

# Land West of Cheddington, Buckinghamshire

*Post-Excavation Assessment and Updated Project Design*



for  
Savills

*On behalf of*

The Society of Merchant Venturers

CA Project: 669057

CA Report: 669057\_1

August 2019



Land west of Cheddington,  
Buckinghamshire

Post-Excavation Assessment  
and  
Updated Project Design

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## SUMMARY

<b>Site Name:</b>	Land west of Cheddington
<b>Location:</b>	Buckinghamshire
<b>NGR:</b>	491876 217487
<b>Type:</b>	Excavation
<b>Date:</b>	August-October 2018
<b>Planning Reference:</b>	16/02806/AOP
<b>Location of archive:</b>	Currently held by Cotswold Archaeology, Milton Keynes. To be deposited with the Buckinghamshire Museum
<b>Accession Number:</b>	AYBCM:2018.92
<b>Site Code:</b>	LWOC18

A programme of archaeological investigation was undertaken by Cotswold Archaeology between August and October 2018 at the request of Savills, on behalf of the Society of Merchant Venturers, on land west of Cheddington, Buckinghamshire. An area of approximately 0.75ha was excavated in the centre of the development area.

An archaeological earthwork survey revealed the remains of 18th and 19th-century field boundaries adjacent to Cheddington village. Excavation revealed a series of earlier field boundaries forming small enclosures spanning the Late Iron Age to post-medieval periods, along with evidence for human settlement, agricultural processing and industrial iron smelting during the Roman period, and agricultural processing during the Late Iron Age, medieval and post-medieval periods. A small group of inhumation burials was excavated in the north western corner of the excavation area, bone samples from the skeletons yielding radiocarbon dates in the early 4th to mid 6th-century AD range.

Following a hiatus between the 5th and 9th centuries, the site was re-occupied as a series of small enclosures on the edge of a medieval settlement which evolved into the modern village of Cheddington. The medieval and post-medieval phases were characterised by pit digging, and the maintenance of property boundaries, between the village and the fields surrounding the nearby moated manor. During this period a large deposit of garden soil began to accumulate across the site, containing a large assemblage of domestic objects consistent with midden material. There was limited evidence for industrial activity and crop processing, and a single large steep-sided pit with layers of dark humic fill was interpreted as a possible cess pit, suggesting nearby occupation.

From the 17th to 19th centuries the site included a network of small fields focused on a small farm building or barn, recorded on the Tithe Map of the parish, constructed immediately to the

east. This had been demolished by the late 19th century, with evidence surviving on site as a spread of demolition rubble.

This document presents a quantification and assessment of the evidence recovered from the excavation and earthwork survey. It considers the evidence collectively in its local, regional and national context, and presents an updated project design for a programme of post-excavation analysis to bring the results to appropriate publication.

## 1 INTRODUCTION

- 1.1 Between 8 August and 12 October 2018, Cotswold Archaeology (CA) carried out an earthwork survey and archaeological excavation on land west of Cheddington, Buckinghamshire (centred on NGR: 491876 217487; Fig. 1). The work was undertaken at the request of Savills on behalf of the Society of Merchant Venturers.
- 1.2 Outline planning permission for development of up to 100 dwellings and associated open space, including amenity land, landscaping and parking was granted by Aylesbury Vale District Council (AVDC) (ref: no. 16/02806/AOP), conditional on a programme of archaeological works issued by Eliza Alqassar, Buckinghamshire County Council Archaeology Officer (BCCAO), archaeological advisor to AVDC. The scope of the works comprised an earthworks (topographical) survey of the entire site and the subsequent excavation of an area measuring c. 0.75ha central to the site (Fig. 2). The scope of the works was defined during discussions between CA and BCCAO, and detailed in a subsequent written scheme of investigation (WSI) produced by CA (2018) and approved by BCCAO. The discussions were informed by a heritage statement prepared by Savills (2016) and a preceding archaeological evaluation (CA 2017a).
- 1.3 The fieldwork followed *Standard and Guidance for Archaeological Excavation* (ClfA 2014); Buckinghamshire County Council's generic Brief for an Archaeological Watching Brief / Small-Scale Investigation, the *Management of Research Projects in the Historic Environment (MORPHE): Project Manager's Guide* (Historic England 2015a) and accompanying *PPN3: Archaeological Excavation* (Historic England 2015b). It was monitored by Philip Markham and Eliza Alqassar, Buckinghamshire County Council Archaeology Officers (BCCAO), including site visits on 22 August, 4 and 21 September and 5 October.

### ***Location, topography and geology***

- 1.4 The development area of c. 4.8ha lay to the west of the village of Cheddington. The site was on the fringes of the village, bordered by Long Marston Road to the north-west, by Mentmore Road to the north-east, by housing to the east and south, and by West End Road/Manor Road to the south-west (Figs 1 & 2). Prior to the archaeological fieldwork, the site comprised three fields, each covered by short grass and utilised for grazing. The surface of the site lay at an average elevation of approximately 103m Above Ordnance Datum (AOD), sloping downwards from c.

110m AOD in the south to c. 97m AOD at the north. There was also a noticeable downwards slope from east to west.

- 1.5 The underlying bedrock geology of the area is mapped as Gault Formation and Upper Greensand Formation - Mudstone, Siltstone and Sandstone in the northern part of the site and West Melbury Marly Chalk Formation in the south (BGS 2019). The natural substrate encountered during the evaluation comprised yellow-grey clays.

### **Archaeological background**

- 1.6 Previous archaeological works associated with the site comprised a Heritage Statement (Savills 2016) which was accompanied by a magnetometer survey (Stratascan 2016), followed by archaeological trial trenching (CA 2017a). These reports have included the archaeological and historical background to the site, which is summarised here with supplementary information from other sources.
- 1.7 Cheddington village is situated on a large outcrop of chalk, isolated from the main Chiltern escarpment to the south-east and dominating the low-lying land of the Vale of Aylesbury to the north-west. Some 750m east of the site, a cropmark complex visible on aerial photography is thought to be of Neolithic or Bronze Age date and as such the site lies within a designated Archaeological Notification Area, afforded protection under Policy GP59 of the Local Plan (CA 2014, 18-19).
- 1.8 Archaeological evidence on the chalk outcrop dates back to the Iron Age with a multivallate hillfort, Southend Hill, a Scheduled Monument, lying south of the village (Fig. 1). Evidence suggests this was occupied in the Early to Middle Iron Age, and again in the Late Iron Age through to the Roman period (Savills 2016, 15). Further evidence of Iron Age activity in the vicinity was found in the area north of Great Seabrook Farm to the east of the village (CA 2015).
- 1.9 A possible Roman road followed the alignment of what is now Mentmore Road (which becomes High Street to the south-east) and passed immediately adjacent to the north-east of the site edge. Scatters of Roman tile found in a field west of High Street, south of the village and at the foot of Southend Hill indicates that a Romano-British settlement may have been located in this area (CA 2014).
- 1.10 The medieval village is thought to have had Late Saxon origins based on documentary research and its listing in the Domesday survey (Savills 2016 16). The extent of the medieval village is not well defined in the archaeological record; the

single watching brief report from the area of the modern settlement did not produce any meaningful data concerning its development (ASC 2011). The relative isolation of St Giles Church may be evidence that the northern end of the settlement has shrunk, or that the centre of the village has migrated south along the axis of Mentmore Road (Fig. 1).

- 1.11 Although the current Cheddington Manor House dates no earlier than the 16th century, there is documentary reference to a manor at Cheddington dating to June 1259 (Savills 2016). The existence of a moat and earthworks close to the current house and a short distance west of the site, indicates that the original manor house may have lain in this area, some distance west of the contemporary village.
- 1.12 Trial trenching on the site (CA 2017a) revealed a concentration of Romano-British ditches in the central area, with sparse remains of agricultural features including plough furrows, and an east/west-aligned driveway at the northern end of the site.

## 2 AIMS AND OBJECTIVES

- 2.1 The objectives of the programme of archaeological mitigation were to:
- record the nature of the main stratigraphic units encountered;
  - assess the overall presence, survival and potential of structural and industrial remains; and,
  - assess the overall presence, survival, condition, and potential of artefactual and ecofactual remains.
- 2.2 The aims of the work were to:
- record evidence of past settlement or other land use;
  - recover artefactual evidence to date any evidence of past settlement that may be identified; and,
  - sample and analyse environmental remains to create a better understanding of past land use and economy.
- 2.3 The mitigation strategy was drawn up with reference to the relevant regional research objectives for the Roman period in the *Solent-Thames Research Framework for the Historic Environment: Resource Assessments and Research*

*Agendas* (Fulford 2014). These research objectives (references in parentheses) include:

- Environmental evidence should be collected and analysed to help identify how field systems operated and developed (12.3.1);
- Variation in resources and agricultural regimes from different scales of farm need to be investigated (12.3.2); and,
- Attempts should be made to identify any changes in farming methods from field, farm and valley environments (12.3.3).

2.4 The research objectives identified above have been revisited and refined (see Section 6) as part of the Post-Excavation Assessment and Updated Project Design (this document), again, with particular regard to the Roman period but also with reference to other periods of activity not identified in the earlier evaluation.

### 3 METHODOLOGY

3.1 The fieldwork followed the methodology set out within the WSI (CA 2018), with the earthwork survey carried out across the entire site and the location of the open-area excavation agreed with Eliza Alqassar (BCCAO), informed by the results of the preceding heritage statement (Savills 2016), magnetometer survey (Stratascan 2016) and field evaluation (CA 2017a), which indicated that archaeological remains were concentrated in a central area of the site. A total of c. 0.75ha was excavated across the central field within the development area (Fig. 2).

3.2 Fieldwork commenced with the archaeological earthwork survey, using survey-grade RTK GNSS (Real Time Kinematic Global Navigation Satellite Systems). The results of the earthwork survey were processed as GIS (Geographic Information System) data and incorporated into the project GIS to inform subsequent interpretation.

3.3 The excavation area was set out on OS National Grid (NGR) co-ordinates using Leica GPS and surveyed in accordance with CA Technical Manual 5.1 Survey Manual. The excavation areas were scanned for live services by trained CA staff using CAT and Genny equipment in accordance with the CA Safe System of Work for avoiding underground services.

- 3.4 Removal of topsoil from the excavation area was then undertaken by mechanical excavator with a 1.8m wide toothless grading bucket, under archaeological supervision. Machining ceased when the first archaeological horizon or natural substrate was revealed.
- 3.5 The archaeological features thus exposed were hand-excavated to the bottom of archaeological stratigraphy. The initial topsoil strip identified a distinct area at the east of the excavation where a significant deposit of a dark-grey brown, silt-clay (garden soil) lay beneath the topsoil. Further, localised garden soil deposits were extant to the north-east and south-east of the main concentration. Features cutting through this material were sampled and the deposit itself investigated with five hand-dug test pits, before it was removed by mechanical excavator.
- 3.6 The archaeological features thus exposed were hand-excavated to the bottom of archaeological stratigraphy. Where features exceeded 1.2m in depth, slots were either stepped in or remaining fills investigated by hand-augering. The following sampling strategy was employed:
- all discrete features were a minimum 50% excavated with all sections recorded
  - linear features were a minimum 10% excavated
  - where special deposits (e.g. those indicating specific activities such as industrial processing) were identified 100% of the fill was excavated for finds retention
  - 100% of burial fills were excavated
- 3.7 Following the excavation of three inhumation burials additional localised ground reduction by machine was undertaken around these features to confirm the presence/absence of further interments.
- 3.8 All features were planned and recorded in accordance with *CA Technical Manual 1: Fieldwork Recording Manual* (CA 2017b). Deposits were assessed for their environmental potential in accordance with *CA Technical Manual 2: The taking and processing of environmental and other samples from archaeological sites* (CA 2012). All artefacts recovered from the excavation were retained in accordance with *CA Technical Manual 3: Treatment of finds immediately after excavation* (CA 1995).

## 4 RESULTS

### *Fieldwork summary*

- 4.1 The archaeological potential of the c. 0.75ha excavation area had been highlighted by earlier magnetometer survey (Stratascan 2016) and field evaluation (CA 2017a). Archaeological remains covered much of the stripped area, with particular concentrations in the north-central and western areas of the excavation.
- 4.2 Although a small number of residual earlier finds were recovered, definable site activity commenced in the late prehistoric/Early Roman period with the development of ditched enclosures towards the north-west of the excavation area, with some contemporary activity to the north-east. The system of enclosures developed and expanded throughout the Roman period. Whilst the enclosures were mostly associated with agriculture and domestic occupation, there was some evidence of industrial activity in the area. Towards the end of the Roman period two burials were interred at the western edge of the excavation area, with a third individual interred in the immediate vicinity in the early post-Roman period.
- 4.3 There was an apparent hiatus in activity in the post-Roman period, with few features other than the later burial pre-dating the Norman Conquest. A small number of ditches were excavated in the post-Conquest period, indicating a limited re-occupation of the site, whilst there was further ditch excavation and enclosure development in the later medieval period. A more formalised system of ditched enclosures developed during the post-medieval period at the east of the excavation area, which at this time lay at the western edge of Cheddington village.
- 4.4 The excavation produced a large finds assemblage, which was dominated by Roman pottery, with smaller amounts of late prehistoric (Iron Age) and medieval material. There were also sherds of earlier prehistoric, early medieval and post-medieval date. A large number of metal finds were recovered though these were mostly of post-medieval date from topsoil and garden soil deposits towards the east of the site. Other finds included fired clay, metalworking residues, worked stone, brick and tile. Limited evidence was gleaned from environmental samples, which mostly just indicated the presence of dispersed settlement waste.
- 4.5 This section provides an overview of the excavation results, detailed analysis of the finds and environmental samples can be found in Appendices 2-16. Based on the

archaeological stratigraphy exposed and the dateable artefactual assemblages recovered, the archaeology of the site has been divided into five provisional periods. These are set out below, with any instances of overlap discussed within the overview below:

Period 1: Late Iron Age – Early Roman (c. 100 BC – AD 43)

Period 2: Roman (c. AD 43 - 410)

Period 2.1: Earlier Roman (c. AD 43 - 200)

Period 2.2: Later Roman (c. AD 200 - 410)

Period 3: Medieval (c. 410 – 1539))

Period 3.1: Early medieval (c. 410 - 1066)

Period 3.2: Medieval (c. 1066 - 1299)

Period 3.3: Late medieval (c. 1100 - 1539)

Period 4: Post-medieval (c. 1540 - 1800)

Period 5: Modern (c. 1801 – 2000)

### **Geology**

- 4.6 Natural geology (substrate) consisting of light-blue grey clay with occasional flint cobbles and shattered flint inclusions was recorded across the site. There was no discernible subsoil across the site; to the west the natural clay was directly overlain by compact, very dark grey brown, silt clay topsoil, up to 0.2m thick, but across a significant part of the eastern excavation area was up to 0.6m of compact, very dark grey brown, silt clay garden soil, which sealed medieval and earlier features but was cut by a number of post-medieval features.

### **Period 1: Late Iron Age to Early Roman (c. 100 BC – AD 43) (Fig. 4)**

- 4.7 Following the removal of overburden a series of linear features dating to the Late Iron Age to Early Roman period, along with a number of contemporary pits, were recorded cutting the natural substrate. Some of the ditches formed the outline of an enclosure running parallel to the natural break of slope from south-east to north-west across the site.
- 4.8 Towards the north-west of the excavation area was a sub-rectangular enclosure defined by Ditches D, B and B2. Ditch D, aligned south-west to north-east, formed the south-eastern edge of the enclosure and consisted of two co-axial linear features extending for a distance of 46m, a gap between the two elements defining a possible entrance, though this would have been partly blocked by pit 2242. Ditch B defined the north-western edge of the enclosure, running north-east from the south-western

corner of the site for 20m before being truncated by Period 2.2 Ditch C. Further to the north-east, Ditch B2, aligned at 90 degrees to Ditch B may have been the continuation of the latter, though later truncation prevented the investigation of this relationship. Ditch B2 closed off the north-east end of the enclosure, though a gap between this and the north-east terminus of Ditch D may have represented an entrance into the enclosed area. This space contained a number of contemporary features.

- 4.9 Ditch D was 0.24m deep and between 0.2m and 0.5m wide, whilst Ditch B was 0.55m deep and was filled by an initial silting deposit to a depth of 0.13m (Fig. 5, Section AA and photograph); subsequently it was backfilled with mid-grey brown silt clay. Ditch B2 was recorded as a shallow, ditch measuring 0.5m wide, 13.5m long and up to 0.25m deep. Intervention 2501 in Ditch D revealed the partially-articulated skeleton of a cow buried within the ditch.
- 4.10 Within the area enclosed by Ditches D, B and B2, several pits up to 0.3m deep contained Late Iron Age pottery, including a third of a grog-tempered ware jar from the fill of pit 2022 (Fig. 6, photograph). Further to the south and east, pit 2121 also contained an assemblage of Late Iron Age and Early Roman pottery.
- 4.11 No evidence for industrial activity nor structures was recorded within the enclosure, though the layout of features within this space, the largely domestic finds assemblage and possible association with slaughtered cattle suggests activity here was associated with the periphery of a settlement, possibly the final occupation of the multivallate hillfort.
- 4.12 Further to the east, another concentration of Period 1 features had been heavily truncated. Ditch P consisted of two aligned segments measuring 18m and 10m in length and 0.5m wide, but surviving to a depth of only 0.1m. The gap of 5m between the two segments may have defined the entrance of an enclosure that extended to the north-east of the site. Pits 2076, 2166, and features 2285 and 2326 suggest a small focus of activity external to this enclosure. Shallow pits 2076 and 2166, cut to a depth of 0.09m and 0.19m respectively contained a small amount of Late Iron Age pottery and animal bone, following a similar pattern to the pits associated with Ditches B and D. Immediately to the south-east of pit 2076, feature 2326 was cut to a depth of 0.05m; its elongated shape and shallow profile suggest that it may represent the remains of a working hollow produced by human activity associated with the pit.

**Period 2: Roman (c. AD 43 - 410) (Fig. 4)***Period 2.1: Earlier Roman (c. AD 43 – AD 200)*

- 4.13 The transitional Late Iron Age to Early Roman landscape experienced a modification in the Early Roman period, during which the enclosure delineated by Ditches B, B2 and D was abandoned, replaced and subsequently re-established.
- 4.14 The modification consisted of a sub-rectangular enclosure defined by Ditch A, which truncated Ditches B and D. Ditch A was between 0.05m and 0.5m deep with an irregular base (Fig. 8, Sections CC and DD). The pottery assemblage recovered from a number of interventions along the ditch consisted mainly of Late Iron Age and Roman sherds, with a small amount of later material likely to have been intrusive from later truncating features.
- 4.15 Ditch A enclosed two clusters of contemporary pits. Towards the north-western end of the enclosure, large, shallow pits, 2279, 2387 and 2389 were cut into the natural substrate to depths between 0.1 and 0.3m. At the southern end of the enclosure, pits 2267, 2319 and 2349 were cut into the natural substrate to a depth of 0.3m and contained assemblages of Late Iron Age and Roman pottery. Fill 2268 of pit 2267 contained a copper-alloy dress pin dated to the late 1st to early 2nd centuries AD. It was accompanied by a few sherds of pottery, mostly of 1st to 2nd-century date.
- 4.16 The enclosure formed by Ditch A was short-lived. The majority of interventions encountered a homogenous single fill which appears to have belonged to a single episode of deliberate backfilling. Following this, Ditch C, Ditch H and ditch 2464 appear to have re-established the pattern of enclosures set parallel and perpendicular to the break of slope.
- 4.17 Ditch C truncated the north-eastern end of Period 1 Ditch B, continuing into the edge of excavation to the north-east. The ditch was cut into the backfilled remains of Ditch A to a depth between 0.2 and 0.3m. At intervention 2295 three fills were recorded, with an initial deposit of highly organic material (fill 2296) containing a number of sherds of Early Roman pottery lying on the base of the ditch and sealed by redeposited natural clay deposit (2297), and subsequently sealed by a darker silty clay material containing further sherds of Early Roman pottery (2298).
- 4.18 Ditch 2464 was aligned parallel to Ditch C, 34m to the south-east of it, and was recorded for a total length of 20m, the profile shallow, measuring 1.8m wide and 0.4m deep. The composition of the backfill material, consisting of homogenous silty

clay, suggested that the feature was intentionally filled in, and the lack of any finds other than charcoal suggested that it was well maintained or use was short lived. This ditch alignment appeared to have been an earlier iteration of later Period 2.2 Ditch K and was largely truncated by that feature.

- 4.19 The southern terminus 2468 of Ditch H was cut through the backfill of ditch 2464 to a depth of 0.3m and ditch H ran for 31m between Ditch C and Ditch 2464, dividing the area between them. The north-western end of Ditch H truncated an earlier linear feature (2574), possibly an earlier iteration of the same feature.
- 4.20 Ditch E was aligned roughly north-east to south-west and consisted of two linear segments, running for a total length of 47m, defining a sub-rectangular area between Ditches C and H. The northernmost segment cut across backfilled Ditch A but there was a 1.5m gap between the northern terminus and Ditch H, possibly indicating access into an enclosed area defined by Ditches E, H and C. The gap between the two elements of Ditch E may also have indicated another access point.
- 4.21 To the south of Ditch E there was further pit digging, but whilst the Late Iron Age features were generally deeper with asymmetric profiles, the Period 2.1 pits tended to be shallow with very gentle profiles. Pits 2057, 2153, 2163, 2283 and 2343 were cut into the substrate to depths between 0.08m and 0.2m, and contained small assemblages of Early Roman pottery, animal bone and flint. Pits 2224 and 2226 to the north-east also demonstrated similar characteristics but lay beyond any enclosed areas. Larger amorphous features such as cuts 2109 and 2361 had similar shallow profiles and assemblages of Early Roman pottery; however, the form of 2361 in particular, suggests this may have been an erosion hollow, possibly associated with movement through a potential entrance between Ditch A and ditch 2464. Why an erosion hollow should have formed in the location of 2109, though, is unclear.
- 4.22 Located approximately 13m south-east of depression 2361, pit 2474 measured 1.78m across and was 0.83m deep. It exhibited vertical sides and a flat base, and contained a single homogenous fill of mid-green grey, friable clay. The pottery assemblage consisted of mainly late prehistoric and Early Roman sherds. Similar steep-sided features have been interpreted as grain storage pits on sites from the late prehistoric to Early Roman periods, though the example here only yielded small quantities of wheat and barley grains, so its function could not be positively ascertained.

- 4.23 At the southern corner of the site, two small linear features, 2101 and 2103, were cut to depths of 0.09m and 0.29m respectively. Although containing no finds later than 1st to 2nd-century pottery, they were heavily truncated by later medieval and post-medieval activity. Given their position, relatively isolated from other areas of activity in Period 2.1, they may represent a further enclosure boundary, or an attempt to drain the natural hollow within which they were situated.

*Period 2.2: Later Roman period (AD 200 – AD 410)*

- 4.24 Period 2.2 was characterised by a continuation in the layout of enclosure ditches parallel to the natural break of slope. Ditch K traversed the entire excavation area on a north-east/south-west alignment and was cut to an average depth of 0.40m into the natural substrate, running for a length of 74m and with a maximum width of 3m. This large boundary ditch truncated Period 2.1 feature 2109, and ditch 2464. The backfill material within this ditch yielded approximately half of the metalworking waste recovered from site; mostly fuel ash slag and smelting waste. A substantial assemblage of mostly Early Roman pottery was recovered from intervention 2186, suggesting that domestic waste was also deposited in the ditch. A small copper-alloy disc (Ra. 61) recovered from fill 2113 has been tentatively identified as an abraded Late Roman coin, indicating that the enclosure ditch was most likely backfilled towards the end of the 4th century AD.
- 4.25 Whilst Ditch K formed the south-eastern edge of the revised enclosure system, Ditch I to the north-west formed the north-eastern and north-western edges of a sub-rectangular enclosure that extended beyond the south-western edge of the excavation area. This enclosure measured at least 47m north-east/south-west by 35m north-west/south-east and Ditch I was cut to an average depth of 0.4m with a similar shallow profile to those recorded in Ditch K, though it had been re-cut on at least one occasion.
- 4.26 Two graves containing three inhumed adult burials were located in the western corner of the enclosure formed by Ditches I and K. Grave 2393 (Fig. 9) contained the remains of two adult females, one older and one younger, the latter of which was associated with the bones from an unborn foetus. They were aligned south-west to north-east with the heads at the south-west end of the grave, which was sub-rectangular in plan, measuring 2.14m in length and 1.12m wide. It had been cut to a depth of 0.25m into the natural clay with almost vertical sides and a flat base, and had been excavated in a single episode, suggesting that the two women died within a short period of time. Samples of bone taken from each skeleton yielded very

similar radiocarbon dates: the skeleton (2395) of the older individual produced a date range of 255-421 cal. AD at 95.4% probability (SUERC-84640), whilst the skeleton (2396) of the younger woman produced a range of 255-428 cal. AD at 95.4% probability (SUERC-84639). A fragment of human peri-natal ulna bone was also recovered from Ditch K, indicating that there may originally have been further burials in the vicinity, or possibly discard of infant remains in the ditch contemporary with the burials to the west.

- 4.27 Grave 2393 lay north-west of shallow Ditch AC and north of steep-sided pits 2572 and 2485 (Fig. 10, Section BB). Both pits and the ditch were backfilled with charcoal-rich clay and burned stone.
- 4.28 Five metres to the north-east of grave 2393 was a second grave 2451 (Fig. 11), which contained the skeleton of a single adult male. The grave, which was aligned approximately parallel with 2393, measuring 1.96m in length and 1.1m wide, appeared to have been a re-used pit with a shallow profile, in contrast with the vertical cut of grave 2393. Although initially appearing to have been associated with the double burial, a sample of bone from the skeleton produced a radiocarbon date suggesting a later interment than the two females; 394-542 cal. AD at 95.4% probability (SUERC-84638). This range indicates that the male burial could have been interred in the early post-Roman period, whilst the two females were clearly of Late Roman date.
- 4.29 The backfills of Ditch I were homogenous compacted clays, suggesting that, whereas Ditch K had been extensively backfilled with industrial waste, possibly from a nearby smithing site, other enclosure ditches had not, indicating that industrial activity may have been carried out to the south of Ditch K rather than in the enclosed area. Pit 2144, which lay approximately 17m to the south-east of Ditch K (Fig. 7, Section EE and FF), contained an assemblage of 3rd to 4th-century AD pottery, with some residual earlier material also present. Its sub-rectangular shape in plan and almost vertical sides suggested some kind of industrial use, though no material was recovered that could suggest a particular activity. The feature may originally have been lined with some type of organic material that left no trace, the collapse/decomposition of which produced a characteristic slumping pattern (Fig 7, Section EE).
- 4.30 Ditch K extended beyond the Ditch I enclosure to the north-east but no further, contemporary features were identified north-east of Ditch I. It is therefore unclear

whether there were further enclosed areas north of the site, or whether Ditches K and I defined the northern edge of a Late Roman enclosure complex.

### **Period 3: Medieval Period (Fig. 12)**

#### *Period 3.1. Early Medieval (410 – 1066)*

- 4.31 The post-Roman period marked a hiatus in activity on site. Other than the possible early post-Roman burial, only four features pre-dating the Norman Conquest were identified and there was negligible deposition of cultural material at this time. Towards the north-eastern side of the site, somewhat sinuous Ditch J cut across period 2.2 Ditch I to an average depth of 0.1 m. The ceramic assemblage includes Late Roman material and a single sherd of Early to Middle Saxon pottery. The shallow profile and morphology of this feature suggest that it represents the remains of a path across the Late Roman landscape, rather than part of an organised, early medieval field system.
- 4.32 A little more than 5m north-east of possible post-Roman burial 2451, a single shallow pit (2051) was dug through the natural substrate to a depth of 0.16m, the fill of this feature yielding a single sherd of Early to Middle Saxon pottery. At the southern end of the site, ditch 2093, cut to a depth of 0.48m, and containing a single sherd of early medieval ware. Ditch 2096 was aligned parallel with ditch 2093 and both cut through Period 2.1 ditches 2101 and 2103 to a depth of 0.3m, and filled by a primary fill of mid-brown silty clay and a backfill deposit of mid-grey brown clay containing a small assemblage of animal bone. Both ditches were aligned north/south, running for a total length of 4m before being obscured by a spread of garden soil layer 2003 (Period 4) which remained unstripped.

#### *Period 3.2 Medieval (1066 – 1299)*

- 4.33 Following the layout changes of Period 3.1, small enclosures were re-established in Period 3.2, consisting of Ditches F, G, L, M, N and Y, and pits 2059, 2075, 2200, 2201, 2188, 2287, 2265, 2291, 2293, 2299 and 2599 (Fig. 12).
- 4.34 Ditch L, aligned north-east/south-west, formed a more substantial boundary than earlier ditches. This larger ditch was 0.5m deep and cut across the top of grain storage pit 2474. A small enclosure formed by Ditch N and recut M, was located in the eastern corner of the site, immediately south-east of Ditch L (Fig. 13). These ditches were cut into the substrate to a depth of 0.2m, and contained mostly redeposited Roman and some Saxon pottery, with a few sherds of medieval coarse ware dated to the 12th to 14th centuries AD. These features may have been

associated with the development of the western periphery of medieval Cheddington. Ditch L therefore appeared to be the first in a series of boundaries which divided the settlement from the surrounding agricultural land.

