Excavation of part of a Roman farmstead on land to the rear of Avon Mills Malmesbury, Wiltshire October – December 2013

Wiltshire Council Planning Ref: 12/00165

Report No.: 18/29

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Illustrator: Joanne Clawley

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Site Code: MAM13
NGR: ST 93665 86873

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1	12/03/2018	Claire Finn	Rob Atkins	Mark Holmes	Draft for client review
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OASIS REPORT FORM

PROJECT DETAILS	**OASIS No: molanort1 - 310643**	
Project name	Excavation of part of a Roman farmstead on land to the rear of Avon Mills, Malmesbury, Wiltshire	
Short description (250 words maximum)	Between October and December 2013, Northamptonshire Archaeology, now trading as MOLA, carried out an archaeological excavation on land to the rear of Avon Mills, Malmesbury. The principal archaeological remains comprised part of a late Iron Age to 2nd century AD Roman farmstead. Activity then lessened until its demise in the late Roman period. Two post-built structures as well as several irregular and linear enclosures were excavated producing moderately sized but well preserved pottery and animal bone assemblages as well as occasional metal finds such as brooches, coins and an iron ard point. Later features included a single medieval pit and post-medieval ditches.	
Project type (eg DBA, evaluation etc)	Excavation	
Site status (none, NT, SAM etc)	None	
Previous work (SMR numbers etc)	Cultural Heritage Assessment (Prospect Archaeology 2012), Magnetometer Survey (Sabin and Donaldson 2011) and Trial Trench Evaluation (Upson-Smith and Walker 2011)	
Current Land use	Arable	
Future work (yes, no, unknown)	None	
Monument type/ period	1st – 2nd century AD Roman settlement	
Significant finds (artefact type and period)	Enclosures, post-built structures, pottery, animal bone, coins, brooches, iron ard point	
PROJECT LOCATION		
County	Wiltshire	
Site address (including postcode)	Land to the rear of Avon Mills, Malmesbury, Wiltshire	
Study area (sq.m or ha)	2.34ha	
OS Easting & Northing (use grid sq. letter code)	ST 93665 86873	
Height OD	Approx. 78-80m aOD	
PROJECT CREATORS		
Organisation	MOLA	
Project brief originator	Nansi Rosenberg (Prospect Archaeology)	
Project Design originator	Nansi Rosenberg (Prospect Archaeology)	
Director/Supervisor	Chris Chinnock (MOLA)	
Project Manager	Ian Meadows (MOLA)	
Sponsor or funding body	Prospect Archaeology Ltd, Simons Developments Ltd	
PROJECT DATE		
Start date/End date	01/10/2013 - 16/12/2013	
ARCHIVES	**Location (Accession no.)**	**Content (eg pottery, animal bone etc)**
Physical	Wiltshire Archaeological and Natural History Museum (Currently not accepting archives). Currently held at MOLA Northampton offices: MAM13	Pottery animal bone and other finds
Paper		Site files
Digital		Mapinfo plans, Word report
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report (MOLA report)	
Title	Excavation of part of a Roman farmstead on land to the rear of Avon Mills, Malmesbury, Wiltshire	
Serial title & volume	18/29	
Author(s)	Chris Chinnock	
Page numbers		
Date	12.03.2018	

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Abstract

Between October and December 2013, Northamptonshire Archaeology, now trading as MOLA, carried out an archaeological excavation on land to the rear of Avon Mills, Malmesbury. The principal archaeological remains comprised part of a late Iron Age to 2nd century AD Roman farmstead. Activity then lessened until its demise in the late Roman period. Two post-built structures as well as several irregular and linear enclosures were excavated producing moderately sized but well preserved pottery and animal bone assemblages as well as occasional metal finds such as brooches, coins and an iron ard point. Later features included a single medieval pit and post-medieval ditches.

1 INTRODUCTION

Prospect Archaeology, on behalf of their client Simons Development and Waitrose Ltd commissioned Northamptonshire Archaeology, now trading as MOLA, to undertake archaeological mitigation work alongside an archaeological watching brief on land to the rear of Avon Mills, Malmesbury, Wiltshire (NGR ST 93665 86873). This followed a program of geophysical survey (Sabin and Donaldson 2011) and trial trench evaluation (Upson-Smith and Walker 2013).

In accordance with paragraph 141 of the National Planning Policy Framework (DCLG 2012), the County Archaeologist for Wiltshire Council required that the impact of development on heritage assets present on the site be mitigated through a programme of archaeological investigation and recording, leading to analysis and publication of the results. The scope of these works were set out in a written scheme of investigation prepared by Prospect Archaeology (2013).

2 AIMS AND OBJECTIVES

The brief for mitigation works was produced in 2013 (Prospect Archaeology), the purpose of the work was to determine and understand the nature, function and character of the archaeological site in its cultural and environmental setting.

The general aims of the investigation were to:

- *Establish the date, nature and extent of the activity or occupation on the development site;*
- *Recover artefacts to assist in the development of type series within the region;*
- *Recover palaeo-environmental remains to determine past local environmental conditions.*

Specific research objectives have been drawn from national and regional research frameworks documents in order to enhance our understanding of both the Iron Age and Roman activity identified within the development area.

Relevant research aims outlined in the *South West Archaeological Research Assessment and Research Agenda* (Webster 2007) include:

- ***Research Aim 29: Improve our understanding of non-villa Roman rural settlement.***

  Whilst work in the past has concentrated on villa buildings, developer funded work has made considerable advances in the study of non-villa rural settlement in certain parts of the region, such as the M4/M5 corridors, the Upper Thames valley and the outskirts of the Bristol conurbation. Elsewhere the record is very patchy and there has been little study of the environmental/economic data such as bones and seeds which ought to provide information on the agricultural base in different parts of the region.

- ***Research Aim 40: Improve our understanding of agricultural intensification and diversification in later prehistory.***

  There is a need to better understand the chronology and regionality of crop diversification and intensification of production, which appears to take place from around the Middle Bronze Age onwards. Well-dated assemblages from a range of settlement contexts are required to examine introductions of new crops and associated wild species.

- ***Research Aim 41: Assess the impact of the Roman Empire on farming.***

  We still do not fully understand the effects of "Romanisation" on plant and animal use and cultivation methods or whether regional differences can be attributed to this or other factors.

The *South West Archaeological Research Framework (SWARF) Draft Research Strategy 2012-2017* (Grove and Croft 2012) identified further themes that could be investigated during the excavation of this site, specifically:

- ***Theme A – Settlement Sites & landscape.***

  Area excavation following geophysical survey will give us the opportunity to investigate the correlation or otherwise between the results of the geophysical survey and the excavated remains. It was noted in the evaluation that there did not in all cases appear to be a direct correlation between the two and understanding this may allow more accurate interpretation of geophysical anomalies in the future.

- ***Theme C – Environment & Dating.***

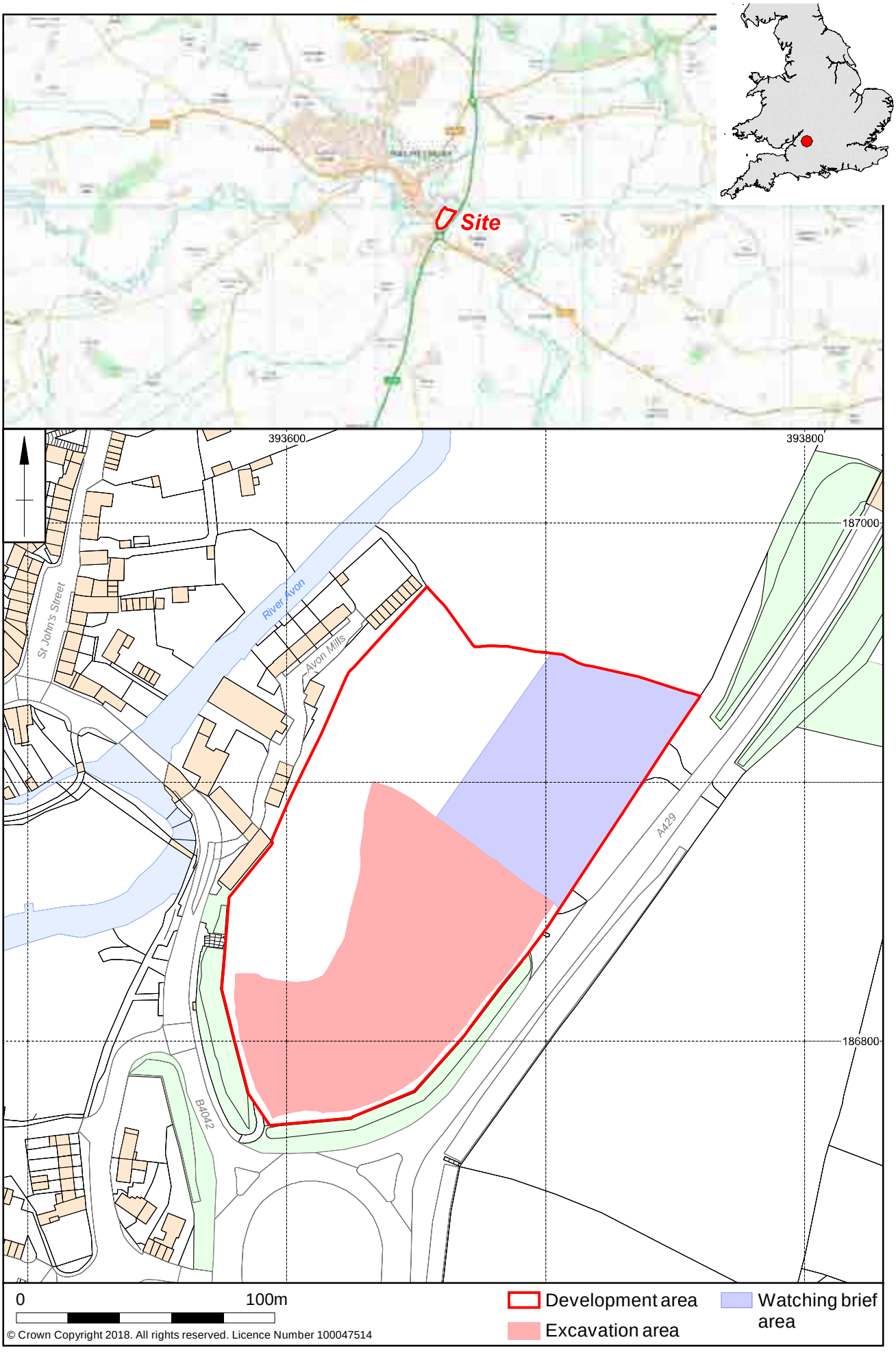
  Although there appeared to be poor potential for environmental sampling on the site, the animal bone was well preserved and provides an opportunity to investigate how much of the local population's diet came from farmed rather than wild animals.

- ***Theme D – Social identity and change.***

  The date of origin of this settlement places it at the very start of the Roman period, and it therefore offers an opportunity to understand the impact of the arrival of the Roman army on the local population.

- ***Theme E – Economies and subsistence, trade, agriculture, transport and communication.***

  Was this settlement providing only for itself or was there a surplus of food being farmed to feed a local urban population?



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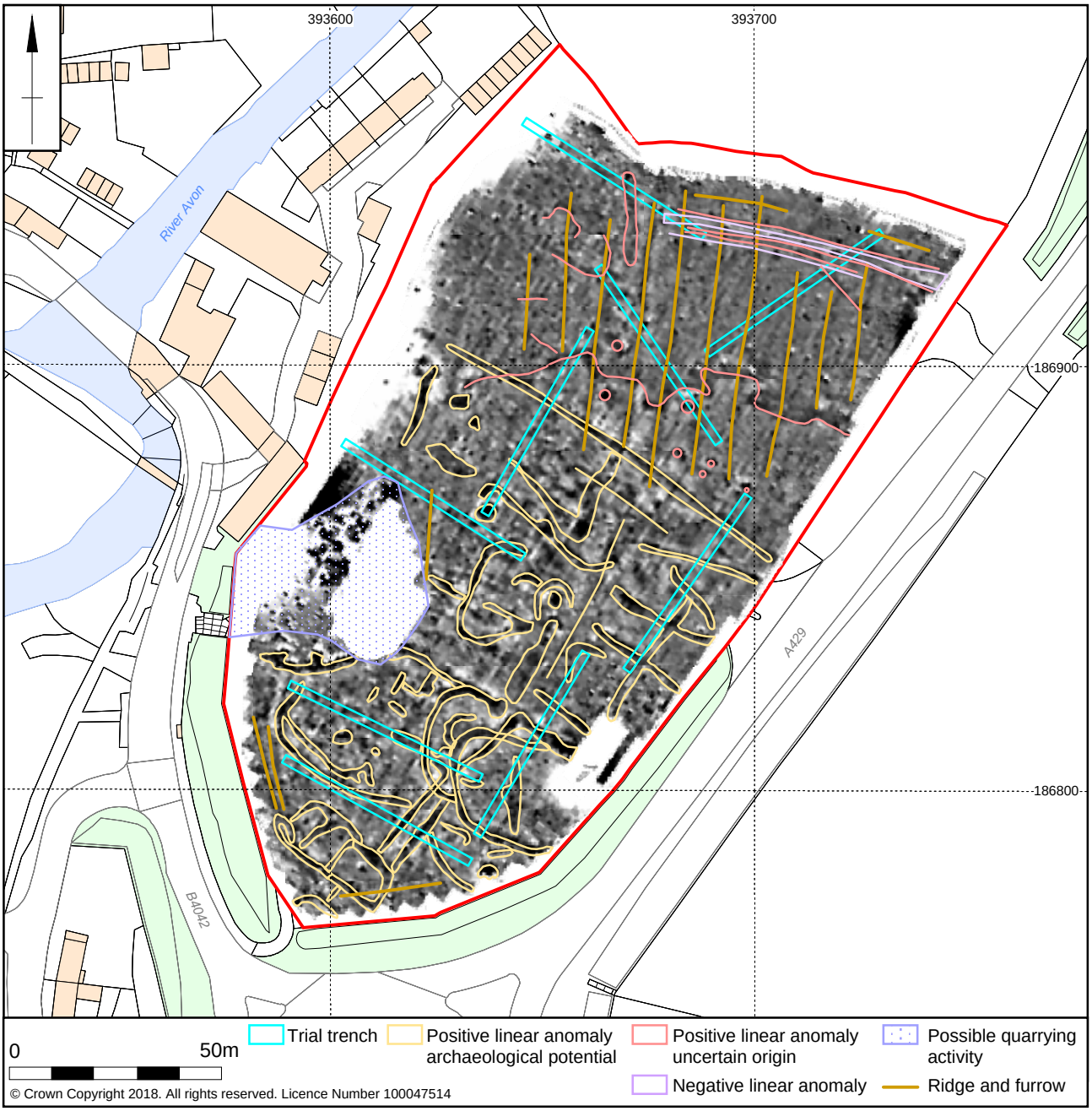
Site location and excavation area Fig 1



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Excavation area showing geophysical data and interpretation (Sabin and Donaldson 2011)

Fig 2

3 BACKGROUND

3.1 Location and topography

The site comprises a single arable field, approximately 2.34ha, on the southern side of Malmesbury, centred at NGR ST 937 869 (Fig 1). It is bounded to the south-east by the A429, to the south by the B4042, on the north-west by Avon Mills and to the north by fields. It occupies part of a meander in the River Avon. The excavation area is generally flat with slight undulations; it lies between 78m and 80m above Ordnance Datum. A large hollow immediately behind Avon Mills, partly occupied by small trees and shrubs, may represent an area of limestone quarrying and the ground level drops sharply from the excavation area (Figs 2 and 3). The northern part of the field slopes gently toward the north.

Hollow, west of the excavation area, looking north Fig 3

3.2 **Geology** by Steve Critchley

The site lies on flat bedded rocks belonging to the middle Jurassic Great Oolite Group, comprising the Forest Marble and Cornbrash Formations overlain by the Kellaways Formation of the succeeding Ancholme Group. The Kellaways Formation is represented here by a restricted thickness of the Kellaways Clay Member which was observed in excavated exposure to comprise sandy silty clays weathering to a pale to dark brown sticky clays. The latter occupy the south eastern portion of the site and are underlain by thin limestones belonging to the Cornbrash Formation outcropping in the central portion of the site.

The Cornbrash comprised weathered pale yellow to brownish rubbly, shelly, slightly oolitic limestones with some clay partings. The underlying Forest Marble Formation comprised a thin impersistent bed of calcareous sandy mudstone underlain by a thick bed of competent pale yellow to greyish coarse bioclastic ooidal limestone, exposed over the remainder of the site. The transitions between each of these Formations are generally sharp and non-sequential. The Cornbrash was also acting as a minor confined aquifer sandwiched between the clays or mudstones of the Kellaways and

the underlying Forest Marble beds. The Forest Marble appeared to have been quarried at some time thereby accentuating the natural slope on the north-west portion of the site and the unbarring of the rock prior to quarrying has possibly removed some of the upper mudstone on the remainder.

All had been affected to some degree by periglacial ground ice processes during the tundra climate that existed over much of central and southern England during the Devensian Glaciation. The main periglacial effects had been to cryoturbate and thermocrack the Cornbrash/Kellaways Clay whilst possible larger thermal contraction features, now filled with silty stoney clays, were noted within the Forest Marble rockhead. There had been varying levels of decalcification of some areas and perhaps the development in the mid-point of the site, of one or more Thermokarst depressions now represented by a clay filled hollows in the Cornbrash.

In the northern half of the development area an irregular linear anomaly was identified in the geophysical survey as the possible edge to an area of quarry (Sabin and Donaldson 2011). During the subsequent mitigation works, the northern area was subject to a watching brief, which indentified the anomaly as a geological variation comprising an irregular band of mid yellow sandy clay loam overlying the cornbrash substrate observed throughout the rest of the area (Fig 4). Evidence for ridge and furrow cultivation can be seen to overlie this anomaly in the geophysical data.

Geological variation observed during watching brief, looking north-west Fig 4

3.3 Historical and archaeological background

Malmesbury stands on a steep hill and is almost entirely surrounded by the confluence of the Sherston and Tetbury branches of the Bristol Avon. The town occupies a naturally defensive position which has made it an obvious and popular area for settlement, perhaps continuously from the Iron Age.

A detailed account of the designated heritage assets and further discussion of Malmesbury throughout the later medieval and post-medieval periods can be found in the cultural heritage assessment undertaken by Prospect Archaeology (2012).

The early evidence for settlement activity at Malmesbury is sparse. The town has remained largely unchanged for many centuries and intrusive archaeological work has been limited. The earliest evidence for settlement on the Malmesbury promontory comes from the small worked flint assemblages found during excavations around the town wall at Nun's Walk (Longman 2006) and Holloway (Collard and Havard 2011). Further unprovenanced flint implements exist in the Athelstan Museum which may have been found in or near the town. It is likely that there was Neolithic and Bronze Age activity in the area though no specific area of occupation has yet been identified.

Though modern Malmesbury is believed to have begun with the arrival of the religious teacher Maildulph in the late 7th century, a reference in the 14th century *Eulogie of Histories* provides a possible insight into the pre-Roman occupation of the promontory (WCAS 2004). "[Maildulph] came to rest under the castle of [Caer] Bladon, called by the Saxons Ingleburne, which had been built by a British King … in the year 642".

If the reference to *Caer Bladon* is to be believed then the indication is that a pre-Roman, British, defended settlement or hillfort existed on the Malmesbury promontory. Recent archaeological work within the town has identified limited evidence for early Iron Age occupation. Archaeological investigation along Nun's Walk identified Iron Age defences, further suggesting the presence of a defended settlement here (Longman 2006). Further work by Cotswold Archaeology identified additional ramparts and stone revetments, which dated to the Iron Age (Collard and Havard 2011). There is mounting evidence for an early univallate hillfort to which more complex defences were added around a possible entrance in the area that would become the medieval East Gate. Additionally, two Iron Age coins were reportedly found in the town though the exact find spots are unknown, and two possible Iron Age burials were discovered during remodelling of the cellar at the Abbey Tea Rooms.

Prior to the excavation of the land to the rear of Avon Mills, evidence for the Roman occupation of Malmesbury was limited. It was thought possible that the Saxon and medieval town had largely eradicated or hidden Roman activity on the Malmesbury promontory. However a reasonable body of evidence exists to suggest that some form of Roman activity had taken place within the town. Scattered finds of pottery, coins, loom weights and even a possible building are recorded in the Historic Environment Record (Prospect Archaeology 2012). Two brooch fragments were found within the development area which, prior to excavation, had suggested further Roman activity away from the promontory.

A geophysical survey (Sabin and Donaldson 2011; Fig 2) was conducted by Archaeological Surveys and a trial trench evaluation was undertaken by Northamptonshire Archaeology, now trading as MOLA (Upson-Smith and Walker 2011). A series of intercutting enclosures and other ditches were located in the southern and central parts of the site, their form suggesting a late Iron Age or Romano-British settlement (Prospect Archaeology 2012).

The 14th century *Eulogie* indicates that when Maildulph arrived he was given permission to settle on the promontory by the small garrison (presumably Saxon) stationed there. The account of Maildulph's arrival suggests that the Malmesbury promontory was only sparsely populated, in comparison to the description of the earlier British city. This account also relates the settlement at Malmesbury, then known as Ingleburne, to a royal centre at *Caer Dur* (the King's residence), modern day Brokenborough. Jeremy Haslam notes that this relationship between Iron Age hillfort and an early *villa regalis* can be compared with similar relationships at Amesbury, Bedwyn, Bradford, Warminster and Wilton (Haslam 1984).

It is known that '*Ingleburne'* had become a major Saxon centre by the 9th century. Malmesbury was sacked by the Danes in 878 AD after which it was fortified as a *burh*

as recorded in the *Burghal Hidage*. The layout of the medieval town as we see it today owes much to its reorganisation by King Alfred during this period. Increasing Danish threats prompted further remodelling of the defences in the 10th and 11th centuries, with the addition of a substantial bank and ditch (Collard and Havard 2011). This re-occupation of ancient defensive sites in the Anglo-Saxon period is well documented and has been described at several other hillforts in Wiltshire.

4 EXCAVATION METHODOLOGY

The mitigation strategy was designed by Melanie Pomeroy-Kellinger, Wiltshire Council's County Archaeologist, in consultation with Nancy Rosenberg (Prospect Archaeology) acting on behalf of their client, Simons Development Ltd.

A programme of open excavation was undertaken by MOLA (then Northamptonshire Archaeology) as specified by the County Archaeologist and outlined in the written scheme of investigation (Prospect 2013). The works were executed in a staged, although continuous, scheme comprising an archaeological watching brief in the northern area and excavation in the southern half of the field. Following the completion of the site compound area, work began on stripping the southern area.

The first phase comprised the excavation of a roughly rectangular area measuring *c*1.0 ha in the northern half of the field. This phase comprised an archaeological watching brief, which involved the stripping of topsoil and subsoil under archaeological supervision to determine whether any archaeological remains were present in the areas where the site compound and spoils heaps were to be located. This followed geophysical and trial trench evaluation which indicated a lack of settlement activity in this half of the field. No archaeological features were identified during this phase of works (see section 5.6).

Work on the second main area of excavation, *c*0.9ha, began as soon as the compound was established (Fig 1). Where poor weather/ground conditions prevented work in the southern area, work then continued on the more accessible northern area.

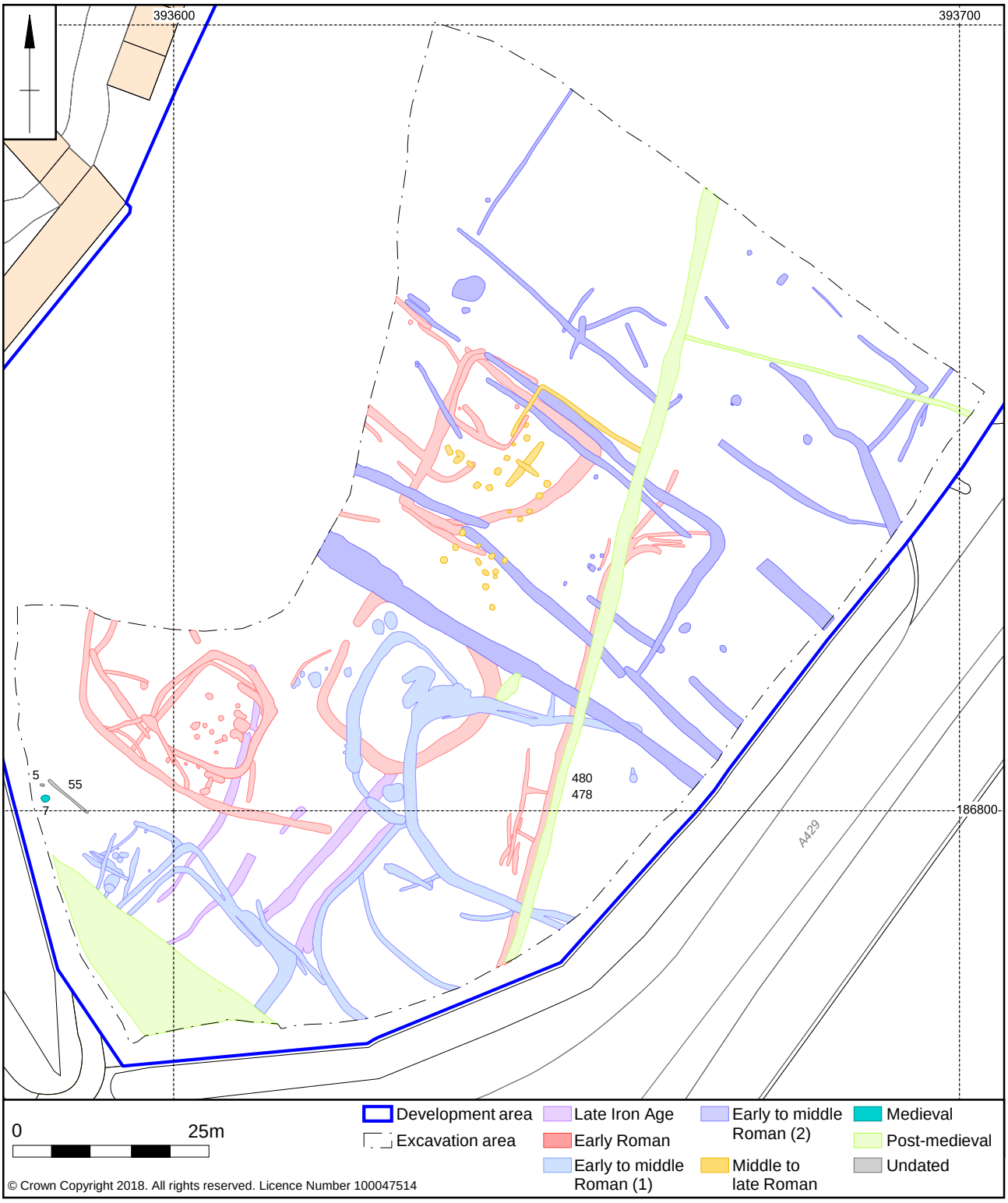
Removal of the topsoil and other overburden was carried out by tracked 360^{o} mechanical excavator, fitted with a toothless ditching bucket, operating under constant archaeological supervision. Excavation proceeded to the natural substrate or the first significant archaeological horizon.

