DigVentures

Earth Trust Visitor Centre:

Archaeological Strip, Map and Sample (SMS) Excavations, Planning Phases 2 and 3

Little Wittenham, Oxfordshire

Volume I: Archaeological Assessment Report

Nat Jackson

Earth Trust Visitor Centre:

Archaeological Strip Map and Sample Excavations

Planning Phases 2 and 3

Archaeological Assessment Report

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Purpose of document

This document has been prepared as an Assessment Report for the Earth Trust and Oxfordshire County Archaeological Service (OCAS). The purpose of this document is to provide a comprehensive account of the strip, map and sample excavation undertaken for Planning Phases 2 and 3 of the Earth Trust's Gateway Project development, with specialist assessment of finds and samples, and recommendations for further investigation and analysis. It is supported by an easily accessible online database of all written, drawn, photographic and digital data, and recommendations for further analysis.

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Project summary

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Executive summary

DigVentures was commissioned by the Earth Trust to undertake a strip, map and sample excavation of the areas associated with Planning Phases 2 and 3 of the organisation's Gateway Project development. Fieldwork took place between 4th November 2019 and 24th March 2020 (DigVentures project code: WIT20), followed by a nine-month gap due to the COVID19 pandemic. Work resumed at the site between the 4th January and 13th February 2021, with the final days of work for this stage happening on the 16th and 19th April 2021. This stage of the project was designed to investigate suspected archaeological remains in areas to the south and west of the Earth Trust centre prior to Planning Phases 2 and 3, the planting of trees, roundhouse reconstruction, infrastructure and services being put in. In addition, a programme of community engagement was embedded in the project delivery from the outset and included weekly site tours, a finds week, and once the pandemic hit these events moved online, with virtual events on Zoom for both adults and families and a virtual site tour on YouTube which has had at least 9388 views.

This report is presented in two volumes. Volume I provides results from the excavations, incorporating specialist assessment and interpretation. The potential of these results to achieve the aims and objectives of the project are discussed in the final section of this report, followed by a detailed list of project recommendations for further analysis. Volume II contains the Appendices, including site archive data and specialist tables.

Results summary

Fieldwork was undertaken between November 2019 and March 2020, and between January and April 2021 to record the extent of Iron Age and Roman activity ahead of building development at the Earth Trust Visitor Centre in Little Wittenham. The work was conducted in the fields to the south of the visitor centre.

The fieldwork follows previous evaluations and excavations at the site carried out by DigVentures and other archaeological organisations over the last decade.

Between November and December 2019 a total of eight trenches were opened up following the footprint of the proposed roadway and tree planting, these eight trenches were split in four main areas. Trenches 2 and 3 were grouped as Area A, Trench 8 as Area B, Trenches 5 and 6 were Area C, and Trenches 4 and 9, Area D. Each area was machine excavated down to the first archaeological horizon and then hand-excavated, with archaeological features clarified, excavated and recorded. All data was recorded by professional archaeologists using a web accessible relational database. This is housed on the project microsite https://digventures.com/earth-trust and can be explored by following the links shown in green font throughout the report.

The earliest archaeological features at the site date to the Late Bronze Age, these include a gully in the west of Area C, a pit in the west of Area D and four post holes scattered through Area A. The first habitation evidence at the site is recorded during the Early Iron Age, with two roundhouses recorded, one in the southwest of Area A and the other in the centre of Area C. A large north to south aligned ditch ran through



the centre of the site, seen in Areas A and D. Alongside these features there were ten large pits and scatters of post holes, including an east to west aligned fence in the eastern end of Area D. Most of the features investigated dated to the Middle Iron Age, including ten potential roundhouses, storage pits and post holes. There was some continuity into the Late Iron Age, with further roundhouses, pits, ditches, and post holes present. These may be Early Roman in date as it is very likely that the site remained occupied throughout the Iron Age to Roman transition.

Evidence for Roman activity on the site came in the form of an E-W aligned trackway in Area D that was then observed in Area C turning to the north. Within the trackway ditches there were large quantities of artefacts recovered which could refine the dating of the trackway even further. In the north of Area D, a substantial Villa was discovered, which had not been visible in the geophysical survey results. There were also two corn driers, one in the east of Area D and one in the centre of Area A. The final evidence for Roman occupation included two cemeteries (one in Area C, the other in Area D) consisting of 39 burials, the population including neonates to adults. Additional burials were recorded along the trackway. Two corn driers were excavated and part of a third was observed, indicating agricultural activity during the Roman period.

Alongside the excavations, a programme of community engagement and participation was delivered, albeit slightly hampered by the Covid-19 pandemic. This engagement consisted of in-person events pre-pandemic which pivoted to a wide variety of online events after lockdowns were announced. The in-person events consisted of finds room training (20th January to 2nd February 2020) and a series of sixteen site tours occurring between November 2019 and March 2020. These events attracted over 350 people. The virtual events included themed Zoom events and a virtual site tour which was presented over YouTube. Due to the online nature of these events, and the much wider audience over 10,000 people were able to participate. On top of this, posts broadcast via social media platforms throughout the excavation and post-excavation process achieved a minimum of 42k engagements with the Earth Trust's Gateway project.

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1 INTRODUCTION

1.1 Project background

1.1.1 This report presents an assessment of an archaeological strip, map and sample excavation undertaken at the site of the Earth Trust Visitor Centre, formerly Hill Farm, Little Wittenham (hereafter 'the site'). The programme of works was undertaken on behalf of the Earth Trust (hereafter 'the client') and designed and agreed in consultation with Richard Oram, Planning Archaeologist for Oxfordshire County Archaeological Services (hereafter OCAS) (planning application reference P16/S3133/FUL). The archaeological works were delivered in accordance with a Written Scheme of Investigation (WSI) (Noon et al 2019). Originally designed as three main phases of development as part of the Earth Trust's Gateway Project, the stages of work all required some degree of archaeological works (see Stammitti-Campbell and Casswell 2018a, b). Planning Phase 1, the development of the Skills and Learning Building was completed in 2018 (Casswell et al 2018, and results summary below, Section 2.1.6). This assessment report presents results from the Phase 2 and 3 works, incorporating:

- Planning Phase 2, tree planting and infrastructure.
- Planning Phase 3, roundhouse reconstruction and services.

1.1.2 The information contained in this report provides an account of the archaeological works undertaken, including a strip, map and sample excavation. This report is one of several archive and dissemination products generated by the project, including the digital archive and metadata, the paper archive and finds material recovered and recorded. All archive material is currently held by DigVentures and will, when the project is complete, be deposited with the County Archive Facility and freely disseminated through Oxfordshire Historic Environment Record (HER), OASIS portal, Archaeological Data Service (ADS), and the project microsite: https://digventures.com/earth-trust/.

1.2 Site description

1.2.1 The site is located at NGR SU 56290 92570, and is part of the Earth Trust Centre, which is situated to the southwest of the Wittenham Clumps, off Little Wittenham Road, in the parish of Little Wittenham, Oxfordshire (Figure 1). The Earth Trust Centre occupies the west end of a gently shelving plateau south of the more westerly of the Clumps at around 90m AOD, and the ground drops away more steeply to the west and south. The area of the site has been cultivated for a long period of time (Rhodes 1948). Historic mapping and aerial photography of the area around the Earth Trust Centre indicate that cultivation extends back before the 19th century, possibly into the medieval period (Allen et al. 2010, Plate 1.9; 1843 Tithe Map).

1.2.2 The development comprises the existing footprint of the Earth Trust Centre, with an extension up to 100m wide to the southwest, south and east. The site does not extend north of Little Wittenham Road. The development will provide links to existing access for visitors to the minor road over Sires Hill, which runs from Brightwell to the east with White Lees Farm and Long Wittenham to the west. The new road will run southwest of the Earth Trust Centre, joining an existing track continuing 500m downslope along a field boundary and across a second field.

1.2.3 The geology is shown as Upper Greensand – sandstone and siltstone (BGS 2019). Streams rise 200-300m south of the south end of the proposed development and drain south-eastwards towards Brightwell. The land at the south end of the proposed development is often wet and was shown as `liable to flooding' on early OS maps before drainage was improved.

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Archaeology at Wittenham Clumps

2.1.1 The site lies some 700m west of Castle Hill, which is encircled by the ramparts of an Iron Age hillfort and is a Scheduled Ancient Monument (Oxfordshire SAM No. 208). Buried within the hillfort is a Late Bronze Age hilltop enclosure, together with features of Iron Age, Roman and medieval date (Allen et al. 2010). A number of archaeological findspots are known in and around the hillfort (information from the Oxfordshire HER). These include Anglo Saxon Pottery (SMR Number: 9001) and a Roman bracelet (SMR Number: 11605) found immediately within the hillfort, and Iron Age pottery (SMR Number: 27616), a Roman bracelet (SMR Number: 3163) and Roman awl (SMR Number: 3164) found immediately outside it.

2.1.2 The area surrounding the hillfort and including the proposed development site has been the subject of a series of archaeological investigations, beginning with work by Rhodes (1948), who found a Roman building (SMR Number: 3161) approximately 200m east of the Earth Trust Centre. Fieldwalking was carried out in advance of the construction of one of the gas pipelines that now crosses the proposed road (Brooks 1992), and this suggested the presence of a Neolithic and Bronze Age activity (SMR Number: 26095), later Iron Age prehistoric activity (SMR Number. 3160) and Roman settlement (SMR Number: 17392) immediately south and east of the Earth Trust Centre. In 1995, a geophysical survey of 2 ha. east and south-east of the Earth Trust Centre revealed a north – south aligned boundary cut by a triple-ditched enclosure (SMR Number: 16818), with internal pits (Price 1995), although geophysical survey along the line of the gas pipeline failed to identify any significant anomalies (Lingard and Wilson 1995, 2). In 1999, fieldwalking organised by the Northmoor Trust (now the Earth Trust) east of the centre gave similar indications of human activity spanning from prehistory to the Roman era.

2.1.3 A programme of archaeological investigations comprising fieldwalking, geophysical survey, and excavations was carried out between 2002 and 2005 by Oxford Archaeology during the conversion of the redundant Hill Farm (SMR Number: 26376) into the Earth Trust Centre. A complete account of the results is deposited in the Oxfordshire HER (Allen et al. 2006), and the work directly related to Castle Hill and the adjacent settlement (including the area of the Earth Trust Centre) was published (Allen et al. 2010). The publication includes reference to all previous work on the site and a summary of the most relevant information is given below. One further archaeological feature was found in the vicinity of hill farm during a watching brief for a Dipping Pond. This consisted or a dark linear feature running SSW-NNE which appeared to have been cut at least twice and then filled during the Roman Period (SMR Number: 26223)

2.1.4 Fieldwalking carried out in the fields immediately to the southwest and south of the Earth Trust Centre in 2002-3 recovered a widespread scatter of worked flint. Earlier fieldwalking in this area (Eeles pers. comm.) had apparently also recovered worked flints. This suggests a focus of earlier

prehistoric activity west of the Earth Trust Centre. An Early Neolithic pit was excavated at the western edge of the present Visitor's Car Park, confirming activity here (Allen et al. 2010, 109). The 2002-3 fieldwalking also confirmed the presence of later prehistoric and Roman pottery close to the Earth Trust Centre on the south and east, but also included a concentration of Roman ceramic building material south-east of the Earth Trust Staff Car Park (SMR Number: 26223). It was thought that this might represent the remains of a Roman building or other structure.

2.1.5 A number of incomplete cropmarks (SMR Numbers: 15360, 15361, 15362) are recorded south of the Earth Trust Centre in the HER, and these and the marks recorded by Price's geophysical survey have now been confirmed and expanded by the more recent geophysical surveys (Allen et al. 2010, figures 5.2 and 5.4). Aerial photographs taken by Stuart Ainsworth of Time Team during 2003 also showed further cropmarks correlating with the geophysical survey results (ibid., plate 5.2). The more recent geophysical surveys covered the area around the Earth Trust Centre for a radius of 200m, and so include all the proposed development immediately adjacent to it. Geophysical survey data showed several small circular, sub-rectangular and trapezoidal enclosures (SMR Number: 28679), the first characteristic of Iron Age roundhouse enclosures, together with a dense spread of pits. It is possible that the Bronze Age, Iron Age and Roman Pottery found by Dr H. Watts in 1937 from a near ploughed out rampart (SMR Number: 3154) relate to these features. West of the Earth Trust, Saxon and Roman remains including an iron lamp stand, brass key and large cut stones were identified in late 19th and early 20th century excavations while excavating for the foundations of a barn (SMR Number: 3158).

2.2 Previous archaeological investigation

2.2.1 In advance of the planning application, geotechnical test pits were dug along the line of the proposed new road in 2015, and these were monitored, and any archaeology recorded by Oxford Archaeology in line with the brief provided by Richard Oram of OCAS (Oram 2015a). Only one archaeological feature was found (OA 2015). An archaeological evaluation of the site was also requested by Richard Oram, and this was carried out in 2015 by Oxford Archaeology in accordance with the brief provided (Oram 2015b). In the light of the known archaeological background immediately around the Earth Trust Centre, investigation in this area was kept to a minimum. A report upon the results of the watching brief and evaluation was submitted to Richard Oram of OCAS and approved (OA 2015). The principal additions to the previously known archaeological background are summarised below.

2.2.2 The southern limit of the dense archaeological activity suggested by the geophysical survey was broadly confirmed by archaeological evaluation trenches (OA 2015). A single pit of Roman date was found in Trench 20 south of the Roman trackway crossing Trench 19. No other archaeological features were positively identified to the south of that until Sires Hill, the southernmost field bordering, where a boundary ditch of early post-medieval date was recorded. The evaluation trenches located across dense geophysical anomalies targeted features interpreted as archaeological and successfully located most of these, providing a reasonable degree of confidence in the geophysical survey results (OA 2015).

2.2.3 The evaluation trenches also recorded the presence of small pits and postholes, which had been too small to locate by normal geophysical survey. The postholes were concentrated within circular or penannular ditches, supporting the interpretation that the ditches surrounded a series of Iron



Age roundhouses and other structures (OA 2015). No trace of a Roman masonry building was found to the south-east of the Earth Trust Centre, where fieldwalking had indicated a concentration of Roman tile. This lack of a stone building was interpreted as an indicating that there had been a wooden building roofed with tile, that a smaller structure (such as a corn-drier) has not been located by the evaluation trench, or that the tile represented an area of disposal of ceramic building materials (OA 2015).

2.2.4 Roman activity appeared to be concentrated in the second and third centuries AD, as suggested by the previous fieldwalking and excavation. Some first and fourth century activity was also indicated. Two extended Roman inhumation burials were found, both towards the edge of the area of dense activity, one on the south-west (OA 2015, fig. 3 Trench 14 and plate 4) and the other on the south (ibid., fig. 3 Trench 17 and plate 8). Combined with a later Roman burial found west of the Earth Trust Centre in 2005, they suggest a pattern of peripheral scattered burials in this period, a common phenomenon on rural Roman settlements.

2.2.5 DigVentures was previously commissioned by the Earth Trust to undertake a strip, map and sample excavation on the proposed site of the new Skills and Learning Building as part of the first stage of Planning Phase 1 of the Earth Trust's Gateway Project. Fieldwork took place between 8th and 29th October 2018 (DigVentures project code: WIT18). This stage of the project was designed to investigate suspected archaeological remains between the existing office building and the staff car park, where Iron Age and Roman remains had been recorded before (Noon and Casswell 2018). The work was conducted in the area immediately east of the existing office building where a scout hut had previously stood. This fieldwork followed a watching brief conducted in July 2018 during the demolition of the scout hut. The scout hut, along with several trees and shrubs were removed to make way for the development of the Skills and Learning Building. During the watching brief, no archaeological remains were disturbed.

2.2.6 In October 2018, the footprint of the former scout hut and nearby area was subject to an archaeological strip, map and sample excavation. The earliest archaeological feature encountered was a Late Bronze Age or Early Iron Age pit in the southeast part of the site (Casswell 2019). Most features investigated dated to the Early or Middle Iron Age with a noticeable lack of material dating to the Late Iron Age. Evidence for Roman activity on the site was particularly scarce and is only represented through a small number of features and a limited number of artefacts. Similarly, the occurrence of medieval and post-medieval features was also limited. Special deposits of pottery were found in three Iron Age pits. These pits contained very large assemblages of pottery in good condition, including near-complete vessels and a decorated bowl. Additionally, part of an Iron Age cremation was identified in the upper fills of one of the backfilled storage pits. Overall, the excavation suggested that the Iron Age settlement in the area may have been more comprehensive than originally believed. While the full extent is still unknown, it is likely that there are further storage pits to the east and north of the site (Casswell 2019).

3 PROJECT AIMS AND OBJECTIVES

3.1 Archaeological aims

3.1.1 The areas of highest archaeological potential are concentrated around the periphery of the development area, and include known areas of Neolithic, Iron Age and Roman activity. While some elements of the archaeological resource will be more extensively covered than others (e.g. the Roman trackway), the areas investigated provide the opportunity to extend previous investigations, allowing for clarification of the true distribution, extent and nature of archaeological resources.

3.1.2 The list below takes into account the aims and objectives for the Iron Age and Roman periods set out in the Regional Research Framework for the Solent-Thames Region (Hey and Hind 2014):

- To establish whether remains of any periods other than those already confirmed in the dense area of archaeological activity around the Earth Trust Centre are present in the areas to be investigated archaeologically, and if so, to date and characterise the exposed remains, and if possible to provide an indication of the environment, contacts, status and significance of activity in these periods.
- For periods already known to be present, to establish whether their extent is greater than presently known from previous survey and excavation.
- If further Neolithic features are found, to investigate whether the occupation was of short or long duration, the types and range of activities being carried out at the site, whether further information on the environment can be obtained, and to place the site within the context of other Neolithic activity in the area.
- To investigate the character of settlement activity within the areas to be investigated archaeologically in the Early, Middle and Late Iron Age, and if and how it changed over time.
- To investigate whether there was any difference in the types of activities carried out across the development area within each phase of the Iron Age.
- To investigate the range of 'special deposits' suggestive of ritual activity found in Iron Age pits and ditches in the areas to be investigate archaeologically, and what light this might shed on Iron Age beliefs.
- Should long sequences of intercutting Iron Age features rich in artefacts occur, to recover good assemblages of pottery to assist in refining artefact chronologies.
- The excavations should aim to recover evidence to assist in clarifying the extent of late Iron Age and early Roman activity within the proposed development area, to distinguish to which of the two periods belong, and whether changes in the character of activity occur between them.
- To clarify the layout of the Roman settlement within the proposed area of development area, and in particular, the relationship between the trackway and north-south ditches visible on the geophysical survey.
- The excavations should aim to clarify the character, complexity, status and duration of Roman settlement within the proposed development area, and the relationship of this to the probable villa enclosure 200m to the north-east.
- To investigate whether inhumations are the only type of human burial evidence of the Roman period within the proposed development area, and to gather further information of the distribution and date of inhumation burials here in the Roman period.

3.2 Public engagement

3.2.1 The project offered a range of opportunities for local community members, school children and visitors to the area to get involved and learn more about the archaeology of Wittenham Clumps. The engagement and participation programme was designed to:

- involve volunteers in supervised finds handling and processing sessions during the excavation, learning how archaeological materials are recovered and managed from professional staff
- engage with local school children
- host a series of open-days where visitors will enjoy a guided tour of the site
- reach thousands through digital engagement with project microsite
- provide full access to the archaeological results via the project microsite as the trenches, finds and feature are recorded
- disseminate results of the excavations via media, broadcast, print and popular publications

3.2.2 The onset of Covid-19 meant that the planned programme of engagement and participation for this stage of works had to be fully pivoted to online content. All in-person activities were redesigned to facilitate virtual experiences, with content for kids, grown ups and families created to meet the ambitions of the Earth Trust. The results demonstrated an enormous interest in the site and the archaeology, and supported the initial objectives to involve, engage and reach the local and wider community through heritage. An evaluation of the public programme can be found in Section XX.

4 METHODOLOGY

4.1 Trench Locations and Definitions (Figure 2)

4.1.1 The site was split in trench numbers and areas. Trench 1 was excavated in a previous year (WIT18) and is located where the new Skills and Learning building has been constructed. Area A was located nearest to the Wittenham Clumps, this comprised of Trenches 2 and 3. Area B was a small area to the north of the site running either side of a farm road, this was Trench 8. Area C was to the south of Area B and the west of Area D, it was made up of Trenches 5 and 6. Area D was between Area C and Area A. It comprised of Trench 4 and Trench 9. A Roman villa was identified within Trench 4 and to distinguish the structure from the rest of the features in the area was given a separate context number sequence and referred to as Trench 9. From now on the trenches will be discussed primarily by area, but the trench number will be used when necessary.

4.1 Archaeological Method

4.1.1 All work was completed to CIfA *Standard and guidance for archaeological excavation* (2014) and was undertaken in accordance with the standards set out within the WSI (Noon 2019).

4.1.2 All areas were stripped of overburden deposits with a mechanical excavator under continuous archaeological supervision down to the first archaeological horizon. All machine excavation was carried out under constant archaeological supervision using a toothless bucket and included visually scanning spoil for artefacts. The area was then assessed by a professional archaeologist to establish the extent of survival and preservation of archaeological remains. Stripping continued in this

manner, removing material in successive spits until significant archaeological remains are encountered or, should buried archaeology be absent, the natural horizon is reached. Spoil was removed in a systematic order, with overburden and topsoil kept separate from subsoil.

4.1.3 Where archaeological remains were encountered a sufficient sample of each feature type/deposit will be examined in order to establish the date, nature, extent and condition of the archaeological remains, encompassing the following percentage interventions:

- 50% of linear features associated with structures E.g. roundhouse, gullies;
- 10% of non-structural linear features, including all intersections, terminals and at least one 'clean' intersection to minimise the risk of intrusive and/or residual finds;
- 50% of non-structural pits were half-sectioned;
- Sufficient non-structural post- and stake-holes were half-sectioned to clarify their character, relationships and chronology.
- 50% of newly identified feature types and 33% of already classified features types were half sectioned

4.2 Chronological terminology

4.2.1 Dating of finds from each context was used as the basis for grouping of features by phase, as were the stratigraphic relationships between features. The phases mentioned here represent a *terminus post quem* (earliest possible date) for the infilling of each feature. A feature listed as 'Early Iron Age' contains material that was produced around that date. It is possible, therefore, that a feature listed as 'Early Iron Age' may have been infilled in the Middle Iron Age or even later. Calendar date ranges for prehistoric pottery follow the date ranges assigned by Edwards (in Allen *et al*, 2010), the Roman dates are taken from the specialist reports:

- Late Bronze Age: 1200 – 800 BC
- Early Iron Age: 800 – 300 BC
- Middle Iron Age: 300 – 100 BC
- Late Iron Age: 100BC – 43AD
- Early Roman: 43AD – 100AD
- Roman: 100 – 350AD
- Late Roman – 350 – 410AD
- Post Roman – after 410AD

4.2.2 The development of the site is likely to have been ever evolving and should be viewed as a process rather than strict classification within these fixed dates.

4.3 Finds and environmental samples

4.3.1 Finds were treated in accordance with the relevant guidance given in the Chartered Institute for Archaeologist's *Standard and guidance for archaeological field evaluation* (revised 2014), and the *Standard and guidance for the collection, documentation, conservation and research of archaeological materials* (2014), excepting where they were superseded by statements made below. Archaeological material will be handled and sorted following advice in Watkinson and Neal (1998).



4.3.2 All artefacts from excavated contexts were washed, counted, weighed, and identified. Finds recovered were assessed by appropriately qualified specialists, who examined the finds to provide an identification, date, and provenance of the material, and to also evaluate the significance of the assemblage.

4.3.3 Bulk environmental soil samples for plant macrofossils, small animal bones and other small artefacts were taken from appropriate sealed and dateable archaeological contexts (each context will normally be sampled). Samples of between 40-60 litres were taken or 100% of smaller contexts. Samples were not taken from the intersection of features. Bulk environmental soil samples were processed by flotation and scanned to assess the environmental potential of deposits, but were not fully analysed. The residues and sieved fractions have been recorded and retained with the project archive.

4.3.4 Human remains were excavated in accordance with the standards set out in the standards set out in CIfA Technical Paper 13 *Excavation and post-excavation treatment of cremated and inhumed remains* (1993) and post excavation processing and assessment undertaken by a qualified osteo-archaeologist in accordance with Mays 2004.

4.4 Pottery, ceramics and building materials: method

David Griffiths

4.4.1 The pottery was recorded and assessed in accordance with national guidelines (Barclay et al. 2016) and Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials (Chartered Institute for Archaeologists (CIfA) 2014), and with reference to a written scheme of investigation (Noon et al. 2019) and the regional research framework (Hey and Hind 2014). All pottery was examined visually (by eye) and sorted into broad ware classes including prehistoric handmade, amphorae, samian, other fine wares, coarse wares, and mortaria, on the basis of colour, hardness, fracture, and inclusion composition, as outlined in Tomber and Dore (1998, 6-8). Each ware class was quantified by count, weight, and estimated vessel equivalents (based on percentage of rims preserved).

4.4.2 International imports, nationally distributed wares, and regional/local products were identified, where possible. No attempt was made to identify samian wares to production source, however, where form and chronology were clear, a date range is provided; only brief comment is made on decorated sherds. Pottery sherds with diagnostic features with which aid identification to form were assigned an ID number (see Appendix B). A basic catalogue of all material is provided in Appendix 1 (associated Excel spreadsheet).

4.4.3 The wares were subdivided into Fabric Groups; subdivision of prehistoric pottery, dating from the Bronze to the Late Iron Age, followed those groups defined by Edwards (2010, 47, table 3.3) and used by Hedge (2018) in the assessment of material from excavations at the site in 2018 (not considered here). Where possible Roman period pottery was classified by fabric class, with regional and national fabric series' referred (e.g. Tomber and Dore 1998); due to the large size of the assemblage, the large collection of coarse wares (both reduced and oxidised) and regional colour-coated/slipped wares where it was not possible to identify fabrics, were broadly grouped. Full fabric analysis of all material is recommended and will enable refinement of many of the coarse ware

fabrics and identified local/regional wares, nationally distributed and imported products within the assemblage.

4.4.4 Diagnostic sherds for which date ranges are provided in Appendix B follow Edwards (2010, 47-56) utilizing pottery from nearby Castle Hill (referenced in Appendix B, Comparanda column using CH followed by vessel number Dating for prehistoric pottery . Date ranges for Roman period pottery are provided from comparanda from the extensive type series from excavations at Alcester (approximately 60 miles to the north of Wittenham Clumps)(Le et al. 1994, 3-92) and Booth (1993) for Oxfordshire sites; dates of Oxford Red Slipped-ware (OXF RS, Tomber and Dore 1998, 176) are based on Young (1977). Black-burnished ware dates refer to Gillam (1976).

4.4.5 Building materials were sorted into broad classes, in this case ceramic (hereafter, CBM) and stone, and type, e.g., brick, tegula etc., and quantified by count and weight. The data were grouped by context, and a basic catalogue is provided in Appendix C (see associated Excel spreadsheet). Due to the scope of this assessment, detailed recording of fabrics and cataloguing (e.g., taking measurements of an item's dimensions) was not undertaken. Full analysis and cataloguing of this material would significantly advance our understanding of the nature of the Roman-style structures associated with occupation of the site at Wittenham Clumps, and the techniques employed in their construction, see recommendations, below.

4.4.6 Concrete, mortar, plaster, fired clay, and daub were examined following the Minimum Standards for Recovery, Curation, Analysis, and Publication for Ceramic Building Material (Archaeological Ceramic Building Materials Group, 2002). A full catalogue of material is provided in Appendix D (Table 15) (see below). The assessment was undertaken with reference to the Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials (CIfA 2014), and with reference to the WSI (Noon et al. 2019) and regional research framework (Hey and Hind 2014). All material was visually assessed by eye and sorted into broad categories as presented in Appendix D, Table 14.

4.5 Animal bone and shell: methodology

Hannah Russ

4.5.1 The animal remains were identified to element, side and to as low a taxonomic level as possible using the Author's reference collection and published and online identification guides (Cohen and Serjeantson 1996; Hillson 2003; 2005; Johnson 2015). Quantification for mammal remains used the diagnostic zone method as presented by Dobney and Rielly (1988) and for birds the method presented by Cohen and Serjeantson (1996). A taphonomic assessment of each fragment was undertaken, recording the presence and absence of cut and chop marks, burning and calcination, any evidence for animal activity (canid or rodent gnawing), and surface preservation; any other surface modifications of note were also recorded. At this stage, no attempt was made to sex any of the remains, or to measure any elements. Sheep (Ovis aries) and goat (Capra hircus) and equid (Equus sp. horse/donkey/mule) distinctions were also not considered. Fragments of bones that could be identified to element but not any specific species were grouped as far as possible using size and class or order categories. Results were recorded in an electronic proforma in Microsoft Excel.



4.5.2 The mollusc remains were identified to side and to as low a taxonomic level as possible using the Author's reference collection and published and online identification guides (Hayward and Ryland 1995; Marine Bivalve Shells of the British Isles (online resource); Kerney and Cameron 1979; Pfleger 2000; Cameron 2003; Naggs et al. 2014). Quantification used a diagnostic zone method following Claassen (1998, 109-110). Oyster size was estimated for near-complete specimens that did not qualify for measurement using a scale from very small to very large, see Appendix F. A taphonomic assessment of each fragment was undertaken, recording the presence and absence of specific infestations and evidence for tool marks or burning; any other surface modifications of note were also recorded. Results were recorded in an electronic proforma in Microsoft Excel.

4.5.3 The work was undertaken in line with published standards and guidelines ((Baker and Worley 2019, CIfA 2014; Campbell et al. 2011; Campbell 2015; 2017; Winder 2011), a written scheme of investigation (Noon et al. 2019) and with reference to the Solent-Thames Research Framework (Hey and Hind 2014).

4.6 Environmental: method

Ellen Simmons

4.6.1 The samples were processed by the author using a water separation machine. Floating material was collected in a 300µm mesh, and the remaining heavy residue retained in a 1mm mesh. Flots and heavy residues were air dried. During processing it was noted that some charred material did not float and remained in the heavy residues. Selected samples were therefore re-floated to maximise recovery of charred material. The >4mm fractions of the heavy residues were sorted for artefacts and ecofacts and the 2-4mm fractions were sorted for wood charcoal and charred plant remains. A series of samples from grave fills were also processed by wet sieving for the recovery of artefacts and human bone. The >4mm fractions of these samples were sorted for bone and artefacts and the 2-4mm fractions were sorted for charred plant remains.

4.6.2 A preliminary assessment of the samples was made by scanning using a stereo-binocular microscope (x10 - x65) and recording the abundance of the main classes of material present. All material present in the samples was quantified using a scale of abundance (- = < 10 items, + = 10-29 items, ++ = 30-49 items, +++ = 50-99 items, ++++ = 100-499 items, +++++ = > 500 items).

4.6.3 Preliminary identification of charred plant material was carried out by comparison with material in the reference collections at the Department of Archaeology, University of Sheffield, and various reference works (e.g. Cappers *et al*, 2006). Cereal identifications and nomenclature follow Zohary *et al*. (2012). Other plant nomenclature follows Stace (2019). The composition of the flots is recorded in Table 31. The seed, in the broadest sense, of the plant is always referred to in Table 31, unless stated otherwise. The abbreviation *cf*. means 'compares with' and denotes that a specimen most closely resembles that taxon more than any other. The charred plant material found in the samples from grave fills that were processed by wet sieving for the recovery of artefacts and bone is recorded in Table 32.

4.7 Archaeometallurgy

Gerry McDonnell

4.7.1 The debris associated with metalworking, or submitted in the understanding that they are associated with metalworking, can be divided into two broad groups; residues diagnostic of a particular metallurgical process or non-diagnostic residues that may have derived from any pyrotechnological process (McDonnell 2001). The slags were visually examined and classification based solely on morphology. Additional data to improve the interpretation was obtained from a programme of Hand-Held X-Ray Fluorescence (HH-XRF).

4.7.2 The diagnostic ferrous debris can be attributed to a particular ironworking process; these comprise ores and the ironworking slags, i.e. the macro, hand recovered smelting and smithing slags and the micro-residues such as hammerscale and slag fragments recovered from sieving programmes. The second group, are the diagnostic non-ferrous metalworking debris, e.g. crucibles and moulds. Thirdly, there are the non-diagnostic slags, which could have been generated by several different processes but show no diagnostic characteristic that can identify the process. In many cases the non-diagnostic residues, e.g. hearth or furnace lining, may be ascribed to a particular process through archaeological association. The residue classifications used in the report are defined below.

4.7.3 Diagnostic Ferrous Slags and Residues

- Ore - Iron rich natural mineral, may be identifiable to a particular type e.g. Goethite, pyrite or hematite.
- Hearth Bottom (HB) - a plano-convex accumulation of iron silicate slag formed in the smithing hearth. The range of dimensions of the hearth bottoms are tabulated.
- Smithing Slag - randomly shaped pieces of iron silicate slag generated by the smithing process. In general slag is described as smithing slag unless there is good evidence to indicate that it derived from the smelting process.
- Hammerscale - there are two forms of hammerscale, flake and spheroidal generated during the smithing process. The presence of hammerscale is therefore a strong indicator that smithing (primary or secondary) was carried out on the site. Their small size precludes their hand recovery, and they are usually recovered during soil sample sieving (for environmental data).

4.7.4 Non-Diagnostic Slags and Residues

- Hearth or Furnace Lining - the clay lining of an industrial hearth, furnace or kiln that has a vitrified or slag-attacked face. It is not possible to distinguish between furnace and hearth lining.
- Cinder - high silica content smithing slag possibly generated in a smithing hearth or other high temperature hearths, e.g. fire-boxes of steam engines.
- Other – material not derived from metalworking and may include stone or residues from low temperature processes.

HH XRF Methodology

4.7.5 The instrument used was a Bruker S1 Turbosdr hand-held XRF instrument operating at 15kV. The technique is non-destructive. A beam of x-rays is generated in the instrument and focussed on a fresh fractured surface of the sample, the x-rays interact with the elements present in the sample resulting in the emission of secondary x-rays which are characteristic (in terms of their energy and wavelength) of the elements present in the sample. The energies of the secondary x-rays are measured and a spectrum generated showing a level of background noise with peaks of the



elements present superimposed on the background noise. Slag samples were analysed for 30 live seconds; the spectrum is stored and a normalised composition determined using a bespoke computer programme. All elements heavier than magnesium (Mg, Z=12), can be detected. The data is normalised and hence gives data showing relative (semi-quantitative) percentage of detected oxides.

4.8 Lithics

Joshua Hogue

4.8.1 All artefacts were classified according to stratigraphic context and artefact type/class following standard typo-technological recording procedures (Butler 2005; Inizan et al. 1999). A blade is a flake with length at least equal to twice its width; a bladelet is a small blade with a width less than 12 mm; and a blade-like flake is a flake exhibiting traits of a true blade (e.g. parallel margins, arises), but not fulfilling the metric criteria of a true blade. A chip refers to debitage or indeterminate fragments less than 10mm. All finds were quantified by count and weighed to the nearest 0.1g. All metrical attributes were recorded after Saville (1980).

4.9 Conservation

Karen Barker

4.9.1 The collection was given an initial visual inspection to identify any objects at immediate risk, none where found. All the metalwork received, excluding the lead, was then bulk x-rayed in a Hewlett-Packard Faxitron. Most of the items were x-rayed at 110 KV for 30 seconds at 2mA. The exception being SF80 which was x-rayed for 2 minutes. Over the month of June 2021, the objects were conserved, where required, and an individual conservation record detailing treatment produced for each object. Table 37 provides details of x-ray and lab numbers for each small find, where applicable.

4.10 Health and safety

4.10.1 All work was carried out in accordance with DigVentures' company Health and Safety Policy (2018), in accordance with its company Health and Safety Policy, to standards defined in The Health and Safety at Work etc. Act 1974, and The Management of Health and Safety Regulations 1999, and in accordance with the SCAUM (Standing Conference of Archaeological Unit Managers) health and safety manual Health and Safety in Field Archaeology (1996), and DigVentures Health and Safety Policy.

6 EXCAVATION RESULTS

Nat Jackson

All digital context and feature records have been archived on the Digital Dig Team system and can be reviewed here at https://digventures.com/earth-trust/ddt/browser.php and by clicking on the links in green in the text.

6.1 Introduction

6.1.1 Between November 2019 and April 2021 excavations were carried out for Planning Phases 2 and 3 of the Earth Trust visitor centre development. This was delivered as a strip, map, and sample excavation, comprising a total of 10,022 square meters. The archaeology recorded was predominantly Iron Age and Roman in date, and included a minimum of 15 probable roundhouses, a potential winged corridor villa and two corn driers. Iron Age features were concentred across Areas A and C, and Roman activity mainly occurred within Area D.

6.2 Area A (Trenches 2 and 3) (Figures 3, 4 and 5)

6.2.1 Area A was the area of site located closest to Wittenham Clumps. The majority of the features in this area were likely Iron Age postholes and storage pits.

Bronze Age

6.2.2 The Late Bronze Age is represented by four post holes distributed across the area and unlikely to be related to one another. The dating of these is tentative, provided by individual potsherds which could be residual and not in situ.

Early Iron Age

6.2.3 The Early Iron Age in Area A is represented by a ring ditch, three large pits and a N-S aligned boundary ditch. The ring ditch, F266, was located in the southwest of Area A and c.14m in diameter. The ditch had a maximum width of 1.34m and minimum of 0.52m, and was between 0.2m and 0.88m deep (see Figures 6 and 17). The diameter is considered to be relatively small diameter, but both the depth and ditch are greater than other ring ditches thought to reflect roundhouses on the site. This example (F266) may be earlier in age, with pottery dating to the Early Iron Age found in the basal fills. The ring ditch has been cautiously interpretated as the remnants of a round barrow. The N-S aligned ditch, F362, is seen in the east of Area A running for c.10m and was also recorded in Area D (F930). At this point (Area A), the ditch was 1.38m wide and 0.78m deep and is likely to be a boundary ditch or the ditch of a large enclosure.

6.2.4 The three pits, F298, F364 and F369, were identified as Early Iron Age from the pottery. These are similar in size, being between 2m and 3m in diameter and c.1m deep, and also comparable in form, with straight to vertical sides and flat bases. They are probably storage pits.

Middle Iron Age

6.2.5 The majority of features in Area A date to the Middle Iron Age and includes evidence for a series of roundhouses. Archaeological features recorded comprise pits, post holes, ditches, and ring ditches.

6.2.6 Three definite roundhouses were observed in the area, identified by stretches of ring ditch (F320, F343 and F307). In addition, three partially exposed curvilinear features (F338, F347 and F348), are considered likely to be ring gullies for further roundhouses. Of the roundhouses in Area A, the best preserved was in the northern area of Trench 2 (F320, see Figure 3). This consisted of a ring gully, F320, with a diameter of 8m, located within which were four structural postholes (F324, F327, F328 and F330) (see Figure 15). One of the postholes appeared to have been recut and a new post put in place (F329). Three smaller stake holes were recorded (F323, F325 and F326) and more may have been present but were not visible due to unfavourable weather conditions. This group could have been part of an internal division within the roundhouse. The entrance to the roundhouse was located on the eastern side of the ring gully and just outside a doorway or porch is suggested by the presence of several more postholes (F331, F332, F333, F334 and F336).

6.2.7 Located to the west of roundhouse F320, in the northwest Area A, a second roundhouse approximately 7m in diameter was identified through the presence of short lengths of ring gully F343 (see Figure 4). This roundhouse was located within an area of pitting, with one pit F342 cutting the roundhouse to the north. The ring gully F343 was bisected by an east-to-west aligned Roman ditch F297 (discussed below). To the east of the gully and south of the ditch, a series of Iron Age storage pits were recorded, including F265 and F299.

Roman

6.2.8 A linear E-W aligned ditch, F297, is located in the northern part of Trench 2 (Figure 4), cutting a large Early Iron Age pit F298. The function of the Roman ditch is likely to be a boundary, perhaps articulating the outer limit of the villa. An intriguing square pit, F255, measured 3.55m by 3.26m wide and was 0.31m deep. The pit was filled by a green organic clay-rich fill, likely to have formed in standing water, which could indicate that F255 was utilised for water storage or as a drinking trough for livestock (Figure 4). To the southeast, two parallel ditches (F345and F346, Figure 5), may have formed a NE-SW aligned Roman trackway. The ditches were between 2.20m (in the SW) and 3.00m (in the NE) apart.

6.2.9 In the north east corner of Trench 3, an area in the middle of Area A (Figure 2, Figure 4), a Roman corn drying structure was identified, F300 (see Figure 16). Situated alongside was a possible second structure, F301. These two features were partially obscured by the limit of the excavation, with around half of the corn drier F300 exposed and a small corner of F301 visible. F300 was made up of a stoking pit [3002] and the foundation wall [3010]. Within the foundation wall there was a substantial amount of rubble backfill or abandonment debris which consisted of CBM and sub-angular to angular stones ranging in size from 0.30m to 0.10m long. The probable stoking pit [3002] had a rubble upper fill (3003), a band of burning, bright orange brown burnt clay material (3013) and a lower charcoal rich fill (3006). Within the structure of the corn drier itself there was a similar pattern of a rubble upper fill (3011) and a charcoal rich basal fill (3012).

6.3 Area B (Trench 8) (Figure 7)

6.3.1 This area was sparce archaeologically. Only two features were observed and excavated, F801 and F807. These features were both typical Iron Age pits.

6.4 Area C (Trenches 5 and 6) (Figure 8)

Late Bronze Age

6.4.1 The earliest potential feature present in Area C, a small shallow E-W aligned gully seen in the west of the area, is potentially datable to the Late Bronze Age. The feature was ephemeral and dated from a single piece of pottery, which may have been a residual find. If it were from the Late Bronze Age, it is likely to have been a field boundary or hedge as it was very uneven in form.

Early Iron Age

6.4.2 More definite are a series of features in Area C which appear to date to the Early Iron Age. A substantial circular ditch, F512, is located at the centre of Area C (Figure 8, plan and Figure 18 sections). This feature was an Iron Age ring ditch or enclosure ditch of unknown function. It had a diameter of 15 meters and was between 0.36m and 0.81m wide, and between 0.33m and 0.53m deep. No internal structural postholes were associated with it and, as such, it cannot be firmly identified as a ring ditch for a roundhouse. Whilst possible that postholes have been lost through truncation, this seems unlikely due to the presence of other ephemeral features in the trench. There were three Early Iron Age pits in the centre of the ring ditch, one was large and deep F534, this was slightly off centre (see Figure 19). The other two pits are closer to the entrance, one F640 was a moderate sized Iron Age storage pit which cut a much smaller pit F641. The ring ditch itself had two phases, a cut and a later recut that occurred throughout the ditch. The initial cut was steep sided, almost V shaped and had a very narrow flat base. This cut contained one or two fills, where a second fill was present it was a lens of redeposited natural. The recut of the ditch is most visible in these slots. The recut contained a single fill throughout. Slots were excavated at the termini and then at every other two meters, with eleven interventions were made in total. The southern terminus cut a series of later pits, including F541, F542, F543 and F544. In the south eastern section of the ditch, the terminus also cut an earlier NE-SW aligned ditch F537. The ring ditch was bisected by the Roman boundary ditch F511. Other Early Iron Age features in the area consisted of nine storage pits of varying sizes and forms. Most of which are the typical straight sided and flat-bottomed type (F523, F532, F535, F653, F684, F687 and F688), although some are more ephemeral and scoop-like (F531 and F643).