- 4.35 To the south-east of Ditch L, a number of discrete features were dug through the natural substrate. Pits 2287, 2291, 2293, 2599 and erosion hollow 2299 were located in a group, whilst pits 2075, 2200, 2201, 2188 and shallow, possible erosion hollow 2059 formed a similar group further to the south-west. The majority of these pits were shallow sided and cut no more than 0.2m into the natural substrate. The smaller features, 2200, 2291 and 2599 may have represented the remains of postholes supporting temporary structures or shelters. Pit 2188 was more substantial, cutting 0.81m into the substrate with vertical sides and a concave to flat base. The earliest fill consisted of organic-rich, dark grey brown silt clay, interpreted as cess material, which was sealed by sterile mid-grey brown clay. Possible erosion hollow 2059 was cut to a depth of 0.1m; it was linear in plan, measuring 4.5m long and 1.0m wide with a distinct 90-degree return, hinting that it was formed as a path which respected the edge of an unrecorded boundary. The location of a sealed cess pit suggests Period 3.2 was characterised by activity on the periphery of the medieval village. The organisation of two distinct groups of features, as mentioned above, is later reflected in Period 3.3 and Period 4.
- 4.36 Ditches F, G and Y appear to have been later evolutions of Ditch L, extending the Period 3.2 boundary further to the south-west. Ditch F comprised two aligned segments of ditch measuring 20 and 12m long, both were cut to depths of 0.1-0.2m and measured 0.4m wide. The eastern segment of Ditch F was re-cut by Ditch G to a maximum depth of 0.3m, with steep sides and a concave base, it terminated in the centre of the site, and formalised the boundary between the subsequent layout of two rectilinear areas corresponding to medieval back-plots (Period 3.3). This spatial layout was later echoed by Ditches W and X, which ran approximately perpendicular to, and cut across Ditch G. Small pit 2265, lying between Ditches L and G, contained residual Roman pottery and two fragments of medieval coarse ware.

#### *Period 3.3 Late Medieval (1300 – 1539 AD)*

- 4.37 Period 3.3 was characterised by the digging of ditches to establish land boundaries, along with smaller sub-enclosures within the Period 3.2 back plot boundaries. Ditch X and its recut, Ditch W, were on a north-west/south-east alignment across the centre of the excavation area, extending beyond the north-west edge of excavation

and probably also originally extending beyond the south-east site edge prior to truncation by later features. This meant that they extended the division between the two back plot areas at the south-east of the site into the adjacent field system. Both cut through Roman features to a depth of 0.3m, and contained medieval to 16th-century ceramics, suggesting that this field boundary spanned the late medieval to post-medieval periods. The ditches also cut across the southern end of Period 3.2 Ditch G and were themselves cut by later boundary features to the south-east.

- 4.38 Ditch V, which appeared to form the north-west boundary of the southern back plot, was aligned perpendicular to Ditches X and W, and prior to later modification of the boundary layout, may have been directly related to them.
- 4.39 Ditch V was cut into the substrate to a depth of 0.6m and filled by a sequence of alternating dark and light clay fills, the darker containing concentrations of charcoal, and animal bone, while light fills consisted of sterile redeposited natural substrate. Ditch S ran parallel to Ditch V, approximately 7.5m to the south-east, but was slightly shallower with a moderate sloping sides, suggesting that it was dug as a drainage channel rather than a formal boundary.
- 4.40 Similar sub-division occurred within the northern plot, where Ditches AB and AA formed a boundary or possible trackway around the eastern and northern edge of the area. These small gullies were cut 0.1m into the natural substrate, and contained small assemblages of 11th to 13th-century Developed St Neots Ware. In contrast with the earlier period, no contemporary internal features were apparent within either of the back plots, possibly indicating a change of function within these areas.

#### ***Period 4: Post-medieval (1540 – 1800 AD)***

- 4.41 Period 4 saw the development of a garden soil layer across the south-eastern half of the site; this was characterised by fine grained sediment, which built up over a period of three or four hundred years following the establishment of the medieval back plots in Period 3.2 (Fig. 14). As the garden soil deposit slowly accumulated, the final iteration of the two back plot areas was also formed, the medieval layout appearing to have been abandoned. Ditches Q, R, T, Z and U replaced the earlier plot boundaries. Ditches W and X may have also continued in use during this period, though ultimately, they were recut by Ditch Z.
- 4.42 The boundaries of the back plot areas were re-established by Ditch Q in the north and Ditches R and T to the South. Ditch Q, which appeared to be recut of Ditch AA,

was cut to a depth of 0.3m to 0.4m through the natural substrate with homogenous, sterile fills suggestive of natural silting. Finds included sherds of Developed St Neots Ware and early medieval ware, suggesting that residual material from the 11th to 13th centuries was still circulated into and out of midden deposits during the post-medieval period. The boundary defined by Ditch Q was subsequently re-modelled by the digging of Ditch Z, which extended the enclosure to the north and east. Likewise, in the southern back plot, Ditches R (which was recut on at least one occasion) and T contained earlier medieval pottery, but within a darker, more charcoal rich fill, which may indicate the presence of nearby industrial activity.

- 4.43 Ditch U measured 2.6m wide and was cut 1.72m into the natural substrate, forming a substantial boundary running from the south-western edge of excavation to the middle of the site (Fig. 15). This feature remained preserved as an earthwork prior to the topsoil strip and was recorded during the topographic survey phase of the investigation. A single primary fill, 2214, had started to accumulate before recut 2215 cleaned out and re-established the depth of the ditch to 1.52m. Thereafter a series of tipping fills from both sides were interpreted as phases of intentional backfill, followed by a long period of natural silting and pedogenesis continuing up until the present day.

#### ***Period 5: Modern (1801 to 2000)***

- 4.44 In the final phase of activity recorded on site, a series of stone platforms were constructed within the former back plot boundaries, which, by the 19th century were fossilised as small sub-rectangular field boundaries. Feature 2021 was cut into the top of garden soil 2003 to a depth of 0.4m and backfilled with highly compact stone fragments. This was interpreted as the remains of a haystack base.
- 4.45 Stone spread 2006 was deposited close to the south-eastern edge of the site and included several large fragments of finished masonry in Bedfordshire Clunch, but mostly consisted of well-worn chalk rubble. The origin of this material is unclear, however a small building immediately to the east of the site was depicted on the early 19th-century Tithe Map, and had been demolished by the time that the 1st Edition Ordnance Survey sheet for the area was published in the 1880s. This spread had the effect of levelling and terracing the natural slope, and reinforcing the upper horizon of the garden soil. Pit 2041 (Fig. 16) was cut into 2006 to a depth of 0.14m and may represent a planting hole or natural tree bole associated with a hedgerow, which was depicted on late 19th-century mapping.

### **Interpretative Earthwork Survey Results**

4.46 An interpretative earthwork survey was undertaken at the end of August 2018 following mowing in order to give the best visibility for archaeological earthworks. Features were recorded using a Real Time Kinematic (RTK) Global Navigation Satellite System (GNSS). Features across the site coincided with anomalies recorded on Environment Agency LiDAR data (CA 2017) (Fig 2). At the northern end of the site the remains of a former driveway was recorded running west to east from Cheddington Manor towards Mentmore Road. It was visible as a series of parallel linear earthworks preserved to a height of 0.4m. A series of linear features aligned perpendicular to the driveway may have provided drainage towards low-lying ground to the north. The central and southern portion of the site contained well preserved ditches and dykes which respect the alignment of 19th-century field boundaries. Finds recovered from the fills of these features suggests they have had medieval origins, potentially marking the boundary between the village and demesne land surrounding Cheddington Manor.

## **5 FACTUAL DATA AND STATEMENTS OF POTENTIAL**

### ***Stratigraphic Record: factual data***

5.1 Following the completion of the fieldwork an ordered, indexed, and internally consistent site archive was compiled in accordance with specifications presented in the *Management of Research Projects in the Historic Environment (MORPHE): Project Manager's Guide* (Historic England 2015a). A database of all contextual and artefactual evidence and a site matrix was also compiled and cross-referenced to spot-dating. The fieldwork archive comprises the following records:

Context sheets	601
Plans (1:10, 1:20, 1:100)	1
Sections (1:10, 1:20)	165
Sample sheets	51
Monochrome Films	0
Digital photographs	803
Matrices	1

5.2 The survival and intelligibility of the site stratigraphy was good with archaeological remains having survived as negative features. All relationships between major phases were investigated where possible. The dominant features on site consisted of large intercutting enclosure ditches, which were assigned to periods according to stratigraphic relationships and artefactual dating. Discrete features were assigned to periods according to spatial distribution or spot dating, or were left undated.

**Stratigraphic record: statement of potential**

- 5.3 A secure stratigraphic sequence is essential to elucidating the form, purpose, date, organisation and development of the various phases of activity represented. This will be achieved through detailed analysis of the sequence and further integration of the artefactual dating evidence. The refined sequence will then serve as the spatial and temporal framework within which other artefactual and biological evidence can be understood.
- 5.4 The stratigraphic record forms a complete record of the archaeological features uncovered. The inter-relationships between the intercutting enclosure ditches affords the opportunity to define a stratigraphic sequence backed up by artefact spot dating.

**Artefactual record: factual data**

- 5.5 All finds collected during the excavation have been cleaned, marked, quantified and catalogued by context. All metalwork has been x-rayed and stabilised where appropriate.

Type	Category	Count	Weight (g)
Pottery	Early Prehistoric	7	53
	Late Prehistoric	276	2528
	Roman	1844	21,607
	Anglo-Saxon	10	127
	L Saxon. - Medieval	8	105
	Medieval	432	4141
	Post-medieval/modern	90	1604
	<i>Total</i>	<i>2667</i>	<i>30,165</i>
Flint	Worked/burnt	176	302
Fired Clay	All	199	1945
Brick/tile	All	157	8524
Glass	All	15	326
Coins	Roman	1	1
	Medieval/pmed	23	168
Metals	Iron	123	
	Copper alloy	62	
	Lead alloy	36	
	Residues	32	18,396
Worked bone	All	3	13
Stone	Objects	3	839
	Building stone	20	42,853
	Natural (Raw Material)	267	38,748
	Burnt	137	14,9044

- 5.6 The finds assemblage included a spread of ceramic dates ranging from the Bronze Age to modern periods. Other artefacts were dated from the Roman to modern periods.

### *Worked flint*

- 5.7 A total of 139 worked lithics were recovered during excavation. The range of object types and the technology within the assemblage correlate to a Late Neolithic to Bronze Age date; two Mesolithic Microliths were recovered from the topsoil and medieval garden soil, representing only residual evidence for very early activity, however they are the earliest known evidence for human activity in the immediate vicinity of the site.

### *Pottery*

- 5.8 A total of 2667 fragments of pottery weighing 30,165g was recovered during excavation. A small amount of material of Bronze Age to Early Iron Age date was recovered from Roman and medieval features, suggesting a similar pattern of residual early material appearing in later features identified from the worked flint assemblage. A small assemblage of late prehistoric pottery, consisting of shell-tempered, quartz-tempered, and grog-tempered ware was recovered from sealed contexts in Period 1, and is dated to the Late Iron Age.
- 5.9 Pottery of Roman type makes up 70% of the assemblage by weight. A proportion, including a small number of imported finewares, comprises types dating to the Late Iron Age/Early Roman transitional period. Dating for the remainder of the assemblage is almost exclusively to the Early Roman period, largely before c. AD 150. Dating is provided mainly by vessels in coarseware types and by a small quantity of samian and other finewares. Key dating, mainly to the mid/late 1st century AD and earlier 2nd century AD is provided by a number of large context groups, some of which include partially reconstructable vessels. The presence, albeit as only a few sherds, of Gallo-Belgic and north Gaulish finewares, is significant, providing evidence for access to such types in the earlier or mid-1st century, although it cannot be said for certain that these pre-dated AD 43. Indications of 'high status' or a military presence, which might be indicated by amphora types, or an abundance of flagons, mortaria or samian are not apparent from the remainder of the group. In common with the large majority of Romano-British groups, the pottery assemblage is dominated by coarsewares and utilitarian forms such as jars for cooking or storage.
- 5.10 Early Saxon pottery was limited, consisting of ten sherds weighing 127g. This material was residual in features from Period 3.

- 5.11 Late Saxon and medieval sherds were recovered from secure contexts in Period 3, and consisted of 440 fragments weighing 4246g, representing domestic ceramic forms spanning the 9th to 15th centuries AD. It is likely to represent the remains of midden material originating from Cheddington. This accumulation of domestic material continued into the post-medieval period, and most post-medieval sherds were recovered from the garden soil layer or from later features.

#### *Ceramic Building Material*

- 5.12 Most of the ceramic building material (CBM) assemblage recovered during excavation was dated to the post-medieval period or later and came from spreads of stone and rubble which were interpreted as terracing material. A total of 19 fragments weighing 1377g were identified as Roman *tegulae* and *imbrices*, these fragments were mostly recovered from the garden soil deposit. Given its size and stratigraphic position, the assemblage does not in itself confirm presence of a Roman structure within the site boundary, but rather suggests that Roman CBM was abundant enough around the village to be present in medieval and post-medieval midden material.

#### *Fired Clay*

- 5.13 The fired clay assemblage consisted of 199 fragments weighing 1945g originating from 48 features. The material was in generally poor condition, consisting of small and abraded pieces with a mean weight of 9.8g per fragment. A single notable object recorded during the assessment was rectangular in shape with a flanged edge and originated from pit 2470, immediately adjacent to the Late Roman double burial. It probably represents a kiln fragment or a piece of kiln furniture.

#### *Clay tobacco pipe*

- 5.14 The excavation produced 49 fragments of post-medieval clay tobacco pipe weighing 149g from eight deposits. All the fragments are stems in relatively good condition, with the exception of few pieces that are burnt. A single stem fragment carries the makers mark 'William Larnar'. The style of the stem stamp is consistent with pipes in the 1680-1780 date range although this maker is currently unidentified.

#### *Glass*

- 5.15 The glass assemblage was largely unstratified and dated from the post-medieval to modern periods.

### *Metalwork*

- 5.16 A total of 234 metal items were recovered from the site, 180 of which were recovered from topsoil and garden soil deposits; the remainder (54) were recovered from sealed contexts. Most objects are likely to be chance losses, or inclusions within midden material recycled for manuring. Dateable objects span the Roman to post-medieval periods.

### *Worked Bone*

- 5.17 The worked bone assemblage consists of three fragments weighing 13g. A fragment of decorated strip was recovered from Ditch Z (Period 4: post-medieval). A post-medieval knife handle and a possible pin beater were recovered from the topsoil, which is consistent with the chance losses spreading of midden material across the site.

### *Industrial Waste*

- 5.18 The excavation produced 32 pieces of slag, weighing 18,396g, from 14 contexts. Slag was recovered from secure Roman contexts including the backfill of grave 2393, pits 2121 and 2343, and Ditch K (fill 2187). Fragments were also found in Period 3 and 4 features, but these are likely to have been residual from earlier Roman features.

### *Stone*

- 5.19 Unworked natural stone was recovered from sealed contexts in Period 2, where it mostly consisted of ironstone, the provenance of which is unlikely to be local. The material was mostly residual in Period 3, 4 and 5 features, with some fragments recovered from Roman (Period 2) features. It was identified as a potential raw material, and may be associated with the industrial waste recovered from other Period 2 features. Schrüfer-Kolb suggests that ore processing prior to smelting would have aimed to produce ore chunks of a few centimetres in diameter (2005: 21), which is consistent with the assemblage recovered from Cheddington. Further evidence for processing raw material included unworked fragments of Hertfordshire Puddingstone, while three fragments of continental lava quern confirmed the presence of imported material spanning the Roman to medieval periods.

### ***Artefactual record: statements of potential***

#### *Worked flint*

- 5.20 This small assemblage provides evidence of activity during the Mesolithic and Early Neolithic periods, and probably during the later Neolithic and/or Bronze Age,

although none is stratified. Its significance is relatively local, due to the small number and residuality of the lithics. A brief discussion of the flint assemblage should be included as the earliest evidence for human activity in the vicinity of site. No further recording or analysis is required.

### *Pottery*

- 5.21 The assessment of the material suggests significant quantities of later Iron Age and Roman fabrics, which probably associate with a continuous phase of occupation. Fabrics and ceramic forms suggest the presence of multiple domestic activities between the 1st century BC and the early 2nd century AD. Such material derives primarily from ditches and other linear features, while the most secure features that produced such pottery appear to be pits.
- 5.22 The pottery assemblage, in particular the large Roman component, demonstrates good potential to assist in the dating and interpretation of the site. Publication, with a focus on the Late Prehistoric and Roman elements, will contribute at a local/regional level to the understanding of pottery supply for these periods. Reporting to publication level is recommended with the aim of characterising the assemblage and examining aspects of supply, chronology and 'status'. The report should be accompanied by an illustrated catalogue drawn mainly from the 'key groups' and vessels of individual interest.
- 5.23 The post-Roman pottery has limited potential for future analysis, particularly due to the unstratified nature of much of the material. Material recovered from environmental samples needs to be added on the final pottery catalogue and database once all required samples have been processed.

### *Ceramic Building Material*

- 5.24 The CBM from the site has been recorded and catalogued. Most of it is of post-medieval date and has limited potential for any future analysis. A discussion of the material in relation to the pottery from the site is unlikely to be useful due to the limited presence of Roman pieces and the total absence of medieval material. The unstratified nature of the CBM from the site cannot offer any other useful information. Any additional material from soil samples should be included in the final catalogue.

### *Fired Clay*

- 5.25 The fired clay assemblage from the site has been fully recorded and catalogued. Its nature and poor condition provide limited potential for future analysis. A brief note is not necessary in a final publication, but any additional material from soil samples needs to be added to the final catalogue.

### *Clay tobacco pipe*

- 5.26 The clay tobacco pipe has been fully recorded and catalogued. The larger part of the assemblage has no potential for future analysis. Further research is recommended to identify the maker of the stem stamped pipe and enable more precise dating.

### *Glass*

- 5.27 The glass has been fully recorded and catalogued. It has no potential for further analysis and no further work is recommended.

### *Metalwork*

- 5.28 A copper-alloy hairpin of 1st to 2nd-century date was recovered from pit 2267 (Period 2.1), representing the only *in situ* Romano British metal artefact recovered from the site, this should be described and illustrated, whilst a small number of other significant metal finds from less-secure contexts should also be mentioned and illustrated.

### *Worked Bone*

- 5.29 The worked bone assemblage is small and has limited potential for providing information on site activity and dating, being largely unstratified. The fragmentary condition of the items makes identification of form or function difficult and consequently no further work is recommended.

### *Industrial Waste*

- 5.30 The assemblage is considered of minimal significance, providing only limited evidence for ironworking at the site during the Roman period. From the small quantities of material recovered this activity may have been of small scale, and it is further possible that this material may have originated elsewhere and was brought to the site as hardcore. In view of the small quantities of material recovered and/or its unstratified provenance and undiagnostic character, further analysis of this material is unwarranted.

### Stone

- 5.31 The worked and non-worked stone has been fully recorded and catalogued. Due to the nature of the contexts from which it was derived, it has little potential for future analysis and no further work is required. In case of future publication, a brief reference to the lava quern and puddingstone fragments could be included, with the lava quern pieces photographed. If any additional material from environmental samples is recovered, then this needs to be included in the final catalogue.

### **Biological record: factual data**

- 5.32 All ecofacts recovered from the excavation have been cleaned, marked, quantified and catalogued by context. A total of 38 bulk samples were taken for the recovery of environmental remains, with some of these also taken for finds recovery.

Type	Category	Count
Human bone	Inhumation burials	4
Animal bone	Fragments	4240
Samples	Environmental	38

### Human bone

- 5.33 The skeletal remains of three adult individuals and a foetus were uncovered, two adults (both probably female, one younger and one older) were simultaneously interred in a double burial and a further single burial (possibly male) was located a short distance away. Radiocarbon dating of the three adult skeletons places them in the Late Roman to Early Saxon period, with calibrated dates ranging from the late 3rd to early 5th centuries AD. A single perinatal ulna was also recovered from Late Roman Ditch K, mixed in with midden material including a large assemblage of 1st- to 2nd-century Roman pottery, and is therefore unlikely to be associated with the burial group.

### Animal bone

- 5.34 A moderate assemblage of c. 600 fragments of animal bone out of a total of 4240 recovered fragments could be identified to taxa. The largest samples came from the Roman and post-medieval contexts (Periods 2 and 4). Bones were generally in fair to good condition, although mixtures of fresh and heavily weathered examples from the same contexts suggest that some of the assemblage consisted of re-circulated midden material. Cattle and sheep/goat bones dominate the assemblage with a shift in dominance from cattle in the Roman period to sheep/goat in the medieval period.

### *Plant macrofossil and charcoal*

- 5.35 A series of 38 environmental samples were selected from a range of feature types across the site with the intention of recovering environmental evidence of industrial or domestic activity. Samples from features in Periods 1 and 3 contained material likely to be representative of windblown material, originating from a nearby settlement. Period 2 material included a single fill from Ditch K, which may have included crop-processing waste, the remainder of the features contained wind-blown material which likely originated off site. No evidence of coprolite was recovered from possible cesspit 2188, and further analysis is unlikely to shed further light on the use of this feature. These assemblages appear to indicate ongoing domestic activity in the vicinity of the site but provide no direct evidence for land-use within the site boundary. The range of weed seeds are generally those typical of grassland, field margins and arable environments. The mollusc assemblage indicates a well-established open landscape with some areas of longer grass and possible scrub and hedgerow.

### *Monolith Assessment*

- 5.36 A single monolith was taken from a section of dark organic deposit 2003 to determine whether or not the context could be described as a buried garden soil or a dumped waste material. It can be concluded that the homogenous, fine-grained sediments, with loose blocky structure and dark hue is a garden soil mixed with dumped waste materials. Most likely, this deposit built up over many generations of site use during the medieval period (based on pottery) and was sealed by later post-medieval material (context 2006 see CA 2018).

### ***Biological record: statements of potential***

#### *Human bone*

- 5.37 Despite the low number of burials these skeletal remains have great potential to provide biological information about the individuals and burial practices. The rural nature of the burial places it within the research framework of the Roman Rural Settlement Project, and as such should contribute to this body of data. Establishing the age of the foetus will help confirm the relationship to the adult female.

#### *Animal bone*

- 5.38 The Iron Age assemblage was too small to warrant further analysis.
- 5.39 The Roman period is best represented, and the number of cattle, sheep/ goat and pig fragments in both the early and late phases total more than 100, which makes

them worth further investigation. Research questions will be limited to a basic appraisal of diet, with some potential for mortality data to be used to consider husbandry practices.

- 5.40 The combined number of fragments of cattle, sheep/ goat and pig bone recovered from all medieval phases is well below the recommended number of 100 to be worth further analysis (Hambleton 1999), so no more work on bones from this phase is recommended.
- 5.41 The post-medieval phase is well-represented in the animal bone assemblage, although the sample size remains small. It should therefore be considered in terms of diet and animal husbandry only.
- 5.42 The modern assemblage was also too small to warrant further work.
- 5.43 The size of the assemblage is too small to provide reliable data to perform high-level analysis involving comparisons with other sites. Nonetheless, full recording and basic analysis of Roman and post-medieval assemblages is recommended to understand the nature of diet, status and husbandry of those living at the settlement in those phases.

#### *Plant macrofossil and charcoal*

- 5.44 It is proposed that the charred remains from four or five samples should be analysed in more detail. These are to be selected from: Period 1 pits 2022 and 2166 and ditch 2326, Period 2.1 pit 2343, Period 2.2 pit 2144 and Ditch K 2459, Period 3.1 pit 2188, Period 3.2 pit 2291, Period 3.3 Ditch W 2207 and Period 4 ditch 2047.
- 5.45 No further work is proposed for the charcoal.

#### *Monolith Assessment*

- 5.46 The sequence has no palaeoenvironmental significance. The archaeobotanical remains from the bulk samples should be enough to provide a reconstruction of the human activity in medieval period. No further work is recommended.

## **6 SUMMARY STATEMENT OF POTENTIAL**

- 6.1 The survival of features dating from the medieval period at Cheddington, sealed under a large deposit of garden soil and post-medieval terracing material, was good.

A large portion of late prehistoric and Roman features had been truncated by medieval and later ditches. Consequently, our understanding of Roman activity along the south eastern edge of the site, which had the highest chance of containing evidence associated with the Great Seabrook Farm Roman site (CA 2015), has been adversely affected.

- 6.2 Ceramic dating evidence for the Roman and medieval periods is good and may offer further opportunity for refinement beyond what has already been achieved. The other artefactual assemblages, including CBM, fired clay, worked stone, metalwork, glass and worked bone have made a limited contribution to the understanding of the development of Cheddington as a later medieval and post-medieval settlement, but their contribution to understanding the occupation of the site from the 1st to 5th centuries AD has been negligible. There is little potential for furthering our understanding of the site from these assemblages beyond what has already been laid out in this document.
- 6.3 The natural stone and industrial waste assemblages have limited potential for further discussion in the context of raw material consumption and industrial processes in the Thames Solent Research Framework, making mention of nearby findspots indicating Romano-British iron production at Aston Clinton (RPS 2005), Leighton Buzzard (NA 2009) and Cow Roast (Allen *et al.* 2018), all of which have produced evidence of industrial waste, but lack structural evidence for furnaces. Excavations at Dellfield Road, Berkhamsted, confirmed the nearest direct evidence for Late Iron Age/Early Roman iron processing, including four shaft furnaces (Thompson and Holland 1976). Analysis of Romano-British ironworking in the East Midlands (Schrüfer-Kolb 2005) has suggested a close geographic relationship between mining, processing and smelting sites, so Cheddington is an outlier due to its isolation from natural sources of iron ore.
- 6.4 Further analysis of the human remains has the potential to contribute to understanding of the lifestyle and age of the individuals, as well as contribute to the published corpus of double inhumation burials from small rural inhumation groups, and perinatal burials, which are both rare occurrences in Roman Britain (Holbrook 2005).
- 6.5 By the Late Iron Age, evidence suggests that the landscape of south Buckinghamshire was characterised by open grassland and that agricultural areas on clay geology predominantly specialised in a pastoral economy (Kidd 2007). It is

therefore reasonable to conclude that the earliest evidence on site, which consisted of heavily truncated Late Iron Age and Early Roman enclosures, represents the remains of a complex stock management landscape. Given the size and scope of the excavation it was impossible to detect the original extent of these enclosures, but the system of small fields to which they belonged may originally have characterised the whole of the outcrop and focused on the small multivallate hillfort at Southend Hill. A small assemblage of Late Iron Age and Roman ceramic was recovered from these enclosures; there is limited potential for understanding this assemblage within its regional context.

- 6.6 Subsequent Roman activity in Period 2.1 was suggestive of small-scale re-design of the field system with the digging of Ditch A. The presence of features resembling animal wallows in and around this enclosure might therefore suggest a change or a very short-term hiatus in farming practices during the late 1st to 2nd centuries AD, as the more formal layout of parallel ditches was re-established during Period 2.2 and continued into the late 4th century. The faunal assemblage from Period 2.1 included a large proportion of cattle bones, suggesting that cattle were either consumed or produced disproportionately to other livestock. This bias corresponds with the need to establish small enclosures, such as bull pens, for effective herd management (Pryor 1996), and this may explain the small sub-rectangular enclosure formed by Ditch A. The ceramics and plant remains have contributed to the understanding of land use in the immediate vicinity of the site, which appears to have been characterised by domestic activity and crop processing.
- 6.7 In the Late Roman period, the industrial landscape around the periphery of the possible Roman settlement had begun to encroach, albeit indirectly, onto the site. Enclosure ditches were backfilled with metal-working waste and midden material containing Early Roman pottery and animal bone, whilst large concentrations of iron ore, possibly stockpiled somewhere nearby, were recovered from Period 2.2 features.
- 6.8 Although no direct evidence for industrial activity was recorded within the site, a small area had been re-utilised as a burial ground by the late 4th century. Despite the proximity of the nearby Roman building at Great Seabrook Farm, only three adult individuals were present. The relative scarcity of Late Roman pottery from this period suggests that the focus of domestic activity had moved away from the immediate vicinity of the site, perhaps to avoid the unpleasant and unhealthy industrial processes associated with iron smelting, for which there is some evidence.

- 6.9 During the medieval period there is limited evidence for activity on the periphery of Cheddington, consisting of small, sub-rectangular enclosures, pits and a single cess pit. A sequence of ceramic dates has been established, and the pattern of forms and fabrics associated with domestic consumption found to continue. There is limited potential for further analysis or refining of dating from this assemblage, despite the quantity of artefactual material. The assemblage may however warrant discussion as a group of objects which might be related to the development of Cheddington as a medieval and post-medieval settlement.
- 6.10 The original objectives of the project were to record the main stratigraphic units encountered, assess the overall presence, survival and potential of structural and industrial remains and assess the overall presence, survival, condition and potential of artefactual and ecofactual remains. These aims have been met: a record of the features encountered during the excavation has been created, including a record of their stratigraphic relationships to one another and from this an understanding of the function and development of the site over time has been established. In addition, assemblages of pottery, CBM, fired clay, metalwork, glass and biological remains have been recovered and assessed (see sections 5.5-5.44).
- 6.11 The specific aims of the work were to record evidence of past settlement or other land use, recover artefactual evidence to date any evidence of past settlement that may be identified, and sample and analyse environmental remains to create a better understanding of past land use and economy. These aims have been met too, with evidence for field systems spanning the Late Iron Age to post-medieval periods having been recorded. Evidence for activity within the evolving field system has been recovered from all phases, suggesting long-term arable and pastoral activity, with evidence of industrial activity from the 2nd to 4th centuries AD. The interpretation of the site is hampered by the lack of information from the main foci of Late Iron Age and Roman activity near Cheddington.
- 6.12 The proposed further analysis of this archive includes final integration of the dating evidence with the stratigraphic sequence for Periods 1 and 2, detailed analysis of the human skeletal remains in their local and national context, detailed analysis of selected artefact and biological evidence from Periods 1 and 2, and synthesis of all of this information leading to an interpretation of the site in its regional and national context. The report would also include a discussion of the stratigraphic sequence from Periods 3 to 5 in order to place the site within its full chronological context.

## 7 STORAGE AND CURATION

- 7.1 The archive is currently held at CA offices, Milton Keynes, whilst post-excavation work proceeds. Upon completion of the project and with the agreement of the legal landowners, the site archive and artefactual collection will be deposited with Buckinghamshire Museum (accession number: AYBCM:2018.92), which has agreed in principle to accept the complete archive upon completion of the project.

