

# TAKING STOCK IN THE LATE BRONZE AGE TO EARLY IRON AGE TRANSITION: A CROWDING- ALLEY AND SETTLEMENT SITE AT HAMILTON, LEICESTER

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Excavations at North Hamilton, Humberstone, have located a ditch system associated with a small settlement. The system is interpreted as a crowding-alley for livestock management and an indicator of large scale animal stock control in the earlier 1st millennium BC, possibly necessitating co-operation between different families or communities on a seasonal basis. Structural evidence includes at least one circular building that had seen some re-building. The pottery from the site was distinct from the more usual Iron Age assemblages in fabric and form, and flint was being used for tooling.

## INTRODUCTION

The excavation was undertaken in advance of residential development within the Hamilton Northern Housing Area at Hamilton, Leicester (SK634074).

The development site covers c. 55ha., 1.6 km north of Humberstone village and 5.6 km north-east of Leicester City Centre (Fig. 1) and consists of pasture and arable fields on north-facing slopes above the Melton Brook at a height of 65–95m O.D. The fields fell within the open fields of the medieval village and ridge and furrow was evident after machine stripping. The underlying geology is glacial boulder clay with areas of overlying sand and gravel which in turn overlay Mercia mudstone.

The site is situated on a small spur of land between 80m and 75m OD, above a steepening slope to the north down to the valley bottom and the lesser slopes of dry gullies to the immediate west and east. The gully to the east was topped by a major field boundary running north-south dividing the edge of the present City of Leicester from the parish of Beeby; this boundary was also the limit of the development area (Fig. 2).



Fig. 1. Location plan showing Hamilton in relation to other sites mentioned in the text.

## BACKGROUND

Archaeological evaluation comprising field walking surveys, geophysical survey and trial trenching (Leicestershire Museums Arts and Records Service Archaeological Survey Team Report 94/3; Leicestershire Archaeological Unit Report 94/41; ULAS Reports 2000/32; 2000/40; 2000/67) had identified archaeological potential in three main and three ancillary areas. A recording programme following a brief from the Leicester City Council planning Archaeologist resulted in two separate area excavations, (Fig. 16, A and B; Beamish 2003, 131). Site A, was recorded in two adjacent areas between December 2000 – January 2001 (Area 1) and May – June 2002 (Area 2).

The contexts are divided into cut numbers in square brackets (e.g. [6]) and fills in round brackets (e.g., (91)). It has not been possible for a definitive phasing sequence to be deduced and the features are described in functional groups.

The finds and records have been deposited with Leicester City Museum Service under Accession Nos. A.6.2000 and A14.2002.

The general arrangement of the site comprised two ditch systems with a number of structural areas to the north and south (structures 1–8) with small numbers of discrete pits within and between these. All the structures appear to be Late Bronze Age/Early Iron Age in date and some degree of contemporaneity, while the two ditch systems are separated by perhaps 800 years.

## IRON AGE DEPOSITS

### The ditch system (Fig. 3)

DITCHES A, A1, A2 AND A3; DITCH B; DITCH C AND C1; DITCHES D AND D1; DITCH E AND E1; PIT 187

A series of shallow ditches were traced for 93m from east-south-east to west-north-west before turning to the south-west for a further 27m. The ditches followed the contour of the land at a softening in the northerly slope at 77m OD, and were in two broadly parallel groups north and south, so defining an area 120m long, ranging from 2.7m to 9m in width. Some recutting was apparent although where they were identified this was sometimes discontinuous and confused by the medieval furrows. The ditch-fills showed little variation ranging in colour from mid-greyish browns to mid-orange greyish browns and all consisted of silty sandy clays. In profile the ditches had sides sloping at between 30° and 45° with curved bases and depths typically between 0.30 and 0.50m. The general lack of differentiation between the profiles and fills of the various cuts and recuts made the resolution of what relationships existed difficult.

DITCHES A,A1,A2,A3

A minimum of four stratigraphic sub-phases were identified in the northern group (A, A1, A2 and A3). The earliest of these was found in the west of the main excavation area where a single ditch on the northern side of the system continued

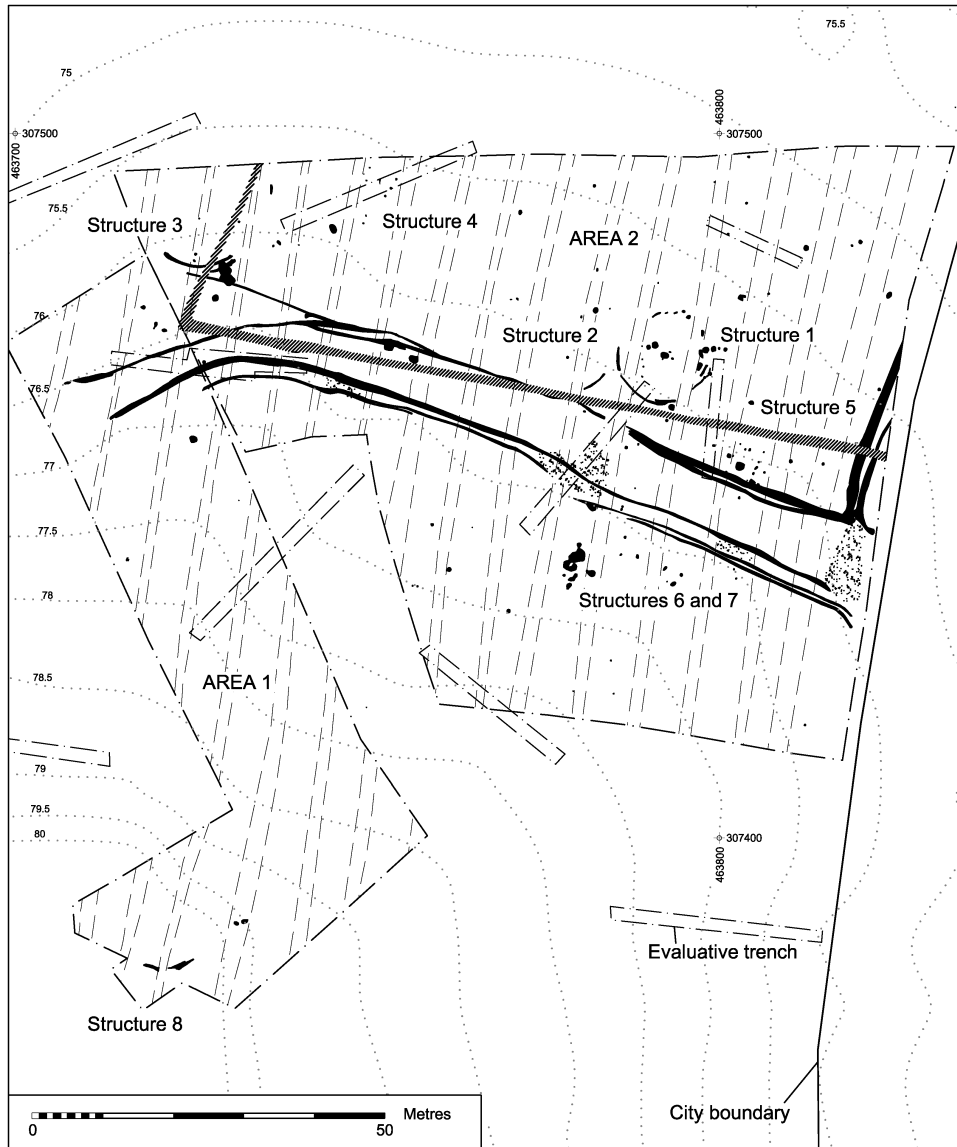


Fig. 2. All features, with contours and medieval ridge and furrow.

on a straight west-north-west alignment toward Structure 3. This ditch was truncated at its eastern end by a pit and at its western end by a later ditch cut (A1), which seems to have shared a similar line to its own successor (A2) although, as ditches A1, A2 and A3 were not recorded as continuous features, this cannot be established with certainty. Ditch A3 curved strongly to the south in the west before terminating. The latest sub-phase recorded at the eastern end (represented

here also as ditch A3) showed a ditch terminating a metre short of a right-angled turn that appeared, previously, to continue between ditches A/A1 and E. Twenty-five metres south-east of Structure 3, a sub-square pit [187], cut one phase of ditch (A2) and was itself cut by the final phase ditch (A3). This pit contained pottery sherds of a round shouldered vessel in a fine grog-tempered fabric (Fig. 10, 1).

#### DITCH B

Ditch B on the northern side of the southern group was recorded as a continuous feature which showed no evidence of recutting and shared a common alignment with A3. Ditch B terminated in a similar way to A3 to the west. The terminal formed by ditches A3 and B was flared. To the immediate east of this terminal the area between the ditches narrowed to form a slight bottle neck. At its eastern end ditch B petered out and, although this may have been a terminal point, it is also possible that this area on the line of the later borough city boundary had been more aggressively truncated.

#### DITCHES C, C1

Ditch C lay a metre or so to the south of ditch B, and was again cut along a similar line although at its western end, it diverged from ditch B and the distance between the two features was widened to over 3m. A second ditch (C1) ran closely parallel with C. As these ditches did not intersect it is possible that they were contemporary, although as the area was heavily plough-truncated, and the ditches were perhaps 1m deep when first cut, the two ditches would have effectively shared a common edge at ground level and any such contemporaneity is doubtful.

After a break of some 5m, the line of ditch C was re-established by another ditch, D, which also had been partly re-cut (D1). D/D1, which did intersect at a distinct kink and maintained a similar line to B albeit terminating 13.50m short and at the same time diverging so that the distance between the ditches was again widened.

#### DITCHES E, E1

In the east, the first phase northern ditch represented (A and/or recut A1) turned sharply to the north and was traced running down the gentle valley slope (E), with a broadly parallel neighbour between 0.30 and 1.50m to the east (E1), for a further 26m before continuing beyond the excavation area. E1 turned to the east in the south. Both ditches had similar fills; although they did not intersect and may have been contemporary, the space between the two ditches became increasingly narrow in the south, and it seems likely that they must have intercut prior to plough truncation.

A distinct sub-square depression, 1.1m by 1.35m, and 0.22m deep was recorded in the base of an excavated segment through ditch E, 3.6m north of its junction with ditch A/A1. Filled with a mid orange brown silty sandy clay, this was probably the base of a pit pre-dating the ditch, but as any relationship was inadvertently removed in its entirety during the excavation of the ditch, this must remain uncertain.

Within a 2.5m long segment excavated through the same ditch immediately north of its intersection with Ditch F, no pitting existed.

#### SURFACING

Four extremely light spreads of small to medium rounded pebbles were recorded on the southern side of the system and at the eastern junction. Recognition of the layers was only made after the site had been open for several weeks due to the diffuseness of the spreads and no clear stratigraphic relationship with the ditches was established. Three of the spreads overlay the infilled ditches although the lines of the ditches themselves remained clear; the likelihood is that the metallurgy post-dated at least the earlier fills of the ditches, although there remains a possibility that plough action had dragged stones back over the infill and distorted the surface stratigraphy.

### Structures

Evidence of three circular or part circular structures was recorded. All three examples were partially indicated by lengths of curvilinear gullies on their southern edges.