The excavation areas were measured in periodically throughout the excavation, and tied in to the Ordnance Survey data using Leica Viva System 1200 dGPS survey equipment using SMARTNET real-time corrections, operating to a 3D tolerance of ± 0.05m. The spoil heaps and excavated areas were scanned with a metal detector by an experienced operator to ensure maximum finds retrieval.

All archaeological deposits encountered during the course of the excavation were fully recorded, following standard MOLA procedures (then standard Northamptonshire Archaeology procedures) (MOLA 2014). All deposits were given a separate context number. They were described on *pro-forma* context sheets to include details of the context, its relationships and interpretation. A full photographic record comprising digital images was maintained. The field data from the evaluation has been compiled into a site archive with appropriate cross-referencing.

All works were carried out in accordance with the Chartered Institute for Archaeologists (then Institute for Archaeologists) *Code of Conduct* (2010b; revised in 2014b), *Standard and Guidance for Archaeological Excavation* (2010a; revised in 2014a) and *Standard and guidance for archaeological watching brief* (2010c; revised in 2014c). All works conformed to English Heritage procedural documents

Management of Archaeological Projects 2nd edition (1991) and *Management of Research projects in the Historic Environment* (2006), and with their updated form under Historic England (EH 2006; revised as HE 2015).



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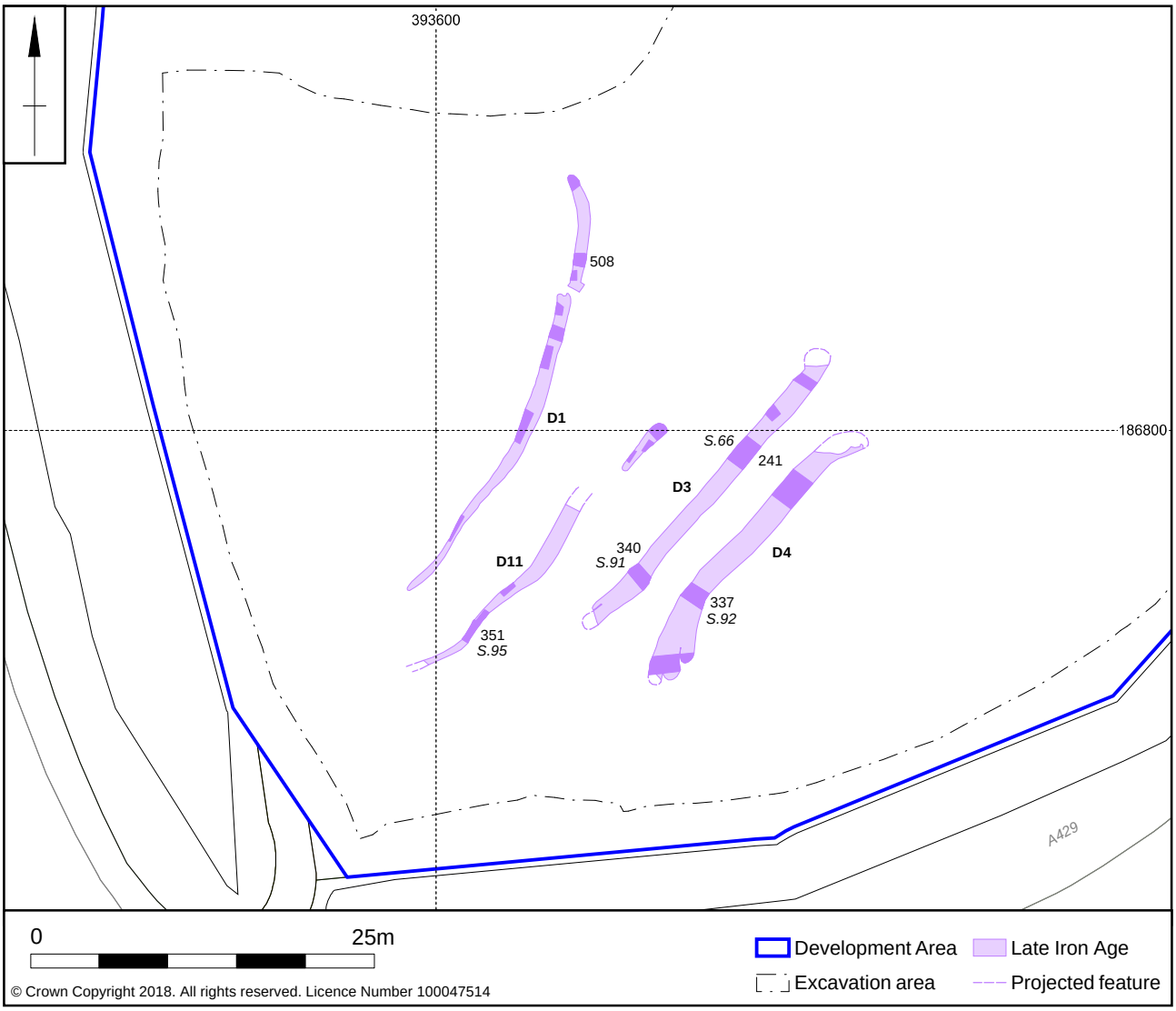
All features plan Fig 5



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Period 1.1- Late Iron Age Fig 6

5 THE EXCAVATED EVIDENCE

5.1 Summary of site chronology

The archaeological remains discovered at Avon Mills largely comprised enclosure and boundary ditches dated from the late Iron Age to the late Roman period. The artefactual material recovered from the site suggests contemporary domestic occupation had existed nearby, though the archaeological remains within the excavation area appeared to be limited to evidence for agricultural activity alone. These features have been grouped into four broad periods.

- Period 1 - Iron Age and Roman agricultural activity

The Iron Age and Roman period has been further sub-divided into five phases of activity based on the stratigraphical relationships of the archaeological remains supplemented by the chronology indicated by the ceramic assemblage. A number of the ditches and enclosures identified within the excavation area showed multiple iterations of expansion, design or development. In each case, multiple phases of the same feature have been discussed together under the broad divisions listed below.

- 1.1 - Late Iron Age (1st century BC to mid 1st century AD)
- 1.2 - Early Roman (mid 1st to mid 2nd centuries AD)
- 1.3 - Early to middle Roman (2nd to 3rd centuries AD)
- 1.4 - Early to middle Roman (2nd to 3rd centuries AD)
- 1.5 - Middle to late Roman (2nd to 4th centuries AD)

Further archaeological features dating to after the Roman period were encountered on the site and have been covered under the following sections:

- Period 2 - Possible Saxon and medieval evidence
- Period 3 - Post-medieval field system
- Period 4 - Undated features

5.2 Period 1 - Late Iron Age and Roman agricultural activity

Period 1.1 - Late Iron Age (1st century BC to mid 1st century AD)

In the south-western half of the excavation area a small number of linear features were present which contained small amounts of Iron Age pottery and were, stratigraphically, the earliest features on site (Fig 6). This phase of activity was dominated by two parallel ditches (D3 and D4), aligned north-east to south-west, close to the southern edge of the site. These have been interpreted as part of a possible droveway.

Ditch D3 was cut into the yellow-brown sandy clay loam substrate that dominated the central and southern parts of the excavation area. The profile of the ditch remained consistent throughout its length with wide, splayed upper edges, steep edged U-shaped profile and flat base (Figs 10: Section 66). The ditch was generally between 1.35 – 1.50m wide though slightly narrower toward its south-western end. The depth of the ditch varied between 0.46 – 0.68m deep. This consistency in the profile suggests that the ditch was well maintained during its period of use. The excavated sections indicate that once the ditch had almost completely in-filled there was at least one re-cut for a much smaller, 0.69m wide and 0.33m deep, ditch with a U-shaped profile (Figs 10: Section 91).

The fills of the ditch were typically comprised of mid grey-brown silty clay overlain by mid yellow to mid brown silty clays with poorly sorted sub-angular limestone

fragments present throughout. Pottery recovered from sections excavated through this ditch has been dated to the late Iron Age period.

Levels taken from the base of the excavated sections are broadly similar but did not suggest any directional trend. The large size and steep profile of the ditch suggest that the primary function of the feature was to contain/direct livestock and/or to act as a boundary marker. Pottery recovered from the fill of this ditch has largely been dated to the late Iron Age to mid 1st century AD, though some pottery recovered from the upper fills may date slightly later.

Ditch D3 [241] looking south-west Fig 7

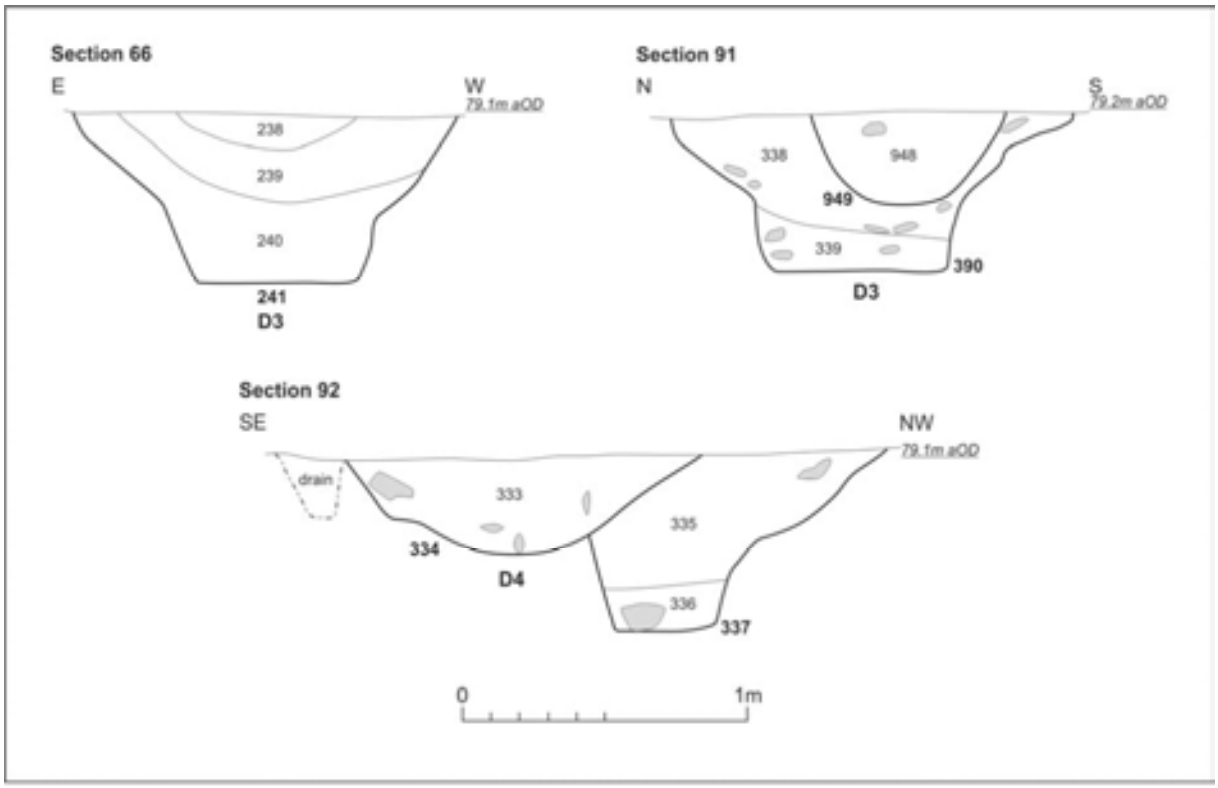
Ditch D4 lay parallel and immediately to the south-east of D3 (Fig 8). At the southern end the ditch curved slightly to the south before terminating (Fig 6). The line of the ditch was partially re-used and re-cut as part of Roman period enclosure annexes (see Period 1.3).

Ditch D4 [337] with later Roman ditch [77], looking south-west Fig 8

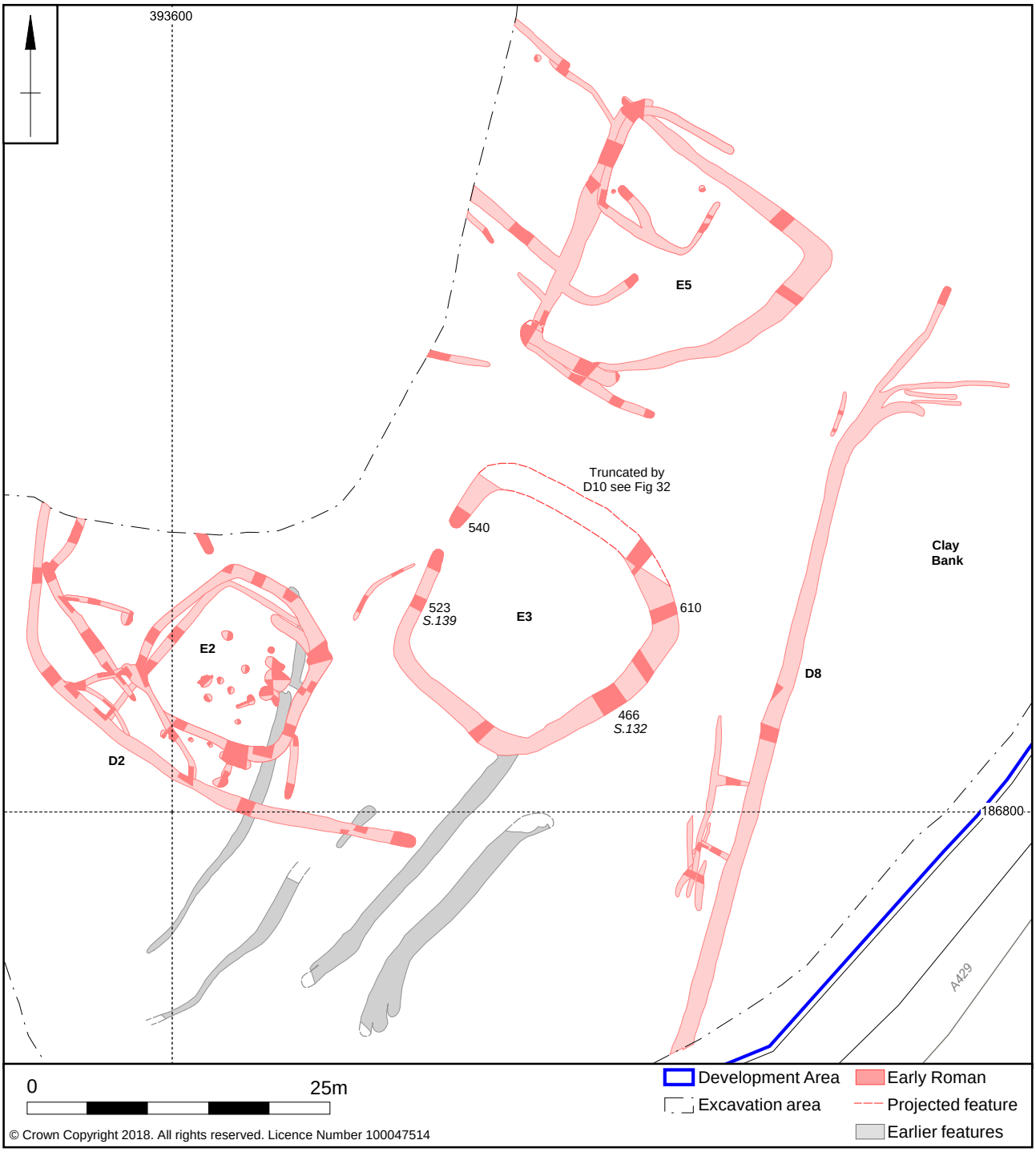
Ditch D4 comprised a wide U-shaped ditch with splayed/eroded upper edges and a steep sided trough, with an irregular flat base (Fig 10: Section 92). The south-eastern edge was truncated by Roman ditches, so a full representative profile was not visible at any point along its length. A maximum depth of 0.61m was recorded with the base of ditch measuring between 0.50 and 0.57m wide. The fills typically comprised compact mid-dark grey brown silty clay with a moderate to high amount of limestone fragments throughout and occasional charcoal flecks. One of the excavated sections, recorded during the trial trench evaluation, had limestone rubble packed into the base, suggesting deliberate backfilling of some or all parts of the ditch (Upson-Smith and Walker 2011, fig 6).

The fragmentary remains of a further two ditches (D1 and D11) were present to the north-west of D3 and D4. Both ditches were slightly sinuous in plan though they were on the same broad north-east to south-west alignment as D3 and D4 (Fig 6). Ditch D1 was cut through the mid yellow sandy clay loam that makes up the substrate in this part of the excavation area. At the southern end the ditch was narrow, approximately 0.50m wide and 0.17m deep with a broad U-shaped profile. As the ditch extended northwards the profile became much shallower and wider, 0.70m – 1.00m wide and 0.07 – 0.14m deep. The fill of the ditch typically comprised compact, dark brown to mid grey-brown silty clay with occasional limestone fragments throughout. A small pottery assemblage was recovered from the excavated sections and has been dated to the late Iron Age period. Other finds included animal bone and a piece of distorted wire, possibly from an ear-ring though not closely dateable (SF11). Ditch D11 [351] was very narrow and had near vertical sides, suggesting it may have held posts for a fence line (Fig 9).

Ditch D11 [351], looking north-east Fig 9



Scale 1:25 Period 1.1 excavated sections Fig 10



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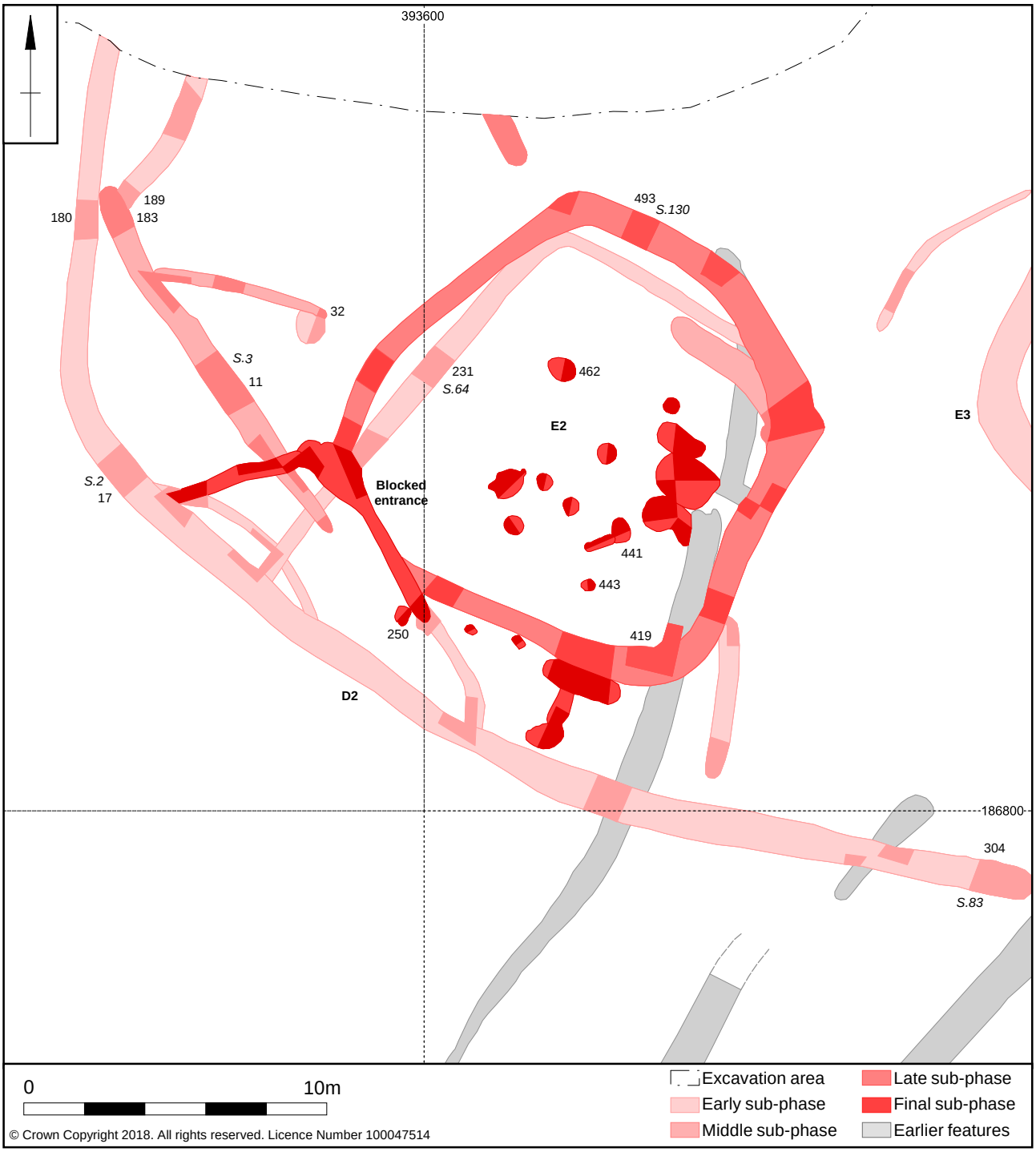
Period 1.2- Early Roman Fig 11



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Period 1.2 Enclosure 2 Fig 12

Period 1.2 - Early Roman (mid 1st to 2nd centuries AD)

This phase of activity was characterised by several enclosures (E2, E3 and E5). The area occupied by the three enclosures was broadly framed by two key ditches (D2 and D8). Ditch D2 appeared to respect the alignment of Enclosure E2 and may represent a boundary feature within the landscape.

Ditches D2 and D8

Ditch D2 lay in the south-west corner of the site and comprised a *c*50m length of curvilinear ditch (Figs 11 and 12). It extended beyond the excavation area and so its full form could not be determined. The ditch was aligned approximately north to south, but curved to the east where it terminated in the central part of the excavation area (Figs 11 and 12).

The ditch was cut through limestone in the south-west corner of the site and mid yellow sandy clay loam observed elsewhere. Where cutting the limestone [17], the ditch had a flat-bottomed and broad U-shaped profile, 0.80 - 1.10m wide and 0.30 - 0.36m deep (Figs 13, and 22: Section 2). Elsewhere the ditch [304] was wider and had a deeper profile between 1.30 - 1.50m wide and 0.49 – 0.62m deep, with a narrow trough cut into the base (Fig 22: Section 83). This is probably due to the increased difficulty in excavating through the limestone compared to the sandy clay loam, as well as increased erosion of the ditch edges on the softer natural.

Ditch D2 [017], looking south-east Fig 13

The fills of the ditch also varied depending on the underlying geology. Where cutting the limestone there was typically a thin layer of broken and crushed limestone fragments overlain by naturally deposited green-grey-brown clay silt, followed by a final deposit of more humic dark brown clay silt which contained most of the material

culture. On the sandy clay loam geology the edges of the ditch were more eroded resulting in a wider profile. Here, the fills typically comprised a series of mid grey-brown to mid red-brown deposits of silty clay with occasional limestone fragments throughout. Tip lines indicate that the material had washed in from the northern side of the ditch.

Due to the comparatively narrow width and shallow depth, it seems most likely that the ditch facilitated drainage of an area rather than enclosing an area for livestock. It may have acted as a catch-all drain for a number of short lengths of ditch/gully on its northern side (Fig 12). Alternatively, it may have acted only as a boundary marker for agricultural activity to the north. The pottery recovered from the ditch is contemporary with much of ceramic evidence recovered from across the site, and broadly dated to the 1st and 2nd centuries AD. This may suggest that, whilst the boundary may have had its origins in this phase, it continued to exist as a feature in the landscape into the subsequent phase, likely after the ditches of Enclosure E2 had been backfilled.

Ditches [180] and [183] with Ditch D2 in the foreground, looking east Fig 14

Ditch D8 lay in the south-east part of the site and was aligned approximately north-north-east to south-south-west (Fig 11). The location of the ditch reflects a dramatic change in the natural substrate between a clay ridge present on its eastern side and the cornbrash and silty clay loam present to the west. A series of small gullies at the northern end could be seen to feed into the ditch from the clay ridge taking water away to the south. This ditch contained pottery dated to the 1st and 2nd centuries AD.

Much of the ditch had been truncated by a post-medieval ditch on the same alignment suggesting that the variation in the natural substrate had the same impact on the management of the immediate agricultural landscape during post-medieval period as it had done in the early Roman period.

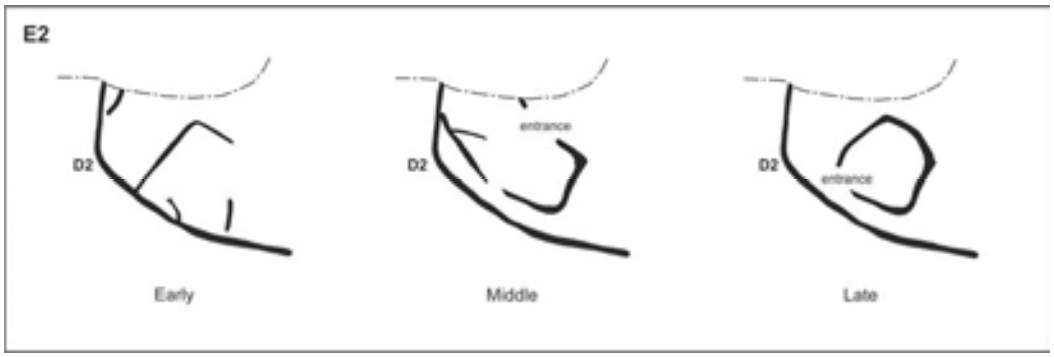
Enclosure 2

A palimpsest of ditches were present on the north-eastern side of Ditch 2 (Fig 12). These appear to have formed part of an enclosure, which had been remodelled on at least three occasions. Judging by the ceramic evidence, all of these iterations appear to have been relatively short-lived and all respected the boundary created by Ditch 2.

The earliest phase of enclosure comprised an L-shaped ditch approximately 22m long; this along with a short stretch of ditch to the south-east appeared to form a semi-enclosed trapezoidal area of roughly 182m^2 (Figs 12 and 15). Ditch [231], part of the L-shaped enclosure ditch, was approximately 0.92m wide and 0.22m deep with a shallow U-shaped profile and flat base (Fig 22: Section 64). Pottery recovered from the feature has been dated to the first and second centuries AD.

This early phase of enclosure was replaced by a sub-rectangular enclosure only partially visible within the excavation area (Figs 12 and 15). The enclosed space measured approximately 10m by at least 30m and enclosed a minimum area of 263m^2. A 7m wide entrance was present on the north-eastern side of the enclosure, defined by two ditch terminals. A second possible gap may have existed on the south-western side of the enclosure though due to the complexity of intercutting features in this area it is possible that there was no break in the ditch (Fig 15). Ditch [011], part of the south-western side of the enclosure, was 0.92m wide and 0.26m deep with a U-shaped profile and flat base (Fig 22: Section 3). Pottery recovered from the fill of this enclosure ditch has been dated to the 1st to 2nd centuries AD.

The third iteration of Enclosure E2 appeared to utilise the southern corner of the previous phase to create a smaller sub-square enclosure which measured approximately 12m by 12m enclosing an area of roughly 140m^2 (Figs 12 and 15). The entranceway is presumed to have existed at the south-western corner though the area was disturbed by the sheer amount of intercutting features. Ditch [493], which formed part of the north-eastern arm of the enclosure, was 1.05m wide and 0.22m deep with a shallow U-shaped profile and flat base. Pottery recovered from this enclosure ditch has been dated to the 1st-2nd centuries AD.



