Archaeological excavation at Hawthorn Rise, Tibberton, Worcestershire

Worcestershire Archaeology
Archive and Archaeology Service
The Hive, Sawmill Walk,
The Butts, Worcester
WR1 3PD

Status:	Revision 1: 21 October 2016: Publication report
Date:	4 April 2016
Author:	Pete Lovett plovett@worcestershire.gov.uk
Contributors:	Ian L Baxter, C Jane Evans, Robert Hedge, Derek Hurst and Elizabeth Pearson
Illustrator:	Laura Templeton
Project reference:	P4434
Report reference:	2327
HER reference:	WSM 67195
Oasis id	fieldsec1-227018

Contents

Archaeological excavation at Hawthorn Rise, Tibberton, Worcestershire

Pete Lovett

With contributions by Ian L Baxter, C Jane Evans, Robert Hedge, Derek Hurst and Elizabeth Pearson

Summary

An archaeological excavation was undertaken at Hawthorn Rise, Tibberton, Worcestershire (NGR SO 9037 5779). It was undertaken on behalf of Speller Metcalfe Living Ltd, who intends a residential development for which a planning application will be submitted.

The excavations at Tibberton revealed two large parallel ditches that ran roughly east to west around the slope of the hill. Whilst the full extent of the enclosure was not ascertained, the siting of these large contemporaneous ditches around the breast of a hill suggests a possible promontory fort function, potentially enclosing an area of *c* 1.8-4ha. The pottery recovered from these ditches suggests a Middle Iron Age origin, with closure in the Late Iron Age. This closure was represented by intentional backfilling of the ditches after they had been largely allowed to silt up, and then the placement of a two pots into pits cut into the top of the northern ditch.

The pottery vessel type distribution suggests an ordered closure of the site. Later pits cutting the ditches contained possible conquest-era Severn Valley ware pottery, suggesting a limited amount of activity on the site following the demise of the earlier enclosure. A typical assemblage of domestic animal bone for the period was recovered from the site, although as it was largely from the ditch fills, it may have been skewed in favour of bones from larger species.

This document will be published as a short summary report in Transactions of the Worcestershire Archaeological Society, with a link to the full version online.

Report

1 Background

1.1 Reasons for the project

An archaeological excavation was undertaken at Hawthorn Rise, Tibberton, Worcestershire (NGR SO 9037 5779). It was commissioned by Speller Metcalfe Living Ltd, who intends to construct a residential development for which a planning application will be submitted to Wychavon District Council (WCC Pre Application ref CWR10059).

The excavation followed an earlier field evaluation (One Ten Archaeology 2014). The evaluation demonstrated that significant Iron Age deposits survived (HER ref WSM 57101), the significance of which may be affected by the application. Following assessment of the results of the evaluation, the excavation was commissioned.

The project conforms to a brief prepared by Worcestershire County Council (WCC 2014) and for which a project proposal (including detailed specification) was produced (WA 2015).

The project also conforms to the *Standard and guidance: Archaeological excavation* (CIfA 2014a); *Standards and guidelines for archaeological projects in Worcestershire* (WCC 2010).

The event reference for this project, given by the HER is WSM 67195.

2 Aims

The original aims of the excavation were to further investigate the Late Iron Age activity identified in the evaluation, and determine the presence/absence, date, nature and extent of significant archaeological deposits of other date (WCC 2014, section 4), and to ensure the preservation by record of the threatened remains in order to mitigate the impact of the development on the historic environment.

In particular the project had the potential to address a number of key research areas, as identified by Hurst (WA), in *Middle Bronze Age to Iron Age: a research assessment overview and agenda*, (2011, 101-126), namely how the site occupation and activity relates to both the immediate area and the region, in terms of:

- 3.3.1. Chronology
- 3.3.2. Settlement, landscape and people
- 3.3.3. Material culture
- 3.3.4. Regionality
- 3.3.5. Processes of change

The original aims have been revised in the light of the post-excavation assessment (Lovett and Vaughan 2015). The previous aims and objectives remain valid, but can be refined with the following points, which have been compiled with reference to the relevant sections of the *The archaeology of the West Midlands: a framework for research* (Watt 2011).

- What morphological comparisons can be made to determine the site type?
- How does the site fit into the wider landscape?
- Is it possible to determine a date of, and hence potential causes for, abandonment?
- What can the animal bone assemblage tell us about animal husbandry of the Late Iron Age?
- How much can the pottery assemblage inform us about trade links, with particular reference to the briquetage?

- What evidence is there for similar potential closure deposits elsewhere in the archaeological record?

3 Methods

3.1 Personnel

The project was led by Peter Lovett (BSc (hons.)), who joined Worcestershire Archaeology in 2012 and has been practicing archaeology since 2004, assisted by Jamie Wilkins (BA (hons.)), James Spry (BA (hons.); MA), Jessica Wheeler (BA (hons.)), Andy Walsh (BSc (hons); MSc; ACIfA; FSA Scot), and Richard Bradley (BA (hons); MA; ACIfA). The project manager responsible for the quality of the project was Tom Vaughan (BA (hons.); MA; ACIfA). Illustrations were prepared by Laura Templeton (BA; PG Cert; MCIfA). Elizabeth Pearson (MSc; ACIfA) contributed the environmental report. Jane Evans (BA, MA, MCIfA) and Derek Hurst (BA (hons.); PG Dip) contributed the finds report. Ian L. Baxter contributed the animal bone report. Kate Andrew (Earth Heritage Trust) undertook the stone analysis. Sheila Hamilton-Dyer assisted with the bird bone identification.

3.2 Documentary research

Prior to fieldwork commencing a search was made of the Historic Environment Record (HER).

3.3 List of sources consulted

Cartographic sources

- 1776 Tibberton Snape map
- 1904 Ordnance Survey map

Documentary sources

Published and grey literature sources are listed in the bibliography (Section 8).

3.4 Fieldwork strategy

A detailed specification has been prepared by Worcestershire Archaeology (WA 2015). Fieldwork was undertaken between 21 September and 9 October 2015. The site reference number and site code is WSM 67195.

Deposits considered not to be significant were removed using a 360º tracked excavator, employing a toothless bucket and under archaeological supervision. Subsequent excavation was undertaken by hand. Clean surfaces were inspected and selected deposits were excavated to retrieve artefactual material and environmental samples, as well as to determine their nature. Deposits were recorded according to standard Worcestershire Archaeology practice (WA 2012).

3.5 Structural analysis

All fieldwork records were checked and cross-referenced. Analysis was effected through a combination of structural, artefactual and ecofactual evidence, allied to the information derived from other sources.

3.6 Artefact methodology, by C Jane Evans

The finds work reported here conforms with the relevant sections of *Standard and guidance for the collection, documentation, conservation and research of archaeological materials* (CIfA 2014b), with archive creation informed by *Archaeological archives: a guide to the best practice in the creation, compilation, transfer and curation* (AAF 2011), and museum deposition by *Selection, retention and dispersal of archaeological collections* (SMA 1993).

3.6.1 Artefact recovery policy

The artefact recovery policy conformed to standard Worcestershire Archaeology practice (WA 2012; appendix 2).

3.6.2 Method of analysis

All hand-retrieved finds were examined. They were identified, quantified and dated to period. A *terminus post quem* date was produced for each stratified context. The date was used for determining the broad date of phases defined for the site. All information was recorded on *pro forma* sheets.

Artefacts from environmental samples were examined. Most were very small fragments of fired clay and pottery that were not worthy of comment; only pottery from pit 1057 (fill 1058, sample 3), associated with a briquetage vessel, is included in the text and tables below.

The pottery and ceramic building material was examined under x20 magnification and referenced as appropriate by fabric type and form according to the fabric reference series maintained by Worcestershire Archaeology (Hurst and Rees 1992 and www.worcestershireceramics.org).

3.6.3 Discard policy

The following categories/types of material will be discarded after a period of 6 months following the submission of this report, unless there is a specific request to retain them (and subject to the collection policy of the relevant depository):

- where unstratified
- post-medieval material, and;
- generally where material has been specifically assessed as having no obvious grounds for retention.

See the environmental section for other discard where appropriate.

3.7 Environmental archaeology methodology, by Elizabeth Pearson

3.7.1 Sampling policy

Samples were taken according to standard Worcestershire Archaeology practice (2012). A total of 29 samples (each of up to 40 litres) were taken from the site, of which 12 samples were assessed (see Pearson 2015).

Environmental remains were poorly preserved in the Late Iron Age ditches and early Romano-British pits. However, a small assemblage of charred plant remains from a Late Iron Age briquetage pot was selected for further work (1060) in order to quantify the results as it is thought to relate to a 'closure' deposit (Env Table 1).

3.7.2 Processing and analysis

For the fill of the briquetage pot (1060) a sample of approximately 1 litre was processed by the wash-over technique as follows. The sub-sample was broken up in a bowl of water to separate the light organic remains from the mineral fraction and heavier residue. The water, with the light organic faction was decanted onto a 300mm sieve and the residue washed through a 1mm sieve.

3.7.3 Discard policy

Remaining samples and scanned residues not selected for analysis will be discarded following submission of this report unless there is a specific request to retain them.

3.8 Animal bone methodology, by Ian L Baxter

Most of the animal bones were hand-collected. Consequently an under-representation of smaller bones from the main domestic species and bones from small wild mammals, birds and amphibians is to be expected. The bones were recorded on an Access database following a modified version of the method described in Davis (1992) and Albarella and Davis (1994). In this method all teeth (lower and upper) and a restricted suite of parts of the skeleton are recorded and used in counts. These are: horncores with a complete transverse section, skull (zygomaticus), atlas, axis, scapula (glenoid articulation), distal humerus, distal radius, proximal ulna, carpal 2+3, distal metacarpal, pelvis (ischial part of acetabulum), distal femur, distal tibia, calcaneum (sustenaculum), astragalus (lateral side), centrotarsale, distal metatarsal, proximal parts of the 1st, 2nd and 3rd phalanges.

In Animal Table 1 partial skeletons and associated bones are counted as one specimen.

For birds the following were always recorded if present: scapula (articular end), proximal coracoid, distal humerus, proximal ulna, proximal carpometacarpus, distal femur, distal tibiotarsus, and distal tarsometatarsus.

The separation of sheep and goat was attempted on the following elements if present: horncores, dP_3, dP_4, distal humerus, distal metapodials (both fused and unfused), astragalus, and calcaneum using the criteria described in Boessneck (1969) and Payne (1969 and 1985). The shape of the enamel folds (Davis 1980; Eisenmann 1981) was used for identifying equid teeth to species. Equid postcrania were checked against criteria summarised in Baxter (1998).

Wear stages were recorded following Grant (1982) for all P_4s and dP_4s as well as for the lower molars of cattle, sheep/goat and pig, both isolated and in mandibles.

Measurements are recorded on the database. These in general follow von den Driesch (1976). All pig measurements follow Payne and Bull (1988). Humerus HTC and BT and tibia Bd measurements were taken for all species as suggested by Payne and Bull (1988) for pigs. The crown heights of equid teeth were measured following Levine (1982).

3.9 Statement of confidence in the methods and results

The methods adopted allow a high degree of confidence that the aims of the project have been achieved.

4 The application site

4.1 Topography, geology and archaeological context

The site is situated on the south-eastern slope of a small hill, on the north-western edge of the village of Tibberton (Fig 1). The land drops off sharply to the south, from a height of *c* 60m at the northern edge to *c* 55m at the southern. The geology consists of Branscombe Mudstone Formation (BGS 2015), with a glaciofluvial deposit (WSM 56935) located on the northern side of the site. This latter deposit has been identified to have the potential for Palaeolithic remains.

The village of Tibberton is of medieval origin. It contains four listed buildings of 17th and 18th century date, along with 11 unlisted buildings from the 18th and 19th centuries. The surrounding land consists mainly of arable and pastoral farmland, with evidence of field amalgamation and reorganisation in the later post-medieval period.

The site was subject to an archaeological evaluation, which revealed Iron Age activity (WSM 67334). This consisted of two parallel ditches apparently aligned along the contour of the hillside, with a well-preserved assemblage of Late Iron Age pottery (Griffin 2014; One Ten Archaeology 2014).

An archaeological evaluation on the land immediately to the south of the present development site did not discover any archaeological remains (CAT 2002), indicating that the settlement does not extend down that side of the hill.

4.2 Current land-use

The site is currently laid to pasture.

5 Structural analysis

The features recorded are shown in Figs 2-6 and 12-24.

5.1.1 Phase 1: Natural deposits

The natural geology consisted of a reddish brown silty clay marl. Along the northern edge of the site was a glaciofluvial deposit of coarse yellow sands.

5.1.2 Phase 2: Iron Age deposits

Two large ditches ran north-east to south-west around the edge of the hill upon which the site is located. The land drops off sharply just to the south of the southernmost of these linears. The ditches ran parallel to each other, maintaining a distance of approximately 6m (Figs 2, 12 and 13).

The northern ditch, Group 1075 (Figs 14, 19, and 20), ranged from 1.86m wide and 0.95m deep in the west to 2.5m wide and 1.75m deep in the east. In three of the four slots excavated through it, it had a V-shaped profile. The fourth section was flat bottomed. Whilst the number of fills within the ditch generally increased with the size of the feature, a general pattern of deposition could be seen; an initial basal fill, with some early slumping activity followed by a low energy secondary deposit in the middle of the sequence. The ditch was then quite rapidly backfilled via two or three dumped deposits high in fire-cracked stone, pottery, animal bone and charcoal.

The southern ditch, Group 1074 (Figs 15-18), showed a very similar depositional pattern, with the upper fills particularly alike. In the west the ditch was 2.42m wide and 1.21m deep and reached 3.54m wide and 1.3m deep at the eastern extent. This ditch was usually flat bottomed in profile, rather than the V-shape seen in 1075. In both ditches, only one cut could be defined.

A small pit was dug into the upper fills of 1075, within which a nearly complete briquetage vessel had been deposited (1059; Figs 21-23). It lay partially on its side and was missing its upper half. It had apparently originally been placed in whole, but ploughing had truncated the upper half at a later date.

5.1.3 Phase 3: Roman deposits

On the south side of ditch 1074 was a cluster of three intercutting pits (Fig 26). A wide, elongated pit with a flat bottom truncated two earlier versions, 1064, 1066 and 1068, and contained a piece of quern stone, along with some well-preserved pottery. Due to the relative date it is projected to have cut the top of ditch 1074, although the exact relationship could not be determined.

Close to these pits was a shallow circular pit, 1016, truncated on its eastern edge by an equally shallow, long thin feature (1018; Fig 25). The fills of both of these pits were homogenous firm clays, with no evidence for the sort of heat discolouration or charcoal that one might initially assume from the shape of the features (which is akin to the shape of kilns or ovens).

Three small pits, 1027, 1029 and 1031, were found in a rough line close together between and parallel to the two ditches. One contained a small amount of pottery. They did not appear to form any defined structural pattern. It is conjectured by their similar size and location that these undated pits are contemporary with the dated one.

5.1.4 Phase 4: Undated deposits

A small potential posthole, 1004, was excavated on the south side of ditch 1075 towards the western edge of the site. No dateable material was recovered. Two further potential postholes, 1052 and 1054, were excavated toward the eastern edge of site, again on the south side of ditch 1075.

On the northern edge of the site, cutting through the glaciofluvial deposit was a pit (1014; Fig 24). Whilst the form suggested a man-made feature, with regular sides and a rounded base, the sterile sandy fill seemed quite irregular, more akin to a deposit resulting from natural rooting.

