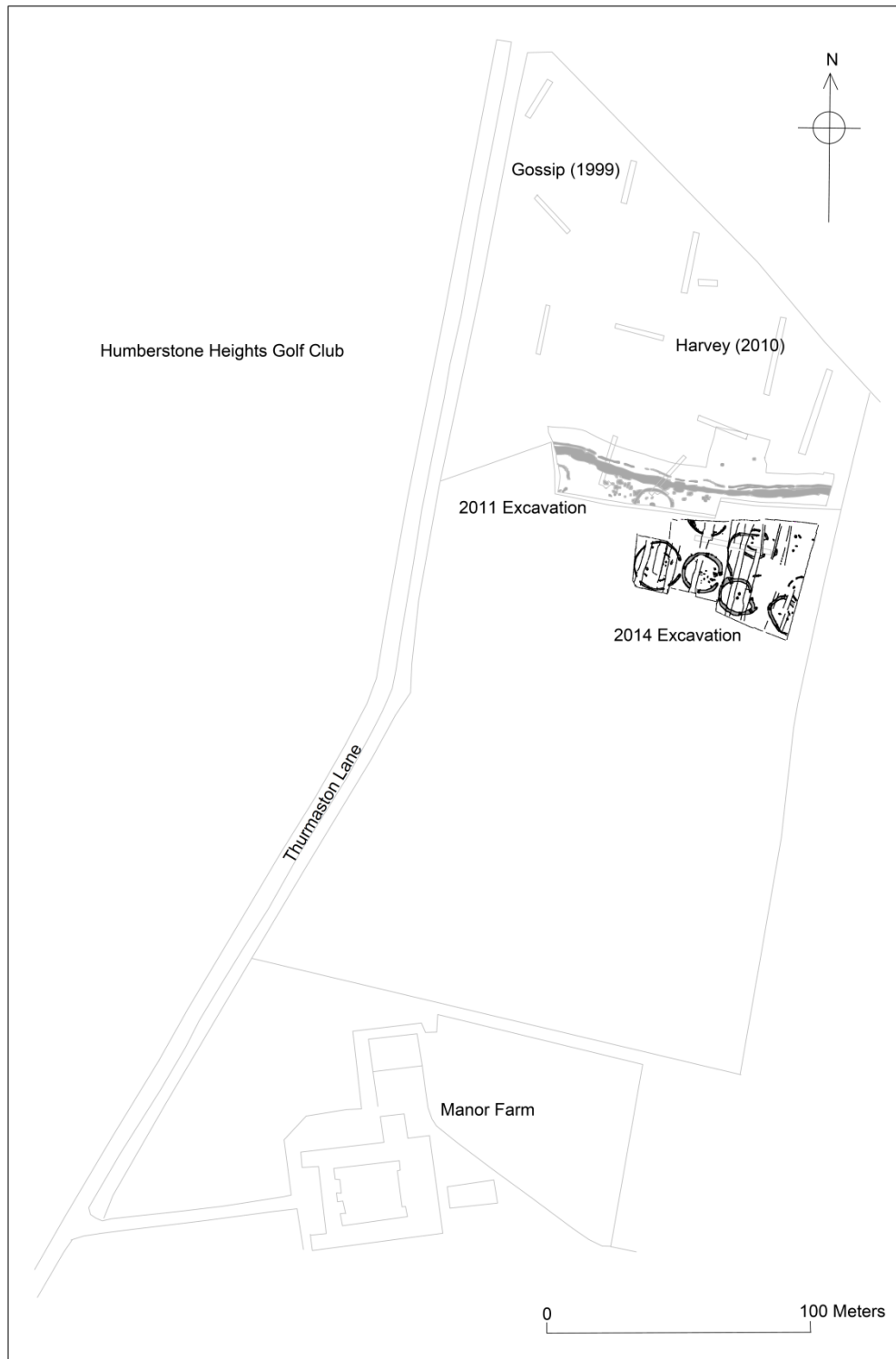


Figure 2: Plan showing the 2014 excavation incorporating the area of previous targeted 2011 excavation (Harvey 2011) and previous evaluations (Gossip 1999 Harvey 2010)

Aims and Objectives

The specific objectives of the project, as stated in the Design Specification for archaeological work at land east of Thurmaston Lane, Humberstone, Leicester (SK 626

065) (Clay 2014, hereinafter Specification), were to record a sufficient amount of the archaeological remains within the development area to establish their extent, date range, quality, character and form. It was also to assess the significance of these heritage assets within their local and regional context (Cooper ed. 2006).

Methodology

The geophysical survey and previous/subsequent evaluations indicated that archaeological deposits relating to Iron Age settlement were present in the northern extremity of the current development boundary and an area of 0.29ha was designated for open area excavation (Fig. 2). The site was stripped in a perpendicular direction to the ridge and furrow in order to prevent over excavation of the ridge tops and to enable removal of the deeper plough deposits in the furrows. This resulted in a corrugated effect across the stripped areas and produced a fuller plan of the available archaeological deposits. From the outset it was obvious that truncation from the ridge and furrow had affected the archaeological remains on the site (Pl. 1 and 2). Only the shallowest features, however, appeared to have been completely truncated; generally the lower portions of features survived in the furrow bases. The differential preservation had some influence on the position of excavated sections which, where possible, were excavated on the top of ridges to provide a representative profile.

Following the machine stripping the exposed areas were planned using a Topcon Hiper Pro GPS+ RTK System attached to a Topcon FC-100 controller that was used to log the points. This procedure enabled the swift production of site plans to aid site excavation strategy and as a guide for preliminary analysis. The data was processed using Topcon Tools GPS+ Software and the final plans completed with the aid of TurboCad v.15 design software.

Guidelines concerning the excavation of archaeological features on the site were provided in the 'Specification'. The ring gullies were sampled following a strategy where sections for excavation included both entrance terminals, a section at the back of the structure diametrically opposite the entrance and opposing sections at mid points along each side. Further areas of gullies were also excavated where rich deposits of soil or finds were identified. Discrete pits and post-holes were generally half sectioned.

All excavated sections were hand-planned, photographed and the sections drawn to scale (either 1:10 or 1:20 as appropriate) and subsequently tied in to the Ordnance Survey grid system. All written records were entered onto pro-forma ULAS context record sheets and regularly updated site indices were maintained. All work followed the Institute for Archaeologists (IfA) *Standard and Guidance for Archaeological Field Excavation*.

Results

Note: Archaeological contexts as a cut are indicated by square brackets e.g. [74], while those that are fills or layers are indicated by round brackets e.g. (61). There was not a great variation within the fills of the features that were generally fairly homogenous mid-dark greyish/greenish brown silty clay deposits. Only notable deposits are described more fully within the excavation results.



Plate 1: View of eastern half of the stripped area looking north-east illustrating the corrugated effect from removing the furrows and showing Enclosure B ring gullies



Plate 2: View of central stripped area looking north illustrating the corrugated effect from removing the furrows and showing ring gullies of Enclosure B (right) and Roundhouse 4

Middle to Late Iron Age Phase 1

Figure 3: Phase 1 Roundhouses 3, 4, 6 and 7

Roundhouse 3

Roundhouse 3, was represented by approximately half a penannular ditch that projected out from the eastern boundary of the site [85]. The roundhouse was not located by the geophysical survey. The other half of the structure would have been under the adjacent hedgerow ditch, but the surviving portion indicated a small circular area *c.* 8m in diameter. The gully was small, generally over 0.25m wide and widest close to the northern end where it reached 0.73m and was generally between 0.21m deep apart from where it had been truncated by furrows. The profile of the ditch was generally steep and ‘V’ shaped and had gradually sloping sides. The ditch generally contained two fills consisting of a relatively homogenous primary fill that thinly covered the base of the ditch and probably represents natural silting. The upper fill was slightly richer, containing moderate quantities of charcoal, cereal grains, animal bone. No pottery sherds were found within any of the various excavated slots of the roundhouse eaves drip gully. A possible contemporary feature existed within the circumference of Roundhouse, an oval post-hole [95] at its western end, perhaps representing structural remains of a roundhouse.

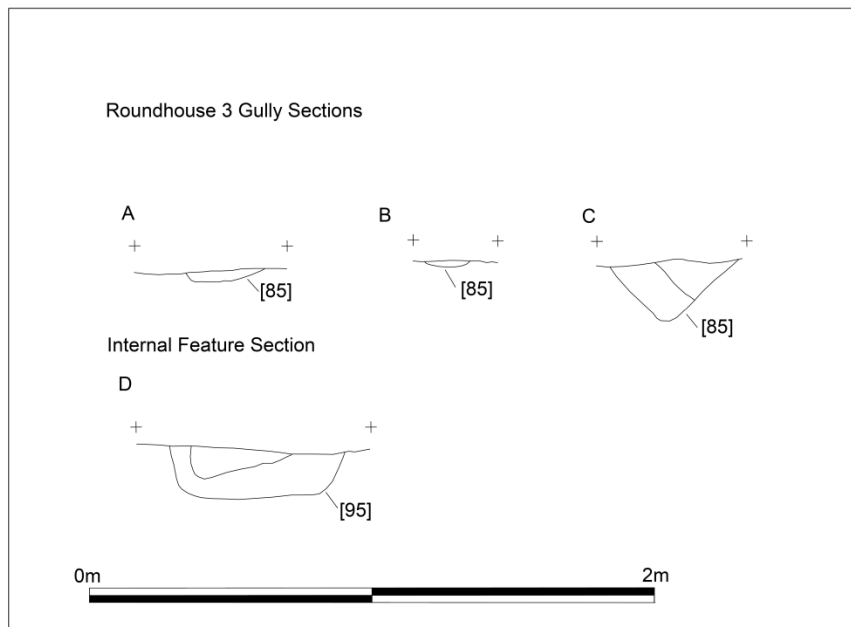
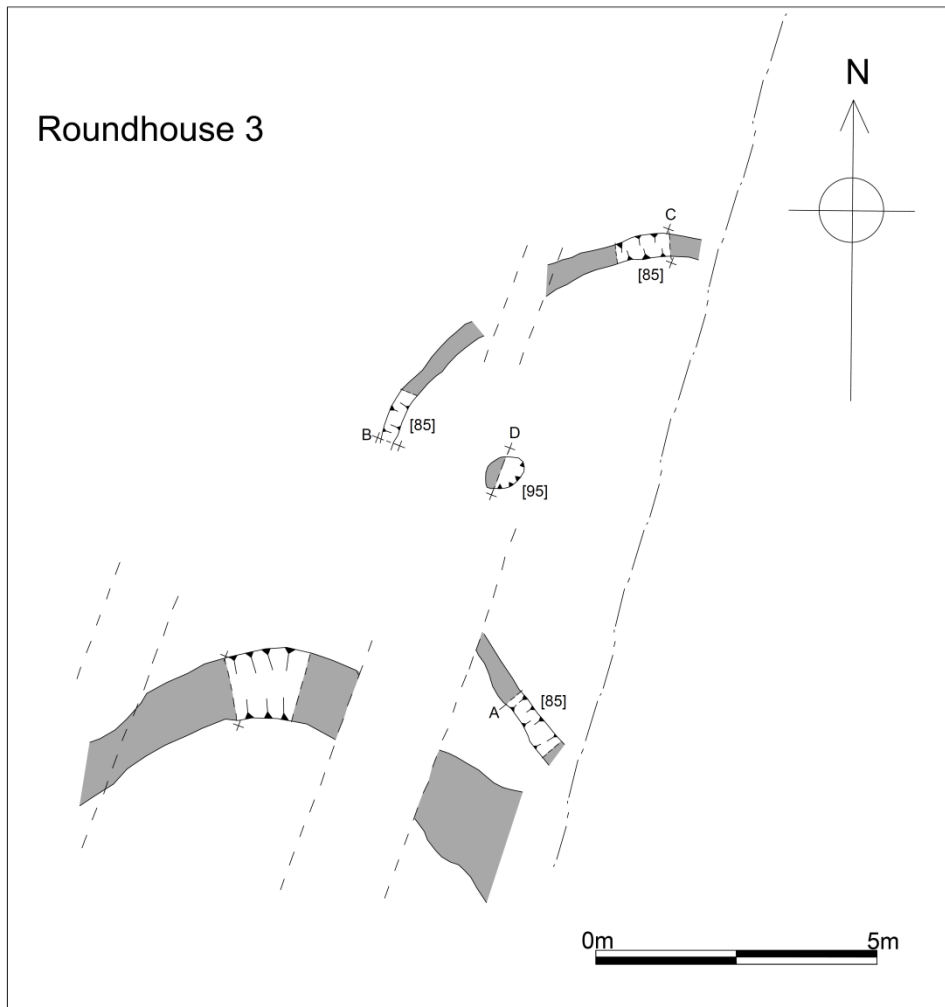


Figure 4: Roundhouse 3 and Gully Sections

Roundhouse 4

Roundhouse 4 was located towards the centre of the excavation area. It consisted of a complete (albeit truncated by furrows) penannular gully [13], (c. 13.3m in diameter) with an entrance c. 3m wide, facing east (Figures 5). The gully was on average 1.10m wide and 0.35m deep. This had an asymmetrical profile, with a steep outer edge and a more gently sloping inner edge. After it had almost completely silted up, it was redefined according to a similar plan, although the second phase was shallower (c.0.20m deep, compared to 0.40m; Figure 6).

