Land North of Whittlesey

Post-Excavation Assessment and Updated Project Design

Tom Bourne

CAMBRIDGE ARCHAEOLOGICAL UNIT

UNIVERSITY OF CAMBRIDGE

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[February, 2023]

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Location:	TL 2753 9790
Site Code:	WSF21
Event Number:	ECB6143
Report no.	1528

PROJECT DATA

Site name	Land North of Whittlesey, Cambridgeshire
OS Grid Ref.	TL 2753 9790
Client	Perssimon
Planning ref.	F/YR19/0158/RM
Brief issued by	Cambridgeshire Historic Environment team.
Accession no.	ECB6143
Physical archive	Cambrideshire County Council approved archaeological storage facility
Digital archive	University of Cambridge Digital Repository
OASIS no.	Cambridg3-510058
CAU Site code	WSF21
CAU Report no.	1528
Report version	1
Date issued	February 2023
Report author	Tom Bourne
Reviewed by	Katie Anderson
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SUMMARY

An archaeological excavation was carried out by the Cambridge Archaeological unit at Land North of Whittlesey (formerly the 'Showfields'), Delph Road, Whittlesey, Cambridgeshire, ahead of residential development. The work covered an area of 1.34ha and was carried out between April and June 2021.

The excavations revealed evidence for occupation dating from the Later Iron Age through to the Mid-Late Roman period, as well as evidence for Later Medieval and Post-Medieval land use. The Later Iron Age activity comprised at least six roundhouses as well as a pair of substantial enclosures, alongside a number of pits and postholes. There was a hiatus of occupation until the Mid-2nd century when a small farmstead was established comprising a single large enclosure, within which were several smaller compounds, watering holes, pits, postholes and an inhumation. The farmstead was in use until the late 3rd century when the site was abandoned. Of note were several substantial deposits of pottery within the Roman enclosure ditches and six undated animal cremations located across the southern portion of the excavation area. Across the site Medieval furrows were excavated highlighting the agricultural importance the area took during this period.

ACKNOWLEDGEMENTS

The project was commissioned by Persimmon Homes and we are grateful for their help during fieldwork. The written brief was prepared by Kasia Gdaneic, of the Cambridgeshire Historic Environment Team (CHET), who also monitored the work on site. The CAU is grateful for their advice and interest throughout the project.

The fieldwork was managed for the CAU by Emma Beadsmoore and the site work was overseen by Tom Bourne and Megan Cameron-Heffer. The field team comprised Hannah Barret, Allan Kirk, Megan-Cameron Heffer, Lawrence Rees, Natatsha Lawson, Len Middleton, Clara Schonfeld and Thomas Matthews Bromer. The site survey was carried out by Jon Moller and the report graphics were prepared by Bryan Crossan. Site photography was undertaken by the site staff and Dave Webb.

Finds and samples were processed by Christopher Boulton and Emma Rees overseen by Emily Banfield. Specialist input was coordinated by Vida Rajkovača, whilst individual specialists are noted in the report.

1. INTRODUCTION

1.1 Site description

1.1.1 Cambridge Archaeological Unit (CAU) were commissioned by Persimmon Homes Ltd to undertake an open area excavation on Land North of Whittlesey, Cambridgeshire, prior to the proposed development of 220 residential units with associated garages, drainage, ponds, and roads (Planning Reference: F/YR19/0158/RM).

1.1.2 The development was located east of Delph Road (TL 2753 9790, Figure 1), on the northern edge of the town of Whittlesey and was bounded to the north and east by open fields and to the south and west by housing estates. The excavation was undertaken on unused land, previously having served as the Whittlesey 'Showfields'.

1.1.3 A planning condition was placed on the development by CHET requiring archaeological excavation of the site. A Written Brief outlining the archaeological requirements was issued by Kasia Gdaniec (2019).

1.1.4 The archaeological excavations were undertaken in accordance with an approved Written Scheme of Investigation (WSI), which was prepared by the Cambridge Archaeological Unit (Beadsmoore 2020).

1.2 Geology, topography and land use

1.2.1 The development area was set within unused scrubland having previously been the Whittlesey 'Showfields' and prior to that agricultural fields. The site is located at 4-5mAOD on the northern edge of a gravel spur known as Whittlesey 'island', one of several 'islands' located within the Cambridgeshire Fens. The underlying geology comprises Oxford clay mudstone formation overlain by March gravels ((British Geological Survey website, http://mapapps.bgs.ac.uk/geologyofbritain/home.html; accessed September 2022)).

2. ARCHAEOLOGICAL BACKGROUND

2.1.1 Whittlesey and its environs is a rich archaeological landscape, which in the last 20 years has been subjected to numerous archaeological excavations. The following is a brief summary of the known archaeology within the landscape dating from the prehistoric through to the Post-Medieval period.

Prehistoric

2.1.2 The Neolithic is not particularly well represented within the immediate environs of the development area. Neolithic flint was recovered from topsoil sampling during evaluations *c.*800m to the southwest (Peachy 2009). Further afield along the western edge of Whittlesey, *c.*4km to the west, excavations by the CAU at Kings Dyke, Bradley Fen and Must Farm have revealed Neolithic activity in the form of Henge Monuments and settlement along the former fen edge (Knight and Brudenell 2020).

2.1.3 The Bronze Age is better represented within the landscape with numerous sites identified in the last 20 years. CAU excavations and evaluations *c.*1km to the southeast have identified an Early Bronze Age ring ditch, containing a central cremation, along with Beaker period and Early Bronze age pits (Patten 2012). Excavations *c.*800m to the south of the development area have also revealed a Middle Bronze Age cremation cemetery comprising at least 30 urned burials (Cope-Faulkner pers comms). Significant Bronze Age remains have also been excavated at the CAU's Bradley Fen and Kings Dyke sites comprising barrows, fieldsystems and associated settlement (Knight and Brudenell 2020). Within the same landscape, at Must Farm, a timber platform and log boats dating to the later Bronze Age have also recently been investigated (Knight *et al* 2019).

2.1.4 Iron Age activity was recorded, c.1km to the southeast during CAU excavations, which comprised Middle-Late Iron Age enclosures and pits (Bourne 2022). Middle to Late Iron Age enclosures were also recorded at Stonald Field (Murphy 2008).

Roman

2.1.5 There are significant Roman remains across Whittlesey and within the surrounding landscape. The Roman routeway, the Fen Causeway, which traversed across the fens from Denver to Peterborough, linking the Fen Islands, is thought to run *c.*200m south of the development area (CB15033). Further Roman activity was recorded during the Fenland survey, with pottery scatters and cropmarks identified *c.*300m to the east (Hall 1987). Excavations at the former Burdetts Nursery, *c.*800m, to the southeast, identified a large Roman settlement, comprising ditched enclosures, watering holes and a stone lined well, dating from the 2nd-4th century (Bourne 2022). On the western edge of Whittlesey 1st-4th century settlement and part of the Fen Causeway were excavated at Stonald Field (Knight and Bruedenell 2020).

Medieval and Post-Medieval

2.1.6 Early Saxon remains are scarce within Whittlesey however, a small Inhumation cemetery comprising seven individuals with pottery vessels was excavated in the 19th century, *c.*700m to the southwest (CHER 10594). The town was of sufficient size in the later Saxon period to warrant a reference within the doomsday book and the church of St Mary, 800m to the southeast, is of Early Medieval origin dating to the 13th century (CHER 02928). In the surrounding fields evidence for Medieval agricultural regimes is evident in the form of ridge and furrow.

2.1.7 The more recent history of Whittlesey is dominated by the extensive quarrying associated with the large brick making industry established in the area. Numerous gravel pits are recorded on OS maps from 1890 along the southern edge of Whittlesey Island.

3. ORIGINAL RESEARCH THEMES, OBJECTIVES AND QUESTIONS

3.1.1 The original aim of the excavation was to mitigate the impact upon archaeological remains through preservation by record by identifying, scrutinising, and recording any archaeological remains. This was in order to enhance our understanding of the archaeological activity on the edge of Whittlesey Island during the Roman period. The investigation was determined to investigate a single site identified during the evaluation phase and determine its relationship with the broader archaeological landscape.

The research aims designed for this excavation were set out within the original written brief set out by CHET (Gdaniec 2020) and in the CAU's WSI and were as follows:

- The focus of the research will be on determining the character, extent, date and duration of the Roman settlement identified on the development area, particularly in relation to the nearby, known Roman activity.

- In light of the site's relationship to the Fen Causeway as well as the rich dumps of material recovered from some of the ditches, emphasis will be placed on not only understanding the settlements economy, but also on identifying evidence for trade, at local, regional and international level.

- In light of nearby salterns, emphasis will be placed on identifying any briquetage within the ceramic assemblages.

- Any evidence for structural remains will be examined in relation to local and regional examples.

- Furthermore, an attempt will also be made to highlight any relevant research issues within a regional and national research framework. The broad research guidelines for the region are outlined and discussed in Glazebrook 1997 and Brown & Glazebrook 2000, revised and updated in Medleycott 2011.

4. EXCAVATION METHODOLOGY

4.1.1 The archaeological work was carried out in accordance with the Written Scheme of investigation (Beadsmoore 2020) approved by CHET prior to commencement of works. The excavation was undertaken in accordance with the Chartered Institute for Archaeologists' Standard and Guidance for Archaeological Excavation (CIFA 2014, updated 2020) and Code of Conduct (2014).

4.1.2 All machine excavation was undertaken under direct archaeological supervision using a tracked 360 excavator fitted with a 2m trenching bucket. Topsoil and subsoil deposits were removed in spits down to the level of the undisturbed natural geological deposits where potential archaeological features could be observed and recorded.

4.1.3 Archaeological features and deposits were surveyed using Leica GPS and recorded using the CAU recording system and pro-forma sheets. A minimum of 50% of each discrete feature and 10% of linear features were hand-excavated in standard metre-long slots, with sections focussing on terminals and intersections with other features in order to understand stratigraphic relationships.

4.1.4 Photographs were taken of all features using a high-resolution digital camera and sections were hand-drawn at an appropriate scale (either 1:10 or 1:20).

4.1.5 Metal-detecting was carried out during the topsoil and subsoil stripping and throughout the excavation process. Archaeological features and spoil heaps were scanned by metal-detector periodically. All findspots were plotted using Leica GPS.

4.1.6 Substantial pottery deposits identified during the excavation were 100% excavated with bulks left in at appropriate stages for recording purposes. These deposits were photographed and the most substantial deposit within F.176 was 3D modelled.

4.1.7 Midden deposits, waterlogged fills, grain-rich fills, ceramic and faunal remains-rich fills, surfaces and abandonment deposits were bulk sampled for flotation, whilst pollen monoliths and phosphate samples were taken from selected deposits for paleoenvironmental and geoarchaeological analysis.

4.1.8 The artefacts and accompanying paper archive have been compiled into a stable indexed archive. This is currently stored at the CAU under the site code WSF21.

5. PROJECT ARCHIVE

5.1 Excavation Records

5.1.1 All site records have been collated, and key data entered into an excel spreadsheet. Hand-drawn plans and sections have been scanned and stored in the digital archive. The number of records is shown in Table 1.

Table 1: Quantification of excavation archive

Record Type	Number
Contexts	427
Features	246
Context register sheets	14
Context Sheets	427
Feature register sheets	8
Skeleton Sheets	2
Section register sheets	1
Large drawing sheets (A2)	12
Small finds register sheets	1
Environmental register sheets	2

5.2 Finds and Environmental

5.2.1 Finds have been washed and dried, counted and weighed, bagged and labelled and placed in archive boxes. A spreadsheet of all finds and quantities has been created. Total quantities of each category of finds are summarised in Table 2.

Table 2: Quantification of finds archive

Finds	Number	Weight (g)
Flint	5	19
Worked stone	18	25500
Burnt stone	102	26300
Pottery	3726	52162
Ceramic building material	39	3500
Fired clay	336	4165
Metalwork	45	532
Small finds	7	104
Human bone	1708	6388
Animal bone	14214	31210
Environmental bulk samples	57	N/A

5.3 Digital archive

5.3.1 The digital archive will be held on the CAU's secure and managed servers during the working life of the project. Upon completion of analysis and publication the digital archive will be deposited with a publicly accessible CoreTrustSeal certified repository, either the University of Cambridge digital repository or the Archaeological Data Service.

Table 3: Summary of digital archive

Resources	Format	Quantity
Project Design (the project budget will be redacted)	.pdfa	1
Final project report (both .pdf and .doc)	.pdfa, .doc	1
CAD/survey files	.dwg, dxf, .shp	1
Site registers (database or spreadsheet)	.xls, .csv, .accdb	1
Context sheets (database)	.xls, .csv, .accdb	1
Finds registers (database or spreadsheet)	.xls, .csv, .accdb	1
Scans of site plans and section drawings	.tiff	TBC
Specialist databases, spreadsheets, diagrams	.xls, .csv, .accdb	TBC
Selected site photographs	.tiff, .raw	100

6. ARCHAEOLOGICAL SUMMARY

6.1 Overview

6.1.1 Later Iron Age and Roman settlement remains dominated the archaeology of the site, comprising roundhouse gullies, enclosure ditches, pits and watering holes (Figure 2),

6.1.2 Site phasing is based on a combination of stratigraphic and spatial associations as well datable material finds, primarily pottery. This summary comprises descriptions by period and key feature groups to provide an overview of the archaeology. However, the full context index, including basic attributes is included in Appendix 1.

6.2 Later Iron Age (350BC-50AD, Figure 3)

6.2.1 The Later Iron Age activity comprised an unenclosed group of at least six roundhouses and a pair of enclosures, along with numerous pits and postholes, located within close proximity to the enclosures. It is possible that the unenclosed roundhouses and the enclosures were two separate sub-phases of activity, however for the purposes of this assessment they will be considered together.

Structures

6.2.2 In total six structures (1-6) were exposed within the excavation area that can be attributed to the Later Iron Age (Figure 4). All the structures were defined by poorly preserved shallow gullies in circular or semi-circular forms, ranging in size between 6-9.5m in diameter, which represent the drip gullies typically associated with roundhouses. The gullies themselves were steep sided with flat or concave bases and measured between 0.25-0.7m in width by 0.09-0.25m. Only Structure six had a definite entrance, facing northwest, however from the surviving gullies of the other structures, the entranceways did not follow a consistent alignment. Four of the structures (1-4) followed a broadly linear arrangement aligned northeast-southwest, a fifth was located some 15m to the east and the sixth was a further 20m to the northeast. As can be seen in Table 4, very few finds were recovered from the structures, suggesting the areas around them were kept clean.

Table 4: Summary of Features and finds associated with Late Iron Age structures.

Structure No.	Feature No.	Pottery	Animal Bone	Fired Clay	Burnt Stone
1	147	7 (33g)	40 (181g)	1 (1g)	1 (33g)
2	296	17 (18g)	3 (41g)		2 (141g)
3	232	18 (317g)	51 (507g)	2 (6g)	5 (1169g)
4	255				
5	300/315	19 (284g)	17 (44g)		
6	167	9 (371g)	17 (47g)		

Enclosures

6.2.3 Enclosures 1 and 2 were both located against, and extended beyond, the southern edge of the excavation area. It is probable that both enclosures were contemporary and formed the northern edge of an enclosed Late Iron Age settlement. Both enclosures showed signs of long-term use with evidence for multiple cuts/phases. The finds assemblages from both enclosures suggest they were directly related to domestic occupation, see Table 5.

Table 5: Finds breakdown for Late Iron Age Enclosures

Enclosure	Pottery	Animal Bone	Fired Clay	Burnt Stone
1	304 (3567g)	247 (2638g)	13 (69g)	1 (910g)
2	203 (3962g)	208 (4022g)	7 (18g)	26 (10402g)

6.2.4 Enclosure 1 was a sub-rectangular enclosure measuring at least 16m x 30m, defined by ditch **F.265**, which was subsequently re-cut along its entire length by **F.266**. The enclosure ditches were generally steep sided with variable bases, measuring between 1.18m-3m in width by 0.46-0.83m deep with between two and four fills noted. The enclosure yielded a finds assemblage dominated by Later Iron Age pottery and animal bone (Table 5).

6.2.5 Located immediately east of Enclosure 1 and attached to its eastern side, Enclosure 2 was sub-rectangular in shape (measuring 40m x 30m) with a single north facing entranceway, *c.*8m wide. The enclosure comprised three ditch segments (**F.195**, **F.196** and **F.292**) rather than a single continuous ditch and only had evidence for re-cutting along the northern arm (**F.194** and **F.228**). The ditches contained between one and three fills, with moderate-steeply slopped sides and concave or flat bases; the dimensions of the ditches ranged between 0.66-1.9m wide and 0.26-0.63m deep. The finds assemblage comprised substantial quantities of pottery and animal bone, with moderate quantities of burnt stone.

6.2.6 A group of curvilinear ditches (**F.230**, **F.231** and **F.234**) in a semi-circular arrangement, reminiscent of a roundhouse setting were located within Enclosure 2. The ditches (0.5-0.97m wide; 0.11-0.4m deep) had moderately slopped sides and variable bases. Finds recovered from these ditches comprised 72 (748g) sherds of mixed Late Iron Age and Early Roman pottery, 1kg of animal bone, 14 pieces of fired clay and 49 flints.

Pits and Postholes

6.2.7 Across the excavation area, a total of 44 pits and postholes can be assigned to the Late Iron Age phase of activity based on their proximity to well dated features and pottery recovered. The pits and postholes were sub-oval/circular and measured between 0.19-3.9m in diameter by 0.09-1.18m deep. Finds were limited to 100 (580g) sherds of Later Iron Age pottery, 135 (791g) fragments of animal bone and small quantities of burnt stone and fired clay.

6.3 Mid-Late Roman (150-300AD, Figure 5)

6.3.1 After an apparent hiatus in activity during the mid-1st-mid 2nd century AD, the Roman period saw the establishment of a small farmstead, characterised by a large enclosure, comprising internal compounds, watering holes, wells and associated field system ditches. This was a short-lived farmstead, in use for around 100-150 years in the second-third century. It is clear from the stratigraphic relationships within the farmstead, that there were several sub-phases, however for the purposes of this assessment only the key components are outlined below.

Enclosures and Compounds

6.3.2 The principal phase of Roman settlement saw the establishment of Enclosure 3, which based on re-cuts and re-organisations of the internal space saw several sub-phases of activity over a short period of time in the second-third century. The following presents the main components of the farmstead's primary enclosure, in the order they were established.

6.3.3 The principal and earliest element of the farmstead was the almost complete sub-rectangular Enclosure 3, which measured 53m by 46m, only the northeast corner had been

lost to truncation caused by later ploughing. The enclosure was initially defined by ditches **F.120, F.139, F.171, F.184** and **F.314**, and later by re-cuts **F.169, F.170, F.198**. During a phase of re-cuts and modifications, a south facing entrance *c*.2m wide was established. All the ditches contained one or two fills and had gentle-moderately slopped sides and flat or concave bases (width 0.32-1.24m; depth 0.07-0.4m). The enclosure yielded a substantial finds assemblage (see Table 6), which included predominantly 2nd-4th century pottery.

Table 6: Finds breakdown from Enclosure 3 and Compounds A-C

Enclosures/ Compounds	Pottery	Animal Bone	Fired Clay	Worked Stone	Burnt Stone	Oyster Shell	CBM
3	603 (9352g)	425 (2928g)	17 (292g)	3 (558g)	12 (3479g)	3 (20g)	
A							
B	7 (120g)	7 (193g)					
C	521(6495g)	182* (3123g)	104 (677g)		7 (3260g)	71 (177g)	2 (13g)

*does not include cremated bone

6.3.4 Two small early elements of the settlement's development were Compounds A and B, set within the northwest and southeast corners of Enclosure 3 respectively. Compound A was sub-rectangular (8m x 5m), open to the west and defined by two ditches **F.166** and **F.178**. Compound B, which was heavily truncated by later ditch cutting, comprised ditches **F.110** and **F.121**, was sub-rectangular, measuring at least 9m by 7m. As can be seen in Table 6, Compound B yielded a small finds assemblage.

6.3.5 Compound C was created along the eastern edge of Enclosure 3. The compound was sub-rectangular (8m x 20m) and defined by ditches **F.109** and **F.133**; ditch **F.162** was also potentially part of this compound. The ditches were on average 0.85m wide by 0.25m deep with steep or moderately slopped sides and flat or concave bases. The finds assemblage includes a substantial deposit of material along ditch F.133, first identified within the evaluation, when over 400 sherds of pottery were recovered. The excavations added a further 420 (5.8kg) sherds of 2nd-4th century pottery, 1kg of animal bone, alongside small quantities of oyster shell and fired clay. In addition to these finds, within a single intervention along the eastern edge of the compound, a deposit of cremated animal bone was recovered totalling 2757 (575g) fragments. The deposit appeared to 'slump' in from the western edge suggesting it had potentially been placed within a bank that had eroded into the ditch.

6.3.6 Two groups of postholes (**F.105-F.108** and **F.112-116**) were within the southern part of Compound C and could represent the remains of heavily truncated structures (Figure 6). The northern group comprised five postholes measuring between 0.33-0.44m in diameter by 0.1-0.2m deep, in two lines, which formed a small sub-rectangular shape measuring 2.37m x 3.08m. The second group comprised four postholes in a rough sub-rectangular arrangement (diameter; 0.42-0.63m, depth; 0.13-0.19m). No finds were recovered from any of the postholes.

6.3.7 Compound D, located within the western half of the enclosed farmstead, was a direct replacement of Compound A and appeared to have been one of the latest developments within the farmstead. The compound was sub-rectangular in shape measuring 48m by 13m and defined by ditches **F.144, F.168 F.176** and **F.198**. An additional ditch **F.199** created a small sub-division within the northern half of the compound. The ditches were moderately slopped with concave bases (width 0.37m-1.19m; depth 0.13-0.35m). The finds assemblage from the compound is impressive (Table 7) and includes elements of a substantial pottery dump that was recovered from along the western arm, which contained 2090 (13.7kg)

pottery sherds, primarily dating to the 3rd century, alongside 792g of animal bone and small quantities of fired clay and a single piece of tesserae (Figure 7).

Table 7: Finds assemblage from Compound D

Compound	Pottery	Animal Bone	Fired Clay	Worked Stone	Burnt Stone	Metalwork	CBM
D	2424 (18747g)	151(1743g)	97 (352g)	4 (1544g)	9(1910g)	7 (266g)	6(485g)

Wells/Watering holes

6.3.8 Eight large pits were found across the excavations, which were of sufficient depth and size to have functioned as either watering holes or wells. Four of the pits (**F.143, F.154, F.221** and **F.327**) were located in and around Enclosure 3 and it is clear from the shape and size of two, F.143 and F.154, that they were almost certainly utilized as wells by humans, as both features were sub-circular, with near vertical sides and concave bases (measuring 1.31-1.61m in diameter by 0.84-0.96m deep and containing between two and four fills). In contrast, F.221 and F.327 were much larger measuring 4.77-5.96m in diameter and 1.51-1.56m deep. The pits contained up to seven fills and had steep sides, except for F.221 which along the eastern edge was gentler to provide access for animals (Figure 8). In terms of finds, F.143, F.154 and F.327 were kept clean and yielded just 14 (99g) pottery sherds, 60 (475g) fragments of animal bone and a piece of tile. In contrast watering hole F.221 had a large finds assemblage containing 70 (1160g) sherds of Late 2nd-3rd century pottery, 3.8kg of animal bone, a large fragment of quern stone and a piece of worked bone.

6.3.9 Located to the north of Enclosure 3 and truncating the eastern edge of Structure 6 was a group of four large intercutting pits (**F.258-F.261**) that appeared to have served as watering holes (Figure 8). The watering holes were sub-oval in shape and had moderate to steeply slopped sides and concave bases and measured 3.75-7.5m in width by 3-9m in length and up to 1.4m deep. As a group, the watering holes yielded a modest assemblage of finds comprising 41 sherds (1.9kg) of 2nd-4th century pottery, 2.3kg of animal bone and 17 (1.7kg) fragments of brick and tile.

Fieldsystems

6.3.10 Located across the excavation area were an additional 13 ditches (**F.100, F.102, F.104, F.138, F.142, F.160, F.211, F.257, F.288, F.298, F.303, F.307, F.317**) on broadly northwest-southeast or northeast-southwest alignments that relate to a wider fieldsystem around the farmstead. The ditches of the fieldsystem measured between 0.29-1.12m wide by 0.09-0.28m deep and had moderately slopped sides and flat or concave bases. Finds recovered include 282 sherds (11.74kg) of 2nd-4th century Roman pottery, the majority of which came from ditch F.160 (167 sherds, weighing 2.1kg) and from a deposit within ditch F.298, which comprised 61 sherds, weighing 9.2kg. Other finds include 0.4kg of animal bone, eight fragments of tile and small quantities of fired clay, burnt and worked stone and Iron nails.

Pits and Postholes

6.3.11 In total 55 pits and postholes can be assigned to the Roman phase of activity, almost all were found within Enclosure 3 and its various internal compounds. The pits and postholes were on the whole sub-oval/circular in shape with moderate or steeply sloped sides and concave or flat bases (diameter 0.15-2.5m; depth 0.05-0.67m). Finds from these features include 75 (2.3kg) sherds of primarily 1st-4th century Roman pottery, 120 (1kg) fragments of animal bone, 423g of fired clay and small quantities of burnt stone and ceramic building materials.

Inhumation

6.3.12 A single inhumation (F.213) can be attributed to this phase, located within Enclosure 3, *c*.3m east of ditch F.184 (Figure 9). The skeleton was of an adult male laid supine in a grave cut measuring 2.08m long by 0.71m wide. Around the edge of the inhumation were a number of iron nails suggesting the individual had been placed within a coffin. A small pottery vessel of 2nd-4th century date had been placed to the left of the individual.

Undated

6.3.13 Across the excavation area a number of pits and postholes could not be accurately dated and remain unphased. In addition to the pits and postholes, a single inhumation and a group of five animal cremations can be added and are summarised in more detail below.

6.3.14 An inhumation (**F.146**) was located within Compound 2 (Figure 9). The individual was a young adult female laid in a tightly flexed position, on their right side and aligned northwest-southeast with the head to the north, within a grave which measured 1.03m long by 0.7m wide and 0.2m deep. No finds were recovered from the fill of the grave. Additional undated human remains were found within a pit (**F.229**).

Five animal cremations (**F.210, F.214, F.215, F.218** and **F.336**) were found, primarily in the south of the excavation area (Figure 10). Three of the cremations were within Iron Age Enclosure 2, the other two were recovered from within Roman Enclosure 3. The pits within which these cremations were place varied between 0.45-0.8m in diameter by 0.1-0.21m deep and were sub circular/oval with variable sides and bases. The quantity of animal bone recovered varied between 92 and 996 fragments and comprised mixed animal remains primarily of sheep and pig. Of particular note was cremation F.210 which had a small, unburnt, dog/fox burial placed within it (Figure 10).

7. FINDS AND ENVIRONMENTAL EVIDENCE: SUMMARY AND STATEMENT OF POTENTIAL

7.1 Artefacts

Flint (Appendix 2A)

7.1.1 Two flints (2g) were recovered from this excavation. Both flints were worked and unburnt and both are chronologically non-diagnostic.

Statement of Potential

7.1.2 The small quantity and chronologically non-diagnostic nature of this material means that it has no potential.

Prehistoric Pottery (Appendix 2B)

7.1.3 A moderate assemblage of 690 sherds weighing 9898g were collected from 36 features. The bulk of the pottery dates to the Later Iron Age (350BC – 50BC) and Late Iron Age (50BC-AD70). A single residual sherd of Early Bronze Age pottery was also recovered.

7.1.4 The assemblage represents domestic debris and suggests occupation activity from the Mid Iron Age continuing into the Late Iron Age to Roman period.

Statement of Potential

7.1.5 The Iron Age of Whittlesey is beginning to come into focus following recent excavations at Burdett's Nursery, which is contemporary or perhaps a little earlier in focus than the activity identified here. This assemblage contributes to a growing data set and helps to fill in the gaps in our understanding of the ceramics of this area of the Lower Nene valley.

7.1.6 Despite a high percentage of the assemblage being recovered from ditches the pottery would benefit from limited further study once detailed stratigraphic analysis of site date has taken place, to further refine the ceramic typology of the area.

Roman Pottery (Appendix 2C)

7.1.7 The excavation produced a total of 3036 sherds of Roman pottery weighing 42264g and representing 69.89 EVEs (estimated vessel equivalent) and a minimum of 235 vessels (MNV). The material dates from the earlier to the later Roman period, although activity before the mid-2nd century AD is limited. The pottery suggests a peak in activity in the mid-2nd-mid 3rd century AD, with the latest dating material suggesting the site had gone into decline by the later 3rd century AD. The Roman assemblage is dominated by shell-tempered wares and sandy greywares including a large number of Nene Valley greyware vessels, although it is of note that there are considerably fewer examples of Nene Valley colour-coated wares.

Statement of Potential

7.1.8 The Roman pottery assemblage is primarily of local importance, including significant groups of shell-tempered wares and Nene Valley greywares. However, the location of the site adds a degree of importance to the assemblage and can significantly contribute to a greater understanding of the nature and dynamics of pottery supply and consumption on what would have been Whittlesey Island during the Roman period.

Worked and Fired Clay (Appendix 2D)

7.1.9 A medium sized assemblage of 336 pieces of baked clay weighing 4,165g was recovered, mostly from pit and ditch fills. The assemblage includes 264 pieces of saltern debris or briquetage weighing 2,531g and is likely to be of Roman date, four fragments of kiln furniture of Early Roman date, and 68 fragments of undated baked clay from miscellaneous structures and hearths. No associated saltern or kiln structures were present at the site, suggesting that the bulk of the baked clay represents material brought in from elsewhere, perhaps as hard core to consolidate trackways or surfaces. Finds of note include an incomplete clay slingshot of Iron Age date and a fragment of Late Iron Age triangular loomweight.

Statement of Potential

7.1.10 The briquetage assemblage is the second such to have been recovered at Whittlesey (Percival 2022). Iron Age to Roman salt making debris in the area had previously been dismissed (Gurney 1982), however the recent evidence, including body sherds from salt boiling pans and the widespread presence of salt bleaching and other characteristic salt colouring, suggests that briquetage is indeed present here. It is still uncertain however if Iron Age and Roman salt winning was taking place at Whittlesey and it is likely that much of the material is redeposited, perhaps related to building of transport routes or other structures as seen elsewhere along the Fen Causeway (Percival 2001, 308). The assemblage is therefore of some interest, both as a further example of salt winning technology and as evidence of the widespread reuse of this material in construction subsequent to use for its original function.

7.1.11 The kiln furniture came originally from a mid-to-late 1st century AD kiln of a type found locally at Haddon (Hinman 2003). The very small quantity of kiln furniture suggests reuse of baked clay material away from its point of original use similar to that suggested for the briquetage. With no associated kilns present the assemblage is of little further research potential.

7.1.12 The miscellaneous and structural fragments form a typical assemblage for Iron Age to Roman sites and represent the debris from baked clay structures such as hearths or ovens. No associated structures were recorded and the assemblage has no further research potential.

7.1.13 Slingshots are not especially common on Iron Age to Early Roman sites perhaps indicating specialised use such as the hunting of small game and birds (Poole 1991, 370), which may have been taking place at Whittlesey, exploiting the rich habitat on the margins of the fens.

7.1.14 The loomweight fragment indicates cloth production at the site. Loomweights are common finds on Iron Age to Roman settlement sites. This very small fragment is of no further research potential.

Ceramic Building Materials (Appendix 2E)

7.1.15 A total of 39 fragments of Ceramic Building Material, weighing c.3.5kg, was recovered from the excavations. The material is all Roman in date apart from a single fragment of Post-Medieval or modern roof tile.

Statement of Potential

7.1.16 This is a small and highly fragmented assemblage of mainly Roman Ceramic Building Material. There are no examples of complete tiles and the material is not connected with an

in situ structure. As such, it has limited scope for further contributing to the interpretation of the site, although it has relevance for understanding local patterns of use and re-use of CBM in the Roman period.

Worked and Burnt Stone (Appendix 2F)

7.1.17 A total of 18.5 kg (15 pieces) of worked stone, 2 kg (3 pieces) of building stone and 26.3 kg (102 pieces) of burnt stone was recovered from this excavation. Most of the burnt stone appears to be prehistoric in date and originally associated with burnt stone features (though now redeposited within later ones), whilst the worked stone consisting of quern was Roman, as was the very small amount of probable building stone.