Middle Iron Age

6.4.3 There were six Middle Iron Age ring ditches, mostly concentrated in the northeast of the area (F550, F555, F566, F649, F667 and F675), with one located in the south (F642 and F657). Of the ring gullies in the northeast of Area C, the most complete was F550, F555 and F566, these all form part of the same gully which would have had a diameter of 12.50 meters (Figure 8). Within this ring gully there were four postholes (F556, F557, F558 and F571) which may have related to the structure of the roundhouse, although their placement towards the northeast side of the ring gully makes this less likely. To the northeast of this ring gully was another gully F649, this was somewhat smaller,



with a diameter of 7.60m, only partially seen in the trench. A very short length of another potential ring gully F574, seen to the west of F649, may be the same feature as F679 and F690. If this is the case, the ring gully would be 6.80m in diameter. To the north west, another ring gully, F667, had a projected diameter of c.6.00m. Only part of the ring gully was visible in the trench and it was truncated by two later, probably Roman, ditches F650 and F651. This area of the trench was dense with Iron Age storage pits (F572, F573, F643, F644, F652, F683, F684 and F688). The final ring gully in the northeast of Area C was F675, this was another relatively small ring gully, having a projected diameter of 6m. It was truncated by later Roman ditch, F625.

6.4.4 At the south of Area C there was one more ring gully, F642, which is likely the same as F657. This gully would have had a diameter of 13.30 meters, making it one of the largest on site.

6.4.5 Other than the ring gullies, and consistent with the rest of the site, the Iron Age features comprised a series of pits and postholes. There was a probable four-post built structure in the west of the area (F615, F616, F617 and F618, see Figure 8). The other notable Iron Age feature was a storage pit F514, with a diameter of 1.28m and a depth of 0.50m. The basal fill (5138) was a compact dark grey brown silty clay with marly chalk inclusions, small to medium stones and charcoal flecks. Within this fill, a neonatal skeleton (SK5136) was discovered, which upon excavation was discovered to be three individuals. The skeleton appeared to have been placed in the foetal position tucked in the side of the pit on its eastern edge at the base, it was facing east. The secondary fill was a moderate to loose grey brown silty clay with moderate small to medium stones, occasional charcoal flecks and burnt stones. The morphology of the pit was a fairly standard form, consistent with other Iron Age storage pits at the site, but the presence of the neonatal skeleton is unusual. There was one other pit with a neonate placed in the base discovered in these excavations, F439 in Trench 4, and likely to be of the same date.

Late Iron Age / Early Roman

6.4.6 Three Late Iron Age pits were recorded in Area C, all probable storage pits. One was located in the centre of the area (F530), one in the north (F635) and the third, F672, in the northeast. Six ditches dating to the Late Iron Age or Early Roman period were excavated, interpreted as probable drainage or enclosure ditches. A potential Late Iron Age ring ditch was seen in the west of the area, F569, this was very ephemeral and likely heavily truncated by much later agricultural activity.

Roman

6.4.7 Several Roman burials were recovered in Area C, clustered in the north west of the area, forming one of two or possibly three cemeteries recorded at the site (see Figure 12). This area of 13 burials were made up of mainly adults, with only one infant (see section 10), contrasting to Area D, were the burials were a more even split of adults and children. The form of the burials in Area C were highly varied. Burial F608 was a decapitation with the skull placed at its feet (SK6156). F658 included a burial where the body had been placed face down (SK6170) and F696 was a coffin burial (SK6138) with nails still in situ (SF37-73). Adjacent to this F695 was a crouched burial (SK6137) and, based on morphology, possibly the earliest burial in the area (see Figure 20). These two burials were cut into a large Roman ditch F698. To the south of the ditch there was one notable burial, F604, which had a coin of Arcadius, 388-402AD, (SF36) placed in its mouth (SK6142).



6.4.8 Area C was bisected by a moderate sized Roman ditch running across Trenches 5 and 6, F511 (see Figure 8). At the southern end, the ditch runs 13m west from the eastern extent of Trench 6, then turns sharply north to run northwards for 35m to the northern extent of the excavation. The ditch is on the same alignment and similar in form to F414 in Trench 4, but this could not be confirmed by excavation. Within Trench 5, five interventions were excavated into the ditch to determine stratigraphic relationships with other features, including a posthole F503 at the south end of the trench, the ring ditch F512, a large Iron Age storage pit F534 (Figure 19), and three postholes F528, F529 and F559 by the northern limit. The sections indicated that the ditch truncated all these features, making it one of the latest features in the trench. The ditch had two fills at the southern end of the trench, a basal fill (5111) which was a firm light grey brown silty clay, and then a secondary fill (5021), a soft mid grey brown silty clay. This upper fill contained a small quantity of animal bone, shell, pottery and CBM. At this point the ditch was 0.70m deep and 2.15m wide. The ditch becomes shallower to the north and by the final slot was 0.52m deep and 1.06m wide.

6.4.9 Roman ditch F515 ran parallel with F511, extending 26m on a N-S alignment in the east of Area C. It also truncated all other features in its path (pits F523, F540 and F560 and gully F517) (Figure 18).

6.5 Area D (Trenches 4 and 9) (Figures 9, 10 and 11)

Late Bronze Age

6.5.1 The earliest feature in Area D is a single late Bronze Age pit (F965) located along the western limit of the area (Figure 10). This pit had a large amount of LBA pottery associated with it.

Early Iron Age

6.5.2 The Early Iron Age in Area D is represented by a large N-S aligned ditch in the east of the area, F930 (Figure 9), which can also be seen in Area A as F362. It was cut by the ring ditches (F851, F876 and F925) and a Roman pit cluster near the northern baulk (F884, F885, F892 and F893) (Figure 21). There was a line of postholes that may have been a fence (F482, F486, F487, F488, F489, F491, F492, F493, and F494). This ran perpendicular from the ditch F930. Three other post holes (F442, F444 and F841) and one large storage pit, F892, may also date to this phase and were seen in the east of Area D.

Middle / Late Iron Age

6.5.3 The Middle Iron Age is represented by ring ditches, pits and post holes distributed across Area D. In the north of the area there was a system of ring ditches indicating several phases of occupation throughout the Iron Age (see Figure 13 and 22). There were eight sections of ring gully (F851, F852, F861, F862, F876, F924, F925, and F926) recorded (Figure 9), some were almost complete rings and others had only a short length visible. There were potentially six phases of roundhouse in this area. F852 and F861 may be truncated sections of the same gully, and the same is possible for F862 and F876. If F852 and F861 were sections of the same ring gully, the roundhouse would have had a diameter of 9.75m. The most complete ring gully was F925, with 30m of its circumference recorded in the trench and a diameter of 14m.

6.5.4 The latest ring gully in the system was F924, dating to the Late Iron Age. It was only partially seen in the ring ditch system and extended into the villa area, being visible once the silting and robbing events there were excavated. This gully had a diameter of 10m and shows the continuity of occupation from the Iron Age into the Roman period. Internally the ring ditch has nine postholes likely to have formed part of a roundhouse structure (F836, F840, F914, F916, F917, F919, and F920). Within the central area of this ring ditch system, a series of postholes were recorded (F816). Whilst difficult to tell which particular ring gully they may have been associated with, they clearly formed part of a ring and are likely to have been part of the internal structure of one of the roundhouses.

6.5.5 Within Area D there were several more ring gullies present. Four were seen once the Roman villa had been fully removed (F924, F903, F904 and F995). These are all probably Late Iron Age. F903 and F904 may represent two phases of roundhouse as they were running concentrically, F903 had a projected diameter of c.8.8m and F904 had a projected diameter of c.8ms. Only around 3.30m of F995 was seen, the rest of the ring gully it is presumed had been truncated away by later archaeology. As such a small length of the gully was visible it is not possible to project a diameter for it.

6.5.6 A further Late Iron Age ring gully was discovered in the far east of the area F869, this one was seen straddling both Area D and Area A. This ring gully had a diameter of 12.5m, making it one of the larger roundhouses seen on site.

6.5.7 Other than ring gullies, the Iron Age features were predominantly postholes and storage pits (see Figure 12). The storage pits all followed the same pattern of being very straight sided and flat bottomed and varied only a little in diameter. One of these storage pits in the south east of the area F439 had a neonatal burial in the base and is therefore comparable with F514 (SK5136) from Area A, see above. The east of the Area D was very dense with postholes, it has proven difficult to determine their function however it is likely as was seen in Area A, that they formed fences and post built structures. In the south west of Area D there was potential four post-built structure (F948, F949, F950 and F951).

Roman / Late Roman

6.5.8 Two late Roman areas of activity were recorded in Area D. These were the villa area (delimited by Trench 9 context numbers, see Figure 11) and a 'Y' shaped corn drier, F933, in the north east of the area. The corn drier was similar in construction to the one seen in Trench 3 (F300) however it was a different shape. F933 was east to west aligned, with the stoking pit to the west and two curving arms drawing the heat to where the corn would have been dried in the east. It was 4m from the stoke hole to the drying area and 5.40m wide (Figure 24). The corn drier had been robbed of some of its construction materials, mainly the stone lining of the southern arm. It is likely that the drier dates to a similar period as the potential villa, 3rd to 4th century AD.

6.5.9 A probable villa was located in the north of the area and defined by a robbed out wall, F906 (Figure 10). The line of the wall ran from the baulk south for 8.52m to the SE corner of the structure, heading west for a length of 33m to the SE corner. The western end of the feature ran north for 2.50m before hitting the baulk (see Figure 13). The foundations had a maximum width of 1.05m and a maximum depth of 0.39m. The robber trench was filled with a mix of limestone/chalk rubble and dark grey

brown silty clay. Once it was removed earlier features were revealed, including enclosure ditch F978, discussed below. Other features associated with the potential villa included seven robbed out column bases (F970, F971, F972, F973, F974 and F975, and F983) (Figure 25). They were filled with poorly sorted limestone/chalk rubble and were relatively finds sterile. Whilst the dating of the robbing event is unknown, the earliest it could have occurred is probably 5th century AD. This robbing event cut through a layer of silting that occurred in the abandonment or post abandonment phase of the building's life. The silting was split arbitrarily into eight areas (9001-8) running from east to west and was done this way to map if there were any concentrations of finds or occurrences of floor surfaces. The latter was unfortunately not the case and finds in this layer were rare except in the southwest of the building. Here there was a huge concentration of pottery and animal bone (9008), possibly washed downslope to gather at the wall of the villa. Another possibility is that the finds were a single dump of material deposited post abandonment. The pottery recovered includes both fine and coarse wares and represents a diverse variety of styles and forms.

6.5.10 Once this layer of silting was removed, numerous earlier Roman and Iron Age features were exposed showing a continuation of what had been observed throughout Area D (see Figure 11). There were a series of Roman pits, some clustered by the northern baulk (F996, F997, F998 and F999) and others cut by the column bases (F940, F976 and F977). F940 and F976 may have been an earlier phase of the structure, being partially under the column bases and likely post pits. F977 was a large pit similar to one seen by the corn drier in the east of the trench F939.

6.5.11 The villa wall truncated a large E-W aligned ditch, F414. This ditch formed part of a series of ditches that ran east to west through Area D (F499, F850, F899, F907, F908, F911, F929 and F942). These ditches may have formed an E-W aligned trackway or possibly delimited the area of occupation as there was far less archaeology to the south of the ditch system as there was to the north. F414 may be the same ditch as F511 in Area C, and F499 may be the same ditch as F620 in Area C. These are highly likely although not confirmed as there was a gap in the excavation between the two areas.

6.5.12 Numerous burials were recorded in Area D, mainly concentrated along the ditch system and to the north of it, and to the east of the building (see Figure 12). It is likely that these burials are earlier than the villa itself, as it is uncommon in the Roman period for the dead to be buried so close to habitation. The burials included a range of inhumations, in all orientations and with some 'deviant' burials. Three had been placed in the grave face down (F452, Sk4561; F470, Sk4554; and F834, Sk4913), one of which Sk4554 was a juvenile burial. There was also a decapitation burial of a child (F921, Sk4715), with the head placed between the feet. In total, 13 adult burials and 13 child burials, including two neonatal burials, were recorded. The age range shows a cross-section of society represented in the burials. Three of the adult burials had combs present under their skulls, as if worn in the hair when interred (F458, Sk4562, SF35; F808, Sk4787, SF84; and F863, Sk4876, SF109). The morphology of the combs date the burials to the late Roman period (350-450AD). Sk4787 also included two late Roman coins and a copper alloy pin recovered from the grave fill.

6.6 Post-Roman activity (See Figure 15)

6.6.1 Throughout the whole of Area A, the latest features were a series of post-Roman furrows. These were all given one feature number (F310) and ran parallel with each other from north to south. The furrows were spaced roughly 6m apart, and varied in width from a maximum of 3.60m and a

minimum of 0.37m. They were all very shallow, with a maximum depth of 0.10m. The latest features in area D were also remnants of post-Roman plough scars and furrows. These were not as uniform as those observed in Area A. There were only two furrows seen in the area, one in the far east of the trench (F310) and one in the south west of the trench (F944). The furrow in the far east ran into Trench 2 hence it being part of F310. F944 was a lot narrower in nature than any furrow grouped in F310, it also ran on a slightly different alignment, more similar to the post-Roman furrows seen in Area C. F310 furrows ran slightly north east to south west whereas F944 ran slightly north west to south east. This possibly indicates the movement of field pattern and field use after the Roman occupation of the site. In Area C there were also furrows present (F505 and F632), running in the same direction as F944. Very few finds were recovered from the furrows but a fragment of clay pipe associated with F632 suggests a post medieval date.

7 ARTEFACTS AND ECOFACTS – OVERVIEW

7.1 Summary

7.1.1 The recovery of finds from the excavations at the Earth Trust has provided an insight into the chronological framework represented, as well as providing a better understanding of the site's archaeological conditions. The condition and preservation of finds across the site was generally good for both artefacts and, in some areas, for environmental material.

7.1.2 The excavations at the Earth Trust between 2019 and 2021 yielded an assemblage of over 12,000 artefacts, including some 4142 sherds of pottery (Appendix B), 820 fragments of CBM (Appendix C), 217 fragments of concrete, mortar, plaster, fired clay, daub and other materials (for full breakdown see Appendix D), 6575 pieces of animal bone (Appendix E), 370 pieces of shell (Appendix F), 43 burials (Appendix G), 49 fragments of slag and 4 possible hearth bases (Appendix I), and 37 lithics (Appendix L). During the excavations, 159 samples were recovered from 110 contexts. Following assessment of the site archive, 73 of these were selected for processing and assessment (Appendix H). In addition, 113 special finds were recorded during the excavation, alongside another 203 pieces of metalwork, predominantly iron nails (Appendix K). The finds assemblage has been assessed by the appropriate specialists and several finds have been conserved. The results are discussed below.

7.1.3 The artefacts were broadly distributed across the site, however Area B was sparce in archaeology and, as such, few finds were recovered from Trench 8 deposits. The Iron Age finds were largely recovered from Areas A and C, with the focus of the Roman site being in Area D, in and around the Villa (Trench 9).

7.1.4 The majority of the special finds were also located in Area D, including a hoard of 26 late 3rd Century coins found in the upper fill of ditch F414 (4013). Other than the hoard, a small selection of coins were recovered across the site, the earliest a coin of Rues of the Catuvellauni (1-10AD), and the latest of Arcadius (388-402AD). The latter was recovered from a burial, SK6142 (F604), indicating that people occupied the area continually from the late pre-Roman Iron Age through to just a few decades before the Romans officially left Britain. Three of the burials (SK4562, SK4787 and SK4876) contained bone combs, all recovered from just below the skull, indicating the individuals had been



buried with the combs in their hair. At least two of the burials were placed in coffins (SK4787 and SK6138).

7.1.5 Ditch F911 yielded everything from a fragment of a late Bronze Age axe (SF17) to a Colchester type brooch (SF20). There is potential evidence for leatherworking or fine woodworking with the presence of two small tools (SF112 and SF114) associated with the practice. There was also metalworking occurring on site, a variety of material from hearth bottoms and slag was recovered.

7.1.6 In and around the villa, a variety of domestic and utilitarian tools were recovered, such as an iron cleaver (SF34), a key (SF76) and a spoon probe (SF122). The villa also contained a concentration of pottery, from large storage vessels to fine dining ware (9008). From the large quantity of ceramic building material, mostly recovered from the fills of the ditches running through Area D, it can be assumed that the villa had been tiled. Fragments of box flue indicate the building had underfloor heating in at least one area and a single piece of red painted plaster is further evidence for the villa being a high status building.

7.1.7 The animal bone consisted of standard Iron Age and Roman domesticates (Cattle, pig, sheep/goat and horse) but also a rather large assemblage of dog skeletons, both larger 'working' dogs and much smaller lap dogs, typical of Roman pets. There was one instance of canine decapitation from an Iron Age pit (F534). Further analysis of the animal bone distribution may indicate areas where livestock was kept, or areas of butchery. The pottery across site ranged from the late Bronze Age through to the late Roman periods, and included some more interesting items such as a late Iron Age or early Roman strainer (SF75) and a complete samian vessel (SF107). Further analysis of the pottery distribution may indicate areas that are associated with food preparation or consumption.

7.1.8 The assessment reports provided by the relevant specialists are included below, with supporting data in the accompanying appendices. Recommendations for each element are included below and in Section 15.

7.2 Conservation assessment of selection finds

Karen Barker

7.2.1 Fifty artefacts were assessed for conservation, the overall condition of the collection is good. Most of the objects sent for conservation assessment are complete or nearly complete (see Appendix J). Most of the copper alloy has only moderate levels of corrosion, often with a thin or patchy patina, the exception to this is SF119, a nail cleaner in two fragments with very hard and bulbous corrosion obscuring most of the surface. Three of the copper alloy coins: SF13.24; 13.26 and 30 have a black waxy coating indicative of silver. Many of the coins are in very good condition, with only a few having worn or patchy detail, all should be identifiable. The iron is equally in reasonable condition with fairly light levels of corrosion over the original metal surface which has some small, blistered areas with the exception of SF111 which has 1 very large, raised blister which produced liquid during cleaning. It is imperative that this object is kept in a desiccated environ. This object is thin and has been reconstructed but remains fragile. SF34 and SF111 are the only metal objects with mineralised organic material both wood. The lead also only exhibits light levels of corrosion. The bone is stable, but the three combs were fragmented due to the iron pins corroding during burial,



which caused pressure on the structure of the comb and lead to the bone cracking. Many of the teeth were detached and have been adhered and are subsequently very fragile.

8 CERAMICS AND BUILDING MATERIALS

8.1 Pottery

Dr David Griffiths

8.1.1 A total of 4142 sherds weighing c. 73.6 kgs was recovered from stratified deposits (see Appendix B, Table 8); 1760 sherds of prehistoric handmade and 2376 sherds of Roman period pottery were included in the assessment, along with six sherds dating to the medieval period. Selected tabulated data can be found in Appendix B and a full catalogue is available as part of the digital archive.

8.1.2 The prehistoric handmade pottery dated from the late Bronze Age and through the Iron Age, and into the early Romano-British period. The Roman period pottery assemblage included the remains of amphorae, samian vessels, other fine wares, mortaria and coarse ware vessels. The ware classes present are discussed below (also see Table 9). The six sherds of medieval pottery were not considered in detail in this assessment, but bulk details are presented in Tables 8 and 9.

Prehistoric pottery

8.1.3 A total of 1760 sherds of prehistoric pottery, weighing c. 28.3 kgs, was recovered from the site. This is a large and significant assemblage, dating from the Late Bronze Age and through the Iron Age. While some sherds were residual and found alongside Roman period pottery, many were recovered from securely stratified deposits (see Table 9). As identified by Edwards (2010, 48, table 3.4), many fabric groups were produced throughout the Bronze and Iron Ages, and dating is only reliable where sherds have diagnostic features, such as a rim.

8.1.4 Date ranges for Late Bronze Age to Middle Iron Age follow those defined by Edwards (2010, 47-56):

- Late Bronze Age: 1200-800BC
- Early Iron Age: 800-300BC
- Middle Iron Age: 300-100BC
- Late Iron Age: 100 BC – AD43
- Bronze Age to early Iron Age

8.1.5 As identified by Edwards (2010, 47, table 3.3) for prehistoric pottery recovered from nearby Castle Hill and that recovered from excavations at this site in 2018 (Hedge 2018, 3), the presence of quartzite- and shell-tempered fabrics, dating potentially from the Late Bronze Age to Early Iron Age, were found during the 2020 programme of excavations (a total of 457 sherds weighing 8087.1 g). The bulk of the prehistoric pottery assemblage dates from the Early- and through the Iron Age, and likely produced locally or regionally in sandy (quartz-rich) fabrics.



Bronze Age

8.1.6 While there was certainly Bronze Age pottery in the assemblage, identified based on diagnostic rim sherds, its presence was residual in later features; there were no deposits/features of Bronze Age date. Body sherds in quartzite- and shell-tempered fabrics may also date to the Bronze Age; however, production continued into the Early Iron Age as such no specific date could be allocated in the absence of diagnostic features.

Early Iron Age

8.1.7 A number of features/deposits in Areas A, C, and D, potentially date to the Early Iron Age (Table 10), with some large diagnostic sherds providing good dating evidence, and some body sherds in the characteristic Early Iron Age red-coated fabrics (e.g. a red-coated bowl from pit 3006, Castle Hill (Edwards 2010, 49, plate 3.2). The pottery from this group of features provides good evidence for Early Iron Age activity in these areas of the site; further analysis is required to consider the assemblage within the stratified sequence and archaeological features.

Middle and Late Iron Age

8.1.8 Much of the prehistoric pottery assemblage (at least 1303 sherds not including Bronze Age-Iron Age fabrics) may date to the Middle and Late Iron Age periods (see Table 10). A number of features/deposits have strong dating evidence for the Middle Iron Age, with many others broadly dated to 'Iron Age'.

8.1.9 Later Iron Age and Early Roman period pottery was present; however, features and deposits clearly dating to this period were few. Further analysis, when considered within the framework of the site's stratigraphy, and other datable evidence, will refine this.

Roman Period

8.1.10 Date ranges for Roman pottery follow those defined by Darling and Precious (2014, 9).

- Early Roman: AD50 – 120/150
- Mid Roman: AD120/150 – 250
- Late Roman: AD250 – 400+
- Very Late Roman: AD350 – 400+

Amphorae

8.1.11 The amphorae assemblage recovered was very small, only 34 sherds weighing 578 grams; these consisted of 33 sherds of Baetican (modern Southern Spain) origin, likely Dressel 20s for transportation of olive oil, and a single sherd of possibly Gaulish origin. The lack of amphorae remains at the site is unusual but may reflect the chronology of Roman period activity (mostly late Roman), and the nature of occupation at the site.

Samian ware

8.1.12 As with the amphorae remains, samian ware sherds were very few, some 23 weighing 340 grams. Again, this is a small assemblage possibly reflecting the later Roman date of occupation at this part of the site.

Other fine wares

8.1.13 While samian ware sherds were few, the presence of 180 sherds of fine, slipped wares (predominantly Oxford and other likely regionally produced slip wares), suggests relatively high-status dining. Continental imports of fine wares were very few, only 12 sherds in total including Central Gaulish Black-slipped ware (6 sherds), unsourced black-slipped ware (3 sherds), and 3 sherds of 'Moselkeramik' from the Trier region in modern Germany. Nationally traded fine wares were also few, with seven sherds from the Lower Nene Valley, and five sherds of unsourced colour-coated ware. Present in the fine ware assemblage are a wide range of red and brown slipped wares which require further analysis to identify source and chronology.

Mortaria

8.1.14 A total of 39 sherds of mortaria were recovered. Thirty-seven sherds were produced in the Oxfordshire region from the late 2nd century AD and later; the remaining two sherds were produced in the Verulamium region (Verulamium White ware) in the early 2nd century AD.

Coarse wares

8.1.15 A total of 2100 sherds of coarse ware were recovered, weighing 39.1 kgs; these included cream/white wares (including Oxford wares (OXF WH), oxidised and reduced wares, likely produced in the region, with some oxidised wares produced in the Severn Valley, and perhaps further afield. In addition, the presence of Roman period 'shelly' wares indicates 4th century AD activity. Most of the coarse wares are utilitarian in character, such as jars for storage and cooking, mortaria (above) for food preparation, and dishes/bowls (e.g., black-burnished and other wares) for dining A particularly rare very large jar was recovered (F414, context 4697 (52 sherds), F974, context 9042 (1 sherd), and context 9008 (6 sherds), which are characteristic of a dolia common at Roman continental sites. Further analysis is required for confirmation.

8.2 Discussion

Chronology

8.2.1 The pottery assemblage contains material dating from the Late Bronze Age through to the Late Roman period, potentially c. 1600 years of human occupation at the settlement. The assemblage was recovered from well-stratified features and deposits, representing multiple phases of activity. There are significant quantities of material from Iron Age and Late Roman deposits. Pottery from the Early and Middle Iron Age is well represented, the results of consumption by those inhabiting the roundhouses at the settlement, as is Late Roman pottery, presumably from the occupants of the villa and associated estate. However, while there are certainly Late Iron Age and Early Roman pottery sherds present in the assemblage, features and deposits securely dating to this period of dramatic changes to life in southern England (with contacts with continental Europe, especially the Roman Empire, and its conquest of Britain beginning in AD43) are not clearly identified.

Spatial distribution

8.2.2 As presented in Table 8, the bulk of the assemblage was recovered from Area D (2804 sherds), with similar quantities each in Areas A (667 sherds) and C (652 sherds); 19 sherds were recovered from Area B. Those sherds with fabrics that date or may date to the Bronze Age/Early Iron Age were recovered from Areas A, C, and D (see Table 10). The bulk of the Roman pottery was found in Area D (in proximity to the remains of the villa structure), as was most of the prehistoric pottery; however, much of this was residual. The quantity of prehistoric pottery from Area A was almost twice that of Roman period material, while in Area C, only 58 sherds of Roman pottery was recovered compared with 594 prehistoric sherds. Only prehistoric pottery (19 sherds) was recovered from Area B.

Pottery: recommendations

8.2.3 The size of the assemblage, and the very long date range of the material, offers significant potential for further analysis, and is appropriate for statistical analyses. Prehistoric and Roman period pottery is present in significant quantities and is in good condition, with limited post-depositional disturbance. Further analysis would provide a unique opportunity to enhance understanding for the continuity and change in occupation at the site from Late Bronze Age to the Late Roman period. Many sherds are large with clean breaks, and examination of the assemblage for cross-joins (joining sherds from deposits across the site) offers further opportunity to refine chronologies for occupation.

- Prehistoric pottery: a wide-range of vessel forms were recovered, and at least 200 diagnostic prehistoric sherds were recovered where it was possible to identify form and date; all of these are recommended for illustration. Much of the assemblage, especially from pre-Roman deposits, is in good condition with little post-depositional damage. This is a large assemblage from well-stratified deposits and will provide extensive evidence for prehistoric activity at the site, especially when compared with material from near Castle Hill, and other local and regional sites.
- Roman pottery: full fabric analysis will significantly refine the chronology for these wares and subsequently those features/deposits which have been dated to a broad 'Roman' period date. In addition, full analysis of fabrics and forms for coarse wares will significantly enhance our understanding of the supply and consumption of pottery at the site. At minimum of 378 sherds of Roman pottery had diagnostic features and require illustration.

8.3 CBM and Daub

Dr David Griffiths

8.3.1 A total of 830 fragments (149.3kgs) of building material: 820 fragments of ceramic and 10 fragments of stone were recovered from the site. Selected tabulated data can be found in Appendix C and a full catalogue is available as part of the digital archive.

8.3.2 The bulk of the recovered building materials were made in ceramic and included *tegulae* and *imbrices* (Roman roofing material), brick, and other fragments (possibly *tesserae* and part of a box flue tile) (Table 11). Initial assessment suggests that all fragments were Roman period in date, and represent parts of a substantial structure, most likely a villa, or structures associated with a villa

estate. Comparison of the range of building material types and fabrics with other regional Roman period sites, may aid dating of the structures at Wittenham Clumps.

Ceramic building material

8.3.3 Roman period *tegulae* and *imbrices* (roof tiles), formed a largest component of the CBM assemblage, with further roofing fragments likely present in the brick/tile and undiagnostic categories. There were few bricks, three possible ceramic *tesserae*, and a single fragment, with cross-hatched incisions to one surface, which is a common feature on box flue tiles; this potentially indicates Roman-style heating in part of the structure. Initial assessment indicates a narrow range of good-quality and well-fired fabrics; full fabric analysis is recommended (see below). A number of fragments show evidence for being overfired. In addition, several fragments were identified that were very crudely made, in a very coarse, sandy fabric, which contrasts with the well-made types that formed the bulk of the assemblage. A number of CBM fragments bore additional features or characteristics (Table 12), and require further analysis. These items have potential to be used for comparison with other sites in to add to our understanding of the manufacture of these items and their use in the construction of substantial structures.

Stone building materials

8.3.4 There were ten fragments of stone building materials, including five which were used as roof tiles; five fragments were undiagnostic in form. The use of stone roof tiles was not uncommon and likely indicate a later Roman period date. On initial inspection the tiles were made from sandstone, but it is recommended that a specialist in lithology examines the examples to identify stone source.

Spatial distribution

8.3.5 The bulk of the building material was recovered from Trench 4 (554 fragments), with 120 fragments recovered from Trench 9; relatively small quantities were recovered from Trenches 2, 3, 5, 6, and 8 (Table 13). The possible box flue fragment was found in Trench 4.

Discussion

8.3.6 The use of ceramic brick and roof tiles for the construction of buildings was widespread throughout the Roman Empire, and it is often found in large quantities at military sites, urban centres, and at the locations of rural villas. This is a large assemblage, and the material is in good condition, with limited post-depositional disturbance. The concentration of material associated in Trenches 4 and 9 presented in Table 13, may indicate *foci* of occupation. This assemblage was recovered from secure stratified archaeological deposits. The quantity of CBM at the site indicates the presence of a substantial, well-built structure(s), with tiled roofs, and possibly with some partial brick-built walls or flooring; potentially, part or parts of the structure(s) had tessellated flooring and may have been centrally heated; this combined evidence indicates the presence of a villa at the site. In addition to the ceramic building materials, ten fragments of stone building material were recovered. Stone and slate roofing tile was not uncommon during the Roman period, but the presence of stone roof tiles generally indicates a later Roman period date, when ceramic building products were no longer available or financially viable.



CBM: Recommendations

8.3.7 The assemblage is large and represents the remains of substantial structures for high status individuals. Full analysis all building material offers significant potential to enhance our understanding of Romano-British structures at or close to the site, and when considered with sites in the region, construction techniques, production (possibly locally), and sourcing of this material for use at the site.

8.4 Concrete, Mortar, Plaster, Fired Clay, and Daub

David Griffiths

8.4.1 A total of 217 fragments weighing 6326 grams of concrete, mortar, plaster, fired clay, daub and other materials were recovered during excavations at Wittenham Clumps, Oxfordshire, in 2020 (WIT20) (Appendix D, Table 14). Within the assemblage examined were 22 fragments of heat-affected stones and one fragment of ceramic roof tile (CBM), which are not considered further in this assessment report. The remainder of the material assessed consisted of predominantly clay-based components used for the construction of various structures, for example daub, mortar, and concrete, along with fired clay and/or fired clay/daub (where there is uncertainty), perhaps used in the forming of kilns or furnaces required for high-temperature activities. In addition to the material considered in this report, large quantities of Roman period ceramic building material (830 fragments weighing 149.4 kgs) were recovered from the site (Griffiths 2021).

Results and discussion

8.4.2 All material was recovered mostly from stratified deposits from Areas A and D (except for topsoil context 2002). All material was in good condition with little evidence for post-depositional disturbance. As is often with this type of material, it is not possible to be precise with identifications at the assessment stage, therefore, some items are classified with a level of uncertainty (highlighted in Table 16 in Appendix D), for example, fired clay and daub. A total of 173 fragments of fired clay and daub were recovered from both Areas A and D (Table 14). Mortar (17 fragments), plaster (1 fragment), and concrete (3 fragments) was only recovered from Area D, in close proximity to the villa-type structure. The heat-affected stone (22 fragments) was recovered from a pit (context 9146).

Fired clay

8.4.3 Fired clay fragments were present with clays fired to a range of colours of varying shades of brown-orange-grey. Most had no diagnostic features which may indicate the use of the structure from which they were originally part of. However, a total of 98 fragments of fired clay showed evidence of vitrification and had been subjected to repeated very high temperatures (e.g. formed a hearth/furnace/kiln) rather than a single event fire. Sixty-eight fragments of fired clay were found in the fill of posthole (context 2021) and may all have originally been part of a single structure, however, 21 fragments show evidence of vitrification, while the remaining do not; all fragments from this deposit require further analysis by a specialist in high-temperature activities.



Daub

8.4.4 A total of 47 fragments of daub were recovered (Table 14); this material was unfired clay with additional temper, e.g., sand, used to form parts of in structures, where wet clay is formed around a wattle frame, and allowed to dry to form a strong and solid wall. Many of the daub fragments have impressions of wattle sticks, and many other plant impressions (such as straw).

Mortar

8.4.5 A total of 15 fragments of mortar and 2 of mortar/plaster were recovered. Initial inspection indicates a small range of compositions, however, there is likely uniformity in how these mortars were made as most fragments were mostly lime-based. These mortars were used to join ceramic building materials to one another and to other parts of a structure.

Plaster

8.4.6 Two fragments of mortar/plaster were recovered from F414, context 4013 (see above). One fragment of plaster (where identification is beyond doubt) was recovered from Area D, F499, context 4860. This fragment was originally part of a wall in a high-statues Roman period building, no doubt from the villa-type structure which was close by. The fragment has the faint remains of red painted decoration.

Concrete

8.4.7 Two large and thick fragments of concrete were recovered from Area D, context 9008. The two fragments are at least 50mm in thickness, with a relatively smooth upper surface, and very uneven lower surface. These fragments may have originally formed a solid floor surface within a structure. The concrete is lime-based, with coarse temper, many of which are large (over 10mm in diameter) rounded pebbles.

Ceramic weights

8.4.8 Two ceramic weights (IDs 24 and 34, Table 15) were recovered from F965, context 4896. Both weights are mostly complete, and quite large, each weighing 446 grams (ID24, in two joining fragments) and 481 grams (ID34). The pottery from the deposits where they were recovered dates potentially from the late Bronze Age to Iron Age, and these items are potentially significant. On initial examination, the clay fabrics look similar to those of some pottery fragments from the site

Other ceramics and building materials: recommendations

8.4.9 A number of recommendations can be made for additional analysis of the finds in this group:

- Fired clay: fragments showing evidence of vitrification all require further analysis (Gerry McDonnell)
- Daub: further analysis of the plant impressions on the daub may yield additional information on the range of plants grown in the vicinity of the site (Ellen Simmons)
- Plaster: further analysis of the painted wall plaster from sites in the region is required to assess for possible comparisons.



- Mortar: a number of fragments of CBM show evidence of lime based mortar present on their surfaces, further analysis and comparison between the classes of material is required
- Concrete: further petrographic analysis is required for the fragments of concrete, it is also recommended that the results should be compared with those of other high-status Roman period sites in the region
- Ceramic weights: the fabric looks similar to some of the pottery fragments from the site, further analysis will confirm or deny this. It is recommended that both these items are sent to an appropriate specialist for further analysis.

9 ANIMAL BONE AND SHELL

9.1 Animal bone

Dr Hannah Russ

9.1.1 Vertebrate remains comprising mammals, birds and amphibians (6,575 fragments) were recovered via hand collection from seven trenches located across the site during the archaeological excavations. Material from bulk environmental samples is not included in this report. Vertebrate remains were recovered from seven trenches across the site from features and deposits of Late Bronze Age/Early Iron Age to Romano-British period date, including ditches, pits, round house gullies and those associated with a Roman villa.

9.1.2 Significant assemblages were recovered from four of these: 2, 4, 6 and 9, Table 16 (Appendix E). The vertebrate remains from all trenches were dominated by the remains of mammals, with a few bird and amphibian remains, but no fish present. Below the results are presented by Trench, followed by a discussion of the findings across the site. Sitewide, the mammal remains included equid (*Equus* sp. - horse/donkey/mule), cattle (*Bos taurus*), deer (Cervidae), including red (*Cervus elaphus*) and roe deer (*Capreolus capreolus*), domestic pig (*Sus domesticus*), sheep/goat (*Ovis aries/Capra hircus*), dog (*Canis familiaris*, but possibly including some red fox (*Vulpes vulpes*)), rabbit/hare family (Leporidae) and rat (*Rattus* sp.). Dog remains included those from extremely small animals, consistent with those introduced into Britain by the Romans as lap and/or hunting dogs. Bird remains included a very large but unidentified bird (identification should be attempted during the analysis stage), goose (*Anser anser*), mallard (*Anas platyrhynchos),* domestic fowl (*Gallus gallus domesticus*), barn owl (*Tyto alba*), crow family birds (Corvidae), probable teal (*Anas crecca*), and possible grey partridge (*Perdix perdix*). Amphibian(s) were represented by two long bones from Trench 9, context 9008, and included frog/toad (Anura).

9.1.3 Vertebrate remains from unstratified contexts (U/S, see Table 16, Appendix E) comprised two bones identified as sheep/goat and 47 fragments consistent with medium mammal. These remains are of extremely low archaeological value due to their lack of context and are not discussed further in the report.

Area A, Trench 2

9.1.4 Vertebrate remains were recovered from 85 contexts in Trench 2, 1075 fragments in total, Table 17 (Appendix E). With the exception of one bone from a crow family bird from context 2379, all of the



vertebrate remains from Trench 2 represented mammals. Cattle remains dominated the identifiable portion of the assemblage, with sheep/goat, equid, pig, and dog forming much smaller proportions, (Table 17, Appendix E). The only bird bone recovered from Trench 2 (context 2379) was a left ulna of a crow family bird, consistent in size with carrion crow (Corvus corone).

Taphonomy

9.1.5 Bone surface preservation varied throughout the assemblage from 'excellent' to 'very poor' (categories 1-5). Most of the specimens displayed 'good' or 'moderate' surface preservation (84.9% by count, n=913). Fragmentation was moderate throughout the assemblage with some partial bones and teeth recovered and some re-fitting fragments of single specimens. Evidence for butchery in the form of fine cut marks and more substantial chop marks was recorded on 34 specimens throughout the Trench 2 assemblage. The butchered remains included equid, cattle, pig and sheep/goat. Area-wide evidence for carcass processing was moderate. Burnt bone was recovered from seven contexts in Trench 2, 12 fragments in total. The burnt remains included cattle, small ungulate and medium/large mammal.

9.1.6 Evidence for carnivore activity was observed on 42 specimens. The gnawed remains included cattle, pig, sheep/goat and dog family. Gnawing activity provides further evidence for the presence of carnivores, likely domestic dogs and/or foxes, at the site and that animal remains/carcasses were accessible to these animals at some point after their deposition.

9.1.7 Skeletal abnormalities possibly resulting from disease, injury or age were recorded in two instances; a longbone shaft fragment from a medium/small mammal had an unusual bone surface that warrants further investigation during the analysis stage of the project. A large ungulate pelvis had bone lipping around zone 2 of the acetabulum. In total, 12 mammal and one bird bone from Trench 2 were suitably complete to allow measurement for size estimation. Measurable elements included equid, cattle, pig, sheep/goat and corvid. Bone fusion data for estimation of age at death was recorded for one or both epiphyses of 89 specimens. Nine mandibles comprising two cattle, six sheep/goat and one pig, and five loose teeth were suitable for providing age at death data. A pig canine tooth from context 2417 was consistent with a male individual; no other animal remains were suitable for identifying sex.

Area A, Trench 3

9.1.8 Vertebrate remains were recovered from 11 contexts in Trench 3, 158 fragments in total, Table 18 (appendix E). All of the vertebrate remains from Trench 3 represented mammals. Cattle remains dominated the identifiable portion of the assemblage, with sheep/goat, pig, and dog forming much smaller proportions, (Table 18, appendix E).

Taphonomy

9.1.9 Bone surface preservation varied throughout the assemblage from 'excellent' to 'poor' (categories 1-4). Most of the specimens displayed 'good' surface preservation (95.9% by count, n=4165). Fragmentation was moderate throughout the assemblage with some partial bones and teeth recovered and some re-fitting fragments of single specimens. Evidence for butchery in the form of fine cut marks, more substantial chop marks and saw marks was recorded on 26 specimens



throughout the SPE1 assemblage. An equid bone from 1505 provided the only evidence for carcass processing using a saw, which indicates the use of 18th century or later animal butchery techniques (e.g. Albarella 2003, 74; Cameron et al. 2019). Area-wide evidence for carcass processing was low. Burnt bone was recovered from 10 contexts in SPE1, 13 fragments in total. The burnt remains included cattle, small ungulate and medium/large mammal.

9.1.10 Evidence for carnivore activity was observed on 90 specimens. The gnawed remains included equid, cattle, pig and sheep/goat, some of which also had cut marks (cattle only). Gnawing activity provides evidence for the presence of carnivores, likely domestic dogs and/or foxes, at the site and that animal remains/carcasses were accessible to these animals at some point after their deposition.

9.1.11 Skeletal abnormalities possibly resulting from disease, injury or age were recorded in 12 instances, in nine contexts, Table 18 (appendix E). In total, 56 mammal and three bird bones from SPE1 were suitably complete to allow measurement for size estimation. Measurable elements included equid, cattle, pig, sheep/goat, dog and domestic fowl. Bone fusion data for estimation of age at death was recorded for one or both epiphyses of 345 specimens. Twenty-eight mandibles comprising, 13 cattle, eight sheep/goat, five pig and two equid, and six loose teeth were suitable for providing age at death data. Pig canine teeth from contexts 1630, 1310 and 1296 were consistent with male individuals; no other animal remains were suitable for establishing sex.

Area B, Trench 8

9.1.12 Vertebrate remains were recovered from one context in Trench 8, six fragments in total, Table 16 (Appendix E). Only one bone could be identified to species, which was a left sheep/goat mandible.

Taphonomy

9.1.13 Bone surface preservation varied throughout the assemblage from 'good' to 'moderate' (categories 2-3). Most of the specimens displayed 'good' surface preservation (83.3% by count, n=5). Fragmentation was moderate throughout the assemblage with some partial bones recovered. No evidence for butchery in the form of fine cut marks, more substantial chop marks or saw marks was recorded in the Trench 8 assemblage.

Area C, Trench 5

9.1.14 Vertebrate remains were recovered from 38 contexts in Trench 5, 768 fragments in total, Table 20 (Appendix E). With the exception of one bone from a large bird, all of the remains from Trench 5 represented mammals. Cattle remains dominated the identifiable portion of the assemblage, with sheep/goat forming the next most frequently recovered remains. Pig, equid, red deer, dog and rat formed much smaller proportions, (Table 20, Appendix E).

Taphonomy

9.1.15 Bone surface preservation varied throughout the assemblage from 'excellent' to 'very poor' (categories 1-5). Most of the specimens displayed 'good' or 'moderate' surface preservation (95.8% by count, n=736). Fragmentation was moderate throughout the assemblage with some partial bones and teeth recovered and some re-fitting fragments of single specimens. Evidence for



butchery in the form of fine cut marks and more substantial chop marks was recorded on 18 specimens throughout the Trench 5 assemblage. Evidence for carcass processing was low in the assemblage from Trench 5. A dog skull from 5160, fill of an Iron Age pit, had chop marks to the occipital condyles indicating that it had been decapitated. The total finds and context of this Iron Age pit, located at the center of the largest roundhouse at the site, require further research. Burnt bone was recovered from five contexts in Trench 5, seven fragments in total. The burnt remains included equid, cattle, sheep/goat and medium/large mammal.

