

5/6 Clerk Maxwell Road, Cambridge

An Archaeological Excavation
Post-Excavation Assessment



Hannah Barrett

Post Excavation Assessment and Updated Project Design 5/6 Clerk Maxwell Road, Cambridge

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December 2021

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Location: 543310 259022

Site Code: CMR21

Event Number: ECB6707

Report no. 1492

PROJECT DATA

Site name	Clerk Maxwell Road, Cambridge
OS Grid Ref.	543310 259022
Client	Hill
Consultant	Myk Flitcroft, RPS Consulting
Planning ref.	19/1734/FL
Brief issued by	Andy Thomas, Cambridgeshire Historic Environment Team
Physical archive	Cambridgeshire County Council
Digital archive	University of Cambridge digital repository
OASIS no.	cambridg3-504564
CAU Site code	CMR21
CAU Report no.	1492
Report version	1
Date issued	December 2021
Report author	Hannah Barrett
Reviewed by	Emma Beadsmoore
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ACKNOWLEDGEMENTS

The work was commissioned by Myk Flitcroft from RPS Consulting on behalf of their client Hill. On-site assistance from Hill was provided by Harry Wright and Matthew Wilson.

The Brief for Archaeological Investigation was prepared by Andy Thomas (Cambridgeshire Historic Environment Team (CHET)), who also monitored the work on site.

The Project Manager was Emma Beadsmoore, and fieldwork was directed by Hannah Barrett. The field team was made up of the author, Andrew Chaplin, Charlotte de Bruxelles, Jonathan Lester, Han Li, and Thomas Matthews Boehmer. Survey was carried out by Jon Moller, with photographs by Dave Webb and members of the field team. Graphics were prepared by Ellie Winter. Finds were processed and catalogued by Emily Banfield and Sabrina Salmon. Samples were processed by Chris Boulton. Specialist input was coordinated by Vida Rajkovača; individual specialists are noted in the report.

Plant was provided by Lattenbury Services Ltd and operated by Grant Roberts.

SUMMARY

An archaeological excavation was carried out by the Cambridge Archaeological Unit at the former University Cocks and Hens Tennis Club, Clerk Maxwell Road, Cambridge between 28th June and 10th August 2021, ahead of development. The work was commissioned following an archaeological evaluation which identified significant Roman remains in the northern half of the Development Area (Middleton 2021).

The excavation revealed late Roman (third-fourth century AD) ditched enclosures and boundaries, a road, metalled surfaces, a scorched surface, pits and disuse deposits. These features were rich in artefactual and environmental remains and provide evidence of edge-of-settlement activity associated with the dense, multi-phase, Vicar's Farm Roman settlement neighbouring the excavations to the west (Evans and Lucas 2020). The Roman road identified appears to be a continuation of that discovered at Wilberforce Road to the south (Brittain and Evans 2018). The medieval *Willowes Ditch*, first noted on maps in the 14th century (Hall and Ravensdale 1976) and still partially extant today, bisected the site from west to east.

Extensive archaeological investigations in the environs of this site have revealed a coherent map of Roman settlements, roads and field systems surrounding the town of *Duriloponte* (Roman Cambridge). The overarching aim of this project is to investigate the character and phasing of the site's Romano-British activity within the context of the surrounding excavations, thereby enhancing our understanding of Romano-British settlement in the western hinterlands of *Duriloponte*.

1. INTRODUCTION

1.1 Project Background

- 1.1.1 The site covers 0.37 hectares of land off Clerk Maxwell Road in the northwest of Cambridge (NGR 543310 259022). It is bordered by Clerk Maxwell Road to the west, and residential houses and gardens to the north, east and south (Figure 1).
- 1.1.2 From the 1960s to 2016, the site was used as the University of Cambridge's Cocks and Hens Tennis Club, comprising grass and hard surface tennis courts, a clubhouse and related infrastructure. Prior to this, according to the cartographic record, it was arable land within the West Fields of Cambridge from at least the 14th century (Hall and Ravensdale 1976).
- 1.1.3 Residual made ground from the former grass and hard surface tennis courts and infrastructure associated with the clubhouse was present. An operational surface water pipe oriented east-west bisected the site and was retained in situ with a 2m standoff either side.
- 1.1.4 The proposed development consists of the erection of 35 dwellings, re-positioning of the existing access onto Clerk Maxwell Road, provision of a new spine road, parking, cycle provision, landscaping and associated infrastructure (Planning reference 19/1734/FL).
- 1.1.5 A planning condition was placed on the development by Cambridgeshire Historic Environment Team (CHET) requiring archaeological excavation of the site. A Brief for Archaeological Investigation outlining the requirements was issued by Andy Thomas (April 2021).
- 1.1.6 The Brief required a detailed open area excavation of 0.37 hectares in the northern half of the Development Area (DA), focussed on the significant archaeological remains identified in the archaeological evaluation (ECB6466; Middleton 2021). The overarching research aim was to assess the context of this site within the surrounding Roman landscape (Thomas 2021).
- 1.1.7 Investigations were carried out in accordance with the Cambridge Archaeological Unit (CAU) Written Scheme of Investigation (WSI; Beadmoore 2021a), which was produced in response to the CHET Brief (Thomas 2021).

1.2 Geology and topography

- 1.2.1 The bedrock comprises Gault Formation Mudstone clays with superficial Quaternary deposits of silt, sand and gravel diamicton tills (British Geological Survey website, <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>; accessed 20/10/2021)
- 1.2.2 The DA is situated at approximately 12-14m AOD, sloping slightly from west to east.

2. ARCHAEOLOGICAL BACKGROUND

- 2.1.1 The DA is situated in a landscape of known archaeological activity revealed by extensive archaeological investigations in the surrounding area at sites such as Vicar's Farm (CHER CB15361), North West Cambridge (CHER ECB 4113), NIAB (CHER ECB 3788), Darwin Green (CHER ECB 5535), High Cross (CHER 13016) and Wilberforce Road (CHER MCB27197).
- 2.1.2 Prehistoric archaeology is well attested in the Cambridge environs but the archaeological features revealed in this excavation are predominantly Roman in date and fit into the somewhat cohesive map of Roman settlements, roads and field systems surrounding the town of *Duriloponte* (Roman Cambridge) and investigated in the afore-mentioned excavations. These areas have been more extensively excavated than the core of the Roman town itself, which was focused on Castle Hill (CHER 05239, CHER 05240), c. 1km east of the site.
- 2.1.3 The archaeological background of the local environs has been described at length in the CAU publication *Hinterlands and Inlands* (Evans and Lucas 2020), Land South of Wilberforce Road Desk Based Assessment (Wiseman 2020) and the various North West Cambridge reports (e.g. Redfern 2001, Evans and Newman 2010) among others. However, two sites that are directly related to the excavations are described below. These are the neighbouring site to the west at Vicar's Farm because features revealed in both excavations form parts of the same Roman settlement (2.2; Evans and Lucas 2020; Figure 2); and the University of Cambridge Sports Ground, Wilberforce Road (2.3; Brittain and Evans 2018) c.350m to the south of the site, because the road excavated there is likely to be a continuation of the road excavated on the current site (Figure 2).

2.2 Vicar's Farm

- 2.2.1 The Vicar's Farm site sloped from 17.5m OD on the western and northern boundaries to a basin at 14m OD on the eastern boundary. Mesolithic activity was identified in the form of flint scatters and tools on the slopes above the basin. Neolithic and Bronze Age worked flints were recovered from lower down the slopes and within the basin itself, indicating a shift to lower areas as the groundwater levels decreased. A few hints of Early Iron Age activity in the form of a ditch with a substantial ceramic assemblage and some residual pottery were recovered along the southern boundary, indicating that there was a settlement to the south. Middle-Late Iron Age pits, a coin and a brooch were revealed in the northern part of site (CHER CB15362; Evans and Lucas 2020).
- 2.2.2 A large stock enclosure, well and pit were dated to the Roman conquest period, but the main settlement phase began around AD 80 (CHER CB15361). Phase I (AD 80-180) of the settlement comprised a central, rectilinear, ditched enclosure, within which was a cremation cemetery, a timber shrine, an aisled building, roundhouses and pits. Linked to this main enclosure were trackways and smaller enclosures. Phase II (AD 180-270) involved major expansion to the north and south in the form of new enclosures, trackways, structures, surfaces and a field system. The settlement reached its peak in Phase III (AD 270-410+) during which substantial changes took place. A new settlement area was added to the south with a linking trackway and an inhumation cemetery, the centre of settlement activity moved eastwards, and the core areas were subject to complex subdivision. The site seems to have been abandoned early in the fifth century AD. Along with a substantial assemblage of pottery and animal bone from cut features, metallised surfaces, and a dark earth deposit preserved in a basin, a diverse range of special finds was recovered from Vicar's Farm including

spearheads, brooches, pins and over 350 coins as well as a fine, small bust of the Roman deity Minerva (Evans and Lucas 2020).

- 2.2.3 After Roman occupation, the Vicar's Farm site saw only limited subsequent archaeological activity comprising medieval ridge and furrow (CHER 04407) and a medieval dyke known as *Willowes Ditch* running through the northern part of the site (CHER MCB15891; (Evans and Lucas 2020)).

2.3 University of Cambridge Sports Ground, Wilberforce Road

- 2.3.1 Prehistoric evidence from Wilberforce Road was minimal and consisted of a few residual flints and pottery sherds dating from the Neolithic to the Late Iron Age (Brittain and Evans 2018).

- 2.3.2 Roman activity can be divided into three phases spanning the first to the fourth centuries AD with the floruit dating to the first and second centuries AD. Phases 1 and 2 saw the establishment of a coaxial field system and paddocks within which a pottery kiln and pits were revealed. Phase 3 was dominated by a ditched, 8-10m wide, north-northeast to south-southwest aligned road. This road is part of a relatively dense web of Roman roads in this part of the Cambridge hinterlands, the most major of which is Akeman Street which lies c. 250m to the southeast of the site (Brittain and Evans 2018).

2.4 Previous Archaeological Work

- 2.4.1 Archaeological evaluation of the DA revealed remains concentrated in the north western part of the plot, the focus of the current investigation, that were associated with the second to fourth century phases of the adjacent Vicar's Farm Roman settlement. Features comprised enclosure ditches rich in ceramic and faunal remains with a potential overlying 'dark earth' deposit that yielded a significant quantity of coins, and a crude metalled surface. Further, less substantial ditches were encountered to the east and south which were thought to be part of an associated Roman field system (ECB6466; Middleton 2021).

3. ORIGINAL AIMS, OBJECTIVES AND RESEARCH THEMES

- 3.1.1 The principal aim of the excavation was to mitigate the impact of development on archaeological remains by investigating the character and phasing of the Romano-British activity in the DA. The results were to be set within the context of the previous excavations at Vicar's Farm, thereby enhancing our understanding of broader Romano-British settlement on the western hinterlands of Roman Cambridge.
- 3.1.2 The objectives of the work were to identify, scrutinise and record any archaeological remains within the excavation area, through the methods defined in the methodology outlined below.
- 3.1.3 The focus of the research was on determining the character, extent, date and duration of the Roman settlement identified in the DA. More specifically and in reference to research objectives within Research and Archaeology Revisited: a revised framework for the East of England (EAA Occ. Paper No 24, 2011) and the updated agenda in the current review (2019; <https://researchframeworks.org/eoe/>):
- To increase our understanding of Roman farmsteads, not only the settlement core, but also peripheral areas.
 - To undertake further environmental sampling of the Vicar's Farm Roman farmstead, with particular focus on further characterisation of the dark earth deposits also encountered at that site.
 - To further investigate through artefact and ecofact studies the farmstead's role as a potential major farm/ production centre and possible market within the wider hinterlands of Roman Cambridge.

4. EXCAVATION METHODOLOGY

- 4.1.1 The archaeological work was carried out in accordance to the Written Scheme of investigation (Beadsmoore 2021a) approved by the CHET prior to commencement of works. The excavation was undertaken in accordance with: the Chartered Institute for Archaeologists' Code of Conduct (2019); Standard and Guidance for Archaeological Excavation (CIFA 2014a); Standards for Field Archaeology in the East of England (EAA Occasional Paper 14); statutory Health and Safety legislation; and the CAU Risk Assessment (Beadsmoore 2021b).
- 4.1.2 All machine excavation was undertaken under the 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 potential archaeological features and were stored separately on site.
- 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. A 25% sample of settlement-related ditches were hand-excavated before 100% excavation by mini-digger to recover extra information. The disuse deposits and metalised surfaces were hand-excavated in 1m transects and then these deposits were 100% excavated by mini-digger and sorted by hand so that a thorough assessment of artefact content and spatial distribution could be made.
- 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 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.
- 4.1.7 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 CMR21.

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 will be scanned and stored in the digital archive. The number of records is shown below in Table 1.

Table 1: Quantification of excavation archive

<i>Record Type</i>	<i>Number</i>
Contexts	111
Features	37
Context register sheets	3
Context Sheets	111
Feature register sheets	2
Section register sheets	1
Large drawing sheets (A2)	6
Small finds register sheets	3
Environmental register sheets	3

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 below in Table 2.

Table 2: Quantification of finds archive

<i>Finds</i>	<i>Number</i>	<i>Weight (g)</i>
Pottery	1369	22563
Animal bone	7447	144643
Flint	5	640
Ceramic building material	64	9509
Worked stone	146	8897.6
Burnt stone	16	4548
Fired clay	38	732
Glass	5	42
Metalwork	142	2780
Small finds	110	6710
Fired clay	38	732
Charcoal	48	10
Shell	87	9260
Slag	32	699
Environmental samples	62	N/A

5.3 Digital archive

5.3.1 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. The digital management plan (DMP) for the site is in section 11 of this report.

Table 3: Summary of digital archive

<i>Resources</i>	<i>Format</i>	<i>Quantity</i>
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,	1
Context sheets (database)	.xls,	1
Finds registers (database or spreadsheet)	.xls,	1
Scans of site plans and section drawings	.tiff	8
Specialist databases, spreadsheets, diagrams	.xls,	5
Selected site photographs	.tiff, .raw	100

6. ARCHAEOLOGICAL SUMMARY

6.1 Overview

6.1.1 Late Roman remains (third-fourth century AD) indicative of edge-of-settlement activity dominated the archaeology on the site, comprising at least three phases of cut features with associated surfaces and disuse deposits. The medieval *Willowes Ditch*, which bisected the site, was almost completely truncated by the operational surface water pipe although part of its original cut and associated deposits were visible in section (Figures 2 and 3).

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

6.2 Prehistoric

6.2.1 Six residual worked flints recovered from five Roman features (F.36, F.37, F.44, F.52, F.61) dispersed across the site provided the only evidence of prehistoric activity. One flint was datable to the Neolithic (Beadsmoore, Appendix 2F). No cut features were revealed.

6.3 Roman

6.3.1 Roman remains were predominantly third-fourth century AD in date and consisted of at least three phases of ditched enclosures, a boundary, a road, metalled surfaces, a scorched surface, pits and disuse deposits. Some of these features formed part of the eastern extension of Phase III (c. AD270-410) of the settlement at Vicar's Farm (Evans and Lucas 2020) whilst the northeast-southwest oriented road is most likely to be a continuation of the road crossing the Wilberforce Road site c.350m to the south (Brittain and Evans 2018).

Enclosures

6.3.2 Three phases of ditched, sub-rectilinear enclosures oriented on a north-northeast to south-southwest axis were partially revealed in the western half of the excavations and are described in chronological order below (Figures 3 and 4). These enclosures formed the eastern end of the enclosure system investigated at Vicar's Farm and therefore the full extents lay beyond the limit of excavation to the west. There is a distinct lack of refuse pits associated with these enclosures, as was the case at Vicar's Farm (Evans and Lucas 2020). However, the ditch fills are rich in charcoal, ceramic and faunal remains, indicating that domestic waste was dumped into the ditches instead.

6.3.3 Enclosure 1 (Figure 4), of which 20m x 6m was revealed within the excavation area, was defined by a continuous ditch (F.31) with an opening in the southwest corner. The pottery recovered was third-fourth century AD in date (Anderson, Appendix 2A).

Table 4: Summary of features forming Enclosure 1

<i>Feature No.</i>	<i>Type</i>	<i>Context Nos.</i>	<i>Width (m)</i>	<i>Depth (m)</i>	<i>Pottery</i>	<i>Bone (g)</i>
31	Ditch	70, 71, 75, 76, 90, 177	1.4	0.5	182 (1636g)	4956

6.3.4 Enclosure 2 (Figure 4), of which 22m x 28m was revealed in the excavations, was delineated by ditches F.34, 40, 43, 50 and 61 with an opening in the northeast corner. The pottery recovered was third-fourth century AD in date (Anderson, Appendix 2A).

Table 5: Summary of features associated with Enclosure 2

Feature No.	Type	Context Nos.	Width (m)	Depth (m)	Pottery	Bone (g)
34	Ditch	74, 81, 88	1.25	0.74	21 (493g)	2217
40	Ditch	89, 130	0.88	0.36	43 (1131g)	2317
43	Ditch	92, 94	0.74	0.23	2 (4g)	663
50	Ditch	108, 121	1.02	0.31	29 (276g)	89
61	Ditch	158, 165, 166, 179	0.64	0.15	20 (571g)	8179

6.3.5 Enclosure 3 (Figure 4) was a rectilinear enclosure in plan with a rounded northeast corner, of which 10m x 14m was exposed. This enclosure was defined by ditches F.33 and F.35 and was particularly rich in charcoal, ceramic, metal and faunal remains. The pottery recovered was predominantly fourth century AD in date (Anderson, Appendix 2A) and the faunal remains dominated by horse and cow (Rajkovaca, Appendix 2G). Once 25% of Enclosure 3 had been hand-excavated, it was 100% excavated by mini-digger and the fills hand-sorted so that artefact content and spatial distribution could be assessed, and to check for neonate burials (found in the continuations of these enclosures to the west at Vicar's Farm (Evans and Lucas 2020)).

Table 6: Summary of features forming Enclosure 3

Feature No.	Type	Context Nos.	Width (m)	Depth (m)	Pottery	Bone (g)
33	Ditch	73, 80, 102, 115, 167, 168	1.55	0.56	306 (6332g)	11329
35	Ditch	77, 95, 119, 176	0.87	0.28	53 (564g)	599

Road

6.3.6 A partially-metalled road was revealed from which second-fourth century AD pottery was recovered (Anderson, Appendix 2A). It is oriented northeast-southwest and is most likely to be a continuation of the north-northeast to south-southwest aligned road excavated at Wilberforce Road, c.350m to the south.

6.3.7 The Road (Figures 5 and 6) crossed 50m of the southern half of the site, with a slight turn to the south next to the southern limit of excavation. Two parallel ditches defined each side (F.36, 38, 39, 45, 46, 47) and a 0.16m-thick metalled agger of compacted flint and animal bone (F.48) existed in between the ditches in the northern 15m exposed. The road spanned c. 6m-8m between the internal edges of the roadside ditches. A quarry pit (F.47) was exposed at the southern limit of the metalling, which would have provided the gravel for the surface (see 6.3.12). A disuse deposit of dark grey/ brown sandy silt (F.37) sealed the metalled agger and roadside ditches (Figure 9).

Table 7: Summary of features forming the road

Feature No.	Type	Context Nos.	Width (m)	Depth (m)	Pottery	Bone (g)
36	Ditch	79, 105, 131	2.03	0.66	26 (587g)	11254
38	Ditch	83, 86, 138	2.06	0.92	10 (178g)	3458
39	Ditch	84, 87, 107	1.1	0.42	0	0
45	Ditch	97, 120, 141	1.26	0.38	0	1370
46	Ditch	98, 118, 140	2.38	0.35	2 (66g)	938
48	Metalling	100, 142	7	0.16	4 (43g)	1383
37	Disuse	82, 85, 101, 109, 139	6.56	0.22	19 (633g)	9730

Boundary

6.3.8 The northern settlement boundary (Figures 7 and 8) was aligned east-west and extended from Vicar's Farm to the west, curving to the south at its eastern end where it was attached to the west side of the road. It was only partially revealed in the excavations due to the 4m wide baulk protecting the surface water pipe that lay directly over the boundary on the same alignment. From the exposed elements (c.70m of the north side, c.20m of the south side), the boundary consisted of at least three phases of parallel ditches (F.51, 57, 67, 68) and metallised surfaces (F.59 and F.52). Ditches F.51 and F.57 contained waterlogged basal silting fills and upper fills of dark grey/ black dumped refuse, particularly rich in charcoal and faunal remains (see Warham, Appendix 2H and Rajkovaca, Appendix 2G respectively). A metallised surface (F.59) was present in the eastern 10m. Later in the Roman period a metallised surface (F.52) was laid down over ditches F.51 and F.57, indicating that the boundary may also have served as a trackway at this time. A deposit (F.53; Figure 9) sealed this metallised surface, posited at evaluation stage to be a potential 'dark earth' deposit of enriched hearth waste due to the density of finds recovered. However, open area excavation revealed that although finds-rich, the layer was not enriched hearth waste but a mid-brown, sandy silt disuse deposit, comparable with the layer sealing the road. The disuse deposit and metallised surface were excavated in transects and subsequently these deposits and the ditches were 100% excavated so that artefact content and spatial distribution could be assessed.