Statement of Potential

7.1.18 The moderate amount of burnt cobble stone recovered from the site with little or no evidence for former use of this material as worked stone (i.e. discarded and subsequently burnt saddle quern) implies that we are probably looking at an identified or implied prehistoric presence within the background archaeology.

7.1.19 The recovery of Roman quern and building stone from at least 10 different features provides a sense of the domestic activities taking place on site (quern, millstone and whetstone). However, the low incidence of building stone could be evidence for building materials brought from another site simply to use as rubble in the making of a trackway or a road.

7.1.20 The identification of the various different types of Millstone Grit and Old Red Sandstone flat-top quern and millstone is typical of sites dating to the Middle-Late Roman date. The use of imported quernstone is commonplace in Roman Britain, and as is the case with many other -Cambridgeshire sites, the mix of these querns from the South-West of England with those from the Southern Pennines is normal, particularly where the locations concerned are centred upon the junction of N-S and E-W routes. Cambridgeshire is probably at the very eastern limit of the Old Red Sandstone quern distribution, yet reasonable numbers of these querns have been found.

Metalwork (Appendix 2G)

7.1.21 A total of 38 metal artefacts weighing 676.4g were recovered from the excavations. The assemblage is predominantly Roman in date with a small number of Medieval and Post-Medieval artefacts.

Statement of Potential

7.1.22 This is a small assemblage of copper alloy and iron artefacts, which has the potential to contribute to an understanding of local patterns of material culture uptake during the Roman period.

Marine Mollusca (Appendix 2H)

7.1.23 A small assemblage of 32 marine shells weighing (226g), comprising European Flat oyster, was recovered, mostly from ditch fills associated with the Roman farmstead. The material is in a poor condition, and likely represented a minor part in the diet of the local inhabitants.

Statement of Potential

7.1.24 This is a very small assemblage of Oyster shell that provides a limited insight into the diet of the inhabitants of this site.

Faunal remains (Appendix 2I)

7.1.25 This small excavation resulted in a recovery of a considerable faunal assemblage, with a raw count of 14214 fragments and a total weight of just over 31kg (31210g). Based on the chronology of the associated ceramic evidence, faunal material came from Late Iron Age contexts and those associated with Romano-British occupation. A small percentage came from features impossible to date. It is a typical cattle-dominated domestic assemblage, with minimal changes in animal use between the two major periods.

Statement of Potential

7.1.26 The faunal assemblage is very characteristic of regional period patterns. The assemblage's complexity and findings give it local importance, though, the site's position in the Fens is arguably more significant than the results coming from the assemblage itself. When considered alongside other evidence, aspects of this faunal assemblage offer great potential for our understanding of exploitation of livestock, but also of how wild Fenland resources were accessed and interacted with, especially during the time when this was Whittlesey Island.

Human remains (Appendix 2J)

7.1.27 Two inhumations and disarticulated remains from a single context, were recovered from this excavation. One of the inhumations F.213 can be dated to the Roman period, the other individual remains undated. The material has a high level of fragmentation, however there is a good level of preservation.

Statement of Potential

7.1.28 Despite the small size of the burial population the skeletons are sufficiently well preserved to provide evidence of health in the past. F.213, an elderly male, stands out for a significant osteoarthritic condition. F.146 has pathological signatures suggesting a Vitamin C deficiency. The disarticulated skull element has a pathology suggesting infection. This assemblage also stands out for dental pathology.

Worked Bone (Appendix 2K)

7.1.29 A small assemblage of five bone and antler artefacts were recovered from Land North of Whittlesey. A possible weaving implement and a bone point were found in two Iron Age features. Two other bone objects, a pin beater and a needle derive from Roman features dating to the second to fourth century AD. In addition to these an unfinished antler object was found in an undated feature. This is a varied assemblage, but all the identified objects can be described as handicraft tools.

Statement of potential

7.1.30 This is a very small and varied assemblage of worked bone and antler that has potential to contribute to the understanding of Iron Age and Roman craftwork activities in the region. Despite the fact most of the objects are incomplete or unfinished, the majority are recognisable implements, in particular the Roman instruments have potential for future research. The Roman pin beater is especially interesting since it is an uncommon find from this period.

Palaeoenvironmental (Appendix 2L)

7.1.31 A total of 18 environmental samples were analysed as part of this assessment. The samples were recovered from a variety of features dating to both Iron Age and Roman periods.

Overall, the material is in poor condition with none of the assemblages comprising significant quantities of seeds and only two yielded more than 100 fragments of charcoal.

Statement of Potential

7.1.32 The uncharred plant macrofossil assemblage from Romano-British watering hole [221] and wood charcoal assemblages from Iron Age ditch [292] and Romano-British ditch [314] provides some potential for palaeoenvironmental reconstruction that can be compared with similar sites within the region (e.g., Simmons forthcoming, Murphy 2003). However, the small size and general poor state of preservation of the plant macrofossil and wood assemblages from the remaining samples affords limited scope for palaeoeconomic and environmental reconstruction.

Pollen (Appendix 2M)

7.1.33 Two 50cm long monolith tins of sediment were collected. The sampled features, F.221 and F.261, were both watering holes of Romano-British date. Six subsamples were taken for pollen extraction, one each from the top, middle and bottom of each monolith. Pollen was recovered from all six of the subsamples and was generally well preserved.

Statement of Potential

7.1.34 The well-preserved nature of the pollen means that there is potential to gain a good understanding of the past environment at this site. Further work will be required on this assemblage to gain the full potential of this material.

7.2 Archaeological Potential

7.2.1 The archaeology uncovered during these excavations has revealed a long-lived sequence of occupation along the northern edge of Whittlesey Island. This is the latest in a number of large-scale excavations to have taken place within Whittlesey in recent years. It is as part of this much larger data set that this site will contribute to the characterisation and the changing nature of settlement from the Later Iron Age through to the Late Roman period on a fen island.

8. UPDATED PROJECT DESIGN

8.1 Review and Revision of Research Aims

8.1.1 The research aims and questions as set out in the Written Scheme of Investigation (Beadsmoore 2020) and Section 3 of this report, are still predominately an effective framework for the ongoing analysis and presentation of results for this project. However, in light of the excavations and preliminary analysis of results, there are some adjustments which are required.

8.1.2 Summary statements on the original aims and questions which are still relevant to the project are detailed below, along with new questions to be addressed at analysis stage, which have arisen as a result of the excavation and initial analysis. These questions are discussed thematically and chronologically and outline the potential for further analysis.

8.2 Period Specific Research Aims

Iron Age

Themes: Character, Date and Duration of the Iron Age activity and its relationship to nearby activity

8.2.1 The Iron Age settlement excavated here comprises two key components: an unenclosed grouping of six roundhouses and two large sub-rectangular enclosures. Identifying whether the unenclosed roundhouses were a separate phase to the enclosures will form an important part at the next stage of analysis. The finds assemblage recovered from the features on site and their distribution will provide the best means of establishing this, as well as establishing the duration of the settlement. Currently the Iron Age pottery dates to between 350BC-50AD with no earlier pottery recovered. Further analysis of this material alongside radiocarbon dating (where possible) can help to clarify the duration of occupation and the potential for two phases of Iron Age activity.

8.2.2 To fully understand the character of the settlement it is important to analyse the potential types of activities taking place around the roundhouses and within the enclosures. This will be achieved through an analysis of the material recovered and the types of features found in association.

Themes: Nature of the economy and trade

8.2.3 The pottery and animal bone assemblages recovered will provide the greatest indicator of the local economy and trade links. The presence of sizeable quantities of animal bone are an excellent source of information and comparisons with other settlements will be carried out. The complete absence of Iron Age quern stone is of note and requires further analysis to establish if this is evidence for zoning of activities or a genuine aspect of the economy. Comparative work with other sites on the Island will help to deduce this.

Theme: The character of Iron Age Whittlesey and its place within the Prehistoric Fenland landscape (LIA-Rom 2 Late Iron Age & Roman Research Agenda - East of England Research Framework (researchframeworks.org) 2019)

8.2.4 Iron Age Whittlesey is now starting to be understood in greater detail and the site excavated here provides some new aspects to this growing picture. Whittlesey seems to be characterised by roundhouses along the fen edge (Bradley Fen, Knight and Brudenell 2020)

or by large rectangular enclosures (Stonald Field, Murphey 2008 and Burdetts Nursery, Bourne 2022). At Showfields the settlement has both of these elements and further analysis will therefore help to understand the relationship between them, in-terms of dates and functions. To fully understand the character of Iron Age Whittlesey, it will also be important to incorporate data from the Cambridgeshire HER to integrate evidence from sites as yet unexcavated.

8.2.5 Once some notion of the character of Iron Age Whittlesey has been established it will be important as part of the next stage of analysis to see how far this settlement and the others within Whittlesey compare to sites along the fen edge to the west and to other fen islands to the east and south (i.e March and Ely). Such comparisons will contribute towards understandings of regional differences that is currently an important topic to be addressed.

Roman

Theme: Character, extent, date and duration of the Roman settlement in relation to other nearby activity

8.2.6 The recovery of the almost complete layout and the principal aspects of this Roman farmstead means that the activities relating to the settlement core can be firmly established, while a sense of the wider field systems can also be grasped. The pottery combined with the stratigraphic relationships between various aspects of the farmstead provide the best means for determining the date and duration of the settlement. At present most of the pottery can only be broadly dated to the 1st-4th centuries, however there is no or very limited quantities of pottery specifically dating to either the early or late Roman periods and it is likely this settlement was only in use during the 2nd- 3rd centuries. Further analysis of this assemblage, alongside any recovered radiocarbon dates, can help to clarify the duration of the farmstead.

8.2.7 The finds assemblage alongside any recovered plant and pollen remains provide the best indicators as to the character of this settlement. It will be important at the next phase of analysis to study the distribution of particular materials in order to deduce possible zones of activity such as occupation, crop processing etc.

Theme: Economy and trade especially in relation to local pottery and salt production

8.2.8 Given the site's proximity to the Roman Fen causeway, it is likely that this formed a major part within the site's economy. The finds and environmental assemblages will provide the best indicators of the wider economy and trade networks in which this settlement operated. Both the pottery and the querns and millstones recovered provide direct evidence for trade beyond the immediate Nene Valley locale and includes material from the continent.

8.2.9 The substantial pottery assemblage will contribute towards understanding the relationship between the Nene Valley pottery industry and its distribution into the Fens. Especially when the assemblage is considered alongside the material recovered from other major Roman settlements on Whittlesey at Burdetts Nursery (Bourne 2022) and Kings Dyke (Gibson and Knight 2002).

8.2.10 Whilst briquetage was recovered from this excavation, the quantity and quality of the material suggests that no *in-situ* salt production was taking place (see Percival Appendix 2b) although this may not preclude that some aspect of salt-processing may have been occurring in this area. It is also possible that the material has derived from elsewhere and that this is evidence of Roman re-cycling. A similar assemblage has also been recovered

from the nearby Roman site at Burdetts Nursery (Percival 2022) and further analysis for both sites could be carried out together, to understand the uses of briquetage within the economy of Late Iron Age and Roman Whittlesey.

8.2.11 Understanding the economic status of the site and placing it within the context of Whittlesey Island during the Roman period will be furthered by a detailed analysis of the animal husbandry taking place, the evidence for agricultural production and the quantities of imported material in comparison with other sites within the region. It will also be important to understand how this settlement fits into the wider economic hinterlands of major settlements at Stonea and Durobrivae.

Theme: Structural remains and their relationship local and regional examples

8.2.12 No definitive Roman structures were identified within the excavation area. There are several clusters of postholes that could potentially form small ancillary structures that have been heavily truncated and further analysis of these is required. Two of the compounds identified are relatively small and sub-square in shape and could possibly have been related to a building. Similar compounds have been noted within the wider region and a comparison with these and their associated finds assemblages may help confirm the presence of structures.

New Themes

Theme: The Nature of the Iron Age-Roman transition (LIA-Rom 05 Late Iron Age & Roman Research Agenda - East of England Research Framework (researchframeworks.org) 2019*)*

8.2.13 Understanding the transition from Late Iron Age to the Roman period is a key research theme within the region especially within a Fenland setting. This excavation can help address this theme as it uncovered both Late Iron Age and Roman settlement. At this stage of analysis, and based on the pottery dates, there is a break in occupation between the mid-1st century and mid-2nd century. This pattern was also noted at Burdetts Nursery (Bourne 2022) and further work is required to establish if this is restricted to just Whittlesey or further afield, within the Fenland region and Nene Valley in order to understand the drivers (i.e environmental, economic, political etc) behind this pattern.

Theme: Ritual, Structural deposition and Middening

8.2.14 One of the major findings of this excavation was three ditches that contained significant pottery deposits (F.133 and F.176, F.298). Breaking down these deposits in terms of the types of pottery found, the completeness of the vessels and distribution of refitting sherds alongside analysis of the photogrammetry undertaken on the deposit within F.174, will help to identify if this material was related to middens or whether it represents deliberate structural deposition perhaps representing a closing deposit. Particular attention will be paid to the date of these deposits and how they may relate to the lifecycle of the settlement.

8.2.15 Another potential aspect of ritual activity identified during this excavation was five animal cremations. The date of these cremations is ambiguous and radiocarbon dating is required. Should they prove to be Roman then as noted by Rajkovajca below their importance increases and further analytical work will be required.

Theme: The character of Roman Whittlesey

8.2.16 To date there have been several investigations in Whittlesey that have yielded Roman settlement remains (Figure 11). Two major Roman sites have been identified at Burdetts Nursery (Bourne 2022) and Kings Dyke (Knight and Gibson 2002), while smaller

investigations at the Whittlesey brickpits also identified Roman activity including a small cemetery (Challands 1977, 1978). In addition, several pottery clusters as well as extensive cropmarks indicate further Roman settlement activity around the edge of the Island (Hall 1987). Further work is required to integrate the evidence from other sites within Whittlesey, including data from the Cambridgeshire HER.

8.2.17 To fully understand the nature of Whittlesey in the Roman period, the data from this excavation and the sites at Kings Dyke and Burdetts Nursery will need to be analysed and compared. This will involve assessing the dates, duration, economies, layouts and status of the respective settlements. Furthermore, the Island as a whole will be compared to other Fen Islands and the Nene Valley.

Theme: The Environment of Roman Whittlesey (LIA-Rom 06 Late Iron Age & Roman Research Agenda - East of England Research Framework (researchframeworks.org)2019)

8.2.18 Initial analysis of the palaeoenvironmental samples taken on site show that they are poorly preserved, although some information regarding the environment was obtained. The pollen however is much better preserved and will contribute to our understanding of the Roman environment. Taken together with other environmental samples from various Roman sites around Whittlesey, there is the potential to form a detailed picture of the Roman environment.

8.3 Recommendations for Further Work

Stratigraphic Analysis

8.3.1 The final phasing and grouping of features should be illustrated.

8.3.2 Location of artefacts and ecofacts, should be incorporated by phase and spatially across the site using GIS.

Artefact Analysis

Prehistoric pottery

8.3.3 The assemblage is fully quantified however a full analysis report is recommended, including examination of the pottery by site phase and final feature groupings, once these are complete. Further work should also include a detailed discussion of the assemblage within its wider setting, with reference to Iron Age pottery previously excavated at Whittlesey, and with the assemblages from Werrington, Cat's Water, Fengate, Wakerly and Weekley (Mackreth 1988, Pryor 1984), Jackson and Ambrose 1978; Jackson, and Dix 1987).

8.3.4 A maximum of 20 sherds will require illustration.

Roman pottery

8.3.5 The assemblage has been fully analysed and recorded and therefore no further work on the material is necessary. However, the archive report should also incorporate the material recovered from the evaluation phase of work (Perrin 2013). Further work on the composition of the assemblage in terms of vessel fabrics and forms should be undertaken. It will also be necessary to quantify and analyse the material by final feature groupings once these are complete. The pottery should be analysed by site phase once complete to highlight any spatial changes in deposition over time. The assemblage should be considered in its wider setting, with reference to other sites on Whittlesey, namely Burdett's Nursery (Anderson

2022). It is recommended that five vessels are illustrated, focusing on some of the more unusual forms as well as the decorated samian sherd from F.139.

Worked and Fired clay

8.3.6 The briquetage, kiln furniture, baked clay objects and miscellaneous and structural baked clay assemblages are all small, abraded and mostly residual. Although there were no structural remains relating to salt production, the assemblage of briquetage recovered from the site is of significance, comprising one of the largest assemblages of material recovered from the western Fen edge. The material has all been fully recorded, however, it is important to try and refine the dating of the assemblage and consider its spatial distribution across the site. When combined with the similar sized assemblage recovered from Burdett's Nursey may provide a significant insight into salt production, transportation and supply in the western fen region.

Ceramic Building Materials

8.3.7 The assemblage has been fully assessed, and no further work on the material is required. However, the assessment report should form part of the site archive.

Worked and Burnt stone

8.3.8 There is very little potential for further analysis of this assemblage and the current work undertaken is sufficient. The current assessment therefore should form the basis of the final specialist report.

Metalwork

8.3.9 The Roman element of the assemblage should be situated within its local context. The iron linchpin, SF.104, is of a more unusual type and it is recommended that this is illustrated, as well as the brooch, SF.101. Otherwise, the assemblage has been recorded in full and no further work is required.

Ecofact analysis

Marine Mollusca

8.3.10 This assemblage is very small and eroded and therefore no further work is required, and the assessment report should be included within the archive report.

Faunal Remains

8.3.11 The assemblage has been fully analysed and the primary data collection has been completed. No further work is necessary on the assemblage itself, though for archive report and publication, any material recovered from previous phases of work must be included.

8.3.12 The assemblage could benefit from further work on economic data (kill-off patterns/ mandibular tooth-wear and epiphyseal fusion data) as well as on carcass processing. As there was indication that bone was discarded differently to the ceramics, it would benefit from spatial analysis and the plotting of bone waste possibly, but not necessarily using GIS. Alongside this, a small number of butchered specimens needs to be fully studied as part of understanding the character of carcass processing on site.

8.3.13 Radio-carbon dates should be obtained for the animal cremations which are currently undated. If these are shown to be Roman, their significance is somewhat increased (King *et a*l.2021). The two archive boxes containing unsorted residue should be scanned to ensure no micro-, fish, or avian fauna was missed during the analysis.

8.3.14 This assemblage should be considered in its wider setting, with reference to the nearby Burdett's Nursery assemblage (Rajkovača 2022), as well as other sites from the same locale.

Human Bone

8.3.15 No further study is required. Samples for radiocarbon analysis should be taken if the phasing of the material is inconclusive. aDNA samples should be taken if the relationship between the individuals wants to be understood. Likewise, if this assemblage is included in a wider regional analysis, where questions surrounding genetic homogeneity/ heterogeneity are to be asked.

Worked Bone

8.3.16 A re-examination of objects <432> and <689> for a full specialist study is recommended in order to define their function. Objects <290>; <432>; <688>; <689> and <690> should be photographed for future publications. No drawing is required.

Paeloenvironmental

8.3.17 The small size and poor state of preservation of the charred plant macrofossil assemblages from the samples means that further identification would not provide significant additional evidence for palaeoeconomic reconstruction. Further analysis, therefore, of the charred plant macrofossils from the 18 samples is not recommended. Only sample 126 from Romano-British watering hole [221] yielded a waterlogged plant assemblage that may be suitable for further analysis. However, the prevalence of 'robust' seeds indicates that there may be a preservational bias and further identification and analysis of the plant macrofossils may not appreciably add to the palaeoenvironmental reconstructions associated with the Romano-British phase of activity.

8.3.18 Sample 152 from Iron Age ditch [292] and sample 153 from Romano-British ditch [314] produced charcoal assemblages with over one hundred fragments >2mm and therefore may be suitable for further identification and analysis. The wood charcoal identifications from Iron Age and Roman ditches (292] and [314] may provide palaeoenvironmental evidence that can be compared with suitable wood preserved under anoxic conditions from sample 126 from Romano-British watering hole [221]. However, there is limited scope for further palaeoenvironmental reconstruction based on three samples. There is no potential for further work in terms of the wood charcoal assemblages from the remaining samples due to the scarcity of charcoal fragments >2mm, and therefore insufficient material to provide a representative sample of the wood charcoal assemblages.

8.3.19 Sample 126 from Romano-British watering hole [221] yielded >100 sclerites from a 1 litre sub-sample that was processed by wash over for the recovery of plant macrofossils. If available, processing 5 litres of sediment from sample 126 for invertebrate macrofossils may provide further opportunity for palaeoenvironmental reconstruction associated with the Romano-British phase of activity. However, analysis of the invertebrate macrofossils from one sample in isolation may not be justified.

8.3.20 There is potential for the ostracod assemblage from sample 158 taken from Romano-British watering hole [327] to provide evidence for palaeoenvironmental reconstruction. Further work, however, may not be justified based on a single sample with a sufficient assemblage size (>100 items).

8.3.21 On the basis of this information and due to the limited capacity for just three samples to add to the understanding of the paleoenvironment at the site, it has been agreed that no further work needs to be undertaken.

Pollen

8.3.22 The pollen and spores from both features were generally well preserved, meaning that assessment counts (or possibly even full counts) are feasible. In order to gain a better understanding of the pollen sequences from the two features, and to ascertain whether further analysis is worthwhile, it is recommend processing the existing subsamples from each monolith and completing assessment counts of 100-150 from these. This would give a clearer picture of the vegetation surrounding the features and of change through time. Although the features from which the samples were taken are known to be Romano-British, if further analysis (i.e. beyond assessment) were to be carried out it would be important to obtain more precise dating evidence to establish the chronology of the sequence and to gauge the rate of deposition.

Scientific analysis

8.3.23 A Radiocarbon dating programme will be carried out as part of the next phase of analysis. It is envisioned that the undated inhumation F.146 and samples from the undated animal cremations will be sent for dating. Articulated animal remains and residues from pottery will also be considered for their potential.

9. PLANNED OUTPUTS: PUBLICATION AND DISSEMINATION

9.1 Publication and Professional Dissemination

9.1.1 The planned final published outputs of the project will consist of an archive report (deposited with the HER and ADS) and a formal publication. The form of the publication is likely to be a journal article on Late Iron Age and Roman Whittlesey within either Britannia or the Proceedings of the Cambridge Antiquarian Society journal.

9.1.2 The Late Iron Age and Roman archaeology at Land North of Whittlesey is of regional significance and warrants publication. This will detail and discuss the settlement within the context of Iron Age- Roman settlement on Whittlesey Island and contribute towards the understanding of a Fen Island during these periods. This data will be placed within its regional context drawing comparisons with other Fenland Islands and the Nene Valley.

9.2 Public Outreach

9.2.1 Once full analysis and reporting has been carried out, details of the site's archaeology will be made public through the CAU's website and social media channels.

10. ARCHIVE AND DEPOSITION

10.1 Standards

10.1.1 The project archive will be prepared and deposited in line with the MoRPHE guidelines (Historic England 2006, reissued 2015), CIfA Standard and guidance for the collection, documentation, conservation and research of archaeological materials (2014, updated 2020), the CIfA Standard and guidance for archaeological excavation (2014, updated 2020), the United Kingdom Institute for Conservators Conservation Guidelines No. 2 (2012) and the requirements of the Cambridgeshire County Archaeological Archive Facilty. .

10.1.2 The archaeological archive and its deposition will be carried out in accordance with the Cambridgeshire County Council's Archaeological Archives Requirements for Post Excavation Analysis (CCC 2017), and Deposition of Archaeological Archives in Cambridgeshire (CCC 2020, version 5).

10.2 Physical archive, discard, and transfer of title agreement

10.2.1 The physical archive will be deposited with the Cambridgeshire County Archaeological Archive Facility. The Event Number (ECB6707) will be on all paperwork, finds bags and samples containers, as well as on the report and OASIS form.

10.2.2 Ownership of finds rests with the landowners. However, the CAU will seek the transfer title of ownership to Cambridgeshire County Council, in which case, final destination of the artefacts and archive would be within the County Council "Deepstore" facility.

10.2.3 Once the full archive report is completed it is recommended that items retained comprise: all of the ceramic material, all of the stratified faunal remains, all of the copper alloy artefacts; the iron linchpin <610> and iron knife <602> and all of the diagnostic burnt and worked clay and a single piece of ceramic building material <378> is to be retained as a fabric reference.

10.2.4 It is recommended that items to be discarded once the full archive report is completed comprise: the burnt stone assemblage, any undiagnostic burnt clay, all the ceramic building material, the remaining iron objects and all un-stratified animal bone.

10.2.5 It is estimated that 27 archive boxes of material will be deposited.

10.3 Digital archive

10.3.1 The digital archive will be deposited with a publicly accessible CoreTrustSeal certified repository, either the University of Cambridge digital repository or the Archaeological Data Service.

10.4 Updated Management Plan

A1. Standards and procedures

10.4.1 All digital data generated during the project will be managed according to the *CAU Digital Data Management Policy and Procedures* (2021). This is consistent with:

- Forster, M. 2019, *Dig Digital. Work Digital. Think Archive. Create Access*. Historic England, CIfA and DigVentures.
- CIfA, 2014 (updated 2020) Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives

- CIfA 2014 (updated 2020) Standard and Guidance for Archaeological Excavation.

A2. Data Collection and Responsibility

10.4.2 Final responsibility for the project's digital data lies with the Project Manager. The following table outlines the main types of data anticipated to be generated, and project staff who will be responsible for each, and where these documents and data will be stored.

Table 8: Data collection and responsibility

Document type	Responsibility	Storage location
Project documentation Final project design Contract with client Site information	Project Manager	CAU server (Projects)
Health and Safety (RAMS)	Project Manager	CAU server (Projects)
Fieldwork site registers (spreadsheet) context sheets (database) working photographs (TIFFs)	Site Director	CAU Server (Projects)
Survey site plans (scanned) section drawings (digitised) GPS/CAD data	CAU Survey lead	CAU Server (Survey)
Specialist photography site photographs artefact photographs	Graphics	CAU Server (Photographs)
Specialist assessments databases spreadsheets report text	CAU specialists External specialists	CAU Server (Projects) subcontracted specialists' computers
Project reporting text	Site Director	CAU Server (Projects)
Report illustrations figure files formatted report	CAU graphics	CAU Server (Graphics)
GIS, photogrammetry	CAU Graphics	CAU Server (Survey)
Finds finds catalogue archive catalogue project metadata	CAU Finds	CAU Server (Finds)

A3. Identification

10.4.3 A unique identification code will be used to prefix all core digital documents created during the project. All core documents will also be identified with descriptive labels (e.g., context_register, pottery_catalogue, site_photo). Version numbers will be used to distinguish documents when substantial changes are made (v1, v2, v3, etc.).

A4. Storage and backup

10.4.4 Digital data will be stored on the CAU's main server, in the allocated folders indicated above. The server is backed up hourly to offsite storage and is provided by the University of

Cambridge Information Service. Staff homeworking will transfer documents to the CAU server weekly (minimally). No core documents will be stored on desktop PCs (as these are not backed up offsite) or outside the relevant folders.

A5. Ethics and legal compliance

10.4.5 Copyright will belong to the CAU.

10.4.6 The only digital data that has been identified as requiring copyright license are Ordnance Survey maps and British Geological Survey Maps. Appropriate licensing fees will be paid (costs have been included in the budget). In the final report to the client, all copyright vector data will be 'flattened' so that it cannot be digitally extracted.

A6. Data sharing and accessibility

10.4.7 To maximise re-use of the project data, digital information will be stored in widely-used formats wherever possible (although for some specialist analyses and read-outs, as well as photogrammetry this may not be feasible)

- Final public reports .pdf/a
- Text .doc or .txt
- Spreadsheets .xls or .csv
- Databases (if not converted to spreadsheets) .accdb
- Survey .dwg, .dxf, .shp
- GIS .shp, .shx, .cpg, .dbf, .prj, .qpj
- Photographs (uncompressed, minimum 10MB) .tiff or .raw

A7. Selection and preservation

10.4.8 This DMP will be updated by the Project Manager following post-excavation assessment.

10.4.9 The digital archive will be transferred to the University of Cambridge digital repository at the conclusion of the project. Preservation of the archive will not be time limited by the Apollo repository. If for any reason it is not possible to deposit the archive in the University's repository, then it will be deposited with the Archaeology Data Service.

10.4.10 An OASIS record has been opened for the project on commencement (Appendix 3).

10.4.11 The digital archive will comprise the final versions of the following documents:

- Project Design (the project budget will be redacted)
- Final project report (both .pdf and .doc)
- CAD/survey files
- Site registers (database or spreadsheet)
- Context sheets (database)
- Finds registers (database or spreadsheet)
- Scans of site plans and section drawings
- Specialist databases, spreadsheets, diagrams
- Selected site photographs

10.4.12 The following files will not form part of the public archive deposited:

- social media posts
- illustration files
- non-final versions of all documents
- working calculations
- financial and contractual information
- any information deemed confidential or data covered by GDPR

10.4.13 Site photographs will be assessed by the CAU's Graphics and Finds team, and only clear illustrative images will be included in the public archive deposited.

A.8 Documentation and metadata

10.4.14 The archive will be accompanied by metadata listing the contents of the archive, with each file listed by name and file type, along with a brief description of the contents (where not apparent from the file name). The meta-data will also include descriptive lists of all the abbreviations and acronyms used.

A.9 Version control

10.4.15 This Data Management Plan will be revised as required.

Table 9: Summary of resources in the digital archive to be deposited

Resources	Format
Project Design (the project budget will be redacted)	.pdfa
Final project report (both .pdf and .doc)	.pdfa, .doc
CAD/survey files	.dwg, dxf, .shp
Site registers (database or spreadsheet)	.xls, .csv, .accdb
Context sheets (database)	.xls, .csv, .accdb
Finds registers (database or spreadsheet)	.xls, .csv, .accdb
Scans of site plans and section drawings	.tiff
Specialist databases, spreadsheets, diagrams	.xls, .csv, .accdb
Selected site photographs (estimated 100 files)	.tiff, .raw

11. PROGRAMME FOR FURTHER WORK

11.1 Project team

Table 10: Post-excavation Team

Name	Initials	Organisation	Role
Tom Bourne	TB	CAU	Project Officer
Emma Beadsmoore	EB	CAU	Project Manager
Katie Anderson	KA	CAU	Roman Pottery Specialist/Editor
Sarah Percival	SP	CAU	Prehistoric Pottery Specialist
Vida Rajkovaca	VR	CAU	Animal Bone Specialist
Ros Quick	RQ	CAU	Materials Specialist
Ben Neil	BN	CAU	Human Bone Specialist
Miquel Rovira	MR	CAU	Worked Bone Specialist
Emily Forster	EF	Sheffield Archaeobotanical consultancy	Pollen Specialist
Simon Timberlake	ST	Freelance	Burnt and Worked Stone Specialist
Sabrina Salmon	SS	CAU	Archivist
Bryan Crossan	BC	CAU	Illustrator
Laura Hogg	LH	CAU	Illustrator
Dave Webb	DW	CAU	Photography

11.2 Project Tasks

Table 11: Task list and Time Allocation

Task	Staff	No. of Days
Project Management		
Team meetings	TB, KB, EB	1
Meeting with specialists	VR, KA, TB	0.5
Stratigraphic Analysis		
Finalise site phasing and feature groups	TB	2
Incorporate artefact dating/C14 with stratigraphy	TB	2
Update context index with final phasing and groups	TB	1
Update illustrations and digital plans to reflect any changes	BC	1
Illustrations		
Produce phased site plans	BC	2
Selection of sections for report	TB	0.5
Illustration of selected artefacts	LH	5
Photography of selected artefacts	DW	0.5
Artefacts: further analysis, archive report and publication text		
Prehistoric Pottery	SP	2
Roman Pottery	KA	9
Worked Stone	ST	1
Cermaic Building Material	RQ	1

Task	Staff	No. of Days
Metalwork	RQ	1
Burnt and Worked Clay	SP	1
Worked Bone	MR	1
Ecofacts: further analysis, archive report and publication text		
Faunal remains	VR	6
Human remains	BN	4
Pollen	EF	4
Radiocarbon dating		
Selection and submission of three samples for C14 dating.	BN	0.5
Report Writing		
Produce overall stratigraphic text and site narrative	TB	5
Integrate finds reports	TB	1
Integrate any documentary evidence/comparative work	TB	1
Write discussion and conclusion	TB	5
Internal edit	KA, EB	1
Incorporate edits	TB	1
Publication		
Produce publication text	TB, KA	10
Produce publication figures	BC	2
Internal edit	KA, EB	2
Incorporate edits	TB	1
Send to publisher for referee comments	TB	0.5
Revisions following referee comments	TB	2
Final edit/proof read	TB, KA	1.5
Archiving		
Compile paper archive	SS	
Archive/delete digital photographs	SS	
Compile/check and deposit material archive	SS	

11.3 Public dissemination

11.3.1 Once full analysis and reporting has been carried out, details of the site's archaeology will be made public through the CAU's website and social media channels.