9.1.16 Evidence for carnivore activity was observed on 22 specimens. The gnawed remains included equid, cattle, pig and sheep/goat. Rodent gnawing was observed on a sheep/goat calcaneum from context 5160. Gnawing activity provides further evidence for the presence of carnivores and rodents, likely domestic dogs and/or foxes, and rats, at the site and that animal remains/carcasses were accessible to these animals at some point after their deposition.

9.1.17 Skeletal abnormalities possibly resulting from disease, injury or age were recorded in one instance. An equid sacrum form context 5160 had pitting, eburnation, and complete loss of proximal articular surface in some areas. There was also a large pit on the ventral surface near the lumbosacral articular surface. In total, three mammal bones from Trench 5 were suitably complete to allow measurement for size estimation. Measurable elements included cattle and sheep/goat. Bone fusion data for estimation of age at death was recorded for one or both epiphyses of 35 specimens. Twelve mandibles comprising seven sheep/goat, three pig, one cattle and one equid, and two loose teeth were suitable for providing age at death data. No animal remains were suitable for identifying sex.

Area B, Trench 6

9.1.18 Vertebrate remains were recovered from 34 contexts in Trench 6, 1110 fragments in total, Table 21 (Appendix E). Pig remains were the most frequently recovered from Trench 6, though this is due to two near complete skeletons from contexts 6272 (ABG5 – fill of pit [6271]) and 6405 (ABG6 – fill of Iron Age pit [6404]). Cattle, equid and sheep/goat remains were recovered in similar numbers, thought the equid count was inflated by 95 fragments of a single skull from context 6182, fill of Iron Age pit [6181]. Dogs were represented by 13 (possibly 15) specimens, including five foot bones from the same individual (ABG14) from context 6419, fill of likely Iron Age pit [6418]. Deer, mallard, chicken and crow family were all represented by a single bone each.

Taphonomy

9.1.19 Bone surface preservation varied throughout the assemblage from 'excellent' to 'very poor' (categories 1-5). Most of the specimens displayed 'good' or 'moderate' surface preservation (86.6% by count, n=961). Fragmentation was moderate throughout the assemblage with some partial bones and teeth recovered and some re-fitting fragments of single specimens. Evidence for butchery in the form of fine cut marks and more substantial chop marks was recorded on 13 specimens throughout the Trench 6 assemblage. Evidence for carcass processing was low in the assemblage from Trench 6, but was observed on equid, cattle and sheep/goat remains. A cattle metatarsal from an animal over 27-36 months of age at death (context 6229) had been worked into a tool of some form. This item should be assessed by a worked bone specialist. Burnt bone was recovered from five contexts in Trench 6, eight fragments in total. The burnt remains included sheep/goat and medium/large mammal.



9.1.20 Evidence for carnivore activity was observed on 26 specimens. The gnawed remains included equid, cattle, pig and sheep/goat. Gnawing activity provides further evidence for the presence of carnivores, likely domestic dogs and/or foxes, at the site and that animal remains/carcasses were accessible to these animals at some point after their deposition.

9.1.21 Skeletal abnormalities possibly resulting from disease, injury or age were recorded in four instances, in four contexts. Two pathological equid specimens included a first phalanx that was completely covered with bone growth to the point it was almost unrecognizable (context 6118), and a left tibia with some abnormal bone formation on the surface of the proximal end of the shaft (context 6315). A right sheep/goat scapula from context 6312 had a re-healed fracture along the scapula blade and a dog atlas vertebra from context 6413 had abnormal bone growth to one lateral edge. In total, ten mammal bones from Trench 6 were suitably complete to allow measurement for size estimation. Measurable elements included equid, cattle, sheep/goat and dog. Bone fusion data for estimation of age at death was recorded for one or both epiphyses of 86 specimens. Twenty mandibles comprising, 12 sheep/goat, four cattle, three pig and one equid, and six loose teeth were suitable for providing age at death data. A pig canine tooth from context 6244 was consistent with a male individual; no other animal remains were suitable for identifying sex.

Area D, Trench 4

9.1.22 Vertebrate remains were recovered from 123 contexts in Trench 4, 2175 fragments in total, Table 19. Cattle remains dominated the identifiable portion of the assemblage (n=554, 50.9% of the identified mammal bone assemblage by count), with dogs forming the next most frequently recovered remains (n=213, 19.6% of the identified mammal bone assemblage by count), which is an unusual pattern for British sites of any period. Sheep/goat, equid, pig and deer formed much smaller proportions, with one rabbit/hare family bone also recovered, Table 19. Bird bones formed 1.1% of the recovered assemblage from Trench 4; twenty-four bird bones represented chicken (domestic fowl), woodcock, barn owl, crow family and possible teal and grey partridge. An absence of any cutmarks on the bird remains leaves the presence of those not usually associated with food unexplained; these may represent food remains, natural deaths, or have played another role at the site. As mentioned previously, the frequency of crow family remains is unusually high, and further research is needed to investigate the potential significance of this finding.

Taphonomy

9.1.23 Bone surface preservation varied throughout the assemblage from 'excellent' to 'very poor' (categories 1-5). Most of the specimens displayed 'good' or 'moderate' surface preservation (88.7% by count, n=1930). Fragmentation was moderate throughout the assemblage with some partial bones and teeth recovered and some re-fitting fragments of single specimens. Evidence for butchery in the form of fine cut marks, more substantial chop marks and saw marks was recorded on 69 specimens throughout the Trench 4 assemblage. A cattle horncore from context 4824 provided the only evidence for saw use. In butchery for meat, the saw did not become a regularly used tool until the 18th century (e.g. Albarella 2003, 74; Cameron et al. 2019). However, in association with horncores it is more likely to represent saw use for horn removal; saw use in bone, antler and horn working is known in Britain from prehistoric times. A red deer skull from context 4013 exhibited chop marks that had facilitated the removal of both antlers, providing further evidence for the use of animal resources in craft. Evidence for carcass processing was moderate in



the assemblage of vertebrate remains from Trench 4. A medium/large mammal rib from context 4650 had become polished, either by design or through use, perhaps representing a spatula. This item should be assessed by a worked bone specialist

Animal interaction

9.1.24 Evidence for carnivore activity was observed on 90 specimens. The gnawed remains included equid, cattle, pig and sheep/goat. A land fowl tibiotarsus from context 4013 had evidence for rodent gnawing. Gnawing activity provides further evidence for the presence of carnivores and rodents at the site, likely domestic dogs and/or foxes, and rats at the site, and that animal remains/carcasses were accessible to these animals at some point after their deposition. Burnt bone was recovered from four contexts in Trench 4, 12 fragments in total. The burnt remains included sheep/goat, small ungulate and medium/large mammal.

9.1.25 Skeletal abnormalities possibly resulting from disease, injury or age were recorded in 20 instances, in 12 contexts. Six bones belonged to the same individual (ABG10), small dog whose remains were distributed across three contexts (4764, 4765 and 4772). The remains were attributed to the same individual based on the unique size, extreme curvature and pathologies observed on the radii and ulna. Further analysis may identify further remains belonging to ABG10. A radius measurement provided a should height estimate of 32.9cm (GL = 81.5cm), but this may be adjusted when all elements are considered. Bone shape was most similar to a modern-day basset hound, which may suggest that this individual had been kept as a hunting dog, rather than, or as well as a lap dog. Another small dog (ABG16), also from context 4764 had bowed longbones with pathologies to the epiphyses indicating an older animal; height estimation for this individual will be undertaken during the analysis phase. Three additional pathological dog bones, which may or may not be additional remains of ABG10 and/or ABG16, were recovered from contexts 4661, 4764 and 4860. These three bones comprised a bowed right radius, a tail vertebra with additional bone growth around articular surfaces, and a pelvis with bone growth that suggested that it had been part fused to sacrum. Further research on the small dog remains is needed to put the findings into their continental context as animals introduced into Britain by the Romans.

9.1.26 In addition to the pathologies observed on dog remains, skeletal pathologies were present on a number of cattle specimens. Cattle pelves from contexts 4704 and 4940 displayed eburnation on the acetabular surfaces. Metatarsals from contexts 4765 and 4949 had abnormal bone growth around the proximal articulation and abnormal bone growth on distal part of lateral shaft surface, respectively, and a phalanx 1 from context 4766 had extra bone growth around the distal portion of the shaft. Finally, two cattle mandibular M3 teeth had extremely reduced or absent third cusps (contexts 4543 and 4599).

9.1.27 In total, 103 mammal and nine bird bones from Trench 4 were suitably complete to allow measurement for size estimation. Measurable elements included equid, cattle, pig, sheep/goat, dog, domestic fowl and crow family. Dog remains suitable for measurement were particularly abundant (n=60); these will provide data for the reconstruction of dog size and shape. Bone fusion data for estimation of age at death was recorded for one or both epiphyses of 221 specimens. Thirty-four mandibles comprising thirteen sheep/goat, eight cattle, seven pig, four equid, one red deer and one dog, and fifteen loose teeth were suitable for providing age at death data. The red



deer skull from context 4013 was from a male (buck); no other animal remains were suitable for identifying sex.

Area D, Trench 9

9.1.28 Vertebrate remains were recovered from 52 contexts in Trench 9, 1234 fragments in total, Table 23 (Appendix E). Cattle remains dominated the identifiable portion of the assemblage, followed by sheep/goat. Dog, pig, equid, deer and rat formed much smaller proportions, (Table 23, Appendix E). Seven bird bones represented goose, land fowl and large bird. The only amphibian remains recovered by hand from the site came from Trench 9, context 9008. Remains of at least two small dogs were recovered from context 9075, fill of likely Roman ditch (F414), one young dog 3-4 months of age at death and one adult dog (over 18 months).

Taphonomy

9.1.29 Bone surface preservation varied throughout the assemblage from 'excellent' to 'very poor' (categories 1-5). Most of the specimens displayed 'good' or 'moderate' surface preservation (90.3% by count, n=1114). Fragmentation was moderate throughout the assemblage with some partial bones and teeth recovered and some re-fitting fragments of single specimens. Evidence for butchery in the form of fine cut marks and more substantial chop marks was recorded on 44 specimens throughout the Trench 9 assemblage. Area-wide evidence for carcass processing was low. A sheep/goat metatarsal from context 9055, fill of large Roman pit [9053] (F977), was drilled through the middle, perhaps representing a toggle or yarn spool. This item should be assessed by a worked bone specialist. Burnt bone was recovered from three contexts in Trench 9, four fragments in total. The burnt remains included cattle and medium/large mammal.

9.1.30 Evidence for carnivore activity was observed on 43 specimens. The gnawed remains included equid, cattle, pig and sheep/goat. Gnawing activity provides further evidence for the presence of carnivores, likely domestic dogs and/or foxes, at the site and that animal remains/carcasses were accessible to these animals at some point after their deposition.

9.1.31 Skeletal abnormalities possibly resulting from disease, injury or age were recorded in four instances, in four contexts. Pathological cattle first phalanges were recovered from contexts 9004 and 9087; the one from 9004 had some bone lipping to the proximal and distal articular surfaces while the one from context 9087 had abnormal bone growth to the shaft as well as the proximal and distal epiphyses. An equid tibia from context 9008 had the remains of a vestigial fibula fused to the proximal end, while a pelvis from a small dog had an acetabular break (zone 3), which was re-healing but displaying significant bone reabsorption and deformed shape. In total, 36 mammal and one bird bone from Trench 9 were suitably complete to allow measurement for size estimation. Measurable elements included equid, cattle, sheep/goat, dog and goose. At least some of the dog remains were from small dogs consistent with those introduced to Britain during the Roman period. Bone fusion data for estimation of age at death was recorded for one or both epiphyses of 98 specimens. Fifteen mandibles comprising nine sheep/goat, five cattle and one dog, and four loose teeth were suitable for providing age at death data. No animal remains were suitable for identifying sex.



Discussion

9.1.32 The animal bone assemblage from Wittenham Clumps is of high regional significance, with the dog remains potentially contributing to the understanding of small dog introductions to Britain at a Continental level. The assemblage well preserved and represents the largest recovered from an Iron Age to Romano-British period site in the region and, as such, its further analysis can contribute significantly to understanding the development of animal husbandry practices, stock improvement and meat production and consumption, both at the site through time, and comparatively in the region (see Hambleton 1999; 2008).

9.1.33 The mammal remains are consistent with those expected on Iron Age and Romano-British period sites in Britain, with six of the main domestic livestock species associated with transportation, traction and/or food production present. Equids would have been kept for transportation and traction, cattle for meat, traction, milk and leather, pigs for meat, sheep/goat for meat, wool and/or milk and geese and chickens for meat, eggs and feathers. Based on quantification by fragment count, the cattle dominant economy, unusual for the Iron Age period nationally, is consistent with the expected pattern of animal husbandry and meat consumption for this area (Hambleton 1999; 2008). The paucity of bird remains at the site suggest that they did not play a major role in the diet, which is consistent with sites of this age, but may change once the bones from environmental samples are considered. The remains of crow family birds are unusually abundant, which is an area for further investigation during the analysis phase. Exploitation of wild resources appears to be minimal with only twelve elements from roe or red deer, a single rabbit/hare tooth, and few wild birds represented. A focus on meat from farmed animals over that obtained through hunting is typical for this region and period.

9.1.34 The dog remains from the site are of some significance and warrant further analysis (see Table 24, Appendix E, and below). Sitewide, there are numerous dogs recognised as animal bone groups (ABGs), and are particularly abundant in Trench 4, Table 24 (Appendix E). A dog skull from context 5160, fill of an Iron Age pit, had chop marks to the occipital condyles indicating that it had been decapitated. The total finds and context of this Iron Age pit, located at the centre of the largest roundhouse at the site, require further research. Some of the canid remains represent very small dogs, though 'normal' sized dogs are also present. In comparison with dogs included in Baxter's 2010 study of Roman/Romano-British dogs and based on the observed curvature of two radii and ulnae, it appears that at least some of the remains represent a dwarf variety, rather than a miniature/toy type, though a more detailed analysis of all of the elements will provide a more precise shoulder heights and body shapes. The small dogs were all recovered from Roman period contexts, suggesting that these remains represent the small 'lap' and/or hunting dogs brought to Britain by the Romans, a symbol of status and wealth (e.g. Baxter 2010; Bennett et al. 2016; Bennett and Timm 2016; 2018; Vince 2020). A spatial and chronological analysis of the dog remains will provide further information on the role of dogs in the Iron Age and Romano-British period at the site.



9.3 Shell

Dr Hannah Russ

9.3.1 Mollusc remains (370 fragments weighing 5.44kg) were recovered via hand collection from six trenches located across the site: 2, 3, 4, 5, 6 and 9 from features and deposits of Late Bronze Age/Early Iron Age to Romano-British period date, including ditches, pits, round house gullies and those associated with a Roman villa. Mollusc remains included both marine and terrestrial taxa. Marine mollusc remains (335 fragments) included the European flat oyster (*Ostrea edulis*) and mussel (*Mytilus* sp.), Table 25, while terrestrial taxa (34 fragments) included the garden snail (*Cornu aspersum*) and the brown- and/or white-lipped snail (*Cepaea* sp.), Table 26. A fossil marine bivalved mollusc was also recovered (context 9008), likely derived from the local solid geology.

Marine molluscs

9.3.2 Marine mollusc remains were dominated by European flat oyster, which formed 98.8% of the marine shell assemblage by count (n=331) and represented a minimum of 166 oysters. The condition of the oyster shells ranged from 'good' (category 2) to 'very poor' (category 5), Table 27. The oysters largely represented those in the 'small' category, between 4.6 and 6cm in diameter, Table 26, with only five specimens over the 'medium' size category (above c. 7.5cm in diameter). Fourteen valves had damage to the inner surface consistent with opening/shucking, with a further nine having possible evidence for this process. One burnt fragment of an oyster shell was recovered from Trench 4, context 4764. Infestations were recorded on oyster valves in 110 instances; burrows of the marine polychaete worm *Polydora ciliata*, a species which is widely distributed in coastal areas in Britain, were most common. Occasional instances of boreholes of the sea-sponge *Cliona celata*, and superficial deposits including the remains of *Bryozoa,* sand tubes created by polychaete worms, and barnacles and barnacle attachment scars were observed on several specimens, along with calcareous annelid worm-tubes created by *Pomatoceros triqueter*. Further research on the frequency and types of infestations present may allow the location of the oyster beds from which the Wittenham Clumps oysters were harvested and allow comment on the scale of oyster fisheries being practiced.

9.3.3 In addition to oyster, four fragments of mussel shell representing at least two individuals were also recovered from Trench 4 context 4013, 4765 and 4766. The condition of the mussel remains was very poor with complete loss of the shell surface, perhaps indicating that mussels are underrepresented at the site as a result of preservation bias. Poor mussel shell preservation is extremely common on archaeological sites.

Terrestrial molluscs

9.3.4 Terrestrial mollusc shell was recovered from ten contexts from three trenches, Table 28. Two taxa were identified, the garden snail (*Cornu aspersum*) and the brown or white-lipped snail (*Cepaea* sp.).

Discussion

9.3.5 The marine shell assemblage from Wittenham Clumps is of moderate local significance. It has potential to inform on oyster bed location and management strategies based on patterns of infestation.

9.3.6 The marine shell remains are consistent with those expected on Iron Age and especially Romano-British period sites in Britain, where oyster is typically the most frequently recovered taxa, followed by mussel (e.g. Cool 2006), as seen at Wittenham Clumps. The remains of marine shellfish attest to the consumption of these resources at Wittenham Clumps, despite the site's inland location. This demonstrates the existence of reliable and efficient trade connections with the coast to deliver food before it spoiled. The short 'shelf life' of marine shellfish and the inland site location may indicate that oysters and mussels were brought from the coast live.

9.3.7 The two identified terrestrial snail taxa, the garden snail and the white or brown-lipped snail, are extremely common ubiquitous snails that can tolerate and inhabit a wide range of habitats. The terrestrial shell from Wittenham Clumps is, therefore, of extremely low local significance with no potential to inform on past environmental conditions at the site.

10 HUMAN BONE

Malin Host; York Osteoarchaeology

10.1 Introduction

10.1.1 The archaeological excavations identified 41 burials and two contexts containing disarticulated bone (Appendix G, Table 30), which were subject to rapid assessment by York Osteoarchaeology Ltd. Three of the 43 human bone assemblages were of excellent preservation, 23 were well preserved, thirteen were moderately well preserved and two were badly preserved, indicating that sexing, ageing and pathological analysis will be possible in the majority of skeletons (Appendix G, Table 30). Notably, the non-adults were overall better preserved than the adult skeletons. This may be due to burial location – something that should be assessed during full osteological analysis of the remains.

10.1.2 Two of the 41 articulated skeletons were 20% or less complete, while eleven skeletons were 50% to 70% complete and the remainder (28) of skeletons were more than 70% complete, indicating good rates of completeness. Overall, the spines were least well preserved, which has likely caused loss of spinal joint disease, which is common in adult human skeletal remains from archaeological contexts.

10.1.3 Almost half of the skeletons were non-adults (18), ranging in age from foetus to adolescent, with the majority being in the young juvenile (1-6 year) age group. A total of 23 individuals were adults, ranging in age from young (18-25 years) to mature adults (46+ years). Assigning an age category to the adults will be possible in most instances, however, some individuals had poor pelvis preservation and as such, age may need to rely on less reliable criteria, which means that age

assessment will fall into broader age categories. It will be possible to estimate sex in all of the adults.

10.1.4 A total of 25 individuals had no immediately obvious pathology, which might be related to the young age of the non-adult skeletons, since non-adults often die rapidly before disease can manifest in the skeleton, or because the quick osteological assessment did not allow for analysis of subtle pathological lesions. As such, it is anticipated that more pathology will be recorded during full analysis. Pathological lesions observed included a long bone fracture, indicators of childhood stress, congenital anomalies and spinal joint disease.

10.2 Statement of significance

10.2.1 Notably, few British Roman villa skeletal populations have been osteologically analysed and most of these only include relatively small skeletal assemblages. As such, the Wittenham Clumps skeletal remains can contribute to our understanding of Roman villas and the population demographic and social structure associated with these. This also ties in with one of the project aims, to clarify the character, complexity, status and duration of the Roman settlement at Wittenham Clumps (Noon *et al* 2019, 11).

10.2.2 The large proportion of non-adults (44% of the excavated population) at Wittenham Clumps is unusual in Roman cemeteries, where adults tend to predominate. At other Roman cemeteries, including villa sites, such as Rectory Farm in Lincolnshire, the percentage of children was considerably lower (17.1%) and consisted largely of neonates (Keefe and Holst 2019), whereas young juveniles were the most commonly represented non-adult age group at Wittenham Clumps. Mortality is by far the best indicator of health and suggests that this population suffered from significant early childhood stress, either in the form of malnutrition or disease. It is vital to analyse lesions for childhood stress in both the children and the adults from this population during full analysis of the remains in order to understand potential causes of this stress and the impact this had on the population as a whole – although it must be kept in mind that only part of the site was excavated and as such, only a proportion of the population may be represented in this assessment.

11 ARCHAEOBOTANTICAL REMAINS

Ellen Simmons

11.1 Introduction

11.1.1 A comprehensive archaeobotanical sampling strategy was implemented during archaeological excavations carried out on behalf of the Earth Trust at Wittenham Clumps, Little Wittenham, Oxfordshire (NGR: SU56299257). Seventy-three samples were processed by flotation for the recovery of charred plant macrofossils and wood charcoal. The samples are from features which date predominantly to the Iron Age and Roman periods. The aims of the assessment were to:

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



- evaluate the potential of any paleoenvironmental material present in the samples to provide evidence for crop plants or wild plant foods.
- evaluate the potential of any paleoenvironmental material present in the samples to provide evidence for environment or land use.

11.2 Preservation

11.2.1 The preservation of the plant material and wood is by charring, with preservation of charred plant remains being relatively good. Cereal grain, cereal chaff and wild or weed plant seeds are present in the samples. Cereal grain is generally well preserved, with minimal distortion and epidermis frequently intact, although some cereal grain was poorly preserved and identifiable by gross morphology only. Wood charcoal is also well preserved with minimal evidence for vitrification, whereby charcoal takes on a glassy appearance which may hamper identification or the recording of dendrological features.

11.2.2 Small rootlets are present in most of the samples, indicating that there is some potential for charred material to be intrusive, particularly where the concentration of charred plant remains and/or wood charcoal is low. The burrowing snail Ceciloides acicula, which is suspected to be a recent introduction to Britain (Davies 2008, 177), was also found in several of the samples, along with occasional untransformed seeds, further indicating the presence of some intrusive material.

11.3 Results

Area A

11.3.1 Of the eleven samples from Area A, six produced low concentrations of charred material consisting of occasional cereal grains and >2mm3 wood charcoal fragments. Sample 11 from posthole F279 produced no charred plant remains or >2mm3 charcoal fragments. The presence of charred cereal grain in samples 209 and 210 from the ring ditch of potential round barrow F266 may however be of significance as material for radiocarbon dating.

11.3.2 A high concentration of wood charcoal was found in Sample 214 from probable Iron Age posthole F334, which is located just outside the entrance to a roundhouse and therefore possibly related to the doorway or a porch. Preliminary examination of the wood charcoal assemblage indicates that a predominantly ring porous taxon is present along with some diffuse porous taxa.

11.3.3 A low concentration but a relatively diverse assemblage of charred plant remains was found in Sample 213 from Iron Age storage pit F369. Barley grain (Hordeum distichum/vulgare) and probable spelt wheat grain (Triticum cf. spelta) are present along with spelt wheat chaff (Triticum spelta) and a wild or weed seed assemblage which includes typical crop weeds or plants of fertile disturbed soils such as fat hen (Chenopodium album), black bindweed (Fallopia convolvulus), parsley piert (Aphanes arvensis) and plants associated with damp soils such as spike rush (Eleocharis sp.) and blinks (Montia fontana spp. chondrosperma).

11.3.4 High concentrations of charred plant remains were found in Samples 137 and 139 from Roman corn dryer F300, with Sample 137 also producing a high concentration of wood charcoal. The charred plant remains assemblage includes barley grain and spelt wheat grain, some of which showed



evidence for germination. Spelt wheat and indeterminate glume wheat glume bases are also present, along with some wild or weed plant seeds. The wild or weed seed assemblage consists of typical crop weeds such as scentless mayweed and brome grass along with taxa commonly associated with damp soils such as blinks, spike rush and most of the species of sedge which are potentially present (Carex spp.). Large (>2mm) vetch or vetchling seeds (Vicia/Lathyrus spp.) were also found.

11.3.5 Preliminary examination of the wood charcoal assemblage from Sample 137 indicates that both ring porous and diffuse porous taxa are present, suggesting the use of a mixture of different woody taxa as fuel in the corn dryer.

11.3.6 Sample 134 from corn dryer F300 also includes abundant fragments white vesicular material which is tentatively identified as some form of slag. Similar material was also found in Sample 216 from the upper fill of Roman storage pit F999 in Area D.

Area C

11.3.7 Of the nineteen samples from Area C, eight produced low concentrations of charred plant material consisting of occasional cereal grains, wild or weed plant seeds and >2mm charcoal fragments. Three samples, Sample 59 from grave F602, Sample 69 from grave F605 and Sample 10 from storage pit F514 which contained an infant burial, produced no charred plant remains or >2mm3 wood charcoal fragments. Three samples from grave fills which were processed by wet sieving for bone and artefact recovery (see Table 32) also produced low concentrations of charred plant remains consisting of barley grain, wheat grain and a tuber/rhizome fragment. High concentrations of charred plant remains were however found in a series of samples from Iron Age pits and storage pits.

11.3.8 Sample 15 and 16 from Iron Age storage pit F534, which is located slightly off centre in the middle of large ring ditch/enclosure ditch F512, produced spelt wheat grain and glume bases as well as tentatively identified free threshing wheat grain. Probable free threshing wheat grain was also found in pit F542, which was cut by the terminus of ring ditch F512 but was not present in any of the other sampled features from the site. Hazel nutshell (Corylus avellana) is also present in Samples 15 and 16 from pit F534. Wild or weed plant seeds are present, with a particularly rich and diverse assemblage being found in Sample 15. The wild or weed seed assemblage includes several typical crop weeds or plants of fertile disturbed soils such as field gromwell (Lithospermum arvense), knotgrass (Polygonum aviculare agg.), scentless mayweed, fat hen and brome grass. Docks (Rumex sp.) which include several species commonly associated with waste and rough ground as well as species of other habitats are present, along with small seeded grasses (<2mm Poaceae) and sedges. High concentrations of wood charcoal were also found in Sample 15 and Sample 16. Preliminary examination indicates that the charcoal assemblage includes a ring porous taxon with closely spaced (<1mm) annual growth rings indicating slow grown timber, along with some ring porous taxa.

11.3.9 Sample 61 from Iron Age storage pit F603, Sample 81 from bottom fill of Iron Age pit F653 and sample 80 from the top fill of bell-shaped Iron Age pit F560 produced particularly high concentrations of cereal grain, cereal chaff and wild or weed plant seeds as well as high concentrations of wood charcoal. The cereal grain in these samples consists of barley, spelt wheat,



and indeterminate wheat. The cereal grain in Sample 81 is particularly well preserved and it was therefore possible to identify 'twisted' barley grains which are characteristic of the lateral spikelets of 'six-row' barley. The cereal chaff is of spelt wheat and indeterminate glume wheat. The wild or weed seed assemblage includes similar taxa to pit F534 such as field gromwell, knotgrass, fat hen, scentless mayweed, brome grass and docks. Clover/medick (Trifolium/Medicago spp.) and vetch/vetchling (Vicia/Lathyrus spp.) are also present, along with blinks, small seeded grasses and sedges. The charcoal assemblage is composed of both ring porous and diffuse porous taxa.

11.3.10 Sample 79 from the basal fill of Iron Age pit F699 and Sample 83 from Iron Age pit F683, which also includes frequent animal bone, produced moderately high concentrations of charred plant remains consisting primarily of cereal grain along with cereal chaff and wild/weed plant seeds. The cereal grain in Sample 79 is particularly well preserved and it was therefore possible to identify 'twisted' barley grains. The chaff is again of spelt wheat and indeterminate glume wheat. Oat grain is present in Sample 83 but no oat floret bases were found during preliminary scanning, so it was not possible to determine whether this a crop or wild oats brought to the site as crop weeds. The wild/weed seed assemblage is similar to that found in pits F512, F603, F653 and F560. Sample 79 and 83 also produced moderate to high concentrations of wood charcoal which includes both diffuse porous and ring porous taxa.

11.3.11 Sample 77 from the fill of posthole F621 produced a high concentration of wood charcoal, composed predominantly of a ring porous taxon.

Area D

11.3.12 Of the forty samples from Area D, twenty-six produced low concentrations of charred plant material consisting of occasional cereal grains, wild or weed plant seeds and charcoal fragments. Two samples, one from grave F921 and one from basal fill 4723 of corn dryer F933, produced no charred plant remains or >2mm3 charcoal. Ten samples from grave fills which were processed by wet sieving for bone and artefact recovery also produced low concentrations of charred plant remains consisting of barley grain, spelt wheat grain and indeterminate wheat grain as well as large (>2mm) vetch/vetchling seeds (see Table 32).

11.3.13 Sample 33 from Iron Age storage pit F439 which contained an infant burial, produced a moderately high concentration of cereal grain, cereal chaff, and wild/weed plant seeds. The crop material and wild/weed seed assemblage is similar to that found in Iron Age pits from Area C, including 'twisted' barley grains. Large (>2mm) vetch/vetchling seeds are also present along with hazel nutshell and seeds of cleavers (Galium aparine). A high concentration of wood charcoal fragments, composed primarily of diffuse porous taxa, is present. The high concentration of charred material found in this feature is in contrast to the lack of charred plant remains and >2mm3 wood charcoal found in Iron Age pit F514 from Area C which also contained an infant burial.

11.3.14 Sample 119 from ring gully F925 and sample 113 from ring gully 876, which are likely to be ring gullies for two Iron Age round houses, produced moderately high concentrations of cereal grain, cereal chaff, and wild/weed plant seeds. The cereal grain is of barley, spelt wheat, and oat, although no oat floret bases were found. The chaff is of spelt wheat and indeterminate glume wheat. The wild/weed seed assemblage includes similar taxa to that found in the Iron Age storage pits from Area C but with some additional taxa such as club rush (Schoenoplectus sp.) and cabbage/mustard



(Brassica/Sinapis sp.). High concentrations of wood charcoal are also present in both samples, consisting of diffuse porous and ring porous taxa.

11.3.15 Samples from three Roman storage pits produced high concentrations of charred plant remains. Sample 92 from probable Roman pit F870 produced a particularly high concentration of wild/weed plant seeds, along with high concentrations of cereal grain and wood charcoal. Sample 215 from the basal fill of Roman pit F998 also produced a high concentration of wild/weed plant seeds, along with a high concentration of cereal grain and some chaff but very little charcoal. Sample 216 from the upper fill of Roman storage pit F999 produced a relatively high concentration of wild/weed plant seeds, along with low concentrations of cereal grain and wood charcoal. The crop types found in these samples are barley and spelt wheat. Oat is also present in pit F870, although no oat floret bases were found. Hawthorn (Crataegus sp.) is also present in pit F870. The wild/weed seed assemblage includes typical crop weeds or plants of fertile disturbed soils such as field gromwell, knotweed, cleavers, fat hen, scentless mayweed, orache (Atriplex sp.) and redshank/pale persicaria (Persicaria maculosa/lapathifolia). Vetches/vetchlings and clovers/medicks are also present, along with docks, small seeded grasses, blinks, spike rush and sedges. The charcoal assemblage from all three pits is composed primarily of diffuse porous taxa and includes whole pieces of roundwood tentatively identified as birch family (Betulaceae) in Sample 92 from pit 870.

11.3.16 Sample 105 from the flume of Roman corn dryer F933 produced a moderately high concentration of charred plant remains consisting of cereal grain, cereal chaff, and wild/weed plant seeds. Low concentrations of charred plant remains were also found in samples 112 and 91 from the basal fill of corn dryer F933 and in sample 89 from a deposit of burnt material within corn dryer F933. The cereal grain found in these samples is of barley, spelt wheat, and oat, although no oat floret bases were found. The chaff is of spelt wheat and indeterminate glume wheat. Large (>2mm) vetch/vetchling seeds are present along with clovers/medicks. The wild/weed seed assemblage also includes field gromwell, brome grass and small seeded grasses (<2mm Poaceae).

11.3.17 Sample 212 from Roman posthole F976, which contained the possible remains of a post rotted in situ, produced a high concentration of charred plant remains consisting of cereal grain, cereal chaff, wild/weed plant seeds and wood charcoal. The crop types and wild/weed seed taxa are similar to those found in the Roman storage pits from Area D.

11.3.18 Sample 118 and Sample 117 from Roman boundary ditch F414 produced moderate to high concentrations of wood charcoal composed of both diffuse porous and ring porous taxa.

11.4 Discussion of potential

11.4.1 The charred plant macrofossil assemblage has good potential to provide evidence for cereal crops and some limited potential for the use of other plant resources such as fruits and nuts. The charred plant macrofossil assemblage also has good potential to provide evidence crop husbandry, crop processing and crop storage practices.

11.4.2 The crop types of hulled barley and spelt wheat, which are the principal crop types found in both Iron Age and Roman features at the site, are typical crops of the Iron Age and Roman period in Britain. The occasional presence of 'twisted' barley grains indicates that the hulled barley is likely to be of the 'six-row' type, although the presence of 'two-row' barley cannot be ruled out. This



evidence from preliminary assessment generally indicates continuity in the crop types cultivated in the Iron Age and Roman period at the site. The presence of tentatively identified free threshing wheat in pit F534, which is located at the centre of large Iron Age ring ditch/enclosure ditch F512 and in pit F542, which was cut by the terminus of ring ditch F512 is more unusual for the Iron Age. This may indicate the cultivation of free threshing wheat as a minor crop or the incidental presence of free threshing wheat as a contaminant of other crops. It is not possible to determine whether the oat grain, which was found in both Iron Age and Roman features, is a crop or a crop weed due to the absence of diagnostic oat floret bases. Some of the large (>2mm) vetch/vetchling seeds, which were also found in Iron Age and Roman features, may be cultivated common vetch. Many of these seeds are well preserved and include the diagnostic hilum so it should be possible to identify them further during full analysis. Evidence for the use of other plant resources includes occasional hazel nutshell fragments in Iron Age features and a seed of hawthorn in Roman pit F870.

11.4.3 The cereal grain is likely to have been charred accidentally during parching, drying or food preparation or in the case of the storage pits, potentially by deliberate burning of the pit linings to clean them (Van der Veen and Jones 2006, 2007). The cereal chaff and many of the wild or weed plant seeds are likely to be by-products from crop processing which became charred as waste thrown onto fires or used as fuel. Where density of charred plant remains is low, such as in the samples from graves processed by wet sieving for artefact and bone recovery, this material is likely to be a background scatter of charred material from domestic hearths and suggests general occupation activity. Where the density of charred plant remains is high, such as in corn dryer F933 and in several Iron Age and Roman pits, this may indicate charred material preserved in situ or the deliberate dumping of charred waste.

11.4.4 The frequent occurrence of glume wheat and glume bases is typical of Iron Age and Roman archaeobotanical samples. In wet climates, the storage of glume wheats such as spelt in spikelet form helps to prevent spoilage (Hillman 1981). To extract the grain for consumption the spikelets are parched, often in corn dryers, to enable the hulls to be removed from the grain by pounding. Various other processing stages are carried out to remove chaff and weed seeds (ibid.). These by-products from the de-husking of spelt wheat are often discarded in domestic hearths or used as fuel (Hillman 1981 and 1984; G Jones 1984) and so are often preserved by charring. The composition of these crop processing by-products can provide information regarding whether grain is stored in a semi clean or fully processed state as well as the stages of crop processing being carried out at the site. The analysis of charred material from corn dryers can provide evidence for the function(s) of corn dryers as well as the use of crop processing by-products as fuel. The density of crop processing by-products and the density of charred cereal grain resulting from accidents or the deliberate charring of storage pits by fire in archaeobotanical samples, can also provide evidence relating to the scale of agricultural production at a site (Van der Veen and Jones 2006; 2007, Van der Veen 2016). Full identification and quantification of the rich assemblages of charred crop material and associated wild or weed seeds from Iron Age and Roman features therefore has good potential to provide evidence for crop processing activities being carried out at the site as well as the scale of agricultural production and how this may have changed over time.

11.4.5 Many of the wild or weed plant seeds present in the sampled contexts are likely to have been brought onto the site with the crops and therefore provide evidence for crop cultivation practices, although other sources of wild/weed plant seeds include fodder or bedding, roofing or flooring material, turves, and tinder. The wild or weed seed assemblage includes many taxa which are



frequently present in archaeobotanical samples from Iron Age and Roman sites in southern Britain and similar crop husbandry practices may therefore be indicated.

11.4.6 The presence of seeds from both nitrophilous taxa such as fat hen and orache, along with taxa associated with poor soil fertility such as clover/medick and vetch/vetchling for example, is a phenomenon that has been identified at Roman rural sites across southern Britain (Lodwick 2017, 40). Leguminous taxa have a competitive advantage over other plants where soil fertility is poor, as they can fix nitrogen from the atmosphere. It has been suggested that leguminous taxa may have been encouraged or even sown on fields in the Roman period which were left fallow to improve soil fertility and provide grazing for livestock (Carruthers and Hunter Dowse 2019, 98). Blinks and common spike rush are taxa commonly associated with damp soils, which indicate the expansion of agriculture onto less well drained, more marginal land in the Iron Age and Roman period (M Jones 1988; Lodwick 2017, 36). Docks and brome grass are perennials which are more likely to survive as crop weeds where ploughing is by ard rather than mouldboard plough (M Jones 2009). Cleavers indicates the autumn sowing of crops, which is consistent with the cultivation of spelt wheat as a crop suited to autumn sowing (M Jones 1981). Full identification and quantification of the rich and diverse assemblages of wild or weed plant seeds from Iron Age and Roman features therefore has good potential to provide evidence regarding land use and crop husbandry strategies as well as potential to provide evidence for whether these strategies changed over time.

11.4.7 The wood charcoal assemblage has good potential to provide evidence for the availability and exploitation of local woodland and/or scrub in the Iron Age and Roman periods. Where at least fifty charcoal fragments of a suitable size for identification are present, this is more likely to result in a representative sample of wood use, including rare taxa (Stuijts 2006). Preliminary examination using low power microscopy indicates that both ring porous and diffuse porous taxa are present in the wood charcoal assemblage from most samples. Identification of a representative sample of wood charcoal fragments from Iron Age and Roman features is therefore likely to provide evidence for the exploitation of a range of different woody taxa as fuel as well as potential to provide evidence for how woodland exploitation may have changed over time.

11.4.8 Where preliminary examination suggests that the charcoal in a sample is composed primarily of a single taxon, this may provide evidence for the selection of fuel for a specific purpose such as cremation or industrial fuel or evidence for wood used as timber where the sample is from a posthole. Examination of the whole fragments of round wood charcoal found in sample 92 from probable Roman pit 870 may provide information relating to woodland management.

11.5 Significance of the charred plant macrofossil and wood charcoal assemblage

11.5.1 The charred plant macrofossil assemblage is of regional research significance as evidence for the crops consumed at the site in the Iron Age and Roman periods, the scale of agricultural production at the site and evidence for crop husbandry, processing, and storage practices. The recovery of archaeobotanical evidence for changes in crop types and farming methods in the Iron Age and Roman period is a research priority for the Thames Solent region (Lambrick 2014; Fulford 2014). The archaeobotanical study of Roman corn dryers has also been highlighted as a research priority (Fulford 2014).

11.5.2 The assemblage of more than one hundred >2mm3 charcoal fragments found in Iron Age and Roman features are of regional research significance as evidence for the availability and exploitation of local woodland. The recovery of evidence for the exploitation of woodland for construction and fuel in the Iron Age and Roman periods, as well as the recovery of evidence for woodland management, are research priorities for the Thames-Solent region (Lambrick 2014; Fulford 2014)

12 OTHER FINDS: LITHICS, ARCHAEOMETALLURGY AND SPECIAL FINDS

12.1 Lithics

Joshua Hogue

Introduction

12.1.1 In total, 37 (314.9g) worked flints, 27 (360.8g) unworked burnt flints, and 1 (602.9g) naturally broken/unmodified flints were hand collected from Phase 2/3 excavations at Wittenham Clumps (Little Wittenham, Oxfordshire). The lithic assemblage comprised of residual material primarily dating from the early Neolithic and late Neolithic/early Bronze Age. A summary of the worked assemblage is given according to artefact type and feature number in Table 43 (Appendix L). A full archive catalogue of the worked material is given in Table 44 (Appendix L). All burnt unworked flint and naturally broken/entirely unworked material is quantified by count and weight in Table 45 and Table 46 (Appendix L).

Results

12.1.2 The density of lithic artefacts was extremely limited, with a handful of features producing only individual or small numbers of worked flints all of which were likely residual and redeposited. Most of worked flints had light edge-damage characterised by isolated or small discontinuous nicks, indicating the assemblage had been subject to relatively limited movement and re-arrangement. Many of the worked flints showed evidence of burning, consistent with incidental burning from later activity. Most of the worked flints had no patina or had only a lightly developed patina characterised by a dull film restricted to the edges and arises, or slight mottling of the surface.

12.1.3 Most of the lithic artefacts were made on light yellowish-brown flint, with rolled, battered, cortex, likely derived from the gravels capping Castle Hill. A smaller number were made on good quality dark grey flint, with 'chalky' white, unweathered cortex, probably derived from the Berkshire Downs.

Dating

12.1.4 No definitive Mesolithic flints were recovered. A bladelet excavated from upper fill (4643) of ditch F930 and a blade-like flake from fill (6282) of ditch F646 were both likely manufactured during the Mesolithic or early Neolithic.

12.1.5 A retouched fragment, most likely of a laurel leaf, was recovered from upper fill (4938) of pit F833 and likely dated to the early Neolithic. A platform rejuvenation flake with use-wear damage was recovered from silting layer (9006). It also was broadly typo-technological consistent with dating from the early Neolithic (Butler 2005).



12.1.6 An end-and-side scraper recovered from upper fill (6100) of ditch F698 most probably dated from the early Neolithic or later Neolithic/early Bronze Age. A thumbnail scraper was recovered from fill (9038) of robbed out column base F972 and likely dated to the later Neolithic/early Bronze Age (Butler 2005).

12.1.7 None of the other material was particularly diagnostic. A few of the flakes had clear evidence of having been manufactured using a hard-hammer technique (e.g. no lips, pronounced bulbs), which is typically associated with the later Neolithic/early Bronze Age and later Bronze Age, as well as probably, the Iron Age (Humphrey & Young 1999).

Discussion

12.1.8 The above assessment describes a range of artefacts dating most likely from the early Neolithic and late Neolithic/early Bronze Age recovered from Phase 2/3 excavations at Wittenham Clumps. Most, if not all, of the material survived as residual finds that were redeposited or reworked into later features. The lithic assemblage contributes to the to the existing body of evidence indicating that the site was the focus of human activity in prehistory (Allen et al. 2010).

12.1.9 The lithic assemblage and its assessment contribute towards the partial fulfilment of the project research aims (Noon et al. 2019). It helps to develop understanding of the chronological narrative of the site and enhances the understanding of the current state of the archaeological record and survival of the earliest artefacts through characterising the assemblage.

