Late Iron Age and early Roman settlement at School Lane, Hartwell Northamptonshire

Report: 15/64

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James Burke and Charlotte Walker

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REGISTERED ORGANISATION CIfA

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Site Code: HSLN 10
NGR: SP789 503

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OASIS REPORT FORM

PROJECT DETAILS	**OASIS No: molanort1-199193**	
Project title	Archaeological mitigation works and excavation at School Lane, Hartwell, Northamptonshire 2010 - 2011	
An area of late Iron Age/early Roman settlement was occupied for a short period around the late 1st century BC to the middle of the 1st century AD, with abandonment occurring shortly after the Conquest. Two adjacent enclosures were defined by partial arcs of deep curvilinear ditches. Within and between them were some subsidiary linear and curvilinear gullies, and a few pits. The features produced a small assemblage of late Iron Age hand-built wares and a larger group of wheel-finished vessels dating to the early to mid-1st century AD. The deposition of two complete upper stones from rotary querns may define the abandonment of Iron Age customs and the adoption of a Romanised lifestyle. The environmental evidence suggests that this was probably a pastoral settlement with the surrounding landscape a mixture of grass and woodland. Remains of a small late medieval building, 14th-16th centuries, were probably part of a dispersed settlement alongside a hollow-way, as shown on a map of 1727.		
Project type	Archaeological excavation	
Site status	Arable	
Previous work	Archaeological appraisal (Gifford 2009), Geophysical survey and Trial Trench evaluation (Burke, Yates and Fisher 2010), Updated Project Design (Burke and Walker 2012)	
Current land use	Grassland	
Future work	Unknown	
Monument type/period	Iron Age and Roman settlement. Late medieval settlement	
Significant finds	Late Iron Age pottery, beehive querns, iron objects	
PROJECT LOCATION		
County	Northamptonshire	
Site address	Land at School Lane, Hartwell	
Postcode	NN7 2HL	
OS co-ordinates	SP 789 503	
Area (sq m/ha)	*c*2.28 hectares	
Height aOD	*c*116 - 125m aOD	
PROJECT CREATORS		
Organisation	MOLA Northampton (formerly Northamptonshire Archaeology)	
Project brief originator	Northamptonshire County Council Planning	
Project Design originator	Northamptonshire Archaeology	
Director/Supervisor	Jim Burke, MOLA	
Project Manager	Adam Yates, MOLA	
Sponsor or funding body	Bellway Homes	
PROJECT DATE		
Start date	November 2010	
End date	April 2011	
ARCHIVES	Location (Accession no.)	Content
Physical	MOLA Northampton Archive Store	Pot; animal bone; Fe objects, querns,
Paper		Site records; background data, photographs; plans and sections on permatrace
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report (MOLA report)	
Title	Late Iron Age and early Roman settlement at School Lane, Hartwell, Northamptonshire	
Serial title & volume	15/64	
Author(s)	Claire Finn, Andy Chapman, James Burke and Charlotte Walker	
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Date	April 2015	

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Abstract

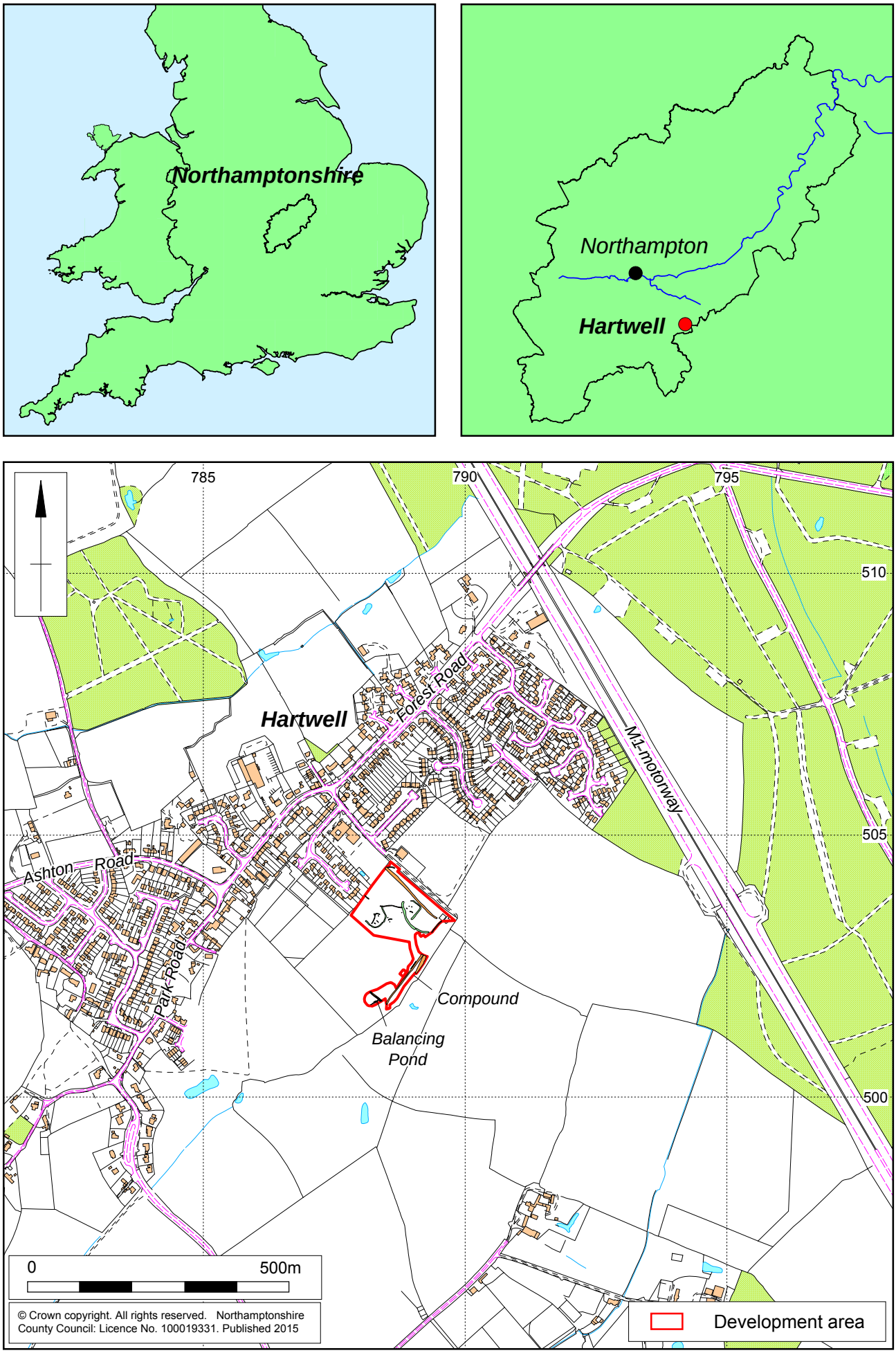
Archaeological excavation was carried out by Northamptonshire Archaeology (now MOLA Northampton) between November 2010 and April 2011, on behalf of Bellway Homes. An area of late Iron Age/early Roman settlement was occupied for a short period around the late 1st century BC to the middle of the 1st century AD, with abandonment occurring shortly after the Conquest. Two adjacent enclosures were defined by partial arcs of deep curvilinear ditches. Within and between them were some subsidiary linear and curvilinear gullies, and a few pits. The features produced a small assemblage of late Iron Age hand-built wares and a larger group of wheel-finished vessels dating to the early to mid-1st century AD. The deposition of two complete upper stones from rotary querns may define the abandonment of Iron Age customs and the adoption of a Romanised lifestyle. The environmental evidence suggests that this was probably a pastoral settlement with the surrounding landscape a mixture of grass and woodland. Remains of a small late medieval building, 14th-16th centuries, were probably part of a dispersed settlement alongside a hollow-way, as shown on a map of 1727.

1 INTRODUCTION

1.1 Site location

Northamptonshire Archaeology (now MOLA) was commissioned by Bellway Homes to undertake archaeological mitigation work on a site of proposed development off School Lane, Hartwell, Northamptonshire (NGR SP 789 503, Fig 1). Geophysical survey and trial trench evaluation (Burke *et al* 2010) were previously undertaken in response to a reserved matter application submitted by Bellway Homes for new housing (S/2010/1131/MAR) and a balancing pond in order to secure discharge on one of the conditions of a previous consent (S/2010/1135/FUL). Following the evaluation, mitigation works were required. Fieldwork was undertaken between November 2010 and April 2011, under the supervision of Jim Burke. An Assessment Report and Updated Project Design were produced by Walker and Burke (2012). All works were undertaken in accordance with the Brief prepared by the Northamptonshire County Council Planning authority (NCC 2010).

The development area is located on the eastern edge of Hartwell village within the northern half of an arable field, with the balancing pond extending to the south. The area designated for housing occupies an area of approximately *c*2.2ha and the balancing pond *c*0.15ha. The north-western boundary of the site is formed by the Hartwell Church of England Primary School, and a modern housing development. To the north-east is the Community Centre and playing fields. The site is bounded to the south-east and south-west by arable fields.



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Site location Fig 1

1.2 Topography and geology

The site lies on a superficial geology of Mid Pleistocene glacial till formed of sticky brown to grey clays with clasts of sandstone, ironstone, quartzite and flint. The underlying bedrock is formed of Middle Jurassic Great Oolite group Blisworth limestone formation, not exposed in the development area. The soil type is seasonally waterlogged, and fine iron-stained network of cracks in the tills on several parts of the site may be caused by frequent drying and shrinkage events (Walker and Burke 2012).

The site gently slopes down from the north-east to the south-west corner, from about 125m above Ordnance Datum to 116m aOD at the level of the proposed balancing pond.

1.3 Historical and archaeological background

Prehistoric and Roman

Evidence for Prehistoric to Roman activity within the near landscape of School Lane is somewhat scattered, in increases towards the later part of this period. A single polished Neolithic axe was recovered 2.2km away from the development site, to the south-west (4795/0/0). Some features, possibly Bronze Age barrows, are also known from the wider vicinity, including several within Salcey Forest to the east (HER 4687, 4793). Surviving earthworks from a defended Iron Age oval enclosure, known as the Egg Rings, can also be found within Salcey Forest, around 1.2km to the east (Woodfield 1980; HER 5414). The presence of this enclosure would indicate that the forest is not ancient (Hall 1995). Further possible enclosures in the area, including potential ring ditches 1km to the west (HER 4793, SP781 497 and 4792, SP782 494), have been identified by aerial photography or other survey methods, and may also date to this period.

Roman coarsewares and part of a quern have been found at Bozenham in the south-west of the parish (SP76786 48299) (HER 5415/0/0), and find spots of unstratified Romano-British material were recorded through the PAS (8073/0/0, 5071/0/0). The possible course of two Roman roads can be found 1.3km to the south-east (HER 4804/1/1) and 1.4km to the east (HER 4826/1). This latter road may have led to the villa at Piddington, around 4.5km to the north-east.

Medieval/post-medieval

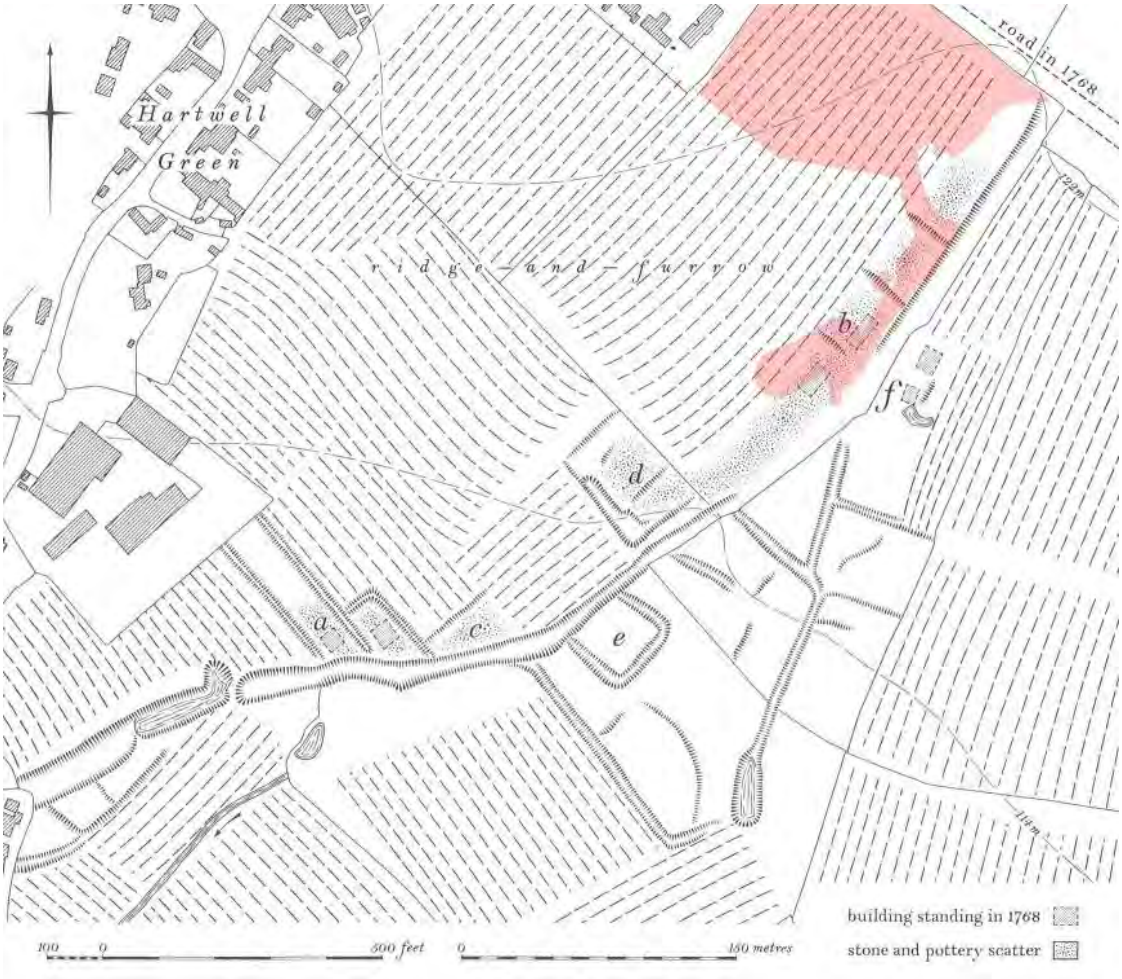
The parish of Hartwell lies on the western edge of Salcey Forest and, as was typical for medieval settlement found in areas of historic woodland, was composed of a number of small dispersed settlements. Uniquely for Northamptonshire however, the pattern found at Hartwell contains a total of six deserted settlement sites, in addition to Hartwell village which also has medieval origins. This settlement pattern is thought to be more characteristic of those found in the claylands of north Buckinghamshire (Hall 1995).

In the medieval period, the main settlement in the parish seems to have been located to the south of present day Hartwell at Chapel Farm (SP78430 48930, HER 4800). A 12th-century chapel dedicated to St John the Baptist lay within this former settlement, but by the mid-16th century it seems to have been entirely abandoned (VCH 2002). A number of other dispersed settlements have also been recorded, ranging between farmsteads to small village settlements (see HER 4799, 4698 4788, 4796). The earliest medieval pottery from any of these hamlets dates to the 12th or 13th century, but earlier habitation is likely (Lewis *et al* 1997). The closest probably medieval settlement to the development site, 550m to the south-east, is at Elms Farm, a settlement containing medieval hollow-ways, pottery kilns, buildings, water courses

and enclosures (HER 4797, SP79144 49781). A large medieval and post-medieval deer park is sited 800m to the west (HER 4794).

Earthworks aligned along the south-eastern edge of the development area were identified from aerial photography (HER 4732). These were previously thought to be part of the medieval field system, but are in fact the remains of a hollow-way aligned north-east to south-west, with associated co-axial plot boundaries and building platforms (RCHME 1982), probably the medieval settlement of Hartwell Green (HER 4732). The development site and its surrounding fields were under ridge and furrow cultivation, probably during the late medieval period (Fig 2). Ridge and furrow cultivation strips were confirmed during the trial trenching on this site, and can also be seen from aerial photographs around the village, although little now survives on the ground (5242/0/7, 8594/0/4, 5242/0/1-4) (RCHME 1982, 80).

A number of properties were present along the hollow-way. These are recorded on the Grafton Estate map of 1727 and form one of the dispersed settlements within the parish (Fig 3). By this date, the development site lay at the juncture of four fields. Town Field had been divided into two parts, and the site lay within the eastern part, within the *Tom Stockin* furlong (Hall 1995). The *Stockin* name indicates that the area was an assart, or clearance, from the forest.



Settlement remains near Hartwell Green, showing site location in red (RCHME 1982, fig 72) Fig 2

Hartwell was enclosed by Act of Parliament in 1828 (RCHME 1982, 80). The Ordnance Survey surveyors map produced in the early 19th century still shows the hollow-way, but only two properties survive at this date. By the late 19th century, the

hollow-way and one of the properties had disappeared (Walker and Burke 2012, 3).

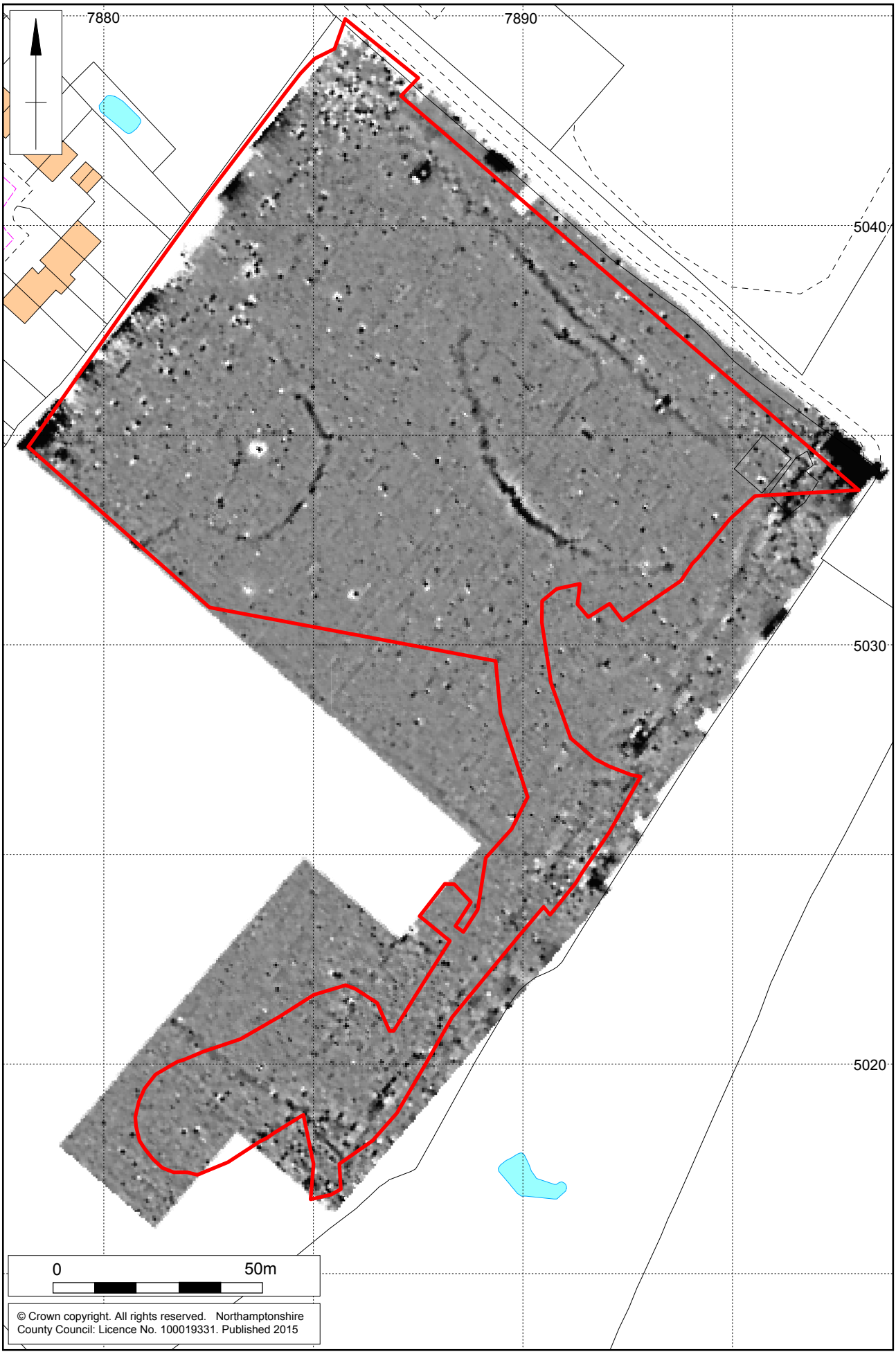
The remains of a Second World War military site, incorporating a blast shelter, survive just over 1km to the south-east of the site (HER 6954). Other remains of this period can be found within Salcey Forest.

Grafton Estate map, *c* 1727, showing approximate site location Fig 3

Previous archaeological work

A geophysical survey, using Bartington fluxgate gradiometer and Geoscan FM256 magnetometers was undertaken by Northamptonshire Archaeology (now MOLA) in 2010 across the development area and balancing pond. This work identified several linear and discrete anomalies of potential archaeological origin.

These anomalies were further investigated by a programme of trial trenching later in the same year, which confirmed the existence of mid- to late Iron Age and early Roman enclosures. Other features were also discovered, associated with medieval and post-medieval land use (Burke *et al* 2010) (Fig 4).



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Geophysical survey results Fig 4

2 OBJECTIVES AND METHODOLOGY

The programme of archaeological works was designed to mitigate the impact of the development upon the archaeological resource. This fulfilled conditions on the planning consent enabling development to proceed. The site was excavated and recorded to allow the archaeological remains to receive 'preservation by record' prior to development impact.

2.1 Objectives

The broad archaeological objectives for the archaeological works were defined in the Written Scheme of Investigation (NA 2010) as follows:

To investigate the origin and development of domestic occupation by:

1. analysing the distribution of material culture;
2. investigating the form and function of structural features;
3. comparing the assemblages of rubbish disposal deposits by period.

To investigate palaeo-economy and industry through time by:

1 examination and comparison of faunal remains;

2 analysis and comparison of soil samples from industrial contexts;

3 identifying possible crop regimes and staple food stuffs from environmental sampling.

To investigate the origin and development of the agricultural landscape by:

1 determining the phasing of any extant field systems by excavation;

2 investigating the changes in landscape flora by environmental sampling;

3 consideration of the wider geological/hydrological landscape as a mechanism for catalysing settlement.

A series of site specific research aims were identified as the nature of the archaeological remains became apparent during the excavation. These were based on the research frameworks set out in Cooper (2006) and Knight *et al* (2012) and were formulated during discussions between the Assistant County Council Archaeological Officer and MOLA in consultation with relevant specialists. The programme of works provided the opportunity to examine the relationship between Iron Age and Roman settlement patterns. Specific research topics included:

- The differences in the form of settlement between the late Iron Age and early Roman periods, and whether these abide by regional and national trends;
- The evidence for settlement shift in the different periods, and the likely reasons for any such shift;
- Further understanding of the way material culture of settlements changed between the Iron Age and Roman periods, and whether it was possible to identify different attitudes to artefacts and the presence of structured deposits;
- The evidence for changing economic and social opportunity between the Iron Age and later Roman period;

- The evidence for different architectural traditions between the Iron Age and Roman periods, and whether different uses of space be detected between the sites;
- The evidence of craft activity or industry, and how this may change through time;
- The evidence for the position of the Iron Age and Roman settlements within the local and regional social structure, relating them to larger settlements, villas or towns.

The presence of field systems allowed some of the avenues of inquiry raised by Willis (2006) to be addressed:

- Evidence of agricultural specialism and changes in practices through time, (e.g. changes in field size and layout);
- Evidence of change or continuity in the form and arrangements of field systems;
- The potential for the understanding of how field systems were used to be improved by the study of artefactual and palaeo-environmental evidence from field systems.

Evidence derived from the dating and palaeo-environmental programmes, with regular specialist input, was integrated into the overall research objectives. This produced a flexible strategy which aimed to increase the understanding and reconstruction of past environments, agricultural regimes, economy, social status and religious beliefs (EH 2002, 19). Sampling conformed to English Heritage guidelines (EH 2002). The environmental evidence was considered with particular reference to the Iron Age/Roman transition, contrasting rural with larger settlements and changing agricultural specialisation (Monckton 2006, 272-7). A number of specific issues were to be addressed by the palaeo-environmental programme (Monckton 2006, 277):

- Evidence of arable farming methods derived from charred plant remains: Increase in disposal of spelt wheat chaff and the introduction of corn driers are indicative of changes in cereal production and bulk processing, (analysis can provide evidence of changes in corn drier function);
- Evidence of arable expansion from pollen bearing deposits to complement the cereal remains;
- Evidence for use of fodder;
- Analysis of weed floras and weed ecology to provide evidence of expansion of agriculture and source of cereals;
- Investigate the timing of the increase in the variety of foods available, including imports and introduced plant foods.