## 8 UPDATED AIMS AND OBJECTIVES

- 8.1 To fulfil the potential of the site data, the following updated objectives have been set out to provide a framework for the proposed further analysis:

***Objective 1: enhance current understanding of land-use in the Vale of Aylesbury from the Late Iron Age through to the Late Roman period***

- 8.2 Gaining an understanding of early settlement, its density and variability as well as economy across Aylesbury Vale has been identified as a priority in the Thames Solent Research Framework (Fulford 2014). Discussion of the field system, artefact and ecofact assemblages from Periods 1 and 2 in the context of the Vale of Aylesbury Claylands (Solent Thames: 12.6.2 B) and with reference to nearby sites including Aston Clinton Bypass (RPS, 2005) and College Road Aston Clinton (NA, 2014) has the potential to achieve this objective.

***Objective 2: gain a greater understanding of the people who lived at the site, and their burial practices***

- 8.3 Full recording of the human remains from Period 2.2 will address this objective. The skeletal remains were all heavily fragmented. SK2453 was exceptionally fragmented, more than the others. This will limit the ability to take measurements needed, for example, for stature estimation. Despite this, reconstruction of key areas will allow for more accurate age and sex estimation. Observation of non-metric traits may be reduced, as will pathological lesions. Where teeth were present these were well preserved so it will be possible to record the dental disease. Further examination of SK2396b and comparison with other neonate remains will confirm the current age estimation (32 weeks, full-term 38-40 weeks). It is recommended that the skeletal remains are fully recorded and analysed and where possible placed

in the regional and national context. A double female burial of late Roman date is very unusual and an initial literature search has found very few comparable examples; comparisons will be sought through further research into wider Roman Roman burial practices. Further research into late Roman/early post-Roman practices will also be necessary, given the possibility of associated burials of both dates on the site.

***Objective 3: determine the nature of possible ironworking in the vicinity of the site during the later Roman period***

- 8.4 The excavation produced a small assemblage of industrial waste indicative of ironworking in the vicinity of the site. A quantity of non-local ironstone that may have provided raw material for such industry was also recovered. Whilst no metalworking features were identified within the excavation area, such work was evidently carried out nearby and this should be discussed in relation to comparable contemporary activity in the region.

***Objective 4: gain a greater understanding of changing land-use of the site and the surrounding area from the immediate post-Roman to post-medieval periods***

- 8.5 Although there was less archaeological and artefactual evidence for the post-Roman development of the site, there was clearly some level of occupation from the Early Saxon to modern periods. There is good evidence for changing land-use over this extended period, which should be compared and contrasted with what is known of the development of Cheddington village and other settlements in the local area. This objective should be addressed with reference to documentary and historic cartographic evidence, including the Tithe Map and any other early maps of the area.

## **9 PUBLICATION**

- 9.1 The results from the investigations west of Cheddington are of regional significance and merit publication. There was exploitation of the landscape and occupation of the site from at least the later prehistoric period, with a continuation through much of the Roman period, activity being largely associated with domestic occupation and agricultural production. During the later Roman period there was also industrial development with metalworking being carried out in the vicinity, whilst a small area of the site was used as a cemetery, which may have continued into the immediate

post-Roman era. The site was also exploited, mostly for agricultural purposes, from the early medieval through to post-medieval periods, with a series of enclosures being established and developed at the western periphery of Cheddington village. It is proposed that a full Excavation Report is published online on the CA website and the ADS, with a summary report published in a suitable academic journal such as *Records of Buckinghamshire*.

### **Synopsis of Proposed Summary Publication Report**

#### **Archaeological Investigations west of Cheddington, Buckinghamshire**

by Jake Streatfeild-James and Peter Boyer

	<b>Words</b>
Introduction	250
Later prehistoric occupation	500
Roman occupation and development	1250
Roman metalworking	500
Roman burials	500
Post-Roman development	750
Discussion	1000
Acknowledgements	150
Total Words	4900
Bibliography	1 page
Illustrations (site location plan; phase plans)	6 Figures

Approx. 12 full A4 pages in *Records of Buckinghamshire*  
(approx. 1000 words per page)

## **10 PROJECT TEAM**

- 10.1 The analysis and publication programme will be quality assured by **Sarah Cobain MCIfA** (Principal Post-excavation Manager: PPXM) and managed by **Peter Boyer MCIfA** (Post-excavation Manager: PXM), who will contribute to the discussion as senior author and co-ordinate the work of the following personnel:

**Jake Streatfeild-James MCIfA** (Principal Geomatics Officer: PGO)

Post-excavation phasing, draft report preparation, research and archive

**Ed McSloy MCIfA** (Finds Manager: FM):

Specialist report preparation and liaison, post-excavation phasing.

**Katie Marsden** (Finds Officer: FO):

Specialist report preparation and liaison.

**Sharon Clough MCIfA** (Senior Environmental Officer (Osteologist): Osteo)

Specialist report preparation human bone

**Sarah Wyles MCIfA** (Senior Environmental Officer: EO)

Specialist report preparation plant macrofossil, molluscs and liaison

**Dan Bashford** (Senior Illustrator: ILL):

Production of all site plans, sections and artefact drawings (exc. pottery)

10.2 Contributions by the following external consultant will be managed by the Finds Manager:

- **Sue Anderson MCIfA** (Consultant): Post-Roman pottery

10.3 Contributions by the following external consultant will be managed by the Senior Environmental Officer (Osteo):

- **Dr Matilda Holmes** (Consultant): Zooarchaeologist

10.4 The final publication report will be edited and refereed internally by CA senior project.

## 11 TASK LIST

TASK	PERSONNEL	DURATION/ COST
<b>EXCAVATION REPORT</b>		
<b>Project Management</b>	PXM	2
<b>Quality Assurance</b>	PPXM	2
<b>Stratigraphic Analysis</b>	PGO	2
	SA	0.5
<b>Excavation Results</b>	PGO	2.5
	SA	0.5
<b>Figures</b>	SI	2.25
	PGO	0.75
<b>Finds Analyses</b>		
Late prehistoric/Roman pottery	FM	6
Post-Roman pottery	External	Fee
Metalwork	FO	2
Other finds	FM	2
Finds illustrations (pottery, metalwork and stone)	SI	6
<b>Environmental Analyses</b>		
Animal bone	External	Fee
Human bone	Osteo	4
Additional environmental sample processing	Finds processor	1.5
Plant macrofossils and molluscs	SEO	3.5
<b>Research, comparanda</b>	PGO	2
<b>Discussion, conclusions</b>	PGO	2
	SA	0.5
<b>Acknowledgements, bibliography</b>	PGO	0.5
<b>PREPARATION OF PUBLICATION REPORT</b>		
Abstract and introduction	SA	0.25
Excavation results	SA	0.25
Discussion	SA	1
Compilation of specialist reports, figures etc.	SA	0.25
Acknowledgements, bibliography	SA	0.25
Illustrations	SI	1
<b>Submission to referees</b>		
Editing	PXM	0.5
Revisions	PGO	0.5
<b>SUBMISSION OF PUBLICATION TEXT</b>		
<b>Archive</b>		
Research archive completion	PGO	1
Security copy		FEE
Deposition		FEE
<b>Publication</b>		
Printing	Records of Bucks	FEE

## 12 TIMETABLE

- 12.1 For an online publication project, CA would normally aim to have completed the Excavation Report within 12 months of approval of the updated publication project design, and a draft summary publication report 3 months after completion of the online report. A detailed programme can be produced if desired.

## 13 REFERENCES

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**APPENDIX 1: STRATIGRAPHIC ASSESSMENT BY JAKE STREATFEILD-JAMES AND EILIDH BARR**

A total of 612 contexts was recorded during the excavation as detailed below:

<b>PERIOD</b>	<b>NUMBER OF CONTEXTS</b>
<b>Period 0:</b> Undated	24
<b>Period 1:</b> Late Iron Age	68
<b>Period 2:</b> Roman	238
<b>Period 3:</b> Medieval	180
<b>Period 4:</b> Post-medieval	100
<b>Period 5:</b> Modern	2
<b>Total</b>	612

The preservation of the archaeological sequence and the recovered artefactual evidence means that a provisional phasing has been achieved for the majority of excavated contexts. Further analysis will be required for those contexts provisionally assigned to Periods 1 through to 4. Twenty-one of the undated contexts were void during excavation, primarily due to re-interpretation of features. Further analysis of these contexts will not be required.

## APPENDIX 2: FLINT BY JACKY SOMMERVILLE

### Introduction and methodology

A total of 139 worked lithics (150.5g) and 37 pieces of burnt, unworked flint (151.5g) was retrieved from 67 separate deposits and as unstratified finds. The artefacts were recorded according to broad debitage/artefact type and catalogued directly onto a Microsoft Access database. Attributes recorded include: raw material; weight; dimensions (for debitage over 20mm in maximum dimension); degree of edge damage (microflaking) and rolling (abrasion); colour; cortex description; the presence of breakage and burning; and butt and termination type for flakes, blades and bladelets. Dimensions and condition (edge damage/rolling) were not recorded for items recovered unstratified or from topsoil/garden soil.

### Raw material

One flake was made using Greensand chert and the rest were made from flint. Of the 83 cortical flints, the cortex is abraded or pitted on 41 (49%) and chalky on 39 (47%). Some evidence for reworking of items knapped in an earlier period is also present as three pieces (4%) with working partially removing previously recorticated (and worked) surfaces. Chalk flint will have been available within 2km of Cheddington (BGS 2019). Most of the flint is brown or grey, with a few honey-coloured, black or orange pieces. Most of the flint (66%) is fine grained and 60% features no inclusions. Of the 10% of flints recorded as coarse, half of these are honey-coloured.

### Provenance and condition

The assemblage appears to be entirely residual. Thirty-seven items (27%) were unstratified or from topsoil or garden soil. The remaining 102 lithics derived from features phased from the Iron Age to the post-medieval period. The degree of edge damage is consistent with redeposition, with moderate edge damage recorded on 39% of flints. However, 91% displayed slight rolling, or none, which suggests that although the lithics are disturbed, they have probably not moved far from where they were originally deposited. Five worked flints (4%) are burnt and 39 (28%) are broken.

### Range and variety

#### *Primary technology*

The eleven blades/bladelets form 9% of removals (Table 1). Features indicative of 'soft' hammer percussion were noted on four flakes, three blades and one bladelet. Evidence of preparation of the striking platform on the parent core was observed on one flake and one blade. These features indicate that a proportion of the debitage is likely to date to the Mesolithic or Early Neolithic periods. The termination types of flakes and blades do not assist with dating – they are 84% feathered and 16% hinged, stepped or plunging. Butt types are mostly plain (51%), cortical (22%) or 'crushed' (14%).

There are 31 intact flakes, which give average dimensions of 30 x 27 x 8mm. The length/breadth indices (which quantifies the relative narrowness of a flake) have been calculated and compared to averages established by Pitts (Table 2) (Pitts 1978, 187). The figures for this assemblage clearly correspond most closely to those for lithics from the Late Neolithic or Bronze Age. It is likely, therefore, that material from different periods of prehistory is present.

The two cores were used for the production of flakes – one is a multi-platform type and the other has two, non-opposed platforms.

### **Secondary technology**

Retouched tools total eleven, making up 8% of the assemblage. Two Mesolithic tools are included – a fragmentary microlith from topsoil deposit 2001 and a truncation from garden soil 2003. The microlith is a rod type (Jacobi's Type 6), with fine, nibbled retouch along the lateral dorsal edges. This type was in use during the later Mesolithic period (Jacobi 1978, 20). The truncation was made on a flake blank, and the retouch on the horizontal truncated edge is steep and regular. A bladelet retrieved from Period 3.3 (late medieval) pit 2051 displays very fine, semi-abrupt retouch on the proximal half of the right dorsal edge – the retouch is too shallow to be considered 'backing'.

Of probable Mesolithic or Early Neolithic date (Butler 2005, 108, 131–2) is a burin from topsoil deposit 2000. It has been made on a blade blank and the burin spall has been removed from the proximal end of the left dorsal edge. The only chronologically diagnostic item from the Early Neolithic period is a leaf-shaped arrowhead, recorded from Period 2.1 (Early Roman) Ditch A. It accords with Green's Type 2C (Green 1980, 71) and the tip, and much of the base, are missing. The retouch is fully invasive on one face but less so on the top end of the other face. The rest of the tools were made on flake blanks and are not closely dateable types.

### **Statement of potential**

This small assemblage provides evidence of activity during the Mesolithic and Early Neolithic periods, and probably during the later Neolithic and/or Bronze Age, although none is stratified. Its significance is relatively local, due to the small number and residuality of the lithics. A report characterising the lithics assemblage should be prepared for publication. No further recording or analysis is required.

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Table 1. Breakdown of lithic assemblage

Type	Count
(Burnt unworked	55)
<b>Primary technology</b>	
Blade	9
Bladelet	2
Chip	4
Core	2
Flake	109
Shatter	2
<b>Secondary technology</b>	
Arrowhead (leaf-shaped)	1
Burin	1
Microlith	1
Miscellaneous retouched	1
Notch	2
Notch/end scraper	1
Retouched bladelet	1
Retouched flake	1
Saw	1
Truncation	1
<b>Total</b>	<b>139</b>

Table 2. Comparison of Breadth: length index (percentage)

	Breadth: length classes					
	<0.2	0.2-0.4	0.4-0.6	0.6-0.8	0.8-1.0	>1.0
Early Mesolithic	2	43	27	13	6.5	9
Late Mesolithic and Early Neolithic	0.5	12.5	32	26.5	14.5	14
Late Neolithic and later	0	3	16	25	23	33
Cheddington	0	3	13	16	26	42

## APPENDIX 3: POTTERY BY IOANNIS SMYRNAIOS AND E. MCSLOY

### Introduction/quantification

The site produced 2667 sherds of pottery weighing 30165g. The assemblage was recovered from 186 deposits and as unstratified material. The quantification of the material in Table 3 shows that the greatest proportions of the assemblage date to the Roman and medieval periods. Small quantities of late prehistoric (Iron Age) pottery were also recorded, with most seemingly re-deposited, occurring with later material. Medieval material is also important and forms the second largest pottery assemblage; though this is much smaller than the Roman assemblage.

### Provenance

The overall distribution of the assemblage according to deposit type is shown in Table 4. Largest quantities of pottery were recovered from ditches/other linear features and pits. In total, 56.6% of the pottery by sherd count or 54% by weight derived from ditches and other linear features. The pottery from such features is primarily Roman. A little more than a fifth of the pottery derived from pits, and more specifically 20.6% of the assemblage by count or 21.9% by weight. Most of the material deriving from pit fills is later prehistoric to Roman. Layers (including subsoil and topsoil deposits) and dumped deposits produced 18.1% of the pottery by sherd count, or 21.7% by weight. Most such deposits (especially the topsoil/subsoil layers) produced material of mixed dating.

### Methodology

The assemblage was recorded directly onto an Access database following the guidelines set by Historic England for prehistoric, Roman and medieval pottery (Barclay *et al.* 2016). The recording of prehistoric fabrics following conventions recommended by the Prehistoric Ceramics Research Group (2010). Generic vessel form (jar, bowl, dish etc) and rim morphology/vessel profile was recorded where possible. In some instances, description of vessel form follows established typologies, including those of Thompson (1982) for 'Belgic' and Late Iron Age-Roman transitional forms and the Camulodunum series (Hawkes and Hull 1947). Roman fabrics were recorded according to the author's devised series but correlated where possible with codes of the Roman National Fabric Reference Collection (Tomber and Dore 1998) and those used for Roman material from Milton Keynes (Marney 1989).

The recording of post-Roman pottery followed the standards set by the Medieval Pottery Research Group (2001). Due to its scarcity, the earlier Saxon material was recorded loosely by fabric; however, the identifications and the recording of Late Saxon and early medieval forms followed the Oxfordshire typologies by Mellor (1994) and the examples discussed by McCarthy and Brooks (1988). Buckinghamshire fabric identifications for the high medieval period were based on Mynard (2006), supplemented by McCarthy and Brooks (1988) and Haslam (1984).

The pottery assemblage is described in summary below chronologically. Comment on condition is included relative to each dated group below.

### Assemblage Range: Late prehistoric

Late prehistoric pottery consists of 283 sherds (2581g). The majority appears to be re-deposited, in most instances occurring in association with later-dated material. The material is in moderately poor condition, with abrasion/surface loss noted in a number of instances. Mean sherd weight of 9.1g is moderately high for material of this period, due in part to the presence of some thick-walled (>10mm) sherds.

The composition of the prehistoric group is set out in Table 5. Unfeathered bodysherds in flint-tempered fabrics F1 and F2 and types mixed with quartz, shell or limestone (F2, FQ, FSHL). probably date to the Late Bronze Age to

Early Iron Age. Similar fabrics commonly characterise pottery of this period from the Chilterns (Bryant 1995, 17; Waugh 1969a) and Bedfordshire (Parminter and Slowikowski 2004). Handmade coarser shell-tempered fabrics (SH), form 4% of the late prehistoric group by sherd count. Dating is again inhibited by an absence of featured sherds although a broad Iron Age dating is suggested.

The larger part of the late prehistoric group occurs in handmade fabrics primarily containing quartz and less-commonly grog (Table 5). Where diagnostic features of form or decoration occur, these are suggestive of Middle Iron Age dating (c. 4th/3rd to 1st centuries BC) and such material compares with groups of similar dating, for example from the excavations along the A4146, near Leighton Buzzard (McSloy 2007). Identifiable forms are mainly slack-profiled or round-shouldered vessels with simple everted or upright rims. Decoration/surface treatments are limited to vertical scoring and one instance of an incised, possibly geometric design. The scoring occurs on 8 sherds in fabrics Q, QV, QVF, QGL and GF including on a slack-profiled jar-like vessel. It is characteristic of a Middle Iron Age tradition known primarily from the area between the Ouse and Trent (Elsdon 1992, 83-91) and with decreasing frequency further south. The indistinct (?)geometric, incised decoration noted on a sherd in fabric QV from fill 2327 of Period 1 feature 2326, may date to the Early Iron Age. A small pedestal base sherd from the same deposit was similarly suggestive of such dating.

### **Roman (includes Late Iron Age/Early Roman 'transitional' material)**

#### *Fabrics*

The 'Roman' component amounted to 1844 sherds (21607g), deriving from 154 contexts or as unstratified material. As has been noted, this forms the largest proportion of the excavated assemblage from the site, exceeding 70% of the total material by weight.

The quantification of the Roman assemblage in Table 6 consists of 35 different fabrics. Most abundant are grog-tempered types (LOC GRG; LOC GRG S; LOC GRG SH, LOC F GRG and LOC F GR) which are characteristic of a tradition spanning the Late Iron Age and Early Roman period, c. 1st centuries BC/AD (Thompson 1982). None are necessarily pre-conquest and both the presence of types with sand inclusions (LOC GRG S) and occurrence in the main with 'Roman' fabrics suggests that most date to the period after c. AD 43 and perhaps as late as the early 2nd century AD. In total, the coarser grog-tempered fabrics form 38% of the Roman assemblage by weight or 41.7% by count.

The second most abundant fabric is coarse local grey ware (LOC GR), which forms 27% of the Roman assemblage by sherd count or 31% by weight. It must be noted that such fabrics may not always be local, with some perhaps coming from regional production centres, perhaps those supplying St Albans and London to the south-east. There certainly appear to be similarities of form and decoration with 'Early Roman Sandy' and 'Highgate Wood C' type wares and other types well-known from the area to the north of London (Davies *et al.* 1994). The source of these types should be examined further as part of proposed analysis (below). More certainly from the Verulamium region are the whitewares (VER WH) which make up the third most abundant type in the assemblage; equivalent to 7.3% of the Roman assemblage by sherd count (6.4% by weight). The dating for this type spans the mid 1st and 2nd centuries AD.

A more minor part of the assemblage, some 102 sherds or 5.5% (1174g or 5.4%) of the Roman group is made up of shell-tempered wares. This material almost certainly derives from production sites in the Bedfordshire/Northamptonshire area to the north, including the important kilns at Harrold, Bedfordshire (Brown

1994). In this assemblage, the 'lid-seated' jar forms made in shelly fabrics (ROB SH) suggest dating from the middle 1st to 2nd centuries.

Other fabrics make up only very minor portions of the assemblage. Of note from the fill of Period 2.2 Ditch K were three joining sherds from a bowl in a mica dusted fabric (MICD OX) probably from the London area (and dateable to the late 1st or earlier 2nd century AD). Other (non-sigillata) finewares are only sparsely-present; a small and abraded clay roughcasted sherd in a colour-coated fabric from fill 2536 of Period 1 Ditch B is most likely from the Lower Nene Valley (NVCC) and dates to the later 2nd century (and is therefore likely to be intrusive). Specifically 'Late Roman' types (after c. AD 270) are notable by their scarcity; represented by a sherd of Hadham oxidised ware (HAD OX) which was residual in medieval-dated layer 2003, and a sherd of Oxford red slipped ware (OXF RS) which was also seemingly re-deposited in medieval-dated ditch fill 2410. In both instances, fineware bowl forms were represented, that in fabric HAD OX, an imitation of a samian form Dr.38.

A total of nine sherds (44g) of Gaulish samian was recorded from nine deposits. A mix of South Gaulish (LGF SA) and Central Gaulish (LMV SA; LEZ SA2) types are represented; the suggested dating weighted to the later 1st and earlier 2nd centuries. All sherds are small and identification of form was not possible in all instances. Where this was possible, only plain forms were present; Drag. 18 platters (of Flavian date) in type LGF SA, from ditch fills 2135 (Period 2.2 Ditch I) and 2187 (Period 2.2 Ditch K), and, in fabric LEZ SA2; and cups of form Dr. 33 (probably Antonine) from Period 2.1 pit fill 2344, and Dr. 27 (Hadrianic/early Antonine) from ditch fill 2113 (Period 2.2 Ditch K).

Other continental types are sparsely-represented although notable in the form of North Gaulish and Gallo-Belgic types which potentially pre-date the Roman period. Gallo-Belgic material is present as a rim sherd from a girth beaker (probably form CAM84) in *Terra Rubra* fabric GAB TR, from ditch fill 2364 (Period 2.2 Ditch K). Dating across the first half of the 1st century AD can be suggested for this sherd and for a small rim sherd from a CAM113 butt beaker in whiteware fabric NOG WH identified from Period 2.1 pit fill 2475. A further possible instance in a related fabric is from Period 2.2 pit fill 2146, where joining sherds from a flagon handle in a fine white fabric also of Gaulish (or possibly south-east English) type were recorded.

#### *Vessel forms*

According to rim sherds, the assemblage consists of 230 identified forms that are summarised in Table 7, which indicates that most vessels are jars and bowls; typical for most Roman domestic assemblages. 'Lid-seated' (channel rim) jar classes are a common component, occurring among the grog-tempered, shell-tempered and reduced sandy wares and reflective of an earlier Roman tradition particularly common to Bedfordshire/Northamptonshire in the mid 1st and 2nd centuries. Also reflective of this date range are the 'Belgic'-inspired necked bowls, carinated bowls and platter copies which are well-represented among the grog-tempered and reduced sandy coarsewares.

In addition to the Gallo-Belgic beaker forms already described, drinking vessels include ovoid or 'poppyhead' forms (from deposits 2110 (Period 2.1 ditch 2109), 2113 and 2463 (both Period 2.2 Ditch K)), in fine reduced-firing fabrics and decorated with barbotine dot-panels. Dating in the late 1st or earlier 2nd centuries is likely for such forms. Flagons and mortaria are very poorly represented, the latter as single examples in Verulamium region (VRW WH) and Oxfordshire (OXF WH) whiteware fabrics from fill 2248 of Period 2.1 Ditch C and fill 2362 of Period 2.1 ditch 2361. Flagons were present as handle fragments mainly in fabric VRW WH.

### Early and Middle Saxon

Saxon pottery is extremely limited, numbering just ten sherds (127g) deriving from nine contexts. The material consists of fragments in fair condition, which preserve no diagnostic features other than their fabric. The assemblage is divided into three distinct fabrics: the Early Saxon organic tempered fabric (ESO), noted in one sherd from Period 3.3 deposit 2412, the typical Early-Middle Saxon sandy fabric (ESS), noted in eight sherds from eight different contexts, and an Early-Middle Saxon sandy variant with flint (ESSF) noted in a single sherd from fill 2606 of Period 3.1 Ditch J. Due to the nature of this small assemblage, there is limited information that can be noted in relation to the Early and Middle Saxon occupation of the site. It is highly likely that such material was redeposited during later phases.

### Late Saxon/Saxo-Norman

Late Saxon to early medieval material consists of eight fragments (105g) deriving from six contexts. The pottery is in fair to good condition and represents the Late Saxon period, extending into the 10th and 11th centuries AD. Unlike the Early and Middle Saxon material, this chronological group bears similarities with early medieval wares discussed in the following paragraph of this report. Late Saxon to early medieval pottery primarily consists of St. Neots wares (STNE) and includes the rims of two jars and a dish, respectively recovered from Period 4 layer 2010 and linear feature fills 2314 (Period 3.3 ditch 2313) and 2168 (Period 4 Ditch R). A small body fragment of Stamford Ware (STAM) in good condition was recovered from Period 4 deposit 2012. Finally, Period 4 layer 2003 produced a handmade bowl in a fabric tempered with coarse limestone (LSL). A vessel of similar form and dated to the Late Saxon period comes from Oxfordshire (Mellor 1994, 40, fig.7, no.4) and Saxo-Norman examples occur from London (Vince 1991, 51, fig.2.24, no.19).

### Medieval

Medieval pottery consists of 432 sherds (4141g) deriving from 62 contexts and as unstratified material. A significant part of this group comes from a single deposit, subsoil layer 2003, which produced 173 sherds (1452g) of medieval pottery together with a further nine sherds (71g) dating to the late medieval to post-medieval period. The pottery is in fair to good condition with a mean sherd weight of 9.6g. Medieval pottery makes up the second largest ceramic group in the total assemblage, forming 16.2% by count or 13.7% by weight. The quantification of medieval pottery in Table 8 shows that the material is divided into ten fabrics, covering the period between the 10th and 15th centuries AD. This material is followed by late medieval-transitional types, which are discussed in the following section of this report. The fabric quantification in Table 8 suggests that early medieval pottery forms 28.2% of the medieval assemblage by sherd count or 29.5% by weight. This pottery consists of three fabrics: typical early medieval sandy coarse wares (EMW) and shelly early medieval coarse wares tempered either with limestone (EMWSL) or limestone and sparse flint (EMWSLF). Such fabrics characterise wheel-made or wheel-finished vessels, which are primarily, cooking pots (jars) with sagging bases, with few possible bowls and lids. Five fabrics are considered to date to the medieval period, probably after c. 1050/1100 and consist of unglazed reduced sandy coarsewares (MCW). Such fabrics form 47.9% of the assemblage by sherd count or 49.6% by weight. Additional small quantities (type MCWL) occur in probable Olney A/B fabrics (McCarthy and Brooks 1988, 290). Such vessels are almost entirely jars with everted rims.

Glazed wares of the High Medieval period (c. mid 13th to 14th centuries) are represented as Brill/Boarstall ware (Bril), originating from the Buckinghamshire/Oxfordshire border. With the exception of one decorated handle from layer 2003, the remaining sherds preserve no diagnostic features, although all sherds probably come from jugs. The medieval assemblage also includes a possible late medieval-transitional ware (LMT?), which derived from linear feature fill 2423 (Period 3.3 ditch 2422) and most likely dates between the 15th and 16th centuries AD. The

sherd is finely lead glazed and its fabric resembles a slightly refined variant of a sandy medieval coarse ware (MCW). Finally, 23.6% of the medieval assemblage by sherd count, or 20.7% by weight, consists of medieval shell-tempered wares (STND), probably of the period spanning the 12th to 14th centuries. Again, the large majority of rim sherds in this type were almost certainly from jars.

#### **Late Medieval to post medieval**

This specific chronological group consists of 14 sherds (288g) deriving from eight deposits. The assemblage is in good condition with a mean sherd weight of 20.5g and with sherd surfaces/glazes surviving well. The group consists of relatively well-refined fabrics, most of which are lead-glazed and/or exhibiting features of late medieval and post-medieval fabrication. The assemblage consists of three fabrics: 12 sherds (262g) have been recorded as unprovenanced glazed ware 1 (UN G1). This specific fabric is sandy and oxidised, often preserving a thick grey core, and is covered with a thick homogeneous green glaze. Although the origin of this fabric is unclear, its relatively frequent presence in the assemblage is likely to suggest it is local, possibly the product of late Brill/Boarstall workshops. The production of Brill/Boarstall glazed wares is recorded to have continued until the 19th century AD (McCarthy and Brooks 1988, 435). The only form identified in this fabric is a carinated cup with plain everted rim, surviving in complete profile, which was recovered from topsoil 2000. A similar fabric recovered from layer 2003 has been recorded as unprovenanced glazed ware 2 (UNG2). This fabric resembles type UNG1, however, its patchy glaze has been applied on top of a white slip.

#### **Post-medieval/modern**

The Post-medieval and later component amounts to 76 sherds (1316g) deriving from 15 deposits, or as unstratified material. The pottery is in good condition, with minimal abrasion noted and with a mean sherd weight of 17.3g. According to the quantification of the material in Table 10, post-medieval pottery consists of 11 fabrics. The earliest fabric in the assemblage is Cistercian-type ware (CTW) dating to the 16th century AD, noted in a single sherd from deposit 2002. The largest proportion of the post-medieval assemblage consists of glazed red earthenware, forming 35.5% of the total by sherd count, or 43.2% by weight. Such pottery is wheel made and dates between the later 16th and 18th centuries AD. Contemporary tin glazed earthenware bowls (TGE) are noted in small fragments. Pottery from the 17th century includes a fragment of metropolitan slipware bowl (METS) deriving from ditch fill 2063 and seven fragments of English stoneware (ESW) dating between the 17th and 19th centuries AD. Staffordshire slipware (STAF), occurring mainly as bowl and platter fragments, was primarily recorded from unstratified deposits. Such vessels date between the late 17th and 18th centuries AD. Finally, 'developed' white earthenwares and porcelain dating between the later 18th and 20th centuries AD are recorded in four fabrics: porcelain (PORC), pearlware (PEW), refined white earthenware (RWE) and transfer printed earthenware (TPE). Vessel forms identified among the post-medieval/modern assemblage are summarised in Table 11. Most (30 vessels) are open vessel classes, primarily of bowls and plates/platters.