#### STRUCTURE 1 AND NEIGHBOURING FEATURES

The first and clearest represented example was centred some 12m north of the gully system within Area 2 and measured 13.50 metres in diameter. The southern side of the structure was formed by a 21m length of shallow gully (albeit with a portion clearly removed by furrowing) which although defining what was most probably a circular area had not been cut with any particular curve. Some evidence of recutting was observed in the south and south-east, with the limited evidence suggesting that an initial shallow slot, was replaced by a slot with post holes along its length. Further fragmentary lengths of poorly aligned slot and post settings of very variable size were found on the northern side.

#### ENTRANCE

An entrance to the building was formed by two substantial elongated post pits [109] and [161], measuring 1.80m between their centres. Both of these features were filled predominantly with mid orangey brown to grey silty clays containing some charcoal and fire cracked stone. Both had evidence of (probably disturbed) post packing, comprising fragments of sandstone ranging from 0.15m to 0.30m in size, and both had more sloping edges on the southern sides. Oak charcoal from [109] was dated to 760–410 cal BC (Wk15080;2463 ± 38 BP).

To the east of the northern entrance post pit [109] was a line of four pits of variable dimensions, three of which contained fragments of calcined and uncalcined bone. The most substantial was [93], a vertically sided flat based cut filled by orangey brown silty clay which contained probably displaced stone packing material. Post pit [93] was potentially mirrored on the south side of the entrance by [97], a much slighter feature although with a similar fill. The two post holes measured 3.60m between centres and were aligned 5° south of east.

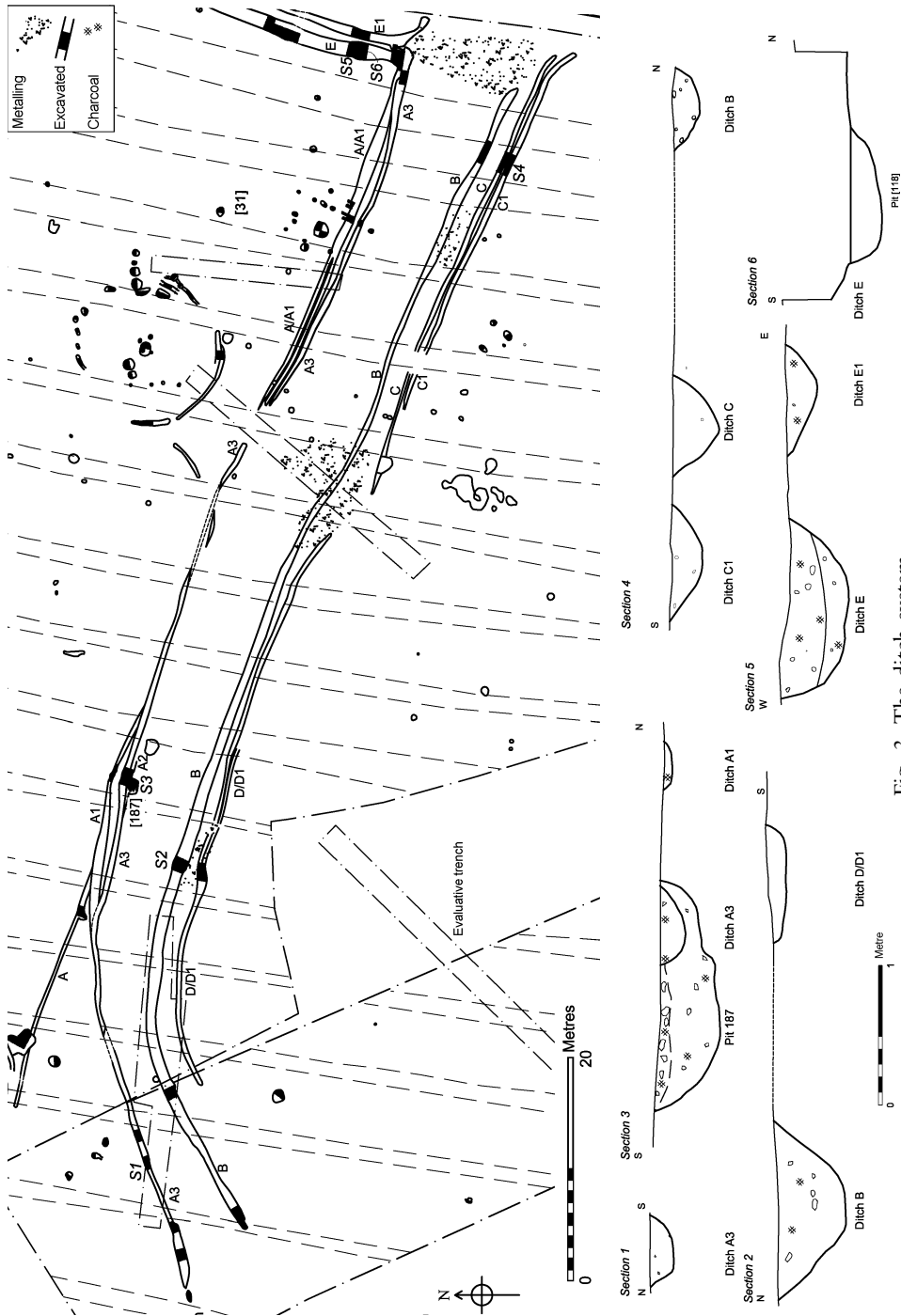


Fig. 3. The ditch system.

At the west end of the internal area was a line of four probable post holes running north-south, two of which were half-sectioned.

#### INTERNAL FEATURES

Within the structure a wide but shallow pit [173] was centrally located, filled by a lower brownish black silty clay (172) with charcoal which also filled a post socket like depression in the base of the pit on the east side, and an upper fill of more mixed silty clay. A radiocarbon date of 800–500 cal BC (Wk-15081;2510 ± 38BP) was determined from oak charcoal from 172.

The pit was cut by two smaller features of a group of four of similar dimensions, probably post holes, which formed a trapezoid configuration, 1m x 1.4m, near the notional centre point of the building.

One metre to the north-west of the central features were a further two pits [112], and [115]. The latter contained two fills of silty clay, the lower of which was a dark grey brown (114) and contained charcoal, ash and lumps of burnt clay from which were recovered some 760 fragments of burnt cattle and sheep bone. The excavator perceived the lower fill to have been backfilled into the pit from one side. Neither pit showed any indications of *in situ* burning.

Seven metres south east of Structure 1 was a solitary pit, [31] (Fig. 3) filled with a dark brown silty clay with abundant burnt stone and undiagnostic charred material (including an indeterminate cereal fragment).

Processed samples from pits [115] and [173] produced only single numbers of charred seeds including fat-hen and large grass with occasional cereal fragments.

#### STRUCTURE 2

A second structure was situated immediately to the west of Structure 1; all that remained was a 3.8m length of curvilinear gully (260) of 7m radius, and some possible internal features, probably post holes, that were not excavated. The nature of the building remains unknown, due to the combination of later plough truncation and the somewhat heterogeneous building style as reflected in Structure 1.

Projection of a circle indicates that a similarly sized round-house to that suspected for Structure 1 could have sat just to the north of the ditch system, and need not necessarily be of a separate phase. An unexcavated portion of linear feature just surviving disturbance by the later ditch F might have been a continuation of this gully.

#### STRUCTURE 3 AND NEIGHBOURING FEATURES

A third structure was situated at the north-western corner of area 2, immediately north of ditch A. Two concentric curvilinear gullies were recorded of 7m and 7.80m radii, both filled with orangey brown charcoal rich silty clays. The inner gully, [182] which at 10m long almost described a quadrant, was shallow and possibly structural, as the base of the cut at the eastern terminal included two probable post settings. The outer gully, [180], was at least 0.30m deep and substantially deeper than its neighbour, although conversely shorter at only 4.5m long.





Fig. 4. Structure 1 from its eastern entrance.

Over 520 fragments of calcined bone were recovered from the excavated terminal of [180], within which those from sheep, and sheep or goat were identifiable. Charred barley grains, a glume of emmer or spelt chaff and a seed of large grass were identified plant remains from the same context.

Two radiocarbon dates from the fill of [180], returned statistically equivalent dates, indicating that the material could be of the same age; these dates combined to give a date of 750–680, 670–640, 600–400 cal BC (Wk15082; 2406BP±37 and Wk15083 2471BP±38).

#### INTERNAL FEATURES

Internal features consisted of three probable post holes filled with mid orange yellow brown silty sandy clays which formed a line. The northernmost post hole was located very close to the notional centre point of circles best fitted to the curvilinear gullies.

Both gullies cut an earlier cluster of pits, one of which cut ditch A, indicating that the structure post-dated ditch A. The curvilinear gullies were both cut by a later ditch F (below).

Three metres south of Structure 3 was a steep sided, flat based pit, [156] (157/8), 1.02m by 0.96m by 0.42m deep. The pit was filled by dark grey brown silty sandy clay, above mid-orange brown silty sandy clay. Pottery was recovered

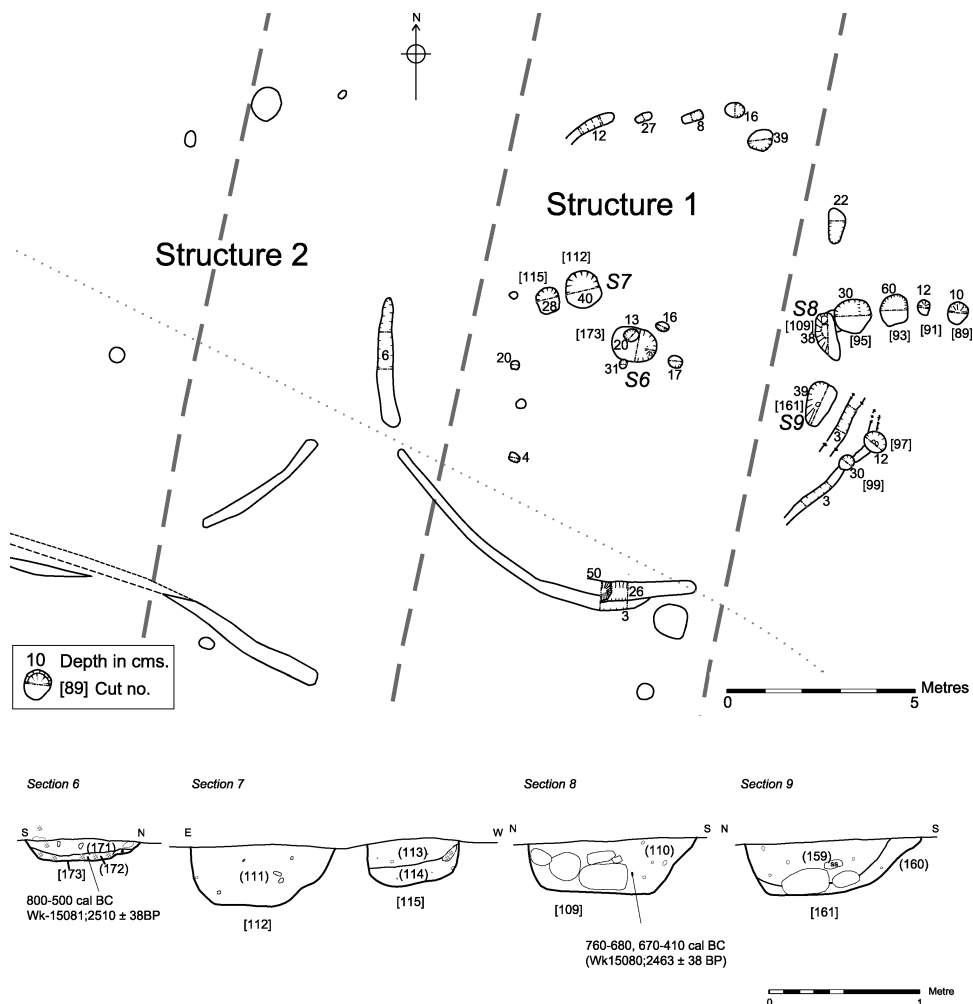


Fig. 5 Structures 1 and 2.

from the top fill (157) which was also rich in charred material that included a barley grain and a seed of brome grass.