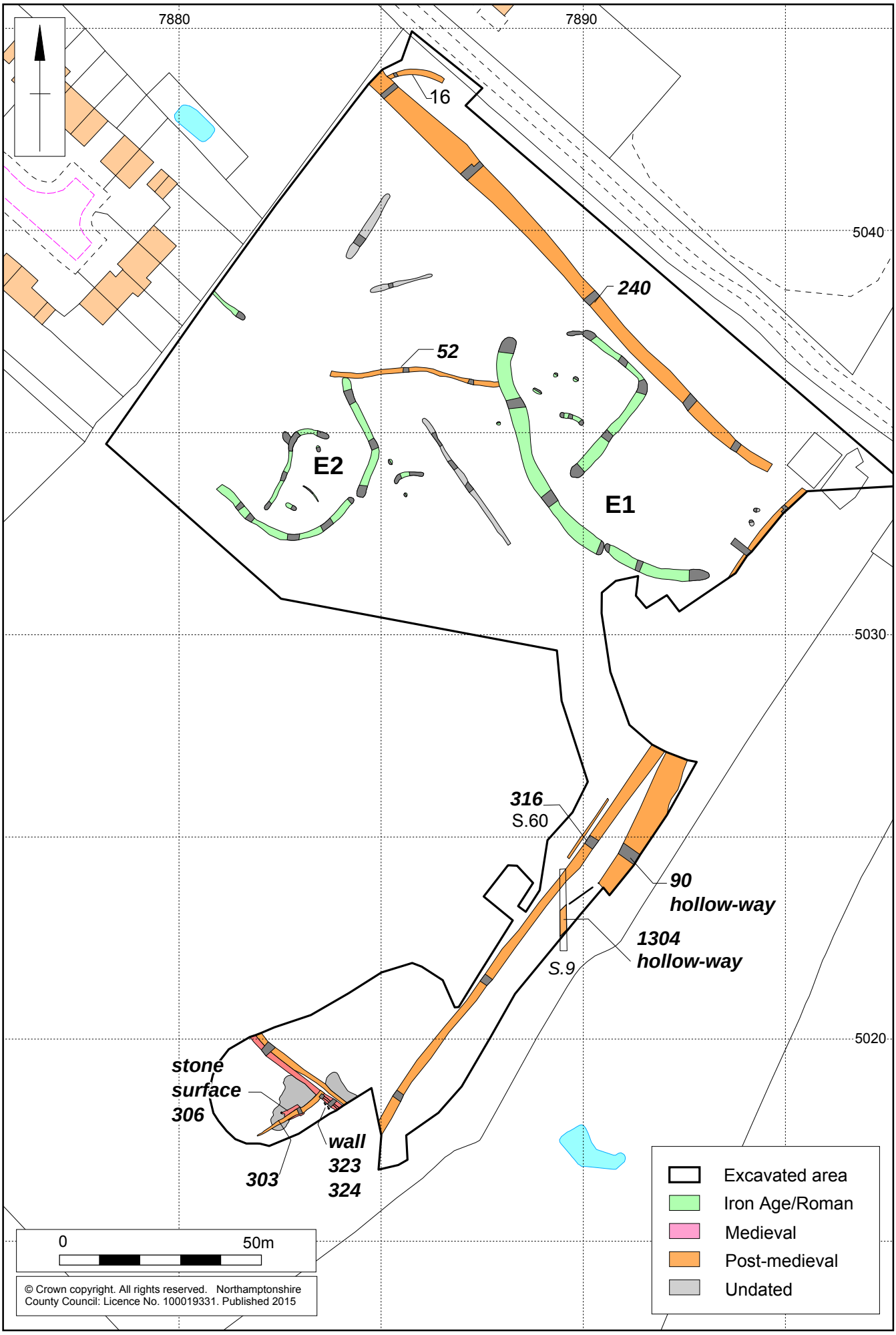
2.1 Excavation methodology

The mitigation strategy was designed following discussions between Bellway Homes, the Assistant County Council Archaeological Officer Liz Mordue, and Northamptonshire Archaeology (now MOLA Northampton).

A total of 1.48ha was designated for set piece open area excavation; this comprised three separate phases. This method was adopted in order to stage release of areas back to the developer in order to allow development to proceed. It was anticipated that necessary alterations of the phasing boundaries within the overall mitigation area be altered to allow archaeological excavation or operational requirements. This was undertaken in agreement with the Assistant County Archaeological Officer.

Removal of the topsoil and other overburden was carried out by a tracked 360-degree mechanical excavator, fitted with a toothless ditching bucket, operating under archaeological supervision. Mechanical excavation proceeded to the natural substrate or the first significant archaeological horizon.

All features were hand excavated and recorded. Standard Northamptonshire Archaeology recording procedures were employed (NA 2011). All works were conducted in accordance with CIfA *Standard and Guidance for Archaeological Excavations* (2014a) and the *Code of Conduct* (2014b). The project was undertaken in accordance with the provisions set out in the English Heritage procedural *documents Management of Archaeological Projects* (EH 1991) and *Management of Research Projects in the Historic Environment (MoRPHE)* (EH 2006). All work was carried out in accordance with the requirements of the project Brief (NCC 2010) and project design (NA 2010).



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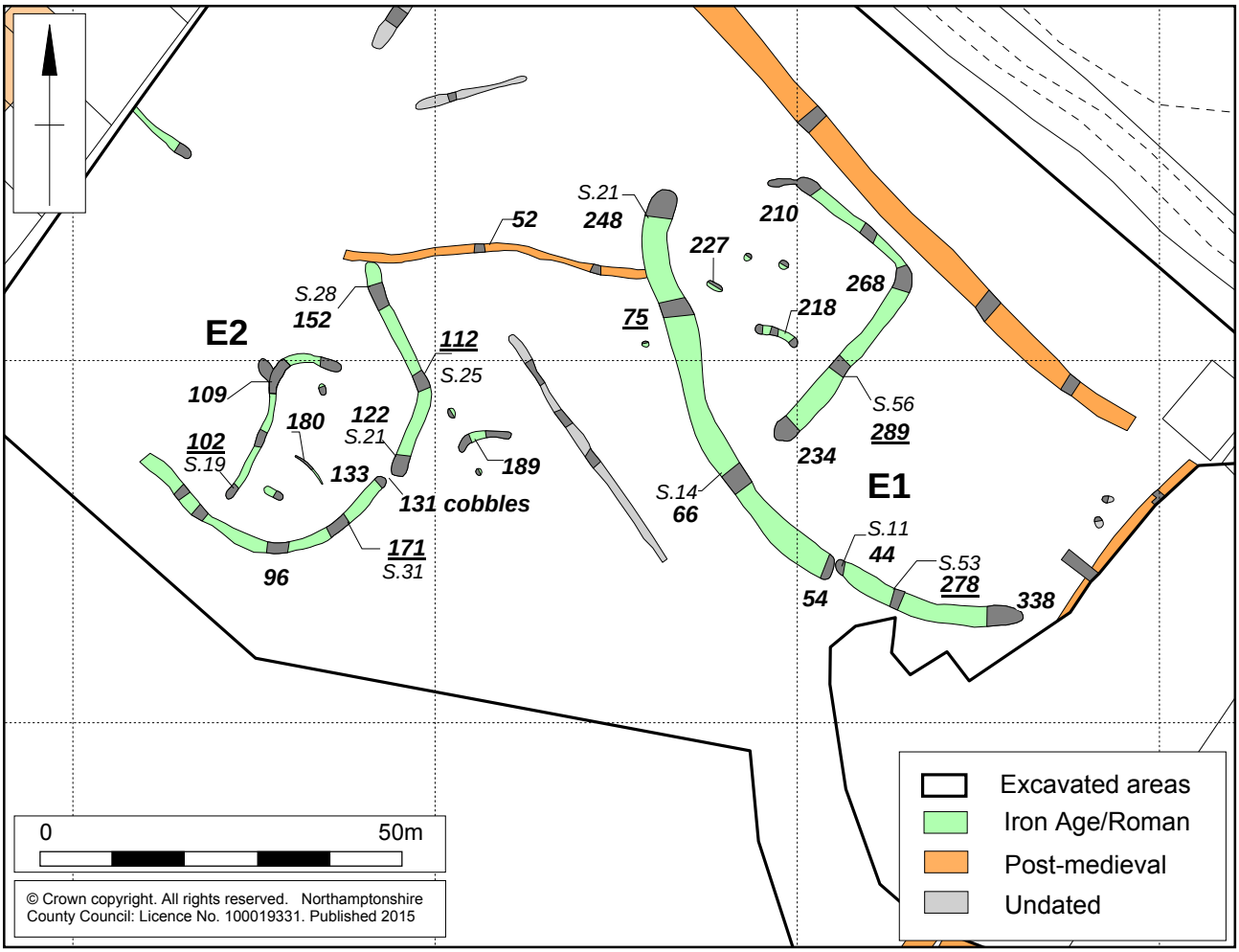
General site plan Fig 5



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The Iron Age enclosures Fig 6

3 THE LATE IRON AGE/EARLY ROMAN ACTIVITY

There were two adjacent areas of activity, Enclosures E1 and E2, both partially defined by curvilinear ditches notable for their depth, and their multiple periods of recutting. As both ditches only partially enclosed these areas, it is possible that other, non-archaeologically visible means were employed to form complete enclosures. Within the area defined by each ditch were less substantial gullies that may have served to sub-divide the enclosed areas. Scattered pits and short lengths of gully were concentrated within the enclosure areas. There was no definitive evidence of settlement, although the finds certainly suggest that it was located nearby. There was some evidence of light industrial or craft activities taking place nearby with the recovery of an iron block anvil and loomweight fragments. A group of rotary querns indicate crop processing was being undertaken. Activity began in the late 1st century BC and continued until shortly after the conquest (mid-1st century AD).

3.1 Enclosure E1

Enclosure 1 was located in the eastern part of the site (Figs 5 and 6). Only its western arm was fully defined, comprising a curvilinear ditch constructed in two arms [75] and [278], extending 80m north to south-east. The long ditch [75] was consistently around 3.0m wide and 10-2.0m deep. The two arms abutted each other but it is likely that the shorter shallower ditch [278], to the south-east, was a later addition. There is no surviving evidence for how the remainder of the enclosure was defined.

Once both ditches were near fully silted, they were extensively recut; The fills of the recuts were largely dumped deposits of occupation debris; dark soils containing quantities of pottery, animal bone and other finds, all dating to the early-mid 1st century AD. In places there were also quantities of limestone within the fills, perhaps derived from the revetment of an adjacent bank.

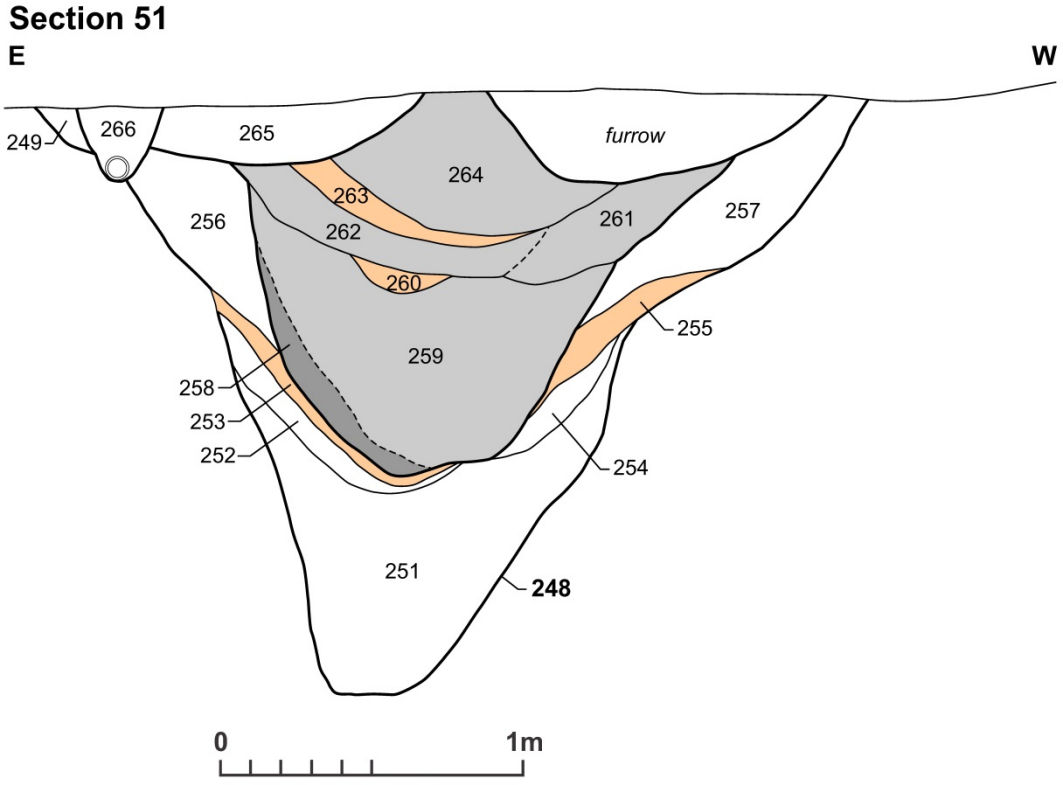
Within Enclosure E1 a smaller sub-enclosure was defined by an L-shaped ditch, [268]. Inside this area were three small pits or postholes and a short stretch of gully.

Ditch [75]

Ditch [75] measured 60m long. At the northern terminal it was 2.8m wide by up to 1.98m deep, with a steep-sided U-shaped profile, but it became gradually shallower to the south. At the southern terminal ditch [54] it was still 3.0m wide but only 0.95m deep, with eroded sides and a broad flat base.

At the deep northern terminal, ditch [248], up to 0.65m of silts (251) had accumulated rapidly, and above this there was thin dark secondary fill (252) overlain by a thin layer of mixed brown and orange clay (253) containing some later Iron Age pottery (Fig 7, S.51). The upper 0.90m of the ditch fill was a homogeneous deposit (256/257) of orange-brown to grey brown clays, perhaps a deliberate infilling of the ditch.

When only a shallow hollow survived, there was a steep-sided, U-shaped recut, 2.2m wide by 1.25m deep [248a]. The preservation of the steep edges indicates that soon after excavation it was filled to a depth of 0.75m with a distinctive dark grey-black silt (259), particularly charcoal-rich deposit against the east side (258), containing much occupation debris of pottery and animal bone. The overlying deposits (260-263) were similar, but less dark, and these were sealed by a final fill (264) of dark-grey silt, also containing pottery and animal bone, perhaps a final dump of occupation debris. There may have been a final shallow recut, filled with dark brown-grey clayey silt (265).



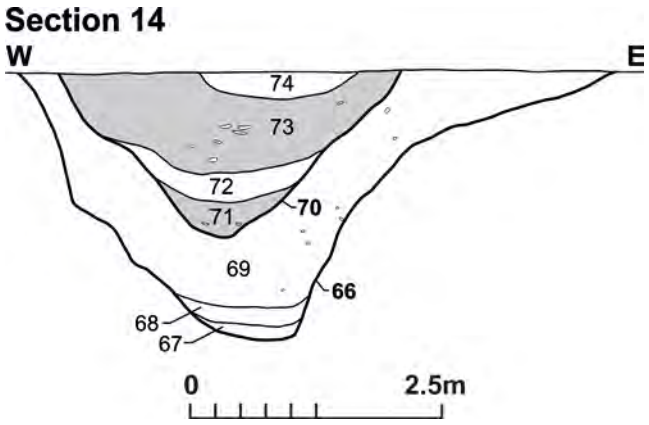
Key (all sections): orange =clean fills; grey/dark grey=dark loams containing charcoal, pottery and other finds

Section of ditch [248], enclosure E1 Fig 7

To the south, in ditch [75], the sequence was less clearly defined, but it is likely that the recutting had carried through from the terminal, although the fills of the recut were less dark and contained less domestic debris. However, the secondary fills of the recut did contain some quantities of limestone slabs, perhaps derived from an adjacent structure, such as a revetment along the front of a bank running along the inner edge of the ditch.

To the south of centre, ditch [66] (Fig 8, S14), the sequence was similar to that at the northern terminal. The original ditch [66] was 2.9m wide by 1.33m deep, and above the primary silts the secondary fills were quite homogeneous grey-brown clays (69). The lower levels were also tinged blue, as a result of chemical action due to prolonged waterlogging. The recut [70] was V-shaped, 1.7m wide by 0.85m deep. The middle fill (73) was dark grey-brown silty clay containing occupation debris. This included the largest single deposit of pottery from the site, making up a third of the pottery and a half of the vessels in the entire late Iron Age/early Roman assemblage, and also a Hod Hill brooch.

At the southern terminal, where the ditch was a broad, flat-bottomed cut 0.95m deep [54], there was no apparent recutting. The secondary fill (58) contained quantities of limestone slabs, 0.20-0.30m long, but this and the upper fills were less dark and did not contain quantities of occupation debris, suggesting that the major recutting to the north had stopped short of the original southern terminal. A narrow, steep-sided recut [61] on the inner edge of the ditch, 1.0m wide and 0.50m deep, continued south-eastwards, and therefore appears to be the northern end of the recutting of the shorter arm [278], see below.



Section of ditch [66], enclosure E1 Fig 8

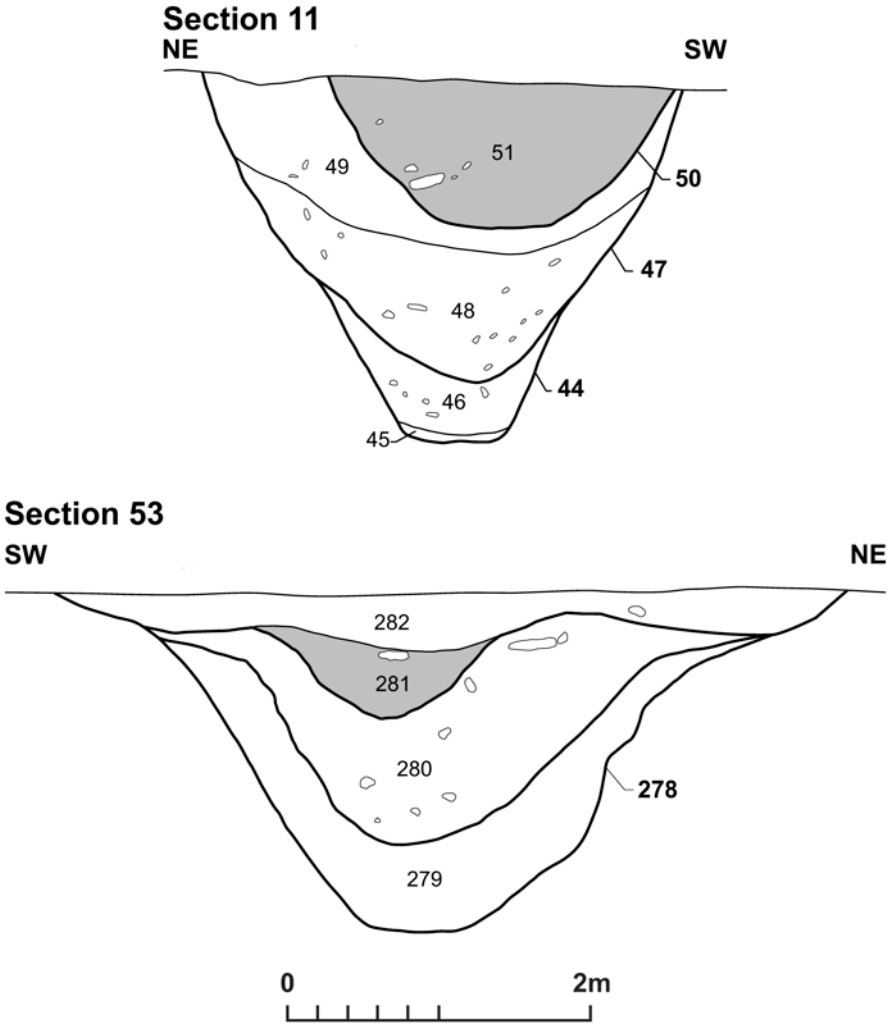
Ditch [278]

Ditch [278], the south-eastwards continuation of the main curving ditch system of Enclosure E1, was 27m long, *c*1.5m wide and up to 1.2m deep (Fig 9). The western half of the ditch was recut, with the recut containing dark soils and occupation debris, but this recut did not extend to the eastern terminal. Of particular interest are two intact upper stones from beehive querns; the deliberate deposition of otherwise usable and valuable querns suggests this final act of deposition, and the broader acts of dumping along this ditch, marked perhaps both the abandonment of the settlement and the Iron Age way of life.

At the western terminal the ditch [44], was narrow and steep-sided, 1.6m wide by 1.2m deep. It probably silted quite rapidly, with the secondary fills producing no finds (Fig 9, S11). There was a U-shaped recut into the upper fills, 1.15m wide by 0.5m deep, with a dark fill that produced pottery, animal bone and some ceramic tile.

Towards the centre, ditch [278] was up to 2.5m wide by 1.1m deep, with a U-shaped profile with eroded upper edges (Fig 9, S53). There was probably a broad recut, 1.35m wide by 0.83m deep, through the secondary fills, which contained dark soils (280) with pottery and animal bones. In the top of this there was a deposit of particularly dark, charcoal-rich soil, from which came the two quern upper stones, as one of the last acts in the deposition of occupation debris.

At the eastern terminal [338] the ditch was 2.3m wide by 1.35m deep, with eroded upper edges. This area was particularly wet, with the blue tinge of the lower fills indicating that it was permanently waterlogged. There was no evident recut that contained quantities of occupation debris; although the upper fill orange-brown clay did contain some pottery.



Sections of ditch [44] and [278], enclosure E1 Fig 9

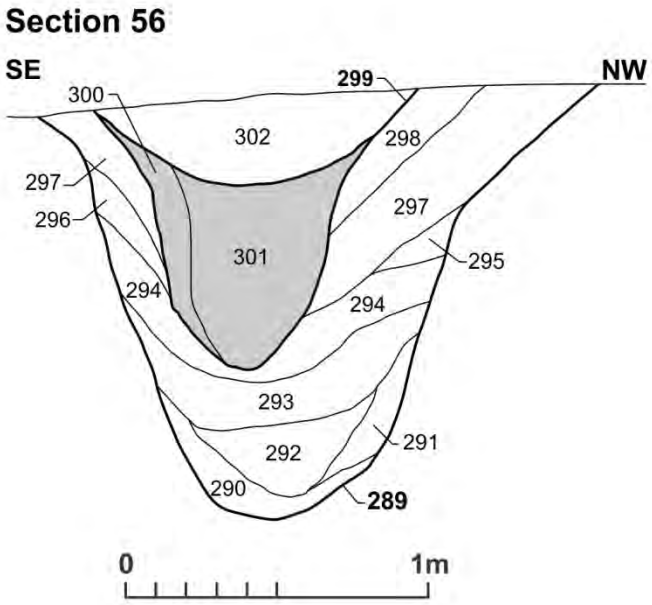
L-shaped ditch [289]

This sub-division within Enclosure E1 was 52m long and up to 1.6m wide and 1.3m deep, with a steep-sided U-shaped profile, even undercut in places (Fig 10, [268]), probably as a result of later side collapse. At the southern terminal [234], it was 1.2m wide by 0.9m deep, with a possible recut almost the same depth as the original ditch.

To the south [289] (Fig 10, S56), the ditch was 1.86m wide by 1.4m deep, and the narrow steep-sided cut had silted rapidly. There was some pottery dating to the late Iron Age (1st century BC) from the secondary fills (293), (294) and (297), in contrast to the later material (early-mid 1st century AD), from the dumped fill (301) of the recut, see below. Once fully silted, there was a narrow, steep-sided recut, 1.05m wide by 0.90m deep [299]. The fill (301) was of grey clayey silt with some charcoal and also pottery and animal bone, probably contemporary with the dumped deposits in the main ditch system to the south and west.

The northern arm of the L-shape was narrower and shallower, 1.3m wide by 0.9m deep, but retained the same profile. At the terminal, ditch [210], the recut through the upper fills, 1.0m wide by 0.5m deep, was again contained occupation debris of pottery and animal bone in grey-black silty clay, with charcoal.

A small gully extended beyond the northern terminal for a further 3.5m.



Ditch [268], looking south-west, and Section of ditch [289], E1, L-shaped ditch Fig 10

Features inside enclosure E1

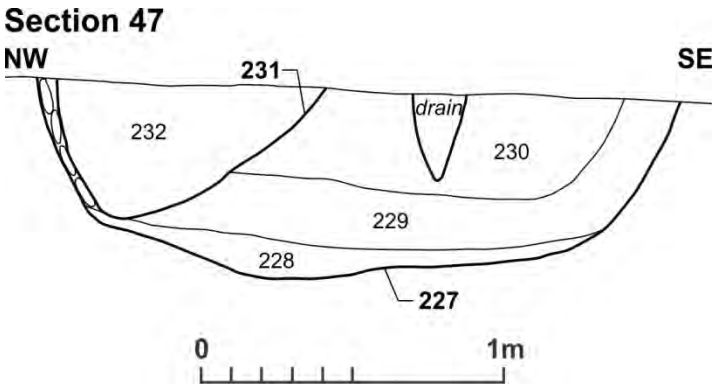
In the area delineated by the enclosure ditch and internal L-shaped ditch was a small group of features comprising two shallow scoops and two short stretches of deep steep-sided gullies ([227] and [218]). The two scoops were circular in plan up to 1m across, but no more than 0.2m deep. The fills comprised dark silty clay.

An elongated pit [227] was 2.12m long, 0.60m wide and 0.64m deep, with steep to nearly vertical sides and a concave base. After a short period of silting, the pit was filled with dumps of charcoal-rich silty clay containing pottery and bone (229). This pit was recut at least once (see Fig 11, S47).

Gully [218] was 6.6m long, 0.32m wide and 0.3m deep, with steeply sloping sides and a flat base (Fig 12). It had a fill of charcoal-rich clay, with a dump of cobbles and

pieces of limestone in the base at the western end. The upper fills of both pit [227] and gully [218] included burnt material, perhaps deriving from domestic or occupation activity.

A long U-shaped gully [52], aligned east-west, seems to link enclosures E1 and E2. However, no dating evidence was recovered leaving it uncertain whether this feature was contemporaneous to the enclosures.



Section of gully [227], within E1 Fig 11

Gully [218], within E1, looking north-west Fig 12

3.2 Enclosure E2

Enclosure E2 comprised a curvilinear ditch with a narrow, south-easterly facing entrance just over 1m wide, with a cobble surface over the entrance causeway. The area enclosed by the ditches was *c*41m long by *c*26m wide. As with Enclosure E1, one side of the enclosure had apparently been left open, in this instance to the north-west. The depth of the excavated ditches makes it unlikely that features in the area had been destroyed by ploughing, and it therefore seems probable that the enclosed area was partly defined by hedging, banks or some other method that left no archaeological trace.