12.2 Archaeometallurgy

Gerry McDonnell

Introduction

12.2.1 This assessment report describes the material classified as slag recovered from excavations at Wittenham clumps, Little Wittenham, Oxfordshire. A brief overview of the material from the site is provided, followed by a detailed description and quantification. The significance of the material is discussed and recommendations made for further work. The assessment report follows the guidelines issued by Historic England (Dungworth 2015, 13-14).

Results

12.2.2 Most of the material derived from the iron smithing process, but no hammerscale was recovered indicating the slags are in tertiary (or higher) deposits. There was no evidence for iron smelting or non-ferrous metalworking. Table 34 (Appendix X) lists the count and weight of the slag types present on the site. The assemblage is dominated by smithing slag (total count 49 pieces, total weight 1.5kg) and hearth bottoms (four examples, total weight 1.3kg). There were four hearth bottoms (details are presented in Table 35), but two were incomplete. The two incomplete hearth bottoms were larger than the complete ones; but the size of all of them were more typical or Iron Age hearth bottoms, rather than Romano-British examples.



12.2.3 The distribution of the slags by Area is presented in Table 36; a single fragment of smithing slag was recovered from Area A (F308, a Roman ditch Terminus). In Area C a small quantity of smithing slag was recovered from an Iron Age pit (F546, 32 grams) and a ditch fill (F698, 63 grams). Four fragments of cinder were recovered from another Iron Age Pit (F532, 44grams). It was noted during the examination that this cinder was similar to a cinder termed Iron Age Grey; this material normally occurs in fist sized dumps, often in single dumps totalling 10's kg. It is not thought to be technological, but the result of a single conflagration event. It occurs in Iron Age contexts (there is one exception the author is aware of from Viking contexts on Unst in Shetland, (Dr Julie Bond. Pers. Comm.)). The best example is from Broxmouth Hillfort, East Lothian where it appeared to be derived from the burning down of a palisade (McDonnell 2013). At the (predominantly) Iron Age site of Beckford in Worcestershire, 29.5kg of cinder/Iron Age Grey was recovered, 23kg from Iron Age contexts, none containing more than 750grams, the remainder was from later deposits (McDonnell 1986). It was also noted that the slag classed as smithing slag from the Iron Age pit (F546) was very cindery and could be a form of Iron Age Grey.

12.2.4 Over 96% of the smithing slags by weight (hearth bottom weight plus smithing slag weight) was recovered from Area D. and it was concentrated in the ring ditch area, with 96% of the Area D slags and 93% of the total from the site in the area. A total of 2.6 kg of slag, as well as the only fragment of hearth lining recovered from the excavation, (which included the partial survival of the blowhole giving a diameter of c.15mm, and they normally range from 15-25mm), was recovered from the ring ditch area (Table 37), of which 1.5kg was recovered from the fill of the drip trenches, and 1.1 kg from the fill of the later (Romano British) graves in the area, presumably disturbed from the Iron Age deposits. The hearth lining fragment and two very small smithing slag fragments were recovered from a dumping layer (F932, undated). One piece of smithing slag from the drip trench (F876, Context 4741) was egg shaped and responded weakly to a magnet; these pieces have been observed before but have not yet been investigated.

12.2.5 The slag from Context 4273 (Iron Age drip gully, F925), was black in colour and more cindery than the slag present in other contexts, this could be due to the use of coal as a fuel. A fresh fractured surface of one sample was analysed by HH-XRF to assess the presence of sulphur. No significant sulphur peak was present which does not rule out the used of coal but makes it unlikely.

Discussion

12.2.6 Although the assemblage is quite small (total weight 3kg), the majority is concentrated in the ring ditch area of the north of Area D (Tables 36 and 37). No hammerscale was recovered, and only one piece of hearth lining, yet the presence of hearth bottoms and smithing slag is a strong indicator that a smithy operated in that area in the Iron Age. The assemblage does contain some small examples of Iron Age Grey, indicating that there had been major burning event, and it was noted that many of the Iron Age contexts mention charcoal flecking in the context descriptions. Small smithing slag assemblages are typical of many rural Iron Age sites.

12.3 Special finds

Anni Byard

12.3.1 A total of 314 objects weighing 5745.1g were assessed for this report. Most of the assemblage comprises iron objects (count 240; 2902.9g), plus 15 objects in copper alloy (146.6g), two in lead alloy (1383.1g), four in worked bone (81.5g), seven fragments of unidentified metallic slag (142.5g) and one ceramic object (13g). Natural objects were quantified but not weighed. The coins are included in the quantifications and site discussion below but have been separately catalogued (see Tables 40 and 41 in Appendix K). Finds recovered from environmental samples have not been included in the assessment. The assemblage being discussed here is summarised by excavation area and artefact function in Table 39 (Appendix K).

12.3.2 The finds span the Late Bronze Age (c.1000 – 750 BC) through to the medieval / post medieval period, however, the vast majority are of Roman date and were recovered from Roman period contexts. There are a small number of Late Iron Age / early Roman finds (pre-second century AD) while most are probably later Roman or earliest early Anglo-Saxon in date (c. AD 300 – 450).

Area A

12.3.3 There are 34 objects from this area, comprising mostly nails recovered from pits and ditches plus six associated with the corn dryer (F300). All the nails are under 15cm in length (Manning type 1b) and would have served in range of purposes, both within and outside of a domestic and structural context. A single piece of slag was recovered from the fill of Iron Age pit feature 344, while a medieval lamp hanger recovered from a recut of the barrow ditch (F266) is probably intrusive.

Area B

12.3.4 No metal objects or small finds were recovered from this area.

Area C

12.3.5 Of the 46 nails recovered from this area, 43 are associated with a single late Roman coffin burial (F696). One nail each was recovered from a ditch (F511), a pit (F534) and a gully (F561). These are all probably Roman in date. The tip and part of the shank of a bone pin was recovered from the fill of ring ditch feature 649 however it is not closely datable on its own. It may be a hair pin or the tip of a drop spindle. A single copper alloy coin was recovered from the mouth of a skeleton in grave 604. Although very worn it is certainly late Roman and may be a nummus of Arcadius (AD 388-402).

Area D overview

12.3.6 This area produced most of the finds recovered during excavations. The area is split into two sub-groups, Area D and Area D – Villa, to enable distinction between artefacts recovered from the building and those from the wider area. An overview of the finds from Area D is presented first.

Area D

12.3.7 Boundary ditch feature 414 yielded 36 metal objects including two copper alloy brooches dating from c. AD 25-100, a fragment of a copper alloy spoon and an iron serving spoon, both of earlier Roman date (pre-c. 300 AD). A copper alloy decorative stud recovered from the dumping layer into the ditch (context 4013) could be either Roman or post-medieval. A possible Roman lead token



(tesserae), possibly depicting a radiate head (although uncertain) was also recovered from this ditch as were numerous nails and iron fragments.

12.3.8 A late Roman coin hoard (SF13) was recovered from ditch F414. The hoard comprised 26 radiates dating from AD 260-296 and spanning issues of Gallienus (AD 260-8) through to the two British usurpers, Carausius and Allectus (to AD 293). A few barbarous copies are present (AD 275-85), and several coins are illegible, however a depositional date during the last years of the 3rd century seems likely. As this hoard qualifies as Treasure under the stipulations of the Treasure Act 1996, it is currently going through the legal process (case number 2020 T363). Four other coins were recovered from ditch F414. These comprise a worn sestertius of Titus under Vespasian dating AD 77-8 (SF32), a second century dupondius or as possibly of Faustina I / II (sf 26), and two worn radiates, possibly of Victorinus (AD 269-71; sf 120) and one barbarous commemorative DIVO CLAVDIVS (AD 275-85). The latter two may be strays from the hoard.

12.3.9 Small quantities of nails, ranging from one to eight in number, were recovered from the fills of 15 graves in Area D. Three graves (F458, F808, F863) contained decorated bone (probably antler) combs. Decorated with ring-and-dot motifs or incised linear banding, such combs are of late Roman / earliest 5th century date. Grave 808 also yielded a bone needle and two coins, both of which were very worn but of probable 4th century date. A late Roman bracelet, possibly cut down and resized and dating from c. AD 320-450, was recovered from ditch fill 4860 (F499). This ditch also produced four coins spanning a period of nearly 300 years. The earliest coin is an Iron Age copper alloy unit of Rues of the North Thames ('*Catuvellauni*') region dating from AD 1-10. This is the earliest coin from the excavations. The other coins are a dupondius of Trajan (AD 114-17), a radiate of Gallienus (AD 265-6) and a probable barbarous radiate (AD 275-85). Several nails were also recovered from the ditch.

12.3.10 Deposits in a large pit (F848) comprised nail fragments and a single hobnail. Ditches, pits and a gully also yielded nails and nail fragments, albeit in small quantities. A large fragment of fired clay with a hole through it and with slag adhering to the clay may be the remains of a hearth or furnace blowhole. This was recovered from the fill of ring gully F876. Of potentially Iron Age date, several pieces of slag were recovered across the excavation, including from an Iron Age pit in Area A (see above). Nails were recovered from the southern corn dryer F933, and pit F960 yielded a possible leatherworking or woodworking bradawl. The tool appears to retain some gilding on the hilt. A possible gouge was recovered from the same pit.

12.3.11 The latest object from Area D is a medieval or post-medieval bar mount with suspension loop. This could be as late as the 17th century and was found in the topsoil.

Area D – Villa

12.3.12 The villa complex yielded a total of 55 objects including 30 nails from pits, postholes and robbed-out trenches associated with the villa's wall. Nails were also recovered from silting layers within the bounds of the building, as too were several personal and domestic items. These comprise a copper alloy toilet spoon or spoon probe (SF122), a strap fitting (SF29) and a possible brooch pin (SF123). Domestic material included a socketed cleaver (SF34) and a complete L-shaped lift-key with suspension loop (SF76). Four hobnails, a conical lead alloy weight (SF27) and a possible fine-work chisel (SF114) were also recovered from this layer. An iron tube with mis-joined seam and with a



nail through it appears to be a socket or fitting although its function is currently unidentified. No coins were recovered from within the villa building.

13 PUBLIC IMPACT

Johanna Ungemach

Profiles for project participants have been archived on the Digital Dig Team system and can be reviewed at https://digventures.com/dig-team/earth-trust/ and by clicking on each individual profile

13.1 Introduction

13.1.1 This section details the social impact of the Earth Trust's Gateway project public programming for (digital) visitors and project participants over the period from November 2019 until April 2021. DigVentures defines social impact as a measure of the positive and negative primary and secondary long-term effects produced by the programme, whether directly or indirectly, intended or unintended, over and above what would have happened in the absence of the project initiative. Results were analysed using a bespoke social impact methodology, drawing on DigVentures' Theory of Change and Standards of Evidence framework (Wilkins 2019; 77; Wilkins 2019: 30).

13.1.2 Public engagement was integral to the research aims of the Earth Trust's Gateway project, designed to provide 'a range of opportunities for local community members, school children and visitors to the area to get involved and learn more about the archaeology of Wittenham Clumps' (Noon et al. 2019, 16). The aim was to offer appropriate participation opportunities such as a community dig, guided site tours, finds laboratory sessions and an embedded public programme of events and school's sessions. Although Wittenham Clumps is situated within an area of low deprivation, it neighbours several areas which find themselves amongst the 40% most deprived neighbourhoods in the country (Source: English Indices of Deprivation 2019). The project therefore presented an opportunity to help address some of the social and educational needs of the surrounding communities, based on the principle that archaeology can do so much more than answer a planning brief: it can transform lives and communities and provide the kind of public support that underpins positive, sustainable growth (Wilkins 2020: 33). The emergence of COVID-19 prevented most of the in-person engagement and resulted in a pivot towards a more involved, but exclusively online engagement plan, which also broadened the reach of engagement.

13.2 Public programming

13.2.1 A carefully designed mix of professional excavation and public participation was programmed over the course of the project that stretched over several months with a 9-month long gap due to COVID-19 (4th November 2019 until 24th March 2020, and 4th January until 13th February 2021), thus creating a breadth and depth of participation opportunities from virtual site tours to structured finds room training. This blended model comprised seven months dedicated primarily to servicing commercial imperative and research brief, with public and virtual events running alongside, and one week of participation and training in the finds room to National Occupational Standards (Figure 27):

- Finds room training for adults (28th January until 2nd of February 2020) – 52 participants
- Sixteen weekly guided tours (19th November 2019 until 12th March 2020) – 300 participants
- Youtube video: Virtual walk through the site (1st May 2020) – 9,388 views
- Five virtual live Zoom events for families (1st, 16th, and 18th February 2021) – at least 887 participants
- Five virtual live Zoom events for adults (3rd, 8th and 25th February, and 4th and 9th March 2021) – at least 955 participants
- Earth Trust half term family event (February 2020)

13.2.2 In response to the COVID-19 pandemic and the resulting lockdown, most of the in-person engagement was pivoted to an extensive strategy of online engagement, which amplified the social footprint of the project beyond expectations. This included posting key developments on social media and on the project timeline, to keep the audience of project participants, as well as Earth Trust and DigVentures followers informed. It did not include a 'full' online strategy aimed at achieving the widest possible local or national coverage as this was not within the remit of the project or available team resources. The Earth Trust's Gateway project achieved a minimum of 42k engagements across Facebook, Instagram, and Twitter combined, with an average reach per post 20k per post on Facebook, plus 12.5k impressions on Twitter per tweet. In addition, there were 10k unique page views of more in-depth information on the project microsite https://digventures.com/earth-trust/, including background information, dig updates, and archival site records. Whilst these results demonstrate a significant public appetite for the Earth Trust's Gateway project, any evaluation of social impact needs to go beyond a list of output numbers of participants and visitors (Gould 2016). DigVentures has developed a bespoke evaluation methodology for measuring the social impact of public archaeology programmes and this is discussed in specific relation to the Earth Trust's Gateway project further below.

13.3 Evaluation methodology

13.3.1 The Earth Trust's Gateway project audience was separated into two broad categories: finds room and zoom event participants, who joined the project through a formal booking process, and site visitors and Youtube viewers, who attended site tours or watched the virtual walk through the site online, with all opportunities delivered free of charge. DigVentures have developed a methodology for measuring the social impact of archaeology programmes for both participants and visitors, pictured as a Theory of Change detailing outputs, outcomes and impacts (see Figure 27). In this framework, social impact can be conceived as the difference that activities make to people's lives over and above what would have happened in the absence of that initiative. Outputs are a measurable unit of product or service, such as a community excavation; outcomes are an observable change for individuals or communities, such as acquiring skills or knowledge. Impact is therefore the effect on outcomes attributable to the output, measured against two metrics: scale, or breadth of people reached; and depth, or the importance of this impact on their lives.

13.3.2 The credibility of a Theory of Change rests on the level of certainty that organisational activities are the cause of this change. In order for this certainty to be achieved, the correct data must be collected to isolate the impact to the intervention. The DV Theory of Change is therefore linked to a Standards of Evidence framework designed to articulate and highlight the causal links between



activity and change. These tools are then used to create a bespoke, project specific evaluation table linking activities, outputs, outcomes and evidence base (**Error! Reference source not found.**).

13.3.3 In support of this overarching methodology, two slightly different data collection strategies were undertaken for both finds room participants and virtual audiences; participants were interviewed pre and post dig experience (89% completion rate, or 52 in total), and virtual audiences completed a short questionnaire as part of the event booking process (90% completion rate, or 1297 in total). The age, pronouns and professional background of participants was derived through digital analytics, with categories derived from the Office for National Statistics, followed by more in-depth analysis designed to reveal 'whether or not people will have learnt about heritage, developed skills, changed their attitudes and/or behaviour, and had an enjoyable experience'. Questionnaires combined closed-end questions easily convertible to statistical data (usually attitudinal questions) and open-ended questions designed to elicit extended responses which were then coded for statistical analysis or otherwise consolidated in order to address the observable implications. The social impact results for both groups are discussed in turn below, with evidence organised according to the specific social outcome that activities were designed to achieve (Figure 27). Due to the delivery format of in-person guided tours and activities for children, participant information could not be collected to the above described standard and is limited to participant numbers.

13.4 Social impact – finds room participants

13.4.1 To ensure that 'a wide range of people will be involved in archaeology and heritage', people were invited to actively participate in the excavation by helping the team in the trenches, as well as in the finds room. The trench sessions had to be cancelled because of the pandemic, but over the course of six days in January and February, 52 people joined the finds room and were trained in post-excavation methods. To help decrease perceived barriers to participation, accessible day sessions were offered to give venturers a taste of the work happening in the finds room, all of which followed DigVentures' CIfA-endorsed Field School curriculum.

13.4.2 Gender profiles for participants were broadly balanced, with 67% female and 33% male, with the youngest aged 9 and the oldest 88. Participants represented a variety of full-time occupations (44%) and retirees (36%). The remainder were students, either of compulsory educational age or those attending university (16%), or people in long-term unemployment (4%). Those in full time employment were divided into categories based on the Office of National Statistics (ONS) classifications, the breakdown of which can be seen in Figure 27 illustrating that finds lab opportunities were taken up by a significant number of people with low income, as well as younger people. Examples of professions included Accountant, Cook, Farmer, Marketing, Company Director, Nurse, Martial Arts Instructor, DJ, Office Manager, Software engineer and teacher. Taking this into consideration, all age groups (apart from 25-34) and socio-economic backgrounds (apart from routine occupations) were represented in the data, with a marked improvement on existing community archaeology provision compared with the typically retired, over 65 local civic society groups (Wilkins 2020, 33) (Figure 27)

13.4.3 In addition to widening the socioeconomic range of participation (when compared to existing community archaeology provision), the project also shows a wide demographic range of participation. Participants joined the project from the immediate locality (28% of participants drove no further than 10 miles to take part in the project), regionally (28% of participants living no further



than 50 miles from the site) and from further away within the south of England (44% of participants having travelled more than 50 miles to have the opportunity to take part in the project, from as far as Suffolk, Norfolk, Bristol and Worcestershire) (Figure 28).Pre-experience interviews were completed with all project participants to help understand why each had decided to get involved in an archaeology project and provide a baseline understanding against which the impact of the experience could be determined through post-experience interviews. Participants answered in their own words, and the responses were coded into nine categories.

13.4.4 The results show that almost 45% of participants described themselves as 'passive consumers of archaeology' who embraced the opportunity to finally get hands-on with their interest. Some 15% of participants took part in the project because it was local to them and therefore easily accessible, and/or because they are specifically interested in the Roman period; similarly 13% of participants were prospective archaeology students or able to tick this experience off their bucket list. Contrarily, only 9% of participants joined a friend or family member who was interested in the project, but they did not have pre-existing interest in archaeology themselves (**Error! Reference source not found.**).

13.4.5 Post-experience 'exit' interviews were also undertaken for all participants, indicating how initial perceptions of archaeology changed and providing evidence for wider social outcomes, such as learning, skills acquisition and well-being. Participants were asked to summarise their highlight of the project in their own words, with responses then codified into four categories in order to visualise the results (Figure 27) The most important consideration for almost 75% of participants was the experience of real archaeology, and the opportunity to get hands-on experience with finds and increasing their knowledge in the finds room and about the site.

13.4.6 Closely related to the experience of real archaeology was the 'thrill of discovery' for 9% of participants, indicating a positive experience for first time participations. The remaining 15% of respondents also described the social life, teamwork and camaraderie as the highlight of their experience, illustrating a powerful positive side product of taking part in archaeology (Figure 27). A closer assessment of interviewees initial answers reveals that in addition to having a good time (such as "I loved the whole experience!"), more subtle impacts could be clearly discerned and will be analysed more in depth in the final report.

13.5 Social impact – Virtual participants

13.5.1 With the arrival of Covid-19, lockdown and the cancellation of in-person events, the public participation of the project pivoted online. Over the course of February and March 2020, anybody with access to an internet connection could participate in a live virtual talk. These talks, some of which were specifically tailored to children and families, included virtual tours of the site, introductions to life during Roman and Iron Age Britain, a peak in the finds room and more. This more accessible format engaged a much larger and wider audience than would have been possible to reach by offering only traditional excavation spaces. Around 1957 people signed up to take part in a virtual event. Recordings of the talks were available to people who couldn't make it to the live event. Almost half of the people (n=916) who signed up to events made use of this offer upon booking and ticked the 'recording only' option.

13.5.2 The exact number of individuals, as well as the exact socio-economic distribution cannot be ascertained as some people signed up for several events. Furthermore, in many cases a parent,



most often the mother, booked one space for the entire family to watch an event. Some parents indicated during the booking process that they are booking for several children, giving the year of births for every child, omitting their own, but then giving their own occupation instead of their children's. Similarly, it is not possible to know how many people watched the recording, but the offer of virtual events reached at least 1957 people in 26 different countries, namely Australia, Canada, Chile, Estland, France, Germany, Greece, Hong Kong, Hungary, Ireland, Italy, Japan, Malaysia, New Zealand, Paraguay, Poland, Portugal, Romania, Singapore, Slowakia, South Africa, Spain, Sweden, Switzerland, the United Kingdom and the United States.

13.5.3 Gender profiles for virtual participants show a majority of people (n=1,051) preferring the pronouns she and her (Figure 27), which is likely in part due the fact that mothers, rather than fathers were more likely to sign up in place of the rest of the family. According to the booking information, the youngest virtual participant was aged 3 and the oldest 95. A little more than half of the participants represented a variety of full or part-time occupations (28%) and retirees (27%). The remainder were students, either of compulsory educational age or those attending university (46%), or people in long-term unemployment (4%). Those in full or part-time employment were divided into categories based on the Office of National Statistics (ONS) classifications, the breakdown of which can be seen in Figure 27 illustrating that the virtual opportunities were not only taken up by almost 50% of young people, but also by a significant number of people with low income. Examples of professions included academic, accountant, animal welfare assistant, artist, bartender, engineer, farmer, dentist, dietitian, film maker, flute maker, gardnener, hedge layer, teacher, librarian, psychologist and waitress. Taking this into consideration, all age groups and socio-economic backgrounds were represented in the data, with a marked improvement on existing community archaeology provision compared with the typically retired, over 65 local civic society groups (Wilkins 2020, 33) (Figure 27)

13.5.4 Due to the virtual nature of the events, the only barrier to participation was not having a functioning internet connection. 26 countries Participants tuned in from the immediate locality (19% of participants live no further than 10 miles away from the site), regionally (17% of participants live no further than 50 miles from the site) (Figure 28) nationally and even internationally (12% of participants stated that their home country is not the UK). Overall, virtual participants joined the events from 26 different countries covering six continents (Africa, Asia, Europe, North America, South America, and Australia).

13.5.5 In addition to widening the demographic and socioeconomic range of participation (when compared to existing community archaeology provision), the virtual events attracted an overwhelmingly new audience for archaeology, with 52% of respondents (n=975) having never taken part in archaeology activities before (Figure 27). And 16% of the remaining 48% of participants who dabbled in archaeology before, had their first archaeological experience with DigVentures. The project also resulted in audience growth for Earth Trust, as 50% of respondents had not heard of the organisation prior to signing up for the online event, and 46% of respondents have never been to Earth Trust before the project. 60% of respondents (n=810) further requested to be added to the Earth Trust email lists to be informed of any future events, thereby becoming a permanent part of Earth Trust's audience.

13.5.6 Pre-booking questionnaires were completed by most virtual event participants to help understand why each had decided to get involved in an archaeology project, and provide a baseline understanding against which the impact of the experience could be determined through post-



experience interviews. Participants answered in their own words, and the responses were coded into twelve categories. The results show that over 35% of respondents (n=776) signed up for the event because they were specifically interested in the topic, either because the site is local to them, and/or because they have an interest in the Roman or Iron Age period. Many school aged children stated that they were currently doing Romans at school. This also explains the high number of respondents (n=293) who attended the event either to complement home schooling, or to simply increase their general knowledge. Some 24% of respondents (n=526) described themselves as 'passive consumers of archaeology' who embraced the opportunity to keep up with their interest; similarly, 16% of respondents (n=158) were already actively involved in archaeology or prospective archaeology students. The relatively high number of 7% of respondents who tagged along can be explained by the high number of children and families, where parents and siblings joined the audience who did not necessarily (**Error! Reference source not found.**).

13.5.7 The online format of the events complicated the undertaking of post experience interviews. Participants were asked to fill in an online questionnaire after the event, but only 47 people/families complied (2.4%). The questionnaire consisted of several open ended as well as closed questions, concerning the quality and format of the broadcast, but also participant's impression of the presented archaeology, indicating how initial perceptions of archaeology changed and providing evidence for wider social outcomes, such as learning, skills acquisition and well-being. Participants were also asked to summarise their highlight of the online event in their own words, with responses then codified into six categories to visualise the results (Figure 27).

13.5.8 Responses were largely positive with a high percentage of respondents stating that they got 'a taste of what it 'feels' like to do real archaeology' (84%), and that they were provided with a 'clear background to the site' (83%), a clear reason why the site is important' (91%), and a 'clear understanding of what has been found' (89%). A further 90% of respondents are of the opinion that the broadcast was a 'good substitute for in person attendance', and 40% of respondents said that they would not have attended the event if it had been in person at Earth Trust. This shows how much the reach of potential audiences has been widened by this online format. The events have also received largely positive feedback from families, with 68% stating that similar events have the potential of being 'something exciting to do as a family'. According to the questionnaires, virtual events have the potential to be an educational supplement (87%), while still being fun (71%).

13.5.9 Regarding their highlight of the event, the most important consideration for 37% of participants was the opportunity to be able to see the finds up close and/or get a tour of the site. Closely related to merely experiencing the archaeology was the accumulation of knowledge by learning about history (16%), the Earth Trust site (14%) and about the finds (8%). (Figures 27). Nevertheless, 20% of participants also described the interaction with the hosts, and their engaging presentation of the material as the highlight of their experience, illustrating a powerful positive side product of taking part in archaeology. A closer assessment of interviewees original answers can also reveal more subtle impacts that can be clearly discerned and will be analysed more in depth in the final report.

13.6 Social impact – communities

13.6.1 Alongside structured activities for project participants, other lighter touch opportunities were provided for site visitors during certain stages of the project. Regular guided tours offered a chance to talk to and interact with the team and drop into the adjacent finds room to see what had been



discovered. They detailed the history of the site, explained the research process, and highlighted the day's latest finds. Approximately 200 members of the public were thereby introduced to the site. Due to the busy nature of a working commercial archaeology site, it was not possible to have visitors complete an evaluation form as part of their visit.

13.6.2 During half-term in February 2020, Earth Trust offered events for families during which children could get hands-on with archaeology and the history that was being excavated. Activities included Iron Age and Roman cooking, how to make Roman pottery, how to identify animal bone and a science experiment figuring out the ph level of soil. This was a free informal event allowing visitors to drop in whenever and for how long it suited them.

14 DISCUSSION

14.1 Introduction

14.1.1 The overall aim of the project was to define and characterise the physical extent of the site through a programme of strip, map and sample excavation on the site prior to Planning Phases 2 and 3, the planting of trees, roundhouse reconstruction, infrastructure and services being put in. Specific aims and objectives for the Iron Age and Roman period are outlined in the Regional Research Framework for the Solent-Thames Region (Section 3.1; Hey and Hind 2014) and are referenced, where appropriate, in the following discussion.

14.2 Chronology

14.2.1 The site was continuously occupied from the at least the Late Bronze Age through to the Late Roman period, with well stratified features dating from every period. The main phases of occupation appear to be the Middle Iron Age and the 2nd to 4th Century AD, with later Roman activity in the form of a large Villa and two definite corn driers and potential third.

14.2.2 The earliest evidence for activity on, or in the vicinity of, the site came in the presence of lithic finds. These range in date from the Early Neolithic through to as late as the Early Iron Age. However, much of this material may survive as residual finds that were redeposited or reworked into later features. The evidence for the Late Bronze Age was sparce, and only one feature (F965) in the southwest of Area D could be definitively categorised as such due to the large quantity of handmade pottery (79 sherds). The other Bronze Age material is likely to be residual. Most of the features date to the Middle Iron Age – 358 in total which were excavated – these were mostly postholes, along with pits, ditches and ring gullies. There was a noticeable drop off in the number of features from the Late Iron Age or very Early Roman, only 97. Of these features there were at least three roundhouses indicating occupation during that period. The Roman features were characterised by a large probable trackway running through Area D, a large villa, and two cemeteries. The post-Roman features were predominantly furrows seen in Area A.

14.2.3 This chronology of the site correlates well with that of the areas previously investigated at the Earth Trust. Previous work had found very limited evidence of Neolithic and Bronze Age activity, particularly in the area around the site. Almost all the features investigated from the previous Skills



and Learning building, Office and Staff Car Park trenches were of an Iron Age date, with some Roman features.

14.3 Settlement characterisation

14.3.1 Previous work immediately to the west and northwest of the site had found direct evidence for settlement in the form of roundhouse ditches, post-built structures and small enclosures, and to the southwest were larger enclosure ditches (Allen et al, 2010, OA 2015, and Casswell, C 2018). This site built upon the previous work, with more of the same and some new discoveries including two Roman cemeteries and a large 3rd-4th century AD Villa.

14.4 The Iron Age settlement

14.4.1 The earliest occupation at the site dates from the Late Bronze Age with the possible evidence of a field boundary and scattered post holes. The earliest evidence for people living at the site is in the Early Iron Age, this is in the form of two large ring ditches, which are possibly associated with roundhouses, F266 in Area A and F511 in Area C. The interpretation of these as roundhouses is tentative as there appears not to be any associated post holes to indicate structures within the ring ditches. This could be that they have been truncated away by ploughing during the medieval or post medieval period. Other evidence of the Early Iron Age comes in the form of a large N-S aligned ditch which runs through Area A and Area D. This may have formed a boundary or an enclosure. In Area D there is a possible fence branching off the ditch aligned E-W. There were also large storage pits seen throughout the site. Pit F534 is of note in that it is in the middle of ring ditch F511 and the basal fills indicate that there may have been a burning event including the decapitation of a dog. The other pits are all of the same form as those seen in the later Iron Age periods with straight sides and flat bases.

14.4.2 The settlement was at its greatest extent in the Middle Iron Age with at least ten roundhouses seen throughout the site, multiple pit clusters and many post holes. The post holes may have formed fences or been part of structures such as four poster buildings as seen by F948, F949, F950 and F951 in the south west of Area D and F615, F616, F617 and F618 in the west of Area C. The ring ditches varied in size from the smallest at 7m in diameter to the largest being over 13m in diameter. The pits are very uniform in nature, most have a diameter of around 1m and are straight sided and flat bottomed. It is likely that these are storage pits however none of them have any evidence for grains within them which indicates that they were cleaned out in antiquity before being abandoned. Two of the pits, F514 in Area C and F439 in Area D, had neonatal burials in the base of them.

14.4.3 Storage pits such as these have typically been interpreted as grain silos for the storage of excess grain, with post-structures such as those mentioned above, acting as granaries (Cunliffe 1991). In order to keep grain from germinating the pits would have been hermetically sealed until used, suggesting they were used communally (Cunliffe 1992).

14.4.4 In the Late Iron Age there was a continuation of occupation, a further five roundhouses were seen in Area D, and there were more ditches and pits associated with either the Late Iron Age or Early Roman periods. Four of the five roundhouses were in the area of the later Roman Villa, with one F924 directly related to the villa and the Middle Iron Age roundhouses to the east of the villa. The villa wall cuts the F924, which then cuts the Middle Iron Age ring ditches. Within this roundhouse



there were post holes which possibly indicate an internal structure. There were eight late Iron Age or Early Roman ditches across the site, these are likely to be enclosure ditches for keeping animals.

14.5 The Roman settlement

14.5.1 The Roman settlement is characterised by a large trackway, agricultural activity in the form of three corn driers, a villa and burials throughout the site. The burials are discussed below. The trackway runs east to west in Area D and then turns to the north in Area C. It was made up of parallel ditches, which had been cut and recut over time. The most material was recovered from F414 which is the most substantial ditch nearest to the villa. The trackway appears to be earlier than the villa, as the outer wall F906, cuts the ditch F414. The material recovered consists of a lot of CBM, pottery and animal bone, and occasional special finds, including a hoard of 23 4th Century coins (SF13). The corn driers appear to be contemporary with the villa, in Area D the corn drier F933 cuts the ditch F414.

14.6 The Roman cemeteries

14.6.1 There were burials seen throughout Areas C and D (see Figure 12), which can broadly be split into two possible 'cemeteries' and further burials alongside the Roman trackway.

14.6.2 In Area C there were 14 burials, two of which are likely Middle Iron Age, with the other twelve being Roman, and probably from the 4th Century AD at the earliest, this date comes from SF36 a coin of Arcadius (388-402). The burials were varied in style with six being NW-SE or W-E aligned, all with the skulls to the west or south west. The other six were buried N-S aligned, of these two were buried with their skull to the north, two were buried with the skull to the south, one was only partial but would have had its skull to the south and the final burial was a decapitation with the body aligned N-S and the skull at the feet to the south. One of the burials was of a juvenile and the others were all adult interments. One of the burials was face down with a stone placed on the feet.

14.6.3 The two probable Middle Iron Age burials were both of children, one a neonate buried in the base of a pit in the foetal position. The other was a crouch burial cut into ditch F698, this is relatively rare and would be worth further analysis.

14.6.4 In Area D there were two areas of burials, one to the east of the villa and likely earlier than the villa as the Romans tended not to bury their dead so close to where they were living. The burials alongside the trackway are also likely to be earlier than the villa for the same reason. In Area D there were 27 burials and two disarticulated skeletons recovered. Of the burials there were 14 children including two neonates, and 13 adults. The high proportion of child burials is probably indicative of a high child mortality rate in the Roman period. One of the neonate burials was Middle Iron Age and found in the base of a storage pit in similar circumstances to the neonate recovered in Area C.

14.6.5 The Roman burials were all similar in style to those seen in Area C in that they were all varied and seemingly have no burial pattern to them. There were three burials that were face down, including a child. From three of the burials grave goods were recovered in the form of combs found behind the skull, it is probable that these individuals were buried with the combs in their hair. One of the burials was clearly placed in a coffin, the coffin nails were preserved in situ around the body. The

most poignant and interesting burial was that of a child, likely a toddler that was a decapitation burial.

14.7 Landscape setting

14.7.1 It has been suggested by Allen *et al* (2004) that the settlement spread out to the south and southwest of Castle Hill, with features of Late Bronze Age and Early Iron Age date concentrated to the north of the present road; it is suggested to have spread further to the south through the Middle Iron Age. Within this site there certainly appears to be an increase in density of features filled with Middle Iron Age material, although the presence of fresh Early Iron Age and occasional Late Bronze Age material in some pits and ditches suggests that this area was also within the settled landscape at the time.

14.7.2 The results of this excavation indicate that there was a large Iron Age settlement that was more extensive and complex than previously thought. The full extent of it is still unknown but the settlement appears to fade out to the south of Area D, with only sporadic post holes present. In the areas between those excavated it is expected that more storage pits and roundhouses would be present. Of the Roman activity, the full extent of the villa has not been revealed and it is likely that the footprint would be visible in the area north of Area D and south of the carpark trench in Area A. The villa did not however appear on the geophysics, so it may be quite ephemeral.

15 RECOMMENDATIONS

15.1 Analysis of the archaeology of the site

15.1.1 This work was undertaken as part of a multi-staged programme of archaeological works at the Earth Trust. The analysis stage of the project will provide a combined final report of the significant archaeology that has been excavated and recorded as part of all Phases of work undertaken to date. This will provide a holistic review of the site archive, providing a phased and illustrated narrative for the site discussed within a regional and national context. The recommendations made here, will be combined with those made for previous works (Casswell 2019). Proposals for a combined publication and dissemination stage are made below (Section 15.3).

15.2 Specialist analysis

15.2.1 Analysis and reporting for all investigations will be collated, and the following section highlights the additional research which project specialists have suggested should be considered as part of the completion of the works and publication of the site. The aim of further work will be focused on the consideration of the evidence within a regional and national context, comparing the archaeological evidence recovered from this investigation with sites which are contemporaneous and of a similar nature. Specific recommendations from assessment include:

Ceramics

- Full form and fabric analysis will need to be undertaken for all the pottery and ceramic building material – David Griffiths

- Petrographic analysis of the fired clay, daub, mortar, plaster, and concrete – Jennifer Murgatroyd
- Analysis of the fired clay fragments, especially those with vitrification, to investigate the possibility for high temperature industrial activity on the site – Rod McKenzie
- Analysis of materials bearing plant impressions – Ellen Simmons
- Analysis of the painted plaster through comparison with other high status Roman period sites – David Griffiths
- Two prehistoric weights to be sent for full analysis by Special Finds specialist – Annie Byard

Animal bone and shell

- Further quantification of the assemblage by minimum number of elements (MNE) and minimum number of individuals (MNI), skeletal part representation, metrical analyses, pathological analysis, and age-at-death analysis, including both epiphyseal fusion and tooth eruption and wear, for all major domesticates.
- The marine shell data collected during this assessment should be considered in further detail to explore the potential for the identification of location of oyster beds and oyster management strategies based on patterns of infestation.

Human Bone

- Full osteological analysis to understand the demographic structure of the population, analyse their health, evidence for diet, status and funerary treatment and how this corresponds with other Roman villa skeletal assemblages, especially since relatively few British Roman villa skeletal populations have been osteologically analysed.
- Analysis should record the minimum number of individuals, surface preservation, fragmentation, completeness, age, sex, living height, cranial metrics where possible, as well as ancestry, skeletal and dental pathology and also the mortuary treatment of the remains and compile the results in a report, including a detailed catalogue of each skeleton.
- AMS dating on a sample of the skeletons to gain a better understanding of the date of the burials.

Environmental

- Further analysis to provide a fully quantified record of the crop types present at the site and investigate evidence for crop husbandry, processing, and storage practices as well as to provide a representative and fully quantified record of woodland and/or scrub exploitation.
- Assess material suitable for scientific dating.

Conservation and special finds

- Analysis of the mineralised wood on SF111 and possibly SF34 for species identification.
- The clay hearth or furnace lining and slag should be analysed by the archaeometallurgist to determine the nature of any smelting or metalworking on site – *Gerry McDonnell*

15.3 Publication and dissemination

15.3.1 In discussion with the team at Earth trust, a programme of publication and dissemination resources are recommended. The nature of the proposals reflects the significance of the archaeology



recorded at the site and the nature of the archaeological finds recovered. In addition, the earth Trust is a public facing and education organisation, keen to continue communicating with the wider public about the rich archaeological landscape that the visitor centre occupies. The interest received during the investigations through the public programme was extremely positive, and demonstrates the value and benefits that can be drawn from embedding a community centred approach to archaeological works.

15.3.2 Dissemination plans include the following:

- Full technical report – a fully illustrated technical report will be submitted to the client, OCAS and linked to the OASIS record of the site. It will also be made accessible online via the project website. The draft report will be produced and forwarded to the Client and OCAS for approval.
- Open Access publication – a peer reviewed journal publication will be produced and submitted to a suitable journal, likely to be Internet Archaeology. Full Open Access will ensure wide accessibility for the project results.
- Educational resources for Earth Trust team – a suite of resources linked to the excavation and analysis discoveries will be developed for the Earth Trust team to support and facilitate ongoing educational engagement.
- Artwork for a large-scale A1 map / poster of the archaeological results, providing a visual summary of the excavations and communicating the significance of the results.

15.4 Archive

15.4.1 This report is one of a number of archive and dissemination products generated by the project, including the digital archive and metadata, the paper archive and the artefact and environmental material recovered and recorded. Selected archive material is currently held by DigVentures and will, when the project is complete, be deposited with the County Archive Facility and freely disseminated through Oxfordshire Historic Environment Record (HER), Archaeological Data Service (ADS), OASIS portal and the project microsite https://digventures.com/earth-trust/.

15.4.2 The archive will contribute one of the key research products associated with the archaeological investigations, and provide ongoing access to the site records, public engagement and associated research for future research and public benefit. Specific plans for the archive include:

- Preparation and deposition of an accessible digital archive, deposited with a suitable Trusted Digital Repository.
- Preparation and deposition of an accessible physical archive, deposited with Oxfordshire Museums Service.