To the south-west of the structure, were three further post holes. Two of these were of similar size and fill, a greyish brown silty sandy clay, whilst a third to the south, comprised a dense surface deposit of large pebbles in a shallow cut, tightly wedged together with sharp ends embedded in the natural clay.

#### STRUCTURE 4, AND NEIGHBOURING FEATURES

Five probable post holes, all unexcavated, filled with dark greyish brown silty sandy clays partly enclosed an area 2.9m long, and 4.5m wide aligned northeast – southwest, situated at the far north western extent of Area 2.

Two further post holes to the south, measuring 1.20m between their centres and also unexcavated, potentially formed a two-post structure aligned to the south-east.

Seven metres south-west of Structure 4, was an ovoid pit [174]. The upper of two similar grey brown silty clay fills was of interest, as it contained quantities of charcoal, pottery and burnt bone, in particular just above the interface with the lower fill. The interface sloped evenly across the feature, and the deposits may have been back fills. A spelt glume, two hulled barley grains and a seed of brome grass were identified samples. The pottery from [174] included relatively thick walled grog tempered sherds.

STRUCTURE 5

Twelve metres to the south-east of Structure 1 was a cluster of 12 small post holes and several pits. Five of the post holes formed a convincing line 4.8m long, running south-west to north-east from [57] and ending with [87]. Three further post holes to the west of [87] suggest perhaps another side, but no other clear corresponding wall lines were evident.

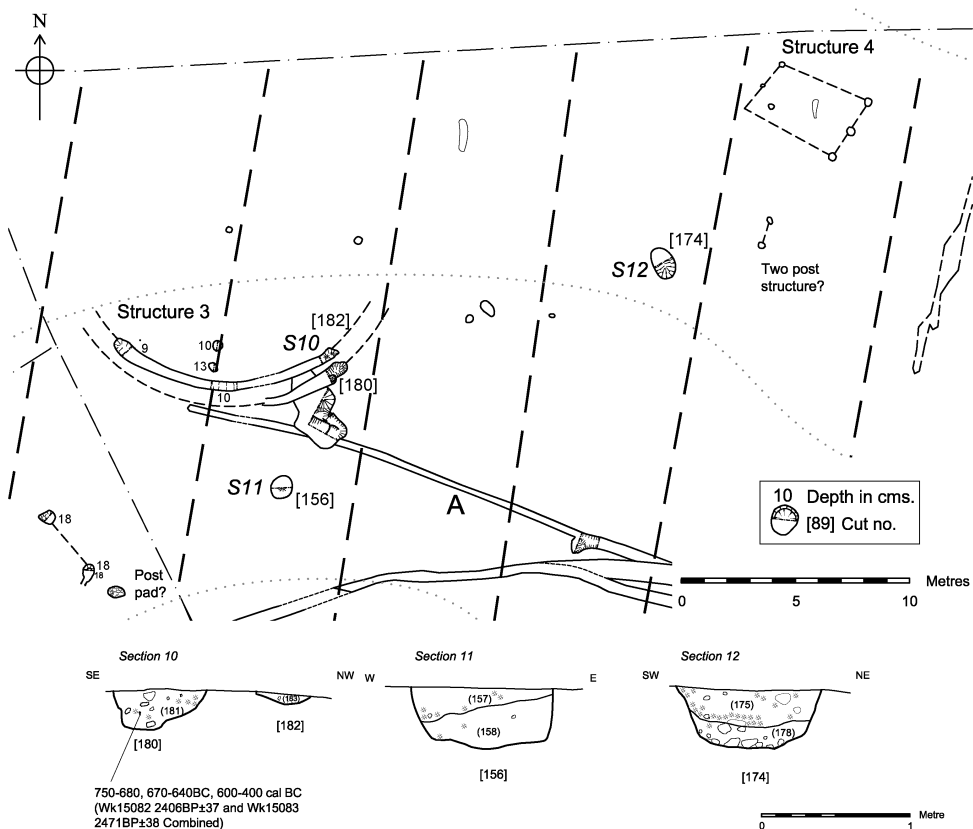


Fig. 6 Structures 3 and 4.

A post hole in the south-west cut ditch A/A1, but the absence (bar one) of post holes on the south side of the ditch system suggests that any structure essentially lay to the north and perhaps was contemporary with a later ditch phase (e.g. A3).

Within and to the west of the vague rectangular area formed by the post holes and the ditch system were two pits. Pit [100] was filled with a mid orange brown silty clay with quantities of fire-cracked stones, burnt clay lumps and charcoal.

One metre to the west of [100] was a slightly deeper pit, [50], filled with a orangey brown silty clay rich with ash and charcoal. Unidentifiable fragments of burnt bone were recovered from both [50] and [100] and an indeterminate cereal grain from the former.

#### STRUCTURES 6 AND 7

Two possible (but incomplete) four post structures lay to the south of the ditch system. Structure 6 was 2.5m by 1.7m between centres; three possible corner post holes were recorded, the fourth perhaps truncated by a furrow. A further small post hole was found on the southern side. All post holes were filled with mid to dark yellowish brown silty sandy clays.

Structure 7 was situated 4m north-west of structure 6, and similarly just south of the ditch system. Three unexcavated possible post holes filled with dark greyish brown silty sandy clays were 2.60m and 2.40m apart. There is no indication why a fourth post hole was missing.

A possible two-post structure aligned east-north-east with post holes 1.37m apart between their centres lay 7m to the east of Structure 6.

#### STRUCTURE 8

A small area of isolated features was recorded some 80m south of the ditch system. These comprised three gully segments, possibly describing an arc of some 6.29m radius. Two clear phases of gully were apparent, with the outer being later in date; the inner gullies were similar and are considered likely to have been contemporary, although any continuity was obliterated by a plough furrow. All the features were filled with mid greyish brown silty sandy clays.

Eight metres north-west of the structure were two probable post holes, filled with greyish brown silty sandy clays.

### **Romano-British (or later)**

#### DITCH F

A ditch, defining the south-western corner of a field or enclosure was recorded running south for 25m, from the northern edge of excavation, before turning sharply to the east for a further 100m, and also continuing beyond the excavation. The ditch which cut all other features encountered (but was itself cut by the furrows) was up to 1.67m wide and 0.57m deep, and filled with mid-yellow brown to dark grey yellow brown silty sandy clays. As relationships were mostly clear in plan, only one segment of the ditch was excavated, at its junction with E,

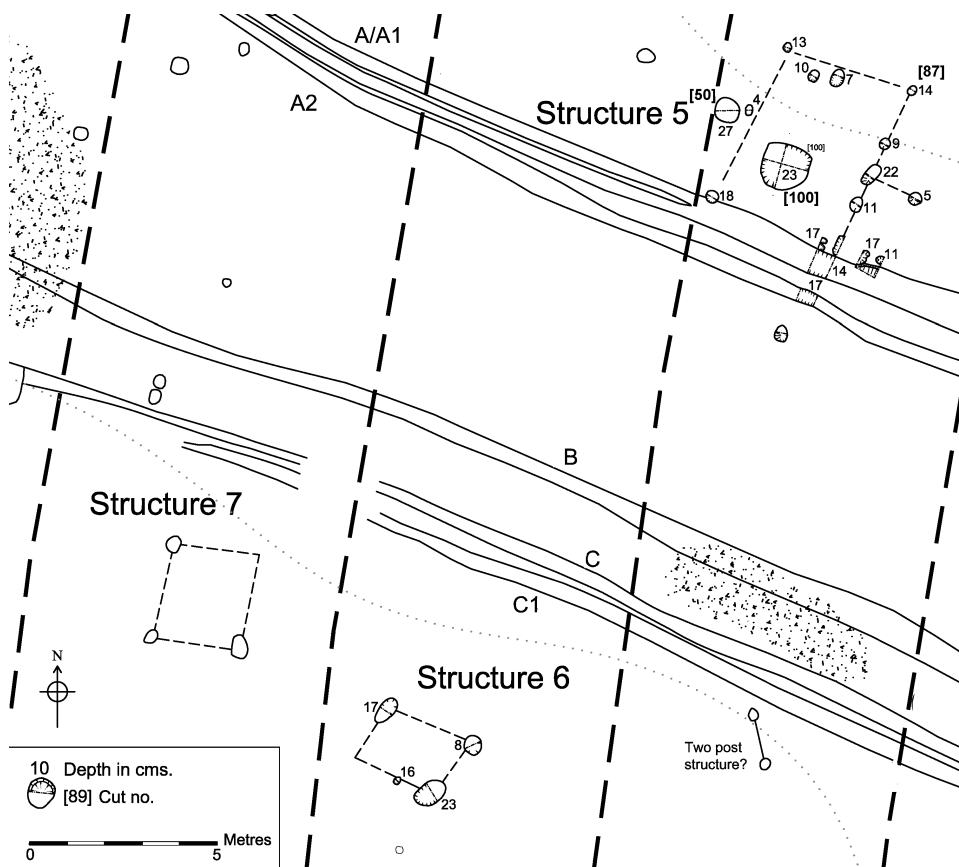


Fig. 7. Structures 5, 6 and 7.

from which one abraded sherd of Romano-British pottery and one residual Iron Age rim sherd were recovered.

## THE LITHICS

Lynden Cooper

The lithics were all of local till-derived flint bar the possible whetstone. There is a probable Upper Palaeolithic component in the unstratified material from the north-western area of the site. While there are no diagnostic tools there are technological indications for such in the use of partial edge faceting of the platform. This form of platform preparation did not occur in Mesolithic reduction strategies.

The majority of the stratified material has typological and technological indications to be of a Late Bronze Age date. The tool forms are limited to scrapers and a piercer. The scraper forms include straight-edged and concave varieties,

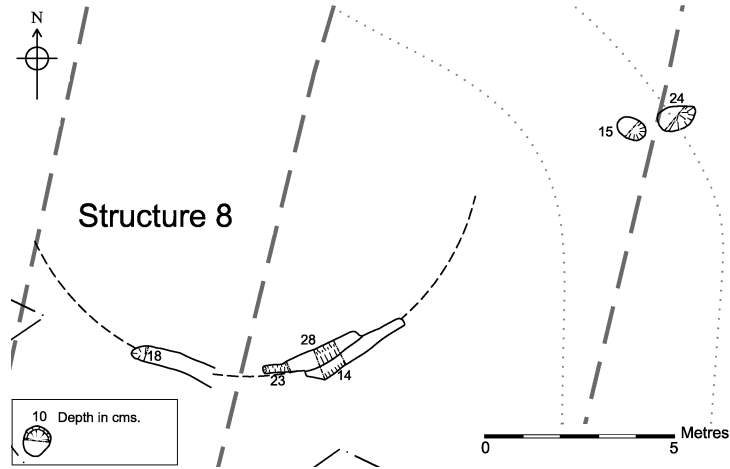


Fig. 8. Structure 8.