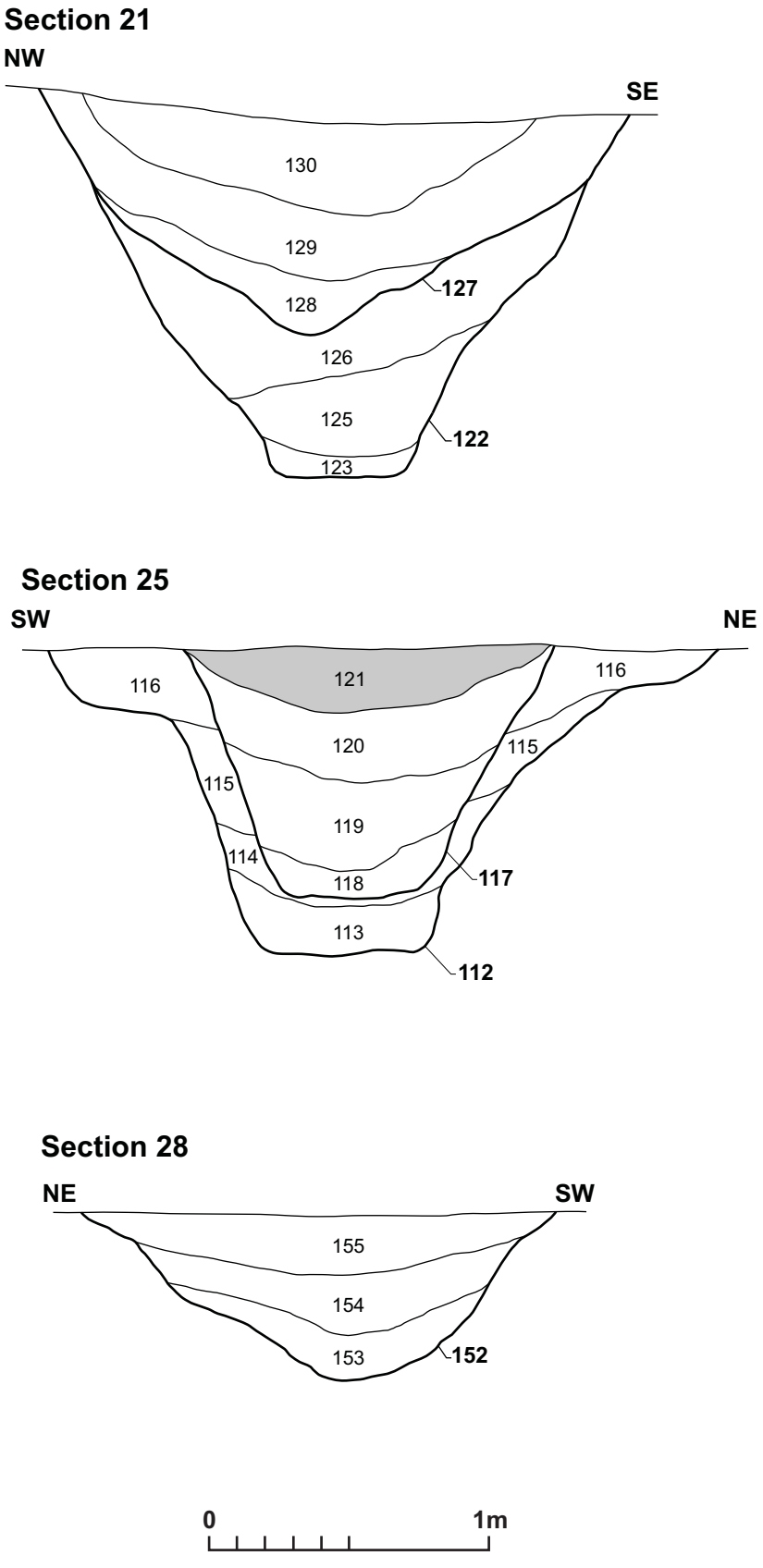
Inside the enclosure was a curvilinear ditch which may have served to sub-divide the area. This enclosure produced a much wider range of material goods dating to the late Iron Age/early Roman period, showing a level of Romanisation, and was probably the focus of occupation towards the middle of the 1st century AD, perhaps even following the backfilling of the ditches of Enclosure E1 with occupation debris from the original late Iron Age settlement.

Ditch [112]

The eastern enclosure ditch [112] was 32m long forming a reverse L-shape in plan. The south part of the ditch was between 2.10-2.40m wide and 1.12-1.27m deep with steep sides and a narrow base, while to the north the ditch was shallower with very different fills.

At the northern entrance terminal [122], the ditch was at its deepest, 2.4m wide by 1.27m deep (significantly deeper than the opposing terminal), with a broad-based U-shaped profile (Fig 13, S21). The primary fills of this ditch (123) were blue-grey, as a result of waterlogging. There was a broad recut [127], 0.75m deep (the same depth as the opposing terminal), and a distinctive final fill (130) of dark-grey clayey silts containing pottery and animal bone.

Further north, the steep-sided, flat-bottomed profiles of both the original ditch [112] and the recut [117], were well preserved, as a result of rapid silting and dumping (Fig 13, S25). Both the upper secondary fill (120) and the final fill (121) contained pottery, with the final fill a distinctive black silty clay of occupation debris. At its northern end, the ditch was shallower, [152], and no recuts were visible (Fig 13, S28).

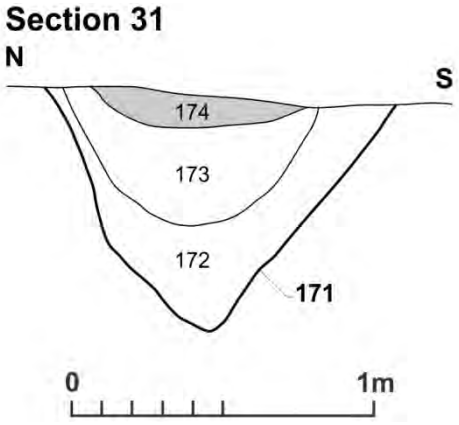


Scale 1:25 Sections of ditch [112], enclosure E2 Fig 13

Ditch [171]

The western ditch [171] was 40.0m long, up to 2.10m wide and 1.25m deep (Fig 14). It was generally V-shaped although at the eastern entrance terminal [133] it had a broad U-shaped profile, 1.3m wide by 0.75m deep. The secondary fills in this area appeared to be largely the result of natural silting and there was no clear evidence of recutting. The final fill (135) was of darker grey-brown clayey silt, which contained pottery, animal bone and some other finds, presumably from a final backfilling with occupation debris. There was a similar sequence to the south, although here the ditch was V-shaped [171], 1.15m wide by 1.25m deep (Fig 15, S31). The primary fill (172) contained a triangular loomweight, and the secondary fill (173) was dark grey and contained pottery. As at the terminal, the final fill (174) was of dumped black silty clays. Similar sequences of deposits were also seen further to the west, and an iron bar came from the dark final fill (100) of [348], a recut of [96].

Ditch [171], enclosure E2, looking south-east Fig 14



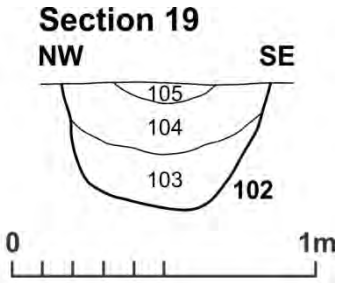
Section of ditch [171], enclosure E2 Fig 15

The narrow south-east facing entrance into the enclosure was just over 1m wide with a causeway of compacted stone, including pieces of limestone and chalk (Fig 16).

Cobbled entrance-way (131) to enclosure E2 Fig 16

Internal ditch [102]

This sinuous ditch was over 28m long and up to 0.78m wide by 0.60m deep. It had a wide U-shaped profile to the south [102] (Fig 17, S19), but was particularly steep-sided to the north [156]. The north-eastern end of the ditch curved to the east, but it may originally have shorter and curving to the west [106]. There were quantities of pottery, charcoal, animal bone and burnt clay in the dark upper and final fills, particularly at the southern end. From the southern terminal [102] there is an iron anvil block; and near the northern terminal, ditch [109] there was half of a bottom stone from a rotary quern, probably dumped after being 'killed' by being split in two.



Section of ditch [102], within enclosure E2 Fig 17

Features inside enclosure E2

Within the area defined by the enclosure and internal ditch were a small number of other features. There was a short length of gully [180], 6.0m long, 0.54m wide and 0.18m deep, with steep edges and flat base. The upper fill contained moderate amounts of charcoal and burnt stone as well as some pottery. There were a small number of other shallow features. None of these appeared to be structural.

External features

To the immediate east of enclosure E2, a length of curving gully [189] contained some further quern fragments.

3.3 The Iron Age pottery by Andy Chapman

Twenty-eight contexts from the open area excavation produced between them 290 sherds of hand-built Iron Age pottery, weighing 4.15kg (Table 1). Much of this material can be attributed to the 1st century BC, but the group also includes large thick-walled storage jars dating to the early 1st century AD, contemporary with a range of wheel-finished vessels that have been reported on separately. Some of the smaller vessels are also likely to date to the 1st century AD. There is no doubt that the site was occupied throughout this period, showing a transition from hand-built wares in traditional shelly fabrics to the wheel-finished forms of the early 1st century AD, although in some cases including the new forms manufactured in the old shelly fabrics.

Fabrics

Fine shell: containing sparse finely crushed shell, measuring no more than 1mm, and used for small jars and bowls, usually thin-walled and well finished, often with smoothed to burnished surfaces. 86 sherds, 29.7%

Medium to coarse shell: containing dense medium to coarse shell, measuring 2-7mm, and used for a wide range of jars, with the coarser shelly wares usually thicker-walled storage jars. 98 sherds, 33.8%

Grog: containing pellets of grog, sometimes combined with finely-crushed shell. Occurs in some smaller jar and bowl forms and particularly distinctive in thick-walled, well finished storage jars that date to the 1st century AD. 86 sherds, 29.7%

Sandy: containing sand, with inclusions of small quartz grains. Two contexts produced sherds from a couple of thick walled, well-finished storage jars. 8 sherds, 2.8%

Calcareous and flint: containing small rounded pellets of chalk and some angular flint. A single vessel. 12 sherds, 4.1%

As would be expected of a Northamptonshire assemblage, nearly two-thirds of the material, 63.5%, was in shelly fabrics, covering the usual range from sparse finely crushed shell in the smaller thin-walled jars, up to dense inclusions of large shell fragments in the thicker-walled storage jars. Also, it should be noted that the proportion of shelly wares would have been even higher if it hadn't been for the presence of many grog tempered storage jars, and also in two instances in a sandy fabric, all dating to the 1st century AD. The calcareous and flint tempered fabric appears in a single vessel, see below.

Table 1: Quantification of Iron Age hand-built pottery

Fabric Fill/cut type	fine shell	grog	coarse shell	sandy	flint	Sherds	Weight (g)	Sherd groups
Enclosure E1								
46/44	2	5	0	0	0	7	65	2
48/44 (44)	0	0	5	0	0	5	75	1
51/50 (44)	0	4	0	0	0	4	146	1
82/80	0	15	8	0	0	23	290	2
83/80	1	15	0	0	0	16	38	4
84/80	0	0	1	0	0	1	40	1
229/227 pit	15	3	7	2	0	27	930	8
259/248	0	0	36	0	0	36	390	4
339/338	0	12	0	0	0	12	315	1
343/338	0	8	1	0	0	9	120	2
272/268 E1-L	6	0	0	0	0	6	80	1
275/268 E1-L	0	1	4	0	0	5	45	2
293/289 E1-L	0	0	9	0	0	9	72	1
294/289 E1-L	0	0	1	0	0	1	3	1
297/289 E1-L	1	0	0	0	0	1	6	1
Sub-total	**25**	**63**	**72**	**2**	**0**	**162**	**2615**	**32**
% of all	29.1	73.3	73.5	25.0	0.0	55.9	63.0	
Enclosure E2								
98/96 gully	7	0	0	0	0	7	55	1
119/117 (112)	0	0	5	0	0	5	74	1
128/127 (122)	2	1	0	0	0	3	29	2
135/133	0	0	0	6	0	6	65	2
143/141 (145)	22	0	0	0	0	22	170	2
154/152	1	12	0	0	0	13	290	2
172/171	0	0	21	0	0	21	320	2
182/180 gully	0	0	0	0	12	12	100	1
Sub-total	**32**	**13**	**26**	**6**	**12**	**89**	**1103**	**13**
% of all	37.2	15.1	26.5	75.0	100.0	30.7	26.6	
Other features								
35/34 furrow	20	0	0	0	0	20	181	1
37/36 ditch	5	0	0	0	0	5	79	2
175/layer	1	0	0	0	0	1	22	1
186/185 gully	1	0	0	0	0	1	31	1
217/216 tree	2	10	0	0	0	12	120	2
Sub-total	**29**	**10**	**0**	**0**	**0**	**39**	**433**	**7**
% of all	33.7	11.6	0.0	0.0	0.0	13.4	10.4	
total	**86**	**86**	**98**	**8**	**12**	**290**	**4151**	
%	29.7	29.7	33.8	2.8	4.1			

Forms and chronology

The single calcareous and flint tempered vessel from gully [180] in enclosure E2 is unlike any of the other material from the site. The fabric has a grey core and interior and an outer surface that is mottled light grey to light brown with fine impressions of grass or other vegetable matter. The vessel is crudely-made and thick-walled, 10-13mm thick, with straight sides and a rounded and uneven rim, giving a cylindrical profile, perhaps some 200mm in diameter (Fig 18, 1). This vessel is unique in the assemblage and the nature of the fabric indicates that is has been imported. One possibility is that this is a cylindrical container for transporting salt, a *briquetage* vessel, although the sherds show no sign of bleaching from the chlorine in the salt. The fabric would be closest to the shelly limestone-gritted Fenland fabric, which was in use during the Iron Age (Morris 2001, 351-375).

The vessel forms, when evident, include a significant proportion of smaller jars and distinctive thin-walled rounded bowls, with simple rounded or beaded rims, and generally in fabrics containing sparse finely-crushed shell. A majority of these smaller vessels are dark grey-black throughout, usually with smoothed to burnished surfaces (Fig 18, 2). Unusually, on a vessel from the recut of ditch [171], Enclosure E2, the body had been deliberately roughened or rusticated with dense near vertical scoring, set beneath a plain upright rim (Fig 18, 3). This vessel might be a hand-built bowl dating to the early 1st century AD.

The smaller vessels with smoothed/burnished surfaces also include a number in fabrics with oxidised external surfaces, including a closed globular bowl with a simple rounded rim from ditch [268] in enclosure E1 (Fig 18, 4). The assemblage also contains a range of jars, finished less well and in fabrics containing coarser shell inclusions, such as a shouldered jar from ditch [47] (Fig 18.5). These also have simple rounded or flattened rims, and flat bases.

A large mixed group from pit [227] in enclosure E1 comprised several vessels displaying a range of forms from the late Iron Age (1st century BC), such as thin-walled globular bowls with everted rims in a grey-black fabric and smooth surfaces. Some thick-walled jar sherds with scored decoration are also part of this assemblage, alongside grog-tempered vessels, and a well-finished, thick-walled storage jar, which probably runs into the early 1st century AD.

The thicker-walled sherds from larger storage jars fall into two distinct groups. There are body sherds and a few rim and base sherds from coarse storage jars containing dense large shell inclusions pieces of shell erupting through the surfaces, with walls up to 12mm thick. These are typical of middle to late Iron Age assemblages. This vessel type contrasts with even larger jars, such as those from pit [227]. These are all very thick-walled, with body sherds 15-20mm thick, and are usually in a variation of the grog fabric or more rarely a shelly fabric. While hand-built, they are better finished than the earlier storage jars, perhaps finished on the wheel. They often have uniform oxidised external surfaces, bright orange-brown in colour, which contrast with the mottled uneven surfaces of the earlier storage jars. These larger storage jars date to the early 1st century AD, and are contemporary with the smaller wheel-turned vessels.

A small bowl, from layer (175) is in a late Iron Age fabric and bowl form. However, the rim has a shallow channel and fine oblique incisions around the outer edge, placing it as an early example of a channel rim jar from the earlier to mid-1st century AD, but manufactured within the Iron Age potting tradition (Fig 18, 6). Several similar, but vessels are also present within the late Iron Age/early Roman assemblage, but usually showing signs of at least wheel-finishing. It could be suggested that the

globular bowl, often uniformly grey-black with smoothed to burnished surfaces and sometimes with curvilinear decoration, which is so characteristic of the late Iron Age in the 1st century BC, was perhaps largely supplanted in the early decades of the 1st century AD by similarly sized globular bowls, often still grey-black and burnished, with the addition of channel-rims and sometimes oblique slashes around the outer edge of the rim. The transitional seems to have been gradual, with early examples hand-built in the Iron Age tradition, later examples in the same Iron Age potting tradition, but wheel-finished, and finally evolving to the fully-developed wheel-turned channel-rim jars by around the middle of the 1st century AD.

Pottery distribution

The curvilinear boundary ditch of enclosure E1 produced late Iron Age hand-built pottery in small quantities from the primary and lower secondary, with larger quantities of wheel-finished pottery or the early to mid-1st century AD from the upper fills of the latest recuts. In contrast, the fills of the curvilinear boundary ditch for enclosure E2 tended to produce wheel-finished pottery of the early to mid-1st century AD along with some residual hand-built pottery.

This suggests that enclosure E1 was in use in the 1st century BC, with recutting probably occurring in the early 1st century AD, and perhaps at the same time as the addition of a second partial enclosure E2.

1

2

3

4

5

6

0 50mm

Iron Age hand-built pottery Fig 18

3.4 The late Iron Age/ early Roman pottery by Rob Perrin

A number of cut features, comprising ditches, gullies and pits, together with other layers or surfaces, contain pottery, providing an assemblage of some 1426 sherds, weighing just over 21.5 kilos and with an estimated vessel equivalent, based on rims, of just under 8.

Fabrics

The fabrics represented are various grogged, shell-gritted, reduced and oxidised wares. No regionally-traded wares or imports from continental sources are present (Table 2). At least ninety percent of the pottery comprises grogged wares, shell gritted wares and fabrics with a combination of both tempers. Similar fabrics occur in the Iron Age (see Chapman, this report) and it is possible that some of the pottery discussed here is of Iron Age rather than later date.

Table 2: Summary of the late Iron Age/early Roman pottery

Fabric	No	%site	W (g)	%site	Rim%	%site	Base%	%site
Grogs	597	41.87	11378	52.78	309	39.36	434	58.41
Shell	388	27.21	5028	23.32	264	33.63	169	22.75
Grog + Shell	313	21.95	4492	20.84	145	18.47	107	14.4
Oxidised	118	8.27	575	2.67	59	7.52	33	4.44
Reduced	4	0.28	28	0.13	8	1.02	-	-
Reduced + grog	6	0.42	58	0.27	-	-	-	-
Total	**1426**		**21559**		**785**		**743**	

A number of sub-types occur in the grogged wares (Table 3), defined by colour rather than noticeable variations in the grog temper. A dark brown grogged ware and a reddish-yellow ware with a grey core are the two most common fabrics.

Table 3: Summary of the grogged wares

Fabric	No	%site	W (g)	%site	Rim%	%site	Base%	%site
Buff grog	32	5.36	798	7.01	24	7.77	37	8.53
Dark brown grog	342	57.29	6900	60.64	136	44.01	313	72.12
Red-yellow grog	178	29.82	2360	20.74	115	37.22	84	19.35

Three varieties of shell-gritted ware occur (Table 4), based on the size of the shell inclusions. The colour of the fabrics is predominately dark brown or black, though some vessels have oxidised surfaces and, occasionally, different fabric core colours. Most of the fabrics a mixture of grog and shell temper are also dark brown in colour, though a reddish-yellow fabric with a grey core also occurs. The ratio of grog to shell temper varies and one fabric contains very large shell pieces.

Table 4: Summary of the shell-gritted wares

Fabric	No	%site	W(g)	%site	Rim%	%site	Base%	%site
Fine shell	6	1.55	96	1.91	0	--	100	59.17
Small shell	151	38.92	2130	42.36	187	70.83	37	21.89
Large shell	133	34.28	1734	34.49	70	26.52	32	18.93

The oxidised wares comprise a range of buff, pink, reddish-yellow and red-brown fabrics (Table 5). A lot of the oxidised wares have a reduced grey core. The reduced

wares include sherds in a grey micaceous fabric and a coarse dark brown fabric.

Table 5: Summary of the oxidised wares

Fabric	No	%site	W(g)	%site	Rim%	%site	Base%	%site
Buff	7	--	54	9.39	10	16.95	--	--
Pink	94	79.66	384	66.78	37	62.71	8	24.24
Red-yellow	6	--	23	-	8	13.56	--	--
Red-brown	11	9.32	114	19.83	4	--	25	75.76

Forms

The vessel forms were recorded using simple form codes. Approximately 62 vessels were noted, based on a count of separate rims, comprising 44 jars, 11 jars or bowls, five bowls, one beaker and one dish. Twenty-eight occur in grogged wares, 22 in shell-gritted wares, six in mixed grog and shell wares and six in oxidised wares (see Fig 19).

Within the grogged wares, many of the 20 jars and four jars or bowls are noticeably globular in shape. Some of these have no neck and a simple bead rim and one vessel has diagonal notches on the rim. Other jars have either short or long necks with more definite curved rims and neck or shoulder cordons. Some sherds have vertical scored or combed decoration, sometimes within panels. The grogged ware jars also include three large storage vessels, some only represented by bases. The remaining grogged ware vessels comprise a sherd from a possible butt-beaker, a dish and a bowl with plain rims and a bowl with a plain rim, reminiscent of a samian ware form 30, but having a cordon in place of an ovolo.

Most of the 17 jars and four jars or bowls in the shell-gritted wares are also globular in shape and neckless. Twelve have a slight lid-seating and five have diagonal notches on the rim; one has a rim with impressed finger-tipped decoration. Two of the jars are of storage vessel size and the other shell-gritted ware vessel is a bowl with a bead rim. A few shell-gritted ware sherds have scored decoration or panels of diagonal close rilling between horizontal grooves and one sherd has a horizontal row of finger impressions around the girth.

The vessels in fabrics with a mixture of shell and grog temper comprise two jars and a jar or bowl with slight lid-seating, a storage jar, a curved-sided bowl and a jar or bowl with a flat-top rim. All of the jars and jars or bowls are globular in shape and two have diagonal notches on the rim; one of the latter was used as a cremation urn. A base sherd is from a vessel with a definite footring.

Two of the four jars in oxidised wares have triangular or slightly undercut rims and a slight lid-seating; the other two have simple plain or bead rims. Two of the jars and a jar or bowl, have neck cordons. The remaining oxidised ware vessel is a possible bowl with a flat-topped rim. There were no rims in the reduced ware fabrics, but one sherd had a cordon and traces of decoration comprising barbotine vertical lines.

Sources

It is likely that most of the pottery was locally produced. There are a large number of known kiln sites within a 15 kilometre radius of Hartwell, in the vicinity of modern-day Northampton, including Hardingstone, Hackleton, Little Houghton and Quinton, (Swan 1984, 144-6) which together produced a range of wares and vessel types. Some of the pottery may not have been fired in kilns, however, and their production may therefore have left little obvious or permanent traces.

Chronology

The globular vessels with simple plain or bead rims are essentially Iron Age in form and some of the fabrics appear similar to those described in the report on the Iron Age pottery (this paper, section 3.3). Numerous parallels from local sites can be cited for the jars with diagonal notches on the rim, eg Weekley (Jackson and Dix 1986-7, fig 39, 139), Quinton (Friendship-Taylor 1974, fig 10. 26-33; Friendship-Taylor 1979, fig 82, 44-7), and Wootton Hill Farm (Jackson 1988-9, fig 13, 18-19). Vessels with impressed finger-tipped decoration also occur at many local sites, such as Twywell (Jackson 1975, fig 24, 12 and 17), and Hardwick Park (Foster *et al* 1977, fig 12, 40). Vessels with a horizontal row of finger impressions around the girth also occur at Hardwick Park (Foster *et al* 1977, fig 15, 20) and Moulton Park (Williams 1974, fig 16, 78), though these vessels also have scoring below. All of the above parallels are from contexts spanning the 'conquest' period. The curved rim vessels with neck and shoulder cordons conform to types commonly called 'belgic' and, together with the possible butt-beaker and possible imitation samian form 30, suggest at least some Roman influence.

Overall, the range of fabrics, the predominance of grogged and shell-gritted wares and the predominant vessel forms, together with the absence of regional and continental imports, suggest an early to mid-1st century date range for most of the assemblage.

Site function and status

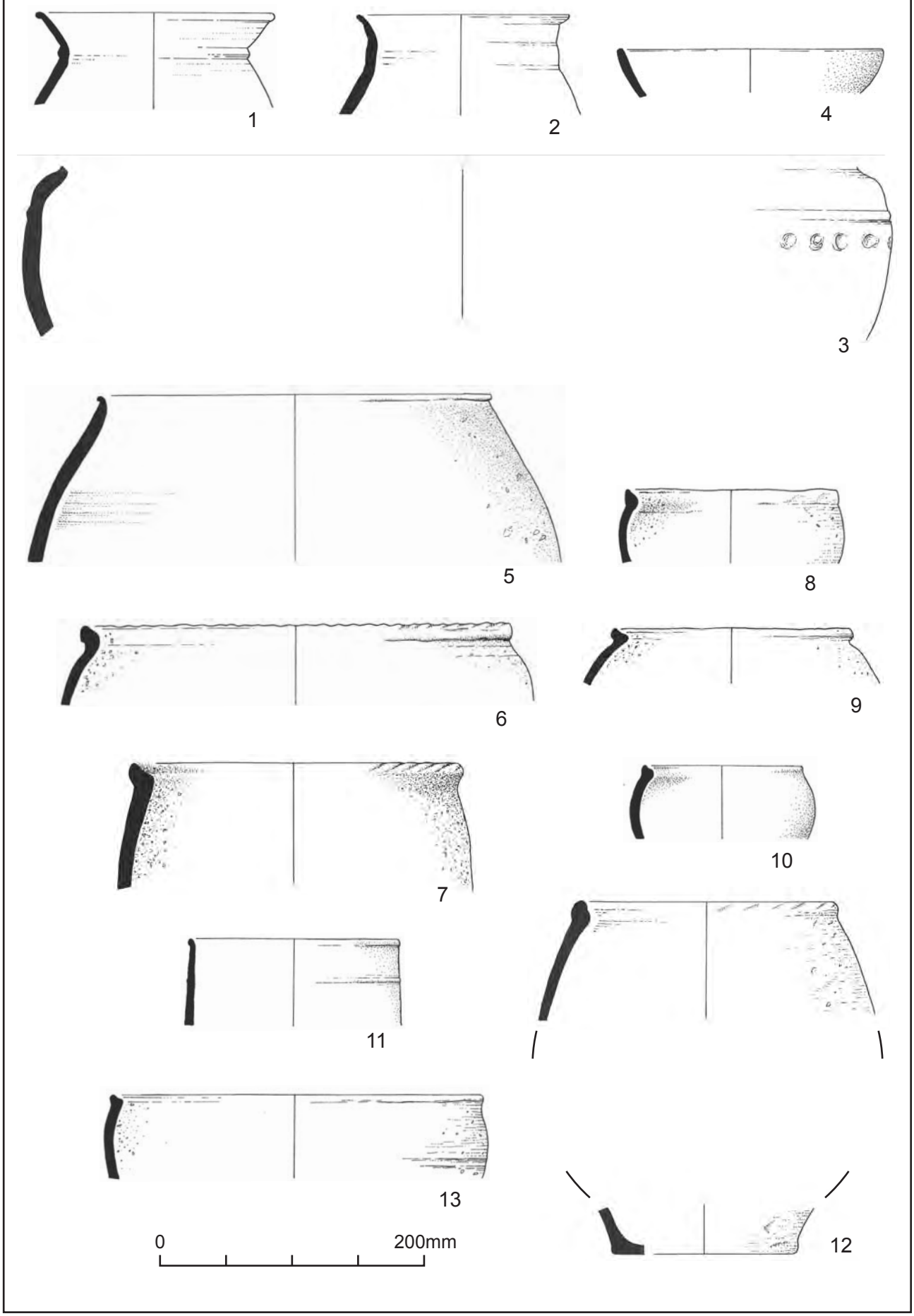
The pottery has an average sherd weight of around 15g, though this may partly be due to the presence of the lower parts of a number of vessels. The figure does suggest, however, that the assemblage does not just comprise material that had been lying around for some time before it was deposited. The range of wares and vessel form range, together with the lack of traded wares, suggests that most of this activity was basic utilitarian domestic and agricultural. The lack of traded wares also suggests little contact outside of the local area.