#### **Summary**

The pottery spans the late prehistoric through to the modern period, with the large majority dating to the Roman and medieval periods. Where diagnostic features of form or decoration among the Late prehistoric group permit, these are consistent with Early and Middle Iron Age dating, although much of this material appears to be re-deposited in Roman-dated deposits.

Pottery of Roman type makes up 70% of the assemblage by weight. A proportion, including a small number of imported finewares, comprises types date to the period transitional across the Late Iron Age/Early Roman periods. Dating for the remainder of the assemblage is almost exclusively to the Early Roman period, largely before c. AD

150. Dating is provided mainly vessels in coarseware types, including the distinctive 'poppyhead' type beakers, and by a small quantity of samian and other finewares. Key dating, mainly to the mid/late 1st century AD and earlier 2nd century AD is provided by a number of large context groups (deposits 2023, 2113, 2146, 2187, 2248) some of which include partially reconstructable vessels. The presence, albeit as only a few sherds, of Gallo-Belgic and north Gaulish finewares, is significant, providing evidence for access to such types in the earlier or mid-1st century, although it cannot be said for certain that these pre-dated AD 43. Indications of 'high status' or a military presence, which might be indicated by amphora types, or an abundance of flagons, mortaria or samian are not apparent from the remainder of the group. In common with the large majority of Romano-British groups, the pottery assemblage is dominated by coarsewares and utilitarian forms such as jars for cooking or storage.

Evidence for activity in the post-Roman period was present mainly for the Late Saxon period onwards. Most abundant are the handmade and/or wheel-finished grey sandy wares which are well-known from the area from the period between the 12th and 14th centuries AD. Some refinement of dating is provided by glazed Brill/Boarstall wares (BRIL), mostly characteristic of the period of the mid 13th and 14th centuries. Finally, post-medieval pottery includes a significant quantity of refined red earthenware dating between the later 16th and 18th centuries AD, followed by stoneware and other decorated types of refined white wares, dating up until the 20th century.

#### **Statement of significance and potential for further analysis**

The pottery assemblage, in particular the large Roman component, demonstrates good potential to assist in the dating and interpretation of the site. Publication, with a focus on the Late Prehistoric and Roman elements, will contribute at a local/regional level to the understanding of pottery supply for these periods. Reporting to publication level is recommended with the aim of characterising the assemblage and examining aspects of supply, chronology and 'status'. Methodology/content will conform to that set out in the current 'Standard for Pottery Studies in Archaeology' (Barclay *et al.* 2016). The report should be accompanied by an illustrated catalogue (up to 40 drawings) drawn mainly from the 'key groups' and vessels of individual interest. Some additional recording of pottery anticipated to come from bulk soil samples will be necessary. This aside, further detailed recording for the pottery is not required, although some reconsideration selected Roman reduced coarsewares is recommended in an effort to establish their origins. Data tables for inclusion within the analysis report should be updated as required to include details of the finalised phasing scheme.

In view of the small size of the post-Roman pottery assemblage and its derivation substantially from subsoil type deposits, this material merits minimal further work. A summary report for inclusion in the final publication can be adapted from the report presented here.

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Table 3. Quantification of pottery by period

Period	Count	Count %	Weight (g)	Weight %
LP	283	10.6	2581	8.6
Roman	1844	69.1	21607	71.6
Saxon	10	0.4	127	0.4
Lsax.-med.	8	0.3	105	0.3
Medieval	432	16.2	4141	13.7
Lmed.-Pmed.	14	0.5	288	1.0
Pmed.	76	2.8	1316	4.4
<b>Totals</b>	<b>2667</b>	<b>100.0</b>	<b>30165</b>	<b>100.0</b>

Table 4. Distribution of pottery by feature type

Feature type	Count	Count %	Weight (g)	Weight %
curvilinear	3	0.1	15	0.0
deposit layer	279	10.5	2398	7.9
ditch	706	26.5	8302	27.5
drain	10	0.4	214	0.7
dump	105	3.9	2231	7.4
grave	19	0.7	81	0.3
irregular feature	48	1.8	262	0.9
linear	794	29.8	7987	26.5
natural substrate	20	0.7	316	1.0
pit, pit?	550	20.6	6594	21.9
subsoil	38	1.4	754	2.5
surface	23	0.9	199	0.7
topsoil	38	1.4	448	1.5
tree bowl	16	0.6	127	0.4
tree bowl or pit	1	0.0	40	0.1
unstratified	17	0.6	197	0.7
<b>Totals</b>	<b>2667</b>	<b>100.0</b>	<b>30165</b>	<b>100.0</b>

Table 5. Quantification of later prehistoric pottery by fabric

<b>Fabric</b>	<b>Fabric description</b>	<b>Count</b>	<b>Weight (g)</b>
FQ	Common medium-sized flint and coarse sand in a medium matrix	2	12
FSHL	Common mixed medium-sized crushed flint and shell with sparse limestone in a sandy matrix	3	13
F1	Coarse flint in fine, silty matrix	7	53
F2	Common large to medium sized crushed flint in a medium sandy matrix	9	70
G	Abundant fine grog in a fine sandy matrix	3	8
GF	Common fine flint and grog in a dense sandy matrix	4	91
GL	Common grog and moderate limestone in a soft sandy matrix	2	34
GV	Moderate grog in a medium vesicular sandy matrix	1	3
GVF	Sparse grog and fine flint in a dense and lightly vesicular sandy matrix	1	18
Q	Dense medium sandy fabric with no other tempers	42	362
QC	Dense medium sandy fabric with sparse chalk	1	7
QF	Dense medium sandy fabric with sparse fine flint	8	101
QFFe	Coarse large-sized quartz, medium flint and common iron ores in a dense sandy matrix	3	24
QG	Rare medium grog in a fine sandy matrix	2	8
QGL	Dense medium sandy fabric with moderate fine grog and sparse limestone fragments	2	48
QGSH	Dense medium sandy fabric with moderate fine grog and sparse shell	1	6
QL	Dense medium sandy fabric with common limestone	17	158
QM	Fine and dense silty fabric with medium-sized fine quartz, micaceous	87	775
QMF	Fine and dense silty fabric with small-sized fine quartz and rare fine flint	2	23
QSHF	Moderate mixture of coarse shell and flint in a medium sandy matrix	1	16
QSH	Moderate coarse shell and medium quartz in a loose sandy soft matrix	1	3
QSHL	Medium to coarse sandy fabric with moderate coarse shell and fine limestone	1	5
QV	Medium to fine vesicular fabric with fine quartz sand	47	356
QVF	Medium to fine vesicular fabric with fine quartz sand and sparse fine flint	8	120
QVL	Medium to fine vesicular fabric with fine quartz sand and sparse medium limestone	3	21
QVM	Fine micaceous fabric with sparse voids	14	167
SH	Abundant shell of various sizes and coarseness in a soft sandy matrix	11	79
<b>Totals</b>		<b>283</b>	<b>2581</b>

Table 6. Quantification of Roman pottery by fabric

Fabric	Fabric description	Period	Count	Count %	Weight (g)	Weight %
BB2	Black burnished ware 2	2-3 c.	1	0.1	12	0.1
EFS BSW	Early fine sandy black-surfaces ware	e.Rom	45	2.4	366	1.7
GAB TR	<i>Terra Rubra</i>	e-m. 1 c.	1	0.1	11	0.1
HAD OX	Hadham oxidised ware	3-4 c.	1	0.1	6	0.0
MICD OX	Mica-dusted oxidised ware	1-e.2 c.	3	0.2	110	0.5
HAD RE1	Hadham reduced ware 1	3-4 c.	1	0.1	11	0.1
ROB SH	Roman shell-tempered wares	1-2 c.	124	6.7	1367	6.3
HOR RE	Coarse reduced wares (Horningsea?)	2 c.+	9	0.5	125	0.6
LEZ SA2	Lezoux Samian 2	2 c.	2	0.2	11	0.1
LGF SA	La Graufesenque Samian	1-e.2 c.	8	0.5	28	0.1
LMV SA	Les Martres-de-Veyre Samian	e.2 c.	1	0.1	5	0.1
LOC BL	Local black-surfaces ware	Rom	103	5.6	1021	4.7
LOC BUF	Local buff ware	Rom	25	1.5	156	0.7
LOC CC	Local colour coated ware	Rom	2	0.1	10	0.0
LOC F BUF	Local fine buff ware	Rom	1	0.1	3	0.0
LOC F GR	Local fine grey ware	Rom	80	4.3	507	2.3
LOC F GRG	Local fine grog-tempered ware	Rom	12	0.7	52	0.2
LOC F OX	Local fine oxidised ware	Rom	7	0.4	22	0.1
LOC GR	Local grey wares	Rom	499	27.0	6700	31.0
LOC GRG	Local grog-tempered wares	Rom	557	30.2	7469	34.6
LOC GRG S	Local grog-tempered sandy wares	Rom	16	0.9	128	0.6
LOC GRG SH	Local grog-tempered shelly wares	Rom	128	6.9	1414	6.5
LOC OX	Local oxidised wares	Rom	56	2.9	328	1.5
NOG WH	North Gaulish white ware	e-m. 1 c	1	0.1	1	0.1
NOG WHF	Fine buff/white flagons	e-m. 1 c	2	0.1	103	0.5
NVCC	Lower Nene Valley colour coated ware	2-4 c.	1	0.1	1	0.0
OXF WH	Oxford white ware (mortaria)	2-4 c.	1	0.1	67	0.3
OXF RS	Oxford red slipped ware	3-4 c.	1	0.1	17	0.1
WS	white slipped ware (?Hadham)	1-4 c.	1	0.1	43	0.2
UN BUF	Unprovenanced buff ware	Rom	1	0.1	4	0.0
UN F GRG	Unprovenanced fine grog-tempered ware	Rom	2	0.1	9	0.0
UN GR	Unprovenanced grey ware	Rom	1	0.1	8	0.0
UN GRG	Unprovenanced grog-tempered ware	Rom	7	0.4	66	0.3
UN GRG BUF	Unprovenanced grog-tempered buff ware	Rom	1	0.1	10	0.0
UN OX	Unprovenanced oxidised ware	Rom	3	0.2	57	0.3
UN SH L	Unprovenanced shell and lime-tempered ware	Rom	1	0.1	10	0.0
VER WH	Verulamium white ware	1-2 c.	139	7.6	1349	6.2
<b>Totals</b>			<b>1844</b>	<b>100.0</b>	<b>21607</b>	<b>100.0</b>

Table 7. Quantification of Roman vessel forms

Form	Count
beaker, beaker?	8
beaker/jar	1
bowl, bowl?	35
Dr.18/31	5
Dr.38	1
flagon, flagon?	7
jar, jar?	165
jar or flagon	1
jar/bowl	1
mortarium	2
platter	1
shallow bowl or lid	1
tazza or bowl	1
<b>Total</b>	<b>230</b>

Table 8. Quantification of medieval pottery by fabric

Fabric	Fabric description	Period	Count	Count %	Weight (g)	Weight %
BRIL	Brill/Boarstal ware	l.12-e.14c.	10	2.3	50	1.2
BRIL?	Brill/Boarstal ware?	l.12-e.14c?	1	0.2	43	1.0
EMW	Early medieval ware	10-12 c.	58	13.4	642	15.5
EMWSL	Early medieval shell and limestone-tempered	10-12 c.	59	13.7	509	12.3
EMWSLF	Early medieval shell, limestone and flint-tempered	10-12 c.	5	1.2	72	1.7
LMT?	Late medieval-transitional ware?	15-16 c.	1	0.2	5	0.1
MCW	Medieval coarse ware	12-14 c.	186	43.1	1797	43.4
MCW?	Medieval coarse ware?	12-14 c?	2	0.5	11	0.3
MCWL	Medieval limestone-tempered coarse ware	12-14 c.	8	1.9	154	3.7
STND	Developed St. Neots ware	Med.	102	23.6	858	20.7
<b>Totals</b>			<b>432</b>	<b>100.0</b>	<b>4141</b>	<b>100.0</b>

Table 9. Quantification of medieval vessel forms

Form	Count
bowl	17
cooking pot	16
dish or curfew	1
jar	25
jug?	1
lid	2
dish	1
<b>Total</b>	<b>63</b>

Table 10. Quantification of post-medieval pottery by fabric

<b>Fabric</b>	<b>Fabric description</b>	<b>Period</b>	<b>Count</b>	<b>Count %</b>	<b>Weight (g)</b>	<b>Weight %</b>
CTW	Cistercian-type ware	16 c.	1	1.3	23	1.7
ESW	English stoneware	17-19 c.	7	9.2	274	20.8
GRE	Glazed red earthenware	16-18 c.	27	35.5	569	43.2
METS	Metropolitan slipware	17 c.	1	1.3	31	2.4
PMSW	Post-medieval slipware	17-19 c.	3	3.9	38	2.9
PORC	Porcelain	18-20 c.	2	2.6	7	0.5
PEW	Pearlware	l.18-m.19 c.	2	2.6	21	1.6
REFW	Refined white earthenware	l.18-20 c.	3	3.9	19	1.4
STAF	Staffordshire-type slipware	l.17-18 c.	10	13.2	103	7.8
TGE	Tin glazed earthenware	16-18 c.	4	5.3	57	4.3
TPE	Transfer printed earthenware	18-20 c.	16	21.1	174	13.2
<b>Totals</b>			<b>76</b>	<b>100.0</b>	<b>1316</b>	<b>100.0</b>

Table 11. Quantification of post-medieval vessel forms

<b>Form</b>	<b>Count</b>
bottle	1
bowl	18
cup	1
cup/bowl	1
jar	2
jug	2
plate/platter	12
<b>Total</b>	<b>37</b>

## APPENDIX 4: CERAMIC BUILDING MATERIAL BY IOANNIS SMYRNAIOS AND E. MCSLOY

### Introduction and methodology

The excavation produced 157 fragments of ceramic building material (CBM) weighing 8524g, which derived from 21 contexts. The material is in relatively good condition, consisting of medium-sized fragments and with a mean weight of 57.3g. As with the pottery, the material is chronologically diverse, covering the Roman to modern periods. The quantification of the material by period is presented in Table 12, which shows that the largest percentage of the assemblage is post-medieval. In total, 87.3% of the material by sherd count, or 83.4% by weight, is of post-Roman date.

The CBM was recorded directly onto an Access Database. Fragments were catalogued by chronological period, form, fabric, count and weight. When available, characteristic features of specific pieces (e.g. dimensions, peg holes, mortar remains, glazing or other marks) were recorded in separate columns. The material is very diverse in terms of the fabric types encountered; 24 different fabrics being recognised during analysis under x40 magnification (Table 13). The most common fabric is coarse sandy with flint and is encountered in 59.2% of the assemblage by piece count, or 59% by weight. Such pieces associate with Roman bricks or tiles, and late medieval to post-medieval roof tiles, bricks and peg tiles. Most fragments made in this fabric were recovered from topsoil layer 2044. In total, coarse fabrics appear to be the most common; accounting for 71.3% of the assemblage by sherd count, or 69% by weight.

The forms encountered in the CBM assemblage are equally diverse as their fabric variability. The quantification of the material by form in Table 14 shows that most of the assemblage consists of roof tiles. Such pieces are usually between 13mm and 18mm thick, produced in medium and coarse, hard fabrics considered typical of post-medieval date. Some fragments from Period 4 ditch fills 2034 (Ditch U) and 2063 (Ditch T), and from topsoil layer 2044, are of late-medieval to post-medieval date. A single wall tile recovered from topsoil layer 2044 is of modern date.

### Discussion

Despite the prevalence of Roman pottery at the site, the presence of Roman CBM is limited to 19 fragments (1377g) of brick or tile. The only fragments that belong to distinct Roman forms are three pieces of *imbrex* (curved roof tile) from Period 4 layer 2010, and six pieces of *tegula* (flanged roof tile) from Period 4 layer 2003, Period 2.2 ditch fill 2187 (Ditch K) and Period 2.2 pit fill 2147. Although the post-Roman pottery from the site primarily dates to the medieval periods, the CBM assemblage is generally much later. Significantly, the late medieval to post-medieval pottery forms and fabrics noted in the assemblage associate with a small number of brick, roof tile and peg tile fragments from ditch fill 2034 and topsoil layer 2044, with some additional roof tile fragments from ditch fill 2063. Most of the ceramic building material consists of post-medieval roof tiles and brick fragments almost three quarters of which derived from topsoil and garden soil deposits or was unstratified (Table 15). This being the case, the majority may relate to dumping episodes or agricultural activity (manuring).

### Statement of significance and potential for further analysis

The ceramic building material from the site has been fully recorded and catalogued. Most of it is of post-medieval date and has limited potential for any future analysis. A discussion of the ceramic building material in relation with the pottery from the site is unlikely to be useful due to the limited presence of Roman pieces and the total absence of medieval material. The absence of large quantities of Roman CBM suggests that it was not widely used at this location in this period and that other forms of roofing/building material were utilised.

The unstratified nature of the ceramic building material from the site cannot offer any other useful information. A brief note could be included in a final publication, and any additional material from soil samples needs to be included in the final catalogue.

Table 12: Quantification of CBM by period

Periods	Count	Count %	Weight (g)	Weight %
Roman	16	10.2	1394	16.4
Roman?	4	2.5	17	0.2
Late-medieval to post-medieval	22	14.0	1693	19.9
Post-medieval	114	72.6	5401	63.4
Modern	1	0.6	19	0.2
<b>Totals</b>	<b>157</b>	<b>100.0</b>	<b>8524</b>	<b>100.0</b>

Table 13: Quantification of CBM by fabrics

Fabric	Description	Count	Count %	Weight (g)	Weight %
cs	coarse sandy	2	1.3	48	0.6
csf	coarse sandy with flint	93	59.2	5026	59.0
csfel	coarse sandy ferrous with limestone	5	3.2	259	3.0
csgcp	coarse sandy with grog and clay pellets	1	0.6	130	1.5
csglv	coarse sandy vesicular with grog and limestone	5	3.2	239	2.8
csf	coarse sandy with limestone	1	0.6	47	0.6
csqz	coarse sandy with quartzite	1	0.6	32	0.4
csvf	coarse sandy vesicular with flint	1	0.6	56	0.7
csxg	coarse sandy with mixed clay and grog	3	1.9	48	0.6
fs	fine sandy	7	4.5	171	2.0
fscp	fine sandy with clay pellets	2	1.3	134	1.6
fscpm	fine sandy with clay pellets, micaceous	1	0.6	5	0.1
fsl	fine sandy with fine limestone	1	0.6	39	0.5
fsv	fine sandy vesicular	1	0.6	37	0.4
fsx	fine sandy with mixed clays	4	2.5	17	0.2
ms	medium sandy	16	10.2	932	10.9
mscp	medium sandy with clay pellets	1	0.6	26	0.3
msf	medium sandy with flint	1	0.6	23	0.3
msfe	medium sandy ferrous	2	1.3	234	2.7
mzgl	medium sandy with grog and limestone	1	0.6	321	3.8
msl	medium sandy with limestone	1	0.6	19	0.2
msv	medium sandy vesicular	4	2.5	302	3.5
msvcp	medium sandy vesicular with clay pellets	1	0.6	310	3.6
msx	medium sandy with mixed clays	2	1.3	69	0.8
	<b>Totals</b>	<b>157</b>	<b>100.0</b>	<b>8524</b>	<b>100.0</b>

Table 14: Quantification of CBM by form

<b>Forms</b>	<b>Count</b>	<b>Count %</b>	<b>Weight (g)</b>	<b>Weight %</b>
Brick	14	8.9	1007	11.8
Curved tile	2	1.3	28	0.3
Drain	1	0.6	47	0.6
Wall tile	1	0.6	19	0.2
Roof tile	107	68.2	5155	60.5
Peg tile	13	8.3	891	10.5
Roman Brick or tile	8	5.1	547	6.4
Roman Brick or tile?	4	2.5	17	0.2
Imbrex	3	1.9	48	0.6
Tegulae	4	2.5	765	9.0
<b>Totals</b>	<b>157</b>	<b>100.0</b>	<b>8524</b>	<b>100.0</b>

Table 15: Quantification of CBM by feature type

<b>Feature type</b>	<b>Count</b>	<b>Count %</b>	<b>Weight (g)</b>	<b>Weight %</b>
Deposit layer	10	6.4	552	6.5
Ditch	27	17.2	1583	18.6
Linear	9	5.7	471	5.5
Pit	3	1.9	139	1.6
Subsoil	3	1.9	108	1.3
Topsoil	105	66.9	5671	66.5
<b>Total</b>	<b>157</b>	<b>100.0</b>	<b>8524</b>	<b>100.0</b>

## APPENDIX 5: FIRED OR BURNT CLAY BY IOANNIS SMYRNAIOS AND E. MCSLOY

### Introduction and methodology

The fired clay assemblage consists of 199 fragments weighing 1945g, which derived from 48 deposits. The material is in poor condition, consisting of small and abraded pieces with a mean weight of 9.8g. The fired clay assemblage was recorded directly onto an Access Database and catalogued by type, count and weight, while characteristic features such as impressions and flat surfaces were recorded in separate columns.

### Discussion

The quantification of the assemblage in Table 16 shows that almost half of the material by fragment count and more than three quarters by weight was amorphous, or preserved a single smoothed surface, or occasionally, curved corners or edges. Such pieces are entirely made of coarse sandy and vesicular mixed clays (csxv), which had been fired at relatively low temperatures. Its use is uncertain, but it may represent structural material (burnt daub) or the fragmented superstructure of pyrotechnic installations such as ovens. A fragment in a similar 'fabric' from Period 2.2 pit fill 2146 is 36mm thick and preserves two flat surfaces. This and a similar fragment from Period 1 ditch fill 2536 (Ditch B), which is 31mm in thickness, may be portions of oven shelves, or ceramic plates of a type known from the later Iron Age and Roman periods. Finally, a large fragment (317g) with one flanged edge which was recovered from Period 2.1 pit fill 2471, appears to come from a portable object, although its function is currently unclear.

Table 16 also shows that 21.9% of the material by weight consists of small and irregular fragments, the function of which could not be identified. Finally, 2.1% of the assemblage by weight consists of small oxidised pieces, the fabrics of which show similarities with ceramic building material. Again, such fragments could not be identified due to their small size.

### Statement of significance and potential for further analysis

The fired clay assemblage from the site has been fully recorded and catalogued. Its nature and poor condition provides limited potential for future analysis. A brief note is not necessary in a final publication, but any additional material from soil samples needs to be added to the final catalogue.

Table 16: Quantification of fired clay by type

Type	Count	Count %	Weight (g)	Weight %
CBM?	18	9.0	41	2.1
Structural	99	49.7	1479	76.0
Unknown	82	41.2	425	21.9
<b>Total</b>	<b>199</b>	<b>100.0</b>	<b>1945</b>	<b>100.0</b>

Table 17: Quantification of fired clay by fabric

<b>Fabric</b>	<b>Description</b>	<b>Count</b>	<b>Count %</b>	<b>Weight (g)</b>	<b>Weight %</b>
cs	coarse sandy	5	2.5	23	1.2
csc	coarse sandy with chalk	3	1.5	17	0.9
csf	coarse sandy with flint	1	0.5	6	0.3
csfe	coarse sandy ferrous	2	1.0	4	0.2
csgfe	coarse sandy with grog, ferrous	2	1.0	24	1.2
csl	coarse sandy with limestone	1	0.5	9	0.5
csv	coarse sandy vesicular	1	0.5	3	0.2
csxv	coarse sandy vesicular with mixed clays	161	80.9	1810	93.1
csfel	coarse sandy ferrous with limestone	1	0.5	4	0.2
csxvcp	coarse sandy vesicular with mixed clays and clay pellets	1	0.5	5	0.3
fs	fine sandy	7	3.5	8	0.4
fsg	fine sandy with grog	1	0.5	1	0.1
fsx	fine sandy with mixed clays	4	2.0	9	0.5
ms	mediun sandy	3	1.5	4	0.2
msfl	medium sandy with flint and limestone	1	0.5	6	0.3
msv	medium sandy vesicula	4	2.0	9	0.5
msx	medium sandy with mixed clays	1	0.5	3	0.2
<b>Total</b>		<b>199</b>	<b>100.0</b>	<b>1945</b>	<b>100.0</b>

**APPENDIX 6: CLAY TOBACCO PIPE BY IOANNIS SMYRNAIOS AND E. MCSLOY****Introduction and methodology**

The excavation produced 49 fragments of post-medieval clay tobacco pipe weighing 149g (Table 18). The material derived from eight deposits, with the largest number (39 fragments) from pit fill 2042. All the fragments are stems in relatively good condition, with the exception of few pieces that are burnt. A single stem fragment from this deposit carries the maker's mark 'William Larnar' incuse on four lines and within an oval border. The style of the stem stamp is consistent with pipes in the 1680-1780 date range although this maker is currently unidentified.

**Statement of significance and potential for further analysis**

The clay tobacco pipe has been fully recorded and catalogued. The larger part of the assemblage has no potential for future analysis. Further research is recommended to identify the maker of the stem stamped pipe and enable more precise dating.

Table 18: Quantification of clay tobacco pipe

Context	Count	Weight (g)	Comments
2000	2	6	stems
2001	1	1	stem
2003	1	4	stem, burnt
2042	39	108	stems, 4x burnt, 1x stamped 'William Larnar'
2044	2	6	stems
2390	2	1	stems, 1x burnt
2463	1	1	stem
2488	1	2	stem

**APPENDIX 7: GLASS BY IOANNIS SMYRNAIOS AND E. MCSLOY****Introduction and methodology**

The site produced 15 fragments of glass (326g) surviving in good condition. The material derived from seven deposits, which are primarily unstratified, and is summarised in Table 19. The material includes small fragments of post-medieval iridescent window and vessel glass, and larger fragments of contemporary iridescent green bottle glass. Modern material includes fragments of green bottle and a colourless decorated rim from an open vessel form, which carries a mechanically engraved herringbone motif. The latter fragment derived from modern drain fill 2601/2602.

**Statement of significance and potential for further analysis**

The glass has been fully recorded and catalogued. It has no potential for future analysis and no further work is required.

Table 19: Quantification of glass

Context	Count	Weight (g)	Comments	Date
2000	2	153	green bottle glass, 1x rim/neck, 1x hollow base	Mod
2000	2	11	iridescent and gold-coated green bottle glass	Pmed
2000	1	1	iridescent, window glass	Pmed
2001	1	1	iridescent green bottle glass	Pmed
2002	2	142	2x iridescent and gold-coated green bottle glass rim/necks	Pmed
2030	1	6	iridescent green bottle glass	Pmed
2246	1	1	thin green vessel glass	Mod
2330	1	2	blue, iridescent vessel glass	Pmed
2601 and 2602	3	6	iridescent, window glass	Pmed
2601 and 2602	1	3	transparent vessel rim, engraved fishbone pattern	Mod

## APPENDIX 8: METALWORK BY KATIE MARSDEN

### Introduction and methodology

A total of 234 items of metalwork (6182g) was recovered from 28 deposits and as unstratified items. Of this number, 73 were recovered by metal-detector in advance of excavation. A summary of the metals is given in Table 20 and the term white metal is used for tin-based objects where the alloying is unknown; e.g. pewter. A preliminary catalogue has been produced for this assessment with items summarised by material type and deposit class and directly to an MS Access database (Table 21). The assemblage is described below by material and according to function. The functional categories used have been adapted from Crummy's groupings (1988).

The metalwork is currently stored in air-tight plastic containers and with humidity control as appropriate. The metal artefacts were examined by a specialist conservator (Pieta Greaves) to facilitate identification and clarify constructional and compositional details. The extent of corrosion/fragmentation is variable, although as to be expected, the copper alloy and lead/lead alloy objects are generally in a more stable condition than those made of iron.

Table 20: Metalwork summary

Metal	Ct.
Copper alloy	62
Copper alloy and white metal	4
Copper alloy and iron	1
Iron	123
Lead alloy	36
Silver	3
White metal	5

### Summary

Three quarters of the assemblage (77%, 180 items) was recovered as unstratified items (including former subsoil deposit 2001) or from topsoil deposits. Where dating is possible based on object form, this ranges across the Roman to modern periods, but with the majority relating to the post-medieval and modern periods. Items from discrete features come from ditches (18%), graves (1.5%) and a pit (0.5%).

#### *Personal Adornment/Dress*

Items of personal adornment/dress total 32 items, the majority of which are buttons occurring in variations of copper alloy and white metals. The buttons, all bar one recorded from Topsoil deposit 2000 or as unstratified items, are probably the result of manuring with nightsoil as well as accidental losses. The earliest forms match types in use in the 18th century (Noël Hume 1969, 90-91; Types 10 and 11). Ten buttons conform to 19th century types (*ibid.* Types 7, 29, 31 and 32) and the remainder more broadly of the 19th or 20th centuries.

Six buckles, comprising four copper alloy and two iron, were recovered from topsoil deposits or as unstratified items. The earliest example occurs in iron; a 'D'-shaped frame from topsoil deposit 2044 which is a common form in the Anglo Saxon period and the first half of the medieval periods (Goodall 2011, fig. 12.3, no's 3-5). Two copper alloy buckles date to between 1720 and 1780 AD and are classed as Georgian shoe buckles (Whitehead 1996, e.g. no. 668). A large leaded copper alloy example is of post-1800 date. A square framed iron buckle and Ra. 32, a copper alloy buckle fragment can't be tightly dated.

Period 2.1 pit 2267 (fill 2268) produced a copper alloy hairpin of Roman date. The pin features a round head with two grooves below, producing a single cordon which equates to Cool's (1990) Type 6, dateable from the late 1st to early 2nd century AD.

Ra. 33, a copper alloy strap end, was recovered as an unstratified item. It is of Thomas (2003) Class A, Type 1, with Trewiddle style decoration and animal head terminal, and of Late Anglo-Saxon date (750-1100 AD).