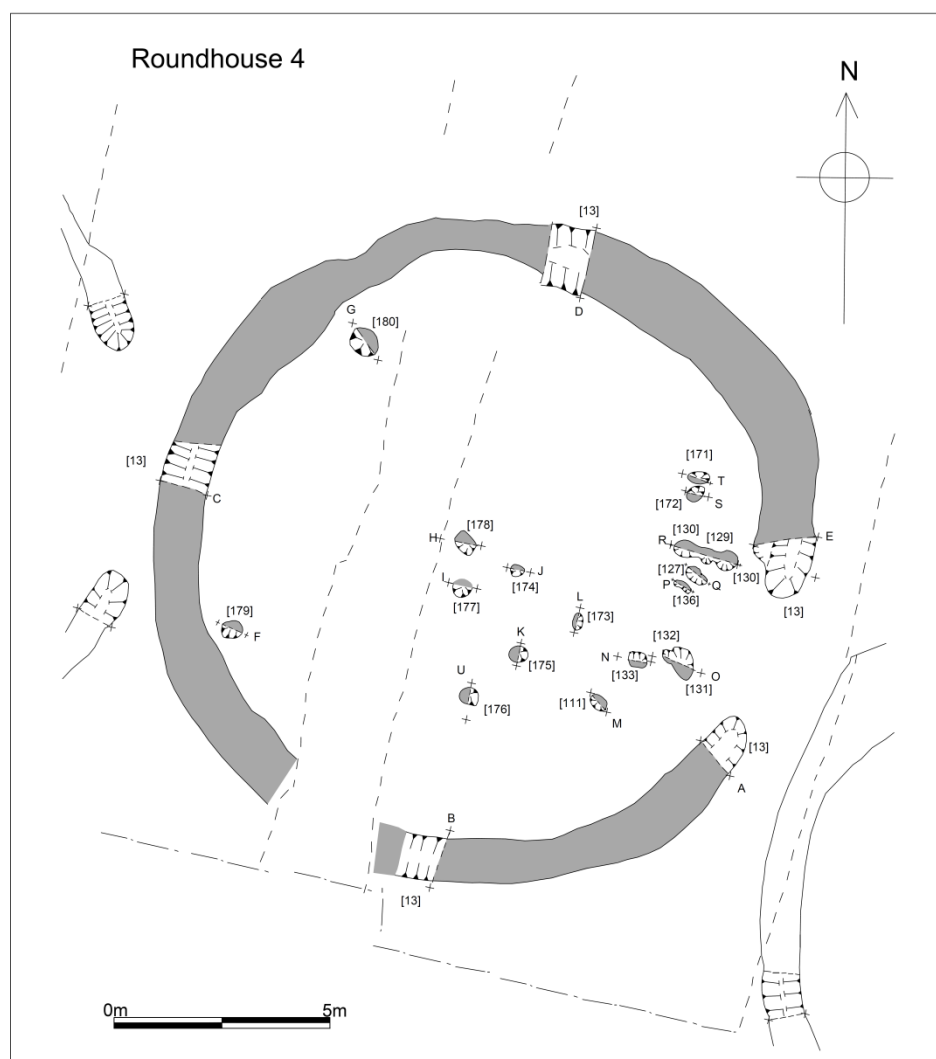


Figure 5: Plan of Roundhouse 4

A number of possible contemporary features existed within the circumference of Roundhouse 4, including several close to the entrance. A group of oval post-holes [127, 128, 129, 130, 131, 132, 133] at its eastern end were possible structural remains of a threshold entrance into a roundhouse. Another set of shallow truncated oval post-holes [111, 176, 172, 171] located just to the south and north of the entrance suggest more potential structural remains of the roundhouse. Occupation debris including pottery, animal bone and some charcoal was present in the gully. A small but significant concentration of granodiorite was found within the eaves drip gully suggesting perhaps pottery production associated with this part of the settlement,

granodiorite often being used as temper in East Midlands Iron Age ceramics (Knight et al 2003).

Directly to the north of Roundhouse 4 a spread (219, 220) of frequent small and large pebbles embedded yellowish brown clay silt was located which may be the remnants of a possible surface.

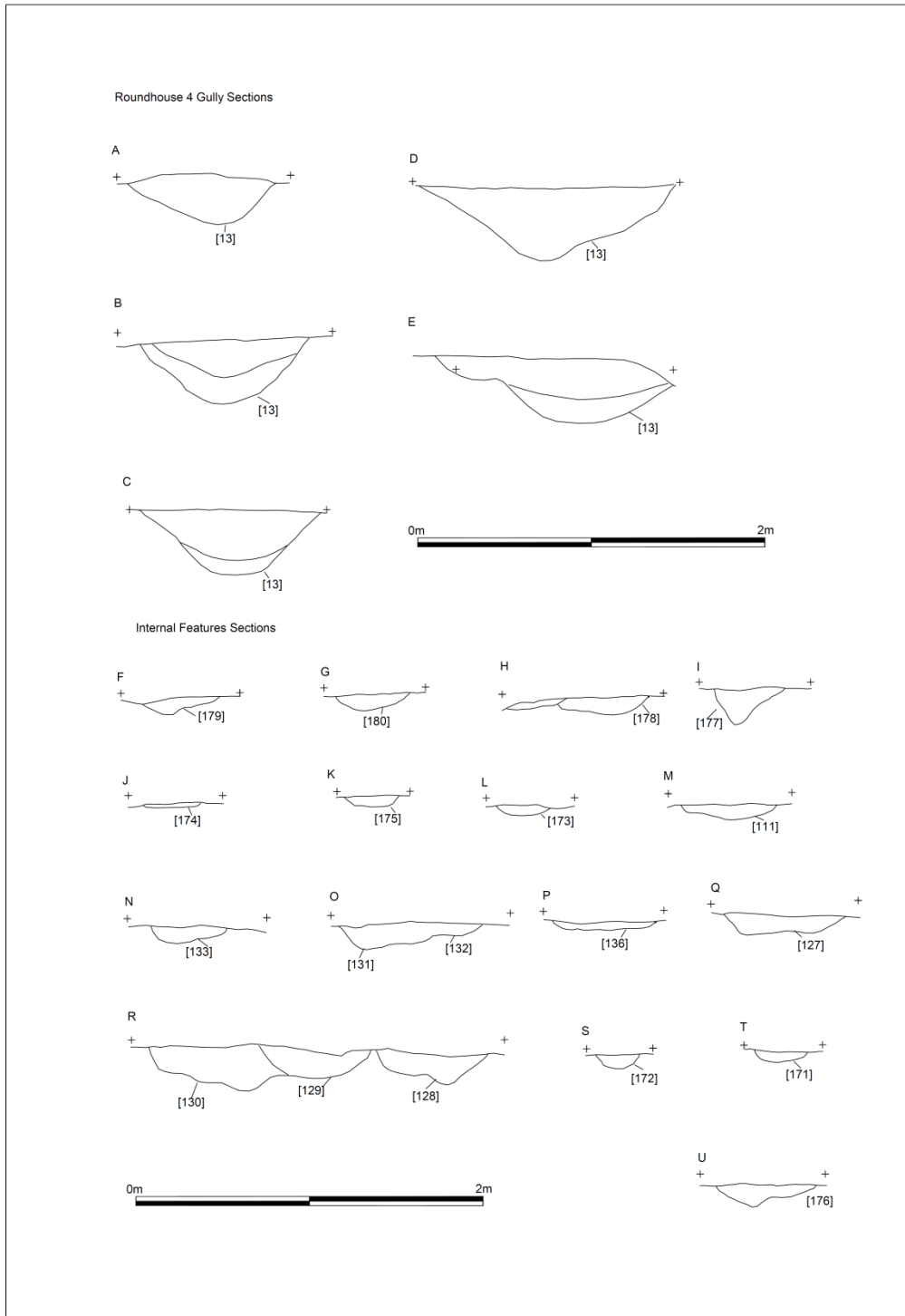


Figure 6: Roundhouse 4 Sections

Roundhouse 6

Roundhouse 6 was represented by a potential penannular ditch that projected beyond the northern edge of the excavation (Figure 6). The other half of the structure lies under the boundary with the previous housing development to the north, but the surviving portion indicated a large circular area *c.* 17m in diameter.

The gully itself [33, 49, 51], was between 0.40m-0.50m wide and up to 0.20m deep with a shallow U-shape profile (Figure 7). Small quantities of pottery, animal bone and cereal grain were recovered from the fill. A potential internal or structural feature had survived and comprised a short length of a curvilinear slot [41]. The gully appears to have a rounded terminus on the south-eastern side, which suggests a potential entrance to Roundhouse 6. Excavation of the western side of the roundhouse which would have been the rear of the building indicated that a number of additional short lengths of gully [71, 72] had been added to the main circuit to facilitate drainage. These had a similar U-shaped profile to the main gully but were generally shallower (*c.* 0.10m deep).

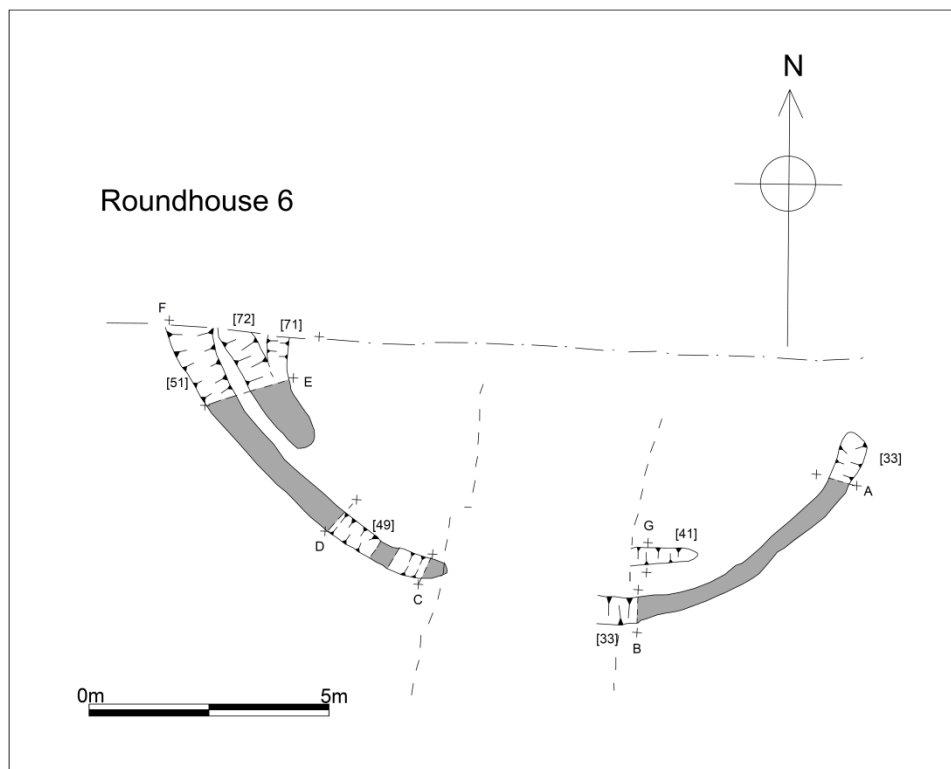


Figure 7: Plan of Roundhouse 6

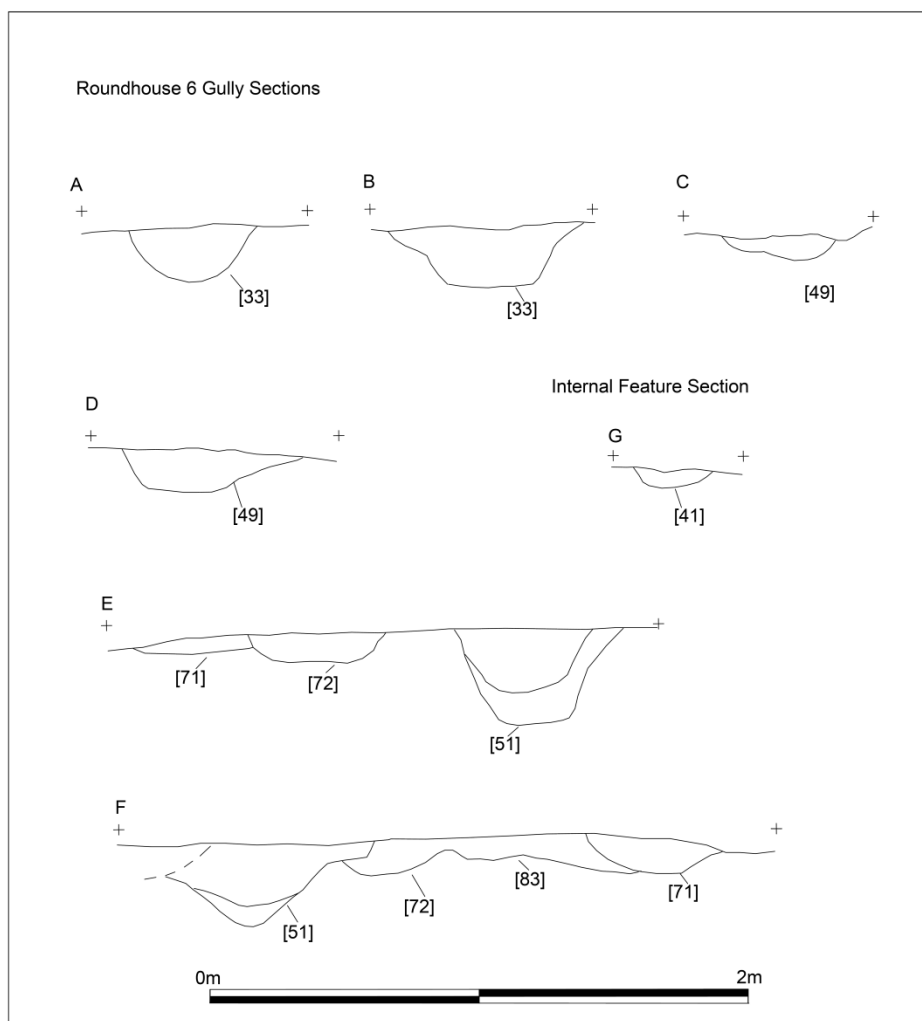


Figure 8: Roundhouse 6 Sections

Roundhouse 7

Located towards the north-east corner of the excavation a smaller building, Roundhouse 7, was represented by a very truncated penannular eaves drip gully [137, 139, 153, 196] with a diameter of *c.* 10m (Figure 9). Much of the western side of this building had been removed by the later ploughing, but enough survived to permit a south-easterly entrance to be distinguished. The gully itself was between 0.30m-0.60m wide and up to 0.20m deep with a shallow rounded profile (Figure 10). No finds were found associated with the fills. A potential internal or structural feature had survived and comprised a long length of curvilinear slot [192]. Towards the western side a scatter of oval shaped post-holes – including [169, 186, 190] were found. No clear formation could be discerned but are thought to be perhaps structural remains within the roundhouse

Features near Roundhouse 7

To the east a pit, a group of post-holes and a gully lay between the Roundhouse 7 and the eastern extent of the excavation (Figure 9). A large oval pit [147] was located to the east of the entrance of Roundhouse 7. The pit measured *c.* 2.7m x 1.10m x 0.45m deep with steep sides and flat base and was filled with a two deposits containing large

quantities of pottery, animal bone, cereal grains, burnt pebbles and charcoal (Figure 10). Towards the east of the large pit was a short truncated linear gully approximately 1.5m long [200], with a shallow rounded profile (0.40m wide, c. 0.1m deep; Figure 10). Small amounts of pottery were found in its fill. A spread of post-holes – including [04, 06, 08, 190, 202] – lay with the eastern corner of the site close to the pit and gully (Figure 9). No clear formation could be discerned although it is possible that more features lay beyond the limit of excavation.