Table 8: Summary of features forming the settlement boundary

<i>Feature No.</i>	<i>Type</i>	<i>Context Nos.</i>	<i>Width (m)</i>	<i>Depth (m)</i>	<i>Pottery</i>	<i>Bone (g)</i>
51	Ditch	110, 124, 127, 134, 143, 148, 149, 163, 169, 175	2.02	0.8	181 (3759g)	39738
57	Ditch	123, 133, 151, 154, 164	1.46	0.32	5 (106g)	505
67	Ditch	173	1.1	0.5	15 (180g)	412
68	Ditch	174	1.8	0.52	5 (119g)	379
52	Metalling	111, 112, 126, 128, 146, 147, 150, 153, 162	4.9	0.15	179 (2714g)	14602
59	Metalling	155, 156, 171	3.9	0.12	5 (119g)	4546
53	Disuse	113, 125, 135, 144, 145, 152, 161	4.9	0.14	74 (1085g)	1921

Pits

- 6.3.9 Pit F.32 [72] (Figure 4) was contemporary with Enclosure 3 (fourth century AD). It was sub-oval in plan with steep sides and a flat base (2.28m in length; 1.42m in width and 0.24m in depth) and contained a single fill of dark blue/ grey silty clay with occasional flint inclusions. A notable ceramic assemblage of 54 sherds (982g) was recovered including eight sherds from a Nene Valley whiteware wall-sided mortaria, 15 sherds (158g) from a Hadham oxidised ware small necked jar and a whiteware pinched-mouth flagon, all of which date AD300-400 (Anderson, Appendix 2A), and 820g of animal bone (Rajkovaca, Appendix 2G).
- 6.3.10 Pit F.42 [91] (Figure 4) contained no material culture but was truncated by and therefore predated Enclosure 1 (third-fourth century AD). It was circular in plan with moderately sloping sides and a concave base (0.8m in length; 0.5m in width and 0.12m in depth) and contained a single fill of dark blue/ grey clayey silt.
- 6.3.11 Pit F.47 [99] (Figure 5) was a quarry pit associated with the construction of Road 1 (third-fourth century AD). It was sub-circular in plan with steep sides and a flat base (4.62m in length;

4m in width and 0.66m in depth). It contained four fills: (1) a light orange mottled grey silty clay with occasional small stone inclusions; (2) a dark grey/ brown with patches of sandy clay with burnt clay; (3) a mixed blue/ grey sandy clay from which 67g of animal bone were recovered; (4) a mid-orange/ blue/ grey sandy silt with frequent small stone inclusions.

Scorched Surface

- 6.3.12 F.69 (Figures 4 and 10) was a sub-rectangular scorched surface (2.7m in length, 2.5m in width, 0.08m thick) that was revealed in the northeast corner of Enclosure 1, sealed beneath the metalled surface of Road 2. It comprised two layers of red/ orange burnt clayey sand with occasional charcoal patches, which were hand excavated and subject to geochemical sampling in order to assess its possible date and function. No artefacts were found in association with the surface.

6.4 Medieval

Willowes Ditch

- 6.4.1 *Willowes Ditch* (Figure 2) was first recorded on 14th century maps of the West Fields of Cambridge as a sinuous wet ditch/ dyke of a roughly north-northwest to south-southeast alignment. The ditch was recorded as starting in land north of the Madingley Road, passing through Vicar's Farm and the current site before continuing to the east towards Bin Brook and the Cam (Hall and Ravensdale 1976).
- 6.4.2 *Willowes Ditch* was only visible in section in the western and eastern baulks of this site as a c. 8m wide, c. 0.75m deep profile with gently sloping sides from which two sherds of post-medieval pottery were recovered. It was cut through the subsoil, but not truncating the Roman archaeological level, consequently it was not identified in either the evaluation or the neighbouring excavations at Vicar's Farm which were stripped to the Roman archaeological level. The central 4m of the profile was not exposed – a baulk was left in to protect the surface water pipe which was laid on the same course. However, the continuation of *Willowes Ditch* to the east was evident as a c.0.5m deep wet ditch running through the neighbouring garden at Hedgerley Close.

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

7.1 Artefacts

Roman Pottery (Anderson, Appendix 2A)

7.1.1 The excavation produced an assemblage of Roman pottery totalling 1369 sherds, weighing 22563g and representing 44.82 EVEs (estimated vessel equivalent) and a minimum of 202 vessels (MNV). The material is predominately late Roman in date, with an apparent peak in activity in the third-fourth centuries AD. Although the assemblage is indicative of domestic activity, there is a higher than average ratio of fineware vessels, largely influenced by the presence of a significant number of Nene Valley colour-coated vessels. Indeed, the assemblage as a whole indicates that the site had access to wide trade networks, probably related to the proximity to the town and the road system.

7.1.2 The Roman pottery assemblage is primarily of local importance, comprising a significant group of predominantly late Roman date from the environs of *Duriloponte*. The site forms part of the larger Vicars Farm site (Evans and Lucas 2020) and therefore should be considered alongside this site.

Ceramic Building Material (CBM) (Quick, Appendix 2B)

7.1.3 An assemblage of 54 fragments of Ceramic Building Material weighing c.8.7kg was recovered from the excavations. The material is all Roman in date.

7.1.4 This is a small and fragmented assemblage of Roman CBM with no examples of complete tiles. Further, the material does not derive from an in situ building and is likely to represent secondary re-use prior to discard. As such, it has limited scope for further analysis, although it has relevance for understanding local patterns of use and re-use of CBM in the Roman period.

Metalwork (Quick and Hall, Appendix 2C)

7.1.5 A total of 110 metal artefacts weighing 1,659.4g were recovered from the excavations. The material spans the Roman, medieval and Post-medieval periods, although the majority of the assemblage is Roman in date. This material adds to the metal artefacts that were recovered during the evaluation trenching at the site (Hall in Middleton 2021).

7.1.6 The assemblage of metal artefacts is small. However, the 23 Roman objects, including 15 coins, provide an important dataset for understanding local patterns of material culture uptake, in particular in connection with the site at nearby Vicar's Farm (Lucas and Whittaker 2001).

Worked Stone (Quick, Appendix 2D)

7.1.7 The excavations produced a total of 166 fragments of worked stone weighing c.7.76kg. The assemblage includes fragments of quern – of which 150 fragments derive from a single lava quern – and roofing slate. The dateable material is all Roman.

7.1.8 This is a small assemblage of worked stone, which for the most part is highly fragmented. There are no complete querns and the material is likely to represent material selected for secondary re-use. The assemblage does however offer scope for understanding local patterns of quern acquisition and use.

Glass (Barrett, Appendix 2E)

- 7.1.9 Six pieces of glass were recovered from the southwest quarter of the site, associated with Enclosures 1, 2 and 3 and Road 1. Four of the pieces were Roman blue/ green glass, including two partial necks and rims of glass vessels and one piece of possible window glass.
- 7.1.10 Once fully analysed by a specialist, the small glass assemblage can be viewed alongside the third and fourth century ceramic, metal and faunal remains from the same contexts, as well as the assemblage from the neighbouring excavations at Vicar's Farm.

Flint (Beadsmoore, Appendix 2F)

- 7.1.11 A total of six ($\geq 644\text{g}$) residual worked and burnt flints were recovered from five Roman features in the western half the site.
- 7.1.12 The flint assemblage is small and residual and therefore has limited potential to contribute further to the understanding of the site.

7.2 Environmental Evidence***Faunal Remains (Rajkovaca, Appendix 2G)***

- 7.2.1 The excavation resulted in a recovery of a relatively substantial faunal assemblage, with a raw count of 5415 fragments and a total weight of just over 136kg (136009g). Based on ceramic evidence, the faunal material is largely late Roman in date, with a peak in activity in the third-fourth centuries AD. Quantitatively significant, the material is almost exclusively made up of remains of larger livestock (cattle and horse), albeit displaying a remarkably restricted range of species.
- 7.2.2 The faunal assemblage forms part of the wider Vicar's Farm site complex and it is important that it is considered in parallel with findings from the immediate locale. It is also quantitatively significant, and, as such, it could go some way to completing the picture of the nature of Roman economy and livestock use in Cambridge's Roman hinterlands (Evans and Lucas 2020). The unusually restricted species range or a clear focus on the larger livestock could be seen as a start of specialisation, but this needs to be considered in more detail.

Paleoenvironmental Assessment (Warham, Appendix 2H)

- 7.2.3 A total of 15 bulk samples were processed and the palaeoenvironmental material analysed. Crop processing residues were present in quantity from ditch F.33 associated with Enclosure 3 and ditch F.51 associated with Road 2. Ceramic building material provisionally identified as 'kiln furniture' has also been recovered from F.33 and the crop residues may be derived from activities associated with drying/parching grain. The presence of damp ground/ aquatic indicators suggests the presence of standing/slow moving water in some of the ditches and the frequent occurrence of seeds of uncharred elder may indicate that hedge-row like vegetation may have grown in proximity to the ditches.
- 7.2.4 The charred plant macrofossil assemblages from ditches F.33 and F.51 are of regional research significance as evidence for crop types and arable husbandry regimes during the late Roman period in the east of England, particularly in the context of the agricultural role of the second to fourth century AD settlement at Vicar's Farm and its environs in relation to Roman Cambridge. If confirmation of the presence of stinking chamomile is possible, presence/absence data of this species is also of regional significance as a potential indicator of the cultivation of heavier soils during the late Roman period.

Geoarchaeological Assessment (Machicado, Appendix 2I)

- 7.2.5 A series of geoarchaeological samples were taken from key contexts in order to add to our understanding of the site within the local Roman environment. Ten micromorph block samples will be processed and analysed; 37 loose soil samples will be evaluated using the basic geoarchaeological analysis suite: pH, EC (electric conductivity), and Redox potential. High phosphate levels will be assessed using the Valadate-Molybdate method. The results will be detailed in the archive report.

7.3 Archaeological Potential

- 7.3.1 The excavated evidence comprises at least three phases of enclosures, pits, surfaces and roads on the eastern edge of a Roman settlement, from which relatively substantial assemblages of artefacts and paleoenvironmental remains have been recovered. There is therefore the potential to: increase our understanding of peripheral areas of Roman farmsteads; identify zones of activity through distributional analysis; map development of the Roman roads; increase our understanding of the Roman environment; and further investigate the farmstead's role as a potential major farm/ production centre and possible market within the wider hinterlands of Roman Cambridge.

8. UPDATED PROJECT DESIGN

8.1 Review and Revision of Research Aims

8.1.1 The overarching research aim established in the Brief (Thomas 2021) and expanded on in the WSI (Beadsmoore 2021a) was to determine the character, extent, date and duration of the Roman settlement identified in the DA, within the context of the previous excavations at Vicar's Farm, in order to enhance our understanding of broader Romano-British settlement on the western hinterlands of Roman Cambridge.

8.1.2 More specific research objectives were outlined in the WSI after consultation of Research and Archaeology Revisited: a revised framework for the East of England (EAA Occ. Paper No 24, 2011) and the updated agenda in the current review (2019; <https://researchframeworks.org/eoe/>):

- To increase our understanding of Roman farmsteads, not only the settlement core, but also peripheral areas.
- To undertake further environmental sampling of the Vicar's Farm Roman farmstead, with particular focus on the further characterisation of the dark earth deposits also encountered at that site.
- To further investigate through artefact and ecofact studies the farmstead's role as a potential major farm/ production centre and possible market within the wider hinterlands of Roman Cambridge.

8.1.3 Details on the relevance of these original research aims are stated below, as are new questions to be addressed at analysis stage, which have arisen as a result of the excavation and initial analysis.

8.2 Updated Research Aims and Questions

1. To increase our understanding of Roman farmsteads, not only the settlement core, but also peripheral areas.

(LIA-Rom 13 (<https://researchframeworks.org/eoe/research-agenda/late-iron-age-roman/> 2019))

8.2.1 This site is located on the eastern edge of the Roman settlement at Vicar's Farm, covering the outer limits of enclosures, fields and roads that link the farmstead to other settlements in the vicinity. The archaeological features and finds assemblages therefore have the potential to further our understanding of the function of the peripheral areas of Roman farmsteads, particularly zones of crop and animal processing and middening.

2. To undertake further environmental sampling of the Vicar's Farm Roman farmstead, with particular focus on the further characterisation of the dark earth deposits also encountered at that site.

8.2.2 Enclosure and roadside ditches rich in midden material, grains and waterlogged contexts, surfaces and disuse deposits were subject to a thorough and varied environmental strategy devised by Dr Eduardo Machicado Murillo (the CAU's Geoarchaeologist) and Dr Rachel Ballantyne. Samples include bulk samples (analysed by Gemma Warham, Appendix 2H), micromorphs and phosphate samples (to be analysed by Eduardo Machicado, Appendix 2I). The results of these samples will facilitate characterisation of the site and context within the wider landscape, by identifying and articulating changes in factors such as ground conditions,

crops planted and midden contents in different areas of the site. No 'dark earth' deposit was encountered on this site and therefore further characterisation of the Vicar's Farm 'dark earth' deposits is not possible.

3. To further investigate through artefact and ecofact studies the farmstead's role as a potential major farm/ production centre and possible market within the wider hinterlands of Roman Cambridge.

- 8.2.3 The artefact and ecofact assemblages will be analysed alongside those from Vicar's Farm in order to further investigate the role that the settlement played in the later Roman period within the wider hinterlands of Roman Cambridge.

New Questions

1. Can we map the development of Roman roads? (LIA-Rom 10 (<https://researchframeworks.org/eoe/research-agenda/late-iron-age-roman/> 2019)

- 8.2.4 Two roads traverse this site, which underwent several alterations over the Roman period. Analysis of the artefact and ecofact assemblages associated with the roads will indicate how they related to the settlement. Based on projected alignments and morphological similarities Road 1 is likely to be a continuation of the road excavated at Wilberforce Road. It will therefore be possible to map the development over space and time and explore the influencing factors.

2. How can we make greater use of artefact distributional analyses? (LIA-Rom 18 (<https://researchframeworks.org/eoe/research-agenda/late-iron-age-roman/> 2019)

- 8.2.5 The ditches, surfaces and disuse deposits that were rich in material culture were 100% excavated and the locations of the material were plotted. Therefore, in combination with the assemblages from Vicar's Farm, distributional analyses of the ceramic, metal and faunal remains from this site have the potential to identify zones of activity within the settlement and its peripheral areas.

2. How can we increase our understanding of the Roman Environment? (LIA-Rom 06 (<https://researchframeworks.org/eoe/research-agenda/late-iron-age-roman/> 2019)

- 8.2.6 Initial analysis of the varied environmental samples taken on site, particularly those from waterlogged contexts, indicates that they provide a wealth of information on changing water levels, ground conditions, types of crop being planted, and the level of activity occurring in different areas (Warham, Appendix 2H). These samples will therefore inform our understanding of the local environment during the Roman period.

8.3 Method Statements and Recommendations for Further Work

Stratigraphic Analysis

8.3.1 Final phasing of the site and integration into the Vicar's Farm sequence, will be undertaken following full specialist analysis.

8.3.2 Distribution of artefacts and ecofacts across the site will be plotted using GIS.

Artefact Analysis

Roman Pottery (Anderson, Appendix 2A)

8.3.3 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 (Anderson in Middleton 2021).

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

8.3.5 The pottery should be analysed by site phase once the phasing is complete. This should include the production of some GIS plots of material to highlight any spatial changes in deposition over time.

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

8.3.7 The assemblage should be considered in its wider setting, with particular reference to the Vicars Farm assemblage (Monteil 2020), as well as other sites excavated within the environs of the town.

8.3.8 It is recommended that a small number of sherds are illustrated (five to eight vessels), focusing on the material from the latest dating contexts.

Ceramic Building Material (CBM) (Quick, Appendix 2B)

8.3.9 It is recommended that the material is plotted spatially in order to understand any intra-site patterning, and situated within its local context, especially in connection with the nearby site at Vicar's Farm (Lucas and Whittaker 2001). Otherwise, the assemblage has been fully assessed, and no further work on the material itself is required. However, this report should form part of the site archive.

Metalwork (Quick and Hall, Appendix 2C)

8.3.10 The assemblage of metal artefacts is small. The assemblage has been fully assessed, and no further work on the material itself is required. However, the 23 Roman objects, including 15 coins, provide an important dataset for understanding local patterns of material culture uptake, in particular in connection with the site at nearby Vicar's Farm (Lucas and Whittaker 2001).

Worked Stone (Quick, Appendix 2D)

8.3.11 The assemblage has been fully assessed, and no further work on the material itself is required. It is recommended that the material from the site is situated within its local context, in particular in relation to the site at Vicar's Farm (Evans and Lucas 2020).

Glass (Barrett, Appendix 2E)

- 8.3.12 The glass assemblage should be subject to identification and analysis by a specialist and a short report produced for the archive report.

Flint (Beadsmoore, Appendix 2F)

- 8.3.13 The assemblage has been fully analysed and recorded and therefore no further work is necessary.

Ecofact analysis*Faunal Remains (Rajkovaca, Appendix 2G)*

- 8.3.14 The primary data collection has been completed, though further work is necessary for archive report and publication, depending on what potential is gleaned from other elements of site assemblage.
- 8.3.15 To fully understand the nature of deposition and the formation of middens, the assemblage would benefit from spatial analysis, 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.
- 8.3.16 The assemblage's chronology appears restricted to the third and fourth centuries, though if any further refinement is possible, the assemblage should be analysed by site phase once the phasing is complete. It will be necessary to quantify and analyse the material by final feature groupings.
- 8.3.17 This assemblage should be considered in its wider setting, with particular reference to the Vicars Farm assemblage (Evans and Lucas 2020), as well as other sites from the same catchment.

Paleoenvironmental (Warham, Appendix 2H)

- 8.3.18 The charred plant assemblages from fill (80.1) of ditch F.33 and fills (124.1), (148.2) and (149.1) of ditch F.51 are recommended for further analysis (samples 12, 37, 38 and 39). These samples are rich in crop residues and have good potential for palaeoeconomic reconstruction that will provide further insight into the crop processing activities and arable husbandry regimes associated with the Roman settlement at Vicar's Farm, which can also be considered in a wider regional context (e.g. Evans and Lucas 2020). The small size and poor state of preservation of the charred plant macrofossil assemblages from the remaining samples means that further identification would not provide significant additional evidence for palaeoeconomic reconstruction. Further analysis, therefore, of the plant macrofossils from the remaining 12 samples is not recommended.
- 8.3.19 There is no potential for further work in terms of the wood charcoal assemblages due to insufficient quantities of charcoal fragments >2mm.
- 8.3.20 There is potential for the mollusc assemblage from fill (80.1) of ditch F.33 to provide evidence for palaeoenvironmental reconstruction that can perhaps be used in comparison with the results of the palaeoenvironmental assessment from the previous evaluation (Fryer in Middleton 2021). Further work, however, may not be justified on the basis of a single sample with a sufficient assemblage size (>100 molluscs). Further identification and analysis of the small vertebrate assemblages is not recommended, due to the small quantities of remains recovered from the samples.

- 8.3.21 The features that yielded material suitable for scientific dating in the form of charred cereal grain are associated with Enclosure 3 and Road 2 only, notably the crop-rich assemblages from fill (80.1) of ditch F.33 and fills (124.2), (148.2) and (149.1) of ditch F.51.

Scientific analysis

Geoarchaeological (Machicado, Appendix 2I)

- 8.3.22 Ten micromorph block samples will be processed and analysed.
- 8.3.23 37 loose soil samples will be evaluated using the basic geoarchaeological analysis suite: pH, EC (electric conductivity), and Redox potential. High phosphate levels will be assessed using the Valadate-Molybdate method.
- 8.3.24 The results will be detailed in the archive report.

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 in the form of an article in the Proceedings of the Cambridge Antiquarian Society (PCAS) journal.

9.1.2 Preliminary analysis of the excavated evidence and associated artefact and ecofact assemblages indicate that this site is primarily of local to regional importance. Therefore an article in the local PCAS journal is appropriate. The Roman archaeology of the site will be the subject, in the context of the excavations of Vicar's Farm and Wilberforce Road, among others. The focus will be on how it enhances our understanding of the Romano-British settlements and the interconnecting web of roads in the western hinterlands of Roman Cambridge.

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), ClfA Standard and guidance for the collection, documentation, conservation and research of archaeological materials (2014b, updated 2020), the ClfA Standard and guidance for archaeological excavation (2014a, updated 2020), the United Kingdom Institute for Conservators Conservation Guidelines No. 2 (2012) and the requirements of the Cambridgeshire County Archaeological Archive Facility.
- 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 to be retained should comprise: all stratified ceramic, faunal and flint remains (Anderson, Rajkovaca, Beadsmoore); all of the copper alloy and silver artefacts; the Roman chisel, <357>; the lower beehive stone <296>; a sample of Millstone Grit rotary quern <298> and lava quern <300> (Quick).
- 10.2.4 It is recommended that items to be discarded once the full archive report is completed comprise: any unstratified ceramic and faunal remains (Anderson, Rajkovaca); the remaining iron and lead objects; the remainder of the worked stone assemblage; all of the ceramic building material (Quick).
- 10.2.5 There will be 35 archive boxes of material to 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 (Version 2, 15/12/2021)

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, ClfA and DigVentures.