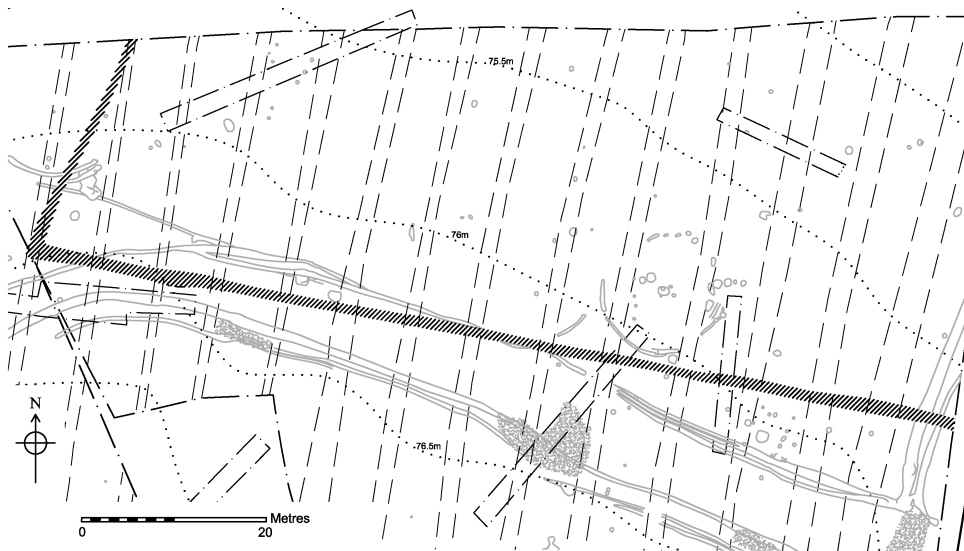


Fig. 9. Ditch F (Romano-British or later).

types that often occur in the Late Bronze Age. The reduction strategies were crude showing limited knapping skills. The flakes were produced with a hard hammer and displayed wide butts, squat and thick with no evidence for platform and core preparation, features well documented for Late Bronze Age lithics (Ford *et al.* 1984). The lack of knapping skills is exemplified by a core from Ditch B where the knapper made 14 deep and unsuccessful blows to the platform. The freshness of the material from the Structure 1 group suggests it was contemporaneous.

Group	Cont	Type	Note
Structure 1	88	Flake	Crude, fresh, incipient cones
	92	Core	Crude and fresh
	4 x flakes	Crude and fresh	
		Burnt shatter	
		Possible whetstone	
	94	2 x flake	Fresh, thick
	96	Flake	Crude
		Flake	
	98		
	113	3 x flakes	Fresh
	114	5 x flakes	Squat, thick, no core front preparation
	152	Utilised flake	Both thick and fresh
		Retouched flake	
Structure 3	153		
	197	3 x flakes	
	201	Flake	
Structure 7	2007	Flake	
Ditch A	33	Flake	
		Retouched flake	
Ditch B	80	Core	Crude and fresh
		Shatter	
		Chip	
		5 x flakes	
	192	Core	14 incipient cones on platform
	2016	Flake	
Ditch C	76	2 x flakes	All squat and thick
		Concave scraper	
		Utilised flake	
Ditch E	13	2 x flakes	
	105	Flake	
		Retouched flake	
	169	1 shatter	
		Flake	Good core front preparation
	177	Piercer	On thick support
		Core	
		Flake	Patinated
Ditch E	177	Core (on flake)	
		3 x flakes	
		Burnt shatter	
		5 x shatter	
Ditch F	166	1 flake	Crude, thick
Pit 156	157	2 x flakes	
Pit 174	175	2 x flakes	
Pit 187	186		
	187	Flake	
Pit 2002	2002	Flake	Calcined
U/S		Concave scraper	Faceted butt
		3 x cores	Exhausted
		5 x flakes	
		Retouched flake	
		5 x bladelets	

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Group	Cont	Type	Note
U/S NW	Blade core	Partial platform edge faceting	
	(single platform)		
	Blade core	Partial platform edge faceting	
	(opposed platform)		
	Scraper	Patinated	
	(end of blade)		
	Flake	Blade scars	
	Flake frag.		
	Flake frag.	Burnt	
	Flake frag.	Faceted butt	
	Chip		
	Core	Crude	
	4 x flakes		
	2 x flakes	Burnt	
	Thumbnail scraper		Non-fancy, NB spur
Bladelet core		Partial platform edge faceting	
Blade			
Utilised blade			
Scraper (Side)		Straight retouch on reused blank	
Concave scraper			

U/S=Unstratified

Table 1. Lithics.

## PREHISTORIC AND ROMAN POTTERY

Nicholas J. Cooper

### Prehistoric Pottery

#### ASSEMBLAGE SUMMARY

An assemblage of 241 sherds of later prehistoric pottery weighing 0.990kg was recovered. The low average sherd weight of 4g, confirms the highly fragmented and generally abraded visual appearance of the assemblage, with shell inclusions invariably being leached from the individual sherds. Very few rims are represented and, in terms of fabric, the assemblage is very variable with few examples adhering closely to the established fabric series, developed mainly during the examination of Middle and Late Iron Age material from the nearby sites at Wanlip and Humberstone (Marsden 1998; 2000). The possibility of a Late Bronze Age or Early Iron Age date for the assemblage is, however, supported by a series of radiocarbon dates indicating occupation between 8th and 5th centuries BC (below p.64) . Two of these dates derive from contexts associated with Structures 1 (110) and 3 (181), both of which also contained pottery. Across the site pottery derived from the ditch system, and Structures 1, 3, 5 and 7 with a proportion from ungrouped contexts (Table 2).



Group	Sherds	Weight
Ditches A-E	63	242
Structure 1	63	254
Structure 3	26	200
Structure 5	8	7
Structure 7	12	14
Isolated Pits	69	273
<b>Total</b>	<b>241</b>	<b>990</b>

Table 2. Pottery from the site.

#### METHODOLOGY

The Iron Age material has been analysed by form and fabric using the Leicestershire County Museums prehistoric pottery fabric series, with reference to the Prehistoric Ceramic Research Groups Guidelines (PCRG 1992), and quantified by sherd count/weight.

#### ANALYSIS BY FABRIC AND FORM

Table 3 summarises the occurrence of individual fabrics across the assemblage. For convenience the currently published fabric descriptions for later prehistoric pottery from the county are summarised below for comparison.

#### Q1 SANDY WARE

Moderate to very common sub-rounded or rounded quartz (well to moderately sorted, up to 1mm) and sparse-moderate angular quartz.

#### R1 (FORMERLY RQ1) IGNEOUS ROCK INCLUSIONS (GRANODIORITE)

Sparse to very common sub-angular igneous rock fragments (poorly sorted, most up to 5mm).

Fabric Summary			
Fabric	% sherds	Sherds	Weight
S1 Shell	40	97	491
S1 Fine shell	5	11	50
S2 shell/sand	<1	1	4
R1 granite	2	4	32
Q1/R1 sand/granite	8	19	58
G grog	17	40	172
G/Q1grog/sand	2	6	28
G/S1grog/shell	4	9	28
G/S2grog/sh/sand	22	54	127
<b>Total</b>	<b>100</b>	<b>241</b>	<b>990</b>

Table 3. Prehistoric pottery fabrics.

### S1 SHELL TEMPERED

Moderate to very common, well to poorly sorted fossil marine shell up to 8mm. Little or no sand content; soapy feel.

### S2 FOSSIL SHELL-TEMPERED WITH SAND

Similar to S1, but with quartz sand.

### G GROG-TEMPERED WARE

Rare-sparse sub-rounded grog (well-moderately sorted, 1–5mm), rare quartz sand and rare acid igneous rock fragments.

The fabrics here contrast markedly with those of the nearby sites of Middle and Later Iron Age date both in terms of the uniformity of inclusion type and the dominance of particular inclusion types. In addition there are no occurrences of scored decoration. Assemblages of Middle and Later Iron Age sites in this part of the county would normally be dominated by the use of mineral inclusions such as quartz and granite (fabrics Q1, Q2 and R1) and use of shell is marginal (Marsden 1998, 46, Table 4 and 2000, 172). By contrast, in this assemblage, 46% of the pottery employs shell as the dominant inclusion (fabrics S1 and S2) and it occurs as a minor inclusion in a further 26%. Only about 10% employs only mineral inclusions and a further 17%, only grog. Significantly 22% contains a combination of grog, shell and sand (G/S2) including the three sherds from contexts used for radiocarbon dating discussed above. This mixed fabric occurs across the site in Ditch A/A1 (34 and 35), Ditch B (192, 2016), Ditch E (169), and in Structures 1, 3 and 7 and residually in Ditch F (166), which also produced an abraded Roman sherd.

It might be tentatively argued that all bar ditch F are broadly contemporary with that Late Bronze Age/Early Iron Age dating. Two rims occur in the fabric, an upright or direct flat one residually from Ditch F (166) and an unfamiliar upright form with a T-shaped flattened lip from ditch E (169), which also occurs in a predominantly shell-tempered fabric (virtually indistinguishable), from the same context and is paralleled within the assemblage from Gretton, Northamptonshire (Jackson and Knight 1985, Fig. 6, 12). The only other rim is another flattened upright form from Structure 5 (57) in a shell-tempered fabric. Fabrics of purely mineral composition are largely confined to Structure 5 but also occur in Structure 1 and some pit groups. Base and lower body sherds in the grog-tempered fabric (Fig. 10, 2) came exclusively from Pit [174] between Structures 3 and 4 and may compare with an example of an ovoid jar also from Gretton (Jackson and Knight, 1985, Fig. 6, 16) although similar sherds also containing shell came from Structure 1 (92) and a pit [187] cut by ditch A2. The latter example is from a thin-walled round shouldered bowl again similar to examples from Gretton (Jackson and Knight, 1985, Fig. 7, 42; Fig. 8, 64). Pit [174] produced the only sherd of granitic fabric R1 which is commonly associated with scored ware in Middle and Late Iron Age assemblages.

The substantial assemblage of Early Iron Age pottery from Gretton, Northamptonshire (Jackson and Knight, 1985, 75–82), with which elements of this assemblage clearly find parallel, was also dominated by shell and grog based fabrics.

### Discussion

Importantly, within the limits of current understanding in the county and without the series of radiocarbon dates, this assemblage would be difficult to place chronologically. Indeed, prior to the radiocarbon dates becoming available, and had it not been for the occurrence of unfamiliar T-shaped rim forms, this assemblage would have been assumed to be very late pre-Roman Iron Age or transitional mid first century AD in date, judging by the proportion of shell and grog-tempered fabrics.

In contrast, grog temper did not feature in a recently excavated assemblage of Late Bronze Age date from Rearsby (Marsden 2008, 56) in which fabrics were quartz and granodiorite based. A single radio-carbon date from a pit containing Post Deverel-Rimbury pottery calibrated to 1130BC-910BC (Wk-20444; 2848±36) (Beamish and Clark 2008, 57).

### ROMAN POTTERY

Only one stratified sherd was recovered, the abraded rim of an oxidised ware jar. An Iron Age vessel rim came from the same context.