It seems likely, however, given the sequence of occupation apparent in the adjacent structures that the cluster of remains is the result of an accumulation of activities associated with the different structures over time.

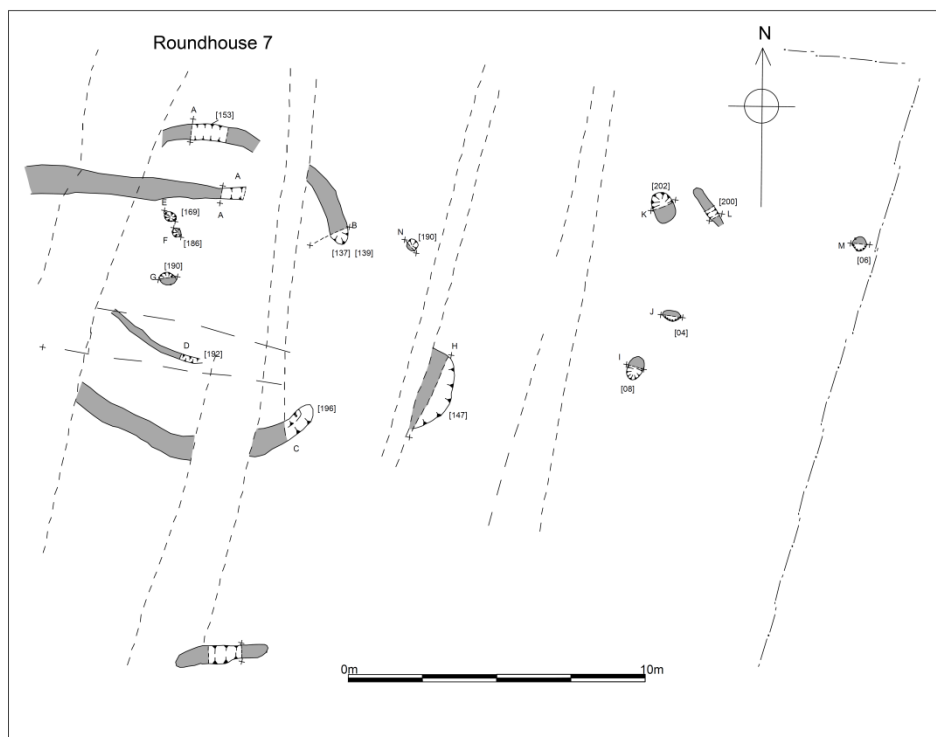


Figure 9 Plan of Roundhouse 7

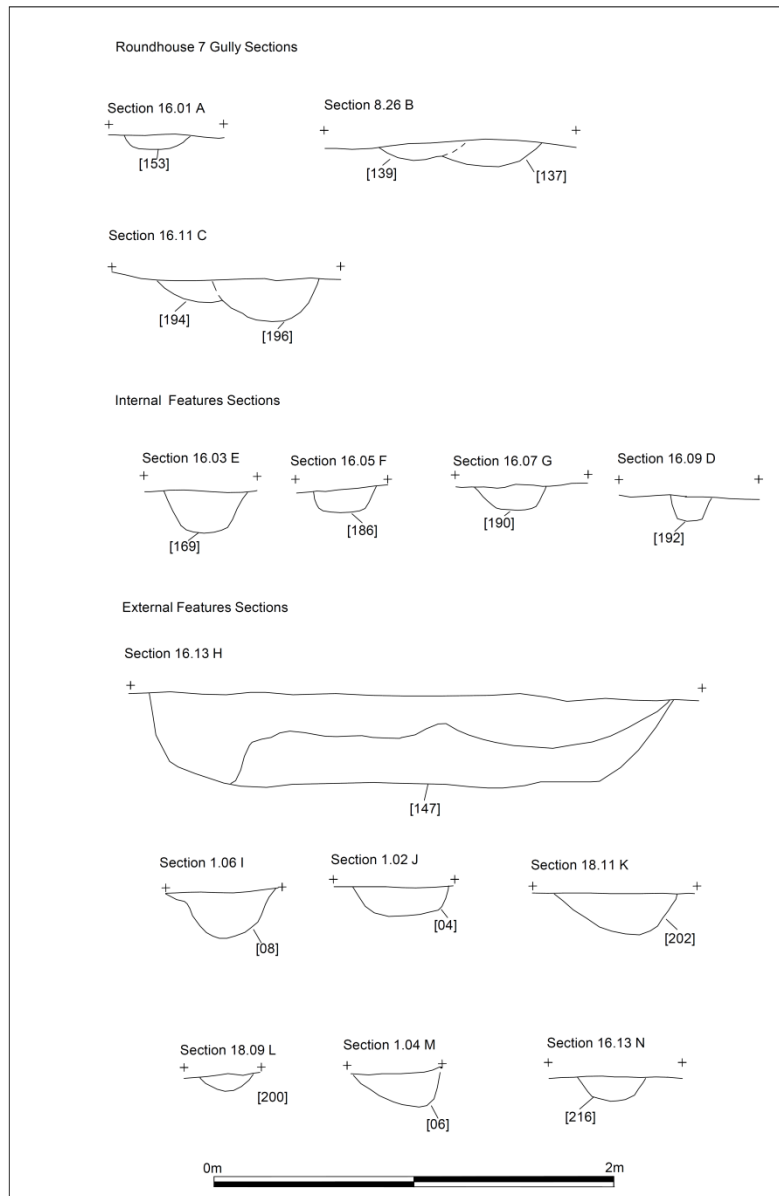


Figure 10: Roundhouse 7 Sections

Middle to Late Iron Age Phase 2



Figure 11: Phase 2 Enclosures A, B and C and Roundhouse 5



Plate 3 View of eastern half of the stripped area looking north-east showing Enclosure A

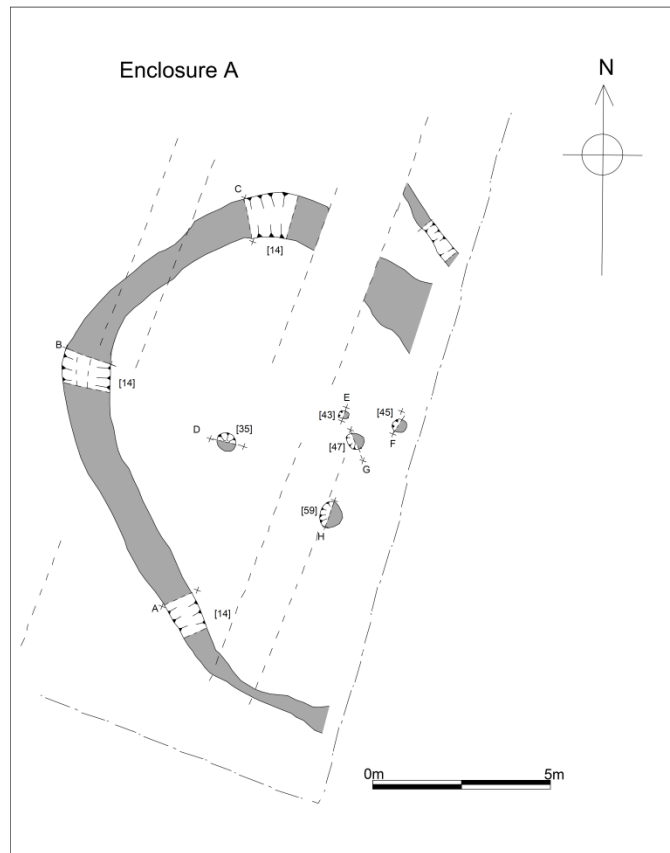


Figure 12: Plan of Enclosure A

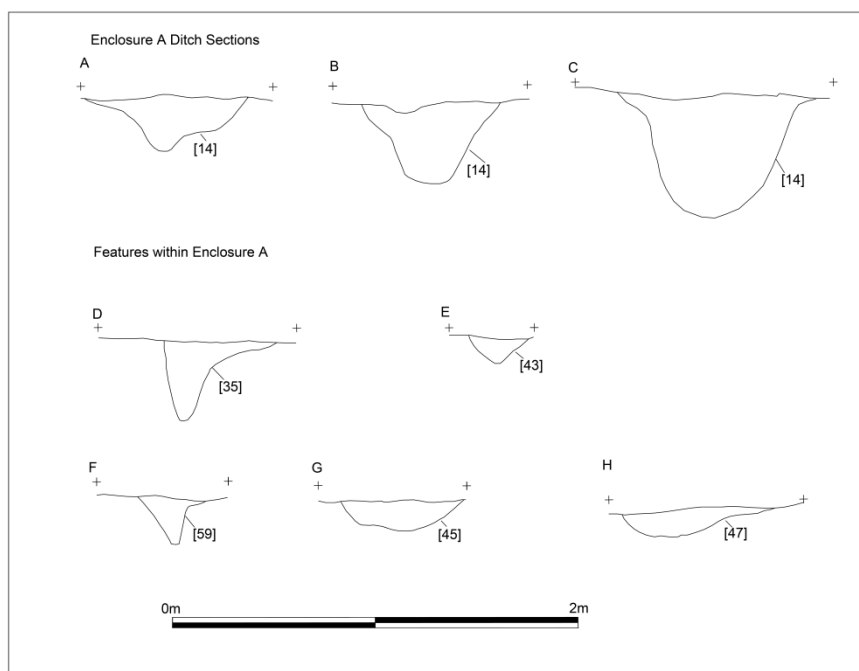


Figure 13 Enclosure A sections

Enclosure A

Enclosure A was a small enclosure [14] *c.* 12m wide represented by approximately two thirds of a sub-rectangular ditch that projected out from the eastern boundary of the site (Figure 11 and 12). The feature matched well with the anomaly highlighted by the geophysical survey. The ditch was large, generally over 1.4m wide and widest close to the northern end where it reached 1.6m and was generally between 0.50-0.60m deep apart from where it had been truncated by furrows. The profile of the ditch was generally steep and ‘U’ shaped although it was noted that the inner side generally had a slightly steeper profile (*c.* 60°) compared to the outer side (*c.* 45°). No evidence for an entrance was visible but an east-facing entrance may be surmised based on the surrounding enclosure features. The ditch generally contained a single fill, which was relatively homogenous, containing pottery, animal bone, cereal grains/chaff, charcoal and burnt stones. A saddle quern stone (SF1) was also found deposited within the ditch fill. A small cluster of possible contemporary features existed within the centre of Enclosure A (Figure 12). These comprised a scatter of oval post-holes [35, 43, 59, 45, 47] that had a mix of profiles that were either shallow and rounded or deep with tapered points (Figure 13). No clear formation could be discerned although it is possible that more features lay beyond the limit of excavation.

Enclosure B

Enclosure B was another small enclosure [14] *c.* 13m wide represented by a complete sub-rectangular ditch that was located directly to the west of Enclosure A (Figure 11 and 14). This feature also matched the anomaly highlighted by the geophysical survey. The initial phase of the enclosure was defined by a *c.* 1.40m wide, relatively deep (*c.* 0.5m) rounded ‘U’-shaped ditch [20], that had noticeably narrower (*c.* 0.80m), shallower (to *c.* 0.3m deep) and steeper sides closer to the entrance. At some stage the enclosure was allowed to silt up and was redefined with sharp ‘V’-shaped

cut [114] (Figure 14) The modification also changed the eastern entrance from an earlier narrow and square access to a wider flared one.

The second fill contained relatively large quantities of pottery and animal bone, charcoal which were present in all the excavated parts of the gully, but showed a marked concentration towards the entrance. A furnace base (SF 4) was found within the ditch providing evidence of metalworking on site. Towards the centre of the enclosure two large post-holes [103, 105] (Figure 14) were found directly opposing the entrance and may relate to internal structures. Equally they may pre- or post-date the creation of Enclosure B.