- ClfA, 2014c (updated 2020) Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives
- ClfA 2014a (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 9: Data collection and responsibility

<i>Document type</i>	<i>Responsibility</i>	<i>Storage location</i>
<i>Project documentation</i> Final project design Contract with client Site information	Project Manager	CAU server (Projects)
Health and Safety (RAMS)	Project Manager	CAU server (Projects)
<i>Fieldwork</i> site registers (spreadsheet) context sheets (database) working photographs (TIFFs)	Site Director	CAU Server (Projects)
<i>Survey</i> site plans (scanned) section drawings (digitised) GPS/CAD data	CAU Survey lead	CAU Server (Survey)
<i>Specialist photography</i> site photographs artefact photographs	Graphics	CAU Server (Photographs)
<i>Specialist assessments</i> databases spreadsheets report text	CAU specialists External specialists	CAU Server (Projects) subcontracted specialists' computers
Project reporting text	Site Director	CAU Server (Projects)
<i>Report illustrations</i> figure files formatted report	CAU graphics	CAU Server (Graphics)
GIS, photogrammetry	CAU Graphics	CAU Server (Survey)
<i>Finds</i> 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, .qjp
 - 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 10: Summary of resources in the digital archive to be deposited

<i>Resources</i>	<i>Format</i>
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
Context sheets (database)	.xls
Finds registers (database or spreadsheet)	.xls
Scans of site plans and section drawings	.tiff
Specialist databases, spreadsheets, diagrams	.xls
Selected site photographs (estimated 100 files)	.tiff, .raw

11. PROGRAMME FOR FURTHER WORK

11.1 Project Team

Table 11: Post-excavation Team

Name	Initials	Organisation	Role
Hannah Barrett	HB	CAU	Project Officer
Emma Beadsmoore	EB	CAU	Project Manager
Katie Anderson	KA	CAU	Roman Pottery Specialist, Editor
Vida Rajkovaca	VR	CAU	Zooarchaeologist
Ros Quick	RQ	CAU	CBM, Metalwork, Worked Stone Specialist
Andy Hall	AH	CAU	Metalwork Specialist
Hilary Cool	HC	Barbican Research Associates	Glass Specialist
Gemma Warham	GW	Sheffield Archaeobotanical Consultancy	Paleoenvironmentologist
Eduardo Machicado	EM	CAU	Geoarchaeologist
Ellie Winter	EW	CAU	Illustrator
Laura Hogg	LH	CAU	Illustrator
Dave Webb	DW	CAU	Photographer
Sabrina Salmon	SS	CAU	Archivist
Jonathan Tabor	JT	CAU	Editor

11.2 Project Tasks

Table 12: Task list and Time Allocation

Task	Staff	No. of Days
Project Management		
Team meetings	EB, HB	0.5
Meeting with specialists	VR, KA,	0.5
Stratigraphic Analysis		
Finalise site phasing and feature groups	HB	0.5
Incorporate artefact dating with stratigraphy	HB	0.5
Update context index with final phasing and groups	HB	0.5
Update illustrations and digital plans to reflect any changes	EW	0.5
Illustrations		
Produce phased site plans	EW	0.5
Selection of sections for report	EW	0.5
Illustration of selected artefacts	LH	2
Photography of selected artefacts	DW	0.5
Artefacts: further analysis, archive report and publication text		
Roman Pottery	KA	3
Ceramic Building material	RQ	1

<i>Task</i>	<i>Staff</i>	<i>No. of Days</i>
Metalwork	RQ	1
Worked Stone	RQ	1
Glass	HC	1
Ecofacts: further analysis, archive report and publication text		
Faunal remains	VR	3
Paleoenvironmentology:	GW	8
Geoarchaeology	EM	14
Report Writing		
Produce overall stratigraphic text and site narrative	HB	4
Integrate finds reports	HB	1
Integrate any documentary evidence/comparative work	HB	1
Write discussion and conclusion	HB	3
Internal edit	EB, KA, JT	1
Incorporate edits	HB	1
Publication		
Produce publication text	HB	8
Produce publication figures	EW	1
Internal edit	EB, KA, JT	0.5
Incorporate edits	HB	1
Send to publisher for referee comments	HB	0.5
Revisions following referee comments	HB	2
Final edit/proof read	HB, EB	1
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 13: Context Table

Context	Feature No.	Feature Type	Length (m)	Width (m)	Depth (m)	Shape in Plan	Fills	Group
70	31	ditch		0.76	0.29	rectilinear in plan with moderately sloping sides and a concave base	(1) mid-light blue/ grey silty clay with orange sandy inclusions; (02) dark blue/ grey silty clay with moderate small flint inclusions	Enclosure 1
71	31	ditch		0.89	0.3	linear in plan with moderately sloping sides and a concave base	(1) mid-light blue/ grey silty clay with orange sandy inclusions; (02) dark blue/ grey silty clay with moderate small flint inclusions	Enclosure 1
72	32	pit	2.28	1.42	0.24	sub-oval in plan with steep sides and a flat base	(1) dark blue/ grey silty clay with occasional flint inclusions	
73	33	ditch		1.33	0.56	linear in plan with moderately sloping sides and a concave base	(1) dark grey/ black clayey silt dumped refuse with occasional small stone inclusions; (2) mid-grey/ brown silty clay	Enclosure 3
74	34	ditch		1.2	0.45	linear in plan with moderately sloping sides and a concave base	(1) mid-brown/ grey silty clay	Enclosure 2
75	31	ditch		1.1	0.5	linear in plan with gently sloping sides and a concave base	(1) dark grey sandy silt with occasional small stone inclusions	Enclosure 1
76	31	ditch		1.4	0.44	linear in plan with steep sides and a concave base	(1) dark grey sandy silty clay with occasional small stone inclusions; (2) mid-light grey/ brown silty clay	Enclosure 1

<i>Context</i>	<i>Feature No.</i>	<i>Feature Type</i>	<i>Length (m)</i>	<i>Width (m)</i>	<i>Depth (m)</i>	<i>Shape in Plan</i>	<i>Fills</i>	<i>Group</i>
77	35	ditch		0.73	0.22	rectilinear in plan with moderately sloping sides and a concave base	(1) dark grey/ black silt with frequent pea gravel inclusions	Enclosure 3
79	36	ditch		2.03	0.66	linear in plan with steep sides and a concave base	(1) mid-orange/ brown sandy silt with occasional small stone inclusions; (2) mid-brown/ grey clayey silt with occasional small stone inclusions; (3) mid blue/ grey silty clay with gravel inclusions	Road 1
80	33	ditch		1.55	0.45	linear in plan with steep sides and a concave base	(1) dark grey/ black clayey silt dumped refuse with occasional small stone inclusions; (2) mid-grey/ brown silty clay	Enclosure 3
81	34	ditch		1.25	0.74	linear in plan with steep sides and a concave base	(1) mid-brown/ grey silty clay	Enclosure 2
82	37	deposit (disuse)		4.23	0.22		(1) burnt clay mixed with mid-yellow sandy clay; (2) dark grey/ brown sandy silt with occasional flint inclusions	Road 1
83	38	ditch		1.14	0.55	linear in plan with steep sides and a flat base	(1) dark blue/ grey clayey silt	Road 1
84	39	ditch		0.6	0.19	linear in plan with gently sloping sides and a concave base	(1) dark blue/ grey clayey silt	Road 1
85	37	deposit (disuse)		1.2	0.18		(1) dark grey/ brown sandy clay	Road 1
86	38	ditch		1.4	0.92	linear in plan with moderately sloping sides and a concave base	(1) dark grey silty clay	Road 1

<i>Context</i>	<i>Feature No.</i>	<i>Feature Type</i>	<i>Length (m)</i>	<i>Width (m)</i>	<i>Depth (m)</i>	<i>Shape in Plan</i>	<i>Fills</i>	<i>Group</i>
87	39	ditch		1.1	0.42	linear in plan with moderately sloping sides and a concave base	(1) mid blue/ grey silty clay	Road 1
88	34	ditch		0.96	0.5	linear in plan with steep sides and a concave base	(1) mid grey/ brown clayey sandy silt	Enclosure 2
89	40	ditch		0.88	0.33	linear in plan with steep sides and a concave base	(1) dark grey/ brown clayey silt refuse deposit; (2) mid-grey/ brown silty clay	Enclosure 2
90	31	ditch		0.7	0.27	linear in plan with moderately sloping sides and a concave base	(1) dark blue/ grey silty clay	Enclosure 1
91	42	pit	0.8	0.5	0.12	circular in plan with moderately sloping sides and a concave base	(1) dark blue/ grey clayey silt	
92	43	ditch		0.54	0.18	linear in plan with gently sloping sides and a concave base	(1) mid brown/ blue/ grey silty clay with occasional gravel and charcoal inclusions.	Enclosure 2
93		VOID						
94	43	ditch		0.74	0.23	linear in plan with gently sloping sides and a concave base	(1) mid brown/ blue/ grey silty clay with occasional gravel and charcoal inclusions.	Enclosure 2
95	35	ditch		0.87	0.28	linear in plan with gently sloping sides and a concave base	(1) dark grey/ brown clayey silt	Enclosure 3
96	44	ditch		1.4	0.33	linear in plan with steep sides and a concave base	(1) dark grey/ brown clayey silt with frequent stone inclusions; (2) dark grey silt	

<i>Context</i>	<i>Feature No.</i>	<i>Feature Type</i>	<i>Length (m)</i>	<i>Width (m)</i>	<i>Depth (m)</i>	<i>Shape in Plan</i>	<i>Fills</i>	<i>Group</i>
97	45	ditch		1.26	0.38	linear in plan with moderately sloping sides and a concave base	(1) mixed orange/ grey silty clay with frequent small stone inclusions	Road 1
98	46	ditch		1.66	0.26	linear in plan with gently sloping sides and a flat base	(1) mixed orange/ grey silty clay with frequent small stone inclusions	Road 1
99	47	pit	4.62	4	0.66	sub-circular in plan with steep sides and a flat base	(1) light orange mottled grey silty clay with occasional small stone inclusions; (2) dark grey/ brown with patches of sandy clay with burnt clay; (3) mixed blue/ grey sandy clay; (4) mid orange/ blue/ grey sandy silt with frequent small stone inclusions	
100	48	surface (metalling)		0.97	0.16		(1) compacted surface comprising rounded and sub-angular flints (2cm-10cm cubed) and large fragments of cow bone	Road 1
101	37	deposit (disuse)		0.23	0.11		(1) dark grey/ brown sandy clay	Road 1
102	33	ditch		1.12	0.4	linear in plan with steep-moderate sides and a flattish base	(1) dark black silt with moderate small stone inclusions	Enclosure 3
103	49	furrow		2.24	0.13	linear in plan with gently sloping sides and an uneven base	(1) mid grey/ brown silty clay	
104	49	furrow		0.85	0.13	linear in plan with gently sloping sides and an uneven base	(1) mid grey/ brown gravelly silty clay	
105	36	ditch		1.55	0.65	linear in plan with steep sides and a concave base	(1) dark grey silty clay; (2) dark blue silty clay	Road 1

Context	Feature No.	Feature Type	Length (m)	Width (m)	Depth (m)	Shape in Plan	Fills	Group
106	49	furrow		2.1	0.1	linear in plan with gently sloping sides and an uneven base	(1) mid grey/ brown gravelly silty clay	
107	39	ditch		1	0.12	linear in plan with moderately sloping sides and a concave base	(1) dark grey/ yellow sandy clay	Road 1
108	50	ditch		1.02	0.31	linear in plan with moderately sloping sides and a concave base	(1) dark grey sandy clay	Enclosure 2
109	37	deposit (disuse)		2.8	0.12		(1) light grey clay with gravel inclusions	Road 1
110	51	ditch		1.34	0.8	linear in plan with steep sloping sides and a concave base	(1) dark brown/ blue grey silty clay with occasional medium-sized cobbles; (2) dark blue/ grey soft silt with occasional charcoal; (3) thin black charcoal lens; (4) compact grey/ blue clay with frequent charcoal and seeds; (5) pale blue/ grey clay	Road 2
111	52	surface (metalling)		0.8	0.06	north side of F.51	(1) compacted surface comprising rounded and sub-angular flints (2cm-10cm cubed) and large fragments of cow bone	Road 2
112	52	surface (metalling)				south side of F.51	(1) compacted surface comprising rounded and sub-angular flints (2cm-10cm cubed) and large fragments of cow bone	Road 2
113	53	deposit (disuse)			0.1		mid brown sandy silt	Road 2

<i>Context</i>	<i>Feature No.</i>	<i>Feature Type</i>	<i>Length (m)</i>	<i>Width (m)</i>	<i>Depth (m)</i>	<i>Shape in Plan</i>	<i>Fills</i>	<i>Group</i>
114	66	ditch		0.52	0.12	linear in plan with gently sloping sides and a concave base	(1) mid brown sandy silt	
115	33	ditch		1	0.4	linear in plan with steep sides and a flat base	(1) dark grey/ brown silt dumped refuse; (2) mid brown/ grey silty clay	Enclosure 3
116	54	ditch		0.6	0.32	linear in plan with vertical sides and a concave base	(1) dark grey sandy silt	
117	55	ditch		1.6	0.18	linear in plan with steep sides and a flat base	(1) mid greenish/ grey/ brown silty clay	
118	46	ditch		2.38	0.35	linear in plan with moderately sloping sides and a flat base	(1) mid-light brown silty clay with moderate small stone inclusions; (2) light white/ grey silty clay with moderate large stone inclusions	Road 1
119	35	ditch		0.7	0.12	linear in plan with gently sloping sides and a concave base	(1) dark grey/ black silt with frequent pea gravel inclusions	Enclosure 3
120	45	ditch		1	0.37	linear in plan with moderately sloping sides and a concave base	(1) light grey clay with occasional small stone inclusions	Road 1
121	50	ditch		0.32	0.12	linear in plan with gently sloping sides and a concave base	(1) mid grey sandy clay	Enclosure 2
122	56	furrow		0.56	0.08	linear in plan with gently sloping sides and a concave base	(1) mid brown gravelly silt	
123	57	ditch		0.56	0.22	linear in plan with steep sides and a concave base	(1) mixed light blue clay and mid brown/ grey clayey silt	Road 2

Context	Feature No.	Feature Type	Length (m)	Width (m)	Depth (m)	Shape in Plan	Fills	Group
124	51	ditch		1.7	0.66	linear in plan with a steep north side, gentle south side and concave base	(1) dark grey/ brown sandy silt with large quantities of cow bone and occasional small flints; (2) dark blue/ grey clayey silt	Road 2
125	53	deposit (disuse)		1.93	0.14		mid brown sandy silt	Road 2
126	52	surface (metalling)			0.06		(1) compacted surface comprising rounded and sub-angular flints (2cm-10cm cubed) and large fragments of cow bone	Road 2
127	51	ditch		1.41	0.15	linear in plan with steep sides and a concave base	(1) dark blue/ grey silty clay with occasional flint inclusions	Road 2
128	52	surface (metalling)			0.15		(1) compacted surface comprising rounded and sub-angular flints (2cm-10cm cubed) and large fragments of cow bone	Road 2
129	66	ditch		0.45	0.13	linear in plan with gently sloping sides and a concave base	(1) mid brown sandy silt	
130	40	ditch		0.8	0.36	linear in plan with steep sides and a concave base	(1) dark grey/ brown sandy silt with frequent stone inclusions	Enclosure 2
131	36	ditch		1.5	0.4	linear in plan with steep sides and a flat base	(1) mid grey/ brown silt	Road 1
132	66	ditch		0.42	0.06	linear in plan with gently sloping sides and a concave base	(1) mid brown sandy silt	
133	57	ditch		0.7	0.15	linear in plan with gently sloping sides and a concave base	(1) dark brown/ blue clayey silt with occasional charcoal	Road 2

Context	Feature No.	Feature Type	Length (m)	Width (m)	Depth (m)	Shape in Plan	Fills	Group
134	51	ditch		1.6	0.14	linear in plan with steep sides and a flat base	(1) dark blue/ grey clayey silt with occasional small stone inclusions	Road 2
135	53	deposit (disuse)		1.87	0.2		mid brown/ blue sandy silt	Road 2
136	58	hollow	1.51	1.62	0.13	amorphous in plan with gently sloping sides and concave base	(1) light grey silty clay with sandy inclusions	
137	54	ditch		1.2	0.32	linear in plan with steep sides and a flat base	(1) dark grey clayey silt; (2) light grey clayey silt; (3) mid grey clay with silty sand inclusions	
138	38	ditch		2.06	0.62	linear in plan with moderately sloping sides and a flat base	(1) dark blue/ grey clayey silt; (2) mixed gravel and grey silt slump	Road 1
139	37	deposit (disuse)		6.56	0.15		mid-dark brown soft silt	Road 1
140	46	ditch		1.7	0.28	linear in plan with moderately sloping sides and a flat base	(1) mid-dark grey/ brown gravelly clayey silt	Road 1
141	45	ditch		1.17	0.18	linear in plan with gently sloping sides and a flat base	(1) mid blue/ grey clayey silt	Road 1
142	48	surface (metalling)	15+	7	0.08		(1) compacted surface comprising rounded and sub-angular flints (2cm-10cm cubed) and large fragments of cow bone	Road 1
143	51	ditch		1.52	0.48	linear in plan with steep sides and a flat base	(1) dark grey/ brown sandy silt with large quantities of cow bonw and occasional small flints; (2) dark blue/ grey clayey silt	Road 2
144	53	deposit (disuse)		4.9	0.12		dark grey/ brown sandy silt	Road 2

<i>Context</i>	<i>Feature No.</i>	<i>Feature Type</i>	<i>Length (m)</i>	<i>Width (m)</i>	<i>Depth (m)</i>	<i>Shape in Plan</i>	<i>Fills</i>	<i>Group</i>
145	53	deposit (disuse)		4.9	0.1		dark grey/ brown sandy silt	Road 2
146	52	surface (metalling)		4.9	0.12		(1) compacted surface comprising rounded and sub-angular flints (2cm-10cm cubed) and large fragments of cow bone	Road 2
147	52	surface (metalling)		4.9	0.11		(1) compacted surface comprising rounded and sub-angular flints (2cm-10cm cubed) and large fragments of cow bone	Road 2
148	51	ditch		2.02	0.49	linear in plan with moderately sloping sides and a flat base	(1) dark grey/ brown sandy silt with large quantities of cow bone and occasional small flints; (2) dark blue/ grey clayey silt	Road 2
149	51	ditch		1.47	0.5	linear in plan with a steep southwest side, moderate northeast side and a flat base	(1) mixed dark grey/ black organic-rich silt with patches of sand	Road 2
150	52	surface (metalling)		4.83	0.15		(1) compacted surface comprising rounded and sub-angular flints (2cm-10cm cubed) and large fragments of cow bone	Road 2
151	57	ditch		0.5	0.3	linear in plan with gently sloping sides and a concave base	(1) dark grey/ black silt	Road 2
152	53	deposit (disuse)		1.47	0.07		dark grey/ brown sandy silt	Road 2

<i>Context</i>	<i>Feature No.</i>	<i>Feature Type</i>	<i>Length (m)</i>	<i>Width (m)</i>	<i>Depth (m)</i>	<i>Shape in Plan</i>	<i>Fills</i>	<i>Group</i>
153	52	surface (metalling)		3.76	0.14		(1) compacted surface comprising rounded and sub-angular flints (2cm-10cm cubed) and large fragments of cow bone	Road 2
154	57	ditch		1	0.32	linear in plan with steep sides and a concave base	(1) dark grey/ black silt	Road 2
155	59	surface (metalling)		3.9	0.12		(1) compacted surface comprising rounded and sub-angular flints (2cm-10cm cubed) and large fragments of cow bone	Road 2
156	59	surface (metalling)		3+	0.1		(1) compacted surface comprising rounded and sub-angular flints (2cm-10cm cubed) and large fragments of cow bone	Road 2
157	60	ditch		2	0.42	linear in plan with moderately sloping sides and a flat base	(1) mid-light brown sandy silt; (2) slightly silty compact gravel; (3) mid-light brown sandy silt; (4) slightly silty compact gravel; (5) light blue/ grey silty clay	
158	61	ditch		0.47	0.12	linear in plan with gently sloping sides and a concave base	(1) mid grey gravelly silty clay	Enclosure 2
159	62	ditch		0.72	0.07	linear in plan with gently sloping sides and a flat base	(1) black clayey silt	
160	63	ditch		0.8	0.15	linear in plan with gently sloping sides and a concave base	(1) mid grey soft silt	
161	53	deposit (disuse)	2.5	1.46	0.14		dark grey/ brown sandy silt	Road 2