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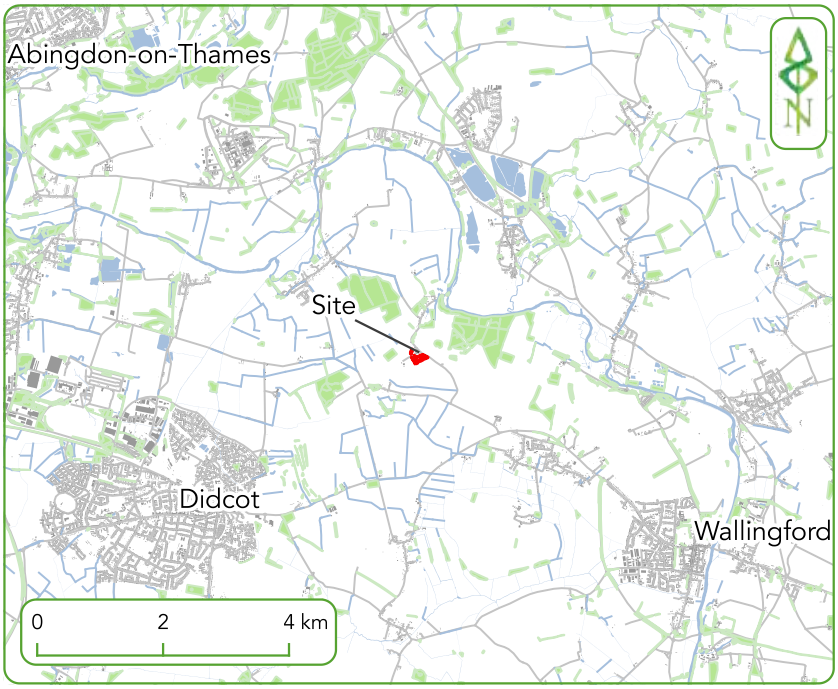




Figure 1. Site location



Figure 2. Excavation Areas and Trench Locations

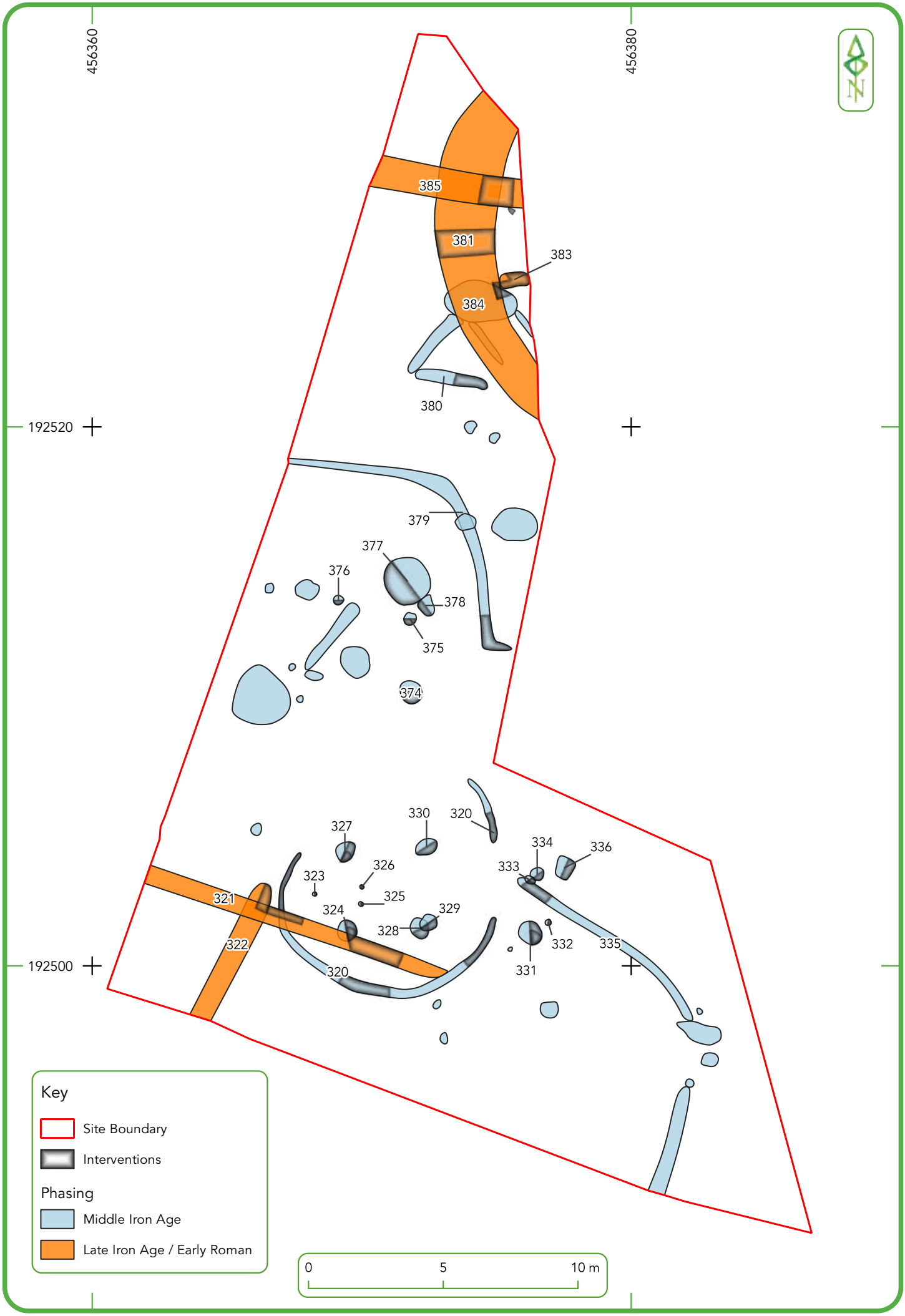


Figure 3. Area A - Trench 2 Staff Car Park

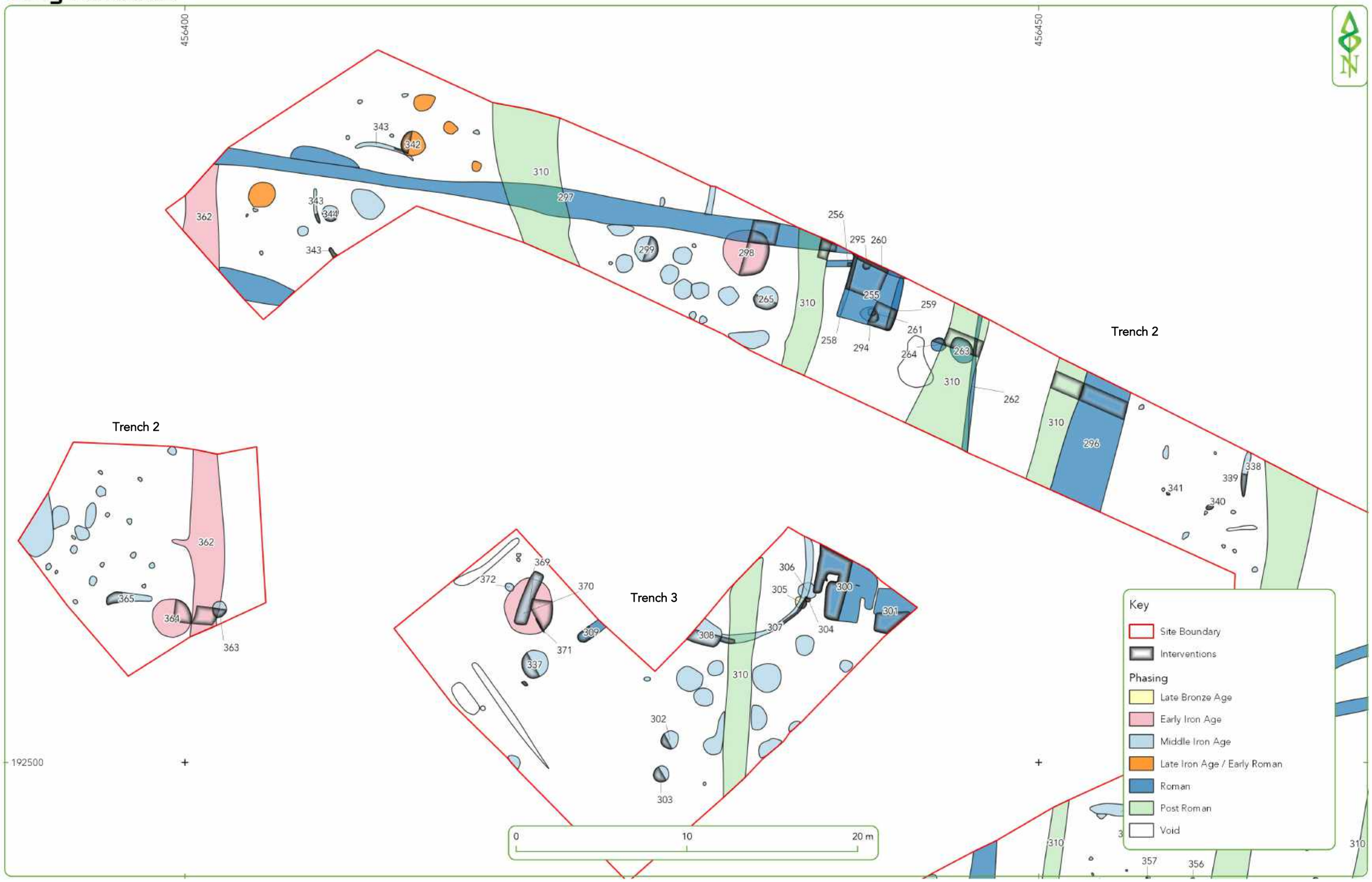


Figure 4. Area A Trench 2 North and Trench 3

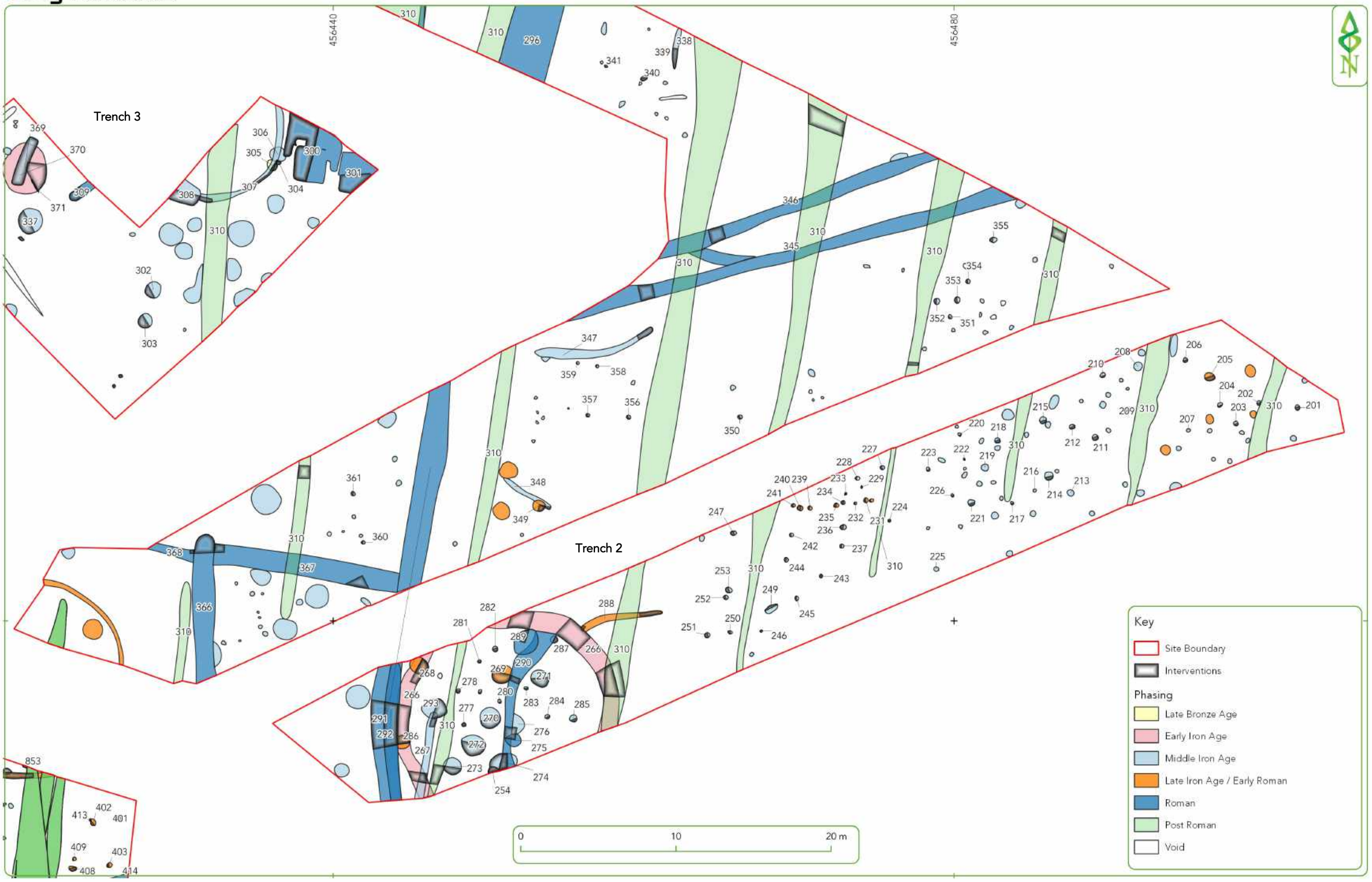


Figure 5. Area A - Trench 2 - South

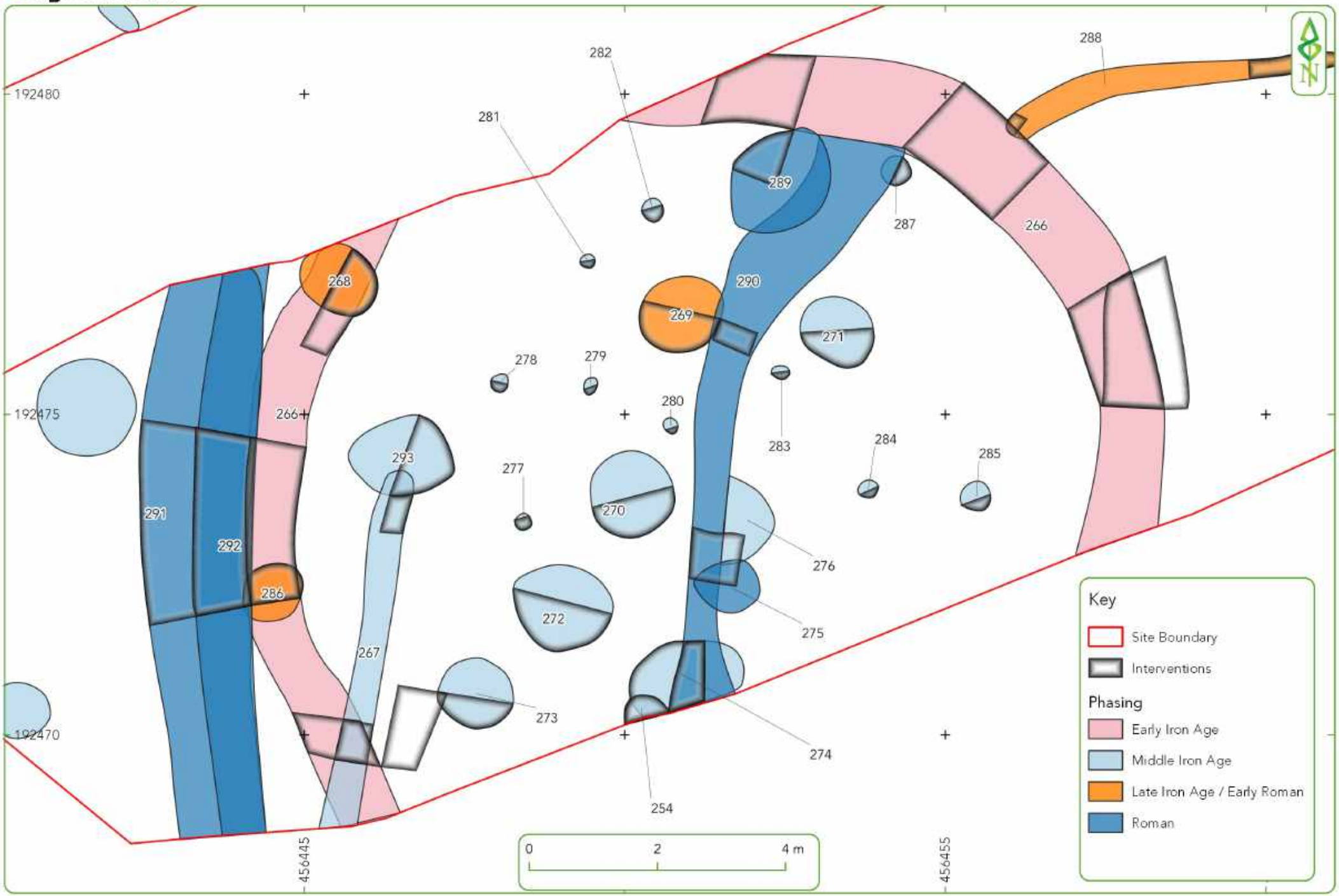


Figure 6. Area A - Trench 2 - Detail of Ring Ditch F266 and associated features.

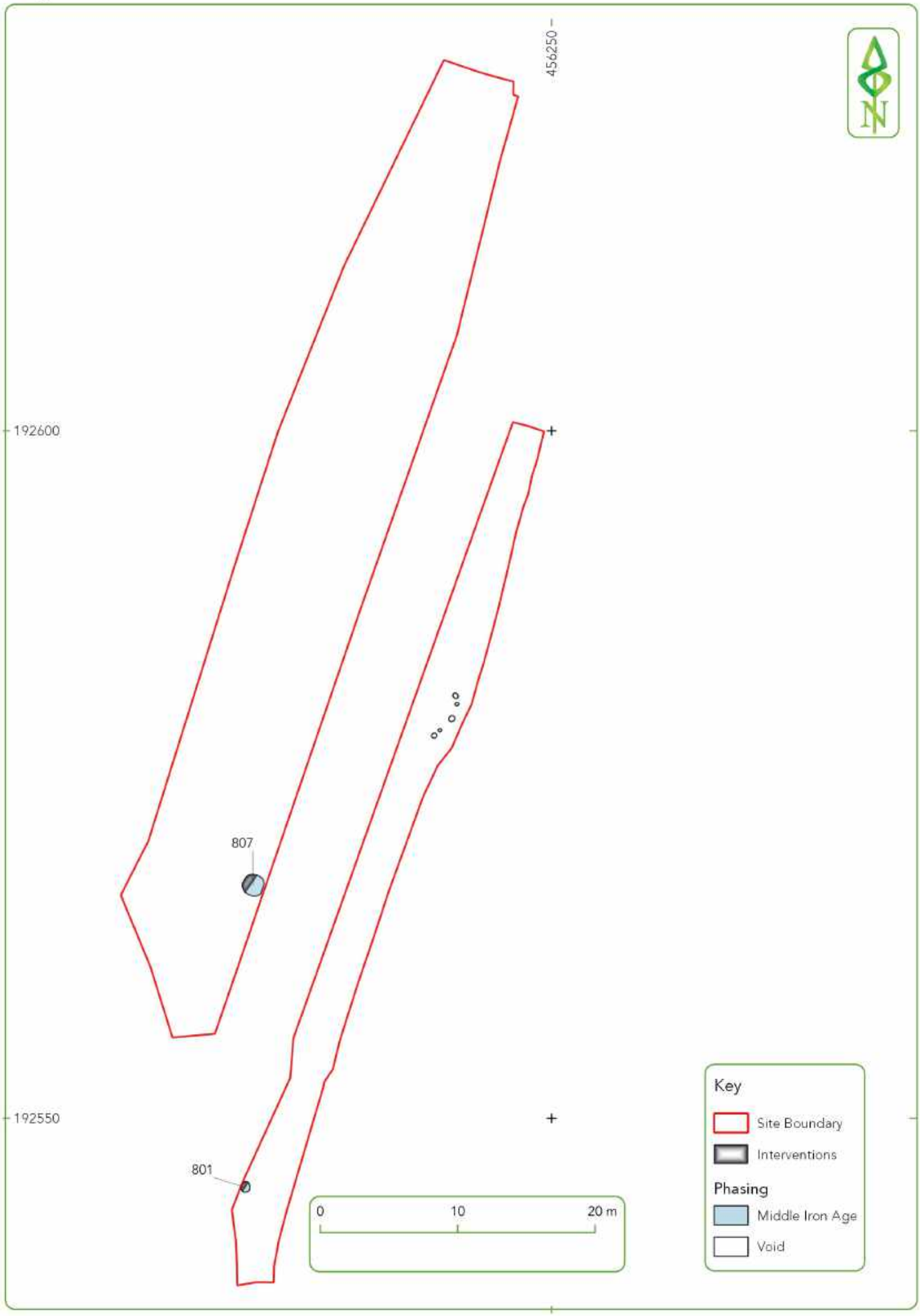


Figure 7. Area B - Trench 8



Figure 8. Area C - Trenches 5 and 6

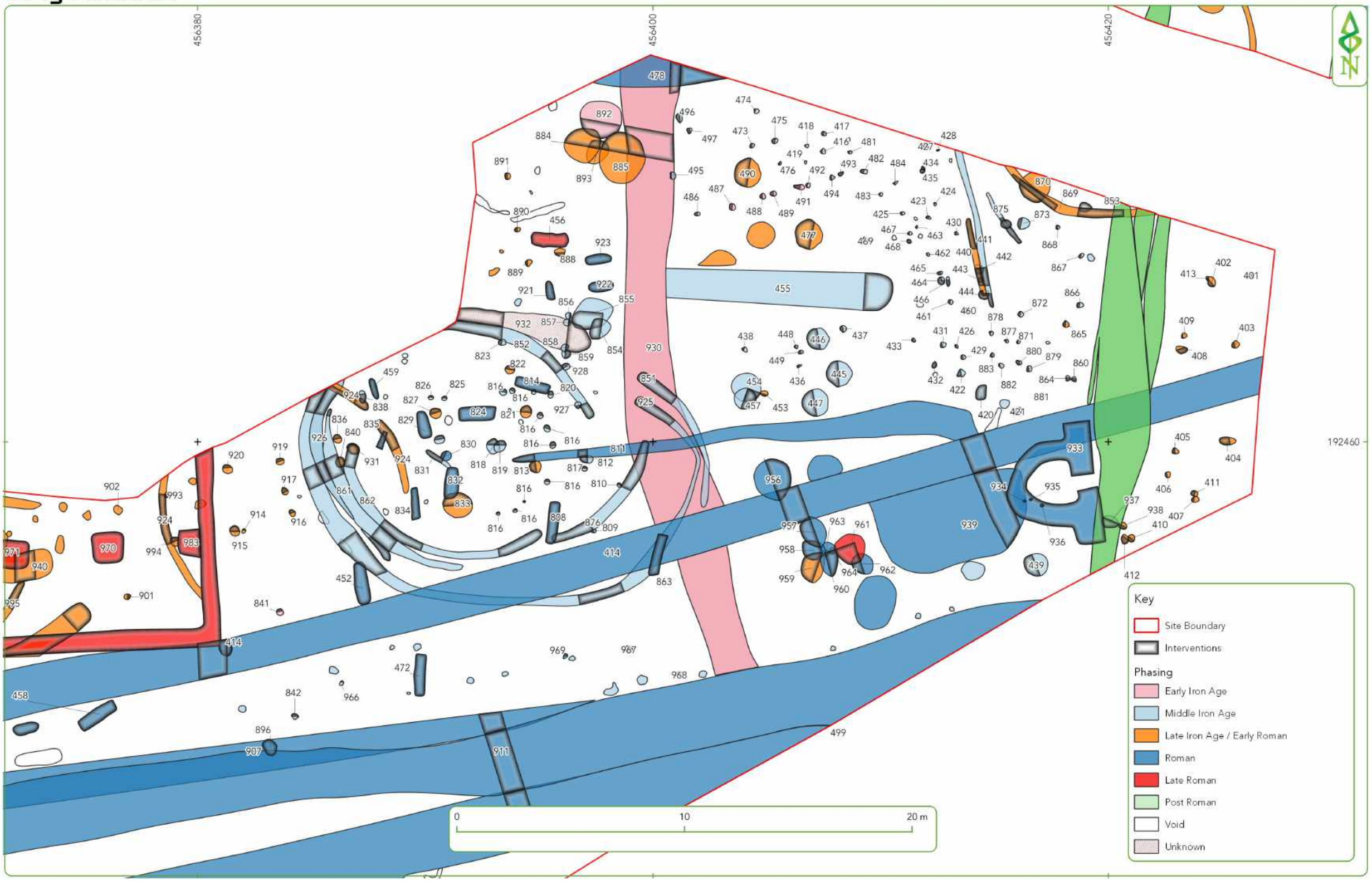


Figure 9. Area D - Trench 4 - East

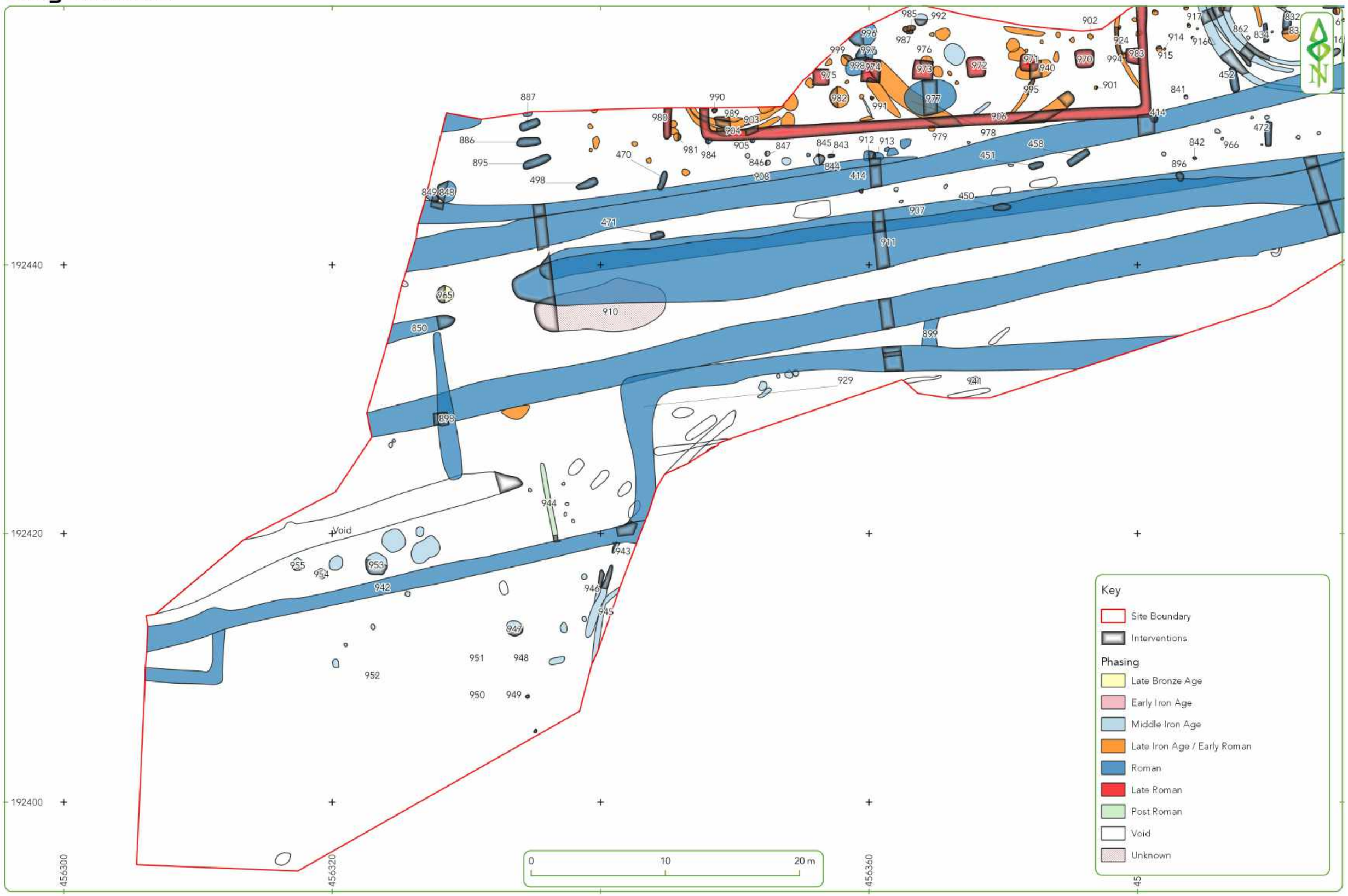


Figure 10 - Area D - Trench 4 - West

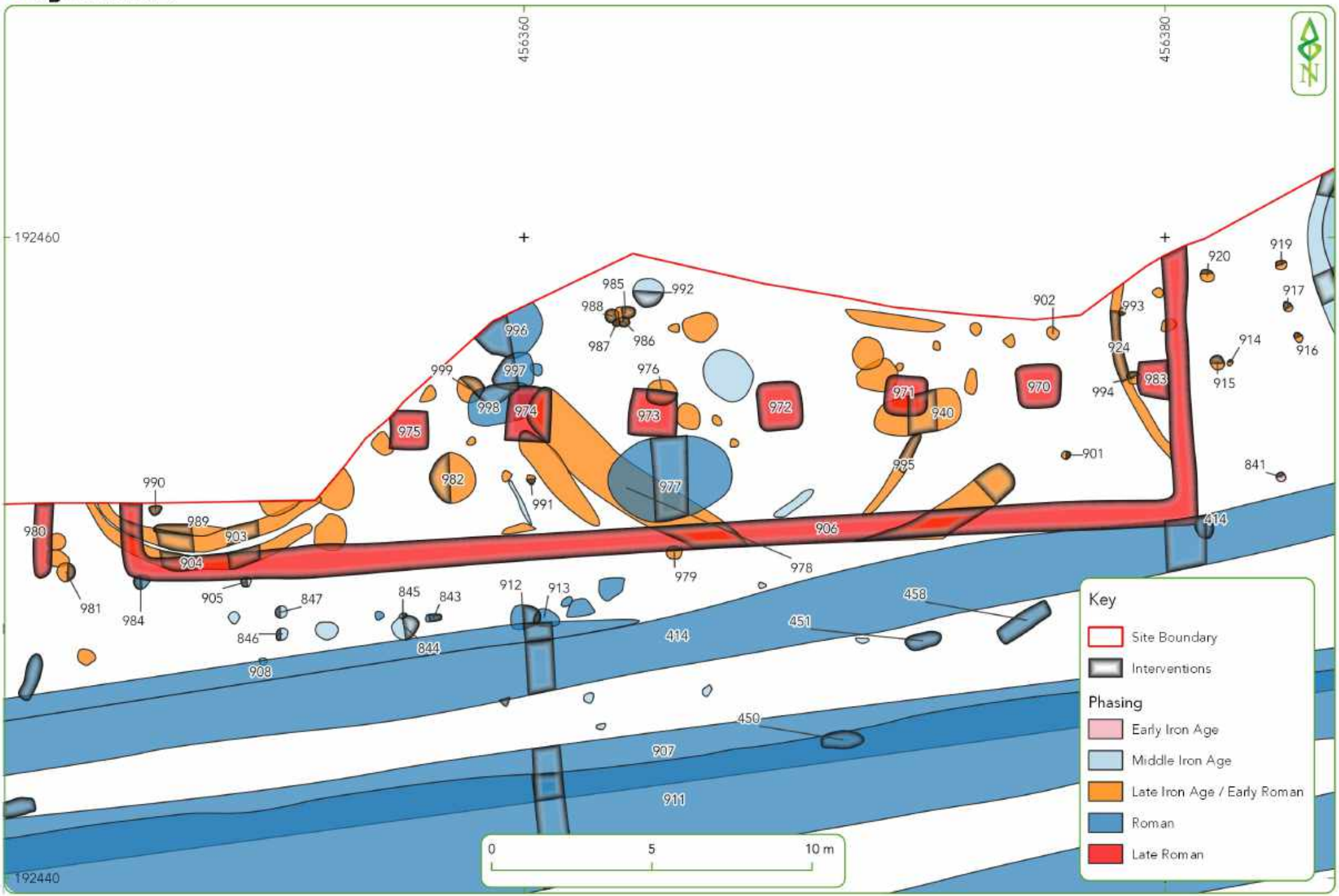


Figure 11 - Area D - Trench 9 - Villa



Figure 12. Location of Burials

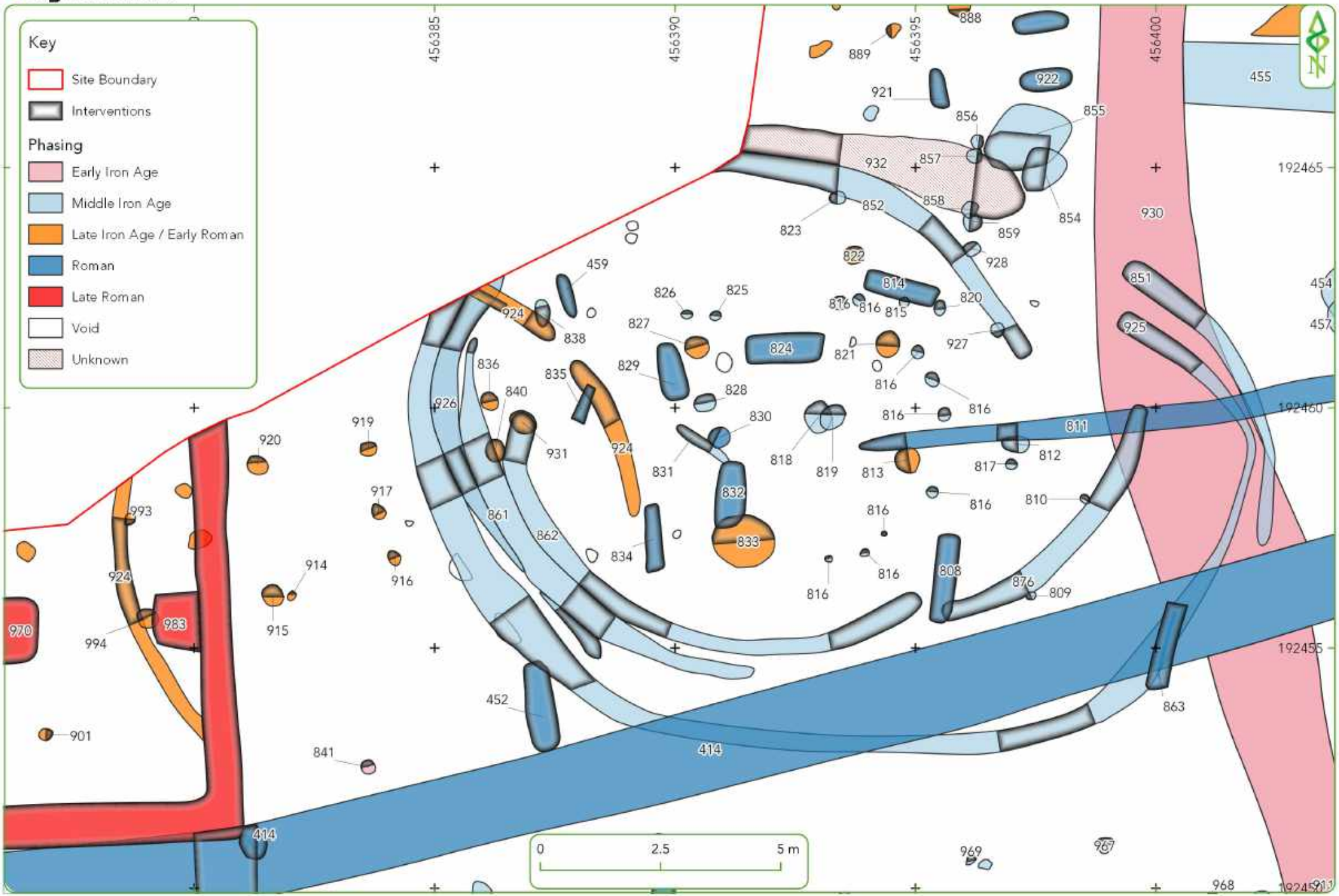


Figure 13. Area D - Ring ditches

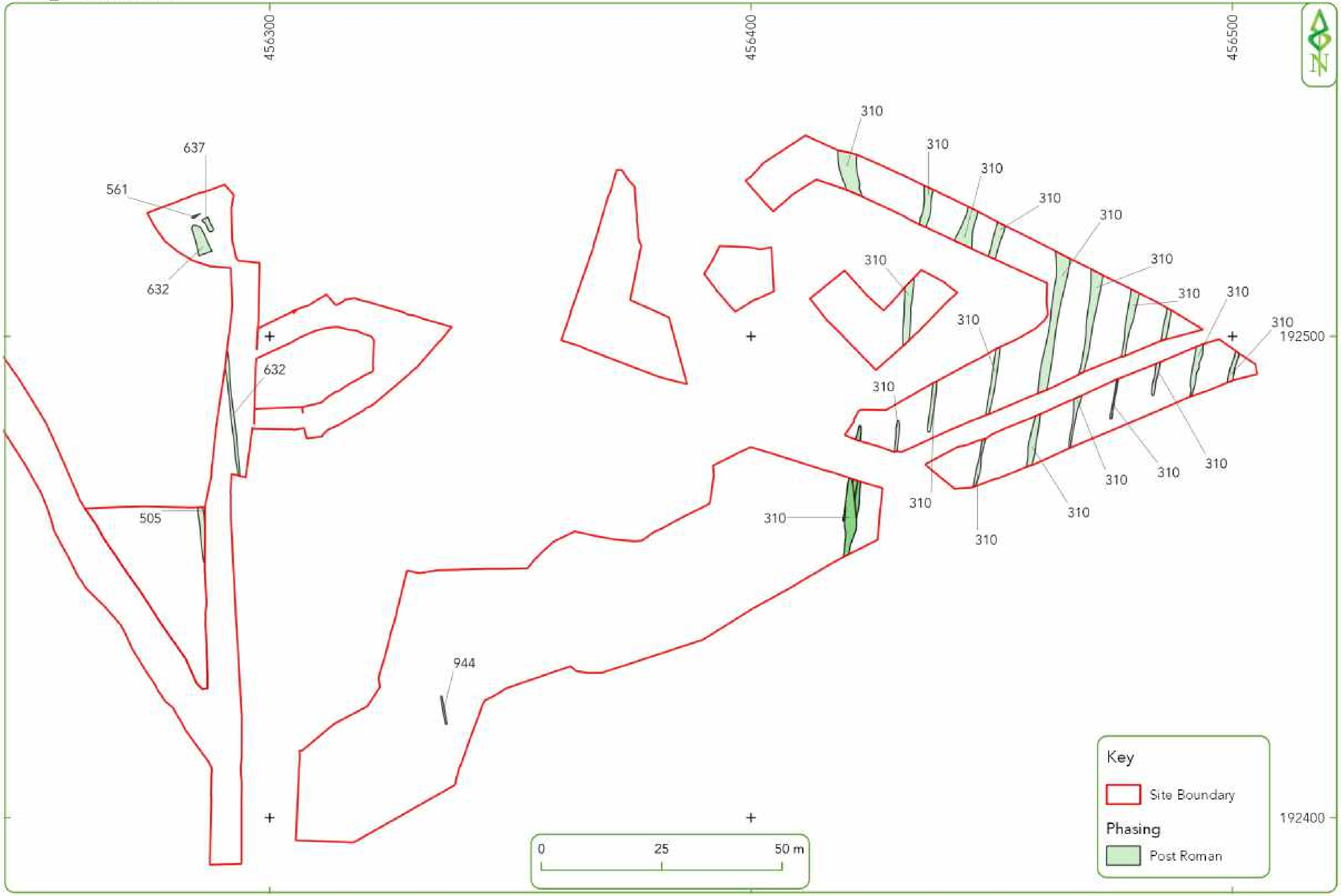
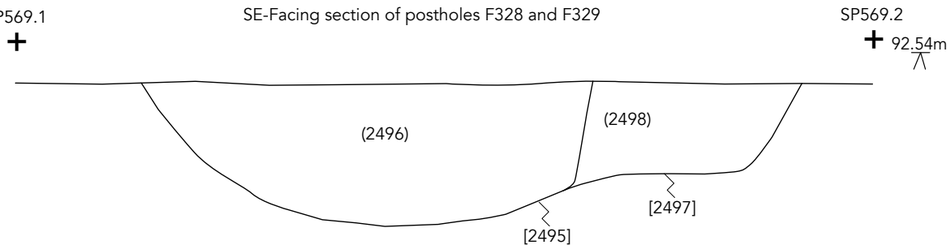
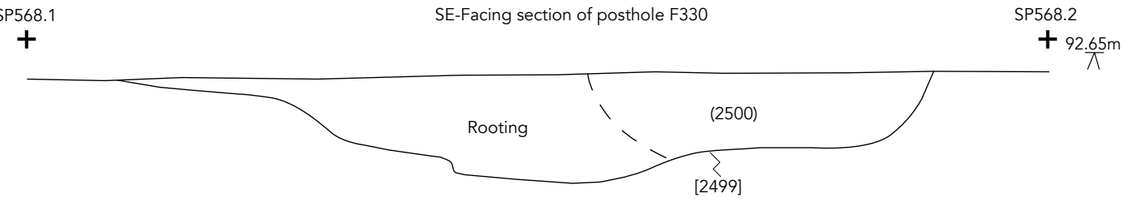


Figure 14. Post Roman features

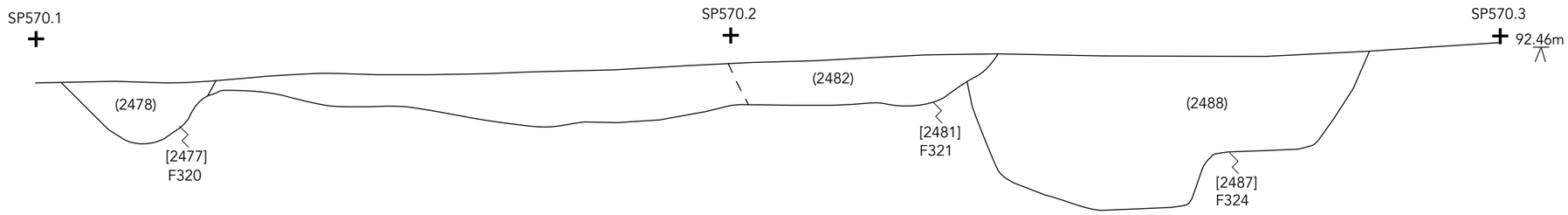
SE-Facing section of postholes F328 and F329



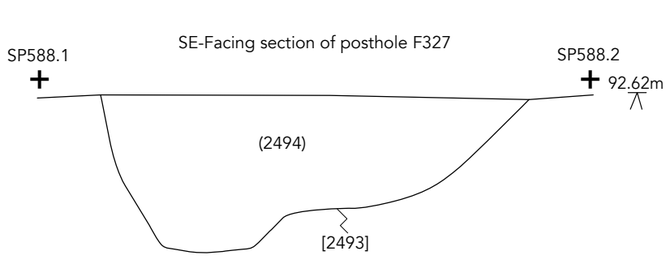
SE-Facing section of posthole F330



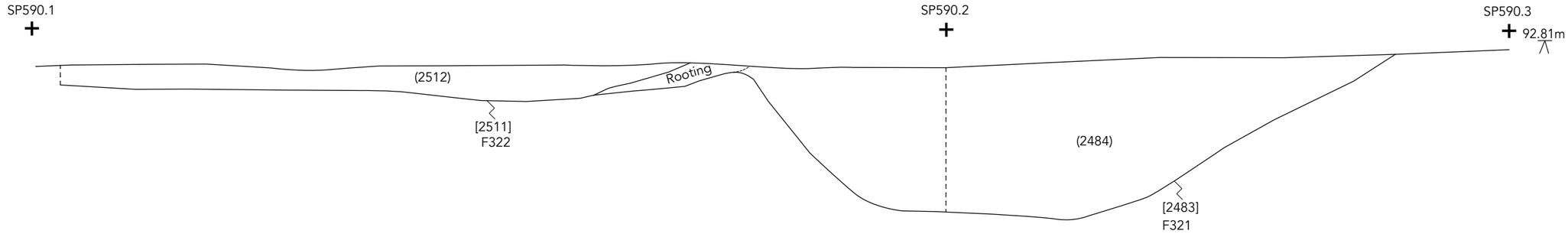
E and NE-Facing section of ring gully F320, Ditch F321 and Posthole F324



SE-Facing section of posthole F327



N and E-Facing section of ditches F321 and F322



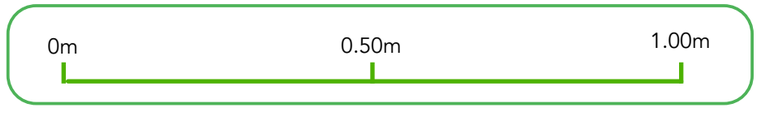
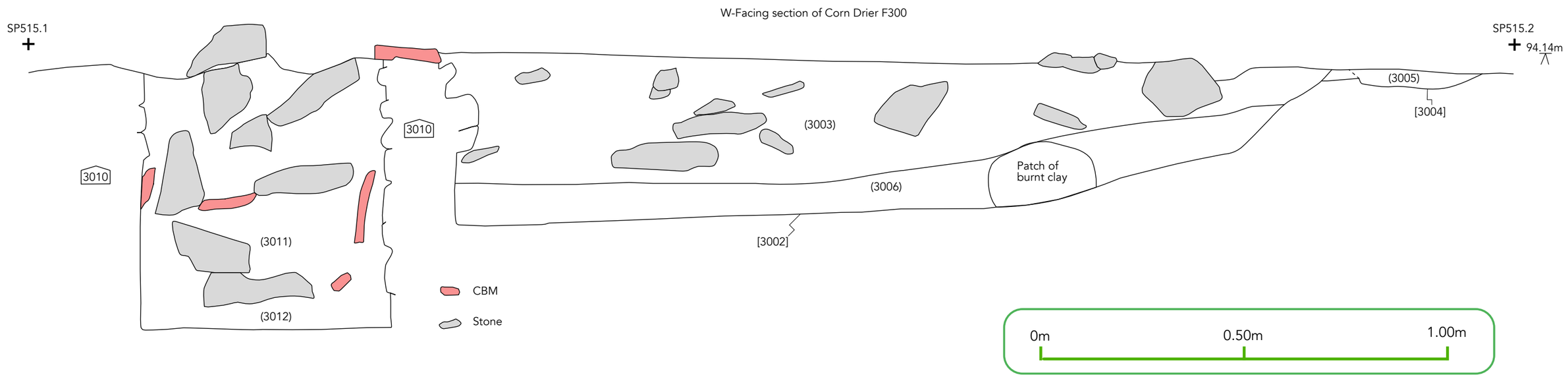


