Archaeological mitigation on land east of Warwick Road, Kibworth Harcourt Leicestershire

November 2017 to December 2017

Report No. 18/62

Authors: Alex Shipley and Claire Finn

Illustrators: Olly Dindol and Joanne Clawley

Project Manager: Anthony Maull
Site Code: X.A136.2017
NGR: SP 673 941

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Manager: Anthony Maull
Mo Muldowney

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PROJECT DETAILS	**OASIS ID: molanort1-318309**	
Project name	Archaeological mitigation on land east of Warwick Road, Kibworth Harcourt, Leicestershire, November 2017 to December 2017	
Brief description: Between November and December 2017 MOLA (Museum of London Archaeology) carried out an archaeological excavation on land off Warwick Road, Kibworth Harcourt, Leicestershire. The site revealed a landscape of sub-rectangular enclosures lying on both sides of an east to west aligned ditched trackway. The enclosures and trackway were in use from the middle-late Iron Age into the Roman period. The enclosures and ditches show signs of recutting and minor alterations throughout their use. Four Saxon inhumation burials, radiocarbon dated to the 7th-8th century, may have been associated with the Iron Age/ Roman trackway ditches. A late Saxon pit cut into a corner of an Iron Age enclosure contained eleven iron items including a pattern-welded seax and barrel padlock which were dated to the 10th century. During the medieval period the land was under ridge and furrow ploughing and a headland was observed following the line of the earlier trackway.		
Project type	Archaeological excavation	
Site status	None	
Previous work	Desk-based assessment for environmental impact assessment, geophysical survey and trial trenching	
Current Land use	Agricultural	
Future work	None known	
Monument type/ period	Enclosures (middle Iron Age to Saxon), trackway (middle Iron Age to Roman), Saxon pit, Saxon burials, medieval ridge and furrow	
Significant finds		
PROJECT LOCATION		
County	Leicestershire	
Site address	Warwick Road, Kibworth Harcourt	
Study area	2ha	
OS Easting & Northing	SP 673 941	
Height OD	122-125m aOD	
PROJECT CREATORS		
Organisation	MOLA Northampton	
Project brief originator	Richard Clarke	
Project design originator	MOLA Northampton	
Project Supervisor	Alex Shipley (MOLA)	
Director/Manager	Anthony Maull (MOLA)	
Sponsor or funding body	Miller Homes	
PROJECT DATE		
Start date	November 2017	
End date	December 2017	
ARCHIVES	Location	Content
Physical	MOLA code: Accession Code: X.A.136.2017	Pottery, animal bone, human bone, environmental, metal finds, worked bone
Paper		Site context records and registers
Digital		Photographs, report and dxf files
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	
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Author(s)	Alex Shipley and Claire Finn	
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Abstract

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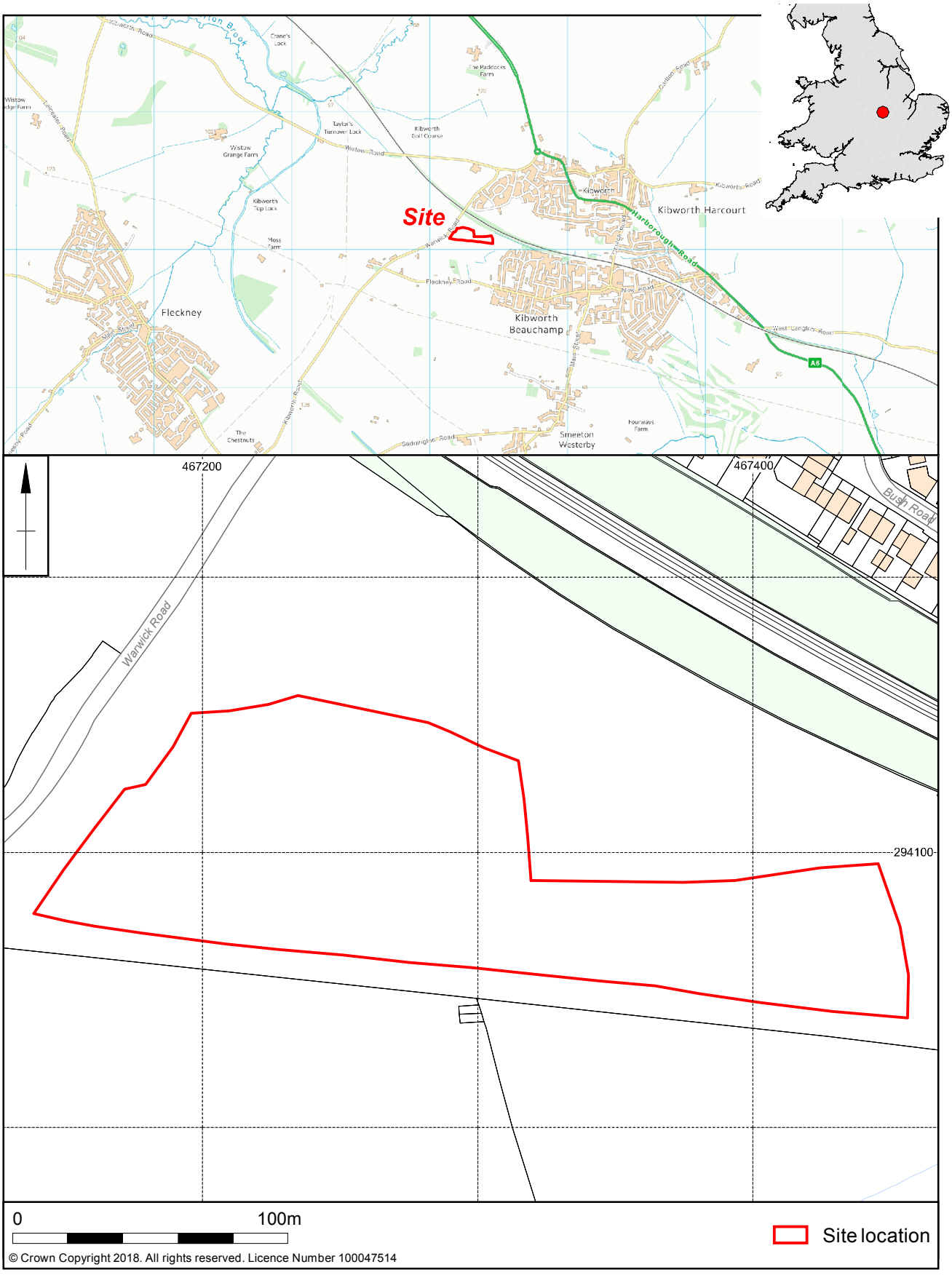
The site revealed a landscape of sub-rectangular enclosures lying on both sides of an east to west aligned ditched trackway. The enclosures and trackway were in use from the middle-late Iron Age into the Roman period. The enclosures and ditches show signs of recutting and minor alterations throughout their use. Four Saxon inhumation burials, C14 dated to the 7th-8th century, may have been associated with the Iron Age/ Roman trackway ditches. A late Saxon pit cut into a corner of an Iron Age enclosure contained eleven iron items including a pattern-welded seax and barrel padlock which were dated to the 10th century. During the medieval period the land was under ridge and furrow ploughing and a headland was observed following the line of the earlier trackway.

1 INTRODUCTION

MOLA (Museum of London Archaeology) was commissioned by Miller Homes to undertake a programme of archaeological mitigation works on land off Warwick Road in Kibworth Harcourt, Leicestershire. This took place in advance of the proposed development of 110 dwellings (including affordable housing) with associated landscaping, open space, car parking and vehicular and pedestrian access from Warwick Road and a footpath link to Melbourne Close (Planning Application: 15/01153/OUT) (Fig 1). The archaeological works were required as a condition (51) on the outline planning consent (after appeal) and are being undertaken in accordance with Paragraph 141 of the National Planning Policy Framework (DCLG 2012).

Previous archaeological works on the site comprised a desk-based assessment (Crothers 2015), geophysical survey (Walford 2015) and trial trench evaluation (Clements 2015). These works resulted in the identification of several sub-rectangular enclosures and a trackway.

The scope of excavation, as determined by the trial excavation, was laid out in an approved Written Scheme of Investigation (Harrison 2017).



Scale 1:2000

Site location Fig 1

2 BACKGROUND

2.1 Location, topography and geology

The site was located on the western edge of Kibworth Harcourt within a roughly triangular field approximately 2ha in size (located at National Grid Reference SP 673 941). The site was bounded by a railway line to the north-east, by Warwick Road and farmland to the north-west and by fields and boundaries to the south (Fig 1).

The site lay on soils identified by the Soil Survey of England and Wales as fine loamy and clayey soils of Wickham 2 association (SSEW 1983: 711f).

The geology of the site is mapped by the British Geological Survey as Diamicton till which overlies Blue Lias formation and Charmouth Mudstone Formation (BGS 2018).

2.2 Historical and archaeological background

The known archaeology of the area was reviewed in an archaeological desk-based assessment prepared by MOLA (Crothers 2015). The archaeological potential of the site was subsequently evaluated through programmes of geophysical survey (Walford 2015) and archaeological trial trenching (Clements 2015).

The geophysical survey identified the possible remains of a trackway curving from the mid northern boundary of the site towards the south- west corner and aligned east-west across the southern part of the site. The trackway appeared to form an axis off which several enclosures were aligned. Interpretations of some of the anomalies suggested that there may have been remnants of roundhouses also surviving, although this evidence was fragmentary (Walford 2015). The trenches excavated in 2015 confirmed the presence of the enclosures and of the trackway (Clements 2015). Further details are given below.

The following sites, findspots and monuments are drawn from the Desk-Based Heritage Assessment (Crothers 2015), utilising the Leicestershire Historic Environment Record. A Grade II Listed monument, a railway company boundary marker, is recorded within the boundary of the development site, to the north of the mitigation area. This railway company boundary marker is situated on the northern edge of the site to the west.

Prehistoric

A possible quartzite scraper was found on land to the north of Kibworth Harcourt.

Iron Age

Geophysical survey revealed a probable Iron Age site consisting of a series of enclosures, underlying a Roman villa to the north of the village. The survey also revealed a second possible sub-rectangular Iron Age enclosure immediately to the south-west.

Roman

A Roman site was excavated to the north-east of the site between 1967 and 1969. A ditch and an L-shaped area of pebbles were recorded. Finds included building material, a quern, several hundred sherds of pottery, a brooch and coins. During excavation of a windmill mound in the 1960s, a number of large pebbles were found with a much-worn Castor ware pottery base and a late Roman belt plate with a ‘mythical dragon type beast’. In 1837 and 1863 a possible Roman site was excavated at The Munt, Hall Close. A stone pavement was found with several Roman artefacts, including pottery, a candlestick and a penannular brooch. It is possible that this site is linked with the remains found at the windmill mound.

Saxon

The BBC Television's Kibworth Dig project revealed Saxo-Norman pottery at 112 Main Street and from the sports field at Hillcrest Avenue.

Medieval

Kibworth township consisted of three townships, Kibworth Beauchamp, Kibworth Harcourt and Smeeton Westerby. Kibworth may have been one of the most populous in the Hundred of Gartree, and the Domesday Survey lists 72 inhabitants; 28 in Kibworth Beauchamp, 28 in Kibworth Harcourt and 16 in Smeeton Westerby in 1086. The Survey records Kibworth Harcourt as *Chiborne* or *Cliborne*. Twelve carucates in Kibworth Harcourt were held by Robert de Vescy. In demesne he had six servi with three ploughs, and his tenants consisted of one Frenchman, six socmen, five bordars and ten villeins. There were six acres of meadow. The land had been held under Edward the Confessor by Aelric the son of Meriet. In 1130 the twelve carucates were describes as belonging to Ansketil's fee. In 1235-36 Richard de Harcourt held land in Kibworth from the Earl of Warwick. In 1270 Walter de Merton bought a large part of the parish of Kibworth Harcourt from Saer de Harcourt, who had been forced to sell the estate following his support for the Barons' Rebellion (VCH 1964). A large part of the parish has remained property of Merton College in Oxford to the present day.

To the east of the site, there is a motte situated within the village known locally as The Munt. It comprises a flat-topped, irregularly-shaped mound, surrounded by a ditch. Depressions on the north and south sides are the result of excavations in the 19th century. The motte is a Scheduled Monument.

The Manor House in Main Street is thought to be the oldest surviving domestic building in the village, built in 1283. A medieval cross once stood opposite the Manor House in the village but was taken down in 1825.

Fishponds are recorded to the north of the village. Their present form clearly dates them to the 19th century but earlier records show less formal ponds in the same location. Their origins may be in the medieval period.

A medieval spindle whorl was found in Dover Street and medieval remains at Kibworth Primary School. The BBC's Kibworth Dig found pottery from the period in many garden test pits to the east of the site, including at Manor Farmhouse, 49 Main Street, 51 Main Street, 60 Main Street, 80 Main Street, 112 Main Street, Old Paddocks Farm, Priory Farm, Jubilee Green and The Spinney. To the south-east of the site further medieval pottery was found in test pits at 15 Harcourt Road and 51 Fleckney Road.

Medieval ridge and furrow earthworks are known to be well preserved in the area to the west of Kibworth Harcourt.

Post-medieval

During the Kibworth Dig, post-medieval pottery was also found at the sites listed above. Additionally pottery from this period was found at 68 Main Street and 15 St Wilfrid's Close. To the south of the site, pottery was also found at 10 Gladstone Street.

A windmill mound survives close to the north-east of the site which is marked as a barrow on a early to mid-18th-century pre-enclosure map. A trench dug across the mound in the 1960s recorded a 13th-century storage jar, fragments of millstone, a carved bone tool and a whetstone.

Previous fieldwork

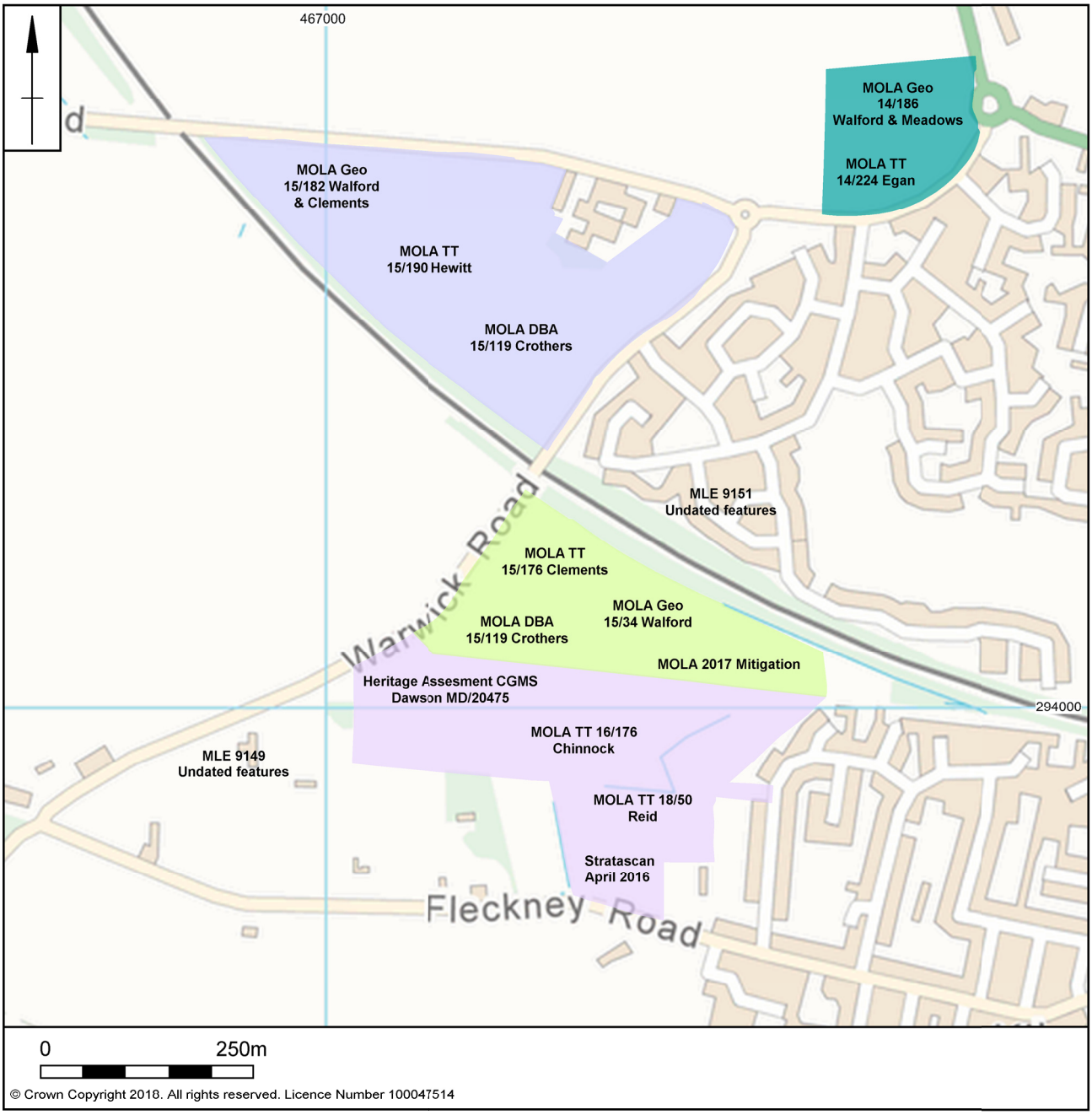
Kibworth Harcourt has been the subject of numerous archaeological investigations in the past decade (Fig 2). Prior to the commissioning of mitigation, the area was subject to a desk-based assessment (Crothers 2015), geophysical surveys, and trial trenching. The first geophysical survey was undertaken in 1999 by GSB Prospection and

identified linear and pit type responses (in Crothers 2015). The 2015 survey was undertaken by MOLA (Walford 2015). This survey identified the remains of a track or droveway flanked on both sides by parallel linear ditches, spaced *c*20m apart. This trackway corresponded with a curving feature seen on aerial photographs and on the site as extant earthworks. To the north of the trackway three square enclosures were seen, the central of which contained a small C-shaped feature which could potentially mark the site of a roundhouse. A conjoined pair of smaller rectilinear enclosures, also with internal partitions, is located to the south of the trackway. The morphology and layout of the enclosures suggested an Iron Age or Roman date. The anomalies are all crossed by other sets of parallel linear anomalies representing traces of medieval to early post-medieval ridge and furrow. The line of the earlier droveway appeared to have influenced the layout of the medieval fields, being fossilized as a boundary between two furlongs of ridge and furrow. A low bank which survives along the same line presumably represents the residual headland associated with this ridge and furrow (Walford 2015).

MOLA undertook trial trenching on the site in 2015; testing the veracity of the geophysical survey and its conclusions (Clements 2015). The trial trenching revealed the trackway and enclosures; however, these only produced a very small sample of pottery, only two sherds, dated to the late Iron Age to early Roman Period.

Further geophysical surveys have previously been undertaken in the fields on the western side of Kibworth Harcourt including fields to the south of the current site (Richardson 2016) and an area to the north on the opposite side of the railway line (Walford and Clements 2015). Possible archaeological features were identified in these surveys and both were taken to trenching evaluation. Trenching on land west of Warwick Road identified a series of rectangular enclosures dating from the late Iron Age to the 4th century AD, and two pits were also identified. Many trenches also contained remnant furrows (Hewitt 2015). On land to the south of the present site sixteen trenches were excavated. Ditches, gullies, large pits and a possible trackway, were tentatively dated to the Roman period. Truncated furrows of former ridge and furrow cultivation were present across the site (Chinnock 2016). Trenching immediately to the south of this in 2018 found no archaeological remains (Reid 2018).

MOLA Northampton previously undertook archaeological works further to the north of Kibworth Harcourt in 2014. A programme of geophysical survey and trial trench excavation at the junction of Wistow Road with the A6 proved to be minimally informative, identifying nothing other than ridge and furrow (Walford and Meadows 2014, Egan 2014).



Scale 1:7500 Previous archaeological sites Fig 2

3 AIMS, OBJECTIVES AND METHODOLOGY

3.1 Project Aims

The aim of the excavation was to mitigate the loss of archaeological remains within the development site that could have contributed towards our understanding of past processes and peoples through a scheme of preservation by record.

The general aims of the investigation were:

- To determine the location, extent, date, character, condition, significance and quality of any archaeological remains within the excavation area;
- To determine the extent, character, function, and significance of the Iron Age/Roman enclosures and trackway identified in the previous works;
- To assess the enclosures and trackway identified in line with the relevant research agendas/objectives;
- To appropriately record the archaeological remains encountered;
- To consider the site within its local, regional, and national context as appropriate;
- To produce a comprehensive site archive of the archaeological remains within the site following national and regional guidelines;
- To deposit the site archive with an appropriate museum, and;
- To provide information for the local HER to ensure the long-term survival of the excavated data.