Context	Feature No.	Feature Type	Length (m)	Width (m)	Depth (m)	Shape in Plan	Fills	Group
162	52	surface (metalling)	3.6	1.48	0.12		(1) compacted surface comprising rounded and sub-angular flints (2cm-10cm cubed) and large fragments of cow bone	Road 2
163	51	ditch		1.46	0.34	linear in plan with steep sides and a flattish base	(1) mid-dark grey/ blue clayey silt with occasional charcoal inclusions	Road 2
164	57	ditch		1.46	0.2	linear in plan with moderately sloping sides and a flat base	(1) mid grey/ brown clayey silt with occasional sandy patches and charcoal inclusions	Road 2
165	61	ditch		0.37	0.15	linear in plan with gently sloping sides and a concave base	(1) mid grey gravelly silty clay	Enclosure 2
166	61	ditch		0.64	0.2	linear in plan with gently sloping sides and a concave base	(1) mid grey gravelly silty clay	Enclosure 2
167	33	ditch				linear in plan with steep sides and a concave base	(1) dark grey/ black clayey silt dumped refuse with occasional small stone inclusions; 100% excavation between slots 73 and 80	Enclosure 3
168	33	ditch				linear in plan with steep sides and a concave base	(1) dark grey/ black clayey silt dumped refuse with occasional small stone inclusions; 100% excavation between slots 77 and 80	Enclosure 3
169	51	ditch				linear in plan with steep sides and a flattish base	(1) mixed dark grey/ black organic-rich silt with patches of sand 100% excavation between slots 124 and 163	Road 2

<i>Context</i>	<i>Feature No.</i>	<i>Feature Type</i>	<i>Length (m)</i>	<i>Width (m)</i>	<i>Depth (m)</i>	<i>Shape in Plan</i>	<i>Fills</i>	<i>Group</i>
170	64	hollow	2.8	3	0.2	sub-circular in plan with gently sloping sides and an uneven base	(1) dark blue/ brown clayey silt with occasional small stone inclusions	
171	59	surface (metalling)		2	0.05		(1) compacted surface comprising rounded and sub-angular flints (2cm-10cm cubed) and large fragments of cow bone	Road 2
172	66	ditch		0.5	0.05	linear in plan with gently sloping sides and a concave base	(1) mid grey silty clay	
173	67	ditch		1.1	0.5	linear in plan with moderately sloping sides and concave base	(1) mid-dark grey silt with occasional flint inclusions	Road 2
174	68	ditch		1.8	0.52	linear in plan with moderate-steep sides and a flat base	(1) very compact metallated surface constructed of rounded and sub-angular flints; (2) mid red/ brown soft sandy silt	Road 2
175	51	ditch				linear in plan with steep sides and a flattish base	(1) mixed dark grey/ black organic-rich silt with patches of sand 100% excavation between slots 110 and 148	Road 2
176	35	ditch				rectilinear in plan with moderately sloping sides and a concave base	(1) dark grey/ black silt with frequent pea gravel inclusions 100% excavation between slots 77 and 95	Enclosure 3
177	31	ditch				rectilinear in plan with moderately sloping sides and a concave base	(1) mid-light blue/ grey silty clay with orange sandy inclusions; (02) dark blue/ grey silty clay with moderate small flint inclusions	Enclosure 1

<i>Context</i>	<i>Feature No.</i>	<i>Feature Type</i>	<i>Length (m)</i>	<i>Width (m)</i>	<i>Depth (m)</i>	<i>Shape in Plan</i>	<i>Fills</i>	<i>Group</i>
							100% excavation between slots 75 and 76	
178	69	surface (scorched)	2.7	2.5	0.08	sub-rectangular in plan with uneven base	(1) red/ orange burnt natural clayey sand; (2) dark brown/ black burnt clayey sand	
179	61	ditch		0.47	0.15	linear in plan with gently sloping sides and a concave base	(1) mid-light grey gravelly silt	Enclosure 2
180	60	ditch		1.79	0.38	linear in plan with gently sloping sides and a concave base	(1) mid grey/ brown sandy silt with flecks of manganese; (2) mixed gravelly grey silt with patches of orange sandy	
181	71	ditch		0.6	0.25	linear in plan with gently sloping sides and a concave base	(1) mid-light grey gravelly silt	

14. APPENDIX 2: SPECIALIST ASSESSMENT REPORTS

14.1 Appendix 2A: Roman Pottery (Katie Anderson)

Introduction and Methodology

14.1.1 The excavation produced an assemblage of Roman pottery totalling 1369 sherds, weighing 22563g and representing 44.82 EVEs (estimated vessel equivalent) and a minimum of 202 vessels (MNV). All 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

14.1.2 The Roman pottery assemblage is predominately later Roman in date (c.AD200-400), with an apparent peak in the late Roman period (AD250-400). This includes ten contexts which contained pottery dating to the fourth century AD. Within the assemblage 23.2% of the pottery (by sherd count) could only be broadly dated as Romano-British due to the generic nature of the fabrics/forms. That said, in most cases this material occurred alongside later dating material.

Table 14: Quantification of Roman Pottery by pottery date

Pottery Date	No.	%	Wt(g)	%	MNV	EVE
Mid-later Roman (AD150-400)	409	30.0	7575	34.2	73	16.37
Later Roman AD200-400	642	46.8	10243	45.0	119	27.37
Romano-British (AD50-400)	318	23.2	4745	20.8	10	1.08
TOTAL	1369	100	22563	100	202	44.82

14.1.3 The assemblage comprises primarily small to medium-sized sherds, with a mean weight of 16.6g, which is within the average range for rural sites. Approximately 10% of the assemblage was noted as being heavily abraded and much of it is fragmented. That being said, there are exceptions to this including an almost complete bowl from (169.01) F.51. There are however, no examples of any cross-context refits.

14.1.4 A variety of fabrics were identified (**Error! Reference source not found.**¹⁵) Coarseware fabrics are the most commonly occurring of the fabric types, representing 53.3% of the assemblage by sherd count (730 sherds, 12973g). Within this category unsourced sandy greywares are well represented, accounting for 36% of the coarsewares by sherd count (264 sherds, 2718g), including both fine and coarse sandy varieties as well as sherds both with and without silver mica. Shell-tempered sherds are relatively well-represented, totalling 158 sherds weighing 2805g, thus accounting for 21.5% of the coarsewares. Horningsea wares represent the largest group of sourced coarsewares, totalling 124 sherds (4960g), of which the greywares are most prevalent totalling 107 sherds weighing 4464g and thus representing 14.7% of the coarsewares. The prevalence of Horningsea products is unsurprising given the sites relatively close proximity to the production centre some 7.5km to the northeast of the site. Thirty-four Nene Valley whiteware (999g) were recovered, the majority of which derive from mortaria as well as thirteen Oxfordshire sherds (319g).

Table 15: Quantification of Roman Pottery by fabric

<i>Fabric Code</i>	<i>Fabric</i>	<i>No.</i>	<i>Wt (g)</i>	<i>MNV</i>	<i>EVE</i>
BLKSL	Black-slipped ware (unsourced)	55	562	7	0.75
BLKSLM	Black-slipped ware - micaceous (unsourced)	10	113	3	0.21
BUFF	Buff sandy ware (unsourced)	12	17	1	0.16
CC	Colour-coat (unsourced)	4	29	1	0.22
CSGW	Coarse sandy greyware (unsourced)	148	1493	19	1.97
CSMGW	Coarse sandy micaceous greyware (unsourced)	39	439	2	0.43
CSEX	Coarse sandy oxidised ware (unsourced)	26	243	1	0.1
CSRDU	Coarse sandy reduced ware (unsourced)	4	132	2	0.1
FSGW	Fine sandy greyware (unsourced)	56	593	10	0.63
FSMGW	Fine sandy micaceous oxidised ware (unsourced)	30	384	10	2.08
FSMOX	Fine sandy micaceous oxidised ware (unsourced)	69	525	6	0.46
FSMRDU	Fine sandy micaceous reduced ware (unsourced)	2	46	0	0
FSOX	Fine sandy oxidised ware (unsourced)	84	612	8	1.52
HADBB	Hadham black-burnished ware	8	70	1	0
HADOX	Hadham oxidised ware	143	1915	24	8.48
HADRDU	Hadham reduced ware	3	934	0	1
HORNBB	Horningsea black-burnished ware	4	85	4	0.21
HORNGW	Horningsea greyware	108	4477	11	0.97
HORNOX	Horningsea oxidised ware	12	398	0	0
IMITBB	Imitation black-burnished ware (unsourced)	12	304	10	0.38
NVCC	Nene Valley colour-coated ware	203	3814	30	14.55
NVWW	Nene Valley whiteware	34	999	6	1.77
OXFRS	Oxfordshire red-slipped ware	121	844	13	2.21
OXFWS	Oxfordshire white-slipped ware	2	126	1	0.32
OXFWW	Oxfordshire whiteware	5	214	1	0.33
SAM	Samian (unsourced)	3	46	0	0
SAMCG	Samian Central Gaulish	4	43	1	0
SAMEG	Samian East Gaulish	5	112	1	0.38
SHELL	Shell-tempered ware	161	2877	28	4.59
WW	Whiteware (unsourced)	2	117	1	1
TOTAL	X	1369	22563	202	44.82

14.1.5 Romano-British finewares account for a further 45.8% of the Roman assemblage (627 sherds, 9389g). This is a significantly higher proportion than the average for rural sites in Cambridgeshire, which typically account for between 10-15%. This figure is largely influenced by a significant number of Nene Valley colour-coated sherds, totalling 203 sherds weighing 3814g, thus representing the largest single fabric group within the assemblage. Hadham products account for a further 24.6% of the assemblage, with the oxidised variety the most commonly occurring (143 sherds, 1915g), while Oxfordshire red-slipped finewares represent a further 18.2% of the finewares. The remaining finewares comprise unsourced sandy grey, oxidised, reduced and black-slipped wares in finewares vessel forms.

14.1.6 The remaining 0.9% of the assemblage comprises imported wares, totalling twelve sherds weighing 201g. eight sherds weighing 192g. This category exclusively comprises samian sherds, with Central and Eastern Gaul represented. The majority of these are non-diagnostic body sherds, most of which are abraded. The only diagnostic forms consist of one sherd from a Dragendorff 31 dish from Ditch F.33 (167.01) and two sherds from a Dr42 dish from layer F.53 (113.01), which has a possible post-firing hole on the side of the vessel. A further post-firing hole was noted on the base of a samian vessel from ditch F.33 (80.02). These holes possibly represent repair holes although there is no evidence for lead rivets or resin visible on either sherd.

- 14.1.7 The majority of the assemblage comprises non-diagnostic body sherds which could not be assigned a vessel form, representing 75.2% of the assemblage (1032 sherds, 11799g). The diagnostic sherds equate to a minimum of 202 different vessels (MNV) based on the number of unique rims identified, of which jars are the most commonly occurring (79 MNV). Bowls and dishes occur in almost identical numbers (30 and 32 MNV respectively), with smaller numbers of mortaria (10 MNV), flagons (MNV 6), beakers (MNV 5) and lids (MNV 3). Overall the assemblage represents a range of forms both for the storage, preparation and consumption of foodstuffs and drink.
- 14.1.8 Of note are two semi-complete beaded flanged bowls. The first comprises a Hadham reduced ware bowl (three sherds, 934g) which is complete except for a small section of rim and the base of the vessel which appears to have been deliberately removed. This was recovered from Ditch F.51, fill (169.02), but seemingly doesn't represent a deliberate deposit as it was recovered alongside a large assemblage of refuse material (181 sherds, 3759g in total). The second vessel is a fragmented Nene Valley colour-coated vessel (twenty-five sherds, 547g) recovered from surface metalling F.146.

Table 16: Quantification of Roman Pottery by vessel form

<i>Form</i>	<i>No.</i>	<i>Wt(g)</i>	<i>MNV</i>	<i>EVE</i>
Beaker	14	35	5	0.46
Beaker/flagon	2	17	2	0
Beaker/jar	4	20	4	0.12
Bowl	77	2878	30	4.41
Closed	47	1268	2	7.22
Dish	41	913	32	1.37
Flagon	6	346	6	4.42
Jar	146	5103	79	11.32
Jug	1	30	0	0
Lid	3	106	3	0.23
Mortaria	43	1316	10	2.42
Open	19	830	2	2.24
Unknown	966	9701	27	10.61
TOTAL	1369	22563	202	44.82

- 14.1.9 Approximately 2.5% of the assemblage has use/wear evidence (thirty-five sherds, 1199g), comprising primarily exterior sooting (fifteen sherds, 577g) and/or interior limescale (six sherds, 75g). A total of sixty-three sherds (2303g) are decorated, representing 4.6% of the assemblage. Combing is the most commonly applied technique (twenty-six sherds, 1740g), occurring exclusively on jars, followed by rouletting (twelve sherds, 127g), applied cordons (six sherds, 198g) and incised lines (six sherds, 117g) and white-painted decoration (six sherds, 57g). Other less common decoration techniques include fingernail impressions and embossed circles.

Contextual Summary

- 14.1.10 Roman pottery was recovered from seventy-one interventions, deriving from twenty-six features (**Error! Reference source not found.17**). The majority of the contexts (fifty-six) contain small assemblages of pottery (1-30 sherds), with an additional fourteen contexts containing medium-sized assemblages (31-99 sherds) and just one large context (100+ sherds). The majority of the assemblage derives from ditches, representing 75.7% of the assemblage by sherd count (1031 sherds, 16955g), with a further 13.4% from metallised surfaces. The remaining 10.9% of the assemblage derived from a combination of pits (4%), paleosol (5.4%) and deposits (1.3%).

Table 17: Quantification of Roman Pottery by Context

Context	Ft.	Type	No.	Wt(g)	MNV	EVE	Context Date
0	0	Surface	1	2	0	0	AD150-400
71.02	31	Ditch	7	40	0	0	AD200-400
72.01	32	Pit	3	5	0	0	AD150-400
72.02	32	Pit	52	1034	8	4.74	AD300-400
73.01	33	Ditch	30	894	8	1.35	AD300-400
73.02	33	Ditch	10	453	1	1.1	AD240-400
74.01	34	Ditch	14	146	2	0.1	AD240-400
75.01	31	Ditch	62	685	14	1.94	AD240-400
76.01	31	Ditch	14	278	4	0.43	AD200-400
79.01	36	Ditch	11	353	2	0	AD240-400
79.02	36	Ditch	7	126	1	0.18	AD250-400
80.01	33	Ditch	41	434	3	0.31	AD300-400
80.02	33	Ditch	48	889	10	3.66	AD300-400
83.01	38	Ditch	3	40	1	0.28	AD50-400
85.01	37	Deposit (disuse)	2	28	1	0.11	AD250-400
86.01	38	Ditch	5	8	0	0	AD240-400
88.01	34	Ditch	9	392	0	1.1	AD240-400
89.01	40	Ditch	39	1114	6	3.93	AD250-400
92.01	43	Ditch	2	7	0	0	AD100-400
95.01	35	Ditch	8	67	1	0	AD240-400
96.01	44	Ditch	30	482	5	0.2	AD240-400
98.01	46	Ditch	2	67	0	0.38	AD100-400
102.01	33	Ditch	30	565	3	0.32	AD250-400
106.01	49	Furrow	2	8	0	0	AD240-400
108.01	50	Ditch	26	272	2	0.16	AD250-400
109.01	37	Deposit (disuse)	15	527	4	0.24	AD250-400
110.01	51	Ditch	8	60	1	0	AD200-400
111.01	52	Surface (metalling)	3	30	0	0	AD100-400
112.01	52	Surface (metalling)	6	50	0	0	AD200-400
113.01	53	Paleosol	2	15	1	0	AD100-150
114.01	66	Ditch	7	93	0	0	AD200-400
115.01	33	Ditch	17	321	2	0.9	AD240-400
119.01	35	Ditch	15	138	1	0.11	AD200-400
124.01	51	Ditch	32	397	2	1.2	AD240-400
124.02	51	Ditch	2	79	0	0	AD70-400
125.01	53	Paleosol	7	107	0	0	AD240-400
126.01	52	Surface (metalling)	1	3	0	0	AD240-400
127.01	51	Ditch	3	10	0	0	AD240-400
128.01	52	Surface (metalling)	4	26	0	0	AD100-400
129.01	66	Ditch	3	62	1	0.2	AD200-400
131.01	36	Ditch	8	103	2	0.11	AD250-400
132.01	66	Ditch	2	5	0	0	AD50-400
133.01	57	Ditch	1	4	0	0	AD100-400
134.01	51	Ditch	12	130	3	1.37	AD200-400
135.01	53	Paleosol	15	157	2	0.1	AD240-400
137.01	54	Ditch	13	159	2	0	AD250-400
138.01	38	Ditch	2	130	0	0.32	AD150-400
142.01	48	Surface (metalling)	4	43	1	0.11	AD100-400
143.01	51	Ditch	3	9	0	0	AD240-400
144.01	53	Paleosol	35	371	4	1.53	AD250-400
145.01	53	Paleosol	15	435	0	0	AD200-400
146.01	52	Surface (metalling)	57	1121	4	2	AD250-400

Context	Ft.	Type	No.	Wt(g)	MNV	EVE	Context Date
147.01	52	Surface (metalling)	82	955	13	0.68	AD300-400
148.01	51	Ditch	2	23	0	0	AD150-300
149.01	51	Ditch	2	12	0	0	AD100-400
150.01	52	Surface (metalling)	25	421	7	0.86	AD300-400
153.01	52	Surface (metalling)	1	108	0	0	AD100-400
154.01	57	Ditch	4	102	1	0.12	AD200-400
157.01	60	Ditch	70	519	12	0.56	AD300-400
163.01	51	Ditch	85	1335	14	3.93	AD300-400
166.01	61	Ditch	2	146	1	0.11	AD250-400
167.01	33	Ditch	112	1915	23	5.15	AD300-400
168.01	33	Ditch	38	623	6	0.72	AD300-400
169.01	51	Ditch	26	728	4	1.33	AD240-400
169.02	51	Ditch	4	937	0	1	AD250-400
171.01	59	Surface (metalling)	5	119	0	0	AD200-400
173.01	67	Ditch	15	180	2	0.29	AD200-400
174.01	68	Ditch	5	119	1	0	AD250-400
175.01	51	Ditch	2	39	1	0.12	AD200-400
176.01	35	Ditch	32	389	4	0.66	AD250-400
177.01	31	Ditch	90	654	7	0.48	AD200-400
179.01	61	Ditch	17	265	4	0.33	AD250-400

14.1.11 The largest assemblages of material derive from Ditches F.31, F.33 and F.51 as well as surface metalling F.52 (**Error! Reference source not found.18**), which when combined account for 62.6% of the total assemblage. Ditch F.33 contained 326 sherds (6094g) deriving from eight contexts. The pottery predominately dates AD300-400, indicating that this is one of the latest dating features on the site as well as being a focus for discarded material.

14.1.12 A total of 179 sherds (2714g) were recovered from surface metalling F.52 presumably in some cases representing material that had a secondary use once broken as a metalling component. That said however, it is of note that the material from this feature has only a marginally lower mean weight than the site average at 15.2g, indicating it was no significantly more fragmented than material from other features. Other features of interest include Pit F.32, totalling fifty-four sherds (982g) from two contexts, with the majority of the assemblage deriving from fill 72.02. This includes eight sherds from a Nene Valley whiteware wall-sided mortaria, fifteen sherds (158g) from a Hadham oxidised ware small necked jar and a whiteware pinched-mouth flagon, all of which date AD300-400.

Table 18: Quantification of Roman Pottery by Feature

Feature	No.	Wt(g)	MNV	EVE
0	1	2	0	0
31	173	1657	25	2.85
32	55	1039	8	4.74
33	326	6094	56	13.51
34	23	538	2	1.2
35	55	594	6	0.77
36	26	582	5	0.29
37	17	555	5	0.35
38	10	178	1	0.6
40	39	1114	6	3.93
43	2	7	0	0
44	30	482	5	0.2
46	2	67	0	0.38
48	4	43	1	0.11
49	2	8	0	0

<i>Feature</i>	<i>No.</i>	<i>Wt(g)</i>	<i>MNV</i>	<i>EVE</i>
50	26	272	2	0.16
51	181	3759	25	8.95
52	179	2714	24	3.54
53	74	1085	7	1.63
54	13	159	2	0
57	5	106	1	0.12
59	5	119	0	0
60	70	519	12	0.56
61	19	411	5	0.44
66	12	160	1	0.2
67	15	180	2	0.29
68	5	119	1	0
TOTAL	1369	22563	202	44.82

Discussion

- 14.1.13 The pottery suggests activity did not commence until the third century AD, with an apparent peak in the mid third-fourth century AD, thus making it contemporary with Phase III at Vicar's Farm (Evans *et al* 2020), of which this site is a part. That said however, there are some interesting contrasts between the assemblages from the two excavation areas, namely, the higher than average ratio of finewares compared to coarsewares at Clerk Maxwell Road. The former is much more in keeping with the norm for the region (Monteil 2020), which raises the possibility of different zones within the site in the late Roman period.
- 14.1.14 That being said, the range of vessels identified in the assemblage are not necessarily evidence for 'high status' activity. Indeed, it may be the sites connectivity with the wider world that accounts for the range of vessels identified. This is likely to be partly due to the sites ready access to the road network and also the sites proximity to the 'town'.