A6 2000 and A14 2002 Hamilton North Roman Pot

Group	Accession	Context	Cut	Fabric	Sherds	Weight
Ditch F	A14. 2002	166	168	OW	1 4	
Unstratified	A6.2000	GW	1	16		
Total		2	20			

Table. 4. Roman pottery.

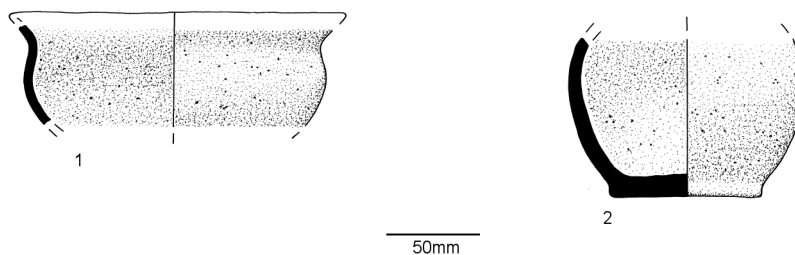


Fig. 10. Prehistoric Pottery. Scale 1:4.  
 1. Round shouldered bowl, Fabric G/S1, 187.  
 2. Ovoid jar, Fabric G, 175.

## CHARRED PLANT REMAINS

Angela Monckton

### Introduction

Samples were taken from deposits with potential to contain charred plant remains in order to recover evidence of crops and cultivation, and possibly give information about activities on the sites. Prehistoric pits and gullies were sampled and it was hoped that the investigation of these samples would provide the opportunity to add to our knowledge of agriculture in the region.

### Methods

Samples amounted to seven bulk samples from pits and gullies which were wet sieved in a York tank using a 0.5mm mesh with flotation into a 0.5mm mesh sieve. The residues were air dried and the fraction over 4mm sorted for all finds which are included in the relevant sections of this report. The fraction below 4mm was reserved for sorting during the analysis stage if required. The flotation fraction (flot) was air dried and packed carefully in self-seal polythene bags.

The flots were sorted at x10 magnification with a stereo-microscope. The plant remains were then identified by comparison with modern reference material, counted and recorded (Table 5). The plant names follow Stace (1991) and the cereals Zohary and Hopf (1993) and are seeds in the broad sense unless stated.

### Results

#### THE PLANT REMAINS

##### *Structure 1*

One post hole and an internal pit were sampled and produced only single numbers of charred seeds including fat-hen and large grass with occasional cereal fragments. A sample of charcoal was collected from a third post hole and was submitted for radiocarbon dating (below p.63).

##### *Structure 3*

A sample from a gully segment produced two charred barley grains, a glume of emmer or spelt chaff and a seed of large grass. Charcoal was submitted for radiocarbon dating (below p.63).

##### *Pits 31, 50, 156 and 174*

Samples from each of these pits contained single numbers of remains. The samples from pits 31 and 50 contained only an indeterminate cereal fragment each; pit 156 contained a barley grain and a seed of brome grass; pit 174 contained a spelt glume, two hulled barley grains and a seed of brome grass.

Structure		1	1	3	-	-	-	
Feature type	PH	PH	Gu	Pit	Pit	Pit	Pit	
Cut number	115	173	180	50	156	174	31	
Context	114	172	181	49	157	175	132	
Sample	3	6	9	2	4	8	1	
GRAINS								
<i>Triticum</i> sp.	-	-	-	-	-	1cf	-	Wheat
<i>Hordeum</i> sp. Hulled	-	-	-	-	-	2	-	Barley
<i>Hordeum vulgare</i> L.	-	-	2	-	1	-	-	Barley
Cereal indet.	1	-	2	1	1	1	-	Cereal
Cereal/Poaceae	-	-	-	-	-	-	1	Cereal/Grass
CHAFF								
<i>Triticum spelta</i> L. glume	-	-	-	-	-	1	-	Spelt
<i>T. dicoccum/spelta</i> glume	-	-	1	-	-	-	-	Spelt/Emmer
<i>T. dicoccum/spelta</i> rachis	-	-	-	1	-	-	-	Spelt/Emmer
Cereal indet. rachis frag.	-	1	-	-	-	-	-	Cereal
WILD PLANTS								
<i>Chenopodium album</i> type 1	1	-	-	-	-	-	-	Fat-hen
<i>Chenopodium</i> sp.	1	-	-	-	-	-	-	Goosefoot
<i>Bromus</i> sp.	-	-	-	-	1	2	-	Brome grass
Poaceae large	1	-	1	-	-	2	-	Grasses
Indetermined seeds	-	-	-	2	-	-	-	Seeds
OTHER								
Culm fragments small	-	-	-	-	-	+	-	Grass stem
Tiller bases small	-	-	-	-	-	-	3	Grass roots
Charred fragments	+	-	-	+	-	-	-	Fragments
Charcoal	+	+	+	++	+	+	++	Charcoal
TOTAL	4	1	6	2	3	9	4	Items
Vol sample	18	16	15	19	17	18	7	Litres
Vol flot	12	7	19	75	10	35	35	mls (all sorted)
Items/litre	0.2	0.1	0.4	0.1	0.2	0.5	0.6	Items/litre

Key. + = present, ++ = abundant. Gu = gully, PH = post-hole, glume = glume base. Sample 6 site A13.2000 context 1006 not tabulated, 6 items only in the sample. Remains are seeds in the broad sense unless described otherwise.

Table 5. Charred plant remains.

## Discussion

The prehistoric features of Late Bronze to Early Iron Age date produced small numbers of charred cereal remains including spelt and barley with a few weed seeds. These show only food preparation and consumption of the cereals on the site. Spelt has also been found in a Bronze Age context at Lockington, Leicester (Monckton 2004).

The density of remains was at the lower end of sites examined in the county with a maximum density of 0.6 items per litre of soil, and may suggest an emphasis on a pastoral economy (Monckton 2004), although remains are often sparse in prehistoric contexts and few sites of this date have been investigated

## THE ANIMAL BONE

Jennifer Browning

A total of 1460 bone fragments was recovered, although only 11% of these were retrieved by hand, while 89% were recovered during sieving of the bulk environmental samples. All of the bone was scanned and where possible identified to species.

## Results

As most of the fragments were only a few millimetres in size and not diagnostic 96% was attributed to 'unidentified mammal'. Almost all have been burnt at a high temperature and 92% are calcined. Calcination typically occurs at temperatures above 700°C, destroying the organic content of the bone and often consolidating the mineral component (Gilchrist and Mytum, 1986, 30). The resulting bone is white in colour and characterised by shrinkage, warping and fragmentation: factors which greatly inhibit identification. The remains of cattle and sheep/goat were recognised in the assemblage but no human remains were identified, indicating that the bones do not represent human cremation burials.

Group	Context	Cut	No frags	Taxa present	Burnt?
Structure 1	88	89	6	6 × cattle – prob same tooth,	not burnt
Structure 1	92	93	10	3 × sheep-size, 1 × cattle-size	mixed; mostly calcined, a few unburnt fragments
Structure 1	111	112	12	None identified	Calcined
Structure 1	113	115	13	None identified	Calcined
Structure 1	114	115	747	2 × cattle, 2 × s/g, 10 × sheep-size	Mostly small, calcined fragments, a few charred black
Structure 1	147	146	27	None identified	not burnt
Structure 1	94	95	10	4 × cattle-size	not burnt
Structure 3	181	180	521	2 × s/g, 1 × sheep-size,	Calcined
Structure 5	46	47	3	None identified	not burnt
Structure 5	49	50	21	None identified	Calcined
Structure 5	102	100	10	None identified	Calcined
Ditch B	80	81	3	None identified	Calcined
Ditch E	169	170	1	1 × s/g molar	not burnt
Ditch F	166	168	3	3 × cattle-size	not burnt
Pit 156	157	156	3	None identified	Calcined
Pit 174	175	174	60	5 × cattle (teeth)	Mixed
Pit 19	20	19	10	2 × sheep-size, 1 × cattle-size	mostly calcined, a few unburnt fragments
<b>Total</b>	<b>1460</b>				

Table 6. Animal bone.

The largest number of fragments, 825, was recovered from features belonging to Structure 1. Structures 3 and 5 yielded 521 and 34 fragments respectively. Only seven fragments were recovered from the ditch system and 73 were assigned to isolated pits.

Unburnt bone only was recovered from four post holes, two of Structure 1 and two of Structure 5, and also from ditches E and F. It seems likely that the particular soil conditions were not conducive to bone preservation as only tooth fragments, which generally survive better due to the less porous nature of tooth enamel, were identifiable. Both sheep and cattle teeth were retrieved.

Calcined bone only was recovered from a pit internal to Structure 1 (112), two pits associated with Structure 5 (50 and 100), a structural groove of Structure 3, ditch B and pit 156.

Some samples contained a mixture of charred, calcined and unburnt fragments: pit 19, pit 174 and two features associated with Structure 1; 93 and 115.

### Comments

Poor preservation of bone is indicated by the lack of identifiable bone in the hand-recovered assemblage and paucity of small boned species in the samples. The assemblage is dominated by burnt bone and tooth enamel fragments, both of which are less porous and therefore can survive better than unburnt bone. It was possible to identify a small proportion of the bone as sheep/goat and cattle, indicating the exploitation of domestic species. The particular concentration of bone in Structures 1 and 3 is interesting, as is the fact that several deposits contain a mixture of burnt and unburnt material. The assemblage may represent sweepings from cooking fires, which had been incorporated with other material before final deposition in the post holes and gullies. The structures yielded far more bone than the ditches, which perhaps suggest a disposal pattern at the centre of settlement rather than at the edges, or the burning of material here rather than at the periphery. The deposition of burnt remains in a structure's postholes and gullies may have had a ritual purpose or may simply reflect the focus of activity within the settlement.

### CHARCOAL

Graham C. Morgan

Oak is by far the most common species present and seems to be mainly large twigs and small branches rather than mature trees. The remainder are typical hedgerow trees but many show very slow growth patterns, perhaps from a drier area.

Group	Sample, Context, Cut	Species	Dia (mm)	Rings present	Age est	Comments
Pit 31	[1] <sub>1</sub> (32) 3	Field Maple Hazel Blackthorn Oak	fragments fragments fragments fragments			
Pit 156	[4] <sub>1</sub> (157) 156	Oak Field Maple Hazel  Oak	25 fragments fragments fragments	20	30	fragments  very slow grown slow and fast grown
	[7] <sub>1</sub> (158) 156	Oak Oak	fragments fragments			
Pit 174	[8] <sub>1</sub> (175) 174	Oak Oak	fragments 30	4	10	
Structure 1	[3] <sub>1</sub> (114) 115	Oak Rowan type Oak Rowan type	30 20 15 10	10 15 5 10	15 30 8 10	slow
	[5] (110)	Rowan type Oak	20 fragments	30	50	very slow
	[6] <sub>1</sub> (172) 173	Oak Oak	fragments fragments			
Structure 3	[9] <sub>1</sub> (181) 180	Hawthorn type Oak Rowan type Rowan type Oak Blackthorn Poplar type	 fragments 25 25 25 25 30	10  10 12 20 6 8	8  20 20 20 10 10	10  very slow slow
Structure 5	[2] <sub>1</sub> (49) 50	Oak Oak	Oak 40	25+ 12	10 15	15+

## Species present

Oak	Quercus species
Rowan type	Sorbus species
Field Maple	Acer campestre
Hazel	Corylus avellana or possibly Alder – Alnus species
Hawthorn type	Crataegus species type
Blackthorn	Prunus spinosa
Poplar	Populus species or Willow – Salix species

## RADIOCARBON DATING

Alan Hogg, Matthew Beamish

Four samples of charcoal recovered from environmental bulk soil samples were submitted for radiocarbon dating at the University of Waikato, New Zealand. Two samples came from Structure 1, comprising Oak charcoal from the northern



entrance post pit, and also from the central pit. Two samples of Hawthorn type charcoal were submitted from the eastern end of the gully or wall slot of Structure 3.