5.1.5 Phase 5: Modern deposits

Two obsolete water pipes ran north-west to south-east from the north-western corner of the site. The topsoil overlying the site was a firm dark reddish brown clay loam.

5.2 Artefact analysis, by C Jane Evans

The artefactual assemblage recovered is summarised in Finds Tables 1 to 7.

The artefactual assemblage was from the excavation stage of fieldwork, and the data from the evaluation (One Ten Archaeology; Griffin 2014) is integrated in the tables and referenced in the text (the evaluation finds were not seen by this author). The combined assemblage dated primarily to the Late Iron Age or perhaps conquest period, with small quantities of residual Late Bronze Age, Early Iron Age and Middle Iron Age pottery. The artefact assemblages recovered from both the evaluation and excavation are summarised in Finds Table 1 below.

The excavation produced 562 sherds of pottery, weighing 5668g, alongside fragments of briquetage, fired clay, quern stone, a shale bracelet, and a worked flint. This group came from 31 stratified contexts, namely the fills of the two ditches and pits. The assemblage was generally well preserved with low levels of abrasion, though average sherd weights varied considerably.

intervention	period	material class	object specific type	count	weight(g)
evaluation	Late Iron Age	ceramic	pot	209	5970
	prehistoric	stone	pot boiler	1	19
	post-medieval	ceramic	pot	9	135
	modern	ceramic	pot	3	13
	modern	ceramic	land drain	1	16
	undated	fired clay	fragment	8	130
excavation	prehistoric	stone	flint	1	2
	Late Bronze Age	ceramic	pot	11	67
	Late Bronze Age to early Middle Iron Age	ceramic	pot	25	207
	Late Bronze Age to Early Iron Age	ceramic	pot	7	71
	Middle Iron Age (earlier)	ceramic	pot	2	22
	Middle Iron Age (later)	ceramic	pot	2	21
	Iron Age	ceramic	briquetage	91	2179
	?Iron Age	stone	shale bracelet	1	0.5
	?Iron Age	stone	quern	2	3670
	?Iron Age	stone	slab	1	1812

	prehistoric	stone	pot boiler*	abundant	
	Late Iron Age/early RB	ceramic	pot	515	5280
	undated (LIA/ERB?)	ceramic	fired clay frag	71	286.5
	undated (?LIA/ERB)	ceramic	hearth	1	186
	undated	ceramic	brick/tile	1	10

Finds Table 1: Quantification of the assemblage (the presence of pot boilers was noted during excavation but these were not quantified)*

5.2.1 Pottery

All sherds were recorded and quantified by fabric type (Finds Table 3). Dating evidence was provided by a number of diagnostic form sherds, and body sherds datable by fabric type to a general period or production span. The majority of the pottery dated to the Middle/Late Iron Age to conquest period, although some <ate Bronze Age/Early Iron Age pottery was also noted.

Most of the pottery, from both the evaluation (Griffin 2014) and excavation, came from the two ditches, and the remainder from five of the pits (Finds Table 2). It was mainly from the southern ditch, Group 1074, which produced 292 sherds weighing 3457g compared to 162 sherds, 1133g from the northern ditch 1075. The assemblage was generally well preserved, though average sherd weights varied considerably. The pottery from the evaluation in particular included some substantial sherds, for instance from the southern ditch (1074, cut 309, fill 307) a Malvernian ware jar sherd weighing 823g (Fabric 3; Morris 2010, form type TV2), significantly raising the average sherd weight for this feature. The evaluation of the northern ditch (1075, cut 310, fill 303) produced the lower portion of a Palaeozoic limestone-tempered ware jar (Fabric 4.1), thought to have been deliberately placed (post-deposition breakage has artificially lowered the average sherd weight for this feature). During the excavation another substantial part of a vessel was recorded from a pit (1057, fill 1058) about 6.5m away and cut into the top of the ditch. This was the base of a briquetage vessel (Droitwich salt container) which had been truncated by post-medieval ploughing, though this was lying on its side rather than in an upright position and so may not have been deliberately placed.

Intervention	feature type	ditch	fill of	count	% count	weight(g)	% weight	average weight
evaluation	Ditch	1074	309	117	15%	4696	41%	40
	Ditch	1075	310	75	10%	1097	10%	15
Total evaluation				*192*	*25%*	*5793*	*51%*	*30*
excavation	Pit		1016	8	1%	37	0%	5
			1027	7	1%	91	1%	13
			1057	41	5%	256	2%	6
			1064	17	2%	177	2%	10
			1068	6	1%	20	0%	3
	Ditch	1074	1074	14	2%	323	3%	23
			1005	9	1%	7	0%	1
			1044	21	3%	143	1%	7
			1078	259	34%	3269	29%	13
			1084	19	3%	215	2%	11
		1075	1019	45	6%	77	1%	2
			1043	13	2%	86	1%	7
			1086	90	12%	846	7%	9
			1107	14	2%	124	1%	9
Total				*563*	*75%*	*5671*	*49%*	*10*

excavation								
Total pottery				755	100%	11464	100%	15

Finds Table 2: Quantification of the pottery

intervention	fabric code	Fabric type	count	% count	weight (g)	% weight	rim EVE	% rim EVE
evaluation	3	Malvernian metamorphic	83	43%	4302	74%	-	-
	4.1	Palaeozoic limestone	99	52%	1363	24%	-	-
	5.1	Sandy	10	5%	128	2%	-	-
total			*192*	*100%*	*5793*	*100%*	-	-
excavation	3	Malvernian metamorphic	345	61%	3221	57%	1.57	52%
	4.1	Palaeozoic limestone	77	14%	1081	19%	0.78	26%
	4.3	Fossil shell	20	4%	152	3%	0.17	6%
	4.4	Shell and sand	24	4%	210	4%	0.08	3%
	4.7	Fossil shell & grog	1	0%	5	0%	0	0%
	5	Sandy	42	7%	342	6%	0.23	8%
	5.1	Handmade sand	3	1%	19	0%	0.03	1%
	12	Severn Valley ware	16	2%	301	5%	0.04	1%
	12.2	Severn Valley ware (organic)	8	1%	37	1%	0	0%
	12.6	Severn Valley ware (soft white)	1	0%	26	0%	0.11	4%
	12.8	Severn Valley ware (grog)	23	4%	268	5%	0	0%
	97	Unidentified prehistoric	2	0%	6	0%	0	0%
total			*562*	*100%*	*5668*	*100%*	*3.01*	*100%*

Finds Table 3: Quantification of the pottery by fabric

The most common fabrics were handmade Malvernian ware (Fabric 3), followed by Palaeozoic limestone-tempered ware (Fabric 4.1), the latter including a large number of sherds from a single vessel found during the evaluation. These and the sand-tempered wares are dated here to the Middle/Late Iron Age, the former extending to beyond the conquest. Small quantities of early Severn Valley ware were also present, with a range of inclusions. These are traditionally classified as Romanised wares, but there is no secure dating for their first appearance; in particular whether they appeared pre- or post-conquest.

Prehistoric pottery

Most sherds in the diagnostically earlier fabrics (Fabrics 4.3, 4.4 and 4.7) were in upper fills of the ditches (eg ditch 1075, fills 1099, 1098, 1101; ditch 1074 fills 1050, 1069, 1071). These deposits represent the rapid backfilling of the ditches, and the sherds were clearly residual amongst quantities of Late Iron Age to conquest period pottery and other domestic refuse, including animal bone and fire-cracked stone 'pot boilers'. Some sherds came from secondary fills thought to have accumulated over a longer period of time. These were again, however, associated with later pottery (eg ditch 1074, fill 1072).

The most significant finds amongst these residual sherds were a Late Bronze Age furrowed bowl and an Early Iron Age, or perhaps Late Bronze Age, decorated jar and bowl (Fig 7.1 and 7.2 respectively). A rim in the shell and sand-tempered fabric (Fabric 4.4; not illustrated) was found in ditch 1075 (cut 1107) but could not be assigned to a specific fill.

Figure 7: Late Bronze Age/Early Iron Age and Middle Iron Age pottery

1 Carinated 'furrowed' bowl with a long neck, a Late Bronze Age type found, for example at Potterne (Gingell and Morris 2000, bowl type 2, fig 47.14, 16). Fabric 4.3/4.9, Diam 16cm (17%).Phase 2, Ditch 1074, cut 1078, fill 1071. Database Rec 56.

2 Body sherds from a bowl or jar with impressed decoration of triangular motifs, in-filled with impressed lines. Similar decoration is noted on beakers in the region (Robin Jackson pers comm), but the curvature of some of the body sherds suggests they are from a bowl or jar, rather than a beaker. The decoration is similar to that found on vessels in the Early All Cannings Cross tradition (Cunliffe 1991, 65), traditionally dated to the Early Iron Age but found in the Late Bronze Age assemblage from Potterne, Wiltshire (Gingell and Morris 2000). Fabric 4.3/4.9. Phase 2, Ditch 1074, cut 1078, fill 1072. Database Rec 58, 156, 165.

3 Barrel-shaped or globular jar with an in-turned rim, Beckford form 2.13 (Wills forthcoming), decorated with a single row of circular stamps (Beckford code Aa3). The form and decoration are similar to vessels associated with earlier Middle Iron Age assemblages at Beckford (Wills forthcoming). Fabric 4.4, Diam 19cm (5%). Phase 2, Ditch 1075, cut 1043, fill 1040. Database Rec 15.

There were indications that both ditches were potentially of Middle Iron Age origin, a slot of each having a small amount of Middle Iron Age decorated pot lower down the sequence. Ditch 1075 (cut 1043, fill 1040) produced a stamp-decorated rim from a jar, a type dated to the earlier Middle Iron Age at Beckford (Fig 7.3). As in the upper fills, there was some general domestic waste associated with these sherds, including animal bone. The sandy texture of this fill was also noted as quite distinct from the other fills, suggesting that this came from a different source. The basal fill (1042) producing a single sherd of briquetage. Five body sherds in Fabric 4.4 were recovered from another lower fill of this ditch (cut 1019, fill 1020).

Two sherds of Malvernian ware (Fabric 3) with linear-tooled decoration, also typical of later Middle Iron Age assemblages at Beckford (unpublished), came from the final fill of this ditch (1075, cut 1019, fill 1023). The south ditch (1074, cut 1044, fill 1049) also featured similarly decorated pottery (Fabric 4.1) from the lowest point where finds were recovered in that slot. On balance, therefore, the evidence shows that both ditches were established by the Middle Iron Age.

Late Iron Age/Conquest period pottery

Most of this pottery was dated broadly to the Late Iron Age to conquest period, and was particularly associated with the upper fills of the ditches and the fills of pits. The assemblages from the northern ditch (1075), the southern ditch (1074) and the various pits are different in character (Figs 10 and 11) in terms of fabrics and forms. As with many other sites of this period, there is no independent dating for the deposits excavated, and the dating of pottery of this period is in general not well refined. The distinctions between these groups are worth noting, however, for future comparative studies.

The assemblage from the northern, innermost, ditch (1075) is dominated by Palaeozoic limestone-tempered ware (Fabric 4.1) and Malvernian ware (Fabric 3), with a significant proportion of a typically black, wheelmade sandy ware (Fabric 5). The carinated bowl and jars with out-turned or everted rims (Fig 8, 1-4) are types recorded from late Iron Age and late Iron Age/conquest period phases E and F at Beckford (Wills in prep). In contrast, the assemblage from the southern, outer, ditch (1074) is heavily dominated by Malvernian ware (Fabric 3), with a much lower proportion of Palaeozoic limestone-tempered ware (Fabric 4.1) and no wheelmade sandy ware. Malvernian tubby cooking pots are the most common form (fig JE4, 5-8), and these first appear at Beckford in Late Iron Age phase E (Wills in prep). Their frequency in this assemblage might reflect a functional variation in the material deposited in this ditch, but might also suggest that this is a slightly later group, perhaps dating to the late pre-Roman Iron Age. Other forms in this feature included a storage jar with an everted rim and a carinated bowl (Fig 8, 9-10), forms that are typically associated with late Iron Age/conquest period phase F at Beckford (unpublished). Another rim, not illustrated, was from a very large storage jar in Palaeozoic limestone-tempered ware. The upper surface of the rim was missing, so precise identification was not possible, but very large storage jars in this fabric are also associated with phase F at Beckford.

Figure 8: Late Iron Age to conquest-period pottery

1 Carinated bowl with a constricted waist and tooled cordons on the neck and girth, reduced with highly burnished, blacked surfaces. A type first noted at Beckford in Late Iron Age/conquest Phase F (Wills forthcoming). Fabric 5, Diam 18cm (4%). Phase 2, Ditch 1075, cut 1086, fill 1098. Database Rec 68.

2 Jar or bowl with a long straight out-turned rim and a high shoulder, similar to Beckford form 11, associated there with late Iron Age Phase E (Wills forthcoming). Reduced with blackened burnished surfaces. Fabric 4.1, Diam 15cm (24%). Phase 2, Ditch 1075, cut 1086, fill 1098. Database Rec 70.

3 Barrel-shaped or globular jar with a gently everted, flat rim, Beckford form 3.82 (Wills forthcoming). Reduced with blackened and burnished surfaces. Fabric 4.1, Diam 12cm (8%). Phase 2, Ditch 1075, cut 1107, fill 1101. Database Rec 121.

4 Small everted rim jar or cooking pot, Beckford form 10, first noted the in late Iron Age phase E (Wills forthcoming). Reduced with blackened surfaces, originally highly abraded but now abraded. Fabric 3, Diam 13cm (14%). Phase 2, Ditch 1075, cut 1043, fill 1033. Database Rec 13.

5 Flat-topped, gently flaring rim from a barrel-shaped jar or tubby cooking pot, similar to Beckford form 14 (Wills forthcoming). Reduced with blackened surfaces. Fabric 3, Diam 23cm (10%). Phase 2, Ditch 1074, cut 1078, fill 1071. Database Rec 42.

6 Slightly thickened rim from a tubby cooking pot, Beckford form 14. Fabric 3, Diam 19cm (12%). Phase 2, Ditch 1074, cut 1078, fill 1071. Database Rec 43.

7 Upright rim from a tubby cooking pot, Beckford form 14, Fabric 3, Diam 14cm (19%). Phase 2, Ditch 1074, cut 1078, fill 1069. Database Rec 94.

8 Flat, thickened rim from a very large tubby cooking pot Fabric 3, Diam uncertain. Phase 2, Ditch 1074, cut 1078, fill 1069. Database Rec 101.

9 Large jar or cooking pot with an everted rim, Beckford form 10. A type first noted at Beckford in late Iron Age/conquest Phase F (Wills forthcoming). Fabric 4.1, Diam 20cm (6%).Phase 2, Ditch 1074, cut 1078, fill 1071. Database Rec 49.

10 Carinated bowl, with a constricted waist and a tooled cordon; reduced with blackened and burnished surfaces. A type first noted at Beckford in late Iron Age/conquest Phase F. Fabric 5, Diam 13 (12%). Phase 2, Ditch 1074, cut 1078, upper fill 1069. Database Rec 98, 99.

11 Tubby cooking pot with slightly in-turned rim, with a groove on top of the rim and another just below the rim. The surface is abraded but there is evidence for horizontal burnish around the rim and vertical pattern-burnish below. Fabric 3, Diam 19cm (12%). Phase 3, pit 1064, fill 1061. Database Rec 30.

12 Carinated bowl, with a bead rim and a tooled cordon at the waist. Severn Valley ware with soft white inclusions, Fabric 12.6, Diam 14cm (11%). Phase 3, Pit 1064, fill 1061. Database Rec 27.