14.2 Appendix 2B: Ceramic Building Material (CBM) (Rosalind Quick)

Introduction and Methodology

- 14.2.1 The assemblage consists of 54 fragments of Ceramic Building Material (CBM) weighing a total of c.8.7kg. The material was all cleaned and recorded in a spreadsheet with details of size, weight, fabric and 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 noted. A catalogue of the material is included in this report, and a copy of the spreadsheet will be included with the project archive.
- 14.2.2 This report provides quantification and a summary of the CBM assemblage and discusses the potential of the material.

Assemblage Character and Summary

- 14.2.3 This is a small assemblage of CBM, which is highly fragmented, and with no examples of complete tiles. The identifiable material consists of tile, including roofing tile (both tegulae and imbrex), floor tiles and box flue tile, see Table 19. There were also 13 fragments of undiagnostic flat tile and 12 fragments of undiagnostic tile or brick.

Table 19: Overview of CBM types.

<i>CBM Type</i>	<i>Qty.</i>	<i>Wt. (g)</i>
<i>tegula</i>	5	1,033
<i>imbrex</i>	1	58
Floor tile	20	4,561
Box flue tile	2	154
Box flue tile or wall tile	1	186
Undiagnostic tile	13	1,796
Undiagnostic tile or brick	12	990
Total	54	8,778

- 14.2.4 The majority of the identified material consists of floor tiles with smaller numbers of other tile types. Three of the tegulae have signature marks (<147> from F.50, <156> from F.37 and <166> from F.61). All three are partial, although stylistically typical of signature marks on roofing tile, being made with a finger or blunt stick. There is one tegula (<156> from F.37) with a diagonal Type D1 Lower Cutaway (for typology see Mills 2013: 455) and one with an upper cutaway (<148> from F.37). There are also two fragments of box flue tile, which were used in hypocaust systems. Both have combed keying to one external surface, and one (<148> from F.37) has traces of mortar or plaster in the combed grooves, and evidence of sooting on the internal surface, indicative of active use in a hypocaust system. There is one further fragment of either box flue tile or wall tile with scored keying on the outer surface. Four further fragments of floor tile have traces of mortar present. On two of these the mortar was on the base and edge. The other two fragments had traces of mortar on the break, indicative of secondary re-use, possibly in foundations.
- 14.2.5 All of the material was manufactured in either a medium or coarse sandy fabric, identified as Fabric 1 and Fabric 2. Fabric 1: A well sorted medium sandy fabric, often with frequent small voids and moderate limestone (up to c.5mm). Fabric 2: A well sorted coarse sandy fabric, either fully oxidised or with a reduced core, with moderate limestone (up to c.19mm).

Discussion

- 14.2.6 This is a small assemblage of Roman CBM, consisting mainly of fragments of floor tile. Box flue tile was used in buildings with hypocaust systems and it is likely that the floor tiles here were also part of this system. However, this type of building need not be in the immediate vicinity or on site. CBM would have been subject to secondary re-use, in particular as hardcore, and it is likely that this material represents secondary re-use from a building nearby. Indeed, seven fragments of tile appear to have been re-used to form an area of metaling, F.52, and the fragments with traces of mortar, especially in the breaks, are indicative of re-use in mortared foundations or surfaces prior to discard.

Table 20: Catalogue of Ceramic Building Material

CAT. No.	Feature No.	Context No.	Qty.	Wt. (g)	Length (mm)	Width (mm)	Thick-ness (mm)	Height of flange (mm)	Width of flange (mm)	Fabric	Type	Description
12	21	51.02	1	137	96	63	19			1	Undiagnostic tile	Undiagnostic edge fragment of tile, probably <i>tegula</i> .
13	21	52.01	1	547	118	118	38			1	Floor tile	Fragment of floor tile. Wear to upper surface. Moulding sand on base.
15	21	surface find	4=1	672	135	105	40			1	Floor tile	Four re-fitting fragments of floor tile.
140	33	73.02	1	456	112	89	40			2	Floor tile	Corner fragment of floor tile. White mortar present on base.
142	36	79.01	1	188	84	68	42			2	Undiagnostic tile/brick	Undiagnostic fragment of tile or brick.
143	36	79.02	1	192	109	74	25			1	Undiagnostic tile	Undiagnostic fragment of tile.
143	36	79.02	1	71	60	31	36			1	Undiagnostic tile/brick	Undiagnostic fragment of tile or brick.
144	33	80.01	1	288	114	100	203			1	Undiagnostic tile	Fragment of probable <i>tegula</i> or floor tile.
144	33	80.01	1	66	53	52	46			2	Undiagnostic tile	Edge fragment of probable floor tile. Traces of mortar on edge and base. Moulding sand on edge and base.
144	33	80.01	1	49	43	48	17			1	Undiagnostic tile	Undiagnostic fragment of tile. Moulding sand on base.
145	40	89.01	1	117	66	64	26			1	Undiagnostic tile	Undiagnostic fragment of tile.
146	33	102.01	1	165	82	62	23	41	19	1	<i>tegula</i>	Fragment of <i>tegula</i> with flange.
147	50	108.01	1	297	154	70	19			1	<i>tegula</i>	Edge fragment of <i>tegula</i> with partial signature mark on upper surface consisting of three concentric lines, probably forming an arch.
147	50	108.01	1	40	47	38	27			1	Undiagnostic tile/brick	Undiagnostic fragment of tile or brick.
147	50	108.01	1	10	33	28	26			1	Undiagnostic tile/brick	Undiagnostic fragment of tile or brick.
147	50	108.01	1	10	26	20	23			1	Undiagnostic tile/brick	Undiagnostic fragment of tile or brick.

CAT. No.	Feature No.	Context No.	Qty.	Wt. (g)	Length (mm)	Width (mm)	Thickness (mm)	Height of flange (mm)	Width of flange (mm)	Fabric	Type	Description
147	50	108.01	1	6	33	23	9			1	Undiagnostic tile/brick	Undiagnostic fragment of tile or brick.
148	37	109.01	1	291	139	74	20			1	<i>tegula</i>	Lower corner fragment of <i>tegula</i> with upper cutaway present.
148	37	109.01	1	75	61	51	16			1	Box flue tile	Fragment of box flue tile with wavy combed keying to outer surface. Traces of mortar present in combed grooves. Possible sooting to interior surface.
149	33	115.02	1	25	41	39	20			1	Undiagnostic tile/brick	Undiagnostic fragment of tile or brick.
150	53	125.01	1	27	42	31	32			1	Undiagnostic tile/brick	Undiagnostic fragment of tile or brick.
151	52	128.01	1	186	108	100	14			1	Box flue tile/wall tile	Edge fragment of box flue tile or wall tile. Widely spaced cross-hatched scoring to upper surface.
151	52	128.01	3=1	286	119	76	31			1	Floor tile	Three re-fitting fragments of floor tile, with edge.
152	36	131.01	2=1	300	94	76	35			2	Floor tile	Edge fragment of floor tile. Traces of white mortar to base and edge. Upper surface worn smooth.
153	66	132.01	1	76	62	29	35			1	Floor tile	Corner fragment of floor tile.
154	57	133.01	1	347	96	82	40			2	Undiagnostic tile/brick	Undiagnostic fragment of tile or brick.
155	53	135	1	25	41	35	30			1	Undiagnostic tile/brick	Undiagnostic fragment of tile or brick.
156	37	139.01	1	207	110	85	17	36		1	<i>tegula</i>	Fragment of <i>tegula</i> with lower cutaway Type D1 and partial signature mark on upper surface, consisting of a single curving line made with a finger or bunt stick. Moulding sand on edge and base. Base slightly concave.
157	53	145.01	1	216	84	71	40			2	Undiagnostic tile/brick	Undiagnostic fragment of tile or brick. Two surfaces present. Moulding sand on base.
158	52	146.01	3=1	133	81	48	21			1	Undiagnostic tile	Three re-fitting fragments. Undiagnostic edge of <i>tegula</i> or floor tile. Moulding sand on base.

CAT. No.	Feature No.	Context No.	Qty.	Wt. (g)	Length (mm)	Width (mm)	Thickness (mm)	Height of flange (mm)	Width of flange (mm)	Fabric	Type	Description
159	51	149.01	1	25	26	26	32			1	Undiagnostic tile/brick	Undiagnostic fragment of tile or brick.
160	57	154.01	1	366	100	70	40			2	Floor tile	Edge fragment of floor tile. Wear to upper surface. Moulding sand on base and edge.
161	51	163.01	1	113	72	38	41			1	Floor tile	Edge fragment of floor tile. Wear to upper surface. Moulding sand on base. Traces of white material (mortar?) on break.
162	33	168.01	1	195	93	44	42			1	Floor tile	Edge fragment of floor tile, upper surface worn. Moulding sand on base.
162	33	168.01	1	25	52	23	19			1	Undiagnostic tile	Undiagnostic fragment of tile.
162	33	168.01	1	79	67	57	19			1	Box flue tile	Fragment of box flue tile. Combed keying on one surface: three concentric grooves present.
163	51	169.01	1	307	92	91	33			1	Floor tile	Coner fragment of floor tile. The upper surface is worn concave. Moulding sand to edge.
163	51	169.01	1	261	74	69	40			1	Floor tile	Edge fragment of floor tile. Slight wear to upper surface. Moulding sand on the base and edge. Traces of white material (mortar?) on one of the breaks - possible re-use?
163	51	169.01	1	367	135	111	22			1	Undiagnostic tile	Frgament of tile (floor tile or <i>tegula</i>). Mounding sand on base.
165	67	173.01	1	302	100	66	37			2	Undiagnostic tile	Undiagnostic weathered fragment of tile.
166	61	179.01	1	172	65	64	42			2	Floor tile	Edge fragment of floor tile.
166	61	179.01	1	210	69	60	42			1	Floor tile	Corner fragment of floor tile.
166	61	179.01	1	120	70	50	37			2	Undiagnostic tile	Fragment of probable floor tile. One worn surface present.
166	61	179.01	1	73	81	38	19			1	<i>tegula</i>	Fragment of <i>tegula</i> base with partial signature mark on upper surface consisting of four concentric grooves made with a finger or blunt stick.

<i>CAT. No.</i>	<i>Feature No.</i>	<i>Context No.</i>	<i>Qty.</i>	<i>Wt. (g)</i>	<i>Length (mm)</i>	<i>Width (mm)</i>	<i>Thick-ness (mm)</i>	<i>Height of flange (mm)</i>	<i>Width of flange (mm)</i>	<i>Fabric</i>	<i>Type</i>	<i>Description</i>
290	32	72.01	1	600	120	99	45			2	Floor tile	Edge fragment of floor tile. Slight wear to upper surface. Moulding sand on the base.
477	61	166.01	1	58	73	48	14			1	<i>imbrex</i>	Edge fragment of <i>imbrex</i> .

14.3 Appendix 2C: Metalwork (Rosalind Quick)

Introduction and Methodology

- 14.3.1 The assemblage consists of 110 metal artefacts weighing a total of 1,659.4g, and includes material derived from metal detecting of the subsoil and archaeological features as well as material derived from hand excavation. The material was cleaned and recorded in a spreadsheet, which will be included with the project archive. Details of the coins are tabulated below, with dates given where possible. A catalogue of the copper alloy, lead and iron objects (excluding nails) has been prepared and is included here. A summary of the iron nails is tabulated here; further details of the nails can be found in the spreadsheet.
- 14.3.2 This report provides a catalogue and summary of the metal artefacts, as well as identifying the potential of the assemblage and recommendations for future work.

Assemblage Character and Summary

- 14.3.3 Table 21 summarises the metal artefact assemblage by metal type. It is dominated by a large number of iron nails, with smaller numbers of copper alloy, silver, lead and other iron objects. There are 16 coins in total, including 15 copper alloy Roman coins and one silver medieval penny.

Table 21: Summary of assemblage by metal type.

<i>Metal type</i>	<i>Qty.</i>	<i>Wt. (g)</i>
Copper alloy	29	146.7
<i>Copper alloy coins</i>	<i>15</i>	<i>29.3</i>
Silver (coin)	1	0.9
Lead	7	329.3
Iron	73	1,182.5
<i>Iron nails</i>	<i>59</i>	<i>707.5</i>
Total	110	1,659.4

- 14.3.4 The focus of the dated assemblage is a group of 23 Roman objects, including 15 Roman coins, with smaller numbers of objects from later periods.

Roman

- 14.3.5 There are 21 copper alloy objects, including 15 coins, and two iron objects that are Roman in date. It is possible that many of the iron nails are also Roman in date, and a summary of them is included after the catalogue. The Roman assemblage includes two late third and fourth century AD armlets or bracelets, including a well-preserved near-complete cable armlet in two re-fitting pieces (SF.85 and SF.95), and an incomplete flat armlet of possible snake's head type (SF.79 from ditch F.33). There was also an incomplete spoon (SF.77 from ditch F.33) from the same context, and an unstratified decorated cast discoidal strap fitting (SF.99). Also of note is a furniture or box fitting with punched dot decoration (SF.103 from ditch F.51), which may be Roman or early medieval in date. There was also an incomplete iron chisel (<357> from ditch F.67). A total of fifteen Roman coins were recovered. The majority of them are heavily worn and corroded, including six coins which are illegible. All of the coins are 3rd and 4th century AD types, including eight *nummi* and one 3rd century *radiata* (SF.61).

Copper alloy

- 14.3.6 <400> SF.77, F.33 (80.01). Incomplete spoon handle and start of off-set bowl, which is mostly missing. The bowl is attached to the handle with a 'C' shaped joining section or elbow. The part of the handle nearest to the elbow is rectangular in section (3.5x2.5mm) and decorated with transverse grooves; it then tapers to form a round-sectioned handle (2mm diameter), which is incomplete. L: 94mm, W (elbow): 8mm, 4.5g.
- 14.3.7 <401> SF.79, F.33 (80.01). Two re-fitting fragments of armlet or bracelet, incomplete and worn. Rectangular in section with central decoration of transverse scoring between two grooved channels. The terminal is rounded, of possible 'snake's head' type, with the remains of solder to the underside for the lap joint. See Crummy (1993) Fig.44, No.1679 for similar, which is dated to the late 3rd and 4th centuries AD. L: 79mm, W: 5.5mm, T: 0.8mm, 1.6g. *Photograph or illustration recommended.*
- 14.3.8 <404> SF.103, F.51 (163.01). A complete thin rectangular strip, with three rivet holes, one at one end and two at the other. It has three parallel lines of punched dot decoration running lengthways along it. Possibly a furniture or box fitting. L: 43mm, W: 19mm, T: 0.5mm, 2.5g. Roman or early medieval. *Photograph or illustration recommended.*
- 14.3.9 <424> SF.85, Buried soil. Re-fits with <426>. Near complete cable armlet or bracelet with three circular section strands. Clasp incomplete. See Crummy (1993) Fig.41, No.1628 for similar, which is dated to the late 3rd and 4th centuries AD. Internal diameter (oval): 54 x 33mm, T: 3mm, 4.2g. *Photograph or illustration recommended.*
- 14.3.10 <426> SF.95. Re-fits with <424>. Near-complete cable armlet or bracelet with three circular section strands, and hook clasp. See Crummy (1993) Fig.41, No.1628 for similar, which is dated to the late 3rd and 4th centuries AD. Internal diameter (oval): 54 x 33mm, T: 3mm, 3.8g. *Photograph or illustration recommended.*
- 14.3.11 <427> SF.99. Cast discoidal strap fitting with relief decoration on the front and a rectangular strap loop on the reverse. Visible decoration consists of a central ring, possibly open at one end, and marginal ring in lower relief. Heavy concretion to both sides. See PAS: LANCUM-88CFAE for similar. Diameter: 33mm, T: 4mm, Loop: 20mm wide and 5mm thick, 31.9g. *Photograph or illustration recommended.*

Table 22: Roman Coins

Cat No.	SF No.	Feature No.	Context No.	Wt. (g)	Diameter (mm)	Denomination	Description	Date
402	75	33	102.01	0.4	13	Unknown	Illegible, heavily corroded, incomplete.	3rd-4th century AD
403	76	33	102.01	2.1	17.5	Nummus (AE2 or AE3)	Head facing right. R: Two victories holding a shield inscr. unclear.	4th century AD
405	110	33	167.01	1.9	18	Nummus (AE2 or AE3)	Heavily worn, obverse illegible. R: Figure advancing right, possible second figure standing?, heavily worn.	3rd-4th century AD
412	56			1.8	16	Nummus (AE3)	Head facing right. R: Soldier advancing left spearing a ?fallen horseman, heavily worn.	c.353-361 AD
414	61			2.5	18	Radiate	Tetricus, head facing right, radiate. R: Fides holding two standards.	270-273 AD

Cat No.	SF. No.	Feature No.	Context No.	Wt. (g)	Diameter (mm)	Denomination	Description	Date
415	62			1.7	16.5	Nummus (AE3)	Head facing right. R: illegible.	3rd-4th century AD
416	66			2	17.5	Nummus (AE3)	Head facing right, 'FLIVLCONS...'. R: Two soldiers holding two standards. Trier mint.	c.330-335 AD
417	72			1.4	15.5	Nummus (AE3)	Head facing right? Heavily worn. R: Emperor going right holding a standard and dragging captive.	364-378 AD
419	74			1.1	15.5	Nummus (AE3)	Head facing right. R: Soldier advancing left spearing fallen horseman.	354-361 AD
420	80			1.6	16	Unknown	Illegible, heavy concretion on both faces.	3rd-4th century AD
421	81			2.4	18	Unknown	Illegible, heavily corroded.	3rd-4th century AD
422	82			3.4	17.5	Unknown	Illegible, heavy concretion on both faces.	3rd-4th century AD
423	84			2.1	17	Unknown	Illegible, heavy concretion on both faces.	3rd-4th century AD
425	93			3.4	21	Nummus (AE2)	Head facing right. R: Two victories holding a shield inscr. '...MVL...'	350-353 AD
428	111			1.5	17	Unknown	Illegible, heavily corroded.	3rd-4th century AD

Iron

- 14.3.12 <346> F.36 (79.01). Incomplete, possible figure-of-eight loop in two non-joining pieces, with rectangular section, becoming rounded in section at the top and bottom. See Manning 1985: Plate 64, S15 for similar. L: 1212mm, W: 10mm, T: 8mm, 53g. Possibly Roman.
- 14.3.13 <357> F.67 (173.01). Incomplete chisel with conical socket. The blade is rectangular sectioned and parallel-sided. For similar see Manning Plate 10, B31. Diameter (socket): 17mm, L: 105mm, W: 21 mm, T: 10mm, 54g. Probably Roman.

Medieval

- 14.3.14 A single heavily worn silver medieval penny, possibly Edward I (SF.18) was recovered from metal detecting of the subsoil.
- 14.3.15 <429> SF.18. Edward I? silver penny, heavily worn. Obverse unclear. R: Long-cross with three pellets in each quarters. Diameter: 17.5mm, 0.9g.

Post-medieval

- 14.3.16 The Post-medieval component of the assemblage consists of four copper alloy and one iron artefact, all of which were recovered through metal detecting of the subsoil.

Copper alloy

- 14.3.17 <407> SF.36, Subsoil. Rectangular lock plate with keyhole and cover plate. L: 79mm, W: 52mm, T: 1mm, 35.5g. 20th century.
- 14.3.18 <408> SF.47. Subsoil. Circular trade weight with a raised rim. The face has three stamps: A sword, a crowned letter, possibly a 'C', and a third stamp which is illegible. Filing marks on the reverse. Diameter 19mm, 7.8g. 17th or 18th century.
- 14.3.19 <409> SF.48, Subsoil. Four fragments of door handle rose. Diameter: 42mm+, T: 1mm, 5.7g. 19th century.
- 14.3.20 <418> SF.73, Subsoil. Circular flat tombac button with start of loop on the reverse, lead alloy. Diameter: 19.5mm, 4.9g. 18th-19th century.

Iron

- 14.3.21 <391> SF.104, Subsoil. Incomplete. Tapering rectangular sectioned rod. At one end there are two curving square sectioned rods set at right angles with a third square sectioned rod projecting centrally between them. Possibly ornamental ironwork, function unknown. L: 102mm, W: 86mm, T: 7mm, 44g.

Undated

- 14.3.22 There were four copper alloy, five lead and eleven iron objects (excluding nails) that are of uncertain date. For the most part they comprise undiagnostic, incomplete fragments of uncertain function and date.

Copper alloy

- 14.3.23 <406> SF.33, Subsoil. Undiagnostic thin folded strip, rectangular cut-out at one end. L: 57mm, W: 23mm, T: 0.5mm, 8.6g.
- 14.3.24 <411> SF.55, Subsoil. Incomplete undiagnostic thin strip fragment, bent. L: 35mm, W: 22mm, T: 0.5mm, 2.5g.
- 14.3.25 <413> SF.60, Subsoil. Small undiagnostic fragment, burnt. L: 10mm, W: 7mm, T: 3mm, <0.1g.
- 14.3.26 <430> SF.15, Subsoil. Fragment of hollow pipe. L:20mm, Diameter: 9mm, 4.1g.