A medieval or post-medieval chape, Ra. 3, was recovered from topsoil deposit 2000. It is formed by a sheet of copper alloy being bent to form a tube and would have provided support for a scabbard or strap.

A possible medal, or medallion, was recovered from topsoil deposit 2000. Ra. 42, a lead alloy disc perforated for suspension, features two figures flanking a possible shield is of probable post-medieval date. It is suffering from wear and corrosion which obscures detail.

Ra. 72 is a copper alloy stable belt fitting comprising a perforated disc with attached rectangular frame. Stable belts became part of the British Army dress in the late 19th century and continue in use.

#### *Household*

Six items belonging to the household items or utensils group were recovered from topsoil deposit 2000 or as unstratified items. The oldest item is a body fragment from a cast copper alloy vessel, probably a cauldron, skillet or posnet which dates from the medieval to post-medieval periods recovered from topsoil deposit 2000. Also from this deposit is a post-medieval copper alloy utensil handle, probably from a spoon. Three copper alloy handles from modern drawers were recovered from topsoil deposit 2000 and as unstratified items and one modern lead alloy object, a probable clock hand is also unstratified.

A copper alloy fitting, Ra. 40, most likely a book clasp of medieval or post-medieval date, was recovered from topsoil deposit 2000. It comprises a rectangular plate that would have been attached to the covers by way of copper alloy rivets, and a sexfoil (six-petalled flower) terminal.

#### *Weighing and Measuring*

Four lead alloy weights were recovered, three from topsoil deposit 2000 and one unstratified. The three stratified examples are undateable, but comprise one disc-like form, one cylindrical and one fragment. The unstratified item is of suspended plumb-bob style (cylindrical with a pointed terminal) and is most likely modern in date.

#### *Recreation*

A whistle of indeterminate white metal was recovered from topsoil deposit 2000. The whistle is manufactured by Acme and is a Scout Master whistle. The Scouting movement was founded in 1909.

#### *Transport*

A square-framed buckle with sheet roller from topsoil deposit 2000 is of medieval date (Goodall 2011, K116) and is a form thought to have been used for harnesses (Crummy 1988). Similarly, a copper alloy 'rumbler' bell from the same deposit is of a style known from medieval illustrations and used as 'fringeing' on reins (Griffiths 1986).

Two iron nails, Ra. 73 from Period 4 Ditch Z (cut 2152, fill 2151) and another example also from Ditch Z (cut 2308, fill 2309), are medieval horseshoe nails of Goodall's (2011) type A. A third example can be seen *in situ* on a horseshoe fragment recovered as an unstratified item. A complete horseshoe of medieval or post-medieval date was recovered from topsoil deposit 2000.

The remaining item in this group is an almost complete spur, recovered as an unstratified item. The goad (prick or rowel) is missing, but the single stud attachment terminals date it to the medieval period (Ward Perkins 1940, figs. 28-31).

#### *Tools*

Four tools were recovered from three deposits and as an unstratified item. A folding knife, in four fragments, was recovered from Period 4 Ditch U (cut 2031, fill 2034), of probable modern date. A knife with a strongly angled back was recovered from topsoil deposit 200. Its form is similar to Anglo-Saxon *seax* forms, although dating as late as the 12th or 13th centuries (Goodall 2011, fig. 8.7; Types G7 and G11), was recovered from topsoil deposit 2000. A blade fragment, of uncertain date, was also recovered from Period 2.2 Ditch K (cut 2112, fill 2113). The remaining item, a possible fish hook similar to Goodall's type J64 (2011, fig. 11.6) was recovered as an unstratified item.

#### *Fittings and Fixtures*

The largest group amongst the assemblage is that of fixtures and fittings, totalling 56 items. The majority of the group comprises forged, flat-headed forms of iron nails (40), for which only broad dating is possible. Copper alloy fittings, such as a sexfoil (six-petal flower) mount (Ra. 38) are of medieval to post-medieval date and number nine items.

Period 2.2 Ditch K (cut 2186, fill 2187) produced an iron swivel fitting. Swivel fittings attach to chains to afford a freedom of movement to whatever was attached to them and suggested attachments include harness straps and cauldrons (Goodall 2011, 302). The form has a long use, with documented early medieval and medieval examples and so cannot be closely dated, though this example may have been intrusive.

Period 2.2 grave 2393 produced two iron nail shanks. There is abundant evidence for wooden coffins in the Roman period using long plank technology commonly with nails at the head and foot of the coffin (e.g. Poundbury, Dorset cf. Farwell and Molleson 1993). Human bone from grave 2393 has been radiocarbon dated to the Late Roman period (SUERC-84640; 255-421 Cal AD at 95.4% probability). The single iron stud or hobnail recovered from grave 2451 (fill 2453) is likely to have been a casual loss.

#### *Agriculture or animal husbandry*

A copper alloy animal bell, Ra. 67 from topsoil deposit 2000, is a crotal bell of post-medieval date. An iron hooked item, probably a hoof pick of post-medieval or modern date was recovered from the same deposit.

Two lead alloy seals were recovered, from topsoil deposit 2000 and as an unstratified item. Such seals were attached to cloth from the medieval period through to the early 20th century. Initially a textile regulation and taxation system, their use expanded, evident by the seal recovered unstratified on which the legends 'DAIRY' and 'LONDON' can be seen, probably indicating a cattle feed bag. The remaining seal is too worn to identify further.

#### *Military or hunting equipment*

Three items of military equipment were recovered. Two lead alloy shot, both recovered as unstratified items, are of 17th to 19th century date. Ra. 98, a socketed iron arrowhead, was recovered from Period 4 garden soil 2003 and dates from the 11th to 14th centuries (Jessop, 1997, fig. 6).

#### *Unknown Function*

A total of 88 items are considered too fragmentary or corroded to attribute form, function or date. They comprise six copper alloy items, one copper alloy and iron, 59 iron and 22 lead alloy.

#### *Numismatics*

A total of 23 coins or jettons were recovered from four deposits and as unstratified items. The group, which displays consistent and heavy wear, comprises 19 copper alloy items and 4 silver coins. Of the identifiable copper alloy coins, the latest is an Elizabeth II issue. Seven halfpennies were recovered, issued by George III (unstratified item and topsoil 2000), George IV (unstratified) and Victoria (unstratified item and topsoil 2000). Two 18th- to 20th-century issues were recovered from Period 4 drain 2602 and Period 2.2 Ditch K (cut 2112, fill 2113), the latter clearly an intrusive artefact. Eleven copper alloy coins, of which ten were recovered from topsoil deposit 2000 and one as an unstratified item, are too worn to identify further, but are likely to be 18th to 20th century (George III to Victoria) issues based on the alloy and size. A further worn and illegible coin from Period 2.1 Ditch H (cut 2576, fill 2577), is dated to the 19th century and was therefore intrusive, though a worn copper alloy disc (RA61), likely to be coin of 3rd- to 4th-century date, was recovered from Ditch K (cut 2112, fill 2113).

Three silver coins were recovered from topsoil deposit 2000. They include a threepence of Elizabeth I with pheon initial mark, dated to 1561 AD. One coin (Ra. 54) is too worn to identify further and the third is a sixpence of Victoria dateable to 1848 (Ra. 47).

A post-medieval jetton, Ra. 63, is a paschal lamb and flag type issued through both the medieval and post-medieval periods.

#### **Statement of potential and recommendations for further analysis**

The general lack of contextual information for the metalwork assemblage limits its usefulness in informing site activity and dating. A small number of items (nine; Table 22) are of individual interest or provide secure dating and these should be described and illustrated.

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Table 21: Metalwork Concordance

Context	Material	Ra. No.	Type	Description	Date	Ct.	Wt. (g)
0	lead_alloy	0	cloth seal	London dairy	1800-1950	1	6
0	copper_alloy	0	button	Hume type 29	1837-65	1	3
0	copper_alloy	0	fitting	Agri?		1	51
0	iron	0	nail	T shaped		1	5
0	iron	96	nail	Goodall type A		1	2
0	iron	93	nail shank?			1	1
0	iron	97	'staple'			1	3
0	iron	94	nail	T-shaped		1	3
0	copper_alloy	0	handles	drawer	C19-C21	2	48
0	iron	0	spur	Ellis in Clark, fig. 91	medieval	1	78
0	copper_alloy	0	uncertain	ridges disc		1	22
0	lead_alloy	95	waste			1	9
0	lead_alloy	0	shot	12mm		1	9
2000	iron	0	?hoof pick			1	68
2000	copper_alloy	67	bell	crotal		1	6
2000	lead_alloy	0	cloth seal			1	6
2000	iron	0	buckle	square frame only		1	9
2000	iron	11	buckle	Goodall K116? Large with sheet roller on bar		1	53
2000	copper_alloy	32	buckle		RB or Pmed	1	3
2000	copper_alloy	0	button	Moulded with paste/glass insert		1	9
2000	white metal	0	button	Hume type 12, iron oxide coating	C18	1	2
2000	copper_alloy	0	button	Hume type 7; one piece cast	C19	1	1
2000	copper_alloy/white metal	0	button	Hume type 29; disc with cu. A wire eye	C19	1	4
2000	copper_alloy/white metal	0	button	Hume type 29; disc with cu. A wire eye	C19	1	5
2000	white metal	0	button	two piece, machine made	C18-C19	1	3
2000	white metal	0	button	two piece, machine made	C18-C19	1	4
2000	copper_alloy	0	button	Four holes	C20	1	1
2000	white metal	0	button	none	C20	1	2
2000	copper_alloy	4	button	Hume type 31; cast drilled eye	C19	1	10
2000	copper_alloy/white metal	10	button	white metal disc, Cu. A. wire eye	C19	1	6
2000	copper_alloy	23	button	fla disc		1	3
2000	copper_alloy	25	button	Hume type 10; cast domed disc, soldered eye	1726-76	1	5
2000	lead_alloy	71	button	dome, iron eye		1	6
2000	copper_alloy	3	chape	Folded sheet metal	Med-Pmed	1	12

2000	lead_alloy	42	medal	two standing figures flanking a ?shield. Pierced for suspension		1	16
2000	copper_alloy	72	medal			1	7
2000	white metal	0	?fitting	disc with edges		1	6
2000	copper_alloy	0	fitting	decorative sheet		2	32
2000	iron	12	fitting	uncertain		1	160
2000	copper_alloy	15	fitting		Modern	1	16
2000	copper_alloy	31	fitting			1	21
2000	copper_alloy	38	fitting	stud sexfoil		1	6
2000	copper_alloy	39	fitting	press metal flower		1	14
2000	copper_alloy	70	fitting	Stud with central shaft		1	7
2000	iron	0	link	Figure 8 style		1	71
2000	iron	0	nail	square shank round head		1	4
2000	iron	9	nail	short shank 17mm long		1	1
2000	copper_alloy	40	book clasp	sexfoil terminal		1	13
2000	copper_alloy	5	drawer handle			1	15
2000	copper_alloy	0	utensil	handle		1	13
2000	copper_alloy	0	vessel	cauldron etc body		1	19
2000	copper_alloy	0	coin	worn		1	2
2000	silver	0	coin	Elizabeth I; Pheon initial mark. rose behind head. Threepence	1561	1	1
2000	copper_alloy	1	coin	Victoria; halfpenny		1	6
2000	copper_alloy	2	coin	28mm	Georgian-Victorian	1	9
2000	copper_alloy	16	coin	George III; halfpenny	1760-1820	1	10
2000	copper_alloy	17	coin	22mm diameter		1	7
2000	copper_alloy	24	coin	Elizabeth II; 17mm		1	3
2000	copper_alloy	43	coin	28mm	Pmed	1	11
2000	silver	47	coin	Victoria; sixpence	1848	1	3
2000	copper_alloy	50	coin	27mm	Georgian?	1	11
2000	copper_alloy	51	coin	worn; 21mm, Britannia reverse		1	6
2000	silver	54	coin	v. worn; 19mm		1	3
2000	copper_alloy	55	coin	worn; 28mm	Pmed	1	9
2000	copper_alloy	58	coin	George [-]		1	7
2000	copper_alloy	68	coin	Pmed type		1	9
2000	copper_alloy	63	jetton	worn; lamb and flag		1	3

2000	white metal	0	whistle	Acme scout	1909 -	1	17
2000	iron	0	knife	Goodall G7/G11	C11-C13?	1	30
2000	copper_alloy	0	bell	rumbler	medieval	1	6
2000	iron	69	horseshoe	rectangular holes		1	245
2000	iron	0	collar	circular fitting		1	46
2000	copper_alloy	3	disc			1	6
2000	lead_alloy	26	disc			1	14
2000	iron	0	fragment			1	156
2000	lead_alloy	0	fragments	uncertain		2	42
2000	copper_alloy/iron	0	object	Disc, iron supporting bar on reverse		1	5
2000	lead_alloy	0	object	waste?		1	63
2000	lead_alloy	66	object	blob		1	3
2000	iron	0	objects	2xbars, 1xfragment		3	1549
2000	iron	0	objects	33xnails, 1xhorseshoe nail, 1xbar, 1x handled hook		37	742
2000	iron	39	plate			1	15
2000	copper_alloy	64	plate	supporting with three rivet holes		1	20
2000	lead_alloy	0	sheet			4	95
2000	iron	0	washer			2	71
2000	lead_alloy	30	object	weight? Round with perforation		1	26
2000	lead_alloy	29	weight	cylindrical		1	58
2000	lead_alloy	48	weight	circular		1	236
2001	lead_alloy	35	pipe			1	41
2001	copper_alloy	0	buckle	Whitehead 668, leaded	1720-1790	1	7
2001	copper_alloy	0	buckle	two piece; large shoe	1720-90	1	18
2001	copper_alloy	0	buckle	Raised strap bar; leaded	post-1800	1	10
2001	copper_alloy	0	button	Hume type 32; sunken panel	1837-65	1	1
2001	copper_alloy	0	button	Hume type 7; one piece cast	1837-65	1	5
2001	copper_alloy	0	button	Hume type 7; one piece cast	1837-65	1	5
2001	copper_alloy/white metal	21	button	Hume type 29; disc with cu. A wire eye	1837-1865	1	4
2001	copper_alloy	33	strap end	Class A, Type 1. Zoomorphic	Early medieval	1	7
2001	copper_alloy	0	fitting	screw thread		1	2
2001	iron	36	nail	square shank round head		1	13
2001	lead_alloy	0	clock hand			1	7
2001	lead_alloy	8	spoon	bowl only		1	6
2001	copper_alloy	34	coin	George IV; 26mm	1820-30	1	6

2001	copper_alloy	45	coin	Georgian?		1	9
2001	copper_alloy	46	coin	Victoria; halfpenny		1	8
2001	copper_alloy	52	coin	George III; halfpenny	1799	1	14
2001	iron	7	hook	fish hook? E.g. Goodall J64		1	33
2001	iron	6	horseshoe	with Goodall type A clench in situ		2	50
2001	lead_alloy	0	?waste			1	35
2001	iron	0	hoop			1	2
2001	copper_alloy	44	object	hinged plate		1	5
2001	lead_alloy	0	scrap			1	3
2001	iron	0	sheet	with rivets		1	106
2001	lead_alloy	0	waste			2	26
2001	lead_alloy	37	shot	casting sprue; 15mm diameter		1	17
2001	lead_alloy	41	weight	plumb bob style		1	24
2003	iron	0	nail	square shank round head		1	2
2003	iron	0	sheet	rivet		1	3
2003	lead_alloy	0	waste			2	219
2003	lead_alloy	27	waste?			1	99
2003	iron	98	arrowhead		medieval	1	7
2010	iron	0	rod			1	4
2011	iron	53	nail	Goodall Type A		1	3
2030	iron	0	nail	square shank, dome head c. 80mm long. Square shank x1		2	14
2034	iron	0	knife	folding type		4	55
2044	iron	0	buckle	D shaped		1	9
2044	iron	0	nail	square shanks, round heads		6	30
2044	iron	80	nail	shanks		3	3
2044	iron	82	nail	round shank/head		1	5
2044	iron	83	nail	round shank/head		1	7
2044	iron	81	sheet fragments	two with nails		6	76
2113	copper_alloy	23	button	Hume type 7		1	3
2113	iron	0	nail	shanks		3	11
2113	copper_alloy	58	coin	George [?]; halfpenny		1	5
2113	iron	59	blade	9mm width, very flat, modern?		1	4
2113	lead_alloy	58	rolled sheet			1	6
2113	copper_alloy	61	uncertain	poss. button or coin	C3-4?	1	3
2113	lead_alloy	60	waste			1	3

2113	lead_alloy	62	waste			1	4
2115	iron	0	nail	square shank, round head		1	7
2151	iron	73	nail?	Goodall type A		1	6
2187	iron	92	swivel and rod			2	24
2187	iron	0	fragment	unident.		1	33
2208	lead_alloy	77	waste			1	7
2233	copper_alloy	74	plaque			1	5
2233	lead_alloy	75	waste			1	6
2246	iron	0	nail	square shank, round head		1	2
2268	copper_alloy	89	hairpin	Cool Group 6; button on cordon head	LC1-EC2	1	5
2309	iron	0	horseshoe	Goodall type A		1	6
2346	iron	0	nails	small		2	5
2356	iron	0	nail shank?	square		1	4
2380	iron	0	nail	square shank round head		1	7
2394	iron	0	nail shank?	possibly relating to burial		1	1
2394	iron	100	nail shank?	relating to burial		1	9
2423	iron	0	nail	square shank round head		1	2
2423	iron	0	nail	round head/shank		3	40
2423	iron	0	sheet	rectangular		1	36
2453	iron	101	hobnail			1	1
2463	iron	0	?waste			1	489
2488	iron	0	nail	square shank, round head small		2	4
2492	iron	0	nail			1	3
2492	iron	0	bar			1	3
2577	copper_alloy	79	coin	uncertain; 21mm	18--	1	5
2602	copper_alloy	4	coin	George [III?]; halfpenny		1	9

Table 22: Metalwork Items for Illustration

Context	Metal	RA No.	Class	Type	Category	Date	Ct.	Wt. (g)	Comments
Unstrat	iron		spur	transport		medieval	1	78	Ellis in Clark, fig. 91
2000	copper_alloy	40	household	book clasp	sexfoil terminal	medieval	1	13	
2000	copper_alloy	0	transport	bell	rumbler	medieval	1	6	
2000	silver	0	Numismatic	coin	Elizabeth I	1561	1	1	20mm. Pheon initial mark. rose behind head. Prob threepence
2000	iron	0	tools	knife	Seax or Goodall G7/G11	AS/Med	1	30	
Unstrat	copper_alloy	33	dress	strap end	Class A/Type 1	AS	1	7	Zoomorphic
Unstrat	iron	6	transport	horseshoe	Goodall Type A clench in situ	medieval	2	50	
2003	iron	98	Weaponry	arrowhead		medieval	1	7	
2268	copper_alloy	89	Dress	hairpin	Cool Group 6	LC1-EC2	1	5	button on single cordon head

## APPENDIX 9: WORKED BONE BY KATIE MARSDEN

### Introduction and methodology

A small and fragmented assemblage of worked bone items, totalling three pieces (13g), was recovered from a ditch fill and two unstratified deposits.

A probable post-medieval handle fragment (8g) was recovered from topsoil deposit 2044. Similar handles are known from cutlery (c.f. Noël Hume 1969, fig. 63, no. 7), most often knives.

An oval-sectioned item with end tapering to a point (6g) was recovered as an unstratified item. The unstratified item comprises an oval-sectioned bone shaft, with tapering terminal. Use as a pin-beater in loom weaving is probable. The lateral break makes it difficult to identify whether it is a single-pointed type, of 5th to 9th century date (Leahy 2003) or double-ended, dateable to the 10th and 11th centuries (*ibid.* fig. 35, C and D). Such items are found in both cemetery and settlement sites, including houses at nearby Sutton Courtenay, Oxfordshire (Evison 1987).

RA. 99, a fragmentary strip (1g), was recovered from ditch Z (fill 2369). The rectangular strip has breaks across both ends and one along the length. The upper surface is decorated with 'ring-in-dot' motifs within an incised border, with the outer edge covered in short, evenly spaced lines abutting the outer border. The 'ring-in-dot' motif could indicate dating from the Roman to medieval periods, and the breaks make identification of form difficult.

### Statement of potential and recommendations for further analysis

The worked bone assemblage is small and the unstratified nature of most pieces limits its usefulness in informing site activity and dating. Additionally, the fragmentary condition of the items makes identification of form or function difficult, and consequently, no further work is recommended.

### References

Evison, V. I. 1987 *Dover: The Buckland Anglo-Saxon Cemetery*, English Heritage Arch. Rep. 3

Leahy, K. 2003 *Anglo-Saxon Crafts* Stroud, Tempus

Noël Hume, I. N. 1969 *A Guide to Artifacts of Colonial America*, Philadelphia, University of Pennsylvania Press

## **APPENDIX 10: INDUSTRIAL WASTE BY IOANNIS SMYRNAIOS AND E. MCSLOY**

### **Introduction**

The excavation produced 32 pieces of slag (18396g) which derived from 14 contexts. With the exception of one large lump (16946g) from topsoil layer 2044, this material consists of medium and small-sized pieces, some of which are well-fragmented. The quantification of the material by context number is shown in Table 23. Apart from small fragments from Roman pit fills 2344 and 2496 and from grave fill 2394, most material was recovered unstratified (including from topsoil) or from ditch fills.

### **Range/process**

The large, dense, and irregular mass from topsoil 2044 (Ra. 85) is heavily encrusted with soil, rounded stones and flint. Its composition is unlike that of residues associated with ironworking and closer to natural agglomerations 'bonded' by iron-rich deposits and sometimes known as 'ferrocrete'. Due to its iron content use as ore cannot be ruled-out, although clear evidence for iron smelting was absent from this group.

Evidence for iron smithing was present in the form of smithing hearth bottoms from deposit 2003, fill 2187 of later Roman Ditch K and an unstratified example. These are dense cakes of slag, typically concavo-convex in section, which formed at the base of a blacksmith's hearth and are common from across the Iron Age, Roman and medieval periods. The remainder of the assemblage is indeterminate of process, consisting of largely formless lumps of slag of varying denseness and occasionally (deposit 2115, also Ditch K) with glassy/vitreous surfaces. Similar material can be associated with either smithing or smelting processes. The presence here of smithing hearth bottoms and an absence of diagnostic 'tap slags' common to smelting sites are indications that this material may relate to smithing activity.

### **Statement of significance and potential for further analysis**

The assemblage is considered of minimal significance, providing only limited evidence for industrial (ironworking) activity at the site. Where dating is present from associated pottery, most material would seem to date to the Roman period. Blacksmithing activity is commonly a feature Romano-British sites including some smaller rural sites. Form the small quantities of material recovered this activity may have been of small scale, and it is further possible that this material may have originated elsewhere and was brought to the site as hardcore.

In view of the small quantities of material recovered and/or its unstratified provenance and undiagnostic character, further analysis of this material is unwarranted.

Table 23: Basic quantification of slag

<b>Context</b>	<b>Count</b>	<b>Weight (g)</b>	<b>Comments</b>
Us.	1	284	smithing hearth bottom
2003	1	166	smithing hearth bottom (fragment)
2012	1	76	Indet. ironworking slag
2034	1	24	Indet. ironworking slag
2044	1	16946	'ferrocrete'?
2113	5	124	Indet. ironworking slag
2115	1	17	Indet. ironworking slag
2122	1	7	Indet. ironworking slag
2187	9	368	Indet. ironworking slag, smithing hearth bottom
2198	1	7	Indet. 'dense' ironworking slag
2344	1	28	Indet. 'dense' ironworking slag
2394	1	131	Indet. 'dense' ironworking slag
2463	7	215	Indet. ironworking slag
2496	1	3	Indet. ironworking slag

## APPENDIX 11: STONE BY IOANNIS SMYRNAIOS AND E. MCSLOY

### Introduction and methodology

The excavation produced 427 stone fragments of various types, weighing 97344g. All recovered stones were recorded directly onto an Access Database by artefact type. All fragments were identified in relation to the geological composition and quantified by count and weight. The original material included both worked and natural pieces of stone; however, after their quantification, most of the latter were discarded, and a note was added on the original catalogue. The material is discussed below according to distinct artefact types.

### The materials

#### *Lava Quern*

The excavation produced three fragments of lava quern in fair condition (839g), which derived from two contexts. Post-medieval layer 2020 produced two fragments that were given the same Registered Artefact number (RA 65); however, their examination under x40 magnification showed that they are geologically different and associate with different quern stones. More specifically, the first fragment (238g) comes from the interior of a rotary quern, 34mm in thickness. This fragment has no visible inclusions and matches the geological composition of Mayen-Niedermendig lava from Germany (Peacock 1980). Such querns were traded between Britain and the Continent during the Roman period, and trade carried on until the 12th century AD (Pohl 2010). By contrast, the second fragment from the same deposit (88g) comes from the rounded edge of another rotary quern, 42mm in thickness, which is made from Volvic lava from France. As opposed to Mayen-Niedermendig lava, Volvic lava contains large inclusions of plagioclase feldspar, probably andesine; glassy black amphibole nodules, most likely hornblende; and random concentrations of green glassy olivine (Maury *et al.* 1980). Volvic lava querns were traded during the Roman period; however, there is uncertainty in relation to the continuation of such trade in post-Roman periods. The same deposit produced no pottery or other datable evidence; therefore, the date of quern fragments could not be confirmed. Finally, fill 2446 of Period 3.2 Ditch N produced a large fragment of lava quern stone (513g), which is broken but in fair condition. The fragment comes from the interior of a rotary quern, 54mm in thickness, and is made from Volvic lava. The pottery from the associated linear feature fill 2434, which is the same as fill 2446, produced pottery of both Roman and high medieval dates.

#### *Worked building stone*

The site produced 20 large fragments of worked building stone weighing 42,853g, which derived from eight contexts. The material consists of large fragments in good condition, representing different geological types, such as limestone, clunch, slate and limestone conglomerates. The material is presented in Table 24. All fragments of clunch are representative of material found in the geology of Bedfordshire, which includes Lower Chalk formations of Cretaceous Age (Farewell *et al.* 2011). Clunch fragments carry two types of working marks on their flattened surfaces: diagonal straight-carved lines (abbreviated as SCL), which could be from the use of hand-operated chisels, and marks from denticulated tips of modern power tools (abbreviated as DPTM). Although the date of such fragments is uncertain, it is highly likely that those carrying denticulated power tool marks (DPTM) are of relatively recent date. A fragment of interest is a block of sandy limestone (RA 18), which derived from post-medieval layer 2006. This specific fragment, which is again of local provenance, has four flat sides and although broken, seems to have been purposely worked to a polygonal shape. Three pieces of worked limestone recovered from the topsoil layer 2044 (RA 84, 85 and 86) carry similar working marks as the clunch fragments recovered from other features; therefore, they are also likely to represent recent working debris. Finally, a small and smoothed piece of worked slate from linear feature fill 2423 is almost certainly modern roofing material.

### *Hertfordshire puddingstone querns*

Three fragments (7413g) of this distinctive local conglomerate were recorded; from fill 2113 of Period 2.2 Ditch K, fill 2330 of Period 2.1 Ditch E and fill 2558 of Period 2.1 Ditch A, all in association with Roman pottery. None of the fragments preserve clearly worked surfaces, although it is likely they represent parts of querns, perhaps deliberately broken-up for other purposes. The use of Hertfordshire puddingstone as a quern material is well-known from the Late Iron Age and Roman periods.

### *Burnt stone*

A total of 137 fragments of burnt sandstone (14904g) derived from 14 deposits. The material is moderately burnt. Some heavily cracked pieces indicate direct contact with fire, while most pieces show signs of irregular heat-alteration on their surfaces due to partial contact with fire. Such pieces are likely to have been used for the lining of hearths. Although most of the material consists of small fragments in poor condition, fill 2327 of Period 1 feature 2326 produced a large, burnt sandstone fragment weighing 10732g (RA 103), which suggests that material of different sizes was selected for the lining of hearths. The material from fill 2538 of Period 2.2 Ditch AC is relatively distinct as it includes a complete natural rectangular burnt sandstone block, and three burnt fragments of glacial erratics that match the geology of Bedfordshire and West Cambridgeshire (Farewell *et al.* 2011).

### *Natural stone*

During the excavation, a total of 267 pieces of natural stone-types (38,748g) were collected from 57 features. Such stones were either collected by accident or were purposely picked up due to their association with other material types recovered from the same features. After its quantification and identification, most of this material was discarded; only a few pieces, which have been noted in the archive catalogue, were retained for geological reference. The largest quantity of such material comprised natural ironstone, of which 242 pieces weighing 13,469g, were recovered. Such material may have been associated with industrial activities taking place in the vicinity. From the total ironstone collected from the site, only five pieces (1444g) were retained for future reference, including a hollow fragment (RA 22). Finally, a natural white quartzite fragment (36g), recovered from fill 2429 of Period 2.1 irregular feature 2428, was retained because of geological rarity; it probably comes from a coastal zone and does not match the local geology.

### **Statement of significance and potential for further analysis**

The worked and non-worked stone has been fully recorded and catalogued. Due to the nature of the contexts from which it was derived, it has little potential for future analysis and no further work is required. In case of future publication, a brief reference to the lava quern and puddingstone fragments could be included, with the lava quern pieces photographed. If any additional material from environmental samples is recovered, then this needs to be included in the final catalogue.