5.2.2 Characterising and dating the pits' assemblages

Quantities of pottery were small (78 sherds, 578g), the largest assemblage coming from pits 1057 and 1064 (Finds Table 2), the former cut into the top of northern ditch 1075 and the latter into the top of southern ditch 1074. Overall the pit assemblages were dominated by Malvernian ware (Fabric 3) and early Severn Valley ware fabrics (Fig 11). Malvernian tubby cooking pots were the most common vessel class, and carinated bowls (Fig 11). There was, however, significant variation between the pits. The assemblage from pit 1057 was of particular interest as this was associated with the base of a briquetage vessel (see below; Fig 9). This deposit also produced 40 sherds of Malvernian ware, some very fragmentary but all of which are likely to be from a single tubby cooking pot (not illustrated). The only other sherd was an in-turned rim in Palaeozoic limestone-tempered ware (Fabric 4.1). The composition of this pit group suggested that it could be a structured, closure deposit to the ditch. This group is most like the assemblage from the upper fills of ditch 1074.

Another fairly complete vessel was recovered during the evaluation and may also have been in its own pit in the top fill of ditch 1075 (303). A similar closure event may have been behind its insertion into the ground (One Ten Archaeology 2014). Pollen and plant macrofossil analysis was undertaken on the samples associated with this vessel (Richer and Clapham 2014). This indicated that "a meadow-type landscape existed in close proximity to the site and that honey might have been used within the pot prior to its discard" (*ibid* 9).

Pit 1064 assemblage included fragments from at least two Malvernian tubby cooking pots, one of which is illustrated (Fig 8.11), along with three sherds in different Severn Valley ware fabrics (Fabrics 12 and 12.6). One of these was from a carinated bowl (Fig 8.12). Severn Valley ware fabrics and carinated bowls are both first noted in Late Iron Age/conquest phase F at Beckford (Wills forthcoming). However, similar forms were noted in a well-dated, Claudian/Neronian assemblage from St Johns suburb of Worcester (Evans 2014, fig 18.15), equivalent to Beckford phase G. Severn valley ware fabrics were noted in two other pits (1016 and 1027). Elsewhere on the site they tended to be associated with the latest deposits. Body sherds from a carinated bowl and from the shoulder of a jar came from the southern ditch (1074; fill 1085), and fragments of another Severn valley carinated bowl came from a dumped backfill of the same ditch (fill 1079). This Severn Valley ware, arguably, represent the latest activity on the site.

5.2.3 Other artefacts

Briquetage

Ninety-one fragments of briquetage were recovered from the excavation and seventeen from the evaluation. Three Droitwich fabrics were recorded (Table 4), although some overlap was noted between the fabrics, the same inclusions being present in all three fabrics in varying proportions. Most fragments were in the sandy marl fabric (Fabric 1.1), tempered with clay pellets and varying quantities of sand and organic material (Morris 1985, 342-3, fabric 1a). The largest and most significant fragment, however, was in the organic fabric (Fabric 2). A number of fragments displayed characteristic features of briquetage, such as finger marks, distinctive breaks between the collars of clay used to form the vessels, and bleached surfaces (Morris 2007, 439-40; Morris 2010, section 4.3.3).

Intervention	fabric name	fabric code	count	% count	weight (g)	% weight	average weight
excavation	sandy	1	7	6%	62	3%	9
evaluation			2	2%	15	1%	8
excavation	sandy marl	1.1	73	68%	796	34%	11
evaluation			6	6%	101	4%	17
excavation	organic	2	11	10%	1321	56%	120
evaluation			9	8%	61	3%	7
total			108	100%	2356	100%	22

Finds Table 4: Quantification of all the briquetage (evaluation and excavation) by fabric

Most of the briquetage came from the two ditches (Finds Table 4) where fragments were found in thirteen contexts throughout the sequence. The largest groups came from two secondary fills of southern ditch 1074 (fill 1072, 18 fragments, 141g; fill 1081, 8 fragments, 158g), thought to represent a gradual infilling of the ditch over time, and from an upper fill of ditch 1075 (fill 1099, 21 fragments, 158g). Two of these fills (1072 and 1099) produced residual, diagnostically early pottery fabrics as well as Late Iron Age vessels, so the briquetage cannot be securely dated. Much smaller quantities were associated with the pits, the most significant fragment coming from pit 1057, and just one sherd from pit 1064.

Pit 1057, cut into the top of ditch 1075, produced the base of a briquetage vessel, the upper portion of which had been sheared off by post-medieval ploughing. The pit, and the base of the vessel, contained a lot of burnt material. Analysis of the environmental remains in the vessel fill (Section 5.3 below) indicated that this was derived from the siting of a fire on grass covered ground. The associated pottery included a number of sherds from a Malvernian tubby cooking pot, so is similar to the pottery associated with the backfilling of southern ditch 1074. It may, therefore, be that the activities associated with this pit are contemporary with the infilling of that ditch. A single, highly fired and dense fragment of fired clay from a hearth or oven was also associated. Another *in-situ* vessel was recovered about 6.5m away from pit 1057, during the evaluation of the northern ditch (ditch 1075, cut 310, fill 303). This produced the lower portion of a large jar in Palaeozoic limestone-tempered ware (Fabric 4.1), thought to have been deliberately placed. This may reflect a pattern of structured deposition on the site.

Figure 9: briquetage vessel

1 Base of a briquetage vessel. Fabric 2, Diam 10cm (100%). Phase 2, Pit 1057, fill 1058. Database Rec 124.

Feature type	Context group	Fill of	fabric code	Count	% count	weight(g)	% weight	average weight
Ditch	1074	1044	1	2	2%	17	1%	9
			1.1	5	5%	79	4%	16
			2	1	1%	10	0%	10
		1078	1	1	1%	25	1%	25
			1.1	27	30%	267	12%	10
		1084	1.1	8	9%	158	7%	20
total ditch 1074				*44*	*48%*	*556*	*26%*	*13*
Ditch	1075	1043	1	3	3%	13	1%	4
Ditch	1075		2	1	1%	44	2%	44
Ditch	1075	1086	1.1	22	24%	164	8%	7
Ditch	1075		2	8	9%	59	3%	7
Ditch	1075	1107	1.1	6	7%	86	4%	14
total ditch 1075				*40*	*44%*	*366*	*17%*	*9*
Pit	0	1057	1.1	5	5%	42	2%	8
Pit	0		2	1	1%	1208	55%	1208
Pit	0	1064	1	1	1%	7	0%	7
total pits				*7*	*8%*	*1257*	*58%*	*180*
total briquetage				**91**	**100%**	**2179**	**100%**	**24**

Finds Table 5: Quantification of the briquetage from the excavation by feature and fabric

Fired clay

Seventy-two fragments of fired clay were recovered, mainly coming from fills of the two ditches. Most were small fragments with no diagnostic features. The only piece of interest was a highly fired and dense (weight 186g) fragment from pit 1057 which had one flattened edge and may be from an oven.

Feature type	Context group	Fill of	context	count	% count	weight(g)	% weight	average weight
Ditch	0	1031	1032	4	6%	0.5	0%	<1
	1074	1005	1010	7	10%	35	7%	5
			1012	6	8%	5	1%	1
		1044	1051	10	14%	47	10%	5
		1078	1069	4	6%	18	4%	5
			1071	15	21%	80	17%	5
	1075	1019	1023	2	3%	10	2%	5
		1043	1033	10	14%	41	9%	4
		1086	1095	4	6%	34	7%	9
			1099	1	1%	2	0%	2
		1107	1102	4	6%	13	3%	3
Pit	0	1057	1058	5	7%	187	40%	37
total				72	100%	472.5	100%	7

Finds Table 6: Quantification of the fired clay from the excavation by feature

The flint, by Robert Hedge

A single piece of worked stone from (1069; ditch 1074) comprised a heat-damaged distal flake fragment on fine-grained mid-grey flint. It is not closely dateable: a broad date range of Mesolithic to Iron Age is possible.

Worked stone

Four stone objects were recovered, all associated with southern ditch 1074 and pit 1064, cutting into the top of this ditch included a fragment of rotary quern upper stone (upper fill of pit 1064 (fill 1061, not illustrated). The working surface of this is smoothed with wear. The quern was made from a coarse-grained conglomerate, typical of the Old Red Sandstone known to have been used for querns elsewhere (Roe 2004, 463). Another small fragment of probable quern, in a finer grained Old Red Sandstone conglomerate, came from an upper fill of ditch 1074 (fill 1051). The upper fill of pit 1064 (1061) also produced a slab of finely bedded sandstone, which had perhaps been used for paving. Another upper backfilling deposit in ditch 1074 (1069) produced a small, D-sectioned fragment from a shale bracelet, with an internal diameter of 60mm (not illustrated).

Abundant burnt stone, pot boilers were noted on site associated with the upper fills of the ditches, but these were not quantified or retained and are not, therefore, included in this report.

5.2.4 Site dating

Context	material class	object specific type	count	weight(g)	period
1010	ceramic	pot	6	5	LIA/ERB
1012	ceramic	pot	3	2	LIA/ERB
1015	ceramic	pot	8	37	LIA/ERB
1020	ceramic	pot	5	5	Late Bronze Age to early Middle Iron Age
1022	ceramic	pot	8	23	LIA/ERB
1023	ceramic	pot	31	46	LIA/ERB
	ceramic	pot	1	3	Middle Iron Age (later)
1028	ceramic	pot	7	91	LIA/ERB
1033	ceramic	briquetage	1	44	Iron Age
	ceramic	pot	10	57	LIA/ERB
1040	ceramic	pot	1	7	Late Bronze Age to early Middle Iron Age
	ceramic	pot	2	22	Middle Iron Age (earlier)
1042	ceramic	briquetage	3	13	Iron Age
1049	ceramic	briquetage	1	7	Iron Age
	ceramic	pot	2	3	LIA/ERB
	ceramic	pot	1	18	Middle Iron Age (later)
1050	ceramic	briquetage	5	79	Iron Age
	ceramic	pot	1	4	Late Bronze Age to early Middle Iron Age
1051	ceramic	briquetage	2	20	Iron Age
	ceramic	pot	17	118	LIA/ERB
	stone	quern	1	540	Iron Age?
1058	ceramic	briquetage	6	1250	Iron Age
	ceramic	pot	41	256	LIA/ERB
1061	ceramic	briquetage	1	7	Iron Age
	ceramic	pot	16	174	LIA/ERB
	stone	quern	1	3130	Iron Age?
1067	ceramic	pot	6	20	LIA/ERB

1069	ceramic	briquetage	6	33	Iron Age
	ceramic	pot	1	5	Late Bronze Age to early Middle Iron Age
	ceramic	pot	100	1585	LIA/ERB
	stone	bracelet	1	0.5	Iron Age
	stone	flint	1	2	prehistoric
1070	ceramic	briquetage	3	93	Iron Age
	ceramic	pot	10	140	LIA/ERB
1071	ceramic	briquetage	1	25	Iron Age
	ceramic	pot	2	37	Late Bronze Age to early Middle Iron Age
	ceramic	pot	86	1187	LIA/ERB
1072	ceramic	briquetage	18	141	Iron Age
	ceramic	pot	11	67	late Bronze Age
	ceramic	pot	1	5	Late Bronze Age to early Middle Iron Age
	ceramic	pot	7	71	late Bronze Age/early Iron Age
	ceramic	pot	41	172	LIA/ERB
1079	ceramic	pot	16	177	LIA/ERB
1081	ceramic	briquetage	8	158	Iron Age
	ceramic	pot	3	38	LIA/ERB
1085	ceramic	pot	14	323	LIA/ERB
1095	ceramic	pot	3	15	LIA/ERB
1098	ceramic	briquetage	3	24	Iron Age
	ceramic	pot	3	45	Late Bronze Age to early Middle Iron Age
	ceramic	pot	60	582	LIA/ERB
1099	ceramic	briquetage	21	158	Iron Age
	ceramic	pot	10	91	Late Bronze Age to early Middle Iron Age
	ceramic	pot	13	106	LIA/ERB
1100	ceramic	briquetage	6	41	Iron Age
	ceramic	pot	1	7	LIA/ERB
1101	ceramic	briquetage	5	75	Iron Age
	ceramic	pot	1	8	Late Bronze Age to early Middle Iron Age

	ceramic	pot	11	107	LIA/ERB
1102	ceramic	pot	2	9	LIA/ERB
1104	ceramic	briquetage	1	11	Iron Age

Finds Table 7 Summary of context dating based on artefacts grouped in context order

5.2.5 Discard and retention

This period and type of site is still relatively rare and so it is recommended that the whole finds assemblage is retained.

5.3 Environmental analysis, by Elizabeth Pearson

The environmental evidence recovered is summarised in Env Table 1.

5.3.1 Late Iron Age briquetage pot fill (1060)

Small fragments of unidentified charcoal and well-preserved charred plant remains were recorded. The latter included a single fragment of spelt wheat (*Triticum spelta*) chaff (glume base), grains of annual meadow grass (*Poa annua*), seeds of corn marigold (*Glebionis segetum*) and an unidentified grass grain (Poaceae sp indet).

The annual meadow grass grains, although small in number, were dominant. They are likely to derive from burnt grass material, with the possible sources being a fire on a grassy surface, grass material being used as tinder for a fire, or burning of organic tempering in the briquetage pot. The latter seems less likely as dark staining on the inside of the pot appears to be result from contact with a charcoal-rich fill rather than burning of the pot. Also, the presence of the intact spelt wheat glume base and the corn marigold seeds suggest some input from cereal crop debris, rather than organic pot temper.

The source of the charred remains is uncertain, but considering the context of a vessel that appears to demonstrate selective deposition, perhaps as an act of closure, and as these remains are not commonly found in isolation in burnt deposits, they may be the result of symbolic or ritual activity. The assemblage is small and difficult to characterise but the dominance of small-sized grass remains has parallels with cremation deposits of this date found, for example, at Walton on the Transco Newbold Pacey to Honeybourne gas pipeline (Pearson 2012) and of Roman date at Domgay Lane, Four Crosses, Powys (Pearson 2008a). An early Roman deposit also dominated by annual meadow-grass and other small grasses was interpreted as a pyre deposit, in the absence of cremated remains, but in a location where the rims of rusticated jars (commonly used as cremation vessels) at All Saints Church, Worcester (Pearson 2008b).

Although cremation remains at Hawthorn Rise were not found within the pot, the assemblage is, nevertheless, of interest and may relate to similarly ritual or symbolic activities which involve the siting of a fire on grassy ground. As there appears to be no parallel for a briquetage pot being interpreted as a closure deposit, there are no comparable assemblages of charred plant remains for (1060).

Latin name	Family	Common name	Habitat	1060
T*riticum spelta* glume base	Poaceae	spelt wheat	F	1
Glebionis segetum	Asteraceae	corn marigold	AB	2
Poa annua grain	Poaceae	annual meadow-grass	AB	31
Poaceae sp indet grain	Poaceae	grass	AF	1

Env Table 1: Charred plant remains from fill of urn (1060)

Key:

habitat
A= cultivated ground
B= disturbed ground
C= woodlands, hedgerows, scrub etc
D = grasslands, meadows and heathland
E = aquatic/wet habitats
F = cultivar

5.4 Animal bone analysis, by Ian L Baxter

5.4.1 Introduction

A total of 144 animal bones from the hand-collected assemblage were identified to species or broader taxonomic category (Animal Table 1). A further eight specimens were identified from the sample residues (Animal Table 2). The animal bones date from the following periods:

- 2) Iron Age
- 3) Roman

This is a small assemblage of animal bones and conclusions regarding the economy of the site will necessarily be limited and tentative. The majority of the animal bones came from Iron Age ditches and the remainder from pits cut into these and dated to the Roman period.