Three tier development of Enclosure 2 Fig 15

The end of this area as an active space appears to have been marked by the excavation of a ditch across the south-western corner of the enclosure, presumably blocking the entranceway. This may also have been linked the curvilinear boundary ditch (Ditch D2) by a narrow gully (Fig 12). A group of pits was excavated in the central and eastern parts of the final enclosure at this time. These ranged from small shallow sub-circular pit to large irregular pits. The irregularity of some of the larger pits may suggest that they were a product of, or had been heavily disturbed by, a large tree throw or animal burrowing activity in this area. Pottery recovered from the

ditch blocking the south-western entrance and from several of the pits has been largely dated to the 2nd century AD. A small amount of 2nd-3rd century AD pottery was recovered from one of the pits. A number of domestic artefacts were recovered from these pits, including ceramic spindle whorls and Roman bottle glass.

Enclosure 3

This sub-square enclosure was located approximately in the centre of the excavation area with a single 2.20m wide entrance located midway along the north-western edge (Fig 11). Almost the entire north-eastern side of the enclosure had been truncated by Ditch 10, part of a later phase of activity (see Period 1.4). The excavated sections indicated that the enclosure ditch had been cut through both the rubbly cornbrash substrate along its north-western edge and elsewhere through the silty clay loam down onto the cornbrash that lay beneath. The ditches in the south-eastern half of the enclosure survived to a much greater depth than those on the north-west side.

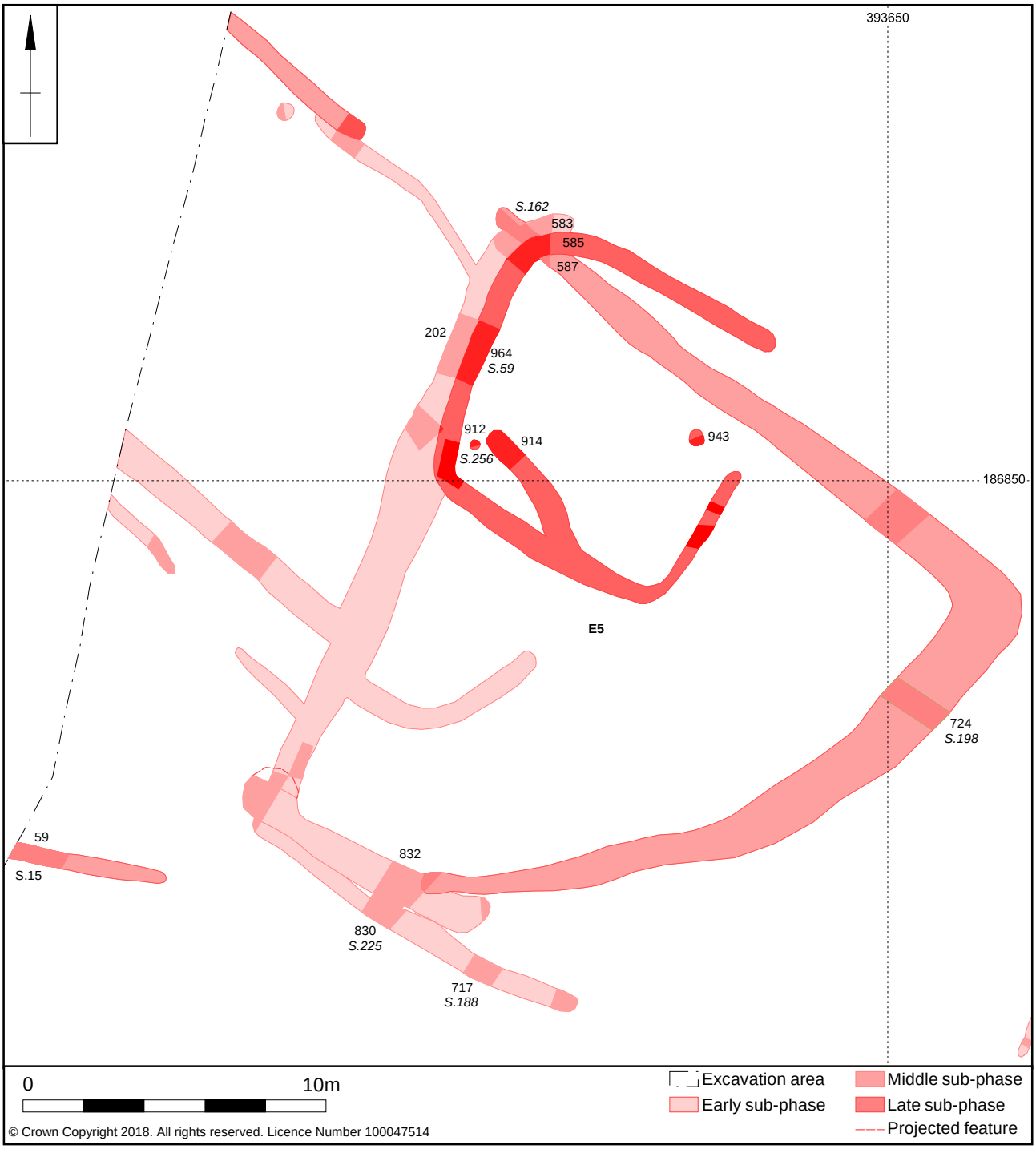
Enclosure E3, ditch [466], looking south-west Fig 16

The profile of the ditch along the southern and south-eastern edges of the enclosure was a wide U-shape with splayed upper edges (Figs 16 and 22: Section 132). At these points the ditch was approximately 1.75-1.95m wide and between 0.42m and 0.52m deep. Along the north-western edge the profile was narrower and much shallower at approximately 1.10-1.30m wide and 0.28-0.40m deep. A re-cut could be seen in the south-western terminal [523] and may have extended around the entire enclosure though it is not as clear in other excavated parts of the ditch (Fig 22: Section 150). Throughout the majority of the excavated sections the inner edge of the enclosure was more eroded than the outer suggesting that this was the direction from which fill entered the ditch, perhaps indicating the presence of an internal bank.

The fill of the ditch typically comprised dark brown-grey silty clay with frequent limestone fragments and occasional charcoal throughout. Where visible, this was overlain by firm mid yellow brown silty clay after which the ditch was re-cut at a much smaller size and filled with mid grey-brown silty clay with infrequent small to medium limestone fragments throughout. This may indicate a period of use followed by abandonment and then a period of re-use.

A small assemblage of Roman pottery was recovered from the enclosure ditch, the majority of which has been dated to the 1st century AD with a small amount dated to the 1st-2nd centuries AD. Furthermore, a continental imported plate brooch was also found in a section excavated through the eastern corner [610] of the enclosure ditch. A complete cattle skull was present in the north-eastern terminal [540] though it was unclear whether or not it formed part of a structured deposit (Fig 17).

Enclosure E3 north-eastern ditch terminal [540], mid-excavation photo showing location of cattle skull Fig 17



Scale 1:200

Period 1.2 Enclosure 5 Fig 18

Enclosure 5

A dense group of intercutting features was present in the northern half of the excavation area (Fig 5). This included part of the rectilinear field system (see Period 1.4) and the late Roman structures (see Period 1.5). Additionally, a number of linear and curvilinear ditches were determined to form multiple developments of one enclosure (Fig 18: E5). These have been discussed as three separate sub-phases. In many respects the development follows a similar pattern to that observed with Enclosure E2 (Figs 12 and 15).

The first part of the development comprised an L-shaped ditch, which measured approximately 12m by 22m (Figs 18 and 21). It remains unclear whether this ditch formed part of a larger enclosed area delineated by hedge lines or fences; no evidence for either was identified during excavation. A number of smaller ditches extended from this main arterial ditch on both its north-western and south-eastern sides; these may have formed part of further enclosed spaces, the majority of which lay beyond the limit of the excavation. The main L-shaped ditch varied in depth and profile. The north-eastern half of the ditch [202], was approximately 1.43m wide and 0.49m deep with a broad U-shaped profile and flat base (Figs 22: Section 59). At the north-eastern end of the same ditch [583] a period of natural silting was clearly visible at the base of the ditch overlain by deposits of deliberately back-filled material containing medium to large fragments of limestone throughout as well as charcoal, pottery and animal bone (Fig 19). The pottery recovered from the ditch, including a near complete vessel recovered from close to the north-eastern terminal [583], has been dated to the 1st century AD (Figs 19 and 22: Section 161). As well as the near complete pot, a single canine jawbone was recovered from the same context. The southern, north-west to south-east aligned, arm of the L-shaped ditch was much narrower and shallower (ditch [830]) though this part of the ditch was later remodelled to reflect more broadly the profile of the rest of the ditch (ditch [832]; Fig 22: Section 225).

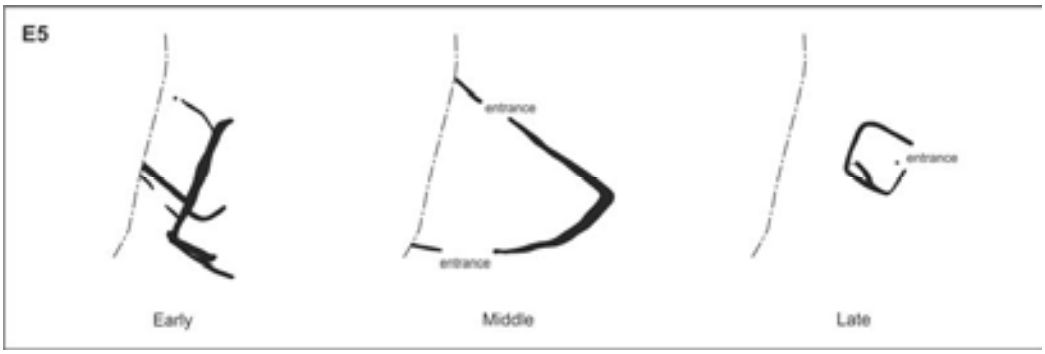
Ditch [583], Period 1.2 (early sub-phase) Enclosure E5 with complete pot visible in section; Middle: Period 1.2 (late sub-phase) Enclosure E5; Right: Period 1.2 (middle sub-phase) Enclosure E5 Fig 19

The second sub-phase comprised the cutting of a large D-shaped enclosure with its straight edge aligned north-west to south-east (Figs 18 and 21). The enclosed area was approximately 503m^2 and had possible entranceways on both the southern and north-eastern sides (Fig 18). The entrance on the north-eastern side was approximately 6.5m wide but may have been widened at a later date to *c*10m. The southern entrance may have been up to 15m wide though its eastern side was somewhat obscured by multiple intercutting features and the terminus was difficult to determine precisely. The profile and depth of the ditch changes dramatically throughout its course. This appeared to correlate well with the variable natural substrate present in this part of the site. Close to the north-eastern entrance the enclosure ditch [587] was shallow, approximately 0.60m wide and 0.43m deep with a steep-sided U-shaped profile and flat base (Fig 22: Section 161). Similarly, the enclosure ditch [59] on the north-western side of the southern entrance was 0.70m wide and 0.53m deep with an extremely steep-sided U-shaped profile and flat base (Figs 18, 20 and 22: Section 15).

In comparison, the eastern corner of the ditch [724], which was cut through silty clays, was 2.2m wide and 0.86m deep with a broad U-shaped profile, very eroded upper edges and a flat base (Fig 22: Section 198). The profile of this section suggests that the softer natural substrate in this area was more susceptible to erosion than the ditches slightly upslope and that the ditch was deliberately excavated as a larger feature to accommodate for this. This part of the ditch was later overlain by a small area of large limestone flagstones, which presumably mitigated the soft upper fills of the then in-filled ditch and provided access to the post-built structures (see Period 1.5) (Fig 37). Pottery recovered from these ditch sections has been dated to the 1st and 2nd centuries AD.

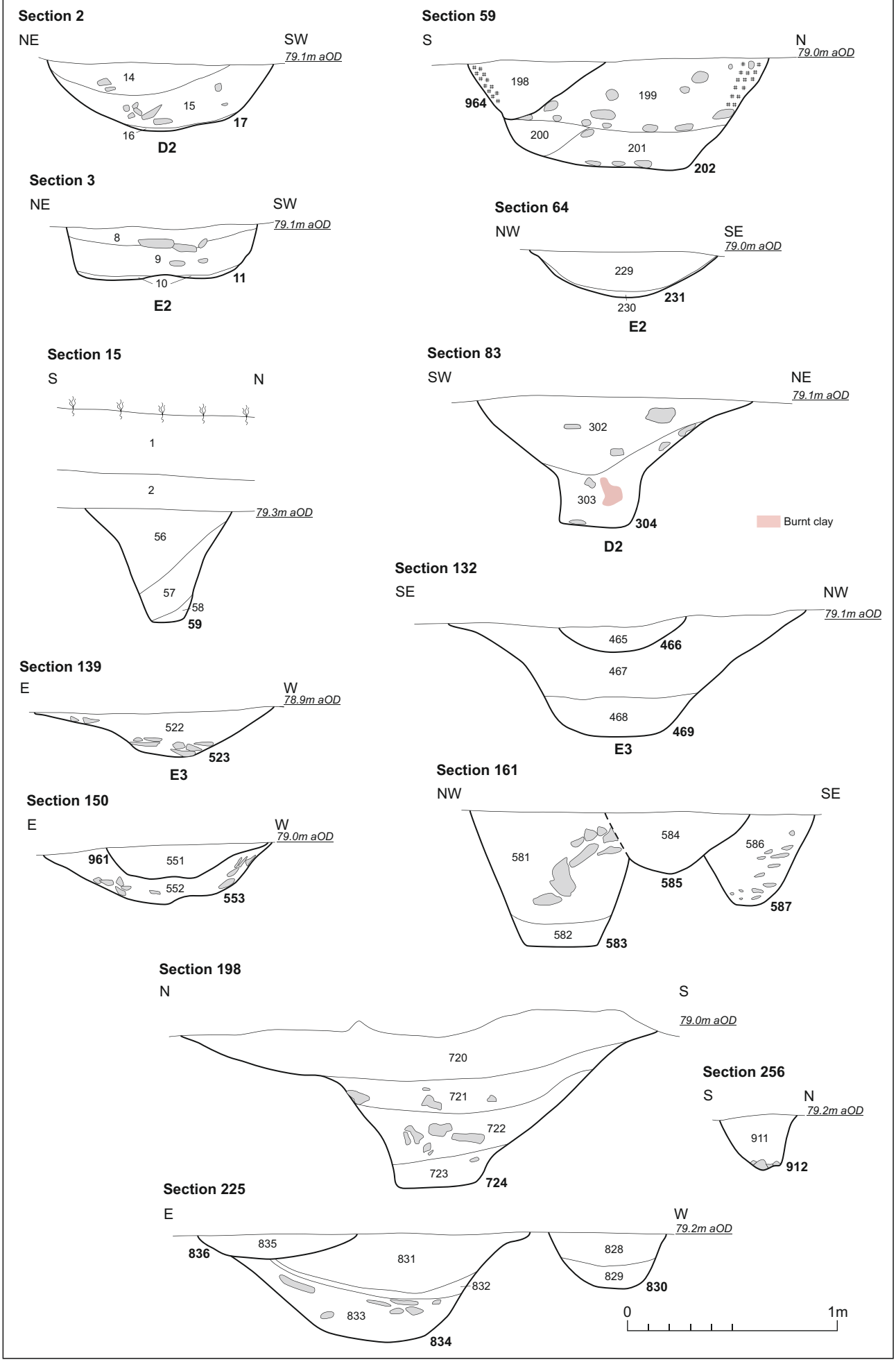
Ditch [59], Period 1.2, Enclosure E5, looking west Fig 20

The third and final sub-phase in this area comprised a small sub-square enclosure, which slightly overlay the north-eastern edge of the D-shaped enclosure from the previous phase (Figs 18 and 21). The enclosure covered an area approximately 73m^{2,} measuring roughly 9m by 9m with an 8m wide entranceway in its eastern corner (Fig 18). Ditch [964], part of the north-western arm of the enclosure, was 0.65m wide and 0.28m deep with an asymmetrical U-shaped profile and concave base (Fig 22: Section 59). Re-deposited natural material was noted on the south-eastern edge of the ditch and may be indicative of a backfilling event. No pottery was recovered from this enclosure ditch.



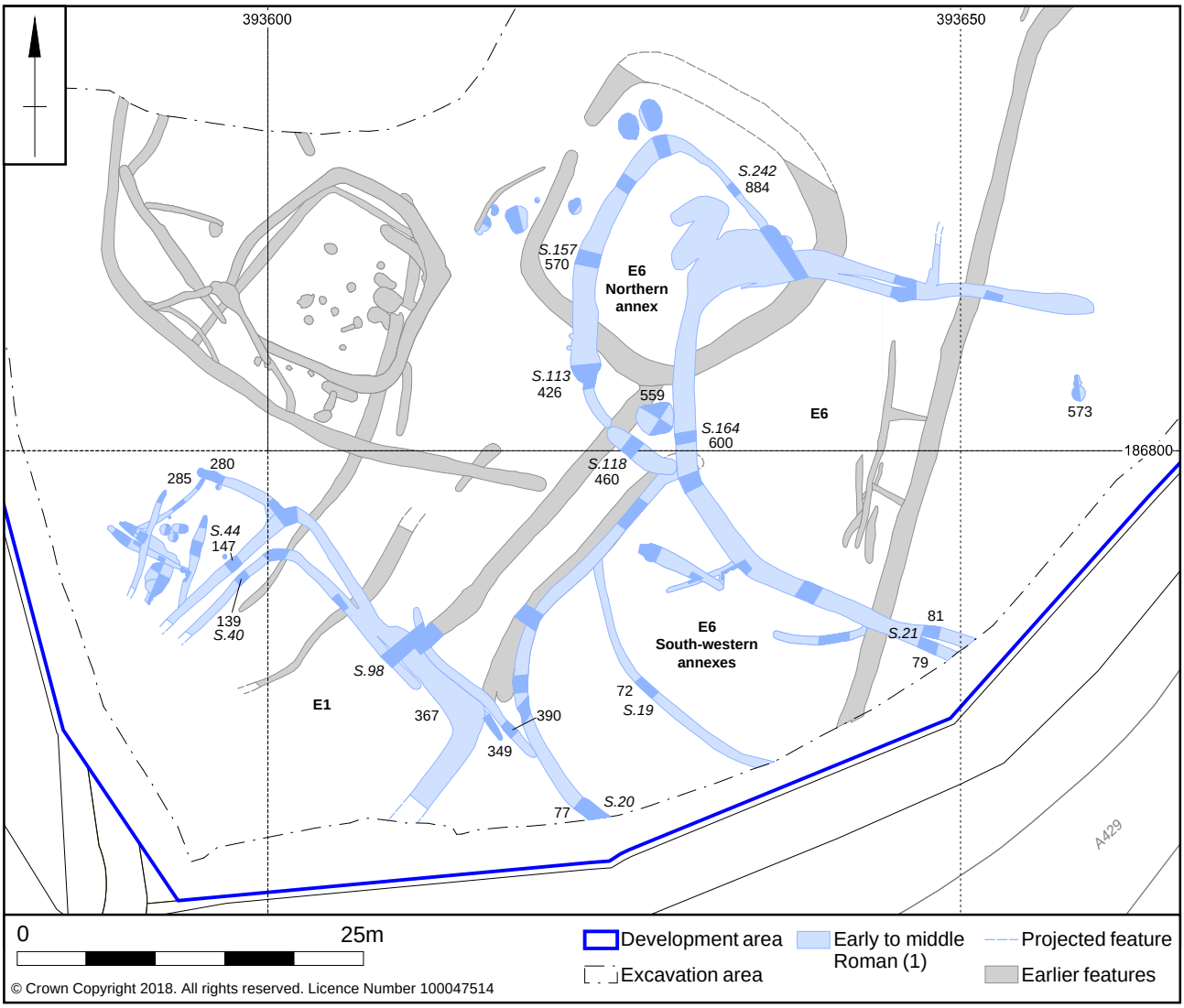
Three tier development of Enclosure E5 Fig 21

A single curvilinear gully [914] was present extending northwards from the south-western edge of the enclosure and was 0.80m wide by 0.11m deep with a shallow bowl-shaped profile and concave base (Fig 18). This appeared to have been part of a possible sub-division within the enclosure. A small posthole [912] was present at between the end of gully [914] and the north-western arm of the enclosure (Fig 18). It measured 0.37m in diameter and 0.26m deep with a U-shaped profile and irregular base (Fig 22: Section 256). No pottery was recovered from the posthole but a small group of compacted stones at the base appeared to have been placed as a base upon which to seat the post. A further small posthole [943] was present close to the entranceway into the enclosure and may have formed part of a gateway into the internal space (Fig 18). The posthole was 0.55m wide and 0.27m deep with a broad U-shaped profile and flat base. A large amount of limestone present in the lower fill may have formed part of the original post-packing. No pottery or other dateable material was recovered from either of the postholes.



Scale 1:25

Period 1.2 excavated sections Fig 22



Scale 1:500 Period 1.3- Early to middle Roman(1) Fig 23

Period 1.3 - Early to middle Roman (2nd to 3rd centuries AD)

This phase comprised two enclosures, E1 and E6. As with the majority of archaeological features on site, the ceramic evidence provides a very tight date range, mostly 1st to 2nd centuries AD. Both enclosures show evidence of expansion and/or alteration over time (Fig 23).

Enclosure 1

In the southern corner of the excavation area, part of a sub-square/sub-rectangular enclosure (E1) was present (Fig 23). A large part of the area encompassed by the enclosure ditches was truncated by a wide corridor of post-medieval boundary ditches and gullies (Fig 5). The visible part of the enclosed space measured approximately 10m by 20m. There were three distinct phases to the layout of the enclosure.

The earliest phase of this enclosure was ditch [367] which seems to have existed as a large L-shaped ditch. This was possibly one arm of a larger hook-shaped enclosure beyond the limit of excavation. The ditch [367] was approximately 1.91m wide and 0.65m deep with a wide irregular U-shaped profile (Fig 31: Section 98). The north-eastern edge of the ditch was severely eroded. The fill of the ditch comprised a firm mid grey silty clay stabilisation fill overlain by a deposit of medium to large limestone fragments against the south-western edge. The remainder of the fill comprised firm mid yellow-brown clayey silt, indicating gradual silting of the ditch. Pottery recovered from the fill of the ditch has been dated to the 1st and 2nd centuries AD.

Ditch [367], Period 1.3 (early sub-phase) Enclosure E1, looking north-west Fig 24

The second sub-phase of the enclosure comprised a narrow linear ditch, [139], which was cut to form the north-western and north-eastern sides of the enclosure (Figs 23 and 26). The ditch was seen to truncate the larger, earlier phase described above (see [360], Fig 31: Section 98). It is unclear in plan, but it is possible that the ditch follows the course of the earlier ditch to create a sub-square enclosure. The profile of

the ditch throughout much of its length was a narrow, steep-sided, U-shape with a concave base, approximately 0.85m wide and 0.44m deep (Figs 25 and 31: Section 40). The outer edge of the ditch was slightly more eroded than the inner, reflecting the side from which fill was entering the ditch. The fill of the ditch typically comprised a firm mid grey-brown clay silt with a moderate amount of small-medium sub-angular limestone fragments throughout.

Ditch [139], Period 1.3 (second sub-phase) of Enclosure E1, looking north-east

Fig 25

North-western arm of Enclosure E1, working shot looking north-east Fig 26

Ditch [147] represented the third sub-phase of the enclosure and was roughly comparable with the second sub-phase. The ditch followed approximately the same course as its predecessor and it is likely that Ditch [139] remained visible at the time of this re-working of the enclosure. The profile of the ditch was very similar to that of Ditch [139], approximately 0.85m wide and 0.30m deep (Fig 31: Section 44). The fill comprised firm mid grey-brown clay silt with occasional limestone fragments throughout. Pottery sherds recovered from both of these ditches has been dated to the 2nd century AD.

A 6.5m stretch of Ditch [280] extending west from the northern corner of E1 may represent part of an annex to the main enclosure, within which a series of intercutting gullies and pits were present. A single canine jawbone had been deposited in the terminal of this ditch. All of the gullies were very shallow and it was difficult to accurately determine their relationships with each other. Pottery recovered from the pits has been dated to the 2nd century AD and they appear to be the latest features associated with E1. One of the gullies [285], which may have closed off the entrance into the annex, as has been observed elsewhere on site, also contained the partial remains of a dog skeleton at its north-eastern terminus (Fig 23).

Ditch [390], aligned north-west to south-east was located at the eastern corner of the enclosure and measured approximately 14m (Fig 23). The relationship of this ditch, and a smaller segment [349] immediately adjacent to it, to the rest of the enclosure was unclear though it did post-date the original large L-shaped ditch and has produced 2nd-century pottery. The ditch was similar in profile to the second and third sub-phases of Enclosure E1 and it form part of one of those modifications to the enclosure. It is also suggested that it may close off the area as an active space, much like a similar gully cut across the entrance to the final sub-phase of E2 in the previous section.

Enclosure 6

In the central part of the excavation area a C-shaped enclosure extended westwards from the south-eastern edge of the development area (Fig 23). The enclosed area measured at least 660m^2. The main enclosure ditch had been re-worked or re-cut on at least one occasion with both ditches visible in some places (Fig 23). The western part of the enclosure ditch was much deeper than the eastern extremities of the ditch, suggesting that it was designed to take run-off from the higher clay bank to the east. Ditch [79], aligned north-west to south-east, was 0.78m wide and 0.10m deep with a very shallow U-shaped profile and concave base (Figs 27 and 31: Section 21). Ditch [81], on the same alignment, was 0.92m wide and 0.20m deep with a U-shaped profile and irregular base (Figs 27 and 31: Section 21). Both ditches were filled with material characterised as friable dark grey-brown silty clay with occasional small sub-rounded stones throughout. Pottery recovered from both ditches has been dated to the 2nd century AD onwards. Ditch [600], aligned roughly north to south, was much more substantial at 1.28m wide and 0.70m deep with a broad U-shaped profile and concave base (Fig 28). The fill sequence suggested an extended period of natural silting followed by a final deposit of mid grey-brown silty clay containing large sub-angular stones. Pottery recovered from this section has been dated to the 2nd century AD.

Enclosure E6: ditches [79] and [81], looking north-west Fig 27

Enclosure E6: ditch [600], looking north Fig 28

A single sub-circular pit [573] was present within the enclosed space (Fig 23). The pit measured 0.90m by 1.07m and was 0.22m deep with an irregular profile. The fills comprised gradually accumulated mid orange-grey silty clays and contained sherds of samian ware dated to the 2nd century AD.

Several annexes to the initial C-shaped enclosure were also recorded (Fig 23). Two narrow curvilinear ditches, [72] and [77], to the south-west of E6 may represent expansions to the enclosure or paddocks attached to it. Both of these ditches cut through the south-eastern ditch (D4) of the possible Iron Age droveway, appearing to follow its alignment (Fig 23). It is therefore possible that the larger droveway ditch still existed as a shallow earthwork at that time. Together, the two annexes would have enclosed at least an additional 382m^2 though it is not clear in which order they were added nor where the entrances may have lain. Ditch [72], was 0.64m wide and 0.19m deep with a U-shaped profile and concave base (Fig 31: Section 19). Ditch [77], was 1.33m wide and 0.28m deep with a wide U-shaped profile and flat base (Fig 31: Section 20). Both ditches were filled with material characterised as mid grey-brown clay silt and contained pottery dated to the 2nd century AD.