3.2 Research objectives

Specific research objectives were drawn from national and regional research frameworks documents (Knight *et al* 2012, replacing Cooper 2006) to be used to enhance our understanding of the activity on the site.

Prior to the start of works, specific research objectives covering the Iron Age taken from Knight *et al* were considered. They comprised:-

- Understanding the emergence of settlement;
- Understanding the development of field systems and how this relates to changes in the agrarian landscape;
- Whether there is any evidence for agricultural intensification;
- Contribute to understanding the relationship between settlement patterns and agricultural changes;
- Contribute to the understanding of the rural economy and diet;

The extent to which the site was able to address each of these agendas is discussed in Section 8.4 below.

467000

467500

294000

Warwick Road

Elish Road

Longbreach Road

Warwick Road
Site

Fleckney Road
Site

Gladstone Street

Dover Street

Fleckney Road

0 100m

Development area | Mitigation Area | Archaeological feature | Disturbance | Furrow

Scale 1:2000 (A3)

Geophysical survey results on land east of Warwick Road Fig 3

3.3 Excavation and recording methodology

Standards and guidance

MOLA is a Chartered Institute for Archaeologists (CIfA) registered organisation and is regulated by its professional Code of Conduct (CIfA 2014a). All works were conducted in accordance with the procedural documents of Historic England (HE 2015a) and the appropriate standards and guidance for archaeological field evaluation (CIfA 2014b and c). Recording followed standard MOLA (Northampton) recording procedures (MOLA 2014).

View of site during frozen conditions Fig 4

Excavation methodology

Topsoil and subsoil were removed under archaeological supervision by mechanical excavator, fitted with a toothless ditching bucket. All archaeological features and deposits uncovered were recorded using pro forma sheets conforming to best practice including a stratigraphic matrix of the relationships between features and deposits.

The excavation areas and archaeological features were mapped in relation to the OS grid and by measured survey equipment (GPS) with a tolerance of + or – 100mm. Plans, sections and elevations of archaeological features and deposits were drawn as necessary at 1:10, 1:20 and 1:50 as appropriate. Each archaeological feature and deposit as well as excavated feature will have a spot height recorded in relation to Ordnance Datum, correct to two decimal places.

Photos were taken as necessary to produce a photographic record of the site of the archaeological features with respect to their relationships with other features, the depositional sequence as well as to record site conditions and working practices. The photographs were taken using both a digital camera of 16 megapixels and 35mm monochromatic prints conforming to industry best practice (HE 2015b).

Where relevant the results of the trial trenching (Clements 2015) are discussed to put the features recorded during the excavation into context.

The archaeological work took place over November and December 2017 in wet and frozen conditions (Fig 4).

Finds

Metal detecting surveying was undertaken of all stripped areas and spoil heaps throughout to ensure complete finds retrieval. The finds retrieved from site were treated in accordance with industry best practice and guidance (Watkinson and Neal 2001).

All artefacts from excavated contexts were retained, bagged and labelled according to the individual deposit from which they were recovered.

All finds were cleaned, weighed, counted and identified. The iron artefacts were submitted for X-radiography and stabilisation in accordance with industry best practice.

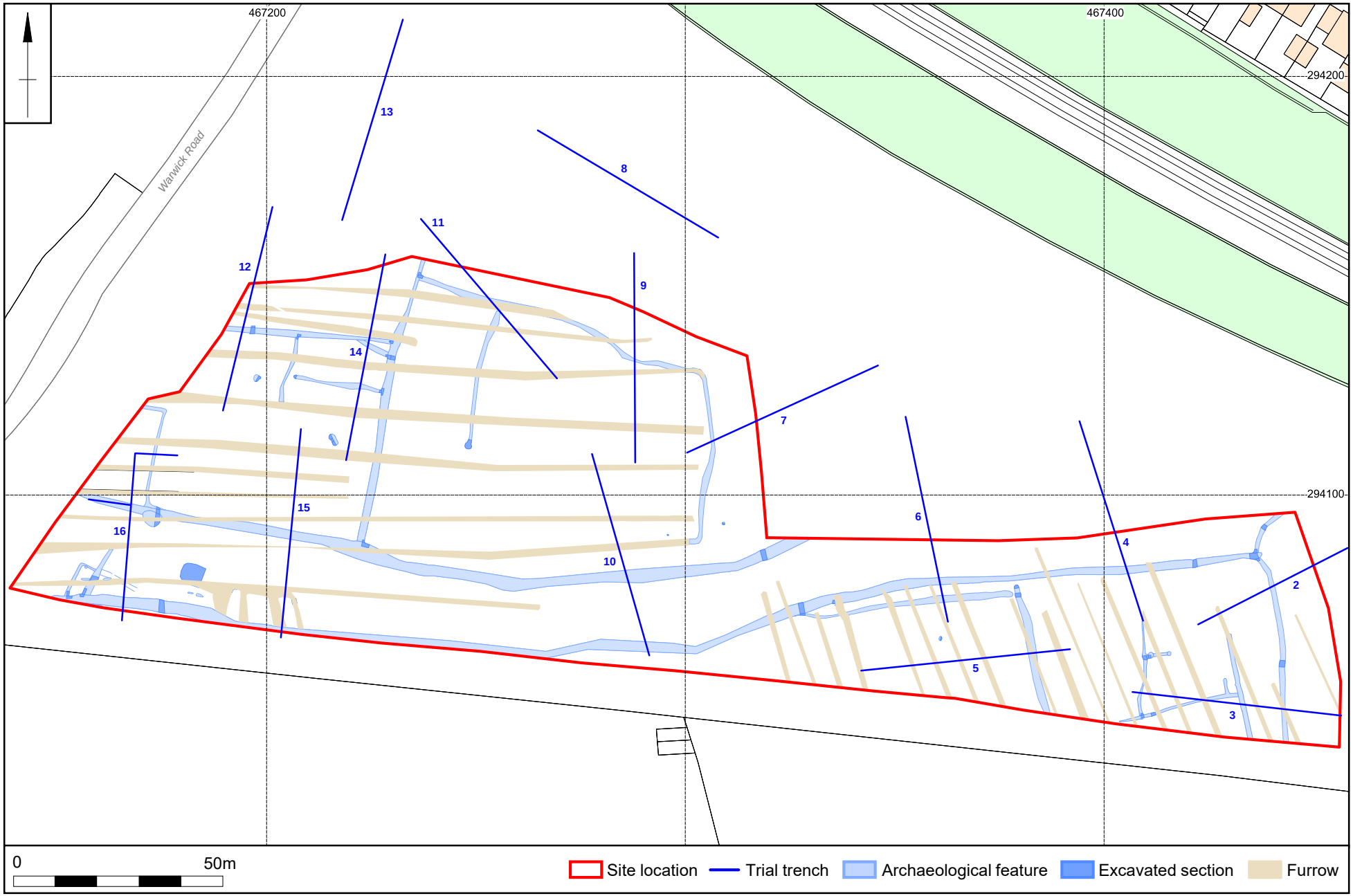
Human remains

After the identification of human remains on site, an appropriate Ministry of Justice (MoJ) excavation of human remains licence was requested (Licence number 17-0320) and all relevant parties were informed. The human remains were cleaned with minimal disturbance, prior to recording and removal by a suitably experienced staff in accordance with industry best practice and under the conditions laid out in the MoJ licence.

Sampling

Environmental samples were taken where appropriate to assess the survival of carbonised macrofossils and other biological remains. Sample sizes were 40 litres and included samples from the graves, the boundary ditches, the metal artefacts deposit and a small pit cluster.

Scale 1:1250



Plan of site with trial trenches and excavated features

Fig 5

4 THE EXCAVATED EVIDENCE

4.1 Stratigraphy

The natural geology across the site was a firm, mid orange-brown clay with moderate chalk and occasional mixed sized sub-angular stones of both Blue Lias and Charmouth mudstone formation (BGS 2018) to depths varying 0.45m. This underlay subsoil formed of dark red-brown clay loam with occasional sub-rounded stones, 0.15m thick. Overlying the subsoil was dark grey brown clay loam with moderate chalk and small sub-angular stones.

4.2 Summary of the results

The archaeology comprised a series of sub-rectangular enclosures (Fig 5). In the earliest phase of the site, these ditches may have been field systems associated with a linear boundary ditch, aligned north-south, and with two long curvilinear parallel ditches which crossed the entire width of the site east-west. These ditches no doubt functioned as some form of boundary, but probably also acted to delineate a central routeway extending from east to west, providing access across the landscape. This routeway or trackway was likely to have been a long-lived landscape feature as enclosures which were aligned with it seem to have been active from the middle-late Iron Age to the Saxon period.

The trackway ditches seem to have originated in the Iron Age, at which point they were broadly contemporaneous with Enclosures E2, E3 and E4. The trackway ditches were re-cut during the Roman period.

Dating of the site was limited as very little ceramic material was recovered and many features contained intrusive material from later phases due to later ploughing and recutting. Relative relationships were established by stratigraphic intercutting. A small number of samples were taken for radiocarbon dating although it was determined that much of the animal bone material was also intrusive.

4.3 Probable Iron Age ditches

A number of ditches and possible enclosures seem to have pre-dated the earliest Iron Age phase of the trackway ditch and the boundary ditch [117], though these features did not contain any artefactual material which could more precisely date them (Fig 6).

4.3.1 Ditches [122] and [21]

Stratigraphically, ditch [122] seemed to be one of the earliest features on the site. The ditch was curvilinear and lay roughly on a north-west by south-east alignment. Only around 7.5m of the ditch's length could be observed, as it was truncated to the north by ditch [23] and to the east by both phases of the boundary ditch [117]. This ditch was greater than 0.70m wide and 0.40m deep with a flat base; it was infilled by silting (Fig 7, section 26).

This ditch may have been contemporary with a similar ditch [21] to the west which was also cut by ditch [23]. Ditch [21] was slightly sinuous and aligned north-south. It had a U-shape profile with a flat base, 0.58m wide and 0.45m deep. This ditch again seemed to be truncated at both ends by later features; to the north by ditch [23] and to the south by a furrow.

Scale 1:500

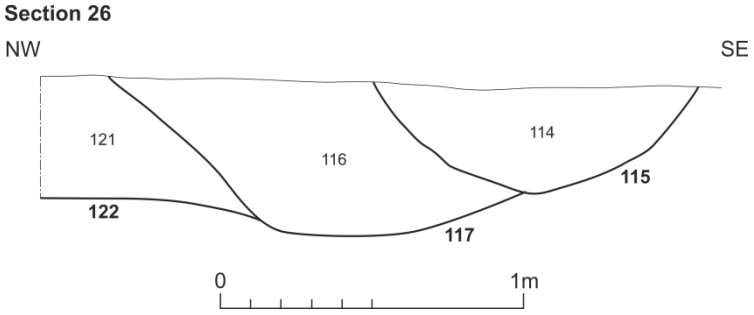
Phase 1 plan of site with numbered features

Fig 6

4.3.2 Boundary ditch [117] and ditch [23] and [111]

A long linear ditch [117], aligned north to south, may have formed a land boundary in the activity of this period. Ditch [117] extended south from the northern limit of excavation for over 73m before it was cut by the northern trackway ditch. There was no identifiable anomaly on the geophysical survey results to suggest this ditch extended much further to the north beyond the limit of excavation, and it was not observed in trench 11 in this area during the trial trenching (Clements 2015). Sections through the ditch showed that it had a wide U-shaped profile over 0.94m wide and 0.55m deep.

It was cut later in the Iron Age by enclosure E2 ditch [115] (Fig 7, section 26). The boundary ditch was sterile along its length, infilled with naturally derived silting material.



Section through ditches [122], [117] and [115] Fig 7

An east-west aligned ditch butted up to the boundary on its eastern side and may have been broadly contemporary, perhaps demarcating smaller field divisions or an enclosure to the west. The ditch [23], which passed from boundary ditch [117] west into the limit of excavation had a U-shaped profile, a flat base and eroded upper edges, 0.87m wide and 0.60m deep. The ditch was infilled by water-borne grey-brown clay overlain by natural weathering and silting deposits.

4.3.3 Enclosure E1

A small possible rectangular enclosure was observed on the southern edge of the site, aligned north-west by south-east. The feature produced no dating evidence, but was cut by two later features; ditch [67] and the trackway, which both contained Roman period pottery. The enclosure also lies partly into the central area of the trackway, suggesting it may pre-date the active use of this route.

The enclosure was defined by ditch [44], which extended from the south edge of the excavation for around 9m to the north-east before making a right-angled turn south-east. The northern arm of the enclosure extended for around 13m south-east before turning south-west.

The ditch had a V-shaped profile and was between 0.50-70m wide and 0.28-40m deep (Fig 8). The ditch infilled by natural silting and contained no artefactual remains. The enclosure was cut entirely across its southern side by the southern ditches of the trackway.

Ditch [44], enclosure E1, looking south Fig 8

4.4 A middle-late Iron Age trackway and enclosures

4.4.1 Trackway

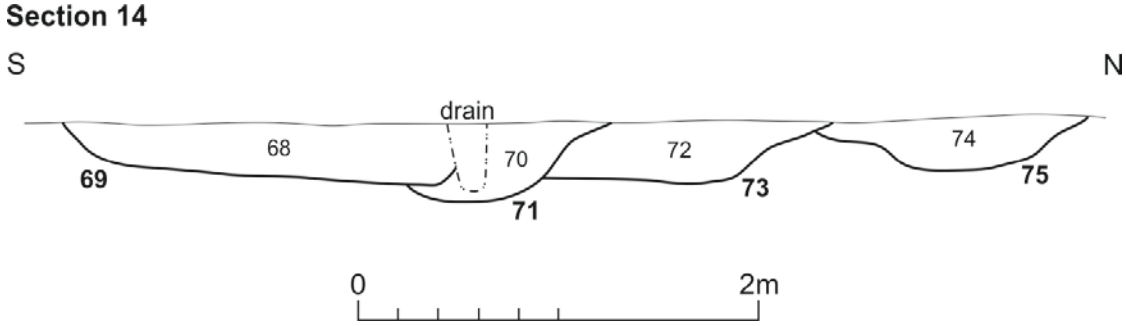
Two parallel sinuous ditches, identified during geophysical surveying and trenching and corresponding with the line of an extant earthwork, crossed the southern part of the site on an east to west alignment (Fig 9). The two ditches lay 23m apart in the south-western corner of the site and narrowed to 14m apart as the trackway passed to the east. The ditches were 13m apart at the point where the northern ditch went into the northern baulk.

Northern trackway ditch 1 (NTW1)

NTW1 was the northernmost of two parallel ditches. This is the earliest phase of the trackway; the ditches were later recut in the Roman period. NTW1 appeared in the south-western corner of the site where it was recorded as [73] and at which point it was aligned east-west (Fig 9, section 14). As it moved east, the ditch curved slightly northwards. Although it is not likely that the earlier phase of the ditch terminated within the open area, it was not observed to the east in section 17 (See Fig 16) and an earlier cut was not observed during trial trenching (Clements 2015, 7). It is possible the later Roman recut removed evidence for the earlier ditch towards the east of the site. Trenching and geophysical survey showed that the ditch continued beyond the limit of the mitigation area for some distance to the east before petering out (*ibid*, trenches 4 and 6, fig 2). It is likely that the routeway also continued to the west under the present line of Warwick Road but this is yet to be confirmed.

The first phase northern trackway ditch had a broad, U-shaped profile and was at least 0.60m wide and fairly shallow at 0.36m. NTW1 was filled by natural silting suggesting that the original trackway ditches were open for some time to accumulate weathering infill before being recut as NTW2.

No dating material was recovered from the ditch. Although to the west NTW1 appears to truncate E4 [75] (Fig 9, section 14), it is thought that these two features were of a similar date.



East-facing profile of E4 [75], NTW1 [73], NTW2 [71] and pit [69], Fig 9

Southern trackway ditch 1

STW1 lay parallel with NTW1 and was almost certainly contemporary. The ditch extended east from the south–western limit of excavation before gently curving north-east before returning east. The southern ditch truncated E1 to the south-west. Similarly to the northern NTW1, the original cut was not clear to the east (Fig 16, section 17) and may have been cut away.

Ditch STW1 had a wide V-shaped profile and that varied from between 0.90-1.20m wide and 0.72-0.78m deep. It was later recut along its length (Fig 15, section 15).

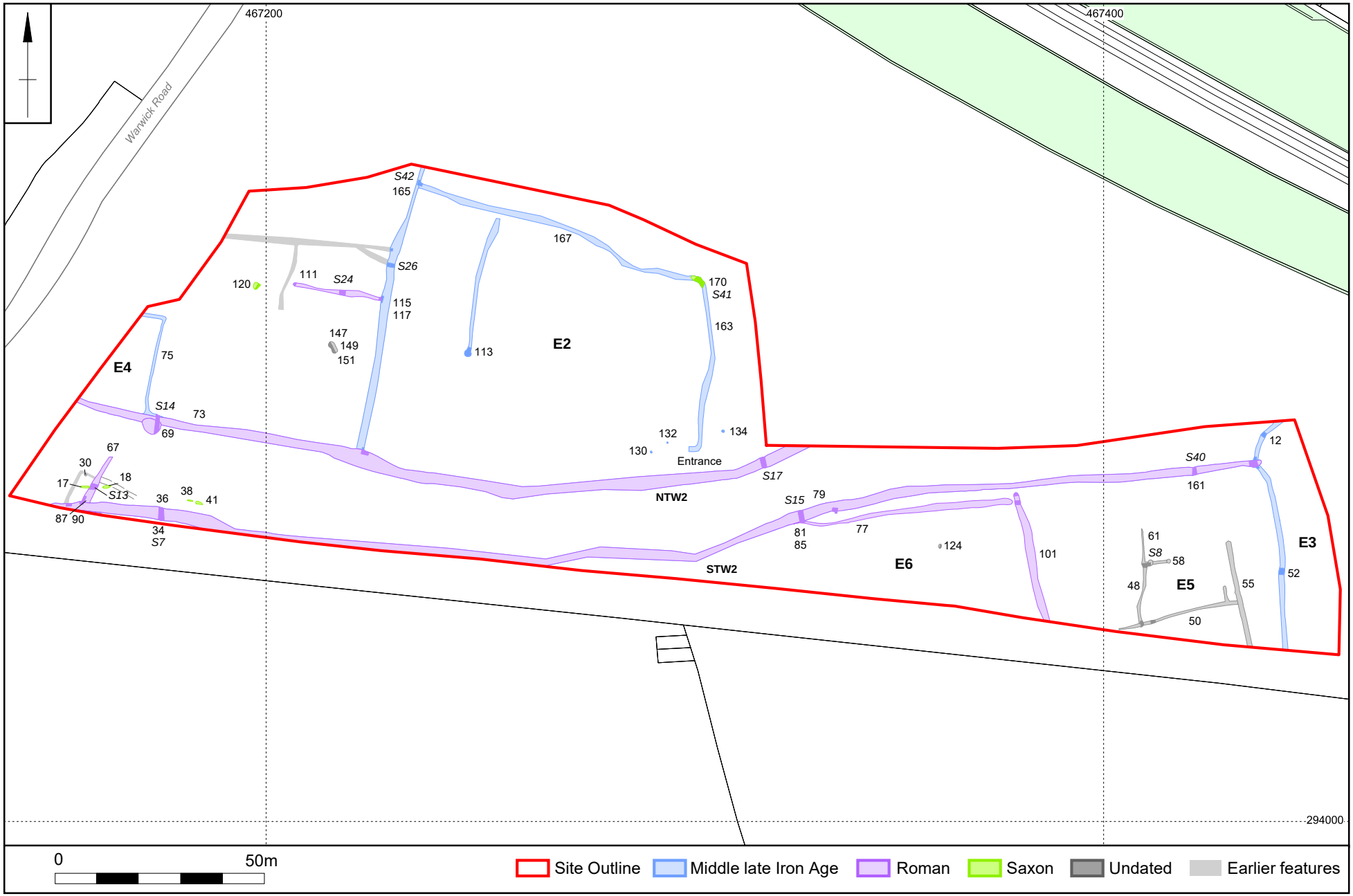
The ditch was infilled with naturally derived silting deposits along its length, with some few scattered fragments of charcoal suggesting human activity in the vicinity. Upper fill (82) of [85] in the centre of SWT1 produced one sherd of probable middle-late Iron Age pottery (Fig 15, section 15). A radiocarbon date was taken from a sample of animal bone from the same context. The date returned was middle Saxon (662 – 778CalAD, 1270+/-30BP, Beta – 489708). However, due to recutting of this feature, it is likely that the bone sampled represented infilling and intrusive activity and does not accurately provide a date for the cutting of the southern trackway.