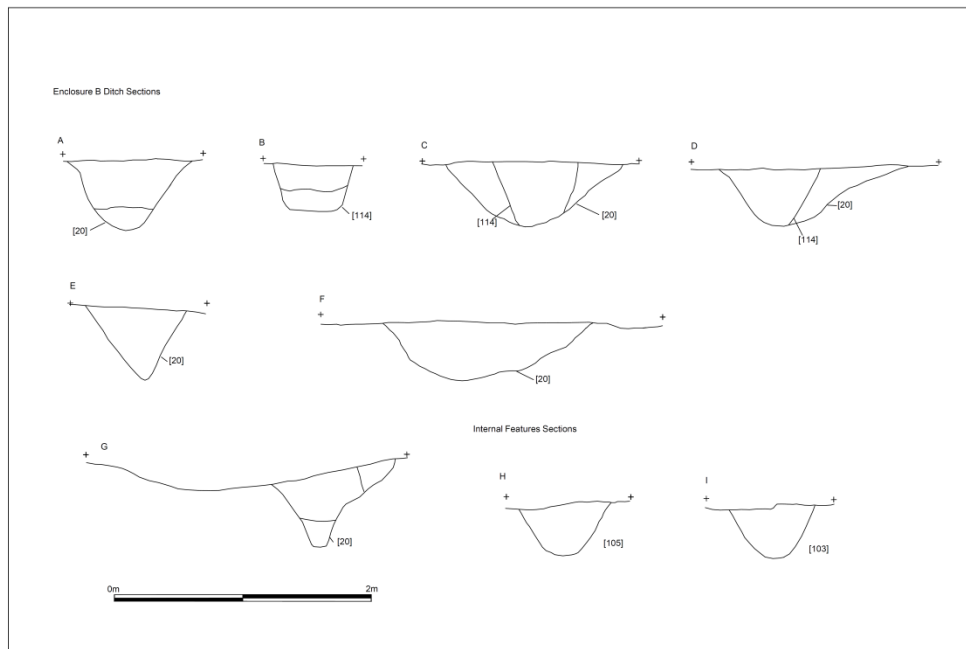
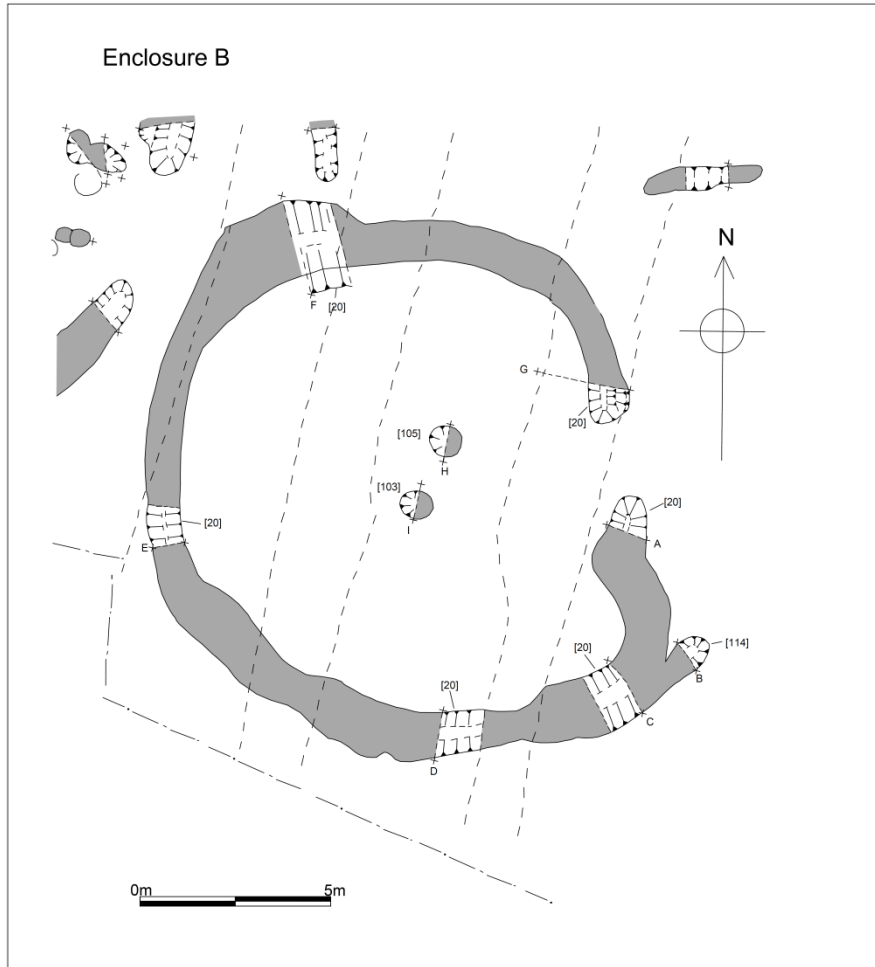


Figure 14 Plan and Section Enclosure B

Enclosure C

A large curvilinear ditch and short linear feature appeared to form a large sub-rectangular arrangement towards the north-east quarter of the excavation (Figures 11 and 15). In an otherwise fairly densely occupied site, the area thus defined was noticeably clear of features with exception Roundhouse 7 from Phase 1. The west side of the rectangular area was defined by a long curving ditch [108, 118, 180] that had cut through the remains of the Roundhouse. The ditch was at least 24m long and appeared to be been truncated at its eastern end. The southern end began as rounded terminus [180] which appeared to respect Enclosure B, and suggests that they were perhaps contemporary. It had a broad U-shaped profile with steep sides and a flat base, measuring between *c.* 0.40m-0.70m wide and *c.* 0.30m-0.50m deep (Figure 16). The fills contained relatively large quantities of pottery and animal bone, charcoal and were present in all the excavated parts of the ditch. An iron object (SF 6) was found within the ditch which may indicate some evidence of metalworking on site.

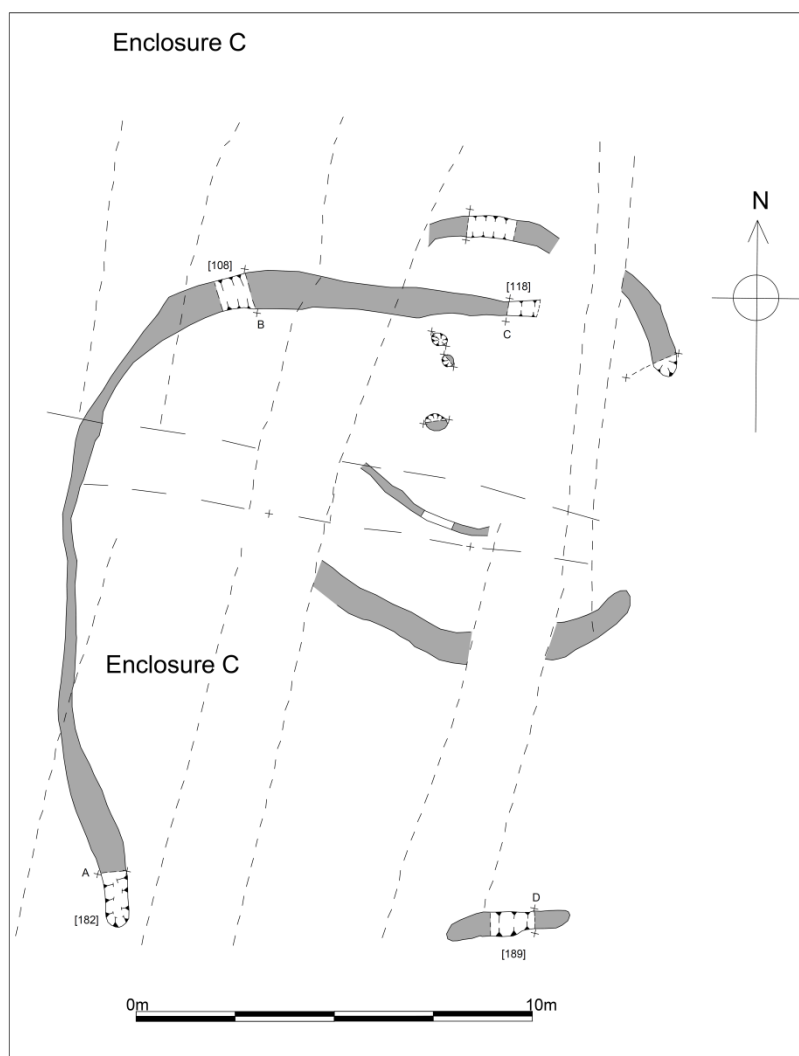


Figure 15: Plan Enclosure C

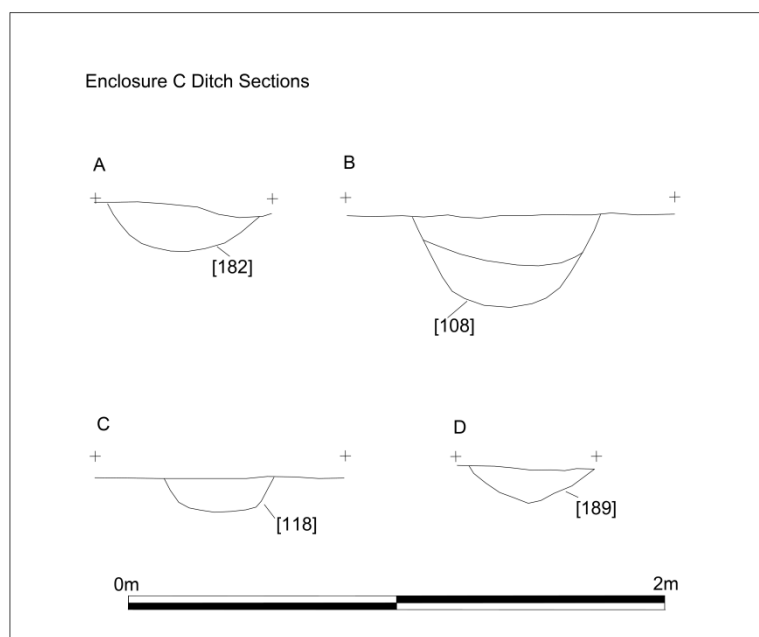


Figure 16: Enclosure C Sections

A single short length of ditch [189] may have defined the southern side of the area. The ditch was approximately 3.2m long, and had a shallow rounded profile (measuring *c.* 0.60m wide x 0.10m deep). The western edges of the sub-rectangular ‘enclosure’ were more difficult to determine and may have been open or perhaps suffered badly from plough damage.

Roundhouse 5

Roundhouse 5 was located towards the western extent of the excavation area (Figures 11 and 17). It consisted of a large complete penannular gully [28], (*c.* 17m in diameter) with an entrance *c.* 5m wide, facing east (Figures 5). The gully was on average 0.60m wide and 0.50m deep. This had a ‘V’ shaped profile, with steep sloping sides and a narrow rounded base. After it had almost completely silted up, it was redefined according to a similar plan, although the second phase cut was shallower (*c.* 0.30m deep, compared to 0.50m; Figure 17).

A number of possible contemporary features were present within the circumference of Roundhouse 5, especially close to the entrance (Figure 17). A group of oval post-holes [142, 144, 146, 221] at its eastern end were possible structural remains of a threshold entrance into a roundhouse. Another set of shallow truncated curvilinear slots [135, 168, 223] located just to the south and north of entrance suggest more potential structural remains of the roundhouse. Occupation debris included pottery animal bone, cereal waste and some charcoal was located in the gully. A small but significant concentration of granodiorite was found within eaves drip gully suggesting again perhaps to be used in pottery production associated with this part of the settlement.