Iron

- 14.3.27 <350> F.44 (96.01). Incomplete, probable ring with round section. Diameter (external): 45mm, T: 8mm, 8g.
- 14.3.28 <358> F.35 (176.01). Undiagnostic lump. L: 38mm, W: 25mm, T: 7mm, 16g.
- 14.3.29 <366> SF.38. Incomplete, undiagnostic flat rectangular sectioned sheet. L: 56mm, W: 39mm, T: 2mm, 16g.
- 14.3.30 <367> SF.40, Subsoil. Incomplete, undiagnostic bar, heavily corroded. L: 46mm, W: 37mm, T: 15mm, 95g.
- 14.3.31 <369> SF.54, Subsoil. Undiagnostic lump, heavily corroded. L: 47mm, W: 38mm, T: 23mm, 47g.

- 14.3.32 <370> SF.70, Subsoil. Incomplete, flat rectangular sectioned, sheet with two rivets. Possible binding strip. L:73mm, W: 36mm, T: 2mm, 52g.
- 14.3.33 <371> SF.58, Subsoil. Incomplete curved bar, narrows at one end. The reverse is flat and the front has a channel c.3mm wide. Function unknown. L: 60mm, W: 13mm, T: 4mm, 13g.
- 14.3.34 <380> SF.71. Incomplete, undiagnostic curved, tapering rod with round section. It curves outwards at the point. L: 137mm, Diameter (max.): 8mm, 29g.
- 14.3.35 <384> SF.94. Complete ring with round section. Diameter: 42mm (ext.), 27mm (int.), T: 7mm, 15g.
- 14.3.36 <387> SF.98, F.51 (124.01). Incomplete, undiagnostic rectangular section bar with loop attached in opposing plane. Diameter of loop: 15.5mm, L: 35mm, W: 18mm, T: 5mm, 10g.
- 14.3.37 <394> SF.112. Rectangular sectioned bar. There is a step down on one side that slopes back up to meet the bar. Function unknown. L: 70mm, W: 8mm, T: 5mm, 23g.

Lead

- 14.3.38 <410> SF.52, Subsoil. Fragment of rectangular strip, folded. L: 18mm, W:14mm, T: 1.5mm, 7.5g.
- 14.3.39 <431> SF.16, Subsoil. Fragment of hollow pipe. L:43, Diameter: 9mm, 14.8g.
- 14.3.40 <434> SF.39, Subsoil. Irregular five sided tapering object, hollow and open at the top, tapering to a solid base. Function uncertain. L: 39mm, Diameter: 14-30mm, 78.3g.
- 14.3.41 <435> SF.41, Subsoil. Fragment of rectangular strip, cut longitudinally at one end. L:66, W:14-19mm, T:5mm, 41.8g.
- 14.3.42 <436> SF.44, Subsoil. Undiagnostic domed fragment, tapering to a rounded point. L: 38mm, W: 21mm, T: 4mm, 25.6g.

Iron Nails

- 14.3.43 The assemblage includes 59 iron nails, see **Error! Reference source not found.**²³ below for a summary. It is likely that the majority of the nails from archaeological features are Roman in date.

Table 23: Overview of iron nails

<i>Type</i>	<i>Qty.</i>
No. from archaeological features	36
<i>Average length: 46.88mm (11-127mm, includes incomplete nails)</i>	
<i>Total Manning Type 1</i>	9
<i>Total Manning Type 2</i>	2
No. from subsoil	22
<i>Total Manning Type 1</i>	1
Total Nails	58

Discussion

- 14.3.44 This is a small assemblage, the core of which is 23 objects that are Roman in date. The Roman coins as well as the two armlets (SF.79, SF.85 & SF.95), are all third and fourth century AD types, giving a later Roman focus to the material. The small number of Post-medieval objects are not associated with any archaeological features and are typical of metal

detected assemblages. It is likely that they derive from processes associated with working and moving across the land.

14.4 Appendix 2D: Worked Stone (Rosalind Quick)

Introduction and Methodology

- 14.4.1 The assemblage consists of 166 fragments of worked stone, including 164 fragments of rotary quern representing a maximum of 10 querns, and 2 fragments of roofing slate. The material was all assessed and recorded in a spreadsheet with details including lithology, object type, and diameter where possible. A catalogue of the material is included in this report, and the spreadsheet will be included with the archive.
- 14.4.2 This report includes quantification and a summary of the worked stone, identifying its potential as well as recommendations for further work.

Assemblage Character and Summary

- 14.4.3 This is a small assemblage of worked stone consisting of Roman rotary querns and a single beehive quern manufactured in Hertfordshire Puddingstone. The rotary querns were manufactured from Millstone Grit, sourced from the Pennines, and lava, which was imported. It is highly likely that the lava querns were sourced from Mayen in Germany, although other possible sources have been identified (Shaffrey 2021: 2). There are no complete stones, and the material is mostly highly fragmented, excepting the beehive quern <296> from F.51, which comprises c.50% of the lower stone. Lava quern <1534> in particular is highly fragmented, and the fragments have been deemed to represent a single rotary quern. Many of the fragments are also burnt, contributing to their fragmentation. Due to the small size of most of the fragments it has not been possible to measure diameter, and as such no millstones have been positively identified in the assemblage (see Shaffrey 2015 for distinguishing criteria). There were also two undated fragments of roofing slate.

Discussion

- 14.4.4 This is a small assemblage of worked stone. Querns in particular are likely to have been re-used as hones, but also as hardcore in foundations and surfaces. Fragment <298> from the area of metaling F.52 is likely to represent re-use in this way. The high incidence of fragments that have been burnt – 10 of the Millstone Grit fragments and the 150 fragments from a single lava quern are burnt – is also indicative of preparation for secondary re-use where the stone was burnt to enable them to be broken up into smaller pieces (see Timberlake 2014, 277 for a discussion of this practice).

Table 24: Catalogue of worked stone

CAT. No	Feature No.	Context No.	Qty.	Wt. (g)	Diameter (mm)	Length (mm)	Width (mm)	Height (mm)	Type	Lithology	Description	Date
292	36	79.01	2=1	449		124	113	42	Rotary quern	Millstone Grit	Two re-fitting fragments of Millstone Grit rotary quern, burnt. Worn, dressed grinding surface, slightly concave.	Roman
292	36	79.01	1	35		47	41	16	Quern	Millstone Grit	Fragment of probable rotary quern, Millstone Grit, burnt. Likely to be part of the same quern as <292>.	Roman
294	33	102.01	1	390		116	88	35	Rotary quern	Millstone Grit	Edge fragment of Millstone Grit rotary quern, burnt. Grinding surface worn smooth.	Roman
295	37	109.01	3=1	256		100	79	26	Upper rotary quern	Millstone Grit	Upper stone. Three re-fitting edge fragments of Millstone Grit rotary quern, burnt. Slightly raised rim. Dressed grinding surface with both grooves and pecking present.	Roman
296	51	124	1	4064	245			90	Lower 'beehive' quern	Hertfordshire Pudding-stone	c. 50% lower beehive quern with central socket (Diameter: 30mm, Depth: 30mm). Rounded base, which curves up to meet the flat grinding surface, worn smooth.	Roman
297	57	133.01	3=1	583		123	113	50	Upper? Rotary Quern	Millstone Grit	3 re-fitting fragments of upper? Millstone Grit rotary quern edge, burnt. Worn, dressed grinding surface. The top surface is raised towards the middle - possible projecting hopper.	Roman
298	52	146.01	1	768		145	109	43	Rotary quern	Millstone Grit	Fragment of Millstone Grit rotary quern with flat, grooved grinding surface, worn. Traces of burning present.	Roman

<i>CAT. No</i>	<i>Feature No.</i>	<i>Context No.</i>	<i>Qty.</i>	<i>Wt. (g)</i>	<i>Diameter (mm)</i>	<i>Length (mm)</i>	<i>Width (mm)</i>	<i>Height (mm)</i>	<i>Type</i>	<i>Lithology</i>	<i>Description</i>	<i>Date</i>
300	68	174.01	1	593		126	108	32	Upper? rotary quern	Mayen Lava	Edge fragment of upper? lava rotary quern. The grinding surface is worn smooth.	Roman
311	46	118.02	1	214		77	66	41	Quern	Mayen Lava	Fragment of lava quern.	Roman
1534	33	102.01	150=1	390		55 max.	40 max.	29 max.	Rotary quern	Mayen Lava	c.150 fragments of lava rotary quern, burnt.	Roman
293	44	96.01	1	9		36	30	4	Roof slate	Slate	Fragment of roof slate.	Undated
310	35	95.01	1	17		59	38	6	Roof slate	Slate	Fragment of roof slate.	Undated

14.5 Appendix 2E: Glass (Hannah Barrett)

14.5.1 The following table is a summary of the glass sherds found on site. Special Finds 105, 108 and 109, as well as the vessel glass from F.36 are Roman in date. They were recovered from the southwest quarter of site in or near to Enclosures 1, 2 and 3 and the southern limit of Road 1. The clear vessel glass is likely to be modern. All glass will be subject to detailed identification and analysis for the archive report.

Table 25: Quantification and description of glass assemblage

<i>Special Find no.</i>	<i>Context no.</i>	<i>Feature no.</i>	<i>Wt. (g)</i>	<i>Length (mm)</i>	<i>Width (mm)</i>	<i>Thickness (mm)</i>	<i>Internal Diameter (mm)</i>	<i>Description</i>
N/A	75.01	31	1	14	11	0.5	N/A	clear vessel glass
N/A	79.01	36	7	23	N/A	4	14	half of the neck and rim of a small, straight-necked light blue vessel
105	subsoil	N/A	7	44	26	6	N/A	light blue vessel glass
108	73.01	33	3	21	16	6	N/A	flat blue/ green possible window glass
109	80.01	33	24	58	N/A	11	50	c. one third of the neck and rim of an open-necked blue/ green glass vessel
N/A	80.01	33	2	24	16	0.5	N/A	clear vessel glass

14.6 Appendix 2F: Flint (Emma Beadsmoore)

14.6.1 A total of 6 ($\geq 644\text{g}$) worked and burnt flints were recovered from the site, five ($\geq 642\text{g}$) of which are worked and unburnt, whilst one ($\geq 2\text{g}$) is burnt and unworked. All six flints were recovered from five features and listed by feature and type in Table 26.

Table 26: *Flint by type and context*

Feature	Type					Sub-totals
	chunk	primary flake	secondary flake	end and side scraper	unworked burnt chunk	
F. 36	1					1
F. 37					1	1
F. 44	1					1
F. 52		1	1			2
F. 61				1		1
TOTAL	2	1	1	1	1	6

14.6.2 All except one of the flints recovered from the features are expediently produced chronologically non-diagnostic working waste. The exception is an end and side scraper likely to be Neolithic, which was residual in F. 61.

14.7 Appendix 2G: Faunal Remains (Vida Rajkovaca)

Introduction and Methodology

- 14.7.1 Of the raw count of 5415 fragments, following the analysis, some 1313 assessable specimens were recorded, 603 of which were possible to assign to species level (c.46% of the assemblage). Aside from the hand-recovered material, a further 80 assessable specimens were recorded as heavy residues following the processing of the environmental bulk soil samples. Of this figure, only some 17 specimens were identified to species.
- 14.7.2 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 reference 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).
- 14.7.3 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

- 14.7.4 The assemblage is entirely made up of domestic species, the exception being the red deer antler with its pedicle present, which was clearly collected as shed (**Error! Reference source not found.**27). The dominance of cattle and horse is worthy of note, while ovicapra and pig are unusually under-represented.
- 14.7.5 Faunal material came from substantial ditch deposits, mostly consisting of larger joints of cattle and horse. Though no articulation was noted in the field, it is possible that these represent partially-articulated remains of cattle and horse.
- 14.7.6 As the material is chronologically confined to the third and fourth centuries, it will be considered as a whole. There is some indication from the ceramic evidence about the greater proportion of later material in F.33 and F.35, there was nothing to suggest any differences in the faunal material.

Table 27: Number of Identified Specimens for all species from all contexts; the abbreviation n.f.i. denotes that the specimen could not be further identified.

<i>Taxon</i>	<i>NISP</i>	<i>%NISP</i>	<i>MNI</i>
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Cow	358	59.4	11
Sheep/ goat	41	6.8	6
Pig	3	0.5	1
Horse	198	32.8	8
Dog	2	0.3	1
Red deer	1	0.2	1
Sub-total to species	603	100	.
Cattle-sized	607	.	.
Sheep-sized	44	.	.
Mammal n.f.i.	59	.	.
Total	1313	.	.

Contextual Summary

- 14.7.7 As the assemblage is too substantial to offer quantification by context for the entire site, here we will show the most important deposits, with the full datasheet given at the end of the report. Amongst the most abundant deposits were those recovered from ditches F.51, followed by F.52 and F.33 (**Error! Reference source not found.**8), all reflecting the broad site pattern of high numbers of cattle and horse.
- 14.7.8 Worthy of note was a juvenile horse radius, aged to less than 15 months at death, recovered from F.33 ([80.02]).

Table 28: Number of Identified Specimens for all species from the most substantial deposits, breakdown by feature.

<i>F.no.</i>	<i>Species</i>	<i>NISP</i>
33	Cow	34
33	Dog	2
33	Horse	9
33	Red deer	1
33	Sheep/ goat	7
33	Cattle-sized	43
33	Sheep-sized	14
33	Mammal n.f.i.	3
Total		113
36	Cow	36
36	Horse	20
36	Sheep/ goat	6
36	Cattle-sized	44
36	Sheep-sized	2
Total		108
37	Cow	26
37	Horse	17
37	Sheep/ goat	2
37	Cattle-sized	55
37	Sheep-sized	4
37	Mammal n.f.i.	3
Total		107
44	Cow	29
44	Horse	10
44	Cattle-sized	42
44	Sheep-sized	2

44	Mammal n.f.i.	3
Total		86
51	Cow	86
51	Horse	64
51	Pig	1
51	Sheep/ goat	4
51	Cattle-sized	131
51	Mammal n.f.i.	37
Total		323
52	Cow	25
52	Horse	27
52	Sheep/ goat	2
52	Cattle-sized	74
52	Sheep-sized	2
Total		131
61	Cow	23
61	Horse	14
61	Pig	1
61	Cattle-sized	36
61	Mammal n.f.i.	2
Total		76

- 14.7.9 It is obvious that ditches were the main receptacle of bone waste, as was the case on a number of similarly dated sites in the immediate vicinity (Evans and Lucas 2020), but also on a number of Roman settlements from across the region.
- 14.7.10 Faunal remains recovered as heavy residues were analysed and no remains of micro-, avian or fish fauna were identified. The only elements worthy of note were amphibian remains, the remainder of the assemblage being unidentified crumbs of mammalian bone waste.

Discussion

- 14.7.11 This is an unusually substantial assemblage, especially for the relatively small size of the investigated area. The general prevalence of larger domesticates mirrors the local patterns (ibid), and further emphasises the significance of larger livestock as working animals or for transport (Allen *et al.*2017). While it is possible cattle and horse were used as beasts of burden, there were little or no pathologies noted, making it more likely horse was more used for transport. Presence of juvenile horse as an indication of on-site rearing and the site's position in a wider network of Roman settlements needs to be explored further.
- 14.7.12 The nature of bone deposition here is of interest, the formation of middens and the substantial ditch deposits.
- 14.7.13 Some seven specimens were recorded as measurable and six mandibles were available for ageing. This is insignificant for any broader site discussions, but it could help us understand the animal use in the area.

14.8 Appendix 2H: Palaeoenvironmental Assessment (Gemma Warham)

Introduction

14.8.1 A series of bulk samples were taken by the Cambridge Archaeological Unit (CAU) during an archaeological excavation at Clerk Maxwell Road, Cambridge, Cambridgeshire (NGR: TL 43310 25902). The bulk sieve samples were processed by the CAU for the recovery of charred plant macrofossils and wood charcoal and fifteen flots were submitted to Sheffield Archaeobotanical Consultancy for assessment. The site lies within the 'hinterlands' of Cambridge's Roman town on Castle Hill, which is located 1km to the east of the area of investigation. An archaeological trial trench investigation revealed evidence for activity associated with the second to fourth century AD Roman phases of the nearby Roman farmstead of Vicar's Farm (CAU 2021). Further archaeological investigation undertaken by the CAU identified multiple phases of activity; Enclosures 1, 2 and 3 and Road 2 are associated with a probable continuation of the Roman settlement of Vicar's Farm and the final phase of activity has been interpreted as a period of disuse of the Roman settlement. The bulk sieve samples ranged in volume between 8 and 40 litres and were taken from one pit and three ditch slots associated with Enclosure 1, from a scorched surface deposit and ditch associated with Enclosure 2, from four ditch slots associated with Road 1, from three ditch slots associated with Road 2, from a disuse deposit and one context identified as possible 'natural' (Table 29).

Aims and objectives

- 14.8.2 To determine the concentration, diversity, state of preservation and suitability for use in scientific dating, of any palaeoenvironmental material present in the samples.
- 14.8.3 To evaluate the potential of any palaeoenvironmental material present in the samples to provide evidence for crop plants and/or wild plant foods.
- 14.8.4 To evaluate the potential of any palaeoenvironmental material present in the samples to provide evidence for the local environment.

Methodology

- 14.8.5 The 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 284 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 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).
- 14.8.6 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). Other plant nomenclature follows Stace (2019). The composition of the samples is recorded in Table 29, which is arranged by group and feature-type for ease

of interpretation. The seed, in the broadest sense, of the plant is always referred to in Table 29, 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

- 14.8.7 The flots range in volume between 1ml and 50ml (excluding root material), although only five flots exceed 10ml. Two flots from the fills of ditches F.35 and F.36 contain recent root material, with the volume of roots ranging between 2 and 40 ml, indicating that these deposits have been subject to some degree of bioturbation. Further potential evidence for bioturbation is indicated in most of the 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). Uncharred vegetative remains and small numbers of untransformed seeds are also present in the fills of the ditches (Table 29). The uncharred plant remains primarily comprise degraded and fragmented vegetative remains, although occasional leaf buds and fragments of moss are present in the fills of ditches 33 and 36 (Table 29). The untransformed seeds include those of birch (*Betula* sp.), buttercup-type (*Ranunculus* sp.), dock (*Rumex* sp.), elder (*Sambucus nigra* L.), sow-thistle (*Sonchus* sp.) and small-seeded grasses (Poaceae <2mm), as well as possible garlic mustard (cf. *Alliaria petiolata* (M. Bieb.) Cavara & Grande), duckweed (*Lemna* sp.) and possible celery-leaved buttercup (*Ranunculus* cf. *sceleratus* L.) (Table 29).
- 14.8.8 Aquatic indicators are present in the ditch fills, including occasional ostracods, small vertebrate bones (potential fish or amphibious remains) and fish scales (Table 29). These remains, together with the untransformed seeds of duckweed and possible celery-leaved buttercup, suggest damp/wet conditions and therefore the uncharred plant remains may be derived from material preserved under anoxic (waterlogged) conditions. The degraded appearance, however, of the vegetative material suggests that the preservation of the potential waterlogged remains is poor and that there may be preservational bias due to the dominance of species that produce 'robust' seeds (such as elder and buttercup-type).
- 14.8.9 Preservation of charred plant macrofossils is variable; many of the cereal grains recovered from the samples are abraded and particularly distorted in appearance, which will impede further identification. Conversely, the presence of cereal chaff (notably delicate awn fragments) and detached coleoptiles in several of the samples demonstrates instances of good preservation. The wood charcoal consists of low concentrations of comminuted charcoal that rarely exceeds 2mm³, with only occasional ring porous and small round wood fragments observed. The small size and composition of the wood charcoal assemblages limits the potential of selecting material suitable for identification or scientific dating purposes.

Results

Charred plant remains

- 14.8.10 The fills of ditches F.33 and F.51 are rich in crop residues and provisional identifications of the cereal assemblages include possible spelt wheat (*Triticum* cf. *spelta* L.), possible emmer wheat (*Triticum* cf. *dicoccum* Schübl.), barley (*Hordeum* sp.) and oat (*Avena* sp.) (Table 29). Where preservation permitted, hulled six-row barley (*Hordeum vulgare* L.) was recorded, as well as tentative identifications of naked barley (cf. *H. vulgare* L. var. *nudum*), based on the rounded appearance of several grains and slight wrinkles on the surface of the grains. Further analysis would be required to confirm these identifications. In addition, small numbers of germinated grain and detached coleoptiles are present in the fills of ditches F.33, F.38, F.51,

and one or two large grass seeds (Poaceae >2mm) from the fill (149.1) of ditch F.51 also appear to have germinated (Table 29). The accompanying chaff assemblages are dominated by glume wheat chaff, which primarily appears to be spelt-type, although possible emmer wheat glume bases have been noted, as well as traces of free-threshing wheat (*Triticum durum* Desf./aestivum L.) rachis and barley rachis. The fills of ditch F.51 also contain awn fragments, including occasional twisted fragments that may be oat-type.