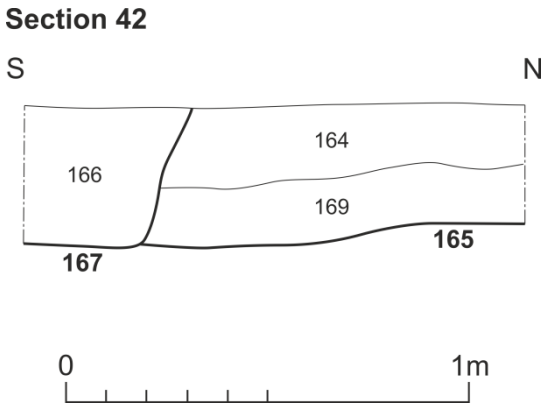
4.4.2 Middle-late Iron Age enclosures

Enclosure 2

Enclosure E2 was a large sub-rectangular enclosure aligned east-west, edging the trackway to the north. It had an area of 0.46ha, defined by ditch [163] to the east and north. The eastern arm was 41m long. This ditch had a broad U-shaped profile with a width between 1.72m-1.80m and a depth of 0.30m-0.50m (Fig 12, section 41; Clements 2015, fig 9, S6, fig 10, S11 and S12).

To the west, the enclosure utilised a 66m long recutting [115] of the former boundary ditch [117] (Fig 7, section 26), which had a rounded U-shaped profile, 1.08m wide by 0.39m deep, infilled with a natural silting deposit. At the north-west corner of the enclosure, the recut [167] diverged from the original boundary ditch [165] and turned to the east for around 73m (Fig 11, section 42). At the southern end, the western arm [115] was truncated by the second phase of the northern trackway ditch (NTW2); it may have abutted the contemporary earlier phase of NTW1 (Fig 10).

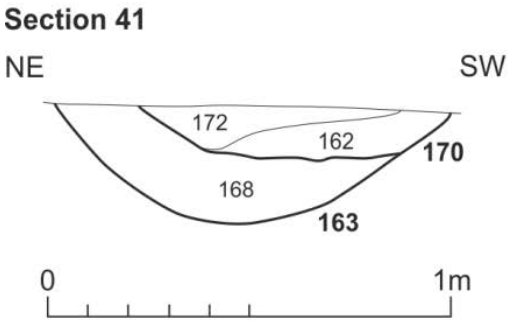




Section of ditch [167] of enclosure E2 cutting [165] of boundary ditch [117] Fig 11

To the south, the southern arm of enclosure E2 was not clear; it may have been obscured by a furrow which crossed the south of the enclosure or the enclosure may have utilised the edge of the trackway ditch NTW1 as its southern arm. An entranceway, around 5m in width, defined by the gap between the terminal of [163] and the northern trackway ditch NTW1.

Pottery was recovered from the north-east corner of the enclosure, in fill (168) of [163]. The pottery comprised a large number of fragments from what was probably a single, highly fragmented, vessel in coarse shelly fabric which has been dated to the middle-to-late Iron Age (4th century BC to 1st century AD). The ditch in this corner of the enclosure was later cut in the Saxon period by a circular pit [170] (Fig 12, section 41).



North-west facing section of E2 ditch [163] and Saxon pit [170] Fig 12

Internal features

Situated in the south-eastern corner of the enclosure were two postholes, [130] and [132], which were 0.50m in diameter by 0.10m deep and 0.38m in diameter by 0.04m deep respectively. Both were infilled via natural silting and contained no evidence of a post pipe. Just outside the enclosure was a small pit [134] that measured 0.60m wide by 0.36m deep. The silty clay fill of the pit (133) contained layers of burnt clay, charcoal and burnt tone, suggesting it was used as a small fire pit or for the dumping of hearth waste. These features contained no dateable evidence but their placement in relation to E2 suggests correlation.

What was thought to be a ditch terminal was identified inside the enclosed area during the trial trenching (Clements 2015; trench 9, [906]). That no further remains of a linear feature were identified in the current works suggests this feature was actually a broad flat-based oval pit. Two pieces of pottery, dated to the late Iron Age and

Roman periods, were recovered, suggesting the pit may have been associated with the activity of this enclosure during this and the subsequent period.

A north-south aligned ditch terminating in a circular cut [113] was also situated inside enclosure E2. Ditch [113] extended probably from the northern arm of the enclosure south for around 33m before it terminated in the centre of the enclosure in a rounded circular cut. The ditch had a wide U-shaped profile 0.74m wide and 0.17m deep. At the pit-like terminal, the width was 1.64m wide and 0.27m deep. The fill of the terminal was formed of silting deposits (112) and contained a high proportion of charcoal, as well as other remains indicative of nearby settlement activity, including one sherd of Roman pottery, two cattle and two sheep/goat bones, some bread wheat-type and emmer/spelt grains and a hazelnut shell. As only one sherd of pottery was identified, it is not clear to which phase this feature can be assigned; it probably acted as an internal division at some point during the use of the large enclosure.

Possible enclosure 3

Enclosure E3 was a probable enclosure located at the eastern end of site possibly to the south of the trackway. The enclosure lay partly beyond the limit of excavation, but it appeared sub-rectangular and was around 55m long. The enclosure was bounded to the west by sinuous ditch [52] which had a U-shaped cut and flat base, 1.30m wide and 0.50m deep. The northern arm was defined by ditch [12], which had a similar profile and was 1.10m wide and 0.30m deep. At the north-west corner where ditches [12] and [52] met, the enclosure was cut by the later Roman recut of the southern trackway ditch STW2. It is not clear how this enclosure interacted with the Iron Age phase of the trackway although the later phase STW2 terminated just into the enclosure (Fig 10), suggesting either that the trackway ended at this point, or the route passed to the north above ditch [12].

Both ditches infilled with naturally derived silting material, although pottery, animal bone, and a small fragment of worked bone (SF21) were all recovered from the ditch fill (51) of [52]. The two pot sherds were joining, and were faintly decorated with scoring on the exteriors, suggesting a similar middle to late Iron Age date to the pottery from enclosure E2. An environmental sample from this ditch fill contained quantities of cereals such as bread wheat, emmer/spelt, and barley, indicating an agricultural landscape or processing site lay nearby.

Enclosure 4

At the western end of the site was a sub-rectangular enclosure designated E4. The enclosure seems to be aligned broadly north-south, perpendicular to the trackway on its northern side. The enclosure is demarcated by ditch [75] which was not fully excavated although it was shown to have curving sides and a concave base (Fig 9, section 14). A section through this ditch was made during the trial trenching, at which point it was shown to be 0.85m wide and 0.25m deep, with a V-shaped profile (Clements 2015, [TT1612]; fig 7 S3). Although the ditch appeared to be cut by the earliest phase of trackway ditch NTW1, these features are probably broadly contemporary. This enclosure lay largely beyond the limit of excavation, although the geophysical survey indicates that it may have extended further to the west.

4.5 Roman trackway and ditches

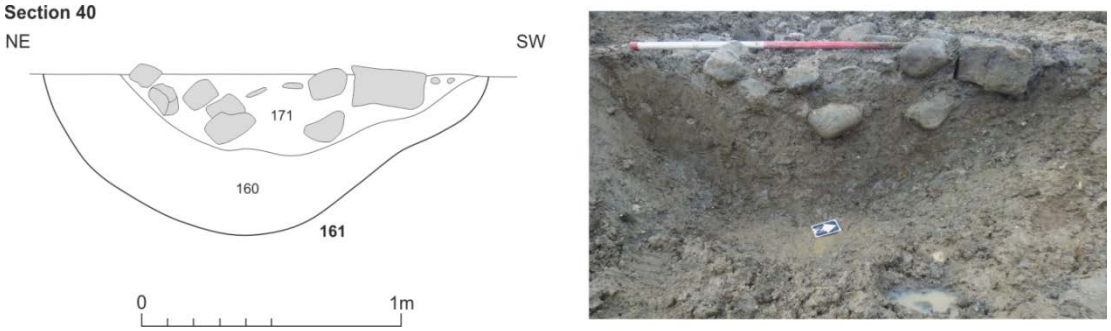
4.5.1 Recut of the trackway

Southern trackway ditch STW2

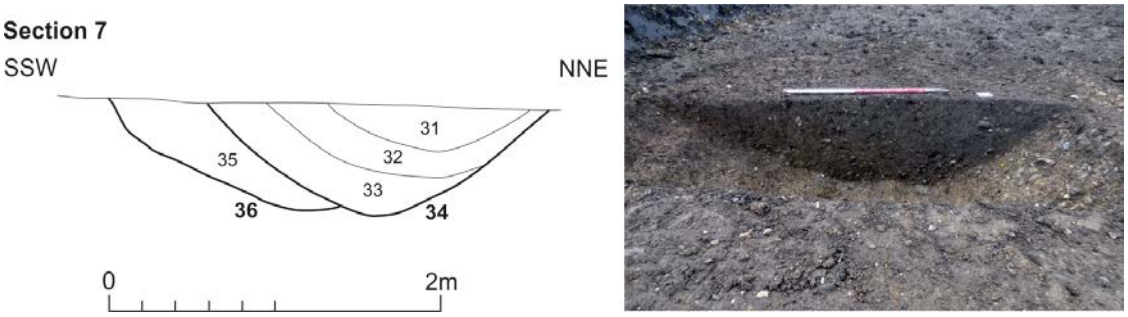
During the Roman period, the ditches of the Iron Age trackway were recut, suggesting this feature had become partially silted up but was still in use during this period (Fig 10). The recuttings followed the same course as the earlier trackway. The southern of the two ditches, STW2, terminated to the east of the site, just after cutting the ditch defining E3 although it did not extend into the area of the enclosure, also suggesting the enclosure may perhaps have still been in use (Fig 10). The ditch had an average width of 1.55m and an average depth of 0.48m.

The recutting ditch can be dated to the Roman period via a piece of tile and four pottery sherds from fill (32) of cut [34] and five Roman potsherds and metal sheet fragments from fill (89) of ditch [90]. This feature also contained bone from a dog which had been butchered; an unusual practice for this period. An environmental sample taken from fill (32) of cut [34] contained a relatively large amount of cereal grains, comprising emmer/spelt and bread wheat and one oat grain. While there is a chance that these charred plant remains were windblown residue, the fact that they are charred and in combination with animal bone indicated probable refuse deposits whilst the ditch was in use.

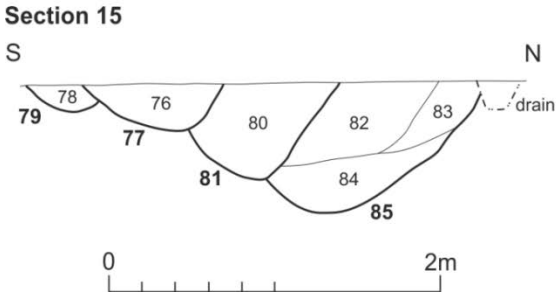
The upper fill of the ditch shows signs of later consolidation (Fig 13, section 40). Fill (171) of cut [161] for instance contained a high proportion of medium to large re-purposed stones, some of which had been worked. This suggests construction materials may have been reused to consolidate the looser ditch fill to ease crossing over the ditch, perhaps during the later Saxon use of enclosure E6.



Section of STW2 ditch [161] showing consolidation Fig 13



Section of STW1 ditch [36] and STW2 ditch [34] Fig 14

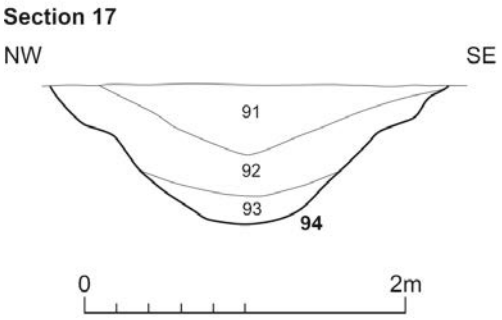


Section of STW1 ditch [85], STW2 ditch [81] and enclosure E6 ditch [77] Fig 15

Northern trackway ditch NTW2

Recut NTW2 (Fig 9, section 14) lay parallel with STW2 before it gently curved north–east at its eastern end and passed beneath the northern baulk. The excavation area did not include the westward continuation of the ditch but the geophysical survey indicates that it may continue for another 116m and probably terminated parallel with the end of STW2. The ditch had an average width of 3.25m and depth of 0.89m and a broad, V-shaped cut with a rounded base. This ditch was cut by a shallow pit [69] on its northern side.

As visible in sections 17 and 40, (Figs 10, 17 and 14), the Roman recut in many places completely obscured the earlier Iron Age trackway ditches.

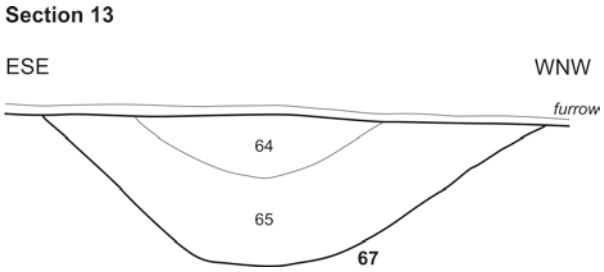


Section of NTW2 ditch [94] Fig 16

4.5.2 Other ditches, possible enclosure and a pit

Ditch [67]

Another length of ditch was situated in the south-west of the site. This ditch [67] was situated north-east by south-west and was rather substantial, being 1.65m wide and 0.49m deep (Fig 17, section 13). The ditch cut through the earlier enclosure E3 on its northern side. In turn it was cut to the south by the second phase of the trackway recut SWT2 and extended for 12.5m north-east before being cut by a furrow. It was not observed beyond this point so may have terminated here. The ditch partially crosses the open area between the trackway ditches. Its purpose is not clear but it would have formed an obstacle to access along the routeway at a point where the distance between the routeway ditches was at its widest (almost 23m). The ditch may have been used to control access along the routeway by forcing traffic through a narrower 9m-wide route.



Profile of E4 ditch [67] Fig 17

The ditch produced five sherds of Roman pottery, from fill (86) of [87] at its southern end and (65) of [67] in the middle, giving a date of around AD120 onwards for the ditch. A large cattle bone assemblage was recovered from fills (64) and (65), comprising vertebrae and mandible fragments from one or two animals. A cattle bone fragment from (65) was radiocarbon dated to the early Roman period AD133–264, corroborating the pottery date (133–264CalAD, 1790+/-30 BP, Beta – 489707, 68.6% probability) (Table 15, Fig 30).

Pit [69]

Pit [69] was situated at the western edge of the site, cutting the intersection between NTW2 and the eastern arm of enclosure E4 (Fig 9, section 14). It was sub-circular, 1.94m wide and 0.42m deep with curving sides to a broad, flat base. The pit was filled with grey-brown silty clay mixed with charcoal, a sheep bone and two sherds of late-1st or 2nd century AD pottery.

4.5.3 Possible enclosure 6

Possible enclosure 6 (E6) was located in the south-east of the site to the south of the trackway (Fig 10). The probable enclosure was formed of three ditches, two aligned north to south and one aligned east-west, cut along the length of STW1 and STW2. The enclosure lay partly beyond the southern limit of the excavation. Its alignment with STW2 suggests that it was contemporary with it and formed an alteration of the field systems which extended off the trackway.

Ditch [77] was 0.86m wide and 0.28m deep, with a wide U-shaped cut (Fig 15, section 15), possibly backfilled with silty clay with some charcoal. It cut through STW1 and 2, as well as a narrow earlier ditch cut [79], which had sloping sides and a curving base around 0.45m wide and 0.16m wide. The phase and purpose of this small ditch is not known; it may be a drainage feature.

The eastern arm of enclosure E6 was defined by north-south aligned ditch [101], which had a wide U-shaped profile, around 1.04m wide and 0.30m deep. This eastern arm terminated in a rounded end 1.16m from ditch STW2. This ditch also did not connect with the northern arm [77]; however the gap of 0.60m wide is too small to be considered an entrance.

A proposed western arm of enclosure E6 was no longer visible, probably removed by later ploughing.

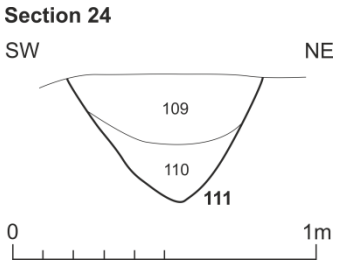
Even though no pottery was recovered for dating from the ditches of the enclosure, these cut into the Roman recut SWT2 indicating yet another phase of modification on the Iron Age and Roman field systems. Radiocarbon dating was undertaken on a piece of animal bone recovered from relationship section between enclosure E6 and the trackway. The bone was recorded as coming from fill (82) of [85] of SWT1. The

date returned was middle Saxon (662–778CalAD, 1270+/-30BP, Beta – 489708) (Table 15, Fig 31). However, due to the multiple recuts and later ploughing across the area it is thought that the bone may have been intrusive from later activity.

4.5.4 Ditch [111]

In the north-west of the site was ditch [111] which extended west from the long-standing western edge of enclosure E2 [115/117] for around 21m before it terminated in a rounded end 1.40m from ditch [21]. It had a narrow rounded profile, 0.65m wide by 0.45m deep (Fig 18, section 24). The ditch was probably an alteration of the Iron Age-Roman field systems to the north of the trackway, and may have acted as an internal division of the larger field to the west.

A piece of animal bone recovered from the ditch fill (110) was submitted for radiocarbon assessment. The date returned was from the middle Saxon period (85.3% accuracy 668-778CalAD, 1260 +/- 30 BP, Beta-489706) (Table 15, Fig 32). Despite this, the dating of this feature remains uncertain as it was not corroborated by other Saxon pottery or material and there was no other Saxon activity in this part of the site. It is therefore considered that the animal bone was again intrusive within an earlier Iron Age or Roman feature.

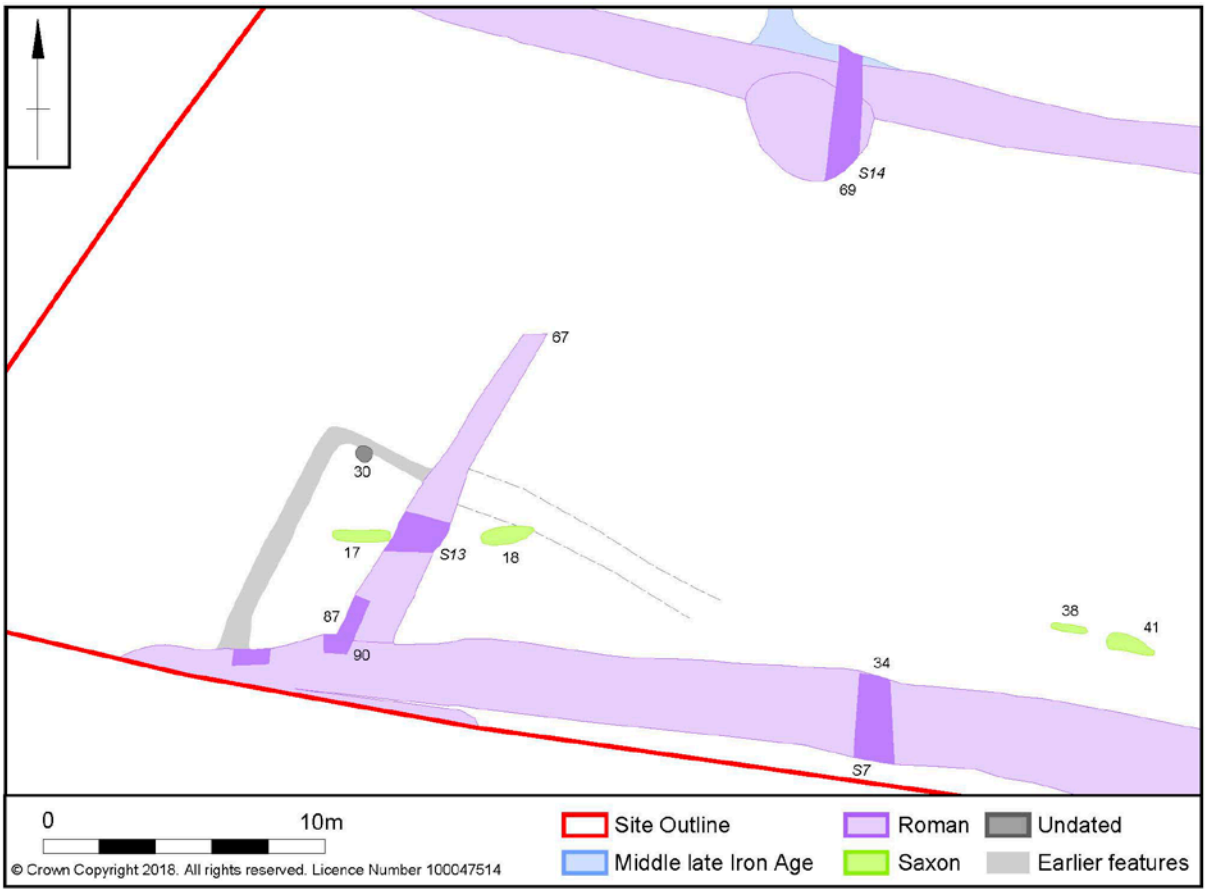


Section of ditch [111] Fig 18

4.6 Middle Saxon burials (AD 7th-8th century)

Four Saxon inhumations were situated on the south-eastern edge of the site, just within the route of the trackway and laid parallel with the southern trackway ditch STW1 and 2 (Figs 13 and 20). The four burials are referred to below by context number. They lay in a linear arrangement, head to toe, over a 30m distance east-west. Two burials, (17) and (18), lay within an area of earlier Roman and pre-Roman ditches while burials, (38) and (41) were identified around 19m to the east. None of the graves produced any grave goods or grave furnishings, either due to these not being included or due to the shallow and highly truncated nature of the interments.