### Pre-treatment

Physical Pretreatment: Single pieces of charcoal were selected for dating. Possible contaminants were removed. Samples were washed in an ultrasonic bath.

Chemical Pretreatment: Samples washed in hot 10% HCl, rinsed and treated with hot 1% NaOH. The NaOH insoluble fraction was treated with hot 10% HCl, filtered, rinsed and dried.

### Results

The dates were then calibrated using Oxcal v3.10.

Date	Group	Reference	68.2% probability	95.4% probability
<i>Wk15080</i> : <b>2463±38BP</b>	Structure 1 Posthole <i>Oak</i>	110 Sample 5	760BC (23.3%) 670BC (15.0%) 600BC (27.4%) 440BC ( 2.4%)	680BC 760BC (25.6%) 610BC 670BC (69.8%) 500BC 420BC
<i>Wk15081</i> : <b>2510±38BP</b>	Structure 1 Posthole <i>Oak</i>	172 Sample 6	770BC (13.4%) 690BC (11.4%) 650BC (43.3%)	730BC 800BC (95.4%) 500BC 660BC 540BC
<i>Wk15082</i> : <b>2406±37BP</b>	Structure 3 Gully <i>hawthorn type</i>	181 Sample 9.1	540BC (68.2%) 670BC ( 3.7%) 590BC (77.8%)	400BC 750BC (13.9%) 680BC 390BC
<i>Wk15083</i> : <b>2471±38BP</b>	 Sample 9.2 <i>hawthorn type</i>	 Sample 9.2	760BC (23.6%) 670BC (18.6%) 600BC (26.0%)	680BC 770BC (95.4%) 410BC 610BC 510BC

References – Atmospheric data from Reimer et al (2004); OxCal v3.10 Bronk Ramsey (2005); cub r:5 sd:12 prob usp[chron]

Table 7. Calibrated radiocarbon dates.

The dates from the Structure 1 pit and post hole are statistically equivalent and could be of the same age ( $df=1$   $T=0.8(5\%3.8)$ ). The dates from the Structure 3 gully context are also statistically equivalent, and could be of the same age ( $df=1$   $T=1.5(5\%3.8)$ ). The dates indicate a possible range of occupation between the 8th and 5th centuries BC.

### Discussion

Evidence of occupation is dated demonstrably to the Late Bronze Age to Early Iron Age, with clear evidence of enclosure in the Romano-British period or later.

Early Iron Age occupation in the region is relatively rare, and found most commonly as a precursor to Middle Iron Age or later activity (Cooper 2000, 48) with the character and extent of occupation difficult to unravel as it is usually

Atmospheric data from Reimer et al (2004) ; OxCal v3.10 Bronk Ramsey (2005) ; cub r5 sd:12 prob usp[chron]

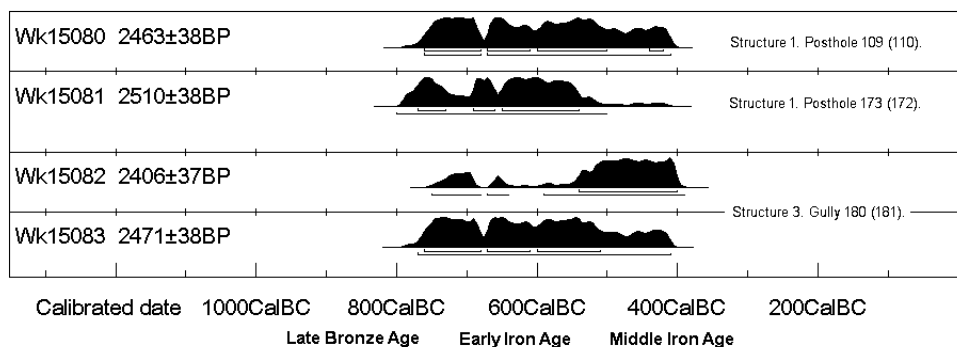


Fig. 11. Radiocarbon graph.

truncated and complicated by later activity. The discovery and recording of sites of apparently relatively short lived duration from this period, as in this instance, is a rare phenomenon. This rarity may well be more a reflection of the location of such sites (for instance on lower valley sides rather than the terraces), the lack of enclosure ditches to form identifiable crop marks, and the ephemeral nature of settlement.

#### THE STRUCTURES

The remains of several structures were recorded to north and south of the ditch system, including one definite and three further possible round houses. All these structures were evidenced by structural slots on their southern sides, possibly a result of deeper foundations for the walls on the upslope side of the buildings. The irregular form of the clear round house is of interest as it contrasts with the better defined ground plans of other similarly sized structures from both earlier and later periods (e.g. Middle Bronze Age, Beamish 2005, 8, Late Iron Age, Meek *et al.* 2004, 4). The recorded slots do appear to have been structural and to have held the bases of walls, and were not ditches to drain or demarcate the structure. As such, the walls of the structure appear to have been formed from a series of straight sections (cf Beamish 1998, 31). Although a post ring typical of Bronze Age roundhouses was not present, scrutiny of the layout suggests that some pattern was adhered in the construction, and that the structure appears to have been rebuilt once, with a slight shift to the east (Fig. 12).

Paired entrance post holes ([109], [161], [93] and [97]) indicate a rectangular porch 3.60m wide externally, 2m internally, and 1.9m long. The largest internal pit [173] was effectively central to a circle forming a best fit with these entrance post holes, the earlier surviving slot in the south and the slot in the west.

The entrance post holes are interpreted as being recut 0.80m to the east on the basis of post holes [95], [91] and [89]. This slight shift is also reflected in the centre of the structure, where the centre of the irregular four post cluster was 0.50m to the east of the original centre.

The paired internal pits, one containing particularly numerous fragments of calcined bone are of interest. The function of these pits has not been established; it is feasible that they were originally used as post-holes rather than pits *per se*. In disuse, however, the smaller feature at least has been backfilled, and relatively substantial quantities of calcined bone along with other occupation related material included in the backfilling. A parallel for such a deposit has not been found. Finds character and distribution within Late Bronze Age/Early Iron Age roundhouses from Southern England has been recently re-interpreted as evidence of intentional deposition marking the end of a building's use (Webley 2007, 140). The paired pits may have had functions for food preparation toward the centre of the building. However the dense mixed calcined bone layer is interpreted as intentional deposition.

The line of possible post-holes on the west side of the round house may possibly reflect an internal partition. The broad trend of front/back division of space has resulted from a recent comprehensive study of round houses across Britain, at the same time exposing the significant variability both across time and space in the organisation and use of these buildings (Pope 2007, 223).

The other structures represented are more difficult to interpret as they are incomplete. However other circular or part circular buildings were present, and probably also four post structures, the latter now an equally established element of later prehistoric settlement, interpreted as raised stores (Gent 1983, 245–51).

The Roman (or later) ditched enclosure provides evidence of the area being farmed again in the historic period and may be associated with the Roman settlement examined 1.4km to the west (Fig. 16, B; Clay and Shore 2004).

#### PARALLELS

Late Bronze Age and Early Iron Age settlements have been excavated within the county at Melton Mowbray (Finn 1998), Kirby Muxloe (Cooper 1994) and Rearsby (Beamish and Clarke 2008); see Clay 2001, for a fuller review. A Bronze Age enclosure was recorded at Humberstone, preceding the Iron Age occupation (Fig. 16, 567; Charles *et al.* 2000). A Late Bronze Age pottery scatter has been recorded on the opposite side of the Melton Brook to the Hamilton site (Fig. 16, MLE493).

More similar examples of Early Iron Age settlements in the immediate proximity of a ditch system have been recorded at Gretton, Northamptonshire, where the remains of post built structures including four posters and an oval post ring were recorded 20 to 30m to the east of a substantial double ditch (Jackson and Knight 1985, 69–70). Consistently parallel double ditches, some 5.5m apart, each 2m wide and over 1m deep, were traced for some 600m and crossed a plateau of Lincolnshire Limestone.

At Weekley Hall Wood, Northamptonshire, more extensive remains again comprising four posters, and post built circular or part circular structures extended over an area up to 40m wide on the west side of paired ditches, again on Lincolnshire limestone (Jackson 1976, 78). In this instance the ditches were not as substantial as the Gretton examples, but enclosed an interpreted road or driveway

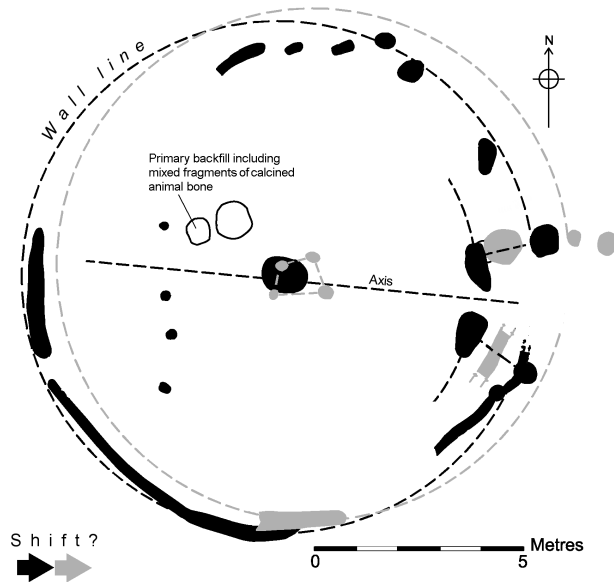


Fig. 12. Suggested rebuilding of Structure 1.

7m in width. Where detailed examination was possible of the ditches on the western side, at least two recutting episodes were recorded.

A further similar ground plan was recorded at Tallington, Lincolnshire (Taylor 1996, Fig. 6.13) where the slightly convergent ditches of a track way of Late Bronze or Early Iron Age date ran to west and east of an extensive pit alignment. A post built roundhouse was found just to the north of the ditched track way, and both house and track predated a rectangular enclosure (Taylor 1996, 123–125).

#### LINEAR BOUNDARIES

The similarity between these sites is clear, i.e. settlement of Late Bronze or Early Iron Age date in the immediate vicinity of parallel ditches, although an explicit similarity between the ditches at Hamilton, and a double ditch system (e.g. at Gretton) is difficult to make on the available evidence. The Hamilton ditches are shallow and on the lower valley side following the contour. Willis' tacit consensus of double and triple ditch systems, which often cut across the topography, is that they are significant boundaries (Willis 2006, 121), serving also to form the basis of land divisions (Boutwood 1998,32), and indeed these features can develop monumental proportions. The Hamilton ditches are in total contrast in both scale and topographic context.

The site is unenclosed, although the ditch system effectively partitions the site. The ditch system, although truncated and in places only just surviving, was visually dominant in plan, and is interpreted as the most important component of the site. On-site interpretation of the system was that of a droveway and indeed this interpretation persisted until the mechanics of any supposed droving were questioned, and the system was viewed in its immediate and wider topography.