- 14.8.11 Charred plant remains occur in low concentrations from the remaining pit and the ditch features and only two samples are devoid of charred plant remains, the scorched surface deposit (178.1) associated with Enclosure 2 and the context identified as potential 'natural' (Table 29). The small quantities of cereal residues from these features also indicate the presence of possible spelt wheat, emmer/spelt wheat, hulled six-row barley and possible naked barley. The only other remains of potential economic value are charred hazelnut shell from fill (80.1) of ditch F.33. The weed/wild species assemblages consist of small numbers of seeds and include species of waste/rough and disturbed habitats (that may include cultivated ground), notably buttercup-type, small leguminous seeds (Fabaceae <2mm), small vetch/vetchlings (*Vicia/Lathyrus* sp(p), <2mm), dock (*Rumex* sp.), knotweed (Polygonaceae), goosefoot (Amaranthaceae), chamomile (*Anthemis* sp.), daisy family (Asteraceae) and grasses.

Wood charcoal

- 14.8.12 The wood charcoal assemblages consist of extremely small quantities of comminuted charcoal, with ring porous fragments recorded from fill (95.1) of ditch F.35 and occasional small round wood fragments noted from fill (80.1) of ditch F.33 only (Table 29). The scarcity of fragments >2mm means that there is insufficient material from any of the sampled deposits to provide a representative sample of the wood charcoal assemblage (i.e. the minimum required is one hundred >2mm charcoal fragments).

Other palaeoenvironmental remains

- 14.8.13 Molluscs are present in all the flots; the fills of ditch F.34 and ditches F.33, F.36 and F.38 in particular, produced comparatively large assemblages. Mollusc assemblages containing at least 100 shells are recommended as suitable for analysis (Allen 2017), therefore only the assemblage from fill (80.1) of ditch F.33 is large enough to warrant further analysis. The blind burrowing snail *Cecilioides acicula* is present in most of the flots, but is generally a minor component of the mollusc assemblages, whilst the presence of ostracods and bivalve shells indicates aquatic conditions in ditch F.38 (Table 29). In addition, occasional small vertebrate remains (including possible amphibious or fish bones) and/or fragments of fish scales are present in ditches F.33, F.36, F.38 and F.51, which also suggests damp/wet conditions associated with the ditch features.

Discussion

- 14.8.14 Crop processing residues are only present in quantity from ditches associated with Enclosure 3 and Road 2, specifically fill (80.1) of ditch F.33 and fills (124.1), (148.2) and (149.1) of ditch F.51. The cereal crops recovered from ditches F.33 and F.51 appear to be dominated by glume wheat, specifically spelt-type, although emmer wheat may also be present. Barley, oat and possibly free-threshing wheat seem to form minor components of the crop assemblages and may be contaminants of the principal (spelt) wheat crop. Conversely the charred cereal residues may be a mix of crop processing residues from different sources that were deposited into ditches F.33 and F.51. The composition of the crop-rich assemblages from ditches F.33 and F.51 are comparable with those from samples assessed from the previous evaluation

phase of works at Clerk Maxwell Road (Fryer 2021) and with crop assemblages from excavations at Vicar's Farm (Ballantyne 2001, 128-130). Overall, 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).

- 14.8.15 The wild/weed plant species associated with the charred cereal assemblages from the fills of ditches F.33 and F.51 may be derived from crop processing residues and tend to be represented by one or two seeds only, thus forming minor components of the crop assemblages. Chamomile is present in the charred plant macrofossil assemblages; although the seeds are worn in appearance further identification may confirm if these are stinking chamomile (*Anthemis cotula* L.), a species that is associated with the expansion of cultivation onto heavier soils during the Roman period in southern Britain (Jones, M. 1991). The composition of the grain, chaff and wild/weed seed assemblages affords good opportunity for reconstructing crop processing activities and arable husbandry regimes that can be examined in context with palaeoeconomic reconstructions from Vicar's Farm and the hinterlands of Roman Cambridge (e.g. Lucas 2001, Evans and Lucas 2020). Ceramic building material provisionally identified as 'kiln furniture' has also been recovered from fill (73.2) of ditch F.33 and the crop residues may be derived from activities associated with drying/parching grain (primarily spelt-type) from the later stages of crop processing (Hillman 1981, van der Veen 1989). Whilst germinated grain and detached coleoptiles are present in the crop-rich samples from ditches F.33 and F.51, these remains do not appear to be a dominant component of the grain assemblages, which suggests natural spoilage rather than deliberate germination associated with brewing activities (van der Veen 1989, 304-305). The charred plant macrofossil assemblages from ditch F.34, pit F.32 and ditches F.35 and F.36, provide some evidence for the types of crops consumed at the site during the Roman period, but there is limited scope for further economic reconstruction due to the relatively small quantities of charred crop remains. In addition, due to the small quantities of wood charcoal recovered from the features, these assemblages have no potential to provide evidence for the availability and exploitation of local woodland and/or scrub associated with the Roman settlement at Vicar's Farm.
- 14.8.16 The presence of damp ground/aquatic indicators from the fills of some of the ditches in the form of uncharred seeds of duckweed and possible celery-leaved buttercup, fragments of fish scales and an occasional ostracod from ditches F.33, F.36 and F.51, provides some scope for palaeoenvironmental reconstruction. If contemporary with the features, and not derived from reworked material, these palaeoenvironmental remains suggest the presence of standing/slow moving water in the ditch features. The frequent occurrence of seeds of uncharred elder may indicate that this waste ground/hedgerow species was growing near the ditch features during the main phase of activity of the site. The suggestion that hedge-row like vegetation may have grown in proximity to the ditches is supported by the presence of possible garlic mustard, which also tends to grow in areas of rough ground, hedgerows and shady places.

Table 29: Archaeobotanical sample assessment

Sample No.	Context	Feature No.	Context type	Group	Sample vol (L)	Flot vol (ml) Incl. roots/ excl. roots	Grain/ chaff	Wild or weed plant material	2-4mm/ >4mm charcoal from flot	>4mm charcoal from residues	Molluscs	Notes
69	74.1	34	Ditch	Enc 1	20	6/6	-/0	0	0/0	0	++	CPR: <i>Triticum</i> sp., <i>Hordeum</i> sp. (twisted) and <i>Cerealia</i> indet. grain. Molluscs: Moderate species diversity (4-6 species), incl. <i>Cecilioides acicula</i> . Other: Small vertebrate bones (-). Flot predominantly silt and uncharred degraded vegetative/root remains.
71	178.1	69	Surface (scorched)	Enc 1	8	6/6	0/0	0	-/0	0	-	WC: Comminuted charcoal. UC: <i>Sambucus</i> sp. (+). Molluscs: <i>Cecilioides acicula</i> . Other: Arthropoda (-). Flot predominantly reddish/orange sediment lumps.
10	72.1	32	Pit	Enc 3	16	3/3	-/0	0	-/0	-	-	WC: Comminuted charcoal. CPR: <i>Triticum</i> cf. <i>spelta</i> grain. UC: <i>Betula</i> sp., <i>Sambucus</i> sp., <i>Sonchus</i> sp. (+). Molluscs: Low species diversity (<4 species). Other: Arthropoda (including intact larva and woodlouse) (-). Flot predominantly sandy/silty sediment lumps.
12	80.1	33	Ditch	Enc 3	34	16/16	+++/>++	+	+/>0	++	++++	WC: Comminuted charcoal, occasional small round wood frag. CPR: Predominantly <i>Triticum</i> cf. <i>spelta</i> (incl. one germinated?), some <i>T.</i> cf. <i>dicoccum</i> and <i>Hordeum</i> (incl. hulled) grain;

												<i>Triticum</i> sp(p). glume bases (predominantly. <i>T. cf. spelta</i>); <i>Corylus avellana</i> nutshell, Poaceae <2mm, Polygonaceae, <i>Rumex</i> sp., indet. seed. UC: <i>Betula</i> sp. (+). Molluscs: Moderate species diversity (4-6 species), incl. occasional <i>Cecilioides acicula</i> . Other: Arthropoda (-); small vertebrate bones (amphibious?).
68	73.2	33	Ditch	Enc 3	16	13/13	+/-	-	++/-	++	+++	WC: Comminuted charcoal. CPR: Predominantly <i>Triticum</i> sp. (incl. <i>T. cf. spelta</i>), <i>Hordeum</i> sp. (incl. possible twisted) grain; <i>Triticum</i> spp. glume bases (incl. <i>T. spelta</i>); Poaceae <2mm, <i>Vicia/Lathyrus</i> <2mm. UC: <i>Sambucus</i> sp., small indet. seed heads; leaf buds. Molluscs: High species diversity (c.8 species), incl. occasional <i>Cecilioides acicula</i> . Other: Fish scale frags (-); small vertebrate bones (-). Flot predominantly silt and uncharred degraded vegetative/root remains.
67	95.1	35	Ditch	Enc 3	16	44/4	0/-	0	-/0	+	+	WC: Comminuted charcoal, RP frags noted. CPR: <i>Triticum</i> spp. glume bases. UC: cf. <i>Alliaria petiolata</i> , <i>Betula</i> sp., <i>Sambucus</i> sp. Molluscs: moderate species diversity (4-6 species), incl. <i>Cecilioides acicula</i> . Flot predominantly uncharred degraded vegetative/root remains.
11	79.3	36	Ditch	Road 1	20	10/8	-/-	0	-/0	-	+	WC: Comminuted charcoal. CPR: <i>Cerealia</i> indet. grain; <i>Triticum</i> sp(p). glume bases (incl. <i>T. dicoccum/spelta</i>). UC: <i>Betula</i> sp., <i>Lemna</i>

												sp., Poaceae <2mm (+). Molluscs: Low species diversity (<4 species). Other: Arthropoda (-). Flot predominantly silty sediment lumps.
70	79.3	36	Ditch	Road 1	16	1/1	0/-	-	0/0	0	++	CPR: <i>Triticum</i> cf. <i>spelta</i> glume bases, cf. <i>Hordeum</i> rachis; <i>Anthemis</i> sp. UC: <i>Betula</i> sp., <i>Lemna</i> sp. (+); moss indet. (-). Molluscs: Moderate species diversity (4-6 species), incl. <i>Cecilioides acicula</i> . Other: Fish scale frags (-). Flot predominantly sediment lumps.
13	105.1	36	Ditch	Road 1	20	5/5	-/-	0	-/0	0	+++	WC: Comminuted charcoal. CPR: <i>Triticum</i> sp(p). grain (incl. <i>T. dicoccum/spelta</i>), <i>Hordeum</i> sp. grain; <i>Triticum</i> sp. glume base. UC: <i>Betula</i> sp. (+). Molluscs: Low species diversity (<4 species). Other: Arthropoda (-).
36	138.1	38	Ditch	Road 1	40	13/13	+/+	-	-/0	0	+++	WC: Comminuted charcoal. CPR: Predominantly <i>Triticum</i> spp. (incl. <i>T. cf. spelta</i> and <i>T. cf. dicoccum</i>), <i>Hordeum</i> (incl. hulled and 1x <i>H. cf. nudum</i>) grain, some cereal grains germinated, occasional detached coleoptile; <i>Triticum dicoccum</i> and <i>T. cf. spelta</i> glume bases; Poaceae <2mm, <i>Rumex</i> sp. UC: <i>Betula</i> sp., <i>Ranunculus</i> sp., <i>Rumex</i> sp., <i>Sambucus</i> sp. (+). Molluscs: Moderate species diversity (4-6 species), including occasional <i>Cecilioides acicula</i> , bivalve sp. and ostracods. Flot predominantly sandy/silty sediment lumps.

37	148.2	51	Ditch	Road 2	20	6/6	+++/>+++	-	+/>0	-	+	WC: Comminuted charcoal. CPR: Predominantly <i>Triticum</i> cf. <i>spelta</i> grain, some <i>T. dicoccum/spelta</i> and <i>Hordeum</i> sp. (incl. hulled) grains; <i>Triticum</i> sp(p). glume bases (mostly <i>T. spelta</i>), occasional awn frags; <i>Anthemis</i> sp., Poaceae <2mm, <i>Rumex</i> sp., indet. seed. UC: <i>Lemna</i> sp., Polygonaceae, <i>Ranunculus</i> cf. <i>scleratus</i> , <i>Sambucus</i> sp. (++) degraded vegetative material. Molluscs: low species diversity (<4 species). Other: Small vertebrate bones (-).
38	124.2	51	Ditch	Road 2	20	50/50	++++/>++++	-	+/>-	-	-	WC: Comminuted charcoal, RP small round wood fragment. CPR: Predominantly <i>Triticum</i> spp. (incl. <i>T. cf. spelta</i> , <i>T. dicoccum/spelta</i>) grain, <i>Hordeum</i> sp(p). (incl. hulled and <i>H. cf. nudum</i>) and <i>Avena</i> sp. grain, some cereal grains germinated, occasional detached coleoptile; <i>Triticum</i> spp. glume bases (incl. <i>T. spelta</i>), <i>Hordeum</i> sp. rachis, awns; <i>Anthemis</i> sp., Poaceae <2mm and >2mm, Polygonaceae, small leguminous seed, cf. <i>Ranunculus</i> sp.. UC: <i>Sambucus</i> sp. (++) Molluscs: low species diversity (<4 species), incl. occasional <i>Cecilioides acicula</i> . Other: Fish scale frags (-); small vertebrate bones (-).
39	149.1	51	Ditch	Road 2	20	38/38	++++/>+++++	+++	++/>-	-	-	WC: Comminuted charcoal. CPR: Predominantly <i>Triticum</i> cf. <i>spelta</i> grain, with some <i>T. cf. aestivum/durum</i> , <i>Hordeum</i> sp(p).

												(incl. <i>H. cf. vulgare</i> and hulled grains) and <i>Avena</i> sp. grain, some cereal grains germinated, occasional detached coleoptile; <i>Triticum</i> spp. glume bases (incl. <i>T. spelta</i>), occasional <i>Hordeum</i> sp. and <i>T. cf. aestivum/durum</i> rachis, serrated awns, twisted awns; Asteraceae, Amaranthaceae, Poaceae <2mm and >2mm (some germinated), Polygonaceae, <i>Rumex</i> sp. UC: <i>Lemna</i> sp. (+). Molluscs: Low species diversity (<4 species), incl. occasional <i>Cecilioides acicula</i> . Other: Arthropoda (-).
35	82.1	37	Deposit		8	8/8	-/0	0	0/0	0	-	WC: Comminuted charcoal. CPR: <i>Triticum</i> sp. grain. UC: <i>Betula</i> sp. (+). Molluscs: Low species diversity (<4 species). Other: Arthropoda (-). Flot predominantly orange/red sediment lumps.
23	Natural?	-	Natural?	-	10	4/4	0/0	0	-/0	0	-	WC: Comminuted charcoal. CPR: Herbaceous root/tuber >2mm x1. UC: <i>Betula</i> sp. (+). Molluscs: Low species diversity (<4 species). Other: Arthropoda (-). Flot predominantly sandy/silty sediment lumps.

Key - = < 10 items, + = 10-29 items, ++ = 30-49 items, +++ = 50-99 items, ++++ = 100 - 499 items, +++++ = > 500 items. CPR = charred plant remains, WC = wood charcoal, WPR? = possible waterlogged plant remains, DP = diffuse porous charcoal, RP = ring porous charcoal, UC = uncharred



Figure 1. Site location

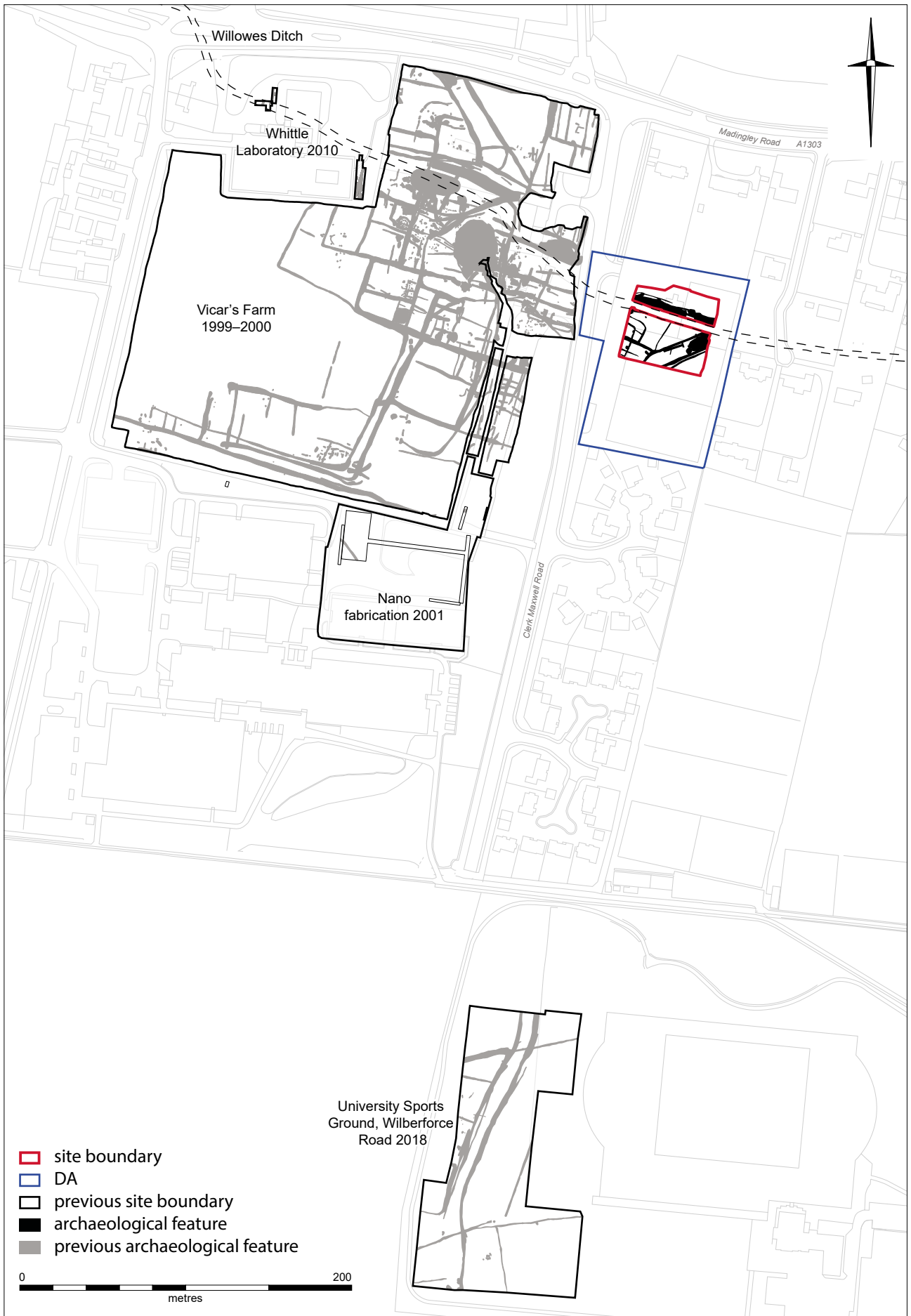


Figure 2. Site location in relation to Vicar's Farm, Willowes Ditch and Wilberforce Road