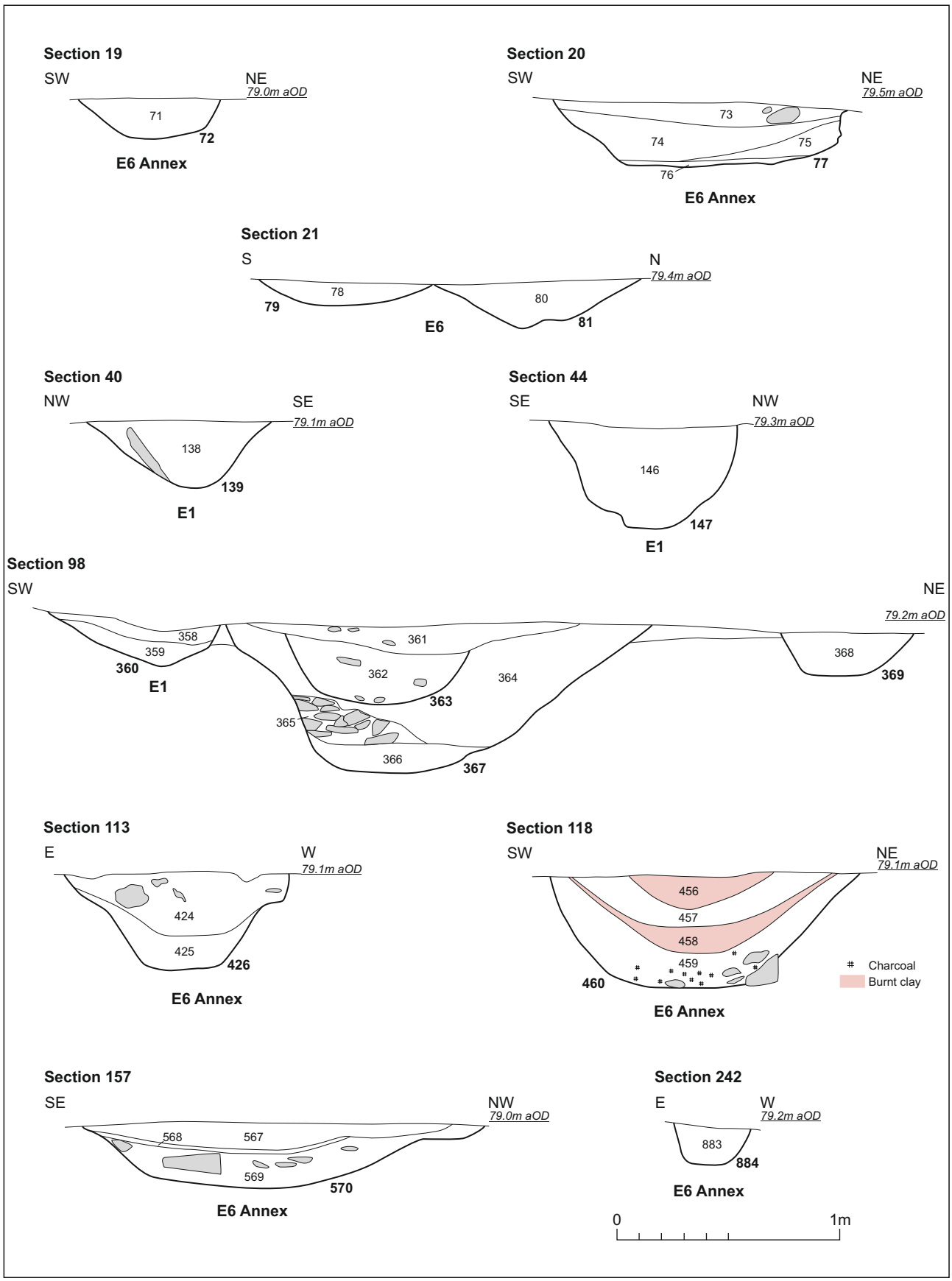
A further annex/paddock was added on to the north-western edge of E6 (Fig 23). This comprised a hook-shaped ditch, which extended for approximately 28m from the northern edge of the main enclosure. A further 6m long segment of ditch extended from the eastern edge of the main enclosure to form a *c*3.5m wide entranceway into the northern annex. These ditches enclosed an additional area of approximately 130m^2. The hook-shaped ditch had a variable profile along its length, narrower on its north-eastern side and much wider on its western side. Later pits and vegetative disturbance had obscured much of the northern corner of the annex ditch (Fig 23). Ditch [884], aligned north-west to south-east, was 0.34m wide and 0.17m deep with a shallow U-shaped profile and flat base (Fig 31: Section 242). Ditch [570], aligned roughly north to south was 1.82m wide and 0.28m deep with a broad, shallow, U-shaped ditch and flat base (Figs 29 and 31: Section 157).The fills of both ditches largely comprised mid grey-brown silty clays, though ditch [570] did contain a thin layer of burnt material (568). Pottery from this part of the northern annex to E6 has been dated to the 2nd century AD.

Ditch [570], part of the northern annex to Enclosure E6, looking south Fig 29

The shorter segment of ditch [460], which formed the south-eastern part of the entranceway into the northern annex also contained distinctive layers of burnt material (458; Figs 30 and 31: Section 118). The ditch was 1.39m wide and 0.51m deep with a broad U-shaped profile and flat base. The lower fills comprised gradually accumulated mid grey-brown silty clays. These were overlain by thin lenses of burnt/heat affected clay and further mid-dark grey-brown silty clay. Pottery recovered from this ditch segment has been dated to the 2nd-4th centuries AD. This included a small sherd of decorated Samian ware (SF56). Whilst the profiles of ditches [570] and [460] are markedly different, the fill sequences and the thin lenses of burnt material are comparable and are likely to reflect the same event.

Ditch [460], part of the northern annex to Enclosure E6, looking north-west Fig 30

As with some of the other enclosures investigated on site, the entranceway to the northern annex appeared to have been deliberately blocked off (Fig 23). Ditch [426], aligned north-north-west to south-south-east, was 1.01m wide and 0.45m deep with a U-shaped profile, slightly eroded upper edges and a flat base (Fig 31: Section 113). The fills comprised mid grey silty clays and contained pottery dated to the 2nd century AD. A number of pits were also present in this area. A single large pit [559] within the northern annex and several smaller irregular pits immediately to the east of the enclosure all contained pottery dated to the 2nd century AD. Based on the association between pits and some of the other enclosures on site, it seems more likely that they post-date the primary use of the enclosure though they could conceivably relate to any part of the enclosures use period.



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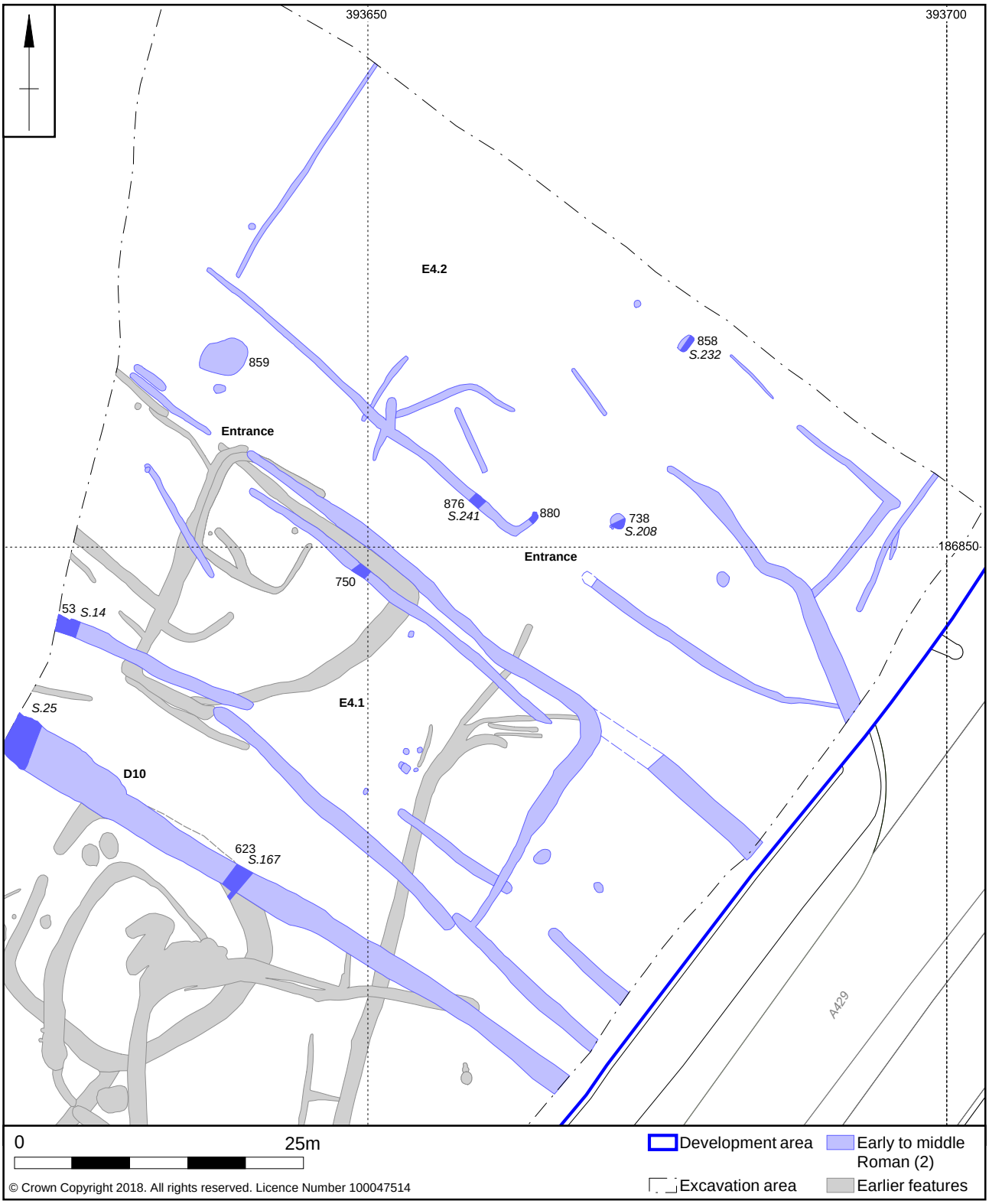
Period 1.3 excavated sections Fig 31



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Period 1.4- Early to middle Roman (2) Fig 32

Period 1.4 - Early to middle Roman (2nd to 3rd centuries AD)

This phase encompasses a palimpsest of ditches, which formed the large rectilinear field systems in the north-eastern half of the excavation area (Fig 32). Two main sub-rectangular fields/enclosures, E4.1 and E4.2, could be easily identified, both parallel to one another and aligned north-west to south-east. The number of ditches present would suggest that the fields had been re-worked on a number of occasions with boundaries re-excavated and possible extensions added to the south-east (Fig 32). This area of activity was bounded to the south-west by a large linear ditch, which bisected the excavation area.

Boundary ditch (D10) [623]/[85], aligned north-west to south-east, was approximately 2.2m wide and 0.62-0.84m deep with a broad U-shaped profile and concave base (Fig 36: Sections 25 and 167). The lower fills of the ditch comprised mid grey-brown silty clay with occasional medium to large fragments of limestone throughout. The upper fill of the ditch comprised darker grey silty clay and contained sherds of pottery dated to the 2nd century AD. At the north-western end, the ditch appeared wider, the excavated section at this point demonstrated that the ditch may have had earlier iterations (though none were visible in other excavated sections) or cut through a series of pits (Fig 36: Section 25). The latter is more likely though the extent of the possible earlier pitting lay beyond the limit of excavation.

The south-eastern sub-rectangular field/enclosure (E4.1) measured at least 47m in length, approximately 19m wide and enclosed a visible area of roughly 875m^2 (Fig 32). A possible, 3.5m, wide entranceway into the enclosure was present on the north-eastern perimeter ditch. Ditch [53], part of the south-western perimeter ditch, was 1.35m wide and 0.42m deep with a U-shaped profile and concave base (Fig 36: Section 14). The single fill of the ditch comprised naturally accumulated mid brown-grey silty clay and contained sherds of pottery dated to the 1st to 2nd centuries AD. A parallel ditch [750] present immediately adjacent to the north-eastern edge of the enclosure may reflect a re-working of that boundary or supplementary drainage. Pottery recovered from that ditch has been dated to the 2nd century AD.

The north-eastern of the two sub-rectangular field/enclosures (E4.2) measured approximately 57m in length, 23m wide and enclosed an area of roughly 1279m^2 (Fig 32). A probable entrance, approximately 6m wide, into the enclosure was present midway along its south-western perimeter. Ditch [876], which formed part of the south-western side of the perimeter ditch, was 1.01m wide and 0.25m deep with a U-shaped profile and concave base (Fig 36: Section 241). The fill comprised mid brown-grey clay silt and contained pottery sherds dated to the 2nd century AD. Posthole [880] was present at the hooked ditch terminus, which formed part of the south-western entranceway (Fig 32). It was 0.31m in diameter and 0.30m deep with a U-shaped profile and concave base (Fig 33). The relationship between the posthole and ditch terminus was unclear though it remains likely that this posthole formed part of the entrance into the enclosure.

Posthole [880] at the entranceway of Enclosure E4.2, looking south-west Fig 33

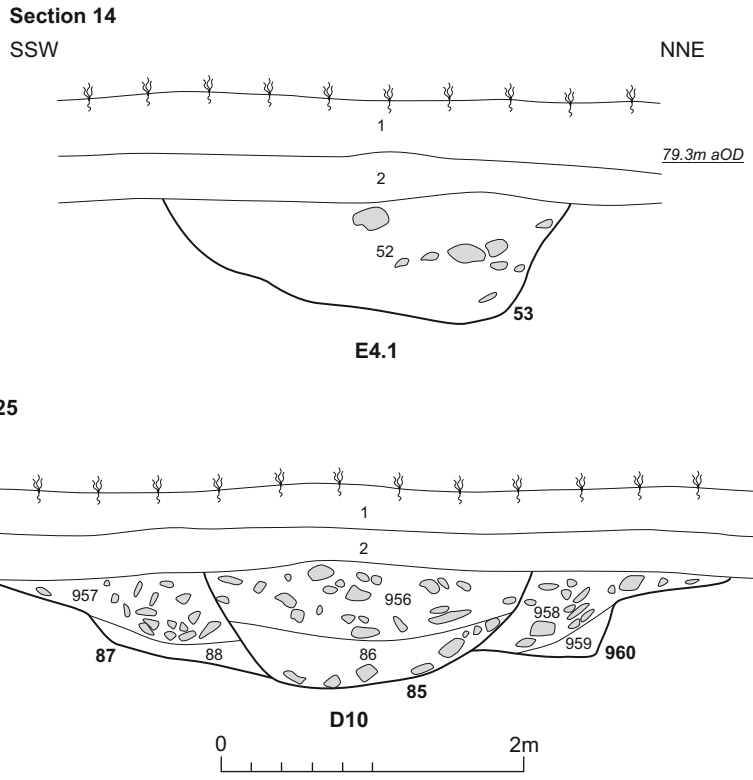
A number of small pits were present across the area and have been grouped into this phase based on the presence of 2nd century pottery recovered from a number of them (Fig 32). One sub-rectangular pit [858], located close to the north-eastern edge of the excavation area, was of particular interest (Figs 32 and 34). The pit was 1.58m long, 0.80m wide and 0.53m deep with a broad U-shaped profile and flat base (Figs 34 and 36: Section 232). The three fills of the pit comprised backfill deposits of dark grey-brown silty clays and large dumps of stone with frequent small fragments of charcoal and heat affected stones present throughout. The amount of charcoal and heat affected material present in the fill of the pit may suggest that it reflects hearth waste from nearby occupation. Pottery recovered from the pit has been dated to the 2nd century AD.

A large sub-circular pit [859], located between E4.1 and E4.2 at the north-western edge of the excavation area, measured 3.7m by 3.2m and 0.57m deep with a wide irregular U-shaped profile and uneven base. The fill comprised homogenous dark brown-grey sandy clay. No pottery or other dateable material was recovered from the fill of this feature. The irregular profile and homogenous fill may suggest that this feature was a quarry pit.

Pit [858], looking north-west Fig 34

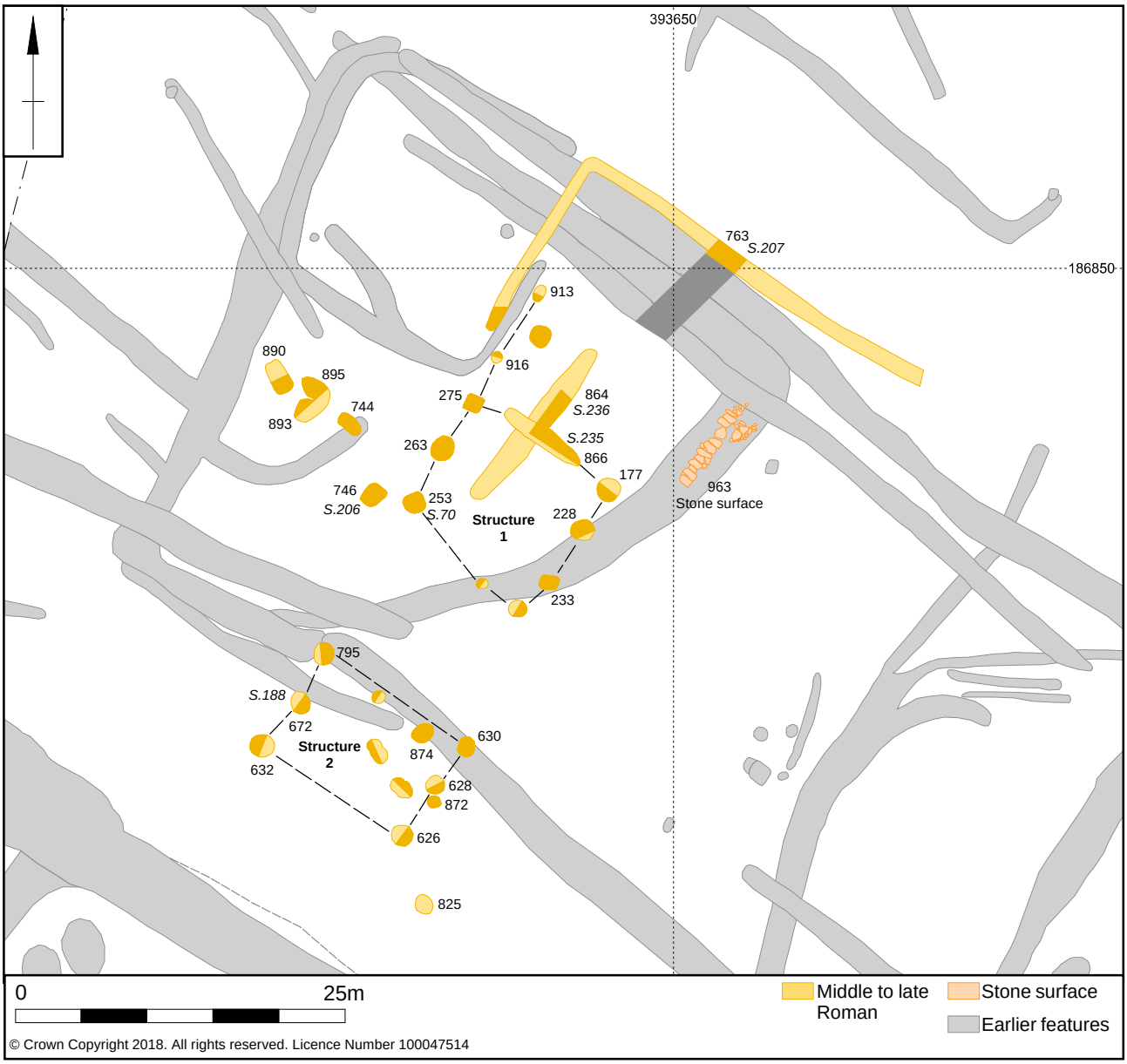
Sub-circular pit [738] was located in the south-eastern half of Enclosure 4.2 and measured 1.18m in diameter and was between 0.02-0.05m deep (Figs 35 and 36: Section 208). It is possible that this feature had been a hearth or oven but no other postholes were observed nearby. The clay natural substrate immediately below the feature had been heat-affected and was characterised by dark red-brown clay. The fill comprised darky grey/black silty clay with frequent charcoal throughout. A fragment of brooch recovered from the fill has been dated to the late 1st to early 2nd centuries AD. Possible stakeholes were recorded during excavation though are more likely to reflect variations in the natural substrate and/or bioturbation.

Pit [738], looking north-north-west Fig 35



Scale 1:50 (Section 25) 1:25

Period 1.4 excavated sections Fig 36



Scale 1:500 Period 1.5- Middle to late Roman Fig 37

Period 1.5 - Middle to late Roman (2nd to 4th centuries AD)

A total of 28 postholes and a number of shallow gullies were present in the north-eastern half of the excavation area (Fig 37). Together they reflect two post-built structures and associated drainage features, which post-date all other activity on-site (Fig 38). It should be noted that the possibility of the postholes reflecting a single structure was considered, though due to the arrangement and alignment of the posts, two discrete smaller buildings was deemed more likely.

Structure 1, posthole [795] cutting Enclosure E5 from Period 1.2 Fig 38

Structure 1

Structure 1 lay immediately to the north-east of Structure 2. Its layout comprised two rows of three large structural post holes approximately 6m apart (Figs 37 and 39). The six main structural postholes, [177], [228], [233], [253], [263] and [275], were all broadly comparable with similar dimensions and profiles suggesting they were of a single phase of construction although the post pits were somewhat shallower than those of Structure 2. Given the similarity of the two structures and the dates from the pottery, it is highly likely that the two structures, if not in fact part of a single structure, were contemporary with one another.

Posthole [253] was approximately 0.71m in diameter and 0.34m deep with a broad U-shaped profile and flat base (Figs 40 and 42: Section 70). A post pipe was present and measured approximately 0.21m in diameter. As with many of the other postholes, the post had been secured into the pit with limestone packing (Fig 40). The fill of the post pipe comprised friable dark brown-grey clay silt. Pottery recovered from the limestone packing around the post pipe has been dated to the 1st-2nd centuries AD.

Structure 1, north-western alignment of three structural postholes, looking north-east
Fig 39

Two smaller postholes [916] and [913] were present immediately to the north-east of Structure 1 and followed the same alignment as its north-western side (Fig 37). Contemporary pottery was recovered from these smaller postholes and it is possible that they reflect part of a fenceline or some other, less substantial, ancillary structure associated with the building. Furthermore, a group of five additional postholes and shallow pits, [890], [893]. [895], [744] and [746], were located immediately to the north-west of the structure (Fig 37). Pits [744] and [746] were both sub-rectangular in shape with steep-sided U-shaped profiles and flat bases (Fig 42: Section 206). The fills comprised friable dark grey-brown silty clays and contained pottery dated to the 2nd and 3rd centuries AD as well as a single sherd of possible Saxon pottery. Two coins recovered from pit [746] have both been dated to the second half of the 3rd century AD.

Structure 1, posthole [253], looking north-east Fig 40

Two linear gullies were associated with Structure 1 (Fig 37). Gully [866], aligned north-west to south-east was in-line with the two most north-easterly postholes, almost linking the two. It was 0.7m wide and 0.15m deep with a broad U-shaped profile and flat base (Fig 42: Sections 235 and 236). The fill comprised mid grey-brown silty clay with frequent charcoal flecks and fragments of limestone throughout. Several fragments of floor tile and a fragment of *tegula* were recovered from the feature. Gully [864], aligned north-east to south-west and perpendicular to gully [866] was 0.84m wide and 0.35m deep with a U-shaped profile and flat base (Fig 42: Section 235). The fill comprised firm mid brown-grey silty clay with occasional limestone fragments throughout. Pottery recovered from this gully has been dated to the 1st to 2nd centuries AD. Upon excavation this gully appeared to pre-date gully [866] and it is possible that this feature belongs to an earlier phase, perhaps relating to E5 (see Period 1.2), and had gone out of use before the structures were erected. These features may or may not relate to possible beam slots associated with the post-built structures.

An L-shaped narrow ditch [763] was present, broadly framing the northern corner of the area occupied by the structures (Fig 37). Its alignment respected that of both structures and the additional smaller postholes to the north-east of Structure 2. Despite the lack of dating evidence has been interpreted as having been a contemporary feature. The ditch was approximately 0.8m wide and 0.32m deep with a broad U-shaped profile and flat base (Fig 42: Section 207). The single recorded fill comprised dark grey silty clay with frequent large angular fragments of limestone throughout.

Structure 2

Structure 2, aligned north-east to south-west, comprised six main structural postholes: [630], [628], [626]. [632], [672] and [795], and measured approximately 6m by 4.2m (Fig 37). All of these six main postholes were similar in dimensions and profile suggesting that they were of one phase of construction. Posthole [672], was

0.70m in diameter and 0.47m deep with a steep-sided u-shaped profile and flat base (Figs 41 and 42: Section 188). The surviving post pipe suggested that the post would have measured approximately 0.29m in diameter. The post had been packed into the posthole with a deposit of small to medium sized sub-angular limestone fragments. Judging by the survival of a well-defined post pipe in the majority of the postholes it is likely that the post was either deliberately removed and the void backfilled soon thereafter or cut off at ground level and left to rot *in situ*. The former seems more likely given the character of the post pipe fill. Pottery dated to the 2nd century AD was recovered from this posthole and many of the others from this structure.

Structure 2, post pad [825], looking north-east and posthole [672], looking north-west respectively Fig 41

At least one of the structural postholes [628] appeared to have been replaced or supported by an additional, significantly smaller posthole [872] (Fig 37). Posthole [872] was 0.38m in diameter and 0.11m deep with a shallow U-shaped profile and concave base. Unlike the larger structural postholes, this one did not show any evidence for a post pipe or packing material. Pottery dated to the 2nd century AD was also recovered from this feature. Furthermore, a single post pad [825] bedded into the surface of the natural substrate 2.5m from the southern corner of the building, is likely to be related to the structure (Fig 41).