5.4.2 Provenance and preservation

In general the preservation of the animal bone is fairly good and ranges from good to fair. The animal bone fragments were recovered from ditches and pits.

5.4.3 Frequency of species

The assemblage is heavily biased in favour of the domestic mammals, with cattle, sheep/goat, pig, horse and dog all represented. Compared with Bath Road, Worcester (Warman 2010), where Iron Age and Roman fragments have not been separately tabulated and where the assemblage is predominantly Roman, sheep/goat and pig are relatively more numerous at Hawthorn Rise compared to cattle and horse respectively.

Iron Age

Cattle

No measurable horncores or diagnostic cranial fragments were recovered so no information regarding the affinities of the cattle population is available. Teeth and mandibles belonging to subadult and adult beasts predominate. An old adult mandible from ditch 1074, fill 1070, has metallic calculus and periodontal disease with signs of infection and alveolar resorption between P4 and M1. This has been caused by the wedging of fodder in the sulcus (cf. Miles and Grigson

1990: 564). A complete metacarpal recovered from ditch 1075, fill 1099, came from an animal approximately 119cm at the shoulder based on the multiplication factors of Matolcsi (1970).

Sheep

Sheep/goat fragments are slightly more numerous than those of cattle. Four mandibles could be identified as sheep and nothing diagnostic of goat was present in the assemblage. The limited dental and skeletal material available derives from subadult and adult animals.

Pig

Pig remains are relatively frequent at Hawthorn Rise accounting for 12.5% of the main domesticates (Animal Table 1). The pig remains recovered came from young adult, subadult and juvenile animals. All four lower canine teeth found belonged to females.

Horse

Equid remains are relatively frequent. All are consistent with horse and nothing was seen that could be ascribed to mule or donkey. Loose teeth and a mandible came from animals aged approximately 6 years, ten years and eight years based on the comparative wear curves of Levine (1982). The mandible of the eight year old came from ditch 1074, fill 1081. A radius and ulna found in the same context came from a horse 124.6cm (12.5 hands) at the withers based on the multiplication factors of May (1985). A calcaneum and astragalus probably belonging to a single individual were found in ditch 1074, fill 1069.

Dog

Mandibles of medium sized dogs were found in ditch 1074, fill 1049 (Fig 27) and 1072 (Fig 28). A dog upper 3rd incisor was also recovered from (1072).

Wild mammals

Mouse/vole (murid/microtine) bones were found in several samples taken from ditch fills. Species represented include wood mouse (*Apodemus* sp.) represented by a maxilla fragment from ditch 1075, fill 1100.

Birds

A distal tibiotarsus belonging to a small corvid, probably jackdaw (*Corvus monedula*) was found in ditch 1074, fill 1072. A sample from context (1071) contained a thrush sized distal humerus (cf. *Turdus* sp.).

Amphibian

The ilium of a frog (*Rana* sp.) was recovered from a sample taken from ditch 1074, fill 1071.

Roman

The few fragments recovered from the Roman pits include elements from cattle, sheep/goat and pig. A distal humerus from a sample taken in Pit [1064] (1061) came from either a rat (*Rattus* sp.) or water vole (*Arvicola* sp.). This is unusual in having a septal aperture or hole above the articulation. This anomaly has been recorded in both wild and laboratory rats (Riesenfeld and Simon 1975).

Taxon	Period 2 Iron Age	Period 3 Roman	Total
Cattle (*Bos* f. domestic)	51	1	**52**
Sheep/Goat (*Ovis/Capra* f. domestic)	55	2	**57**
Sheep (*Ovis* f. domestic)	(4)	(1)	**(5)**
Pig (*Sus scrofa*)	17	1	**18**
Horse (*Equus caballus*)	13	-	**13**
Dog (*Canis familiaris*)	3	-	**3**
Corvid (cf. *Corvus monedula*)	1	-	**1**
Total	**140**	**4**	**144**

Animal Table 1: Hawthorn Rise, Tibberton, Worcestershire (P4434/WSM 67195). Number of mammal and bird bones in the hand collected assemblage (NISP)

"Sheep/Goat" also includes the specimens identified to species. Numbers in parentheses are not included in the total of the period.

Taxon	Period 2 Iron Age	Period 3 Roman	Total
Pig (*Sus scrofa*)	+	-	**+**
Murid/Microtine	5	1	**6**
Wood Mouse (*Apodemus* sp.)	(1)	(-)	**(1)**
Rat/Water Vole (*Rattus/Arvicola* sp.)	(-)	(1)	**(1)**
Thrush (*Turdus* sp.)	1	-	**1**
Frog (*Rana* sp.)	1	-	**1**
Total	**8**	**1**	**8**

Animal Table 2: Hawthorn Rise, Tibberton, Worcestershire (P4434/WSM 67195). Number of mammal, bird and amphibian bones in the sample assemblage (NISP)

"Sheep/Goat" and "Murid/Microtine" also includes the specimens identified to species. Numbers in parentheses are not included in the total of the period. "+" means that the taxon is present but no specimens could be "counted" (see text).

6 Synthesis

6.1 Morphology

The site comprised of two large parallel ditches running north-east to south-west around the slope of the hill. There were several small pits, none of which could be associated with the ditches; few were dated and even fewer had any physical relationship with the linear features. Those that did were shown to be later, representing the latest activity on the site.

The two ditches were certainly open, and then closed during the later Iron Age, and are considered to be contemporary with each other. Their position and size are suggestive of a substantial defended position, and the quantity of domestic material recovered from the upper fills indicates that settlement activity was situated in the immediate vicinity. The function of the ditches initially suggests defence, but multiple uses should not be ruled out. Emulation and prestige-display are viable aspects (Ray 2015, 132). However, the limited exposed area and the lack of any definitively associated internal structures make morphological comparisons difficult.

The siting of the wide and deep ditches upon the promontory of the hill, just above a steep break in the slope (Fig 3), could justify the application to the site of the, admittedly somewhat loaded, term of hillfort. This report is not the place to discuss the various definitions or the potential societal roles such monuments have elicited, though it should be noted that size and location are not definitive factors in determining what is a hillfort and what is a large enclosure. Moore (2006), partly in order to avoid a similar debate, included hillforts as 'large enclosures', and was able to analyse various characteristics from which to glean patterns. Working on the presumption that the ditches represent part of a large enclosure system, then logically they would follow the contours to encircle the hill. The eastern extent would therefore be relatively simple to conjecture, though the western side is more debatable. A conservative estimate of the size would put an enclosure at 1.8ha, whilst

an enclosure that extended to the natural pinch point in the topography of the hill (approximately 200m west) would suggest an area of *c* 4ha. Either would place the site in the upper bracket for enclosure size (*ibid* 61-2).

The encirclement of the hill would result in a relatively flat area of land at the top approximately 100m across, which is where any occupation is likely to have been sited.

The site had been truncated following ploughing in the post-medieval period, and this was indicated by the depths of the ditches; the slots excavated in the west were significantly shallower than their counterparts in the east. Because of this truncation, no earthworks were visible in the landscape to suggest possible banks or ramparts, though the deposition of the fills would indicate internal banks.

6.2 Middle Iron Age origins

Whilst the final stages of the two ditches are clearly placed in the later Iron Age, both contain Middle Iron Age pottery (and some possible Late Bronze Age fabrics). In the northern ditch (1075), some of this material is found in isolation in lower fills. These fills were identified as being formed via low energy depositional processes, presumably erosion from upcast bank material (with the bank on the upper, western side). As such, it is possible that the formation of these ditches belongs to the Middle Iron Age. Certainly there was enough domestic material recovered dating from this period to suggest settlement activity in the vicinity. As noted by Ray (2015, 128), later hilltop settlements were also often the location of earlier, potentially continuous, activity.

The apparently single cutting of the ditches asks various questions of the chronology of the site. If there is a Middle Iron Age origin, it suggests a long period of use, but with a diminishing need for the function of the ditches. If these ditches were defensive then presumably they would have been better maintained, and not allowed to silt up. Conversely, they may have been well maintained and regularly cleaned, the process of which is not visible in the archaeological record. This would not preclude a Middle Iron Age formation, but it would render it impossible to determine from the ceramic assemblage alone. Any material found in the lower fills could of course be residual.

6.3 Settlement and trade, by Derek Hurst and Ian L. Baxter

Broadly the bulk of the artefactual evidence is typical of a site occupied in the later Iron Age, with some earlier finds signifying later Bronze Age/earlier Iron Age. Both ditches included a sequence of finds, arguably starting with the Middle Iron Age, though this could have been just residual material derived from earlier activity in the vicinity. Certainly the ditches were present in the Late Iron Age and had mainly been infilled by the end of this period, and, therefore, the purpose of the ditches (defence/emulation) had been superseded by then. This substantial Late Iron Age enclosure can be compared to a similar site at Blackstone, near Bewdley, where the more complete remains suggested that this was a prominent site with quite specialised use perhaps serving a variety of purposes, and deserted before the Roman conquest. Here its position on the River Severn suggested it played a part in the distribution of goods, while possible funerary evidence perhaps indicated that it may have had another role (Hurst *et al* 2010). It will be necessary to excavate more of the Tibberton site and more sites of this general type before any further progress can be made interpreting these remains in more detail.

The animal bone assemblage recovered from the site is small and conclusions regarding the economy of the site are necessarily limited and tentative. However, in the Iron Age sheep were probably the most numerous domestic species. As the animal bones were recovered from ditch fills this aspect is probably understated as the bones of larger species, cattle and horse, tend to be more numerous in peripheral features of sites of the period (Wilson 1996). Cattle and pigs were also kept and horses and dogs doubtless used in herding the domestic stock.

6.4 Late Iron Age abandonment

The upper three fills of both ditches share certain characteristics; rapid and intentional deposition; a high quantity of domestic waste including cooking pots, charcoal, animal bone and pot-boiler stones; and residual pottery from earlier periods.

The comparison of the pottery assemblages from the two ditches (Fig 11) highlights the difference between the vessel classes present. In the southern ditch, tubby cooking pots are dominant, whilst the northern ditch contains predominantly jars. Whilst no major chronological deductions can be made from this data, it does suggest that the backfilling of the ditches was to some extent structured. It could represent a systematic process of abandonment, with aspects of the settlement interred in specific areas.

In the top of the northern ditch was cut a small pit, into which was placed a briquetage vessel (the upper part had been truncated away, presumably as a result of post-medieval ploughing). As has already been noted, a near complete, if not intact, vessel was recovered from the top of the same ditch during the evaluation (One Ten Archaeology 2014), and it is proposed that this too sat within its own pit. Other sites show systematic abandonment with structured deposits marking the final phase (Moore 2006, 63). For example Conderton Camp hill fort at the northern end of the Cotswolds escarpment to the south-east exhibits evidence for an orderly end to its occupation, with radiocarbon dates suggesting this had occurred by 80 cal BC at the latest (Thomas 2005, 256-7).

The pottery conclusively dates the last stages of the backfilling of the ditches to the Late Iron Age. The presence of possible conquest-period Severn valley ware in the very top of the ditches could easily be intrusive; of the small number of pits that also contain such pottery, one cuts the top of the southern ditch. These pits indicate that some level of activity is continuing on the site, even after the enclosure ditches have been slighted and backfilled. Whilst the limited sample of such features makes greater analysis difficult, there is a suggestion that the site has not been wholly abandoned.

6.5 Wider landscape

From the Middle Iron Age, the number of enclosures increases dramatically from what had been an unenclosed settlement pattern in the Late Bronze Age and Early Iron Age (Moore 2007). Examples from the region include Brockhill (Mann 2012), a small curvilinear enclosure dated to between 181BC-18AD, and Blackstone (Hurst *et al* 2010), a rectangular enclosure. Blackstone occupied a small promontory position, and was double-ditched, though it was much smaller than the projected size of the Tibberton site, at 0.5ha. Other examples of double-ditched enclosures in Worcestershire include sites at Kempsey, Broadway and around Bredon Hill, whilst modern exploitation of aggregates on the river terraces has led to archaeological investigations of enclosed sites at Grimley, Clifton, and Ripple.

To the south-west of the site, 1.5km distant, lies a probable Middle Iron Age timber walkway, built across wet ground (Keith-Lucas 2010). Whilst this site has not been fully investigated and therefore has only a limited understanding, it could form part of the local landscape associated with the enclosure at Tibberton. The major salt production centre at Droitwich lies just 5km north of Tibberton, and the presence of three Droitwich fabrics of briquetage is testament to the site's connection to the saltway trade routes.

The general pattern for later Iron Age settlement in the region is one of densely settled and organised landscapes, with occasional hilltop enclosures like those at Conderton Camp or Bredon Hill to the south-east (Moore 2006). However, the relationship between the lowland settlements and those on the hilltops is poorly understood (Hurst *et al* 2010). Questions remain regarding the relationships between the hilltop and lowland settlements, such as the potential interdependence in livestock management and trade. Fundamentally, further excavation would be required of such sites as Tibberton in order to understand the scale and function of these enclosures before their influences on, and position within, the landscape can be considered in more detail.

7 Acknowledgements

Worcestershire Archaeology would like to thank the following for their kind assistance in the successful conclusion of this project, Matthew Brown (Speller Metcalfe Living Ltd), Adrian Scruby (Historic Environment Advisor, Worcestershire County Council),

8 Bibliography

AAF 2011 *Archaeological archives: a guide to the best practice in the creation, compilation, transfer and curation,* Archaeological Archives Forum, http://www.archaeologyuk.org/archives/

Albarella, U, and Davis, S J M, 1994 The Saxon and Medieval animal bones excavated 1985-1989 from West Cotton, Northamptonshire, *Ancient Monuments Laboratory Report Series* **17/94**

Baxter, I L, 1998 Species identification of equids from Western European archaeological deposits: methodologies, techniques and problems, 3-17, in Anderson, S, (ed), 1998 *Current and Recent Research in Osteoarchaeology*, Proceedings of the third meeting of the Osteoarchaeological Research Group, Oxford: Oxbow, *http://www.alexandriaarchive.org/icaz/icazForum/viewtopic.php?t=1089*).