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13. APPENDIX 1: CONTEXT LIST

Table 12: Context List

Context No.	Feature No.	Feature type	Length (m)	Width (m)	Depth (m)	Description	Additional Info	Phase / date
100	100	Gully		0.29	0.1	Linear gully		Mid-Late Roman
101	100	Gully		0.44	0.1	Linear gully		Mid-Late Roman
102	101	Furrow		0.5	0.1	Linear furrow		Post Med
103	101	Furrow		0.7	0.05	Linear furrow		Post Med
104	102	Gully		0.45	0.2	Linear gully		Mid-Late Roman
105	103	Furrow		0.6	0.22	Linear furrow		Post Med
106	102	Gully		0.56	0.21	Linear gully terminus		Mid-Late Roman
107	104	Ditch		0.76	0.23	Linear ditch terminus		Mid-Late Roman
108	105	Posthole	0.5	0.54	0.18	Sub-circular posthole		Mid-Late Roman
109	106	Posthole	0.42	0.5	0.19	Sub-circular posthole		Mid-Late Roman
110	107	Posthole	0.44	0.42	0.14	Sub-circular posthole		Mid-Late Roman
111	108	Posthole	0.55	0.63	0.13	Sub-circular posthole		Mid-Late Roman
112	109	Ditch		0.61	0.29	Linear ditch	Compound C	Mid-Late Roman
113	110	Ditch		0.45	0.39	Linear ditch	Compound B	Mid-Late Roman
114	111	Furrow		0.5	0.08	Linear furrow		Post Med
115	112	Posthole	0.42	0.49	0.19	Sub-circular posthole		Mid-Late Roman
116	113	Posthole	0.44	0.42	0.2	Circular posthole		Mid-Late Roman
117	114	Posthole	0.42	0.42	0.19	Circular posthole		Mid-Late Roman
118	115	Posthole	0.4	0.37	0.13	Sub-circular posthole		Mid-Late Roman
119	116	Posthole	0.4	0.43	0.14	Sub-circular posthole		Mid-Late Roman
120	117	Posthole	0.32	0.45	0.1	Sub-circular posthole		Mid-Late Roman
121	118	Pit	0.48	0.46	0.36	Circular pit		Mid-Late Roman
122	119	Posthole	0.33	0.34	0.14	Circular posthole		Mid-Late Roman

Context No.	Feature No.	Feature type	Length (m)	Width (m)	Depth (m)	Description	Additional Info	Phase / date
123	109	Ditch		0.65	0.15	Linear ditch	Compound C	Mid-Late Roman
124	109	Ditch		0.57	0.16	Linear ditch terminus	Compound C	Mid-Late Roman
125	104	Ditch		0.66	0.26	Linear ditch		Mid-Late Roman
126	104	Ditch		0.53	0.17	Linear ditch terminus		Mid-Late Roman
127	120	Ditch		1.2	0.22	Linear ditch	Enclosure 3	Mid-Late Roman
128	120	Ditch		0.75	0.12	Linear ditch	Enclosure 3	Mid-Late Roman
129	120	Ditch		0.42	0.1	Linear ditch	Enclosure 3	Mid-Late Roman
130	121	Ditch		0.42	0.25	Linear ditch	Compound B	Mid-Late Roman
131	122	Pit	0.49	0.9	0.19	Oval pit		Mid-Late Roman
132	123	Pit	1.68	0.68	0.23	Sub-oval pit		Mid-Late Roman
133	124	Pit	1.48	0.64	0.24	Sub-oval pit		Mid-Late Roman
134	125	Pit	1.08	0.51	0.13	Sub-oval pit		Mid-Late Roman
135	126	Pit	1.34	0.4	0.13	Sub-oval pit		Mid-Late Roman
136	127	Pit	0.47	0.44	0.21	Circular pit		Mid-Late Roman
137	128	Pit	0.49	0.33	0.15	Circular pit		Mid-Late Roman
138	129	Pit	0.5	0.36	0.15	Circular pit		Mid-Late Roman
139	130	Pit	0.55	0.46	0.18	Circular pit		
140	131	Pit	2.26	1.49	0.15	Oval pit		
141	132	Pit	0.9	1.2	0.2	Sub-oval pit		Mid-Late Roman
142	133	Ditch		1.05	0.28	Linear ditch terminus	Compound C	Mid-Late Roman
143	133	Ditch		0.9	0.31	Linear ditch	Compound C	Mid-Late Roman
144	134	Pit	2.5	2.03	0.6	Oval pit		Mid-Late Roman
146	136	Ditch		0.75	0.17	Linear ditch terminus		Mid-Late Roman
147	137	Pit	1.2	1.2	0.33	Circular pit		Mid-Late Roman
148	138	Ditch		0.64	0.21	Linear ditch		Mid-Late Roman
149	139	Ditch		0.7	0.17	Linear ditch	Enclosure 3	Mid-Late Roman
150	140	Ditch		0.5	0.25	Linear gully		Mid-Late Roman

Context No.	Feature No.	Feature type	Length (m)	Width (m)	Depth (m)	Description	Additional Info	Phase / date
151	141	Ditch		0.55	0.1	Linear gully terminus		Mid-Late Roman
152	133	Ditch		0.89	0.14	Linear ditch terminus	Compound C	Mid-Late Roman
153	143	Well	1.31	1.5	0.96	Sub-circular well		Mid-Late Roman
154	142	Ditch		0.52	0.19	Linear ditch terminus		Mid-Late Roman
155	142	Ditch		0.53	0.2	Linear ditch		Mid-Late Roman
156	142	Ditch		0.55	0.23	Linear ditch terminus		Mid-Late Roman
157	144	Ditch		0.74	0.13	Linear ditch terminus	Compound E	Mid-Late Roman
158	144	Ditch		0.64	0.2	Linear ditch	Compound D	Mid-Late Roman
159	145	Ditch		0.25	0.2	Linear ditch	Compound D	Mid-Late Roman
160	146	Inhumation	1.07	0.68	0.2	Sub-oval		
161	147	Gully		0.47	0.25	Curvilinear gully	Roundhouse 1	Later Iron Age
162	147	Gully		0.63	0.3	Curvilinear gully	Roundhouse 1	Later Iron Age
163	147	Gully		0.58	0.12	Curvilinear gully	Roundhouse 1	Later Iron Age
164	147	Gully		0.55	0.2	Curvilinear gully	Roundhouse 1	Later Iron Age
165	147	Gully		0.73	0.2	Curvilinear gully	Roundhouse 1	Later Iron Age
166	147	Gully		0.54	0.18	Curvilinear gully	Roundhouse 1	Later Iron Age
167	147	Gully		0.55	0.2	Curvilinear gully	Roundhouse 1	Later Iron Age
168	147	Gully		0.4	0.1	Curvilinear gully	Roundhouse 1	Later Iron Age
169	147	Gully		0.55	0.17	Curvilinear gully	Roundhouse 1	Later Iron Age
170	147	Gully		0.46	0.17	Curvilinear gully	Roundhouse 1	Later Iron Age
171	148	Posthole	0.37	0.37	0.11	Circular posthole		Mid-Late Roman
172	149	Posthole	0.3	0.28	0.12	Circular posthole		Mid-Late Roman
173	150	Posthole	0.31	0.27	0.14	Circular posthole		Mid-Late Roman
174	151	Posthole	0.35	0.35	0.1	Circular posthole		Mid-Late Roman
175	152	Posthole	0.27	0.27	0.07	Circular posthole		Mid-Late Roman
176	147	Gully		0.5	0.26	Curvilinear gully	Roundhouse 1	Later Iron Age
177	144	Ditch		1	0.34	Linear ditch	Compound D	Mid-Late Roman

Context No.	Feature No.	Feature type	Length (m)	Width (m)	Depth (m)	Description	Additional Info	Phase / date
178	153	Ditch		0.77	0.41	Linear ditch corner		Mid-Late Roman
179	154	Well	1.61	1.52	0.84	Sub-circular pit		Mid-Late Roman
180	133	Ditch		1.14	0.32	Linear ditch	Compound C	Mid-Late Roman
181	155	Posthole	0.3	0.27	0.19	Sub-circular posthole		Mid-Late Roman
182	156	Pit	0.83	0.17	0.17	Sub-oval pit		Mid-Late Roman
183	157	Pit	0.63	0.22	0.2	Sub-oval pit		Mid-Late Roman
184	158	Posthole	0.63	0.28	0.14	Sub-oval pit		Mid-Late Roman
185	159	Posthole	0.31	0.15	0.09	Sub-circular posthole		Mid-Late Roman
186	160	Ditch		0.62	0.23	Linear ditch		Mid-Late Roman
187	161	Pit	1	1.02	0.3	Sub-circular pit		Mid-Late Roman
188	162	Ditch		0.67	0.2	Linear ditch	Compound C	Mid-Late Roman
189	160	Ditch		0.76	0.1	Linear ditch		Mid-Late Roman
190	163	Gully		0.55	0.18	Linear gully		Mid-Late Roman
191	164	Gully		0.5	0.16	Linear gully		Mid-Late Roman
193	166	Ditch		0.39	0.1	Linear ditch	Compound A	Mid-Late Roman
194	349	Ditch		0.4	0.2	Linear ditch		Mid-Late Roman
195	168	Ditch		0.65	0.13	Linear ditch terminus	Compound E	Mid-Late Roman
196	168	Ditch		0.56	0.14	Linear ditch	Compound E	Mid-Late Roman
197	169	Ditch		0.95	0.26	Linear ditch	Enclosure 3	Mid-Late Roman
198	171	Ditch		0.44	0.17	Linear gully	Enclosure 3	Mid-Late Roman
199	170	Ditch		0.53	0.07	Linear ditch	Enclosure 3	Mid-Late Roman
200	140	Ditch		0.4	0.15	Linear ditch terminus		Mid-Late Roman
201	133	Ditch		0.9	0.31	Linear ditch	Compound C	Mid-Late Roman
202	133	Ditch		0.9	0.31	Linear ditch	Compound C	Mid-Late Roman
204	160	Ditch		1.12	0.22	Linear ditch terminus		Mid-Late Roman
205	162	Ditch		0.65	0.21	Linear ditch terminus	Compound C	Mid-Late Roman
206	168	Ditch		0.62	0.2	Linear ditch	Compound E	Mid-Late Roman

Context No.	Feature No.	Feature type	Length (m)	Width (m)	Depth (m)	Description	Additional Info	Phase / date
208	145	Ditch		0.58	0.17	Linear ditch	Compound D	Mid-Late Roman
209	174	Ditch		0.57	0.33	Linear ditch		Mid-Late Roman
210	175	Ditch		0.43	0.15	Linear ditch		Later Iron Age
211	144	Ditch		1.19	0.4	Linear ditch	Compound D	Mid-Late Roman
212	178	Ditch		0.49	0.25	Linear ditch terminus	Compound A	Mid-Late Roman
213	176	Ditch		0.77	0.21	Curvilinear ditch corner	Compound D	Mid-Late Roman
214	184	Ditch		0.5	0.1	Linear ditch	Enclosure 3	Mid-Late Roman
215	144	Ditch		1.1	0.35	Linear ditch	Compound D	Mid-Late Roman
216	178	Ditch		0.44	0.31	Linear ditch	Compound A	Mid-Late Roman
217	140	Ditch		0.25	0.05	Linear ditch		
218	179	Posthole	0.35	0.32	0.13	Sub-circular posthole		
219	180	Posthole	0.37	0.31	0.07	Sub-circular posthole		
220	181	Posthole	0.44	0.44	0.22	Circular posthole		
221	167	Ditch		0.62	0.18	Linear ditch	Roundhouse 6	Later Iron Age
222	167	Ditch		0.7	0.25	Linear ditch	Roundhouse 6	Later Iron Age
223	182	Ditch		0.65	0.08	Linear ditch		Later Iron Age
224	183	Ditch		0.57	0.12	Linear ditch terminus		Later Iron Age
225	184	Ditch		0.78	0.28	Linear ditch	Enclosure 3	Mid-Late Roman
226	184	Ditch		0.8	0.22	Linear ditch	Enclosure 3	Mid-Late Roman
227	184	Ditch		0.48	0.17	Linear ditch	Enclosure 3	Mid-Late Roman
228	185	Posthole	0.38	0.41	0.17	Sub-circular posthole		
229	186	Posthole	0.4	0.39	0.22	Sub-circular posthole		
230	187	Posthole	0.45	0.35	0.12	Sub-circular posthole		
231	188	Posthole	0.35	0.33	0.22	Sub-circular posthole		
232	189	Posthole	0.28	0.42	0.1	Sub-circular posthole		
233	190	Pit	0.95	0.34	0.15	Sub-oval pit		Post Med
234	191	Pit	1.4	0.55	0.16	Sub-oval pit		Post Med

Context No.	Feature No.	Feature type	Length (m)	Width (m)	Depth (m)	Description	Additional Info	Phase / date
235	192	Pit	1.12	0.43	0.15	Sub-oval pit		Post Med
236	193	Pit	0.7	0.32	0.1	Sub-oval pit		Post Med
237	194	Ditch		1.35	0.45	Linear ditch	Enclosure 2	Later Iron Age
238	195	Ditch		0.82	0.5	Linear ditch	Enclosure 2	Later Iron Age
239	196	Ditch		0.8	0.36	Linear ditch	Enclosure 2	Later Iron Age
241	198	Ditch		0.63	0.21	Linear ditch	Compound D	Mid-Late Roman
242	170	Ditch		0.73	0.23	Linear ditch	Enclosure 3	Mid-Late Roman
243	199	Ditch		0.7	0.23	Linear ditch	Compound D	Mid-Late Roman
244	198	Ditch		0.96	0.33	Linear ditch terminus	Compound D	Mid-Late Roman
245	170	Ditch		1.01	0.36	Linear ditch	Enclosure 3	Mid-Late Roman
246	200	Pit	1	0.72	0.28	Circular pit		Mid-Late Roman
247	201	Posthole	0.41	0.42	0.12	Sub-circular posthole		
248	202	Posthole	0.47	0.43	0.2	Sub-circular posthole		
249	203	Posthole	0.45	0.39	0.16	Sub-circular posthole		
250	204	Posthole	0.59	0.46	0.15	Sub-circular posthole		
251	205	Posthole	0.38	0.35	0.09	Sub-circular posthole		
252	206	Posthole	0.47	0.34	0.15	Sub-circular posthole		Mid-Late Roman
253	207	Posthole	0.46	0.39	0.17	Sub-circular posthole		
254	208	Posthole	0.39	0.4	0.21	Sub-circular posthole		
255	209	Pit	0.6	0.9	0.2	Oval pit		
256	210	Cremation	0.6	0.6	0.13	Sub-circular pit		
257	211	Ditch		0.54	0.11	Linear ditch		Mid-Late Roman
258	212	Pit	1.02	0.92	0.15	Sub-oval pit		
259	138	Ditch		0.52	0.14	Linear ditch		Mid-Late Roman
260	176	Ditch		0.5	0.13	Linear ditch	Compound D	Mid-Late Roman
261	184	Ditch		0.32	0.07	Linear ditch	Enclosure 3	Mid-Late Roman
262	170	Ditch		0.63	0.23	Linear ditch	Enclosure 3	Mid-Late Roman

Context No.	Feature No.	Feature type	Length (m)	Width (m)	Depth (m)	Description	Additional Info	Phase / date
263	213	Inhumation	2.08	0.71	0.2	Sub-oval		Mid-Late Roman
264	214	Cremation	0.48	0.45	0.17	Sub-circular pit		
265	215	Cremation	0.5	0.8	0.1	Sub-oval cremation		
266	216	Pit	0.59	0.62	0.14	Sub-circular pit		
267	217	Pit	0.3	0.32	0.05	Sub-circular pit		
268	214	Cremation	0.48	0.45	0.17	Sub-circular pit		
269	215	Cremation	0.5	0.8	0.1	Sub-oval cremation		
270	195	Ditch		1.57	0.37	Linear ditch	Enclosure 2	Later Iron Age
271	218	Cremation	0.65	0.71	0.1	Sub-circular pit		
272	219	Pit	0.6	0.56	0.11	Sub-circular pit		
273	220	Pit	0.94	0.5	0.19	Oval pit		
274	221	Watering hole	4.37	4.77	1.56	Sub-circular watering hole		Mid-Late Roman
275	222	Pit	1.5	1.59	0.24	Sub-oval pit		Mid-Late Roman
276	195	Ditch		1.9	0.54	Linear ditch	Enclosure 2	Later Iron Age
277	223	Pit	2.7	2.5	0.25	Sub-circular pit		Mid-Late Roman
278	224	Pit	1.3	0.8	0.46	Circular pit		Later Iron Age
279	176	Ditch		0.88	0.15	Linear ditch	Compound D	Mid-Late Roman
280	176	Ditch		0.1	0.17	Linear ditch	Compound D	Mid-Late Roman
281	225	Ditch		0.6	0.2	Linear ditch terminus		Mid-Late Roman
282	226	Ditch		0.5	0.1	Linear ditch terminus		Mid-Late Roman
283	227	Pit	0.94	0.96	0.13	Sub-circular pit		Later Iron Age
284	194	Ditch		1.34	0.39	Linear ditch terminus	Enclosure 2	Later Iron Age
285	196	Ditch		1.75	0.49	Linear ditch	Enclosure 2	Later Iron Age
286	228	Ditch		0.87	0.37	Linear ditch terminus	Enclosure 2	Later Iron Age
287	228	Ditch		0.79	0.33	Linear ditch terminus	Enclosure 2	Later Iron Age
288	176	Ditch		0.4	0.18	Linear ditch	Compound D	Mid-Late Roman
289	194	Ditch		0.9	0.33	Linear ditch	Enclosure 2	Later Iron Age

Context No.	Feature No.	Feature type	Length (m)	Width (m)	Depth (m)	Description	Additional Info	Phase / date
290	229	Pit	2	1.3	0.35	Sub-oval pit		
291	230	Gully		0.95	0.4	Curvilinear ditch		Later Iron Age
292	230	Gully		0.97	0.28	Curvilinear ditch terminus		Later Iron Age
293	231	Gully		0.8	0.12	Curvilinear ditch terminus		Later Iron Age
294	120	Ditch		0.93	0.11	Linear ditch	Enclosure 3	Mid-Late Roman
295	194	Ditch		1.15	0.36	Linear ditch	Enclosure 2	Later Iron Age
296	196	Ditch		1.52	0.44	Linear ditch	Enclosure 2	Later Iron Age
297	232	Gully		0.62	0.1	Curvilinear gully	Roundhouse 3	Later Iron Age
298	233	Gully		0.46	0.08	Curvilinear gully	Roundhouse 3	Later Iron Age
299	232	Gully		0.45	0.12	Curvilinear gully	Roundhouse 3	Later Iron Age
300	233	Gully		0.45	0.05	Curvilinear gully	Roundhouse 3	Later Iron Age
301	234	Gully		0.56	0.24	Curvilinear ditch		Later Iron Age
302	235	Pit	1.37	1.16	0.2	Circular pit		Later Iron Age
303	236	Pit	1.36	1.3	0.15	Circular pit		Later Iron Age
304	237	Pit	0.76	0.62	0.28	Sub-circular pit		
305	238	Pit	1.4	1.26	0.5	Sub-circular pit		
306	231	Gully		0.55	0.11	Curvilinear ditch		Later Iron Age
307	239	Pit	0.78	0.68	0.2	Sub-circular pit		Later Iron Age
308	240	Pit	0.44	0.68	0.16	Sub-circular pit		Later Iron Age
309	241	Pit	0.68	1.49	0.22	Sub-circular pit		Later Iron Age
310	242	Ditch		1.41	0.47	Linear ditch		Mid-Late Roman
311	243	Pit	0.88	0.88	0.32	Sub-circular pit		Mid-Late Roman
312	226	Ditch		0.47	0.29	Linear ditch		Mid-Late Roman
313	244	Pit	1.35	0.95	0.1	Sub-oval pit		Later Iron Age
314	245	Posthole	0.43	0.36	0.05	Circular posthole		Mid-Late Roman
315	246	Posthole	0.38	0.3	0.07	Circular posthole		Mid-Late Roman
316	247	Posthole	0.37	0.3	0.18	Circular posthole		Mid-Late Roman

Context No.	Feature No.	Feature type	Length (m)	Width (m)	Depth (m)	Description	Additional Info	Phase / date
317	248	Posthole	0.33	0.3	0.07	Circular posthole		Mid-Late Roman
318	249	Posthole	0.3	0.29	0.12	Circular posthole		Later Iron Age
319	250	Posthole	0.52	0.54	0.22	Circular posthole		Later Iron Age
320	255	Gully		0.3	0.1	Curvilinear gully	Roundhouse 4	Later Iron Age
321	255	Gully		0.55	0.14	Curvilinear gully	Roundhouse 4	Later Iron Age
323	255	Gully		0.24	0.16	Curvilinear gully	Roundhouse 4	Later Iron Age
324	255	Gully		0.32	0.12	Curvilinear gully	Roundhouse 4	Later Iron Age
325	255	Gully		0.43	0.23	Curvilinear gully	Roundhouse 4	Later Iron Age
326	255	Gully		0.38	0.1	Curvilinear gully	Roundhouse 4	Later Iron Age
327	255	Gully		0.46	0.2	Curvilinear gully	Roundhouse 4	Later Iron Age
328	255	Gully		0.41	0.12	Curvilinear gully	Roundhouse 4	Later Iron Age
329	255	Gully		0.41	0.12	Curvilinear gully	Roundhouse 4	Later Iron Age
330	255	Gully		0.36	0.13	Curvilinear gully	Roundhouse 4	Later Iron Age
331	256	Quarry	1	1.82	0.4	Irregular pit		Mid-Late Roman
332	256	Quarry	1	3.37	0.4	Irregular pit		Mid-Late Roman
333	257	Ditch		0.46	0.18	Linear ditch		Mid-Late Roman
334	257	Ditch		0.36	0.13	Linear ditch		Mid-Late Roman
335	258	Watering hole	5	4.05	0.55	Sub-oval watering hole		Mid-Late Roman
336	259	Watering hole	3	3.75	1	Sub-oval watering hole		Mid-Late Roman
337	260	Watering hole	9	7.5	1.4	Oval watering hole		Mid-Late Roman
338	261	Watering hole	7	5.7	1.4	Oval watering hole		Mid-Late Roman
339	251	Pit	1	0.98	0.19	Irregular pit		Later Iron Age
340	252	Pit	0.33	0.22	0.35	Sub-circular pit		Later Iron Age
341	253	Pit	0.62	0.19	0.48	Sub-circular pit		
342	254	Pit	1.4	0.91	0.35	Sub-circular pit		Later Iron Age
343	262	Pit	0.62	0.84	0.26	Sub-circular pit		Mid-Late Roman
344	263	Ditch		1.12	0.29	Linear ditch		Mid-Late Roman

Context No.	Feature No.	Feature type	Length (m)	Width (m)	Depth (m)	Description	Additional Info	Phase / date
345	264	Hearth	0.65	0.43	0.08	Sub-oval pit		Later Iron Age
346	265	Ditch		3	0.72	Linear ditch corner	Enclosure 1	Later Iron Age
347	266	Ditch		2	0.76	Linear ditch corner	Enclosure 1	Later Iron Age
348	267	Posthole	0.51	0.54	0.12	Sub-circular posthole		Later Iron Age
349	268	Posthole	0.39	0.38	0.11	Circular posthole		Later Iron Age
350	269	Posthole	0.41	0.4	0.2	Circular posthole		Later Iron Age
351	270	Posthole	0.59	0.62	0.2	Sub-circular pit		Later Iron Age
352	271	Posthole	0.27	0.28	0.17	Circular pit		Later Iron Age
353	272	Posthole	0.34	0.32	0.18	Circular pit		Later Iron Age
354	273	Posthole	0.27	0.22	0.17	Sub-circular posthole		Later Iron Age
355	274	Posthole	0.26	0.24	0.18	Circular posthole		Later Iron Age
356	275	Pit	0.6	0.84	0.11	Oval pit		Mid-Late Roman
357	276	Tree throw	0.62	1.21	0.15	Oval silty hollow/tree throw		
358	277	Ditch		0.28	0.13	Linear ditch		Later Iron Age
359	278	Ditch		0.44	0.09	Linear ditch		Later Iron Age
360	176	Ditch		0.34	0.16	Linear ditch	Compound D	Mid-Late Roman
361	279	Pit	0.8	0.7	0.32	Circular pit		Later Iron Age
362	257	Ditch		0.5	0.2	Linear ditch		Mid-Late Roman
363	280	Gully		0.32	0.12	Linear beam slot		Later Iron Age
364	281	Pit	1.4	1.43	0.67	Sub-circular pit		Mid-Late Roman
365	282	Pit	0.54	0.66	0.25	Sub-circular pit		Later Iron Age
366	283	Pit	1.18	0.8	0.15	Sub-circular pit		Later Iron Age
367	284	Posthole	0.4	0.46	0.15	Sub-oval posthole		Later Iron Age
368	285	Posthole	0.41	0.39	0.12	Sub-circular posthole		Later Iron Age
369	170	Ditch		0.88	0.32	Linear ditch	Enclosure 3	Mid-Late Roman
370	109	Ditch		0.78	0.18	Linear ditch	Compound C	Mid-Late Roman
371	286	Posthole	0.19	0.36	0.1	Sub-circular posthole		Later Iron Age

Context No.	Feature No.	Feature type	Length (m)	Width (m)	Depth (m)	Description	Additional Info	Phase / date
372	287	Pit	0.78	0.53	0.2	Sub-oval pit		Later Iron Age
373	278	Ditch		0.57	0.22	Linear ditch		Later Iron Age
374	288	Gully		0.32	0.09	Linear gully		Mid-Late Roman
375	265	Ditch		2.2	0.21	Linear ditch	Enclosure 1	Later Iron Age
376	266	Ditch		1.58	0.83	Linear ditch	Enclosure 1	Later Iron Age
377	289	Pit		1.15	0.3	Sub-circular pit		Later Iron Age
378	266	Ditch		1.18	0.46	Linear ditch	Enclosure 1	Later Iron Age
379	265	Ditch		1.56	0.66	Linear ditch	Enclosure 1	Later Iron Age
380	290	Ditch		0.88	0.35	Linear ditch		Later Iron Age
381	291	Pit		3.9	0.6	Sub-circular pit		Later Iron Age
382	266	Ditch		1.69	0.65	Linear ditch	Enclosure 1	Later Iron Age
383	257	Ditch		0.39	0.15	Linear ditch		Mid-Late Roman
384	292	Ditch		0.66	0.26	Linear ditch terminus	Enclosure 2	Later Iron Age
385	293	Pit	1.32	1.14	0.29	Sub-circular pit		Later Iron Age
386	294	Gully		0.4	0.1	Linear gully		Later Iron Age
387	295	Posthole	0.55	0.32	0.15	Sub-oval posthole		Later Iron Age
388	296	Gully		0.31	0.15	Curvilinear gully	Roundhouse 2	Later Iron Age
389	296	Gully		0.32	0.09	Curvilinear gully	Roundhouse 2	Later Iron Age
390	296	Gully		0.32	0.16	Curvilinear gully	Roundhouse 2	Later Iron Age
391	296	Gully		0.42	0.18	Curvilinear gully	Roundhouse 2	Later Iron Age
392	296	Gully		0.52	0.2	Curvilinear gully	Roundhouse 2	Later Iron Age
393	296	Gully		0.42	0.17	Curvilinear gully	Roundhouse 2	Later Iron Age
394	296	Gully		0.38	0.12	Curvilinear gully	Roundhouse 2	Later Iron Age
395	296	Gully		0.28	0.1	Curvilinear gully	Roundhouse 2	Later Iron Age
396	297	Gully		0.37	0.18	Curvilinear gully		Later Iron Age
397	297	Gully		0.31	0.12	Curvilinear gully		Later Iron Age
398	298	Ditch		0.74	0.28	Linear ditch terminus		Mid-Late Roman

Context No.	Feature No.	Feature type	Length (m)	Width (m)	Depth (m)	Description	Additional Info	Phase / date
399	299	Pit	0.76	0.87	0.26	Sub-circular pit		
400	300	Gully		0.36	0.22	Curvilinear gully terminus	Roundhouse 5	Later Iron Age
401	300	Gully		0.3	0.1	Curvilinear gully terminus	Roundhouse 5	Later Iron Age
402	301	Pit	0.94	1.1	0.22	Oval pit		
403	302	Pit	1.4	1.3	0.58	Circular pit		
404	303	Ditch		0.67	0.18	Linear ditch		Mid-Late Roman
405	304	Pit	1.68	0.89	0.3	Irregular pit		
406	303	Ditch		0.47	0.11	Curvilinear ditch		Mid-Late Roman
407	292	Ditch		1.23	0.58	Linear ditch	Enclosure 2	Later Iron Age
408	305	Pit	1.3	1	0.4	Sub-circular pit		Later Iron Age
409	306	Pit	2.3	2.1	0.35	Sub-circular pit		Later Iron Age
410	298	Ditch		0.54	0.28	Linear ditch		Mid-Late Roman
411	307	Ditch		0.57	0.15	Linear ditch		Mid-Late Roman
412	308	Pit	0.73	0.65	0.23	Sub-circular pit		
413	309	Pit	0.75	0.58	0.12	Sub-circular pit		
414	310	Pit	0.8	1.1	0.24	Circular pit		
415	311	Pit	1	0.9	0.24	Circular pit		
416	312	Pit	2.1	1.35	0.84	Circular pit		Later Iron Age
417	313	Pit	0.51	0.51	0.19	Circular pit		Mid-Late Roman
418	120	Ditch		1.24	0.4	Linear ditch	Enclosure 3	Mid-Late Roman
419	109	Ditch		0.7	0.15	Linear ditch terminus	Compound C	Mid-Late Roman
420	169	Ditch		0.5	0.36	Linear ditch terminus	Enclosure 3	Mid-Late Roman
421	314	Ditch		0.34	0.22	Linear gully	Enclosure 3	Mid-Late Roman
422	292	Gully		1	0.63	Linear ditch	Enclosure 2	Later Iron Age
423	265	Ditch		0.45	0.35	Linear ditch	Enclosure 1	Later Iron Age
424	266	Ditch		1.38	0.64	Linear ditch	Enclosure 1	Later Iron Age
425	176	Ditch		0.64	0.15	Linear ditch	Compound D	Mid-Late Roman