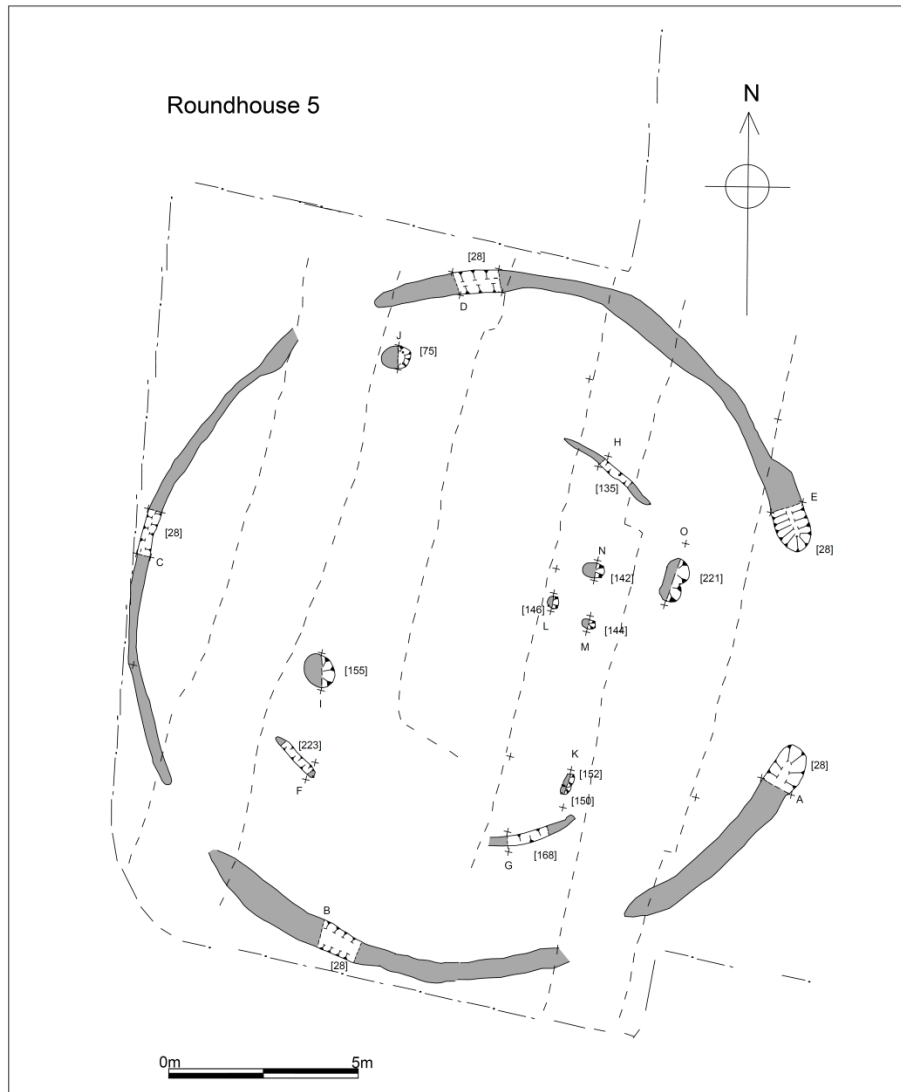


Figure 17: Plan of Roundhouse 5

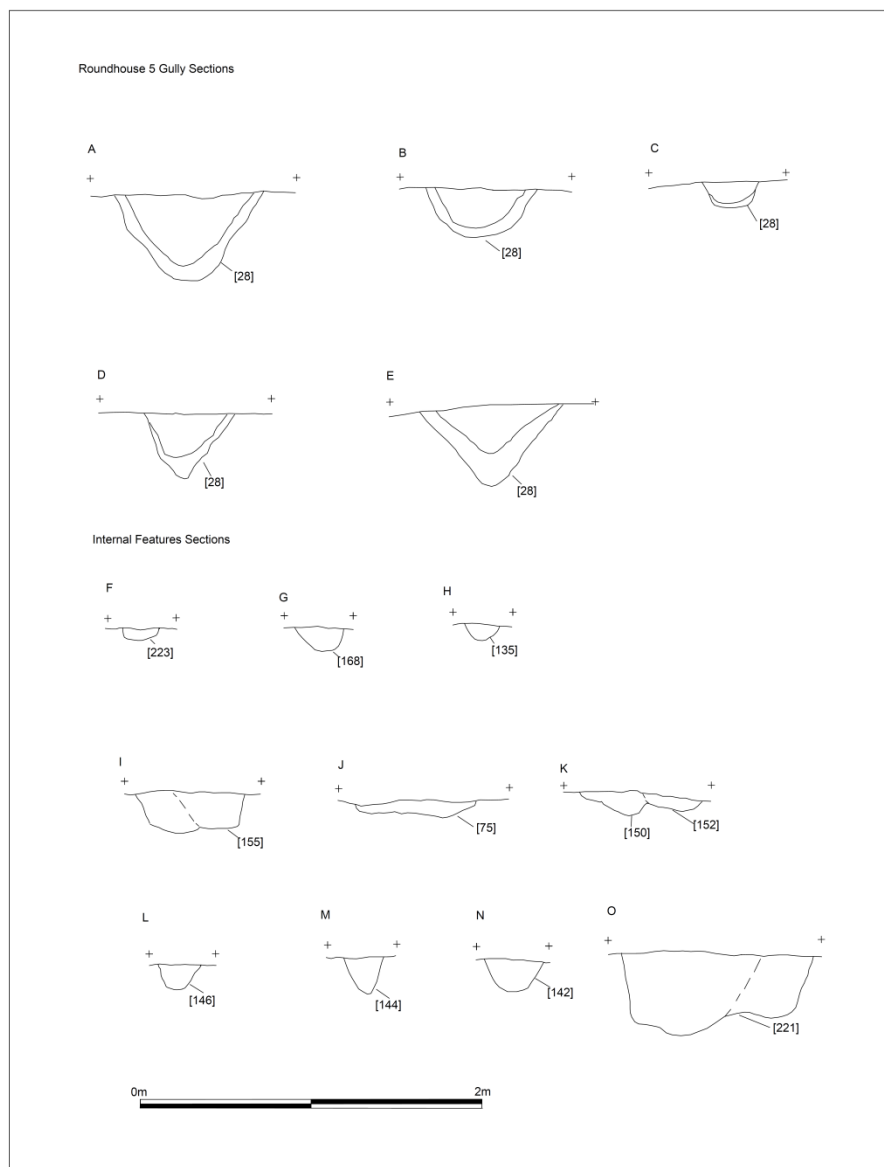


Figure 18: Roundhouse 5 Sections

Discussion

2011 Excavation

Iron Age Linear Settlement

The previous excavation directly to north of this site revealed what was a continuation of a linear spread of an ‘open’ settlement remains that respected the previously excavated linear boundary on the northern edge of the site (Harvey 2011).

The settlement area developed alongside a sinuous boundary that seems to form the northern limit of occupation (Figure 2). Around 40m of this boundary were revealed during the 2011 excavation and evidence for its continuation to the east was provided by a geophysical survey (Butler 2001; Thomas 2004) and earlier excavation of this boundary (Thomas 2008a; 2011). The previous excavations suggest that the boundary

was long lived with a history of renewal comprising at least three or four distinct phases. Small amounts of charcoal, pottery and animal bone were found in excavated segments of all phases. Over time the boundary maintained a broadly unchanged alignment, although its character altered from initially being a broad shallow ditch, later to become a smaller, more gully-like feature. There is distinct lack of evidence for settlement remains north of the boundary contrasts with the clustered occupation to the south.

Round House Structures

Portions of two roundhouse structures were revealed to the south of this boundary (Roundhouse 1 and 2). The easternmost of these, Roundhouse 1, had a large enclosing ditch with a backfill that was rich in finds including pottery and animal bone (including a handle made from red deer antler) as well as metal working waste and human remains. Some of the pottery from this feature dated to the latest phase of activity within the early 1st century AD. A zoned area of activity was also identified to the rear of this roundhouse that may have been associated with pottery production

2014 Excavation

Chronology

The information from the Manor Farm radiocarbon dating suggests that the main period of occupation lasted for a period of between *c.*270 and 430 years, beginning in the middle Iron Age and lasting until the late 1st century BC or early years of the 1st century AD (420-300 cal BC to 40 cal BC-cal AD 10) (Thomas 2008a, 105; 2011). Although no radiocarbon dating has been conducted on this part of the settlement area the artefactual data would appear to fit within this date range although the actual settlement activity could date tighter within this period of time. Residual Bronze Age pottery in the form a single large rim and upper body fragment from an urn was found on site. The urn belongs broadly to the tradition of Middle Bronze Age vessels belonging to the Deverel-Rimbury tradition.

Settlement Architecture

The partial excavation of the five roundhouses has shown a continued trend from the previous Elms Farm and Manor Farm excavations where the buildings are characterised by an encircling eaves drip gully and a little evidence for the structure itself. Three roundhouses were large, their projected diameters (combining excavation results with the geophysical survey) measuring between 15m to 17m. The remaining two roundhouses were smaller with a diameter of 8m. Roundhouses 4 and 5 contained post-holes and curvilinear wall slots that suggest possible structures. Roundhouses 3, 6 and 7 contained possible post-holes and slots although little could be drawn from their arrangement. Roundhouse 2 possibly contained an internal gully but its relationship with the roundhouse was unclear. The lack of internal structures would indicate that either the features have been removed through horizontal truncation or that more ephemeral techniques of building have been used or a combination of both. Given that Roundhouse 4, 5 and 6 has such a large enclosing ditch and that other small pits were recorded on the site it would suggest that survival

of any substantial post-holes would be likely. It has previously been suggested that this disparity would indicate that alternative building methods may have been employed at Humberstone. It is possible that stacked turf or cob walling may have provided the basis for the Humberstone buildings, or that structural timbers used were not substantial enough to penetrate the subsoil (Thomas 2008a, 108)

Phasing

The spacing or arrangement of the various roundhouses and enclosure ditches would suggest possibly two phases. Phasing, however, was difficult due to the lack of intercutting features although in some cases it can be shown that certain structures are unlikely to have been contemporary with others. Phase 1 appears to comprise Roundhouses 3, 4 6 and 7 and their overall character suggests that their various ditches and gullies were all allowed natural fill with silt. The second phase perhaps comprised of Enclosures A, B and C with Roundhouse 5 and all appeared to be deliberately backfilled with more domestic refuse charcoal and burnt stones. Enclosure C also appears to post-date Roundhouse 7 and respect Enclosure B.

The faunal evidence recovered during this phase compares well with the adjacent 2011 boundary excavation and Area B excavation, reflecting a clear continuation of this settlement activity. Cattle dominated the assemblage, with smaller proportion of sheep and a much smaller proportion of pig and horse. There was continued evidence that the animal bones were being used for a variety of different purposes. Slight evidence of metalworking was found widespread across the previous excavations but it has been suggested that a specific zone of the site was responsible for this craft at some point (Thomas 2008a, 109). A pit was found to the east of Roundhouse 7 and this siting around structures was also a feature that has been recorded on the neighbouring sites. It has been suggested that many of these would have originally been dug as small-scale quarries to extract clay for building purposes. Given the geological context, and the sites relative proximity to running water, it is also suggested that a proportion of the pits would have been left open to hold water for domestic and animal use. It has previously been suggested that some pottery production may have taken place at Humberstone, particularly given the sandy, quartz or grog tempered wares that all could have made use of locally available materials for inclusions. Previous excavation has revealed a number of 'exotic' lumps of granodiorite, outcropping some 10km from the site at Mountsorrel and further evidence was found during this phase of work. It has been suggested that this material might also have been deliberately brought in as a tempering agent for locally produced pottery (Thomas 2011). Little evidence was gained from the site for crop production with some environmental remains coming from the dump of burnt material recovered from the fills of the various eaves drip gullies and enclosure ditches which indicated cereal cleaning waste from glume wheat, probably spelt. A few chaff fragments, grains and a legume fragment from the ditches from some of the Roundhouses suggests food preparation waste from cereal cleaning before consumption, burnt in the hearth and accumulated in the eaves drip ditches. The previous excavations at Manor Farm showed that evidence for crop production was also slight in comparison to that from Elms Farm, perhaps suggesting different functional areas of the site (2008a, 110) with more emphasis on pastoral activities within this area of the settlement. Despite the lack of environmental evidence for crop production in this area of the site the adjacent excavations recorded a large number of

quern stones, in particular saddle querns which was in keeping with the Elms Farm excavation that shows crop production was taking place. A further example of a saddle quern has been recovered during this phase of work which has added to the significantly large assemblage already collected.

Deposition

Previous excavation has drawn much from the differential deposition across the site. Generally concentrations of finds centred on the main building remains and enclosure ditches which contained mixed assemblages that were relatively fragmented and perhaps characteristic of midden accumulations. Little can be said about artefact deposition from this part of site given that only a small area has been investigated. Broadly speaking the tradition of deposition near structures would appear to continue. All roundhouse ditches produced the densest quantity of finds across the site. Phase 2 Roundhouse 5 and enclosure ditches appeared to be particularly rich, containing the majority of the finds from the site including a large quantity of pottery.

Conclusion

The recent excavations at Manor Farm, Humberstone have contributed to the growing knowledge that has already been compiled relating to the aggregated Iron Age settlement activity at Humberstone (Thomas 2011; Harvey 2011). This settlement was spread along a prominent clay ridge on the eastern side of the Soar valley that extended beyond the limits of the Elms Farm excavation to the east and beyond boundary of this excavation to the west. Although only a small area has been recorded during this phase of work it is important to directly relate this evidence with the previous investigations, especially with the excavation of Manor Farm, Area B which was located directly adjacent to the east of the site

It is clear that the activity recorded represents a continuation of the settlement previously recorded within Boundary ditch excavation and Area B of the Manor Farm excavations. Evidence suggests that the activity in this part of the site has resulted in response to the linear monument, acting as a focus for settlement. This particular area of the settlement activity would appear to fall within the Middle to Late Iron Age although it is possible the linear boundary may date back to the earlier phases of activity. Evidence has been recorded of potential specialised activities that have taken place on the site. In particular material associated with pottery production has been identified that provides evidence of a craft activity. Further evidence of activities includes metal working, were also recorded on the site which has added to our wider understanding of Iron Age activities in the hinterland surrounding the important Iron Age settlement at Leicester (Willis 2006, 110).

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Archive and Publication

A summary of the work will appear in *Transactions of the Leicestershire Archaeological and Historical Society*. A more detailed article may also be submitted for publication in due course.

The archive will be deposited with Leicester City Museums Service under the Accession no. X15.2014. A record of the project will also be included on the OASIS data collection service (See Appendix 1).

The content of the archive consists of:

- A4 unbound copy of this report
- 5 A4 Context summary sheets
- 70 A5 Context sheets
- A4 Drawing records 1 A4 Sample record
- A4 photo records
- 1 CD containing digital photos
- Films of black and white contact prints and negatives
- Boxes of finds

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Appendix 1 OASIS

INFORMATION REQUIRED	EXAMPLE
Project Name	An Archaeological Excavation Thurmaston Lane, Humberstone, Leicester
Project Type	Excavation
Project Manager	Patrick Clay
Project Supervisor	Tim Higgins
Previous/Future work	Previous: desk-based assessment and evaluation. Possible future work on adjacent land
Current Land Use	Pasture
Development Type	Residential
Reason for Investigation	NPPF Section 12
Position in the Planning Process	As a condition
Site Co ordinates	NGR SK 626 065
Start/end dates of field work	April 2014 to May 2014
Archive Recipient	Leicester City Museums
Study Area *	0.29ha open excavation

Appendix 2 The Bronze Age and Iron Age Pottery

Nicholas J. Cooper

Introduction

A total of 252 sherds of Middle to Late Iron Age pottery weighing 3.5kg (average sherd weight 14g) was retrieved from 40 contexts, notably the fills of [28] which produced 24 sherds and those associated with Enclosure B (35 sherds) with other groups coming from (15) and (148). Notably context (10) also contained, residually, but in good condition, the rim of a Deverel-Rimbury-type bucket urn.