BGS 2015 *Geology of Britain Viewer*, http://mapapps.bgs.ac.uk/geologyofbritain/home.html, British Geological Survey, accessed 19 October 2015

Boessneck, J, 1969 Osteological Differences between Sheep (*Ovis aries Linne*) and Goat (*Capra hircus Linne*), 331-359 in: Brothwell, D R and Higgs, E, (eds.), 1969 *Science in Archaeology*, London: Thames and Hudson

Cappers, T R J, Bekker, R M, and Jans, J E A, 2012 Digitale Zadenatlas van Nederland: Digital seed atlas of the Netherlands, Groningen Archaeological Studies, 4, Barkhuis Publishing and Groningen University Library: Groningen

CAT 2002 *Land to the west of Plough Road, Tibberton, Worcestershire – archaeological evaluation*, Cotswold Archaeological Trust, unpublished report **02030**, dated 17 April 2002

CIfA 2014a *Standard and guidance: Archaeological excavation*, Chartered Institute for Archaeologists, http://www.archaeologists.net/codes/ifa

CIfA 2014b *Standard and guidance for the collection, documentation, conservation and research of archaeological materials,* Chartered Institute for Archaeologists, http://www.archaeologists.net/codes/ifa

Cunliffe, B, 1991 *Iron Age communities in Britain: an account of England, Scotland and Wales from the seventh century BC until the Roman conquest*, 3rd edition

Dalwood, H, and Edwards, R, 2004 *Excavations at Deansway, Worcester, 1988-89, Romano-British small town to late medieval city,* CBA Res Rep **139**

Davis, S J M, 1980 Late Pleistocene and Holocene equid remains from Israel. *Zoological Journal of the Linnean Society* 70 (3): 289-312

Davis, S J M, 1992 A rapid method for recording information about mammal bones from archaeological sites, *Ancient Monuments Laboratory Report Series* **19/92**

Driesch, A, von den, 1976 *A guide to the measurement of animal bones from archaeological sites,* Peabody Museum Bulletin 1, Cambridge, Mass, Harvard University

Eisenmann, V, 1981 Etude des dents jugales inferieures des *Equus* (Mammalia, Perissodactyla) actuels et fossiles, *Palaeovertebrata* **10**: 127-226

Evans, C J, 2014 Analysis of the artefacts, in Wainwright, J, 2014 *Archaeological Investigations in St John's, Worcester,* Worcestershire Archive and Archaeology Service, Worcestershire County Council, unpublished report **1751**

Gingell, C J, and Morris, E L, 2000 The artefacts, in Lawson, A J, 2000 *Potterne 1982-5, Animal Husbandry in Later Prehistoric Wiltshire*, Wessex Archaeology, Report No **17**

Grant, A, 1982 The Use of Tooth Wear as a Guide to the Age of Domestic Ungulates, 91-108 in Wilson, R, Grigson, C, and Payne, S, (eds) *Ageing and Sexing Animal Bones from Archaeological Sites,* , BAR British Series **109**, Oxford

Griffin, L, 2014 *Analysis of the artefacts from an archaeological evaluation at land adjacent to Hawthorne Rise, Tibberton, Worcestershire,* Worcestershire Archive and Archaeology Service, Worcestershire County Council, unpublished report **2151**

Hurst, J D, 2011 Middle Bronze Age to Iron Age: a research assessment overview and agenda, chapter three, 101-126 in Watt, S, (ed) 2011 *The archaeology of the West Midlands: a framework for research,* Oxbow Books, Oxford

Hurst, J D, and Rees, H, 1992 Pottery fabrics; a multi-period series for the County of Hereford and Worcester, 200–9 in Woodiwiss, S G, (ed), 1992 *Iron Age and Roman salt production and the medieval town of Droitwich*, CBA Res Rep, **81**

Hurst, J D, Hunt, A, and Davenport, P, 2010 Iron Age settlement at Blackstone, Worcestershire: excavations 1972, 1973, and 1977, *Internet Archaeology* **28**, Online access, http://intarch.ac.uk/journal/issue28/hurst_index.html

Keith-Lucas, F, 2010 *Archaeological evaluation at Pershore Lane, Tibberton, Worcestershire*, Worcestershire Archive and Archaeology Service, Worcestershire County Council, unpublished report **1782**

Levine, M A, 1982 The use of crown height measurement and eruption-wear sequences to age horse teeth, 223-250 in: Wilson, R, Grigson, C, and Payne, S, (eds) 1982 *Ageing and Sexing Animal Bones from Archaeological Sites*, BAR British Series **109**, Oxford

Lovett, P J, and Vaughan, T M, 2015 *Assessment and Updated Project Design for excavation at Hawthorn Rise, Tibberton, Worcestershire,* Worcestershire Archive and Archaeology Service, Worcestershire County Council, unpublished report, dated 21 December 2015

Mann, A C, 2012 *Archaeological Excavation at Brockhill Lane, Redditch, Worcestershire,* Worcestershire Archive and Archaeology Service, Worcestershire County Council, report **1934**

Matolcsi, J, 1970 Historische Erforschung der Körpergröße des Rindes auf Grund von ungarischem Knochenmaterial *Zeitschr f Tierzüchtg u Züchtungsbiol, Hamburg* **87**: 89-137

May, E, 1985 Widerristhöhe und Langknockenmasse bei Pferd – ein immer noch aktuelles Problem, *Zeitschrift fur Saugertierkunde* **50**: 368-382

Miles, A E W, and Grigson, C, 1990 *Colyer's Variations and diseases of the teeth of animals,* Cambridge University Press

Moore, T, 2006 *Iron Age Societies in the Severn-Cotswolds: developing narratives of social and landscape change*, Brit Archaeol Rep (Brit Ser) **421**, Oxbow Books

Moore, T, 2007 The Early to Later Iron Age transition in the Severn-Cotswolds: enclosing the Household? 259-278 in Haselgrove, C, and Pope, R, (eds) 2007 *The earlier Iron Age in Britain and the near Continent,* Oxford, Oxbow Books

Morris, E, 1985 Prehistoric salt distributions: two case studies from western Britain, *The Bulletin of the Board of Celtic Studies* **32**, 336–79

Morris, E L, 2007 Making magic: later prehistoric and early Roman salt production in the Lincolnshire fenland, 430–43 in Haselgrove, C, and Moore, T, (eds), 2007 *The later Iron Age in Britain and Beyond*, Oxford: Oxbow Books

Morris, E, 2010 Briquetage, in Hurst, J D, Hunt, A, and Davenport, P, 2010 *Iron Age settlement at Blackstone, Worcestershire: excavations 1972, 1973, and 1977*, Internet Archaeology, **28.4.3.** http://intarch.ac.uk/journal/issue28/3/4.3.html

One Ten Archaeology 2014 *Land (Hillside) adjacent to Hawthorn Rise, Tibberton, Worcestershire, Draft Report for Planning*, One Ten Archaeology, unpublished report **HRT 14**, dated June 2014, WSM 57101

Payne, S, 1969 A metrical distinction between sheep and goat metacarpals, 295-305, in Ucko, P, and Dimbleby, G, (eds), 1969 *The domestication and exploitation of plants and animals*, London: Duckworth

Payne, S, 1985 Morphological distinctions between the mandibular teeth of young sheep, *Ovis*, and goats, *Capra*. *Journal of Archaeological Science* **12**: 139-147

Payne, S, and Bull, G, 1988 Components of variation in measurements of pig bones and teeth, and the use of measurements to distinguish wild from domestic pig remains, *Archaeozoologia,* **2**: 27-65

Pearson, E, 2008a *Analysis of plant remains from Domgay Lane, Four Crosses, Powys*, Worcestershire County Council, Historic Environment and Archaeology Service, Worcestershire County Council, report **1636**

Pearson, E, 2008b Environmental analysis, in Sworn, S, Archaeological Fieldwork at Worcester College of Technology, Worcester, *Trans Worc Arch Soc*, Ser 3, **21**, 261-277

Pearson, E, 2012 Charred plant remains (Walton, Wellesbourne), in P Thompson, P, and Palmer, S, 2012 *Iron Age, Romano-British and medieval settlements excavated on the Transco Newbold Pacey to Honeybourne gas pipeline in 2000*, Transactions of the Birmingham and Warwickshire Archaeological Society, **116** (for 2012)

Pearson, E, 2015 Environmental remains, in Lovett, P J, and Vaughan, T M, 2015 *Assessment and Updated Project Design for excavation at Hawthorn Rise*, *Tibberton, Worcestershire,* Worcestershire, Worcestershire Archive and Archaeology Service, Worcestershire County Council, unpublished report dated 21 December 2015

Ray, K, 2015 *The Archaeology of Herefordshire: An Exploration*, Woonton Almeley, Logaston Press

Richer, S, and Clapham, A, 2014 *Environmental remains from an evaluation on land off Hawthorn Rise, Tibberton, Worcestershire,* Worcestershire Archive and Archaeology Service, Worcestershire County Council, unpublished report, in One Ten Archaeology 2014 *Land (Hillside) adjacent to Hawthorn Rise, Tibberton, Worcestershire, Draft Report for Planning*, One Ten Archaeology, unpublished report **HRT 14**, dated June 2014, WSM 57101

Riesenfeld, A, and Simon, M, 1975 (online 2005) Septal apertures in the humerus of normal and experimental rats, *American Journal of Physical Anthropology* **42 (1)**: 57-61

Roe, F, 2004 Worked stone, in Dalwood, H, and Edwards, R, 2004 *Excavations at Deansway, Worcester, 1988-89, Romano-British small town to late medieval city,* CBA Res Rep **139**

SMA 1993 *Selection, retention and dispersal of archaeological collections,* Society for Museum Archaeology, http://www.socmusarch.org.uk/publica.htm

Stace, C, 2010 New flora of the British Isles, Cambridge University Press, 3rd edition

Thomas, N, 2005 *Conderton Camp, Worcestershire, A small middle Iron Age hillfort on Bredon Hill,* CBA Res Rep **143**, London

WA 2012 *Manual of service practice, recording manual*, Worcestershire Archaeology, Worcestershire County Council, report **1842**

WA 2015 *Proposal for an archaeological excavation at Hawthorn Rise, Tibberton, Worcestershire*, Historic Environment and Archaeology Service, Worcestershire County Council, unpublished document, dated 14 September 2015, **P4434**

Warman, S, 2010 Animal bone analysis, in Rogers, T V, 2010 *Archaeological Excavation and Watching Brief at the former petrol storage facility, Bath Road, Worcester,* Historic Environment and Archaeology Service, Worcestershire County Council, unpublished report **1629**

Watt, S, (ed) 2011 *The archaeology of the West Midlands: a framework for research,* Oxbow Books, Oxford

WCC 2010 *Standards and guidelines for archaeological projects in Worcestershire*, Planning Advisory Section, Worcestershire Archive and Archaeology Service, Worcestershire County Council, unpublished report **604**, amended July 2012

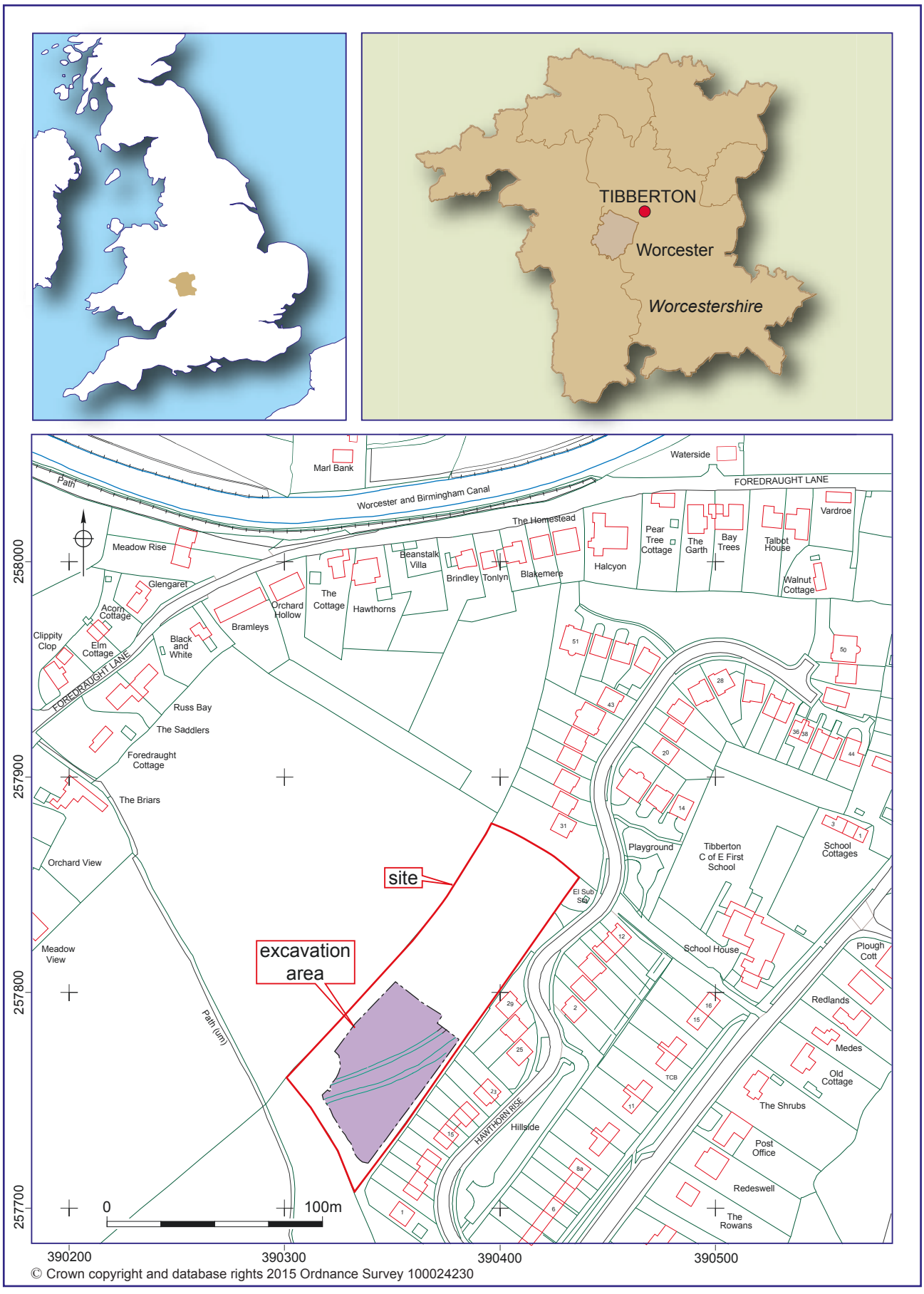
WCC, 2014 *Requirements for a programme of archaeological work at Hawthorn Rise, Tibberton, Worcestershire*, Historic Environment and Archaeology Service, Worcestershire County Council, unpublished document, dated 16 September 2014

Webster, J, forthcoming *Archaeological Investigations at Church Farm West, Ball Mill Quarry, Grimley, Worcestershire*, Worcestershire Archive and Archaeology Service, Worcestershire County Council, unpublished report **1906**