The burials were all aligned east–west, with heads to the west, in a supine position. At the west end of the line was burial (18), laid in a sub-rectangular grave cut approximately 2m long (Figs 13 and 21). The skeletal remains belonged to an adult male who was observed to have suffered from spinal joint disease and extra-spinal osteoarthritis of the right hip. Sample from the bone was radiocarbon dated to the middle Saxon period (660 – 730CalAD, 1300 +/- 30 BP, Beta- 489710, 64.4% probability) (Table 11; Fig 28).



Scale 1:250

Plan of Saxon burials Fig 19

View of burials (17) (foreground) and (18), looking west-north-west Fig 20

Burial (18), looking south Fig 21

Around 3m to the east was burial (17), an adult female burial between the ages of 26 and 35, laid within a tapering grave cut which was 1.48m long and between 0.43m and 0.24m wide (Figs 13 and 22). The skull of this burial was missing due to the shallow grave cut and truncation by later ploughing. The individual (17) showed evidence of infectious bone changes in the tibiae and on the visceral surfaces of the ribs, indicating bouts of infection.

Burial (17), looking south Fig 22

Around 20m to the east was burial (38), a burial of an infant around 4-5 years of age at the time of death (Figs 13 and 23). The burial was highly truncated with the entire torso, arms and skull missing as well as the lower legs. The burial was laid in a 1.10m long and 0.38m wide rectangular grave cut.

Burial (38), looking south Fig 23

Around 1m south-east was burial (41), which was the inhumation of an adult female between the ages of 36-45 (Figs 13 and 24). The skull, lower legs and left side of the torso were lost to ploughing; the right arm was placed across the torso. Burial (41) was radiocarbon dated to the middle Saxon period (668–778CalAD, 1260 +/- 30 BP, Beta- 489709, 85.3% probability) (Table 11; Fig 29).

Burial (41), looking south Fig 24

Environmental samples were taken from the grave fills. Within all the grave fills, bar burial (38), analysis showed residual inclusions of wheat and cereals, particularly burial (18) which had a few bread wheat and emmer/spelt grains mixed into the fill around the arms and legs.

Only four burials were identified on the site and it is difficult to determine if there may have been more burials in the area which were no longer surviving. It is possible that further burials forming a larger graveyard may have been situated to the south under the existing field boundary, although no human remains were detected in the trenching undertaken by MOLA in the fields to the south (Chinnock 2016).

4.6.2 Pit [170] and deposit of late Saxon metalwork (AD 9th-10th century)

In the north-eastern corner of E2, a small pit [170] was cut through Iron Age ditch [168]. The pit was sub-circular, around 0.79m wide and 0.11m deep, with sloping sides and a flat base (Fig 12, section 41). Given the location, it seems possible that the pit was deliberately sited in relationship to the earlier Iron Age enclosure E2, which was possibly upstanding as an earthwork at the time.

The pit contained a lower fill comprising a domestic waste deposit in a mid grey-brown silty clay matrix (162) which had a high charcoal content. Finds from this dumping fill included pottery, animal bone and a deposit of 11 iron objects including a seax <SF 5, 7, 8> and a padlock <10>, a hinge fitting <11>, looped hasp <15>, a possible strainer <13> and a number of other objects, all dated to the late 9th-10th century. The artefacts are discussed in greater detail in the metalwork report in section 5.4. Pottery from FILL (162) was dated to the middle Iron Age, but as sherds of the same vessel also came from the truncated Iron Age fill below (168), it is thought these sherds were residual within fill (162) and do not date pit [170].

A relatively large animal bone assemblage was recovered from (162), which comprised 15 pieces of cattle bone, three specimens from sheep/goat and fragments from horse, pig and a chicken, some of which were burnt. The environmental sample from the fill produced 59 charred grains of bread wheat with one grain each of emmer/spelt and rye. The presence of mollusc remains suggested that the pit contained stagnant water for some time, perhaps remaining open after the material was dumped inside. During this open period, the waste deposit was overlain by natural silting which gradually infilled the pit.

4.7 Medieval and post-medieval activity

Two sherds of later pottery came from the narrow ditch [21] in the north-west of the site, comprising 16th-17th-century Midlands purple ware from the lower fill, while the upper fill produced a sherd of 14-15th-century Cistercian ware (Fig 6). Both sherds were extremely abraded suggesting the sherds were transported for some distance. No other ditch or pit digging activity of either period was known from the site. Stratigraphic relationships show this ditch must date to an earlier period, probably the Iron Age and the pottery within the ditch fills is therefore intrusive.

At the east of the site, the upper fill of the Roman trackway ditch appeared to have been infilled with large stones. This may have taken place as consolidation to ease access across the ditch (Fig 13, section 40). No other clearly identifiable post-Roman features stood within that area, but intrusive animal bone fragments and the burials to the west indicate that some Saxon activity was taking place on the site, and that the earlier ditch earthworks were likely to have been extant.

Ridge and furrow

The area of mitigation contained two distinct areas of former ridge and furrow cultivation systems, observable in the geophysical survey (Fig 3 and 5). Furrows in the western part of site were aligned east-west. Furrows aligned north-south lay in the eastern part of site and were observed to continue into the field to the south in the trial trenches (Chinnock 2016). The furrows in each area extend up to the position of the former routeway, and as observed in the trial trenching, an extant earthwork which extends along the length of the trackway is likely to be a headland demarcating the division between the two different areas of ridge and furrow (Clements 2015, 8). This again supports the interpretation the trackway remained a significant landscape feature for some centuries.

Six metal objects were recovered from furrows metal detecting; SF1 – 4 and SF 17 and 18, including two copper-alloy coins. These came from the northern area of east to west aligned furrows.

4.8 Undated features

A number of features on the site could not be dated by archaeological finds or by stratigraphic relationships with associated features (Fig 10). These features comprised pits, ditches and an enclosure.

4.8.1 Enclosure E5

At the south-east edge of the site, a number of ditches formed an area of possible enclosure numbered E5. The ditches were shallow and highly truncated by later furrows so the complete arrangement of the enclosure could not be determined. The ditches shared a general alignment with the trackway, enclosure E3 and enclosure E6, which suggests the undated enclosure E5 could correlate with any of those phases of activity.

Stratigraphically, the earliest ditch was [48], a narrow sinuous ditch aligned north-south on the western edge of the enclosure. This ditch was 0.86-1.01m wide and 0.19-0.31m deep with a U-shaped profile to a flat base. The narrow size of this ditch suggests it may have been for drainage or a small internal subdivision of the enclosure rather than forming a major boundary. This ditch was cut to the north by a similarly sized ditch [61], which was aligned east-west, possibly an additional division. At the east end of the ditch was a circular pit cut [58], which was 0.68m wide and

0.20m deep. After a period of silting, the pit was infilled with black-grey silty clay mixed with a few pieces of animal bone, fired clay and charcoal.

The next phase of ditch cutting comprised linear ditch [50], which extended for 29m north-east from a rounded terminal. The ditch had a U-shaped profile to a flat base, 0.73m wide and 0.15m deep, which seems to have been manually backfilled with silty clay. The north-east end of the ditch was truncated by later ditch [55], part of the same enclosure. A short section of ditch extended 3.75m north of the [50] at the east end, possibly indicating further alteration to the enclosure.

Ditch [55] formed the east arm of the possible enclosure E5. It extended 25m from the southern baulk on a north-west by south-east alignment before being truncated by a later furrow. Beyond this point it could not be observed further. The ditch was 0.85m wide and 0.25m deep with a U-shaped profile and flat base.

4.8.2 Pits

A number of pits across the site were undated but are likely to be contemporaneous with one of the main periods of activity in the Iron Age and Roman period.

Pit [124]

An oval pit [124] was situated in the eastern half of site within the Saxon enclosure E6. The pit was 1m in diameter and 0.14m deep with a bowl-shaped profile. It contained a naturally derived silting deposit, with some charcoal.

Pits [147], [149] and [151]

Within the north-east of the site was a trio of pits, [147], [149] and [151], not obviously related to the surrounding archaeology. These pits can be stratigraphically phased with each other; with [147] cutting the previous two. Pit [149] was at least 1.09m in diameter by 0.45m deep, with gently curving slopes and stepped with a slightly rounded base, filled by natural silting processes and containing some animal bone, most likely waste. An environmental sample from this pit was sterile of plant remains but contained mollusc associated with contexts containing waste deposits. Pit [151] was at least 0.74m in diameter and was 0.19m deep. It had gently sloping sides and a flattish base, filled by natural silting processes. The latest pit [147] was 1.44m in diameter by 0.40m deep with moderately sloping sides, stepped on the southern edge, filled by natural processes and contained animal bone. Two grains of emmer/spelt wheat and a grain of bread wheat were recovered from the pit fill

Pit [120]

A circular pit [120] was aligned east-west at the west end of the site. The pit was greater than 1.13m wide and 0.45m deep, with an uneven, sloping base. The pit contained two fills; a lower silting fill which was covered by a deliberate backfill of grey-brown silty-clay-loam with charcoal flecks. Two probable Saxon iron knives, SF <18> and <21>, came from the upper fill; it is unclear how these related to the other metalwork deposited in pit [170] *c*165m to the east.

Pit [30]

A small pit was located 2.40m north of grave (17). The pit was 0.58m wide and 0.05m deep. Although it contained no datable material, it cut through the Iron Age enclosure E1, and its proximity to the Saxon graves means it may date to this period. The fill comprised dark grey-brown silty clay which was rich in charcoal. A sample from the fill contained only a single grain of bread wheat. The shallow truncated nature of this feature makes it almost impossible to determine its function.

5 THE FINDS

5.1 Pottery by Adam Sutton

The pottery from the Warwick Road site was recorded using the conventions of the Leicester & Leicestershire pottery type series (see pottery reports in Clay & Pollard 1994). Prehistoric fabrics are classified according to dominant inclusion type, while Roman and Medieval fabrics are classified according to established ware groups. Quantification was achieved using sherd count, weight, and Estimated Vessel Equivalents (EVEs). EVEs were based upon measurements of rims only.

In total, the site produced 85 sherds weighing 494.7g and equating to 0.63 EVEs. The assemblage was heavily fragmented, with an average sherd weight of only 5.82g. Nevertheless, rim sherds from several vessels were present, and these have been of some use in dating the assemblage. The pottery falls into three broad period-groups: prehistoric, Roman, and medieval.

Prehistoric

65 sherds (of the 85 total) weighing 40.6g and equating to 0.22 EVEs were dated to the prehistoric period. The large discrepancy between the total number of sherds represented and the weight of the prehistoric group is attributable to the 59 sherds (plus numerous unquantifiable 'crumbs') from context (168), which were recovered from soil samples and are all in a coarse shelly fabric conceivably deriving from a single, highly fragmented, vessel. Fragments of the same vessel (two body sherds and a rim sherd of identical form) were also found in (163) fill of pit [170]. The vessel itself was a small barrel- or tub-like form with a simple, thickened rim. This type is well-known in middle-to-late Iron Age assemblages in the scored ware repertoire (Elsdon 1992a), although this vessel appears to have been undecorated. Nevertheless, a late Iron Age date broadly coincident with the scored ware tradition is appropriate. The presence of this vessel probably better dates ditch [163] (Enclosure 2) than it does the succeeding pit [170], with the fragments in pit fill (162) seemingly deriving from the disturbance of the original deposit.

Notably, the shelly fabric of the sherds from (168) does not fit with the kinds of fabrics known from nearby Leicestershire sites, e.g. at Enderby (Elsdon 1992b) or Coventry Road, Hinckley (Jackson 2004), which are commonly characterised by inclusions of acid igneous or metamorphic rocks. Shelly fabrics fit better with assemblages further east in the East Midlands, e.g. at Burrough Hill, Leicestershire (Percival 2012) or Weekley, Northamptonshire (Jackson and Dix 1987). They were also found at the adjacent Warwick Road site in 2015 (Perrin 2015). This places the Warwick Road complex at the geographical interface between two dominant M-LIA potting traditions.

Additionally, three sherds of prehistoric pottery in a sandy fabric with some small, angular flints were recovered from (51) and (82). The sherd from (82) was small and undiagnostic, but the joining sherds in (51) include faint scoring decoration on their exteriors which may be used to tentatively assign a similar M-LIA date to that offered for the vessel from (162).

Table 1: Prehistoric pottery fabric quantification by sherd count, weight, and EVE

		Fabric type/ L&LPFRC code		
Fill / cut / type		**Sandy/ Q1**	**Shelly/ S**	**Total**
51 / 52 / ditch	Number	2	-	**2**
	Weight	40.6	-	**40.6**
	EVE	0	-	**0**

		Fabric type/ L&LPFRC code		
Fill / cut / type		**Sandy/ Q1**	**Shelly/ S**	**Total**
82 / 85 / ditch	Number	1	-	**1**
	Weight	4.6	-	**4.6**
	EVE	0	-	**0**
162 / 170 / pit	Number	-	3	**3**
	Weight	-	74.6	**74.6**
	EVE	-	0.12	**0.12**
168 / 163 / ditch	Number	-	59	**59**
	Weight	-	125	**125**
	EVE	-	0.1	**0.1**
Total	**Number**	**3**	**62**	**65**
	Weight	**45.2**	**199.6**	**244.8**
	EVE	**0**	**0.22**	**0.22**

Roman (AD 2nd century)

16 sherds of Roman pottery weighing 129.4g and equating to 0.35 EVEs were recovered from six contexts. Three broad fabric groups were identified, these being Dorset black-burnished ware (BB1), greywares, and a small variety of miscellaneous coarsewares.

Greywares were found in every Roman context, and probably offer dates in the late-1st or 2nd centuries AD. This range can be improved upon in the case of (65), which included the only sherd of BB1 from the site; a fabric which is far more common in contexts dated *c*AD120 onwards. Similarly, a triangular jar rim in a misc. coarseware fabric has black surfaces and has been finely burnished, suggesting imitation of BB1 types and thus potentially indicating a similar mid-late 2nd-century date for its context (32).

Table 2: Roman pottery fabric quantification by sherd count, weight, and EVE

		Fabric type/ L&LPFRC code			
Fill / cut / type	**-**	**Greywares/ GW**	**Misc. coarseware/ MC**	**BB1/BB**	**Total**
32 / 34 / STW2	Number	1	3	-	**4**
	Weight	3.1	12.9	-	**16**
	EVE	0	0.12	-	**0.12**
65 / 67 / ditch	Number	3	-	1	**4**
	Weight	63.3	-	2.9	**66.2**
	EVE	0.05	-	0	**0.05**
68 / 69 / pit	Number	2	-	-	**2**
	Weight	18.2	-	-	**18.2**
	EVE	0.18	-	-	**0.18**
86 / 87 / ditch	Number	1	-	-	**1**
	Weight	5.8	-	-	**5.8**
	EVE	0	-	-	**0**

Fill / cut / type	-	Fabric type/ L&LPFRC code Greywares/ GW	Misc. coarseware/ MC	BB1/BB	Total
89 / 90 / STW2	Number	3	2	-	**5**
	Weight	15.8	7.4	-	**23.2**
	EVE	0	0	-	**0**
112 / 113 / ditch	Number	1	-	-	**1**
	Weight	98.6	-	-	**98.6**
	EVE	0	-	-	**0**
Total	**Number**	**11**	**5**	**1**	**17**
	Weight	**311**	**20.3**	**2.9**	**334.2**
	EVE	**0.23**	**0.12**	**0**	**0.35**

Medieval

Three sherds of medieval pottery were found. Among these were two sherds of 14th-15th-century Cistercian ware: one base found unstratified, with another very abraded sherd coming from the upper fill (19) of ditch [21]. Additionally, the single sherd of Midland purple ware from the lower fill (20) can be dated to the 16th-17th centuries.

Table 3: Medieval pottery fabric quantification by sherd count, weight, and EVE.

Fabric type/ L&LPFRC code	19 / 21 / ditch			20 / 21 / ditch			Unstratified			Total		
	Number	Weight	EVE	Number	Weight	EVE	Number	Weight	EVE	Number	Weight	EVE
Cistercian ware/ CW	1	3.4	0	-	-	-	1	16.1	0	2	19.5	0
Midlands purple ware/ MP1	-	-	-	1	2.4	0.06	-	-	-	1	2.4	0.06
Total	1	3.4	0	1	2.4	0.06	1	16.1	0	3	21.9	0.06

Discussion

When integrated with other Kibworth assemblages, the ceramics provide a clear impression of occupation covering the full timescale from the middle- to late Iron Age to the end of the Roman period. This is clearest on the excavations which took place west of Warwick Road, immediately to the north of the current site, which produced a similarly-sized assemblage of pottery that covered this complete timescale (Perrin 2015). The current assemblage adds to this impression with further evidence of occupation during the final centuries BC and 1st/2nd centuries AD. It is notable that at both the West of Warwick Road (Perrin 2015) and Fleckney Road (Hylton 2016), sites, grog-tempered ceramics of first century BC or AD dates were recovered. Their absence from the current assemblage may suggest a hiatus of occupation in this area during this period; however, it is worth reiterating that these are small assemblages and that the absence of any particular chronological component should not be seen as necessarily significant at this stage. Significantly, the evidence of medieval activity in the current assemblage is not reflected on the other two nearby sites.

5.2 CBM by Rob Atkins

A single fragment (38g) of a probable Roman flat tile was found in fill (32) of ditch [34], part of the latest modifications of the trackway. It was in a hard fully oxidised sandy fabric and was 20mm (¾") thick.

5.3 Fired clay by Mary Ellen Crothers

Two fragments of fired clay were found in the fill (56) of pit [58]. These measured 48.61 x 34.63 x 28.85mm and 23.59 x 18.75 x 8.48mm. Both were heavily fired and both have been made from a largely homogenous clay mix with frequent sand inclusions. It is likely that both fragments come from within the body of a structure. The larger fragment also has occasional small stones of quartz and flint. The homogeneity of the clay mix would imply that the clay had been heavily processed for a structural purpose and no organic inclusions are visible. No external surfaces are visible on either of the fragments.

The larger fragment of 28.2g has one likely withy impression and a further two possible withy impressions, although it is so abraded that this cannot be said with certainty. However, compression patterns are visible on one end on the large fragment, suggesting that it had been pushed into and set within a wattle or brush frame.

Table 4: Fired clay

Fill / Cut / Type	No	Weight (g)	Fabric and comments
56 / 58 / pit	1	28.2	Pale yellow brown and pale orange-brown, mixed oxidisation with possible withy impressions
56 / 58 / pit	1	2.6	Pale orange-brown, occasional sand inclusions, homogenous oxidisation

5.4 The metalwork by Lyn Blackmore

5.4.1 Introduction

The metalwork assemblage from this site comprises 21 accessioned fragments of metalwork which represent 18 objects, 15 of which derive from four widely spaced features of Roman, medieval and uncertain date, while the remainder are unstratified (collected by metal detecting) (Figs 25 and 26). The majority, however, are from a single pit and were probably buried in the late 9th to 10th century. The following considers the finds by date, material and function as far as they can be understood at the time of writing (planned conservation and investigative analysis was unfortunately delayed due to non-functioning equipment and a few additional X-rays from different angles are needed). The Roman coin is discussed separately.

Distribution

Roman finds are limited to a nail fragment (<20>) and some metal flakes (<19>) from different sections of the same ditched trackway ([6], [90]), and the unstratified Roman coin. The largest group of material is from fill (162) of pit [170], which yielded 11 objects dating to the late 9th or 10th century; their possible significance is discussed below. The two knife fragments from pit [120] could also be of similar date. There is little evidence for any later activity, but if the copper-alloy strap slide and drape ring are contemporary they suggest some activity nearby in the 14th century. One of the

unstratified finds is probably a post-medieval button, but the three others are of uncertain date.

5.4.2 Roman finds

Stratified Roman finds are limited to the coin <4>, discussed separately, a few small fragments of iron plate (<18>) and a nail (<20>), about which nothing more can be said.

Catalogue

Iron fragments

SF <19>, fill (89) of ditch [90]

Incomplete, largest fragment 19 x 20mm (sub-triangular outline), Th 2mm, weight 7g. Six non-joining fragments of sheet metal, function and date unknown.

Iron nail

SF <20>, fill (35) of ditch [36]

Incomplete; extant L 51mm. Upper end of nail with flattened, burred head (13 x 9mm), shank of rectangular section (max 10 x 8mm) tapering towards the point.