Context No.	Feature No.	Feature type	Length (m)	Width (m)	Depth (m)	Description	Additional Info	Phase / date
426	176	Ditch		0.64	0.15	Linear ditch	Compound D	Mid-Late Roman
427	176	Ditch		0.64	0.15	Linear ditch	Compound D	Mid-Late Roman
428	315	Gully		0.36	0.12	Curvilinear gully	Roundhouse 5	Later Iron Age
429	316	Gully		0.46	0.11	Curvilinear gully terminus		Later Iron Age
430	317	Gully		0.38	0.11	Linear gully terminus		
431	317	Gully		0.32	0.11	Linear gully terminus		
432	298	Ditch		0.67	0.28	Linear ditch		Mid-Late Roman
433	298	Ditch		0.66	0.15	Linear ditch terminus		Mid-Late Roman
434	176	Ditch		0.6	0.2	Linear ditch	Compound D	Mid-Late Roman
435	176	Ditch		0.6	0.2	Linear ditch	Compound D	Mid-Late Roman
436	176	Ditch		0.6	0.2	Linear ditch	Compound D	Mid-Late Roman
437	176	Ditch		0.6	0.2	Linear ditch	Compound D	Mid-Late Roman
438	176	Ditch		0.6	0.2	Linear ditch	Compound D	Mid-Late Roman
439	176	Ditch		0.6	0.2	Linear ditch	Compound D	Mid-Late Roman
440	176	Ditch		0.6	0.2	Linear ditch	Compound D	Mid-Late Roman
441	176	Ditch		0.6	0.2	Linear ditch	Compound D	Mid-Late Roman
442	176	Ditch		0.6	0.2	Linear ditch	Compound D	Mid-Late Roman
443	176	Ditch		0.6	0.2	Linear ditch	Compound D	Mid-Late Roman
444	176	Ditch		0.6	0.2	Linear ditch	Compound D	Mid-Late Roman
445	176	Ditch		0.6	0.2	Linear ditch	Compound D	Mid-Late Roman
446	176	Ditch		0.6	0.2	Linear ditch	Compound D	Mid-Late Roman
447	257	Ditch		0.67	0.2	Linear ditch		Mid-Late Roman
448	257	Ditch		0.48	0.2	Linear ditch terminus		Later Iron Age
449	318	Pit	1.84	1.15	0.5	Sub-oval pit		Later Iron Age
450	319	Pit	0.95	0.84	0.33	Irregular pit		Later Iron Age
451	320	Ditch		1.2	0.14	Linear ditch terminus		Later Iron Age
452	320	Ditch		0.84	0.22	Linear ditch		Later Iron Age

Context No.	Feature No.	Feature type	Length (m)	Width (m)	Depth (m)	Description	Additional Info	Phase / date
453	320	Ditch		0.52	0.24	Linear ditch terminus		Later Iron Age
454	321	Ditch		0.58	0.34	Linear gully		Later Iron Age
455	322	Ditch		0.6	0.22	Linear ditch		Later Iron Age
456	323	Ditch		0.58	0.16	Linear gully		Later Iron Age
457	324	Pit	0.68	0.6	0.28	Circular pit		Mid-Late Roman
458	325	Pit	0.49	0.54	0.15	Circular pit		Mid-Late Roman
459	170	Ditch		0.9	0.27	Linear ditch	Enclosure 3	Mid-Late Roman
460	198	Ditch		0.37	0.13	Linear ditch terminus	Compound D	Mid-Late Roman
461	326	Ditch		0.32	0.1	Linear ditch		
462	327	Watering hole	5.96	5.02	1.51	Sub-oval watering hole		Mid-Late Roman
463	147	Gully		0.55	0.17	Curvilinear gully	Roundhouse 1	Later Iron Age
464	147	Gully		0.5	0.26	Curvilinear gully	Roundhouse 1	Later Iron Age
465	147	Gully		0.63	0.3	Curvilinear gully	Roundhouse 1	Later Iron Age
466	147	Gully		0.63	0.3	Curvilinear gully	Roundhouse 1	Later Iron Age
467	147	Gully		0.58	0.2	Curvilinear gully	Roundhouse 1	Later Iron Age
468	147	Gully		0.58	0.2	Curvilinear gully	Roundhouse 1	Later Iron Age
469	147	Gully		0.73	0.2	Curvilinear gully	Roundhouse 1	Later Iron Age
470	147	Gully		0.55	0.2	Curvilinear gully	Roundhouse 1	Later Iron Age
471	147	Gully		0.4	0.2	Curvilinear gully	Roundhouse 1	Later Iron Age
472	328	Gully		0.2	0.26	Curvilinear gully terminus		Later Iron Age
473	328	Gully		0.38	0.12	Curvilinear gully		Later Iron Age
474	328	Gully		0.32	0.18	Curvilinear gully terminus		Later Iron Age
475	329	Pit	0.78	0.43	0.08	Circular pit		Later Iron Age
476	232	Gully		0.5	0.13	Curvilinear gully	Roundhouse 3	Later Iron Age
477	233	Gully		0.38	0.06	Curvilinear gully	Roundhouse 3	Later Iron Age
478	330	Pit	0.86	1.3	0.23	Oval pit		
479	331	Pit	0.69	0.65	0.18	Sub-circular pit		

Context No.	Feature No.	Feature type	Length (m)	Width (m)	Depth (m)	Description	Additional Info	Phase / date
480	332	Posthole	0.48	0.51	0.14	Sub-circular posthole		
481	333	Posthole	0.4	0.4	0.15	Circular posthole		
482	334	Posthole	0.3	0.31	0.14	Sub-circular posthole		
483	335	Posthole	0.35	0.34	0.09	Circular posthole		Later Iron Age
484	336	Cremation	0.66	0.7	0.21	Sub-circular pit		
485	337	Posthole	0.4	0.39	0.13	Circular posthole		Later Iron Age
486	338	Posthole	0.46	0.42	0.07	Sub-circular posthole		Later Iron Age
487	339	Pit	0.66	0.69	0.13	sub-circular pit		Later Iron Age
488	340	Pit	1	0.93	0.3	Circular pit		Later Iron Age
489	341	Pit	0.8	1.16	0.23	Oval pit		Mid-Late Roman
490	342	Posthole	0.29	0.28	0.11	Circular posthole		Mid-Late Roman
491	343	Pit	2.51	2.23	0.66	Sub-circular pit		Mid-Late Roman
492	344	Pit	3	1.6	1.18	Sub-circular pit		Later Iron Age
493	322	Ditch		0.5	0.4	Linear ditch terminus		
494	345	Ditch		0.28	0.09	Curvilinear gully terminus		Later Iron Age
495	230	Gully		0.5	0.22	Curvilinear gully terminus		Later Iron Age
496	255	Gully		0.3	0.1	Curvilinear gully	Roundhouse 4	Later Iron Age
497	255	Gully		0.32	0.16	Curvilinear gully	Roundhouse 4	Later Iron Age
498	255	Gully		0.43	0.23	Curvilinear gully	Roundhouse 4	Later Iron Age
499	255	Gully		0.46	0.2	Curvilinear gully	Roundhouse 4	Later Iron Age
500	255	Gully		0.41	0.12	Curvilinear gully	Roundhouse 4	Later Iron Age
501	255	Gully		0.41	0.12	Curvilinear gully	Roundhouse 4	Later Iron Age
502	255	Gully		0.41	0.12	Curvilinear gully	Roundhouse 4	Later Iron Age
503	296	Gully		0.32	0.15	Curvilinear gully	Roundhouse 2	Later Iron Age
504	296	Gully		0.32	0.16	Curvilinear gully	Roundhouse 2	Later Iron Age
505	296	Gully		0.42	0.18	Curvilinear gully	Roundhouse 2	Later Iron Age
506	296	Gully		0.52	0.2	Curvilinear gully	Roundhouse 2	Later Iron Age

Context No.	Feature No.	Feature type	Length (m)	Width (m)	Depth (m)	Description	Additional Info	Phase / date
507	296	Gully		0.52	0.2	Curvilinear gully	Roundhouse 2	Later Iron Age
508	296	Gully		0.42	0.17	Curvilinear gully	Roundhouse 2	Later Iron Age
509	296	Gully		0.38	0.12	Curvilinear gully	Roundhouse 2	Later Iron Age
510	169	Ditch		0.62	0.2	Linear ditch	Enclosure 3	Mid-Late Roman
511	142	Ditch		0.4	0.15	Linear ditch		Mid-Late Roman
512	136	Ditch		0.8	0.15	Linear ditch		Mid-Late Roman
513	297	Gully		0.37	0.18	Curvilinear gully		Later Iron Age
514	297	Gully		0.31	0.12	Curvilinear gully		Later Iron Age
515	336	Cremation	0.66	0.7	0.21	Sub-circular pit		
516	167	Ditch		0.52	0.25	Curvilinear ditch	Roundhouse 6	Later Iron Age
517	167	Ditch		0.59	0.19	Curvilinear ditch	Roundhouse 6	Later Iron Age
518	160	Ditch		0.56	0.14	Linear ditch		Mid-Late Roman
519	162	Ditch		0.62	0.18	Linear ditch	Compound C	Mid-Late Roman
520	346	Pit	0.99	0.66	0.13	Sub-oval pit		Later Iron Age
521	347	Ditch		1.36	0.23	Linear ditch		
522	347	Ditch		1.21	0.17	Linear ditch terminus		
523	176	Ditch		0.88	0.15	Linear ditch	Compound D	Mid-Late Roman
524	176	Ditch		0.88	0.15	Linear ditch	Compound D	Mid-Late Roman
525	348	Ditch		0.55	0.11	Linear ditch		Mid-Late Roman
526	211	Ditch		0.52	0.15	Curvilinear ditch		Mid-Late Roman
527	194	Ditch		0.47	0.32	Linear ditch	Enclosure 2	Later Iron Age
528	167	Gully		0.76	0.23	Curvilinear gully	Roundhouse 6	Later Iron Age
529	327	Watering hole	1.72	0.65	0.4	Sub-oval watering hole		Mid-Late Roman

14. APPENDIX 2: SPECIALIST ASSESMENT REPORTS

14.1 Appendix 2A: Flint

14.1.1 Two pieces of flint debitage weighing 2g was recovered from the excavation. No further work is recommended on this material.

14.2 Appendix 2B: Prehistoric Pottery (Sarah Percival)

Summary

14.2.1 A moderate assemblage of 690 sherds weighing 9898g were collected from 36 features. The bulk of the pottery dates to the Later Iron Age (350BC – 50BC) and Late Iron Age (50BC-AD70). A single residual sherd of Early Bronze Age pottery was also recovered (Table 13).

14.2.2 The assemblage represents domestic debris and suggests occupation activity from the Mid Iron Age continuing into the Late Iron Age to Roman period.

Introduction and Methodology

14.2.3 A total of 690 sherds weighing 9,898g representing a minimum of 111 vessels (MNV) were collected from 36 features. The majority of the sherds are of Later Iron Age date (350BC – 50BC) with these sherds forming 84% of the total assemblage by weight. A further 16% of the pottery is of Late Iron Age type. A single sherd of Early Bronze Age pottery was also recovered. The assemblage is moderately to poorly preserved and often abraded. The mean sherd weight is high at 14g.

Table 13: Quantity and weight of sherds by spotdate

Spot date	Quantity	Weight (g)	Maximum no of vessels
Early Bronze Age	1	15	1
Later Iron Age	611	8317	90
Late Iron Age	78	1566	20
Total	*690*	*9898*	*111*

14.2.4 The assemblage was analysed in accordance with the guidelines for analysis and publication recommended by the Prehistoric Ceramic Research Group (PCRG 2010). Forms follow Hill 2003 for Later Iron Age vessels and Thompson 1982 for Late Iron Age transitional forms. The total assemblage was studied and a full catalogue prepared. The sherds were examined by eye and using a hand lens (x 20 magnification) and were divided into fabric groups defined on the basis of inclusion types. Vessel form was recorded and the sherds were counted and weighed to the nearest whole gram. Decoration, condition, food residues and sooting were also noted.

Assemblage Character and Summary

14.2.5 A single body sherd of Early Bonze Age pottery was recovered from sub-circular pit F.238. The sherd is made of fine, silty fabric with moderate, medium-sized sub-angular. pale grog inclusions and has wet hand wiped surfaces. The exact date and form of the Early Bronze Age pottery in uncertain.

14.2.6 The Iron Age assemblage contains a mix of Later Iron Age and Late Iron Age pottery forms representing a minimum of 110 vessels. Rims are present from 29 forms (Table 14).

14.2.7 Utilitarian jars dominate the assemblage, the most common form being the slack-shouldered or ovoid bodied jar with everted rim (Form D) dating to the Mid and Later Iron Age (350BC+) and continuing in use beside Late Iron Age forms. Similar Later Iron Age slack shouldered jars with upright rim (form A) are also present along with high shouldered jars with upright necks and scored surfaces (form E), and ovoid neckless jars with direct rim or rim defined by groove (forms K and M). All are handmade. No decorated vessels are present. One rim sherd from an ovoid bodied jar (form K) has a row of pre-firing piercings below the rim. Drilled holes, perhaps to accomplish a repair, were present on the body of one high shouldered jar (form E). Late Iron Age forms are common. These include handmade and possibly slow wheel made cordoned and bead-rimmed jars (forms Q, C1-1, B3-1 and B1-1) along with handmade barrel-shaped, bead rim jars with combed surfaces (form P) and sinuous S profiled jars (form G).

Table 14: Description and date of Iron Age pottery by form

Form	Description	Date	Vessel count
D	Slack shouldered/ ovoid jar with everted neck (Hill 2003)	350-50BC	5
Q	Bead rim cordoned jar (Hill 2003).	MCIBC-MLC1AD	4
C7-1	Rilled jar with everted rim (Thompson 1982).	LC1BC-MC1AD	3
P	Barrel-shaped jar with everted rim (Hill 2003).	C1BC	3
A	Slack shouldered/ ovoid jar with upright neck and direct rim (Hill 2003).	350-50BC	2
E	High shouldered jar with short upright neck (Hill 2003).	350-50BC	2
K	Ovoid bodied jar with direct rim and no neck (Hill 2003).	350-50BC	2
P/C1-2	Barrel-shaped jar with bead rim (Hill 2003/ Thompson 1982).	C1BC	2
B1-1	Plain everted necked jars (Thompson 1982).	LC1BC-MC1AD	1
B3-1	Everted rim wide mouthed jars with bulges between cordons on shoulder (Thompson 1982).	MCIBC-MLC1AD	1
C1-1	Bead rim jar (Thompson 1982).	LC1BC	1
D1-3	Wide mouth bowl with girth groove (Thompson 1982).	LC1BC-MC1AD	1
G	S profile jar/ bowl (Hill 2003).	350-50BC	1
M	Ovoid bodied jar with direct rim defined by groove (Hill 2003).	350-50BC	1
Total			*29*

14.2.8 The Iron Age assemblage is dominated by shell-tempered fabrics which form 92% of the assemblage by weight (Table 15). The remainder of the sherds are made of sandy fabrics. The extensive use of shell tempering is typical of pottery from the Peterborough region throughout the prehistoric period and reflects the geology of the area which overlies Jurassic Cornbrash limestone with shelly mudstone deposits (BGS online). Shell rich fabrics form the major component of the contemporary assemblages from Burdett's Nursery and from sites around Peterborough at Werrington and Cat's Water, Fengate, where a limited range of fine to coarse shelly fabrics formed the bulk of the assemblages alongside a small transitional shell with grog and grog component (Mackreth 1988, 112; Pryor 1984, 134).

Table 15: Iron Age pottery by fabric

Fabric code	Description	Date	Quantity	Wt (g)	% wt
S2	Moderate to common medium shell (0.25-1mm)	350-50BC	333	3641	36.84
S3	Moderate to common coarse shell (1-3mm)	350-50BC	142	3125	31.62
S1	Moderate fine shell (<0.25)	350-50BC	49	561	5.68
S2OXS	Moderate to common medium shell (0.25-1mm). Grey core oxidised surfaces	350-50BC	19	547	5.53
S3OX	Moderate to common coarse shell (1-3mm). Oxidised	350-50BC	21	542	5.48
QS1OXS	Sandy with moderate fine shell (<0.25). Grey core oxidised surfaces	350-50BC	16	364	3.68
QS1	Sandy with moderate fine shell (<0.25).	350-50BC	22	282	2.85
S3OXS	Moderate to common coarse shell (1-3mm). Grey core oxidised surfaces	350-50BC	9	245	2.48
STW	Well sorted moderate to common medium shell (0.25-1mm)	50BC-AD70+	10	133	1.35
SL	Moderate to common medium shelly limestone (0.25-1mm	350-50BC	4	95	0.96
S1OXS	Moderate fine shell (<0.25). Oxidised surfaces and grey core	350-50BC	8	94	0.95
QS2	Sandy with moderate to common medium shell (0.25-1mm).	350-50BC	3	42	0.42
GTW	Slow wheel made/ wheel formed sandy greyware with moderate pale grey grog	50BC-AD70	3	38	0.38
micaSandwich	Sandy micaceous ware with orange core and black surfaces	50BC-AD70+	2	35	0.35
S2voids	Moderate to common medium shell (0.25-1mm). With common plate shaped voids	350-50BC	18	31	0.31
SRWOXS	Sandy reduced ware with oxidised surfaces	50BC-AD70+	1	26	0.26
Qsandwich	Sandy ware with orange core and black surfaces	50BC-AD70	2	24	0.24
Q1	Handmade common moderate rounded quartz sand in fine clay matrix	350-50BC	2	20	0.20
QChRF	Handmade common moderate rounded quartz sand in fine clay matrix with rare fine sub-angular chalk	350-50BC	16	13	0.13
QGTW	Handmade and wheel formed sandy grog-tempered ware	50BC-AD70	6	12	0.12
S2OX	Moderate to common medium shell (0.25-1mm). Oxidised surfaces	350-50BC	2	10	0.10
Q1OXS	Handmade common moderate rounded quartz sand in fine clay matrix. Oxidised surfaces	350-50BC	1	3	0.03
Total			*689*	*9883*	*100*

Contextual Summary

14.2.9 The majority of the Iron Age pottery came from ditch fills which produced 83% of the total assemblage by weight. A further 9% came from gullies, 7% from pits and less than 1% from postholes. Within the Later Iron Age style group 81% came from ditches, 11% from gullies, 7% from pits and 0.60% from postholes. Linear ditch F194 contained an especially large deposit of Later Iron Age pottery. The pit assemblages comprise small mostly single sherds, with only one, pit F318, containing a moderate assemblage of 31 sherds. Late Iron Age pot came almost exclusively from ditches (*c.*96%) with a further 3% from gullies and only 0.57% from two pits (F243 and F281). Especially large deposits of Late Iron Age pot came from linear ditch F.195 and rectilinear ditch corner F266 which also contained a large dump of Later Iron Age pottery. (Table 16).

Table 16: Iron Age pottery by feature type

Feature type	Feature no.	Date	Quantity	Weight (g)	% Weight
Circular pit	224	Later Iron Age	1	81	0.82%
	312	Later Iron Age	22	174	1.76%
Curvilinear ditch	230	Later Iron Age	23	268	2.71%
	234	Later Iron Age	5	32	0.32%
Curvilinear ditch corner	176	Later Iron Age	2	22	0.22%
		Late Iron Age	19	184	1.86%
Curvilinear ditch terminus	231	Later Iron Age	19	94	0.95%
		Late Iron Age	2	36	0.36%
Irregular pit	319	Later Iron Age	1	4	0.04%
Linear ditch	120	Later Iron Age	19	259	2.62%
	167	Later Iron Age	16	230	2.33%
	170	Late Iron Age	2	99	1.00%
	194	Later Iron Age	174	2437	24.66%
		Late Iron Age	2	26	0.26%
	195	Later Iron Age	13	798	8.07%
		Late Iron Age	16	349	3.53%
	196	Later Iron Age	5	20	0.20%
	277	Later Iron Age	16	13	0.13%
	278	Later Iron Age	15	172	1.74%
Linear ditch terminus	142	Late Iron Age	2	31	0.31%
	228	Later Iron Age	13	32	0.32%
	292	Later Iron Age	19	357	3.61%
Rectilinear ditch corner	265	Later Iron Age	1	8	0.08%
	266	Later Iron Age	146	2416	24.45%
		Late Iron Age	27	820	8.30%
Roundhouse drip gully	147	Later Iron Age	3	314	3.18%
	232	Later Iron Age	17	19	0.19%
	255	Later Iron Age	9	125	1.26%
	296	Later Iron Age	12	29	0.29%
		Late Iron Age	6	12	0.12%
Sub-circular pit	223	Later Iron Age	1	9	0.09%
	241	Later Iron Age	8	28	0.28%

Feature type	Feature no.	Date	Quantity	Weight (g)	% Weight
	243	Later Iron Age	1	18	0.18%
		Late Iron Age	1	2	0.02%
	281	Late Iron Age	1	7	0.07%
	289	Later Iron Age	2	26	0.26%
	293	Later Iron Age	1	2	0.02%
	305	Later Iron Age	10	82	0.83%
Sub-circular posthole	206	Later Iron Age	2	50	0.51%
Sub-oval pit	132	Later Iron Age	1	59	0.60%
	287	Later Iron Age	3	27	0.27%
	318	Later Iron Age	31	112	1.13%
Total			689	9883	100.00%

Discussion

14.2.10 The later Iron Age pottery is comparable to contemporary assemblages found locally at Burdett's Nursery, Werrington and Cat's Water around Peterborough and Wakerly and Weekley in Northamptonshire (Mackreth 1988, Pryor 1984, Jackson and Ambrose 1978; Jackson, and Dix 1987). The forms and fabrics suggesting occupation from perhaps 350BC similar to that found at Burdett's but here with especial focus on the late 2nd century BC to early 1st century AD.

14.2.11 The use of shell in the Later Iron Age and shell and grog in the Late Iron Age is again comparable to Burdett's and with larger settlement assemblages found at Werrington and Cat's Water, (Pryor 1984, 134). This indicates that the pottery from the Whittlesey region falls within the shell tempered tradition characteristic of the Iron Age around Peterborough and more widely across the lower Nene Valley in Cambridgeshire and Northamptonshire with limited grog-tempered fabrics being introduced in the later Iron Age (Mackreth 1988, 120).

14.2.12 The presence of sooting and limescale on several vessels confirms the use of the pottery as domestic cooking vessels.

Statement of Potential

14.2.13 The Iron Age of Whittlesey is beginning to come into focus following recent excavations at Burdett's Nursery, which is contemporary or perhaps a little earlier in focus than this site. The assemblage contributes to this growing data set and helps to fill in the gaps in our understanding of the ceramics of this area of Lower Nene valley.

14.2.14 Despite a high percentage of the assemblage being recovered from ditches the pottery would benefit from limited further study once detailed stratigraphic analysis of site date has taken place, to further refine the ceramic typology of the area.

Recommendations for Further Work

14.2.15 The assemblage is fully quantified however a full analysis report is recommended, including examination of the pottery by site phase and final feature groupings, once these are complete and a detailed discussion of the assemblage within its wider setting, with particular reference to Iron Age pottery previously excavated at Whittlesey, and with the assemblages from Werrington, Cat's Water, Fengate, Wakerly and Weekley (Mackreth 1988, Pryor 1984), Jackson and Ambrose 1978; Jackson, and Dix 1987)

14.2.16 A maximum of 20 sherds will require illustration and a full illustrated sherd catalogue should be prepared.

Discard

14.2.17 In accordance with the Prehistoric Ceramic Research Group Guidelines (PCRG 2010) no pottery should be discarded.

14.3 Appendix 2C: Roman Pottery (Katie Anderson)

Summary

14.3.1 The excavation produced a total of 3036 sherds of Roman pottery weighing 42264g and representing 69.89 EVEs (estimated vessel equivalent) and a minimum of 235 vessels (MNV). The material dates from the earlier to the later Roman period, although activity before the mid-2nd century AD is limited. The pottery suggests a peak in activity in the mid-2nd-mid 3rd century AD, with the latest dating material suggesting the site had gone into decline by the later 3rd century AD. The Roman assemblage is dominated by shell-tempered wares and sandy greywares including a large number of Nene Valley greyware vessels, although it is of note that there are considerably fewer examples of Nene Valley colour-coated wares.

Introduction and Methodology

14.3.2 A total assemblage of 3036 sherds of Roman pottery weighing 49518g and representing 69.89 EVEs (estimated vessel equivalent) and a minimum of 235 vessels (MNV) was recovered from the excavations. All of the pottery was analysed and recorded in accordance with the Study Group for Roman Pottery guidelines (Perrin 2011), using a combination of fabric codes from the National Roman Fabric Reference Collection (Tomber & Dore 1998) and local Cambridgeshire series. This report provides quantification and summary of the Roman pottery assemblage, as well as highlighting the potential of the material and recommendations for further work.

Assemblage Chronology and Character

The Roman pottery is dominated by material dating to the mid-later Roman period (c.AD150-300), which represents 77.2% of the assemblage by sherd count (Table 17). There is a small quantity of early Roman pottery (mid-late 1st century AD), totalling thirty-one sherds weighing 201g, representing no more than a background presence during this time. The pottery evidence indicates that there was a decline in activity after the mid-3rd century AD, and whilst there is some material with a date range of AD200-400, the lack of any definite 4th century AD pottery suggests activity had ceased by this time. A total of 18% of the assemblage (by sherd count) could only be broadly dated as Romano-British due to the generic nature of the fabrics/forms.

Table 17: Quantification of Roman pottery by pottery date

Pot Date	No.	%	Wt(g)	%	MNV	EVE
Early Roman (AD40-100)	31	1.0	201	0.5	2	0.57
Mid Roman (AD100-200)	114	3.8	897	2.1	8	0.83
Mid-later Roman (AD150-300/400)	2344	77.2	35388	83.7	207	59.79
Romano-British (AD40-400)	547	18.0	5778	13.7	18	5.7
TOTAL	**3036**	**100**	**42264**	**100**	**235**	**66.89**

14.3.3 The assemblage comprises primarily small to medium-sized sherds, with a mean weight of 13.9g, which is within the average range for rural sites. Approximately 8% of the assemblage was noted as being heavily abraded and much of it is fragmented, including fifty-six sherds (819g) from a Nene Valley self-coloured closed vessel from Ditch F.176, context (279.01) and fifty-five sherds (133g) from a fine sandy black-surfaced ware imitation samian bowl also from Ditch F.176, but context (433.01). Furthermore, a limited number of cross-context refitting sherds were identified, all of which derive from contexts (425.01) and (444.01), both of which are part of Ditch F.176. The condition and fragmented nature of the assemblage indicates that at least some of the material may represent sherds which were initially part of surface deposits before later being deposited within cut features.

14.3.4 A variety of fabrics were identified (Table 18), with coarseware fabrics dominating, representing 87.2% of the assemblage by sherd count 2646 sherds, 36892g). Within this category shell-tempered wares are the most common fabric group, representing 55.9% of the coarsewares by count (1479 sherds, 21785g). The exact source of these wares is as yet uncertain, however, it is most likely that they derive from a local source(s) from the Cambridgeshire Fen region (Vince 2013, 329). Jars dominate the shell-tempered component, representing seventy-four of the minimum eighty-six vessels identified (by MNV). Unsourced sandy wares are also common, comprising grey, black-slipped, reduced and oxidised varieties, of which greywares the most frequently occurring, accounting for a further 20.4% of the coarsewares by count (541sherds, 7195g), including both fine and coarse sandy varieties as well as sherds both with and without silver mica. Nene Valley greywares wares represent the largest group of sourced coarsewares, totalling 319 sherds weighing 3752g thus representing 12.1% of the coarsewares, with an additional fifty-six Nene Valley self-coloured wares (819g) and eleven Nene Valley whitewares (232g). The prevalence of Nene Valley wares within the coarseware assemblage is unsurprising given the sites relatively close proximity to the production centre some 16km to the west of the site. The only other sourced coarsewares comprise eleven Godmanchester whiteware sherds (179g). A small number of grog-tempered sherds were identified (fabrics GROG, QG1 and QG2), totalling thirty-six sherds weighing 220g, the majority of which are earlier Roman in date.

14.3.5 Romano-British finewares account for a further 11.6% of the Roman assemblage by count (353 sherds, 5022g), dominated by unsourced sandy wares, which occur in the same broad fabric groups as the unsourced sandy coarsewares, but comprise fineware vessel forms such as dishes and beakers. Black-slipped wares are the most commonly occurring within this category, totalling eighty-two sherds (706g). Nene Valley wares represent the largest fineware group, with four different fabrics identified, accounting for 49.7% of the finewares. These comprise colour-coated sherds (fifty-six sherds, 376g), fine greywares (forty-two sherds, 1374g), fine whitewares (seventy-six sherds, 998g) and parchment wares (one sherd, 2g). Whilst it is not unexpected for the Nene Valley wares to dominate the fineware category, the quantity of colour-coated sherds is noticeably low, especially when compared to the greywares (both fine and coarse) and whitewares.

14.3.6 Also, of note are two fine sandy black-surfaced vessels, one of which has stamped circle and rouletted decoration from Ditch F.211, context (257.01) and a possible imitation of a samian Dragendorff (Dr) 37 bowl, with rouletted small dots and applied cordons from Ditch F.176, context (443.01). These vessels are part of the 'London/Essex fineware' tradition wares, although that is a misleading name which has been avoided during the recording of the assemblage, as these wares have also been identified at other sites around *Durobrivae*, with local production most likely (Perrin 1999, 106-107). No further sourced finewares were identified, and it is of note that there are no examples of the more common late Roman

fabrics such as Oxfordshire or Hadham. This may be due to issues of trade and supply, but may also reflect a lack of activity in the later 3rd and 4th centuries AD.

14.3.7 The remaining 1.3% of the assemblage comprises imported wares, totalling thirty-seven sherds weighing 350g. This group is dominated by samian sherds. Vessels from all three production centres are represented, with East Gaulish wares the most commonly occurring (twenty-one sherds, 199g). Of the sherds which could be assigned a vessel form, plain dishes and cups are most common, with examples of Dragendorff (Dr)31 dishes (MNV 3) and Dr33 cups (MNV 3.). Two sherds from decorated vessels were identified, comprising a rim sherd from a Dr37 bowl with ovolo decoration from Ditch F.160, context (186.01) and of most interest a bearded man from a bowl from Ditch F. 139, context (149.01). Two vessels had makers stamps, although in both cases the vessels are so heavily abraded that the makers cannot be identified. A further two vessels had evidence for small post-firing holes in the side of the vessels (from Ditch F.160 contexts (518.01) and (186.01). These holes possibly represent repair holes although there is no evidence for lead rivets or resin visible on either sherd. The remaining imported sherds comprise nine Argonne colour-coated wares (28g), all of which come from a single cornice rim beaker, with barbotine white painted decoration, recovered from Watering hole F.261, context (338.02).

Table 18: Quantification of Roman Pottery by Fabric

Fabric Code	Fabric	No.	Wt(g)	MNV	EVE
ARGO	Argonne colour-coated ware	9	28	1	0.12
BLKSL	Black-slipped ware (unsourced)	65	909	7	3.15
BLKSLM	Black-slipped ware - micaceous (unsourced)	84	483	3	1.69
BUFF	Buff sandy ware (unsourced)	5	37	1	0.1
CC	Colour-coat (unsourced)	24	191	0	1.7
CSCGW	Moderately coarse sandy greyware, occasional to moderate small calcareous inclusions	65	1136	11	2.28
CSGW	Coarse sandy greyware (unsourced)	328	5426	22	9.34
CSMGW	Coarse sandy micaceous greyware (unsourced)	16	278	2	0.35
CSOX	Coarse sandy oxidised ware (unsourced)	34	668	6	2.32
CSRDU	Coarse sandy reduced ware (unsourced)	10	348	1	1.7
CSSRDU	Coarse sandy ware with moderate to common shell	2	16	0	0
FSGW	Fine sandy greyware (unsourced)	165	1417	21	3.49
FSMGW	Fine sandy micaceous oxidised ware (unsourced)	62	724	10	3.53
FSMRDU	Fine sandy micaceous reduced ware (unsourced)	3	17	0	0
FSOX	Fine sandy oxidised ware (unsourced)	23	225	6	0.87
FSRDU	Fine sandy reduced ware (unsourced)	5	22	0	0
GODWW	Godmanchester whiteware	11	179	3	0.58
GROG	Grog-tempered ware	1	1	0	0
NVCC	Nene Valley colour-coated ware	57	511	3	1.55
NVGW	Nene Valley Greyware	361	5126	38	10.51
NVSC	Nene Valley self-coloured ware	57	821	0	1
NVWW	Nene Valley whiteware	87	1230	6	4.01
QG1	Fine sandy fabric with rare to occasional small grey grog inclusions white surface, dark grey core	8	65	0	0
QG2	Moderately sandy ware with occasional to moderate small grog	27	154	1	0.25
SAM	Samian (unsourced)	2	8	0	0
SAMCG	Samian Central Gaulish	4	111	1	1.51
SAMEG	Samian East Gaulish	21	199	6	2.1
SAMSG	Samian South Gaulish	1	4	0	0
SHELL	Shell-tempered ware	1479	21785	86	17.24

Fabric Code	Fabric	No.	Wt(g)	MNV	EVE
WSOX	White-slipped oxidised ware	1	2	0	0
WW	Whiteware (unsourced)	19	143	0	0.5
TOTAL	**x**	**3036**	**42264**	**235**	**69.89**

14.3.8 The majority of the assemblage comprises non-diagnostic body sherds which could not be assigned a vessel form, representing 68% of the assemblage (2051 sherds, 21963g,Table 19). The diagnostic sherds equate to a minimum of 235 different vessels (MNV) based on the number of unique rims identified, of which jars are the most commonly occurring (137 MNV). Bowls and dishes occur in almost identical numbers (17 and 21 MNV respectively), with smaller numbers of beakers (9 MNV), lids (5 MNV), flagons (3 MNV), cups (3 MNV) and mortaria (1 MNV). Overall, the assemblage represents a range of forms both for the storage, preparation and consumption of foodstuffs and drink.