Such doubts in the function of the system led to an interpretative vacuum, and the need for a subsequent careful re-assessment of the archaeology and its meaning. The significant elements of the system are as follows:

- i. The western end of the system is a terminal and is open to the south-west
- ii. The western end of the system is flared and also includes a bottle neck with the enclosed area between ditches A3 and B, narrowing from 5.7m to 2.9m before widening again to some 7m.
- iii. The western end of the system incorporates a distinct curve that creates a kink of some 47° in the line of the system
- iv. It is probable that the eastern end of the system is also a terminal, and if not, at least incorporates a sharp change in direction

Consideration of the recutting evidence led to the following:

- v. The northernmost ditch is clearly redefined several times, but is recut mostly on the same line, leading to obliteration of earlier sub-phases
- vi. The southernmost ditches (C and D) which although themselves recut (as C1, D1) appear to respect their neighbour (B) leaving a space between the ditches that is rarely encroached upon. In the south-west this is of notable consistency.
- vii. Where surviving, three of the thin pebble surfaces recorded are fully or partly between these southern ditches.
- viii. On the south side of the system opposite Structure 1, ditches B, C and D visibly bulge to the south by between 1 and 2 metres. There is additionally a clear break between ditches C/C1 and D/D1 on the southern side that is adjacent to an area of surviving pebble surface, and is thus not easily explained by either plough truncation or the over machining of an evaluation trench.

#### DATING:

The Hamilton ditch system is dated by pottery from the ditches, association with the radiocarbon dated structures, and also by a stratigraphic relationship with pit 187, which cut an early phase ditch, and was cut by the final phase ditch. This pit contained the fine walled sherds of a round shouldered jar (Fig. 10, 1) that are consistent with an Early Iron Age (if not Late Bronze Age) date. The system is cut by a ditch which is of Roman or later date. The ditch system does appear to relate to the structures on its north side – it seems unlikely that remains of one circular structure, and the part remains of two others in similar relative positions to the ditch system are chronologically disparate.

The transitional period from Bronze to Iron Ages is currently held as 800–450 cal BC (Willis 2006, 97), and the radiocarbon dating has indicated that occupation occurred between the 8th and 5th Centuries BC. The pottery evidence suggests an Early Iron Age date, while the lithics could be of Late Bronze Age date. On the assumption that the site had a duration of perhaps a century, occupation in the 8th or 7th Century BC is interpreted.

## LIVESTOCK MANAGEMENT

*Droeways?*

The system occupies the north-facing slope of a stream valley which is not an obvious location for a trackway, but is not at risk of flooding and need not be dismissed. Consideration of the micro-topography, however, demonstrates that there are slight variations in the slopes in this part of the valley side, and any such track would have either wandered up and down the valley side to have maintained any consistency in level, or undulated gradually up and down over the various dry gullies that dissect the valley side. However the very need for a droving track to be enclosed and prescribed in such a manner is questioned (cf Hindle 1993, 72). Firstly, our terminology needs improvement. The National Monuments Record Thesauri (English Heritage 2008) defines a drove road (to be used for droveway) as ‘A road or track specifically used by drovers or herders to drive their animals to market.’ Such a definition, a product of the historic development of droving, specifically the long distance movement of livestock on the hoof over hundreds of miles on established routes from peripheral pasture to urban centres of consumption that proliferated in the 18th and 19th centuries (Hindle 1993, 72), is not particularly useful in the discussion of prehistoric livestock control. The provision of enclosed tracks to facilitate the movement of animals between perhaps upland and lowland grazing areas on a small scale, or from pasture to even a very local market would have required substantial investment in infrastructure and was surely only functionally necessary where routes passed immediately adjacent to settlements, gardens or arable areas at certain times of year; the successful movement of sheep or cattle through open land could have depended upon the skills of the herders rather than confinement by ditches, banks and hedges. Nonetheless, ditched trackways running adjacent to enclosures are common in the archaeological record, and require explanation. Examples from Late Iron Age Yorkshire running between and adjacent to regularly spaced small farmsteads have been interpreted as ‘liminal channels’ (Giles 2007, 241) where the flow of people and their animals could be scrutinised and controlled, the enclosed settlement effectively cocooned from the outside world. The addition of such a social requirement for such structures helps illuminate a picture that otherwise remains unclear. However this analogy comes from a Late Iron Age and probably sedentary settlement pattern in a landscape that had rapidly infilled, and is not easily applicable here.

*Crowding-Alley*

The ditch system is interpreted as a livestock management engine, intentionally using the slight softening in the slope, with evidence of holding enclosures and accommodation to the north and is hereinafter referred to as a *crowding-alley*. The 120m or more long alley was a major construction; with internal banks and hedges, the internal area was still over 400 square metres (not including the funnel), which could have held perhaps 1,000 sheep, or 150 cattle, and would have been awkward to use with many fewer (cf Pryor 1996, 317).

The eastern extent of the alley, and the extent of any holding enclosures are unclear due to the excavation limits, and therefore the scale of any activities being carried out on the site is difficult to assess. Nonetheless it is clear that this was a substantial construction whether extended to the east or not.

The flared ditches at the eastern end appear as a curving funnel into which stock could be driven. Such curved alleys are commonplace amongst modern cattle handlers (Fig. 14; Turner 2004, 1), as contemporary animals are less hesitant when driven along a curving wall or fence as opposed to a straight one. The curved funnel potentially served two functions. The first was to enable animals to be driven into a holding area, and as such the alley could have served as a corral for animals entering from the west. The second function of the curve is also suggested by the clear bottle-neck created between the inner ditches (A and B). This narrowing has been intentionally created, and is interpreted as a processing crush. Here an animal could be restrained for treatment (hoofs, teeth, parasites), processing (such as castration or branding), or slaughtered. The line of sight to such a crush is clearly limited from the east within the alley, whilst it is fully visible from the funnel and the area to the west (13). If this interpretation is correct it may imply that this part of the system was worked in a direction from east to west, although conversely it seems unlikely that the funnel was more for driving animals out rather than driving them in. Therefore perhaps the alley

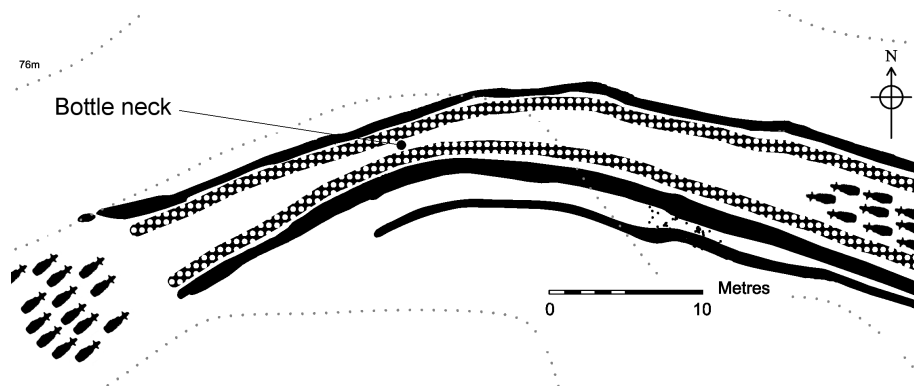


Fig. 13. Interpretation of the funnel with internal banks 0.80m wide, stippled, and earlier features removed, showing the scale, and more limited line of sight of the bottle-neck from the eastern as opposed to the western end.

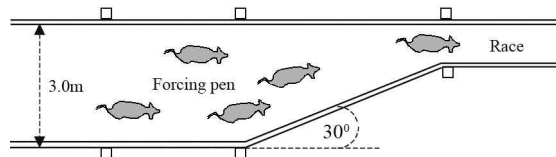


Fig. 14. Example of a modern forcing pen (after Turner, 2004, 3).

performed multiple functions and worked both with animals moving from west to east, and in reverse.

### *Races*

Although the surfacing only survived very poorly, the areas in which the pockets did survive may have significance. The areas chosen to be surfaced will have been those areas that were most heavily trampled (or conversely where the surfacing survived had been most eroded by traffic). Of the four recorded patches, three are either completely or mostly between the ditches B and D/D1 in the west, and B and C/C1 in the east.

If the ditches and gullies are considered to be substantially contemporary (albeit with elements of piecemeal recutting (A/A1, C/C1, D/D1 etc) such as would be necessary to maintain the facility and ensure that drains continued to function) then it is quite feasible that the crowding alley also included a number of working races on the southern side (15). Animal races are designed to force animals into single-file so that they are effectively contained in a narrow corridor (Pryor 1996, 317). At the end of the race there may be also a crush where individual animals can be restrained (either with ropes or planks) for processing. As these single track races become more heavily trampled they will have needed surfacing to prevent becoming quagmires.

It is also apparent that there is a break in the southernmost ditches adjacent to an area of surfacing (C/C1 and D/D1). Although furrowing had caused truncation in this area, it seems unlikely that gullies did not survive the medieval furrow but surfacing did. Therefore, it is argued that the gullies were designed to terminate in this area, and that an exit from one race, an entrance to a second race, and an exit to either grazing or a holding pen are all represented. Preceding the metalling and within a slight widening in the race are two unexcavated post holes. The second race also widens part way down its length, and was also partly metalled.

### **Cattle or Sheep?**

There is insufficient evidence to establish or exclude any species from being funnelled into the ditch system, although the scale of operation appears inordinately large for sheep or goats; the clearer race on the southern side of the system was 1.50m between ditches, but there is no evidence for the width of internal banks. The bottle-neck at the western end was 3m between ditches. Modern adjustable cattle handling alleys can vary between 0.40m to 0.80m, with a head gate crush adjustable between 0.25m and 0.80m. The scale of the alley therefore seems well suited to cattle but could have equally been used for smaller animals with the use of hurdles to narrow specific areas.

### **Landscape and economy**

The sparse quantity of cereals on this site, in common with some other sites from this period (Monckton 2004, 157), may mean that cereal production was not



widely practiced in this area. It may also mean that only part of the period's economy or subsistence is reflected and that the site was used seasonally as a pasturing or processing area and was only occupied for parts of the year. The scale of the crowding-alley is very large – much larger than would be needed by a small holder on today's terms. There is clearly a possibility on the basis of these two premises, that it represents a device that would have been used by groups of farmers working together and not by individual families.

The handling of large herds is attested in later periods where funnels up to 60m wide have been recorded in Nottinghamshire, and south and west Yorkshire (Adrian Chadwick pers. comm.), with specific examples from Collingham, Nottinghamshire (Bishop 2001, 4) and Dunston Heath, Lincolnshire (Boutwood 1998, 44), while the lack of enclosure on Late Bronze Age and Early Iron Age sites within the region, has been interpreted as a possible indicator of transhumance within an unbounded landscape (Knight 2007, 193; cf Taylor 1996). Where further information has been gleaned from bone assemblages and midden sites of Late Bronze Age date in other regions, interpretations of large scale specialist stock handling have also been made (Brück 2007, 32).

Late Bronze Age/Early Iron Age agriculture focussed on pastoralism has for some time been identified in the river valleys of the Lower Welland and Nene to the east and south-east (Taylor 1996, 233). The base of a pastoral economy is argued to require large tracts of cleared land as the dramatic increase in numbers of animals requires more extensive areas of grazing over the winter months. The tending and movement of herds over these large areas would have required an element of the population at least, to be mobile (Taylor 1996, 233). Although evidence of cereal cultivation is emerging from some sites of this period (Monckton 2006, 268) areas of difference perhaps existed.