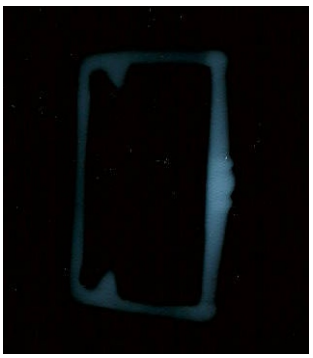
5.4.3 Medieval finds

Copper alloy

Dress accessories

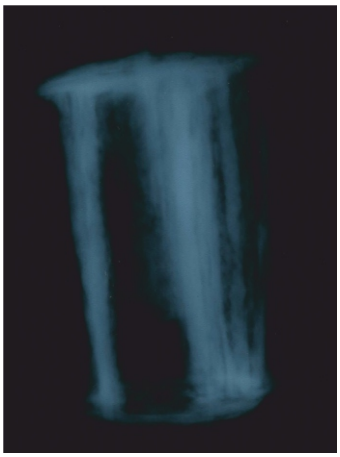
The copper-alloy fitting SF <1> is a strap loop, or belt slider, designed to hold down the loose part of a strap. Made in both copper alloy and iron, these fittings occur in two main form types: those with rivets (ie fixed), and those with a pair of opposed projections (ie adjustable), as seen on <1>. Most such strap loops are trapezoidal, although other forms are also known. The plain examples are generally more rectangular and so designed for wider straps, while those with a decorated outer/upper edge, as found at Kibworth Harcourt, are usually squarer, although a similarly rectangular decorated example is known from Billingsgate (Egan and Pritchard 1991, fig 149, no. 1260) and a good parallel is known from Winchester (Hinton 1990, 541, fig 143, no.1353, referred to as a belt hasps). Two modes of use have been suggested. According to Hinton, these loops took the place of a buckle: the end of the strap was secured to the narrow end and held in place by the projections, while the remainder engaged with a metal clip attached to the other end of the same strap or to the terminal of a different strap. The preferred interpretation, however, is that the end of the strap attached to the buckle probably passed through gap between the projections and the narrow, or lower, end of the fitting, while the loose end of the strap passed through the buckle and then through the wider, or upper, end of the fitting. Either way, the strap used with <1> was 26mm wide with a maximum thickness of 2mm.

Data from London suggested that adjustable strap loops such as <1> are earlier than the riveted form, being present in Billingsgate contexts dated to *c*1150–1200 and 1200–30 (Egan and Pritchard 1991, 146–7, figs 147, 149). In Winchester, however, such finds were dated to the 14th century (Hinton 1990, 539–41). It is, therefore, uncertain whether the early London finds are intrusive, or if those from later deposits at Billingsgate are residual. The numerous examples from Buckinghamshire, Lincolnshire, Somerset, Sussex, Warwickshire and elsewhere reported on the Portable Antiquities database (PAS 2018) do not help resolve this as they cannot be closely dated, but a broadly similar example dated to *c*1330–80 is reported from North Lincolnshire (NLM-D1FD39).

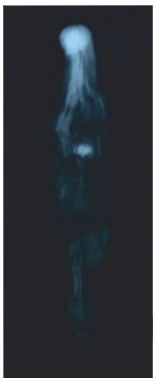


<1>

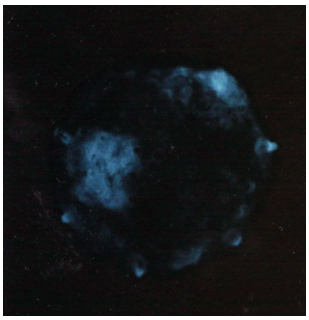
0 50mm



<10>



<11>



<13>

<9>

<14>

<15>

0 100mm

Scale 1:1 and 1:2 X-rays of selected metal artefacts from the Warwick Road site Fig 25

Catalogue

Copper-alloy strap loop (Fig 25)

SF <1>, unstratified

Complete, L 20–21mm, W 34–36mm, weight *c*4g. Cast strap loop with round-cornered, slightly trapezoidal frame. The plain narrow end has a square section (1.5 x 1.5mm), while the sides are rectangular (2 x 1.5mm) with two opposed projecting lugs (L 3.5mm) close to the narrow end. The sides project very slightly beyond the wider end, which thickens from 2 x 2mm to 4 x 5mm at the centre, where the decoration in relief comprises a broad transverse rib (W 3mm) flanked by two narrower ribs (W 2mm), all extending over the upper, outer and undersides of the frame.

Utensils and furnishings

Plain copper-alloy rings such as SF <2> were used for many purposes, either in their own right or as part of a composite object. This example is, however, the same size as several examples from Billingsgate, which were interpreted as an alternative to the hooked drape ring, perhaps sewn directly to the cloth (Egan 1998, 62–4, fig 43, no. 104). Although the illustrated example in Fig 25 has a round section, they vary and can be flattened, sub-hexagonal or bladed, as here. Dating is uncertain but they were probably in use by the late 14th century.

Catalogue

Copper-alloy ring

SF <2>, unstratified

Complete, ext Diam 23mm, weight 2.6g. Plain ring with irregular but predominantly externally-bladed sub-rectangular section (W 3mm, Th *c*2.5mm).

Iron

Utensils and furnishings

No parallel has been found for the small perforated ?strainer SF <13> from pit [170], but it appears to have been designed to fit into a larger object with the concave face horizontal and facing up (similar to a present-day plughole), and held in place by the pointed projections on the back which appear to be designed to be embedded in wood or some other softer material. It is possible that <9> and <14> (below, uncertain) are also from items of household equipment.

Catalogue

Iron strainer? (Fig 25)

SF <13>, fill (162) of pit [170]

Complete? Diam 61mm, D 13mm. Small dish-shaped object with roughly aligned rows of closely spaced perforations (Diam 1–2mm) across the entire surface and five small pointed projections (originally seven) around the underside of the rim.

Knives and tools

By far the most striking find from the site is the seax, SF <5, 7, 8> from pit [170], a large angle-backed, single-edged knife. The seax is a long-lived form which changed over time. Two main forms occur in the late Saxon period: the long seax, which is rare, and the shorter 'common seax' (Wilson 1964, 60; Gale 1989, 72), both of which can be pattern-welded (ibid, 76), using the same technology employed for swords (Anstee and Biek, 1961; Tylecote 1986, 195–6; Lang and Ager 1989; Gilmour 2007).

Characterised by blades ranging from 500mm to 760mm in length of 540, the long seax was classed as Type C in the typology established by Böhner (1958) and Type III in that outlined by Wheeler (1935, 177–9, fig 42; Gale 1989, 72). Although introduced on the Continent *c*AD 700, the form appeared considerably later in

England and the few known examples are dated to the late 9th or 10th century. Although there are variations in blade form, on the English long seax the rear part of the back is parallel or near parallel to the cutting edge, while the front is angled down to the tip and sloping down to the tip; the tang is plain while the blade is wedge-shaped in section (Gale 1989, 72–4; Gilmour 2004a, 283). The example from the Hurbuck hoard, Co. Durham (length 713mm; Wheeler 1935, 179; Wilson 1964, 39, 60, 135–6, pl XIX, no. 22) is pattern-welded with a single band of inlaid decoration, while that from the Thames at Battersea (length 811mm) is more ornate, with inlaid decoration in copper, bronze and silver which includes the runic alphabet and a running lozenge pattern (*ibid*, 38–9, 144-6, pl XXII, no 36; Gale 1989, 74).

The shorter seax, type IV in Wheeler's classification, is more common and in England generally dated from the later 9th to 11th century (Wheeler 1935, 179–80; Wilson 1964, 60; Ottaway 1992, 564), although probably began to evolve earlier than this (Gilmour 2004a, 283). It has a broader blade, usually around 240mm in length, but in some cases up to 360mm length. The back is more obviously angled (also known as 'broken–backed') and falls within back form A in the Coppergate typology (Ottaway 1992, 562–5). The plain examples are difficult to date, but those with pattern-welding can be dated to the 9th or 10th century, when this technology was mainly used on seaxes and spearheads rather than swords (Lang and Ager 1989, 106–7, 113; Gilmour 2004a, 283; 2004b, 316; 2007, 102). Examples include a find from Yarnton, Oxfordshire, dated to the late 9th or 10th century, which has a complex banded, twisted and 'toothed' design (Gilmour 2004a, 283, fig 15.2.10; 2004b). Simpler pattern-welded designs, comprising angled lines formed by twisting the hammer-welded strips, occur on two finds from the Thames at Brentford and Wandsworth (Wheeler 1935, 181, pl XV, nos 22, 24; Gale 1989, 76, fig 6.12). Many seaxes, including a find from Coppergate (Ottaway 1992, fig 229, no. 2808), have simple inlaid strips, possibly a later interpretation of pattern-welding (Gilmour 2004a, 283), while a few are more prestigious. The latter include the late 9th- or early 10th-century example from Sittingbourne, which has inlaid decoration (in copper, bronze, silver and niello), including Latin characters naming the owner and the maker (Wilson 1964, 38, 172–3, pl XXX, no.80).

From the above, the Kibworth seax can be dated to the late 9th or 10th century. Where it was made is more problematic, but it has elements in common with both types of seax described above, and could be interpreted as a transitional form. In length, however, it is a large example of the 'common seax', while the blade form places it within second sub-type described by Gale (1989, 72), where the change in the angle of the back is approximately one third of the total blade length from the point. At present it is uncertain whether the complex pattern-welding appears on one of both faces of the blade. The 'distorted looped pattern', however, differs from the angled designs seen on most other examples, with a running motif of paired back-to-back C-shaped motifs which are closer to the 'snake pattern' seen on a 6th-century sword from West Heslerton, although there the arcs are alternating (Gilmour 2007, 203-4). Contemporary examples of swords with C-shaped motifs include a 10th-century Viking sword from the Nottingham, on which the C is the one surviving letter (Lang and Ager 1989, 103, fig 7.10), and the eyelet loops seen on the 10th-/11th-century sword from the Thames at Westminster (*ibid*, 102–3, fig 7.9). It is likely, however, that the pattern is of north European, rather than Anglo-Saxon origin (B Gilmour, pers comm, 29/5/18), meaning that the seax could be an import, or that this is an English interpretation of a foreign design perhaps related to the Viking '*bloðida*' ('blood eddy') pattern (Oakeshott 1960, 151, fig 70); either scenario would be in keeping with the location of the site within the Danelaw. Possible methods of achieving the Kibworth pattern are suggested below, although not included in the techniques discussed by Anstee and Biek (1961), Lang and Ager (1989), Gilmour (2007) or other writers.

In terms of function, the size and neatly executed decoration of the Kibworth seax might imply that, as suggested for the Yarnton find (Gilmour 2004a, 283), it was a weapon rather than a tool, but it could equally have been a large hunting knife. Either way, it would have been a high status object worn horizontally at the waist and was probably owned by male of some standing in the local community (Gale 1989, 79–80, fig 6.15).

The two knives from fill (118) of pit [120] are probably also of similar date and the smaller example <18> probably falls within back form C1 in the Coppergate typology, which is defined as having a back which has straight rear part and convex front part (Ottaway 1992, 559, 565–70). At Coppergate the complete examples of this form range between 87mm (blade length *c*60mm) and 200mm, placing <18> at the small end of the scale. The larger fragment is harder to interpret due to corrosion and poor preservation, which make it impossible to determine the true section. As the X-ray is ambiguous, this find can, therefore, be read as the rear part of a blade with part of the tang, or as the front part of a blade damaged at the tip. Another possibility is that it is from a pair of shears, although while the blade proportions compare well with an unstratified find from Coppergate (*ibid*, fig 219, no. 2700), the arm, if such it is, is rather wider than usual. Either way, <21> appears to be from a tool with wear along one edge.

Catalogue

Iron seax (Fig 26)

SF <5>, SF <7>, SF <8>, fill (162) of pit [170]

Complete, in two joining pieces with detached flake (<7>); L 400mm, total weight 335g (<5>: 313g; <7>: 5g; <8>: 27g). Single-edged blade with angled back sloping slightly upwards from the cutting edge, changing angle 120mm in from the tip; worn but straight cutting edge, bent sideways at the tip (L345mmm, W 25 at junction with tang; max 40mm, Th *c*10mm along back, 1mm along the cutting edge). The tang is set centrally with angled shoulder and choil (L 55mm, W 17mm tapering to 9mm). There is no evidence for a median groove as such, but a band of complex pattern-welded decoration extends the length of the blade, parallel to the cutting edge (W 5–6mm). At present this appears to comprise 36 or more back-to-back semi-circular motifs, each made up of three concentric arcs, aligned along a central core which extends beyond these motifs into the tang and to the point.

Pending technological analysis, three possible means of creating this pattern can be suggested.

a) Create a composite twisted rod and grid way about half the thickness, then polish and etch the surface (B Gilmour pers comm, 29/5/2018)

a) Create a composite twisted rod (at least three layers), bisect it longitudinally, reverse each half to face inwards, pair up the arcs and weld them to the central core by hammering flat

c) Create two composite twisted rods (at least three layers), pair up the arcs and weld them to the central core, trimming off the excess leaving a narrow strip of the required width.

X-ray of seax, SF <5>, SF <7> and SF <8> Fig 26

Iron knife

SF <18>, fill (118) of pit 120

Incomplete, extant L 95mm, W of blade 9mm, weight 16.3mm; Ottaway Form C1, damaged and in corrosion. Complete blade (L *c*80mm) in two pieces held together by the ?steel strengthening of the cutting edge, the rear part of the back apparently parallel to the cutting edge, the front convex. Broad tang with rectangular section (max 9 x 4mm) set centrally with concave shoulder to the back and ?sloping choil.

Iron knife?

SF <21> fill (118) of pit 120

Incomplete, extant L 67mm, W 24mm in corrosion (65 x 20mm on X-ray), weight 22g. Appears to be either rear part of blade with convex shoulder, concave choil and part of centrally set tang, or front part of type C blade with damaged point.

Fasteners and fittings

Three finds from fill (162) of pit [170] can be associated with security, of which the first is the large padlock SF <10>, which has the U-shaped bolt *in situ* and seems to be hybrid of Goodall types A1 and A2 (Goodall 2011). Both are barrel padlocks with integral tube, A2 having lozenge-shaped end plates which project beyond the cylinder and are linked by strengthening rods; type A2 has rounded end plates and

additional pivoting sub-triangular fins set between the end plates, either above and below, or to the sides (ibid, 231, figs 10.1, 10.6.I6, 10.6.I7). Here the end plates are lozenge-shaped, but there is a single fin above the free arm tube. Due to corrosion, lack of cleaning and limited X-ray views, the nature of the case and the openings for the bolt and key are unknown, and details of the bolt are unclear on the X-rays. It is, however, likely that at least some of the strengthening rods were twisted, as is the norm on other contemporary barrel padlocks, or example from Coppergate (Ottaway 1992, fig 281, no. 3610) and Bishopstone (Ottaway 2010, 120, fig 6.19). This form of padlock appears to be of predominantly Late Saxon/Anglo-Scandinavian date and probably did not continue beyond the 12th century, if that (Goodall 2011, 231), those dating to after the late 11th century having recessed endplates and separate free arm tubes (Ottaway 1992, 665–7; 2010, 120, fig 6.19). It is likely, therefore, that padlock <10> is contemporary with the seax <5>/<7>/<8>).

Hinge fitting SF <11> is probably from a box, casket or other item of furniture, and has a projecting eye/loop designed to engage with the other half of the fitting. It is unclear whether this projection was open (U-eyed) or closed (looped) or whether the hinge was originally a single- or double-sided object (Goodall 2011, 165–67), but on balance it is likely to have been U-eyed and double-sided, with a back plate and expanded circular terminal at the narrow end to house a second nail for attachment. Such mounts are long-lived and range considerably in size. Examples are known from Anglo-Scandinavian contexts at Coppergate, York (Ottaway 1992, 639–41, fig 268), from an early to mid 13th-century context at Winchester (Goodall 1990, 971, 974, fig 303, no. 3450; 2011, 210, fig 9.23, H524) and from a late 14th- to 16th-century context at Cambokeels, Durham (*ibid*, 198, figs 9.16, H400). The closest parallel found for <11> is from Coppergate (Ottaway 1992, fig 268, no. 3474).

The other object in this group, SF <15>, is a form of looped hasp, probably used for fastening a chest, door or gate. Damage, corrosion and limited X-ray views preclude a fully accurate description, but it comprises an elongated link with a looped terminal at one end which is gripped by a looped staple, or lynch pin. The strip could be solid, like hasp 3490 from Coppergate (Ottaway 1992, fig 270) but could be made of a strip, the sides of which touch in the middle but are open at the ends in figure-8 form (cf ibid, fig 270, 3492). At the damaged end there is a second, wider loop, designed to fit over a staple two which a padlock could be secured, while the elongated terminal is hooked back on itself, a feature not illustrated at Coppergate but found on later hasps and possibly intended to aid lifting (Goodall 2011, 168, figs 9.27, 9.28). Given its bent and damaged condition, it is impossible to know whether the hasp was originally flat or arched.

Catalogue

Iron barrel padlock (Fig 25)

SF <10>, fill (162) of pit [170]

Complete; L 90mm, weight 566g in corrosion. Padlock with lozenge-shaped end-plates (H 65mm, W 60mm) connected by at least five rods, two on each side and one at the base, some/all possibly twisted, and a low sub-triangular fin (H 15mm) engaged in projections at each end above the free arm tube. Bolt in situ, the loop with circular cross section (Diam *c*7–8mm) projecting *c*20mm beyond the end plate. Keyhole obscured by corrosion.

Iron hinge fitting (Fig 25)

SF <11>, fill (162) of pit [170]

Incomplete. Extant L 89mm (86mm on X-ray), max W 21mm (20mm on X-ray). Fitting comprising asymmetrical, elongated sub-triangular plate (L 67mm) with perforation (Diam 3mm) near the arched eye (L 22mm; Diam 7 x 5mm) which springs from the wider end;

narrow end broken at the termainl. Slight trace of mineralised wood lying transversely across the back.

Iron hasp (Fig 25)

SF <15> fill (162) of pit [170]

Near complete; extant L 175mm across central area. Composite object comprising a strip (orig L 127mm (straightened), full W 17mm) with integral loops in same plane at both ends, one engaging with a large looped staple/lynch pin (L 67mm, mx W 26mm). The opening at the other has been pulled open but the elongated terminal is intact, rolled back on itself to create a hooked end.

Uncertain

Five objects from fill (162) of pit [170] are problematic, and although SF <6> is a fragment of sheet metal while SF <12> is probably part of a small awl or nail, no parallels have been found for SF <9>, SF <11> and SF <14>. Interpretation of <9> is hindered by the fact that the long arm appears to have snapped, certainly at the wider end and possibly at the narrow end too. Although it is not impossible that it was a form of slide key, the form is unlike any known example of a key or latch-lifter, and it also differs from the standard wall hook, which usually has a tapering shank with the hook curved to face the wall (Goodall 2011, 167, figs 9.9, 9.10) - here the shank is straight-sided and in order to function the hook must have been on the underside, facing outwards. Other possibilities are that this is part of a pot hook, various forms of which have been found at York, Flixborough and elsewhere (Ottaway 1992, 652, fig 277; Ottaway 2009, 173, fig 5.4), or perhaps a balance.

Object SF <14> is also puzzling. Although at first sight it resembles a key, these have closed loops and are of later medieval date, whereas here the terminal is closer to that of the Anglo-Saxon spiral-headed dress popular *c*AD 680–740. The shank, or stem, is also atypical for a key, expanding from the terminal towards the other end, where it appears to narrow again at the point where it has broken. As the end is missing it is impossible to guess the original length or purpose of the object, but in the absence of any perforations it is unlikely to have been a decorative fitting from a door or chest. It may, therefore, have had some other form of domestic function, perhaps associated in some way with cooking over the hearth.

Catalogue

Iron object

SF <6>, fill (162) of pit [170]

Incomplete; L 50mm, W 21–4mm, Th 1–2mm, weight 14mm. Originally thought to be part of the seax, this is a separate fragment of what seems to be sheet metal.

Iron hooked object (Fig 25)

SF <9>, fill (162) of pit [170]

Incomplete? L 140mm. L of long arm 126mm, W 16mm, Th 5+mm at wider end (possibly broken), tapering to 6mm, (Th *c*8mm) at narrow end (possibly broken). Hooked arm looped back on itself projecting in the same plane on one side, *c*10mm in from the narrow end (W 10mm at base, 4mm at terminal; Th *c*8mm at base, 5mm at outer end).

Iron object

SF <12>, fill (162) of pit [170]

Incomplete; extant L 25mm, max Diam 7mm. Pointed end of a nail shank or awl?