Table 19: Quantification of Roman Pottery by Vessel Form

Form	No.	Wt(g)	MNV	EVE
Beaker	82	542	9	4.91
Beaker/jar	43	306	14	2.22
Bowl	108	1948	17	3.29
Closed	250	3727	0	10.18
Cup	14	101	3	2.71
Dish	42	1385	21	4.02
Dish/bowl	8	27	1	0.09
Dish/Lid	1	21	1	0.1
Flagon	58	579	3	2.82
Jar	613	14975	137	26.41
Lid	9	277	5	0.89
Lid/Bowl	2	42	1	0.12
Mortaria	5	98	2	0
Open	12	428	1	1.55
Unknown	1789	17808	20	10.58
TOTAL	**3036**	**42264**	**235**	**69.89**

14.3.9 Approximately 2.3% of the assemblage has usewear evidence (sixty-nine sherds, 2405g), including exterior sooting (twenty-nine sherds, 1315g). Also of note are five vessels which have post-firing holes, comprising the two samian vessels discussed above, one fineware imitation samian Curle 15 dish and two shell-tempered base sherds. In the case of the latter two vessels, it is likely that the holes represent modification, with both bases having a large central hole. However, the former three represent smaller holes in the side of the vessels which are more likely to represent repair holes. Indeed, in the case of the dish from Ditch F.144, context (157.01), this includes part of a lead rivet. A further three vessels (twenty sherds, 190g) were noted as having air-bubbles in vessel fabrics, comprising two coarse sandy calcareous greywares and one fine sandy micaceous greyware. These were recovered from three different features: Ditches F.133 and F.160 and Pit F.200. The sherd from F.160 had not split the fabric, and it was unclear with the remaining two vessels, whether these had broken as a result of the air-bubbles, indicative of being wasters. However, these vessel can at least be considered as 'seconds' and given the similarity in fabric of the sherds from F.133 and F.200, it is possible that these represent locally made vessels.

14.3.10 A total of 13.7% of the assemblage by sherd count is decorated (415 sherds, 7387g). Cordons, incised lines and combing are the most commonly applied techniques, with fewer

examples of barbotine, painting and rouletting. Other less common decoration techniques include fingernail impressions, embossed circles and roughcast decoration.

Contextual Summary

14.3.11 Roman pottery was recovered from 118 interventions, deriving from fifty-five features (Table 20) as well as some unstratified material. The majority of the contexts (eighty-nine) contain small assemblages of pottery (1-30 sherds), with an additional seventeen contexts containing medium-sized assemblages (31-99 sherds) and eleven large contexts (100+ sherds). The majority of the Roman pottery derives from ditches, representing 90% of the assemblage by sherd count (2732 sherds, 44377g). The remaining 10% of the assemblage derives from watering holes (3%), gullies (2.6%), pits (1.3%), wells and postholes (0.5% each) and burials (0.5%). With the final 1.6% of the assemblage comprised unstratified material.

Table 20: Quantification of Roman Pottery by Feature Type

Feature type	No.	Wt(g)
Cremation	9	118
Ditch	2732	37123
Gully	78	787
Inhumation	5	168
Pit	38	695
Posthole	14	263
Unstratified	57	229
Watering hole	89	2803
Well	14	78
TOTAL	**3036**	**42264**

14.3.12 Ditch F.176 produced the largest assemblage of material from the site, totalling 1243 sherds weighing 11840g, thus representing 41% of the total assemblage. Although a relatively large number of interventions were excavated along the length of this ditch (twenty-four of which fifteen contained pottery), the large quantity of pottery is not simply due to the number of excavated slots. Indeed, during the excavations, this feature was noted as being very finds rich in terms of pottery, despite all of the slots comprising just one fill. The quantity of material recovered from Ditch F.176 and the condition (a lower than average mean weight of 9.5g) highlights that this was a focus for refuse disposal in the mid-later Roman period, though that this assemblage derived from single fills suggests possible dumped material, which may have originated from a surface deposit/midden.

14.3.13 Three of the watering holes on the site produced moderate assemblages of pottery. F.221 contained fifty-three sherds weighing 1057g, deriving from four contexts. There is no chronological difference in the date of the material from different contexts, with all of it dating AD150-300. The assemblage comprises sherds from numerous different vessels, although in terms of unique rims, this equates to just six vessels (by MNV). A total of 38% of the pottery from this feature is noted as being abraded, although the mean weight is higher than the site average at 20g.

14.3.14 A further seventeen sherds weighing 1066g were recovered from F.260, which is possibly contemporary with F. 221, dating mid-later Roman and includes three sherds (624g) from some very large shell-tempered vessels including a storage jar rim with a rim diameter of 34cm. F.261 contained eighteen sherds weighing 658g, dating AD200-300. This includes nine sherds from an Argonne colour-coated cornice rim beaker (28g), one sherd (41g) from a Nene Valley whiteware beaded, hooked rim mortarium, one sherd from a Nene Valley

greyware flanged bowl (303g) and one sherd (151g) from a very large shell-tempered flanged rim from either a bowl or jar.

14.3.15 Small quantities of pottery were recovered from burials on the site, comprising nine sherds (118g) from Cremation burials F.214, F.215 and F.336, with an additional five sherds (168g) from Inhumation F.213. The material from the cremations was primarily recovered from the environmental samples, and comprises small, predominately shell-tempered body sherds, indicative of material that has been incidentally caught in the backfill of the feature rather than representing any deliberately placed grave goods. The vessel from Inhumation F.213 comprises five sherds (168g) from a coarse sandy and calcareous greyware jar with a short neck and beaded rim. This vessel can only be broadly dated as Romano-British. It is possible that this vessel may represent a truncated grave good, although it is also likely that it represents material caught-up in the backfill, as a result of truncation of earlier Ditch F.196.

Discussion

14.3.16 The pottery suggests activity began sometime during the mid-later 1st century AD, although the quantity of material of this date suggests it was no more than a background presence during this period. During the 2nd and 3rd centuries AD, activity appears to have intensified, with the site acquiring ceramics predominantly from the local area, with the Nene Valley kilns and local shell-tempered wares particularly well represented. The assemblage suggests activity continued into the mid-3rd century AD, after which there was a steep decline, reflecting probable abandonment by the late 3rd/early 4th century AD.

14.3.17 Given the sites relatively close proximity to the production centre, the relatively small quantities of Nene Valley colour-coated vessels are of interest, especially since the greywares were seemingly so readily available. One possible explanation for this discrepancy is that the Nene Valley greywares had a slightly earlier currency than the colour-coated wares, with production thought to begin around AD125/130, (Perrin 1999, 78), compared to AD150 for the colour-coated wares. It is therefore possible that the dominance of the former and relative lack of the latter is related to site chronology, highlighting a peak in the mid-2nd century AD, before the establishment of the colour-coated industry. However, this appears too simplistic an explanation given the presence of material in the assemblage with a definite post-mid 2nd century AD date. This therefore leaves the likely explanations to be related to issues of supply, although whether this is due to the specific nature of trade networks to the site or relative prosperity, wealth/status or simply choice is unclear.

Statement of Potential

14.3.18 The Roman pottery assemblage is primarily of local importance, including significant groups of shell-tempered wares and Nene Valley greywares. However, the location of the site has added a degree of importance to the assemblage and can significantly contribute to an greater understanding of the nature and dynamics of pottery supply and consumption on what would have been Whittlesey Island during the Roman period.

Recommendations for Further Work

14.3.19 The assemblage has been fully analysed and recorded and therefore no further work on the material is necessary. However, the archive report should also incorporate the material recovered from the evaluation phase of work (Perrin 2013).

14.3.20 Further work on the composition of the assemblage in terms of vessel fabrics and forms should be undertaken.

14.3.21 It will be necessary to quantify and analyse the material by final feature groupings once these are complete.

14.3.22 The pottery should be analysed by site phase once the phasing is complete in order to highlight any spatial changes in deposition over time.

14.3.23 The assemblage should be considered in its wider setting, with particular reference to other sites on Whittlesey, namely Burdett's Nursery (Anderson 2022).

14.3.24 It is recommended that five vessels are illustrated, focusing on some of the more unusual forms as well as the decorated samian sherd from F.139.

Discard

14.3.25 It is recommended that the bulk of the Roman pottery assemblage is retained. Material recovered from the environmental samples has been fully recorded and can be discarded (eighty-one sherds, 393g), except for six sherds, 91g from three cremation burials. It is also not necessary to retain the unstratified pottery (fifty-seven sherds, 229g).

14.4 Appendix 2D: Worked and Fired Clay (Sarah Percival)

Summary

14.4.1 A medium sized assemblage of 336 pieces of baked clay weighing 4,165g was recovered, mostly from pits and ditch fills. The assemblage includes 264 pieces of saltern debris or briquetage weighing 2,531g, of probable Roman date, four fragments of kiln furniture of early Roman date, and 68 fragments of undated baked clay from miscellaneous structures and hearths. No associated saltern or kiln structures were present at the site, suggesting that the bulk of the baked clay represents material brought in from elsewhere, perhaps as hard core to consolidate trackways or surfaces. An incomplete clay slingshot of Iron Age date was recovered from ditch F.109 and a fragment of Late Iron Age triangular loomweight was found in circular pit F. 312.

Introduction and Methodology

14.4.2 A total of 338 pieces of baked clay weighing 4,432g were collected. The assemblage includes a range of fragmentary briquetage, which forms the bulk of the assemblage, miscellaneous baked clay probably from ovens or hearths, four fragments from kiln supports and two fragments from baked clay objects (Table 21).

Table 21: Quantity and weight of baked clay by type, class and form

Material type	Class	Form	Quantity	Weight
Briquetage	Container	Body sherd	10	27
	Support	Clip	2	20
		Miscellaneous	9	64
		Pedestal	13	520
		Slab	35	529
	Undiagnostic	Miscellaneous	157	527
	Structure	Lining	24	639
		Miscellaneous	10	149
		Superstructure	4	56
Kiln	Support	Bar	2	1021

Material type	Class	Form	Quantity	Weight
		Fire bar	2	80
Object	Loomweight	Triangular	1	244
	Slingshot	Ovoid	1	23
Baked Clay	Undiagnostic	Miscellaneous	62	258
	Structure	Miscellaneous	5	134
		Superstructure	1	141
Total			338	4432

14.4.3 The complete assemblage was analysed and recorded by context, grouped by class, form and fabric, and counted and weighed to the nearest whole gram. The briquetage was analysed and recorded using the methodology and typology devised for the Fenland Management Project (Lane and Morris 2001). Kiln furniture typology follows Swan 1984 and baked clay objects Poole 1991. Diameter, width and height of pedestals and other supports were noted where complete measurements were available. The thickness of a sample of structural pieces was recorded.

Briquetage

Assemblage Character and Summary

14.4.4 The briquetage assemblage includes material representing containers, supports, structural and undiagnostic pieces distinguished by the presence of characteristic fabrics and discolouration from exposure to salt (Table 22). The assemblage is entirely redeposited and no surviving saltern structures were present.

Table 22: Quantity and weight of briquetage by class form, type and fabric group

Class	Form	Type	Fabric group	Thickness	Quantity	Weight (g)
Container	Body sherd	Undiagnostic	Vegetable		10	27
Support	Clip	CL3	Sandy		2	20
	Miscellaneous	Miscellaneous	Vegetable		9	64
	Pedestal	PD 5	Sandy		7	232
		PD 8	Sandy		3	161
			Vegetable		3	127
	Slab	Miscellaneous	Vegetable	26mm	9	200
		SLB1	Vegetable	30mm	26	329
Structure	Lining	Miscellaneous	Sandy		24	639
	Miscellaneous	Miscellaneous	Sandy		10	149
	Superstructure	Miscellaneous	Vegetable		4	56
Undiagnostic	Miscellaneous	Miscellaneous	Sandy		46	166
			Vegetable		111	361
Total					264	2531

14.4.5 The assemblage includes ten body sherds from containers. The container fragments are made of organic tempered fabric with moderate to abundant organic in a sandy clay matrix (Lane and Morris 2001, 499). The use of organic tempered containers, rather than those made of shell tempered fabrics suggests a Late Iron Age date (Lane and Morris 2001, 354). The container sherds are mostly fired to a bright orange, some with cream salt stained surfaces from exposure to salt.

14.4.6 Supports, which would have held the containers over the heat source, include pedestals, slabs and clips. Two pedestal forms are present. The roughly triangular form PD 8 and square form pedestal with splayed foot form PD 5 (Lane and Morris 2001, fig.115, 22 and fig 114, 20). The slab form SLB 1 has two opposing flat surfaces and is 30mm thick (Lane and Morris 2001, fig.118,41). One incomplete clip of form CL 3 is also present (Lane and Morris 2001, fig.113, 12). The clip is made of fine sandy clay with sparse organic inclusions (Table 23; fabric 3), the pedestals of sandy fabrics with some coarse inclusions (Table 23: fabrics 3 and 4) and the slab of coarse chaff tempered fabric containing chopped chaff (Table 23: fabric V3). All the supports are very fragmentary. The use of sandy fabrics for supports and clips is limited across the fens being found in small quantities within the mid to late Iron Age assemblage from Langtoft (Lane and Morris 2001, 352).

14.4.7 Structural elements include six fragments of hearth lining in poorly mixed fabric with one smoothed surface some with cream colouring from salt bleaching (Table 23: Fabric 5). Four fragments of superstructure in sandy fabric with fine chaff inclusions (Fabric QV) include one example with a smoothed concave surface, perhaps from a flue wall.

14.4.8 The remainder of the assemblage comprises undiagnostic fragments in a range of sandy and organic tempered fabrics. The majority of these fragments vegetable tempered (361g or 68%) the remainder sandy.

Table 23: Quantity and weight of briquetage by fabric

Fabric	Fabric description	Quantity	Weight (g)	% weight
1	Poorly mixed cream and orange swirled fine clay	27	198	7.82%
3	Fine clay with no visible inclusions	8	226	8.93%
4	Fine clay with sparse coarse crushed gravel and flint up to 5mm	33	304	12.01%
5	Poorly mixed lumpy with one smoothed cream surface	24	639	25.25%
QV	Sandy with fine chaff inclusions	4	56	2.21%
V1	Fine silty clay with moderate fine linear vesicles	141	765	30.23%
V2	Fine silty clay with moderate medium linear vesicles	1	14	0.55%
V3	Fine silty clay with common coarse linear voids from stems and platelets	26	329	13.00%
Total		**334**	**3331**	**100.00%**

Contextual Summary

14.4.9 Briquetage was recovered from a variety of ditches (42% by weight), gullies (28%), pits (29%) and in small quantities from watering hole F327 (0.4%;Table 24). The assemblage is all redeposited as no saltern structures were present at the site.

Table 24: Quantity, weight and percentage weight of briquetage by feature

Feature number	Feature type	Quantity	Weight (g)	% Weight
133	Ditch	9	200	7.9%
154	Pit	1	78	3.1%
157	Pit	20	123	4.9%
160	Ditch	1	27	1.1%
162	Ditch	4	85	3.4%
169	Ditch	1	15	0.6%
176	Ditch	82	271	10.7%
194	Ditch	5	14	0.6%

Feature number	Feature type	Quantity	Weight (g)	% Weight
195	Ditch	5	37	1.5%
228	Ditch	1	4	0.2%
230	Gully	2	30	1.2%
231	Gully	42	442	17.5%
235	Pit	10	279	11.0%
255	Gully	2	6	0.2%
266	Ditch	12	69	2.7%
287	Pit	5	19	0.8%
292	Ditch	2	5	0.2%
293	Pit	9	13	0.5%
297	Gully	15	236	9.3%
322	Ditch	1	8	0.3%
324	Pit	7	232	9.2%
327	Watering hole	2	9	0.4%
348	Ditch	26	329	13.0%
Total		264	2531	100.0%

Discussion

14.4.10 The form and fabric of the briquetage assemblage suggests it dates from the mid-Iron Age to early Roman period. By the middle Iron Age salterns were no longer viable in the area around Whittlesey, though redeposited briquetage has been recovered locally, for example at Burdett's Nursery (Percival 2022). No saltern structures are present at either this site or Burdett's Nursery, suggesting that deposits of salt making debris were being transported there for some other purpose, perhaps from the salt producing areas around March (*cf*. Morris 2008). Redeposited briquetage is known to have been used in the construction of the Fen Causeway at Nordelph and Downham West, where dumps of fragmentary containers, supports and structural debris of Mid Iron Age to Roman date were used as building material, having travelled some distance from the salterns which produced them (Percival 2001, 308). It is possible, therefore, that the briquetage found at both here and Burdett's Nursey was brought there for a similar secondary purpose, resulting in the highly fragmentary and dispersed assemblages recovered.

Kiln Furniture

Assemblage Character and Summary

14.4.11 Four fragments of possible kiln furniture weighing 1,101g were collected from two contexts.

14.4.12 The assemblage comprises two fragments from an incomplete kiln bar with square cross-section 38mm wide made of dense shell-tempered fabric with oxidised surfaces. The form and fabric resemble examples found at locally at Haddon dating to the mid to late 1st century AD (Hinman 2003). The width of the bar found at this site is smaller than the maximum widths recorded for the kiln bars from Haddon, suggesting that this single example is from the narrow end of a similar tapered bar (Hinman 2003, fig.29, KB09-KB13).

14.4.13 Two large fragments, again in dense shell-tempered fabric with oxidised surfaces, weighing 1,021g, are from a possible kiln support or 'cross piece' comparable to examples found at Stibbington (Swan 1984 fig.XII). The fragment has a curved profile and may have supported kiln bars as part of a kiln floor

Contextual Summary

14.4.14 The kiln bar fragments were recovered from ditch F.160, whilst the possible cross piece fragments came from pit F.134. No kiln structures were found at the site.

Discussion

14.4.15 The small quantity of portable kiln furniture found is comparable to mid-to-late 1st century AD examples found locally at Haddon (Hinman 2003 fig.29) and nearby Stibbington (Swan 1984 fig XII), some 15km west of Whittlesey. The fragments formed prefabricated elements of a kiln floor (Swan 1984, 96), though no kiln structures were found at the site. The very small size and poor condition of the assemblage is consistent with the redeposited context of deposition suggesting it may have been brought to the site to be reused for some secondary purpose.

Miscellaneous Baked Clay

Assemblage Summary

14.4.16 A total of 62 small abraded undiagnostic formless fragments of baked clay weighing 258g were recovered from 19 features (Table 25). The original function and date of the fragments is uncertain.

Table 25: Quantity and weight of undiagnostic fired clay by feature and fabric

Feature	Feature type	Fabric	Quantity	Weight (g)
109	Ditch	Poorly mixed cream and orange swirled fine clay	13	61
		Fine clay with no visible inclusions	1	5
120	Ditch	Poorly mixed cream and orange swirled fine clay	4	27
		Fine clay with no visible inclusions	1	18
121	Ditch	Coarse orange sandy	2	3
125	Pit	Fine clay with no visible inclusions	5	21
133	Ditch	Poorly mixed cream and orange swirled fine clay	2	6
		Fine clay with no visible inclusions	1	5
160	Ditch	Poorly mixed lumpy	1	7
168	Ditch	Fine clay with no visible inclusions	2	6
170	Ditch	Poorly mixed cream and orange swirled fine clay	2	14
		Fine clay with no visible inclusions	1	2
196	Ditch	Fine clay with no visible inclusions	2	3
207	Posthole	Coarse orange sandy	3	2
221	Watering hole	Poorly mixed cream and orange swirled fine clay	1	5
228	Ditch	Fine clay with no visible inclusions	1	9
230	Gully	Coarse orange sandy	1	6
231	Gully	Coarse orange sandy	1	6
234	Gully	Fine clay with no visible inclusions	10	37
295	Posthole	Poorly mixed cream and orange swirled fine clay	1	2
296	Gully	Fine clay with no visible inclusions	1	1
324	Pit	Fine clay with no visible inclusions	4	10
346	Pit	Fine clay with no visible inclusions	2	2
Total			62	258

Miscellaneous Structural Baked Clay

Assemblage Summary

14.4.17 Six small fragments of structural baked clay weighing 275g were recovered from three features (Table 26). The structural pieces were identified by the presence of a hand smoothed flat surface, the exact origin and date of the fragments is however uncertain.

Table 26: Quantity and weight of structural baked clay fragments by feature and fabric

Feature	Feature type	Fabric	Quantity	Weight (g)
120	Ditch	Coarse orange sandy	3	35
		Fine clay with no visible inclusions	1	10
170	Ditch	Fine clay with coarse crushed gravel and flint up to 5mm	1	141
176	Ditch	Fine clay with coarse crushed gravel and flint up to 5mm	1	89
Total			6	275

Baked Clay Objects

Slingshot

14.4.18 An incomplete ovoid shaped slingshot was recovered from the fill of linear ditch F.109. The slingshot is made of fine silty clay with no visible inclusions with a smoothed and well-finished appearance. The slingshot ovoid form with tapering ends (Poole 1991, 370). The slingshot is 43mm long and is of similar dimensions to the examples found at Danebury (Cunliffe and Poole 1991, fig.7.42, 7.72-7.76).

14.4.19 Baked clay slingshot are considered to have been used for hunting game or perhaps wildfowl (Poole 1991, 370) and have been found at a number of sites such as Duxford, Cambridgeshire (Lyons 2011, 67). A later Iron Age to early Roman date is suggested.

Loom weight

14.4.20 A fragment from a triangular loomweight weighing 244g in fine clay with sparse coarse crushed gravel and flint inclusions up to 5mm long was recovered from circular pit F.312. the loom weights are typical of later Iron Age to early Roman forms with perforations for suspension across each corner (Poole 1991, figs. 7.44 – 7.48).

14.4.21 Locally comparable loomweights have been recovered at Werrington in contexts of 2nd century BC to AD 100 date (Mackreth 1988, 98) and in later Iron Age and early Roman contexts at Fengate (Pryor 1984, fig.120).

Statement of Potential

14.4.22 The briquetage assemblage is the second such to have been recovered at Whittlesey (Percival 2022). Iron Age to Roman salt making debris in the area had previously been dismissed (Gurney 1982), however the recent evidence, including body sherds from salt boiling pans and the widespread presence of salt bleaching and other characteristic salt colouring, suggests that briquetage is indeed present here. It is still uncertain however if Iron Age and Roman salt winning was taking place at Whittlesey and it is likely that much of the material is redeposited, perhaps related to building of transport or other structures as seen elsewhere along the Fen Causeway (Percival 2001, 308). The assemblage is therefore of

some interest, both as a further example of salt winning technology and as evidence of the widespread reuse of this material in construction subsequent to use for its original function.

14.4.23 The kiln furniture came originally from a mid-to-late 1st century AD kiln of a type found locally at Haddon (Hinman 2003). The very small quantity of kiln furniture suggests reuse of baked clay material away from its point of original use similar to that suggested for the briquetage. With no associated kilns present the assemblage is of little further research potential.

14.4.24 The miscellaneous and structural fragments form a typical assemblage for Iron Age to Roman sites and represent the debris from baked clay structures such as hearths or ovens. No associated structures were recorded and the assemblage has no further research potential.

14.4.25 Slingshots are not especially common on Iron Age to Early Roman sites perhaps indicating specialised use such as the hunting of small game and birds (Poole 1991, 370), which may have been taking place at Whittlesey, exploiting the rich habitat on the margins of the fens.

14.4.26 The loomweight fragment indicates cloth production at the site. Loomweights are common finds on Iron Age to Roman settlement sites. This very small fragment is of no further research potential.

Recommendations for Further Work

14.4.27 The briquetage, kiln furniture, baked clay objects and miscellaneous and structural baked clay assemblages are all small, abraded and mostly residual. No associated structures for pottery or salt production are present. All of the worked and fired clay has been fully recorded no further analysis is required, although this report should be included within the archive report.

Discard

14.4.28 It is recommended that undiagnostic baked clay fragments from the following contexts be discarded.

Table 27: Material to be discarded.

Catalogue number	Context	Feature number	Quantity	Weight (g)
102	112.01	109	8	46
110	128.01	120	3	14
114	130.01	121	2	3
117	134.01	125	5	21
186	195.01	168	2	6
195	199.01	170	1	2
201	202.01	133	1	5
207	202.01	133	2	6
271	253.01	207	3	2
289	274.01	221	1	5
311	279.01	176	1	89
319	287.01	228	1	9
327	291.01	230	1	6
333	293.01	231	1	6
336	294.01	120	1	10

Catalogue number	Context	Feature number	Quantity	Weight (g)
340	296.01	196	2	3
408	369.01	170	1	141
436	387.01	295	1	2
439	388.01	296	1	1
460	418.01	120	4	48
495	457.01	324	4	10
499	459.01	170	2	14
542	520.01	346	2	2
558	112.01	109	6	20
568	204.01	160	1	7
581	127.01	120	1	18
Total			*68*	*533*

14.5 Appendix 2E: Ceramic Building Materials (Ros Quick)

Summary

14.5.1 A total of 39 fragments of Ceramic Building Material, weighing c.3.5kg, was recovered from the excavations. The material is all Roman in date apart from a single fragment of Post-Medieval or modern roof tile.

Introduction and Methodology

14.5.2 The assemblage consists of 39 fragments of Ceramic Building Material (CBM) weighing a total of 3.5kg. The material was assessed in full, and each fragment was recorded in a spreadsheet with details of size, weight, fabric and CBM type in line with the guidelines for the analysis of CBM set out by the Archaeological Ceramic Building Material Group (2002). Fabric types were assigned visually using a hand lens (x10 magnification) and major inclusions were noted. A catalogue of the material is included in this report, and a copy of the spreadsheet will be included with the project archive.

14.5.3 This report provides a summary of the CBM assemblage and discusses the potential of the material.

Assemblage Character and Summary

14.5.4 This is a small assemblage of CBM consisting of fragments of tile and brick, see . The assemblage is highly fragmented, with no examples of complete tiles see Table 28.

14.5.5 The majority of the assemblage consists of fragments of floor tile or probable floor tile, with only two certain examples of roofing tile (tegula) and one possible fragment of imbrex. There was a signature mark on one of the tegula fragments (<227> from ditch F.144) consisting of three partial parallel lines made with a finger or a blunt stick on the upper surface. Although stylistically typical of signature marks on tile, not enough survives to allocate it to a specific type. There was one example of a lower cutaway, probably a Type B6 lower cutaway form (see Mills 2013: 455 for the typology used here), on tegula <245> from ditch F.184. There was also one fragment of a probable wall tile with combed keying to the upper surface, designed for attaching wall plaster.

Table 28: Overview of CBM types

Type	Qty.	Wt. (g)
Floor tile	7	945
Probable floor tile	3	260
tegula	2	647
imbrex?	1	11
Wall tile	1	123
Brick	5	604
Undiagnostic tile	9	592
Undiagnostic tile or brick	10	373
Post-Medieval or modern roof tile	1	28
Total	**39**	**3,583**

14.5.6 All of the Roman CBM was manufactured in a medium sandy fabric, identified here as Fabric 1. The fragment of Post-Medieval roof tile has been assigned to Fabric 2, see 1.3.4 for fabric descriptions.

Fabric Descriptions

14.5.7 Fabric 1: A well sorted medium sandy fabric, often with frequent small voids and moderate limestone (up to c.5mm).

14.5.8 Fabric 2: A well sorted, hard fired medium sandy fabric (Post-Medieval roof tile).

Discussion

14.5.9 This is a small assemblage of CBM. However, amongst the identified material, there is an emphasis on floor tiles. Roofing material, including tegulae and imbrices, is poorly represented, although it is possible that some of the undiagnostic fragments may be roof tiles. The absence of box flue tile suggests that the floor tiles were not associated with a hypocaust system, and this contrasts with the nearby site at Burdett's Nursery, Whittlesey (Timberlake 2022), where both box flue tiles and pilae were identified, along with a higher number of roof tiles. The material from this site was all highly fragmented, with no evidence for an in-situ structure. CBM is likely to have continued to have been a useful resource after its use in buildings, in particular as hardcore for surfaces and foundations, and it is possible that this assemblage relates to these practices of re-use.

Statement of Potential

14.5.10 This is a small and highly fragmented assemblage of mainly Roman Ceramic Building Material. There are no examples of complete tiles and the material is not connected with an in situ structure. As such, it has limited scope for further contributing to the interpretation of the site, although it has relevance for understanding local patterns of use and re-use of CBM in the Roman period.

Recommendations for Further Work

14.5.11 The assemblage has been fully assessed, and no further work on the material is required. However, this report should form part of the site archive.

Discard

14.5.12 It is recommended that floor tile fragment <378> is retained as a fabric sample, but that the remainder of the material is discarded once the project is complete.

14.6 Appendix 2F: Worked and Burnt Stone (Simon Timberlake)

14.6.1 In total 18.5 kg (15 pieces) of worked stone, 2 kg (3 pieces) of building stone and 26.3 kg (102 pieces) of burnt stone was recovered from this excavation. Most of the burnt stone was prehistoric in date and originally associated with burnt stone features (though now redeposited within later ones), whilst the worked stone consisting of quern was Roman, as was the very small amount of probable building stone (material).

Methodology

14.6.2 The stone was identified visually using an illuminated x10 magnifying lens and compared where necessary with a reference collection. A dropper bottle containing dilute hydrochloric acid was used to confirm the presence or absence of calcite in the rock.

Burnt Stone

14.6.3 A total of 26,322g of burnt stone was recorded from this site, which was dominated by large heat-fractured cobbles and irregular slab pieces in excess of 100mm diameter. Most of these were just lightly to moderately burnt, although a moderate amount had been strongly burnt, and were cracked (crazed), and some of the sandstones softened and crumbled. There were a few examples of cracking and bleaching in the cobbles which suggested immersion of these into water whilst hot, for use as potboilers, although most of the stone simply exhibited reddening and cracking from having been heated within a fire (perhaps just once). These may therefore have been used as 'cooking stone', though some of the larger pieces could well have been used as hearth surround, in which case they might have been later (i.e. post-prehistoric) in date.

14.6.4 The assemblage was dominated by various sorts of sandstone (up to 75% of the total), as is so often the case with cobbles locally collected from the Drift deposits (either river gravels or primary boulder clay), although quartzite, metaquartzite (e.g. fluvially re-worked Bunter (Trias) cobbles) and local? Limestone made up another 25% of this burnt stone. In this case the incidence of igneous rocks (i.e. cobbles made of dolerite etc) was quite low, perhaps a reflection of the composition of the underlying Drift geology.

Worked Stone

14.6.5 A total of 18,541g of worked stone was recovered from this excavation. This consisted of 30g of lava quern (MNI=1), 1954g of Millstone Grit quern (MNI=3), 1546g of Old Red Sandstone quern (MNI=2), 12400g of Millstone Grit millstone (MNI=1), 427g of primary whetstone (MNI=1) and 2184g of an indeterminate type of worked stone – possibly some sort of sharpening stone (MNI=1). One of the quern fragments and the millstone piece had also seen a secondary re-use as whetstone.

Lava quern

14.6.6 These six pieces are all fragments from a single burnt and weathered pieces basalt lava quern imported from Andernach on the Rhine and the quernstone quarries at Mayen in Germany. The duration and scale of production at Mayen was of some magnitude, but although un-diagnostic in this case, it is probable that these fragments derive from a quern of Roman date. These querns were probably imported into Britain (via Colchester and London) as blanks, to be made up in workshops, from the end of the 1st century AD (Watts 2002: Green 2017). However, the likely date range of use for this one was probably 2nd -3rd century AD.