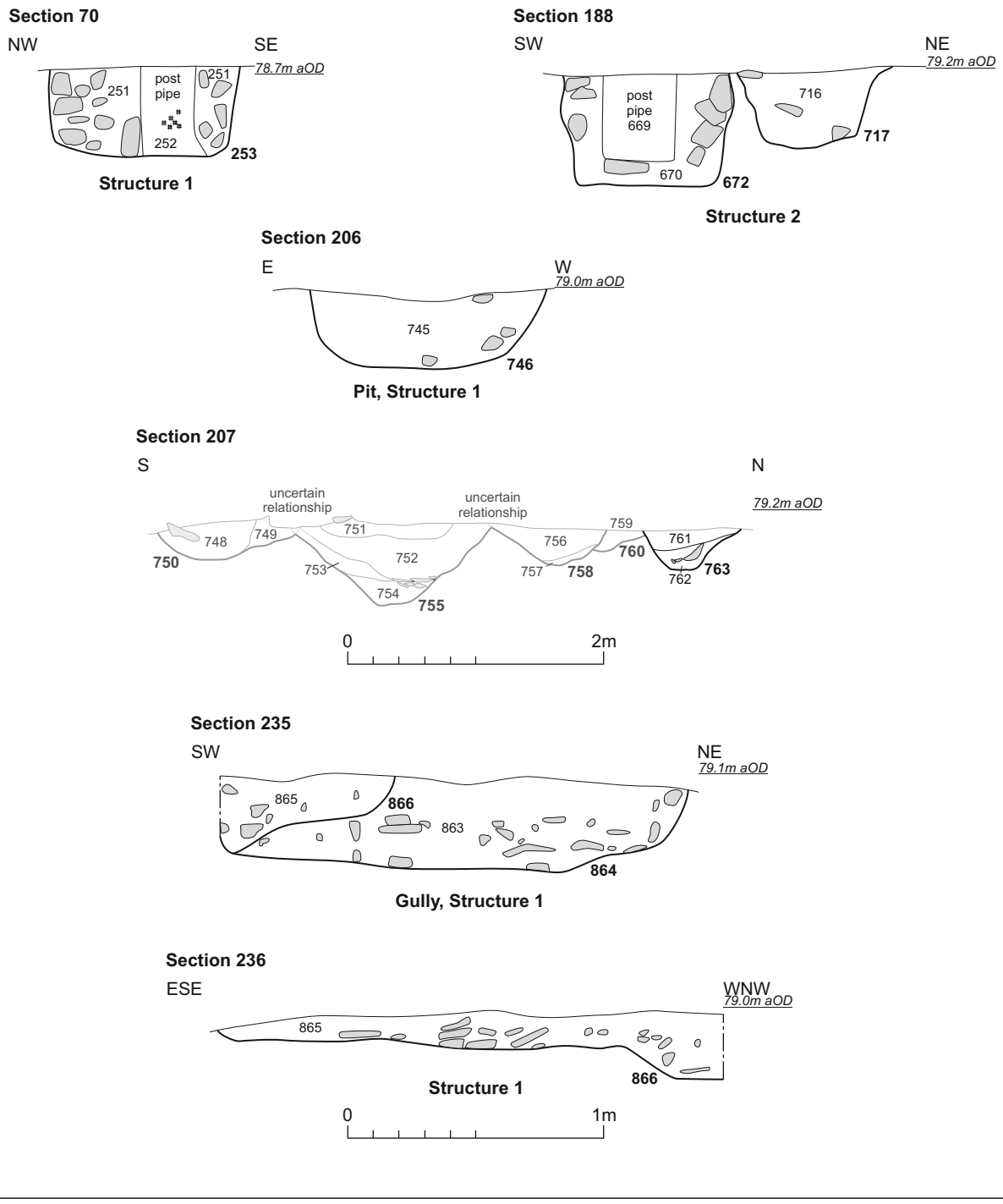
A group of four postholes was present within the internal space of Structure 1, clustered toward its eastern corner (Fig 37). All of these postholes varied in size and shape though none of them survived to a depth greater than 0.2m and were much less significant than the six main structural postholes. They may relate to internal sub-divisions within the structure. A large limestone post pad was present in the base of posthole [874].Pottery dated to the 2nd century AD was recovered from one of the postholes.

5.3 Period 2 - Possible Saxon and medieval evidence

A small amount of possible Saxon pottery was recovered from the fill of a post-void from posthole [746], associated with one of the post-built structures attributed to the final phase of the Roman period. No other Saxon evidence was identified within the excavation area, though Malmesbury is known to have an extensive history during the Anglo-Saxon period and it is highly likely that this area was given over to some form of agricultural activity during this time.

A single shallow pit [7] was located close to the western edge of the excavation area (Fig 5). It was 0.92m in diameter and 0.06m deep with a very shallow dish-shaped profile and concave base. The fill comprised friable dark grey-brown silty clay and contained fragments of pottery broadly dated to the medieval period. It was the only feature identified on site that has been dated to the medieval period.

Evidence of ridge and furrow cultivation was identified in the geophysical data (Fig 2) though remnant furrows were not present at the archaeological horizon. From the geophysical data it appears as though the alignment of the open field system was respected by the post-medieval boundary ditches excavated on site (Figs 2 and 5).



Scale 1:50 (section 207) 1:25 Period 1.5 excavated sections Fig 42

5.4 Period 3 - Post-medieval field system

The latest phase of archaeologically observable activity comprised post-medieval drainage ditches and field boundaries (Fig 5).

In the southern corner of the excavation area a large spread of material was investigated and revealed to be a series of re-cut field boundary ditches aligned west-north-west to east-south-east (Fig 43). Some of the shallower ditches on the northern edge of the spread may be better categorised as drainage ditches due to the smaller size and more humic fills. These smaller ditches contained a significant amount of post-medieval ceramic material as well as bottle glass and copper-alloy buttons etc.

Post-medieval ditches [288], [292], [295], [298] and [300],looking east-south-east
Fig 43

A linear ditch [480], aligned approximately north to south, extended across much of the site from the south-eastern limit of excavation to midway through the north-eastern excavation edge (Fig 5). The ditch respected the edge of a ridge of sticky yellow-grey clay which covers much of the south-eastern edge of the site. It is likely that the ditch acted as a runoff for water coming off the clay ridge. The post-medieval ditch truncated and followed the line of a similar Roman ditch and associated gullies which almost certainly served the same function during the Roman period.

The ditch was approximately 0.90m wide and 0.36m deep, with a wide flat-bottomed U-shape profile (Fig 44). This was re-cut [478] at least once at approximately 0.98m wide and 0.36m deep with a V-shaped profile. The eastern boundary of the ditch was slightly eroded, reflecting the direction of the runoff coming from the clay ridge. Levels taken from the ditch base suggest the flow of water was toward the south.

A further linear ditch in the eastern corner of the excavation area, aligned perpendicular to ditch [480], was recorded in plan though not excavated (Fig 5). The ditch was aligned east to west and post-medieval glass and ceramic material was

noted in its upper fills. It is likely that the features were contemporary and this ditch reflects a sub-division of a post-medieval field.

Artefacts recovered from the excavated sections and observed on the surface of these features confirm that they were post-medieval in date. The alignment of these ditches roughly correlates with the direction of the ridge and furrow cultivation observed in the northern half of field (geophysical survey, Sabin and Donaldson 2011). It is possible that the ridge and furrow may have existed as extant earthworks at the time when the post-medieval ditches were laid out.

Ditches [480] and [478], looking north Fig 44

5.5 The undated features

A number of the excavated features on-site contained no dateable material. However, the vast majority of them have been assigned to a period based on either their stratigraphical or spatial relationship to other dated features. Only a single posthole [5] and gully [55], close to the western edge of the excavation area have been left unphased (Fig 5).

Sub-square posthole [5] was 0.27m wide and 0.14m deep with a vertical sided U-shaped profile and flat base. The single fill was characterised as dark grey clay silt with occasional small sub-angular stones throughout. Gully [55] was approximately 6.5m long, 0.37m wide and 0.07m deep with a shallow U-shaped profile and concave base. The fill comprised friable dark grey-brown clay silt. Both features were not dissimilar to features dated to the Roman period approximately 5m to the south-east but it was felt they could not be confidently associated with those features.

5.6 The northern watching brief area

During the course of archaeological observation for the northern part of the site no archaeological features were identified (Fig 1). A variation in the natural substrate was identified during machine stripping of the area, which correlated well with a linear feature identified in the geophysical data (Figs 2 and 4). Parallel linear anomalies identified in the geophysical data, aligned north to south, relate to ridge and furrow cultivation. These features were not identified during the archaeological watching brief. Similarly, they were not present in the main excavation area. It is likely that they existed only as very ephemeral features at the juncture between the natural substrate and modern ploughsoil.

6 THE FINDS

6.1 **Pottery** by Rob Perrin

The assemblage comprises pottery from an evaluation carried out in 2011 and the subsequent larger excavation in 2013. 1603 sherds, weighing 20.7 kilos and with an estimated vessel equivalent (rim EVE) of almost 15 were recovered from the two seasons' investigations. Quantification comprising numbers of sherds, weight and rim percentage by fabric group was carried out, together with a record of the minimum number of vessels, based mainly on rims. A further 569g of small pottery fragments from 22 context were recovered from environmental samples taken from the site. Context data has been provided in Appendix 2 for the material recovered from the samples but has not been included in the following analysis.

Fabrics

The pottery fabrics were recorded using simple classifications, based on principal inclusion or firing technique, together with known regional or imported wares; the latter are recorded according to the National Roman Fabric Reference Collection codes (Tomber and Dore 1998). The main fabrics are grog, shell-gritted, other gritted, various reduced and oxidised wares, together with the products of regional potteries near Oxford (OXF RS, OXF WH) and south Dorset (DOR BB1) and some imported South and Central Gaulish samian ware (LGF SA, LEZ SA 2) and Spanish amphora. Table 1 shows the proportions of pottery per fabric. The various grey wares are the most common, followed by the grog-tempered wares with the oxidised reddish-yellow comprising a significant proportion.

Table 1: Quantification of pottery by fabric

Fabric	NoSh	%	Wgt (g)	%	Rim EVE	%
Grog	267	16.7	7128	34.4	3.08	20.5
Shell	40	2.5	192	0.9	-	-
Limestone	73	4.6	1554	7.5	0.7	4.7
Flint etc.	11	0.7	294	1.4	0.41	2.7
Shell, grog, limestone etc.	70	4.4	954	4.6	0.55	3.7
Misc. greys	705	44	5902	28.5	5.39	36
Micaceous	73	4.6	896	4.3	0.36	2.4
Reddish-yellow	250	15.6	2428	11.7	2.81	18.7
Misc. oxidised	39	2.4	408	2	0.52	3.5
OXF RS	2	0.1	20	0.1	0.18	1.2
OXF WH	1	0.1	4	-	-	-
DOR BB 1	18	1.1	298	1.4	0.52	3.5
DOR BB 1?	20	1.2	110	0.5	0.11	0.7
LGF SA	8	0.5	99	0.5	0.25	1.7
LEZ SA 2	19	1.2	148	0.7	0.11	0.7
Amphora	7	0.4	292	1.4	-	-
Total	**1603**		**20727**		**14.99**	

Most of the grog-tempered pottery is hard and greyish to greyish brown in colour, though some sherds are buff, reddish yellow, brown or dark brown (Fig 45, a-d). The shell gritted ware is mainly dark brown to black in colour, with some reddish brown sherds. The other gritted wares comprise fabrics with limestone, calcite and flint inclusions, while some fabrics have combinations of one or more of these and, occasionally, grog. The colours of these fabrics are similar to those for the grog-tempered pottery (Figs 45 and 46, e-f).

The reduced (Figs 46 and 47, g-l) and oxidised (Fig 47, m-p) wares comprise a range of quartz-gritted fabrics with varying colours, surface treatment and texture The colours in which the reduced wares occur are various shades of grey, dark grey and grey-brown and some have different coloured cores; one grey ware is noticeably micaceous and another appears to be copying DOR BB1, at least in colour and surface treatment, if not fabric. Oxidised fabrics are buff, pink, reddish-yellow or reddish brown in colour, some with darker coloured cores. One variant has flecks of calcite in the fabric and a number of vessels occur in a finer reddish yellow ware.

Forms

Vessel forms were recorded using simple form letter codes. No attempt was made to identify joins, other than where certain features of fabric, colour, decoration etc. made this obvious. Those represented in the assemblage comprise various types of jars, bowls and dishes, together with a few flagons and cups, as well as mortaria, amphora and possible tankards. Recording of vessel forms, based on rims or other sherds where form identification was certain, identified some 196 different vessels, not including the amphora sherds which may have all been from one vessel. (Table 2).

Table 2: Pottery by fabric and vessel form

Fabric	Form	Jar	J/B	B	D	B/D	F	Cup	M	T	Total
Grog		32	-	-	-	-	-	-	-	-	**32**
Shell		1	-	-	-	-	-	-	-	-	**1**
Shell, grog, limestone etc		6	3	-	1	-	-	-	-	-	**10**
Limestone		6	1	-	-	-	-	-	-	-	**7**
Flint etc		3	-	-	-	-	-	-	-	-	**3**
Misc greys		56	1	-	1	5	2	-	-	-	**65**
Grey, micaceous		7	-	-	2	1	-	-	-	-	**10**
Reddish-yellow		11	1	7	-	2	5	-	1	2	**29**
Misc oxidised		3	-	-	-	1	2	-	-	-	**6**
OXF RS		-	-	-	2	-	-	-	-	-	**2**
OXF WH		-	-	-	-	-	-	-	1	-	**1**
DOR BB 1		5	-	1	2	1	-	-	-	-	**9**
DOR BB 1?		1	-	-	1	-	-	-	-	-	**2**
LGF SA		-	-	1	2	-	-	-	-	-	**3**
LEZ SA 2		-	-	2	7	2	-	3	-	-	**14**
Total		**131**	**6**	**11**	**18**	**12**	**9**	**3**	**2**	**2**	**194**

KEY: J/B = Jar or Bowl; B = Bowl; D = Dish; B/D = Bowl or Dish; F = Flagon; M = Mortarium; T = Tankard

Jars comprise over two-thirds of the vessels, occurring in all the fabrics bar samian and colour coated wares, (Figs 45-47, a-k, m-n). The jar range includes a number of large storage-type jars in grey-brown, grog and limestone gritted wares, while the rim forms of the more standard jars are curved, everted, plain, beaded or undercut. A number of the jars are globular in shape, especially in the grog and other gritted wares. Some of the grog-tempered jars have girth grooves and rilling or burnished lines while some of the jars in the dark grey ware reminiscent of DOR BB 1 have burnished surfaces and lattice decoration. One jar in a fabric which appears to have a shell and limestone mix has rouletted narrow horizontal and curvilinear decoration (Fig 46, f).

Bowls and dishes comprise around a fifth of the total. The LGF SA bowl form is a 29 and one in LEZ SA 2 is a Dr. 37 with a potter's stamp; the DOR BB1 bowl is a flanged type. The bowls in reddish-yellow ware include three carinated bowls, a plain rimmed bowl and imitations of Samian ware forms 30 and 38 (Fig 47, o). Two DOR BB 1

dishes and the two micaceous grey ware dishes have plain rims and the dish in the BB1-type fabric has a grooved rim. A curved sided flat rimmed dish occurs in a mixed limestone and shell fabric, while dishes in LEZ SA 2 include forms Dr. 18/31R or 31R, Dr. 31, Dr. 36 and Wa. 79 and in LGF SA form Dr. 36. The OXF RS dishes are imitations of Samian ware form 31. The vessels which could be either bowls or dishes include flanged types in grey-brown ware and flat rimmed in grey and reddish yellow wares. The LEZ SA 2 cups are forms Dr. 27 and Dr. 33. The flagons are in pink, buff or reddish yellow wares and include a ring-necked type. Only one of the mortaria has an extant rim and comprises a bead and flange type in a reddish yellow ware with a cream slip; the other is one with multi-coloured grits in OXF WH. Two other vessels in reddish-yellow ware appear to be from tankard-type forms (Fig 47, p). The DOR BB 1 and DOR BB 1-type bowls and dishes have characteristic decoration including burnished lattice, intersecting arcs or basal loops. One of the grey ware dishes has burnished lattice decoration on its internal base.

Sources

The nearest known kiln site to Malmesbury is at Minety, less than 10 kilometres to the north-east, where oxidised wares were produced (Swan 1984, 149). More kilns are known further afield in the vicinity of Swindon, at Lydiard Tregoze, Purton (Anderson 1980), Highworth and Wanborough. These kilns produced a range of oxidised and grey wares and are collectively part of the so-called North Wiltshire Industry (Anderson 1979). Another fabric, South West white-slipped ware (Tomber and Dore 1998, 192), may have been part of this production and the Wanborough products appear to have included micaceous wares. It is likely that there are other kiln sites belonging to this industry awaiting discovery. The grog-tempered pottery is almost certainly Savernake ware (Tomber and Dore 1998, 191; Seager Smith 2001, 235) produced at various sites south of Mildenhall, including Savernake, Pewsey, Milton Lilbourne, Oare (Swan 1975) and, probably, elsewhere (Swan 1984, Map 18). A Roman road is thought to have run from the Roman small town at White Walls, four kilometres to the west of Malmesbury, towards Mildenhall near Marlborough and this would have provided a trade route for these products and those from the kilns near Swindon. White Walls is also located on the important Roman road from Bath to Cirencester (Fosse Way) and some of the finer oxidised ware vessels, including the possible tankards, which may well be products of the Severn Valley pottery industry (Tomber and Dore 1998, 148-50), could have reached the site via this route. Definitely regionally traded wares present are from the kilns around Oxford (OXF RS, OXF WH) and Poole Harbour in Dorset (DOR BB 1). The samian ware was produced in the industries at La Graufesenque and Lezoux, while the amphora is from Southern Spain.

Date

The LGF SA has dates of *c*AD 50-75, 50-100 and 70 -100 but the majority belongs to the second half of the 2nd century, within the range *c*AD 120-200. A number of vessels and fabrics suggest activity in the later Iron Age, but most of the pottery can be dated to the Roman period. The kilns at Minety and Great Bedwyn were operating in the mid-1st to 2nd centuries, those at Purton in the 2nd and those at Lydiard Tregoze from the 2nd through to the 4th centuries. Savernake ware was produced from the mid-1st century well into the 2nd century while Severn Valley ware was in use outside of its local production area in the 2nd and 3rd centuries. The DOR BB 1, OXF RS and OXF WH wares suggest occupation at least into the 3rd century. The jar with rouletted narrow horizontal and curvilinear decoration may be of Saxon date.

Assemblage and site characteristics

The pottery is generally in good condition with little signs of abrasion and the average sherd weight is almost 13g. The average number of sherds per context is low at just over 6, but there are some larger fragments and one near complete vessel.

None of the features and other contexts were sealed and their general character means that material would have tended to become deposited in them for as long as they remained 'open'. As a result, although a physical chronological sequence of the activity on the site can be identified, most of the pottery assemblages within the various features and other contexts are of mixed date.

The preponderance of jars, together with the overall lack of fine wares and imported non local and continental material suggests a fairly utilitarian range of agricultural and domestic activities (one or two vessels has pierced bases and others were sooted or showed signs of burning) and a fairly low status, at least in the areas excavated. A possible attempt to mend a broken samian ware dish perhaps provided some evidence to support this view. The probability that much of the pottery used on the site came from sources some distance away suggests that the occupants of the site had contact with a wider area, with the small town at White Walls perhaps providing the centre at which pottery at other goods were obtained.

Selected features

The principal features identified are five enclosures, ten ditches and two post-built buildings. Table 3 shows the amount of pottery from the contexts relating to these features which, together, contain around half of the total pottery recovered.

Table 3: Pottery data by key features

Feature	NoSh	Wgt (g)	Rim EVE
Enclosure 2	129	1938	1.46
Enclosure 3	57	592	0.63
Enclosure 4	53	961	0.14
Enclosure 5	105	2713	2.3
Enclosure 6	80	640	0.77
Enclosure 6, SW annexes	54	649	0.05
Enclosure 6, N annexe	32	338	0.04
Ditch 1	8	218	0.22
Ditch 2	34	734	0.36
Ditch 3	24	564	0.35
Ditch 4	9	146	0.1
Ditch 5	32	338	0.04
Ditch 6	18	260	0.24
Ditch 7	62	380	0.53
Ditch 8	3	27	0.06
Ditch 9	27	236	0.16
Ditch 10	35	1058	0.12
Buildings Enclosure	3	10	-
Building 1	46	900	1.14
Building 2	7	66	0.08
Total Features	**818**	**12768**	**8.79**
Total Site	**1603**	**20727**	**14.99**

The contexts relating to the features also contain just over half of the vessels recorded (Table 4). The ratio of jars and bowls and dishes is the same as for the total assemblage, at three-quarters and a fifth, respectively.

Table 4: Feature fabric/form quantification

Fabric/Form	Jar	J/B	B	D	B/D	F	Cup	M	Total
Grog	20	1	-	-	-	-	-	-	**21**
Shell, grog, limestone etc.	5	-	-	1	-	-	-	-	**6**
Limestone	5	1	-	-	-	-	-	-	**6**
Flint etc.	3	-	-	-	-	-	-	-	**3**
Misc. greys	31	1	-	1	5	-	-	-	**38**
Grey, micaceous	4	-	-	-	-	-	-	-	**4**
Reddish-yellow	2	-	3	-	2	1	-	-	**8**
Misc. oxidised	1	-	-	-	1	-	-	1	**3**
OXF RS		-	-	1	-	-	-	-	**1**
DOR BB1	4	-	-	-	-	-	-	-	**4**
DOR BB1?	-	-	-	1	-	-	-	-	**1**
LEZ SA 2	-	-	-	4	-	-	1	-	**5**
Total	**75**	**3**	**3**	**8**	**8**	**1**	**1**	**1**	**100**

KEY: J/B = Jar or Bowl; B = Bowl; D = Dish; B/D = Bowl or Dish; F = Flagon; M = Mortarium

Enclosure 2

Twenty-two contexts (one from the 2011 evaluation) relate to Enclosure 2. The fabric proportions show a higher amount of grog-tempered, limestone and mixed tempered fabrics than the site as a whole (Table 1). There are 16 vessels recorded from Enclosure E2; 15 jars and one grog-tempered jar or bowl. Six of the jars are also grog-tempered (Fig 45, a-b), grey and limestone-tempered wares both have another three, with buff-coloured, flint-tempered and mixed-tempered fabrics having one each. The amount of grog-tempered, limestone and mixed tempered fabrics might indicate a date earlier in the overall site sequence, though the piece of LEZ SA 2 is dated *c*AD120-200.

Enclosure 3

This smaller assemblage from nine contexts is dominated by various grey wares. The vessel forms are five jars, a bowl and a bowl or dish. The latter two are both in a reddish yellow ware, while four of the jars are in various grey wares and the other, a neckless type, is in a limestone-tempered ware. One of the grog-tempered jars appears to have little grog and may be a variant of this ware.

Enclosure 4

The nine contexts comprising Enclosure 4 contain mainly grog-tempered and grey wares. Two sherds in a brownish-grey ware have clay particle roughcast decoration and some of the grey wares are similar to DOR BB 1. There are seven recorded vessels, two jars, three bowls or dishes and two dishes. Both jars and a dish are in grey ware and the base of the dish has internal burnished lattice decoration. The other dish is a LEZ SA 2 Dr. 18/31 dated *c*AD 150-200. The vessels which are bowls or dishes occur in reddish-yellow, buff-pink ware and LEZ SA 2. Much of the pottery would appear to be of 2nd century date, but the grog-tempered wares and the grey wares similar to DOR BB 1 suggest a wider overall date range, perhaps mid -1st to early 3rd centuries.

Enclosure 5

Thirteen contexts are associated with Enclosure 5. Grog-tempered wares are the most common but there are also significant amounts of sherds with limestone or mixed inclusions (Table 8). There are 18 vessels, all jars bar one jar or bowl. Five are in grey ware (Fig 46, g), including one similar to DOR BB 1, two in micaceous grey ware, four in grog-tempered ware and one in a fabric with mixed flint and quartz sand inclusions. The jar or bowl and another jar are in the fabric with limestone inclusions and both are globular vessels with the jar being a neckless type. Two of the three jars in the mixed inclusion fabrics are of storage size and the other is a neckless type. The remaining jar is in DOR BB 1. This vessel is likely to date to the 2nd or 3rd centuries and some of the other pottery is of 2nd-century date but the grog-tempered, shell, flint and mixed inclusion fabrics date to the late Iron Age to 1st century.

Enclosure 6

Grey wares account for most of the assemblage in the 11 contexts of Enclosure 6, including some which might be DOR BB 1. Eight of the 13 recorded vessels are in grey ware and comprise four jars and four dishes or bowls; two of the jars and one of the dishes or bowls are similar to DOR BB 1 in form and decoration. Two other possible DOR BB 1 vessels are a jar and a dish with external burnished lattice decoration. A possible flagon and a carinated bowl occur in a reddish-yellow ware and there is a Dr. 31 dish in LEZ SA 2. The date range is mainly 2nd century with some pottery that may be 3rd century in date.

Enclosure 6 south-west annexes

Grey wares also comprise the bulk of the pottery in the seven Enclosure 6 south-west annexes contexts. There are seven recorded vessels, two jars in grog-tempered ware, two jars in grey ware, a jar in micaceous grey ware and a LEZ SA 2 DR. 31 dish and a Dr. 33 cup. One of the grog-tempered jars is of storage size and one of the grey ware jars is similar to DOR BB 1. The date range is again mainly 2nd century with some pottery that may be 3rd century in date.

Ditch 2

Grog-tempered and grey wares account for most of the pottery in the six Ditch 2 contexts. There are five recorded vessels, a grog-tempered storage jar, two grey ware jars, a grey ware flanged dish or bowl and a possible bowl in reddish-yellow ware; one of the grey ware jars is similar to DOR BB 1. There is a mixed date range with the grog-tempered ware, shell-gritted ware and flint-gritted ware likely to date to the 1st century, possibly earlier and the grey ware, reddish-yellow ware and possible DOR BB 1 being 2nd perhaps into the 3rd century.

Ditch 3

Only three contexts relate to Ditch 3 and they contain a relatively small assemblage. Fabrics with flint or mixed inclusions feature strongly. There are only three recorded vessels, all jars, one each in flint-gritted ware, a mixed inclusion fabric and a dark grey ware; the latter is again similar to DOR BB 1. The date range of the fabrics with flint, shell or mixed inclusions is late Iron Age to 1st century but the grey ware is later, probably 2nd century or after.

Ditch 10

There are also only three contexts relating to Ditch 10 with grog-tempered, miscellaneous oxidised and grey wares accounting for most; 20% by weight comprises a sherd of amphora. Apart from this there are two jars, a jar or bowl and a dish, the latter a Dr. 31 in LEZ SA 2. One of the jars is a grog-tempered storage jar and the other is in a reddish-yellow ware. The jar or bowl is a neckless globular grey ware vessel. A 1st to 2nd century date range seems likely.