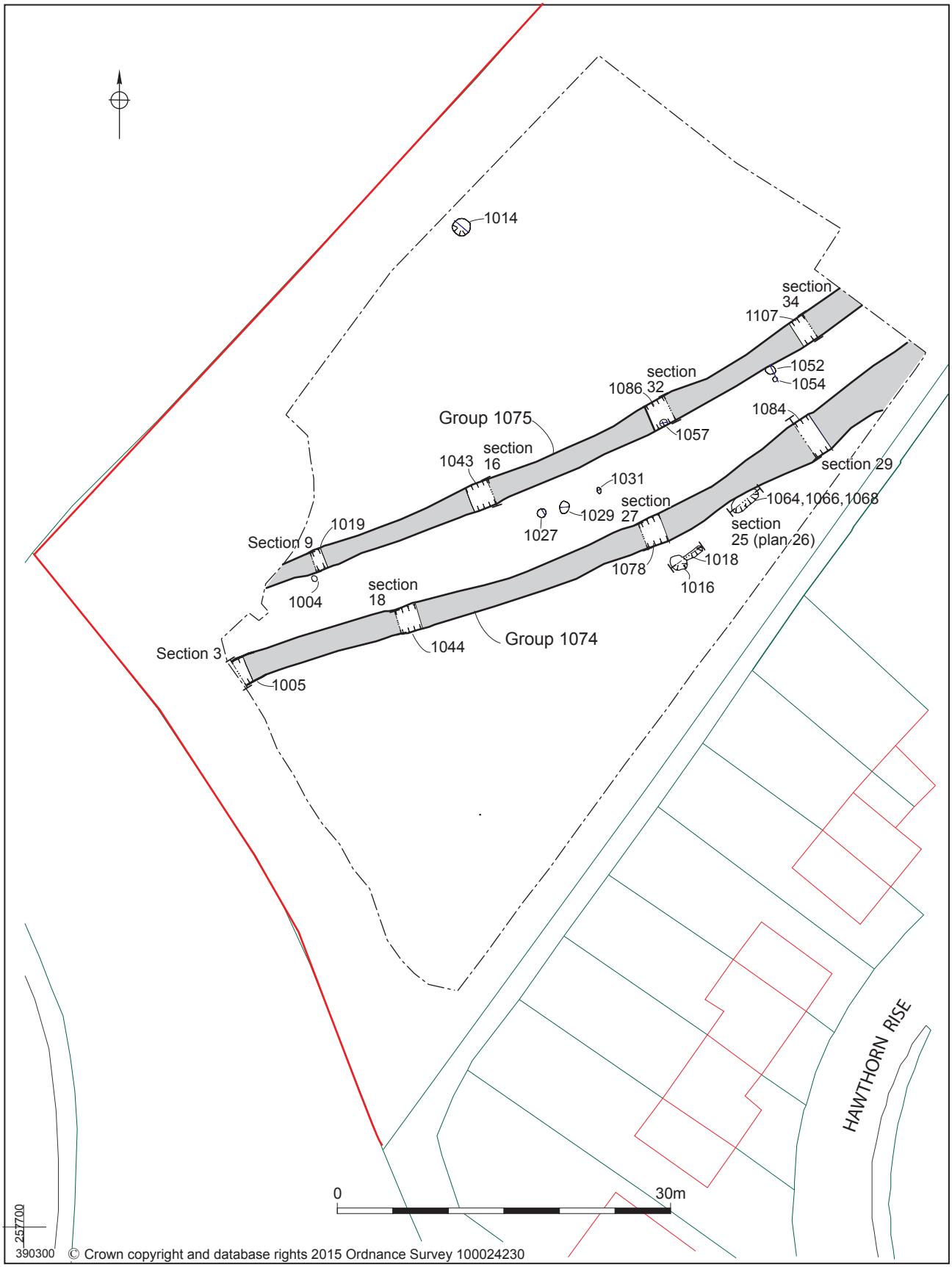
Wills, J, forthcoming *Excavations at Beckford, Worcestershire, 1972-79*, CBA Res Rep **tbc**

Wilson, B, 1996 *Spatial Patterning among Animal Bones in Settlement Archaeology,* BAR British Series **251**, Oxford

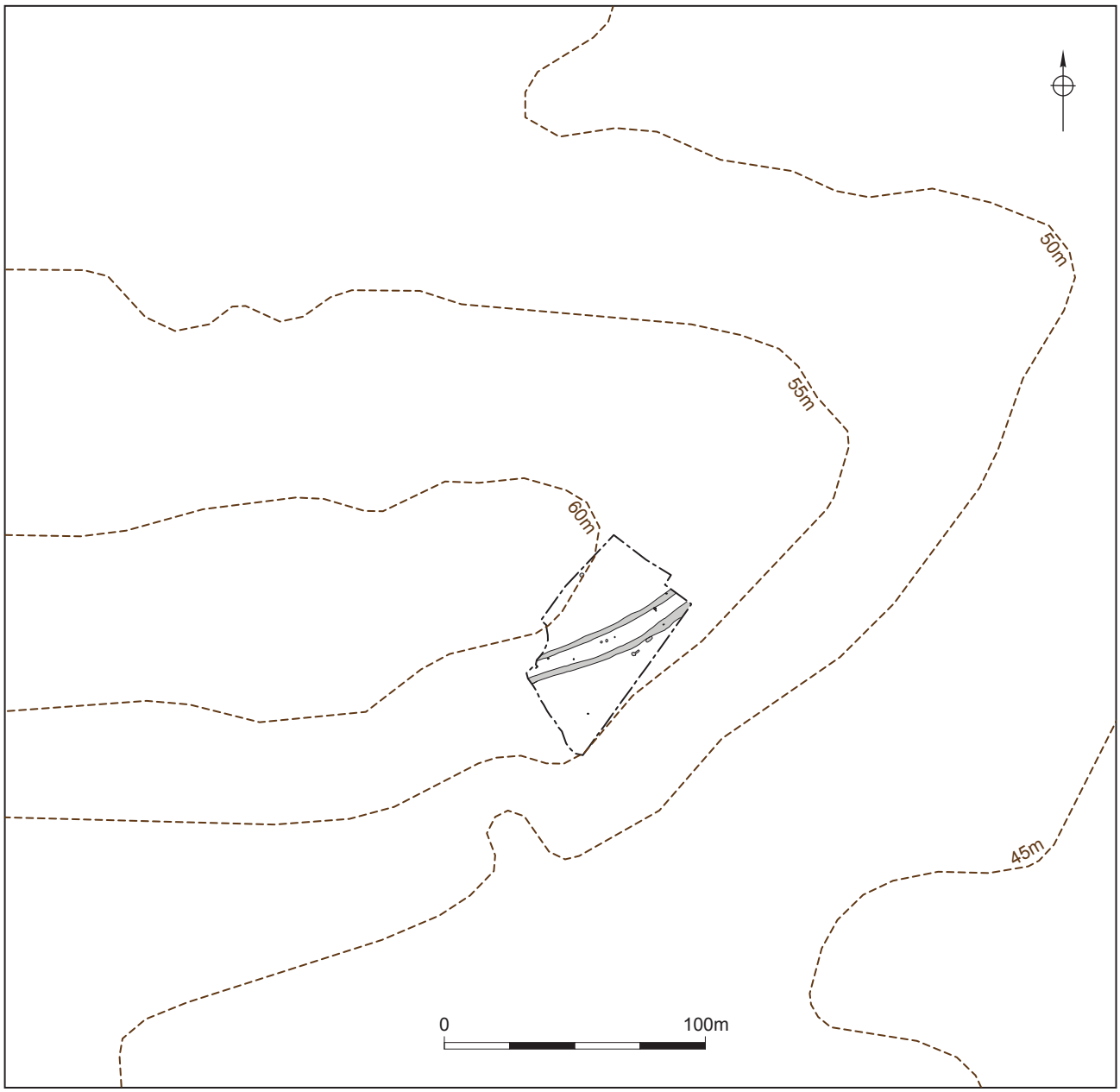
Figures



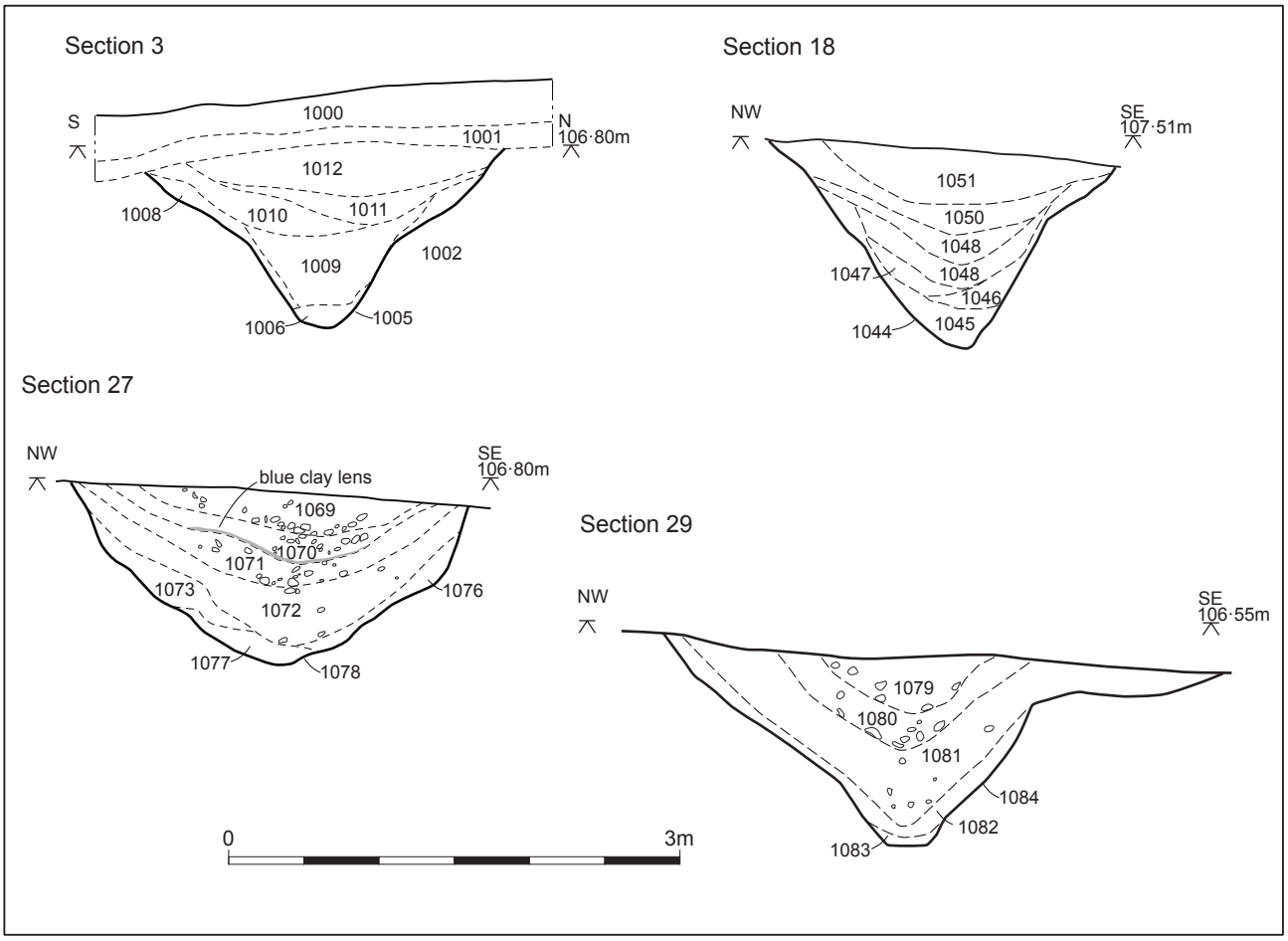
Location of the site *Figure 1*



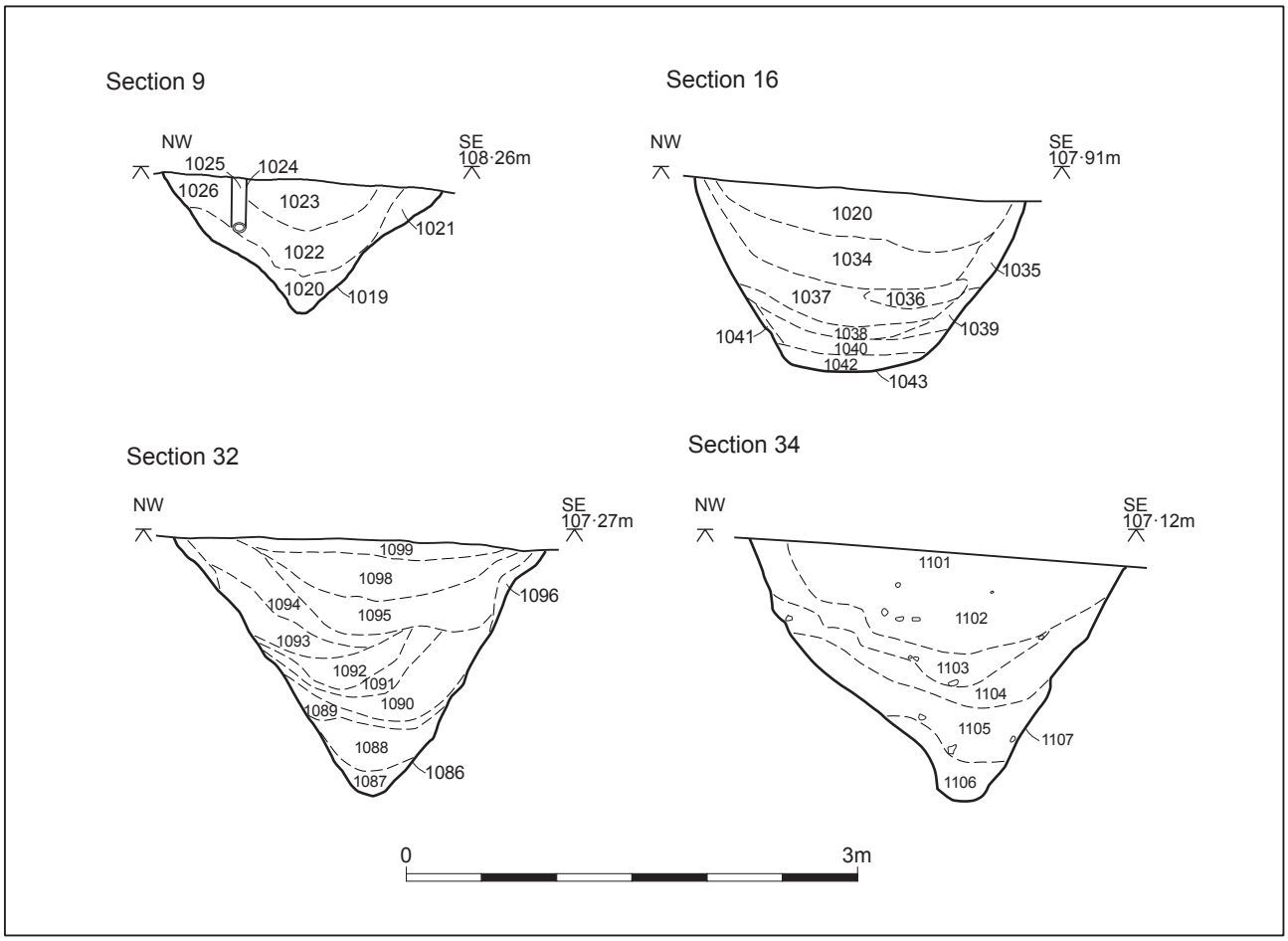
Trench plan *Figure 2*



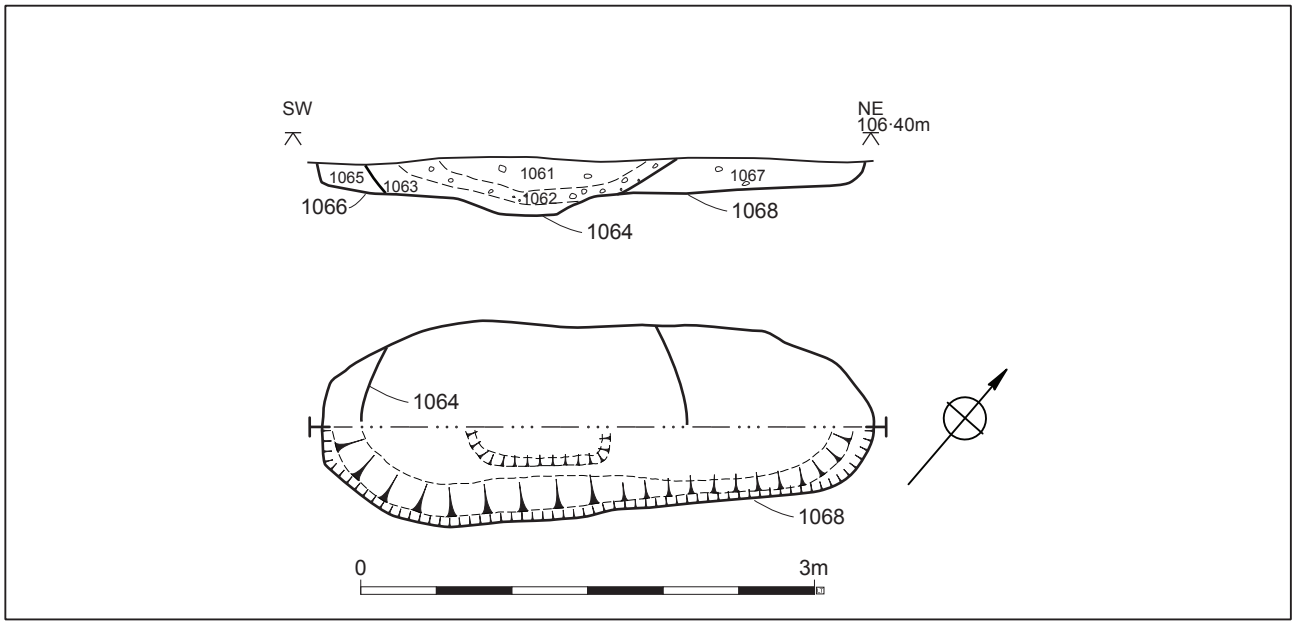
Location of the site in relation to contours *Figure 3*