Iron object (Fig 25)

SF <14> fill (162) of pit [170]

Incomplete, extant L 119mm (as bent), W 63mm across inwardly curled bifurcating terminal, 14mm just above the broken end (W 9mm); Th *c*4m throughout. The terminal is now bent, both outwards from the shank (at angle of *c*35°), and sideways, one side higher than the other.

5.4.4 Post-medieval finds

Copper alloy

SF <17> is probably the remains of a composite post-medieval button. As there is no perforation or pin on the larger fragment it must be from the upper side, while the second, smaller fragment is from the rim of the lower half. A button of this form from Winchester, with the loop projecting through a central perforation in the lower half, is dated to the 18th or 19th century (Biddle and Cook 1990, 576, fig 155, no. 1726)

Catalogue

Copper-alloy button?

SF <17>, unstratified

Incomplete? Extant Diam 21mm, Th 0.5mm, weight 1g. Two fragments from a composite button: a slightly domed upper disc, near complete but dented at centre with a crack extending from there to the outer edge, which is slightly lipped, and two small fragments (both L 8xmm, W 2–3mm) from the rim of a lower lipped disc of the same diameter.

5.4.5 Finds of unknown date

Copper alloy

Copper alloy sheet

SF <3>, unstratified

Incomplete, Diam 19mm, Th 1mm. Disc-like fragment of sheet metal with pitted upper surface and parallel striations beneath powdery corrosion on the underside.

Iron

Iron nail

SF <16>, unstratified

Incomplete; extant L 45mm (43mm on X-ray), weight with accretions *c*6g. Nail shank or rod, tapering from 7mm (Th 5mm) to 5mm (Th 3mm) at the narrower end.

5.4.6 Discussion

Although small, the assemblage from this site contains a varied range of finds with an intriguing group of 11 pieces of 10th-century ironwork from a single pit. While there is no definite evidence to suggest that these were purposely buried as a hoard, the fact that group contains some rare, and in some cases unique, items, but no non-residual pottery, suggests that this is not normal waste disposal. Secondly, and more significantly, pit [170] was small, so the objects were close together, but was also located in the corner of an Iron Age ditch system, suggesting that the spot was purposely selected for a particular reason. If so, it would make an important addition to the growing number of broadly contemporary sites with evidence for the planned concealment of larger groups of tools and other items (Thomas and Ottaway 2010, table 6.6), as well as smaller assemblages in pits (*ibid*, 104; Hamerow 2006).

Some hoards are in lead tanks, such as that from Flixborough (Ottaway and Cowgill 2009), but others, including those from Hurbuck, Co Durham, and Bishopstone, have

no evidence for a container. The Hurbuck hoard is of interest as the 19 objects include a long seax and a sword as well as a range of agricultural tools, while the Bishopstone hoard contained 25 items, including three padlocks, a large lock case, tools, hinges and other items. Both can be interpreted as votive deposits, the former, like that from Nazeing, Essex (Morris 1983) being in a watery location, the latter buried in a sub-floor posthole of a cellared building following its demolition, one of three hoards to be found inside, or close to, significant buildings within an associated settlement (Thomas and Ottaway 2010, 104). Although discovered during quarrying, the Flixborough hoard, in two lead tanks, is another settlement find, possibly related to a church some 50m away (Ottaway and Cowgill 2009). As neither context seems to directly apply to the Kibworth group, the finds in pit [170] could have been concealed at point still visible in the landscape with the aim of recovering them, as first thought for the Nazeing hoard, which also includes a range of unique items, mostly incomplete (Morris 1983, 36–7). However, as the Nazeing hoard has since been reinterpreted, it is not impossible that the location of pit [170] was governed by more cosmological motives.

Acknowledgements

I am very grateful to Brian Gilmour, University of Oxford, for his helpful comments on the pattern-welding on the seax.

5.5 Other finds by Tora Hylton

A very small fragment of worked bone was recovered during the sieving of samples from fill (51) of ditch [52], part of enclosure E3. The fragment measured *c*2mm x 2mm and two grooves could be observed on the flat surface, identifying it as a probable part of a side plate from a composite comb. Beyond this possible identification, the fragment was too small for dating or further comment.

6 THE HUMAN REMAINS by Chris Chinnock

6.1 Introduction and nature of the sample

Four middle Saxon inhumations were present. The radiocarbon dating results are presented below in section 6.4. This report contains the results of the complete osteological analysis and discussion of the human bone assemblage. Analysis was limited by the small sample size and incomplete nature of the remains. Nevertheless, this assemblage serves to add to the corpus of demographic and palaeopathological data and information on funerary practices during the Saxon period in Britain.

The four inhumations were all orientated approximately east to west with the heads at the western end of the grave in the south-west corner of the site (Fig 19). The burials seemed to be arranged in two separate groups approximately 19m apart. They were positioned in a head-to-toe position, giving an overall linear arrangement parallel with the southern ditch of the Iron Age and Roman trackway.

Preservation and completeness

The skeletal remains were assessed for overall bone preservation and scored on a three point scale (Table 5; Connell and Rauxloh 2007).

Table 5: Preservation and completeness categories

Scale	Condition description
1	Bone surface in **good** condition with no erosion, fine surface detail such as coarse woven bone deposition would be clearly visible (if present).
2	Bone surface in **moderate** condition with some post-mortem erosion on long bone shafts but the margins of articular surfaces are eroded and some prominences are eroded.
3	Bone surface in **poor** condition with extensive post-mortem erosion resulting in pitted and eroded cortical surfaces

The levels of preservation and completeness were assessed for each inhumation excavated and the results proved to be highly variable, dependant on local geological variations (Table 6). All of the graves were very shallow and each of the skeletons displayed some evidence of truncation as a result of medieval to modern ploughing.

Table 6: Preservation and percentage completeness of each individual

Context	Completeness	Preservation
17	37.2%	1
18	46.3%	1
38	10.7%	2
41	28.9%	2

6.2 Methods

All skeletal remains were recorded onto an Oracle 9i (v9.2.0) relational database following Museum of London methodology (Connell and Rauxloh 2007; Powers 2008). This provided a full catalogue of the bones and teeth present, estimates of age and sex, measurements of cranial and post-cranial elements and observations of non-metric traits. Disarticulated remains were rapidly scanned and elements present recorded onto an Excel spreadsheet and the MNI calculated.

Where possible, observations of the dimorphic features of the skull and pelvis were used for sex estimation. Estimations of age and sex followed the categories outlined in Tables 7 and 8.

Table 7: Age categories

Category	Age group	Description
Subadult	perinatal	inter-uterine/neonate
	1–6 months	early post-neonatal infant
	7–11 months	later post-neonatal infant
	1–5 years	early childhood
	6–11 years	later childhood
	12–17 years	adolescence
Adult	18–25 years	young adult
	26–35 years	early middle adult
	36–45 years	later middle adult
	≥46 years	mature adult
Unclassified	adult	≥18 years
	subadult	<18 years

Table 8: Biological sex categories

Sex
Male
Probable male
Intermediate
Probable female
Female

Adult age at death estimates employed a combination of pubic symphysis, auricular surface and sternal rib end morphology, in addition to dental attrition (Brothwell 1981; Iscan *et al* 1984; 1985; Lovejoy *et al* 1985; Brooks and Suchey 1990). Individuals aged ≤18 years were classed as 'sub-adults'. Sub-adult age was estimated using a combination of long bone diaphyseal growth measurements, observations of the stage of epiphyseal fusion and tooth development and eruption (Moorees *et al* 1963(a); 1963(b); Maresh 1970; Gustafson and Koch 1974; Scheuer and Black 2000).

Metric and non-metric data was recorded where possible (*ibid*). The calculation of adult stature employed metric data from the right femur, applying the formulae devised by Trotter (1970). Pathological bone changes, where present, were recorded onto the database and supplemented by digital photographs when necessary. Crude prevalence rates by individual and true prevalence rates by bones or joint were calculated where appropriate. The diagnosis of pathological conditions followed the procedures set out by Roberts and Connell (2004, 34). Full details of pathology locations, measurements and all other osteological data can be found in the site archive.

6.3 Results

6.3.1 Demographic Data

The demographic data is summarised in Table 9. Two contained the remains of adult female individuals, (17) and (41), one an adult male individual (18) and one the remains of an infant (38). The total minimum number of individuals is therefore four.

Estimations for the age at death were possible for three out of the four individuals in this group. Female individual (17) was between the ages of 26 and 35 at the time of death and female individual (41) was 36 to 45 years of age. Male individual (18), due to the lack of skeletal elements used for the estimation of age at death, could only be assessed as adult. Individual (38) was aged between one and five years old based on the growth and development of the skeleton. Analysis suggests that the infant was closer to five years old than one, at the time of death.

Table 9: Summary of demographic data

Context	Age (years)	Sex
17	26-35	Probably Female
18	Adult	Male
38	1-5	-
41	36-45	Probably Female

6.3.2 Metric Data

Stature

Due to the fragmentation of the long bones in each individual, stature estimation was not possible.

Indices

The platycnemic index takes measurements from the proximal part of the tibia to calculate the degree of transverse flattening. Two tibiae, one right from adult male (18) and one left from adult female (17), were used to calculate the platycnemic index. The right tibia from adult male (18) was calculated (71.67) as eurycnemic (broad/wide). A left tibia from adult female (17) was also calculated (79.44) as eurycnemic (broad/wide).

6.3.3 Non-metric traits

All individuals were assessed for the presence or absence of any cranial and/or post-cranial non-metric traits. The individual that displayed traits, and details of which ones were present, are shown in Table 10.

Table 10: Non-metric traits

Skeleton	Non-metric trait
17	Third trochanter (R)
	Third trochanter (L)
18	Third trochanter (R)
	Third trochanter (L)
	Calcaneal facet double (R)
41	Third trochanter (R)
	Patella - Vastus notch (L)

6.3.4 Palaeopathology

Dental disease

Due to the shallow depth of the graves and the resultant truncation by modern ploughing, only a single tooth from adult female (41) had survived. The tooth, a lower left 1st pre-molar, displayed hypoplastic linear enamel defects to the crown surface.

Infectious disease

Adult female (17) displayed dense plaques of well-healed striated lamellar bone growth on the medial and lateral surfaces of the left tibial mid-shaft. This can be described as periostitis, an inflammation of the periosteum (outer surface) of the bone. It has been noted that the slower blood circulation and lack of soft tissue covering make the tibiae more vulnerable to inflammation and infection (Roberts 2000, 148). The same individual displayed well healed plaques of new bone growth on the visceral surfaces of a single small unsided rib fragment and a fragment of left rib. It was not possible to determine whether or not the lesions on the tibia and the on the ribs were linked or instead reflective of two separate episodes of infection.

Trauma

Adult female (17) displayed a possible healed fracture on a small unsided fragment of rib. Not much could be said about the nature of the fracture as it was well-healed/remodelled by the time of death.

Joint disease

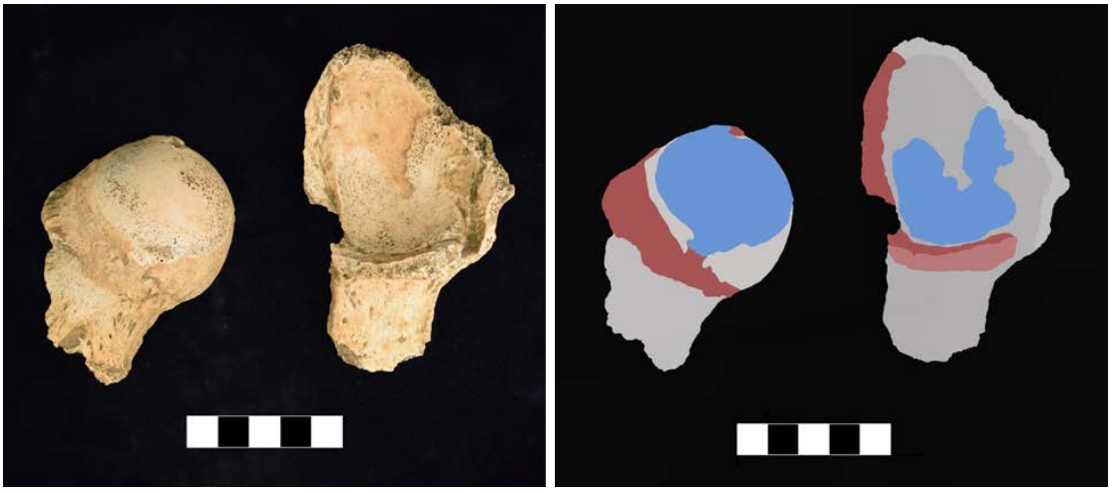
One of the more commonly observed types of pathology in the post cranial skeleton of archaeological, as well as modern, populations is joint disease. The degeneration of joints resulting from biomechanical factors, activity or trauma may lead to pain and disability with potential hardships suffered (Rogers 2000, 163).

Spinal joint disease

The overall preservation of the vertebrae was poor with the vast majority of the vertebral bodies not having survived in great numbers. That being said, pathological changes indicative of spinal joint disease were observed on the articular facets of the thoracic and lumbar vertebra in adult female (17) and adult male (18). Adult female (17) displayed slight lipping on the margins of the articular facets between the 11th and 12th thoracic vertebrae. Adult male (18) displayed similar marginal lipping throughout much of his mid-lower thoracic vertebrae and lumbar vertebrae. Eburnation, indicative of osteoarthritis of the spine, was observed on the articular facets between the 4th and 5th thoracic vertebrae.

Extra-spinal joint disease

Adult male (18) was the only individual to display evidence of extra-spinal osteoarthritis. A diagnosis of osteoarthritis was only deemed appropriate if the individual displayed polishing of the joint surface (eburnation) (Rogers and Waldron 1995). This individual displayed eburnation across the anterior and superior parts of the right femoral head which was mirrored on the corresponding acetabulum (hip), resulting in a much altered joint surface contour. Additionally, significant thick callus of new bone growth was present around the margins of the joint (Fig 27).



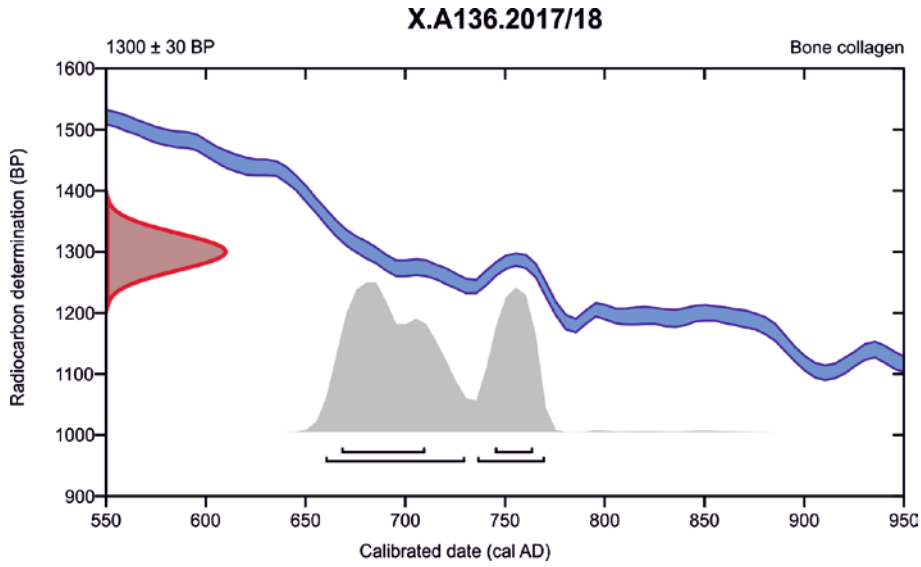
Right hip joint (proximal femur and acetabulum) with interpretative image showing the location of eburnated (polished) bone surface (blue) and marginal new bone growth (red) - Scale 5cm Fig 27

6.4 Radiocarbon dating analysis – human bone

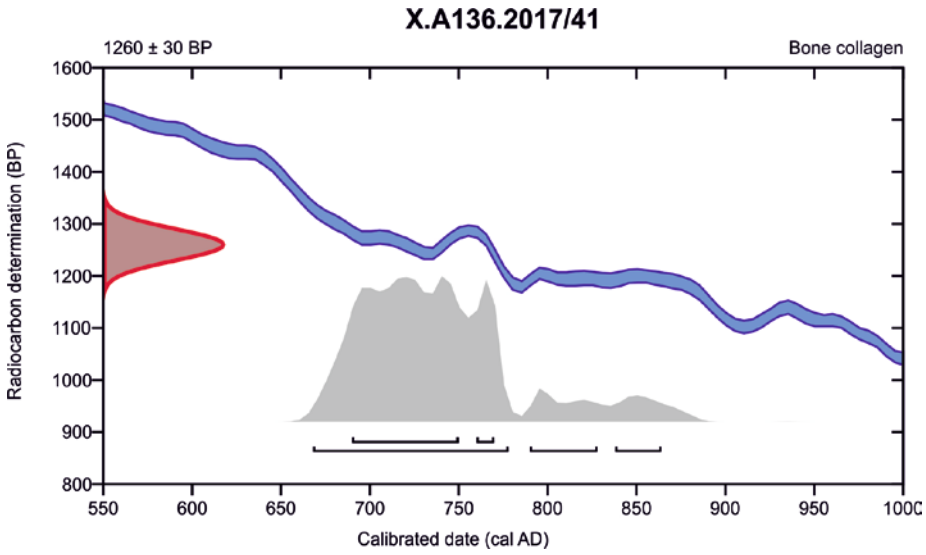
Two samples from the burials were submitted for radiocarbon dating. The results are presented below in Table 11 and in Figs 28 and 29. The radiocarbon dating showed that burials 18 and 41 died during the 7th or 8th centuries AD, and it is therefore highly likely that all four burials belonged to this period.

Table 11: Radiocarbon dating samples – human bone

Sample No. Burial No.	Laboratory sample ID	δC13	Conventional Radiocarbon Age BP	Cal AD (confidence rating)
Burial 41	**Beta-489709**	-19.8 o/oo	**1260 ± 30 BP**	**668 – 778 (95.4%)** *690 – 750 (68.2%)*
Burial 18	**Beta-489710**	-20.1 o/oo	**1300 ± 30 BP**	**668 – 710 (64.4%)** *660 – 730 (31.0%)*



Graph showing radiocarbon dating result for a sample from burial 18 Fig 28



Graph showing radiocarbon dating result for a sample from burial 41 Fig 29

6.5 Discussion

The four burials, comprising three adults and a single sub-adult, were in good condition considering the shallow depth of the graves and the impact of modern ploughing. In all of the individuals, the skulls had been lost to ploughing activity, which greatly inhibited the amount of data recoverable at analysis. Nevertheless, the good condition and relative completeness of the bone has allowed for the collection of some demographic and palaeopathological data.

The group comprised one adult male, two adult probable females and one sub-adult individual aged around 4-5 years at the time of death. Fragmentation of key bones precluded much in the way of metric analysis though non-metric traits were observed. All three of the adult individuals displayed third trochanters on their femurs. Non-metric traits such as these have been linked to identifying familial relationships though post-cranial traits may be highly susceptible to environmental influence and thus not a good indicator for relatedness (White and Folkens 2005). The difficulty of determining heritability in traits such as this is discussed by Tyrell (2000).

Adult female (17) showed evidence of infectious bone changes in the tibiae and on the visceral surfaces of the ribs. In both locations the lesions were well healed by the time of death. The individual may have suffered from single or multiple bouts of infection. Some evidence for spinal joint disease was present though the majority of the vertebrae had not survived and so the extent and severity could not be assessed.

Adult male (18) displayed significant osteoarthritis of the right hip. The severity of the changes observed on the bone reflect the condition at an advanced stage, which would undoubtedly have caused the individual severe discomfort, pain and possibly limited joint function. In addition, evidence for spinal osteoarthritis was present throughout the mid to lower thoracic and lumbar vertebrae. The lesions recorded on the skeletal remains of this man may suggest an individual who led an active life perhaps subject to strenuous labour over an extended period of time.

The remains provide a limited insight into the health and lifestyle of the Anglo-Saxon population in this region. Nevertheless, they add to the corpus of data for the period and region and should be included in any further discussion of burial data from the Saxon period in the Kibworth Harcourt area. Their position in the landscape is of particular interest. It is not uncommon for Anglo-Saxon burials to be located on or

close to sites of earlier activity and this can be observed for the site at Kibworth. Whilst only a small number of burials were identified it is possible that further burials have been lost to ploughing activity. Any further excavation within the area should account for the possibility of burials existing at very shallow depths and/or human remains being scattered throughout the subsoil as a result of plough disturbance.

7 THE FAUNAL AND ENVIRONMENTAL REMAINS

7.1 The animal bone by Rebecca Gordon

A small assemblage of animal bone was recovered via hand-collection and from environmental samples. The faunal remains were dominated by domestic, commensal and intrusive species; however, the assemblage was too small to draw conclusions about diet and economy. The main domestic species (e.g. cattle, sheep/goat and pig) and a small amount of poultry and fish were present, which is typical of domestic refuse. The exploitation of animals appeared to have extended to dogs as evident by evident of a butchered dog atlas recovered from a Roman ditch.