Structure 1

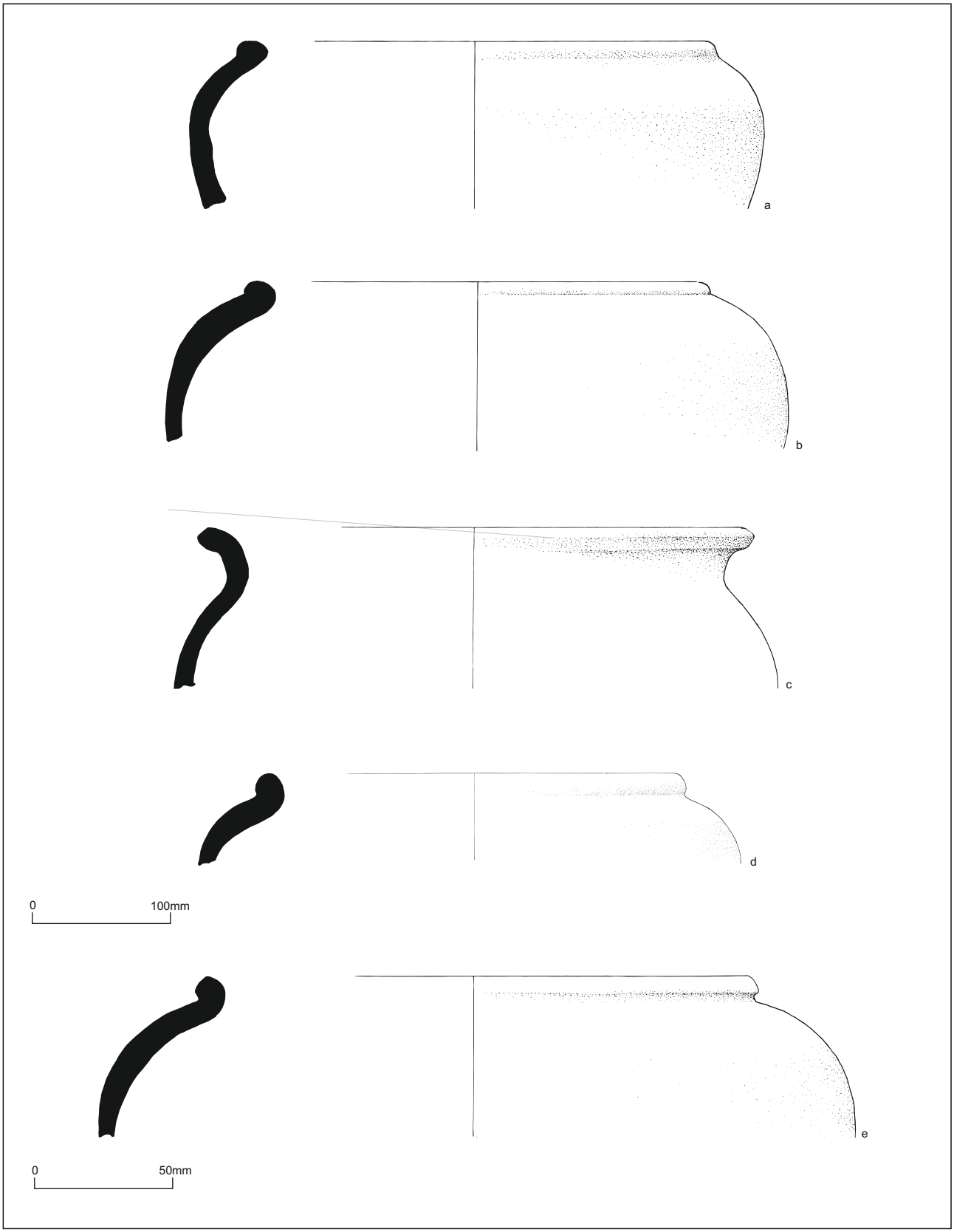
Ten contexts relate to Building 1. Various grey wares and mixed limestone and shell-tempered wares comprise the bulk of the assemblage accounting for around 40% each with grog-tempered wares providing around another 10%. Of the 11 recorded vessels from these contexts, all bar an OXF RS imitation samian form 31 dish are jars, which occur in all the other fabrics other than shell-gritted (Fig 46, f, j). The presence of DOR BB 1 and OXF RS suggests a date for activity associated with the buildings later in the overall site sequence. Vessel 'f' is interesting in that its form and particularly its decoration may suggest a Saxon date (Fig 46: f). It comes from a pit/post-hole which lies outside Structure 1.

Pottery catalogue

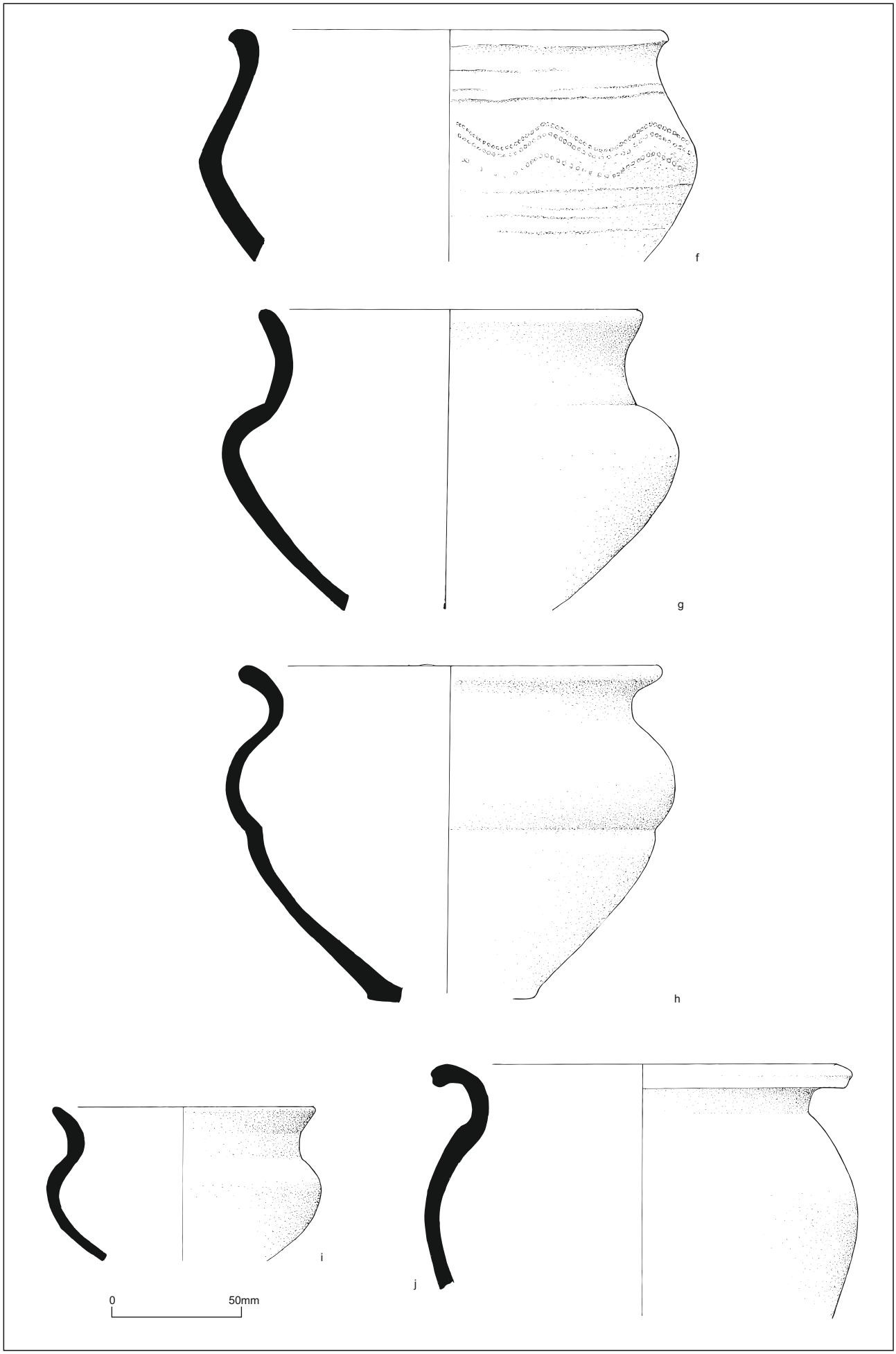
A full description of the decorated unillustrated sherds of pottery and the illustrated sherds can be found in Appendix 1.

Samian ware by J M Mills

The three earliest sherds, all likely to be from the first century kilns of La Graufesenque, include a scrap from the upper zone of a decorated Dr 29 bowl of Neronian or early Flavian date and a base sherd probably from a Flavian Dr 36 dish. The remaining sherds are from vessels made at Lezoux in Central Gaul from *c*AD120 -200. The range of forms identified is a limited, and includes examples of dish forms Dr18/31R or 31R (1), Dr 31 (4), Dr 36 (1) and Walters 79 (1), cups Dr 27 (1) and Dr 33 (1) and a small sherd from a Dr 37 bowl with a scrap of an intradecorative mould stamp which unfortunately could not be identified. With the exception of the Dr27 cup which dates AD120-160, the sherds probably belong to the second half of the second century. The Wa 79, possibly the latest vessel in the group, has been prepared for repair by the cutting of 'X' shaped slots although no lead survives to show that the repair was completed.

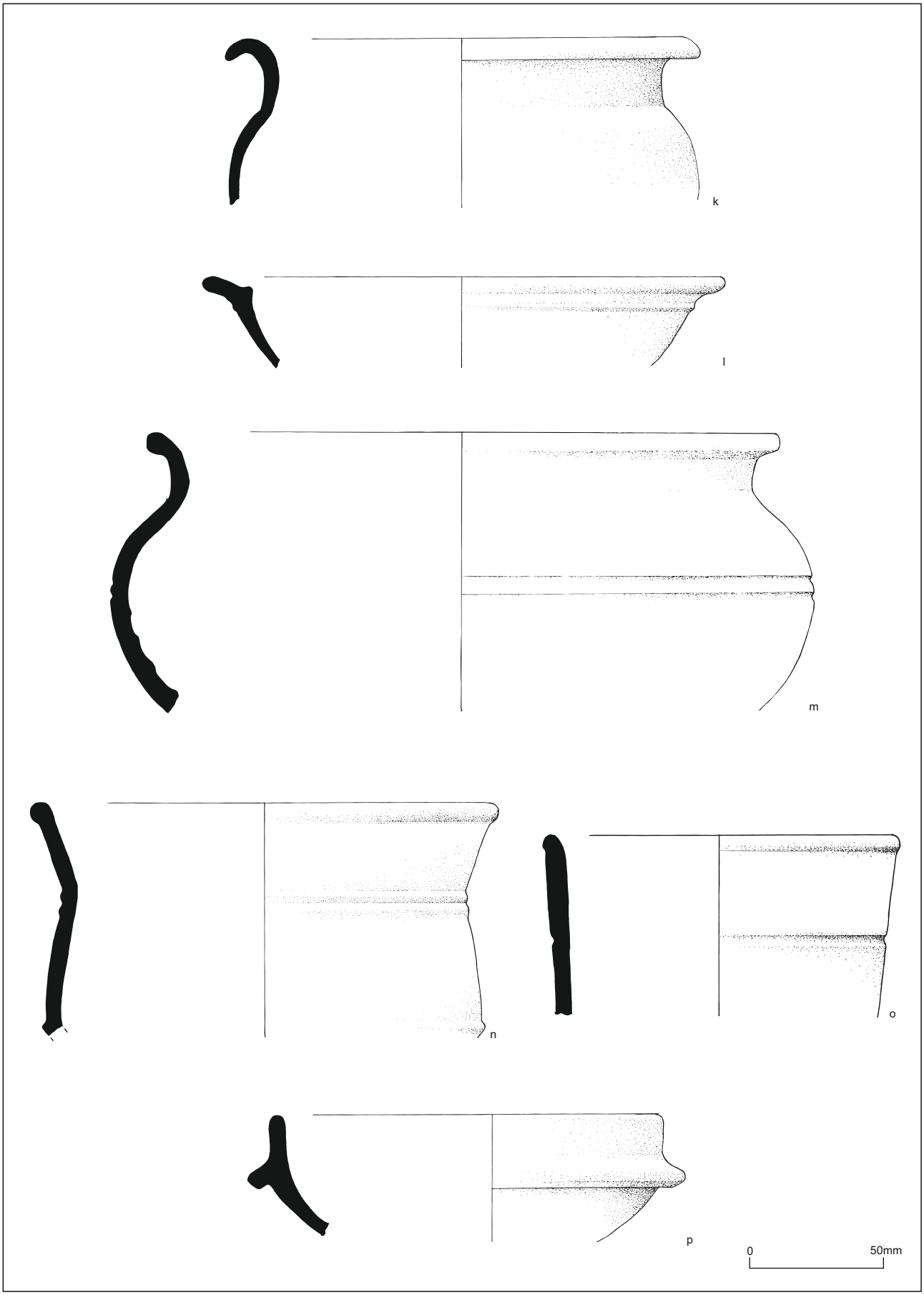


Scale 1:2, 1:4 (d) Illustrated pottery a-e Fig 45



Scale 1:2

Illustrated pottery f-j Fig 46



Scale 1:2

Illustrated pottery k-p Fig 47

6.2 Ceramic building material by Pat Chapman

Ceramic tile

This assemblage of 47 tile sherds weighs 9.3kg. It comprises 21 sherds from roof tiles, floor tiles and a flue tile, with 26 undiagnostic body sherds and fragments (Table 5). These are small weathered sherds. An additional 1g of tile was recovered from an environmental sample taken from fill (624) from ditch [623].

The fabric is predominantly fine pale orange sandy clay for 62% of the assemblage; a fine reddish clay comprises a further 25%, both of these fabrics include tiny calcareous and grog inclusions, with the occasional chunk of burnt flint or lump of chalk. The floor tiles are made from coarse red sandy clay. The other fabrics include a pinkish-brown body sherd and one sandy grey.

Of the roof tiles there are 14 *tegula* and three *imbrex* sherds. Two *tegulae* have had the flanges knocked off, while a further four only have the flange surviving. The surviving flanges are typically 40-45mm high and 20-30mm thick. The bodies are 15-25mm thick, one slightly larger tile has a flange 55m high with a body 30mm thick. There is white slip surviving on one flange, possibly for decorative purposes.

One of the three *imbrex* tiles, from fill (782), ditch [750], is 20mm thick and would have quite a wide span and could therefore be a ridge tile. There is one plain box flue tile sherd from fill (196), gully [197].

The floor tile sherds and fragments, from fill (865) feature [866], are 65mm thick and are probably all from one tile; one large sherd has a nail hole on the top surface, 10mm in diameter and tapering to 35mm deep. Remnants of a two finger swirl survive on another sherd. A sherd from fill (522), ditch terminus [523], is 60mm thick and another sherd from fill (538), ditch terminus [540], is a minimum of 50mm thick. These are most likely *bipedalis* tiles, which were generally used to bridge the gap between the *pilae* of a hypocaust and form a solid base for a floor.

The small number of tile sherds indicates that there had been at least one tiled building in the vicinity, maybe a bathhouse, but the small and weathered nature of the sherds implies these are the end result of a midden scatter.

Table 5: Quantification of ceramic roof tile

Fill	No	Wt (g)	Description
50	1	266	Tegula
82	1	110	Tegula
86	4	480	Tegula; 3 body
109	1	73	Imbrex
114	2	702	Tegula, flange gone; body
138	1	203	Tegula
196	3	285	Tegula, flange only; box flue; fragment
236	1	80	Body
335	1	58	Tegula
347	2	370	Tegula x 2, one missing body
522	1	180	Floor type
536	1	22	fragment
538	2	420	Tegula x 2 – one flange only
558	1	350	Floor – 2 joining sherds
561	1	50	Imbrex
565	1	14	Fragment
574	1	7	Fragment
605	1	68	Body
631	1	31	Fragment
634	3	30	Fragments
645	1	72	Body
698	1	350	Tegula
720	1	20	Body
745	1	347	Body
782	2	757	Tegula, 2 joining; imbrex, possible ridge
865	1	2045	Floor tile 60mm thick- nail hole
865	1	940	Floor tile 60mm thick- finger swirl
865	7	1000	Tegula, 5 floor tile fragments, body
875	1	32	Fragment
Total	**47**	**9362**	

Fired clay

The 105 fragments of fired clay, hand collected from 21 contexts, weigh 924g, with an average weight of 9g per fragment; half of the assemblage comes from one context (Table 6). A further 928g of small fragments of fired clay were recovered from environmental samples taken from 15 contexts across the site (Table 6). A total of 843g of the material recovered from samples came from pit [738], discussed below.

The fragments are generally hard, often pale orange to orange and/or brown, a few are grey and occasionally black. In shape they are typically flattish, sometimes with one smooth surface. Two fragments have a smooth curved surface, from contexts (249), posthole [250], and (911), posthole [912]. A few are irregularly-shaped. There are no wattle or other impressions.

The remains of a possible object comes from fill (31), gully [32]. The remains are 100mm long with a 40mm radius tapering to 15mm radius, made from very fine

blocky hard brown clay and the surface has been carefully smoothed. It is possibly the broken narrow top end of a pedestal.

The material from fill (736/737), pit [738], totalled 1.2kg and represented 65% of the assemblage by weight. It comprises blocky chunks, typically 15mm thick with a flattish, quite hard pale grey surface over dark brownish-black clay.

This fired clay is not oven or hearth debris, apart from a few small pieces. They seem to be more likely to have either come from the lining of some structure not subject to great heat or have been wall infilling. It is of note that small amounts of fired clay were recovered from all of the enclosures within the excavation are though hardly any was recovered from features associated with the post-built structures.

Table 6: Quantification of fired clay

Fill	Cut	Type	Group	Sample	No	Wt (g)
8	11	Ditch	Ditch D2	-	1	7
31	32	Gully	Enclosure E2	-	1	195
122	124	Ditch	Enclosure E2	-	1	12
134*	135	Pit	Enclosure E1 NW Annex	8	-	3
146*	147	Ditch	Enclosure E1	35	-	1
159	161	Ditch	Enclosure E5	-	2	30
159*	161	Ditch	Enclosure E5	32	-	14
181	183	Ditch	Enclosure E2	-	8	60
199	202	Ditch	Enclosure E5	-	1	5
249	250	Pit	Enclousre E1	-	3	25
325	326	Gully	Enclosure E6 SW Annex	-	1	7
361*	363	Ditch	Enclosure E1	38	-	1
364	367	Ditch	Enclosure E1	-	1	5
391	393	Ditch	Enclosure E6 SW Annex	-	2	5
398*	400	Ditch	Enclosure E2	36	-	1
421	423	Pit	Enclosure E6 NW Annex	-	1	5
425	426	Gully	Enclosure E6 NW Annex	-	2	5
427	429	Gully	Enclosure E2	-	2	22
430	432	Ditch	Enclosure E2	-	2	8
433	434	Ditch	Enclosure E2	-	1	60
456*	456	Ditch	-	10	-	18
510	512	Ditch	Enclosure E2	-	1	4
561	562	Ditch	Enclosure E4.1	-	6	20
581*	583	Ditch	Enclosure E5	15	-	1
618*	619	Ditch	Enclosure E3	37	-	4
625*	626	Posthole	Structure 2	2	-	2
645	646	Ditch	Enclosure E4.1	-	1	23
725*	726	Ditch	Enclosure E5	21	-	2
736*	738	Pit	Enclosure E4.2	23	-	741
737	738	Pit	Enclosure E4.2	-	58	360
737*	738	Pit	Enclosure E4.2	24	-	102
779*	781	Pit	-	25	-	27
832	834	Ditch	-	-	8	36
855*	858	Pit	Enclosure E4.2	29	-	3
857*	858	Pit	Enclosure E4.2	30	-	8
911	912	Posthole	Enclosure E5	-	2	30
Totals					**105****	**1852**

Key: * - Material recovered from sample; ** - Does not include material recovered from samples

6.3 Coins and other non-ferrous finds by Ian Meadows

A total of 22 non-ferrous objects were recovered during the excavation from pits ditches and gullies as well as some unstratified contexts. The majority of the finds can be dated to the Roman period though a number of post-medieval objects were also identified. A full description of each object by material type is presented below

Copper alloy

SF 2 (unstratified) Large circular (31mm diameter) copper-alloy button with a slightly domed outer surface and a concave underside with central attachment loop. Both faces preserve a white metal coating. Post-medieval

SF3 (unstratified) Part of the bow and one wing of a head stud type brooch. The preserved portion of the bow incorporates the setting for paste lozenges, one complete one and part of a second being present, down the centre. The head of the bow to the wings has two deeply incised grooves. A single closed wing survives that would have held a bar on which the pin hinged. Later 1st century into mid 2nd century AD.

SF4 (Post-medieval ditches) Part of a jetton with an obverse legend of –INCKEL IN NVR and a reverse of OTES.SEGEN. The reverse would originally have read GOTES SEGEN MACHT REICH (God's blessing brings riches). The Krauwinckel dynasty of jetton makers operated between 1543 and 1635 from Nuremburg, as the obverse legend is incomplete a closer date is not possible.

SF5 (Post-medieval ditches). A suspension ring 24mm across externally 16mm across internally. The piece bore signs of rough filing of the surface. The piece is not closely dateable.

SF6 (Post-medieval ditches). A Langton Down brooch preserving the head, flattened bow and part of the catch plate. The head had a line of beading at its junction with the spring case, the tapering bow was fluted with two raised ridges on the upper surface which were slightly beaded. The partial catch plate preserved part of a circular perforation. First half first century AD.

SF7 (unstratified) A domed stud 20mm in diameter and 4mm high. The outer convex surface appeared to be plain and a single square section shaft extended from the centre of the concave element. This shaft barely extended beyond the line of the domed head and was slightly bent at the end as if clenched. Although not closely datable the piece may be from either a piece of furniture or saddlery.

SF8 (unstratified) An irregular but near circular piece of metal 39mm across, bent into three. No perforations or surface decoration was evident.

SF10 (080) ditch [81], part of Enclosure 6. A penannular brooch of Mackreth type f1.a. (Mackreth 2011). This example had is in two pieces and missing one terminal, it had been bent in antiquity so the terminals crossed, and there was no sign of the pin. The piece was originally about 25mm across externally and comprised a plain circular cross section rod with an undecorated folded over terminal. Roman.

SF11 (157) gully [158], part of Iron Age ditch D1. A 45mm length of plain circular cross-section wire *c*1mm across. This bent and distorted piece could be the remains of an ear-ring but is too fine to have served as a pin in a brooch or similar. Not closely datable.

SF21 (327) ditch [328], part of Enclosure 1. A brooch pin 34mm long and two coils of the spring.

SF23 (Enclosure 4.1) An 11.5mm diameter coin. The piece is a contemporary copy of a Constantinopolis issue with the helmed head of Constantinople on the obverse and

victory in the prow on the reverse. This example also has a poorly formed version of a Trier mint mark (PTR) in the exergue. Post AD330.

SF25 (Period 1.4, possibly Enclosure 4.2). A rectangular piece of sheet metal 41 x 29mm and 0.5mm thick with unfinished rough edges. The piece bore a rippling which might reflect it had been rolled and then unrolled. Both faces were plain but near one corner a small rectangular hole (2 x 1mm) was present where something had been driven through, part of a second was visible near one of the edges. Not closely datable.

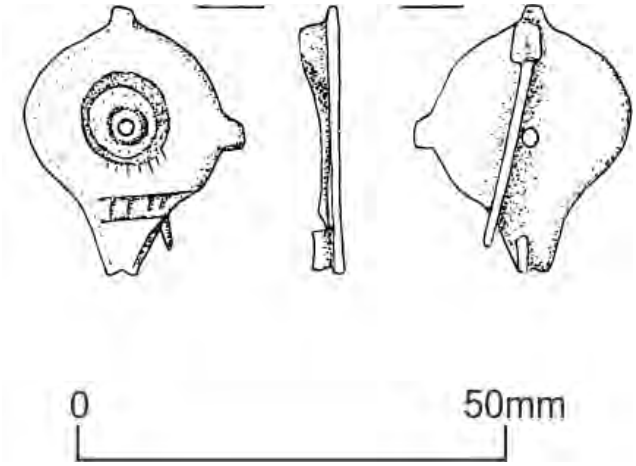
SF27 (Period 1.4, Boundary ditch D10). A button 22mm diameter with a central rear loop for attachment. The piece was coated in a white metal but otherwise plain. Post-medieval/modern.

SF28 (745) pit [746], part of Period 1.5 - Structure 1. A poorly formed coin of Carausius, 23mm diameter. The obverse bore a radiate head and the partial legend IMPCAR – AVG, the rest of the legend going off the edge of the mis-struck flan. The reverse bore the figure of Pax with the legend PAX AVG, sadly no mint mark was present. AD287-293

SF29 (Unstratified) Part of a circular button 27mm diameter with an attachment loop on the rear. Both faces had been coated in a white metal. Post-medieval/modern.

SF30 (Unstratified) A Colchester derivative brooch complete apart from pin and part of the spring. The solid catch plate and bow were both plain as were the short wings. One coil of the spring was present either side of the head and a second hole was present further up for the second loop of the spring. First into early 2nd-century AD.

SF40 (605) ditch [606], part of Period 1 - Enclosure 3. A continental imported plate brooch (Fig 48). The shape of the plate is that of a Roman lamp with the longer neck extending at the catch plate end and short extensions at the other cardinal points. A narrow zone (2mm) comprising two parallel grooves with other near perpendicular grooves between divided the circular plate from the extending neck. The centre of the circular portion bore three concentric circular grooves, around the outer of which there may originally have been some milling, and a central circular setting. The surface of the piece bore slight traces of a possible white metal coating, no enamel was however noted in the grooves or circular setting. The reverse side was plain with a simple hinged pin characteristic of these continental pieces (Mackreth op cit 167). In terms of dating there are few examples from England and the only example in the Mackreth corpus is assigned a date of AD43-50.



SF40, continental brooch Fig 48

SF42 (736) pit [738], part of Period 1.4. The foot and part of the catch plate from a headstud type brooch. The bow preserves six lozenge shaped cells of blue glass/enamel down the middle. The plain foot knob was separated from the enamel by a transverse groove. This type of brooch dates to the later 1st century ceasing to be used by about AD125.

SF43 (0745) pit [746], part of Period 1.5 - Structure 1. An 18mm diameter coin with a bearded radiate head on the obverse with the partial legend –LIENVSAVG indicating an issue of Gallienus AD253-268. The reverse bore a doe with only the AVG visible of the legend although the base of several other letters could be seen, the complete original legend would have read DIANAE CONS AVG.

Glass

SF31 (416) ditch [419], part of Period 1.2 - Enclosure 2. A small plain pale blue glass bead. 5.5mm diameter and 4mm thick with a central perforation of about 1.5mm. This simple type of bead has a long life from the first century through the 4th century AD (Guido 1978, 95.).

SF35 (461) pit [462], part of Period 1.2 - Enclosure 2. A piece of pale blue glass 26 x 20mm and 3mm thick. The piece had a curvature suggestive of a cylindrical bottle body. Probably Roman.

Ceramic

SF34 (442) pit [443], part of Period 1.2 - Enclosure 2. Part of a spindle whorl made from a sherd of pottery. The piece had an original diameter of about 35mm and was at least 8mm thick, with a central perforation 9mm diameter. The piece had been turned from a sherd of pottery as could be seen from the surviving portions of the original surfaces. Roman.

6.4 **The iron finds** by Tora Hylton

In total 33 objects and miscellaneous fragments were recovered from 14 individual deposits. In addition a further 11 objects were recovered during the sieving of soil samples making a total number of 44 objects. With the exception of one object from topsoil, all the finds were recovered from stratified deposits. The majority of stratified finds were located within the fills of ditches [26, 161, 544, 639], gullies [864] and pits [135, 221, 746, 858] dating to the first and second centuries AD, while a small number of finds were recovered from medieval/post-medieval soil deposits (Feature 94 and Ditches 288, 478). A full catalogue of the objects can be found in Appendix 3.

Roman finds

Of interest is the presence of a complete plough share. The remaining assemblage is dominated by nails (x 20), in addition there are numerous undiagnostic fragments (rods, sheet, strips and nodules); all are too small or fragmentary to identify with certainty.

As is often the case, the most interesting find recovered from an excavation is unstratified. In this case, a plough share was recovered from topsoil. This particular example (SF 9) takes the form of an iron tip (share tip) which would have been placed on the wood foreshare of a bow ard. The share tip comprises a flat rectangular-sectioned bar with rounded edges; it tapers to a rounded point at one end and an

open flanged socket at the other. Stylistically it equates to Rees Type 1a (1979, 49ff), the most common plough share recovered and a type that was in use from the early Iron Age through to the Roman period. Rees has indicated that early examples of share tips are relatively short in length and they increase in size over time ranging from *c*7.2cm to up to 54cm in length. The Malmesbury example measures *c*219mm in length, midway between the lower and upper range in sizes. It is similar both in form and size to an example from Walthamstow, Essex (Manning 1985, fig 17, F3) for which Manning has suggested a date close to the Roman Conquest.