### **References**

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<http://www.bedfordshiregeologygroup.org.uk/projects/The%20Mapping%20of%20Landscapes,%20Geology%20and%20Soils%20of%20Bedfordshire%20and%20Cambridgeshire.pdf> (accessed 21 December 2018)

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Table 24: Quantification of worked building stone

Context	Type	RA No	Count	Weight (g)	Comments
0	Limestone	109	1	1948	1 side flat and smoothed
0	Clunch	108	2	8216	joining; top smoothed flat, 4 sides with SCL, one random directions
0	Clunch	102	1	2882	top smoothed flat, 2 sides with DPTM, incl. bottom
2000	Clunch	14	1	2184	possibly worked flat side
2000	Clunch	13	1	7710	2 parallel sides with DPTM
2003	Sandy limestone flint conglomerate	106	1	600	phased on one side
2006	Sandy limestone	18	1	1936	polygonal shape, broken, 4 flat sides survive
2006	Clunch	28	1	2680	1 side diagonal SCL, 1 side DPTM
2006	Clunch		2	2414	1 side with SCL
2021	Clunch		1	616	4 sides with SCL
2021	Clunch		1	520	1 side with DPMT, 1 side smoothed flat
2021	Clunch		1	2600	2 sides smoothed flat, 1 side with ?chisel marks
2037	Clunch		1	2284	1 side with DPTM
2044	Limestone	86	1	362	1 side with SCL
2044	Limestone	84	1	426	1 side with DPTM
2044	Limestone	85	1	5386	1 side with SCL
2423	Slate		1	17	tile, 4mm thick
2542	Clunch		1	72	phased on one side and burnt

Key: DPTM = Denticulated power tool marks; SCL = Straight-carved lines

**APPENDIX 12: HUMAN REMAINS BY SHARON CLOUGH****Biological Record: factual data**

Type	Category	Count
Human Remains	Skeletal Remains	4

The skeletal remains of three adult individuals and a foetus were recovered. Two adults (both probably female, one young, one older) were simultaneously interred in a double burial and a further single burial was located a short distance away (possibly male). The remains of a foetus were discovered after excavation from amongst the sampled soil which had been located in the lower torso area of SK2396. The supposition here is that the young female individual was still pregnant at the time of death and the unborn baby remained in-utero. An alternative explanation is that the baby was placed on the stomach area.

Radiocarbon dating of the three adult skeletons places them in the Late Roman to Early Saxon period (SUERC-84638, 84639, 84640). The dates from the double burial range from mid third century to early fifth AD and lie in the Late Roman period. At this time inhumation had become the most popular method of disposal of the body. Double burials are rare, and may represent deaths which occurred within a short time of one another. The possibility of a pregnant woman dying with foetus in –utero is a rare find, 20 published accounts and a further 24 from UK are known, with some more written about in grey literature. Further more detailed investigation is needed.

**Biological record: statement of potential**

Despite the low number of burials these skeletal remains have great potential to provide biological information about the individuals and the burial practices. The rural nature of the burial places it within the research framework of the rural Roman project (Smith *et al.* 2018), and as such contribute to this body of data. Establishing the age of the foetus will help confirm the relationship to the adult female. It will therefore add to the few other known burials of a foetus in-utero.

**Methodology**

The skeletal remains were examined to determine the quantity, general condition, completeness, provenance, date and nature of the material (i.e. whether it comprised articulated (disturbed or undisturbed) or disarticulated remains).

All skeletons were examined in accordance with national guidelines for producing assessment reports (Mays *et al.* 2004, updated 2018). This involved assessing the completeness and condition of the skeletons with particular reference to certain landmarks that may be used to establish biological parameters and explore health status.

Completeness was estimated by recording, as a percentage, how much of the skeleton had survived and assigning it to one of the following categories:

1 = <25% complete 2 = 25-50% complete 3 = >50-75% complete 4 = >75% complete

The condition of the bone was assessed according to the degree of erosion of the bone surface and how much of the epiphyses (the ends of the bones) and cancellous bone (the spongy bone that is beneath the outer layer) had survived. Based on these factors, skeletons were assigned to one of the following categories:

1 = Poor (cortical bone completely eroded. Very limited survival of epiphyses and cancellous bone).

2 = Fair (moderate erosion of cortical bone. Limited survival of cancellous bone and epiphyses).

- 3 = Good (Occasional erosion on cortical bone. Cancellous bone complete and frequent survival of epiphyses)  
4 = Excellent (cortical bone undamaged, cancellous bone and epiphyses complete).

All observations were made by rapidly scanning each skeleton. While these observations provide adequate guidance to the potential of the material for further work they are, by their very nature, preliminary and subject to change as a result of any future high resolution examination.

The potential of the skeletons to yield information relating to age and sex was estimated by determining if the appropriate skeletal elements were present to employ standard methods (Brickley and McKinley 2004).

The skeletons were also assessed for their potential to yield metrical data, in particular that which will allow stature estimation and that which will facilitate age estimation for sub-adults and sex estimation for adults. Potential for metrical assessment was scored on as possible, limited and none (i.e. no elements could be measured owing to fragmentation/poor preservation).

Other observations pertaining to metrical assessment involved noting which skeletons had sufficiently preserved bones, in particular crania that will facilitate comparisons between individuals and groups. This may indicate factors such as ethnic affinities, regional microevolution and biological distance, particularly when combined with the chemical analysis of the bones and teeth.

An assessment of the potential for the skeleton to yield non-metrical data was scored as possible, limited, or none (i.e. preservation prevented the observation of all standard cranial and post-cranial sites).

More readily observable traits were noted (but not formally scored) to give an indication of the level and range of traits present in the population. This will inform a data collection strategy for full analysis. Non-metric traits are morphological variations in the skeleton. They are influenced by both the environment and genetics, but to variable and unpredictable degrees (Saunders 1989).

### **Discussion and recommendations**

The skeletal remains were all heavily fragmented. SK2453 was exceptionally fragmented, more than the others. This will limit the ability to take measurements needed, for example, for stature estimation. Despite this, reconstruction of key areas will allow for more accurate age and sex estimation. Observation of non-metric traits may be reduced, as will pathological lesions. Where teeth were present these were well preserved so it will be possible to record the dental disease.

Further examination of SK2396b and comparison with other neonate remains will confirm the current age estimation (32 weeks, full-term 38-40 weeks).

It is recommended that the skeletal remains are fully recorded and analysed and where possible placed in the regional and national context.

### **References**

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Table 25: Assessment summary of the skeletal remains

<b>Skeleton Number</b>	<b>Potential for Sex estimation</b>	<b>Potential for Age estimation</b>	<b>Adult/subadult</b>	<b>Completeness</b>	<b>Condition</b>	<b>Potential metric</b>	<b>Potential non-metric</b>	<b>Teeth?</b>	<b>Skeletal pathology</b>
2395	Yes – female	Yes – older	Adult	Nearly complete	Grade 3 – heavily fragmented	Limited	Limited	Yes – dental disease present	None observed but possible
2396	Yes - female	Yes – young	Adult	Almost all present	Grade 3 – heavily fragmented	Limited	Fair	Yes – calculus	None observed but possible
2396b	No – non-adult	Yes – foetus c. 32 weeks	Subadult	Some long bone, spine, ribs	Grade 3 – good but fragmented	Limited	None	No	None
2453	Yes - ?male	Yes - older	Adult	Most skeleton represented except cranial	Grade 3 – but very heavily fragmented	Limited	Limited	Yes – dental disease and heavy wear	None observed but possible

## APPENDIX 13: ANIMAL BONE BY MATILDA HOLMES

### Introduction

A moderate assemblage of c.600 fragments of animal bone could be identified to taxa. Bones came from Iron Age to modern features, with the largest samples from the Roman and post-medieval periods. Given the variation in sample size, it is recommended that only these periods are considered for further analysis.

### Methods

All bones and teeth were recorded, although for some elements a restricted count was employed to reduce fragmentation bias: vertebrae were recorded when the vertebral body was present, and maxilla, zygomatic arch and occipital areas of the skull were identified from skull fragments. A basic recording method was employed to assess the potential of the animal bone assemblage. The number of bones and teeth that could be identified to taxa were noted, as well as those used to age the major domesticates (tooth wear and bone fusion). The quantity of bones likely to be useful for metrical data was also recorded. Other information included condition and the incidence of burning, gnawing and butchery marks. All fragments were recorded by context including those that could not be identified to taxa. Recording methods and analysis are based on guidelines from Baker and Worley (2014).

### Summary of findings

Bones were generally in fair to good condition (Table 26), though a few contexts (2028 (Period 3.2 Ditch Y), 2208 (Period 3.3 Ditch W) and 2458 (Period 3.2 Ditch G) contained bones in very mixed states of preservation indicating that either they were deposited as a combination of old and new rubbish, or there was some contamination. Similarly, the inclusion of very weathered bones in contexts 2498 (Period 1 ditch 2497), 2028 (Period 3.2 Ditch Y), 2477 (Period 3.2 Ditch M), 2015 (post-medieval garden soil) and 2135 (Period 2.2 Ditch I) implies that fragments were left exposed to the elements prior to burial, often buried alongside bones that were better preserved and therefore from a different taphonomic pathway. Almost half the contexts contained gnawed bones (Table 26), again indicating bones that were not buried immediately but were available for dogs to chew on. Butchered and burnt bones were less commonly observed, although their presence is consistent with the apparent domestic nature of the assemblage.

No specific deposits of butchery, craft-working or skin-processing waste were observed, although several Associate Bone Groups (ABGs) were noted:

- Iron Age Ditch D (context 2502) partial cattle skeleton of an old, pathological animal; pit 2478 (context 2479) calf shoulder
- Early Roman pit 2474 (context 2475) cattle lower hind leg (gnawed); ditch H (context 2571) cattle lower hind leg (gnawed)
- Late Roman Ditch K (context 2113) six cattle cervical vertebrae
- Post-medieval Ditch R (context 2124) horse cervical and thoracic vertebrae plus ribs; Ditch R (context 2126) horse cervical, thoracic, lumbar and sacral vertebrae, possibly associated with the previous ABG; ditch W (context 2204) dog partial skeleton; ditch Z (context 2492) cattle first and third phalanges

Cattle and sheep/ goat bones dominated the assemblage, with a shift in dominance from cattle in the Roman period to sheep/ goat in the medieval period (Table 27). Small numbers of pig, equid (horse or donkey) and canid (dog or fox) bones were recorded in all phases, along with occasional finds of cat, chicken, goose and corvid. A human

perinatal ulna was also recovered from Late Roman Ditch K (context 2463). The sieved samples produced large quantities of micro-mammal remains, most commonly vole, as well as mouse, mole and shrew, also frog/ toad and small passerine (e.g. blackbird size) (Table 28).

A number of sheep mandibles were observed with periodontal disease, although they were from a mixture of Iron Age, Late Roman, post-medieval and modern periods so they cannot be used for implying flock health.

### **Potential and recommendations**

This is a well-preserved assemblage, although there is considerable evidence for mixed deposits. The inclusion of sieved samples means there is good potential to understand the diet and economy of those living at the settlement. The absence of fish remains even in the samples implies a dearth of them in the diet of those living at the site in all periods. The potential for further work will be considered by phase.

The Iron Age assemblage was too small to warrant further analysis.

The Roman period is best represented, and the number of cattle, sheep/ goat and pig fragments in both the early and late phases total more than 100, which makes them worth further investigation. Research questions will be limited to a basic appraisal of diet, with some potential for mortality data to be used to consider husbandry practices (Table 29).

The combined number of fragments of cattle, sheep/ goat and pig bone recovered from all medieval phases is well below the recommended number of 100 to be worth further analysis (Hambleton 1999), so no more work on bones from this phase is recommended.

The post-medieval phase is well-represented in the animal bone assemblage, although the sample size remains small. It should therefore be considered in terms of diet and animal husbandry only.

The modern assemblage was also too small to warrant further work.

The size of the assemblage is too small to provide reliable data to perform high-level analysis involving comparisons with other sites. Nonetheless, full recording and basic analysis of Roman and post-medieval assemblages is recommended to understand the nature of diet, status and husbandry of those living at the settlement in those phases.

### **Bibliography**

Baker, P. and Worley, F. 2014 *Animal Bones and Archaeology: Guidelines for Best Practice*. Portsmouth: English Heritage

Hambleton, E. 1999 *Animal Husbandry Regimes in Iron Age Britain*. Oxford: British Archaeological Reports British Series **282**

Table 26: Preservation and bone modifications observed on the bones for each context

Phase		Description	Preservation						Bone Modification		
			Good	Good-fair	Fair	Poor	Fair-poor	Good-poor	Gnawed	Butchered	Burnt
1	Iron Age	Ditches, pits, droveway, grain store, inhumation	6	1	8		1		4	2	
	Late Iron Age/ Roman				1				1		
2.	Early Roman	Enclosures	11	2	49	2			13	6	8
2.	Late Roman	Enclosures	4	1	15		2	1	8	1	5
3.	Early medieval	Ditches	3		10	1			2	1	1
3.	Medieval	Ditches, cess pits	3		4	1					
3.	Late medieval	Enclosures, pits	2	1	9		1	1	5		
4	Post-medieval		14	3	16		2	1	14	5	3
5	Modern			1					1		
<b>Total N contexts</b>			<b>43</b>	<b>9</b>	<b>11</b>	<b>4</b>	<b>6</b>	<b>3</b>	<b>48</b>	<b>1</b>	<b>1</b>
Proportion (%) of all contexts			24	5	63	2	3	2	27	9	1

Table 27: Number of fragments recorded for the major domesticates, birds and other taxa

Phase	Unidentified	Cattle		Sheep		Pig		Bird	Fish	Other	Total	Other taxa
		Bones	Teeth	Bones	Teeth	Bones	Teeth					
Iron Age	105	1	4	1	4	3	1			5	45	Equid, canid
Late Iron Age/ Roman	17	2	3	1	4	1	2			1	14	Equid
Early Roman	468	3	1	4	3	7	2			12	143	Equid, canid, cat
Late Roman	248	2	6	4	2	5	6			8	117	Equid, canid, human
Early medieval	145	5		4	2		1			2	14	Equid
Medieval	32			4	2	3	3	2		0	14	Chicken
Late medieval	122	1	1	9	8	3	3			4	39	Equid, canid
Post medieval	363	4	1	3	2	1	1	6		43	205	Equid, canid, cat, chicken, goose, corvid
Modern	26	7	1	4	4		2			3	21	Canid

Table 28: Number of bones recovered from samples

Phase	Burnt	Fish	Bird	Micro-mammal	Frog/toad	Cattle	Sheep/goat	Pig	Other	Taxa
Iron Age	42			39			6			Mouse, vole, shrew
Early Roman	103		1	62	3	1	1	3		Mouse, vole, chicken

<b>Late Roman</b>	130			76	3		10			Sheep/ goat, vole
<b>Early medieval</b>	2			12						Vole, mole
<b>Medieval</b>				15						Vole, mouse
<b>Late medieval</b>	8			10						Vole
<b>Post medieval</b>	16		1	11		1	4		1	?Cat, mole, vole, passerine

Table 29: Number of bones and teeth likely to provide ageing and metrical data for the major domesticates.

	<b>Cattle</b>				<b>Sheep/ goat</b>				<b>Pig</b>			
	<i>MWS</i>	<i>TW</i>	<i>FU</i>	<i>MEA</i>	<i>MWS</i>	<i>TW</i>	<i>FUS</i>	<i>MEA</i>	<i>MW</i>	<i>TW</i>	<i>FU</i>	<i>MEA</i>
<b>Iron Age</b>			7		1		8	13			1	
<b>Late Iron Age/ Roman</b>	1		1			1	1				1	
<b>Early Roman</b>	2		18	6	6	2	17	19	1		1	
<b>Late Roman</b>	1		12	7	6	3	16	8	2		3	
<b>Early medieval</b>			4				2	5				
<b>Medieval</b>							4	1			2	
<b>Late medieval</b>			9		2	1	6	2	1		2	2
<b>Post medieval</b>	1	2	22	7	2	2	11	12			11	
<b>Modern</b>			4		1		1					

MWS= mandibular wear stage; TWS= wear from individual teeth; fusion= bone fusion; meas= metrical data

**APPENDIX 14: ENVIRONMENTAL SAMPLE ASSESSMENT BY EMMA AITKEN AND SARAH F. WYLES****Introduction and methodology**

A series of 35 environmental samples (1240 litres, of which 680 litres was processed) were selected from a range of feature types and periods across the site with the intention of recovering cremated material and environmental evidence of industrial or domestic activity on the site and examining how this changed over time. The breakdown of the samples by period is tabulated in Table 30 below. The samples were processed by standard flotation procedures (CA Technical Manual No. 2).

Table 30: Breakdown of samples by period

Phase	Features	Number of samples	Volume of samples (L)
1 - Iron Age	Pits	6	110
	Ditches	1	20
2.1 - Early Roman	Pits	5	100
	Ditches	4	80
2.2 - Late Roman	Pits	4	80
	Ditches	7	140
3.2 - Medieval	Pits	3	60
	Ditches	1	20
3.3 - Late Medieval	Ditches	2	30
4 - Post Medieval	Ditches	1	20
Undated	Ditch	1	20
Total		35	680

Preliminary identifications of plant macrofossils are noted in Table 31, following nomenclature of Stace (1997) for wild plants, and traditional nomenclature, as provided by Zohary *et al.* (2012) for cereals. The presence of mollusc shells has also been recorded in a number of these samples and will be discussed within the text. Nomenclature is according to Anderson (2005) and habitat preferences according to Kerney (1999) and Davies (2008).

**Results****Period 1: Iron Age***Pits*

Fill 2019 (sample 3) of pit 2018 contained small quantities of hulled wheat (emmer or spelt (*Triticum dicoccum/spelta*) grains) and no other charred plant remains. Charcoal fragments greater than 2mm were recorded in a small amount. Moderate numbers of terrestrial snail shells belonging to the open country species *Vallonia costata*, *Vallonia excentrica* and *Vertigo* sp. and the intermediate species *Trochulus hispidus* were observed during assessment.

Fill 2026 (sample 5) of pit 2025 contained small quantities of charred indeterminate cereal grains and no other charred plant remains. A low quantity of charcoal fragments greater than 2mm were noted. Moderately low numbers of terrestrial snail shells belonging to the open country species *Vallonia costata*, *Vallonia excentrica* and *Vertigo* sp. and the intermediate species *Trochulus hispidus* were also recorded during assessment.

Fill 2023 (sample 4) of pit 2022 and fill 2167 (sample 16) of pit 2166 contained moderately low quantities of hulled wheat grains, indeterminate grains and barley (*Hordeum vulgare*) grains. Within sample 16 free-threshing wheat (*Triticum turgidum/aestivum* type) was also present alongside a small number of hulled wheat glume base fragments. Both sample 4 and sample 16 contained seeds from vetch/wild pea (*Vicia/Lathyrus* sp.), with sample 4 also containing oat/brome grass (*Avena/Bromus* sp.) and dock (*Rumex* sp.) and sample 16 containing brome grass

and rye-grass/fescue (*Lolium/Festuca* sp.). Both samples contained charcoal fragments greater than 2mm in a moderately low amount with only sample 4 containing terrestrial snail shells which include the open country species *Vallonia costata*, *Vallonia excentrica* and *Vertigo* sp. and the intermediate species *Trochulus hispidus*.

Fill 2122 (sample 12) of pit 2121 contained low quantities of hulled wheat and indeterminate cereal grain fragments. A small number of vetch/wild pea, bedstraw (*Galium* sp.) and rye-grass/fescue seeds were recovered alongside moderate amounts of terrestrial mollusc shells which included those of the open country species *Vallonia costata*, *Vallonia excentrica* and *Vertigo pygmaea* and the intermediate species *Trochulus hispidus*.

Fill 2327 (sample 34) of pit 2326 contained moderately low quantities of charred wheat grains (*Triticum* sp.) alongside a small number of indeterminate cereal grain fragments. Low quantities of oat seeds and vetch/wild pea seeds were also recovered. Charcoal fragments greater than 2mm were recovered in moderately low quantities alongside a moderately low number of terrestrial snail shells including those of the open country species *Vallonia costata*, *Vallonia excentrica* and *Vertigo* sp. and the intermediate species *Trochulus hispidus*.

The environmental assemblages assessed from within the pits discussed above are likely to be representative of wind-blown/dispersed settlement activity material. This suggests that some settlement or domestic activity was taking place within wider vicinity, possibly nearest to pit 2022 and pit 2166 which contained the highest number of charred cereal grains, even if they are in moderately low quantities.

#### *Ditches*

Fill 2502 (sample 47) of ditch 2501 (Ditch D) contained low quantities of indeterminate cereal grain fragments and no other charred plant remains. Small numbers of charcoal fragments greater than 2mm were recovered from within the fill. Moderately low quantities of terrestrial snail shells including those of the open country species *Vallonia costata* and *Vallonia excentrica* and the intermediate species *Trochulus hispidus* were present within sample 47.

The assemblage from this ditch is likely to be representative of wind-blown/dispersed material.

### **Period 2.1: Early Roman**

#### *Pits*

Fill 2268 (sample 22) of pit 2267 contained low quantities of spelt wheat (*Triticum spelta*) and indeterminate cereal grains. Small numbers of oat grass seeds were also recovered. Low amounts of charcoal greater than 2mm was recorded during assessment. Moderately low quantities of terrestrial snail shells including those of the open country species *Vallonia costata* and *Vallonia excentrica* as well as the intermediate species *Trochulus hispidus* were recorded during assessment. Alongside the low amount of charcoal fragments found within the sample, five large pieces, which are greater than 2mm in size, were hand-picked during excavation.

Fill 2429 (sample 35) of pit 2428 also contained charcoal fragments greater than 2mm in moderate quantities but no other charred plant remains were recovered.

Fill 2344 (sample 24) of pit 2343 and fill 2475 (sample 42) of pit 2474 contained low quantities of hulled wheat (emmer or spelt) barley and indeterminate cereal grain fragments. Sample 24 also contained free-threshing wheat in small amounts alongside a low number of charred thorns belonging to hawthorn/cherry (*Crataegus/Prunus spinosa* type). Sample 42 contained low quantities of vetch/wild pea seeds. Both samples contained low quantities of charcoal fragments greater than 2mm. Sample 24 contained terrestrial snail shells including those of the open country species *Vallonia costata* and *Vallonia excentrica* and the intermediate species *Trochulus hispidus* and

*Cochlicopa* sp. Sample 42 only contained a small number of terrestrial snail species including the intermediate species *Trochulus hispidus*.

Fill 2110 (sample 10) of working hollow 2109 contained free-threshing wheat and indeterminate cereal grain fragments in moderately low quantities. Moderate quantities of terrestrial snail shells including those of the open country species *Vallonia costata*, and *Vallonia excentrica*, the intermediate species *Cochlicopa* sp., and *Trochulus hispidus* were recorded from within Sample 10 as well as shells of another open country species *Pupilla muscorum*.

Pit 2267 is likely to be representative of wind-blown/dispersed material however due to 5 large pieces of charcoal being hand-picked by the archaeologists it can also be suggested that it was within the vicinity of an area where the burning of wood occurred, i.e. a hearth. The other three pits from within this period of the site are suggestive of being wind-blown/dispersed material.

### *Ditches*

Fill 2362 (sample 25) of ditch 2361 contained low quantities of hulled wheat, barely, free-threshing wheat and indeterminate cereal grain fragments. No other charred plant remains were recovered and only a small amount of charcoal fragments greater than 2mm were recorded from within fill 2362. A low number of terrestrial snail shells were recovered and included those of the open country species *Vallonia costata* and *Vallonia excentrica* and the intermediate species *Trochulus hispidus* and *Cochlicopa* sp.

Fill 2584 (sample 51) of ditch 2583 (Ditch A) contained low quantities of free-threshing wheat and indeterminate cereal grain fragments. No other charred plant remains were recovered and only a small amount of charcoal fragments greater than 2mm were present. Low quantities of the open country terrestrial snail shell species *Vallonia excentrica* was recorded during assessment.

Fill 2248 (sample 21) of ditch 2247 (Ditch C) contained a very small amount of indeterminate cereal grain fragments and no other charred plant remains. Low quantities of charcoal fragments greater than 2mm were present within this sample. A moderate number of terrestrial snail shells including those of the open country species *Vallonia costata*, *Vertigo* sp. and *Vallonia excentrica* were present alongside the intermediate species *Trochulus hispidus* and *Cochlicopa* sp. and the shade loving species *Aegopinella nitidula*. The aquatic snail shell species *Galba truncatula* was also recorded during assessment.

Fill 2569 (sample 49) of ditch 2568 (Ditch H) contained very low quantities of wheat grains and indeterminate cereal grain fragments. Small numbers of vetch/wild pea seeds were also recorded alongside a small amount of charcoal fragments greater than 2mm in size.

The environmental assemblages discussed within the ditches from period 2.1 are likely to be representative of wind-blown/dispersed settlement or domestic material from within the nearby vicinity.

## **Period 2.2: Late Roman**

### *Pits*

Samples 14 and 15 of fill 2146 (pit 2144) both contained moderate quantities of hulled wheat, free-threshing wheat, barley, indeterminate cereal grain fragments and glume base fragments, with sample 15 containing those of spelt. Within the hulled wheat assessed from sample 14 spelt grains were present. A moderately low number of charred seeds were recorded during assessment which included vetch/wild pea, oat/brome grass, meadow grass/cat's tails

(*Poa/Phleum* sp.), clover/medick (*Trifolium/Medicago* sp.) and buttercup (*Ranunculus* sp.). Sample 14 also contained charred field madder (*Sherardia* sp.) seeds and sample 15 contained fruit/parenchyma fragments and stems. Both samples contained moderate quantities of charcoal fragments greater than 2mm. Terrestrial snail shells were also recovered within both samples including those of the open country species *Vallonia costata*, *Vallonia excentrica* and *Vertigo* sp., and the intermediate species *Trochulus hispidus* and *Cochlicopa* sp.

Fill 2486 (sample 45) of pit 2485 contained low quantities of hulled wheat grain fragments and charred hazelnut (*Corylus avellana*) shell fragments. Fill 2473 (sample 43) of pit 2472 contained no charred plant remains but both sample 45 and sample 43 contained a moderate number of charcoal fragments greater than 2mm in size. Both samples also contained moderate quantities of the terrestrial snail shells which include the open country species *Vertigo* sp. and *Pupilla* sp., the intermediate species *Trochulus hispidus*, *Cochlicopa* sp. and *Cepaea* sp., and the shade loving species *Discus rotundatus*, *Aegopinella pura*, *Aegopinella nitidula*, *Clausilia bidentata* and *Carychium tridentatum*. Aquatic snail shells were also recorded in moderate quantities from both samples and included *Anisus leucostoma* and *Galba truncatula* which can be indicators of seasonal flooding and desiccation.

Pit 2144 had two environmental samples assessed where both suggested that pit 2144 was within the nearby vicinity of where settlement or domestic activity taking place. This is due to the wide variety of weed seeds and cereal remains that were recorded during the assessment, which may be reflective of crop processing waste material. Pits 2472 and 2485 are likely to be representative of wind blow/dispersed material.

#### Ditches

Two samples (sample 44 and 48) were processed from Ditch AC. Sample 44, fill 2484 of ditch 2483 and contained no charred plant remains with only a very low number of charcoal fragments greater than 2mm. Sample 48, fill 2538 of ditch 2537 contained low quantities of hulled wheat, barely, indeterminate cereal grain fragments and rachis fragments. A moderate number of charcoal fragments greater than 2mm were also recorded during assessment.

Two samples (sample 13 and sample 20) were processed from within Ditch I with sample 13, fill 2139 ditch 2138 containing low quantities of indeterminate cereal grain fragments. Sample 20 fill 2245 produced a low amount of possible hulled wheat grain fragments but due to the poor preservation levels a firm identification could not take place. Both sample 13 and sample 20 contained no other charred plant remains with only sample 20 producing moderate levels of charcoal fragments greater than 2mm. Sample 13 and Sample 20 contained terrestrial snail shells and aquatic snail shells. These included those of *Vallonia costata*, *Vallonia excentrica*, *Vertigo* sp., *Pupilla muscorum*, *Trochulus hispidus*, *Cochlicopa* sp., *Aegopinella pura* and *Galba truncatula*.

Three samples from ditch group K were processed and assessed. Fill 2113 (sample 9) of ditch 2112 contained hulled wheat, barley a. No other charred plant remains were recovered from either sample and only a moderate number of charcoal fragments greater than 2mm were noted. Moderate quantities of terrestrial snail shells including those of the open country species *Vallonia costata*, and *Vallonia excentrica*, the intermediate species *Cochlicopa* sp., and *Trochulus hispidus* were recorded from within sample 9. Fill 2460 (sample 40) of ditch 2459 contained moderately low quantities of hulled wheat, barley and indeterminate cereal grain fragments. Small amounts of vetch/wild pea and docks (*Rumex*) seeds were also present as well as some stem fragments. Moderate numbers of terrestrial snail shells and aquatic snail shells were noted and included those of *Vallonia costata*, *Vallonia excentrica*, *Trochulus hispidus*, *Aegopinella nitidula* and *Galba truncatula*. Fill 2463 (sample 41) of ditch 2459 contained moderate quantities of hulled wheat, free-threshing wheat, barley, indeterminate grain fragments, glume

bases and spikelet fork fragments which included those of spelt. A moderate amount of vetch/wild pea, oat/brome grass, meadow grass/cat's tails, clover/medick, buttercup and cabbage (*Brassica* sp.) seeds were also recorded from within sample 41. A moderate number of charcoal fragments greater than 2mm were present. Terrestrial snail shells including those of the open country species *Vallonia costata* and *Vallonia excentrica* and the intermediate species *Cochlicopa* sp., and *Trochulus hispidus* were also present in moderate quantities.

The assemblages from three of the ditches discussed above appear to be representative of wind-blown/dispersed material from nearby settlement activity. However, the assemblage recovered from ditch 2459 may be indicative of dumped crop processing waste.

### **Period 3.2: Medieval**

#### *Pits*

Fill 2292 (sample 23) of pit 2291 contained low quantities of free-threshing wheat and indeterminate cereal grains. A small number of vetch/wild pea seeds were present alongside a hazelnut shell fragment. Moderate quantities of charcoal fragments greater than 2mm were noted during assessment. A moderate number of terrestrial snail shells including those of the open country species *Vallonia costata* and *Vallonia excentrica* and the intermediate species *Cochlicopa* sp. and *Trochulus hispidus* were recovered from sample 23.

Fill 2378 (sample 26) of pit 2377 contained low quantities of indeterminate cereal grain fragments and low quantities of vetch/wild pea seeds. Charcoal fragments greater than 2mm in size were recorded in a small amount. A moderate quantity of terrestrial snail shells were recovered including those of the open country species *Vertigo* sp., *Vallonia costata* and *Vallonia excentrica* and the intermediate species *Trochulus hispidus*.