Methodology

The pottery has been analysed by form and fabric using the Leicestershire County Museums prehistoric pottery fabric series (Marsden 2011, 62, Table 1), with reference to the Prehistoric Ceramic Research Group's Guidelines (PCRG 1997), and quantified by sherd count and weight.

Middle Bronze Age Pottery

A single large rim and upper body fragment (155g) from an urn manufactured in a granite-tempered fabric (R1) was recovered, residually from (10). The urn has a plain upright rounded rim with a diameter of 270mm. Running horizontally, 50mm below the rim, and 10mm wide, is a raised cordon decorated with continuous transverse fingertip impressions to give a toothed effect. The urn belongs broadly to the tradition of Middle Bronze Age vessels belonging to the Deverel-Rimbury tradition (Gibson 2002, 106, fig. 51) and the raised, toothed, cordon is paralleled in cremation urns from Shortleath Lane, Sulhamstead, near Reading in the Thames Valley (Lambrick 2009, 300, fig.8.10a). Such vessels have not often been found in Leicestershire, with one recorded from Willow Farm Castle Donington (Marsden unpublished). The chronological relationship of such vessels to the cordoned urns with raised decorated cordons from the Eye Kettleby cemetery is not secure but a Middle Bronze Age date is suggested by comparison (Woodward and Marsden 2011, 75 and figs.59-62)

The Middle to Late Iron Age Pottery: Analysis of Assemblage by Fabric, Form and Decoration

The complete record of the stratified assemblage is presented below (Table 1) with a quantified summary by fabric following (Table 3).

Table 1: Quantified record of Iron Age pottery

Thurmaston Lane Humberstone A15.2014 Iron Age Pottery								
Context	Cut	Fabric	Form/Rim	Decoration	Sherds	Weight	Diam	Date
10		R2	jar	scored	1	50		M-LIA
10		Q1	misc		7	30		M-LIA
11	13	S1	upright flat	rim slashes	2	16		M-LIA
12		S1	jar	scored	1	85		M-LIA
15		Q1	upright flat	rim slashes	4	48	120	M-LIA
15		R2	large jar	scored	21	640	G260	M-LIA
16		S1	uprightround		1	2		M-LIA
16		R2	jar	scored	9	35		M-LIA
18		Q1	jar	scored	3	33		M-LIA

21		R2	jar	scored	12	134		M-LIA
25		R2	jar	scored	6	97		M-LIA
29	28	R2	large jar		9	395	G300	M-LIA
37	28	R2	uprightflat		3	50		M-LIA
37	28	R2	uprightflat	piecrusttrim	1	35	>220	M-LIA
37	28	Q1	large jar		4	500	G320	M-LIA
37	28	R2	misc		5	51		M-LIA
39	ENC B	Q1	uprightround	scored	2	10	<120	M-LIA
42		R2	misc	scored	2	12		M-LIA
48		R2	uprightround		4	21	240	M-LIA
50		R2	misc		3	4		M-LIA
52		Q1	uprightflat		4	11	100	M-LIA
52		R2	misc	scored	3	13		M-LIA
53	28	R2	uprightflat		2	28		M-LIA
55	ENC B	R2	misc	scored	1	2		M-LIA
67		S2	misc		1	2		M-LIA
76		S1	misc		2	11		M-LIA
77		R2	large jar	scored	1	42		M-LIA
77		S1	misc		3	10		M-LIA
77		R2	uprightflat		1	8	100	M-LIA
77		R2	uprightround		2	7	120	M-LIA
77		R2	misc	scored	21	103		M-LIA
81		R2	uprightround	rim slashes	11	248	200	M-LIA
89		S1	misc		2	5		M-LIA
89		R2	misc	scored	4	26		M-LIA
90		Q1	uprightround		1	2		M-LIA
90		Q1	misc	scored	1	10		M-LIA
93	ENC B	R2	misc	scored	12	51		M-LIA
98		S1	misc		1	1		M-LIA
102	ENC B	S1	misc	scored	4	9		M-LIA
104		R2	misc		3	25		M-LIA
107		S1	jar	scored	12	65		M-LIA
109		R2	misc		1	5		M-LIA
110	108	S1	misc		1	6		M-LIA
113	ENC B	S1	misc		10	48		M-LIA
116	ENC B	R2	misc	scored	6	68		M-LIA
124		R2	misc	scored	6	60		M-LIA
134		R2	misc		1	1		M-LIA
148		R2	uprightflat	burnished	6	45	150	M-LIA
148		R2	uprightround		12	100	100	M-LIA
148		R2	jar	scored	10	165	B160	M-LIA

161		R2	misc		1	6		M-LIA
165		R2	misc	scored	1	5		M-LIA
199		R2	large jar		1	36		M-LIA
218		R2	misc		3	25		M-LIA
220		Q1	misc		1	1		M-LIA
Total					252	3498		AvSW 14g

ENC B = Enclosure B

Table 2 Quantified summary of combined assemblage by fabric

Quantified Summary by Fabric					
Fabric	sherds	Weight	%sherds	% weight	Av.Sh.Wt
Granite R2	185	2593	73	74	14
Quartz sand Q1	27	645	11	18	24
Shell S1	40	260	16	8	7
Total	252	3498	100	100	14

The assemblage all belongs to the East Midlands scored ware tradition, current from the 4th or mid-3rd century BC to the earlier 1st century AD (Elsdon 1992a, 85, Fig.1.6) and corresponding to Knight's 'earlier La Tene' ceramic phase in the East Midlands (Knight 2002, 133-5). The tradition produced slack shouldered jars in a variety of sizes usually with upright flat or rounded rims, the tops sometimes decorated with slashes as for example from (11), (15) and (81) or finger tips to form a pie-crust rim as from (37). Large jars, similar to Elsdon's Form 4 from Enderby (1992b, 39, fig.24.4) and often showing their coiled structure, came from (15) and [28] with girths estimated at 260 to 320mm in diameter and body thicknesses of up to 18mm. Most jars with simple upright or slightly outcurving rims were smaller with diameters of 100 to 160mm and similar to Form 1-3 from Enderby (1992b, 39, fig.24.1-3). There are broad similarities with the two far larger assemblages from the adjacent areas of the Humberstone aggregated settlement excavations at Elms Farm (Marsden 2000) and Manor Farm (Marsden 2011) and specific parallels for rim decoration have been recorded from the latter site (e.g. the transverse grooves on the rim of the vessel from (15) (Marsden 2011, 68, fig.72.3) and the 'piecrust' rim from (37) [28] (Marsden 2011, 69, fig.73.15). Amongst the smaller vessels was a very competently burnished jar, in a granitic fabric, from (148), similar to a range of examples from Elms Farm (Marsden 2000, 183, fig.50.20). In view of the high proportion of vessels decorated with scoring recorded (55% by sherd count), also a feature of both adjacent sites, the assemblage may indicate a date in the Later rather than the Middle Iron Age, perhaps as late as the 1st century BC or early 1st century AD.

In terms of fabrics, the sources of opening materials used in the manufacture of the vessels is directly comparable to that from the two adjacent excavations, with all three assemblages dominated by granitic rock tempered fabrics (R1/R2 formerly RQ1), with the remainder comprising shell-tempered fabric (S1/S2) and quartz sand fabric (Q1), in similar proportions to those at Manor Farm and Elms Farm (Marsden 2011, 64, Table 2 and fig.71). Humberstone and Leicester lie towards the western edge of

the East Midlands scored ware tradition (Elsdon 1992a, 87) and assemblages are usually dominated by fabrics with high mineral content, typical of the north and west of the scored ware distribution. The granodiorite used in the granitic rock tempered fabric has been specifically sourced to nearby Mountsorrel (Knight *et al.* 2003), whilst the shell-tempered fabrics are typical of sites in eastern Leicestershire and Rutland (Cooper 2000); their unusual occurrence at Elms Farm and Manor Farm being previously remarked upon (Marsden 2000, 178; 2011, 65). It is interesting to note in this respect that shell-tempered fabrics do not reach Leicester itself until the early decades of the 1st century AD.

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Appendix 3 The Charred Plant Remains

Rachel Small

Introduction

Excavation was carried out on the mid to late Iron Age settlement near Thurmaston Lane Humberstone, Leicestershire, expanding upon earlier investigations at Elms Farm and Manor Farm (Charles *et al.* 2000; Thomas 2011). Soil samples were taken from a range of features to establish if they contained charred plant remains which are a useful indicator of the environment and activities associated with crop processing.

Method

In total, 31 soil samples were taken, although not all samples were wet-sieved, only samples thought to have the highest probability of containing charred plant remains. These were primarily from the termini of eaves-drip gullies, but also included sections of eaves-drip gullies, a post hole, enclosure ditch, pit fill and deposit over a cobbled surface. One bucket of each of these samples was wet-sieved.

The samples had high clay content and were wet sieved in a York tank using a 0.5mm mesh with flotation into a 0.3mm mesh sieve. The flotation fractions (flots) were transferred into plastic boxes; air dried and then sorted using an x10-40 stereo microscope. The residues were air dried and the fractions over 4mm sorted for all finds.

The plant remains were identified by comparison with modern reference material available at ULAS. Quantification of grains, chaff and weed seeds present was carried out as follows: each complete specimen was counted as one; for fragments the likely number of whole specimens this would have represented was estimated. Counts for each sample are tabulated below (Tables 3 and 4); the plant names following Stace (1991).

Results

Low numbers of charred plant remains were found in the samples. Only two samples, 9 and 10, contained over ten charred plant remains (12 and 15 specimens respectively). The specimens were abraded. Despite the poor preservation and low numbers, grain, chaff and six different species of wild seed were identified. Charcoal fragments were present in all samples but in low numbers. All samples contained modern rootlets and seeds whilst samples 3, 10 and 14, contained worm egg sacs, suggestive of a level of bio-disturbance.

Grains

Grains were identified in low numbers in samples 6, 7, 9, 10, 19 and 30. Glume wheat (*Triticum* sp.) grains were most common. One barley (*Hordeum Vulgare* L.) grain was identified in sample 10.

Chaff

Glume wheat (*Triticum* sp.) bases were identified in samples 10, 19 and 30. Sample 10 contained the most glume bases, 7 in total. The specimen in sample 19 displayed

very clear lengthwise nerves, which is characteristic of spelt wheat (*Triticum spelta* L.).

Wild plant seeds

The most common type of wild seed identified was goosefoots (*Chenopodium* spp.); these grow in disturbed, nitrogen-rich soils, as are found around manure heaps and human occupation. Wild seeds associated with cultivated land and wastelands were present, and included: small nettle (*Urtica urens* L.), chickweed (*Stellaria media* L.) small and large grasses (Poaceae) and knotweeds (*Polygonum* spp.). Sheep's sorrel (*Rumex acetosella* L.) was identified and is associated with rough grassland, being particularly abundant on acidic soils (Jones *et al.* 2004).

Discussion

The decision was made not to sieve the remaining tubs for each sample because this would not have produced the numbers needed for a statistical analysis. Despite this, general conclusions can be drawn about the samples – the grain, chaff and weed seeds found represent the waste from small scale cereal processing for consumption.

In the Iron Age, glume wheat cereal crops would have been harvested and then gone through initial processing to remove straw and weeds before storage. The ear of glume wheat breaks into spikelets which consist of two glumes containing two grains and the cereal can be stored in this form. Small amounts would be taken out of storage on a day-to-day basis and go through a second stage of processing to prepare for consumption. This requires parching and pounding to free the grain, followed by fine sieving to remove the chaff and weed seeds. Finally hand sorting was probably undertaken to remove any weed seeds left similar in size to the grain. The waste would have been disposed of in domestic hearths and become charred along with any grains spilled during cooking. The remains of the hearth would then be raked and disposed of in feature such as pits. Some of the hearths remains would form a general scatter that might accumulate in open features such as gullies (Monckton and Hill 2011, 130).

The only feature that did not contain charred plant remains was the cobbled surface (sample 31); suggesting this area was not important for crop processing. Charred plant remains were absent in sample 28, an enclosure ditch fill; however, specimens were found in the other layers of this feature. Roundhouse 1 and 7 contained the largest amount of charred plant remains, especially in the terminals, perhaps suggesting a greater emphasis on crop processing activities in these structures.

Monckton and Hill (2011, 130) suggested that the small amount of cereal cleaning waste may be due to chaff and weed seeds being used as animal fodder, because a mixed farming was likely. The poor preservation (abraded condition) of the specimens may also be a factor.

The findings are similar to those from Manor Farm (Monckton and Hill 2011). At Manor Farm, the number of remains in each sample was also low, mostly single numbers, only a small number of samples (22/172) having between 10 and 40 items. The general pattern was the same - a scatter of grain, with weed seeds and little chaff and this was interpreted as waste from small scale cereal processing. The main cereal crop was spelt wheat, with occasional remains of emmer (*Triticum dicoccum* L.) and

barley; species of weed associated with arable and disturbed land were identified. Generally the roundhouses produced the most remains; this was also true for Thurmaston Lane. This compares with other local sites such as Enderby (Monckton 2004), the two are thought to have a bias towards pastoral farming.