Methodology

The animal bones were recorded using an 'all fragments' method - therefore identification to element and taxon was attempted on all bones providing there were diagnostic features. Bones that could not be identified to species were recorded as large, medium, small mammal or bird and fish. Those that could not be defined to the above categories were recorded as unidentifiable. As sheep and goat are morphologically similar, the term 'sheep/goat' was employed, unless it was possible to distinguish between the two species following Boessneck (1969) and Payne (1985). All identifiable bones were sided either as left or right where possible. The primary quantitative method was NISP "the number of identified specimens per taxon".

Animals were aged using three methods: epiphyseal fusion and the eruption and subsequent wear of mandibular teeth. Five categories of epiphyseal fusion were recorded: fused, fusing, unfused epiphysis, unfused metaphysis, and unfused metaphysis and. Bird bones were recorded as juvenile if the ends of the bones appeared 'spongy' and porous. Mandibular wear stages were recorded using Grant (1982) for cattle, which were converted into age categories using Hambleton (1999).

Gnawing, butchery and burning were recorded on all identifiable bones. Butchery was recorded as either 'cut' or 'chop' and its location was recorded using the codes devised by Lauwerier (1988). Burning was recorded using the three categories described in Thomas (2005): 'singed', 'burnt' or 'calcined'. Bone preservation was recorded for identifiable post-cranial bones using Harland *et al* (2003). Due to the lack of phasing it was not possible to analyse the remains by period, therefore the report considers the assemblage as a single group while making reference to bones from datable features.

Results

The animal bones had moderate preservation conditions ranging between good and fair. Since most of the remains came from ditch fills it was not possible to determine preservation differences between features. Carnivore gnawing was present (n=7), which suggest that discarded remains were not always rapidly buried on site. Butchery marks comprise cut and chop marks on the cattle (n=5), sheep/goat (n=1) and dog (n=1). Burning evidence was limited to a few identifiable (n=2) and unidentifiable (n=17) fragments.

Domesticated species comprise cattle, sheep/goat and pig; out of these species cattle remains were more common (Table 12). Horse, dog and chicken were represented by one or two elements. The distal end of a chicken tarsometatarus was found in sample <17> pit fill (162), which was dated by a deposit of metalwork to the 10th century (see Blackmore, this volume). Chickens were likely to have been introduced to Britain in the early-middle Iron Age and began to become more widespread from the late Iron Age onwards (Albarella 2007, 395-396). A greater diversity of species was found in the bulk samples, which included small rodents,

birds and fish (Table 13). The small rodents (e.g. mole, vole and insectivore) and amphibian either represent commensal or intrusive species on site. Four unidentifiable bird remains were recovered from sample <16> fill (51). The fish bone was unidentifiable.

Cut and chop marks observed on cattle and sheep/goat remains were associated with flesh removal and dismemberment. Cut marks were also found on a dog atlas recovered from fill (89) of ditch [90], which had Roman pottery. Two to three vertical cut marks were located on the dorsal arch of the atlas (e.g. first cervical vertebra) indicating that the animal was slaughtered. This specimen is of particular interest as the consumption of dogs was rare in the Roman period, although they were occasionally exploited for their fur (Maltby 2014). With a single example, it is difficult to determine the reason why this animal was slaughtered; nonetheless, its occurrence represents an unusual example for the Roman period. The range of body parts for the three domesticates is somewhat limited (Table 14). For cattle, a range of cranial and post-cranial elements was present on site, which is expected when the whole animal or carcass is on site. Although not as common as cattle, the range of elements for sheep/goat tentatively suggests the whole animal or carcass was processed on site. The body part data for pig was too small to comment.

Ageing data was largely restricted to cattle post-cranial elements, however, the sample size was too small to analyse in detail (n=23). Fourteen elements were fused and had reached skeletally maturity and the remaining was unfused. One cattle mandible and a loose 3rd molar suggest these animals were 10 years+ at the time of death. Three sheep/goat elements fused (n=1) and unfused (n=2). There was also one juvenile chicken ulna, which could imply they were bred on site.

Discussion and conclusion

The faunal assemblage appears to primarily contain domestic waste, which is also supported by butchery evidence. However, due to the paucity of dating evidence and the limited number of identifiable fragments it is not possible to draw conclusions regarding diet and the local economy, although the fish bone could suggest that local water sources were also exploited for food. The dog atlas with butchery marks is an interesting find as it could point to the exploitation of dogs on site.

The excavation of faunal remains from Kibworth Harcourt, Land West of Warwick Road and Kibworth Harcourt, Fleckney Road had a very similar range of species to Kibworth Harcourt, Land off Warwick Road (see Gordon 2015 and Reid 2016). Each assemblage derives mainly from domestic refuse; however, since the majority of the faunal remains from the sites are below the recommended 100 identifiable fragments, is not possible to compare the data to draw further conclusions (Davis 1987).

Table 12: Number of identifiable and unidentifiable specimens from Kibworth Harcourt, Land off Warwick Road

Taxa	Hand collected	Bulk sample
Cattle	73	7
Sheep/Goat	13	10
Pig	4	1
Horse	2	1
Dog	1	-
Mole	-	1
Vole	-	24
Insectivore	-	1
Small rodent	-	10
Chicken	1	1
Fish	-	1
Amphibian	-	3
Unid. small bird	-	1
Unid. medium bird	-	3
Unid. large bird	-	1
Unid. small mammal	-	4
Unid. medium fragment	9	44
Unid. large fragment	275	147
Unidentifiable	-	2
Total	**378**	**262**

Table 13: Number of identifiable and unidentifiable specimens from bulk samples taken at the Kibworth Harcourt, Land off Warwick Road

Sample	**14**	**16**	**15**	**12**	**11**	**13**	**17**	
Context	**32**	**51**	**91**	**112**	**146**	**148**	**162**	**Total**
Feature	**34**	**52**	**94**	**113**	**147**	**149**	**170**	
Context type	**Ditch**	**Ditch**	**Ditch**	**Ditch**	**Pit**	**Pit**	**Pit**	
Cattle	-	-	-	2	-	-	5	7
S/G	3	4	-	2	-	-	1	10
Pig	-	-	-	-	-	-	1	1
Horse	-	-	-	-	-	-	1	1
Mole	-	-	-	-	-	-	1	1
Vole	-	-	-	-	-	-	24	24
Insectivore	-	-	-	-	-	-	1	1
Small rodent	-	-	-	-	-	-	10	10
Chicken	-	-	-	-	-	-	1	1
Amphibian	-	-	-	-	-	-	3	3
Fish	1	-	-	-	-	-	-	1
Unidentifiable large bird	-	1	-	-	-	-	-	1
Unidentifiable medium bird	1	2	-	-	1	-	-	4
Unidentifiable small bird	-	1	-	-	-	-	-	1
Unidentifiable small mammal	-	2	-	-	-	-	1	3
Unidentifiable medium mammal	8	20	-	5	-	5	6	44

Sample	14	16	15	12	11	13	17	
Context	32	51	91	112	146	148	162	Total
Feature	34	52	94	113	147	149	170	
Context type	Ditch	Ditch	Ditch	Ditch	Pit	Pit	Pit	
Unidentifiable large mammal	14	42	1	37	4	1	48	147
Unidentifiable fragment	-	1	-	-	-	-	1	2
Total	**27**	**73**	**1**	**46**	**5**	**6**	**104**	**262**

Table 14: Body parts representation for cattle, sheep/goat and pig (hand-collected only)

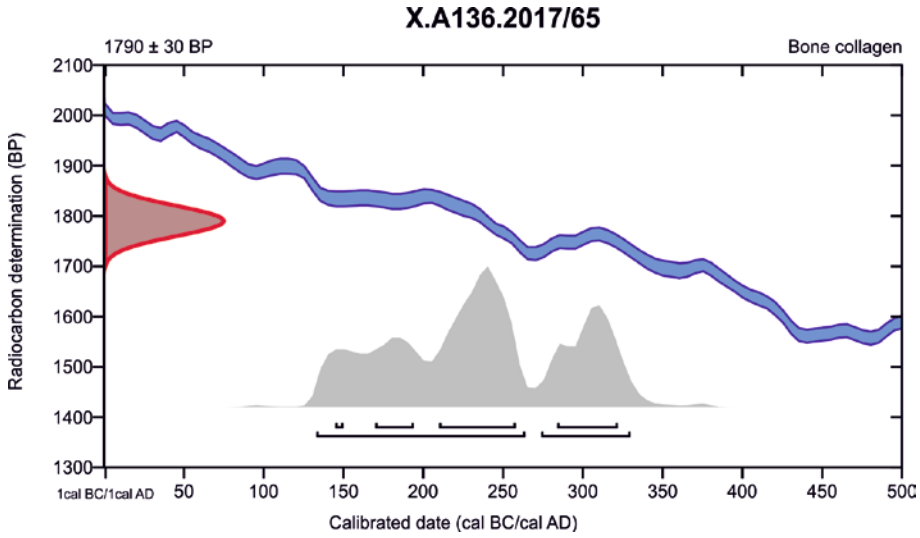
Element	Cattle	Sheep/goat	Pig
Horncore	-	-	-
Skull (occipital)	-	-	-
Zygomatic	1	-	-
Mandibles with teeth	2	-	-
Mandibles without teeth	-	2	2
Hyoid	-	-	-
Atlas	-	-	-
Axis	-	-	-
Cervical vertebra	10	-	-
Thoracic vertebra	9	-	-
Lumbar vertebra	1	-	-
Sacrum	-	-	-
Scapula	6	3	1
Humerus	2	-	-
Radius	3	-	-
Ulna	1	-	-
Pelvis	6	-	1
Femur	3	2	-
Tibia	3	3	-
Astragalus	1	-	-
Calcaneum	1	1	-
Metacarpal	2	-	-
Metatarsal	2	1	-
Metapodial	3	-	-
1st phalanx	1	-	-
2nd phalanx	1	-	-
3rd phalanx	-	-	-
Total	**58**	**12**	**4**

7.2 Radiocarbon dating analysis – animal bone

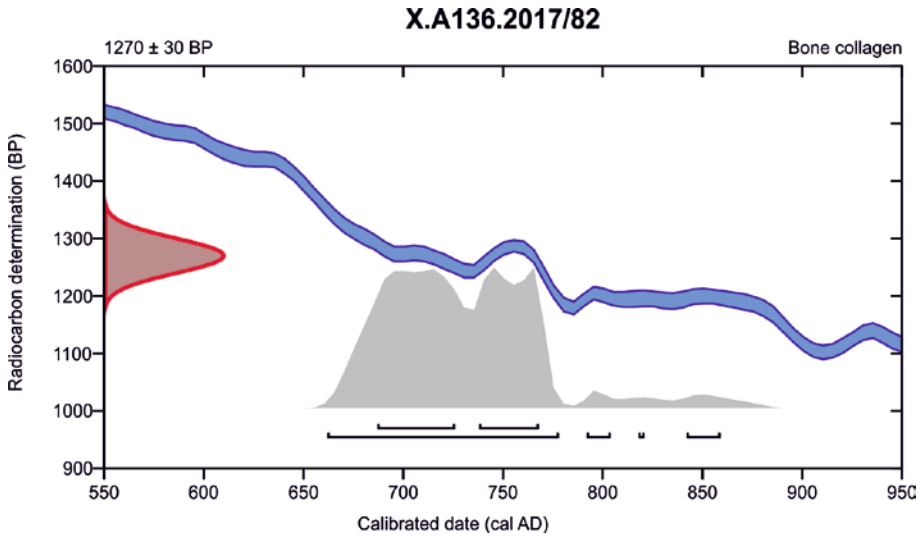
Three of the faunal remains from contexts (65), (82) and (110) were radiocarbon dated to further corroborate the dates and phasing for the site (Table 15 and Figs 30-32). The piece from (65) was dated to the early Roman period 133–264 AD with a 68.6% probability corroborating the pottery date The further two samples from (82) and (110) were dated to the middle Saxon period (662-778CalAD, 1270 +/- 30 BP, Beta – 489708; 92.3%) and (668 – 778CalAD, 1260 +/- 30 BP, Beta – 489706; 85.3%) respectively.

Table 15: Radiocarbon dating samples – animal bone

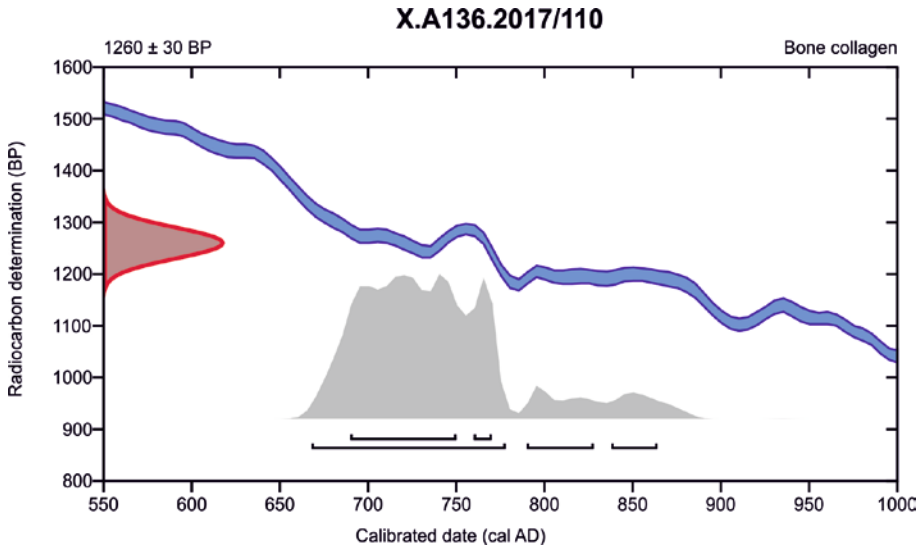
Cut/ fill/ type	Laboratory sample ID	δC13	Conventional Radiocarbon Age BP	Cal AD (confidence rating)
67/ 65/ ditch	Beta-489707	-21.5 o/oo	**1790 ± 30 BP**	**133 - 264 (95.4%)** *210 - 258 (68.2%)*
85/ 82/ ditch	Beta-489708	-22.0 o/oo	**1270 ± 30 BP**	**662 - 778 (95.4%)** *687 – 726 (68.2%)*
111/ 110/ ditch	Beta-489706	-21.8 o/oo	**1260 ± 30 BP**	**668 – 778 (95.4%)** *690 – 750 (68.2%)*



Graph showing radiocarbon dating result for a sample from (65) of [67] Fig 30



Graph showing radiocarbon dating result for a sample from (82) of [85] Fig 31



Graph showing radiocarbon dating result for a sample from (110) of [111] Fig 32

7.2 The plant macrofossils and molluscs by Sander Aerts

Introduction

The aim of this analysis is to establish the level of preservation of environmental remains, as well as the taxonomic diversity and abundance at Warwick Road. Biological remains related to human activities, agriculture and related economical practices are of special interest. Implications on the local economic characteristics are to be compared to previous environmental analyses surrounding the site. Other naturally occurring taxa will be analysed to obtain information on the characteristics and taphonomy of archaeological features.

A total of 17 samples were collected for environmental analysis, comprising approximately 350 litres of soil. These included grave fills (9 samples for 4 burials), a possible cremation (1 sample), fills of 3 pits (3 samples), fills of 3 ditches (3 samples) and the fill of a ditch terminus (1 sample). Dating evidence suggests a Roman (2nd century onwards) date for (32), fill of ditch [34]. Other samples are currently undated.

All samples were processed at MOLA Northampton using a siraf flotation tank fitted with a 1 millimetre nylon mesh and a 500 micron sieve to recover the flots. All residues were dried and sorted for ecofacts and artefacts using a desk magnifier and a low powered binocular microscope with a maximum magnification of 40. Carbonised fruit remains were quantified, charcoal weighed and mollusc counts were estimated per abundance category

Charred plant remains

Fourteen samples produced charred botanical remains, of which 12 included domesticated cereal crops. These results have been summarised in Table 16. Preservation of the cereal remains vary greatly, some being in a good condition but the majority being mildly to heavily distorted in shape due to combustion at high temperatures.

Burials

Most of the grave fills yielded some charred economic plant remains, with only burial [39] being sterile. Both burials [17] and [42] contained a single wheat grains. More wheat grains were identified from burial [18], notably around the arms and legs, with emmer/spelt grains to a lesser extent. These remains are associated with minor charcoal concentrations of less than 0.1 grams. Absence of other environmental remains deems it likely that these cereals are strictly residual.

One seed of goosefoot (*Chenopodium*) was identified from burial [18]. This is possibly intrusive.

Ditch and pit fills

The majority of charred cereals derive from the fills of the ditches and pits, with only (148), fill of pit [149] being completely void of economic plant remains, and (91) fill of ditch [94] containing only a single wheat grain. Slightly larger assemblages were identified from (112), fill of ditch terminus [113], and (146), fill of pit [147], of which some bread wheat type and emmer/spelt grains were observed. More substantial concentrations were found in fill (32) of ditch [34] (71 grains), fill (51) of ditch [52] (52 grains), and fill (162) of pit [170] (59 grains). Again, bread wheat type *Triticum* cf *aestivum* is the dominant category, followed by the characteristically drop-shaped grains of emmer or spelt. Additionally, some barley remains were observed from ditch [52], an oat grain from ditch [34] and a rye grain from [170]. A fragment of hazelnut shell was recovered from ditch terminus [113].

It seems more likely that the larger assemblages from the ditches and pits are primary deposits. Mollusc evidence shows that the pits would have been open for a

longer period of time, and associated eco-/artefacts such as animal bone and pottery suggest that these features were used to dispose of domestic refuse. However, it cannot be ruled out that some of these remains are residual or the result of windblown deposition.

In relation to earlier investigations

In terms of species diversity, this assemblage resembles the taxa from two MOLA trial trenching projects at Kibworth Harcourt (Gordon, in Hewitt 2015; Fryer 2016). The 2015 trial trenching project at land west of Warwick Road resulted in a small assemblage of unidentifiable cereals from ditches, with some charcoal and occasional herbs (Hewitt 2015). A few pits and ditches were analysed for botanical remains during the 2016 trial trenching at Fleckney Road, which resulted in a similar cereal assemblage which comprised (bread) wheat, barley and oat, albeit in far lower quantities (Chinnock 2016). None of the features from either project produced more than 10 specimens per taxon. In both of these reports, it is suggested that the assemblages are the result of accidental scattered and windswept detritus. Economic species rye and hazelnut were previously unidentified in the trial trenching projects, as well as wheat varieties emmer/spelt.

One pit from Fleckney Road resulted in a large waterlogged assemblage of herbs, wetland plants and tree/shrub macrofossils. This evidence implicates an environment of "…rough, damp, poorly managed grassland which may occasionally have been used as seasonal pasture or for the dumping of animal ordure" (Fryer 2016, 26). As the environmental samples from the current project did not include waterlogged material, this cannot be compared or expanded on.

Discussion

The environmental samples have resulted in a wealth of economic plants, namely cereals including multiple varieties of wheat, barley, oat and rye as well as hazelnut. These cereals are the only cultivated plants that were found. The naked wheat species is most likely bread wheat (*Triticum aestivum)*, as this is the only free-threshing wheat identified from Roman Britain (Monckton 1999). In many cases these can be interpreted as a secondary, accidental deposits, namely for the grave fills and the pits/ditches with lower quantities of plant macrofossils. However, a few ditches and pits contain larger numbers of specimens and are associated with larger charcoal concentrations, animal bone and occasionally pottery. This deems it more plausible that the charred grains form part of a domestic refuse assemblage. Apart from the hazelnut fragment, there is a distinct lack of other collected plants.

The vast majority of the remains were preserved through carbonisation. Therefore, the goosefoot seed is potentially intrusive. The lack of natural occurring species severely limits the possibilities for a palaeoenvironmental reconstruction. The presence of a burnt rush seed confirms Fryer's (2016) reconstruction of a predominantly damp soils.