Figure 15 - Area A - Trench 2 - Staff Car Park - Sections related to roundhouse F320

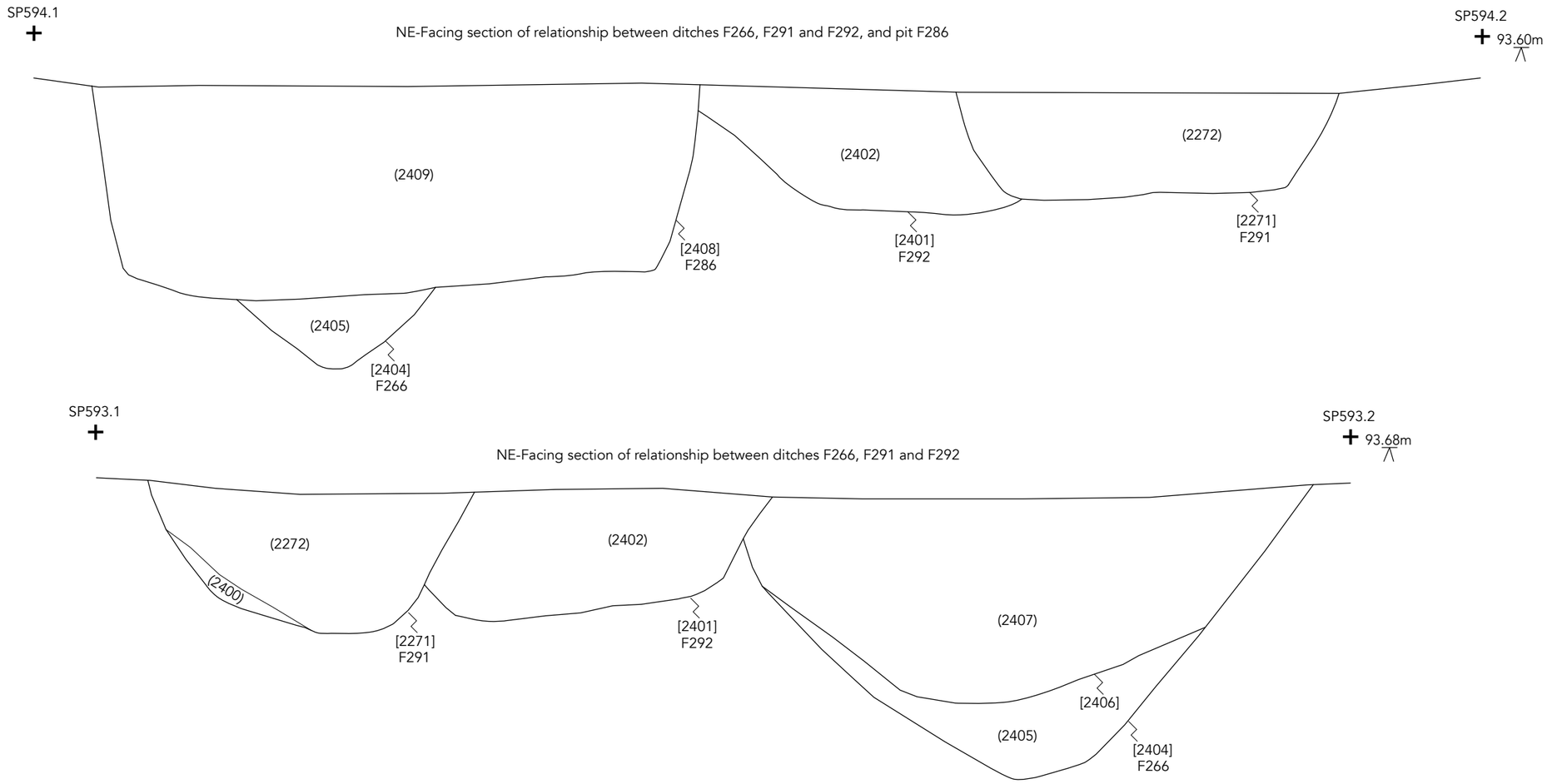


0m 1m 2m



0m 0.50m 1.00m

Figure 16. Area A - Trench 3 - Corn Drier F300



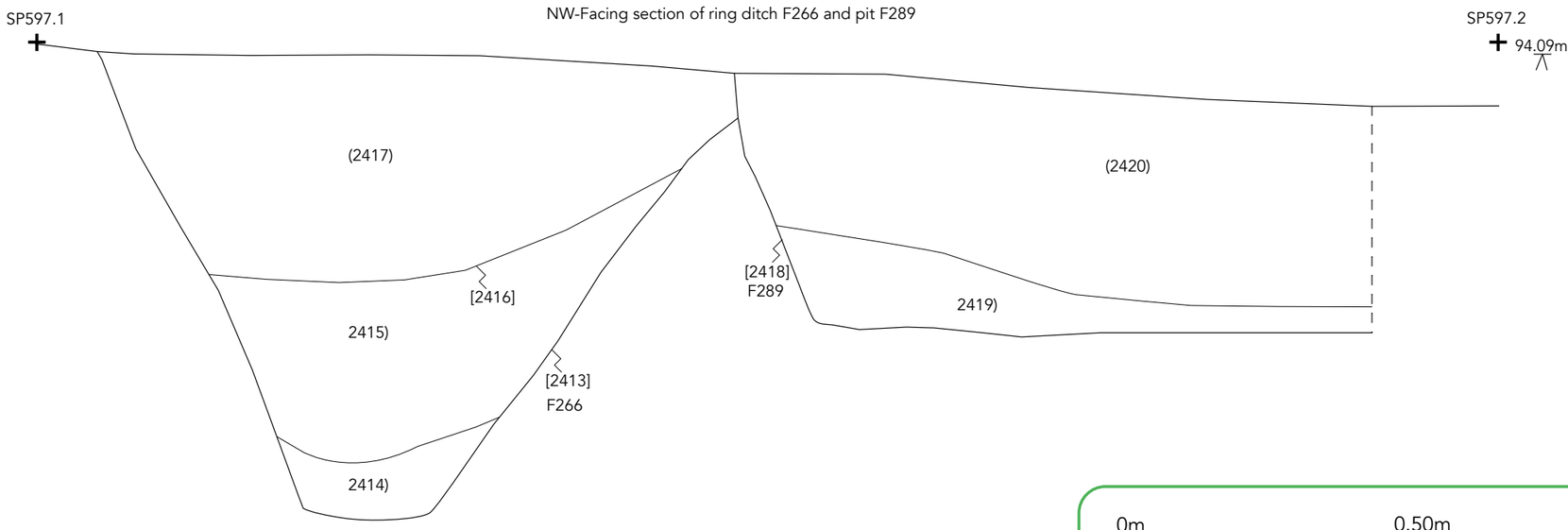
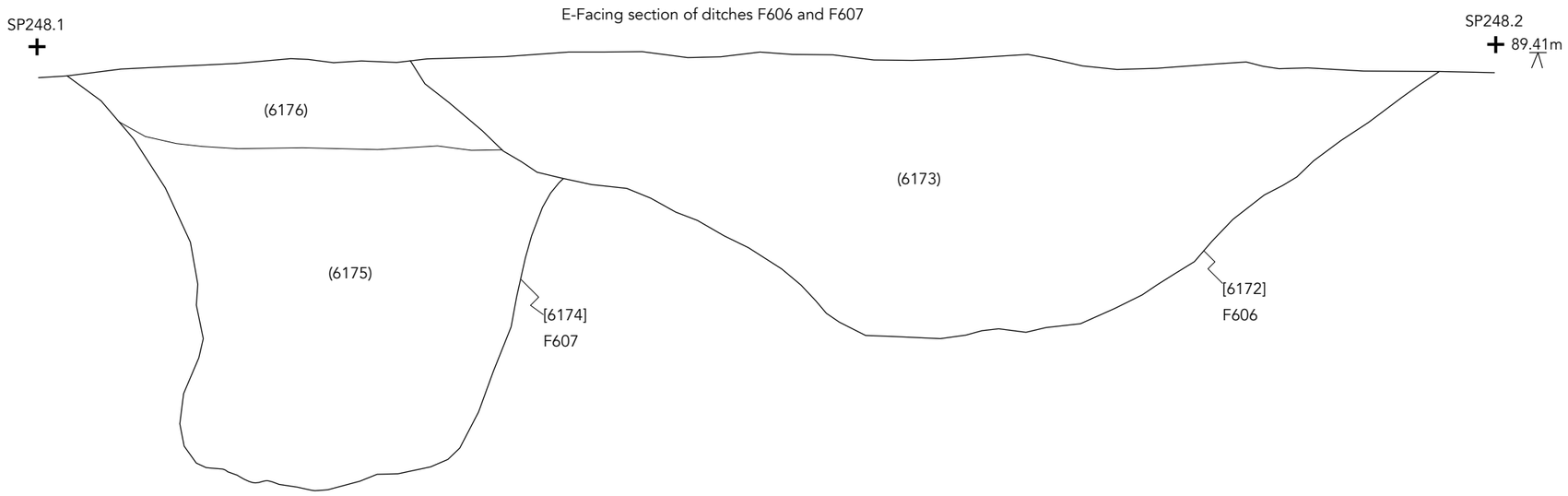
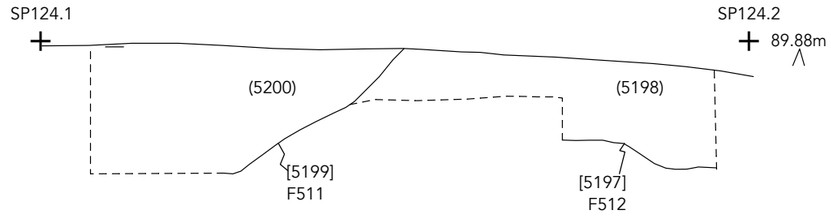




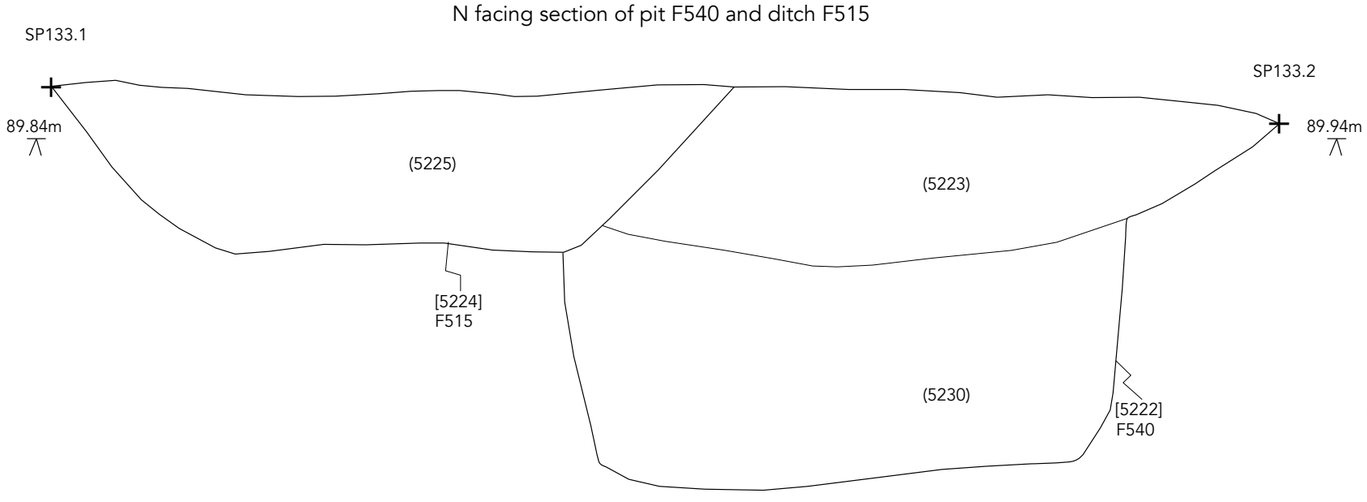
Figure 17. Area A - Trench 2 - Relationship sections of potential barrow F266



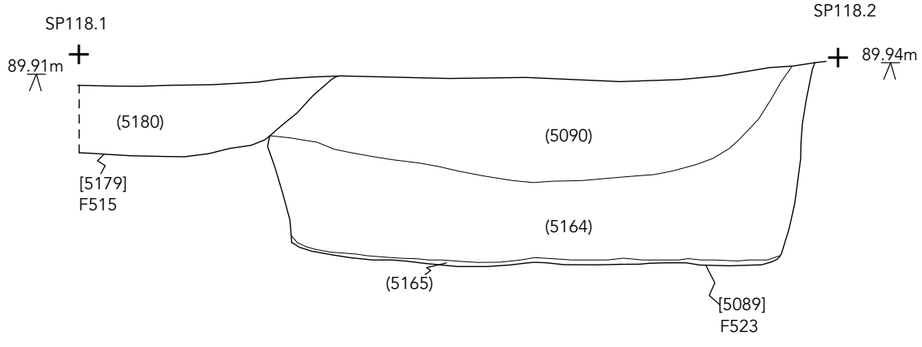
N-Facing section of ring ditch F512 cut by ditch F511



N facing section of pit F540 and ditch F515



W-Facing section of pit F523 and ditch F515



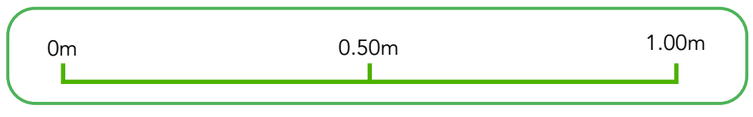
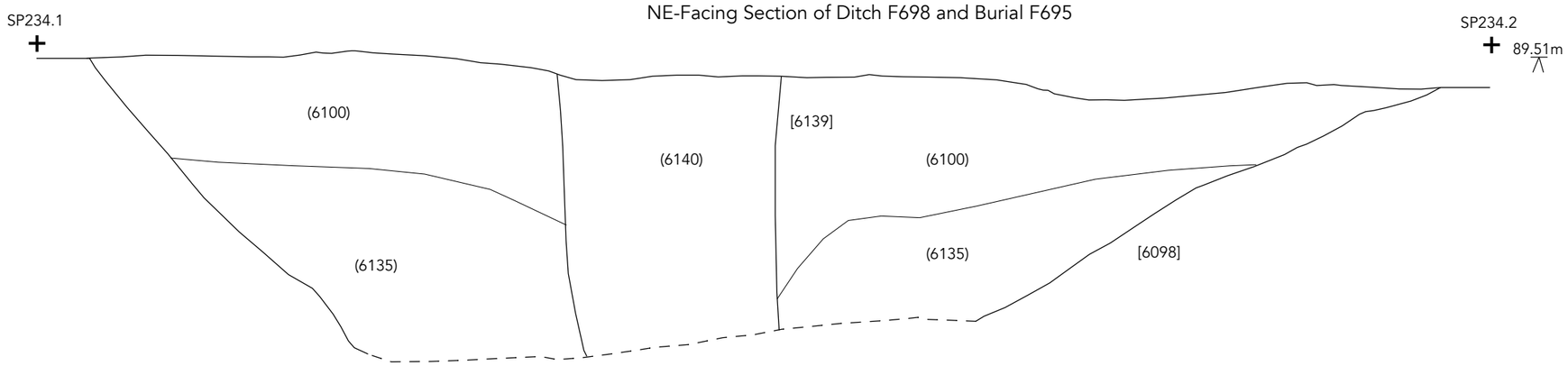


Figure 18. Area C - Trenches 5 and 6 - Various Sections

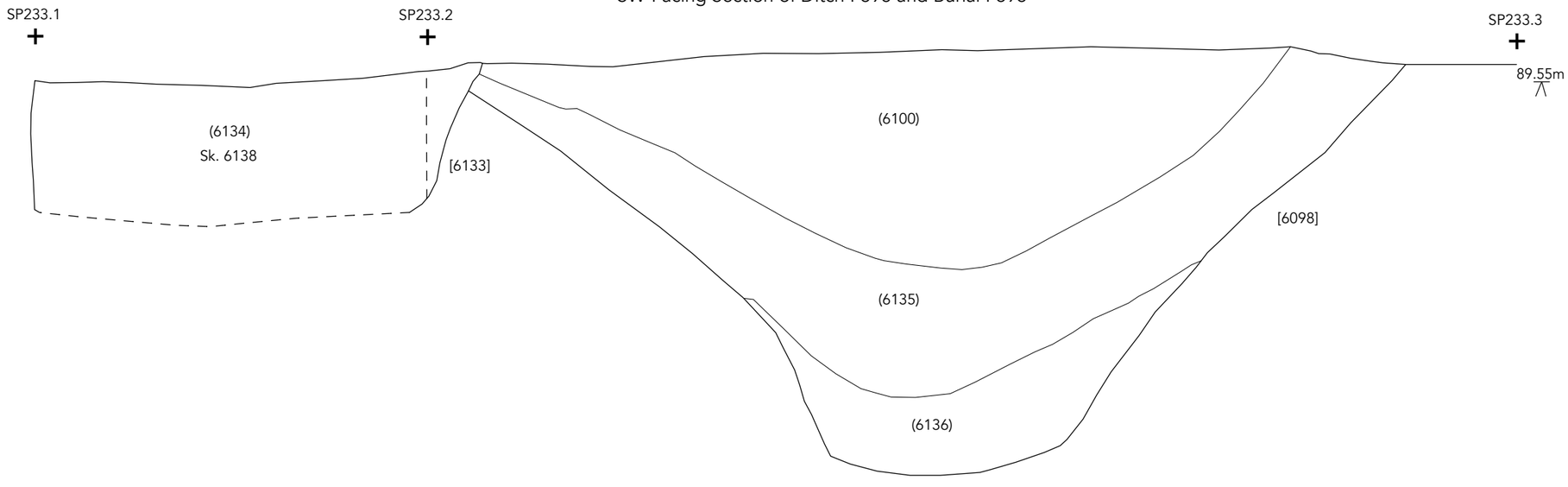


Figure 19. Area C - Trench 5 - Relationship between ditch F511 and pit F534

NE-Facing Section of Ditch F698 and Burial F695



SW-Facing Section of Ditch F698 and Burial F696



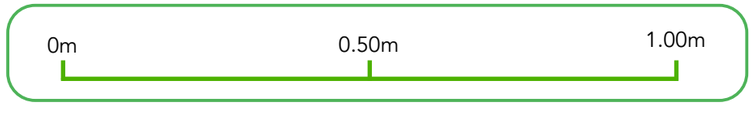
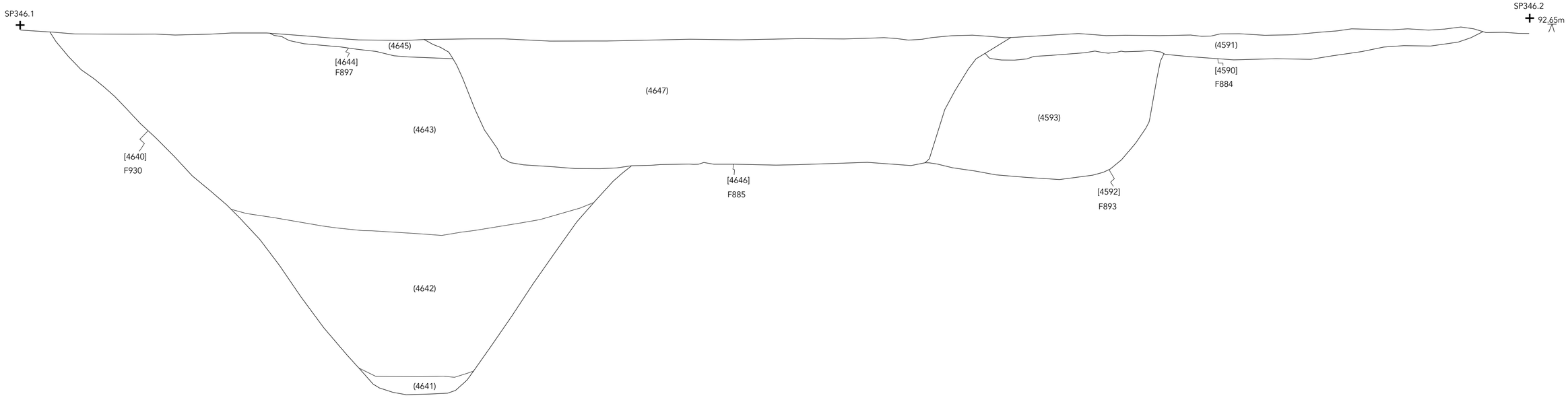
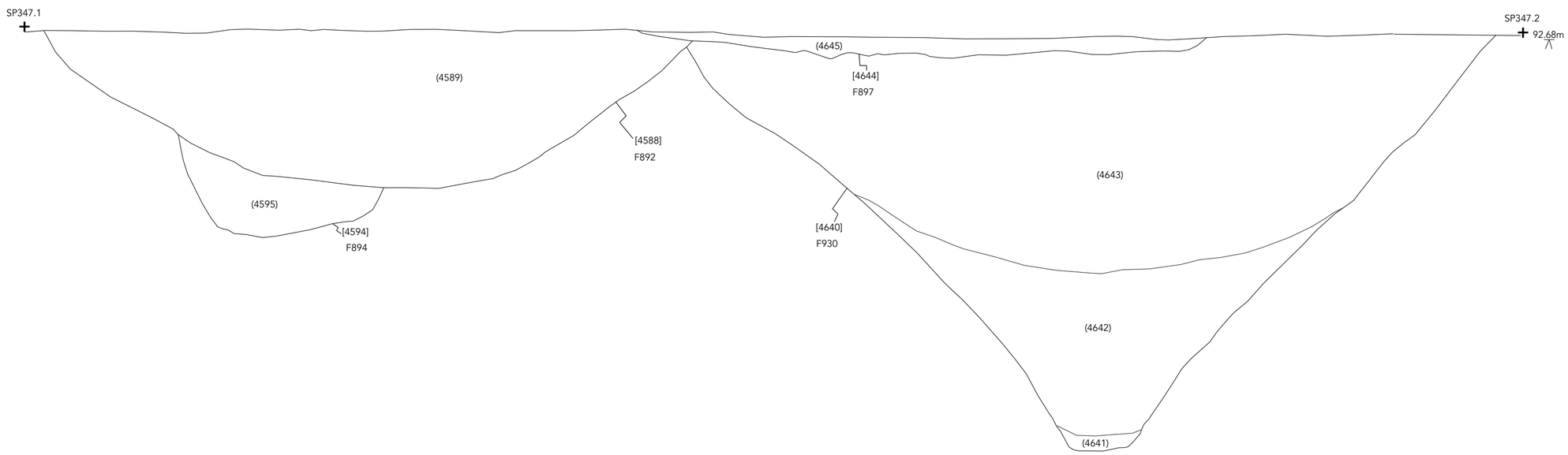


Figure 20. Area C - Trench 6 - Relationship between burials and ditch F698

SE-Facing section of pits F885, F892, F893, F884 and F897 and ditch F930



SE-Facing section of pits F892, F894 and F897 and ditch F930



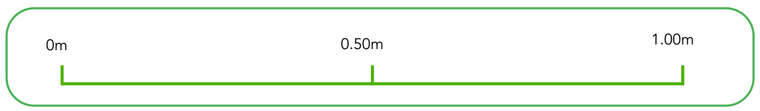
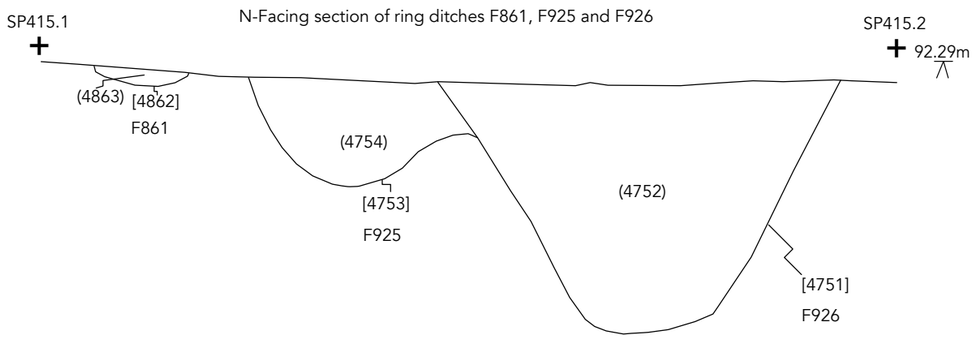
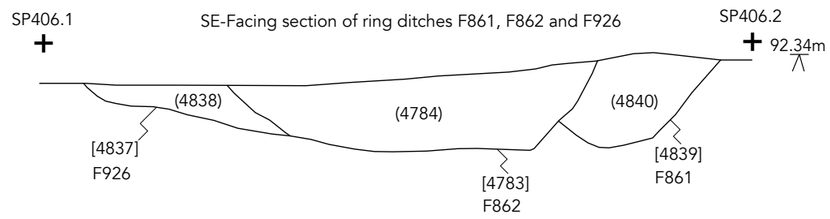


Figure 21 - Area D - Sections of Early Iron Age ditch F930 and later pit cluster





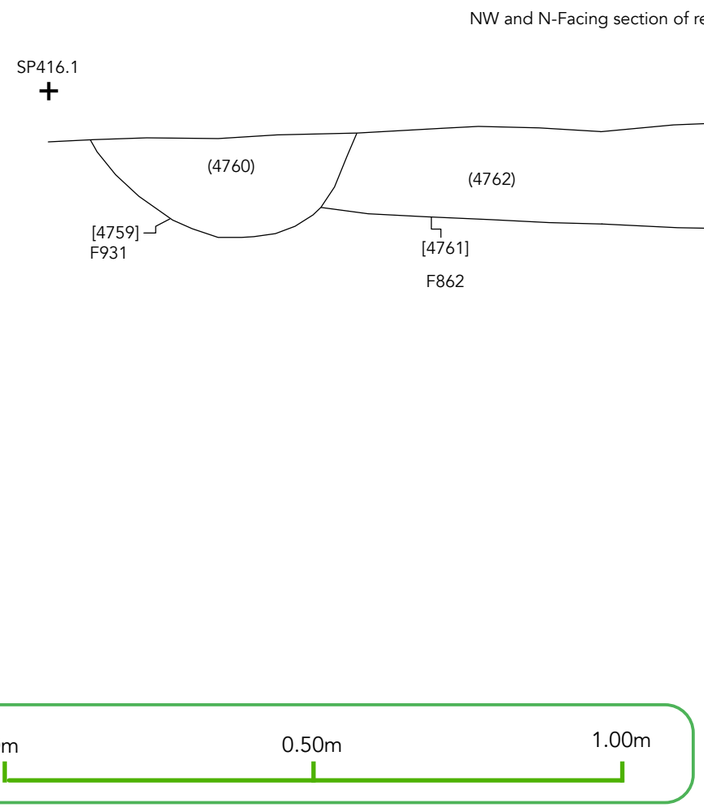
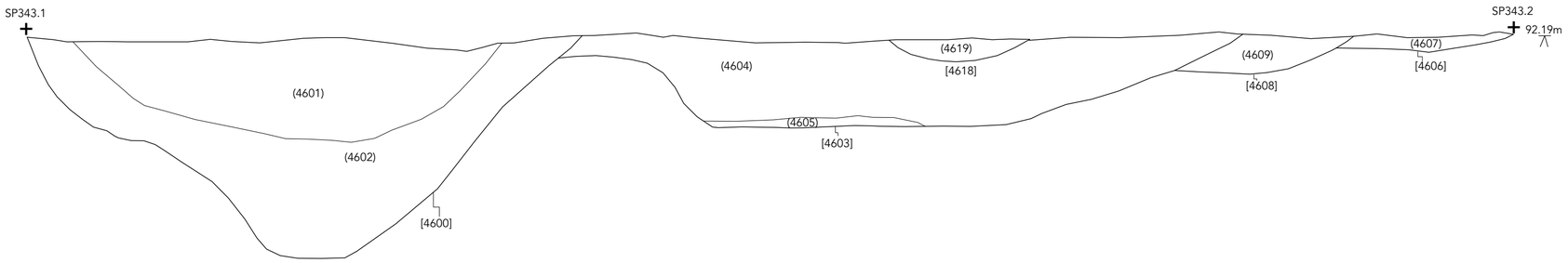
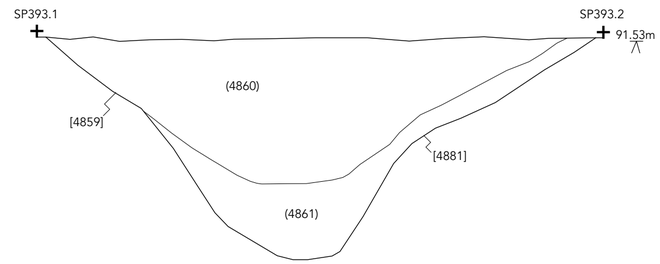


Figure 22. Area D - Sections of showing relationships between ring ditches to the east of the villa

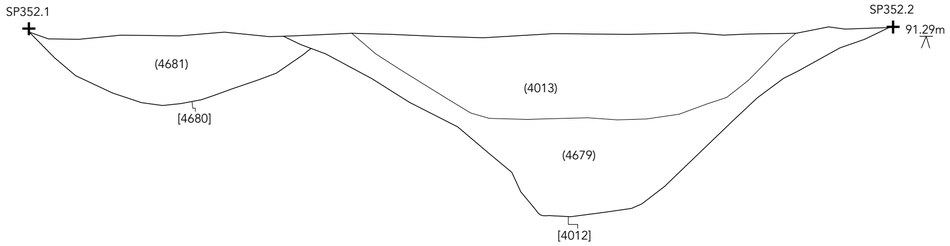
SW-Facing section of ditches F484, F499, F907, F909 and F911



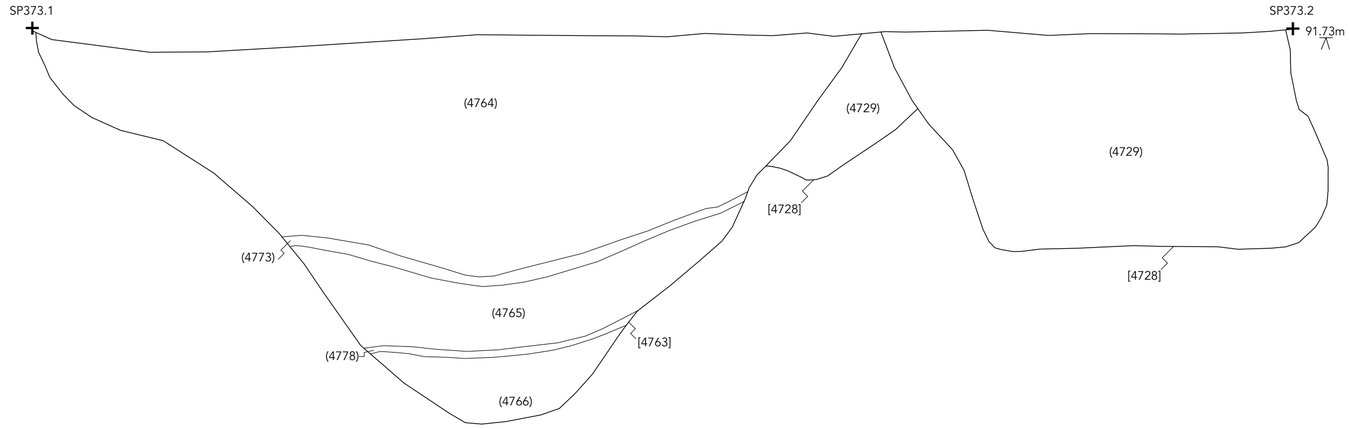
E-Facing section of ditch F499



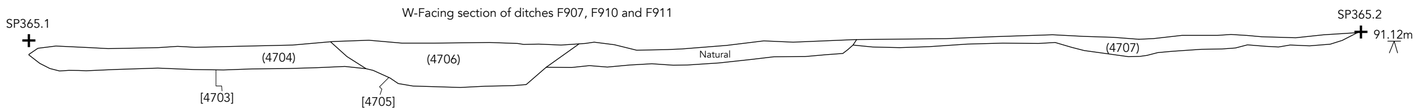
W-Facing section of ditches F414 and F908



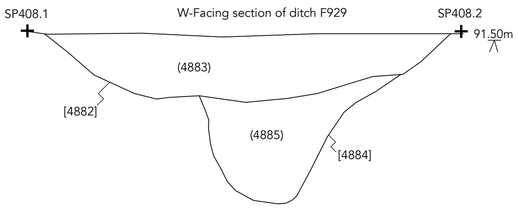
E-Facing section of ditches F414 and F908 and pit F912



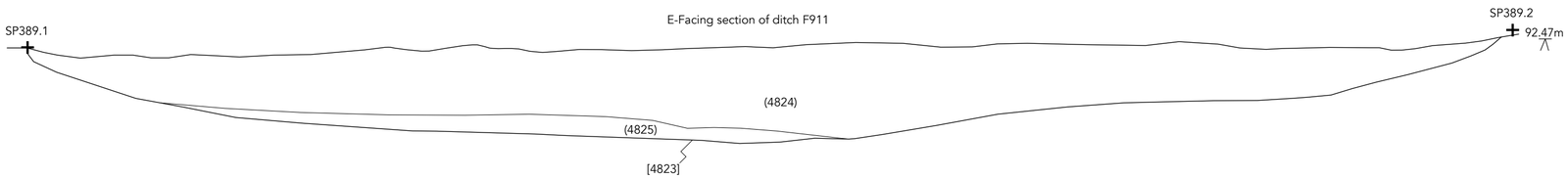
W-Facing section of ditches F907, F910 and F911



W-Facing section of ditch F929



E-Facing section of ditch F911



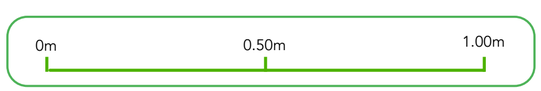
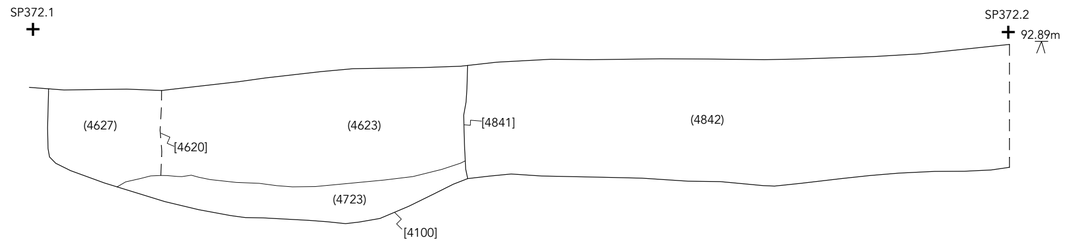
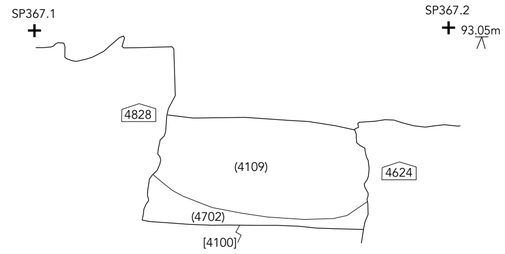


Figure 23. Area D - Ditch Sections

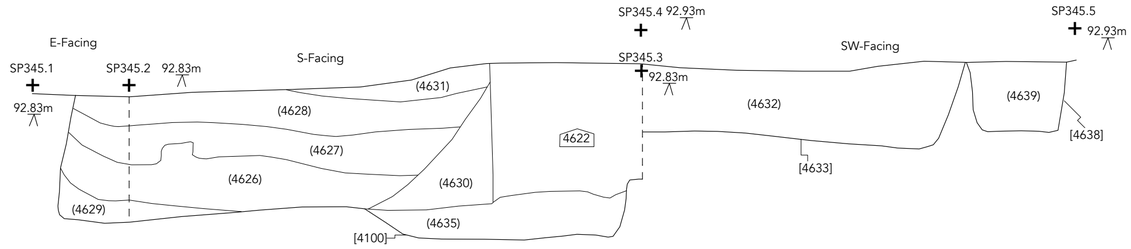
E-Facing section of corn drier F933 and pit F939



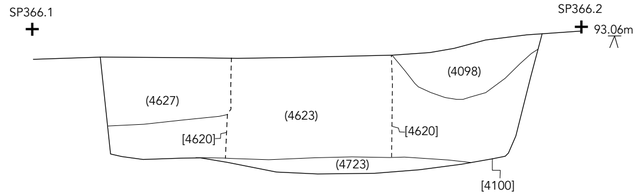
W-Facing section of northern corn drier flue F933



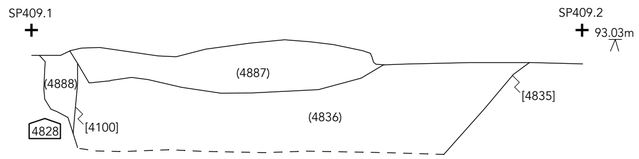
Wrap around section of corn drier F933



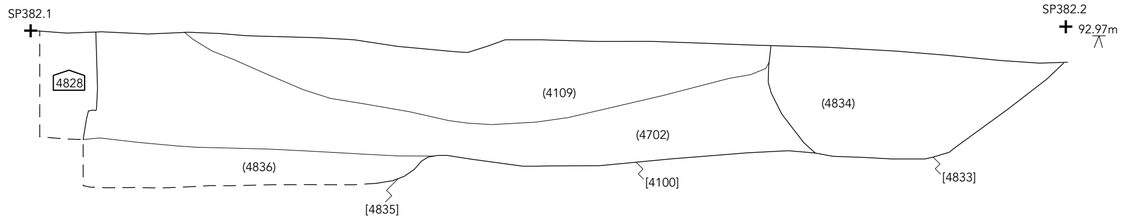
E-Facing section of southern corn drier flue F933



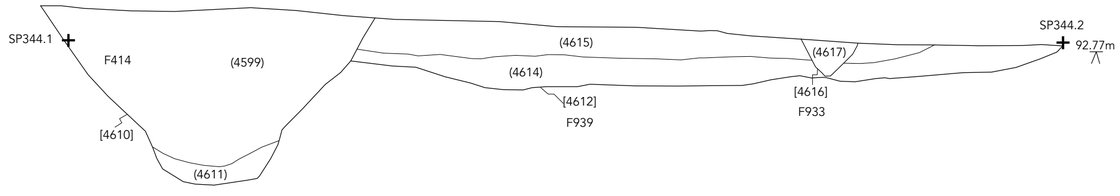
E-Facing section of rubble spread and corn drier F933



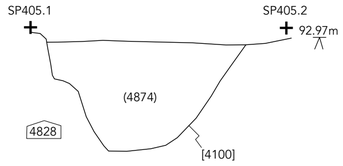
W-Facing section showing relationship between corn drier F933 and ditch F414



W-Facing section of ditch F414, pit F939 and corn drier F933



N-Facing section of Masonry Cut F933



S-Facing section of corn drier F933

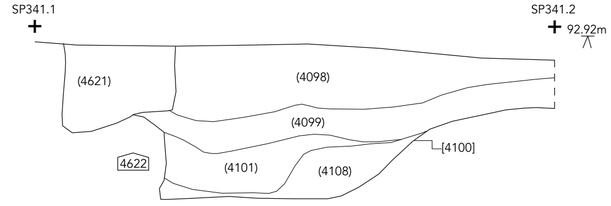
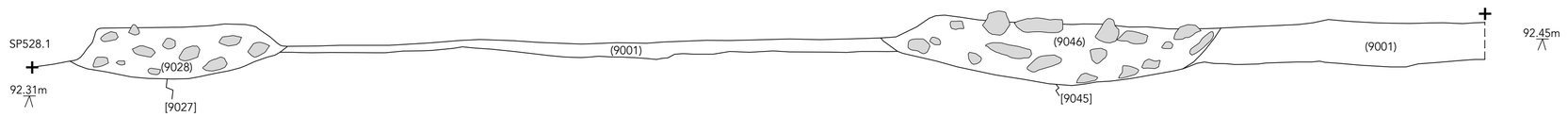


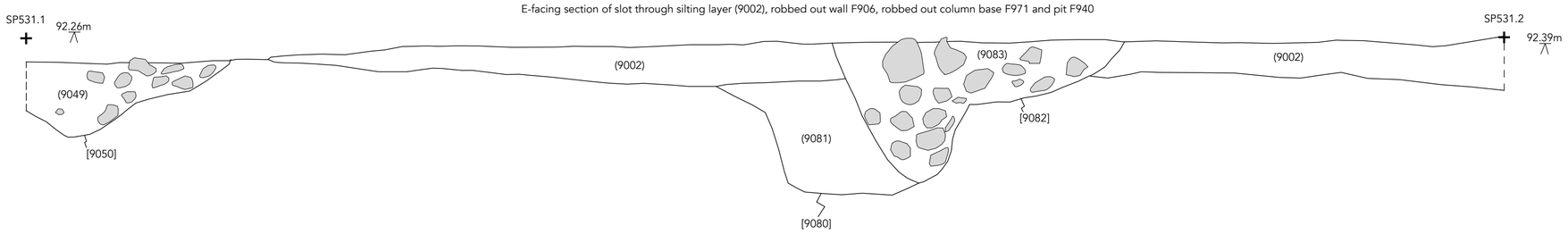


Figure 24. Area D - Sections Associated with Corn Drier F933

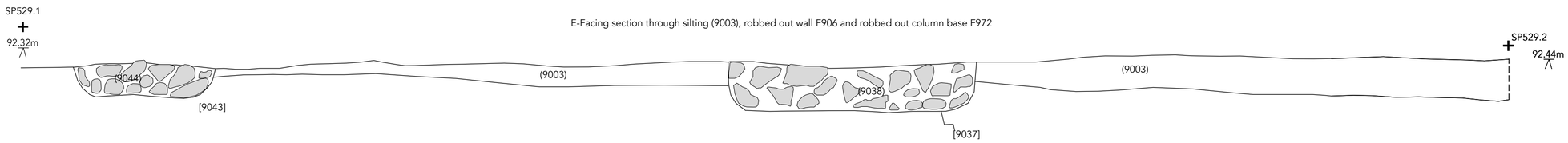
E-facing section of slot through silting layer (9001), robbed out wall F906 and robbed out column base F970



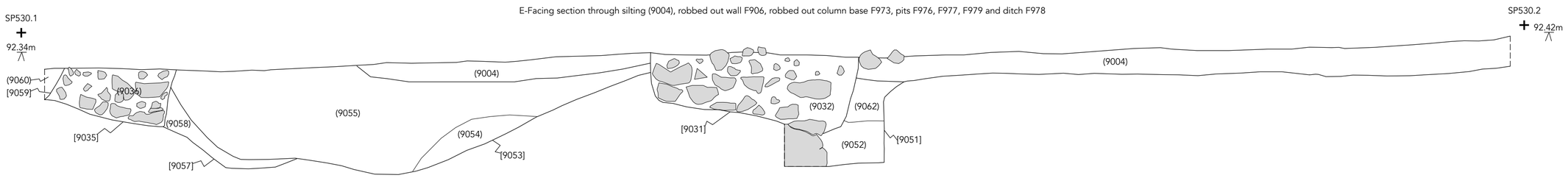
E-facing section of slot through silting layer (9002), robbed out wall F906, robbed out column base F971 and pit F940



E-Facing section through silting (9003), robbed out wall F906 and robbed out column base F972



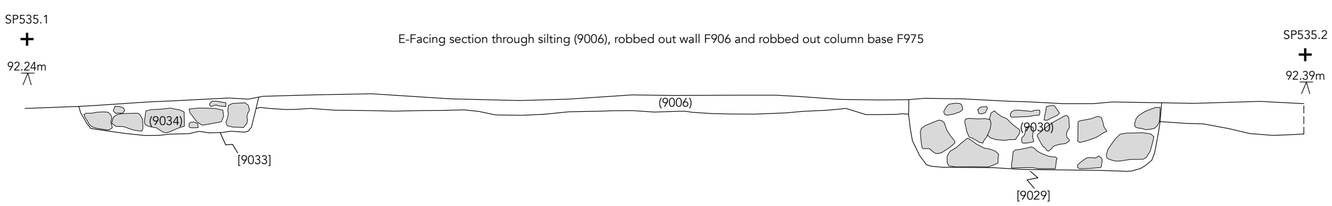
E-Facing section through silting (9004), robbed out wall F906, robbed out column base F973, pits F976, F977, F979 and ditch F978



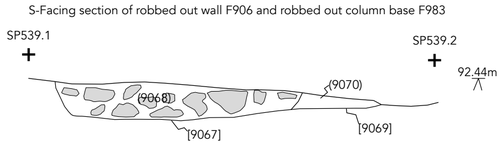
E-Facing section of slot through silting (9005), robbed out wall F906 and robbed out column base F974



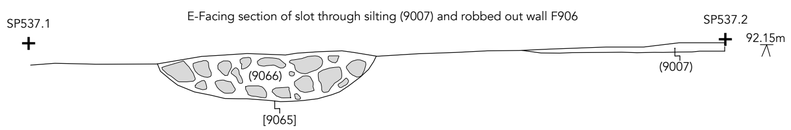
E-Facing section through silting (9006), robbed out wall F906 and robbed out column base F975



S-Facing section of robbed out wall F906 and robbed out column base F983



E-Facing section of slot through silting (9007) and robbed out wall F906



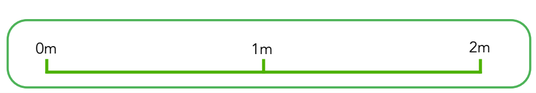


Figure 25. Area D - Trench 9 - Sections through Villa



Supported by our community archaeologists, venturers in the finds room learnt how to properly clean, sort, count and weigh all the wonderful finds that came out of the trenches



It was also a great opportunity for families to be active together. Side by side, children and parents learnt to clean and identify all sorts of finds. Old and young worked side by side.