Thurmaston Lane and Manor Farm differ to the previous excavation at Elms Farm (Pelling 2000). At Elms Farm nine samples (out of 109) had sufficient numbers for a detailed analysis; these numbers were not achieved at Thurmaston Lane and Manor Farm. The most significant samples from Elms Farm were sample 148 from a bell shaped pit feature, dominated by *Triticum* sp. glume bases, and interpreted as processing waste. Also, sample 33, associated with a four post structure was grain rich, and was interpreted as a grain store.

Monckton and Hill (2011) suggested that Elms Farm and Manor Farm may have differed in function. Elms farm had some evidence for arable activities and grain storage, whilst Manor Farm had only evidence for domestic food preparation and so may have a stronger association with crafts and pastoral activities. These differences may indicate changes over time, spatial differences, or status.

Table 3 Counts for charred plant remains present in samples 1 to 10

Feature Type	S terminus eaves drip RH4	N terminus eaves drip RH4	S terminus Ditch ENC B	N terminus Ditch ENC B	S terminus eaves drip RH4	N terminus eaves drip RH5	N slot Ditch ENC A	E terminus eaves drip RH6	S terminus eaves drip RH5	
sample	1	2	3	4	5	6	7	9	10	
context	11	16	18	21	12	29	25	34	37	
Cereal chaff										
Triticum spp. Glume base									7	C
Triticum spelta L. glume base										S
Total chaff									7	
Cereal grains										
Triticum spp. grains								2		C
Hordeum vulgare L. grains									1	E
Cereal grains						1	1	1	1	C
Cereal/Poaceae grains							1			C g
Total grains						1	2	3	2	
Wild Plants										
Chenopodium spp.		1	1		1	1	2		3	C
Urtica urens L.	1									S
Stellaria media L.						1	1	1		c
Remex acetosella L.								1		S s
Polygonum spp								4		K

Poaceae (large)				2					1	
Poaceae (small)				1						
Indeterminate seeds		1		2				2	2	
Total wild plants	1	2	1	5	1	1	3	9	6	
Total	1	2	1	5	1	2	5	12	15	
Litres	9	10	8	9	8	9	9	10	7	
Part sorted	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table 4 Counts for charred plant remains present in samples 14 to 31

Feature Type	Terminus eaves drip RH6	N slot eaves drip RH 3	N slot ditch ENC B	Post hole ENC B	ENC C lower fill	ENC C upper fill	ENC C terminus fill	Pit fill	Deposit above cobbled surface	
sample	14	19	24	26	27	28	29	30	31	
context	52	77	93	104	109	110	113	148	220	
Cereal chaff										
Triticum spp. Glume base								2		Glume wheat
Triticum spelta L. glume base		1								Spelt wheat
Total chaff		1						2		
Cereal grains										
Triticum spp. grains										Glume wheat
Hordeum vulgare L. grains										Barley
Cereal grains		1						1		Cereal
Cereal/Poaceae grains								1		Cereal grasses
Total grains		1						2		
Wild Plants										
Chenopodium spp.		1	1	1				1		Goosefoots
Urtica urens L.								1		Small nettle
Stellaria media L.								1		chickweed
Remex acetosella L.										Sheep's sorrel
Polygonum spp										Knotweeds
Poaceae (large)										Large grasses
Poaceae (small)		1								Small grasses
Indeterminate seeds	1				1		1	1		Indeterminate seeds
Total wild plants	1	2	1	1	1		1	4		

Total	1	4	1	1	1	0	1	8	0	
Litres	8	9	8	10	8	9	10	8	5	
Part sorted	100%	100%	100%	100%	100%	100%	100%	100%	100%	

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Appendix 4 The Animal Bone

Rachel Small

Introduction

This report presents the analysis of a small assemblage of animal bone recovered during excavations at Thurmaston Lane, Humberstone. Specimens from wet-sieving were also available. The archaeology represents mid-late Iron Age settlement activity.

Provenance and dating

Thirty-five contexts contained animal bone; all were securely dated to the mid to late Iron Age. The contexts represented; ditches, eaves drip gullies, wall foundations, post-holes, pits and spreads which formed part of the roundhouses and enclosure. Roundhouses 3, 4, 5, and 6; and Enclosures A and B all contained animal bone.

Methodology

Identification to element and taxon was attempted on all animal bones by comparison to the reference collection held at the School of Archaeology and Ancient History, University of Leicester. Information was compiled directly onto a standardised *Excel* spreadsheet.

Species distinction: distinction between sheep and goat was attempted on elements listed in Boessneck (1969); and by the inter-pillar found on the mandibular deciduous fourth premolar and third molar on goat teeth (Payne 1985, 143).

Zonation and measurements: anatomical zones present were recorded using the eight zones defined by Serjeantson (1996). Measurements were taken on mammal teeth and bones following Von den Driesch (1976).

Ageing: Grant's (1982) system was used to record mandibular tooth wear for cattle and sheep/goat; associated ages were obtained from Hambleton (1999). Epiphyseal fusion data was recorded for post-cranial bones following ages suggested by Silver (1970) and Noddle (1974).

Taphonomy: burnt bone was recorded and gnawing was identified using Binford's (1981, 44 – 49) descriptions. Bone preservation was rated on a four point scale following Harland et al (2003); a bone was chosen as a 'standard' for each rating and referred to ensuring consistent categorisation.

Quantification: joining fragments were re-assembled and the resulting specimen counted as one (a record of the original number of fragments was retained). 'Number of Specimens' (NSP) was calculated.

Preservation and taphonomy

The total number of fragments in the assemblage was 407; reassembly of joining fragments reduced the total to 370 specimens (352 bones; 18 teeth). Analysis will refer to the number of *specimens*.

Ninety percent of the bone came from eaves drip gullies and enclosure ditches (table 8). The area with most bone was Enclosure B, followed by Roundhouse 4, 6 and

Enclosure A; roundhouses 3 and 5 contained little (table 7). (The assemblage is too small for meaningful analysis to be conducted regarding spatial variation of species and age distribution).

Regarding preservation (table 1), one specimen (0.3%) was classified as ‘excellent’, with the majority of surface fresh or even slightly glossy. A considerable number (48%) were classified as ‘good’; surface lacking a fresh appearance but solid, with localized flaking or powdering. The majority (51.1%) were ‘fair’; surface flaking or powdering on up to 49% of the specimens. Two specimens (0.6%) were identified as ‘poor’; flaking or powdering on 50% or more of the surface. Root etching was present on some specimens.

Table 5: Preservation of bone by context; based on Harland et al’s (2003) descriptions. Key: RH, roundhouse; EDG, eaves drip gulley; PH, post hole; ENC, enclosure ditch

Context	Cut	Description	Preservation scale			
			1	2	3	4
10	9	ENC A DITCH		3		
11	13	RH4 EDG			18	
12	13	RH4 EDG		12	7	
15	14	ENC A DITCH		7	8	
16	13	RH4 EDG			6	
18	20	ENC B DITCH		1	33	
21	22	ENC B DITCH	1		27	
25	24	ENC A DITCH		10	10	
29	28	RH5 EDG			3	
30	28	RH5 EDG		1		
39	40	ENC B DITCH		13	11	
42	41	RH6 WALL FOUNDATION		1		
48	47	ENC A PH			2	
50	49	RH6 EDG		7		
52	51	RH6 EDG		8		
55	56	ENC B DITCH		9	5	
67	28	RH5 EDG		6		
77	73	RH3 EDG			4	
89	51	RH6 EDG		25		
92	51	RH6 EDG		12		
93	94	ENC B DITCH		16	1	2
98	13	RH4 EDG		1	17	
102	103	ENC B PH		2	3	
104	105	ENC B PH		1	2	
107	13	RH4 EDG		11	6	
109	108	ENC C DITCH			6	
113	114	ENC B DITCH		5		
116	117	ENC B DITCH		10		
124	123	RH5 PH		2		

148	147	ENC C PIT		1	3	
170	170	ENC C PH		4	6	
218	147	ENCL C PH		1		
220		SPREAD			2	
Total			1	169	180	2

Seven bones (2%) were gnawed; all incidents were characteristic of canine gnawing - craters rather than punctures and broad grooves across the surface where teeth have been dragged (Binford 1981: 44 – 49). One bone (0.3%) had been burnt (further detail is given in table 9).

Only 19.2% of the assemblage was identifiable to species and element; this is low and is probably due to the high level of fragmentation, both modern and ancient, and preservation.

Taxa and carcass representation

Below is an overall table showing the number of specimens in each context (Table 6).

Key: RH, roundhouse; EDG, eaves drip gully; PH, post hole.

Context	Cut	Description	Cattle	Equid	Sheep /goat	Pig	Large mammal	Medium mammal	Indent.	Total
10	9	ENC A	2					1		3
11	13	RH4 EDG	3				15			18
12	13	RH4 EDG	3		1		10		5	19
15	14	ENC A DITCH	3		1		12			16
16	13	RH4 EDG			2			4		6
18	20	ENC B DITCH			1		33	1		35
21	22	ENC B DITCH			1		12		15	28
25	24	ENC A DITCH	7		4		10			21
29	28	RH5 EDG	1				3			4
30	28	RH5 EDG	1							1
39	40	ENC B DITCH	4		3		17	1	1	26
42	41	RH6 WALL FOUNDATION						1		1
48	47	ENC A PH	1				1			2
50	49	RH6 EDG	1				6			7
52	51	RH6 EDG	2				4		3	9
55	56	ENC B	1		2		7	1	5	16
67	28	RH5 EDG			1		2		4	7
77	73	RH3 EDG					4			4
89	51	RH6 EDG	3		4		19	2		28
90	51	RH6 EDG			1					1
92	51	RH6 EDG					10	2		12
93	94	ENC B DITCH					14	4	1	19
98	13	RH4 EDG	1		1		17			19
102	103	ENC B PH	1		1		1	3		6

104	105	ENC B PH				1	2			3
107	13	RH4 EDG	1	1	2		7		6	17
109	108	ENC C DITCH	1						5	6
113	114	RH5 EDG	1				3		1	5
116	117	ENC B DITCH	4				6		1	11
124	123	RH5 PH			1			1		2
148	147	ENC C PIT					4			4
164	133	RH4 PH	1							1
170	170	ENC C PH					8		2	10
218	147	ENC C PH			1					1
220		SPREAD					2			2
NSP			42	1	27	1	229	21	49	370

The main domesticates were present: cattle was the most common (59.2%) in the identified assemblage; followed by sheep/goat (38%), pig (1.4%) and equid (1.4%). An astragalus (context 124) was positively identified as sheep; as well as three third molars (contexts 15, 55 and 89).

Regarding the representation of the cattle carcass, all areas of the body were present (Table 7). Only the head, hindlimb and feet of sheep/goats were represented; this is probably due to the small sample size, and high levels of fragmentation.

Table 7: Carcass representation by element and species.

Element	Cattle	Sheep/goat	Equid	Pig
<i>Head</i>				
Zygomaticus	1			
Mandible		2		
<i>Spine</i>				
Atlas	1			
Axis	1			
Cervical vertebra	1			
<i>Scapulae</i>				
Scapula	1			
<i>Pelves</i>				
Pelvis	1			
<i>Forelimb</i>				
Humerus	5			
Radius	4		1	
Ulna	1			
<i>Hindlimb</i>				
Femur	3	2		
Tibia	5	6		
<i>Feet</i>				
Astragalus		1		

Calcaneum	1			
Metacarpal	2	1		1
Metatarsal	5	1		
Metapodial		3		
Proximal phalanx	3			
Total	35	16	1	1

Age structure

Epiphyseal fusion data was obtained from twenty bones; this is detailed in table 10. There is evidence for skeletally mature cattle and sheep/goat (figure 1); suggesting utilisation of animals for secondary products in addition to meat.

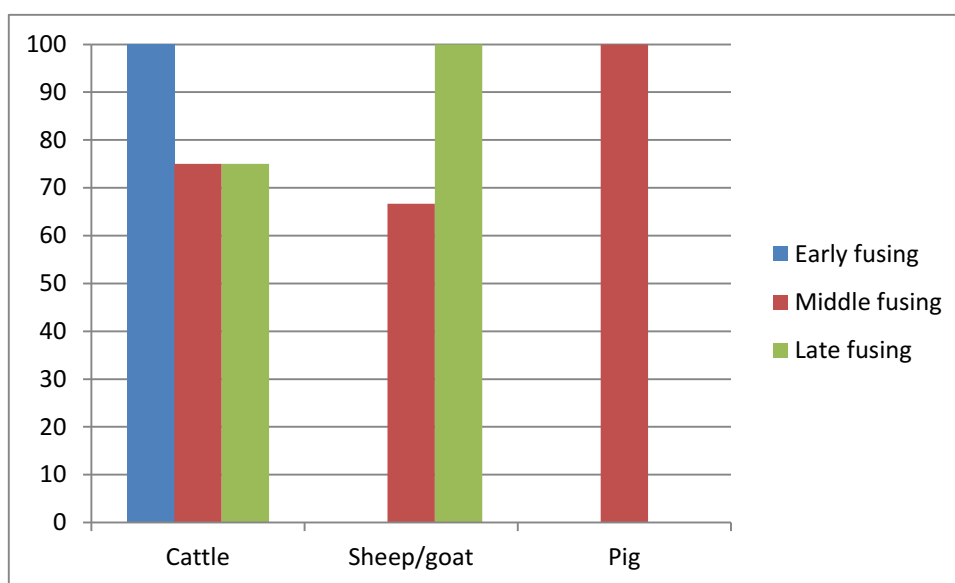


Figure 1: Percentage of bones fused (divided into early, middle and late fusing) for species.

Tooth wear data was obtained from 5 sheep/goat teeth and 1 cattle mandible; this is detailed in the table below, again there is evidence for older sheep/goats.