The Hamilton alley may therefore represent specialist pastoralism occupied on a seasonal basis. It appears to indicate animal management on a large scale and may have resulted from different communities combining their resources. It is possible that this site was used seasonally with stock tending groups having other areas of (equally ephemeral) settlement elsewhere. The excavation, therefore, has revealed important information on animal husbandry practised around 700–500 BC.

### The wider landscape

The site forms a small part of an area of known and emerging Late Bronze Age and Iron Age activity in the hinterland of Leicester (Fig. 16). Archaeological work in the vicinity of the development area since 1998 has located substantial areas of Iron Age settlement 1km to the south west (MLC567, MLC1305 and MLC1434; Charles et al 2000; Thomas 2003).

Comparison with other known Later Bronze Age and Iron Age evidence in the vicinity clarifies some patterning in the record. Late Iron Age settlements at Crown Hills (MLC1223; Chapman 2000), Humberstone (Willis 2006, 101) and crop marks of enclosures in Beeby (MLE451) and Barkby parishes (MLE419) are all

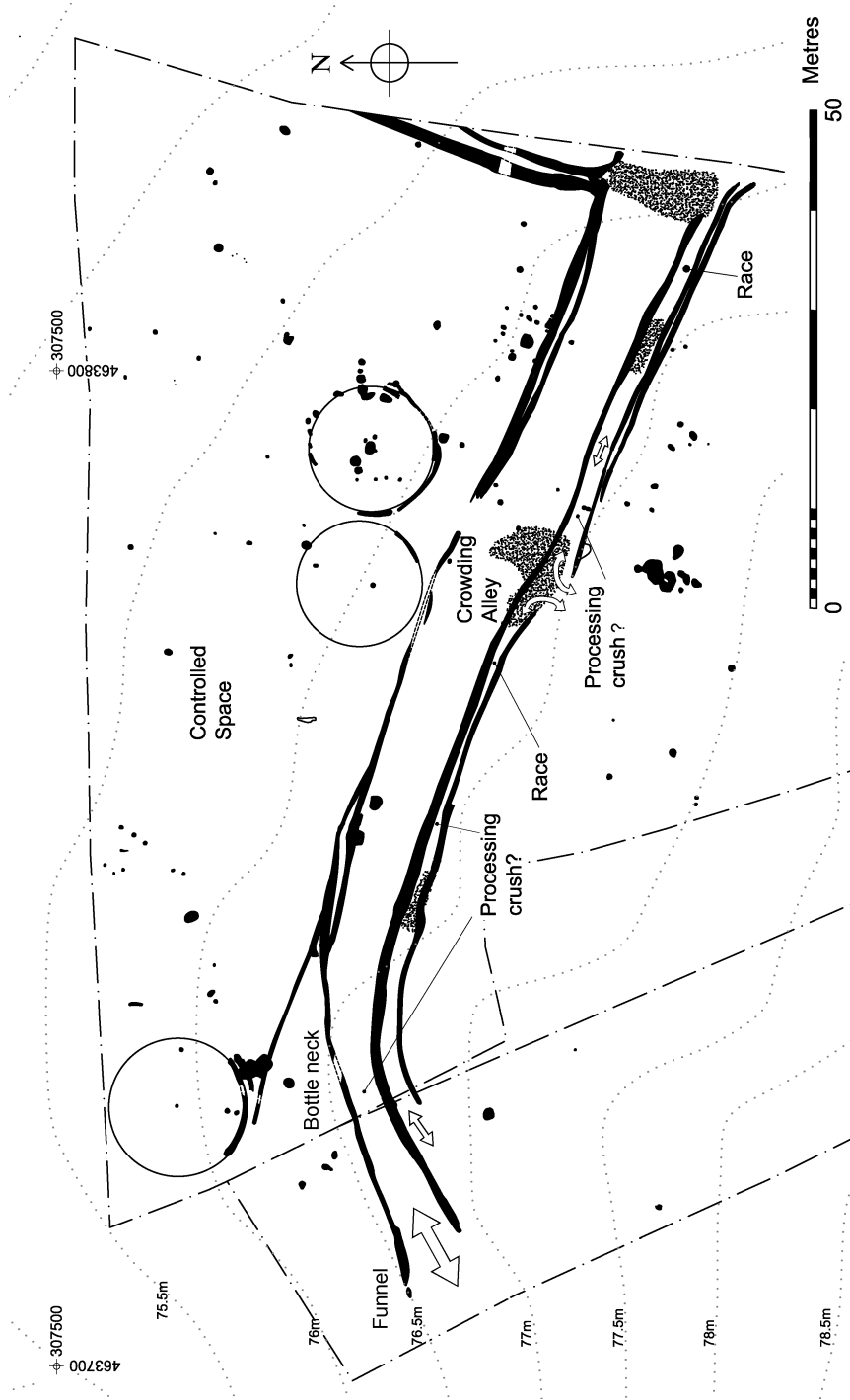


Fig. 15. Interpretation of the Hamilton crowding alley and processing races.

located on the ends of the low parallel ridges that dominate this part of eastern Leicestershire. Along with the development of the probable tribal capital at Leicester on a slight ridge which effectively narrows the valley at this point, further Late Iron Age settlement is probable at Rushey Mead, where a crouched inhumation pit burial was located (Pollard 2001, 20) while circular crop marks (probably from a number of roundhouses) and further incidences of Iron Age finds each side of the river are known from Thurmaston (MLE6549) and Birstall (MLE5919).

Middle Iron Age sites have been recorded on the lower terraces of the Soar at Wanlip (MLE1091; Beamish 1998) but also on the crest of the valley side at Beaumont Leys (MLC1484; Thomas 2007). Earlier sites of Later Bronze Age or Early Iron Age date such as the Hamilton site (MLC662) described here, are suggested on the opposite side of the Melton Brook stream valley (MLE493 and MLE449) where occupation appears just down slope from the crest of the ridge, and on the lower slopes of the ridge above the Soar valley to the west (MLE445), while Late Bronze/Early Iron Age burials came from palaeochannel deposits of the River Soar at Birstall (MLE8438) and Late Bronze Age metalwork (not securely located) from the lower valley side also in Birstall (MLE6280). The location of Late Bronze Age and Early Iron Age occupation on the valley sides, as opposed to valley bottom or top, has some parallels (Parry 2006, 65).

Late Bronze Age occupation within the Wreake valley to the north-east, has been identified at Eye Kettleby, Melton Mowbray (Finn 1998) and more recently at Rearsby (Beamish and Clarke 2008, 44 and this volume, 'Rearsby bypass road scheme'), both examples including evidence of nearby pit alignments. Further stretches of pit alignment have been recorded nearer to Hamilton to the north, on the western edge of Barkby (MLE434 and MLE435).

## CONCLUSIONS

This site provides an important example of rarely located Late Bronze Age to Early Iron Age occupation in the county. The essentially open and somewhat sparse nature of the occupation makes identification difficult, and this is reflected in the known distribution of similar sites.

The site is interpreted as comprising a stock management system adjacent to accommodation areas; the scale of the ditch system is substantial and could have catered for hundreds of cattle. Such a facility is clearly at odds with models of small scale agricultural production, with the implication that there was significant organisation and specialisation in livestock farming at this time, and possibly pastoralism. Such an imbalance is also reflected in the dichotomy between the large scale land divisions that start to be formed in this period, and the known settlement record. The domestic archaeology of the site shows the continued use of the round house, albeit in less formalised and patterned form than existed in earlier and later periods.

The occupation of the site is interpreted as having occurred in the eighth or seventh centuries cal BC, on the basis of radiocarbon dating and the finds.

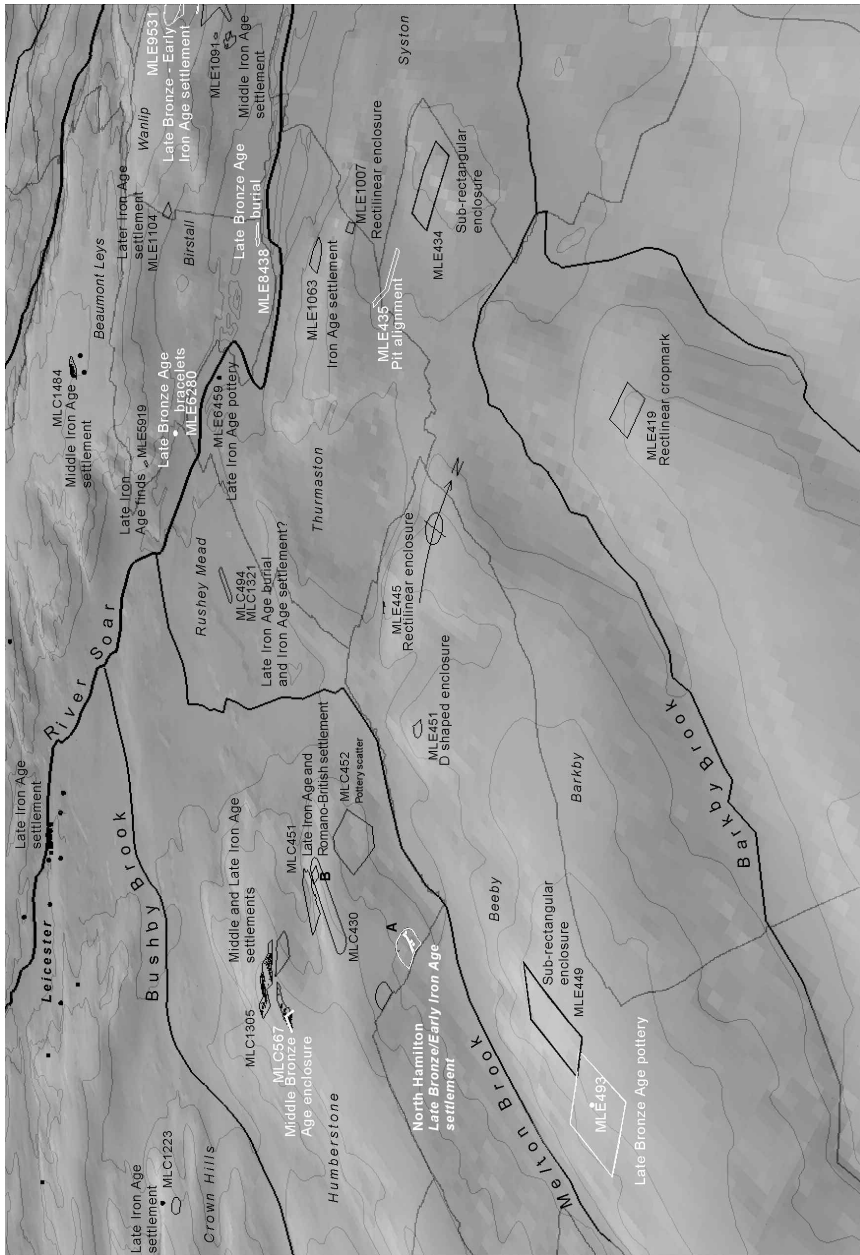


Fig. 16. The North Hamilton site (A) in relation to selected Leicester (MLC) and Leicestershire (MLE) Historic Environment Records from the Middle/Late Bronze Age and Early Iron Age (white) and Middle to Late Iron Age (black) to the north of Leicester, with drainage, contours and parishes.

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