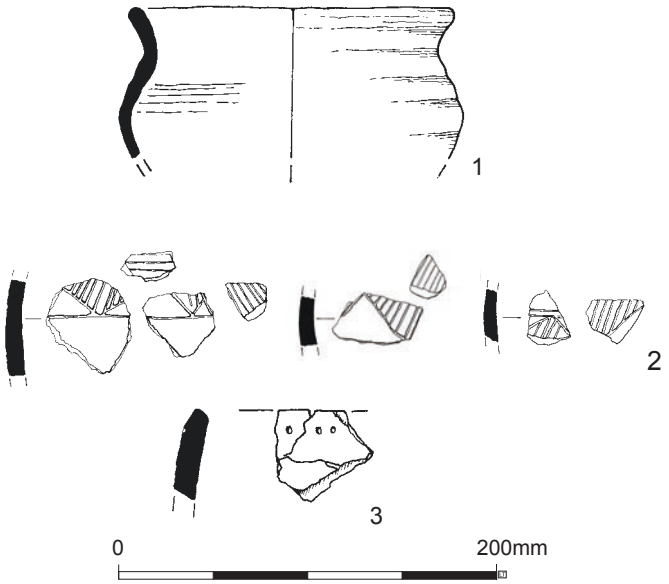
Sections 3,18,27 and 29 *Figure 4*



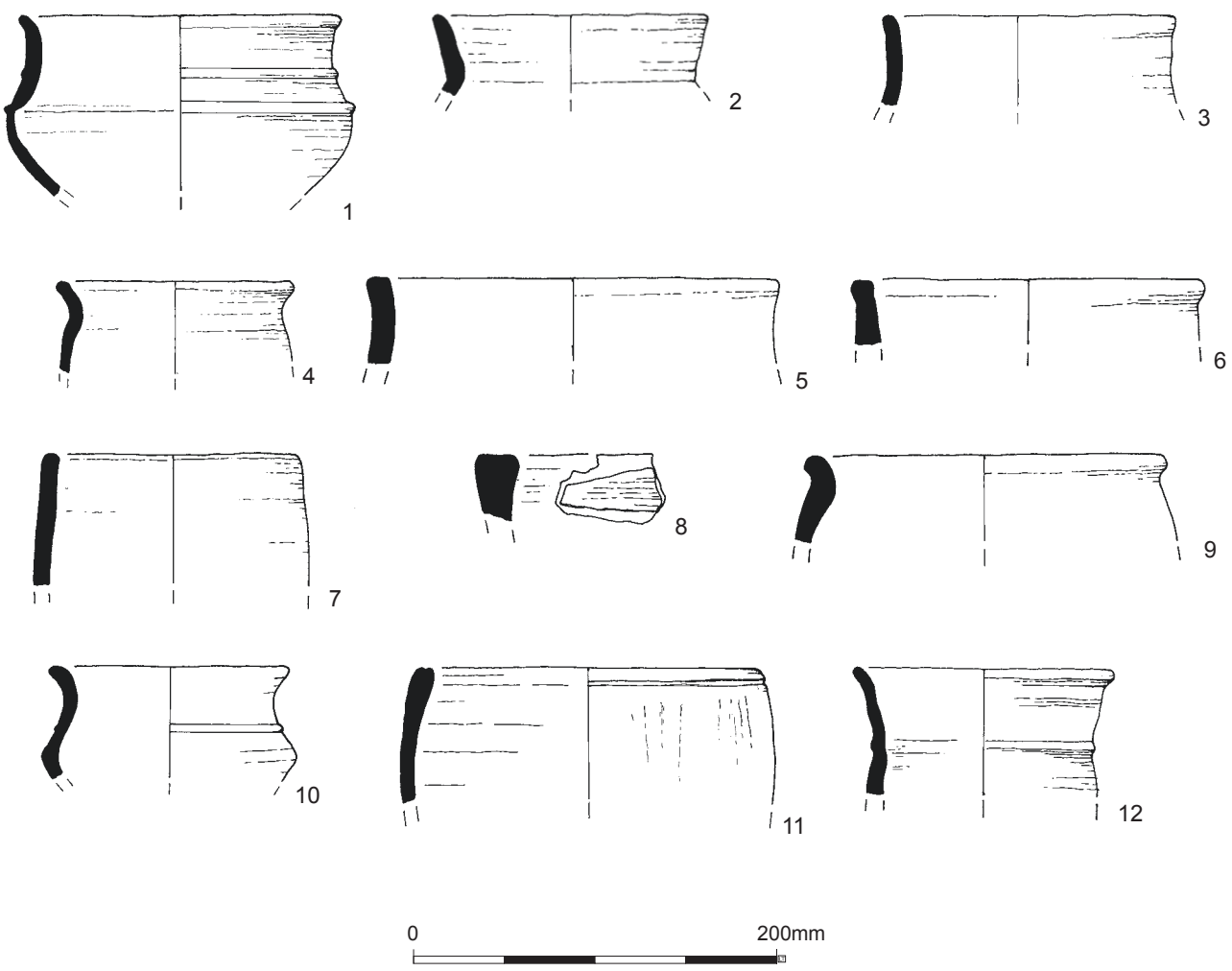
Sections 9,16, 32 and 34 *Figure 5*



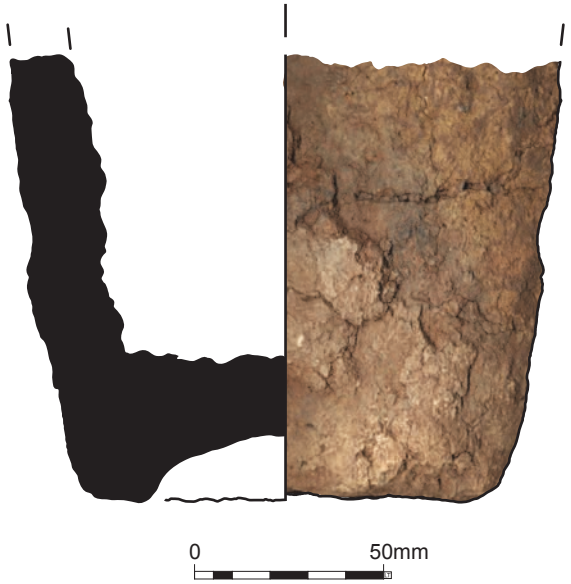
Sections 25 and plan 26 *Figure 6*



Bronze Age pottery *Figure 7*



Late Iron Age pottery *Figure 8*



Briquetage: *Figure 9*

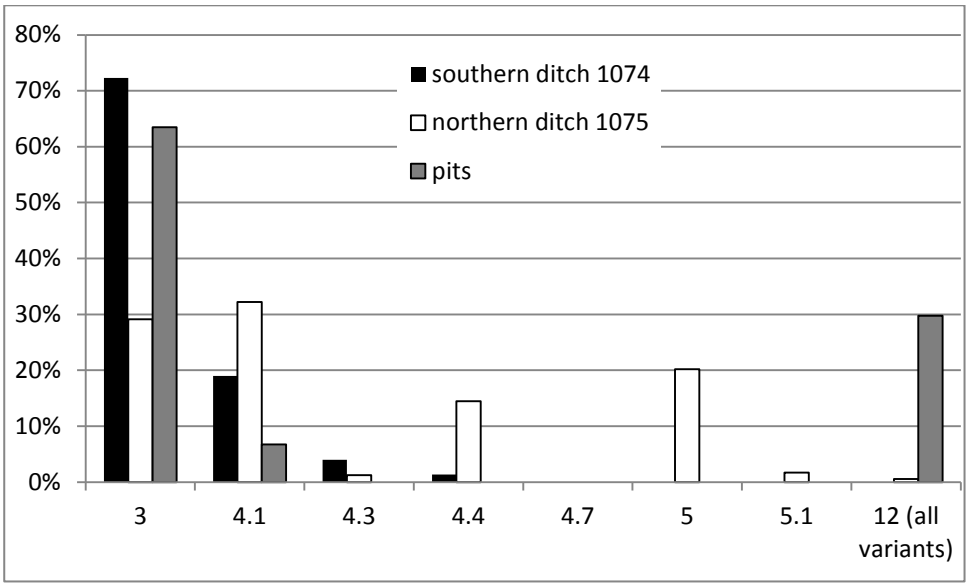


Figure 10: Comparison of the pottery assemblages by feature type and fabric (% weight)

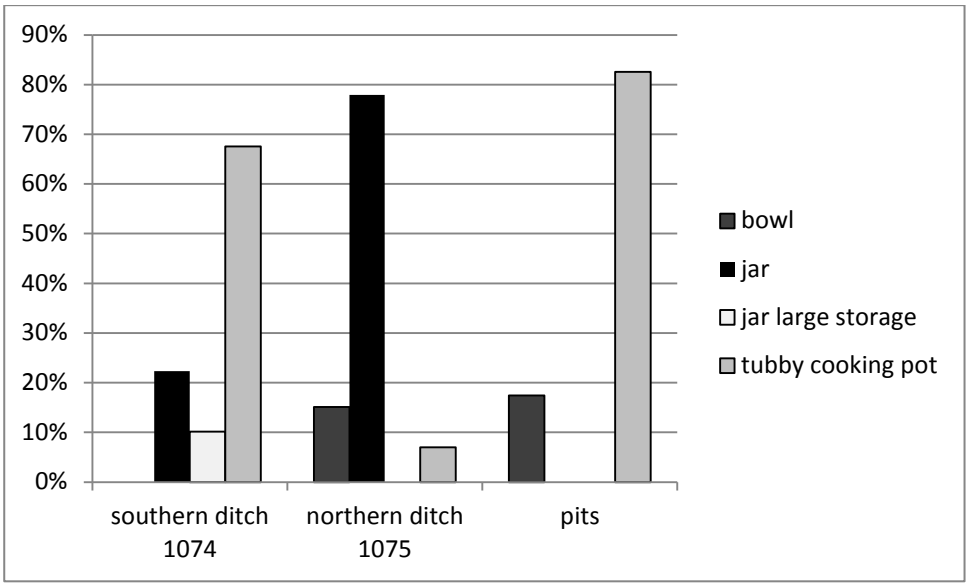


Figure 11: Comparison of the pottery assemblages by feature type and vessel class (% rim EVE)