Millstone Grit quern

14.6.7 Three fragments from different flat-top Millstone Grit rotary querns were identified from ditches F.170 and F.169. Two of these probably made from Ashover Grit or Chatsworth Grit beds and one from the Rough Rock bed usually used to make millstones. All were of Southern Pennine origin, made from gritstone extracted at one or other of the known or suggested sites for Iron Age-Roman extraction at Melbourn, Duffield or else at Rivelin or Wharnecliffe Crag closer to Sheffield.

14.6.8 Both pieces from F.170 were from lower stones; one possesing a central axle hole (a Shaffrey (2006) 4a hybrid type) and the other a Type 2 lower lozenge style with an estimated original diameter of c.350mm. The fragment of upper stone exhibited traces of radial groove furrows with an estimated original diameter of c.410mm.

14.6.9 Based upon known style, the likely period of manufacture and use of these querns was the 2nd-3rd century AD.

Old Red Sandstone quern

14.6.10 Both pieces of Old Red Sandstone (Devonian) quern came from ditch F.170 (245.01). One of these was composed of an Old Red Sandstone sandstone grit facies (probably the Upper Old Red Sandstone), perhaps from Beacon Hill, Mendip (Shaffrey ibid. 106) or a similar source. However, the second fragment seems to have been manufactured from the Lower Old Red Sandstone Quartz Conglomerate bed, based upon its distinctive lithology dominated by white vein quartz pebble clasts with some other green and red lithic inclusions. The classic identifiable source for this is the outcrop at Ross on Wye, Herefordshire. The latter appears to be one of the commonest sources for ORS querns.

14.6.11 Quern <264>a was part of a lower stone of unknown diameter with traces of segmented radial grooves. The quern fragment has been re-used as a whetstone (SEE secondary whetstone).

14.6.12 Quern <264>b was part of an upper stone of a Shaffrey (ibid.) Type 3 angled disc form with an estimated original diameter of c.380mm.

14.6.13 In all likelihood the date of these querns is 2nd-3rd C AD. Old Red Sandstone hand mills were an important product of the Romano-British quern industry, and Cambridge is at the eastern limit of their distribution. A moderate number of these querns (mostly those manufactured from the Lower ORS Quartz Conglomerate) have been recovered from the NW Cambridge CAU excavations and from Huntingdon Road (Cambridge) within the last 10 years.

Millstone Grit (Rough Rock facies) lower millstone <296> F.221 (274.05)

14.6.14 This large fragment represents <15% of a perforated lower millstone made from the coarse Rough Rock facies which outcrops towards the top of the Southern Pennine Millstone Grit sequence. This rock type seems to have been commonly used to make millstones during the later Roman period in Britain (K.Hayward in Evans et al. 2013 re. Langdale Hale, Cambs.), although the exact source(s) of these stones are unknown. Secondary use of this particular piece as a whetstone may have removed any original dressing on the stone, yet it was possible to determine the original diameter of the mill (650mm) and the diameter of the axle perforation (100-150mm). The central (sub-pyramidal) boss is typical of these lower millstone types. The mill may have been manually operated, or else turned by a donkey or other beast of burden (SEE Hayward ibid.). The small size of this suggests the former.

Primary whetstone (<178> F.160 (186.01))

14.6.15 The identification of this piece as a whetstone is a little uncertain, although it doesn't seem to have been used as anything else. The stone is almost certainly an erratic, yet it may be Cretaceous (Wealden) in age and contains traces of fossil fish bone and teeth. One possible knife-sharpening groove was identified, alongside a small area of smooth grinding/polishing surface.

Secondary whetstone (<264>a F.198 (245.01); <296> F.221 (274.01))

14.6.16 The fragment of ORS quern <264>a appears to have been re-used as an expedient whetstone just upon the underside and along one broken edge. The main (slightly concave) surface of whetstone use exhibits a faint knife-sharpening groove. The large millstone fragment (<296>) on the other hand is extensively worn as a result of its secondary use as a whetstone upon both the upper and lower faces (consequently now slightly concave) – probably for the sharpening of a large-bladed tool. The secondary use (re-use) of both these pieces as whetstones may date to the late Roman period.

Abrasive/ worked stone (uncertain) (<302>b F.195 (276.01))

14.6.17 The presence of a worked surface upon a large cobble of burnt stone was noted during the examination of this material. The working of this stone appears to pre-date the burning of the cobble, which is almost certainly 'prehistoric' in date. This consists of a couple of smooth, sinuous, worn and polished grooves (of approx 10mm wide), formed perhaps as a result of its short-term use as a polissoir. The interpretation of this is quite uncertain.

Building stone

14.6.18 Some 2052g of identifiable 'building stone' was identified. In all probability the bre may have been more stone than this, that was either not collected or else not recognized (i.e the use of it) within the material recovered.

Rough wall stone (<219 b> F.162 (205.01))

14.6.19 This fragment of a roughly squared 'cube' of stone, without any obvious trace of mortar attached, would appear to be from a drystone/ lightly-mortared stone-faced and rubble-centred wall constructed of rough-sized/ faced pieces of 'local' limestone. A firm identification of this stone wasn't possible on this occasion, yet a Corallian (Upper Jurassic) Limestone does seem likely. This piece was associated with re-deposited burnt stone, yet a Roman date for is still possible.

Roof slate (<224> F.168 (206.01))

14.6.20 One possible piece (as an undiagnostic fragment) of Collyweston Slate (Upper Lincolnshire Limestone) from Collyweston, Northants. may be an undiagnostic fragment of a possible Roman roof slate. This piece doesn't include a nail hole nor any obvious trace of the distinctive lozenge-shape these tiles would have had in their un-broken state. During the Roman period the slate would have been extracted from small outcrop quarries, and the slates split by frost action. Collyweston was used widely in Roman Cambridge, presumably on account of the relative proximity of the source which was accessible by the Roman waterways (Car Dyke) and the road network.

Stone tessara (<487> F.176 (446.01))

14.6.21 A single stone tessara cube (22mmx20mmx20mm) made from the breakage and working-up of a fragment derived from a glacially-erratic sandstone cobble was recovered from Compound 5. This is a standard size and shape for stone and red tile tessara pieces, implying the former presence nearby of a Roman mosaic or else a simple tesserae-made floor derived from a moderately high-status Romano-British building.

Statement of potential

14.6.22 The moderate amount of burnt cobble stone recovered from this site with little or no evidence for former use of this material as worked stone (i.e. discarded and subsequently burnt saddle quern) implies that we are probably looking at an identified or implied prehistoric presence within the background archaeology.

14.6.23 The recovery of Roman quern and building stone from at least 10 different features provides a sense of the domestic activities taking place on site (quern, millstone and whetstone). However, the low incidence of building stone could be evidence for building materials brought from another site simply to use as rubble in the making of a trackway or a road.

14.6.24 The identification of the various different types of Millstone Grit and Old Red Sandstone flat-top quern and millstone points unequivocally towards a Middle-Late Roman date – most probably the 2nd-3rd century AD. In fact, there are no stone artefacts indicative of an earlier Roman presence. This would have been the case if there were Hertfordshire Puddingstone (beehive) querns, or for that matter the domed versions of Folkestone Greensand or Lodsworth rotaries. Neither of these are present, whilst lava quern has a long currency of use.

14.6.25 The use of imported quernstone is commonplace in Roman Britain, and as is the case with many other near-Cambridge sites, the mix of these querns from the South-West of England with those from the Southern Pennines is the norm, particularly where the locations concerned are centred upon the junction of N-S and E-W routes. Cambridge is probably at the very eastern limit of the Old Red Sandstone quern distribution, yet reasonable numbers of these querns have been found.

14.6.26 There is probably very little potential here for further analysis of this already sufficiently studied assemblage. The current assessment therefore should form the basis of the final specialist report.

14.7 Appendix 2G: Metalwork (Ros Quick)

Summary

14.7.1 A total of 38 metal artefacts weighing 676.4g were recovered from the excavations. The assemblage is predominantly Roman in date with a small number of Medieval and Post-Medieval artefacts.

Introduction and Methodology

14.7.2 The assemblage consists of 38 metal artefacts weighing a total of 676.4g, and includes material derived from metal detecting of archaeological features as well as from excavated contexts and environmental sampling. The material was all cleaned and weighed with details recorded in a spreadsheet, which will be included with the project archive. A

catalogue of the copper alloy and iron objects (excluding nails) follows. A summary of the nails is included here; further information on the nails can be found in the spreadsheet.

14.7.3 This report provides a catalogue and summary of the metal artefacts, as well as discussing the potential of the assemblage and includes recommendations for further work.

Assemblage Character and Summary

14.7.4 This is a small assemblage consisting of 4 copper alloy objects and 34 iron objects, of which 30 are nails. Although this is a small assemblage, there are two objects of note. The first is a 1st-2nd century AD copper alloy Colchester Derivative brooch (SF.101 from ditch F.169); and the second is a complete Roman iron linchpin (SF.104 from ditch F.144). A catalogue of the copper alloy and iron artefacts and a summary of the iron nails follows.

Roman

Copper alloy

14.7.5 <613> SF.101. Colchester Derivative brooch, complete apart from the pin. The side wings are plain. The bow has a central plain ridge and crest, and there is a groove either side of the ridge where the bow meets the wings. Six spring coils visible; spring attachment unclear. For parallels see Mackreth 1996, Fig.95, Nos.26-29. L: 40mm, W (bow): 5mm, W (including wings): 21mm, T (bow): 3mm, 6.5g. 1st-2nd century AD. Recommended for illustration.

Iron

14.7.6 <602> F.144 (211.01). Incomplete parallel sided knife. The back is straight and in line with the tang, and the edge is stepped down from the tang. L: 79mm, W: 24mm (blade), 12mm (tang), T: 5mm, 36g.

14.7.7 <610> SF.104, F.144 (211.01). Complete T-shaped linchpin with crescentic, slightly recessed, arms. No head. Lug set centrally at right angles to the arms. Stem is square in section and ends in a point. Similar to Manning 1985: Plate 32, H45 but without the head. L: 97mm, W (including arms): 86mm, T: 12mm (arms), 14x14mm stem, 186g. Recommended for illustration.

Medieval

Copper alloy

14.7.8 <608> F.266 (378.01). Incomplete cast tubular padlock case with arm and start of bar, bolt missing. Irregularly facetted hollow case, seven-sided in cross-section. T-shaped keyhole in one end, and holes for twin barb-spring mechanism inside the case at the other. Circular hole in one of the upper facets close to the keyhole end. The lower three facets are decorated with a single wavy line with punched dots either side. For similar see PAS: HAMP-7478A. L: 30mm, Diameter: 11mm, 7.5g.

Post-Medieval

Copper alloy

14.7.9 <607> F.266 (376.01). Incomplete, thin rectangular sheet, folded, with circles of punched dot decoration. L: 38mm, W: 28mm (sheet), T: <1mm (sheet), 8.3g. Probably early Post-Medieval.

Undated

Copper alloy

14.7.10 <611> SF.105. Complete small ring with oval section. Diameter: 21mm (ext.), 16mm (int.), W: 2.5mm, T: 1.8mm.

Iron

14.7.11 <606> F.211 (274.01). Incomplete, heavily corroded sheet fragment. Function unclear. L: 71mm, W: 65mm, T: 2mm, 36g.

14.7.12 <606> F.211 (274.01). Undiagnostic lump, heavily corroded. 78g.

Iron Nails

14.7.13 A total of 29 iron nails were recovered, see Table 29 below. They are mainly heavily corroded and incomplete. The majority of the nails are likely to be Roman in date, including 18 coffin nails (<604>) associated with Inhumation F.213. Where complete lengths of coffin nails are present, there appear to be three sizes: the first group ranged from c.47-50mm, the second group ranged from 62-70mm and there was a single complete nail of 91mm. All of these are Manning Type 1 nails with rounded heads and square section stems.

Table 29: Summary of iron nails

Type	**Qty.**	**Wt. (g)**
Coffin nail from F.213 (MNI: 13)	18	191
Manning Type 1	*10*	
Nail (excluding coffin nails)	10	89
Manning Type 1	*5*	
Nail - probably modern/undated	2	37
Total nails	**30**	**317**

14.7.14 The Medieval, Post-Medieval and Undated artefacts are all typical of metal detected assemblages and are likely to reflect process of loss associated with working and moving across the land.

Statement of Potential

14.7.15 This is a small assemblage of copper alloy and iron artefacts, which has the potential to contribute to an understanding of local patterns of material culture uptake during the Roman period.

Recommendations for Further Work

14.7.16 The Roman element of the assemblage should be situated within its local context. The iron linchpin, SF.104, is of a more unusual type and it is recommended that this is illustrated, as well as the brooch, SF.101. Otherwise, the assemblage has been recorded in full and no further work is required.

Discard

14.7.17 It is recommended that all of the copper alloy artefacts, as well as the iron linchpin (<610>, SF.104) and knife (<602>) are retained as part of the archive. All of the other iron objects have been fully recorded and can be discarded once the project is complete.

14.8 Appendix 2H: Marine Mollusca (Christopher Boulton)

Introduction and Methodology

14.8.1 The small assemblage of marine shell from consists of 32 fragments of European Flat Oyster (Ostrea edulis) which weigh 226g. Prior to analysis, the marine shell were hand washed as bulk finds and then air-dried. Nomenclature and general information from Jessica Winder's Oyster Shells from Archaeological Sites (2011), and an updated version of the example recording table was used (Winder, J. M., 2011, p.10). Average length and height, general size, number of left and right valves and physical characters, such as distortions and chambering, as well as infections and anthropogenic modification were recorded on identifiable whole and incomplete valves.

Results

14.8.2 Of the 32 fragments, five valves were whole, eight valves were incomplete and the remaining 19 were small, fragmented pieces. Of these identifiable 13 whole and incomplete valves, 11 were left valves and two were right valves which produces a minimum number of individuals of 11 for the assemblage. The left valves had an average length of 62mm and a height of 71mm and the right valves with an average length of 56mm and a height of 66mm. The general condition of the assemblage was worn with a few examples of additional chalkiness and flaking, which could account for the higher fragment and incomplete amount compared to the whole valves.

14.8.3 Of the identifiable valves, seven (54%) were recorded as having a distorted shape. The most common distortion being a slight bulging on one side of the valve giving it a 'd/b' as one side having a more pronounced curve than the opposite one. The cause is likely to be an issue of space in the harvesting bed which had hindered growth before harvesting (Wyles, 2014: 29-30).

14.8.4 Nine (69%) of the valves were recorded as having evidence of chambering. This is caused when low salinity levels cause the animal to shrink and pull away from the valves surrounding it, this promotes rapid shell growth to keep contact with the animal and cavities can be formed in the process (Winder 2015).

14.8.5 In terms of infestation and alterations, three valves (23%) were recorded as having small amounts of burrows from the worm, Polydora ciliata and two valves (15%) had boreholes from the sponge, Cliona celata. No other infestations, conjoined shells or anthropogenic modification were present.

Summary

14.8.6 In conclusion, the condition of the small assemblage from Whittlesey is mostly worn and fragmentary. Only a few valves showed evidence of infestation and there were no signs of alterations. It is likely that the European flat oyster is present for their value as a food source but then not in any great amount as the approximate meat content of the assemblage is just 396g.

14.9 Appendix 2I: Faunal Remains (Vida Rajkovača)

Introduction

14.9.1 This small excavation resulted in a recovery of a considerable faunal assemblage, with a raw count of 14214 fragments and a total weight of just over 31kg (31210g). Based on the

chronology of the associated ceramic evidence, faunal material came from Late Iron Age contexts and those associated with Romano-British occupation. A small percentage came from features impossible to date. It is a typical cattle-dominated domestic assemblage, with minimal changes in animal use between the two major periods.

Methodology

14.9.2 The hand-recovered assemblage amounted to 2724 fragments and weighed just over 27kg (27694g). Further 11490 fragments with a total weight of only 3516g were recovered as heavy residues following the processing of the environmental bulk soil samples. Of the raw count of 14214 fragments, following the analysis of the hand-recovered, some 834 assessable specimens were recorded, 392 of which were possible to assign to species level (47% of the assemblage, (Table 30). Further 700 assessable specimens came from environmental samples and 'animal cremations', interesting deposits of burnt animal bone, currently impossible to accurately date. Of this figure, only some 75 were identified to species (Table 31, Table 32).

14.9.3 These were quantified and considered separately (The assemblage's NISP and MNI values as well as the weights were all used in quantifying the material. The zooarchaeological investigation followed the system by Bournemouth University with all identifiable elements recorded (NISP: Number of Identifiable Specimens). Also recorded was the diagnostic zoning (amended from Dobney & Reilly 1988) used to calculate MNE (Minimum Number of Elements) from which MNI (Minimum Number of Individuals) was derived. MNI was established using the most abundant skeletal element, taking into account the left and right specimens, as well as zones occurring in more than one element. Additionally, size and age were also considered. Identification of the assemblage was undertaken with the aid of Schmid (1972), Hillson (1999) and the referece material from the Cambridge Archaeological Unit, Grahame Clark Zooarchaeology Laboratory at the Department of Archaeology in Cambridge. Those fragments impossible to assign to species level were categorised to size (cattle/ red deer-sized, pig/ sheep/ goat-sized and rodent-sized). Most, but not all, caprine bones are difficult to identify to species; however, it was possible to identify a selective set of elements as sheep or goat from the assemblage, using the criteria of Boessneck (1969) and Halstead (Halstead et al. 2002). Ageing of the assemblage employed both mandibular tooth wear (following Matschke 1967, Payne 1973, Grant 1982 and Levine 1982) and fusion of proximal and distal epiphyses (Silver 1969, O'Connor 1989).

14.9.4 This report offers the quantification and the characterisation of the assemblage, as well as the assessment of its research potential. Finally, recommendations for further work are offered as well as advice on potential discard of components of this assemblage.

Assemblage Character and Summary

14.9.5 The assemblage is dominated by the domestic species, the exception being the canid (dog or a fox) and the few otter specimens recovered from samples. Preservation of the material was recorded as moderate to quite good, a minimal number of elements showed any signs of weathering or erosion. A small number of specimens were butchered, larger carcasses required greater reduction compared to smaller livestock.

14.9.6 The dominance of cattle is typical for these two periods in the region, as well as the numbers for ovicapra and pig. The Late Iron Age component of the assemblage came from gullies and pits. The prevalent cattle amounted to more than half of the identified count. Sheep/ goat, pig, horse and dog completed the full range of domesticates (Table 30). As hinted at by the mandibular tooth-wear evidence, younger and older livestock was present

on site. Of the three specimens available for sexing, only male pigs were identified, a sign that some males were culled and females kept for reproduction.

14.9.7 Almost as substantial, Roman aspect of the assemblage was mostly recovered from ditches and watering holes. With an exception of a more significant horse cohort, and a possible wild goose specimen, the species' range is almost identical to that from the preceding phase. The growing importance of larger livestock clearly reflects their significance for agricultural production or for transport (Allen *et al*.2017). Typical for the Roman period, there was a greater proportion of specimens affected by butchery with larger carcasses being processed more thoroughly.

14.9.8 The only evidence of articulated animal deposits was noted in the undated component of the site assemblage comprising a sheep skeleton a possible dog/ fox.

Table 30: Number of Identified Specimens and the Minimum Number of Individuals for all species from all contexts, breakdown by phase; the abbreviation n.f.i. denotes that the specimen could not be further identified.

	Late Iron Age contexts			Romano-British contexts			Undated		
Taxon	NISP	%NISP	MNI	NISP	%NISP	MNI	NISP	%NISP	MNI
Cow	101	*50.5*	5	99	*53*	6	.	.	.
Sheep/ goat	69	*34.5*	6	43	*23*	3	.	.	.
Sheep	1	*0.5*	1	2	*1*	1	2	*40*	2
Pig	22	*11*	2	22	*11.8*	2	2	*40*	1
Horse	6	*3*	2	19	*10.2*	2	.	.	.
Dog	1	*0.5*	1	1	*0.5*	1	.	.	.
Canid	.	.	.	.	.	.	1	*20*	1
Goose *sp.*	.	.	.	1	*0.5*	1	.	.	.
Sub-total to species	**200**	*100*	**.**	**187**	*100*	.	**5**	*100*	.
Cattle-sized	87	.	.	102	.	.	1	.	.
Sheep-sized	114	.	.	63	.	.	3	.	.
Mammal n.f.i.	11	.	.	56	.	.	2	.	.
Bird n.f.i.	.	.	.	3	.	.	.	.	.
Total	**412**	.	.	**411**	.	.	**11**	.	.

Contextual Summary

14.9.9 Recovered from some 91 features across the site, the assemblage mostly derived from ditches. In large, contexts contained small amounts of animal bone amounting to a few hundred grams of bone waste.

14.9.10 Looking at the Iron Age component of the assemblage, several features stand out. Ditches F.194, 194 and F.266 generated 6493g of bone waste. If we consider the NISP values, these three features produced some 85 assessable specimens. These figures correspond to 20% of the assemblage by weight and by (sub-set) NISP count.

14.9.11 Recovered from ditches, but also watering holes, Roman material appeared more evenly spread across the settlement swathe, with only two major bone deposits worthy of note. Animal bone from ditch F.109 accounted for 6460 fragments with a weight of 2754g, corresponding to 45% by count and only 9% by weight. Even more substantial was the material from the watering hole F.221 (3815g). Although thoroughly investigated as one of the more finds-rich features, and while generating a substantial amount of Roman ceramics, ditch F.176 only produced some 99 fragments and just over 1kg of bone waste.

14.9.12 A small number of deposits were impossible to date. All recovered from F.210 ([256.01]) were the partial skeleton of small dog or fox and two nearly complete sheep skeletons. Sheep were both less than two years old, both with cut marks on astragali and calcaneum. This deposit also contained a partial canid skeleton, as well as charred and butchered remains of a pig.

14.9.13 Faunal remains recovered as heavy residues were analysed and no remains of micro-, avian or fish fauna were identified. The only exception were the amphibian remains, the remainder of the assemblage being unidentified crumbs of mammalian bone waste (Table 31)

14.9.14 Cremated animal remains came from five different features with a range of species represented within each of these deposits. Though some heavily abraded shell-tempered body sherds came from F. 214 and F.215, it is difficult to confidently use that evidence to date these deposits securely. Already recorded from the Iron Age component of the sieved material, of note is another indication for the presence of otter in this assemblage. Sheep/ goat and pig were the most abundant, though other species were clearly represented. In addition to the heavy residues, there are further two standard archive boxes containing unsorted fine residues which were not studied at this stage.

Table 31: Number of Identified Specimens for all species from all contexts from heavy residues, breakdown by phase; the abbreviation n.f.i. denotes that the specimen could not be further identified.

	NISP	
Taxon	Late Iron Age	Romano-British
Cow	.	1
Sheep/ goat	4	6
Pig	1	10
Otter	1	.
Sub-total to species	**6**	**17**
Sheep-sized	18	13
Rodent-sized	.	1
Mammal n.f.i.	30	175
Total	**54**	**206**

Table 32: Number of Identified Specimens for all species from all contexts from undated animal cremation/ deposits, breakdown by feature number; the abbreviation n.f.i. denotes that the specimen could not be further identified.

	NISP - Undated animal cremations				
Taxon	F.210	F.214	F.215	F.218	F.336
Cow	.	.	4	.	1
Sheep/ goat	15	4	6	.	4
Pig	2	6	2	.	1
Dog/ Fox	4	.	.	.	.
Otter	.	1	.	.	.
Frog/ Toad	.	.	.	2	.
Sub-total to species	**21**	**11**	**12**	**2**	**6**
Cattle-sized	1	3	.	.	.
Sheep-sized	26	44	57	7	27
Rodent-sized	.	.	.	14	.
Mammal n.f.i.	126	64	19	.	.
Total	**174**	**122**	**88**	**23**	**33**

Discussion

14.9.15 There is no indication there was any activity on site before the Late Iron Age, when a series of ditches and gullies are dug, marking the establishment of the enclosed settlement. Continuing into subsequent phase, based on the ceramic evidence, the Roman activity continues during the 2nd and 3rd centuries with the hints of abandonment during the late 3rd and the early 4th centuries AD. On the whole, this assemblage reflects the patterns for the Late Iron Age and the Roman period recorded across the region, highlighting the importance of cattle as a 'food species', but also as an economic asset.

14.9.16 In total, only two specimens were recorded as measurable and eleven mandibles were available for ageing. Although insufficient for discussions on site-specific or wider economic strategies, it offers a level of understanding of basic husbandry principles. Based on radius from F.109, there was indication that young horses were also present and possibly raised on site. A few specimens of otter reflect the Fenland environment.

14.9.17 The discrepancy in waste deposition during Roman occupation, or rather the evidence that ditch F.176 served as a receptacle of ceramics but not bone waste, as well as that the most substantial animal bone deposit was watering hole F.221, all draw attention to a level of organisation and the management of waste on a site level.

Statement of Potential

14.9.18 The faunal assemblage is very characteristic of regional period patterns. The assemblage site, complexity and findings give it local importance though the site's position in the Fens is arguably more significant than the results coming from the assemblage itself. When considered alongside other evidence, aspects of this faunal assemblage offer great potential for our understanding of exploitation of livestock, but also of how wild Fenland resources were accessed and interacted with, especially during the time when this was Whittlesey Island.

Recommendations for Further Work

14.9.19 The assemblage has been fully analysed and the primary data collection has been completed. No further work is necessary on the assemblage itself, though for archive report and publication, any material recovered from previous phases of work must be included.

14.9.20 The assemblage could benefit from further work on economic data (kill-off patterns/ mandibular tooth-wear and epiphyseal fusion data) as well as on carcass processing. As there was indication that bone was discarded differently to the ceramics, it would benefit from spatial analysis, or the plotting of bone waste possibly, but not necessarily using the GIS. Alongside this, a small number of butchered specimens needs to be fully studied as part of understanding the character of carcass processing on site.

14.9.21 Radio-carbon dates should be obtained for the animal cremations which are currently undated. If these are shown to be Roman, their significance is somewhat increased (King *et al*.2021). The two archive boxes containing unsorted residue should be scanned to ensure no micro-, fish, or avian fauna was missed during the analysis.

14.9.22 This assemblage should be considered in its wider setting, with particular reference to the nearby Burdett's Nursery assemblage (Rajkovača 2022), as well as other sites from the same locale.

Discard

14.9.23 Once full archive report is completed, it would be recommended that any unstratified material is discarded. Beyond this, it is difficult to assess this any further without full analysis of the material.

14.10 Appendix 2J: Human Bone (Benjamin Neil)

Introduction

14.10.1 Three inhumations and disarticulated remains from a single context are reported from the 2021 Land North of Whittlesey excavations.

Methodology

14.10.2 Sex estimation was accomplished by identifying the dimorphic dimensions of the skull, pelvis and humerus using methods outlined by Buikstra et al. (1994) Rogers (1999) and Langley et al. (2018) and estimated according to Table 33. Metric dimensions supplemented these estimations following data outlined by France (1998). Age at death estimation (Table 34) was based on the degree of epiphyseal and apophyseal union (Cunningham et al. 2016), patterns of molar attrition (Brothwell 1981: 72), and skeletal degeneration (Buckberry & Chamberlain 2002; Calce 2012; Falys & Prangle 2015). Teeth were catalogued using the Universal Notation System. The level of fragmentation was assessed using the specialist's own scoring system (Table 35). Zonation of disarticulated remains followed the criteria set out by Knüsel & Outram (2004). Stages of preservation followed the notation system developed by Mckinley (2004: 16) (Table 36). Bone dimension was measured using a 150mm digital sliding calliper (with a resolution of 0.01mm and accuracy of ± 0.02mm). Stature was estimated using data compiled by Trotter (1970) with reference to the humerus. The assemblage was studied for any salient traumatic and pathological change referencing paleopathological and modern clinical examples.

Table 33: Sex estimation

Term	Read as	Meaning
Female	Female	Analyst has full confidence in the determination of sex for the remains
Male	Male	
(female)	Probably Female	Analyst does not have full confidence in the determination, but feels the remains are probably the stated sex.
(male)	Probably Male	
Female?	Possibly female	Analyst does not have confidence in the determination, but feels the available evidence hints at the stated sex.
Male?	Possibly male	
Indet.	sex indeterminate	The remains have been analysed, but lacks sufficient diagnostic morphology for determination

Table 34: Age estimation. YA = Young Adult. YMA = Young Middle Adult. OMA = Old Middle Adult. MA = Mature Adult.

Sub-Adult				Adult				
Neonate	Infant	Juvenile	Adolescent	Adult	YA	YMA	OMA	MA
<6months	0-4	5-12	13-18	18+	18-25	26-35	36-45	46+

Table 35: *Skeletal fragmentation*

Attribute	Score	Definition
Low	1	At least one of an axial, upper and lower appendicular element is complete
Medium	2	Excluding sullegic and trephic processes, all axial and appendicular elements are broken due to some taphonomic agency but at least one bone from each major anatomical zone can be refitted
High	3	None of the elements can be completely refitted. Fragment sizes mostly range between 10-200mm with diagenetic processes impacting on bone survival
Very high	4	Fragment sizes mostly range between 10-50mm. significant diagenetic activity is a likely factor for poor preservation.

Table 36: Skeletal Preservation

Attribute	Score	Definition
high	0	Surface morphology clearly visible with fresh appearance to bone and no modifications
	1	Slight and patchy surface erosion
medium	2	More extensive surface erosion than grade 1 with deeper surface penetration
	3	Most of bone surface affected by some degree of erosion; general morphology maintained but detail of parts of surface masked by erosive action.
low	4	All of bone surface affected by erosive action; general profile maintained and depth of modification not uniform across whole surface.
	5	Heavy erosion across whole surface, completely masking normal surface morphology, with some modification
Very low	5+	As grade 5 but with extensive penetrating erosion resulting in modification of profile

Results

14.10.3 The following three tables summarise the results of the study carried out on the human remains from the 2021 excavations. Table 37 summarises position, preservation, age, sex and stature. Table 38 outlines the inhumed individuals' pathologies and other observations. Table 39 summaries the disarticulated human bone.

*Table 37: Summary of the inhumations. * head position given first. † indicates same individual*

Feature	Context	Position*	Fragm.	Preserv.	Age	Sex	Stature (cm)
146	160.02	N-S flexed left	4	1	MA	(M)	Indet.
213	263.02	N-S extended	2	1	MA	M	164.082 ± 4.05
229	290.03	indet	2	1	YMA	(M)	Indet.

Table 38: Descriptive observations of pathology and trauma. ATML = AnteMortem Tooth Loss. SAF= Superior Articular Facet. IAF= Inferior Articular Facet. PIP= Proximal Inter Phalangeal joint.

Feature	Pathology / observation	Trauma
146	• Large caries (14) (15) • ATML (17)-(20) (30) (32) • Moderate bilateral microporosity over the anterior face of the mandibular fossa • Porotic/diploic expansion over the left zygomatic and maxilla (centred inferior to the anterior nasal spine)	None observed
213	• Periapical abscesses for (3) and (11). (3): D=8.39mm, W=7.02mm • Periodontal disease affecting alveolar margin of (2)-(5) characterised by mild microporosity • Interproximal caries between (11)-(12). (11): D=3.06mm, Dia=3.88mm • ATML: (11), (15) • Moderate lingual, labial, buccal dental calculus • Fine microporosity over the supraorbital ridge/margin, posterior parietals and occipital planum • Bilateral eburnation of the acetabular lunate surface/fossa • Extensive remodelling of the left acetabular rim, extending 20.15mm • Slight 'traction spur' enthesophyte extending 1.41mm from right ulna head • Bilateral interarticular eburnation/osteophytic extension around the trapeziometacarpal joint 5 left, 4 right ribs have slight-moderate osteophytic extensions around the tubercles (c.1mm ext.) • Degeneration of the right acromioclavicular joint characterised by microporosity and minor lobulated osteophytes • Cervical vertebrae: eburnation of C2 dens and bilaterally over SAF Left side Interfacet remodelling between C2-C4 Left Interfacet ankylosis between C3-C4 Moderate osteophytic extension over anterior body margins of C6-C6 • Bilateral IAF macroporosity of C7 • Thoracic vertebrae: Endplate macroporosity/spiculation between T1-T5 Inferior Schmorls node on T11 Bilateral interarticular facet macroporosity/ eburnation between T6-T7, bilateral macroporosity between T9-T10, unilateral (right) macroporosity/ eburnation to T10-T11 • Lumbar vertebrae: Inferior Schmorls node to L4 Unilateral (left) interarticular eburnation between L1-L2 Bilateral interarticular facet macroporosity between L4-L5	• Healed oblique fracture to the right fibula with a 51.76mm overlap

Feature	Pathology / observation	Trauma
	• Bilateral femoral head eburnation concentrated over the superoposterior part of the heads, characterised by a region of high polish, micro/macro porosity and a large osteophytic collar predominantly around the posterior margin: av. ext. 16mm. • Right patella-femoral eburnation relative to the right condyle • Intertarsal eburnation between right MT3-4 • Interarticualr eburnation of the right pedal PIP. Slight osteophytic growth to the heads of the proximal pedal phalanges • Osteoma/hamartoma on the lateral border of MT4: L=11.74mm, W=4.60mm	
229	None observed	None observed

Table 39: Summary of Disarticulated remains.