Selected group and pottery of intrinsic interest

Only one deposit warrants further discussion, though there are some other vessels of intrinsic interest. The fill (73) of ditch re-cut [70] on the northern arm of E1 enclosure ditch [66], contains around a third of the pottery and half of the vessels, based on the count of separate rims, of the site assemblage as a whole (Table 6).

Table 6: Quantification of the late Iron Age/early Roman pottery from Enclosure E1 ditch [70]

Fabric	No	%	Wt (g)	%	R%	%	B%	%
Reddish-yellow grog	62	14.69	1304	18.53	83	18.68	40	22.35
Dark brown grog	71	16.82	776	11.03	99	22.30	-	-
Buff grog	22	5.21	708	10.06	24	5.41	37	20.67
Other grog	7	1.66	736	10.46	-	-	-	-
Grog and Shell	7	1.66	158	2.24	21	4.73	-	-
Small shell	82	19.43	1550	22.02	126	28.38	37	20.67
Large shell	54	12.8	952	13.53	55	12.39	32	17.88
Oxidised	86	20.38	294	4.18	30	6.76	-	-
Other	31	7.35	560	7.96	6	1.35	33	18.44
Total	**422**		**7038**		**444**		**179**	



Scale 1:4

Late Iron Age/early Roman pottery Fig 19

Shell-gritted wares account for around a third of the deposit by sherd count and weight, while grogged wares comprise a further third by sherd count but a half by weight. All of the vessels are jars excepting a buff grogged ware possible butt-beaker and a dark brown grogged ware dish or lid (Fig 19, 4). Seven of the jars are in the reddish-yellow grogged ware and include two storage jars, a lid-seated jar with diagonal notches on the rim and a narrow-mouthed jar (2). Six more jars are in the dark brown grogged ware (including 1) and another vessel in buff grogged ware has a horizontal row of finger impressions around the girth with a cordon above (3). The shell-gritted ware includes a storage jar and seven lid-seated jars (6-10), three with diagonal notches on the rim. Another shell-gritted jar has no neck and a simple bead rim (5).There is one vessel with a triangular rim and short neck, possibly a beaker, in an oxidised reddish-yellow ware. It is decorated with zones of close vertical lines or combing, separated by horizontal grooves or cordons (11).

Catalogue of illustrated late Iron Age/early Roman pottery (Fig 19)

Pottery from fill (73) of enclosure ditch re-cut [70] of ditch [66], enclosure E1

1 Necked jar, grogged ware, burnished and grey external surface. Munsell 10YR4/2 with 10YR6/4 core edges and N4 core.

2 Necked jar, grogged ware, orange-brown surfaces. Munsell 2.5YR6/6 with N4 core.

3 Very large jar/bowl, grogged ware, light brown to orange-brown surfaces, fingertip impressed decoration. Munsell 7.5YR6/4 with 10YR4/1 core.

4 Shallow dish/lid, grogged ware. Munsell 10YR3/2, 4/2.

5 Large jar, shell gritted, light brown external surface with grey patches, grey interior. Large shell >6mm. Munsell 10YR4/2-5/2 with 7.5YR6/2-6/4 external surface.

6 Channel-rim jar, hand finished, orange internal surface and blackened exterior, shell gritted,. Medium shell >3mm. Munsell 7.5YR4/2 externally and 2.5YR6/6 internally.

7 Channel-rim jar, hand finished, light greyish-brown surfaces, diagonal slashes on rim, shell-gritted. Mainly small shell but some >4mm. Munsell 7.5YR6/4 with a 10YR5/2 core.

8 Globular channel-rim jar/bowl, wheel-finished, brown-grey surfaces, shell-gritted. Small shell. Munsell 10YR3/1-3/2 with 2.5YR4/4 patches internally.

9 Globular, channel-rim jar/bowl, grey surfaces, shell-gritted ware. Small shell. Munsell 10YR3/1-3/2.

10 Small globular, channel-rim jar/bowl, grey surfaces, shell-gritted. Small shell. Munsell 10YR3/1-4/1.

11 Reddish-yellow ware. Munsell 5YR6/6, 7.5YR6/4 with a N4 core (Small pieces, not illustrated), cf Hardwick Park (Foster et al 1977), fig 12, 45 for form and fig 12, 44 for decoration.

Vessels of intrinsic interest from other contexts

12 Large jar, orange surfaces, diagonal slashes on rim, grog with large shell >5mm. Vesicular, abraded. Munsell 2.5YR5/6, 6/6 with a 10YR5/2 core. Cremation urn. Fill (121) of re-cut [117] of [112], east arm of E2.

13 Channel-rim jar, wheel-finished, dark grey surfaces, shell gritted, horizontal groove on body. Small shell. Munsell 10YR3/1-3/2. Fill (130) of re-cut [127] of [122], east arm of E2.

3.5 Ceramic building material by Pat Chapman

There are 18 sherds of Roman tile, weighing 562g. One sherd, from fill (51) of ditch [50], enclosure E1, is the heavily abraded flange from a shellyware *tegula* roof tile. Ten small friable sherds, probably from one floor type tile, 35mm thick and made from fine sandy silty reddish clay with a brown surface, comes from fill (71) of ditch [70], E1. The remaining six sherds, from fill (84) of recut ditch [80], fill (120) of recut ditch [117], enclosure E1, and residual from furrows 3 and 19, are undiagnostic body sherds no more than 13mm thick, made from fine silty pinkish-orange clay with cream streaks and occasional tiny grog and shelly inclusions. The fabrics have some similarities to tile fabrics found at the Romano-British settlement at Quinton (Friendship-Taylor 1979, 121-124), only five miles to the north of Hartwell.

3.6 Querns by Andy Chapman

A group of rotary querns were recovered from the site, and these were exceptional due to their complete or near complete condition. From the fill (281) near the terminal of the C-shaped ditch [278], enclosure E1, there were two near complete upper stones from Iron Age beehive querns. One is in Spilsby sandstone from Lincolnshire. This stone is notable for being both heavily worn and extremely asymmetrical, with the hopper at 30 degrees to the grinding surface. As a result of these two factors, it had been necessary to add a second handle socket as the first was becoming unusable. In the handle socket there was an iron spike which may have reinforced the wooden handle. The other stone is in a dense, hard quartzite and has a collar encircling the hopper. In the base of the stone the central feeder hole retains an iron fitting that is probably the pivot broken off from the lower stone.

From the fill (158) of the western enclosure ditch [156], E2, there was exactly half of a lower stone in Millstone Grit. This is to 330mm diameter and 140mm thick, with a flat grinding surface. The small diameter would suggest that it was used with a beehive upper stone.

The two complete upper stones are classic Iron Age beehive querns and the half lower stone was probably also used with a beehive upper stone. Beehive querns appear to have been rapidly replaced by flat rotary querns following the Roman Conquest, and this process is perhaps being seen at Hartwell in the deposition of these stones. Rather than signifying the abandonment of the settlement in the later 1st century AD, they may perhaps mark the social transition of the inhabitants from the Iron Age to being subjects of Rome and Roman customs shortly after the Conquest.

Catalogue of querns

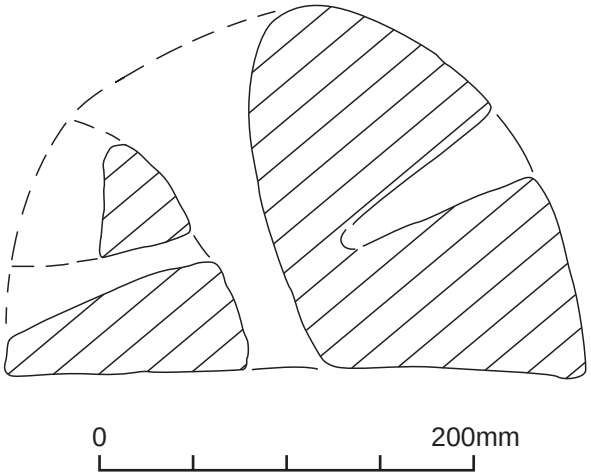
Small Find 21, fill (281), enclosure ditch [278], E1
This stone is fine-grained sandstone from Spilsby, Lincolnshire; characterised by its pale greyish-white colour and the presence of distinctive black mineral inclusions. The stone has a simple beehive form, with smoothly curving surfaces. It stands 200mm high and is elliptical in plan, measuring 305-330mm diameter and weighing 23kg (*c*50lb) (Fig 20). This shape is a result of the extreme asymmetry of the stone, with the hopper at *c*30 degrees to the grinding surface. While this is a common feature of beehive rotary querns, this example is at the extreme range of asymmetry. The longest axis is along the line of the opposed handle sockets. The base of one socket is only 25mm above the grinding surface while the other is 100m above the surface. The complete handle socket is sub-square, 40x40mm, and is 95mm deep, terminating within the body of the stone. The other handle socket has been largely lost where a section of the quern has broken away, but it penetrated to the central hole. There are fossil shells in the face of the fractured surface and it is possible that these, along with the handle socket, were points of weakness along which the

fracture developed. The hopper is 125mm in diameter and tapers to 30mm at the grinding surface. The grinding surface is worn smooth and is slightly concave, 5-6mm deep.

Embedded in the clay within the intact handle socket, there was an iron pin. This is 89mm long, with a rectangular section, measuring 10x8mm at its thickest, but tapering to a blunt point at one end (Fig 21).

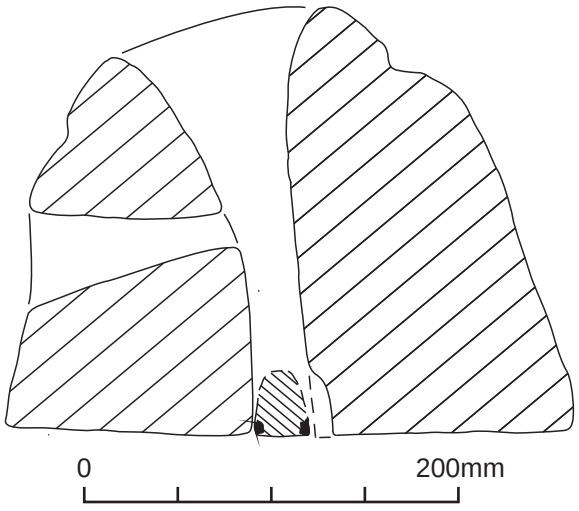
The corrosion products encasing the pin retain wood impressions, perhaps suggesting that the pin was in situ and had been set into the end of a wooden handle, with the pin running the entire depth of the handle socket, and still in place when the quern was deposited.

The position of the handle socket only 25mm above the grinding surface is a clear indicator that the extreme asymmetry of the stone is a product of wear and not an original feature, at least not in this extreme form. The location and angle of this handle socket would have eventually have made it very difficult to turn the stone, and the second handle socket was perhaps a later addition to prolong its useful life. The fractured surface around the lower handle socket is also worn and not fresh, suggesting that the stone had fractured around the handle socket and that its later use was after the fracture had occurred and the new handle socket was cut. The asymmetry may have become more extreme in this later use as a result of the weight imbalance caused by both the fracture and the developing asymmetry.



Quern SF21

Quern SF21



Quern SF32

The beehive rotary querns (SF21 & SF32) from enclosure E1 Fig 20

Iron pin within handle socket of quern, SF21 (Scale 20mm) Fig 21

Small Find 32, fill (281), enclosure ditch [278], E1
This stone is hard, dense and fine-grained sandstone, possibly an orthoquartzite (sandstone subject to low pressures and temperatures where the spaces between the sand grains are filled with silica cement). The stone is of beehive form, with a shaped collar, 50mm deep. The stone stands 230mm high and is up to 330mm in diameter, weighing 30kg (*c*65lb) (Fig 20). In the plane of the handle socket, a diameter of 300mm can be measured due to areas at either side of the handle socket being cut back to form a flattened face. The base of the handle socket is 60mm above the grinding surface. The socket itself is oval, perhaps worn down from a rectangle, measuring 65mm wide by 55mm high. It penetrates through to the hopper. The hopper is 115mm in diameter, tapering to 28mm diameter below the handle socket. The hopper is some 12 degrees off vertical, as is common to many beehive rotary querns. The grinding surface is worn smooth through use and is, unusually, slightly convex rather than concave.

In the grinding surface the central feed hole retains an iron fitting some 30mm in diameter and perhaps 35mm high, although in its surviving corroded form the fitting is more rectangular than circular. This is perhaps the original iron pivot that would have been embedded in the lower stone, with the upper stone rotating around it. Adjacent to the fitting the central hole is broader, perhaps to enable grain to feed past the pivot.

Small Find 18, fill (158), enclosure ditch [156], E2
A bottom or bed stone in Millstone Grit, up to 330mm diameter and 105-140mm thick, was split almost exactly in half. The surviving half weighs 12kg (23lb), indicating a total weight for the complete stone of 24kg (*c*46lb) (Fig 22). The grinding surface is well worn and almost flat. The circumference has been neatly worked, with small dimpled tool marks still visible, but the base has been left uneven. The central pivot socket is 18mm diameter by 40mm deep. The small diameter of the stone indicates that it would probably have been used in conjunction with a beehive upper stone. Four other querns fragments, weighing some 6.6kg, were recovered from (193).

Plan and section of bottom stone, SF18 (Scale 50mm) Fig 22

3.7 Other late Iron Age/early Roman finds by Ian Meadows

A variety of small finds were recovered from the Iron Age/Romano-British settlement, of which a small number of objects are closely dateable. These generally indicate a date in the 1st century AD.

From the area of enclosure E1, small finds were recovered from recuts of the main enclosure ditch [75]. Fill (73) produced two highly corroded fragments from a copper alloy brooch (SF9). The larger piece 29 x 8mm appears to be part of a flat foot with traces of the catch plate; it could be derived from a Hod Hill type brooch or a plate brooch. The remaining piece is part of a hook fixing for the spring of a brooch. Neither piece is sufficiently diagnostic to be closely dateable. From fill (67) of E1, ditch [66], two small copper alloy pieces were recovered (SF5, SF7). Fill (84) of recut [80] of the E1 enclosure ditch produced a complete Colchester derivative brooch comprising a plain bow, catch plate and wings. The piece is 55mm long, and the spring held in position by an axis bar. The piece is dateable to the third quarter of the 1st century (SF2). A similar Colchester brooch, comprising the bow and head with fragments of catch plate and pit, dating to the mid-1st century AD, was unstratified.

Enclosure E2 produced a much greater variety of small finds. An iron bar, 0.425m long with a rectangular cross section 10 x 5mm, was found in the upper fill (100) of the boundary ditch [348]. At one end the bar has been beaten and bent back on itself and preserves part of a hook, at the opposite end the bar had been similarly beaten and bent down although that portion is now entirely missing. *In situ* soil staining suggests this end may have held a ring or small hook. The original form or function of the piece is uncertain, and whilst a steelyard has been suggested, this piece differs from all the published examples in the British Museum catalogue by the lack of a suspension point for the weight and a pivot point (SF13).

A highly unusual find is an iron block anvil found in the primary fill of ditch [102], in the interior of enclosure E2. The anvil, which weighs 3.29kg, has a concave upper surface 90mm across and thinning from 80 to 65mm wide. The anvil is 160mm long,

and tapers down towards the base, with three slightly concave sides (Figs 23 & 24). At its base the piece measures 60mm long and about 20-22mm wide with a slight waist (SF10). There is a substantial concretion of corrosion products low down the anvil and in similar examples at this point there would often be a large hole through the metal (Manning 1985).

Iron nails, shanks, and straps were also common finds, with SF25 and SF31 being recovered from fill (121) of recut [117] of Enclosure E2 ditch; SF17 and SF24 coming from fill (159) of gully [156]; and layer (175) SF26, SF27, SF28, SF29 and SF30. This group contains a square-headed stud, a 'fiddle key' nail and a possible fragment of blade.

Other unusual small finds from the area of enclosure E2 include what was possibly a shaped piece of shale (SF19, context (169)), and three large fragments of a triangular fired clay loom weight. These have perforations through each corner, and were found in the fill (172) of ditch [171]. The fabric of the weight contains crushed burnt flint along with some flint pebbles, there are also several small vesicles which were possibly where organic material had burnt out during firing. Weights of this form are generally interpreted as loomweights and are assigned an Iron Age date. Owing to its fragility, it is unlikely that the weight moved far, so it is perhaps an indication of settled activity on the site in the Iron Age, including weaving.

The iron anvil SF10 from ditch [102], side views (height 160mm) Fig 23

The anvil, showing the domed top (scale 50mm) Fig 24

3.8 Animal bone by Karen Deighton

Introduction and method

A total of 11.6kg of animal bone was collected by hand from contexts during the course of excavation. This material was analysed to determine the level of preservation, the taxa present, and to aid the understanding of the site. Phasing follows J Burke (pers comm) and consists of Iron Age/Roman, medieval and post-medieval to modern phase. The Iron Age/Roman material from the main excavation will be discussed here. Medieval, post-medieval and modern material is discussed in section 4.6.

The material was firstly sorted into recordable and non-recordable fragments then quantified. Quantification follows Halstead after Watson (1979) and uses minimum anatomical element (Min. A.U). The following were recorded for each element: context, anatomical element, taxa, proximal and distal fusion, side, preservation, fragmentation, modification, butchery evidence and sex (where appropriate). Vertebra and ribs (with articulating ends) were counted and noted as small or large ungulate but not included in quantification. Partial skeletons are not included in quantification in order to avoid over representation.

Epiphyseal fusion follows Silver (1969). Ovicaprid teeth were aged after Payne (1973), cattle after Halstead (1985), and pigs after Bull and Payne (1982). Recognition of butchery is after Binford (1981). Schmid (1972) and Von den Driesch (1976) were also consulted. Material from sieved samples was included.

Results

Fragmentation was moderate and largely the result of old breaks and is possibly the result of trampling or compaction in the soil following burial. Bone surface abrasion was also moderate. Thirty-five examples (17.5%) of canid gnawing were noted, which could attest to the presence of dogs/foxes at the site. This level of canid gnawing is high enough to result in preservation bias against smaller bone elements (ie completely destroyed by canids). Six possible examples of butchery were noted, including sawing. Evidence for burning was noted from only three contexts which suggest this was not a preferred method of disposal.

The taxa present

The presence and proportions of taxa present is catalogued in Table 7, below.

Table 7: Animal taxa by feature (Iron Age/Roman)

Fill/cut	Cattle	Sheep/ goat	Pig	Horse	Dog	Deer	L. ung	S. ung	Bird	Total
E1										
46/44	1	-	-	-	-	-	-	-	-	**1**
51/50	3	3	-	-	-	-	1	-	-	**7**
59/54	1	1	-	1	-	-	-	-	-	**3**
73/70	9	6	1	2	-	-	-	-	-	**18**
82/80	2	-	-	2	-	-	1	-	-	**5**
83/80	1	-	-	-	-	-	-	-	-	**1**
85/80	2	-	1	2	-	-	-	-	-	**5**
250/248	-	-	-	2	-	-	-	-	-	**2**
259/248	6	2	-	-	-	-	1	-	-	**9**
262/261	1	2	-	-	-	-	-	-	-	**3**
264/263	2	2	-	-	-	-	-	-	-	**4**
280/278	1	-	-	-	-	-	-	-	-	**1**
E1 pits										
229/227	2	3	-	-	-	-	-	1		**6**
230/227		3	-	-	-	-	-	-	-	**3**
232/231	1	2	-	-	-	-	1	-	-	**4**
E1 L-shaped gully										
211/210	2	-	-	-	-	-	-	-	-	**2**
212/210	1	1	-	1	-	-	-	-	-	**3**
234/235	1	1	-	-	-	-	-	-	-	**2**
272/268	6	3	-	-	-	-	1	-	-	**10**
286/285	1	-	-	-	-	-	-	-	-	**1**
287/285	3	9	-	1	1	1	-	-	-	**15**
290/289	-	-	1	-	-	-	-	-	-	**1**
291/289	1	-	-	-	-	-	-	-	-	**1**
293/289	-	1	-	-	-	-	-	-	-	**1**
294/289	1	-	-	-	-	-	-	-	-	**1**
297/289	1	-	-	-	-	-	1	-	-	**2**
301/299	1	-	-	-	-	-	-	-	-	**1**
302/299	1	2	-	-	-	-	1	-	-	**4**
E2										
119/117	-	-	-	2	-	-	-	-	-	**2**
120/117	1	4		-	-	-	-	-	-	**5**
121/117	2		1	-	-	-	-	-	1	**4**
129/127	1	1		-	-	-	-	-	-	**2**
130/127	-	-	1	-	-	-	1	-	-	**2**
134/133	1	-	-	-	-	-	-	-	-	**1**
135/133	1	1	-	**1**	-	-	-	-	-	**3**
139/138	4	-	-		-	-	-	-	-	**4**
154/152	5	-	-	1	-	-	-	-	-	**6**
155/152	1	1	-	1	-	-	1	-	-	**4**
172/171	-	1	-	-	-	-	-	-	-	**1**
173/171	-	1	-	-	-	-	-	-	-	**1**
E2 gully										
96/98	1	2	-	1	-	-	-	-	-	**4**
100/348	1	-	1	1	-	-	-	-	-	**3**
102/103	-	1*	-	-	-	-	-	-	-	**1**
102/103*	3	2	-	1	-	-	-	-	-	**6**
106/107	1	-	-	-	-	-	-	-	-	**1**
109/111	2	-	-	-	-	-	-	-	-	**2**
E2 cobbled surface										
132/131	-	-	-	1	-	-	-	-	-	**1**
Other Areas										
217/216 Tree	-	-	-	1	-	-	-	-	-	**1**
23/22 gully	1	-	-	-	-	-	-	-	-	**2**
37/36 ditch	1	-	-	-	-	-	-	-	-	**1**
Totals	**79**	**57**	**6**	**22**	**1**	**1**	**10**	**1**	**1**	**178**

* Partial skeleton consisting of pelvis, vertebra, radii, humerii, metacarpals and phalanges

Ageing and metrical data

Data were insufficient to allow a study of age at death patterns. Very little metrical data (4 measurements from a single bone) were available due to the nature of fragmentation and canid gnawing.

Table 8: Animal bone: ageing and metrical data

Fill/cut	Taxa	Element	Side	Wear stage	Age class
E1.51/50	Sheep/ goat	3rd molar	Right	H	6-8 years
E1.85/80	cattle	3rd molar	Right	J	Old adult
E2.135/133	Sheep/ goat	3rd molar	Right	H	6-8 years
E1 229/227 pit	Sheep/ goat	Mandible	Left	C+	6-12 month+
E1.259/248	Cattle	Deciduous 4th premolar	Left	A	0-1 months
E1.L.287/285	Cattle	Mandible	Right	I	Senile
E1.L.293/289	Sheep/ goat	Mandible	Right	I	8-10 years

Sieved material

Table 9: Sieved animal bone

Fill/cut	Sample	Weight (g)	Cattle	S/G	Pig	L.ungulate	Total
E1.73/70	8	5	1	1	-	**-**	**2**
E2.155/152	18	29	-	1	-	**-**	**1**
Total	**-**	**-**	**1**	**2**	**-**	**-**	**3**

Sieve mesh sizes were 1mm, 2mm, and 3.4mm. Sample 16 produced indeterminate fragments only.

Discussion

In all phases, cattle were the dominant taxa, followed by sheep/goat, then horse. Cattle was utilised from meat, traction and milk. Sheep/goat provided meat, milk and wool. Horse was used for transport and meat as well as acting as a status symbol.

Material from Iron Age/Roman contexts is reasonably diverse. Deer are also present in this period. The taxa is represented by antler fragments only, these could the suggest collection of shed antlers as opposed to hunting, particularly as a burr was present. This material had been chopped and smoothed suggesting preparation for craft activities. Dog was also noted. Apart from uses such as hunting and guarding, dog meat was also eaten at this time. Although the assemblage is too small for bodypart analysis to be undertaken, the mixed nature of the assemblage both in terms of taxa and anatomical parts suggests the origin to have been kitchen waste.

Inter-site comparisons could only be made for the Iron Age and these are tentative due to the small size of the assemblage, but do suggest that the current site fits a local pattern for the taxa present and that the dominance of cattle is not unknown. The A43 sites (Deighton 2007) show a similar range of taxa, although sheep/goat was the dominant taxa. A similar taxonomic range and dominance of cattle was seen at Mallard Close, Earls Barton (Deighton 2004a), and a similar range of taxa is seen at Higham Ferrers (Deighton 2004b) and Newton Bromswold (Deighton 2006).

Conclusion

Analysis of the animal bone has shown a small assemblage of common domesticates which is broadly compatible with other local Iron Age sites.

3.9 The ecofactual evidence by Mike Allen and Ellen Simmons

A series of 41 bulk soil samples were taken from a range of Iron Age and Romano-British contexts. All samples were processed by Northamptonshire Archaeology by standard flotation methods where flots and residues were retained on at least 0.5mm mesh. Unsorted flots together with charcoal and shells recovered from the residues of 21 of the samples, all from ditches and gullys, were presented for assessment of the charred plant and charcoal remains, and the land and fresh-water molluscs (Allen 2012). The sorted flots were sparse in charred remains; little grain and charred weed seeds were present and no chaff was recognised. The only samples with charred grain were from the smaller curvilinear enclosure ditch of E2. A targeted series of 12 samples were selected for analysis (Table 10), and subsequent to assessment more detailed phasing was available. Samples included the identification of charred plant remains from fills of [117] and [152] from E2's curvilinear ditch, and of charcoal in the main fills in ditches of E1 main curvilinear ditch [47], L-shaped ditch [268], and E2 curvilinear ditch [117]. Mollusc samples were selected from a range of ditch fills (Table 11).

The aims of the analytical programme was to characterise the local environment, land-use and farming economy, and attempt to define any activities performed on site and potentially the role of the site.

Table 10: Samples selected for charred plant, charcoal and molluscan analysis

Feature	Sample	Molluscs	Charred plants	Charcoal
IA				
E1 Main curvilinear ditch				
48/47	6	-	-	✓
E2 gully				
100/348	12	✓	-	-
M-LIA				
E2 curvilinear ditch				
155/152	18	-	✓	-
LIA				
E1 Main curvilinear ditch				
236/234	30	✓	-	-
339/338	39	✓	-	-
340/338	40	✓	-	-
341/338	41	✓	-	-
L-Shaped ditch				
269/268	35	-	-	✓
LIA/ER				
E2 curvilinear ditch				
119/117	15	✓	-	-
121/117	14	-	✓	✓
Early Roman				
E1 Main curvilinear ditch				
71/70	7	✓	-	-
L-Shaped ditch				
59/54	5	✓	-	-
Total		**8**	**2**	**3**

Environment, landscape character and land-use; the molluscan evidence by Mike Allen

The site is located on the Blisworth Limestone Formation with localised superficial deposits of Diamicton of the Oadby Member; a Mid Pleistocene glacial till. It supports pelostagnogely soils of the Ragdale Association with typical calcareous pelosols of the Hanslope Association and (Jarvis *et al* 1984) directly over the limestone outside the investigation area. The area is subject to high localised groundwater conditions (due the glacial till) and standing water (localised bodies of water) and surface drainage (small streams and rivers) locally.