Figure 12 Site looking NE, 1m scales

Figure 13 Site looking SW, 1m scales

Figure 14 Ditch 1043, looking NW, 1m scales

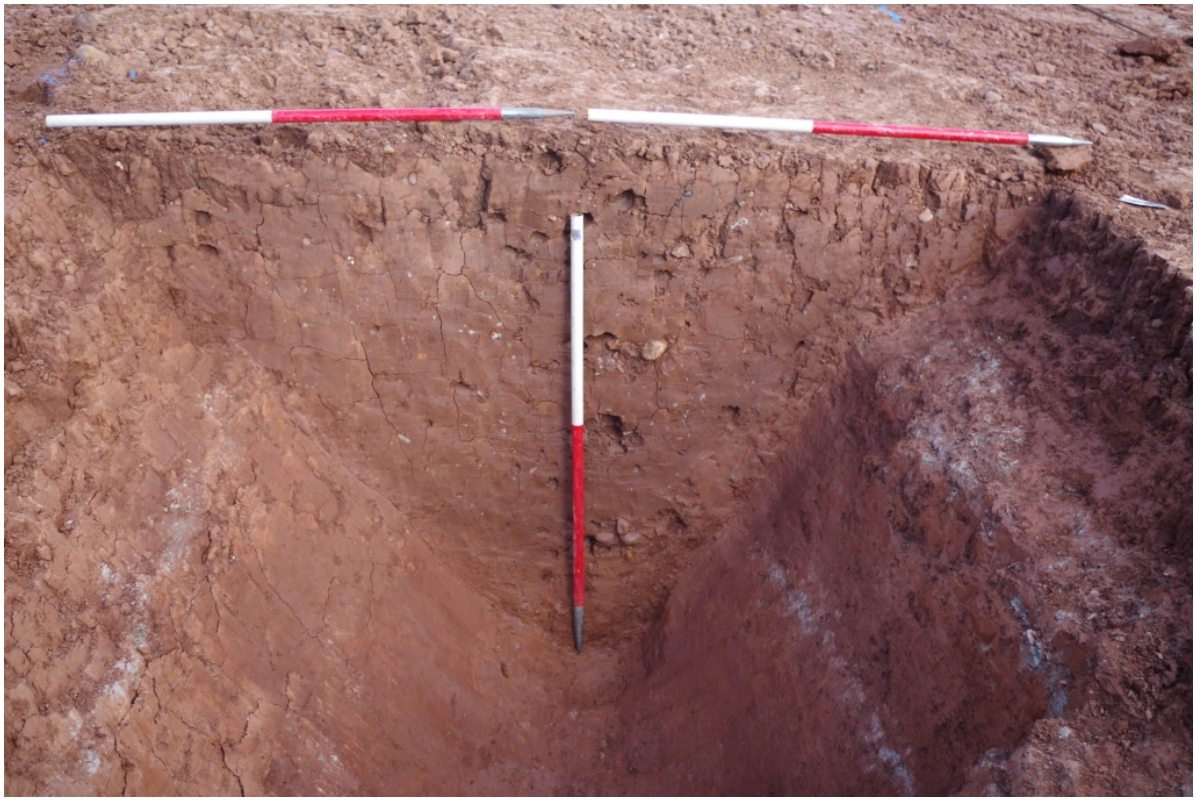


Figure 15 Ditch 1044, looking NE, 1m scales

Figure 16 Ditch 1078, looking SW, 1m scales

Figure 17 Ditch 1084, looking NE, 1m scales

Figure 18 Ditch 1084, looking SW, 1m scales

Figure 19 Ditch 1086, looking NE, 1m scales

Figure 20 Ditch 1107, looking NE, 1m scales

Figure 21 Briquetage in situ, 0.3m scale

Figure 22 Excavation of the briquetage vessel, 1059, in progress

Figure 23 Pit 1057, looking NW, 0.3m scale

Figure 24 Pit 1014, looking NE, 1m and 0.3m scales

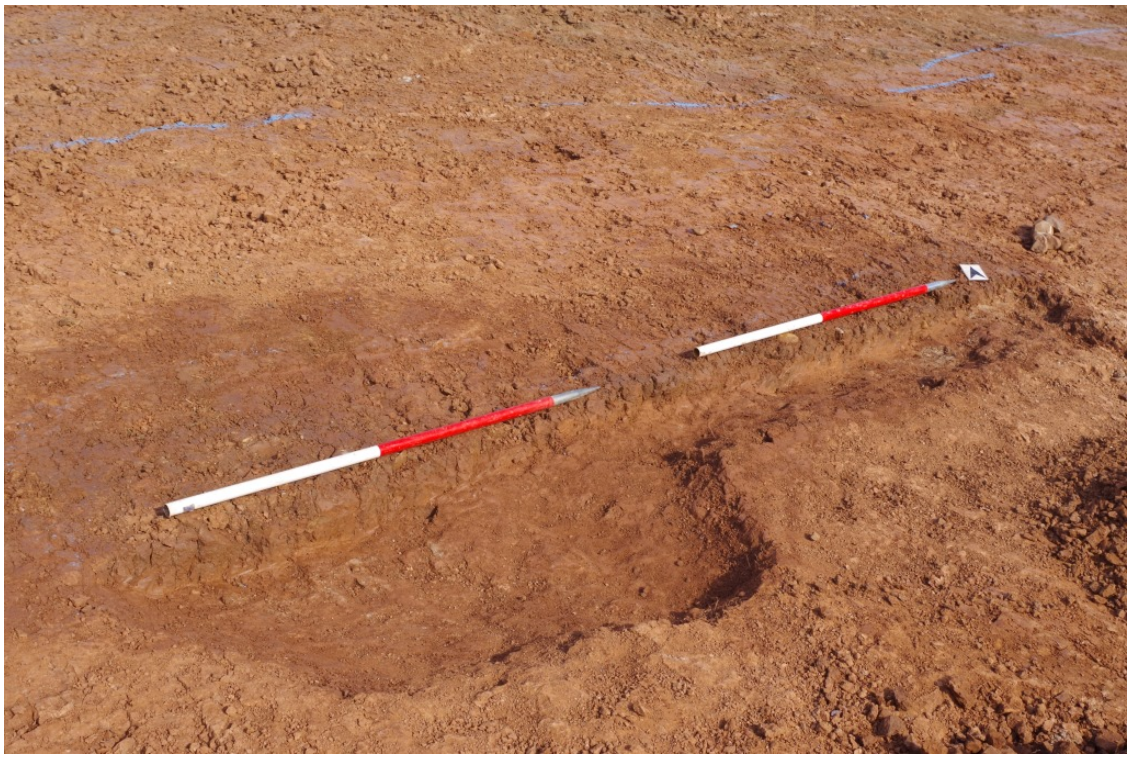


Figure 25 Pits 1016, 1018, looking W, 1m scales

Figure 26 Pits 1064, 1066, 1068, looking north-west, 1m scales

Figure 27 Dog mandible from ditch fill 1049, 0.1m scale

Figure 28 Dog mandible from ditch fill 1070, 0.1m scale

Appendix 2 Technical information

The archive (site code: WSM 67195)

The archive consists of:

108	Context records AS1
7	Field progress reports AS2
2	Photographic records AS3
168	Digital photographs
1	Drawing number catalogues AS4
18	Scale drawings
2	Context number catalogues AS5
13	Sample records AS17
1	Sample number catalogues AS18
5	Box of finds
1	CD-Rom/DVDs
1	Copy of this report (bound hard copy)

The project archive is intended to be placed at:

Worcestershire County Museum
Museums Worcestershire
Hartlebury Castle
Hartlebury
Near Kidderminster
Worcestershire DY11 7XZ
Tel Hartlebury (01299) 250416

Summary of data for Worcestershire HER

intervention	period	material class	object specific type	count	weight(g)
evaluation	Late Iron Age	ceramic	pot	209	5970
	prehistoric	stone	pot boiler	1	19
	post-medieval	ceramic	pot	9	135
	modern	ceramic	pot	3	13
	modern	ceramic	land drain	1	16
	undated	fired clay	fragment	8	130
excavation	prehistoric	stone	flint	1	2
	Late Bronze Age	ceramic	pot	11	67
	Late Bronze Age to early Middle Iron Age	ceramic	pot	25	207
	Late Bronze Age to Early Iron Age	ceramic	pot	7	71
	Middle Iron Age (earlier)	ceramic	pot	2	22
	Middle Iron Age (later)	ceramic	pot	2	21
	Iron Age	ceramic	briquetage	91	2179
	?Iron Age	stone	shale bracelet	1	0.5
	?Iron Age	stone	quern	2	3670
	?Iron Age	stone	slab	1	1812
	prehistoric	stone	pot boiler*	abundant	
	Late Iron Age/early RB	ceramic	pot	515	5280
	undated (LIA/ERB?)	ceramic	fired clay frag	71	286.5
	undated (?LIA/ERB)	ceramic	hearth	1	186
	undated	ceramic	brick/tile	1	10

Finds Table 1: Quantification of the assemblage (the presence of pot boilers was noted during excavation but these were not quantified)*

Intervention	feature type	ditch	fill of	count	% count	weight(g)	% weight	average weight
evaluation	Ditch	1074	309	117	15%	4696	41%	40
	Ditch	1075	310	75	10%	1097	10%	15
Total evaluation				*192*	*25%*	*5793*	*51%*	*30*
excavation	Pit		1016	8	1%	37	0%	5
			1027	7	1%	91	1%	13
			1057	41	5%	256	2%	6
			1064	17	2%	177	2%	10
			1068	6	1%	20	0%	3
	Ditch	1074	1074	14	2%	323	3%	23
			1005	9	1%	7	0%	1
			1044	21	3%	143	1%	7
			1078	259	34%	3269	29%	13
			1084	19	3%	215	2%	11
		1075	1019	45	6%	77	1%	2
			1043	13	2%	86	1%	7
			1086	90	12%	846	7%	9
			1107	14	2%	124	1%	9
Total excavation				*563*	*75%*	*5671*	*49%*	*10*
Total pottery				755	100%	11464	100%	15

Finds Table 2: Quantification of the pottery

intervention	fabric code	Fabric type	count	% count	weight (g)	% weight	rim EVE	% rim EVE
evaluation	3	Malvernian metamorphic	83	43%	4302	74%	-	-
	4.1	Palaeozoic limestone	99	52%	1363	24%	-	-
	5.1	Sandy	10	5%	128	2%	-	-
total evaluation			*192*	*100%*	*5793*	*100%*	-	-
excavation	3	Malvernian metamorphic	345	61%	3221	57%	1.57	52%
	4.1	Palaeozoic limestone	77	14%	1081	19%	0.78	26%
	4.3	Fossil shell	20	4%	152	3%	0.17	6%
	4.4	Shell and sand	24	4%	210	4%	0.08	3%
	4.7	Fossil shell & grog	1	0%	5	0%	0	0%
	5	Sandy	42	7%	342	6%	0.23	8%
	5.1	Handmade sand	3	1%	19	0%	0.03	1%
	12	Severn Valley ware	16	2%	301	5%	0.04	1%
	12.2	Severn Valley ware (organic)	8	1%	37	1%	0	0%
	12.6	Severn Valley ware (soft white)	1	0%	26	0%	0.11	4%
	12.8	Severn Valley ware (grog)	23	4%	268	5%	0	0%
	97	Unidentified prehistoric	2	0%	6	0%	0	0%
total excavation			*562*	*100%*	*5668*	*100%*	*3.01*	*100%*

Finds Table 3: Quantification of the pottery by fabric

intervention	fabric name	fabric code	count	% count	weight(g)	% weight	average weight
excavation	sandy	1	7	6%	62	3%	9
evaluation			2	2%	15	1%	8
excavation	sandy marl	1.1	73	68%	796	34%	11
evaluation			6	6%	101	4%	17
excavation	organic	2	11	10%	1321	56%	120
evaluation			9	8%	61	3%	7
total			108	100%	2356	100%	22

Finds Table 4: Quantification of all the briquetage (evaluation and excavation) by fabric

Feature type	Context group	Fill of	fabric code	Count	% count	weight(g)	% weight	average weight
Ditch	1074	1044	1	2	2%	17	1%	9
			1.1	5	5%	79	4%	16
			2	1	1%	10	0%	10
		1078	1	1	1%	25	1%	25
			1.1	27	30%	267	12%	10
		1084	1.1	8	9%	158	7%	20
total ditch 1074				*44*	*48%*	*556*	*26%*	*13*
Ditch	1075	1043	1	3	3%	13	1%	4
Ditch	1075		2	1	1%	44	2%	44
Ditch	1075	1086	1.1	22	24%	164	8%	7
Ditch	1075		2	8	9%	59	3%	7
Ditch	1075	1107	1.1	6	7%	86	4%	14
total ditch 1075				*40*	*44%*	*366*	*17%*	*9*
Pit	0	1057	1.1	5	5%	42	2%	8
Pit	0		2	1	1%	1208	55%	1208
Pit	0	1064	1	1	1%	7	0%	7
total pits				*7*	*8%*	*1257*	*58%*	*180*
total briquetage				**91**	**100%**	**2179**	**100%**	**24**

Finds Table 5: Quantification of the briquetage from the excavation by feature and fabric

Feature type	Context group	Fill of	context	count	% count	weight(g)	% weight	average weight
Ditch	0	1031	1032	4	6%	0.5	0%	<1
	1074	1005	1010	7	10%	35	7%	5
			1012	6	8%	5	1%	1
		1044	1051	10	14%	47	10%	5
		1078	1069	4	6%	18	4%	5
			1071	15	21%	80	17%	5
	1075	1019	1023	2	3%	10	2%	5
		1043	1033	10	14%	41	9%	4
		1086	1095	4	6%	34	7%	9
			1099	1	1%	2	0%	2
		1107	1102	4	6%	13	3%	3
Pit	0	1057	1058	5	7%	187	40%	37
total				72	100%	472.5	100%	7

Finds Table 6: Quantification of the fired clay from the excavation by feature

context	material class	object specific type	count	weight(g)	period
1010	ceramic	pot	6	5	LIA/ERB
1012	ceramic	pot	3	2	LIA/ERB
1015	ceramic	pot	8	37	LIA/ERB
1020	ceramic	pot	5	5	Late Bronze Age to early Middle Iron Age
1022	ceramic	pot	8	23	LIA/ERB
1023	ceramic	pot	31	46	LIA/ERB
	ceramic	pot	1	3	Middle Iron Age (later)
1028	ceramic	pot	7	91	LIA/ERB
1033	ceramic	briquetage	1	44	Iron Age
	ceramic	pot	10	57	LIA/ERB
1040	ceramic	pot	1	7	Late Bronze Age to early Middle Iron Age
	ceramic	pot	2	22	Middle Iron Age (earlier)
1042	ceramic	briquetage	3	13	Iron Age
1049	ceramic	briquetage	1	7	Iron Age
	ceramic	pot	2	3	LIA/ERB
	ceramic	pot	1	18	Middle Iron Age (later)
1050	ceramic	briquetage	5	79	Iron Age
	ceramic	pot	1	4	Late Bronze Age to early Middle Iron Age
1051	ceramic	briquetage	2	20	Iron Age
	ceramic	pot	17	118	LIA/ERB
	stone	quern	1	540	Iron Age?
1058	ceramic	briquetage	6	1250	Iron Age
	ceramic	pot	41	256	LIA/ERB
1061	ceramic	briquetage	1	7	Iron Age
	ceramic	pot	16	174	LIA/ERB

	stone	quern	1	3130	Iron Age?
1067	ceramic	pot	6	20	LIA/ERB
1069	ceramic	briquetage	6	33	Iron Age
	ceramic	pot	1	5	Late Bronze Age to early Middle Iron Age
	ceramic	pot	100	1585	LIA/ERB
	stone	bracelet	1	0.5	Iron Age
	stone	flint	1	2	prehistoric
1070	ceramic	briquetage	3	93	Iron Age
	ceramic	pot	10	140	LIA/ERB
1071	ceramic	briquetage	1	25	Iron Age
	ceramic	pot	2	37	Late Bronze Age to early Middle Iron Age
	ceramic	pot	86	1187	LIA/ERB
1072	ceramic	briquetage	18	141	Iron Age
	ceramic	pot	11	67	late Bronze Age
	ceramic	pot	1	5	Late Bronze Age to early Middle Iron Age
	ceramic	pot	7	71	late Bronze Age/early Iron Age
	ceramic	pot	41	172	LIA/ERB
1079	ceramic	pot	16	177	LIA/ERB
1081	ceramic	briquetage	8	158	Iron Age
	ceramic	pot	3	38	LIA/ERB
1085	ceramic	pot	14	323	LIA/ERB
1095	ceramic	pot	3	15	LIA/ERB
1098	ceramic	briquetage	3	24	Iron Age
	ceramic	pot	3	45	Late Bronze Age to early Middle Iron Age
	ceramic	pot	60	582	LIA/ERB
1099	ceramic	briquetage	21	158	Iron Age

	ceramic	pot	10	91	Late Bronze Age to early Middle Iron Age
	ceramic	pot	13	106	LIA/ERB
1100	ceramic	briquetage	6	41	Iron Age
	ceramic	pot	1	7	LIA/ERB
1101	ceramic	briquetage	5	75	Iron Age
	ceramic	pot	1	8	Late Bronze Age to early Middle Iron Age
	ceramic	pot	11	107	LIA/ERB
1102	ceramic	pot	2	9	LIA/ERB
1104	ceramic	briquetage	1	11	Iron Age

Finds Table 7 Summary of context dating based on artefacts grouped in context order

Latin name	Family	Common name	Habitat	1060
T*riticum spelta* glume base	Poaceae	spelt wheat	F	1
Glebionis segetum	Asteraceae	corn marigold	AB	2
Poa annua grain	Poaceae	annual meadow-grass	AB	31
Poaceae sp indet grain	Poaceae	grass	AF	1

Environmental Table 1: Charred plant remains from fill of urn (1060)

Key:

habitat
A= cultivated ground
B= disturbed ground
C= woodlands, hedgerows, scrub etc
D = grasslands, meadows and heathland
E = aquatic/wet habitats
F = cultivar

Taxon	Period		Total
	2 Iron Age	3 Roman	
Cattle (*Bos* f. domestic)	51	1	**52**
Sheep/Goat (*Ovis/Capra* f. domestic)	55	2	**57**
Sheep (*Ovis* f. domestic)	(4)	(1)	**(5)**
Pig (*Sus scrofa*)	17	1	**18**
Horse (*Equus caballus*)	13	-	**13**
Dog (*Canis familiaris*)	3	-	**3**
Corvid (cf. *Corvus monedula*)	1	-	**1**
Total	**140**	**4**	**144**

Animal Table 1. Hawthorn Rise, Tibberton, Worcestershire (P4434/WSM 67195). Number of mammal and bird bones in the hand collected assemblage (NISP).

"Sheep/Goat" also includes the specimens identified to species. Numbers in parentheses are not included in the total of the period.

Taxon	Period		Total
	2 Iron Age	3 Roman	
Pig (*Sus scrofa*)	+	-	**+**
Murid/Microtine	5	1	**6**
Wood Mouse (*Apodemus* sp.)	(1)	(-)	**(1)**
Rat/Water Vole (*Rattus/Arvicola* sp.)	(-)	(1)	**(1)**
Thrush (*Turdus* sp.)	1	-	**1**
Frog (*Rana* sp.)	1	-	**1**
Total	**8**	**1**	**8**

Animal Table 2. Hawthorn Rise, Tibberton, Worcestershire (P4434/WSM 67195). Number of mammal, bird and amphibian bones in the sample assemblage (NISP).

"Sheep/Goat" and "Murid/Microtine" also includes the specimens identified to species. Numbers in parentheses are not included in the total of the period. "+" means that the taxon is present but no specimens could be "counted" (see text).