In total 20 complete and fragmentary nails were recorded. The majority were recovered from enclosure ditches [26, 161, 369, 460], while the remainder were retrieved from the fills of pits [135, 858]. Where possible the nails have been classified according to Mannings Typology (1985, fig 32). The majority of the identifiable nail types are represented by Type 1b which have a flat sub-circular head; complete examples range in recorded length from 27mm to 69mm. The nails were presumably used for furniture or light structural fixings. The only other type of nail represented is Mannings Type 8, a dome headed nail which Manning suggests is an upholstery stud. These are incomplete and they were recovered from ditch [460].

Medieval/Post-medieval finds

An amorphous fragment and six nails were recovered from medieval/post-medieval features. Only one item is worthy of note is a horseshoe nail which typologically dates to the 13th and 14th century. The head of the nail has a rectangular expanding head with 'ears' (cf Clark 1995, fig 66a) and terminal of the shank is 'spiral 'clenched (ibid 1995, fig 66b). Clarke has suggested that 'spiral clenching' permitted the tightening of loose horseshoe nails (1995, 87).

6.4 **Querns and grinding stones** by Andy Chapman

From the fill (440) of pit [441], part of the later pitting with in Enclosure 2 (see section 5.2), there is a small fragment from the circumference of a rotary quern in Old Red Sandstone from the Forest of Dean, characterised by the presence of scattered inclusions of large rounded quartz, up to 35mm long. The broken edges are worn from secondary use. The stone is up to 55mm thick and the quern would have been at least 550mm in diameter. The chamfered circumference and the slightly concave grinding surface indicate that it was an upper stone from a typical flat quern of Roman date.

A further unstratified find (SF55) comprised a sub-rectangular block of coarse sandstone, possibly millstone grit, 285mm long by 190mm wide and 70mm thick with a worn upper surface (Fig 49). The grinding surface is consistently convex across the width of the stone along its entire length, and is very slightly convex longitudinally. This indicates that this is not a fragment from a quern or millstone, but a grinding stone. Highly polished areas around much of the circumference suggest that the stone is complete, although the grinding surface has been lost along part of one edge.

Unstratified grinding stone (Scale 20mm) Fig 49

6.5 **Metalworking debris** by Andy Chapman

Twelve deposits produced a total of 948g of metalworking debris, varying from 3g to 283g per context. It is a mixed assemblage comprising small lumps of both ferrous slag and fuel ash slag, either separate or sometimes from the same context. There is no classic tap slag, as derived from slag-tapping smelting furnaces, but much of the ferrous slag does have fluid surfaces. However, the quantities recovered are very small, so it seems most likely that the material derives from a short-term episode of iron smithing. From the fill (507) of ditch [508], part of possible Iron Age ditch D1, there is most of a sub-circular 'cake' of slag, 70mm in diameter, with a fluid upper surface, which may be a smithing hearth bottom.

6.6 **Post-medieval glass** by Tora Hylton

Five shards of green bottle glass comprising one neck fragment and four base shards were recovered from one in a series of post-medieval ditches in the southern corner of the site (fill (286), cut [288]). The neck shard appears dull/iridescent and although exceedingly worn, part of a protruding string is apparent towards the top of the neck. The height of glass surviving beyond the string suggests that typologically this neck fragment may originate from a 17th-century wine bottle. The base shards represent two different *c*18th-century wine bottles; both are furnished with high kicks, measuring in excess of *c*50mm high and *c*12mm thick. The wall fragments of the bottles are relatively thin, measuring *c*5mm thick. The exterior and interior surfaces are pitted and display signs of lamination.

6.7 **Clay pipe** by Tim Upson-Smith

Five clay pipe stem pieces were recovered from a single context (286), part of a series of post-medieval ditches in the southern corner of the site, dating between the early 17th-century to the 19th-century (Oswald 1975). The assemblage is a small one and is likely to have derived from manure spreading.

7 ENVIRONMENTAL AND FAUNAL EVIDENCE

7.1 **Animal bone** by Philip Armitage

This report summarises the results of the analysis of the 511 hand-collected animal bone elements/fragments recovered from Roman enclosures, ditches, gullies and two post-built structures. Of the total 511 bones, 418 (81.8%) are identified to species and anatomy (part of skeleton); with the majority of identified bones (326/418 = 78%) from the enclosures and ditches (Tables 7 & 8). Overall, five mammalian species are represented in the submitted animal bone material: horse - *Equus caballus* (domestic); cattle - *Bos* (domestic); sheep - *Ovis* (domestic); domestic pig - *Sus* (domestic); and dog - *Canis* (domestic). There is a single bird taxa present: domestic fowl *Gallus gallus* (domestic). No fish, amphibian or reptiles are present. An additional 685g of animal bone from 52 contexts was recovered from environmental samples taken during excavation. The majority of the material comprises unidentifiable bone elements though a very small amount of possible fish/amphibian bones were noted (see Appendix 2).

Table 7: Summary counts of numbers of identified specimens (NISP) by taxon and feature

	Enclosures	**Ditches**	**Gullies**	**Pits**	**Buildings**	**Total**	**%**
number of features	6	13	6	12	3	-	-
number of contexts	31	37	7	16	5	-	-
cattle	79	93	21	13	3	209	55.1
sheep/goat	52	37	-	12	3	104	27.4
pig	4	4	-	1	-	9	2.4
horse	11	12	2	8	-	33	8.7
dog	1	1	21	-	-	23	6.1
domestic fowl	-	-	-	1	-	1	0.3
Totals	**147**	**147**	**44**	**35**	**6**	**379**	**100%**

Table 8: Summary counts of numbers of loose teeth and indeterminate mammal bone fragments

	Enclosures	**Ditches**	**Gullies**	**Pits**	**Buildings**	**Totals**
Loose teeth:	-	-	-	-	-	-
cattle	-	-	-	-	-	-
upper cheek teeth	1	3	-	-	-	4
lower cheek teeth	-	1	-	1	-	2
sheep/goat	-	-	-	-	-	-
upper cheek teeth	1	-	-	2	-	3
lower cheek teeth	-	4	-	1	-	5

pig	-	-	-	-	-	-
incisor	1	-	-	-	-	1
canine	1	-	3	-	-	4
horse	-	-	-	-	-	-
upper cheek teeth	7	12	-	-	-	19
lower cheek teeth	1	-	-	-	-	1
Totals	**12**	**20**	**3**	**4**	**-**	**39**

Methodology

Basic NISPs (number of identified specimens present) data were collected for species/taxon and anatomical determinations. For the purposes of quantification, where fragments/pieces of the same bone elements that had either been broken post-deposition/ *in situ* in antiquity and/or during excavation/post-excavation handling were able to be refitted together, these were counted as single NISPs. Measurements (in mm) were taken on selected elements using a Draper dial calliper (graduated 0.02 mm) following the system of von den Driesch (1976).

Identifications of taxon/species were carried out using the author's modern comparative osteological collections. Wherever possible, sheep and goat bones and teeth were differentiated following Boessneck *et al*'s (1964) and Payne's (1985) criteria. Although no positive identifications of goat were made and all elements with diagnostic features proved to be sheep, it remained a possibility there may have been a few unrecognised goats among the broken elements. All ovicaprid material in this report is therefore referenced as sheep/goat, except where specific mention is made to positively identified sheep elements. Cattle horn cores were classified according to the system of Armitage & Clutton-Brock (1976). Sex in cattle innominate bones was determined using the criteria of Grigson (1982) and in sheep innominate bones by applying the criteria of Armitage (1977). Howard's (1963) indices were calculated to determine sex in the cattle metapodial bones. Pig lower canine teeth (tusks) were sexed using the methodology of Mayer and Brisbin (1988). Patterns of eruption and wear in mandibular cheek teeth were recorded in order to determine age at death; in cattle (classification of Bond and O'Connor 1999 & Halstead 1985 referenced in Hambleton 1998: 115) and in sheep (system of Payne 1973). Crown heights in cheek teeth (method of Levine 1982) and incisor wear (AAEP 1966) were used to determine ages in the horse dentition. Withers heights in cattle were calculated from measurements taken on complete adult long bones using the methods of Fock (see von den Driesch 1976) and Matolsci (*ibid*). With horse long bones the factors of Kiesewalter were applied to estimate withers heights in the living animals. All these methods for establishing withers heights are referenced in von den Driesch and Boessneck (1974).

Preservation & modifications of the bone

The general condition/state of preservation of the bones is assessed as fair to good with virtually no evidence of sub-aerial weathering/exposure before burial. However, a relatively high degree of fragmentation was noted in the crania and lower jawbones of the horses, cattle and sheep, which may be explained by their disposal in the enclosures, ditches and gullies where they would have been subjected to post-depositional disturbances/damage including, possibly, reworking of the deposits from remodelling of the layouts of the enclosures (see Section 5.2). In particular, these disturbances might also account for the much abraded/eroded condition of the cattle bones from Enclosure 3 contexts (468) and (618).

Many of the recovered bones from across the site were in a brittle state resulting from alternate episodes of leaching and drying in the ditches and gullies – and in consequence have been fragmented during excavation and post-excavation handling. Adverse taphonomic conditions following disposal/deposition may also account for the paucity of very young specimens (e.g. neonatal sheep) and must be considered in the interpretation of the site's livestock economy (see below).

The quantities of butchered and dog-gnawed bone are low (Table 9) with no overall discernible spatial pattern other than a possible indication of a higher incidence of chopped and dog-gnawed cattle bones in the ditches. Apart from a small concentration of nine calcined very small/scrappy bone fragments and one partially charred pig calcaneum from context (855), the fill of the large sub rectangular pit [858] at the north east edge of the site, only two other bones (both sheep) from the site exhibit evidence of burning (both charred black): one metatarsus from possible Iron Age ditch D1 and one long bone shaft piece from (727) (Enclosure 5).

Knife cutting marks, evidence for skinning/hide removal during the primary butchery/carcase reduction process, are noted in the following specimens:

- 1 cattle metacarpus from context (187), fill of ditch [189], part of Enclosure 2 in north-west corner of the site.
- 1 horse metatarsus III from (138), Enclosure 1.
- 1 horse tibia from (461), fill of small pit [462] in north central part of Enclosure 2.

The tibia also exhibits destruction of the distal end from dog gnawing; indicating horse flesh was fed to dogs. None of the horse bones from this site however exhibit any evidence (butchery) that horse flesh was being consumed by humans.

Table 9: Butchered, dog gnawed and burnt bones by feature

	Enclosures	**Ditches**	**Gullies**	**Pits**	**Buildings**	**Totals**
chopped bones:	-	-	-	-	-	-
cattle	1	4	-	1	-	6
knife cut marks:	-	-	-	-	-	-
cattle	1	1	-	-	-	2
sheep	1	-	-	-	-	1
horse	1	-	-	1	-	2
dog-gnawed bones:	-	-	-	-	-	-
cattle	1	7	-	-	-	8
horse	-	-	-	1	-	1
Cattle-sized fragments	-	-	1	-	-	1
burnt bones:	-	-	-	-	-	-
sheep	1	-	1	-	-	2
pig	-	-	-	1	-	1

v.small/extremely "scrappy" frags.	-	-	-	9	-	9

An example of bovine spavin, a chronic pathological condition sometimes found in the hock joints of draught cattle (Baker & Brothwell 1980, 117-119; Bartosiewicz 2013, 43, 122-125) is evident in a metatarsus and associated tarsal bones from context (430), Enclosure 2. In this adult animal, the os centrotarsal (naviculo-cuboid) and cuneiform (smaller tarsal bone) are both fused to the proximal articular surface of the metatarsus. There is no evidence the astragalus was involved and this condition would have therefore only caused a relatively mild degree of lameness - but it perhaps would have rendered this animal only useful for slow, less demanding, draught work. A similar example of bovine spavin was identified among the cattle bones from the Romano-British site at Booth Rise, Northamptonshire (Armitage 2014).

Descriptions of the species

Horses – Withers heights ranging from 1.17 to 1.29 m (mean = 1.24 m) in five animals are calculated from the lateral length measurements taken on their limb bones. Apart from the smallest individual, all the Malmesbury horses represented by these bones would have been slightly taller in stature than the modern New Forest pony skeleton in the collections of the Natural History Museum London (reg.no.H37) whose withers height was 1.22 m. Based on the dentition, the horses at the Malmesbury site ranged in age from 6 to 16 years, with one individual over 20 years; all therefore were of working age. No foal/very young horse bones are present among the faunal remains, suggesting horse breeding did not take place at the site.

Cattle – At least one young adult medium-horned animal is represented by a left horn core from (178), Ditch 2. Two other horned cattle are represented by horn core fragments from (467) and (618), both contexts from Enclosure 3.

Based on the available metric data, the following withers heights are calculated:

- cows 102.6 – 112.1 cm mean 108.6 cm (N = 4)
- cows/castrates 105.6 & 115.0 (N = 2)
- bull 116.2 cm

Cows appeared to outnumber bulls based on sexing the innominate bones and complete metapodial bones (Table 10) and from the dentition examined the majority of the cattle appeared to have been fully adult at time of death/slaughter. Evidence for the presence of at least two calves at the site however is provided by a metacarpus from (14) and a tibia from (118) both contexts from Ditch 2.

Sheep – All the sheep would have been small, slender-legged animals similar in appearance to the modern Soay. Withers heights are calculated in three individuals: 52.2, 65.5 and 66.5cm. A horned sheep (sex and age indeterminate from the incomplete horn core/cranial fragment) is represented among the remains from (518) Enclosure 2. No polled (naturally hornless) are identified.

Pig – In the absence of any complete adult long bones it is not possible to determine stature in the pigs represented but it seems from their general size that all the pig bone elements from the site derived from domestic rather than wild animals. Using the morphological criteria of Mayer & Brisbin (1988) one female and two male canine teeth (tusks) are identified (Table 10).

Dogs – At least three adult dogs are represented among the submitted faunal material: Context (278), ditch terminus at the north corner of Enclosure 1, produced a

right jawbone; another right jawbone came from context (581), Enclosure 5, and part skeletal remains of a single dog (see Table 11) came from (283), terminal of a shallow gully north-west of Enclosure 1. The shoulder height in the latter dog is calculated at 48.6 cm (based on the lengths of the right femur & right tibia); a value that falls with the height range of the modern Border Collie (48 to 56 cm). No ancestral link between the Malmesbury dog and this modern breed is implied by this comparison but it does indicate the Roman animal would have been of a suitable size for assisting in the movement of sheep or cattle herding.

Domestic fowl – Context (858) fill of large pit [859], part of Phase 4 of the Roman activity, yielded the sole evidence of poultry keeping at the site: 1 male (spurred) tarsometatarsus. Measurements (in mm): GL greatest length 90.1; SD minimum shaft width 8.0; Bd distal width 15.8; spur length 18.6

Table 10: Sexed bones by feature

	Enclosures	**Ditches**	**Gullies**	**Pits**	**Buildings**	**Total**
Canine teeth (b):	-	-	-	-	-	-
pig - male	1	-	1	-	-	2
pig - female	-	-	1	-	-	1
Innominate bones:	-	-	-	-	-	-
cattle (c) - female	1	1	1	-	-	3
Metapodial bones (f):	-	-	-	-	-	-
cattle - female	2	1	1	-	-	4
cattle - castrate/female	2	-	-	-	-	2
cattle - male	-	-	-	1	-	1
Tarsometatarsus (g):	-	-	-	-	-	-
domestic fowl - male	-	-	-	1	-	1

Table 11: Anatomical distributions (parts of skeleton represented)

CATTLE	Enclosures	Ditches	Gullies	Pits	Structures	Total
horn core	2	1	-	-	-	3
horn core & skull	1	-	-	-	-	1
skull	2	4	-	-	-	6
maxilla	1	1	-	1	-	3
mandible	3	17	2	3	1	26
upper cheekteeth	1	3	-	-	-	4
lower cheekteeth	-	1	-	1	-	2
cervical	1	1	3	-	-	5
thoracic	3	5	3	-	-	11
lumbar	-	1	1	-	-	2
sacrum	2	-	1	-	-	3
rib	11	8	2	2	-	23
scapula	2	7	2	5	-	16
humerus	5	4	-	-	-	9
radius & ulna	-	1	-	-	-	1
radius	4	1	1	-	-	6
ulna	3	2	-	1	-	6
metacarpus	8	4	1	1	1	15
innominate	4	2	1	-	-	7
femur	1	2	1	-	-	4
tibia	1	3	-	-	-	4
calcaneum	1	-	-	-	-	1
astragalus	1	1	-	-	-	2
tarsal	1	-	-	-	-	1
os centrotarsale	1	1	-	-	1	3
metatarsus	8	9	1	-	-	18
metapodial	-	1	-	-	-	1
phalanx I	1	-	2	-	-	3
long bone shaft frag.	12	17	-	-	-	29
Total	**80**	**97**	**21**	**14**	**3**	**215**

Interpretation & discussion

The anatomical (body part) distributions (Table 5) indicate the cattle, sheep and pig bones are predominantly waste from all stages of slaughtering, carcass preparation (disjointing) and consumption of local livestock. The inhabitants appear to have been heavily reliant on their traditional livestock animals for their food supply and there is no evidence for the exploitation of supplementary food resources such as fish, wildfowl or game. In the local farming economy, cattle followed by sheep comprised the principal livestock, with pigs of minor importance. Unless domestic fowl had been kept elsewhere (outside the excavated areas) the recovered faunal samples indicate poultry played an insignificant role in the local food provision strategy.

Although rather a limited sample is available, it is interesting to note that at the Malmesbury site there was an apparent higher proportion of cows present relative to bulls and castrates. This is contra to the pattern discussed by Maltby (referenced in Sykes 2007, 152) where generally, prime-age cows from rural settlements were sent to provision Roman towns, whilst oxen and bulls were retained for draught purposes and as the main supply of meat for the local inhabitants. One explanation for this apparent difference would be if the cows at the site had been kept principally as breeding animals and milk producers – although the paucity of calves represented in the recovered faunal samples perhaps argues against the latter. Based on the mortality pattern established from analysis of the sheep dentition (Table 6), on-site breeding is indicated by the presence of a few newborn/young lambs whilst the relatively high proportion (67%) of prime young animals (aged 1 to 3 years), suggests the local flocks were kept chiefly as meat (and perhaps milk) producers rather than for their wool.

Horses probably were used in herding cattle, controlling movements of the sheep flock and possibly also employed as pack animals. Old horses at the end of their useful life were apparently slaughtered and fed to dogs. Dogs also probably assisted in herding cattle and in controlling the sheep flock when these animals were being moved to and from the enclosures and grazing pastures.

7.2 **Analysis of environmental soil samples** by Sander Aerts

A total of 30 samples comprising of 740 litres of soil were analysed for environmental macro remains. All soil samples were processed at MOLA Northampton through manual flotation, using a siraf tank fitted with a 1 millimetre nylon mesh and a 500 micron sieve to retrieve the flots. All flots and residues were dried and hand sorted using a desk magnifier and low-powered binocular microscope with a maximum magnification of 40x.

Environmental remains were identified using the MOLA Northampton reference collection, and relevant literature: Bekker et al (2006, 2013) and Kerny and Cameron (1979).

Results

Botanic macrofossils

A fairly large assemblage of carbonised domestic plant material was uncovered, with the addition of a few unidentified small grass species. 27 out of 30 samples were found to contain charred cereal grains (Triticeae), which were associated with small charcoal concentrations. The identified taxa have been summarised in table A.

The cereals have proven difficult to identify to species level, as the grains were mostly in poor condition after combustion during heating. The general morphology allowed for a rough indication of bread-wheat type grains (*T.* cf *aestivum*), drop shaped spelt

or emmer grains (*T.* cf *spelta/dicoccon*), and some possible barley grains (*Hordeum vulgare*). Oat (*Avena* sp.) was identified from (748), fill of ditch [750].

A number of seeds from goosefoot/orache, chickweed and a stone fruit fragment were identified, but these were found to be modern intrusions.

Mollusc macrofossils

A large, but homogeneous assemblage of terrestrial snail shells was observed. This is dominated by the slippery moss snail (*Cochlicopa lubrica*), a widespread snail species that is commonly found on moist surfaces.

Discussion and conclusions

Various species of poorly preserved economic cereals were found in most features, including postholes, ditches and pits, but excluding the possible kiln [738] and oven/industrial surface [781]. The grain concentrations never exceed 50 individuals. These observations deem it likely that the grains are largely secondary deposits, as part of scattering or wind distribution. It indicates that the features were open and exposed for a longer period of time. This includes the postholes, meaning that the deposition had taken place after the removal of the posts. This argument is strengthened by the high abundance of *C.lubrica* in most features.

Not enough environmental data could be retrieved to assess the paleoenvironmental circumstances as the mollusc assemblage is low in diversity and consists of eurytopic taxa. Other plant and arthropod remains were interpreted as modern intrusions.

Table 12A. Environmental remains retrieved from environmental flots and 10-2 millimetre fractions.

Sample		1	2	3	4	5	6	8	10	11	13	14	15	16	19
Context		176	227	232	251	262	274	134	456	465	538	568	581	624	625
Cut		177	228	233	253	263	275	135	460	466	540	570	583	623	626
Type		p/h	p/h	p/h	p/h	p/h	p/h	pit	ditch	ditch	ditch t	ditch	ditch	ditch	p/h
Volume (L.)		30	20	30	20	20	10	30	30	30	30	20	30	30	30
Charred plant remains															
Triticum cf *aestivum*	Bread wheat-type	A	A	A	A	B	-	A	B	A	-	A	A	B	-
Triticum cf *spelta/dicoccon*	Emmer/spelt-type	A	A	A	A	A	-	-	-	-	A	-	A	-	-
cf *Hordeum vulgare*	Resembles barley	-	-	-	-	-	A	-	-	-	-	-	-	-	-
Triticeae sp.	Cereal grains	A	B	B	B	A	A	B	B	B	A	A	C	B	B
Avena sp.		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Small Poaceae	Small grasses	-	-	-	-	-	-	-	-	-	-	-	B	A	-
Charcoal		0.7	<0.1	0.6	0.1	0.1	0.1	<0.1	0.6	<0.1	<0.1	<0.1	0.2	<0.1	2.4
Other plant remains															
Stellaria sp.	Chickweed	-	-	-	-	-	-	-	-	-	-	-	B*	-	-
Chenopodium/Atriplex sp.	Goosefoot/ Orache	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prunus sp.	Stone fruit	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Terrestrial snails															
Aegopinella sp.	Glass snail	-	A	-	-	-	-	-	A	-	-	-	-	-	-
Cochlicopa lubrica	Slippery moss snail	B	-	-	B	B	B	C	-	C	-	A	C	A	D
Vallonia sp.	Grass snail	A	-	-	-	-	-	-	-	-	-	-	-	-	
Vertigo sp.	Whorl snail	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cf *Nesovitrea* sp.	Glass snail	A	-	-	-	-	-	-	-	-	-	-	-	-	-
Helicidae sp.	Typical snails	-	-	-	-	-	-	-	-	A	-	-	-	-	A
Zonitidae sp.	True glass snails	-	-	-	A	-	-	A	-	-	-	-	-	-	-
Arthropods		-	-	-	-	-	-	-	-	-	-	-	-	-	-

KEY - A = 1-3 individuals, B = 4-19 individuals, C = 20-50, D = 50+ individuals. Ditch t = ditch terminus, ditch r= ditch return. An asterisk indicates modern intrusions. Charcoal concentrations are in grams, volumes in litres.

Table 12B. Environmental remains retrieved from environmental flots and 10-2 millimetre fractions.

Sample		21	22	23	24	25	26	29	30	31	32	33	34	35	36	37	38
Context		725	727	736	737	779	748	855	857	865	159	494	24	146	398	618	361
Cut		729	728	738	738	781	750	858	858	866	161	496	2026	147	400	619	363
Volume (L.)		ditch	ditch	kiln?	kiln?	20	30	30	30	20	30	20	30	20	10	20	10
Charred plant remains		30	20	30	30												
Triticum cf *aestivum*	Bread wheat-type	-	-	-	-	-	B	-	-	-	A	-	-	-	A	-	-
Triticum cf *spelta/dicoccon*	Emmer/ spelt-type	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cf *Hordeum vulgare*	Resembles barley	-	-	-	-	-	A	-	A	-	-	-	-	-	-	-	-
Triticeae sp.	Cereal grains	-	-	-	-	-	C	-	A	A	A	A	B	A	B	A	A
Avena sp.		A	-	-	-	-	A	-	-	-	-	-	-	-	-	-	-
Small Poaceae	Small grasses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Charcoal		-	-	-	-	<0.1	0.1	0.7	1.3	0.7	1.1	0.6	0.1	0.5	0.1	<0.1	0.2
Other plant remains		0.5	0.4	52.7	6.1												
Stellaria sp.	Chickweed	-	-	-	-	-	A*	-	-	-	A*	-	-	-	-	-	-
Chenopodium/Atriplex sp.	Goosefoot/ Orache	-	-	-	-	-	A*	-	-	-	-	-	-	-	-	-	-
Prunus sp.	Stone fruit	-	-	-	-	-	-	-	-	-	-	-	-	-	A*	-	-
Terrestrial snails																	
Aegopinella sp.	Glass snail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cochlicopa lubrica	Slippery moss snail	-	-	-	-	-	C	D	D	C	B	C	C	B	A	A	A
Vallonia sp.	Grass snail	D	D	A	-	-	-	-	B	-	A	-	A	-	-	-	-
Vertigo sp.	Whorl snail	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cf *Nesovitrea* sp.	Glass snail	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Helicidae sp.	Typical snails	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zonitidae sp.	True glass snails	A	A	-	A*	-	-	-	-	-	-	-	-	-	-	-	A
Arthropods																	
Staphylinidae	Rove beetles	-	-	-	-	-	-	-	-	-	A*	-	-	-	-	-	-
Oribatida	Moss mites	-	-	-	-	-	-	-	-	-	A*	-	-	-	-	-	-
Oniscidea	Woodlice	-	-	-	-	-	A*	-	-	-	-	-	-	-	-	-	-

8 DISCUSSION

Overview

The excavation on land at Malmesbury, Avon Mills followed archaeological geophysical survey and trial trench evaluation (Sabin and Donaldson 2011; Upson-Smith and Walker 2011). Full excavation identified archaeological remains predominantly dating to the Roman period, though some limited evidence for late Iron Age and Anglo-Saxon activity was present.

Despite the extent of the archaeological remains uncovered on site, no direct evidence for settlement activity was identified anywhere within the excavation area. It may be that domestic buildings have not survived later truncation. A moderate quantity of pottery (1603 sherds weighing 20.7 kilos) and other finds suggest that domestic occupation had occurred either in the excavation area or adjacent to it.

The site started in the 1st century BC may have continued to be used into the early 4th century with the latest coin recovered dated up to AD 330. The evidence from the pottery is that occupation had continued into at least the 3rd century, but not definitely into the 4th century (See Perrin, Section 6.1). The lack or definite 4th century pottery or middle or late 4th century coins may suggest the site had stopped by this date or had moved and continued beyond the excavation area.