The aim of the mollusc analysis was to characterise the local environments, landscape character and land-use, and examine changes through time. Two elements in particular are addressed; the wet nature of the features in view of high numbers of aquatic species in the assessment, and the shady (possibly woody) environments (*cf*. Allen 2012) which would be unusual for a late Iron Age and Romano-British occupation area.

Molluscs were recovered from 40 litre bulk samples processed by Northamptonshire Archaeology (now MOLA) by standard flotation methods where flots and residues were retained on at least 0.5mm mesh. A series of samples were selected for analysis (Allen 2012) and flots (at least 0.5mm) and some shells extracted for the large residue fractions were available for analysis. The shell fragments in the finer fractions (to 0.5mm) normally extracted under low magnifications (Evans 1972) were not sorted or available so some bias in the assemblages might be expected. The flots

and any fragments recovered from the residues (generally observed to be >4mm with few >2mm) were sorted and identified using a stereo-binocular microscope with x7.5-x45 magnification. The results are presented in Table 11, and nomenclature follows Anderson (2005).

Sampled features

A series of just eight samples were analysed, and these covered features associated with Enclosure 1 (including the main curvilinear ditch and the L-shaped enclosure ditch) and Enclosure 2 (including both the curvilinear ditch and a linear gully and ditch). The samples covered the Late Iron Age and Romano-British periods, but did not touch on earlier periods or later medieval phases of the site, making the identification of change through time challenging.

Character of the assemblages

For this period (Iron Age and Roman-British) we would expect to see largely open landscapes in which analysis would concentrate upon defining land-use, such as short-grazed grassland (pasture), arable contexts, and changes in land-use and the broader environment. Clearly high groundwater conditions are evident in the relatively high proportions of aquatic or amphibious species (*sensu* Robinson 1988), indicating periods of standing water in many features. The relatively high proportion, however, of shade-loving species (Table 11) is unusual and suggests some local, and probably relatively rapid, vegetation growth in and around some of the sampled features.

Table 11: Mollusca from Late Iron Age/Early Roman ditches

	Enclosure E1						Enclosure E2	
	Main curvilinear ditch (LIA)			L-shape (LIA)	curvilinear ditch (ER)		Gully (IA)	curvilinear (LIA/ER)
Context	**339/338**	**340/338**	**341/338**	**236/234**	**71/70**	**59/54**	**100/348**	**119/117**
Sample	**39**	**40**	**41**	**30**	**7**	**5**	**12**	**15**
MOLLUSCA								
Carychium cf. *minimum* Müller	-	-	4	12	11	-	2	7
Carychium tridentatum (Risso)	2	1	10	75	122	-	15	78
Carychium spp.	-	-	-	6	10	-	1	44
Oxyloma elegans (Risso)	-	-	-	5	2	-	-	2
Cochlicopa cf. *lubrica* (Müller)	-	-	2	1	3	-	-	1
Cochlicopa cf. *lubricella* (Porro)	-	-	+	-	1	1	-	-
Cochlicopa spp.	1	-	5	7	12	2	-	4
Vertigo cf. *pygmaea* (Draparnaud)	3	-	-	-	1	3	-	1
Vertigo angustior Jeffreys	-	-	-	1	-	-	-	-
Vertigo spp.	-	-	-	-	1	-	-	-
Pupilla muscorum (Linnaeus)	-	-	1	-	1	16	-	+
Vallonia costata (Müller)	1	-	-	36	18	2	31	25
Vallonia pulchella (Müller)	1		31	1	-	-	-	-
Vallonia cf. *excentrica* Sterki	7	1	9	12	10	76	39	34
Vallonia spp.	-	-	-	-	-	-	2	1
Acanthinula aculeata (Müller)	-	-	1	16	12	-	-	7
Merdigera obscura (Müller)	-	-	3	2	2	1	1	2
Punctum pygmaeum (Draparnaud)	-	-	-	1	2	-	1	2
Discus rotundatus (Müller)	-	-	-	1	-	-	-	-
Vitrina pellucida (Müller)	-	-	1	1	-	-	-	-
Vitrea crystallina (Müller)	-	-	1	-	4	-	-	4
Vitrea contracta (Westerlund)	-	-	3	13	8	1	-	8
Nesovitrea hammonis (Ström)	-	-	-	3	-	-	1	1
Aegopinella pura (Alder)	-	-	2	21	10	-	-	3
Aegopinella nitidula (Draparnaud)	3	1	26	51	79	3	4	32
Oxychilus cellarius (Müller)	2	-	1	31	29	-	3	6

	Enclosure E1						Enclosure E2	
	Main curvilinear ditch (LIA)			L-shape (LIA)	curvilinear ditch (ER)		Gully (IA)	curvilinear (LIA/ER)
Context	**339/338**	**340/338**	**341/338**	**236/234**	**71/70**	**59/54**	**100/348**	**119/117**
Sample	**39**	**40**	**41**	**30**	**7**	**5**	**12**	**15**
Zonitiodes nitidus (Müller)	1	1	2	1	3	-	1	-
Cecilioides acicula (Müller)	-	-	(1)	-	-	-	-	-
Cochlodina laminata (Montagu)	-	-	5	3	5	-	1	-
Clausilia bidentata (Ström)	-	-	2	2	7	-	-	4
cf. *Balaea perversa* (Linnaeus)	-	-	-	-	-	-	+	-
Helicella itala (Linnaeus)	-	-	-	1	3	11	7	5
Trochulus hispidus (Linnaeus)	8	-	7	25	-	21	5	11
Arianta arbustorum (Linnaeus)	-	-	-	-	+	-	-	-
Cepaea hortensis (Müller)	-	-	-	3	4	-	-	-
Cepaea spp.	-	-	+	-	11	1	+	3
Cepaea/Arianta spp.	1	-	-	-	-	-	-	8
Cornus aspersum (Müller)	-	-	-	-	-	-	-	+
FRESH-WATER SPECIES								
Galba truncatula (Müller)	9	1	63	13	15	47	15	10
Planorbis planorbis (Linnaeus)	-	-	-	-	-	-	-	
Anisus cf. *leucostoma* (Millet)	8	2	190	155	185	1	276	110
Hippeutis complanatus (Linnaeus)	2	-	14	-	-	-	-	
Pisidium cf. *personatum* Malm	-	-	-	-	-	-	-	1
Terrestral taxa	11	4	18	24	22	12	13	21
molls per litre	1.2	0.15	9.6	12.5	14.3	4.7	10.1	10.3
TOTAL	**49**	**6**	**383**	**499**	**571**	**186**	**405**	**414**
% freshwater	38.8	32.3	69.7	33.7	35.0	25.8	71.9	51.2

The environmental character and nature of the features

The variation between the assemblages seems to relate largely to spatial and local micro-environments of the sampled features than obvious changes in environment and land-use through time (Table 11). As such, this report will largely attempt to document the mosaic of local micro-environments and land-use of the late Iron Age and early Romano-British enclosures E1 and E2. Superficially, there is little consistency between the features assemblages with shade-loving species dominating in particular the upper fills of Late Iron Age ditch [338] (E1), the upper fills of Iron Age ditch [348], and secondary fills of late Iron Age/early Romano-British ditch [117] (E2). This may however hint at a temporal, rather than spatial variation across the excavated and sampled area, though this is not immediately obvious.

The lowland environment

Aquatic species were present in high levels (26-72% of the total assemblages), and generally present represent over a third of individual assemblages. Two aquatic/amphibious species *Galba truncatula* and *Anisus* cf. *leucostoma* dominated the freshwater assemblages indicating the presence of standing water in the ditches, (and in the local lowland environment as a whole), and that these were subject to seasonal drying. Both species are typical of small bodies of water (small rivers, streams, ditches) as well as marshy grassland and damp places in fields (Macan 1977; Kerney 1999). *Hippeutis complanatus* and the Pisidium bivalve *Pisidium personatum* were also present in very low numbers, and are typical of well-vegetated places in drainage ditches (Kerney 1999). The accompanying slum species (*Oxyloma elegan*s, the relatively rare *Vertigo angustior* and the ubiquitous occurrence of *Zonitoides nitidus*) indicate wet base-rich meadows and marsh. The occurrence of. *V. angustior* (a rare marsh species (Evans 1972, 146)) is very limited in its distribution (Kerney 1999, 101), but requires open permanent shallow water conditions and inhabits short vegetation, and mosses such as in wet base-rich meadows; and *Z, nitidus* lives on *Phragmites* and *Carex* litter often in zones of emergent vegetation and, like other species here, is virtually amphibious.

Feature microenvironments

All of the samples features are ditches and the ditch fills cover, presumably, several decades at least. The earliest contexts sampled, the primary and secondary fills of the Iron Age main curvilinear ditch [338] (Enclosure E1), although mollusc-poor, tentatively indicate moist damp open grassland conditions with few mesic and shade-loving species present, probably with shallow standing water in the ditches and in local environs. Another possibly early ditch fill is that from the gully [348] (E2) which indicates a similar open environment. The presence of *Aegopinella nitidula, A. pura* and *Oxychilus cellarius* in upper fills of the main curvilinear ditch [234] and [338] and the early Roman primary fills of the same ditch [70], suggest the relatively rapid growth of long herbaceous vegetation probably largely in the ditches, but possibly on any associated banks and beyond. The assemblages from these contexts become dominated by shade-loving species (67-81%) and indicate the presence of possibly fallen and rotting vegetation (leaves) as well as the shady long herbaceous and scrubby vegetation.

Land use

Although the assemblages largely reflect the micro-environments of the ditches, they do represent that of the wider environs. What is clear is that this is not a xerophillic, open dry trampled short grassland and bare earth typical of intensive occupation and activity. Instead, the land-use is one of longer grassland and scrub with damp pools and local marshy areas. This suggests a low intensity of occupation and one perhaps more related to summer pasture for especially the larger herbivores (cattle), but also possibly sheep grazing. There is little indication from the molluscan evidence of

cultivation of the immediately adjacent landscape. This evidence tends to suggest that perhaps the majority of the features here relate to stock enclosure and management, rather than domestic settlement and occupation. An open mosaic of land-use and local vegetation is suggested by assemblages from the upper fill (59) of Early Roman ditch [54], part of the main curvilinear ditch of E1, and that from upper fill (100) of the Iron Age gully [348] (E2), which are both dominated by open country species (78% and 69% respectively), and whose assemblages do suggest the presence of shorter, possibly lightly grazed but damp grassland. The very open nature of the assemblages may indicate slightly later assemblages, and seem slightly at odds to some of the very shady local habitats indicated by other assemblages from, in some cases, the same ditch.

Change through time; Late Iron Age to Early Romano-British
Defining change through time is difficult, but the aquatic species seem to be particularly dominant in later features and the later fills of earlier features; such as the upper fills of late Iron Age ditch [338] (E1), the upper fills of Iron Age ditch [348], and secondary fills of late Iron Age/early Romano-British ditch [117] (E2). This may suggest increasing wetness and or standing water during the Roman period. This coincides with the growth of loner herbaceous vegetation and scrubby plants growing in the ditches and the wider environs.

There are hints of drying landscape in the later periods if the upper fill (69) of the Iron Age gully [70] and early Roman ditch (59)/[54] are later, and perhaps belong to later Roman or later phases of ditch infilling.

Charred plant remains and wood charcoal by Ellen Simmons

Analysis of two samples for charred plant remains and three samples for wood charcoal was undertaken. This report summarises the identification and analysis of charred plant remains present the curvilinear ditch of E2; in mid to late Iron Age ditch fill (155)/[152] and late Iron Age to early Roman ditch fill (121)/[117], along with the wood charcoal present in Iron Age ditch fill (48)/[47], and late Iron Age ditch fill (269)/[268] of E1. Results are summarised in Tables 12 and 13 and present in full in Appendix 2 (Table 19).

Recovery, processing and laboratory methods
Forty litre samples were processed by flotation and flots and residues were retained on at least a 500µm mesh. Samples selected for analysis of charred plant remains were sorted using a stereo-binocular microscope (×10 - ×65). Identification of charred plant material was carried out using modern reference material in the Department of Archaeology, University of Sheffield and various reference works (Berggren 1981; Anderberg 1994; Cappers *et al* 2006). Cereal identifications follow Jacomet (2006). Other plant nomenclature follows Stace (2010). Quantification of cereal grains was based on the presence of embryo ends (Jones 1990, 92). The archaeobotanical composition of the samples is recorded in full in the archive (Appendix 2, Table 19) and summarised in Table 12. The seed of the plant is always referred to in these tables, unless stated otherwise. The abbreviation *cf.* means 'compares with' and denotes that a specimen most closely resembles that particular taxa more than any other. Charred plant material recovered from the samples was stored in gelatine capsules, or glass tubes with plastic stoppers, in sealable plastic bags.

Fifty charcoal fragments greater than 2mm in size were identified from each sample to record the principle taxa present in each deposit. Wood charcoal fragments were fractured manually and the resultant anatomical features observed in transverse, radial and tangential planes, using high power binocular reflected light (episcopic)

microscopy (×50, ×100 and ×400). Identification of each fragment was carried out by comparison with material in the reference collections at the Department of Archaeology, University of Sheffield and various reference works (e.g. Schweingruber 1990; Hather 2000). Nomenclature follows Stace (2010). A record was also made, where possible, of the ring curvature of the wood and details of the ligneous structure, in order for the part of the woody plant which had been burnt and the state of wood before charring, to be determined (Marguerie & Hunot 2007).

Twenty-five fragments of wood charcoal greater than 4mm in size, and 25 fragments 2-4mm in size, were examined from each sample with the aim of reducing bias related to differential fragmentation. Where 25 charcoal fragments greater than 4mm in size were not available, all the fragments greater than 4mm that were present were identified along with additional 2-4mm fragments. Charcoal fragments recovered from both flots and residues were sieved into greater than 4mm and 2mm - 4mm fractions. These fractions were then sub-sampled using a riffle splitter until around 25 fragments of each size fraction were obtained, with the aim of recovering as random a sample of taxa present in the deposit as possible. Identified charcoal fragments were grouped by taxa, weighed.

Preservation

Preservation of cereal grains was poor with all of the grains present being puffed and distorted and retaining only fragments of epidermis or with epidermis completely absent. Preservation of wild or weed plant seeds was also relatively poor which hampered identification of some seeds to species. Preservation of wood charcoal fragments was generally good, with less than 10% of fragments being unidentifiable due to poor preservation in samples 6 and 14 and none in sample 35.

Results

The charred plant remains assemblage composition of the samples is summarised in Table 12 and recorded in full in Appendix 2 (Table 19). The charcoal assemblage composition is summarised in Table 13.

For the purposes of the summary table, it is assumed that the identifications made from the better preserved charred remains are representative of the less well preserved material in each sample. The probable barley grains (cf. *Hordeum*) are therefore assumed to represent barley (*Hordeum* sp.). Due to poor preservation it was not possible to determine whether any of the barley grains were twisted and thereby confirm the presence of the six row variety of barley. It was possible however to determine that one of the barley grains from fill (121) of ditch [117] was of the hulled variety. It was also not possible to determine which types of wheat were present due to poor preservation. Grains with morphological characteristics intermediate between emmer wheat and bread/club wheat and between spelt wheat and bread/club wheat were both present. It is therefore only possible to state that some form of wheat (*Triticum* sp.) was present along with hulled barley (*Hordeum* sp.).

The number and weight (g) of wood charcoal fragments of each taxa present is listed in Table 13. The proportions of each taxa present, as represented in weight and number of fragments in Figures 25 and 26 demonstrate that similar proportions of the majority of taxa are represented as both weight and number of fragments and therefore that fragmentation is unlikely to have led to a significant bias in the proportion of each taxa represented. The exception to this is the proportion of wild/bird cherry present in sample 14 which comprised around twice as much of the sample by fragment weight than by fragment number. This was due to the presence of a number of larger fragments of wild/bird cherry charcoal in the >4mm fraction and

generally smaller fragments of oak.

The taxa represented in the charcoal assemblage as a whole are *Quercus* sp. (oak), *Corylus avellana* L. (hazel), *Prunus spinosa* L. (blackthorn), *Prunus avium/padus* (wild or bird cherry), Pomoideae (hawthorn, apple, pear, rowan family), *Acer campestre* L. (field maple) and ash (*Fraxinus excelsior* L.). Oak charcoal cannot be identified to species using morphological characteristics so either *Quercus petraea* (Matt.) Leibl. (sessile oak) or *Quercus robur* L. (pendunculate oak) is represented. Wild and bird cherry (*Prunus avium/padus*) cannot be differentiated on morphological characteristics. Pomoideae, which cannot be differentiated on morphological characteristics, is a large sub-family of the Rosaceae (rose family) containing many species, although the native woody plant species most likely represented would be *Pyrus communis* L. (wild pear), *Malus sylvestris* (L.) Mill. (crab apple), *Sorbus domestica* L. (service tree), *Sorbus aucuparia* L. (rowan), *Sorbus aria* (L.) Crantz. (common whitebeam), *Crataegus monogyna* jacq. (hawthorn) or *Crataegus laevigata* (Poir.) DC. (Midland hawthorn).

Iron Age: First fill of recut, Enclosure E1 main curvilinear ditch 48/47, sample 6
The wood charcoal assemblage from ditch fill (48)/[47] was diverse, with six different wood types represented. Oak comprised the largest proportion of the sample by both number and weight of charcoal fragments, followed by Pomoideae and wild/bird cherry. A small proportion of field maple, blackthorn and hazel was also present. For the proportion of fragments were ring curvature could be determined, 67% exhibited strong ring curvature, 19% exhibited weak ring curvature and 14% exhibited intermediate ring curvature. Narrow growth rings were observed on three of the oak charcoal fragments. Fungal hyphae were present in 5% of the fragments where mineralisation had not obscured the vessels.

Mid to Late Iron Age: Upper fill, Enclosure E2 curvilinear enclosure ditch 155/152, sample 18
The charred plant remains assemblage from ditch fill (155) was composed of two barely grains, two grains with morphological characteristic intermediate between emmer wheat and bread/club wheat, two indeterminate wheat grains and three indeterminate cereal grains. A fragment of probable apple seed was also present (cf. *Malus sylvestris*). Wild or weed plant seeds included curled/clustered/broad leaved dock (*Rumex crispus/conglomeratus/obtusifolius*), probable field gromwell (cf. *Lithospermum arvense*), probable thistle (cf. *Carduus*/*Cirsium* sp.), probable brome grass (cf. *Bromus* sp.) and small seeded grass (< 2mm Poaceae).

Table 12: Summary of charred crop material and wild or weed plant seeds from the curvilinear ditch (Enclosure E2)

	Phase/date	**mid – late IA**	**LIA – ER**
	Feature	**Ditch 155/152**	**Ditch 121/117**
	Sample number	**18**	**14**
Cereal grain			
Barley grain (*Hordeum* sp.)		2	11
Wheat grain (*Triticum* sp.)		4	3
Indeterminate cereal grain		3	3
Other economic plants			
Probable apple seed (cf. *Malus sylvestris*)		-	1
Wild or weed plant seeds			
pale persicaria/redshank (*Persicaria lapathifolia/maculosa*)		-	1
curled/clustered/broad-leaved dock (*Rumex crispus/conglomeratus/obtusifolius*)		1	-
vetch/pea (*Vicia/Lathryrus* sp.)			1
cleavers (*Galium aparine*)		-	1
probable field gromwell (cf. *Lithospermum arvense*)		1	-
probable greater plantain (cf. *Plantago major*)		-	1
probable thistle (cf. *Carduus*/*Cirsium* sp.)		1	-
rush (*Juncus* sp.)		-	1
small seeded grass family (<2mm Poaceae)		1	-
probable brome grass (cf. *Bromus* sp.)		1	-
unidentified wild or weed plant seeds		4	2

Table 13: Summary of wood charcoal

Phase/date	**Iron Age**		**L Iron Age**		**LIA/ER**	
Enclosure	**E1**		**E1**		**E2**	
Feature	**ditch**		**ditch**		**ditch**	
Feature number	**48/47**		**269/268**		**121/117**	
Sample number	**6**		**35**		**14**	
Number/weight of fragments	No.	weight (g)	No.	weight (g)	No.	weight (g)
Oak (*Quercus* sp.)	16	0.442	1	0.071	11	0.558
Hazel (*Corylus avellana* L.)	1	0.004	-	-	4	0.055
Blackthorn (*Prunus spinosa* L.)	2	0.026	9	0.391	3	0.383
Wild/bird cherry (*Prunus avium/padus*)	12	0.272	40	2.611	12	1.523
Hawthorn/Sorbus group (Pomoideae)	12	0.349	-	-	5	0.297
Field maple (*Acer campestre* L.)	5	0.077	-	-	4	0.075
Ash (*Fraxinus excelsior* L.)	-	-	-	-	7	0.279
Indeterminate	2	0.021	-	-	4	0.039
Total weight/number of fragments	**50**	**1.191**	**50**	**3.073**	**50**	**3.209**

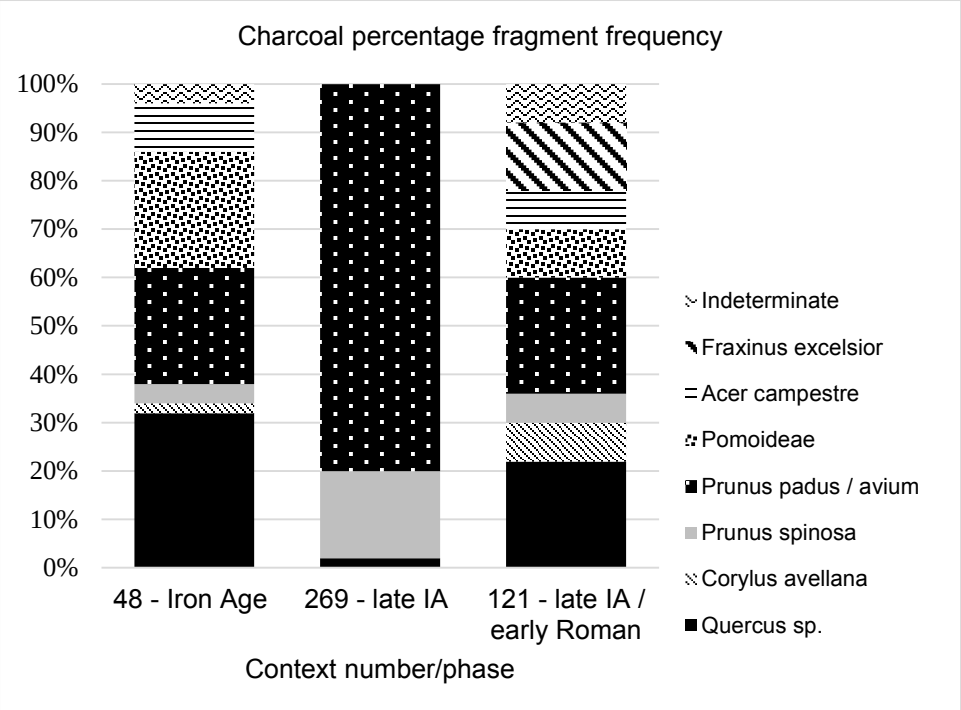
Late Iron Age: Primary fill, Enclosure E1 L-shaped enclosure ditch 269/268, sample 35

The wood charcoal assemblage from ditch fill (269) was relatively homogenous, with only three different wood types represented. Wild/bird cherry comprised by far the largest proportion of the sample as both fragment number and fragment weight, followed by a small proportion of blackthorn and one fragment of oak. For the proportion of charcoal fragments were ring curvature could be determined 5% exhibited strong ring curvature, 25% exhibited weak ring curvature and 70% exhibited intermediate ring curvature.

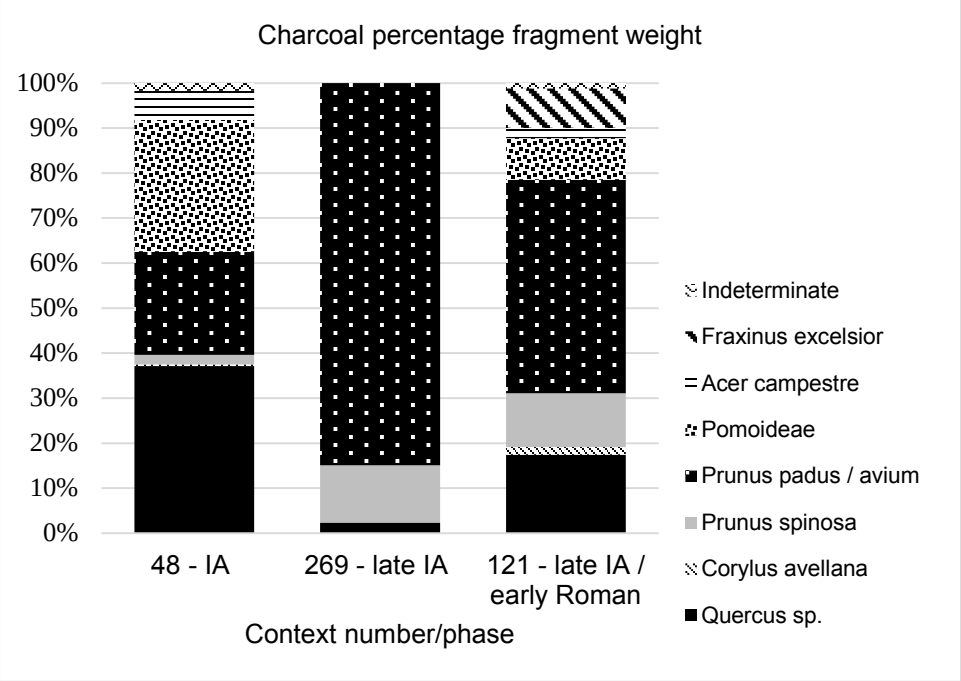
Late Iron Age/early Roman: Upper fill, re-cut of Enclosure E2 curvilinear enclosure ditch 121/117, sample 14

The charred plant remains assemblage from ditch fill (121) was composed of eleven barley grains, one grain with morphological characteristic intermediate between spelt wheat and bread/club wheat, two indeterminate wheat grains and three indeterminate cereal grains. Wild or weed plant seeds included pale persicaria/redshank (*Persicaria lapathifolia/maculosa*), vetch/pea (*Vicia/Lathryrus* sp.), cleavers (*Galium aparine* L.) probable greater plantain (cf. *Plantago major*), rush (*Juncus* sp.) and small seeded grass (< 2mm Poaceae).

The wood charcoal assemblage was diverse, with seven different wood types represented. Oak and wild/bird cherry both comprised large proportions of the sample with wild/bird cherry comprising the largest proportion by fragment weight due to the presence of large fragments of wild/bird cherry and mostly small fragments of oak. Also present in smaller proportions were Pomoideae, ash, blackthorn, field maple and hazel. For the proportion of fragments were ring curvature could be determined, 61% exhibited strong ring curvature, 6% exhibited weak ring curvature and 33% exhibited intermediate ring curvature. Fungal hyphae were present in 4% of the fragments and thick walled tyloses were observed within the vessels of three of the oak charcoal fragments.