Feature	Element	Side	Age	Sex	Zone	MNI	Pres.	Path. / obs.
133	Parietal	L	YA	Indet.	4	1	1	Complete element refit. Porotic/woven new bone lamination centred around the bregma, extending to the mid coronal and anterior sagittal sutures. Healed/undulationg new bone occupying a 40mm 'corridor' lateral to the sagittal suture

Preservation

14.10.4 Collectively, the material has a medium to high level of fragmentation and a good level of preservation.

Provenance of the material

- F.133: ditch running parallel to the eastern N-S arm of enclosure F.109.
- F.146: located c.2m south of F.134 eastern ditch terminus and c.0.5m west of the eastern N-S ditch of enclosure F.109.
- F.213: located c.1m east of the western N-S ditch of F.109 enclosure and cutting the southern edge of linear F.194.
- F.299: Isolated pit feature located towards the central north of the mitigation area

Statement of potential

14.10.5 The research potential its relationship to the surrounding centres of occupation. F.213, an elderly male, stands out for a significant osteoarthritic condition. F.146 has pathological signatures suggesting a Vitamin C deficiency. The disarticulated skull element has a pathology suggesting infection. This assemblage also stands out for dental pathology.

Recommendations

14.10.6 No further study is required. Samples for radiocarbon analysis should be taken if the phasing of the material is inconclusive. aDNA samples should be taken if the relationship between the individuals wants to be understood. Likewise, if this assemblage is included in a wider regional analysis, where questions surrounding genetic homogeneity/ heterogeneity are to be asked.

14.11 Appendix 2K: Worked Bone (Miquel Rovira)

Summary

14.11.1 A small assemblage of five bone and antler artifacts were recovered from Land North of Whittlesey. A possible weaving implement and a bone point were found in two Iron Age features. Two other bone objects, a pin beater and a needle derive from Roman features dating to the second to fourth century AD. In addition to these an unfinished antler object was found in an undated feature. This is a varied assemblage, but all the identified objects can be described as handicraft tools.

Introduction and Methodology

14.11.2 All the worked bone and antler was recovered during the manual excavation of the site except one, <690> F.215 (265.01), that was found in a bulk environmental sample. They have been inspected macroscopically and with the aid of an x40 lens. This report provides a description of the assemblage, discuss its potential and includes recommendations for further work.

Assemblage characterisation

Iron Age

14.11.3 <432> (384.01) F.292. Fragmentary implement cut from a sheep or goat right tibia, potentially a weaving instrument. The epiphysis is entirely retained, with no modification other than a perforation on its anterior side. The perforation appears to have been carved instead of drilled and has a square shape. The edges of the hole show smoothing as a result of its use. On the posterior side at the same height as the hole is an oval collapse to the bone surface. This depression is not an unfinished hole, but rather a by-product due to the making of the hole on the anterior side. The other end is fractured, which was most likely the cause of its discard. It seems clear that this object was a finished object due to the presence of wear traces on the hole's edge and was possibly used for weaving. Dimensions: length 79.2mm; width 22.1mm; thickness 16.3mm; weight 10.6g.

14.11.4 <689> (378.01) F.266. Bone point, probably used as a polishing or scraping tool, made from a cattle right tibia, comprising two refitting pieces. Several cut marks are still present on the lateral side close to the metaphysis, indicating that it was first butchered, potentially soon after the fresh tibia was broken creating a helical fracture, and the epiphysis was removed. The medial side and tip of the fracture's surface show use wear in the form of rounded edges, polishing and scratched lines. Furthermore, the tip also displays flaking on the opposite cortical side. This tool was made with minimal modification, utilizing fresh bones from the animal's butchering in an expedient manner, and used for polishing or scraping. Dimensions: length 172.9mm; width 41.7mm; thickness 40mm; weight 88.9g.

Roman

14.11.5 <290> (274.01) F.221. Incomplete pin beater cut from a medium or large mammal long bone cortical splinter. It is well preserved, with only a small missing part, the result of a transverse fracture. It is ovoid in section, with one side distinctly flatter than the other. The pointed terminal tapers evenly and very gradually to finish in a sharp point, which has one side intensively polished. It is highly polished to all original surfaces with no traces of striations. The potential shape of the missing part is unclear since this type of object can be double-ended (two pointed ends) or single-ended (a pointed end and a head). Pin beaters from the Roman period have been recorded (Wild 1970, 66) although they are more

commonly found within Anglo-Saxon contexts and are probably used as a spool in tapestry-weaving. Dimensions: length 75.8mm; width 9.4mm; thickness 7.9mm; weight 3.6g.

14.11.6 <688> (518.01) F.160. Fragmentary needle made from an indeterminate mammal long bone. It is fractured at both ends and the portion surviving would have been close to the now missing head. It also has part of the shaft surviving and has a straight profile. It has a flat-oval cross-section at the segment close to the missing head and becomes circular and tapers gradually towards the (absent) pointed terminal. The surface is highly polished throughout. Dimensions: length 44.5mm; width 6mm; thickness 3.5mm; weight 1.1g.

Undated

14.11.7 <690> (265.01) F.215. Fragment of an unfinished antler object found in sample 119. It has an elongated shape with a moderate pointed end, however both ends are broken. Its section goes from ovoid at one end and becoming flatter at the point. Its flat profile reveals two sides where the outer and inner surface of the antler are still recognizable. The external surface is characterized by the original relieve of the antler, while the inner side is porous. Each edge contains two facets, representing a phase before the final polishing. This artifact could represent an early stage of the production of a needle or a pin and was probably being cut with a metal instrument. Dimensions: length 32.5mm; width 5.5mm; thickness 4.4mm; weight 0.5g.

Discussion

14.11.8 The Iron Age objects were tools for craft production. They appear less elaborate in comparison to the Roman implements, and neither item present has seen intensive modification of the morphology or surface of the bone. Craftworking implements, like scrapers and weaving equipment, are common in the Iron Age. Examples of similar objects can be found at Trumpington (Riddler 2018, 222-227) which was a more extensive and varied assemblage. The Roman objects have been more intensively altered, to the extent that it is more difficult to recognize the original bones they were cut from. They are finely finished; their surfaces are well polished and free of striations and other manufacturing marks. The Roman implements are more readily attributable, and are indicative of wool production, weaving and textile manufacturing. Pin beaters from this age are rare, but needles are common in Roman contexts from Cambridgeshire, with examples found at Northstowe (Aldred and Collins 2021, 309) and Stonea Grange (Greep 1996, 530-532).

Statement of Potential

14.11.9 This is a very small and varied assemblage of worked bone and antler that has potential to contribute to the understanding of Iron Age and Roman craftwork activities in the region. Despite the fact most of the objects are incomplete or unfinished, the majority are recognisable implements, in particular the Roman instruments have potential for future research. The Roman pin beater is especially interesting since it is an uncommon find from this period.

Recommendations for Further Work and Discard

- A re-examination of objects <432> and <689> for a full specialist study is recommended in order to define their function.
- Objects <290>; <432>; <688>; <689> and <690> should be photographed for future publications. No drawing is required.

- All of the worked bone from this assemblage should be retained in order to permit further studies.

14.12 Appendix 2L: Palaeoenvironmental (Gemma Warham)

Introduction

14.12.1 A series of bulk samples taken by the Cambridge Archaeological Unit (CAU) and processed by the CAU for the recovery of charred plant macrofossils and wood charcoal. Thirteen flots were submitted to Sheffield Archaeobotanical Consultancy (SAC) for assessment, as well as five 1 litre samples for the processing and assessment of waterlogged plant macrofossils. The archaeological investigation conducted by the CAU revealed evidence for mid-late Iron Age activity, in the form of a pair of enclosures and roundhouses, as well as features associated with a small 2nd century Romano-British farmstead. The bulk sieve samples processed for charred plant macrofossils ranged in volume between 8 and 10 litres and were taken from a variety of the Iron Age and Romano-British features, including a hearth, several pits, ditches and roundhouse gullies(Table 40). The five 1 litre sub-samples processed for plant remains preserved by anoxic waterlogging were taken from features with waterlogged deposits; from two Iron Age pits and two watering holes dating to the Romano-British period (Table 40).

Aims and objectives

14.12.2 To determine the concentration, diversity, state of preservation and suitability for use in scientific dating, of any palaeoenvironmental material present in the samples.

14.12.3 To evaluate the potential of any palaeoenvironmental material present in the samples to provide evidence for crop plants and/or wild plant foods.

14.12.4 To evaluate the potential of any palaeoenvironmental material present in the samples to provide evidence for the local environment. Privilege

Methodology

14.12.5 The bulk sieve samples were processed by the CAU using a water separation machine. Floating material was collected in a 300µm mesh and the remaining heavy residue retained in a 1mm mesh. A total of 118 litres of sediment was processed in this way. The flots and heavy residues were air-dried and the >4mm fractions of the heavy residues were sorted for ecofacts and artefacts, and the <4mm fractions were checked for charcoal and charred plant macrofossils. The five sub-samples submitted to SAC were processed by wash over for the recovery of plant remains preserved by anoxic waterlogging, broadly following the techniques outlined in Kenward et al (1980). Sub-samples of one litre were disaggregated in water, before being processed by gently washing material through a stack of sieves of mesh sizes 2mm, 1mm, 500µm and 250µm. Material from each size sieve fraction was stored in distilled water in sealable plastic bags and kept refrigerated. The samples were assessed in accordance with Historic England guidelines for environmental archaeology assessments (Campbell et al. 2011). A preliminary assessment of the samples was made by scanning using a stereo-binocular microscope (x10 - x65) and recording the abundance of the main classes of material present. All material found in the samples was quantified using a scale of abundance (- = < 10 items, + = 10-29 items, ++ = 30-49 items, +++ = 50-99 items, ++++ = 100-499 items, +++++ = > 500 items).

14.12.6 Preliminary identifications of plant material were carried out by comparison with material in the reference collections at the Department of Archaeology, University of Sheffield and various reference works (e.g. Cappers et al. 2006). Cereal identifications and nomenclature follow Zohary et al. (2012), whilst other plant nomenclature follows Stace (2019). The composition of the samples is recorded in Table 40. The seed, in the broadest sense, of the plant is always referred to in Table 40, unless stated otherwise. The abbreviation cf. means 'compares with' and denotes that a specimen most closely resembles that taxon more than any other. Information relating to the ecology of various plant taxa was sourced from Stace (2019) and Preston et al. (2002).

Preservation

14.12.7 The eighteen flots range in volume between 2ml and 85ml (excluding root material in the dry flots), but only five flots exceed 10ml. Preservation of plant macrofossils and wood is by charring and anoxic waterlogging. Preservation of the charred plant macrofossils and wood charcoal is tends to be poor; the few cereal grains recovered from the samples are abraded and distorted in appearance, which will prevent further identification. The wood charcoal primarily consists of very low concentrations of comminuted charcoal that rarely exceeds 2mm, with only occasional ring porous, possible diffuse porous and small round wood fragments observed (Table 40). Only two samples produced relatively rich wood charcoal assemblages and preservation of the wood charcoal is fair, with minimal evidence for vitrification (a process that results in the charcoal taking on a glassy appearance that impedes identification or the recording of dendrological features). In terms of the state of preservation of the waterlogged plant remains, only one sample produced a relatively rich and species diverse assemblage of plant material and several fragments of waterlogged wood, whilst the remaining samples contain low levels of uncharred seeds and vegetative remains (Table 40). Overall, the small size of waterlogged plant assemblages and the dominance of species that produce 'robust' seeds, such as crowfoots (Ranunculus subgenus. Batrachium (DC.) A. Gray), bramble (Rubus fruticosus agg.) and elder (Sambucus nigra L.), suggests and that there may be preservational bias and that the preservation of the waterlogged remains is poor. One sample also produced a rich assemblage of invertebrate macrofossils.

14.12.8 The thirteen flots processed for charred plant remains and wood charcoal all contain recent root material, with the volume of roots ranging between 5 and 40 ml, indicating that these deposits have been subject to some degree of bioturbation. Further potential evidence for bioturbation is indicated in ten of the non-waterlogged flots by the presence of Cecilioides acicula (Müller), a blind burrowing snail that is suspected to be a recent introduction to Britain (Davies 2008, 117), as well as occasional remains of both intact and disarticulated insects (Arthropoda) and the frequent occurrence of untransformed seeds of birch (Betula sp.).

Results

Charred plant remains and wood charcoal

14.12.9 Extremely low concentrations of charred plant remains are present in most of the samples, including several of the waterlogged deposits. Traces of cereal residues and seeds of wild or weed species are present in several samples, but in the form of very small numbers of poorly preserved grain and the wild/weed species tend to be represented by one or two seeds only. Whilst wood charcoal fragments potentially suitable for identification (>2mm) are present in most of the samples, only two samples yielded charcoal-rich assemblages (over one hundred fragments).

14.12.10 Eight samples were taken from features associated with the Iron Age phase of activity. Samples 116, 132, 134 and 137 from ditch [195], roundhouse gullies [232] and [255] and hearth [264] respectively, are practically devoid of charred plant remains and wood charcoal. The three samples (131, 163, 161) from pits [235], [266] and [344] each yielded several poorly preserved cereal grains, including barley (Hordeum distichum/vulgare) and possible wheat (cf. Triticum sp.), as well as seeds of knotweed (Persicaria sp.) and knotgrass (Polygonum aviculare L.) from the fill of pit [235]. Due to the distorted appearance of the cereal grain, identification is only possible to genus. Sample 152 from the fill of ditch [292] produced a relatively rich wood charcoal assemblage that includes ring porous taxa and possible round wood, the latter suggesting the use of smaller diameter branches or twigs, as well as several seeds of wild or weed species, including wild radish (Raphanus raphanistrum L.), possible pale persicaria (Persicaria cf. lapathafoilia (L.) Delarbre), goosefoot (Chenopodium sp.) and bedstraw (Galium sp.). The presence of species such as knotgrass, knotweeds and goosefoot suggests nutrient-rich disturbed ground, whilst wild radish and bedstraw are also indicators of disturbed habitats, including cultivated ground.

14.12.11 Seven bulk sieve samples were taken from a range of Romano-British features, including roundhouse gully [147], pit [134] and ditches [120], [133], [160], [176] and [314]. Charred plant remains occur in low concentrations from all the samples, but cereal grain and seeds of wild or weed species tend to be represented by one or two seeds only and the wood charcoal rarely exceeds >2mm (Table 40). Small quantities of cereal residues are present in the fills of ditches [133], [160] and [314] and indicate the presence of spelt wheat (Triticum spelta L.), possible free-threshing wheat (T. cf. durum Desf./aestivum L.) and barley. The only other remains of potential economic value are charred fragments of fruit pericarp (>4mm) from the fill of ditch [314], which have provisionally been identified as Rosaceae-type, and may be remains of apple/pear-type (Malus/Pyrus spp.) or sloe/plum/cherry-type (Prunus spp.) fruit. Weed or wild species are represented by small numbers of seeds and frequently include species of damp/wet habitats, notably possible great fen-sedge (Cladium mariscus (L.) Pohl.), spike-rush (Eleocharis sp.) and sedges (Carex spp.). The presence of dock (Rumex sp.) from the fill of ditch [176] also suggests disturbed, nutrient rich ground.

14.12.12 The fills of pit [134] and ditches [133], [160] and [314] contained moderately rich wood charcoal assemblages. Ring porous taxa and occasional small round wood fragments were noted in the samples from pit [134] and ditch [314], whilst ring porous and possible diffuse porous taxa and small round wood fragments are present in the fill of ditch [133]. The charcoal assemblages from these pit and ditch features indicates the use of a range of taxa and smaller diameter branch wood or twigs. Only the fill of ditch [314] yielded a wood charcoal assemblage that is sufficiently rich to justify further analysis (i.e. at least one hundred fragments >2mm).

Waterlogged plant remains and wood charcoal

14.12.13 Five sub-samples taken from two Iron Age pits, and a well and two watering holes dating to the Romano-British period were processed by wash over for the recovery of waterlogged plant remains. Overall, the uncharred plant assemblages were small with low species diversity, which may reflect poor survival of plant remains preserved by anoxic waterlogging. One sample from a Romano-British watering hole proved to be relatively abundant in plant macrofossils.

14.12.14 Pits [266] and [344] were sampled for waterlogged plant remains (samples 163 and 161 respectively) and yielded small uncharred plant assemblages dominated by roots and fragmented vegetative remains. Low concentrations of uncharred seeds were recorded from pits [266] and [344], consisting of birch and goosefoot. The presence of ostracods in the fill

of pit [266] does indicate that this feature contained standing water, but the low abundance and species diversity in the plant macrofossil assemblage suggests potential preservational bias for more robust plant remains.

14.12.15 Three samples were taken from waterlogged deposits associated with the Romano-British phase of activity; one from well [154] and two from features [221] and [327], which were identified as watering holes (samples 109, 126 and 158 respectively). Sample (109) from well [154] produced a small uncharred plant assemblage consisting of roots, occasional leaf bud scales and small numbers of uncharred seeds of birch and rush (Juncus sp.). At this stage of assessment, the presence of rush in the sample from well [154] is the only indicator damp or wet conditions. The sample from watering hole [327] also produced a small uncharred plant assemblage dominated by roots, with occasional net-veined leaf fragments and woody/herbaceous stems, as well as a small number of uncharred seeds of birch and crowfoot. The presence of crowfoot and frequent ostracods from the fill of watering hole [327] indicates that the feature contained standing water. The sample from watering hole [221] yielded a rich and relatively diverse plant macrofossil assemblage, with several large fragments of wood (>2cm), twigs/woody stem fragments, leaf buds and herbaceous stem fragments and an abundance of uncharred seeds. Provisional identifications include species indicative nutrient-rich and disturbed ground, such as knotgrass (Polygonum aviculare L.), common chickweed (Stellaria media (L.) Vill.) and possible fat hen (Chenopodium cf. album L.). Species suggesting scrub are well represented by frequent uncharred seeds of elder and bramble, whilst a single seed of hawthorn-type (cf. Crataegus sp.) was also recorded. Another species that suggests disturbed ground is thistle (Carduus spp.), whilst the tentative identification of bittersweet (cf. Solanum dulcamara L.) suggests damp or rough ground. The presence crowfoot and sedges (Carex spp.), as well as water flea (Daphnia spp.) ephippia from the fill of watering hole [221] also indicates aquatic conditions.

Other palaeoenvironmental remains

14.12.16 Molluscs are present in most the flots, although generally in small quantities with low species diversity (Table 40). The fills Iron Age ditches [195] and [292] and Romano-British ditch [314] produced moderate quantities of molluscs (50-99 shells), however, none of the mollusc assemblages contain at least 100 shells, which is the quantity recommended as suitable for analysis (Allen 2017). The blind burrowing snail Cecilioides acicula occurs frequently in most of the flots from the bulk sieve samples and is a dominant component of several of the mollusc assemblages. The presence of ostracods in the samples from Iron Age pit [266] and Romano-British watering hole [327] indicates aquatic conditions in these feature, with the fill of watering hole [327] yielding a particularly rich assemblage (>100 ostracods) (Table 40). Only the ostracod assemblage from the fill of watering hole [327] is large enough to warrant further analysis.

14.12.17 In addition, the sample from Romano-British watering hole [221] also produced a rich invertebrate macrofossil assemblage, including occasional water flea ephippia. Several small vertebrate remains are present in the fills of Romano-British pit [134] and ditches [176] and [314], although given the dominance of Cecilioides acicula in the samples from pit [134] and ditch [176], these small vertebrate remains could be intrusive.

Discussion

14.12.18 The dearth of charred plant remains from the Iron Age hearth [264] and roundhouse gullies [232] and [255] provides limited insight as to the nature of the activity associated with these features. The slightly elevated concentrations of wood charcoal and traces of wild/weed species present in the fills of ditches [195] and [292], and traces of cereal residues and

charred seeds of wild/weed species in pits [235], [266] and [344] indicates low-level domestic activity in the vicinity of these features. The overall scarcity of evidence for food residues or domestic waste suggests that the focus of any potential domestic activity during the Iron Age phase of activity may have been located elsewhere on the site or was short-lived. The presence of barley and possible wheat from pits [235] and [344] provides extremely limited palaeoeconomic evidence, and the poor state of preservation of the charred remains prevents further identification to genus. The presence of wild or weed species indicative of disturbed, fertile conditions that may reflect disturbance associated with settlement or livestock activity. However, given the evidence for bioturbation, it cannot be ruled out that these charred remains are derived from redeposited material. The two Iron Age pits ([266] and [344]) containing waterlogged deposits also yielded limited palaeoenvironmental evidence, although the small number of ostracods from the fill of pit [266] indicates that this feature contained standing water.

14.12.19 The small concentrations of charred plant macrofossils and wood charcoal from the Romano-British features also suggests only low-levels of domestic debris being incorporated into the fills of roundhouse gully [147], pit [134] and ditches [120], [133], [160], [176] and [314] during this phase of activity. The scarcity of charred cereal and domestic residues may suggest that the area under investigation continued to be peripheral to the focus for settlement activity in the Romano-British phase. There is limited palaeoeconomic evidence, although the provisional cereal identifications are consistent with the range of cereals cultivated and consumed during the Roman period in the east of England (Murphy 1997, 42). The presence of charred apple/pear or sloe/plum/cherry-type fruit suggests the exploitation of gathered foods. The charred weed or wild seed assemblages from the Romano-British phase of activity are very small, but dominated by species of damp or wet ground and are less likely to be associated with cultivated ground. The potential presence of great fen-sedge in a couple of the charred assemblages may suggest the exploitation of sedges for domestic purposes. Murphy (2003, 109) recorded great fen-sedge in the Iron Age fenland site of Wardy Hill Ringwork, Coveney, Ely, and noted that it has traditionally been used for thatch or kindling for fires. The presence of species of damp/wet habitats along with traces of cereal grain, such as the charred plant macrofossil assemblages from ditches [160] and [314], may therefore suggest the inclusion of low levels of domestic residues derived from a range of activities.

14.12.20 The fill of Romano-British well [154] and watering hole [327] yielded extremely limited palaeoenvironmental evidence or indicators for disturbance associated with occupation or livestock activity. Only traces of rush seeds indicate damp/aquatic conditions associated with well [154], whilst the presence of crowfoots and an abundance of ostracods from the fill of watering hole [327] indicate that the feature contained standing water. The frequent occurrence of seeds of uncharred elder and bramble in the fill of watering hole [221] indicates that these waste ground/hedgerow species were growing near the feature during the Romano-British of activity of the site. Furthermore, the presence of species of nutrient rich and disturbed ground, such as common chickweed, knotgrass, possible bittersweet and fat hen, indicate disturbance associated with settlement or livestock activity near watering hole [221] during this period.

Significance of the plant macrofossil and wood charcoal assemblage

14.12.21 The uncharred plant macrofossil assemblage from Romano-British watering hole [221] and wood charcoal assemblages from Iron Age ditch [292] and Romano-British ditch [314] provides some potential for palaeoenvironmental reconstruction that can be compared with similar sites within the region (e.g. Simmons forthcoming, Murphy 2003). However, the small

size and general poor state of preservation of the plant macrofossil and wood assemblages from the remaining samples affords limited scope for palaeoeconomic and environmental reconstruction.

Recommendations for further work

Plant macrofossils and wood charcoal

14.12.22 The small size and poor state of preservation of the charred plant macrofossil assemblages from the samples means that further identification would not provide significant additional evidence for palaeoeconomic reconstruction. Further analysis, therefore, of the charred plant macrofossils from the 18 samples is not recommended. Only sample 126 from Romano-British watering hole [221] yielded a waterlogged plant assemblage that may be suitable for further analysis, including several large fragments of wood (>2cm). However, the prevalence of 'robust' seeds indicates that there may be a preservational bias and further identification and analysis of the plant macrofossils may not appreciably add to the palaeoenvironmental reconstructions associated with the Romano-British phase of activity.

14.12.23 Sample 152 from Iron Age ditch [292] and sample 153 from Romano-British ditch [314] produced charcoal assemblages with over one hundred fragments >2mm and therefore may be suitable for further identification and analysis. The wood charcoal identifications from Iron Age and Roman ditches (292] and [314] may provide palaeoenvironmental evidence that can be compared with suitable wood preserved under anoxic conditions from sample 126 from Romano-British watering hole [221]. However, there is limited scope for further palaeoenvironmental reconstruction based on three samples. There is no potential for further work in terms of the wood charcoal assemblages from the remaining samples due to the scarcity of charcoal fragments >2mm, and therefore insufficient material to provide a representative sample of the wood charcoal assemblages.

Invertebrate macrofossils and small vertebrate remains

14.12.24 Sample 126 from Romano-British watering hole [221] yielded >100 sclerites from a 1 litre sub-sample that was processed by wash over for the recovery of plant macrofossils. If available, processing 5 litres of sediment from sample 126 for invertebrate macrofossils may provide further opportunity for palaeoenvironmental reconstruction associated with the Romano-British phase of activity. However, analysis of the invertebrate macrofossils from one sample in isolation may not be justified.

Mollusca and ostracods

14.12.25 There is potential for the ostracod assemblage from sample 158 taken from Romano-British watering hole [327] to provide evidence for palaeoenvironmental reconstruction. Further work, however, may not be justified on the basis of a single sample with a sufficient assemblage size (>100 items).

Scientific dating

14.12.26 The selection of plant remains and wood charcoal potentially suitable for scientific dating are restricted to uncharred seeds >2mm from sample 126 from Romano-British watering hole [221] and several round wood fragments >4mm from sample 152 Iron Age ditch[292] and sample 153 from Romano-British ditch [314]. The small size and composition of the plant remains and wood charcoal assemblages from the remaining samples limits the potential of selecting material suitable for scientific dating purposes.

Table 40: Archbotanical Sample Assessment

Sample No.	Context	Feature No.	Context type	Sample vol (L)	Flot vol (ml) Incl. roots/ excl. roots or vol of wash over (ml)	Grain/ chaff	Wild or weed plant material CPR/UC	2-4mm/ >4mm charcoal from flot	2-4/ >4mm charcoal from residues	Molluscs	Notes
106	161	147	Romano-British(?) roundhouse gully	10	10/5	0/0	0/-	-/0	0/0	+	**WC:** Comminuted fragments. **UC:** *Betula* sp., *Chenopodium* sp. **Molluscs:** Low species diversity (<4 species), incl. *Cecilioides acicula.* **Other:** Arthropoda (-). Flot predominantly silt and uncharred degraded vegetative/root remains.
109	179	154	Romano-British well	1 Litre sub-sample	3	0/0	0/-	0/-		-	**WC:** Comminuted charcoal. **UC:** *Betula* sp., *Juncus* sp., roots (+), leaf bud scales (-). **Molluscs:** Low species diversity (<4 species). **Other:** Arthropoda (-); small nematode capsules (-).
110	180	133	Romano-British ditch	8	40/10	-/0	0/+	+/-	++/+	+	**WC:** Silted comminuted charcoal, RP, DP?, occasional twigs/woody herbaceous stem frags. **CPR:** *Triticum* sp. **UC:** *Urtica dioica, Betula* sp. **Molluscs:** Low species diversity (<4 species), incl. *Cecilioides acicula*. Flot predominantly recent roots and sandy/silty sediment lumps.
114	144	134	Romano-British pit	10	45/5	0/0	-/+	-/-	++/++	+	**WC:** Comminuted charcoal, RP, occasional small round wood frag. **CPR:** cf. *Cladium mariscus.* **UC:** *Betula* sp. **Molluscs:** Low species diversity (<4 species), predominantly *Cecilioides acicula*. **Other:** Small vertebrate bones (-).
116	238	195	Iron Age ditch	8	50/10	0/0	0/-	-/0	0/-	+++	**WC:** Silted, comminuted charcoal, RP? **UC:** *Betula* sp. **Molluscs:** Moderate species diversity (4-6 species). Flot predominantly net-veined leaf fragments and root material.
126	274	221	pal	1 Lire sub-sample	85	0/0	0/+++++	0/0		0	**UC:** *Ranunculus* subgen. Batrachium*, Rubus* sp., cf. *Crataegus* sp., *Polygonum aviculare, Stellaria media, Chenopodium* cf. *album,* cf. *Solanum dulcamara, Carduus* sp., *Sambucus* nigra, *Carex* spp. (trigonous), wood >2cm (-), woody stem frags (++), leaf buds (+), herbaceous stems (+++++). **Other:** Arthropoda (+++++), occasional *Daphnia ephippia*.
131	302	235	Iron Age pit	8	10/5	-/0	-/-	-/0	0/0	-	**WC:** Comminuted charcoal, culm internode. **CPR:** *Hordeum* sp., cf. *Triticum* sp., *Cerealia* indet., *Persicaria* sp., *Polygonum aviculare*. **UC:** *Betula* sp., *Chenopodium* sp. **Molluscs:** Low species diversity (<4 species), incl. *Cecilioides acicula.* **Other:** Arthropoda (-); small nematode capsules (-). Flot predominantly silty sediment lumps and uncharred degraded vegetative/root remains.
132	299	232	Iron Age roundhouse gully	8	22/2	0/0	0/-	-/0	0/-	-	**WC:** Silted/concreted comminuted charcoal. **UC:** *Betula* sp. **Molluscs:** Low species diversity (<4 species), *Cecilioides acicula.* Flot predominantly root/vegetative material.
134	326	255	Iron Age roundhouse gully	10	34/4	0/0	0/-	0/0	0/0	+	**UC:** *Betula* sp., *Chenpodium* sp. **Molluscs:** Low species diversity (<4 species), predominantly *Cecilioides acicula*. **Other:** Small nematode capsules (-). Flot predominantly root/vegetative material.
137	345	264	Iron Age hearth	10	45/15	0/0	0/-	-/0	0/-	+	**WC:** Comminuted charcoal. **UC:** *Betula* sp., cf. *Sonchus* sp. **Molluscs:** Low species diversity (<4 species), predominantly *Cecilioides acicula*. Flot predominantly sandy/silty sediment lumps and roots.
142	128	120	Romano-British ditch	10	40/5	0/0	0/-	-/0	0/0	+	**WC:** Comminuted charcoal. **UC:** *Betula* sp. **Molluscs:** Moderate species diversity (4-6 species), incl. *Cecilioides acicula*. **Other:** Small nematode capsules (-). Flot predominantly sandy/silty sediment lumps and roots.
143	204	160	Romano-British ditch	8	50/20	-/0	-/0	/-	++/+	+	**WC:** Silted, comminuted charcoal, occasional herbaceous stem frag. **CPR:** *Triticum* cf. *aestivum/durum*, cf. *Cladium mariscus*, *Carex* sp. (trigonous), indet. seed. **Molluscs:** Low species diversity (<4 species), predominantly *Cecilioides acicula*. **Other:** Arthropoda (+); small nematode capsules (-). Flot predominantly sandy/silty sediment lumps and roots.