Everybody had a good time and even the youngest of our venturers quickly put those toothbrushes and toothpicks to some good use and helped us whizz through many full finds trays.

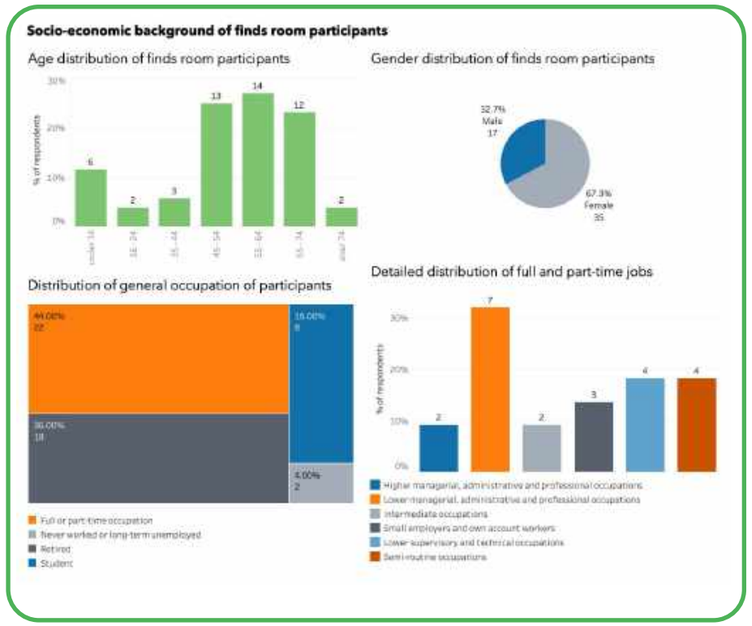


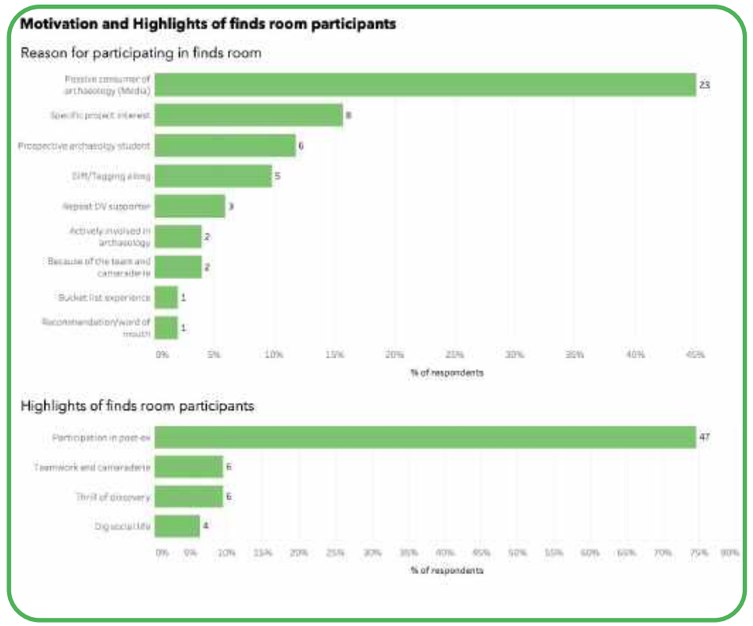
Venturers were rewarded with some mind blowing discoveries like this paw print of a fox in a Roman tile ….

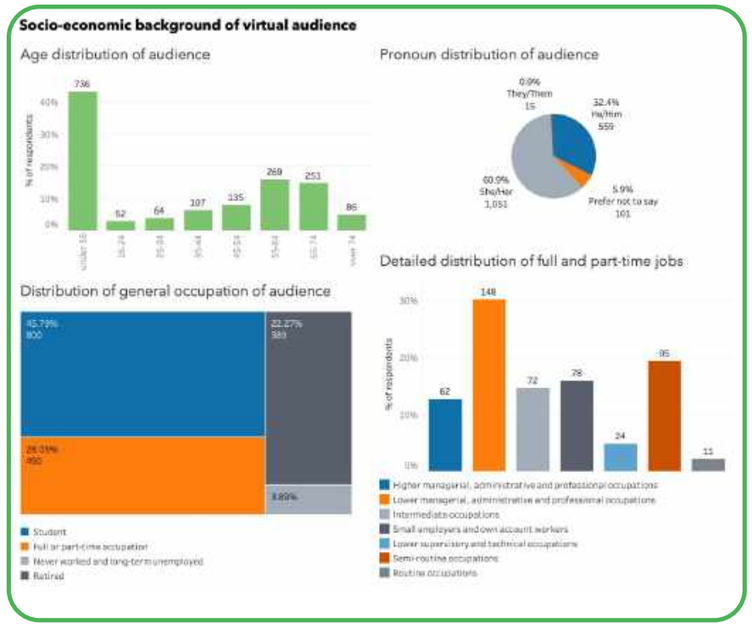


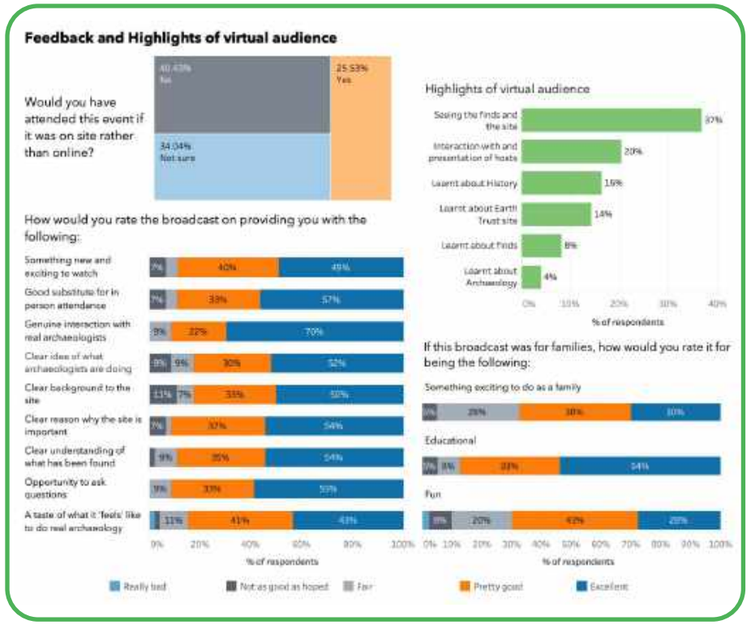
… or the satisfaction when two pieces of pottery fit smootly together as if they never broke apart.

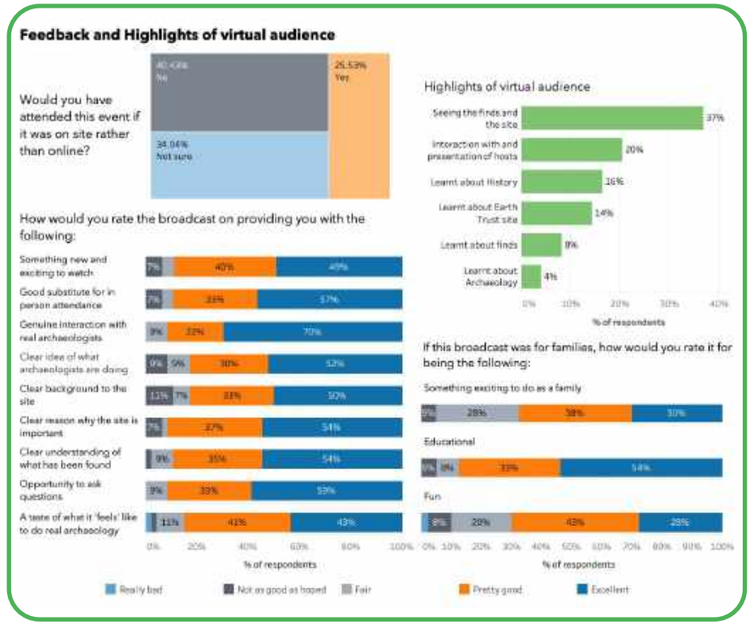
Figure 26. Public Impact - Community Engagement photographs











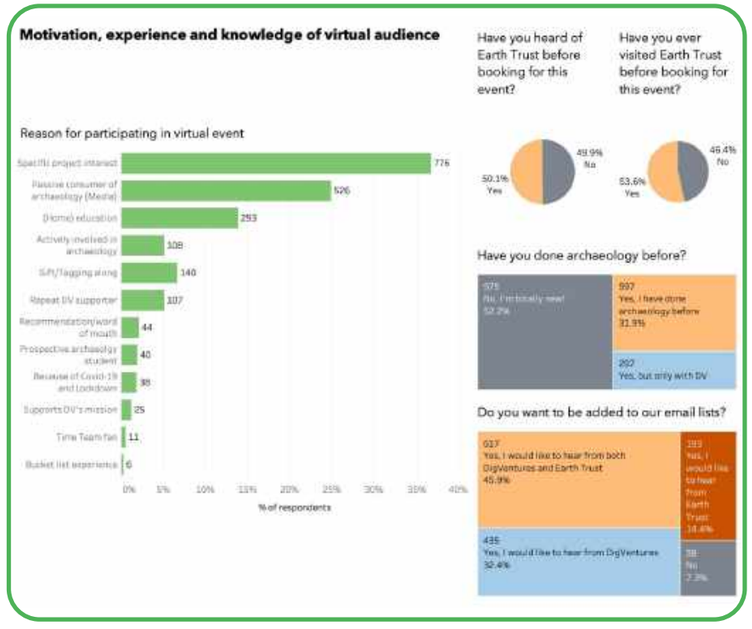
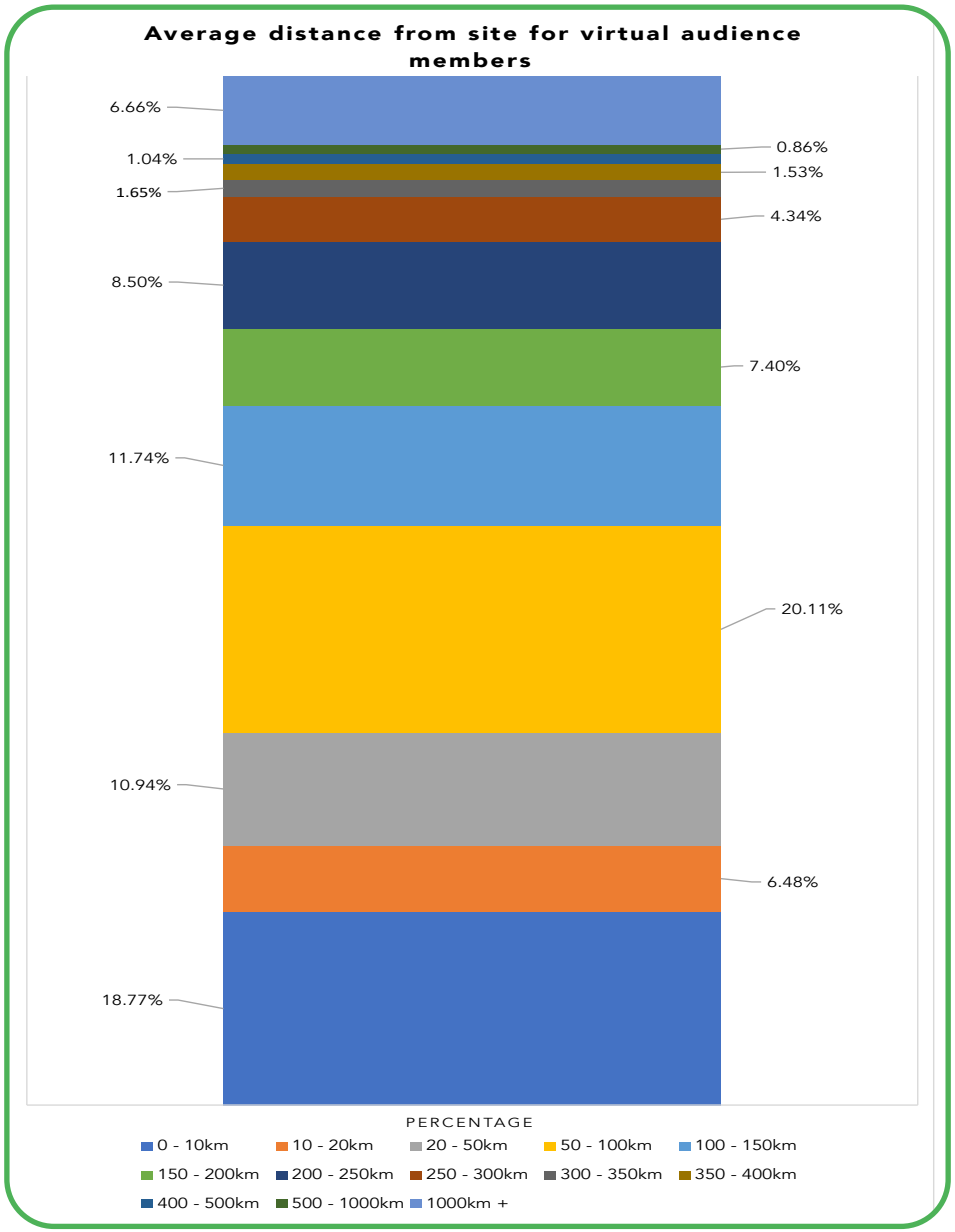


Figure 27. Public Impact



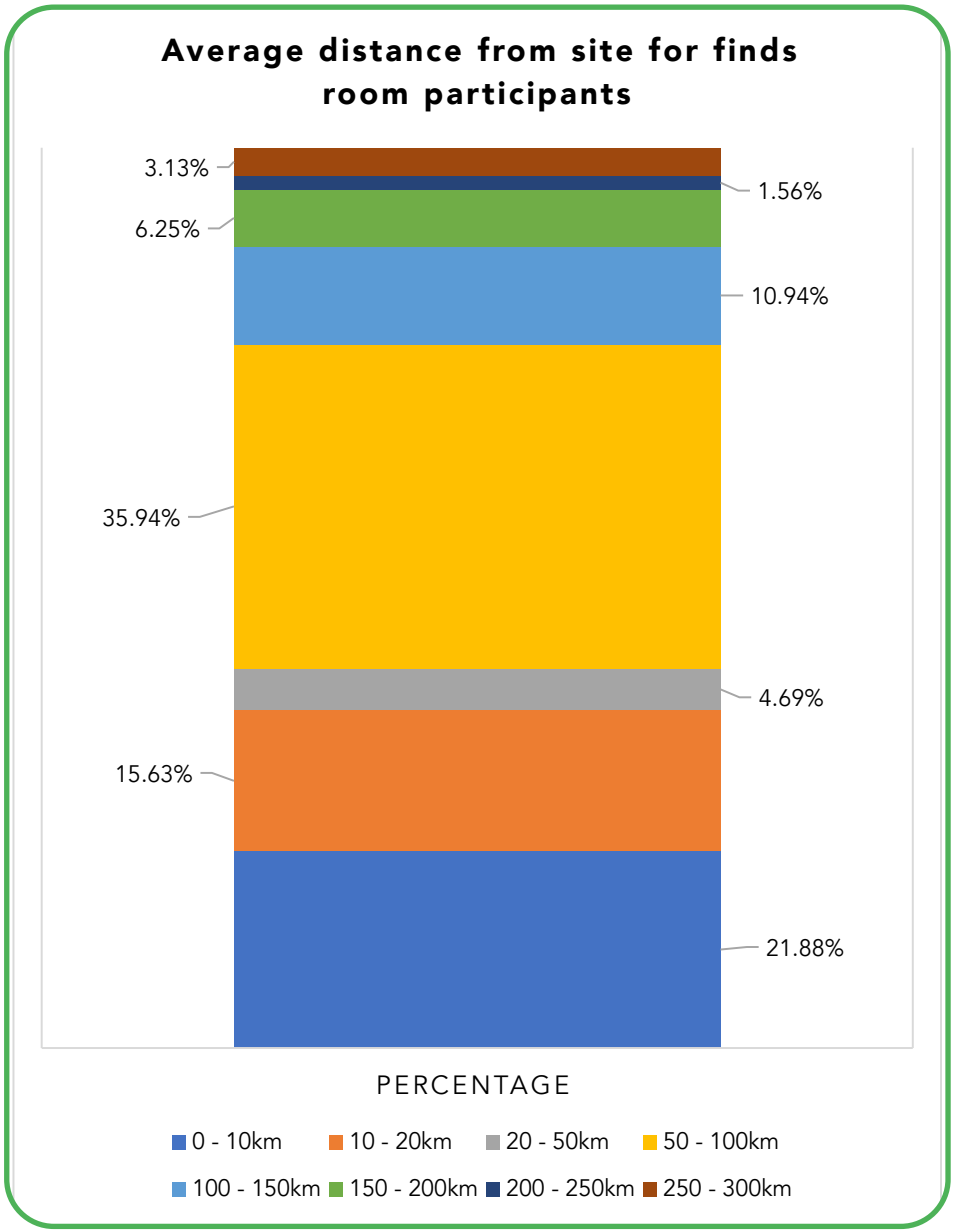


Figure 28. Public Impact - Distance Analysis



Square pit F255, ditch F260 and gully F258



Working shot of possible barrow area



Record shot of corn drier F300



W looking post- ex photo of roundhouse with drip gully F320 and internal post holes. 1m scale

Figure 29. Area A Photographs



South facing section of ditch F511 and pit F534



Infant burial SK5136 in pit F514 facing north west, 0.4m scale and 1m scale



Record of skeleton SK6137 and ditch F698, 1m scale



N looking record shot of SK6156. 1m and 2m scale



General trench shot Trenches 5 and 6

Figure 30. Area C Photographs



Working shot in Tr 4



Comb SF35 with burial SK4562



Comb SF84 with burial SK4787



E facing general plan shot of Roman building. Taken near the western end of the building. 2m scale



East looking post excavation shot of Iron Age ring ditches in Trench 4, 2m scales



W looking record photo of corn dryer F933. 1m scale

Figure 31. Area D Photographs

Appendix 1: HPAR7006 Assignment 4

Feedback provided by a participant at DigVentures' excavations on Lindisfarne. The quotation has been anonymised for confidentiality purposes.

"*I enjoyed my time in the finds room, which gave me the opportunity to see the great finds. In previous years I had just been in the trench and did not have an opportunity to see the finds. It would be helpful to highlight if and when those who are digging might have a chance to visit the finds room*."

Archaeology at Earth Trust
2019/2020 Events Programme

Event	Date / Occurrence	Description	Delivery requirements
Live Dig Tours 30-45 mins Capacity: 100 Cost: Free	Family: 01 Feb 11:00 Adult: 03 Feb 14:00 08 Feb 11:00	Archaeologists are currently excavating the remains of a Roman villa at Earth Trust. On this live, online tour, you will get to: - Take a virtual walk around the remains with one of our archaeologists - See the team in action and what they're unearthing - Take a close-up look at some of the finds - Ask questions!	1 x DV Host (GC) 1 x ET Host (JC) 1 x Field Team co-host in the field (BS) 2 x Field Archaeologists at work (IJ/NJ/DW) 1 x Finds Tray
Family #1 Meet the Archaeologists: Roman Homes 45-60 mins Ages 8-12 Capacity: 60 (potential to run AM/PM if fully booked) Cost: Free	Half Term 16 Feb 11:00	How did people live through the ages? And what were their homes like? Archaeologists at Earth Trust in Oxfordshire have just discovered the remains of a huge Roman villa where a Roman family once lived. Who lived here? What was this Roman home like? And how do archaeologists uncover the evidence to figure it out? Our archaeologists are here to show you! In this live, family-friendly online event, you will get to: - Learn what Roman homes were like	1 x DV Host (GC/HT) 1 x ET Host (JC/AM) 1 x DV Co-host in the Finds Room (SN or BS) 1 x Finds Tray selection 1 x Pre-recorded trench tour of the villa 1 x Short creative activity to download and do afterwards

		- Meet the archaeologists who discovered the villa - See archaeologists unearthing the villa - Look at the artefacts we found - Ask questions! TBC – Short creative activity, like a Roman recipe, build a Roman villa, draw a map of a Roman villa?	
Family #2 Meet the Archaeologists: Iron Age Homes 45-60 mins Ages 8-12 Capacity: 60 (potential to run AM/PM if fully booked) Cost: Free	Half Term 18 Feb 11:00	How did people live through the ages? And what were their homes like? Archaeologists have just discovered the remains of a busy Iron Age village at Earth Trust. Dating from 800 BC – AD 100, this village is very close to Oxfordshire's famous Iron Age hillfort at Wittenham Clumps. Who lived here? What were their homes like? And how do archaeologists uncover the evidence to figure it out? Our archaeologists are here to show you! In this live family-friendly event, you will get to: - Learn what Iron Age homes were like - Meet the archaeologists who discovered the Iron Age village - See archaeologists digging on the site - See some of the artefacts we found - Ask questions! - Find out why we're building a new one at Earth Trust and how to build your own at home!	1 x DV Host (GC/HT) 1 x ET Host (JC/AM) 1 x DV Co-host in the Finds Room (SN or BS) 1 x Finds Tray selection 1 x Pre-recorded clip of archaeologists showing how to dig 1 x Short creative activity to download and do afterwards

		TBC – Short creative activity, like a Iron Age recipe, build a roundhouse, draw a map of a roundhouse?	
Adults #1 Iron Age Life in Oxfordshire 60-80 minutes Capacity: 100	26 Feb	Archaeologists have recently discovered the remains of an Iron Age village at Earth Trust. It sits in the valley below Wittenham Clumps, one of Oxfordshire's most famous hillforts. What was life like at the time? And what remains can we see? In this event, you will get to: - Learn what was happening in Oxfordshire during the Iron Age - Take a guided Virtual Tour of Oxfordshire's major prehistoric sites - Meet the archaeologists who discovered the Iron Age village - Learn what Iron Age homes were like - Interact with archaeologists live in the Finds Room - Find out why Earth Trust is building a new roundhouse, and how to build one - Ask questions!	1 x Host (GC or MPD) 1 x Expert co-host in the Finds Room (SN or BS) 1 x Expert co-host at home (CC or NJ) 1 x Roundhouse expert! (Luke) 1 x Google Earth Tour of major sites, including Uffington White Horse + Clumps 1 x Pre-recorded clip of archaeologists in the field Other resources: - Dyfed Archaeology roundhouse model
Adults #2 Roman Life in Oxfordshire 60-80 minutes Capacity: 100	04 March	Archaeologists have discovered the remains of a huge Roman villa at Earth Trust. In this event, you will get to: - Learn what was happening in Oxfordshire in the Roman period - Take a guided Virtual Tour of Oxfordshire's major Roman sites - Meet the archaeologists who discovered the villa - Watch how archaeologists unearthed the villa	1 x Host (GC or MPD) 1 x Co-host in the Finds Room (SN or BS) 1 x Expert co-host at home (CC or NJ) 1 x Finds Tray 1 x Google Earth Tour of major Roman sites 1 x illustrative materials for villa

		- Interact with archaeologists live in the Finds Room - See some of the Roman artefacts up close - Ask questions!	1 x Pre-recorded mini tour of the Roman villa Other resources: TBC
Adults #3 Live from the Finds Room 60 minutes Capacity: 100	09/10 or 16/17 March	Archaeologists have been unearthing the remains of a Roman villa and Iron Age settlement at Earth Trust. What does the evidence look like? And what happens to everything we found? In this live online event, you will get to: - Meet the archaeologists on the dig - Learn about their favourite discoveries - See how artefacts are handled and preserved - Interact with the archaeologists and ask questions	1 x Host (GC or MPD) 1 x Co-host in the Finds Room (SN or BS) 1 x Co-host at home (CC or NJ or SN) 1 x Finds Specialist if required (e.g., DG) 1 x Finds Tray
Schools Meet the Archaeologists: Romans / Iron Age 30-45 mins (Age range TBC)		Archaeologists have discovered the remains of a huge Roman villa at Earth Trust. This villa was once home to a Romano-British family. What was their home like? Our archaeologists have been uncovering brand new clues and evidence to show you! In this event, your class will get to: - Learn what Roman homes were like - Meet the archaeologists who discovered the villa - See archaeologists unearthing the villa - Look at the artefacts we found - Ask questions! - Bonus activities to do afterwards, like how to build	1 x Host (Script and notes) 1 x Co-host in the Finds Room (Script and notes) 1 x Finds Tray selection 1 x Pre-recorded trench tour 2 x short creative activities that the class can download to do in advance and afterwards

		your own villa with Lego, or try a Roman recipe OR Iron Age version	

Short Guide to Interpretation Panels and Leaflets in Archaeology

Guide 21



BAJR Practical Guide Series

David Connolly MIfA

June 2004

© held by authors

: Rough Guide to Interpretation Panels and Leaflets in Archaeology :

Contents:

1. Introduction
2. Clear Aim
3. Style
4. Target Audience
5. Illustrations
6. Layout and Design

Appendix 1 – Useful Addresses

Disclaimer

This document is produced as a personal guide to understanding interpretation in books, pamphlets and boards.. it is not definitive and should be seen as a starting point to both create your own interpretation and understand the complex process of creating interpretation

More information is available on the BAJR website (www.bajr.co.uk in the Resources section)

David Connolly, Director, BAJR

Short Guide to Interpretation Panels and Leaflets

• Introduction.

Increasingly the popularisation of our heritage requires the archaeologist to be in a position where some form of public interpretation is called for. There are several publications and guidelines that deal with this. But this simple, short guide will be a good starting point. I have had to produce a number of documents, guides and interpretation panels over the years and with help and guidance for many people have overcome many of the problems and pitfalls that crop up. Although this guide is not comprehensive in all aspects of communicating with the public, it will make sure that you do not have to go through the mistakes I have already made. Remember though that you 'either have it or not' so do not be afraid to pass responsibility to someone who feels easy at public interpretation and writing.

• Clear Aims.

Before anything else, be clear to yourself, just what it is you are trying to convey... and stick to it. It can be too easy to get sidetracked, if you are dealing with perhaps an Open Day guide to your excavation of an Iron Age site... do not go off on a tangent about the nearby Motte or the fact that in 1894 the person who owned the field was the first person to cross the M'boke River in what is now called Zambekaiyaka, which only received independence from Belgium in 1978, which made it ...etc etc.....fascinating as it may be... non of the above has anything to do with your Iron Age Farm. By understanding what it is you want to say, it becomes easier to collect the resources you need rather than an unwieldy catchall of information overload.

• Choose a style:



a: **The voice of authority**, which will inform the reader and try to teach them about the chosen subject - you will use language that is suited to the classroom... but be careful as this style could lead you into being over scholarly. Many archaeologists think that using complex language is showing a respect for the reader and also providing a level of information that is of educational value. However, remember that a leaflet or panel is NOT a book, and therefore the language of scholarship may not be best suited. Talking about *'BE/MB transitional phasing with relation to the substructure of the structure, evidenced in features 101, 105 and cut309'* will only result in alienating 90% of your audience. It is a difficult style to carry off successfully, but may be the most familiar to archaeologists themselves. Remember that an interpretation panel or leaflet does not have an extensive bibliography or glossary and is there to inform, not be regarded as a major research document.

b: The Storyteller, will use the age old techniques of guiding the reader through an interpretation by means of a narrative. Use the style of the oral traditions, with elements of rhythm in the language and the tools of humour, suspense or questions that engage and lead the audience into your story. In this way you can be informative and introduce elements of knowledge while remaining entertaining. The story does not even have to be true, but can still contain the information you wish to present. So it would be possible to tell a story about a boy who sees a Roman



legion pass on a Road even if the actual event is not recorded it could well have happened and would allow you to introduce subtle details like Roman Legionary armour, the construction of roads, the relationship between the ordinary farmer and the Romans ... etc. But like all types of interpretation keep it brief as you are writing a short passage not a book the size of Clan of the Cave Bear!

c: Firstperson or Thirdperson, is somewhat a subgenre of the Storytelling style. The thirdperson can feel very comfortable for most people as it mirrors the way most documentaries are presented, you can be detached from the actual events, and in effect stand with the reader, telling them the information. First person though can be much more exciting, engaging the reader in the actual events, a character from the past actually talking to the public 'face to face'. Imagine the impact of a character from the past explaining their feelings, " I would never have thought I'd ever have to pay taxes to these soft Romans and just look at this road, straight across my best fields!!"



d: Conversational is another style that sounds easy but is as difficult to get right as the Scholarly approach. It is often seen as enthusiastic and based on the premise of people out to have a good time. It can be a way of not only engaging the public, but also of actively encouraging involvement. It can ask them to participate, like asking them to climb a hill, try and cross a rampart, go to a standing stone, shout, enjoy etc. ...

It is also a good style for using metaphors to aid understanding, like

"the ramparts were as high as a double-decker bus"

A word of caution for this style is that trying to create an unforced matey style can actually lad to an empty superficial cliché-ridden style instead. If you can get over your enthusiasm and the message, without becoming patronising and forced then it can be a good style.

e: The creative style is for those who want to be a bit different. let your creative juices flow and experiment. As long as it works then the sky is the limit. Perhaps a poem or a song that relates to your site.

"Often tred the feet that came shod in iron and leather,
up ribbons of stone from beyond the hills
where fruits of my fields are taken
to pay for pax romani."

You must remember though that your reader will be a harsh critic, so keep in mind that people have to understand the message. A cleverly constructed Haiku which, when read backwards, gives the name of the site in the original Q-Celtic language is not going to win you any friends!

- ## Target Audience

Now this section may sound a bit patronising, but the reading age of the general public should be pitched at 9-12 years old. This is in fact the reading level that has been deemed the most accessible for the majority of adults and older children – in other words it is inclusive. This means that there are few technical terms, no complex bits of science or convoluted histories. You will of course have one or two people who read your leaflet or panel, and will accuse you of dumbing down or not providing the more in depth information required to fully appreciate the subtle complexities of the site. Fair enough, but if they want to know more, then they will have the ability to study further or ask you directly. The other 95% will only want the simple digest that you present in the interpretation.



A recent client caused me much concern by the continual rewriting and complaints about the factual content of the text, demanding that I include complicated political details from 16th century Scotland to create a backdrop to the internal local squabbles and alliances which led to a single act in the early 17th century. This would have been fine if I had been writing a book, but when you have only 50 words, you must make concessions. Keep it simple and to the point. Why use 20 words when one well-chosen word will do.

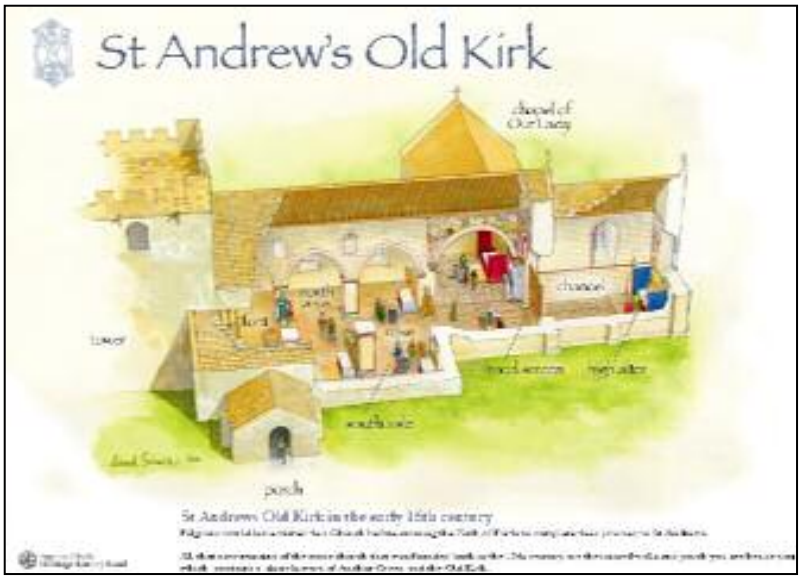


Once you know who will read your interpretations, you can pitch it at the right level. Newspapers must do it every day, and you must decide whether your reader will be generally a SUN reader, a GUARDIAN reader or a NEWSWEEK.



• Illustrations

Imagine a leaflet or an interpretation panel without pictures and maps. – Unthinkable! In some ways the illustration will take the place of all the words you would like to use but do not have the space for. Graphics should be thought of as carefully as the text, and the style should reflect a consistent approach. As a personal plea, can I ask that you get someone who can actually create illustrations that do not look amateur; the public have sophisticated needs when it comes to graphics. Now this does not mean that they must be expensive 3 D digital reconstruction's using texture-mapped terrain models to accurately recreate the site in the autumn of 79AD, as even a simple line drawing can effectively draw the viewer into the past with a minimum of fuss.



Dave Simon reconstruction of medieval church (for Scottish Seabird Centre, North Berwick)

Illustration falls into 4 main categories:

a: Reconstructions, which are the staple of almost all forms of interpretation. These can range from lavish colour panoramas using watercolours and inks (like the one above) through digital models (though be careful as they can look very very forced, unreal and frankly naff!) to simple drawings in black and white. Make sure you talk to the artist or illustrator to discuss the nature of what you are trying to get over and have a tie in with the text - Often it is easier to write the text after the drawings have been done. Also make sure that the reconstruction bears a passing resemblance to what you are interpreting, and has a tie-in within the text. So there is no point in the reconstruction of a Roman Fort, no matter how nice, when the site actually has a Roman Road and Iron Age enclosed farmstead. An important point, which is often forgotten until the end, is where an interpretation panel will be located. If the reconstruction is of a particular view, it does help if it is similar to the one that the public are actually seeing. Too often the viewer is left confused or misled by what they see 'on the ground' and what they see on the panel.

b: Maps / Plans form another important part of interpretation, allowing descriptions of location and routes to be easily understood. Imagine trying to describe even the simple process of trying to describe the layout of your house in words? Forget it, draw a plan. A good plan however is one that conveys, at a glance, all the information that the viewer requires, such as "*I am here, the round houses are there the nearest Roman fort is there which is near the present town of XXX.*"... end of information. If you have a good illustrator, please try to remember that this is for the public, not a journal, so the map or plan can be as creative as you wish, and does not have to be a traditional informative standard that appears in most journals. If your site is for example on the coast and medieval then looking like a mappa mundi with sea monsters etc can add both humour and context. Also think about making the map look more hand drawn, with key elements in 3D to emphasize them, many people find this easier to interpret than the OS map style.

c: Photographs are often undervalued and underused in interpretation, but from the 1890s onwards you will have a wealth of available resources, whether it is the view of the village on market day or a fine photograph of the man who first 'excavated' the druid barrow group in the 1920s posing with his workers. Photographs do not always have to be dull rectangles either, they can be shaped, cut to mould around text or given borders that replicate torn photos or even a series of negatives. Like the idea of creative text, you can also be creative here ... in fact, as you are dealing with graphics, it can be easier to be more visually imaginative.



d: Insets and drawings can be useful to enhance the text with images that show artifacts or elements within the words. Often you may want to describe an artifact within the text, but space makes this impossible. Just try to describe in words how an ard plough looks and works!! Instead of losing precious words.. use an illustration, but only if it is relevant and enhances the interpretation. So in the case of the ard plough ... only illustrate it if you have actual plough marks visible or it is essential to the interpretation of the site. It can also be useful to create a 'logo' that can be easily identifiable and links separate interpretation panels or chapters in a booklet.



Georgian Enamel, Nokalakevi.

• Layout and design

It is very difficult to provide a definitive guide to the final product, as it all depends upon the style used, the material, the size of the interpretation panel or booklet / leaflet. However there are certain points which range across all the different styles.

What you must try and achieve is a coherent text, a consistent style and a harmony between the use of text and the use of visuals. Sounds simple?

Think very early on about how you want the final product to look and how it will be produced as this may influence how you approach the rest of it. Will the board be on wood, will it be on long vertical panels, will it form a pathway around the site, will people be on the site with your booklet or can it be read elsewhere and still make sense ... etc. Also think about the use of colour, no point producing fabulous colour illustrations or colour-coded routes on a map if the final product is a photocopied sheet or a duotone panel. If you are intending to produce exterior panels, think about maintenance issues and length of time that they are expected to last.

Choose a maximum of 2 fonts (serif fonts are best for people to read – I personally use Elegant Garamond for text) make sure the headline text is 'significant' and will grab peoples attention both visually and by the content. Also think about font size, font colour and the layout on the page.
Text sizes regarded to be best for interpretation panels are as a minimum:
Headlines 12mm (60-72pts)
Sub Headings 20mm (48 - 60pts)
Text 8mm (24-30pt)
Captions 8mm (24-30pt)

If you have a designer then make sure they are consulted early on, instead of just dumping a load of pictures and text on their laps .... It is important to realise that the illustrations will affect the text layout and the text will affect the graphics. You will spend time removing words, graphics, moving them about and then moving them again. Think about it early on.

My rule of thumb for the first draft is to print it out to size and see if it actually works ... the screen of a computer is not the best place to view drafts.

Act as if you are one of 4 stereotypes ...

a) Just looks at the title and the picture ... then walks on
b) Just looks at the title and first paragraph as well as the pictures before moving on.
c) Looks at everything and then walks on ... (usually saying ... hmm I never knew that)
d) looks at everything, is interested and goes to a library or bookshop to find out more.

Your interpretation should work on ALL 4 levels of interest, and there is nothing wrong with the viewer only getting the information they want from only the title and picture, there is something wrong if they can't though.

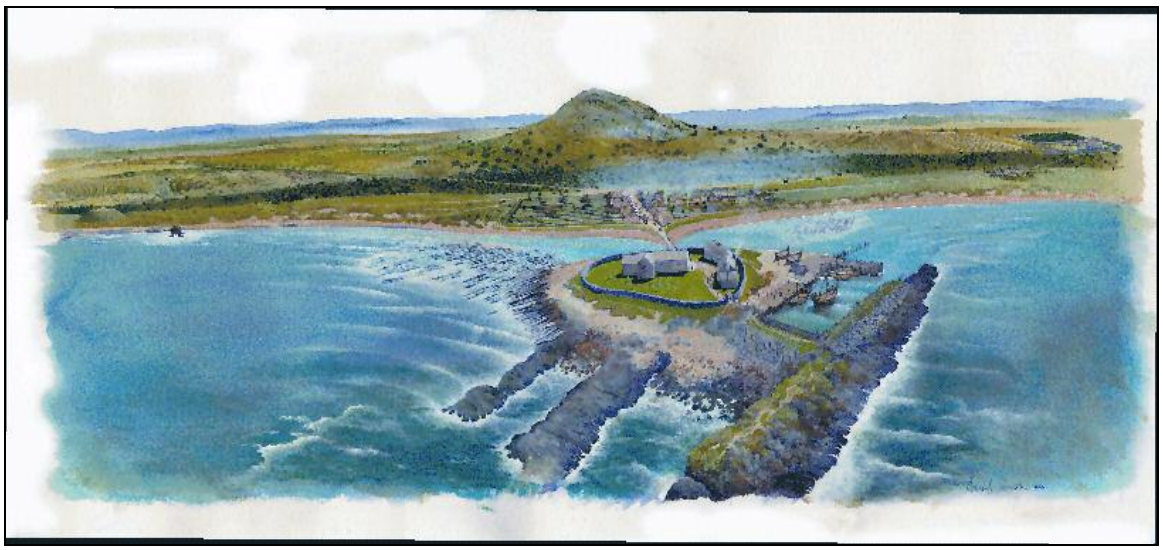
Be prepared to try to create text that is no more than 200 words per board / item, however less is best. Be prepared to edit ruthlessly and keep editing until you have the words pared down to the minimum without losing the meaning. Try not to repeat yourself, or say the same thing again, as by repeating yourself over and over, you are using up words which if you had not repeated yourself you could have used elsewhere... but I repeat myself!
Go through each word and check spelling and grammar and also check the text layout, as sometimes it is better to keep certain words together.

For example;

the early 13th century church of St Cuthbert was founded to meet the needs of the pilgrim route.	*the early 13th century church of St Cuthbert was founded to meet the needs of the pilgrim route.*

by bringing the ***St*** *and* ***Cuthbert*** onto the same line you have help the human eye associate words together.

Show it to someone who knows nothing about the subject (quite often you can be too close and know too much about it yourself) to ascertain if the message is coming across loud and clear.



North Berwick in the 13th century – David Simon

Be prepared to rewrite, redesign and redo at least twice.

At the end of the day you want to have a sign or booklet that suits the needs of the end user. It should appeal to the broadest number of people, but does not have to be dumbed down to be accessible, just carefully thought out first.

This guide is merely a short and simple first step, if you wish to learn more then I recommend these books, magazines and websites for further reading.