Charcoal assemblage composition represented as number of fragments of each taxa Fig 25



Charcoal assemblage composition represented as total weight of fragments of each taxa Fig 26

Discussion

Limited interpretative information was available from analysis of the charred plant assemblage due to the poor preservation and low density of the remains. Barley was present in the mid to late Iron Age and late Iron Age/early Roman deposits and is a typical crop of both the Iron Age and Roman periods in the East Midlands (Monckton 2006, 270, 274). Either emmer wheat or bread/club wheat or both was present in mid to late Iron Age fill (155) in ditch [152], E2, and either spelt wheat or bread/club wheat was present in late Iron Age/early Roman fill (121) in ditch [117]. Emmer wheat and bread/club wheat are both present in archaeobotanical assemblages of mid to late Iron Age date in the East Midlands, although spelt wheat is generally the predominant crop type and bread/club wheat is comparatively rare (Monckton 2006, 270). Emmer wheat and possible bread type wheat were both present in the charred plant assemblage from the nearby Iron Age settlement site of DIRFT East, Crick, Northamptonshire (Monckton 2000, 2). Spelt wheat and bread/club wheat are also both present in archaeobotanical assemblages of Late Iron Age and early Roman date in the East Midlands (Monckton 2006, 274). At Normanton le Heath, Leicestershire a small proportion of probable bread wheat type grains were present in Roman deposits (Monckton 1994, 59).

The cereal grains from School Lane, Hartwell are likely to have been charred accidentally during food preparation or as a result of accidents during drying before storage or milling. Some smaller grains may also form a component of crop processing waste which was burnt. The assemblage of wild or weed plant seeds includes taxa commonly associated with cultivation or fertile disturbed soils such as pale persicaria/redshank (*Persicaria lapathifolia/maculosa*) curled/clustered/broad-leaved dock (*Rumex crispus/conglomeratus/obtusifolius*), cleavers (*Galium aparine*), probable field gromwell (cf. *Lithospermum arvense*), and probable brome grass (cf. *Bromus* sp.). It is likely that these seeds were harvested along with the crops and charred as crop processing waste. Plant taxa more commonly associated with

grassland or waste ground include vetch/pea (*Vicia/Lathyrus*), probable greater plantain (cf. *Plantago major*) and probable thistle (cf. *Carduus/Cirsium*) although these may also represent arable weeds. Other sources of charred wild or weed plant seeds may however include kindling, waste roofing or flooring material and animal fodder.

The composition of the charcoal assemblage is likely to be influenced by a number of factors, including differences in the availability of local fuel woods and anthropogenic fuel wood selection strategies, as well as to taphonomic factors such as differential charcoal preservation and recovery (Asouti & Austin 2005, 8; Théry-Parisot *et al,* 2010). It is unlikely that the dominance of any particular taxa in an assemblage of wood charcoal directly reflects dominance in the surrounding environment. The wood charcoal assemblage overall does however demonstrate a certain degree of consistency in the fuel woods utilised which is likely, at least in part, to be related to the availability of those taxa in the surrounding environment.

Scrub, hedgerow or underwood taxa such as wild/bird cherry and blackthorn were present in all three charcoal samples with Pomoideae also present in Iron Age fill (48) of ditch [47] and late Iron Age/early Roman fill (121) of ditch [117], E2. Also present in all three samples was oak with field maple and hazel present in Iron Age ditch fill (48) and late Iron Age/early Roman ditch fill (121). Ash was only present in late Iron Age/early Roman ditch fill (121).

The charcoal of wild or bird cherry, blackthorn and Pomoideae is likely to reflect a local availability of underwood, woodland margin, hedgerow or scrub vegetation. The use of hedgerow taxa as field boundaries in order to contain stock, particularly in the case of spiny taxa such as blackthorn and hawthorn, is likely to have been common during later prehistory, although direct evidence for hedgerows rarely survives (Murphy 2001, 14). The oak, ash, hazel and field maple may be representative of open woodland but may also represent trees growing as a component of hedgerows or scrub vegetation. *Crataegus-Hedera* scrub which is dominated by hawthorn but frequently includes blackthorn and tree saplings, particularly of ash and oak, is the dominant sub-climax woody vegetation community on circumneutral and base rich soils in lowland England (Rodwell 1991, 34). *Fraxinus-Acer-Mercurialis* woodland and *Quercus-Pteridium-Rubus* woodland also however represent the dominant woodland communities in Southern and Eastern lowland areas of Britain on rendzinas and brown calcareous earths (Rodwell 1991, 23). Hazel frequently grows in association with ash and maple as underwood, in hedgerows or forming the usual woodland of clayey or calcareous soils with standard oak tress also often present (Rackham 2003, 203, 207). Hazel is also present as understory in oak woodland, along with hawthorn (Rodwell 1991, 22), and has been recorded in open landscapes (Rackham 2003, 205).

Where observable, the high proportion of strong ring curvatures of the charcoal fragments from Iron Age fill (48) of ditch [47] and late Iron Age/early Roman fill (121) of ditch [117], E2, indicate an abundance of smaller branches or twig material. This further indicates the use of underwood or scrub vegetation as fuel. The high proportion of intermediate ring curvatures of the charcoal fragments from late Iron Age fill (269) of main curvilinear ditch [234], E1, indicate an abundance of intermediate branches rather than smaller branches and twigs. The homogeneous composition of the charcoal assemblage from ditch fill (269) indicates the possibility that this material may represent a single burning event. It may also be the case that wild/bird cherry was preferentially selected for use as fuel, possibly due to availability or to other factors such as burning properties or a pleasantly scented smoke (Edlin 1949, 156).

The suite of taxa represented in the charcoal assemblage from the Iron Age and early Roman deposits is also consistent with palaeo-environmental evidence for the general nature of the landscape in the region during the Iron Age and Roman period. Charcoal from the middle Iron Age site of Wanlip in Leicestershire included high frequencies of hawthorn type and blackthorn, with oak, ash and hazel also common (Morgan 1998, 83). Woodland clearance and agricultural activity in central southern Britain, which had begun during the Later Neolithic and Bronze Age periods, increased in intensity during the Iron Age (Robinson 1984, 9). Pollen evidence indicates that a mosaic of woodland, grassland and arable land characterised the landscape of England during the Iron Age and that woodland clearance intensified further during the Roman period, particularly in central southern England (Dark and Dark 1997, 30).

Conclusions

Barley and wheat were present in deposits of mid to late Iron Age and late Iron Age to Early Roman date. It could not be determined which wheat species was present, although emmer wheat or bread/club wheat or both was present in a mid to Late Iron Age ditch fill and spelt wheat or bread/club wheat was present in a late Iron Age/early Roman ditch fill. Barley and all three wheat types have been recovered at other Iron Age and Roman sites in the region. Wild or weed plant seeds associated with the cereal grains include taxa commonly associated with fertile disturbed soils and cultivation and are likely to have been harvested along with the crops and charred as crop processing waste. Wild or weed plant seeds which may also represent arable weeds but are commonly associated with grassland or waste ground were also present. Other sources of wild or weed plant seeds may include kindling, waste roofing or flooring material and animal fodder.

The wood charcoal assemblage from Iron Age, mid to late Iron Age and later Iron Age to early Roman deposits exhibited a certain degree of consistency in the fuel woods utilised with underwood, scrub or woodland margin taxa well represented along with open woodland taxa. The woodland taxa present may also however represent tress growing as a component of hedgerow or scrub. The predominance of strong ring curvatures of the wood charcoal fragments from Iron Age ditch fill (48)/[47], E1, and late Iron Age to early Roman ditch fill (121)/[117], E2, further indicate the use of smaller branches or twigs. The charcoal assemblage from mid to late Iron Age ditch fill (269) was relatively homogeneous in composition, in comparison to ditch fills (48), E1, and (121), E2. A high proportion of wild/bird cherry charcoal was present with a high proportion of intermediate ring curvatures, indicating the possible preferential selection of intermediate branches of wild/bird cherry for use as fuel or possibly a single burning event.

The suite of taxa present in the charcoal assemblage is consistent with palaeo-environmental evidence for the nature of the landscape in the Iron Age and Roman period in central southern Britain which indicates an increase in woodland clearance and therefore an increased likelihood of the availability of scrub or hedgerow taxa.

Summary: environment, land-use, farming economy and activity by Mike Allen

Following this limited environmental analysis programme a few simple concluding comments can be made about the environment, land-use, farming economy and site activities.

Local lived-in environment

Of particular note was the overall lack of intensive activity. Charred plant and charcoal remains were generally sparse (see above and Allen 2012), and the molluscan evidence indicates a local environment of one with long herbaceous vegetation and scrub (hazel, blackthorn, cherry etc.). This contrasts with many other sites where short trampled dry grassland and perhaps bare earth are present indicating high levels of activity and trampling locally. The high groundwater levels during the use of the site through the Iron Age and Roman periods lead the ditches holding water and to pools of standing water across the area in wetter months. Overall this gives the impression of perhaps seasonal fluctuation in the intensity of use and activity hear, and even then that the sampled areas of the site were not a focus of high levels of domestic and settlements activity and crop processing.

Farming

The crops of barley and wheat were harvested, but seem to have been grown on dry soils as there is no evidence in the few charred weed seeds recovered (Table 12) of any reeds, rushes, or wetland plants nor any of damp ground. This may suggest that the crops were grown in fields slightly away from the site on higher dry ground, or that the site remained very dry during spring to autumn months and that the high water tables, damp ground and wet ditches were entirely a winter phenomenon.

Site activities

The setting of fires of young wood from scrub and hedges indicates the collection of local wood and that these are domestic fires rather than for any high-temperature burning or firing activities. Most of the charcoal seems to be in small but discrete dumps in the ditches, and the lack of charcoal distributed more generally throughout the features fills may indicate relatively few fires. Limited crop processing occurred, but these remains here are accidental, or indeed incidental, burning, possibly of just a waste cereal grains, but may possibly indicate accidental charring resulting from drying grain for milling or storage. The low number of grain here (barley 13; wheat 7, indeterminate 6) and their presence in only 2 of 21 samples confirms the scarcity of these remain here.

Role of the site

Overall, from the environmental evidence (molluscs, charred plant remains and wood charcoal) suggests a low level of activity here, which may well have been seasonal. The density of remains and the more utilised site conditions seen at many domestics and occupation sites is not seen here. We may tentatively suggest that the enclosures here may relate to stock enclosure and management, rather than domestic settlement and occupation. Even if that was the case, there is no evidence of intensive grazing. It is difficult to suggest any functions for these enclosures noting the lack of normal domestic evidence unless it was for preforming rapid temporary task such as wool collection (sheep).

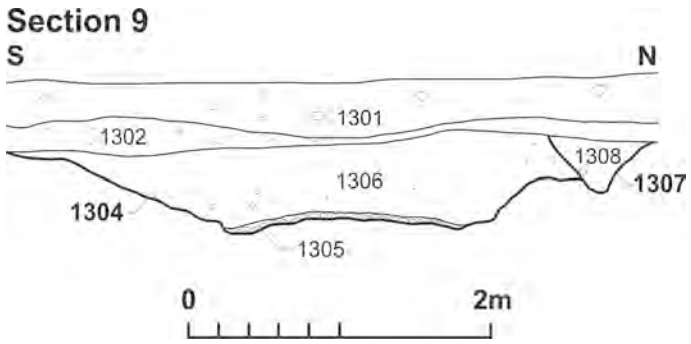
4 THE LATE MEDIEVAL AND POST-MEDIEVAL SETTLEMENT

4.1 The late medieval activity (14th-16th centuries)

The earliest evidence of medieval activity dated from the 14th-16th centuries and was associated with a possible plot boundary. The remains of a small building were also found south of the boundary, probably part of the small dispersed settlement located along the length of the hollow-way. It is possible that it was the northernmost element of a small group of buildings present on the 1727 map (see Fig 3).

The hollow-way

A former hollow-way [90]/[1304] was aligned north-east to south-west and was up to 7.0m wide and 0.73m deep, with a very shallow concave profile (Fig 27). The earliest fill was hard greyish-brown clay, which was overlaid by a layer of gravel in a sandy clay matrix; both these fills may have served as make-up or levelling layers. The upper surface of the trackway had been laid with angular pieces of limestone and cobbles, some of which appeared to have been burnt. Overlying the stone were disuse layers of silt and clay.



Section of ditch [1304] Fig 27

No dating evidence was recovered, but it is likely to have been in existence from at least the medieval period. The layers of make-up and hard-core probably dated to the post-medieval period, having been laid down to provide a firmer surface.

The hollow-way is depicted in the map of 1727, but had fallen out of use by the late 19th century. At its south-west end it met up with the road from Hartwell Green to Hanslope and at its north-east end it joined another former road which linked Hartwell to Elms Farm.

Possible settlement remains

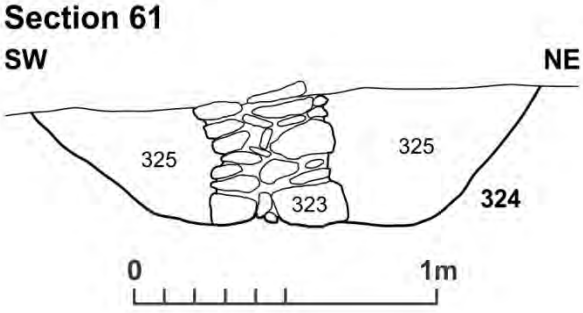
Late medieval activity dating to the 14th and 16th centuries was concentrated at the south-eastern corner of the site, adjacent to the trackway (Fig 5). There were two parallel ditches, aligned north-west to south-east and perpendicular to the trackway, although there appeared to be no relationship between them.

Only the southern ditch [324] contained any pottery. This ditch was 1.68m wide and 0.45m deep with steep edges and flat base. In the centre of the ditch were the remains of a dry-stone wall, 0.43m wide and 0.48m high (Figs 28 and 29). The wall sat on the base of the ditch and was constructed from roughly coursed limestone and sandstone. To the west the wall and ditch were truncated by the end of a clay

foundation [303] (see below), and while the ditch continued to the north the wall terminated at this point.

Located *c.*6m to the south was a rectangular stone-flagged surface [306], 4.90m long and 2.70m wide (Fig 30). It lay at a slight angle to the wall (323), and lay beside a shallow linear gully [303} filled with light brown clay with some stones, which was perhaps the foundation for a cob or rubble wall, which may have abutted stone wall (323) to the north to form the north-western corner of a small cottage or hovel. The limestone flags were irregularly-shaped, but with a flat upper surface and tightly fitted together, perhaps forming the external threshold for a doorway. A small group of four postholes to the east [322] may relate to structures within the building. No pottery was found in association with these features.

Wall (323) set in ditch [324] Fig 28



Section of ditch [324] with wall (323) Fig 29

The flagstone surface [306] and clay foundation [303], looking south-west Fig 30

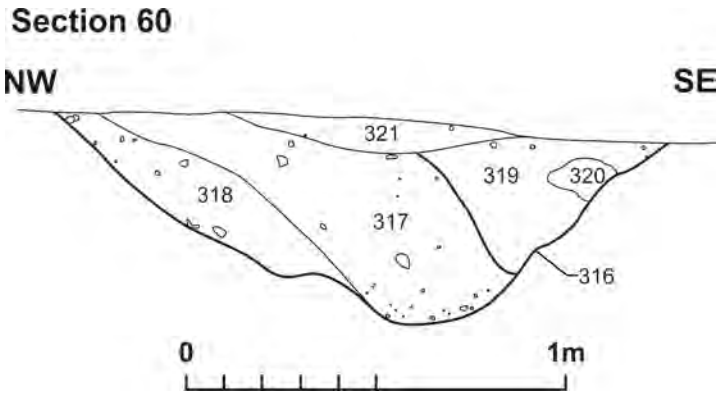
Medieval remains of ridge and furrow were noted across the site and sampled in the northern part. Each was filled with mid grey-brown silty clay and the furrows had a shallow U-shaped profile.

4.2 Post-medieval/modern activity (18th to 19th centuries)

One ditch [316], aligned north-east to south-west, was 1.90m wide and 0.60m deep with a wide U-shaped profile. The compact dark brown silty clay fills contained pottery dating to the 18th or 19th centuries, as well as clay pipe and brick/tile. The ditch was aligned parallel to the trackway and was probably a boundary (Fig 31). The trackway continued in use until at least 1835 (RCHME 1982), although many of the buildings that had once stood along it had disappeared by this date.

Some 15m to the east, ditch [303] was situated on the same alignment and was 1.40m wide and 0.30m deep. It truncated the remains of the earlier building and flagged floor (Fig 30). The upper fill of the ditch contained large quantities of demolition material, including stone and mortar, testifying to the continuing abandonment and demolition of the buildings during the 19th century.

At the north of the site, ditch [240] was aligned north-west to south-east, 3.08m wide and 0.76m deep with a wide U-shaped profile. This ditch may have been a boundary ditch running parallel to the trackway from Hartwell to Elms Farm.



Section of ditch [316] Fig 31

4.3 Medieval and post-medieval pottery by Iain Soden

A total of 82 sherds of pottery were recovered from twelve contexts. They comprise 14 different fabric types, and have a total weight of 3.324kg. The pottery is summarised in Table 14 and correlated, where possible, to the Northamptonshire County Type series (CTS).

The assemblage is clearly split and comprises a small concentration of medieval wares, probably of the 14th-16th centuries, with most of the remainder being of 18th to 19th-century date. The weights are dominated by the very large sherds from a pancheon, a robust (Staffordshire) vessel-type which often breaks easily into large, durable pieces.

The medieval and early post-medieval material is generally sparse, but the concentration of pieces from ditch [325] suggests that there is occupation nearby. The sherds are clean, of moderate size and weight, and relatively unabraded. Their origin in the influential Potterspury industry is as might be expected in this area.

The post-medieval, late 18th and 19th-century material, suggests that there is contemporary domestic occupation in the near vicinity. The material includes a large pancheon from ditch [303] which might be described as at home in either a dairy or kitchen (in a farm setting) or in a pantry or kitchen (in a domestic home). Also present is the majority of a creamware bedpan from ditch [303], a common enough form in this fabric, but also indicating that a home lies nearby. The occurrence of Black Basalt and Blue shell edged pearlwares in small quantities might suggest a family with an awareness of fashion in the late 18th century as both were distinctive and highly sought after during the 1770s and 1780s.

Table 14: Medieval and post-medieval pottery by type and context

Fabric type: fill/cut		2	17/ 16	53/ 52	304/ 303	305/ 303	310/ 309	311/ 309	315/ 314	317/ 316	321/ 316	323 wall	325/ 324
14th-16th centuries													
Potterspury ware	329	3/3g	-	-	-	-	-	-	-	-	-	1/6g	12/ 224g
Brill/Boarstall ware	324	1/2g	-	-	-	-	-	-	-	-	-	-	-
Medieval coarseware	360	-	-	-	-	-	-	-	1/2g	-	-	1/2g	-
Glazed red earthenware	407	-	-	-	-	-	-	-	-	-	-	1/23g	-
Midland Black ware	411	-	-	1/9g	-	-	-	-	-	1/1g	-	-	-
18th-19th centuries													
Mocha	432	-	-		-	-	-	-	-	1/44g	1/11g	-	-
Blue shell-edged pearlware	419	-	-	-	-	-	-	-	-	1/13g	1/7g	-	-
Creamware	415	-	-	-	7/170g	-	-	-	-	1/2g	1/1g	-	-
Black basalt ware	431	-	-	-	2/5g	-	-	-	-	-	-	-	-
Underglaze transfer printed earthenware	416	-	-	-	5/46g	-	-	3/9g	1/9g	3/29g	-	-	-
Church Gresley-type stoneware	1000	-	1/11g	-	4/66g	-	-	-	-	-	-	-	-
English Stoneware flask	1000	-	-	-	-	-	-	-	3/62g	-	-	-	-
White glazed earthenware	1000	-	1/3g	-	-	-	-	-	-	-	1/1g	-	-
Pancheon	426	1/19g	-	-	20/ 2362g	1/18g	1/164g	-	-	-	-	-	-
Total		**5/24g**	**2/14g**	**1/9g**	**38/ 2649g**	**1/18g**	**1/164g**	**3/9g**	**5/73g**	**7/89g**	**4/20g**	**3/31g**	**12/ 224g**

4.4 Medieval and post-medieval building material by Pat Chapman

Roof tile

There are twelve sherds of roof tile, weighing 700g. These are 12-15mm thick and made from very hard slightly coarse red-brown to orange-brown clay. Three come from furrows, the other six from the fill of land-drains (315) and (330), and a gully [52]. One sherd, from the topsoil has a remnant peghole, 11mm square.

Brick

Eight brick fragments, weighing 3.1kg, come from four contexts. Approximately half a brick from the fill of ditch [240], 110mm wide and 65mm thick (4⅜ x 2½ inches), is made from hard coarse red-brown clay. The header has been highly vitrified to a glassy surface from exposure to very high or prolonged high temperatures. Four fragments come from the fill of ditch [316]. Two are 60mm thick (2⅜ inches), one is a sandy dark orange, the other is hard fine orange-brown. The remaining two pieces are fine sandy red-brown and orange-brown. A brick from the fill of ditch [316] has close spaced rough diagonal scoring on the header and one stretcher. This brick measures 100mm wide and 63mm thick (4 x 2½ inches). It is made with sandy dark red-brown clay and has the remnants of a wide frog. A very small sandy orange fragment comes from the fill of a land-drain. These brick fragments generally date from the 18th to the 20th century.

Plaster

Two fragments of quite soft fine white lime plaster, weighing 158g, were recovered from the primary fill of [303]. One piece, 32mm thick, has a smoothed flat surface. The other piece is irregular in shape 60x55x40mm with one area of flat surface to a possible right-angled corner.

Fired clay

The 87 fragments weigh 872g and come from 21 contexts of all periods. They are usually small, with a few larger fragments up to 70mm long, often irregular in shape, although some fragments have smooth, though not flat surfaces. The fragments are hard and made from either fine sandy red-brown clay with frequent calcareous inclusions, or from fine silty brown clay with a black core. A few of these might be the fragmentary remains of Roman tiles. Otherwise they are probably widely scattered structural debris, as indicated by the smooth surfaces of some fragments, there are no wattle impressions.

4.5 Post-medieval small finds by Ian Meadows

Several different medieval and post-medieval small finds were recovered across the site. The most commonly found objects were various types of dress accessory.

One post-medieval cast copper alloy looped button was recovered from the fill of ditch [4] (SF1). Another copper alloy button (SF20) of the same period, this time spherical, was recovered from the fill of the large post-medieval boundary ditch [240] at the northern edge of the site. The fill of a modern land drain (310) crossing the site also produced a copper alloy button (SF34). This artefact is decorated with white metal coating and on the outer slightly convex surface was a lion or large dog, possibly a Talbot, statant on a wreath surmounted by a crown. This button may have been part of the uniform worn by a retainer or member of a hunt.

Two small fragments of buckles from this period were also recovered. This includes part of the copper alloy tongue from a buckle (SF8). The piece is 20mm long, 4m wide and up to 2mm thick and displays the characteristic curvature of a buckle that has been used with a strap or belt. This piece is of post-medieval date, and was found in the upper fill (73) of a recut of the enclosure ditch [75] from E1. A small corner of a square or rectangular cast copper alloy hat or shoe buckle was also recovered, and given a possible 18th-century date (SF7). The find location of this piece is not known.

In addition to the dress accessories, several other pieces of material culture were recovered. An illegible, possibly cast, base metal coin type object was found, and has a bust on one face and an unclear motif on the reverse (SF3). The piece has a sub-square perforation in the centre, suggesting it was once fixed to something as a decorative element. This artefact possibly dates to the 19th century.

From the same land drain deposit as the button (310), a post-medieval bone cutlery handle was found (SF35). This single-piece handle still has part of the iron tang embedded.

The final piece from this group is a bundle of pieces of lead window came including at least two strips twisted together (SF38), with a total length of about 140mm. These pieces, probably from domestic dumping, were found in the fill of post-medieval ditch (303), which cut the earlier medieval flag-stoned floor.

The occurrence of several fragments and artefacts of post-medieval date indicates recent agricultural activity and associated dumping continued to take place at the site.

4.6 Animal bone by Karen Deighton

A total of 11.6kg of animal bone was collected by hand from contexts during the course of excavation. The majority of this dates to the late Iron Age/early Roman period and is discussed above (section 3.8). The medieval, post-medieval and modern material discussed here was analysed to determine the level of preservation, the taxa present and to aid the understanding of the site.

Table 15: Animal taxa by context (medieval)

Fill/cut	Feature	Cattle	Sheep/goat	Horse	Total
313/312	Ditch	2	1	-	3
317/316	Ditch	1	-	1	2
Total		**3**	**1**	**1**	**5**

Table 16: Animal taxa by context (post-medieval to modern)

Fill/Cut	Feature	Cattle	Sheep/goat	Pig	Horse	L.ung	Total
26/24	Ditch	1	-	1	1	-	3
30/28	Ditch	1	-	-	-	-	1
32/31	Ditch	5	1	-	-	1	7
244/243	Ditch	1	-	-	-	-	1
284/283	Ditch	-	-	-	1	1	2
305/303	Ditch	1	-	-	-	-	1
308/316	Ditch	1	1	-	-	-	2
310/316	Ditch	-	1	-	-	-	1
325/324	Ditch	-	-	1	-	-	1
339/333	Layer	-	1		-	-	1
Total		**10**	**4**	**2**	**2**	**2**	**20**

Table 17: Animal taxa by context (undated)

Fill/cut	Feature	Cattle	Total
159/156	Ditch	2	**2**
207/206	Pit	2	**2**
Total		**4**	**4**

Table 18: Animal bone: ageing and metrical data

Fill/cut	Taxa	Element	Side	Wear stage	Age class
317/316	Sheep/ goat	Mandible	Left	E	2-3 years
308/307	Cattle	Deciduous 4th premolar	Left	B+	1-8 months

Data were insufficient to allow a study of age at death patterns. Very little metrical data (four measurements from a single bone) were available due to the nature of fragmentation and canid gnawing.

Discussion and conclusion

Unfortunately little can be said for the medieval and post-medieval to modern phases due to insufficient data. For the later phases all that can be confirmed with any certainty is that the major domesticates: cattle, sheep, horse, and pig were utilised at the site.

5 DISCUSSION

Several phases of work were undertaken at School Lane in Hartwell. The initial geophysical survey of the site in 2010 identified several positive and negative anomalies. These were used to inform the placement of 13 trial trenches undertaken later in the same year, which identified a number of features that corresponded well with the geophysical anomalies. Features revealed at this stage included two large areas of late Iron Age/early Roman enclosure, formed of substantial ditches, as well as two medieval or post medieval trackways.

The open-area excavation, undertaken in 2010-2011, excavated many of the features which lay in the proposed development area, including the two late Iron Age/ early Roman enclosures, and a small area of medieval habitation structures.