152	422	292	Iron Age ditch	8	85/55	0/0	-/0	++++/+++	0/+	++	**WC:** Comminuted charcoal, RP, possible round wood frags. **CPR:** *Raphanus raphanistrum, Persicaria* cf. *lapathifolia, Chenopodium* sp., *Galium* sp. **Molluscs:** Moderate species diversity (4-6 species). Flot predominantly sandy/silty sediment lumps and roots.
153	421	314	Romano-British ditch	10	40/20	-/0	-/-	+++/++	++/+	+++	**WC:** Silted, comminuted charcoal, RP, round wood and woody/herbaceous stem frags. **CPR:** *Triticum spelta, Triticum* sp. *Hordeum* sp. *Cerealia* indet., cf. Rosaceae fruit pericarp frag (2-4mm), unidentified seed head (>4mm), *Eleocharis* sp. **UC:** *Betula* sp. (-). **Molluscs:** Moderate species diversity (4-6 species). **Other:** Arthropoda (-); small vertebrate bones (-). Flot predominantly sandy/silty sediment lumps and roots.
156	444	176	Romano-British ditch	10	40/5	0/0	-/-	+/0	0/0	+	**WC:** Comminuted charcoal. **CPR:** *Rumex* sp. **UC:** *Betula* sp. **Molluscs:** Low species diversity (<4 species), predominantly *Cecilioides acicula*. **Other:** Arthropoda (-); small vertebrate bones (-). Flot predominantly sandy/silty sediment lumps and roots.
158	462	327	Romano-British watering hole	1 Lire sub-sample	7	0/0	0/-	-/0		++++	**WC:** Comminuted charcoal. **UC:** *Ranunculus* subgen. Bactrachium*, Betula* sp., roots (+++), net-veined leaf frags (-), woody/herbaceous stem frags (+). **Molluscs:** Low species diversity (<4 species), predominantly ostracods and fragmented shell <500µmm. **Other:** Arthropoda (-); small nematode capsules (+).
161	492	344	Iron Age pit	1 Lire sub-sample	10	-/0	0+	-/0		-	**WC:** Comminuted charcoal. **CPR:** *Hordeum* sp., *Cerealia* indet. **UC:** *Betula* sp., *Chenopodium* sp., roots (++++), woody/herbaceous stem frags (+). **Molluscs:** Low species diversity (<4 species). **Other:** Small nematode capsules (-).
163	347	266	Iron Age pit	1 Lire sub-sample	10	-/0	-/-	-/-		+	**WC:** Comminuted charcoal. **CPR:** *Cerealia* indet., unidentified seed. **UC:** *Betula* sp., roots (++), fragmented vegetative remains (++++). **Molluscs:** Low species diversity (<4 species), incl. ostracods.

14.13 Appendix 2M: Pollen (Emily Forster)

Introduction

14.13.1 Two 50cm long monolith tins of sediment were collected by CAU (Cambridge Archaeological Unit). The sampled features, F.221 and F.261, were both watering holes of Romano-British date. Six subsamples were taken for pollen extraction, one each from the top, middle and bottom of each monolith. The aim of this assessment was to establish whether or not pollen and spores were present and their state of preservation. Although counts were not carried out as part of this brief assessment, it was possible to gain a broad understanding of the taxa present at different depths.

Method

14.13.2 The surface of the monolith was cleaned back (scraped with a sterilised scalpel) to reduce the risk of contamination from pollen that may have settled on the surface during excavation/sampling. Subsamples of 1cm3 were cut from the monolith and stored in a fridge until they could be processed, in order to prevent mould growth. Subsamples were processed using standard procedures of potassium hydroxide digestion, microsieving (180µm) and acetolysis (Faegri and Iversen, 1989; Moore, Webb and Collinson, 1991), followed by density separation using heavy liquid (Fastfloat, specific gravity 1.95, sodium polytungstate): this has been adopted as a replacement for treatment with hydrofluoric acid to remove silica, mainly for reasons of safety, and produces much cleaner slides (e.g. Nakagawa et al., 2008). Two Lycopodium tablets with a known number of spores per tablet (batch 938934) were added to each subsample at the start of the extraction process. This will facilitate pollen concentration calculations if a full assessment or analysis of the samples is carried out in future (after Stockmarr, 1971). Subsamples were stained with safranin prior to mounting in glycerol and examined using a Zeiss Axioskop transmitted light microscope at x400 magnification. Two non-consecutive transects were scanned for pollen and spores from each subsample/slide to assess preservation and the range of taxa present. As this was not a full assessment, some types that would have required consultation of a reference collection were not identified, but where necessary the key of Moore, Webb and Collinson (1991) was used to aid identification. Nomenclature for pollen and spores follows Bennett (1994).

Results

14.13.3 Pollen and spores were present in all six of the subsamples and were generally well preserved and diverse. A summary of the results is provided in Table 41. There were some broken and degraded pollen grains/spores in all samples, but the proportion of the assemblage affected seemed low. The subsample from the top of F.261 (0-1cm depth) was less well preserved than the other subsamples, with a higher proportion of degraded pollen and spores and lower diversity. This suggests preservation at that depth might be relatively poor, though this is uncertain without full assessment counts and there was no obvious bias towards more robust pollen types.

Herbaceous taxa dominated the assemblage in all subsamples, with trees and shrubs rare; Pinus sylvestris (Scots pine) was found at the top of F.261 and the base of F.221, while Quercus (oak) and Salix (willow) were present in the deeper samples from F.261. Poaceae (grass) pollen was present in all of the samples, with other common types including Apiaceae (carrot family), Asteraceae (daisy family), Brassicaceae (cabbage family), Caryophyllaceae (pink family), Lactuceae (dandelion/lettuce tribe), Plantago sp. (plantains)

and Rumex sp. (sorrel/dock). There were no definite identifications of aquatic plants, but Brassicaceae, Apiaceae and Mentha-type include aquatic species, Cyperaceae are sedges, often found in wetland areas, and Sparganium emersum type represents reeds. Spores of Pteropsida monolete indet. (ferns) and Pteridium aquilinum (bracken) were present in some of the samples from both features. Sporormiella, a coprophilous fungus often associated with animal dung, was present in samples from both features.

Summary and recommendations for further work

14.13.4 The vast majority of the pollen seen in these samples was herbaceous, suggesting open landscape conditions, but assessment counts of 100-150, or even full pollen counts of 300-500 land pollen, may change this picture. It is important to note that small features (e.g. watering holes) are likely to have small catchment areas, meaning they may reflect very local vegetation rather than the wider landscape. The two features do, however, appear to have similarly herbaceous pollen assemblages (though with differences in the taxa present), suggesting the local area was broadly open at the time of deposition.

14.13.5 The pollen and spores from both features were generally well preserved, meaning that assessment counts (or possibly even full counts) are feasible. In order to gain a better understanding of the pollen sequences from the two features, and to ascertain whether further analysis is worthwhile, I would recommend completing assessment counts of 100-150 from the existing (processed) samples to give a clearer picture of the vegetation surrounding the features and of change through time. Although the features from which the samples were taken are known to be Romano-British, if further analysis (i.e. beyond assessment) were to be carried out it would be important to obtain more precise dating evidence to establish the chronology of the sequence and to gauge the rate of deposition.

Table 41: Preservation status and taxa present in pollen sub-samples

Monolith Tin	Feature	Sample depth (cm)	Pollen and spores present (two transects	Preservation status	Non-pollen palynomorphs present
125	F.221	0-1	Pollen: Apiaceae, Asteraceae, Caryophyllaceae, Centaurea nigra, Cyperaceae, Fabaceae, Lactuceae, cf. Plantago sp., Poaceae, Rhinanthus type, cf. Rosaceae, Rubiaceae, Rumex sp., Sparganium emersum type, cf. Trifolium type, trizonocolporate/trizonocolpate pollen - unidentified Spores: Pteropsida monolete indet.	Good, with some broken and degraded pollen/spores	
125	F.221	24-25	Pollen: Apiaceae, Betula, Brassicaceae, Caryophyllaceae, Centaurea nigra, Chenopodiaceae/ Amaranthaceae, cf. Filipendula, Lactuceae, cf. Mentha type, Poaceae, cf. Rumex sp. Spores: Pteridium aquilinum	Good, with some broken and degraded pollen/spores	
125	F.221	49-50	Pollen: Brassicaceae, Pinus sylvestris, cf. Plantago sp., Poaceae, Urtica sp., large trizonocolpate pollen – unidentified Spores: Pteropsida monolete indet.	Moderate – quite a high proportion of broken and degraded pollen/spores	*Fungal hyphae*
146	F.261	0-1	Pollen: Apiaceae, Pinus sylvestris, Poaceae, Rumex sp., cf. Urtica, trizonocolpate pollen – unidentified	Good, with some broken and degraded pollen/spores	
146	F.261	24-25	Pollen: Apiaceae, Asteraceae, Caryophyllaceae (cf. Scleranthus), Centaurea nigra, Chenopodiaceae/Amaranthaceae, Lactuceae, Poaceae, Quercus, cf. Rumex sp., cf. Thalictrum, trizonocolporate pollen – unidentified Spores: Pteropsida monolete indet.	Good, with some broken and degraded pollen/spores	
146	F.261	49-50	Pollen: Apiaceae, Asteraceae, Poaceae, cf. Brassicaceae, Caryophyllaceae (cf. Scleranthus), Chenopodiaceae/Amaranthaceae, Lactuceae, Quercus, Rumex sp., Salix, Trifolium type, several unidentified types (trizonocolporate/trizonocolpate) Spores: Pteridium aquilinum	Good, with some broken and degraded pollen/spores	*Sporormiella* (coprophilous)

cf. – 'confer/compare to' – identification is uncertain owing to poor preservation or need to check reference material; sp. – one species of the preceding genus present (unidentified); spp. – more than one species of the preceding genus present; indet. – indeterminate

Summary for cambridg3-510058

OASIS ID (UID)	cambridg3-510058
Project Name	Open Area Excavation at Land North of Whittlesey
Sitename	Land North of Whittlesey
Activity type	Open Area Excavation
Project Identifier(s)	WSF21
Planning Id	F/YR19/0158/RM
Reason For Investigation	Planning requirement
Organisation Responsible for work	Cambridge Archaeological Unit
Project Dates	05-Apr-2021 - 28-Jun-2021
Location	Land North of Whittlesey NGR : TL 27530 97900 LL : 52.563992095436, -0.11999515708902 12 Fig : 527530,297900
Administrative Areas	Country : England County : Cambridgeshire District : Fenland Parish : Whittlesey
Project Methodology	An area of 1.34ha was machine excavated at Land North of Whittlesey, Cambridgeshire following an earlier trenched evaluation. The excavation was carried out between April and June 2021.
Project Results	The excavations revealed evidence for occupation dating from the Later Iron Age through to the Mid-Late Roman period, as well as evidence for Later Medieval and Post-Medieval land use. The Later Iron Age activity comprised at least six roundhouses as well as a pair of substantial enclosures, alongside a number of pits and postholes. There was a hiatus of occupation until the Mid 2nd century when a small farmstead was established comprising a single large enclosure, within which were several smaller compounds, wateringholes, pits, postholes and an inhumation. This farmstead was in use until the late 3rd century when the site was abandoned. Of note were several substantial deposits of pottery within the Roman enclosure ditches and six undated animal cremations located across the southern portion of the excavation area. Across the site Medieval furrows were excavated highlighting the agricultural importance this area took during this period.

Keywords	Ditched Enclosure - LATE IRON AGE - FISH Thesaurus of Monument Types Ditched Enclosure - ROMAN - FISH Thesaurus of Monument Types Waterhole - ROMAN - FISH Thesaurus of Monument Types Rubbish Pit - LATE IRON AGE - FISH Thesaurus of Monument Types Rubbish Pit - ROMAN - FISH Thesaurus of Monument Types Extended Inhumation - ROMAN - FISH Thesaurus of Monument Types Ring Ditch - MIDDLE IRON AGE - FISH Thesaurus of Monument Types Pot - MIDDLE IRON AGE - FISH Archaeological Objects Thesaurus Pot - ROMAN - FISH Archaeological Objects Thesaurus Pot - LATE IRON AGE - FISH Archaeological Objects Thesaurus Animal Remains - ROMAN - FISH Archaeological Objects Thesaurus Animal Remains - LATE IRON AGE - FISH Archaeological Objects Thesaurus Human Remains - ROMAN - FISH Archaeological Objects Thesaurus Two-Piece Colchester Brooch - ROMAN - FISH Archaeological Objects Thesaurus Quern - ROMAN - FISH Archaeological Objects Thesaurus Animal Burial - UNCERTAIN - FISH Thesaurus of Monument Types
Funder	
HER	Cambridgeshire Historic Environment Record - unRev - STANDARD
Person Responsible for work	
HER Identifiers	HER Event No - ECB6143
Archives	Physical Archive, Documentary Archive - to be deposited with Cambridgeshire County Council County Archaeological Store; Accession Id(s): ECB6143

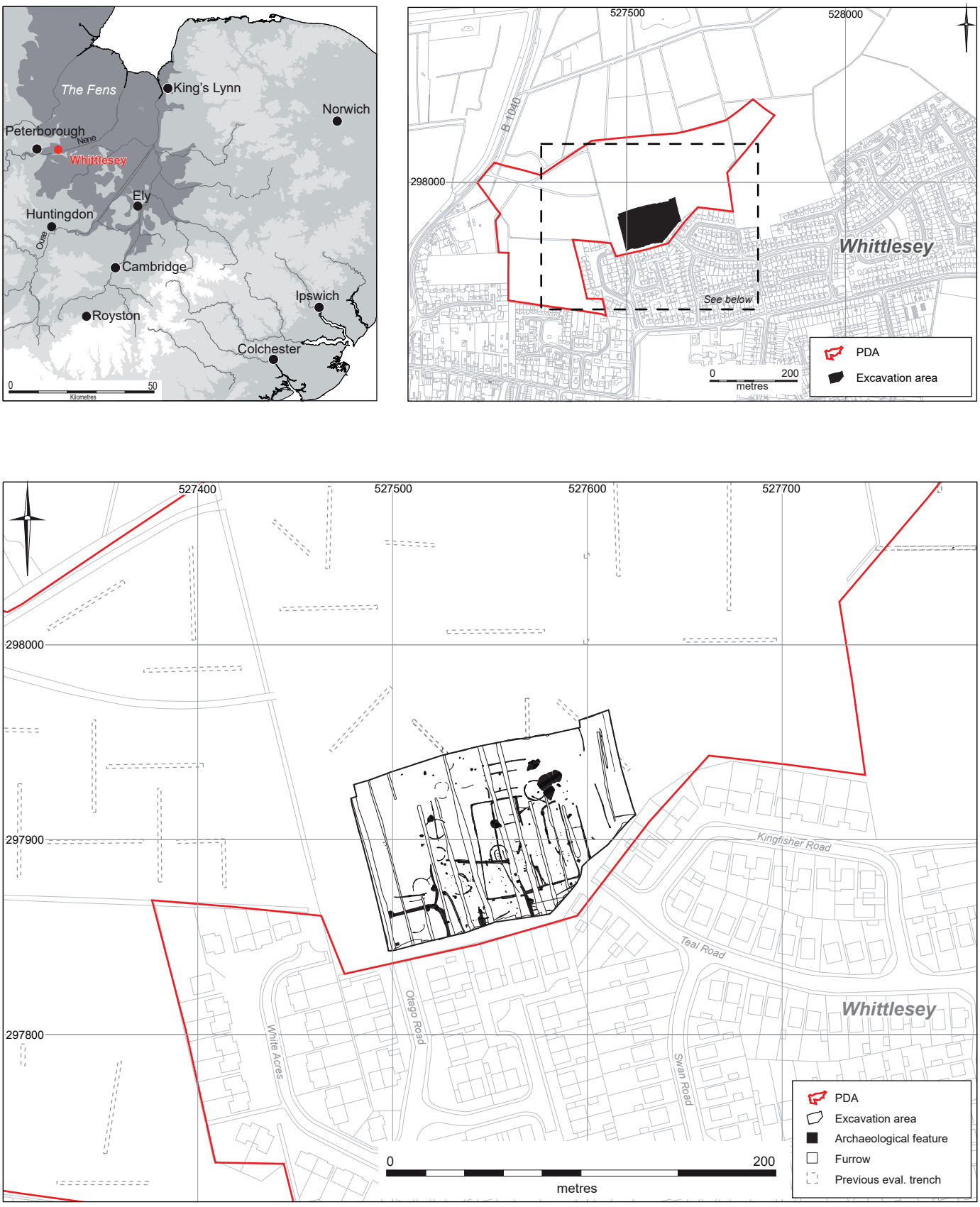

Figure 1. Site location

Figure 2. Site excavation plan

Figure 3. Later Iron Age features

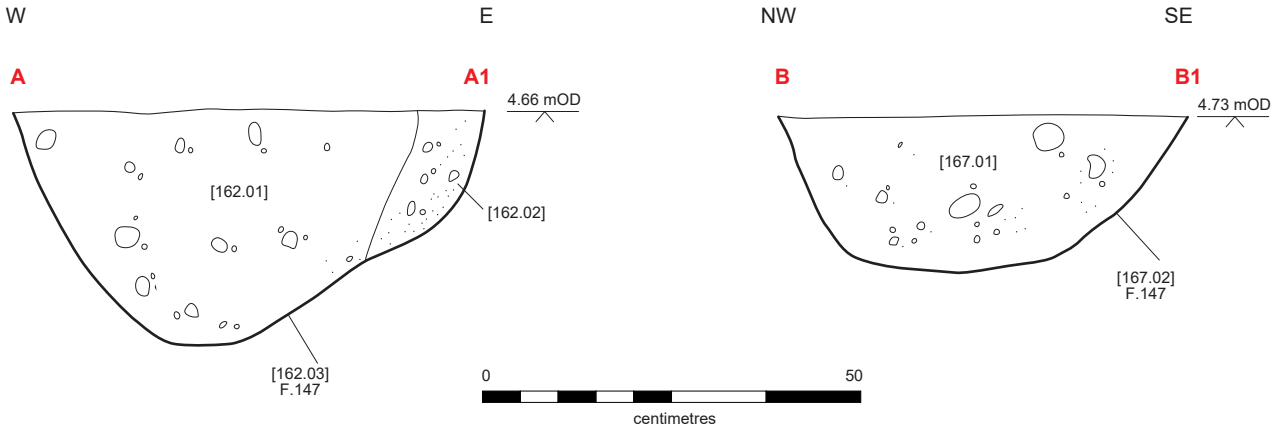

Figure 4. Iron Age roundhouse 6, with accompanying sections

Figure 5. Roman features

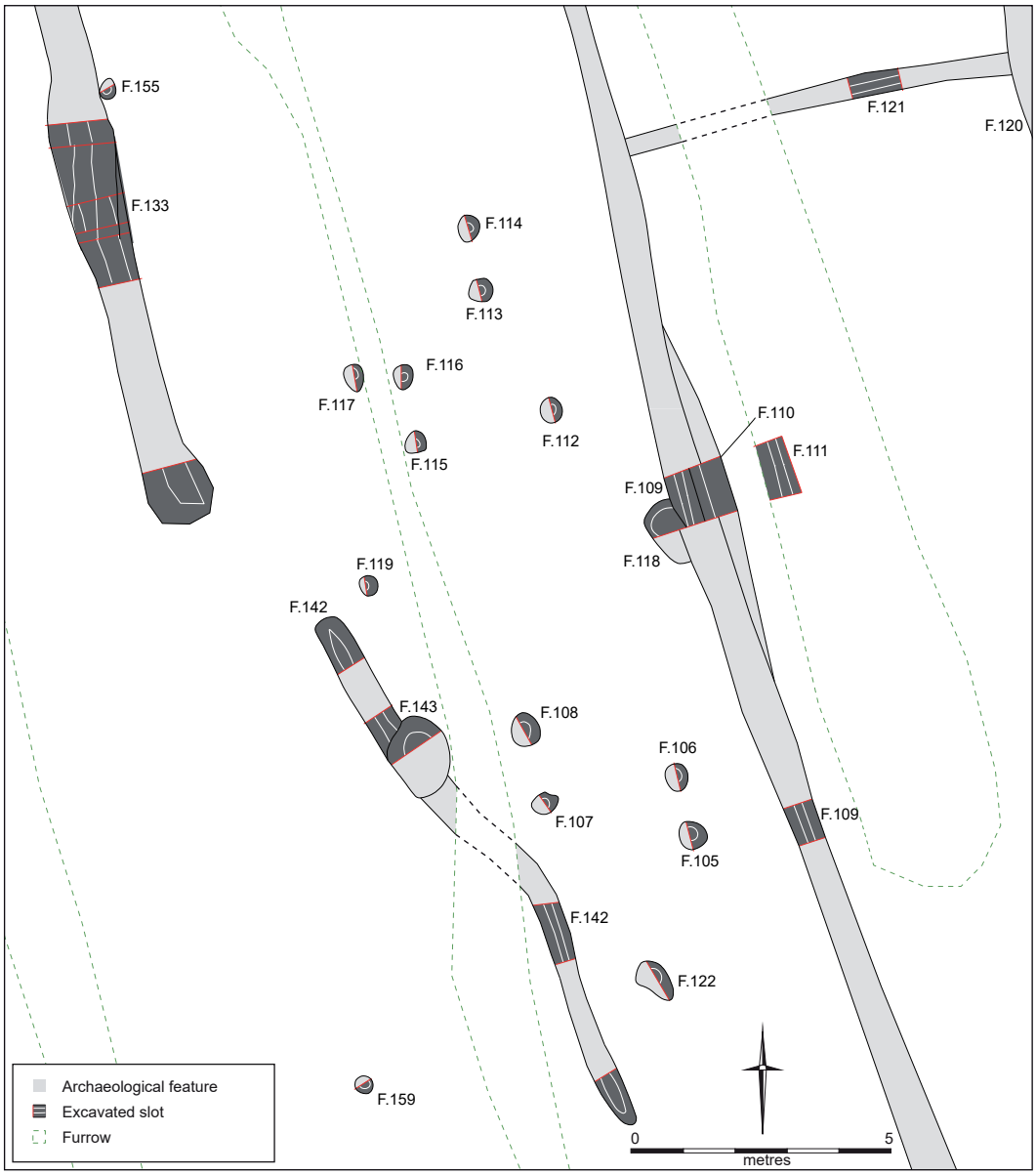

Figure 6. Plan and Photo of Posthole groups within Compound C

Figure 7. Photographs of Pottery deposits. From left to right F.176, F.133 and F.160

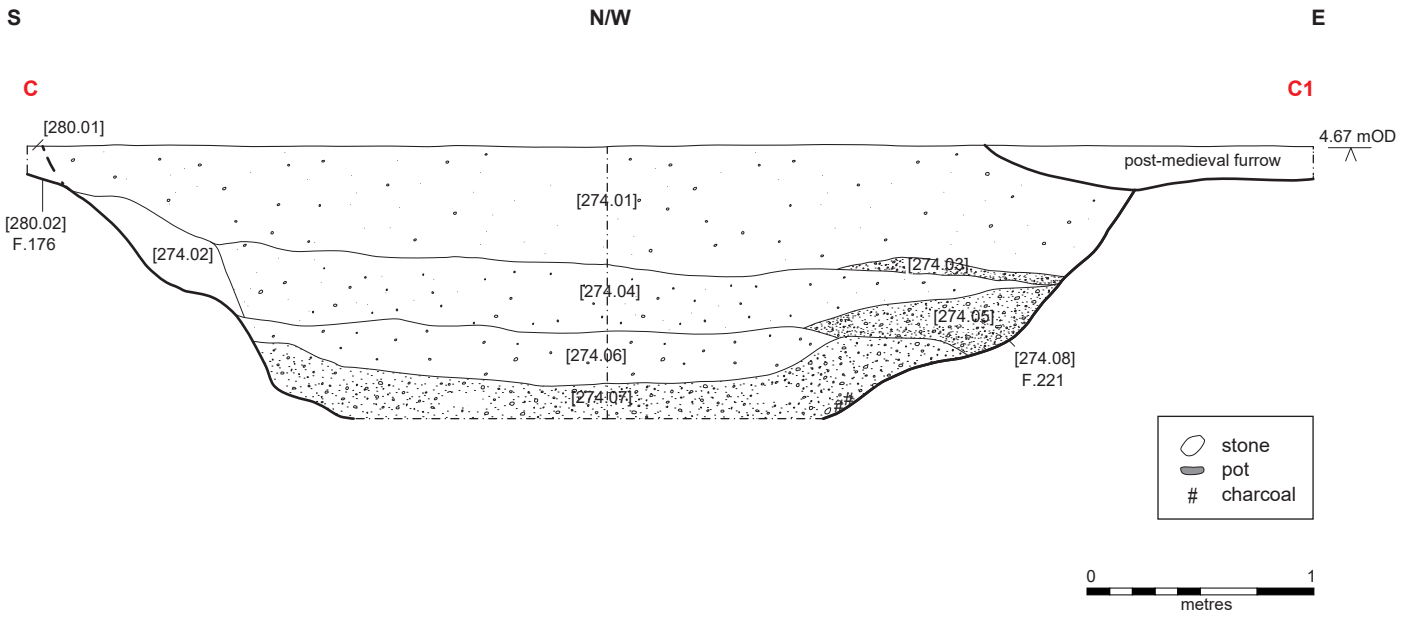

Figure 8. Photo of wateringhole group F.258-261 and section of wateringhole F.221

Figure 9. Skeleton F.146 (Above) and Roman Skeleton F.213, (Below)

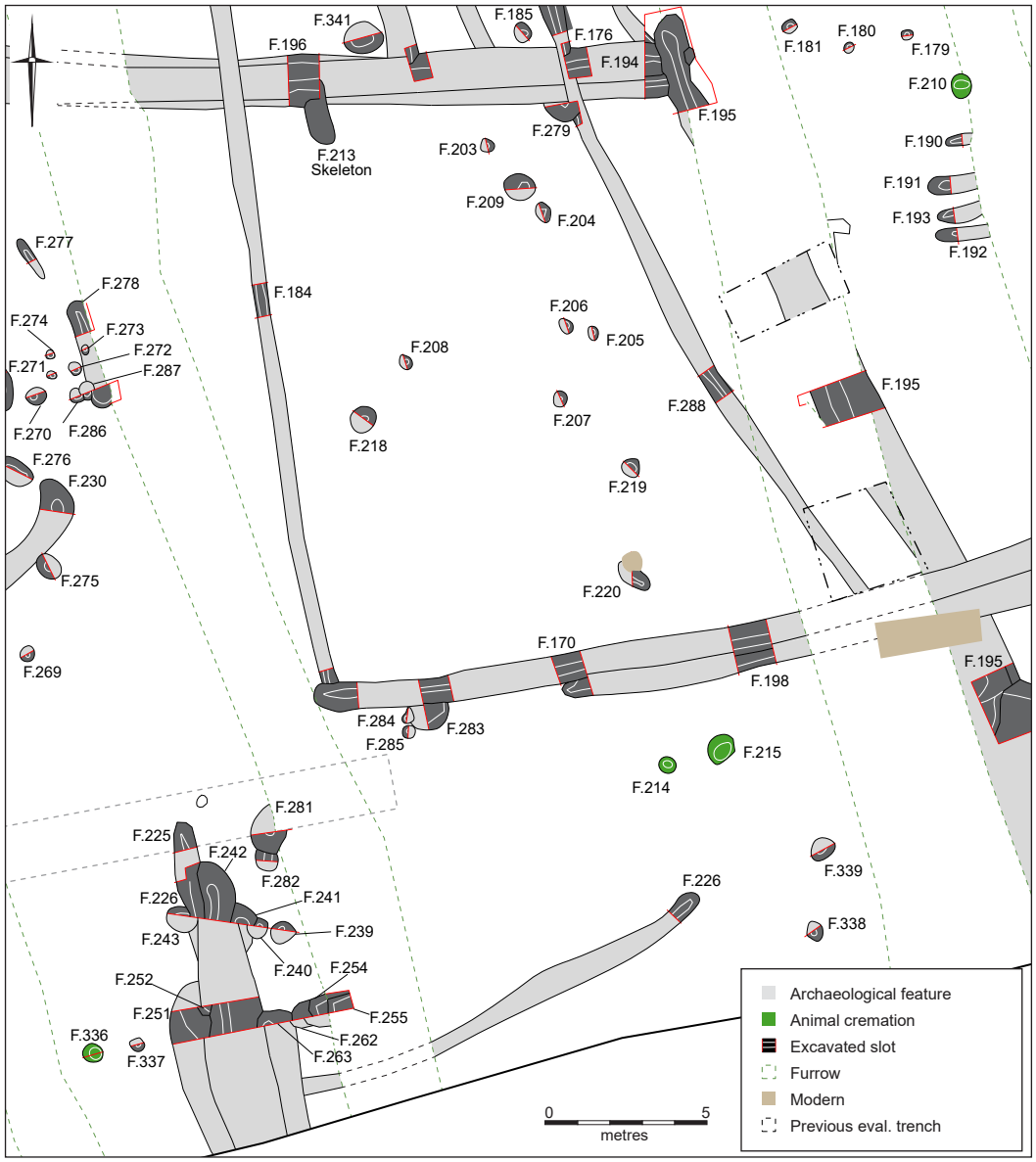

Figure 10. Plan of animal cremations, with dog/fox skeleton within the top of Animal cremation F.210

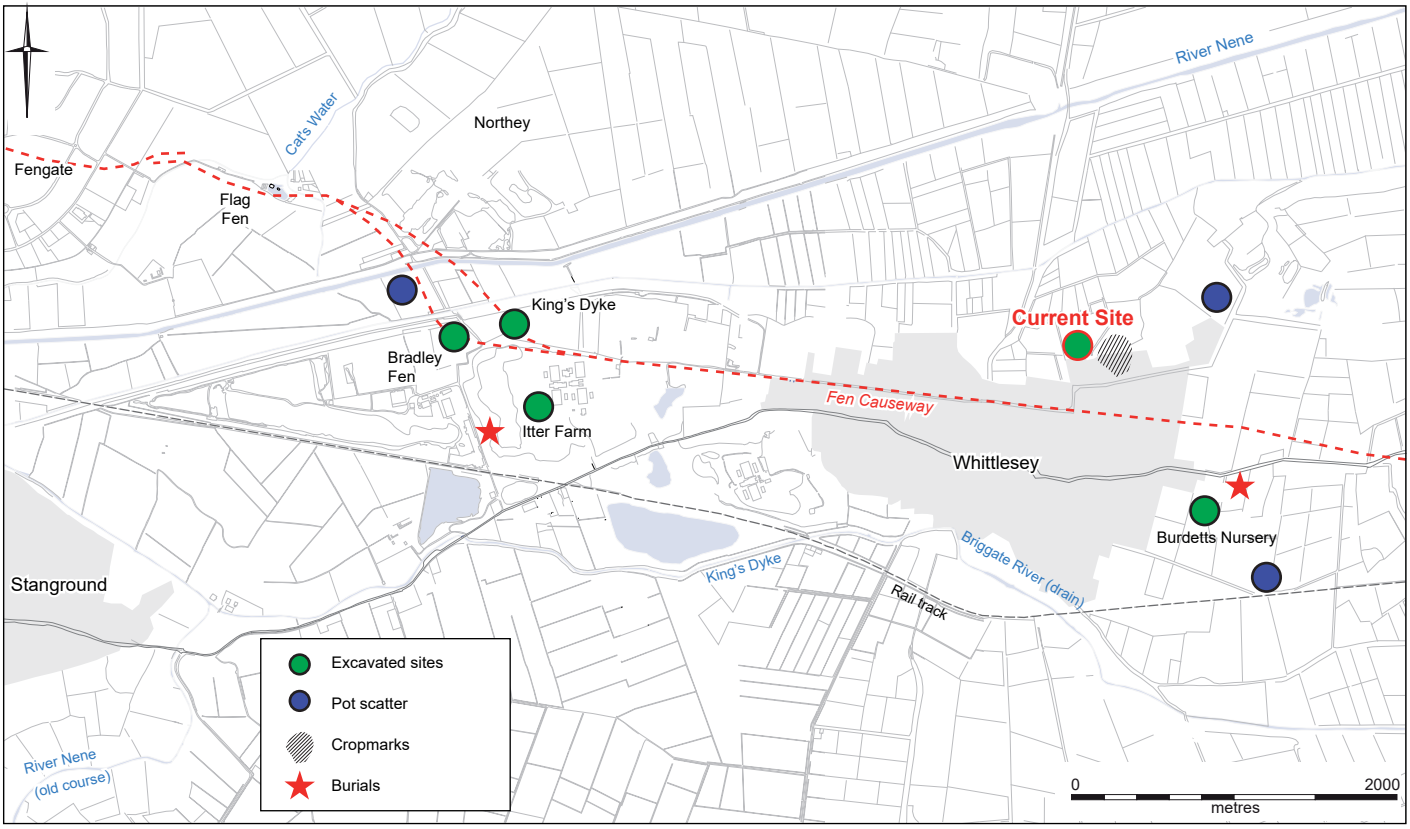

Figure 11. Roman sites in the surrounding area