Geology

When discussing the spatial development of the site, the importance of the underlying geology should be considered. In the case of the Avon Mills site, it became immediately apparent that the natural subtrate and its variations across the site had had a significant impact on the way in which the land had been utilised in antiquity. Along the south-eastern edge of the site the substrate comprised an impermeable clay bank, which sloped downwards to the cornbrash and silty clays present across the remainder of the site. At the juncture between the two a ditch had been excavated during the early Roman period, presumably designed to take water away from the clay bank and away to the south-west. The significance of this is illustrated by a similar ditch excavated during the post-medieval period, which appeared to serve precisely the same function. Elsewhere the depth and profile of many of the enclosure ditches varied depending on whether they were cut through cornbrash or silty clays. Where cut through the former, the ditches were shallower and steep sided compared with those cut through the silty clay where they were deeper and displayed much more erosion of their upper edges. It was unclear whether those deeper ditches were excavated in this way intentionally or whether it was a consequence of the ditch having been cleaned out and re-worked continually throughout its period of use.

Late Iron Age ditches and droveway

The first activity in the site was in the late Iron Age and comprised four ditches aligned north-east to south-west including a possible droveway. The small quantity of pottery suggest a 1st century BC start date. The date of this type of new feature within the site would not be unusual as it is noticeable that for much of Britain, the later Iron Age saw increased population levels and establishment of new settlements connected by a network of tracks and droveways (Taylor 1979, 21; Cunliffe 1995, 113; Haselgrove *et al* 2001, 29).

The Roman enclosures

The majority of the excavated evidence was dated to the Roman period and during this time the site was regularly replanned and has been divided into four phases (some with sub-phases). Within these Roman phases a broad progression could be observed on site, which showed a general development of the site from south-west to north-east. This was followed by a series of irregular shaped enclosures, several of which demonstrated multiple phases where the shape or line of the enclosure ditches had been re-worked/re-modelled. A greater shift was evident when these more irregular enclosures were replaced with a large boundary ditch and rectilinear field system in the north-eastern part of the site.

Many of the enclosures shared similar patterns of use and development. In particular Enclosures 2 and 5, in Phase 2 of the Roman period, shared a very similar pattern. Each began with a section of ditch, from which a number of secondary ditches extended, this was followed by a more irregular large enclosure and finally a smaller more regular sub-square enclosure (Figs 12 and 18). This may suggest some of these enclosures may have been contemporary with one another given that they share such characteristics.

The precise function of these enclosures remains unclear, though the presence of surviving postholes at the entranceways to some of them indicated that they may not have been designed to be open but to contain livestock. The faunal assemblage would suggest that this was most likely to have been cattle and/or sheep. Environmental analysis could not add much to the interpretation of these features due to poor preservation, with surviving material suggestive of secondary deposits of scattered or wind-blown deposits. An iron ard point recovered from the fill of one of the earlier boundary ditches does however indicate that arable crops were being farmed locally. Some of the enclosures also show evidence of having been ‘closed’. In most cases this act comprised the excavation of a short stretch of ditch across the entranceway. In addition, the internal space appears to have been given over to the excavation of pits, many of which contained domestic refuse such as moderate quantities of pottery and a few other finds including a spindle whorl and a bottle glass fragment. The best example of this at the Avon Mills site was Enclosure 2 where both closure of the entrance and internal pitting was identified. This pattern has been recorded elsewhere; a sub-square enclosure was found during excavations at Site B, A419 Blunsden Bypass, Wiltshire. The enclosure showed elements of modification and a sinuous narrow gully had closed off a corner entrance into the enclosure. A number of pits filled with much darker earth, which contained much domestic waste, were associated with the later gully (Brett and McSloy 2011, 102; fig 5).

The majority of the enclosure ditches on site showed distinct fill sequences, which invariably comprised lower silty clay fills overlain by deliberate backfill deposits. Given the very tight dating suggested by the ceramic evidence it is likely that these backfill deposits relate to deliberate successive re-organisations of the landscape, which reflect changing uses and/or requirements. This is illustrated most clearly in Enclosure 5 in the second phase of Roman activity where ditches had clearly been deliberately backfilled to allow for re-development of the enclosed space/layout.

In some cases excavation of enclosure ditch terminals’ revealed possible structured or special deposits, which may also be associated with the ‘closure’ of the area as an active space. A single cattle skull was present in the north-eastern terminus of Enclosure 3 (Fig 17). The placement of associated groups of bone has been interpreted by many to have a degree of ritual significance (Morris 2008). However, this interpretation has come under scrutiny and caution urged when attributing ritual significance to any and all structured deposits (Morris 2008; Hill 1995). It has been noted that whilst many deposits of animal bone can be described as structured

deposits, not all such deposits are necessarily indicative of ritual activity. The example at Avon Mills may be best described as possibly having had some ritual significance but is by no means a definitive example. A near complete upturned pottery vessel was recovered from close to the north-eastern terminus of the earliest sub-phase of Enclosure 5 (Figs 19 and 50). Whilst not necessarily of any ritual significance, the placement and position of the pot upside down and between the primary fills and backfill deposits is conspicuous and exceptional when compared to the more random scatter of pottery sherds noted in excavated sections across the rest of the site. That complete and semi-complete pots may have been placed as part of some ritual activity, formal or otherwise, is a theory that has been noted at other sites during the Roman period (Luke and Preece 2011, 162). Nevertheless, the difficulty in distinguishing between 'strcutured deposits' and more mundane refuse has been highlighted by many authors (Chadwick 2015). The remains of at least two dogs were recovered from the northern annex to Enclosure 1: a single right jawbone from one ditch terminus and a partial articulated skeleton from the ditch terminus of the possible closure of that same annex. Again, whilst not definitively ritual in nature, the conspicuous placement of these remains is worthy of note. A further canine jawbone was present in the ditch terminus of a possible entranceway attributed to the second evolution of Enclosure 5. The selective deposition of remains or partial remains of dogs has often been interpreted as having been imbued with some ritual or magical significance (*ibid*).

Enclosure E5, upturned pottery vessel in ditch terminus [583] Fig 50

Overall, the evidence from the animal bone assemblage may support this theory as material from all stages of slaughtering, carcass preparation and consumption appear to be represented. Animal husbandry appeared to focus on cattle and sheep. Furthermore, it was noted that there was a higher ratio of cows to bulls and castrates, which is contrary to the suggestion that prime-age cows were sent to Roman towns

whilst bulls and oxen were retained for draught purposes and meat consumption. This may suggest that Roman occupation of the Malmesbury promontory was perhaps more significant than previously suggested and that outlying farmsteads were producing meat for that population.

Roman structures

The final phase of activity within the site area during the Roman period was the construction of two post-built structures in the north-eastern half of the site. Two main groups of six postholes were broadly on the same alignment. It was initially considered that all twelve postholes were part of a single structure and could be better described as a Roman aisled building. However, the two groups of six postholes were of different widths, existed on very slightly different alignments and were separated by a gap of approximately 6m (Fig 37). Additional postholes and post pads located around the structures may reflect additions to the buildings such as lean-to's and/or fencelines. Surviving post voids within the main structural postholes appeared to show broadly uniform dimensions though variation in the depth of the postholes was noted dependent upon the character of the natural into which it was excavated. Further internal postholes and possible beam slots may hint at internal subdivisions of space though little could be gleaned from the surviving evidence other than the gully at the north-eastern end of Structure 1 may have held a timber beam supporting its north-eastern end. Pottery recovered from the majority of the post-holes has been dated to the 1st and 2nd centuries AD, though a single sherd of possible Saxon pottery and a coin dated to the second half of the 3rd century AD were recovered from one of the associated postholes to the north-west of the post-built structures. This may suggest that these structures or other activity continued to take place in this area though more pottery or other artefactual evidence dated to the later Roman and Saxon periods may be expected if that were the case. Alternatively, it could suggest that the posts of the disused building were removed long after the structures had gone out of use or the postholes had simply been left open for an extended period of time following the removal of the posts.

A significant amount of building material was recovered from a possible beam slot associated with Structure 1. This included large fragments of roof, floor and flue tiles. Further smaller sherds of tile were recovered from ditches and pits across the excavation area. The concentration of large fragments of tile within the post-built structure is curious as they were limited to this single feature and not found in great quantity anywhere else around the structures. It is possible that ceramic building material including the roof tiles was systematically dismantled and removed from the site to be re-used elsewhere.

The significance of agricultural buildings during the Roman period has often been underrepresented in the academic literature, with villa complexes having demanded much more attention over the years. However, the importance of looking at other types of buildings in order to give a more balanced understanding of Roman rural architecture has been noted in a recent synthesis of Roman rural settlements in Britain (Smith 2016). The two structures at Malmesbury may fall into the category of 'other agricultural buildings', specifically single space architecture as defined by Smith (*ibid*). This categorisation is a result of the lack of primary domestic material within the associated features. A remarkably similar post-built structure was identified at Eton, Berkshire (Smith 2016, fig 3.16). Many of these types of structures have been interpreted as livestock shelters on account of internal stall divisions and associated drainage, backed up in some cases by phosphate analysis. Others have been associated with corn dryers and/or threshing floors. Despite this, the function of the single-space structures at Malmesbury remains unclear. Internal postholes and

associated boundary/drainage features may support the livestock shelter interpretation though not enough evidence had survived to say with any certainty that this was the case.

No definitive ovens or industrial features survived within the site, but the small quantity of slag recovered suggests there had probably been some iron smithing within the settlement

Status of the site

The excavation produced a range of objects which can give us an indication of the status of the site. It is important to note the domestic area of the settlement may have been adjacent to the excavation area and this will affect what can be said. There was an interesting range of metal objects recovered with eight copper alloy brooches or brooch fragments including an earlier imported continental brooch type, a stud, sheet and wire fragments. Other objects were far less significant, just three coins were found and these dated to the late 2nd and 3rd centuries. This is a low quantity of coins for a Roman settlement even if it had gone out of use in the late 3rd or early 4th centuries. A single glass bead and a single glass vessel fragment show limited use of glass within the site. Similarly a single spindle whorl and two quern fragments indicate small scale craft and other activities had occurred with the farmstead. The pottery assemblage indicated that there was limited imports and regional wares. Twenty seven Samian sherds (including a fragment with a repair) comprised less than 2% of the total assemblage and regional wares from Oxford and South Dorset comprised just over 2%. Specialist wares included two mortaria and seven amphora sherds, but the latter may have been from a single vessel (See Perrin, Section 6.1).

Collectively the evidence indicates that the settlement was probably part of a small farmstead which may have been up to average status at best. Similarly, the excavated remains may represent only the periphery of a more substantial area of occupation. It was presumably run on a mixed economy regime, largely self-sufficient with limited to moderate access to markets for goods.

Research aims

Prior to excavation, a number of general research aims and more specific research goals were identified (see Section 2). Of the broader aims outlined in the regional research agenda (Webster 2007), the majority could not be addressed by this specific project alone. Nevertheless, the results of this excavation viewed in conjunction with other excavations throughout the region hold the potential to address many of these wider issues. Research Aim 29 from that document details the need to improve our understanding of non-villa Roman rural settlements. The excavations at Malmesbury have revealed further information about these kinds of settlements. Whilst the environmental evidence was fairly poor, the favourable preservation of faunal remains has helped build up a more detailed picture of the local economy. In addition, this site shows a very clear progression from multiple small irregular enclosures to larger linear fields systems and finally small single-spaced but well-constructed agricultural buildings. This appeared to reflect shifting land-use and requirements throughout the Roman period and may be a further reflection on national trends influenced by increased ‘Romanisation’.

Themes identified under the regional research framework were more specific and could be more readily addressed by the results of excavations at the Avon Mills site (Grove 2012). The correlation between the geophysical data (Sabin and Donaldson 2011) and the results of the excavation was identified as of interest in order to inform

more accurate interpretation of geophysical data in the future. Due to the density of the archaeological remains in the main excavation area it was inevitable that the geophysical interpretation would underestimate the final number of archaeological features. Nevertheless, all of the key enclosures and ditches had been identified. Subsequent archaeological trial trench evaluation confirmed that areas interpreted as 'blank' in the geophysical data were in fact devoid of archaeological remains (Upson-Smith and Walker 2011). In addition the geophysical survey had identified changes in the geology which were observed during the excavation (Fig 2).

Following the results of the trial trench evaluation the good survival of animal bone was established as an area for research potential. The faunal assemblage recovered from the excavation did hold great value and analysis was able to identify, if this site was representative of the local population and economy, that cattle and sheep were the primary sources of meat and that critically there was no evidence for the exploitation of supplementary food sources such as fish, wildfowl or game. Furthermore, as discussed above, the greater than expected numbers of prime-age cattle would appear to suggest that this farmstead may have been breeding and supplying livestock for a nearby population centre such as Cirencester, which lay approximately 20 kilometers to the north-east. However, an increasing amount of evidence for Iron Age and Roman occupation on the Malmesbury promontory itself may suggest that the site at Avon Mills was supporting settlement activity on the site of the Iron Age hillfort.

The impact of the Roman army and the concept of 'Romanisation' is also highlighted for consideration. Whilst the site at Avon Mills is relatively unassuming, the artefactual evidence recovered from the site has shown that the Roman material, in terms of pottery and building materials, was being adopted at rural sites within the region outside of the main centres such as Cirencester. A continental plate brooch in the shape of a Roman lamp recovered from one of the enclosure ditches is a good example of how Roman traditions, technology and fashions had permeated into everyday life. Similarly, the presence of sherds of amphora vessels and Samian ware pottery further indicate trade and cultural links with the continent. Nevertheless, the presence of possible structured deposits in the terminals of enclosure and field ditches, common throughout the Iron Age in Britain, may demonstrate how one culture had not simply replaced the other, rather elements of Roman life were gradually adopted throughout the Roman period.

Publication

It is proposed to submit a *c*20 page article to the Wiltshire Archaeological and Natural History Society.

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APPENDIX 1: Unillustrated identified samian ware and illustrated pottery catalogue

Decorated sherds (Unillustrated):

- Small sherd from the upper zone of a Dr 29 bowl in a La Graufesenque fabric. The decoration includes a loop-petalled flower within a medallion with a beaded inner border and a pendant motif. The pendant was used by several potters including Murranus (Mees 1995, taf 150,1). The overall style is certainly Neronian or early Flavian, *c* AD50-75. MAM13, 356.

- Central Gaulish Drag 37. The small sherd from the lower edge of the decorated zone of the bowl has the rear half of a running dog (possibly Oswald 1936-7: O.1917) with the end of a mould stamp above the tail. The stamp cannot be read. Probably Antonine. MAM13, 460, SF56.

Grog-tempered (Savernake) wares

a. Light grey to grey to light brownish grey (10YR7/1; 6/1; 6/2; Neutral 5). Enclosure 2. MAM13, 518.

b. Light grey to grey to light brownish grey (10YR7/1; 6/1; 6/2; Neutral 5). Enclosure 3. MAM13, 618.

Jars 1-2 are a common Savernake type (eg cf Seager Smith 2006, fig. 5.3, 20-31; fig. 5.4, 32-4).

c. Light grey to light brownish grey (10YR6/1; 6/2) with a white (10YR8/1) core. Pimply surface. MAM 82.

d. Light grey to grey to very pale brown (10YR7/1; 7/3; 6/2). Ditch 2. MAM13, 118.

Grog, calcite/flint-tempered

e. Very pale brown (10YR7/3; 7/4). Sooted externally on and below shoulder. Ditch 3. MAM13, 238.

Shell, limestone-tempered ware

f. Greyish brown (10YR5/2) and very pale brown (10YR7/3) internally, Structure 1. MAM13, 742, 743).

Grey wares

g. Very dark grey (10YR3/1) with a grey (Neutral 5) core. Burnished externally. Near complete. Enclosure 4. MAM13, 581. cf Seager Smith 2001, fig.80, 4.

h. Dark grey (10YR4/1) with a pink (5YR7/4) core. MAM13, 50. cf Hodder 1974, fig. 2, 6,8,10, Seager Smith 2001, fig.82, 70 and fig. 88, 217).

i. Dark grey to dark brownish grey (10YR4/1;4/2) with a very dark grey (10YR3/1) external surface. MAM13, 56.

j. Light grey to light brownish grey (10YR6/1; 6/2). Structure 1. MAM13, 745.

k. Very dark grey (10YR3/1) with a pink core (7.5YR7/4). Micaceous. Ditch 4. MAM13, 75.

l. Grey to greyish brown (10YR5/1; 5/2). Ditch 2. MAM13, 118.

Red-yellow wares

m. Reddish yellow (5YR7/6; 7/8). Ditch 10. MAM13, 86.

n. Reddish yellow (5YR7/6; 7/8). MAM13, 56.

o. Reddish yellow (5YR7/6). Ditch 2. MAM11, 304. cf Evans 1999, fig. 26, BT1.

p. Reddish yellow (5YR7/6) with a grey (Neutral 6) core. MAM13, 218.

APPENDIX 2 - FINDS RECOVERED FROM ENVIRONMENTAL SAMPLES

Pottery

Context	Sample No.	No. of Bags	Weight (g)
134	8	1	228
146	35	1	7
159	32	1	3
176	1	1	2
227	2	1	16
232	3	1	6
251	4	1	22
274	6	1	2
398	36	1	8
465	11	1	15
456	10	1	61
494	33	1	5
538	13	1	86
568	14	1	1
581	15	1	4
618	37	1	6
625	19	1	13
725	21	1	2
727	22	1	68
736	23	1	1
748	26	1	2
855	29	1	11
TOTAL	**-**	**22**	**569**

Animal Bone

Context	Sample No.	No. of Bags	Weight (g)	Notes
24	34	1	91	
134	8	1	1	fill of p/h . Rodent?
134	8	1	12	fill of p/h .
134	8	1	4	fill of p/h. sheep/goat
146	35	1	8	animal bone
146	35	1	1	animal bone. Rodent?
159	32	1	2	animal bone. Rodent?
159	32	1	18	animal bone
176	1	1	7	fill of p/h
176	1	1	1	fill of p/h fish bone
227	2	1	3	fill of p/h. unknown
227	2	1	1	fill of p/h. rodent?
227	2	1	1	fill of p/h amphibian?

232	3	1	3	fill of p/h
232	3	1	1	fill of p/h. sheep/goat
251	4	1	4	fill of p/h.
251	4	1	5	fill of p/h. sheep/goat
262	5	1	1	fill of p/h. rodent?
262	5	1	18	fill of p/h
274	6	1	3	fill of p/h
274	6	1	2	fill of p/h. animal bone
274	6	1	1	fill of p/h. rodent?
361	38	1	4	unknown
361	38	1	1	amphibian
398	36	1	1	unknown
456	10	1	43	f/o ditch c/u ditch [460]
456	10	1	1	sheep/goat
465	11	1	3	animal bone
494	33	1	1	rodent?
494	33	1	19	animal bone
538	13	1	14	fill of ditch terminus
581	15	1	1	animal bone
618	37	1	29	animal bone
624	16	1	1	animal bone
625	19	1	12	animal bone
625	19	1	2	animal bone . Fish?
625	19	1	4	animal bone. Sheep/goat
725	21	1	11	
727	22	1	1	animal bone. Pig?
727	22	1	1	animal bone. Sheep/goat
727	22	1	1	animal bone. Rodent?
727	22	1	4	unknown
736	23	1	4	f/o fireplace or kiln
748	26	1	17	A. bone
855	29	1	1	f/o pit [858]. Rodent?
855	29	1	1	f/o pit [858]. fish?
855	29	1	1	f/o pit [858]. Amphibian
855	29	1	268	f/o pit [858]
857	30	1	48	
857	30	1	1	amphibian ?
857	30	1	1	rodent?
865	31	1	1	rodent?
TOTAL	**-**	**52**	**685**	**-**

Burnt animal bone

Context	Sample No.	No. of Bags	Weight (g)
176	1	1	1
361	38	1	1
568	14	1	1
581	15	1	1
727	22	1	4
736	23	1	1
855	29	1	1
857	30	1	2
TOTAL	**-**	**8**	**12**

Shell

Context	Sample No.	No. of Bags	Weight (g)
24	34	1	1
146	35	1	1
232	3	1	1
398	36	1	1
494	33	1	1
581	15	1	1
625	19	1	3
725	21	1	1
TOTAL	**-**	**8**	**10**

APPENDIX 3: CATALOGUE OF IRON OBJECTS

Plough share, iron. Complete. Flat rectangular-sectioned bar with rounded edges tapering to a rounded point at one end and an open socket at the other end. L:c219mm Blade - Width: c35mm Th: 15mm Socket – Width: Exterior : c 48mm Int: 35mm SF 9, Part of Enclosure 2

Nail, iron. Incomplete, fragment of tapered rectangular-sectioned shank only. L (incomplete): 38mm, SF 1, Context 0023, Fill of ditch 26. C1-C2 (Part of Enclosure 2)

Nail, iron. Incomplete, terminal of shank missing. Small, flat sub-circular head with square-sectioned shank. Manning type 1b. L (incomplete):55mm, SF 12, Context 0160, Fill of ditch 161. C1-C2 (Part of Enclosure 5)

Nail, iron. Complete. Flat sub-circular head with tapered square-sectioned shank; curved profile. Manning type 1b. L: 69mm, SF 13, Context 0160, Fill of ditch 161. C1-C2 (Part of Enclosure 5)

Nail, iron. Incomplete, terminal of shank missing. Flat sub-circular head with tapered square-sectioned shank. Manning type 1b. L (incomplete): 39mm, SF 14, Context 0160, Fill of ditch 161. C1-C2 (Part of Enclosure 5)

Nail, iron. Incomplete, terminal of shank missing. Flat sub-circular head with tapered square-sectioned shank; curved profile. Manning type 1b. L: 56mm, SF 15, Context 0160, Fill of ditch 161. C1-C2 (Part of Enclosure 5)

Nail, iron. Complete. Flat sub-circular head with tapered square-sectioned shank. Manning type 1b. L: 67mm, SF 16, Context 0160, Fill of ditch 161. C1-C2 (Part of Enclosure 5)

Nail, iron. Incomplete, terminal of shank missing. Flat sub-circular head with square-sectioned shank. Manning type 1b. L (incomplete): 38mm, SF 17, Context 0160, Fill of ditch 161. C1-C2 (Part of Enclosure 5)

Nail, iron. Complete. Flat sub-circular head with tapered square-sectioned shank. Manning type 1b. L: 48mm, SF 18, Context 0160, Fill of ditch 161. C1-C2 (Part of Enclosure 5)

Nail, iron. Incomplete, head missing. Tapered square-sectioned shank. L: 43mm, SF 41, Context 637, Fill of ditch 639. C2+ (Part of N annex to Enclosure 6)

Rod fragment, iron. Square-sectioned rod; nature of object impossible to determine. Measurements: 85mm SF 20, Context 220, Fill of pit 221. No date (Part of NW annex to Enclosure 1)

Sheet fragment, iron. Damaged fragment of sheet metal measuring c55 x 30mm; vestige of countersunk perforation. Fragment unidentifiable. SF 37, Context 0543, Fill of ditch 544

Strip, iron. Undiagnostic tapered strip. Measurements: 20 x 7 x 4mm SF 38, Context 0543

Strap fragment, iron. Rectangular strap fragment with centrally placed circular perforation. Possibly some sort of binding strap frag. Dimensions: 55 x 30 x 4mm SF 44, Context 745, Fill of pit/posthole 746. C2-C3 (Associated with Structure 1)

Rod fragment, iron. D-sectioned rod fragment with curved profile, Possible fragment from a ring etc. Dia; c40mm H:7mm SF 45, Context 0855, Fill of pit 858. C2 (Pit within Enclosure 4.2)

Nail, iron. Complete. Flat sub-circular head with square-ectioned shank tapered to a point. Length: 27mm SF 46, Context 0855, Fill of pit 858. C2 (Pit within Enclosure 4.2),

Nail, iron. Incomplete, head missing and shank in two pieces. Square-sectioned shank tapered to a point. L (incomplete): 79mm, SF 47, Context 0855, Fill of pit 858. C2 (Pit within Enclosure 4.2)

Sheet fragment, iron. D-shaped sheet/plate fragment. Nature of object impossible to determine.Measurements: 36 x 25 x 9mm SF 48, Context 0855, Fill of pit 858. C2 (Pit within Enclosure 4.2)

Unidentifiable rod fragment, iron. Covered in corrosion so difficult to identify with certainty, but possibly a nail with clenched terminal. Measurements: 45 x 12mm, SF 49, Context 0855, – Fill of pit 858. C2 (Pit within Enclosure 4.2)

Sheet fragment. Iron. Rectangular in shape with flat cross-section. Measurements: 47 x 20mm SF 50, Context 0855, – Fill of pit 858. C2 (Pit within Enclosure 4.2)

Stud head??, iron. Large sub-rectangular head with vestige of shank protruding from the underside. L: 50mm W: 27mm Th: c10m SF 51, Context 0857, Fill of pit 858. C2 (Pit within Enclosure 4.2)

Nail shank, iron. Incomplete, shank only. Square-cross section a tapered to a point. l (incomplete).40mm SF 52, Context 0857, Fill of pit 858. C2 (Pit within Enclosure 4.2)

Nail shank, iron. Incomplete, shank only. Square-cross section a tapered to a rounded point. l (incomplete). 42mm SF 53, Context 0857, Fill of pit 858. C2 (Pit within Enclosure 4.2)

Rod fragment, iron. both terminals missing, circular cross-section. l (incomplete). 30mm SF 54, Context 0857, Fill of pit 858. C2 (Pit within Enclosure 4.2)

Iron without SF numbers

Context 92 Small amorphous sub-oval fragment. Dimensions: 22 x 15mm, Fill of Unknown feature 94. Contained C1 pottery,

Context 134 Nail, iron. Complete. Sub-square head with tapered square-sectioned shank; clenched terminal. Length: 38mm, Fill of pit 135. C2 (Part of NW annex to Enclosure 1)

Context 286 Nails x 5, iron. Fill of ditch 288. C2 (Poss. post-med)

i) Complete nail with no discernible head, rectangular sectioned shank tapered to a point. L:73mm

ii) Incomplete nail, most of shank missing. Large flat sub-circular head with vestige of square-sectioned shank. Head – dia : 27mm

iii) Two nails with T-shaped head and tapered shanks. L: 35mm

iv) Horseshoe nail with expanded ears and ‘spiral’ clenching. Late medieval date. 30mm

Context 456 Nails x 2 and 2 fragments, iron. Sample 10, Fill of ditch 460

i) Incomplete, terminal of shank missing. Domed head with square-sectioned shank. L(incomplete): 16mm

ii) Incomplete, terminal of shank missing. Domed head with square-sectioned shank and clenched terminal. L(incomplete): 17mm

iii) Rectangular-sectioned strip with vestige of right angled projection.L:27mm

iv) Rod fragment. L: 16mm

Context 477 Nail, iron. Incomplete, terminal of shank missing. Expanded head with rectangular-sectioned shank. L(incomplete):25mm, Fill of ditch 478. Post-med

Context 855 Nail shanks x 2 and 4 small amorphous lumps, Sample 29

i) Nail shank. Square cross-section and clenched terminal L: c15mm

ii) Rod fragment. L: 15mm

iii) x 4 amorphous fragments.

Context 862 Strip, iron. Undiagnostic rectangular-sectioned strip. Length: 52mm W: 9mm, Fill of gully 864. C1-C2 (Possibly associated with Structure 1).

Context 865 Nail, iron. Complete. Sub-triangular head with square-sectioned shank tapered to a point. L:20mm. Sample 31

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