Enclosure E1, lying to the east, was bounded by two large curvilinear ditches of substantial size and depth, being *c*5m wide and in excess of 1.5m deep. The open sides of both enclosures, to the north-east and the north-west, may have been originally defined by hedges or banks, as no archaeological traces were recovered. There was a narrow gap between the two enclosing ditches of E1 which may have functioned as an entrance. An L-shaped ditch subdivided the central area. Enclosure E1 was probably created in the 1st century BC and continued in use into the 1st century AD, with the ditch being recut.

The final fills of the main ditch, the L-shaped ditch and some of the smaller features contained dumps of burnt organic material in charcoal rich layers, as well pottery and bone, which may largely have derived from a final act of systematic abandonment, levelling and destruction, rather than the daily deposition of settlement garbage. Perhaps the most revealing piece of evidence was the dumping of two complete upper stones from rotary querns, both still quite usable, as a marker that the Iron Age way of life at this settlement was at an end. A lower stone, split in half to render it useless, came from enclosure E2.

Enclosure E2 to the west, was smaller than enclosure E1, but was similarly only partially enclosed by a curvilinear ditch. It also enclosed a ditch which sub-divided the space, as well as a scatter of smaller features. In this example there was a clear central entrance, surfaced with cobbles. This enclosure may have been a later addition, perhaps in the early 1st century AD. The enclosure ditch was recut and, in a similar fashion to enclosure E1, it was the final ditch fills that were rich in charcoal, pottery and animal bone from an act of clearance and levelling. The fills of the internal division and some of the smaller features were also similar.

Despite the presence of domestic material in so many features, there was no evidence for the presence of any roundhouses or other structures, and from the analysis of the environmental evidence it was suggested that this might have been a seasonal settlement, rather than a main domestic focus. With a surrounding landscape of grassland and woodland, it seems most likely that the focus was pastoral and perhaps as only a seasonal centre for grazing.

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MOLA Northampton

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APPENDICES

APPENDIX 1: SMALL FINDS CATALOGUE

Enclosure E1

Fill/cut (67)/

SF5 A near semi-circular shaped piece of copper alloy sheet 35mm x 13mm. It was perforated by a single irregular 1mm hole, possibly a result of corrosion.

SF6 A small copper alloy ferule 15mm across and 7mm deep, the external surface of which is scored with what appears to be a shallow helical thread suggesting this piece is of very recent date.

Fill/cut (73)/

SF8 Part of the copper alloy tongue from a buckle. The piece is 20mm long, 4m wide and up to 2mm thick and displays the characteristic curvature of a buckle that has been used with a strap or belt. This piece is of post-medieval date.

SF9 Two highly corroded and non-joining fragments of a copper alloy brooch. The larger piece 29mm x 8mm appears to be part of a flat foot with traces of the catch plate, it could be derived from a Hod Hill type brooch or a plate brooch. The remaining piece is part of a hook fixing for the spring of a brooch. Neither piece is sufficiently diagnostic to be closely dateable.

Fill/cut (84)/

SF2 A complete Colchester derivative brooch comprising a plain bow, catch plate and wings. The piece was 55mm long. The spring was held in position by an axis bar. Dateable to the third quarter of 1st century.

Enclosure E2

Fill/cut (100)/

SF13 An iron bar 425mm long with a rectangular cross section 10mm x 5mm. At one end the bar has been beaten and bent back on itself and preserves part of a hook, at the opposite end the bar had been similarly beaten and bent down although that portion is now entirely missing. *In situ* soil staining suggests this end may have held a ring or small hook. The original form or function of the piece is uncertain and whilst a steelyard has been suggested this piece differs from all the published examples in the British Museum catalogue by the lack of a suspension point for the weight and a pivot point.

Fill/cut (103)

SF10 An iron block anvil with a slightly concave upper surface 90mm across and thinning from 80mm - 65mm wide. The anvil tapered down from this face and three of the sides appeared concave. At its base the piece measured 60mm long and about 20mm - 22mm wide with a slight waist. There is a substantial concretion of corrosion products low down the anvil and in similar examples at this point there would often be a large hole through the metal (Manning 1985 1-3 and plate 1 A1).

Fill/cut (121)/

SF25 Two corroded iron nail shanks 37mm and 40mm long. No heads were present and it was not possible to identify the character of the cross section of the shank other than to say it tapered.

SF31 An iron 'fiddle key' nail originally 32mm long, the end of the shank is clenched. The form of the head is difficult to determine owing to corrosion but it is 4mm thick and 8mm deep surmounting a tapering rectangular shank.

Fill/cut (159)/

SF17 Iron nail

SF24 Five iron nails and fragments. The nails ranged in length from 22mm - 30mm, with square sectioned tapering shanks and three examples preserved flattened struck heads.

Fill/cut (169)/

SF19 A triangular fragment of shale a maximum of 20mm x 20mm and 5mm thick. No original worked surface or edge could be seen.

Fill/cut (172)/

No Number Three large fragments of a triangular fired clay weight with perforations through each corner, Poole 1984 type 1. The fabric of the weight contained crushed burnt flint along with some flint pebbles, there were also several small vesicles which were possibly where organic material had burnt out during firing. Weights of this form are generally interpreted as loomweights and assigned an Iron Age date.

Layer (175)

SF26 An iron object 58mm long and up to 14mm wide with either a thickening along one edge or a folded up edge. The piece might be a fragment of a blade or binding.

SF27 Fe object

SF28 An iron strip up to 44mm long and 26mm wide broken at each end, of uncertain function, possibly part of a binding.

SF29 An iron nail 42mm long with a slightly domed burred head and a tapering rectangular shank 5mm x 4mm at the top and 4mm x 3mm at the break, missing its point. In addition part of what was probably a joiner's dog was present. It comprised a 50mm long 'back' with a 25mm long point at lying at a right angle at one end, a similar point may have been present at the other end but is now missing, a short curve suggests its former presence.

SF30 A large slightly domed square headed stud 30mm across with a tapering rectangular cross section shank, 11mm x 16mm at the top thinning to 9mmm x 3mm, and 40mm long.

Unknown contexts

SF4 A Colchester brooch, comprising the bow and head with fragments of catch plate and pit. Mid-1st century AD.

SF7 A small fragment of the corner of a square or rectangular cast copper alloy hat or shoe buckle of post medieval, possibly 18th-century date.

Post-med and redeposited disturbance

Fill/cut (5)

SF1 A post-medieval cast copper alloy looped button with a bi-conical button 12mm diameter and 8mm thick with a protruding nipple on the outer surface.

Fill/cut (242)

SF11 A copper alloy mount or decorative hook 50mm long which had originally been held attached to a box or furnishing by means of two iron nails positioned on its mid line. The top of the fixing plate terminates in a small fleur attached to a hook with a ball end.

SF20 A spherical post medieval copper alloy button 18mm across its diameter and 16mm front to back, preserving two short nibs where the rear loop had been broken off. The sphere was formed of two hemispheres joined together as could be seen by their slight misalignment. The rear of the button had two circular perforations of uncertain function. The interior of the sphere was possibly filled to provide extra weight.

Fill/cut (284)

SF23 A 26mm long iron 'fiddle key' nail with a rectangular cross section. The squat square head section ran into a tapering shank, which was slightly bent. This type of nail is characteristic of horseshoe fixing.

Fill/cut (304)

SF32 An iron bolt 90mm long. It had a rectangular sectioned shaft 8mm x 6mm broken at its tip and an irregular struck head 20mm x 13mm.

SF38 A twisted bundle of pieces of lead window came including at least two strips twisted together. The piece had a total length of about 140mm.

Fill/cut (305)

SF33 The shank of an iron nail, 45mm long, and missing both head and tip.

Fill/cut (310)

SF34 A 16mm diameter white metal coated copper alloy button. Two small nibs were all that survived of the attachment loop on the rear. On the outer, slightly convex surface a lion or large dog, possibly a Talbot, statant on a wreath surmounted by a crown. This button may have been part of the uniform worn by a retainer or member of a hunt.

SF35 A post-medieval bone cutlery handle with part of the iron tang still embedded. The handle is a single piece into which the iron tang was only driven a short distance. The handle is 70mm long and has a flattened oval cross section 10mm x 8mm at the tang end widening to 10mm x 5mm at the other.

SF36 An assemblage of ten iron nails and a tapering wedge. The nails ranged in size from 50mm to 100mm long but most were about 60mm, they had tapering square section tangs and irregular flattened heads. Several had been bent, possibly clenched. The longest nail had a short bar for its head that lay across the narrow axis of the tapering rectangular shank. The shank was 8mm x 6mm at its widest tapering to 5mm x 4mm.

The 79mm long iron wedge shaped object was 30mm x 14mm at its widest tapering to 9mm x 3mm. The widest part appeared slightly burred as if it had been struck.

Furrow (no context)

SF3 An illegible, possibly cast, base metal coin type object with a bust on one face and an unclear motif on the reverse. The piece has a diameter of 22mm and near its centre a sub square perforation 1.5mm across is present suggesting the piece was once fixed to something as a decorative element. The piece is definitely not ancient and possibly 19th-century.

Fill/cut (19) Furrow

The straight back of a joiner's dog or clamp. The piece had a circular cross section 6mm diameter and was 50mm long curving at each end indicating the former presence of the points.

Fill/cut (317)

An assemblage of six nails and nail fragments ranging from a complete example at 80mm long to undiagnostic fragments of shank 32mm long. The two longest examples had both had their tips clenched back at about ninety degrees suggesting they had been driven through a piece of wood at least 50mm thick.

APPENDIX 2: CHARRED PLANT REMAINS

Table 19: Charred plant remains from the curvilinear ditch (Enclosure E2)

Context and sample number	**Ditch 155/152 Sample 18**	**Ditch 121/117 Sample 14**
Phase	**mid – late IA**	**late IA – early Roman**
Cereal grain (common name)		
Hordeum sp.		
hulled grains (hulled barley type)	-	1
indet grains (indeterminate barley)	1	3
cf. *Hordeum*	-	-
indet grains (probable indeterminate barley)	1	7
T. dicoccum/*Triticum aestivo-compactum* (emmer or bread/club wheat type)	2	-
T. spelta/*Triticum* aestivo-compactum type (spelt or bread/club wheat type)	-	1
Triticum indet.(indeterminate wheat)	2	2
Hordeum/Triticum (barley/wheat)	-	-
Cereal indet. (cereal)	3	3
Cereal chaff		
Culm node >2mm (large grass/cereal stem node)	1	-
Other economic plants		
cf. *Malus sylvestris (*probable apple)	1	-
Other plant material		
Vesicular indeterminate (probable fragmented cereal grain)	24	31
Stem fragment indet	1	1
Thorn	-	1
Wild/weed plant seeds		
Persicaria lapathifolia/maculosa (pale persicaria/redshank)	-	1
Rumex crispus/conglomeratus/obtusifolius (curled/clustered/broad-leaved dock)	1	-
Vicia/Lathryrus spp. (vetch/pea)	-	1
Galium aparine L. (cleavers)	-	1
cf. *Lithospermum arvense (*Probable field gromwell)	1	-
cf. *Plantago major (*probable greater plantain)	-	1
cf. *Carduus*/*Cirsium* sp. (probable thistle)	1	-
Juncus sp. (rush)	-	1
<2mm Poaceae (small seeded grass family)	1	-
cf. *Bromus* sp. (probable brome grass)	1	-
Wild/weed plant seeds indet.	4	2

APPENDIX 3: HARTWELL, SCHOOL LANE CONTEXT INVENTORY

Context Number	Context type	Description	Dimensions	Artefacts	Small Finds	Samples	Notes	Feature type	Phasing & Dating
001	Topsoil	Dark brown, plough soil Mixed with subsoil							
002	Subsoil	Only shallow parts remain						Ditch	
004	Cut	Linear Ditch	1.70m wide, 0.57m depth					Ditch	
005	Fill (primary)	Dark- mid brown silty clay	1.70m wide, 0.57m deep		1		Cu A button	Ditch	
006	Cut	Light brown sandy clay, with ironstone chips (up 50mm)	1.50m wide, 0.52m deep					Ditch	
007	Fill (secondary)	Mottled mid brown-grey, Gritty clay	1.50m wide, 0.52m depth	Pot				Ditch	
008	Cut	Linear U-shape, Concave	0.70m wide, 0.36m deep					Ditch	
009	Fill	Dark brown clay,	0.70m wide, 0.36m deep					Ditch	
010	Cut	Linear U-shape, Concave	0.89m wide, 0.42m deep					Ditch	
011	Fill	Mottled dark grey-brown and reddish-brown	0.89m wide, 0.42m deep					Ditch	
012	Cut	Linear U-shape, Concave	0.60m wide, 0.25m deep					Gully	
013	Fill	Mid Brown, clay.	0.60m wide, 0.25m deep					Gully	
014	Cut	Linear U-shape, Concave	0.50m wide, 0.27m deep					Gully	
015	Fill	Mid brown, clay	0.50m wide, 0.27m deep	Pottery				Gully	
016	Cut	Linear Steep side with stepped north side	1.30m wide, 0.31m deep					Gully	
017	Fill	Mottled orange-red changing to greyish brown.	1.30m deep, 0.31m wide	Pottery				Gully	
018	Cut	Linear furrow	1.30m wide, 0.20m deep					Furrow	
019	Fill	Grey-brown clay,	1.30m wide, 0.20m deep	Bone, brick/tile, Joiner's clamp				Furrow	
020	Cut	Linear furrow	0.90m wide, 0.10m deep					Furrow	
021	Fill	Mid greyish brown	0.90m wide, 0.10m deep	Brick/tile				Furrow	
022	Cut	Linear V-shape narrow flat base, gully	0.56m wide, 0.35m deep					Gully	
023	Fill	Mottled mid dark greyish-brown silty clay	0.56m wide, 0.35m deep	Bone				Gully	
024	Cut	Linear	4.00m wide, 0.67m deep					Ditch	

Context Number	Context type	Description	Dimensions	Artefacts	Small Finds	Samples	Notes	Feature type	Phasing & Dating
025	Fill	Mottled grey yellow, silty clay	0.85m wide, 0.07m deep					Ditch	
026	Fill	Mottled light grey brown silty clay	3.90m wide, 0.60m deep			3		Ditch	
027	Layer	Layer of weathered clay similar to the natural geology						Layer	
028	Cut	Linear U-shape concave	3.20m wide, 0.92m deep					Ditch	
029	Fill	Mottled grey-brown clay	0.88m wide, 0.04m deep					Ditch	
030	Fill	Dark grey ironstone streaks, silty clay	1.24m wide, 0.38m deep	Bone, snail shell				Ditch	
031	Cut	Linear U-shape, Concave	1.30m wide, 0.36m deep					Ditch	
032	Fill	Dark grey ironstone streaks	1.30m wide, 0.36m deep	Pottery, bone		1		Ditch	
033	Fill	Mid brown silty clay	>1.30m wide, 0.14m deep					Ditch	
034	Cut	Linear furrow	1.93m wide, 0.38m deep					Furrow	
035	Fill	Mid brown silty clay	1.39m wide, 0.19m deep			2		Ditch	
036	Cut	Linear shallow concave	0.85m wide, 0.26m deep					Ditch	
037	Fill	Mottled dark grey-brown	0.85m wide, 0.26m deep	Pottery, bone				Ditch	
038	Cut	Linear shallow side flat base	0.27m long 0.90m wide, 0.26m deep					Gully/pit	
039	Fill	Mottled orange-grey silty clay	0.27m long 0.90m wide, 0.26m deep					Gully/pit	
040	Cut	Circular U-shaped pit/posthole concave	0.60m long, 0.60m wide, 0.12m deep					Pit	
041	Fill	Mottled black-dark grey charcoal, silty clay	0.60m long, 0.60m wide, 0.12m deep			4		Pit	
042	Cut	Linear U-shaped concave silty clay	0.75m wide, 0.35m deep					Gully	
043	Fill	Mottled orange-brown silty clay	0.75m wide, 0.35m deep					Gully	
044	Cut	Terminal of enclosure ditch, E2 southern arm	1.60m wide, 1.20m deep					Ditch	Iron Age
045	Fill	Primary fill, Mottled grey-brown silty clay	0.38m wide, 0.04m deep	Pottery				Ditch	Iron Age
046	Fill	Dark grey-brown silty clay	1.60m wide, 1.16m deep	Bone, charcoal				Ditch	
047	Re-cut [044]	Re-cut of enclosure ditch, step sided U-shape	1.42m wide, 0.98m deep					Ditch	
048	Fill (primary)	Dark brown-grey clay	1.06m wide, 0.44m deep	Pottery		6		Ditch	Iron Age

Context Number	Context type	Description	Dimensions	Artefacts	Small Finds	Samples	Notes	Feature type	Phasing & Dating
049	Fill (secondary)	Mid grey gritty clay	1.43m wide, 0.56m deep					Ditch	
050	Cut	Linear between [50] and [61]	1.13m wide, 0.48m deep					Ditch	
051	Fill	Compact mid brown-grey clay	1.13m wide, 0.48m deep	Pottery, bone				Ditch	
052	Cut	Linear U-shaped	0.59m wide, 0.26m deep					Gully	Undated
053	Fill	Mottled orange-brown silty clay	0.59m wide, 0.26m deep	Pottery				Gully	Undated
054	Cut	Terminal of enclosure ditch, E2 northern arm	3.16m wide, 0.96m deep					Ditch	Iron Age
055	Fill (primary)	Silty clay mid grey	1.17m wide, 0.06m deep					Ditch	
056	Fill	Dark grey silty clay	2.27m wide, 0.11m deep	Pottery				Ditch	
057	Fill	Mottled orange-grey silty clay	3.16m wide, 0.13m deep					Ditch	
058	Fill	Dark grey-brown silty clay	2.50m wide, 0.25m deep					Ditch	
059	Fill	Mid brown-grey loamy clay	1.48m wide, 0.14m deep			5		Ditch	
060	Fill	Upper mid grey-brown clay	1.22m wide, 0.30m deep					Ditch	
061	Re-cut	Linear U-shaped concave	1.00m wide, 0.50m deep					Ditch	
062	Fill (primary)	Dark brown-grey silty clay	0.70m wide, 0.18m deep					Ditch	
063	Fill	Mid grey-brown silty clay	0.97m wide, 0.32m deep					Ditch	
064	Cut	Linear U-shaped concave	0.63m wide, 0.19m deep					Gully	
065	Fill	Dark grey silty clay	0.63m wide, 0.19m deep					Gully	
066	Cut	Curvilinear enclosure, steep sides, concave, E1 northern arm	2.97m wide, 1.34m deep					Ditch	Iron Age
067	Fill	Mid grey-brown silty clay	0.53m wide, 0.08m deep		5, 6		Cu Alloy	Ditch	Iron Age
068	Fill	Dark red-brown silty clay	0.65m wide, 0.09m deep					Ditch	Iron Age
069	Fill (upper)	Mid grey-brown with blue clay patches silty clay	2.97m wide, 0.34m deep					Ditch	Iron Age
070	Re-cut of 66	Curvilinear enclosure, U-shaped concave, E1 northern arm	1.70m wide, 0.82m deep					Ditch	LIA/ early Roman
071	Fill (primary)	Light mottled grey brown silty clay	0.70 wide, 0.17m deep			7		Ditch	LIA/ early Roman
072	Fill	Mottled light grey-brown silty clay	1.10m wide, 0.14m deep					Ditch	LIA/ early Roman

Context Number	Context type	Description	Dimensions	Artefacts	Small Finds	Samples	Notes	Feature type	Phasing & Dating
073	Fill	Dark grey-brown silty clay	1.80m wide, 0.50m deep	Pottery, bone	8, 9	8	Cu Alloy	Ditch	LIA/ early Roman
074	Fill (upper)	Mid brown-grey silty clay	0.79m wide, 0.14m deep					Ditch	
075	Cut	Curvilinear steep slopping west side gradual slopping east side concave, E1 northern arm	4.60m wide, 1.74m wide, 1.74m deep					Ditch	Iron Age
076	Fill (primary)	Mid grey-brown silty clay	0.84m wide, 0.64m deep			9		Ditch	
077	Fill	Mottled grey-brown silty clay	4.60m wide, varied depths 0.14m - 0.70m					Ditch	
078	Re-cut of 75	Curvilinear enclosure	>0.90m wide, 0.34m deep					Ditch	
079	Fill	Grey-brown silty clay	>0.90m wide, 0.34m deep					Ditch	
080	Re-cut of 75	Curvilinear enclosure, E1 northern arm	>4.0m wide, 1.60m deep					Ditch	LIA/ early Roman
081	Fill	Mottled mid red-grey silty clay	1.12m wide, 0.35m deep	Pottery				Ditch	LIA/ early Roman
082	Fill	Grey mid brown silty clay	1.98m wide, 0.57m deep	Pottery, bone				Ditch	LIA/ early Roman
083	Fill	Mid brown silty clay	2.51m wide, 0.44m deep	Pottery, bone				Ditch	LIA/ early Roman
084	Fill	Mid brown silty clay	4.0m wide, 0.31m deep	Pottery, bone, tile		2	1st century brooch	Ditch	LIA/ early Roman
085	Fill	Red-brown silty clay	1.55m wide, 0.27m deep	Pottery, bone				Ditch	LIA/ early Roman
086	Cut	Linear gradual slopping side concave	3.20m wide, 0.82m deep					Trackway	
087	Fill	Grey-brown silty clay, remains of metalled surface, mixed material	1.50m wide, 0.15m deep					Metalled surface	
088	Fill (primary)	Mid grey-brown silty clay	2.80m wide, 0.49m deep	Clay pipe stem				Trackway	
089	Fill	Light grey – mid brown silty clay levelling layer weathered clay	3.20m wide, 0.22m deep					Trackway	
090	Cut	Linear ditch from hollow-way track, concave	>3.40m wide (Not fully excavated) 0.73m deep					Trackway	Medieval
091	Fill	Grey-brown clay occasional rounded chalk and stone	>3.76m wide (Not fully excavated) 0.23m deep					Trackway	Medieval
092	Fill	Mid brown to dark brown 80% stone, gravel fill	>0.34m wide (Not fully excavated) 0.15m deep					Trackway	Medieval
093	Fill (upper)	Layer of trackway, black silty stone layer with fragmented charcoal throughout	>3.10m wide (Not fully excavated) 0.38m deep					Trackway	Medieval
094	Fill	Mid to dark grey gritty loam, 20% angular stone	>0.15m wide (Not fully excavated) 0.05m deep					Trackway	Medieval
095	Fill	Mottled red-brown clay final levelling layer	>0.90m wide (Not fully excavated) 0.06m deep					Trackway	Medieval

Context Number	Context type	Description	Dimensions	Artefacts	Small Finds	Samples	Notes	Feature type	Phasing & Dating
096	Cut	Curvilinear gully steep side lower breaking to gradually slopping top, E2 ditch	1.25m wide, 0.98m deep					Ditch	Iron Age
097	Fill (primary)	Mottled grey–brown silty clay	0.72m wide, 0.43m deep					Ditch	Iron Age
098	Fill	Grey mid brown silty organic clay	0.87m wide, 0.34m deep	Pottery, bone				Ditch	Iron Age
099	Fill	Grey light brown silty clay	1.22m wide, 0.38m deep					Ditch	Iron Age
100	Fill	Mottled grey-brown-red silty clay, iron staining from SF 13	0.94m wide, 0.26m deep		13	12	Fe Obj	Ditch	LIA/ early Roman?
101	Fill	Mottled yellow-brown silty clay weathered clay	0.42m wide 0.14m deep						
102	Cut	Curvilinear gully steep sided concave base, gully in E2	0.70m wide, 0.43m deep					Gully	Iron Age
103	Fill (primary)	Mottled orange-brown silty clay	0.57m wide, 0.18m deep	Pottery, bone	10	10	Fe Anvil	Gully	Iron Age
104	Fill (upper)	Mottled orange-brown silty clay	0.70m wide, 0.16-0.25m deep	Pottery, bone				Gully	Iron Age
105	Fill	Mottled yellow-brown silty clay, weathered clay	0.30m deep 0.06m wide						
106	Cut	Spur of Curvilinear gully, E2	0.64m wide, 0.34m deep					Gully	Iron Age
107	Fill (primary)	Dark brown silty clay	0.33m deep 0.09m wide	Pottery, bone		13		Gully	Iron Age
108	Fill	Mid brown silty clay	0.64m wide, 0.25m deep	Pottery				Gully	Iron Age
109	Cut	Linear gully steep sides irregular base, gully in E2	0.64m wide, 0.39m deep					Gully	Iron Age
110	Fill (primary)	Dark brown silty clay	0.39m wide, 0.22m deep	Pottery, bone				Gully	Iron Age
111	Fill (upper)	Dark brown silty clay with organic inclusions	0.64m wide, 0.22m deep	Pottery, bone				Gully	Iron Age
112	Cut	Curvilinear steep sides onto a flat base, E2 ditch, east arm	2.40m wide, 1.12m deep					Ditch	Iron Age
113	Fill (primary)	Mottled blue-grey silty clay with vanes of ironstone	0.76m wide, 0.16m deep					Ditch	Iron Age
114	Fill	Mottled grey-brown silty clay	0.72 wide, 0.18-0.23 deep	Pottery				Ditch	Iron Age
115	Fill	Yellow grey silty clay	1.60m wide, 0.35m deep					Ditch	Iron Age
116	Fill	Mottled light grey-brown silty clay, weathered clay	2.40m wide, 0.25m deep					Ditch	
117	Re-cut [112]	Curvilinear steep sided onto a flat base, E2 ditch, east arm	1.30m wide, 0.90m deep					Ditch	LIA/ early Roman
118	Fill (primary)	Dark grey-brown silty clay	0.72m wide, 0.10-0.12m deep					Ditch	LIA/ early Roman
119	Fill	Mottled dark grey-brown silty clay	0.95m wide, 0.34m deep	Pottery, bone		15		Ditch	LIA/ early Roman