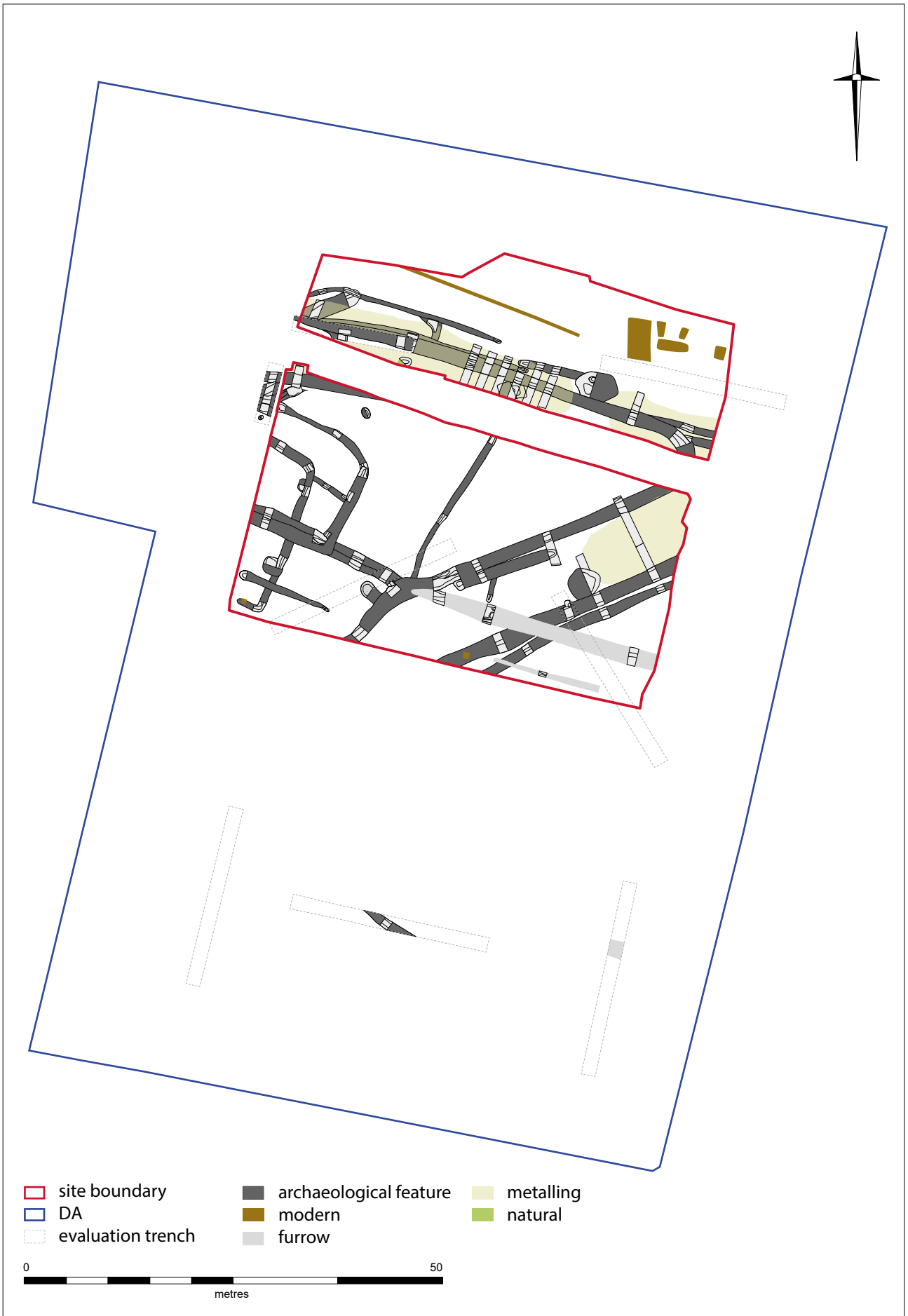


Figure 3. Site plan

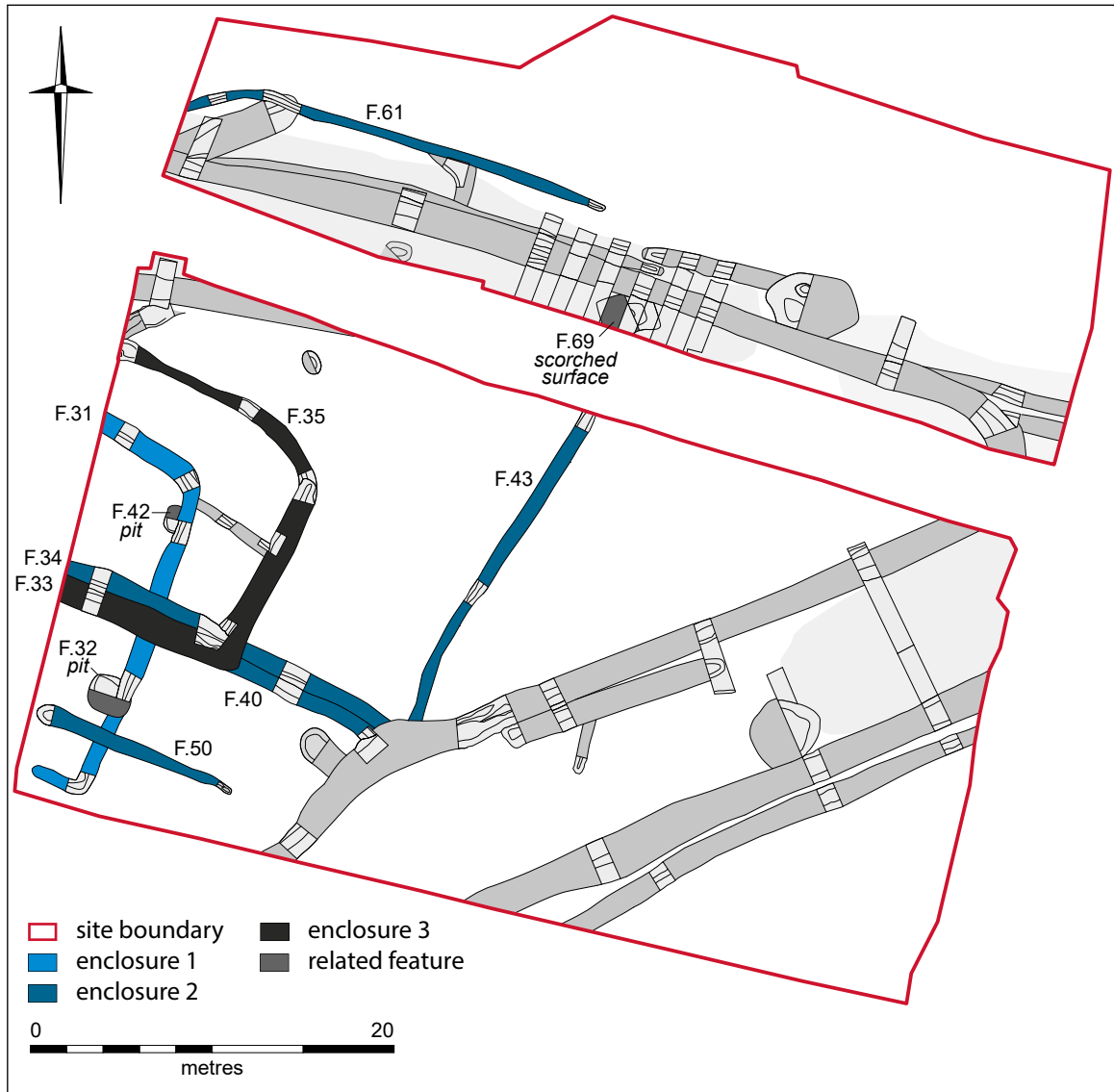


Figure 4. Plan and photo of enclosures and related settlement features

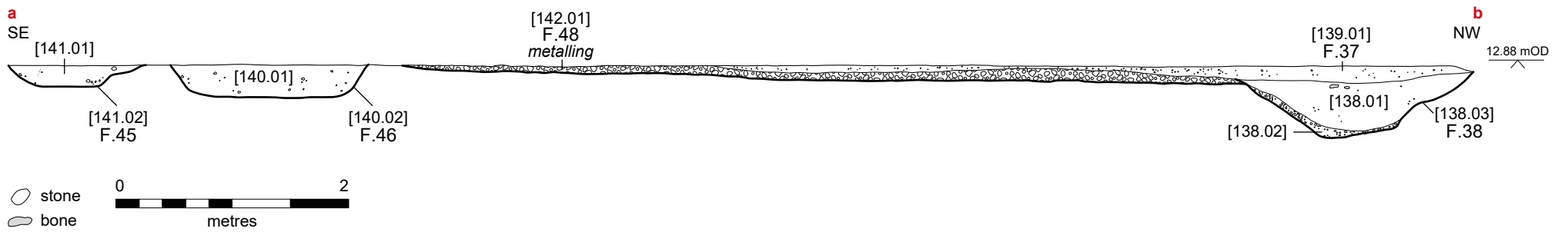
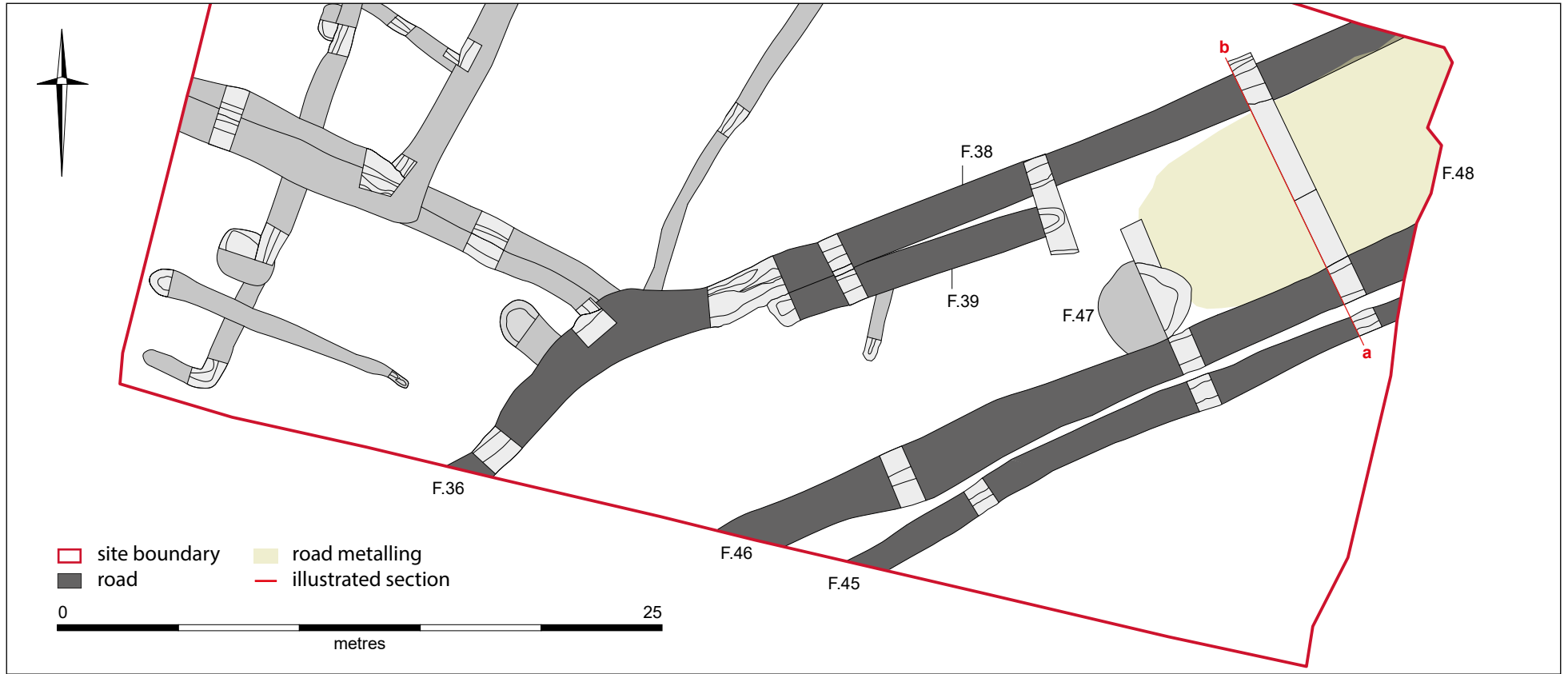
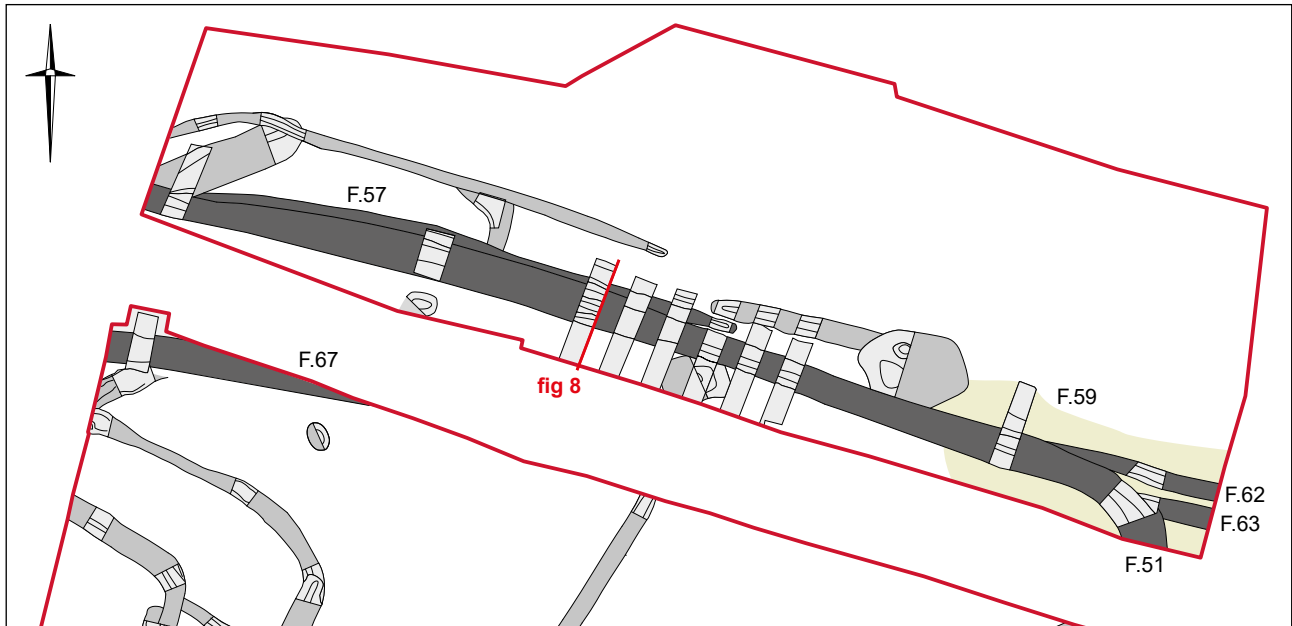


Figure 5. Road plan and section

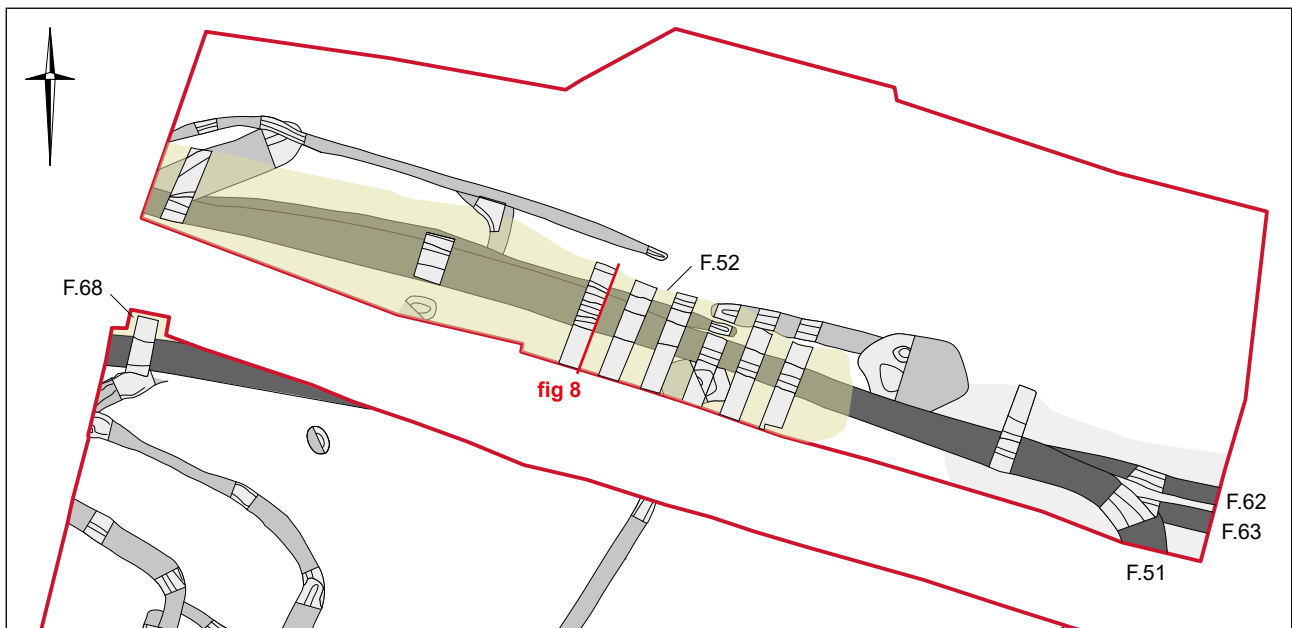


Figure 6. Road from the north-east

phase 1



phase 2



- site boundary
- boundary
- boundary metalling
- illustrated section

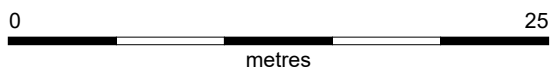


Figure 7. Boundary phases 1 and 2

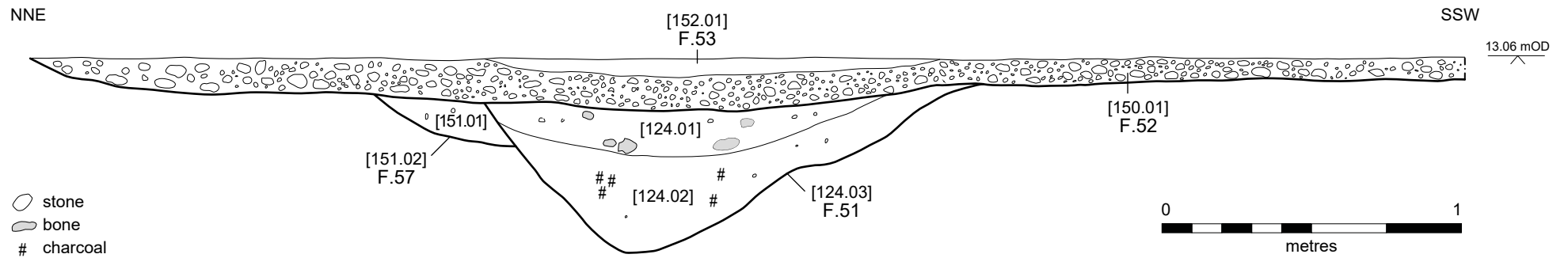


Figure 8. Boundary section and photos: from the west (left) and the east (right)

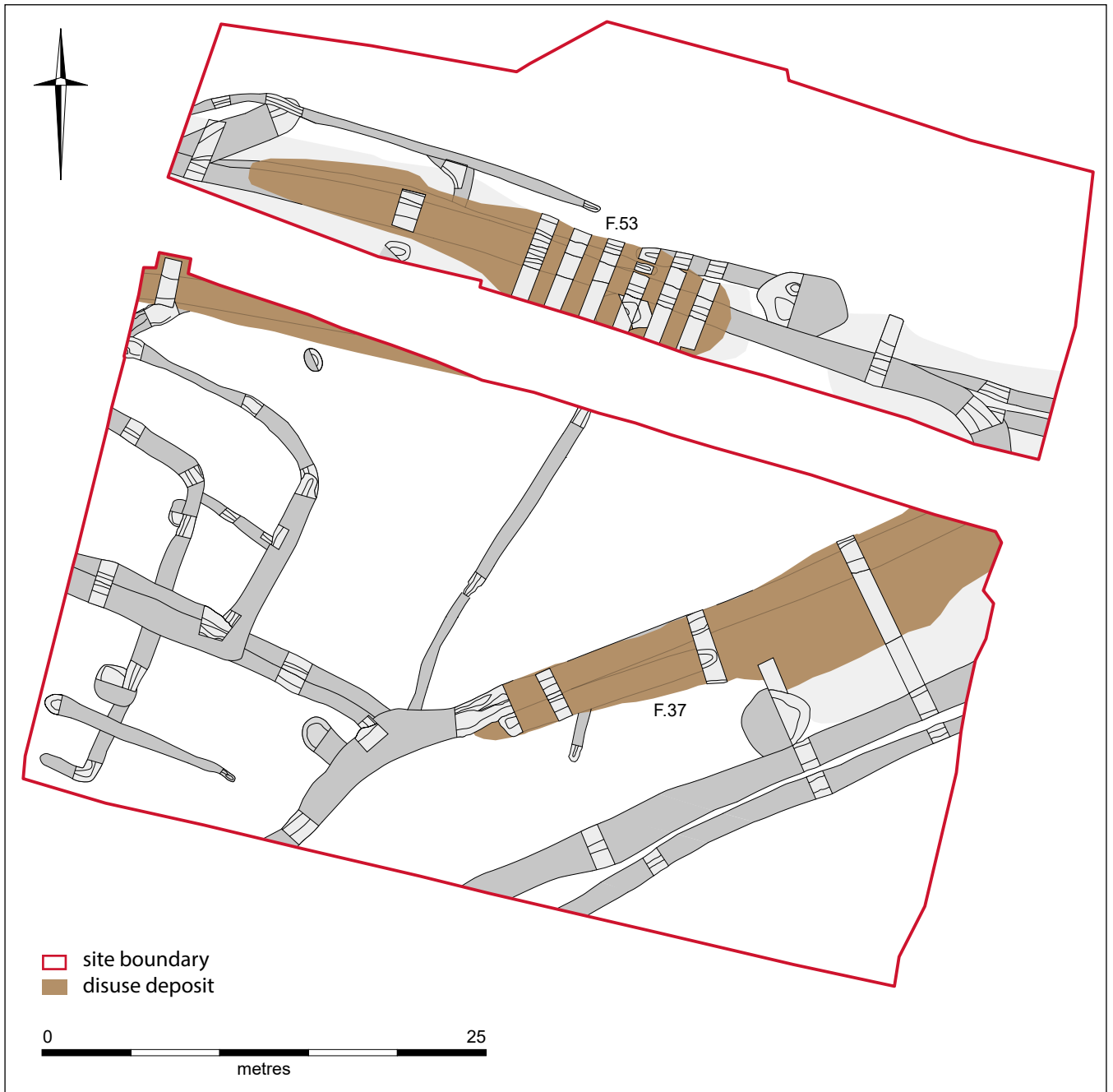


Figure 9. Disuse deposits



Figure 10. Scorched Surface F.69 from the south-east