Pit 2291 and pit 2377 are likely to be environmental assemblages that are representative of wind-blown/dispersed material.

Fill 2189 (sample 17) of pit 2188 contained moderately low quantities of free-threshing wheat, hulled wheat and indeterminate cereal grain fragments. A small number of vetch/wild pea and brome grass seeds were also recorded during assessment alongside a fragment of hazelnut shell. Moderate quantities of charcoal fragments greater than 2mm were recovered from within sample 17. Terrestrial snail shells including those of the open country species *Vallonia costata*, *Vallonia excentrica* and *Vertigo* sp., and the intermediate species *Trochulus hispidus* and *Cochlicopa* sp. were also recorded in a moderate amount from within the feature.

This assemblage is likely to be representative of wind-blown/dispersed material that has been moved from a nearby domestic activity area.

#### *Ditch*

Fill 2500 (sample 46) of ditch 2499 (Ditch L) contained moderately low quantities of free-threshing wheat and indeterminate cereal grain fragments. Small numbers of vetch/wild pea seeds and charcoal fragments greater than 2mm were also recorded. This assemblage is indicative of wind-blown/dispersed material from nearby settlement activity.

### **Period 3.3: Later Medieval**

#### *Ditches*

Fill 2208 (sample 18) of ditch 2207 (Ditch W) contained moderately low quantities of free-threshing wheat grains and indeterminate cereal grain fragments. Small numbers of clover/medick seeds were also recorded alongside low amounts of charcoal fragments greater than 2mm. A moderate quantity of terrestrial snail shells were recovered and included those of the open country species *Vertigo* sp., *Vallonia costata* and *Vallonia excentrica* and the intermediate species *Trochulus hispidus* and *Cochlicopa* sp.

Fill 2210 (sample 19) of ditch 2209 (Ditch X) contained low quantities of fragments of free-threshing wheat grains. No other charred plant remains or charcoal was observed within sample 19. A small number of shells of the intermediate terrestrial snail shell species *Trochulus hispidus* was noted during assessment.

The environmental assemblages from ditches 2207 and 2209 are likely to be representative of wind-blown/dispersed material with ditch 2207 perhaps being slightly closer to the settlement due to the marginally higher number of charred cereal grains and weed seeds present within the sample.

#### **Period 4: Post Medieval**

##### *Ditch*

Fill 2048 (sample 7) of ditch 2047 (Ditch R) contained high quantities of free-threshing wheat grains with some barley and indeterminate cereal grain fragments. Large amounts of charred plant remains were also recorded during assessment and included oat, oat/brome grass, celtic bean (*Vicia faba*), celtic bean/pea (*Vicia faba/Pisum*), vetch/wild pea, cabbage, knotgrass (*Polygonum aviculare*), bedstraw (*Galium* sp.), dock, clover/medick, goosefoot (*Chenopodium* sp.) seeds, hazelnut shell fragments and a stone fragment from blackthorn (*Prunus spinosa*). Some of the oat grains are of a size that they are likely to have been cultivated, but no oat florets were present to help confirm this. A moderately large number of charcoal fragments greater than 2mm were also recorded and this include fragments of round wood and twig wood charcoal. Additionally two large pieces of charcoal from fill 2047 were hand collected. A large number of terrestrial snail shells was recovered, including those of the open country species *Vertigo* sp., *Vallonia costata* and *Vallonia excentrica*, the intermediate species *Trochulus hispidus* and *Cochlicopa*, and the shade loving species *Oxychilus* sp., *Aegopinella nitidula* and *Aegopinella pura*. Low quantities of shells of the aquatic species were also noted, including those of *Galba truncatula*.

The assemblage from ditch 2048 appears to be representative of food processing waste. Alongside the charred plant assemblage there is also a higher number of charcoal fragments greater than 2mm which suggests that burning activities were taking place within the vicinity.

##### **Undated**

##### *Ditch*

Fill 2360 (sample 27) of ditch 2359 contained low quantities of free-threshing wheat grains and indeterminate cereal grain fragments. Small numbers of dock, brome grass and vetch/wild pea seeds were also recorded. A small amount of charcoal fragments greater than 2mm were noted during assessment. Terrestrial snail shells including those of the open country species *Vertigo* sp., *Vallonia costata* and *Vallonia excentrica* and the intermediate species *Trochulus hispidus* were recorded in moderate quantities.

Ditch 2359 is likely to be representative of wind-blown/dispersed material. Due to the small amount of environmental material within the assemblage it is not possible to provide a firm date for this feature. However, as free-threshing wheat only becomes the predominate wheat in this part of Britain after the Roman period (Greig 1991) it could be tentatively suggested that this ditch may belong to one of the later phases of activity on this site.

### **Hand-picked shell from site**

From three different contexts on site, shell was hand collected by the archaeologists. Context 2325 contained a single oyster shell. Context 2423 contained a single shell of *Cornu apersum* and context 2526 contained a shell of *Cepaea* sp.

### **Summary**

These assemblages generally appear to be indicative of a rural settlement with domestic activities taking place in the nearby vicinity. The range of cereals is mostly compatible with the site as from the post Roman period free-threshing wheat became the predominant wheat in this part of Britain (Greig 1991). Before the post Roman period hulled wheat, in particular spelt, was the predominant wheat in this area (Greig 1991). The few free-threshing wheat grains within the earlier assemblages are likely to be intrusive.

The range of weed seeds are generally those typical of grassland, field margins and arable environments. There is some indication of lighter drier soils being used (favoured by species such as field madder) together with the exploitation of the scrub/woodland edge suggested by hazelnut shells and hawthorn.

The mollusc assemblages are indicative of a well-established open landscape, with some areas of longer grass and possible scrub/hedgerow. There is some evidence for some damper areas on site subject to seasonal flooding and desiccation.

### **Potential**

#### **CPR**

There is some potential for more detailed analysis of a selection of the charred plant assemblages from periods 1, 2.1, 2.2, 3.2 and 4 to provide information on the nature of the settlement and surrounding landscape, the range of crops and the possible crop-processing activities taking place on site and how this changed over time.

There is a small indication of the exploitation of a number of different environments which could be examined in more detail and the range of weed seeds may also assist in determining the crop-processing techniques being employed as the present of low growing species, such as clover or medick and docks, and twinning species, such as vetches/wild peas, may suggest a low harvesting height by sickle (Hillman 1981).

There is the potential for comparing these results with other assemblages of a similar date from other sites in the wider area such as Park Farm, Aston Clinton (Aitken and Wyles unpublished), and Chesham Bois House (Wessex Archaeology 2007).

#### **Charcoal**

Whilst there is potential for more detailed analysis of a selection of the charcoal assemblages from Periods 1, 2.1, 2.2, and 4 to provide information on the range of species and the management and exploitation of the local woodland resource, this may not necessarily add significantly to the wider environmental picture of this area in these periods.

### **Recommendations for Further Work**

It is proposed that the charred remains from four or five samples should be analysed in more detail. These are to be selected from: Period 1 pits 2022 and 2166 and ditch 2326, Period 2.1 pit 2343, Period 2.2 pit 2144 and Ditch

K (2459), Period 3.1 pit 2188, Period 3.2 pit 2291, Period 3.3 Ditch W (2207) and Period 4 Ditch R 2047. No further work is recommended on the charcoal assemblage.

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Table 31. Assessment of environmental remains

Feature	Context	Sample	Processed vol (L)	Unprocessed vol (L)	Flot size (ml)	Roots %	Grain	Chaff	Cereal Notes	Charred Other	Notes for Table	Charcoal > 4/2mm	Other	Analysis
Period 1: Iron Age														
Pits														
2018	2019	3	20	20	40	75	*	-	Hulled wheat grain	-	-	*/*	Moll-t (***) Sab (*)	
2022	2023	4	20	20	70	75	**	-	Hulled wheat, barley + indet. grain frags	*	<i>Avena/Bromus, Vicia/Lathyrus, Rumex</i>	*/**	Moll-t (**)	P C
2025	2026	5	20	10	60	75	*	-	Indet. grain frag	-	-	-/*	Moll-t (**)	
2166	2167	16	10	0	15	60	**	*	Hulled wheat, f-t wheat grain, barley + indet. grain frags. Glume base frags	*	<i>Vicia/Lathyrus, Bromus, Lolium/Festuca</i>	*/*	-	P
2121	2122	12	20	20	40	75	*	-	Hulled wheat + indet. grain frags	*	<i>Vicia/Lathyrus, Lolium/Festuca, Galium</i>	*/**	Moll-t (***) Sab (*), siliceous material	
2399	2400	34	20	20	15	60	**	-	Wheat + indet. grain frags	*	<i>Avena, Vicia/Lathyrus</i>	*/**	Moll-t (**)	C
Ditch														
D - 2501	2502	47	20	20	20	70	*	-	Indet. grain frag	-	-	-/*	Moll-t (**)	
Period 2.1: Early Roman														
Pits														
2267	2268	22	20	20	15	70	*	-	Spelt wheat + indet. grain frags	*	<i>Avena</i>	-/*	Moll-t (**)	
2267	2268											5 pieces		C
2343	2344	24	20	20	15	70	**	-	F-t wheat, barley, hulled wheat + indet. grain frags	*	<i>Crataegus/Prunus spinosa</i> type thorn	*/*	Moll-t (**), min. nodule, siliceous material	P

Feature	Context	Sample	Processed vol (L)	Unprocessed vol (L)	Flot size (ml)	Roots %	Grain	Chaff	Cereal Notes	Charred Other	Notes for Table	Charcoal > 4/2mm	Other	Analysis
2109	2110	10	20	20	40	70	**	-	F-t wheat + indet. grain frags	-	-	**/**	Moll-t (**)	
2428	2429	35	20	10	15	60	-	-	-	-	-	*/**	-	C
2474	2475	42	20	20	10	50	*	-	Hulled wheat, barley + indet. grain frags	*	<i>Vicia/Lathyrus</i>	*/*	Moll-t (*)	
Ditches														
2361	2362	25	20	20	10	60	**	-	Hulled wheat, barley, f-t wheat + indet. grain frags	-	-	-/*	Moll-t (**)	
A - 2583	2584	51	20	10	10	60	**	-	F-t wheat + indet. grain frags	-	-	*/*	Moll-t (*)	
C - 2247	2248	21	20	20	70	70	*	-	Indet. grain frag	-	-	*/*	Moll-t (***), Moll-f (*)	
H - 2568	2569	49	20	20	25	70	*	-	Wheat + indet. grain frags	*	<i>Vicia/Lathyrus</i>	*/*	-	
Period 2.2: Late Roman														
Pits														
2144	2146	14	20	0	15	40	**	*	Hulled wheat (inc. spelt), f-t wheat grain, barley + indet. grain frags. Glume base frags	**	<i>Vicia/Lathyrus, Rumex, Avena/Bromus, Poa/Phleum, Trifolium/Medicago, Ranunculus, Sherardia</i>	**/**	Moll-t (**)	P C
2144	2146	15	20	0	20	40	**	*	Hulled wheat, f-t wheat grain, barley + indet. grain frags. Glume base frags inc. spelt	**	<i>Vicia/Lathyrus, Avena/Bromus, Poa/Phleum, Trifolium/Medicago, Ranunculus, fruit/parenchyma frag, stems</i>	**/**	Moll-t (**)	P C
2472	2473	43	20	30	15	60	-	-	-	-	-	**/**	Moll-t (***), Moll-f (**)	

Feature	Context	Sample	Processed vol (L)	Unprocessed vol (L)	Flot size (ml)	Roots %	Grain	Chaff	Cereal Notes	Charred Other	Notes for Table	Charcoal > 4/2mm	Other	Analysis
2485	2486	45	20	20	10	60	*	-	Hulled wheat grain frag	*	<i>Corylus avellana</i> shell frag	*/**	Moll-t (**), Moll-f (**)	
Ditches														
AC - 2483	2484	44	20	20	5	70	-	-	-	-	-	-/*	-	
AC - 2537	2538	48	20	20	50	60	*	*	Hulled wheat + indet. grain frags, barley rachis frag	-	-	**/**	-	C
I - 2138	2139	13	20	0	30	75	*	-	Indet. grain frag	-	-	-/*	Moll-t (**), Moll-f (*)	
I - 2244	2245	20	20	20	20	70	*	-	?Hulled wheat grain frag	-	-	-	Moll-t (**), Moll-f (**)	
K - 2112	2113	9	20	20	25	65	**	-	Hulled wheat, barley + indet. grain frags	-	-	*/**	Moll-t (**)	
K - 2459	2460	40	20	20	35	10	**	-	Hulled wheat, barley + indet. grain frags	*	<i>Vicia/Lathyrus, Rumex</i> , stem frag	*/*	Moll-t (**), Moll-f (**)	
K - 2459	2463	41	20	10	15	40	**	**	Hulled wheat, f-t wheat grain, barley + indet. grain frags. Glume base + spikelet fork frags inc. spelt	**	<i>Vicia/Lathyrus, Avena/Bromus, Poa/Phleum, Trifolium/Medicago, Ranunculus, Brassica</i>	**/**	Moll-t (**)	P C
Period 3.2: Medieval														
Pits														
2188	2189	17	20	20	10	15	**	-	F-t wheat, hulled wheat + indet. grain frags	*	<i>Vicia/Lathyrus, Bromus, Corylus avellana</i> shell frag	*/**	Moll-t (**)	P C
2291	2292	23	20	10	15	30	*	-	F-t wheat + indet. grain frags	*	<i>Vicia/Lathyrus, Corylus avellana</i> shell frag	**/**	Moll-t (**)	P C
2377	2378	26	20	20	20	70	*	-	Indet. grain frag	*	<i>Vicia/Lathyrus</i>	*/*	Moll-t (**), Sab (*)	
Ditch														

Feature	Context	Sample	Processed vol (L)	Unprocessed vol (L)	Flot size (ml)	Roots %	Grain	Chaff	Cereal Notes	Charred Other	Notes for Table	Charcoal > 4/2mm	Other	Analysis
L - 2499	2500	46	20	20	30	70	**	-	F-t wheat + indet. grain frags	*	<i>Vicia/Lathyrus</i>	*/*	-	
Period 3.3: Later Medieval														
Ditches														
W - 2207	2208	18	20	20	40	75	**	-	F-t wheat + indet. grain frags	*	<i>Trifolium/Medicago</i>	*/*	Moll-t (**)	P
X - 2209	2210	19	10	0	5	70	*	-	F-t wheat grain frag	-	-	-	Moll-t (*)	
Period 4: Post Medieval														
Ditch														
2047	2048	7	20	20	150	15	*****	*	F-t wheat (*****), barley + indet. grain frags, culm node	*****	<i>Avena, Avena/Bromus, Vicia faba, Vicia faba/Pisum, Vicia/Lathyrus, Rumex, Polygonum, Galium, Brassica, Trifolium/Medicago, Chenopodium, Corylus avellana shell frags, Prunus spinosa stone frag</i>	***/**	Moll-t (****), Moll-f (*), Sab (*), siliceous material	P C
2047	2048	-										2 Large pieces		C
Undated														
Ditch														
2359	2360	27	20	20	10	60	*	-	F-t wheat + indet. grain frags	*	<i>Rumex, Bromus, Vicia/Lathyrus</i>	*/*	Moll-t (**)	

Key: \* = 1–4 items; \*\* = 5–19 items; \*\*\* = 20–49 items; \*\*\*\* = 50–99 items; \*\*\*\*\* = >100 items, Moll-t = land snails, Moll-f = freshwater/aquatic snails, sab = small animal bone, P = plants, C = charcoal

## APPENDIX 15: MONOLITH ASSESSMENT BY AGATA KOWALSKA

### Introduction

This report is an assessment of the lithology of monolith sample obtained during excavation at Land West of Cheddington (669057), Aylesbury Vale, Buckinghamshire. According to the British Geological Survey, the underlying bedrock geology of the area is mapped as Gault Formation and Upper Greensand Formation - Mudstone, Siltstone and Sandstone in the northern part of the site and West Melbury Marly Chalk Formation in the south; both deposited during the Cretaceous period. No superficial deposits are recorded in the proposed development area (BGS 2018; CA 2017).

A single monolith was taken from a section of dark organic deposit 2003 to determine whether or not the context could be described as a buried garden soil or a dumped waste material (Plate 1).



Plate 1 Section showing monolith <8>

### Methodology

The monolith (sample 8) was taken from north-west facing section of a test pit. It was retained in steel tin measuring 100 x 100 x 500mm and was then wrapped and labelled following standard sampling procedures. The monolith was opened, and the deposits cleaned, photographed and recorded according to standard criteria provided by Hodgson (1978). All observations were summarised in table 1. Colours were described by using on-line application *Munsell color chart, version 1.0.1.1* supported by Revised Standard Soil Color Charts (Revised 2018).

## Result and discussion

The basal context 2002 is a possible upper weathered stratum of the natural geology recorded at the site. The macropores recorded in the top part of the unit are filled with more dark greyish clay fraction, possibly translocated from overlying unit due to bioturbation caused by earthworm and roots activity. Common yellowish-brown mottling is result of changing oxidizing conditions and accumulation of iron along roots channels (Rapp and Hill 1998).

Overlying context 2002 with a clear and smooth boundary is context 2003. The context is 0.30m thick and consists of dark olive grey silty clay, with few chalk flecks (<4mm, <5%) and rare flint cobbles observed in the field. The context is homogenous with no laminations indicating any episodes of dumped material. The context is characterized by medium to large blocky structure, which is characteristic for soil B horizon with high clay content (Bt). Small rare charcoal lumps and a fragment of bone were recorded within the context. Context 2003 can be interpreted as a garden soil developed during the medieval period. The organic and inorganic domestic waste observed both in the monolith and in the field could be incorporated and then mixed by various human activity such tillage and then frequently reworked (Karkanias and Goldberg 2018, 211).

## Conclusions

It can be concluded that the homogenous, fine-grained sediments, with loose blocky structure and dark hue is a garden soil mixed with dumped waste materials. Most likely, this deposit built up over many generations of site use during the medieval period (based on pottery) and was sealed by later post-medieval material (context 2006 see CA 2018). The sequence has no palaeoenvironmental significance. The archaeobotanical remains from the bulk samples should be enough to provide a reconstruction of the human activity in medieval period.

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**APPENDIX 16: RADIOCARBON DATING BY SHARON CLOUGH**

Radiocarbon dating was undertaken in order to confirm the date of three skeletons (SK2395, SK2396, SK2453). The samples were analysed during February 2019 at Scottish Universities Environmental Research Centre (SUERC), Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow, G75 0QF, Scotland. The methodology employed by SUERC Radiocarbon Laboratory is outlined in Dunbar *et al.* (2016).

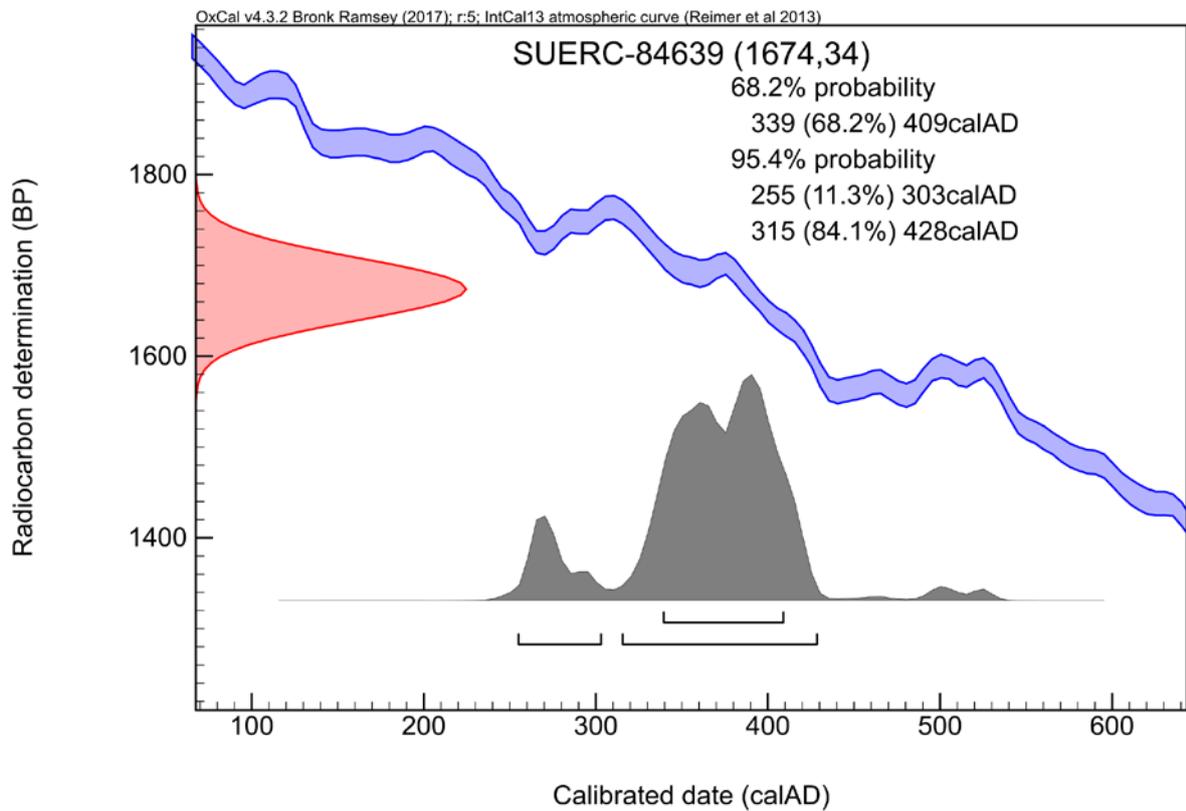
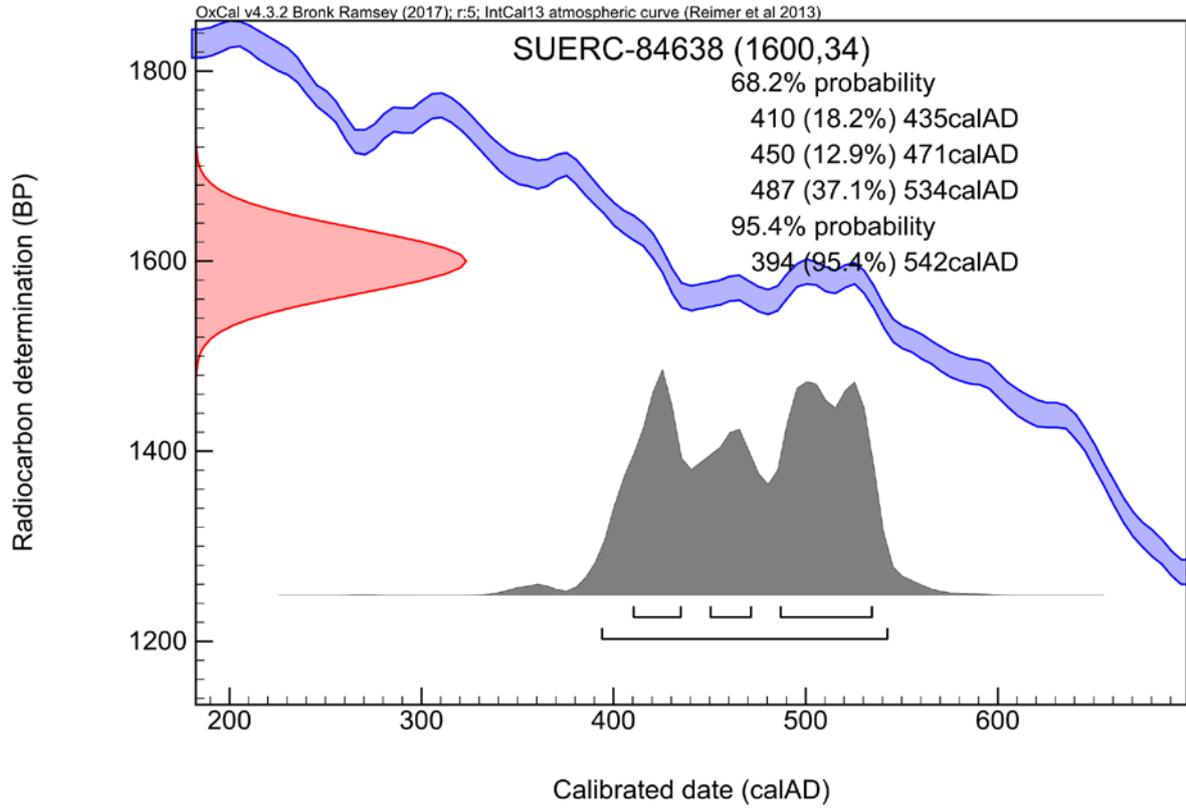
The uncalibrated dates are conventional radiocarbon ages. The radiocarbon ages were calibrated using the University of Oxford Radiocarbon Accelerator Unit calibration programme OxCal v4.3.2 (2017) (Bronk Ramsey 2009) using the IntCal13 curve (Reimer *et al.* 2013).

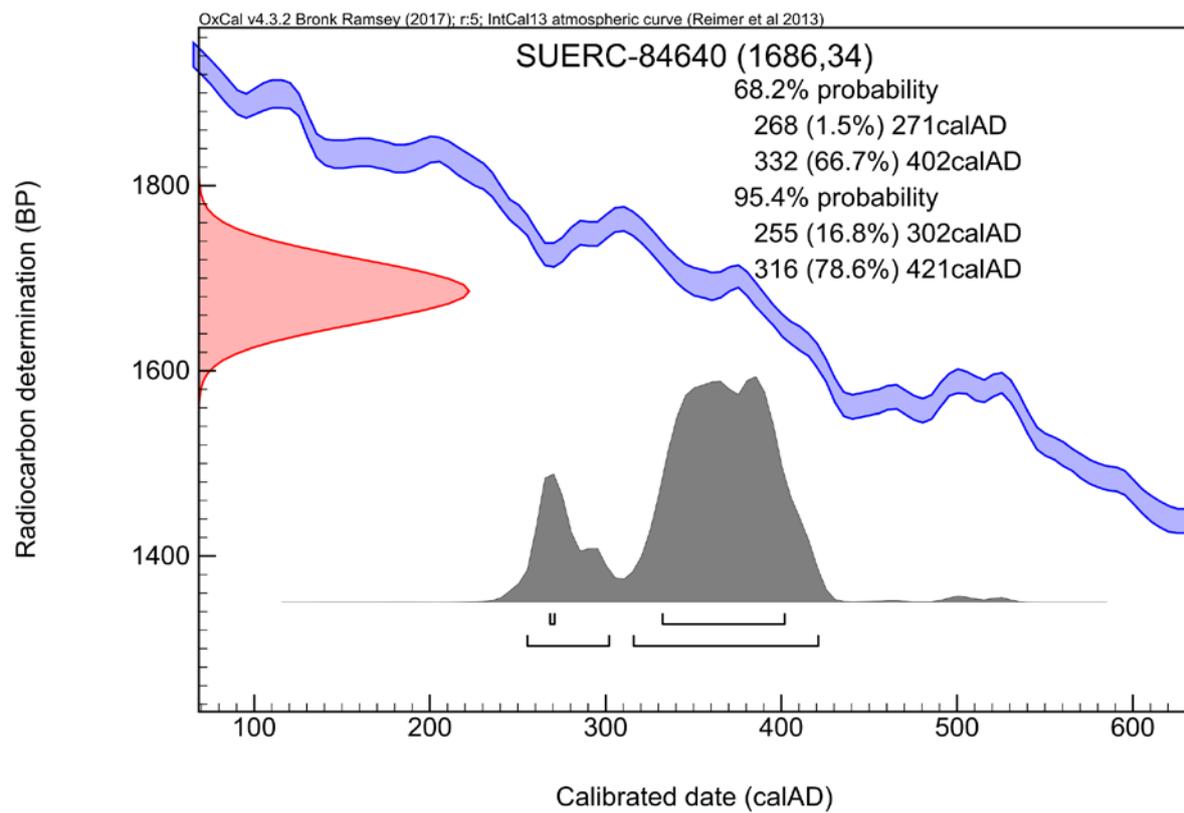
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Table 32: Radiocarbon dating results

Feature	Lab No.	Material	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	C/N ratio	Radiocarbon age	Calibrated radiocarbon age 95.4% probability	Calibrated radiocarbon age 68.2% probability
Context SK2395 Skeleton	SUERC-84640	Human Bone–right femur	-20.5‰	10.3‰	3.3	1686 ± 34 yr BP	255–302 cal AD (16.8%) 316–421 cal AD (78.6%)	268–271 cal AD (1.5%) 332–402 cal AD (66.7%)
Context SK2396 Skeleton	SUERC-84639	Human Bone–right tibia	-20.0‰	10.1‰	3.2	1674 ± 34 yr BP	255–303 cal AD (11.3%) 315–428 cal AD (84.1%)	339–409 cal AD (68.2%)
Context SK2453 Skeleton	SUERC-84638	Human bone–left tibia	-20.5‰	10.5‰	3.6	1600 ± 34 yr BP	394–542 cal AD (95.4%)	410–435 cal AD (18.2%) 450–471 cal AD (12.9%) 487–534 cal AD (37.1%)