Context Number	Context type	Description	Dimensions	Artefacts	Small Finds	Samples	Notes	Feature type	Phasing & Dating
120	Fill	Mottled grey-brown silty clay	1.30m wide, 0.26m deep	Pottery, flint, bone	12	11	flint	Ditch	LIA/ early Roman
121	Fill (upper)	Dark grey-brown to black silty clay, burnt layer	1.30m wide, 0.23m deep	Pottery, flint, bone	25, 31	14	Fe nails	Ditch	LIA/ early Roman
122	Cut	Curvilinear steep sided, narrow flat base, E2 ditch, east arm	2.10m wide, 1.27m deep					Ditch	Iron Age
123	Fill (primary)	Mid blue-grey silty sandy clay	0.56m wide, 0.10m deep					Ditch	Iron Age
124	Fill	Light grey-brown clay	0.18m wide, 0.28m deep					Ditch	Iron Age
125	Fill	Mid yellow-brown clay	0.94m wide, 0.32m deep					Ditch	Iron Age
126	Fill	Mid orange vanes of grey silty clay	1.78m wide, 0.38m deep		16			Ditch	Iron Age
127	Re-cut [122]	Curvilinear steep sided, narrow concave base	2.10m wide, 0.80m deep					Ditch	LIA/ early Roman
128	Fill (primary)	Mid to dark grey with orange mottling silty clay	1.28m wide, 0.20m deep	Pottery				Ditch	LIA/ early Roman
129	Fill	Mid grey-orange silty clay	2.10m wide, 0.32m deep	Pottery, bone				Ditch	LIA/ early Roman
130	Fill (upper)	Dark grey with orange mottling	1.61m wide, 0.34m deep	Pottery, bone				Ditch	LIA/ early Roman
131	Cobbled Surface	Compacted cobbled surface	1.5m wide					Cobbled Surface	Iron Age
132	Fill	Dark grey-brown silty clay layer overlies (131)	3.10m wide, 0.10m deep	Pottery				Cobbled Surface	Iron Age
133	Cut	Curvilinear steep-sided concave base, E2 ditch, west arm terminal	1.32m wide, 0.79m wide					Ditch	Iron Age
134	Fill (primary)	Dark Grey-brown silty clay	1.32m wide, 0.79m deep	Pottery, bone				Ditch	Iron Age
135	Fill	Mid grey-brown silty clay concave	1.30m wide, 0.45m deep	Pottery, bone				Ditch	Iron Age
136	Cut	Curvilinear steep-sided, concave base, E2 ditch, west arm	1.55m wide, 1.0m deep					Ditch	Iron Age
137	Fill (primary)	Light grey-orange silty clay	1.55m wide, 1m deep	Pottery				Ditch	Iron Age
138	Cut	Curvilinear steep-sided, concave base, E2 re-cut, west arm	1.50m wide, 0.68m deep					Ditch	Iron Age
139	Fill (primary)	Mid grey-brown silty clay	1.50m wide, 0.68m deep	Pottery, bone				Ditch	Iron Age
140	Weathered clay layer	Weathered clay overlies [138]	0.14m deep						
141	Re-cut of 145	Curvilinear re-cut of [145], E2 re-cut, west arm	1.28m wide, 0.45m deep					Ditch	LIA/ early Roman
142	Fill (primary)	Mottled light brown to blue-grey clay	0.44m wide, 0.16m deep					Ditch	LIA/ early Roman
143	Fill	Mottled mid grey to dark brown silty clay	0.94m wide, 0.22m deep	Pottery				Ditch	LIA/ early Roman

Context Number	Context type	Description	Dimensions	Artefacts	Small Finds	Samples	Notes	Feature type	Phasing & Dating
144	Fill	Mottled dark grey to light blue-grey silty clay	1.30m wide, 0.24m deep	Pottery	14, 15	16	flint (natural flakes)	Ditch	LIA/ early Roman
145	Cut	Curvilinear steep sided concave base, E2 ditch, west arm	1.20m wide, 0.96m deep					Ditch	Iron Age
146	Fill (primary)	Mottled light grey to blue-grey silty clay	0.64m wide, 0.28m deep					Ditch	Iron Age
147	Fill (upper)	Mottled light blue-grey to orange brown silty clay	1.16m wide, 0.70m deep					Ditch	Iron Age
148	Cut	Linear gully between [125] and [133] terminals of E2 arms	1.56m wide, 0.30m deep					Gully	Iron Age
149	Fill (primary)	Dark grey-brown silty clay	1.56m wide, 0.30m deep					Ditch	Iron Age
150	Cut	Shallow oblong concave pit/ depression	1.40m wide, 0.15m deep					Pit	
151	Fill	Mottled black-orange silty clay	1.40m wide, 0.15m deep	Pottery, bone		17		Pit	
152	Cut	Curvilinear part of enclosure ditch, E2 ditch, east arm	1.70m wide, 0.60m deep					Ditch	Iron Age
153	Fill (primary)	Mid to dark brown silty clay	1.16m wide, 0.16m deep					Ditch	Iron Age
154	Fill	Mid grey-orange silty clay	1.38m wide, 0.22m deep	Pottery, bone				Ditch	Iron Age
155	Fill (upper)	Dark grey-brown	1.68m wide, 0.21m deep	Pottery, bone		18		Ditch	Iron Age
156	Cut	Curvilinear steep slopping V-shape gully in E2	0.71m wide, 0.60m deep					Gully	Iron Age
157	Fill (primary)	Dark grey-brown silty clay	0.34m wide, 0.17m deep					Gully	Iron Age
158	Fill	Mid brown-grey silty clay	0.71m wide, 0.43m deep		18		Quern	Gully	Iron Age
159	Fill (upper)	Black-grey silty clay	0.50m wide, 0.23m deep	Pottery, Bone	17, 24	19	Fe nail	Gully	Iron Age
160	Cut	Circular shallow depression	1.0m wide, 0.04m deep					Pit	
161	Fill (primary)	Light grey-brown silty clay	1.0m wide, 0.04m deep					Pit	
162	Cut	Linear gully steep sided flat base, gully in E2	0.72m wide, 0.51m deep					Gully	Iron Age
163	Fill	Mid brown silty clay	0.10m wide, 0.51m deep					Gully	Iron Age
164	Fill	Dark brown-black	0.48m wide, 0.51m deep	Pottery, bone		20		Gully	Iron Age
171	Re-cut of 165	Curvilinear steep-sided concave base	1.15m wide, 0.77m deep					Ditch	Iron Age
172	Fill (primary)	Mottled grey-brown silty clay	1.15m wide, 0.77m deep	Pottery, bone			Iron Age loom weight	Ditch	Iron Age

Context Number	Context type	Description	Dimensions	Artefacts	Small Finds	Samples	Notes	Feature type	Phasing & Dating
173	Fill	Dark grey sandy clay	0.83m wide, 0.42m deep	Pottery, bone				Ditch	LIA
174	Fill (upper)	Dark grey-black	0.68m wide, 0.10m deep					Ditch	LIA
175	Layer	Weathered clay layer, dark grey-brown clay	0.10m deep		26, 27, 28, 29, 30		Fe obj		LIA
176	Cut	Linear U-shaped flat base	0.80m wide, 0.15m deep					Gully	
177	Fill (primary)	Mottled grey-orange silty clay	0.80m wide, 0.15m deep					Gully	
178	Cut	Circular steep-sided concave base	0.45m wide, 0.23m deep					Pit/post hole	Iron Age?
179	Fill (primary)	Dark black-orange silty clay	0.45m wide, 0.23m deep	Pottery (frozen within sample)		21		Pit/post hole	Iron Age?
180	Cut	Linear gully, steep-sided on to a flat base, pit in E2	0.54m wide, 0.18m deep					Gully	Iron Age
181	Fill (primary)	Mottled grey-yellow with sandy orange inclusions	0.54m wide, 0.18m deep		21			Gully	Iron Age
182	Fill	Dark brown-grey silty clay	0.29m wide, 0.13m deep	Pottery, burnt stone				Gully	Iron Age
183	Cut	Irregular shallow sided uneven base	0.75m wide, 0.10m deep					Pit	
184	Fill (primary)	Black silty clay	0.75m wide, 0.10m deep			22		Pit	
185	Cut	Curvilinear steep sided concave base	0.23m wide, 0.13m deep					Gully	Iron Age?
186	Fill (primary)	Dark grey-brown silty clay	0.23m wide, 0.13m deep	Pottery				Gully	Iron Age?
187	Cut	Linear U-shaped flat base	0.80m wide, 0.15m deep					Gully	
188	Fill (primary)	Mottled grey-orange silty clay	0.80m wide, 0.15m deep					Gully	
189	Cut	Curvilinear steep-sided flat base	1.04m wide, 0.72m deep					Ditch	
190	Fill (primary)	Mid grey-brown silty clay	0.60m wide, 0.20m deep			23		Ditch	
191	Fill	Mid grey-brown silty clay	0.70m wide, 0.17m deep			24		Ditch	
192	Fill	Dark grey-brown silty clay	0.85m wide, 0.20m deep	Pottery, bone, burnt stone				Ditch	LIA/ early Roman?
193	Fill	Dark grey-black	1.04m wide, 0.18m deep	Pottery, burnt clay				Ditch	LIA/ early Roman?
194	Cut	Curvilinear steep sided narrow concave base	0.34m wide, 0.22m deep					Ditch	
195	Fill (primary)	Mid grey-brown silty clay	0.24m wide, 0.10m deep					Ditch	
196	Cut	Linear gully gradual slopping sides, flat base	0.60m wide, 0.26m deep					Gully	

Context Number	Context type	Description	Dimensions	Artefacts	Small Finds	Samples	Notes	Feature type	Phasing & Dating
197	Fill (primary)	Light brown silty clay	0.38m wide, 0.17m deep					Gully	
198	Fill	Mottled Grey-brown with yellow clay inclusions	0.60m wide, 0.09m deep					Gully	
199	Fill	Dark grey silt	0.34m wide, 1.20m deep					Ditch	
200	Cut	Linear shallow gully or furrow	0.70m wide, 0.15m deep					Gully	
201	Fill (primary)	Mid brown clay	0.70m wide, 0.15m deep					Gully	
202	Cut	Linear U-shaped concave gully in E2	Length 10m 0.78m wide, 0.53m deep					Gully	Iron Age?
203	Fill (primary)	Light brown mottled orange-brown	0.36m wide, 0.16m deep	Pottery				Gully	Iron Age?
204	Fill	Mid grey brown silty clay	0.71m wide, 0.32m deep					Gully	Iron Age?
205	Fill	Dark grey-brown	0.58m wide, 0.17m deep	Pottery				Gully	Iron Age?
206	Cut	Circular steep sided concave pit in E1	1m wide, 0.19m deep					Pit	Iron Age?
207	Fill (primary)	Dark brown-black silty organic clay	1m wide, 0.19m deep	Bone, Burnt Clay		25		Pit	Iron Age?
208	Cut	Linear gully at terminal of [210], E1	0.30m wide, 0.06m deep					Gully	LIA/ early Roman?
209	Fill (primary)	Dark brown-black silty clay	0.30m wide, 0.06m deep					Gully	LIA/ early Roman?
210	Cut	Curvilinear steep sided flat base, gully in E1	1.30m wide, 0.92m deep					Ditch	Iron Age
211	Fill (primary)	Light grey-orange clay	1.30m wide, 0.92m deep	Pottery, Bone				Ditch	Iron Age
212	Fill	Dark brown-black silty clay	1.0m wide, 0.52m deep	Pottery, Bone		26		Ditch	Iron Age
213	Cut	Sub-circular shallow pit, E1	1.43m wide, 0.23m deep					Pit	Iron Age?
214	Fill (primary)	Light brown silty clay	1.43m wide, 0.23m deep					Pit	Iron Age?
215	Fill	Mid dark brown organic silty clay	0.87m wide, 0.14m deep					Pit	Iron Age?
216	Cut	Tree bowl irregular sides and base	2.40m long, 1.0m wide, 0.40m deep					Tree bowl	
217	Fill	Mix redeposited sand and clay	2.40m long, 1.0m wide, 0.40m deep	Pottery, Bone				Tree bowl	
218	Cut	Curved gully steep sided flat slightly concave base, E1	6.60m long, 0.32m wide, 0.30m deep					Gully	Iron Age?
219	Fill (primary)	Mottled dark grey-orange brown silty clay	0.30 wide, 0.20m deep					Gully	Iron Age?
220	Fill	Dark grey-brown silty clay loam	0.34m wide, 0.12m deep			27		Gully	Iron Age?

Context Number	Context type	Description	Dimensions	Artefacts	Small Finds	Samples	Notes	Feature type	Phasing & Dating
221	Cut	Curved gully steep sided flat base, E1	6.60m long, 0.36m wide 0.30m deep					Gully	Iron Age?
222	Fill (primary)	Dark brown-grey silty clay 65% large stones	0.33m wide, 0.22m deep					Gully	Iron Age?
223	Fill	Dark grey-brown silty clay	0.36m wide, 0.20m deep					Gully	Iron Age?
224	Cut	Curved gully steep sided flat base, E1	6.6m long 0.50m wide, 0.42m deep					Gully	Iron Age?
225	Fill (primary)	Dark grey-brown silty clay 40% stone fill	0.40m wide, 0.18m deep					Gully	Iron Age?
226	Fill	Dark grey-brown silty clay	0.50m wide, 0.24m deep	Pottery		28		Gully	Iron Age?
227	Cut	Rectangular steep sided concave base, pit in E1	2.21m long, 0.60m wide, 0.64m deep					Pit	Iron Age?
228	Fill (primary)	Mottled orange-grey Silty clay with leaching from (229)	1.70m wide, 0.12m deep					Pit	Iron Age?
229	Fill	Dark Black-grey silty clay charcoal and ash fill	2.12m wide, 0.28m deep	Pottery, bone				Pit	Iron Age?
230	Fill	Dark grey-black silty clay burnt layer	0.98m wide, 0.34m deep	Pottery, bone		29		Pit	Iron Age?
231	Re-cut of 227	Rectangular steep sided concave base	0.88m wide, 0.45m deep					Pit	Iron Age?
232	Fill (primary)	Grey-brown silty clay	0.88m wide, 0.45m deep	Pottery, bone, burnt stone				Pit	Iron Age?
233	Tree Throw	Burnt remains of tree roots	3m wide					Tree bowl	
234	Cut	Linear steep sided concave base, gully in E1	1.20m wide, 0.89m deep					Ditch	Iron Age?
235	Fill (primary)	Light orange-grey silty clay	1.20m wide, 0.10m deep					Ditch	Iron Age?
236	Fill	Mid brown silty clay	1.10m wide, 0.80m deep	Pottery, bone		30		Ditch	Iron Age?
237	VOID								
238	VOID								
239	VOID								
240	Cut	Linear gradual sloping sides concave base	3.08m wide, 0.76m deep					Ditch	Medieval/ post-med
241	Fill (primary)	Mid brown silty clay	3.08m wide, 0.76m deep	Pottery				Ditch	Medieval/ post-med
242	Fill	Dark brown clay loam	1.84m wide, 0.43m deep	Brick	11, 20		Cu A object and button	Ditch	Medieval/ post-med
243	Cut	Linear gradual sloping sides concave base	3.05m wide, 0.80m deep					Ditch	Medieval/ post-med

Context Number	Context type	Description	Dimensions	Artefacts	Small Finds	Samples	Notes	Feature type	Phasing & Dating
244	Fill (primary)	Mid Grey-brown silty clay	3.05m wide, 0.80m deep	Bone				Ditch	Medieval/ post-med
245	Fill	Mid brown silty clay	3.05m wide, 0.80m deep	Burnt cobblestones				Ditch	Medieval/ post-med
246	Re-cut of 243	Linear U-shape concave	2.55m wide, 0.69m deep					Ditch	Medieval/ post-med
247	Fill (primary)	Dark brown-black clay loam	2.55m wide, 0.69m deep					Ditch	Medieval/ post-med
248	Cut	Linear steep-sided flat base, E1 Northern arm terminal	2.50m wide, 1.98m deep					Ditch	Iron Age
249	Layer	Mid red-brown silty clay weathered clay	0.54m deep						
250	Fill (primary)	Mid orange-brown clay	0.34m wide, 0.40m deep	Pottery, bone				Ditch	Iron Age
251	Fill	Mid grey-brown silty clay	1.28m wide, 0.62m deep					Ditch	Iron Age
252	Fill	Mid grey silty clay	0.70m wide, 0.14m deep					Ditch	Iron Age
253	Fill	Mid yellow-brown	0.40m wide, 0.08m deep	Pottery, Bone	22		Possibly natural flint flake	Ditch	Iron Age
254	Fill	Mid grey silty clay	0.10m deep 0.15m wide					Ditch	Iron Age
255	Fill	Mid orange-brown clay	0.17m wide, 0.15m deep					Ditch	Iron Age
256	Fill	Mid orange-brown	0.38m wide, 0.45m deep					Ditch	Iron Age
257	Fill	Mid grey-brown silty clay	0.59m wide, 0.46m deep					Ditch	Iron Age
258	Fill	Dark grey-black silt	0.10m wide, 0.15m deep					Ditch	Iron Age
259	Fill	Dark grey-black silt	1.20m wide, 0.66m deep	Pottery, bone, flint		32		Ditch	Iron Age
260	Fill	Mid yellow-brown clay	0.31m wide, 0.08m deep					Ditch	Iron Age
261	Fill	Mid grey-brown silty clay	0.34m wide, 0.26m deep					Ditch	Iron Age
262	Fill	Mid-dark grey silty clay	0.80m wide, 0.18m deep	Pottery, bone				Ditch	Iron Age
263	Fill	Mid yellow-brown silty clay	0.85m wide, 0.12m deep	Pottery, bone				Ditch	Iron Age
264	Fill	Dark grey silty clay	0.90m wide, 0.48m deep	Pottery, bone				Ditch	Iron Age
265	Fill	Dark brown-grey	0.86m wide, 0.18m deep					Ditch	Iron Age
266	Cut	Land drain cut	0.28m wide, 0.24m deep					Land drain	Modern

Context Number	Context type	Description	Dimensions	Artefacts	Small Finds	Samples	Notes	Feature type	Phasing & Dating
267	Cut	Cut of furrow	1.10m wide, 0.30m deep					Furrow	Medieval
268	Cut	Curvilinear, steep undercutting sides, concave base, gully in E1	1.60m wide, 1.32m deep					Ditch	Iron Age
269	Fill (primary)	Dark grey-brown organic silty clay	0.60m wide, 0.28m deep			35		Ditch	Iron Age
270	Fill	Mid brown silty clay	0.26m wide, 0.72m deep					Ditch	Iron Age
271	Fill	Light grey-brown silty clay	0.25m wide, 0.55m deep					Ditch	Iron Age
272	Fill	Dark grey-brown silty clay	0.98m wide, 0.85m deep	Pottery, bone				Ditch	Iron Age
273	Fill	Light grey-brown silty clay	>0.30m wide, 0.63m deep					Ditch	Iron Age
274	Fill	Light grey-brown silty clay	0.43m wide, 0.50m deep					Ditch	Iron Age
275	Fill	Mottled Light-mid brown silty clay	1.39m wide, 0.38m deep	Pottery, bone				Ditch	Iron Age
276	Fill (upper)	Dark grey-brown	0.69m wide, 0.12m deep					Ditch	Iron Age
277	VOID							Ditch	
278	Cut	Linear U-shaped, concave base, E2 southern arm	2.60m wide, 1.12m deep					Ditch	Iron Age
279	Fill (primary)	Mottled yellow-pink silty clay	1.90m wide, 0.30m deep					Ditch	Iron Age
280	Fill	Mottled pink-grey silty clay	1.80m wide, 0.60m deep	Pottery, bone		31		Ditch	Iron Age
281	Fill	Mid grey-brown silty clay	0.70m wide, 0.22m deep		21, 37		Quern stone	Ditch	Iron Age
282	Layer	Weathered clay, silty clay	2.60m wide, 0.20m deep						
283	Cut	Linear gradual sides onto a concave base	2.10m wide, 0.55m deep					Ditch	Medieval/ post-med
284	Fill (primary)	Mid brown sandy clay	2.10m wide, 0.55m deep	Pottery, bone	23	33	Fe Nail	Ditch	Medieval/ post-med
285	Cut	Linear U-shaped concave base, gully in E1	1.15m wide, 0.81m deep					Ditch	Iron Age
286	Fill (primary)	Mid grey-brown silty clay	0.70m wide, 0.26m deep	Bone, Burnt clay				Ditch	Iron Age
287	Fill	Dark grey-brown to black silty clay	1.15m wide, 0.50m deep	Pottery, bone		34		Ditch	Iron Age
288	Fill	Mid orange-brown silty clay	0.55m wide, 0.12m deep					Ditch	Iron Age
289	Cut	Linear steep-sided concave base, gully in E1	1.85m wide, 1.40m deep					Ditch	Iron Age
290	Fill	Mid yellow-grey silty clay	0.70m wide, 0.13m deep	Bone				Ditch	Iron Age

Context Number	Context type	Description	Dimensions	Artefacts	Small Finds	Samples	Notes	Feature type	Phasing & Dating
291	Fill	yellow grey silty clay	0.15m wide, 0.8-1.25m deep					Ditch	Iron Age
292	Fill	Yellow brown silty clay	0.55m wide, 1.10-1.30m deep	Pottery, bone				Ditch	Iron Age
293	Fill	Dark grey-brown silty clay	0.90m wide, 0.95-1.10m deep	Pottery, bone		36		Ditch	Iron Age
294	Fill	Brown grey clay	1.2m wide, 0.6-0.9m deep	Pottery, Bone				Ditch	Iron Age
295	Fill	Mid grey-brown clay	0.2m wide, 0.38-0.57m deep					Ditch	Iron Age
296	Fill	Mid yellow- grey silty clay	0.26m wide, 0.15-0.45m deep					Ditch	Iron Age
297	Fill	Mid yellow-brown silty clay	0.2m wide, 0.50m deep	Pottery, bone				Ditch	Iron Age
298	Fill	Dark brown clay	0.5m wide, 0.45m deep					Ditch	Iron Age
299	Re-cut of 289	Linear steep-sided concave base	1.10m wide, 0.90m deep					Ditch	LIA/ early Roman
300	Fill	Yellow-grey silty clay	0.15m wide, 0.60m deep					Ditch	LIA/ early Roman
301	Fill	Grey silty clay	0.45m wide, 0.30-0.90m deep	Pottery bone				Ditch	LIA/ early Roman
302	Fill	Light grey silty clay	1.1m wide, 0.30m deep	Pottery bone				Ditch	LIA/ early Roman
303	Cut	Linear U-shaped concave base	1.30m wide, 0.40m deep					Ditch	Medieval/ post-med
304	Fill (primary)	Mottled grey-brown redeposited silty clay	1.30m wide	Pottery, bone, glass, brick, tile	32, 38		Fe nail, Pb obj	Ditch	Medieval/ post-med
305	Fill (upper)	Yellow-grey silty clay redeposited	1.30m wide	Pottery, bone	33		Fe nail	Ditch	Medieval/ post-med
306	Flagged surface	Mixed stone slices, set into natural	4.90m long, 2.70m wide					Flagged surface	Medieval
307	Cut	Linear U-shaped concave base	2.30m wide, 0.00m deep					Trackway ditch	Medieval/ post-med
308	Fill (primary)	Mottled grey brown silty clay	2.20m wide, 0.90m deep	Pottery bone				Ditch	Medieval/ post-med
309	Cut	Land drain	1.10m wide					Land drain	Post-med
310	Fill (primary)	Land drain redeposited	1.10m wide	Brick, tile, pottery	34, 35, 36		Fe nails, Cu A button, bone knife handle	Land drain	Post-med
311	Layer	Dark grey-brown layer silty redeposited clay							

Context Number	Context type	Description	Dimensions	Artefacts	Small Finds	Samples	Notes	Feature type	Phasing & Dating
312	Cut	Linear U-shape flat base	1.64m wide, 0.63m deep					Ditch	
313	Fill (primary)	Mid grey-brown silty clay	1.64m wide, 0.63m deep	Pottery, bone				Ditch	
314	Cut	Linear U-shaped with land drain at base	1.20m wide, 0.50m deep					Land drain	Post-med
315	Fill (primary)	Mid grey-brown silty clay	1.20m wide, 0.50m deep	Pottery, Bone, glass				Land drain	Post-med
316	Cut	Linear irregular sides and base	1.90m wide, 0.60m deep					Ditch	Post-med
317	Fill (primary)	Dark grey-brown silty clay	0.35m wide, 0.60m deep	Pottery, Bone, clay pipe, brick, Fe nails				Ditch	Post-med
318	Fill	Light brown grey silty clay	0.20m deep					Ditch	Post-med
319	Fill	Light yellow-brown clay	0.40m deep					Ditch	Post-med
320	Fill	Dark brown silty clay	0.20m wide, 0.15m deep					Ditch	Post-med
321	Fill (upper)	Dark brown silty clay	0.80m wide o.10m deep	Pottery, bone, clay pipe				Ditch	Post-med
322	Postholes	Four postholes near modern ditch and flagged surface						Postholes	Medieval/ post-med
323	Wall	Mixed limestone, sandstone wall within a ditch [324]						Wall	Medieval/ post-med
324	Cut	Linear U-shaped flat base	1.68m wide, 0.45m deep					Ditch	Medieval/ post-med
325	Fill (primary)	Mottled grey-brown silty clay, wall within this section	1.65m wide, 0.48m deep	Pottery, bone				Ditch	Medieval/ post-med
326	Cut	Oval, almost vertical sides, flat base	1.03m long, 0.80m wide, 0.22m deep					Pit	
327	Fill (primary)	Firm black clay/organic	0.80m wide, 0.08m deep	Burnt flint, burnt clay, charcoal		37		Pit	
328	Fill	Dark orange-brown clay	0.80m wide, 0.19m deep	charcoal				Pit	
329	Cut	Linear U-shaped, not fully excavated						Ditch	
330	Fill	Dark brown silty clay with green mottling		Brick/tile				Ditch	
331	Layer	Firm yellow grey silty clay with mottling	0.25m deep						
332	Layer	Mid brown-orange sandy clay							
333	Levelling layer	Modern compact clays	>0.40m deep	Brick/tile				Levelling layer	Modern
334	Cut	Modern ditch	>2.0m wide, 0.3-0.5m deep					Ditch	Modern
335	Fill (primary)	Hard grey silty clay	>2.0m wide, 0.3-0.5m deep	Glass, pottery, brick/tile			Clay pidgeon	Ditch	Modern

Context Number	Context type	Description	Dimensions	Artefacts	Small Finds	Samples	Notes	Feature type	Phasing & Dating
336	Cut	Modern feature							Modern
337	Fill	Light yellow-brown silty clay							Modern
338	Cut	Linear, terminal, steep-sides with vertical slot at base, E1 southern arm	3.00m wide, 1.20m deep					Ditch	Iron Age
339	Fill (primary)	Primary, mottled blue and dark orange clays	1.10m wide. 0.40m deep	Pottery, bone		39		Ditch	Iron Age
340	Fill	Dark blue-grey silty clay	1.0m wide, 0.20m deep			40		Ditch	Iron Age
341	Fill	Mid-dark orange-brown silty clay	1.3m wide, 0.30m deep			41		Ditch	Iron Age
342	Recut of 338	Irregular, shallow sides, concave base, E1 southern arm	1.20m wide, 0.50m deep					Ditch	LIA/ early Roman?
343	Fill	Mid orange-brown clay	1.2m wide, 0.50m deep	Pottery				Ditch	LIA/ early Roman?
344	Cut	Oval, V-shaped. Tree-bole?	1.50m long, 0.90m wide, 0.50m deep					Tree bole	
345	Fill	Brown-grey silty clay	0.90m wide, 0.50m deep	Pottery, flint, charcoal				Tree bole	
346	Cut	Irregular. Tree-bole	0.32m wide, 0.13m deep					Tree bole	
347	Fill	Dark grey/black silty clay	0.13m deep	Pottery		38		Tree bole	
348	Recut of 96	Recut of ditch 96, wide U-shape. Filled by 100	1.04m wide, 0.25m deep					Ditch	LIA/ early Roman?
003	Natural								