Table 16: Plant macrofossils retrieved from environmental samples

Sample		**2**	**4**	**5**	**6**	**7**	**8**	**9**	**11**	**12**	**13**	**14**	**15**	**16**	**17**
Context		**13**	**15**	**15**	**15**	**15**	**29**	**40**	**146**	**112**	**148**	**32**	**91**	**51**	**162**
Feature		**17**	**18**	**18**	**18**	**18**	**30**	**42**	**147**	**113**	**149**	**34**	**94**	**52**	**170**
Type		Burial torso	Burial torso	Burial arms	Burial legs	Burial legs	Burnt fill	Grave fill	Pit fill	Fill of ditch terminus	Pit fill	STW2 fill	NTW2 fill	Ditch fill	Pit fill
Volume (L.)		<2.5	<5	<7.5	10	10	10	20	40	40	40	40	40	40	40
Triticum diccocum/spelta	Emmer/ Spelt	-	-	3	1	1	-	-	2	1	-	13	-	4	1
Triticum cf *aestivum*	Bread Wheat Type	1	-	2	4	2	1	1	1	7	-	15	-	28	15
cf *Triticum* sp.	Wheat	-	-	2	-	-	-	-	-	-	-	-	-	-	-
Secale sereale	Rye	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Hordeum vulgare	Barley	-	-	-	-	-	-	-	-	1	-	-	-	4	-
Avena sp.	Oat	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Triticeae indet.	Cereal	-	-	6	-	1	-	-	4	9	-	41	1	16	42
Corylus avellana	Hazelnut	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Juncus sp.	Rush	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Charcoal (in grams)	-	-	<0.1	<0.1	<0.1	<0.1	1.2	<0.1	0.1	3.4	0.1	0.2	<0.1	0.9	0.5
Indet. black porous material	-	-	-	-	-	-	-	-	-	1	-	-	-	2	-
Chenopodium sp.	Goosefoot	-	-	1	-	-	-	-	-	-	-	-	-	-	-

Molluscs

A total of five samples produced remains of molluscs, all of which are snail species. All of these are land snails, with the exception of one freshwater species. The results have been summarised in Table 17. Mollusc remains have been identified to reconstruct the local palaeoenvironment and the characteristics of the archaeological features.

Table 17: Mollusc remains retrieved from environmental samples. A = 1-3 individuals, B = 4-19 Individuals, C = 20-50 individuals

Sample	**11**	**13**	**15**	**16**	**17**
Context	**146**	**148**	**91**	**51**	**162**
Feature	**147**	**149**	**94**	**52**	**170**
Type	**Pit fill**	**Pit fill**	**NTW2 fill**	**Ditch fill**	**Pit fill**
Volume (L.)	**40**	**40**	**40**	**40**	**40**
Ellobidae	-	-	-	-	-
Carychium minimum/tridentatum	-	-	B	B	A
Cochlicopidae	-	-	-	-	-
Cochlicopa lubrica	-	-	B	-	A
Vertiginidae	-	-	-	-	-
Vertigo sp	-	-	B	-	-
Valloniidae	-	-	-	-	-
Vallonia cf *pulchella*	-	A	A	-	-
Vallonia sp	-	-	A	B	A
Endodotidae	-	-	-	-	-
Helicodiscus singleyanus	-	A	-	-	-
Discus rotundatus	-	A	-	-	-
Zonitidae	-	-	-	-	-
cf *Vitrea* sp.	-	-	B	-	-
Aegopinella sp.	-	-	-	A	-
Zonitidae indet.	A	-	C	C	B
Helicidae	-	-	-	-	-
Arianta arbustorum	-	-	-	A	-
Cepaea nemoralis/hortensis	-	-	-	A	-
Cepaea sp	-	-	A	-	-
Helicidae indet.	-	-	C	C	B
Lymnaeidae	-	-	-	-	-
Omphiscola glabra	-	-	B	C	B

All the snail shells derived from fills of pits and ditches. These would have been features that were exposed for a longer period of time, in contrast to the burials. This supports the idea that the occurrence of snails is in fact contemporary with the archaeology. No modern faunal remains or subterranean mollusc species were identified with the potential exception of *Heliodiscus singleyanus* (Kerney and Cameron 1979), making intrusion less likely.

Results

The ecologies of the identified land snails appear to be largely homogenous. *Carychium minimum/tridentatum*, *Cochlicopa lubrica*, *Vallonia*, British species of *Aeginopella* and Arianta appear in various but exclusively damp habitats, which include marshes, damp grasslands, moist meadows, herbage, hedgerows and woodlands. *Discus rotundatus* has a similar ecology, and is often found in association with humans, in rubbish in gardens (Kerney and Cameron 1979).

Cepaea nemoralis/hortensis occur in a variety of habitats. *C. hortensis* occurs in colder and wetter places than C. *nemoralis*, but distinguishing between the two is impossible based on the macrofossil from ditch [52]. *Heliodiscus singleyanus* may be subterranean, but little is known about its ecology (Kerney and Cameron 1979).

One species of freshwater snail, *Omphiscola glabra*, was identified. This species is now rare in Britain, but used to occur frequently in small weedy and swampy habitats in areas that are inclined to dry out (O'Connor 2017), and is known to occur in swampy meadows and ditches (Rondelaud *et al* 2009).

Discussion

All evidence of mollusc ecologies points towards a damp, vegetated area with the presence of grassland and some occasional stagnant water in or around the ditches [94] and [52] and pit [170]. This matches the palaeoenvironmental implications of the waterlogged plant remains from Fleckney Road as described by Fryer (2016).

Conclusion

The remains from the environmental samples comprise mainly of charred botanical macrofossils and mollusc shells, as no waterlogged remains were present.

A variety of domesticated cereals were identified, of which some are to be considered residual, mainly for the fills of graves. Larger assemblages from ditches and pits are more likely to be primary deposits. These are dominated by wheat, presumably bread wheat, and emmer/spelt grains. Some singular grains of rye and oat were also observed. The only collected economic plant is the common hazel, represented through a hazelnut shell fragment. There is a lack of natural occurring plants, apart from a charred rush seed and a goosefoot seed, which may be intrusive.

Molluscs were retrieved from a number of ditches and pits; these exclusively indicate damp soils with moist grasslands nearby, with vegetation in the form of herbage, weeds and possibly trees. There has been stagnant water in or around the ditches and pits at times. These palaeoenvironmental implications align with those from the waterlogged plant macrofossils from Fleckney Road. These datasets should therefore be used to complement each other.

8 DISCUSSION

8.1 Roman/ Iron Age occupation

The excavation identified a Roman/Iron Age rural landscape of enclosure systems divided north from south by two large sinuous ditches that acted as both a boundary and the edged a trackway. An additional long-standing boundary ditch extended from the trackway to the north; this was later used as one arm of an enclosure. This kind of multifunctional ditch is far from uncommon in the Roman period and is frequently seen throughout the central belt of England in the middle Iron Age to AD 2nd century as described by Smith *et al (*2016, 141). Such sites generally seem to have gone into decline after the AD 2nd century, a pattern also observed here.

Many of the ditches used for boundaries, enclosures and to define the trackway showed reuse and re-management from the Iron Age into the Roman period, serving as evidence of an extended occupation. The pattern of field system enclosures extending from long double-ditched boundaries also possibly functioning as trackways is also a recognised site layout for this area and numerous similar agricultural sites are known from the county (Smith *et al* 2016, 181-183, fig 5.40). The site from Tubney Wood Quarry, for instance, demonstrates a very similar field system arranged around a double-ditched trackway (Smith *et al* 2016, 181). The trackway ditches were also be seen to curve and widen before petering out, very similar to the eastern end of the ditches observed at Kibworth Harcourt on the geophysical survey (Walford 2015), and a short section of ditch extended perpendicular into the centre of the defined ditched area, as seen with feature [67]. In Cambridgeshire a Roman rural settlement featured a similar field system and trackway (Luke 2014); many of these trackways were used to link settlements to the field systems and, in extension, to nearby roads.

From the animal bone it can be ascertained that the general use of the landscape was farming with the vast majority of the remains being cattle and other domesticated species, with one fish bone and the unusual addition of a butchered dog bone. The animal bone assemblage suggests that cattle and possibly also sheep/goat were being processed on site or nearby as entire carcasses. Chickens may also have been bred. The presence of charred grains on site as identified by palaeoenvironmental analysis, which includes mostly cereals and other agricultural remains, indicates that arable farming was also taking place in the area from the Iron Age into the early medieval periods. However, the small quantities of both animal bone and plant remains mean it is difficult to propose that any primary processing took place on this site, and remains were likely deposited as domestic waste.

This landscape then would appear to have the character of agricultural hinterland, with the low artefactual remains suggesting it was situated some distance from primary settlement. It is not clear where the settlement for this farmland was situated. Land to the west of Warwick Road, around 500m due north of the present site, was shown to contain a number of rectangular enclosures, dating from the late Iron Age to 4th century AD (Hewitt 2015). These ditches followed the same alignment as the enclosures uncovered on the present site, and may be part of an extended landscape, although it should be noted that a dense proximity of settlement sites in this period is a recognised phenomenon; Atkins *et al* (2000, 70) noted that in nearby landscapes, such as the Wollaston Valley in Northamptonshire, Iron Age and Roman farmsteads were situated as densely as 0.3-0.4km apart, while still remaining independent settlements. Additional activity of similar date is known further to the north; a Roman site was excavated in the

1960s about 900m to the north-east of the site, with an earlier Iron Age site 300m north of that (Crothers 2015).

With the surrounding sites included then it can be ascertained that the majority of the landscape to the south of Kibworth Harcourt was used as farm land during this period.

8.2 Saxon and medieval activity

Burials

Four inhumation burials were identified during the excavations. These were supine and extended, aligned east-west, with their heads to the west and none contained grave goods. The burials were in a rough line/row over a 29.3m distance. The burials had been dug into the interface of the subsoil and natural and survived fairly truncated. Immediately to the south of the burials was the southern ditch of the long-standing Iron Age and Roman trackway. Two of the burials were radiocarbon dated to the middle Saxon period (Beta–489709, 668-778 CalAD and Beta–489710, 660-730 CalAD), both at 95.4% confidence.

Osteological evidence suggests that the four individuals buried at Kibworth Harcourt may have been related as they shared certain osteological markers; this is far from certain as post-cranial traits may be affected by environmental influence rather than purely representative of inherited traits. It is possible to propose a link between the isolation of these burials and a group from a single related household but this is highly speculative.

Consideration should be given to the fact that the burials on the present site could be part of an otherwise truncated open-ground Christian inhumation cemetery, potentially extended to the south or west. Late 7th to 9th-century cemeteries of any size have rarely been excavated in the East Midlands, with an observable 'missing' phase between pagan cemeteries and the establishment of most parish churches in the tenth and eleventh century (Vince 2006, 166). Kibworth Harcourt is located within the area of the Mercian kingdom which controlled this area sometime before the middle of the 7th century, reportedly converting to Christianity under King Penda between AD653-655 (Bede 1968, 176-7).

Other open-ground cemeteries of this period were small and contained few burials (Blair 2005, 238). If these burials were part of a cemetery, the small size and lack of earlier burials suggest it must have been a very short-lived graveyard. The date of the burials, the east-west orientation, and the lack of grave goods could be interpreted as being indications of early Christian burial practice, but as Palmer states for the similar site at Ratley this is far from a certain indicator of belief (2011).

The small number of burials (four) at the present site across a 29m distance does not necessarily preclude their having been part of a larger open-ground cemetery. At Southam, Warwickshire, a cemetery comprised 13 burials, eight adults and five sub-adults, over a *c*30m by 13m area (Egan and Atkins in press). At Site H of the A5M1 project (Bedfordshire) six adults and three sub-adults were found over a *c*40m by 25m (Brown forthcoming). At Great Houghton, Northamptonshire there were 17 adults to six sub-adults within a c15m by 10m area (Chapman 2000/1). The possible 'row-like' layout of the Kibworth cemetery is also similar to open-ground cemeteries at Southam (Egan and Atkins in press), Great Houghton and Site H A5M1. Four mid Saxon burials, arranged in a close group rather than a row, were identified on the hilltop at Ratley, and were suggested to form part of a 'formal cemetery' positioned in a knoll, possibly a

Bronze Age barrow. These burials were highly truncated by later building work (Palmer 2011).

The rarity of recognised open-ground cemeteries of the middle Saxon period in the Midlands means it is difficult determine whether the burials from the present site might be included within this type of practice. There are only two known open-ground cemeteries in Warwickshire at Ratley (Palmer 2011) and Southam; a single example from Northamptonshire, and a cemetery at the Empingham II site, Rutland (Cooper 2000). However, the burials at the present site do not fit within accepted definitions of 'cemetery', i.e. "specifically demarcated sites of burial, with an ordered internal layout" (Rugg 2000), and there is no evidence for additional graves elsewhere on the site or within evaluations undertaken to the south (Chinnock 2016). While the burials are very shallow, the lack of disturbed human remains or charnel elsewhere on the site makes it more likely that these represent an isolated group of burials whose 'row-like' appearance may have more to do with alignment along the extant Roman trackway than being an indicator of formalised cemetery layout.

The reuse of prehistoric sites and earthworks as a focus for Saxon burial is a known phenomenon; in 1998 it was argued that a quarter of all known Saxon burial sites at that time were associated with previous monuments (Williams 1998, 92). Previously observed sites have seen isolated or small groups of Saxon burials being inserted into or orientated on Bronze Age barrows, and less commonly also utilising Neolithic, Iron Age or Roman structures, sites and earthworks (Lucy 2000, 124). The reuse of earlier monuments is also noted to have increased during the 7th century, the period into which the Warwick Road burials fall (*ibid)*.

An association between Saxon burial and earlier Roman sites has also been noted within the region. At Empingham, Rutland, excavations in advance of the flooding of Rutland Water identified five 7th-century possible Christian inhumations dug into the remains of an aisled villa at Empingham North (Cooper 2000, 17-22), as well as the burial ground at Empingham II of possible early Saxon date which was positioned alongside a cobbled Roman trackway (Cooper 2000, 22-45; Timby 1996), At Cestersover, a trackway was also used to define burial, when an early medieval cemetery was aligned in the centre of and along both sides of Roman Watling Street as it traversed the border of Warwickshire and Leicestershire (Thurnham 1867, 481, in Lucy 2000). Numerous examples of Saxon burials respecting Roman roads have been recorded adjacent to Leicestershire at Peterborough, Cambridgeshire and Northamptonshire (Spoerry and Atkins 2015, 129). The date and types of these Saxon burials varied. For example, a 6th-century pagan mixed cremation and inhumation cemetery respected a Roman road 3km west of Botolph Bridge, Peterborough (*ibid*). At Castor, Peterborough, a late 6th-century cemetery was aligned on the Roman Road at King Street despite the fact the surface of the Roman road was no longer extant (Taylor and Angus 1999, 95-97). At Wollaston, Northamptonshire a single isolated mid to late 7th-century burial was located some distance from any other Saxon occupation adjacent to a Roman road; the individual, in their mid 20s at the time of death, was buried with a sword, boar-crested helmet, hanging bowl and other grave goods (Meadows 2004).

That the Iron Age/Roman enclosures and trackway seem to have been used as a focus of later burial indicates that some of these features remained extant or at least visible by this date, and were adopted into a Saxon ritual landscape. The presence of the medieval headland along the trackway further supports the idea that the trackway left a visual or topographic marker to the landscape well into the medieval period. There is little evidence for a phase of significant occupation at the site during the Saxon period. With

the exception of one ditch system, the other Saxon remains seem to have been isolated occurrences of ritual behaviour. The location of the burial ground was *c*1km to the south-west of the centre of Kibworth Harcourt and *c*1km to the north-west of the centre of Kibworth Beauchamp. In the Domesday Book both townships were of roughly equal size and were each known to have 28 registered inhabitants (see Section 2.2 above). It is interesting to note that the burials are a similar distance from the nearest centres of population as other Saxon burial grounds in the Midlands. At Southam and Ratley, Warwickshire, for example, burials lay 0.90km to the south-west and north respectively of the centre of present day settlements (Egan and Atkins in press; Palmer 2011). At Great Houghton, Northamptonshire, the burial ground was *c*0.80km to the south of the medieval settlement within an open area (Chapman 2000/1).

Pit containing Saxon metalwork assemblage

The reuse of earlier landscape features as sites for otherwise isolated burial has been suggested to form part of a process of laying claim to the landscape during the Saxon period. The pit [170] cut into the corner of the earlier Iron Age enclosure E2 is perhaps another example of incorporating earlier monuments into later, possibly ritualised, activity. The pit contained a deposit of eleven late 9th or early 10th-century metal artefacts. This feature perhaps adds to the small body of evidence suggesting acts of planned concealment of assemblages of tools and weapons in pits. The seax in particular could be a symbolic protective offering (Naylor 2015). However, it is not clear that this deposit certainly had a ritual function as a 'hoard'; the pit fill also contained a quantity of material more in common with a standard domestic waste deposits, including charred grains and bone from cattle, sheep/goat, horse, pig and a chicken, some of which was burnt, and mollusc remains suggested that the pit contained stagnant water for some time before silting up. Only contemporary pottery is absent. It is possible some of this domestic material was also disturbed from the Iron Age ditch fill below during the digging of the pit but this is not clear. What can be determined, however, is that the pit containing the metal artefacts was dug with some apparent precision into the corner of an earlier Iron Age enclosure ditch in an area containing no other contemporary dated activity. Into the pit was deposited an assemblage of metal artefacts, some of which were rare and even unique. This feature probably comprises an act of planned concealment of tools and other items known from other broadly contemporary sites (Thomas and Ottaway 2010, 104; Hamerow 2006; Morris 1983, 36–7), although whether this was as some sort of votive offering or whether it was intended to recover the material at a later date is not known.

8.3 Conclusion

Although no settlement, in terms of structures or habitations, was present on site, the archaeological and environmental remains suggest an extensive use of the land for agricultural processes over an extended period of time. The earthworks that survived contributed to the placement of later constructions and uses, such as the re-use of earlier boundary ditches to form enclosures in the middle Iron Age, the orientation of Saxon burials along the line of Iron Age and Roman trackway ditches, the insertion of a possible 10th-century hoard into an Iron Age enclosure ditch and the use of the extant Roman trackway ditches to position the medieval headland and field systems.

8.4 Research agendas and potential for further contribution

The excavation at Kibworth Harcourt, Warwick Road was undertaken in accordance with the East Midlands Research framework, which was used to formulate research objectives and excavation aims (Knight, Vyner and Allen 2012). The following criteria were able to be partially addressed by the results of the excavation.

Contexts which had both pottery and animal bones present have been radiocarbon dated to further cement chronological timeframes, as part of the framework 5C. The radiocarbon dates provided an insight into the scope of the site indicating Saxon utilisation of surviving earthworks to inform the placement of further enclosures and burials, which would not have been suspected due to the lack of pottery of this period.

As reflected in the East Midlands Research framework 5E, integrating specialist studies of material relating to subsistence, diet and health, and palaeoenvironmental analysis has revealed various wheat and grains within the enclosure ditches either as primary or windswept deposits, reflecting the diet of the Iron Age and Roman population utilising the landscape. The dietary practices are further expanded through analysis of the faunal remains, indicating butchery of a small number of cattle, sheep/goat and dog on or near the site, and also the utilisation of other food sources such as bird, fish and possibly gathered foodstuffs like hazelnuts. The location of the animal remains within their contexts and features suggest that they were waste produce and deliberately deposited as waste management. The presence of a butchered dog is particularly interesting as dog meat was not commonly consumed during this period and it adds an example to a rare corpus of evidence; it may have been used for fur rather than meat (Maltby 2014).

The excavation and sampling strategies allowed for an understanding of site expansion and landscape management as identified in the research framework 5H. For Kibworth Harcourt the transition from Iron Age to Roman did not impact on the landscape or the previous Iron Age archaeology, rather the transition seemed to occur smoothly with no abrupt increase in expansion or produce, and comprised the recutting and reuse of silted up features belonging to the earlier period without a dramatically different change in use or alteration of the landscape.

Relevant research agendas relating to the Anglo-Saxon remains includes assessing the landscape settings of Anglo-Saxon burial sites (Knight *et al* 2012, 85), namely 6A: Elucidate the chronology and demography of the Roman to Anglo-Saxon transition period (ibid, 84) and 6B: Assess the landscape settings of Anglo-Saxon burial sites (Knight *et al* 2012, 85) as well as the conversion to Christianity and re-use of earlier enclosures as Christian sites (Medlycott 2011, 59). The position of the burials which correspond with the southern arm of the Roman trackway might contribute to research agenda 6.3.1 which asks to what extent were Roman roads used and maintained from the fifth century, and may some have acted as social or political boundaries? It is unclear if the trackway was still in use as a routeway at this time, but it was certainly a visible landscape feature as it later came into use to align the ploughing headland. There is a known association with Pagan Saxon burials and land unit boundaries, particularly in the 7th century (Goodier 2016), and perhaps these burials suggest the Roman trackway became used as a social boundary of some kind.

Although not directly associated with a published research agenda, the possible hoard from pit [170] has utility for further research which would add to the presently small corpus of data for deposits of this kind. The seax is a particularly important and rare find and it is hoped that in future stages of work the pattern-welding can be studied in more detail by a specialist in the subject, with technological analysis in order to accurately

understand the construction of the blade and the inlay. Questions to address include: is the decoration present on both sides? Is the inlay non-ferrous? How many layers does it comprise and how was it assembled? Is the blade made of one, two or three sections? Is the cutting edge strengthened with steel? Further conservation and detailed x-rays will help to identify details about the metal artefacts and may aid in identification of the problematic items.

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