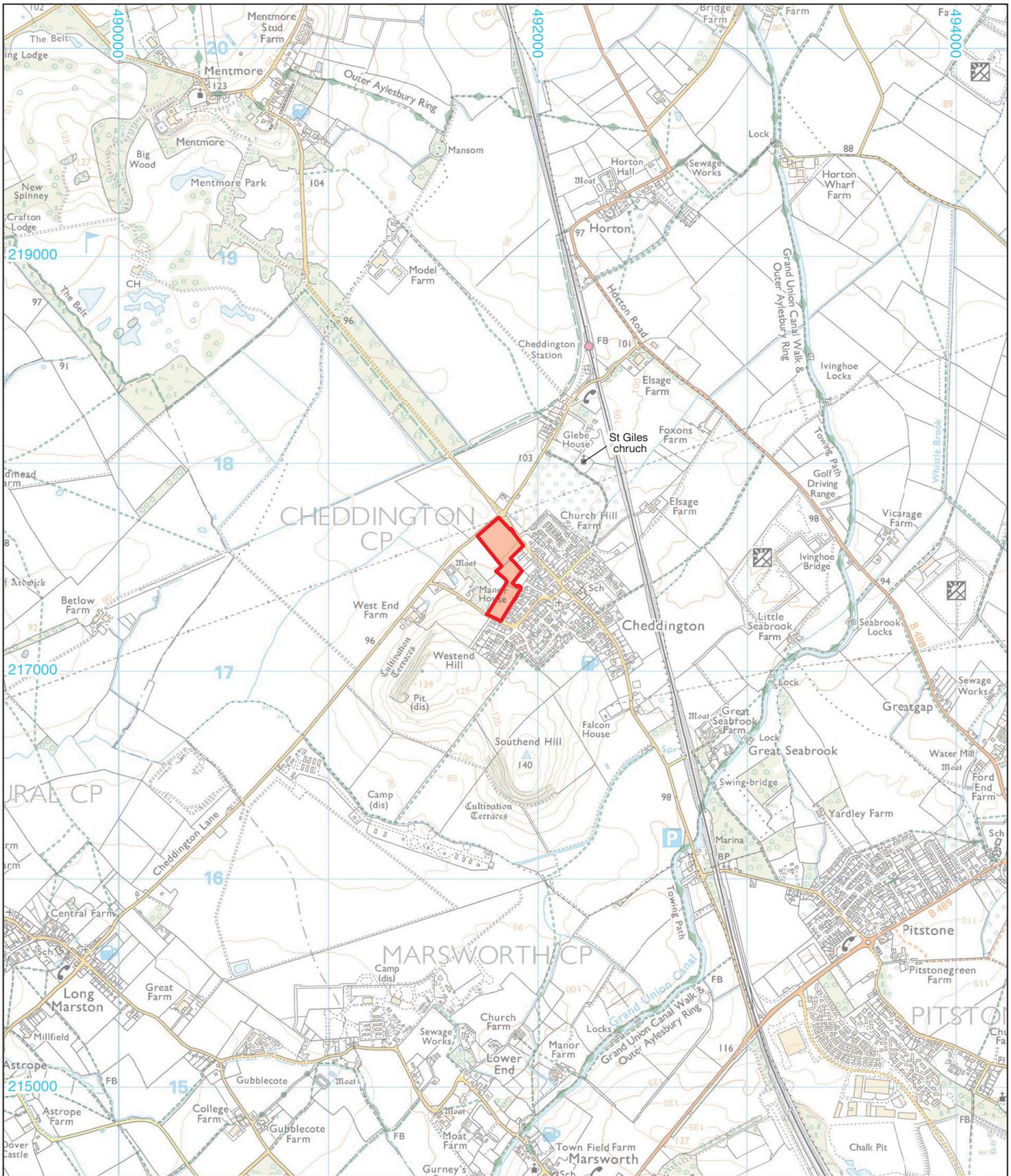




**APPENDIX 17: OASIS REPORT FORM**

<b>PROJECT DETAILS</b>	
Project Name	Land west of Cheddington, Buckinghamshire
Short description	<p>A programme of archaeological investigation was undertaken by Cotswold Archaeology between August and October 2018 at the request of Savills (on behalf of the Society of Merchant Venturers) on land west of Cheddington, Buckinghamshire. An area of approximately 0.75ha was excavated in the centre of the development area.</p> <p>Archaeological earthwork survey revealed the remains of 18th- and 19th-century field boundaries which developed adjacent to Cheddington village. Excavation revealed a series of field boundaries forming small enclosures spanning the Late Iron Age to post-medieval periods, along with evidence for human settlement, agricultural processing and industrial iron smelting during the Roman period, and agricultural processing during the Late Iron Age, medieval and post-medieval periods. A small group of inhumation burials was excavated and recorded in the north western corner of the excavation area, bone samples from the skeletons yielding radiocarbon dates in the early 4th- to mid 6th-century range.</p> <p>Following a hiatus between the 5th and 9th centuries, the site was re-occupied as a series of small enclosures on the edge of a medieval settlement which evolved into the modern village of Cheddington. The medieval and post-medieval phases were characterised by pit digging, and the maintenance of property boundaries, between the village and the fields surrounding the nearby moated manor. During this period a large deposit of garden soil began to accumulate across the site, containing a large assemblage of domestic objects, consistent with midden material. There is limited evidence for industrial activity and crop processing, and a single large steep sided pit with layers of dark humic fill was interpreted as a possible cess pit, suggesting nearby occupation.</p> <p>From the 17th to 19th centuries the site became incorporated into a network of small fields focused on a small farm building or barn, recorded on title maps of the parish, constructed immediately to the east. This was demolished by the late 19th century and was preserved on site as a spread of demolition rubble.</p>
Project dates	8 August 2018 – 12 October 2018
Project type	Earthwork survey and archaeological excavation
Previous work	Magnetometer survey (Stratascan 2016) Heritage statement (Savills 2016) Field evaluation (CA 2017)
Future work	Unknown
<b>PROJECT LOCATION</b>	
Site Location	Land west of Cheddington, Aylesbury Vale, Buckinghamshire
Study area (M <sup>2</sup> /ha)	4.8ha (earthwork survey) 0.75 ha (archaeological excavation)
Site co-ordinates	491876 217487
<b>PROJECT CREATORS</b>	
Name of organisation	Cotswold Archaeology
Project Brief originator	Buckinghamshire County Council
Project Design (WSI) originator	Cotswold Archaeology

Project Manager	Mark Hewson	
Project Supervisor	Jake Streatfeild-James	
<b>MONUMENT TYPE</b>	Ditch – Iron Age Pit – Iron Age Burial - Roman Ditch – Roman Pit – Roman Pit – Early medieval Ditch – Medieval Pit – Medieval Ditch – Post-medieval Pit – Post-medieval	
<b>SIGNIFICANT FINDS</b>	Lithic – Mesolithic Lithic – Neolithic Lithic – Bronze Age Pottery – Iron Age Building material – Roman Coin – Roman Industrial residue – Roman Metalwork – Roman Pottery – Roman Pottery – Early medieval Metalwork – Medieval Pottery – Medieval Building material – Post-medieval Clay tobacco pipe – Post-medieval Coin – Post-medieval Glass – Post-medieval Metalwork – Post-medieval Pottery – Post-medieval Worked stone – Post-medieval	
<b>PROJECT ARCHIVES</b>	Intended final location of archive (museum/Accession no.) Recipient of each type of archive	Content (e.g. pottery, animal bone etc) Indicate the contents of each archive box
Physical	The Buckinghamshire Museum	Lithics, ceramics, glass, slag, metalwork, worked stone, human bone, animal bone
Paper	The Buckinghamshire Museum	Context sheets, register sheets, photographic registers, registered artefact sheets, section drawings, sample sheets, matrices, site diary
Digital	The Buckinghamshire Museum/ Archaeological Data Service (ADS)	Database, digital photos, survey data
<b>BIBLIOGRAPHY</b>		
CA (Cotswold Archaeology) 2019 <i>Land West of Cheddington, Buckinghamshire: Post-Excavation Assessment and Updated Project Design</i> . CA typescript report <b>669057_1</b>		



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Archaeology**

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---

**PROJECT TITLE**

Land west of Cheddington,  
Buckinghamshire

---

**FIGURE TITLE**

**Site location plan**

---

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CHECKED BY	DJB	DATE	18/03/2019		
APPROVED BY	PB	SCALE	A4		



217750

491750

492000

217500

217250

LONG MARSTON ROAD

MENTMORE ROAD

WEST END ROAD

BARKHAM CLOSE

NEW STREET

MANOR ROAD

LODGE CL

West End Farm

inset

inset

0 1:750 25m

0 1:2,000 100m

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- Site boundary
- Excavated area
- Archaeological feature
- Garden soil
- Test pit
- Earthwork Survey Results:
- Bottom of slope
- Top of the slope


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**PROJECT TITLE**  
 Land west of Cheddington,  
 Buckinghamshire  
**FIGURE TITLE**  
 Excavation area, showing all features  
 and the earthworks survey

<small>DRAWN BY</small> EE	<small>PROJECT NO.</small> 669057	<small>FIGURE NO.</small> 2
<small>CHECKED BY</small> DJB	<small>DATE</small> 18/03/2019	
<small>APPROVED BY</small> PB	<small>SCALE</small> A3 1:2000 / 1:750	



-  Site boundary
-  Excavation area
-  Test pit

-  Medieval or earlier feature
-  Garden soil
-  Post-medieval feature
-  Tree-throw pit
-  Stone spread

0 1:500 25m

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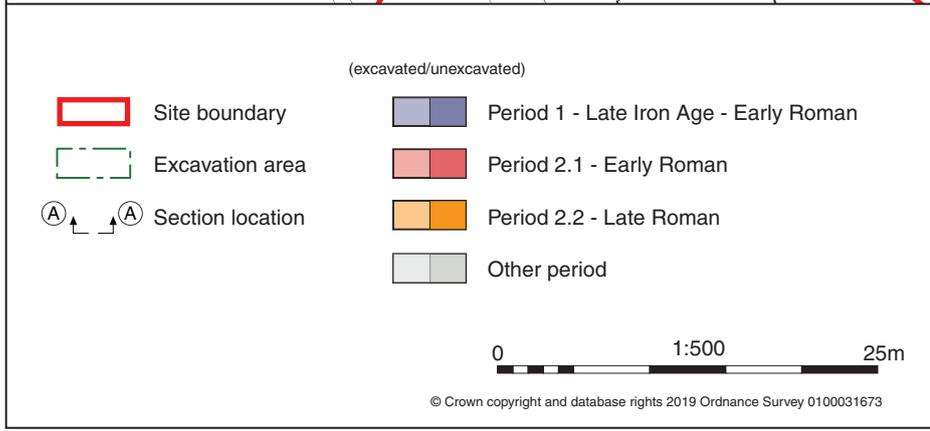
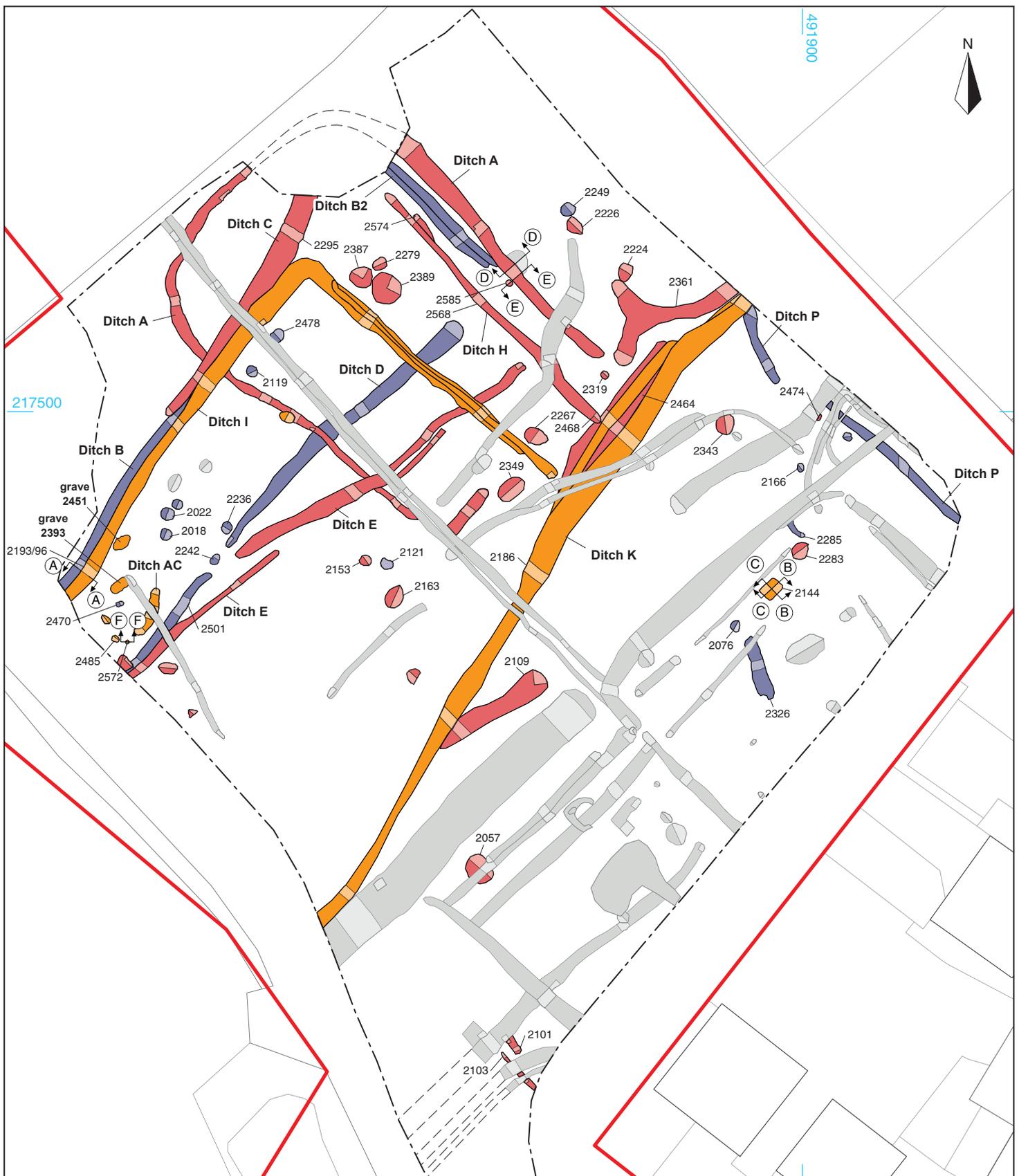
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FIGURE TITLE

Mapped garden soil area, showing  
 post-medieval ditches

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APPROVED BY	PB	SCALE@A4	1:500	



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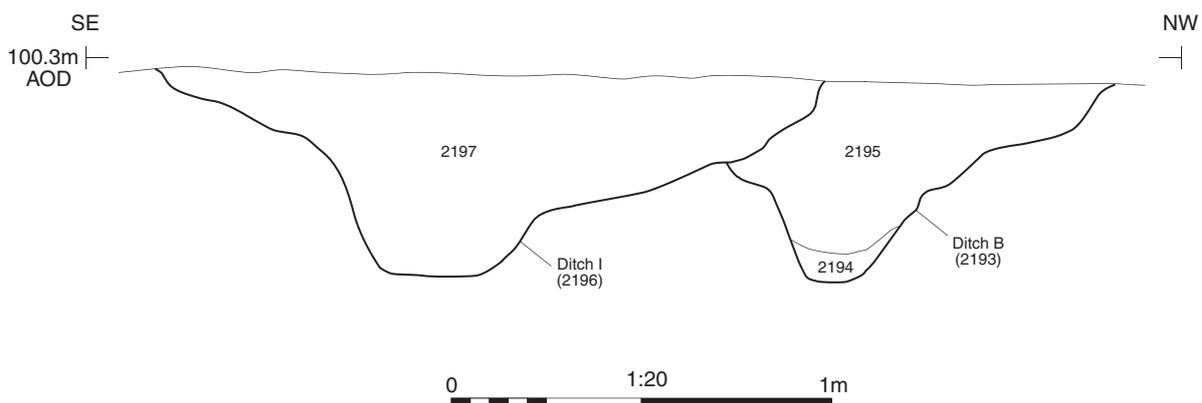
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**Land west of Cheddington,  
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FIGURE TITLE  
**Excavation area phased feature plan:  
 Periods 1 - 2.2**

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CHECKED BY	DJB	DATE	18/03/2019	
APPROVED BY	PB	SCALE@A4	1:500	<b>4</b>

Section AA



Ditch I (2196) and Ditch B (2193), looking south-west (1m scales)



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FIGURE TITLE

Section AA and photograph

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Broken pottery vessel in pit 2022 (0.2m scale)



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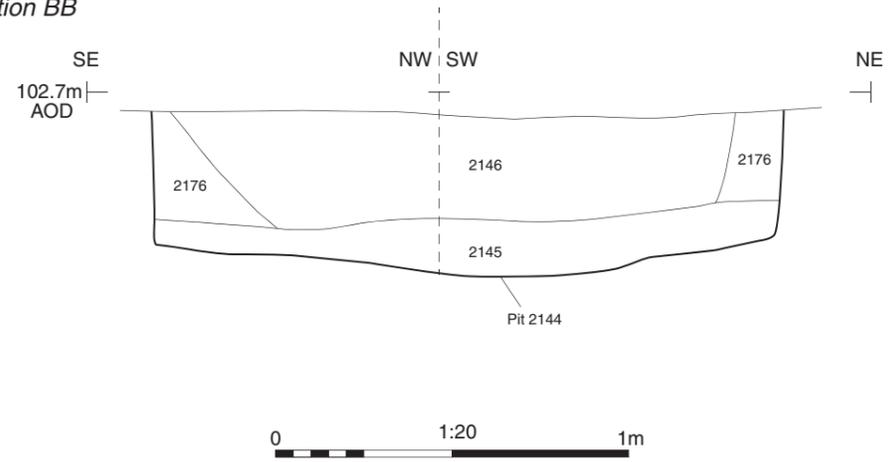
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FIGURE TITLE

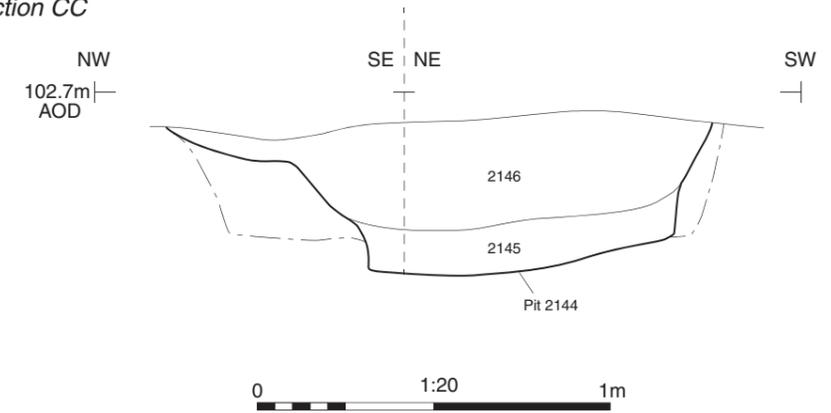
Photograph

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Section BB



Section CC



Pit 2144, looking north-east (1m scale)


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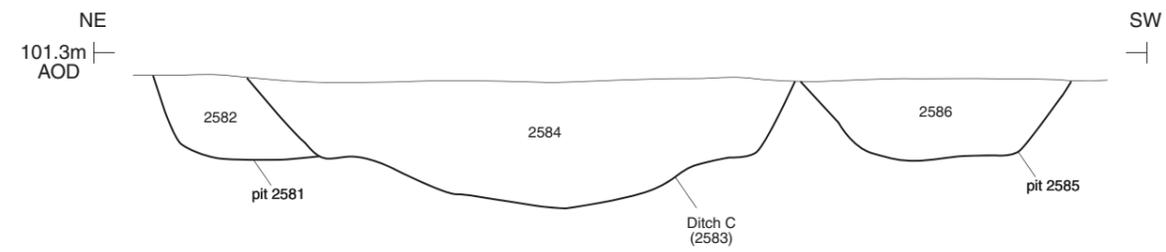
FIGURE TITLE  
**Sections BB + CC and photograph**

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APPROVED BY	PB	SCALE@A3	1:20	

Section DD



Section EE



Ditch C (2583), looking south-east (2m scale)


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FIGURE TITLE  
 Section DD + EE and photograph

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*Skeletons SK2395 (lower) and SK2396 (upper), looking north-west (1m scales)*



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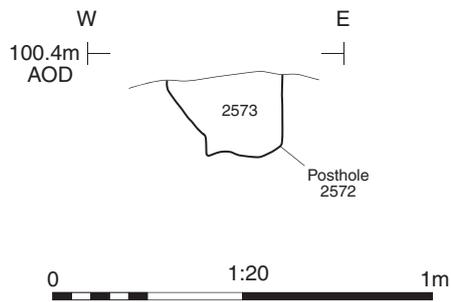
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Buckinghamshire

FIGURE TITLE

Photograph

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Section FF



Posthole 2572 and Pit 2485, looking north (0.3m scales)



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FIGURE TITLE

Section FF and photograph

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*Skeleton SK2453 in grave cut 2451, looking south-west (1m scales)*



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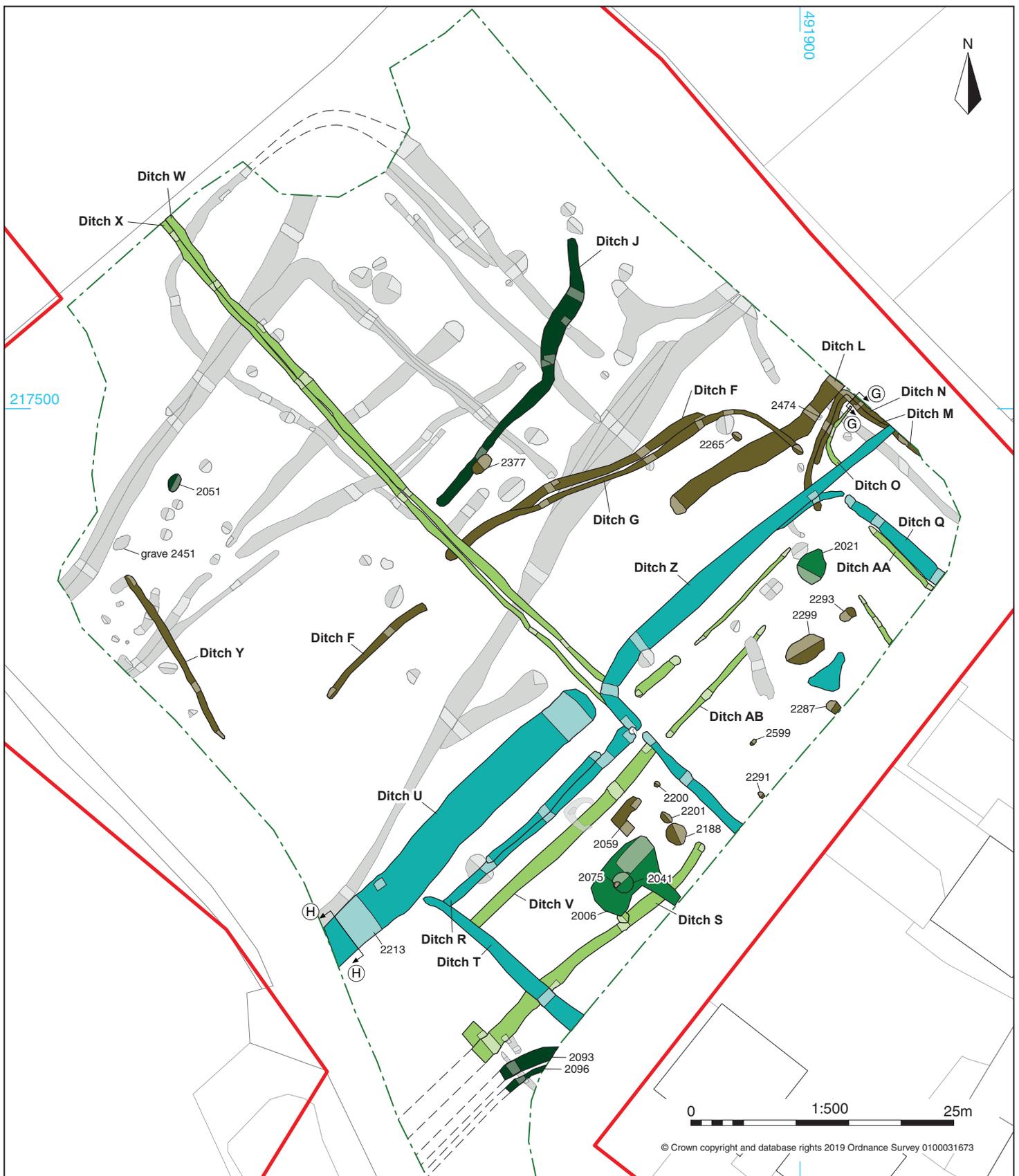
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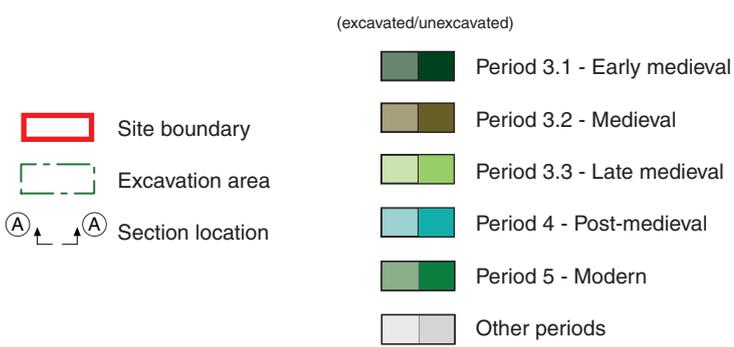
FIGURE TITLE

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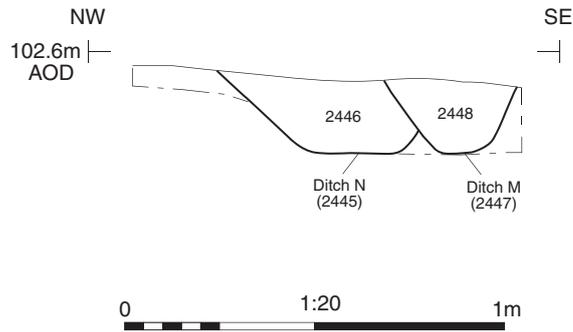


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**Land west of Cheddington, Buckinghamshire**  
 FIGURE TITLE  
**Excavation area phased feature plan: Periods 3.1 - 4**

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Section GG



Ditch N (2445) and Ditch M (2447), looking south-east (0.5m scale)



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FIGURE TITLE

Section GG and photograph

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North-eastern site area prior to garden soil removal (1m scale)



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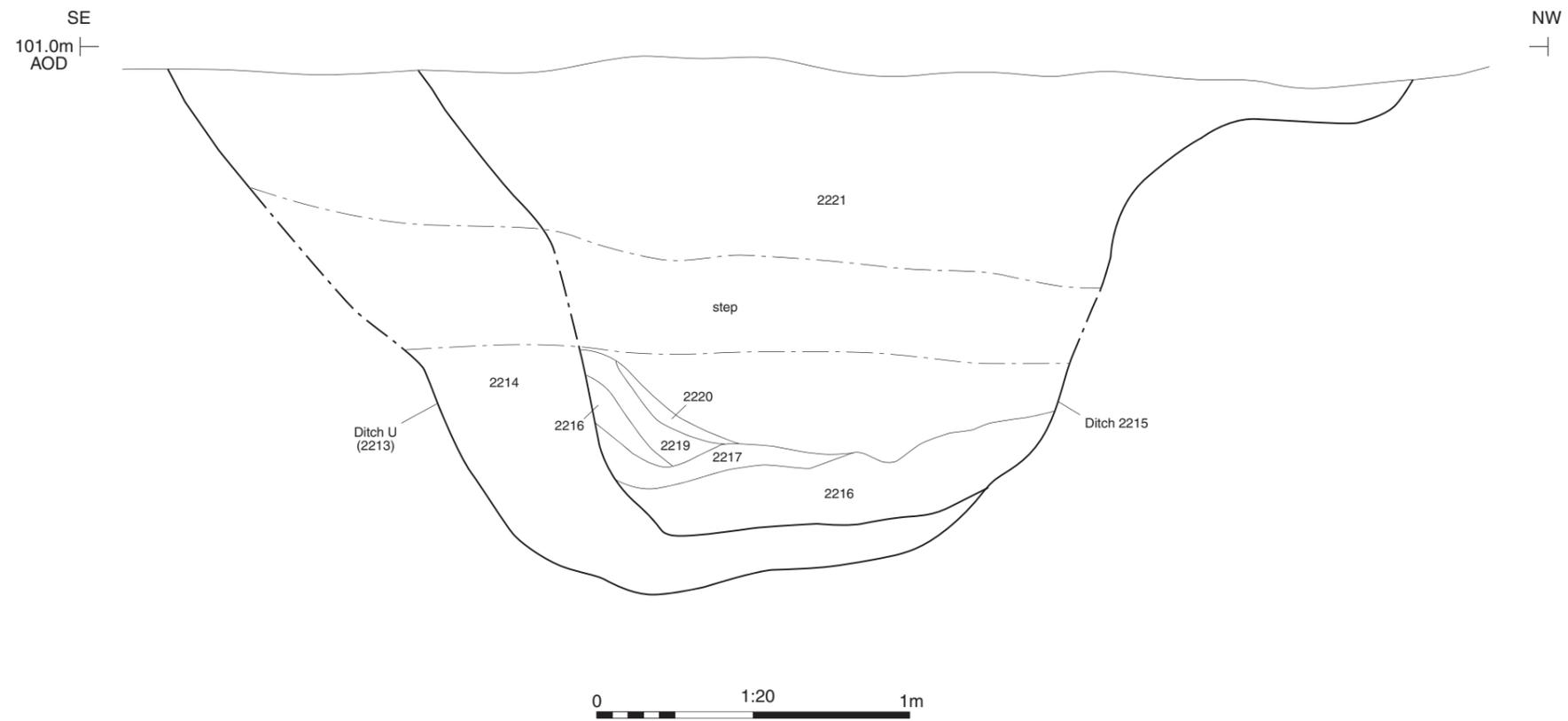
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FIGURE TITLE

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Section HH



Ditch U (2213), looking south-west (1m scales)


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FIGURE TITLE  
 Section HH and photograph

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Pit 2041, looking south-east (1m scale)



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FIGURE TITLE

Photograph

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*Droveway earthworks, looking south*



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FIGURE TITLE

**Photograph**

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*Manor boundary, looking north*



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*FIGURE TITLE*

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*FIGURE NO.*

**18**

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