Table 8: Tooth wear data for the assemblage based on Grant’s (1982) stages; ages obtained from Hambleton (1999). Key: dp2, deciduous second premolar; dp3, deciduous third premolar; dp4, deciduous fourth premolar; M1, first molar; M3, third molar; and, M1/2, first/second molar.

Context	Cut	Taxon	Mandibular /Loose	Mandible /Maxilla	Side	dp2	dp3	dp4	M1	M3	M1/2	Age
15	14	Sheep	Loose	Mandible	Left					g		4 - 8 years
18	20	Sheep /goat	Loose	Mandible							f	≥ 6 months
39	40	Cattle	Mandibular	Mandible	Right	p	p	j	p			1 - 30 months
55	56	Sheep	Loose	Mandible	Left					g		4 - 8 years

89	51	Sheep /goat	Loose	Mandible							g	≥ 6 months
89	51	Sheep /goat	Loose	Mandible							g	≥ 6 months

Pathologies and measurements

No pathologies were noted. The measurements of bones and teeth taken during analysis are recorded in tables 11 and 12. Whilst there is insufficient data for intra-site comparison they may contribute to wider studies.

Butchery

Only two butchery marks were observed. A cattle humerus (from context 116) had fine knife marks on the medial side of the distal end of diaphysis; these are likely to have occurred during defleshing. A fragment of a large mammal carpal/tarsal (from context 98) also had cut marks; these probably resulted from skinning.

Animal bone from samples

Samples were wet sieved in a York tank using a 0.5mm mesh with flotation into a 0.3mm mesh sieve. The flotation fractions (flots) were transferred into plastic boxes; air dried and then sorted using an x10-40 stereo microscope. The residues were air dried and the fractions over 4mm sorted for all finds.

Animal bone from the residue totalled 369 fragments (table 5); this was across 14 samples. The assemblage can be characterised as fragmentary large mammal bone of 'fair' preservation. The number of calcined and burnt bones is higher than in the excavated assemblage.

Table 9: Total number of fragments; and, the number of burnt and calcined fragments present in the residues of samples.

Sample	Context	Cut	Total fragments	Burnt	Calcined
1	11	13	34		4
2	16	13	45		1
4	21	22	5		
5	12	13	120	1	11
6	29	28	10	1	
7	25	24	8		1
10	37	28	4		1
14	52	51	15	1	1
24	93	94	14		
26	104	105	59		4
27	109	108	13	4	8
28	110	108	18		1
29	113	114	21		
30	148	147	3		
Total			369	7	32

It was possible to identify to element nineteen fragments (Table 10). It was possible to speciate the teeth - 4 pig and 2 sheep/goat – and a fragment of pig maxilla. The number of pig specimens is higher than in the excavated assemblage.

Table 10: Description of specimens identified to element present in the residues of samples.

Sample	Context	Cut	Fragments	Taxon	Element	Notes
1	11	13	1	Medium mammal	Vertebra plate	Calcined
1	11	13	3	Indent.	Tooth	
5	12	13	1	Pig	Maxilla	
5	12	13	1	Pig	Premolar	
5	12	13	1	Pig	Canine	
5	12	13	1	Medium mammal	Femur	Trochlea
5	12	13	1	Large mammal	Metatarsal	Proximal end
5	12	13	1	Indent.	Ossified cartilage	
6	29	28	1	Indent.	Tooth	
10	37	28	1	Sheep/goat	M1/2	Maxillary
10	37	28	1	Large mammal	Long bone shaft	
14	52	51	1	Pig	Tooth	
24	93	94	1	Large mammal	Thoracic vertebra	
26	104	105	1	Sheep/goat	Incisor	
26	104	105	1	Medium mammal	Scapula	
26	104	105	1	Medium mammal	Long bone shaft	
27	109	108	1	Pig	Tooth	

Discussion

The excavation produced 370 specimens dating to the mid to late Iron Age. The assemblage was very fragmentary and the majority of specimens were of a ‘fair’ preservation. Most of the bone came from eaves drip gullies and probably represents domestic refuse.

The main domesticates were present; cattle most common, followed by sheep/goat, pig and equid. In the absence of positive evidence for goats and, in keeping with other assemblages from the region, most of the sheep/goat bones probably derived from sheep.

Older cattle and sheep were present suggesting utilisation of secondary products, in addition to meat. Secondary products for sheep include wool and milk; for cattle, traction, milk and hide.

Fragmentary bone was collected from the residues of wet-sieved samples, 369 fragments in total. A small number of pig and sheep/goat specimens were identified. A number of burnt and calcined fragments were also present.

Comparison to past excavations

Previous investigations were carried out at Elms Farm and Manor Farm, Humberstone (Charles 2000; Browning 2011). Some of the patterns identified are similar to those from Thurmaston Lane as described below.

Much larger assemblages of animal bone, over 5000 specimens, were produced from the previous excavations. Bone preservation and taphonomy were similar to Thurmaston Lane; generally specimens were extremely fragmented and had a 'fair' to 'good' preservation, incidents of burning and gnawing were low.

Like Thurmaston Lane, cattle and sheep/goat were most abundant in previous excavations. All parts of the body were represented indicating processing and disposal on site. At Manor Farm, reoccurring butchery marks were observed, suggesting a systematic approach to carcass redistribution. Older cattle and sheep were present indicative of a mixed economy, exploitation of meat and secondary products.

Pig and horse bones were also found in the previous excavations and considered to be of less economic importance. Domestic fowl bones were also found; however, the numbers were small suggesting they did not form a significant part of the diet. No evidence for birds was found at Thurmaston Lane.

At Elms Farm and Manor Farm there was evidence for the exploitation of wild animals such as red deer, roe deer and hare. These were generally single isolated specimens, suggesting they were infrequently consumed. An exception is a large cache of worked deer antler at Manor Farm; these were probably collected after they were shed.

At Manor Farm there was intra-site variation between areas A and B and this was possibly due to differences in stock, carcass disposal and status. The assemblage size from Thurmaston Lane was too small for intra-site comparison of species and age for example.

These patterns fall in line with other Iron Age settlements in the region such as Enderby and Beaumont Leys (Goudwell 1992; Browning 2011).

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Table 11: Number of specimens by area and species. Key: RH = roundhouse, ENC =enclosure ditch.

Description	Cattle	Equid	Sheep/goat	Pig	Large mammal	Medium mammal	Indent.	Total
RH3					4			4
RH4	9	1	6		49	4	11	80
RH5	2		2		5	1	4	14
RH6	6		5		39	5	3	58

ENC A	13		5		23	1		42
ENC B	11		8	1	95	10	24	149
ENC C	1		1		12		7	21
Spread					2			2
Total	42	1	27	1	229	21	49	370

Table 12: Number of specimens by feature type and species.

Description	Cattle	Equid	Sheep/goat	Pig	Large mammal	Medium mammal	Indent.	Total
Eaves drip gully								
Ditch	39	1	24		211	16	47	338
Post-hole	3		3	1	12	4	2	25
Pit					4			4
Wall foundation						1		1
Spread					2			2
Total	42	1	27	1	229	21	49	370

Table 13: Further information on gnawed and burnt specimens. Key: RH, roundhouse; EDG, eaves drip gully ENC enclosure ditch..

Context	Cut	Description	Specimens	Element	Taxon	Gnawing	Burning	Preservation
15	14	RH4 EDG	1	Humerus	Cattle	Yes		2
21	22	ENC B	1	Metapodial	Sheep/goat	Yes		1
39	40	ENC B	1	Indent.	Large mammal	Yes		3
52	51	RH6 EDG	1	Indent.	Indent.		Yes	2
55	56	ENC B	1	Tibia	Sheep/goat	Yes		2
89	51	RH6 EDG	1	Ulna	Cattle	Yes		2
89	51	RH6 EDG	2	Long bone shaft	Large mammal	Yes		2

Table 14: Epiphyseal fusion data for bones following ages suggested by Silver (1970) and Noddle (1974). Key: PFus, proximal end fused; DFus, distal end fused.

Context	Cut	Element	Taxon	Side	PFus	DFus	Class	Age (months)
10	9	Metacarpal	Cattle			Fused	Middle fusing	≥24
11	13	Tibia	Cattle		Unfused		Late fusing	≤48
11	13	Femur	Cattle	Left		Line of fusion	Late fusing	Approx. 42 - 48
12	13	Calcaneum	Cattle	Left	Unfused		Middle fusing	≤42
15	14	Proximal phalanx	Cattle		Fused		Early fusing	≥18
16	13	Tibia	Sheep/goat	Right		Fused	Middle fusing	≥15
25	24	Radius	Cattle	Left	Fused		Early fusing	≥12

25	24	Metapodial	Sheep/goat			Unfused	Middle fusing	≤36
39	40	Tibia	Sheep/goat	Right		Fused	Middle fusing	≥15
39	40	Tibia	Cattle	Right		Fused	Middle fusing	≥24
39	40	Femur	Sheep/goat	Right		Fused	Late fusing	≥23
48	47	Proximal phalanx	Cattle		Fused		Early fusing	≥18
50	49	Radius	Cattle	Left	Fused		Early fusing	≥12
52	51	Radius	Cattle	Right	Fused		Early fusing	≥12
89	51	Radius	Cattle	Right	Fused		Early fusing	≥12
104	105	Metacarpal	Pig			Unfused	Middle fusing	≤27
113	114	Cervical vertebra	Cattle		Fused		Late fusing	≥84
116	117	Tibia	Cattle	Right		Fused	Middle fusing	≥24
116	117	Humerus	Cattle	Left		Fused	Early fusing	≥12
116	117	Femur	Cattle			Fused	Late fusing	≥42

Table 15: Measurements (mm) of bones following Von den Driesch (1976). Key: GL, greatest length; Bd, breadth of the distal end; Dd, depth of the distal end; Bp, breadth of the proximal end; Dp, depth of the proximal end; and, SD, smallest diameter.

Context	Cut	Element	Taxon	Side	GL	Bd	Dd	Bp	Dp	SD
16	13	Tibia	Sheep/goat	Right		21.4				
25	24	Metacarpal	Sheep/goat					19.1		
39	40	Tibia	Sheep/goat	Right		23				
48	47	Proximal phalanx	Cattle		57	22.1	18.9	24.1	28.6	21
55	56	Tibia	Sheep/goat	Left						11.5
124	123	Astragalus	Sheep	Left	23.7	15.1				

Table 16: Measurements (mm) of teeth following Von den Driesch (1976). Key: dp4W, width of the deciduous fourth premolar; M3W, width of the third molar; M1/2W, width of the first/second molar.

Context	Cut	Taxon	Mandibular/Loose	Mandible/Maxilla	Side	dp4W	M3W	M1/2W
15	14	Sheep	Loose	Mandible	Left		7.8	
18	20	Sheep/goat	Loose	Mandible				7

25	24	Sheep/goat	Loose	Maxilla				8.1
39	40	Cattle	Mandibular	Mandible	Right	12.4		
55	56	Sheep	Loose	Mandible	Left		6.9	
67	28	Sheep/goat	Loose	Maxilla				11
89	51	Sheep/goat	Loose	Mandible				7.6
89	51	Sheep/goat	Loose	Mandible				6.7

Appendix 5 Miscellaneous Finds

Small Finds

Number	Context No.	Cut No.	Object description	Location
1	10	9	Saddle Quern stone	Enclosure A ditch fill
2	10	9	Saddle Quern stone	Enclosure A ditch fill
3	16	13	Granodiorite	Eaves drip ditch fill entrance Roundhouse 4
4	93	94	Furnace base	Enclosure B ditch fill
5	93	94	Furnace base	Enclosure B ditch fill
6	109	108	Iron object?	Enclosure C ditch
7	109	108	Iron object	Enclosure C ditch
8	109	108	Iron object	Enclosure C ditch

The quern stones

Rebecca Hearne

One saddle quern stone in two fragments was recovered from the ditch of Enclosure A. Its characteristics are documented in Table 17 (below).

SF No.	Con	Cut	Lithology	Object type	State	Description	Thick (mm)
1	10	9	Quartz sandstone	Saddle base	Broken	A coarse-grained, grey-white quartz sandstone saddle quern base in 2 fragments (SFs 1 and 2). Grinding surface worn smooth. Roughly shaped. Underside roughly convex.	< 80

The quern is a broken saddle base, roughly shaped, with a flat upper grinding surface, worn smooth, and a pecked, convex underside which may have been secured into the ground during use. The quern is of Iron Age type, i.e. relatively small in size, roughly dressed, and rounded in comparison to very wide, flat, and saucer-shaped Neolithic or Bronze Age varieties (Curwen 1937, 1941).

Other contemporary Leicestershire sites, e.g. Gimbro Farm at Castle Donington (Derrick 1999), Enderby I (Clay 1992), Hinckley (Chapman 2004), Enderby II and

Huncote (Meek et al. 2004), also produced very few or no querns; thus, small assemblages are far from unusual. This may reflect an originally greater number of querns when the site was active which have been subsequently removed when it was abandoned, recycled, or deposited elsewhere. Alternatively, it may represent a quern assemblage which was small to begin with, possibly suggesting communal, rather than individual familial, food or other materials' preparation at sites such as Manor Farm. The deposition of the quern in an enclosure ditch fill also containing cereal chaff, glume wheat, and Iron Age pot suggests deliberate deposition. This may be illustrating the contemporary socio-economic significance of the quern and its original use (cereal-grinding). It may also suggest a direct relationship between the quern and Enclosure A, which is also associated with five post-holes possibly representing a structure within the enclosure.

Humberstone overlies outcropping bedrock of sedimentary units including sandstone and gritstone, such as the Bromsgrove Sandstone formation which outcrops in north-west Leicestershire (Horton and Harrald 2012); therefore the rock upon which the quern is made is likely to be of local provenance.

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