Books

Evans, H
Newsmans English
Heinemann, 1972

Gross, M. Zehr, J. and Zimmerman R.
Signs, Trails and Wayside Exhibits, Interpreter's Handbook Series.
UW-SP Foundation Press, Inc, 1994

Gross, M. Zehr, J. and Zimmerman R.
Creating Enviromental Publications, Interpreter's Handbook Series.
UW-SP Foundation Press, Inc, 1994

McManus, P M.
Oh Yes They DO: how Museum Visitors Read Labels and Interact with Exhibits Text
Curator 1989

Scottish Tourist Board
Site Interpretation: A Practical Guide
STB 1993

Magazines

Interpret Scotland

Websites

Panel Manufacturers

Arien Products - Somerset - 01278 785268 - www.arien.com

BEP signs - Greenock - 01475 784423 - www.bepsigns.co.uk

Charles Henshaw - Edinburgh 0131 337 4204 - www.charles-henshaw.com

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Chance Heritage

Activity Booklet

For kids





CHANCE HERITAGE TRUST

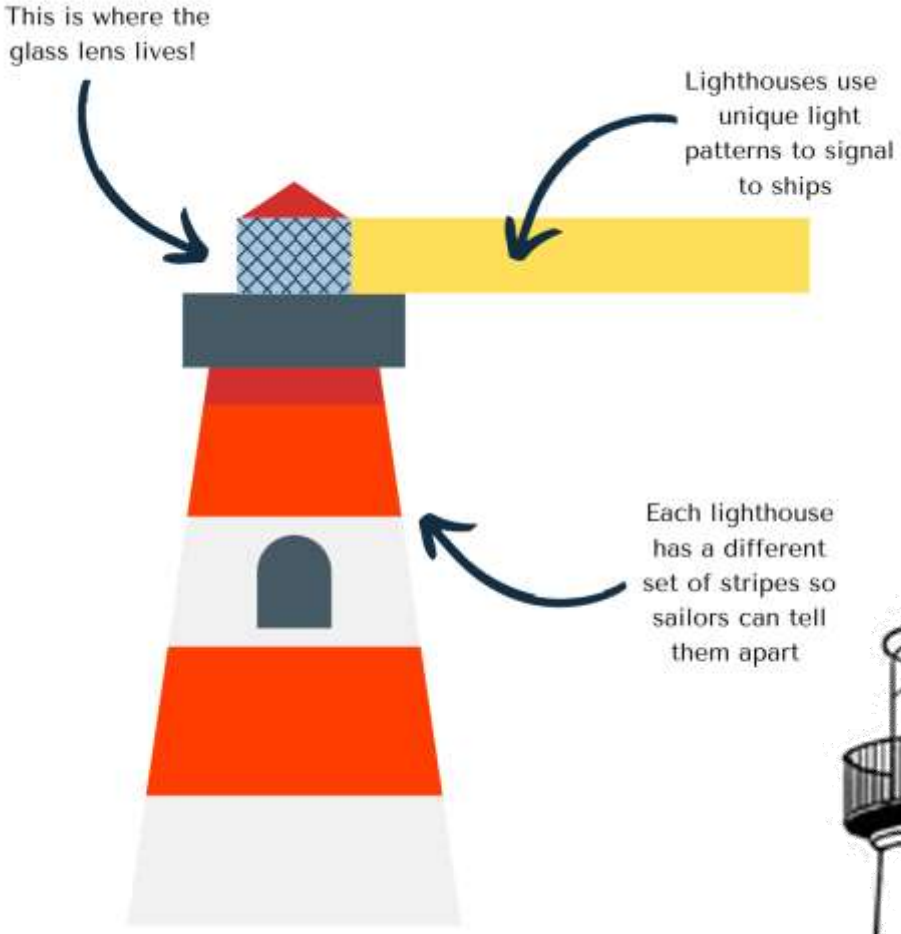
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DigVentures

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Chance Glassworks from Smethwick installed glass lenses in over 2000 lighthouses in more than 80 countries all around the world to make their lights shine further and brighter.

Do you know how a lighthouse works?



Each lighthouse is unique. Add some stripes to this lighthouse to make your own design.

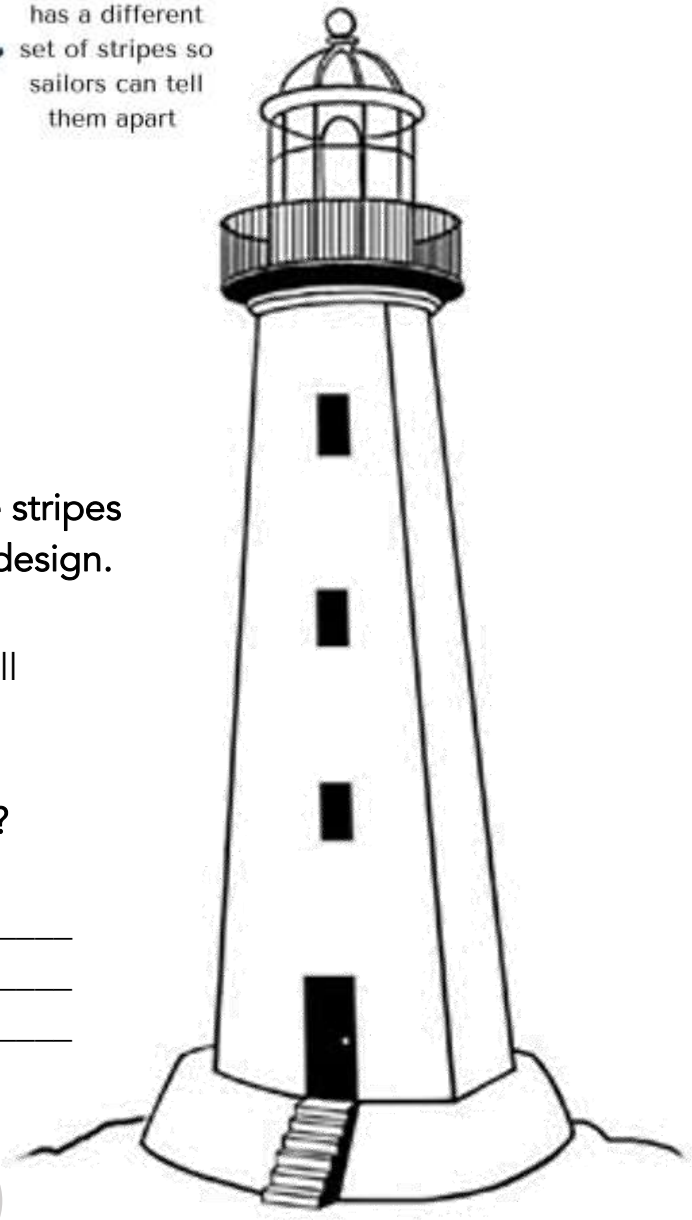
Chance Glassworks put lighthouses all over the world to keep ships safe.

Where would you build a lighthouse?

_____

_____

_____



The light from the lighthouse shines all night to warn ships there are rocks nearby.

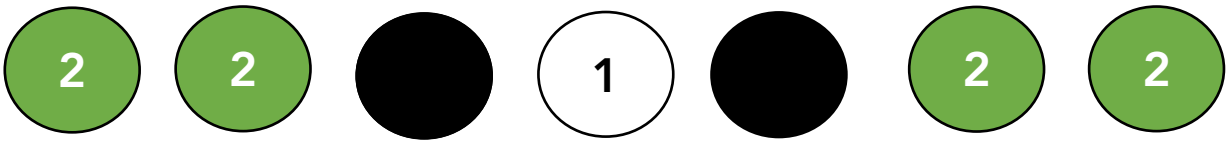
Each lighthouse will flash in a unique pattern using a variety of different colours.

This tells sailors which lighthouse they're looking at even if it is night and shows them the safe way past the rocks.





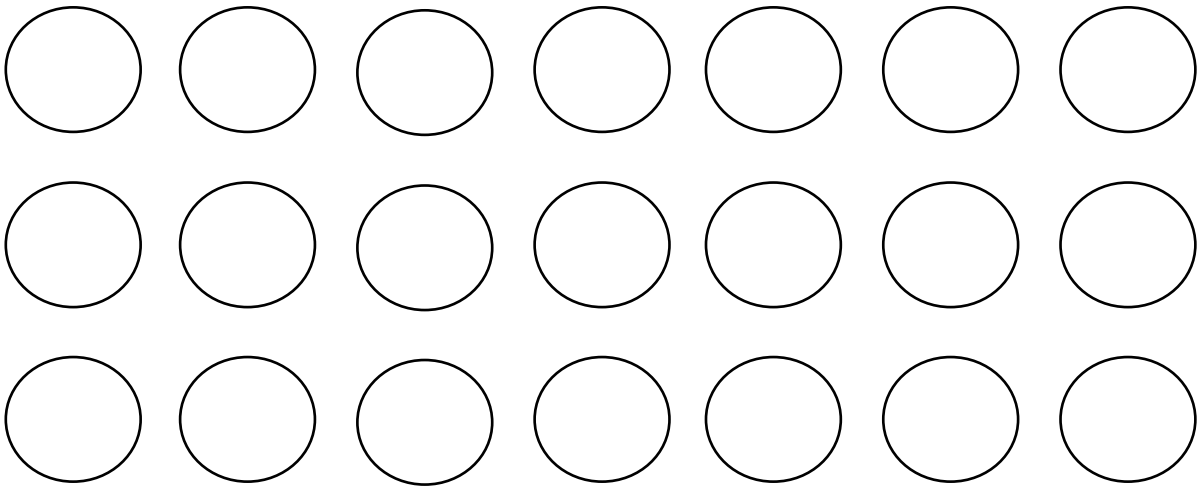
The circles show how this lighthouse flashes green for 2 seconds, then white for 1 second and then green again. Do you see?



Think about your own lighthouse.

Colour in the circles below to show the pattern of the flashes of your lighthouse.
Add a number to show how long the light will flash for.







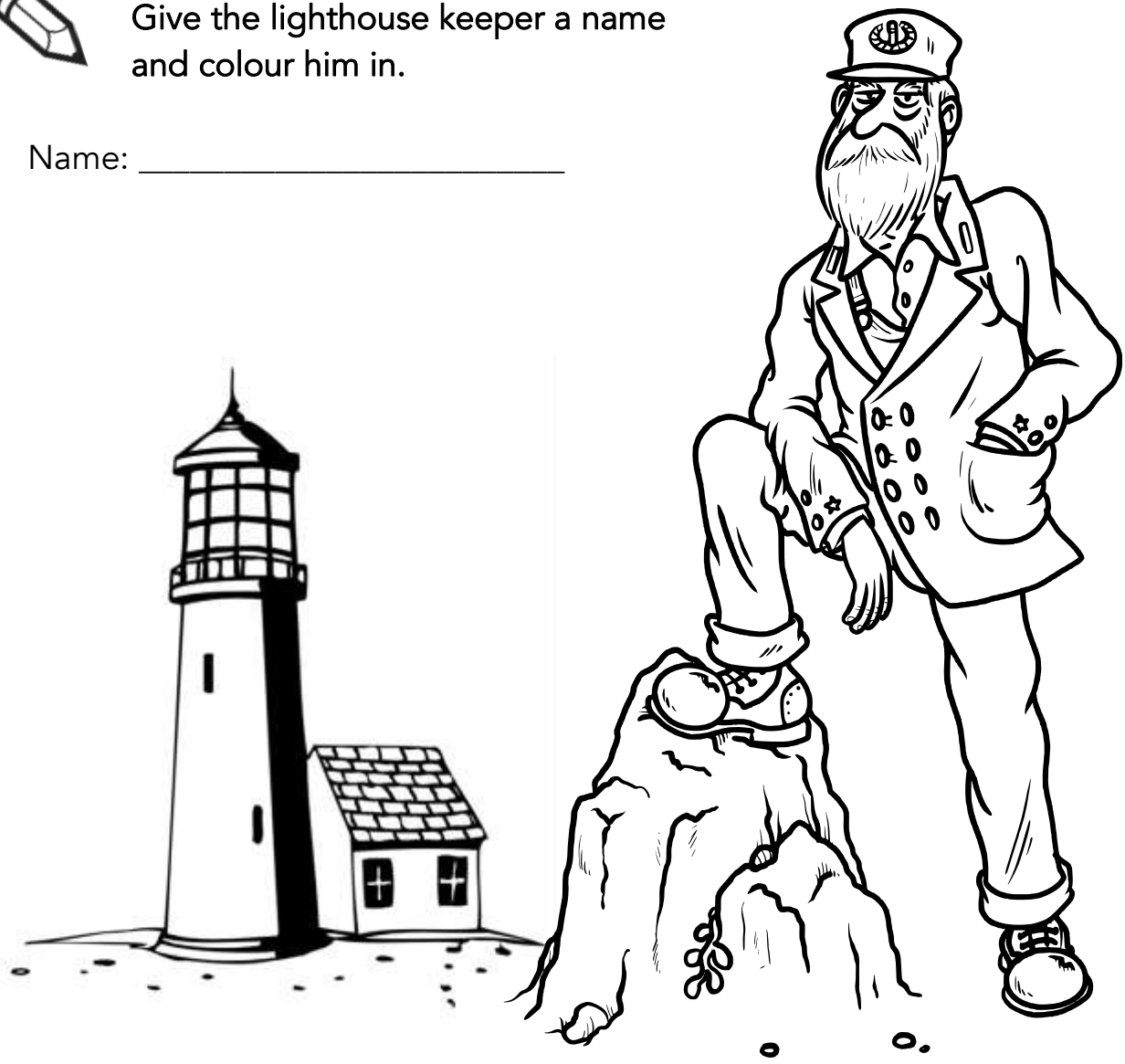
Activity idea: Get a torch and see if you can recreate this pattern at home.



A lighthouse keeper lives in the house next door to look after the light. He cannot let the light go out or ships may hit the rocks.

Give the lighthouse keeper a name and colour him in.

Name: _____



What do you think a lighthouse keeper does all day long?

A lighthouse keeper lives with _____ and _____. His favourite food is _____ and he likes to drink _____. Sometimes, he _____. He likes to _____ _____ in his free time. And ___ times a day, he makes sure the light in the lighthouse is still on.
On his day off, he goes to _____.

Lighthouse word search



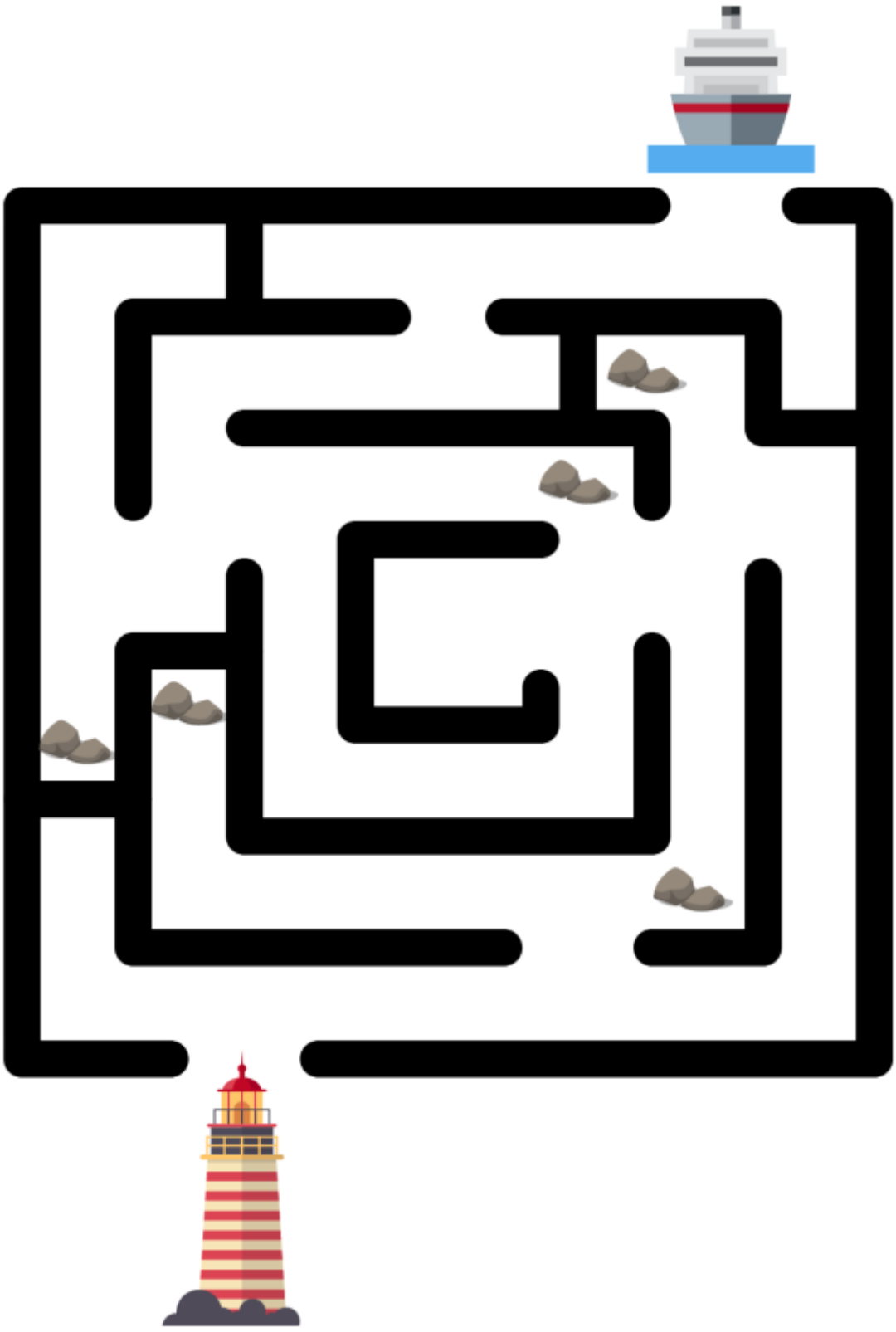
How many words related to lighthouses can you find?

K	C	W	S	M	E	T	H	W	I	C	K	K	I
G	H	N	J	D	I	U	L	F	G	F	M	K	G
Y	A	U	Q	T	O	I	Q	O	O	B	H	N	L
J	N	B	L	I	G	H	T	H	O	U	S	E	A
X	C	S	V	S	I	X	G	W	P	O	A	A	S
Q	E	A	R	W	E	W	F	L	D	M	A	M	S
T	B	I	A	V	J	A	K	E	R	N	N	M	S
V	R	L	I	H	P	N	V	N	V	U	J	J	R
T	O	O	D	M	C	O	A	S	T	S	D	Y	T
F	T	R	V	S	Y	C	F	R	Y	K	Q	H	R
G	H	S	V	H	T	T	L	U	O	H	B	D	A
Z	E	H	A	I	K	P	P	I	O	C	W	D	D
T	R	H	W	P	C	A	L	Y	F	A	K	D	E
K	S	A	L	A	H	G	P	D	Z	F	K	S	D

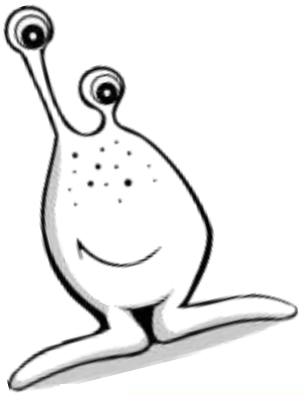
Answers: Sea Coast Lighthouse Ship Lens Chance
Brothers Smethwick Rocks Glass Sailors Cliff Trade

Troubled Waters

Can you guide the ship to the safety of the lighthouse?
Watch out for rocks!



In 1929, Chance Glassworks was asked to design a lighthouse to send light signals all the way to Mars. Plans were drawn, but it was too expensive to build.



What message would you send to Mars to tell them about life on earth?



Chance Glassworks did not only produce lenses for lighthouses.

They created all sorts of things out of glass.

Can you think of other objects that are made of glass? **Draw them here!**

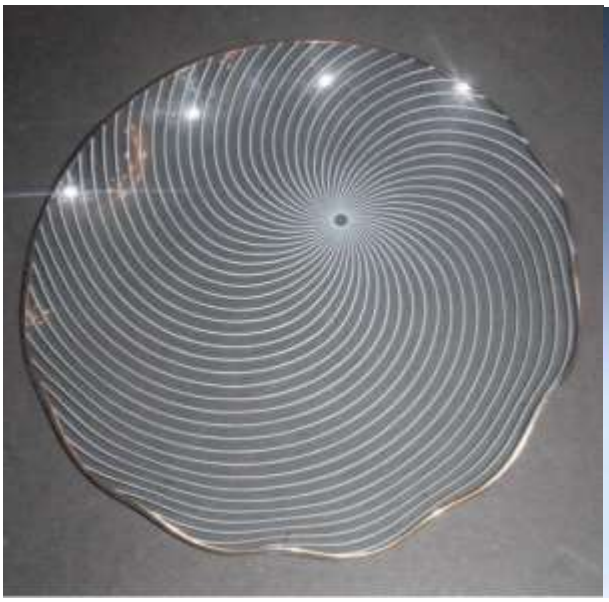








Chance Glassworks made glass plates with all sorts of designs.





Draw a design you would you put on a plate.



Well done! You completed all the activities!



We would love to see what you came up with. If you want to share your designs with us, send an email to info@chanceht.org

Or share it on Twitter or Facebook using #MadeInSmethwick

This booklet is part of the 'Made in Smethwick' project and funded by the Community Renewal Fund. The project has been delivered by DigVentures with Chance Heritage Trust.

DigVentures



Earth Trust Visitor Centre:

Planning Phases 2 & 3: Archaeological Strip Map and Strip, Map and Sample (SMS) Excavations

Little Wittenham, Oxfordshire

Written Scheme of Investigation

Stuart Noon, Chris Casswell and Joshua Hogue

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Earth Trust Visitor Centre:

Planning Phases 2 & 3: Archaeological Strip Map and Strip Map and Sample (SMS) Excavations

Written Scheme of Investigation

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Purpose of document

This document has been prepared as a Written Scheme of Investigation for the Earth Trust, describing archaeological works associated with Planning Phases 2 & 3 of the Earth Trust's Gateway Project development. The purpose of this document is to provide an outline of planned fieldwork, aims and objectives of the work, and methodology to be employed.

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Project summary

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Author(s):	Stuart Noon MCIfA Chris Casswell MCIfA Joshua Hogue DPhil
Origination date:	24 September 2019
Circulation:	Earth Trust
Reviewed by:	Manda Forster PhD MCIfA
Approval:	Brendon Wilkins MCIfA

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Acknowledgements

We'd like to begin with a sincere thank you to the Project Team at Earth Trust for inviting us to take part in this project, specifically Jayne Manley, Adam Godwin, Abi Morris, and Naomi Douglas. Thanks also to Richard Oram of the Oxfordshire County Archaeological Services for advice and support.

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1

INTRODUCTION AND SCOPE

1.1 Project background

1.1.1 DigVentures has been appointed by the Earth Trust (hereafter the Client) to prepare a Written Scheme of Investigation (WSI) for a programme of proposed works to be undertaken at the site of the Earth Trust Visitor Centre, formerly Hill Farm, Little Wittenham (hereafter the Site). The programme of works has been prepared in consultation with Richard Oram, Planning Archaeologist for Oxfordshire County Archaeological Services (hereafter OCAS) (planning application reference P16/S3133/FUL).

1.1.2 The development area, centered on SU56299257 (Figure 1), is located to the southwest of the Wittenham Clumps, off Little Wittenham Road, in the parish of Little Wittenham, Oxfordshire. The Site is situated on an area of Upper Greensand, comprising sandstone and siltstone geology at roughly 80m AOD (BGS 2019). Due to significant archaeological potential of the site, a condition has been placed on planning consent in order for the development to comply with the National Planning Policy Framework (NPPF 2019) and will be carried out in accordance with the relevant *Standards and guidance* of the Chartered Institute for Archaeologists (CIfA 2014).

1.1.3 The programme of works was originally designed as three main phases of development for the Earth Trust's Gateway Project all requiring some degree of archaeological works (see Stammitti-Campbell and Casswell 2018a, b). Planning Phase 1, the development of the skills and Learning Building was completed in 2018 (Casswell et al 2018). For a summary of this work see Section 2.1.6. This proposed programme of works incorporates Planning Phases 2 & 3: -

- Planning Phase 2, tree planting and infrastructure
- Planning Phase 3, roundhouse reconstruction and services.

1.1.4 The above phases of work require a stage specific WSI to be agreed in advance by the Planning Archaeologist for Oxfordshire County Council.

1.1.5 The current Written Scheme of Investigation specifies archaeological works to be undertaken during Planning Phase 2 & 3 of the development and incorporates material from an archaeological strategy which was defined previously by Oxford Archeology for the Earth Trust (OA 2016).

1.2 Scope of document

1.2.1 This WSI sets out the overarching strategy and archaeological methodology by which the archaeological contractor will implement the archaeological works relating to Planning Phases 2 & 3 of the development. In format and content, it conforms with current best practice and to the guidance outlined in the Chartered Institute for Archaeologists' *Standards and Guidance* (2014). This WSI is to be submitted for approval to the Planning Archaeologist for Oxfordshire County Council who provides archaeological planning advice to the Local Planning Authority. Prior to the

commencement of archaeological works, a WSI specific to each stage is prepared and requires approval by the Planning Archaeologist.

1.2.2 This WSI follows the completed Planning Phase 1, the development of the skills and Learning Building area and comprises the methodology relating to a strip, map and sample of Areas A – D incorporating an area for the purpose of public engagement involving a community dig, finds lab sessions and schools sessions. These works relate to Planning Phases 2 & 3 as previously outlined (Stammitti-Campbell and Casswell 2018a, b) as illustrated in Figure 2.

1.3 Site location and geology

1.3.1 The site is located at NGR SU 56290 92570, and is part of the Earth Trust Centre, which is situated to the southwest of the Wittenham Clumps, off Little Wittenham Road, in the parish of Little Wittenham, Oxfordshire (Figure 1). The Earth Trust Centre occupies the west end of a gently shelving plateau south of the more westerly of the Clumps at around 90m AOD, and the ground drops away more steeply to the west and south. The area of the site has been cultivated for a long period of time (Rhodes 1948). Historic mapping and aerial photography of the area around the Earth Trust Centre indicate that cultivation extends back before the 19th century, possibly into the medieval period (Allen et al. 2010, Plate 1.9; 1843 Tithe Map).

1.3.2 The proposed development comprises the area of the current Earth Trust Centre with an extension to the southwest, south and east of up to 100m wide. It does not extend north of Little Wittenham Road. The development links existing access for visitors to the minor road over Sires Hill, which runs from Brightwell to the east with White Lees Farm and Long Wittenham to the west. The new road will run southwest of the Earth Trust Centre, joining an existing track continuing 500m downslope along a field boundary and across a second field.

1.3.3 The geology is shown as Upper Greensand – sandstone and siltstone (BGS 2019). Streams rise 200-300m south of the south end of the proposed development and drain south-eastwards towards Brightwell. The land at the south end of the proposed development is often wet and was shown as `liable to flooding' on early OS maps before drainage was improved.

2 ARCHAEOLOGICAL AND HISTORIC BACKGROUND

2.1 Archaeology at Wittenham Clumps

2.1.1 The site lies some 700m west of Castle Hill, which is encircled by the ramparts of an Iron Age hillfort and is a Scheduled Ancient Monument (Oxfordshire SAM No. 208). Buried within the hillfort is a Late Bronze Age hilltop enclosure, together with features of Iron Age, Roman and medieval date (Allen et al. 2010). A number of archaeological findspots are known in and around the hillfort (information from the Oxfordshire HER). These include Anglo Saxon Pottery (SMR Number: 9001) and a Roman bracelet (SMR Number: 11605) found immediately within the hillfort, and Iron Age pottery (SMR Number: 27616), a Roman bracelet (SMR Number: 3163) and Roman awl (SMR Number: 3164) found immediately outside it.

2.1.2 The area surrounding the hillfort and including the proposed development site has been the subject of a series of archaeological investigations, beginning with work by Rhodes (1948), who found a Roman building (SMR Number: 3161) approximately 200m east of the Earth Trust Centre. Fieldwalking was carried out in advance of the construction of one of the gas pipelines that now crosses the proposed road (Brooks 1992), and this suggested the presence of a Neolithic and Bronze Age activity (SMR Number: 26095), later Iron Age prehistoric activity (SMR Number. 3160) and Roman settlement (SMR Number: 17392) immediately south and east of the Earth Trust Centre. In 1995, a geophysical survey of 2 ha. east and south-east of the Earth Trust Centre revealed a north – south aligned boundary cut by a triple-ditched enclosure (SMR Number: 16818), with internal pits (Price 1995), although geophysical survey along the line of the gas pipeline failed to identify any significant anomalies (Lingard and Wilson 1995, 2). In 1999, fieldwalking organised by the Northmoor Trust (now the Earth Trust) east of the centre gave similar indications of human activity spanning from prehistory to the Roman era.

2.1.3 A programme of archaeological investigations comprising fieldwalking, geophysical survey, and excavations was carried out between 2002 and 2005 by Oxford Archaeology during the conversion of the redundant Hill Farm (SMR Number: 26376) into the Earth Trust Centre. A complete account of the results is deposited in the Oxfordshire HER (Allen et al. 2006), and the work directly related to Castle Hill and the adjacent settlement (including the area of the Earth Trust Centre) was published (Allen et al. 2010). The publication includes reference to all previous work on the site and a summary of the most relevant information is given below. One further archaeological feature was found in the vicinity of hill farm during a watching brief for a Dipping Pond. This consisted or a dark linear feature running SSW-NNE which appeared to have been cut at least twice and then filled during the Roman Period (SMR Number: 26223)

2.1.4 Fieldwalking carried out in the fields immediately to the southwest and south of the Earth Trust Centre in 2002-3 recovered a widespread scatter of worked flint. Earlier fieldwalking in this area (Eeles pers. comm.) had apparently also recovered worked flints. This suggests a focus of earlier prehistoric activity west of the Earth Trust Centre. An Early Neolithic pit was excavated at the western edge of the present Visitor's Car Park, confirming activity here (Allen et al. 2010, 109). The 2002-3 fieldwalking also confirmed the presence of later prehistoric and Roman pottery close to the Earth Trust Centre on the south and east, but also included a concentration of Roman ceramic building material south-east of the Earth Trust Staff Car Park (SMR Number: 26223). It was thought that this might represent the remains of a Roman building or other structure.

2.1.5 A number of incomplete cropmarks (SMR Numbers: 15360, 15361, 15362) are recorded south of the Earth Trust Centre in the HER, and these and the marks recorded by Price's geophysical survey have now been confirmed and expanded by the more recent geophysical surveys (Allen et al. 2010, figures 5.2 and 5.4). Aerial photographs taken by Stuart Ainsworth of Time Team during 2003 also showed further cropmarks correlating with the geophysical survey results (ibid., plate 5.2). The more recent geophysical surveys covered the area around the Earth Trust Centre for a radius of 200m, and so include all the proposed development immediately adjacent to it. Geophysical survey data showed several small circular, sub-

rectangular and trapezoidal enclosures (SMR Number: 28679), the first characteristic of Iron Age roundhouse enclosures, together with a dense spread of pits. It is possible that the Bronze Age, Iron Age and Roman Pottery found by Dr H. Watts in 1937 from a near ploughed out rampart (SMR Number: 3154) relate to these features. West of the Earth Trust, Saxon and Roman remains including an iron lamp stand, brass key and large cut stones were identified in late 19th and early 20th century excavations while excavating for the foundations of a barn (SMR Number: 3158).

2.2 Previous archaeological investigation

2.2.1 In advance of the planning application, geotechnical test pits were dug along the line of the proposed new road in 2015, and these were monitored, and any archaeology recorded by Oxford Archaeology in line with the brief provided by Richard Oram of OCAS (Oram 2015a). Only one archaeological feature was found (OA 2015). An archaeological evaluation of the site was also requested by Richard Oram, and this was carried out in 2015 by Oxford Archaeology in accordance with the brief provided (Oram 2015b). In the light of the known archaeological background immediately around the Earth Trust Centre, investigation in this area was kept to a minimum. A report upon the results of the watching brief and evaluation was submitted to Richard Oram of OCAS and approved (OA 2015). The principal additions to the previously known archaeological background are summarised below.

2.2.2 The southern limit of the dense archaeological activity suggested by the geophysical survey was broadly confirmed by the evaluation trenches. A single pit of Roman date was found in Trench 20 south of the Roman trackway crossing Trench 19, but no other definitely archaeological features south of that until the southernmost field bordering Sires Hill, where a boundary ditch of early post-medieval date was found. The evaluation trenches in the area of dense geophysical anomalies interpreted as archaeological features successfully located most of these. Confidence in the geophysical survey interpretation has been strengthened by the evaluation.

2.2.3 The evaluation trenches also demonstrated the presence of small pits and postholes, too small to locate by normal geophysical survey. The postholes were concentrated within circular or penannular ditches indicated by the geophysical survey, and support the interpretation of these as the ditches surrounding Iron Age roundhouses and other structures. No trace of a Roman masonry building was found south-east of the Earth Trust Centre where fieldwalking had indicated a concentration of Roman tile. Either this was a wooden building roofed with tile, a smaller structure such as a corndrier that was not located by the evaluation trench, or it simply represents an area of disposal of ceramic building materials.

2.2.4 Roman activity appeared to be concentrated in the second and third centuries AD, as suggested by the previous fieldwalking and limited excavations. Some first and fourth century activity was also indicated. Two extended Roman inhumation burials were found, both towards the edge of the area of dense activity, one on the south-west (OA 2015, fig. 3 Trench 14 and plate 4) and the other on the south (ibid., fig. 3 Trench 17 and plate 8). Combined with a later Roman burial found west of the Earth

Trust Centre in 2005, they suggest a pattern of peripheral scattered burials in this period, a common phenomenon on rural Roman settlements.

2.2.5 DigVentures was previously commissioned by the Earth Trust to undertake a strip, map and sample excavation on the proposed site of the new Skills and Learning Building as part of the first stage of Planning Phase 1 of the Earth Trust's Gateway Project. Fieldwork took place between 8th and 29th October 2018 (DigVentures project code: WIT18). This stage of the project was designed to investigate suspected archaeological remains between the existing office building and the staff car park, where Iron Age and Roman remains had been recorded before. The work was conducted in the area immediately east of the existing office building where a scout hut had previously stood. This fieldwork followed a watching brief conducted in July 2018 during the demolition of the scout hut. The scout hut, along with several trees and shrubs were removed to make way for the development of the Skills and Learning Building. During the watching brief, no archaeological remains were disturbed.

2.2.6 In October 2018, the footprint of the former scout hut and nearby area was subject to an archaeological strip, map and sample excavation. The earliest archaeological feature encountered was a Late Bronze Age or Early Iron Age pit in the southeast part of the site. The majority of features investigated dated to the Early or Middle Iron Age with a noticeable lack of material dating to the Late Iron Age. Evidence for Roman activity on the site was particularly scarce and is only represented through a small number of features and a limited number of artefacts. Similarly, the occurrence of medieval and post-medieval features was also limited. Special deposits of pottery were found in three Iron Age pits. These pits contained very large assemblages of pottery in good condition, including near-complete vessels and a decorated bowl. Additionally, part of an Iron Age cremation was identified in the upper fills of one of the backfilled storage pits. Overall, the excavation suggested that the Iron Age settlement in the area may have been more comprehensive than originally believed. While the full extent is still unknown, it is likely that there are further storage pits to the east and north of the site (Casswell et al 2018).

3 AIMS AND OBJECTIVES

3.1 Archaeological aims

3.1.1 The areas of highest archaeological potential are concentrated around the periphery of the development area, and include known areas of Neolithic, Iron Age and Roman activity. While some elements of the archaeological resource will be more extensively covered than others (e.g. the Roman trackway), the areas investigated provide the opportunity to extend previous investigations, allowing for clarification of the true distribution, extent and nature of archaeological resources.

3.1.2 The list below takes into account the aims and objectives for the Iron Age and Roman periods set out in the Regional Research Framework for the Solent-Thames Region (Hey and Hind 2014):

- To establish whether remains of any periods other than those already confirmed in the dense area of archaeological activity around the Earth Trust Centre are

present in the areas to be investigated archaeologically, and if so, to date and characterise the exposed remains, and if possible to provide an indication of the environment, contacts, status and significance of activity in these periods.

- For periods already known to be present, to establish whether their extent is greater than presently known from previous survey and excavation.
- If further Neolithic features are found, to investigate whether the occupation was of short or long duration, the types and range of activities being carried out at the site, whether further information on the environment can be obtained, and to place the site within the context of other Neolithic activity in the area.
- To investigate the character of settlement activity within the areas to be investigated archaeologically in the Early, Middle and Late Iron Age, and if and how it changed over time.
- To investigate whether there was any difference in the types of activities carried out across the development area within each phase of the Iron Age.
- To investigate the range of 'special deposits' suggestive of ritual activity found in Iron Age pits and ditches in the areas to be investigate archaeologically, and what light this might shed on Iron Age beliefs.
- Should long sequences of intercutting Iron Age features rich in artefacts occur, to recover good assemblages of pottery to assist in refining artefact chronologies.
- The excavations should aim to recover evidence to assist in clarifying the extent of late Iron Age and early Roman activity within the proposed development area, to distinguish to which of the two periods belong, and whether changes in the character of activity occur between them.
- To clarify the layout of the Roman settlement within the proposed area of development area, and in particular, the relationship between the trackway and north-south ditches visible on the geophysical survey.
- The excavations should aim to clarify the character, complexity, status and duration of Roman settlement within the proposed development area, and the relationship of this to the probable villa enclosure 200m to the north-east.
- To investigate whether inhumations are the only type of human burial evidence of the Roman period within the proposed development area, and to gather further information of the distribution and date of inhumation burials here in the Roman period.

4 ARCHAEOLOGICAL METHODOLOGY

4.1 Monitoring of archaeological works

4.1.1 A programme of archaeological works will be carried out in advance of Planning Phases 2 and 3. A breakdown of the development stages has been previously been provided by DigVentures (Stammitti-Campbell & Casswell 2018a). Updated programme delivery schedules based on minimum and maximum levels of archaeology are given in Appendix 1 and 2.

4.1.2 DigVentures will inform OCAS prior to the commencement of fieldwork. There are four areas to be stripped designated A-D (Figure 2). All these areas have been identified for strip and mapping, or SMS excavation. All stripping of the Site will be

undertaken in one mobilization beginning the week commencing 4th November 2019. A summary of the programme delivery dates is given according in Table 1.

4.1.3 Areas to be stripped of topsoil will be done so under constant archaeological supervision down to the archaeologically relevant layer. The area will be cleaned and all features will be recorded on plan. Once the planning phase is completed a site visit will need to be undertaken and the sampling strategy agreed between the archaeological contractor (acting on behalf of the Client) and OCAS. A copy of the pre-excavation plan will be submitted prior to these meetings.

Stage	Area	Size	Method	Topsoil Stripping & Review Dates
Stage 2	B – sewage tank only	60m^2	SMS	4th – 11th Nov
Stage 3	C	3,200m^2	SMS Strip map	4th- 11th Nov
Stage 4	D	3,350m^2	SMS	11th – 18th Nov
Stage 5	A	2,945m^2	SMS Strip map	18th – 25th Nov
Stage 6	B	1,400m^2	Strip map	11th - 18th Nov (based on minimum archaeology) 25th Nov - 2nd Dec (based on maximum archeology)
Stage 7	Community Fieldwork	An area will be stripped for the proposed community dig which will be discussed and finalised, in terms of area and strategy, once the strip and map has commenced	SMS	March 2020 tbc

Table 1: Stages, areas, and topsoil stripping and review dates

4.2 Archaeological strip and mapping / excavation methodology

4.2.1 All work will comply to CIfA *Standard and guidance for archaeological excavation* (2014). All works will be undertaken in accordance with the standards set out within the WSI provided by DigVentures and the requirements of OCAS. The Client will afford reasonable access in order that all archaeological features and deposits revealed during excavations and groundwork can be investigated and recorded appropriately.

4.2.2 All areas identified for strip and mapping, or SMS excavation (Figure 2) will be stripped of overburden deposits with a mechanical excavator under continuous archaeological supervision down to the first archaeological horizon. All machine excavation will be carried out under constant archaeological supervision using a toothless bucket, and will include visually scanning spoil for artefacts. The area will then be assessed by a professional archaeologist to establish the extent of survival and preservation of archaeological remains. Stripping will continue in this manner, removing material in successive spits until significant archaeological remains are

encountered or, should buried archaeology be absent, the natural horizon is reached. Spoil will be removed in a systematic order, with overburden and topsoil kept separate from subsoil, and stored in designated areas (Figure 2).

4.2.3 For areas of archeological strip and mapping, archaeological features exposed at maximum impact depth will be cleaned by hand if necessary, photographed and surveyed using a GPS. Exposed fills will be described and any surface finds recovered, but no further archaeological excavation will take place.

4.2.4 Where archeological SMS excavation is planned, a sufficient sample of each feature type/deposit will be examined in order to establish the date, nature, extent and condition of the archaeological remains, encompassing the following percentage interventions:

- 100% excavation of structural remains and other areas of significant and specific activity (domestic, industrial, religious, hearths, 'special'/patterned deposits in pits or ditches etc.);
- 10% of non-structural linear features, including all intersections, terminals and at least one 'clean' intersection to minimise the risk of intrusive and/or residual finds;
- 50% sample of all pits;
- All post and stake holes that relate to specialised activities will be subject to a 100% sample;
- Post and stake holes that do not relate to specialised activities will be subject to a 50% sample.

4.2.5 In the event that unexpectedly complex and widespread archaeological remains are revealed, the Client and OCAS will be informed in order that the provisions of this WSI may be reviewed. Archaeological trenches, the location of archaeological finds of particular interest and environmental samples taken will be surveyed using a Total Station or GPS and tied in to the Ordnance Survey. Variations to the WSI and Method Statement will be agreed in advance with the Client and OCAS. The trenches will not be backfilled without the approval of OCAS.

4.3 Finds and environmental samples

4.3.1 Finds will be treated in accordance with the relevant guidance given in the Chartered Institute for Archaeologist's *Standard and guidance for archaeological field evaluation* (revised 2014), and the *Standard and guidance for the collection, documentation, conservation and research of archaeological materials* (2014), excepting where they are superseded by statements made below. Archaeological material will be handled and sorted following advice in Watkinson and Neal (1998).

4.3.2 All artefacts will be retained from excavated contexts, except features or deposits undoubtedly of modern date. In these circumstances, sufficient artefacts will only be retained to elucidate the date and function of the feature or deposit. Finds recovered will be assessed by appropriately qualified specialists, who will examine the finds to provide an identification, date and provenance of the material, and will also evaluate the significance of the assemblage.

4.3.3 All artefacts from the investigation will, as a minimum, be washed, counted, weighed and identified. Any stratified ironwork will be x-rayed and stored in a stable condition along with other fragile and delicate material. Suitable material, primarily the pottery and non-ferrous metalwork, will be scanned to assess the date range of the assemblage. The results of this scan will be appended to the submitted report.

4.3.4 Bulk environmental soil samples for plant macrofossils, small animal bones and other small artefacts will be taken from appropriate sealed and dateable archaeological contexts (each context will normally be sampled). Samples of between 40-60 litres will be taken or 100% of smaller contexts. Samples will not be taken from the intersection of features. Bulk environmental soil samples will be processed by flotation and scanned to assess the environmental potential of deposits, but will not be fully analysed. The residues and sieved fractions will be recorded and retained with the project archive. A statement on the environmental potential of excavated deposits will be included to the evaluation report. Environmental finds will be treated in accordance with relevant guidance, including reference to the following Historic England guidance documents;

- 2011 Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (second edition)
- 2014 Animal Bones and Archaeology: Guidelines for Best Practice
- 2015 Geoarchaeology: Using earth sciences to understand the archaeological record

4.3.5 The project manager will ensure that the results of palaeoenvironmental investigation, industrial residue assessments, analyses and other scientific analyses are included in a full evaluation report.

4.4 Human remains

4.4.1 In the event of discovery of any human remains, the OCAS will be informed immediately. Any remains will be left in situ, covered and protected, until the Client, Coroner and Local Planning Authority Advisor have been informed. Where development will unavoidably disturb them, they will be fully recorded, excavated and removed from the site subject to compliance with the relevant Ministry of Justice Licence, which will be obtained by DigVentures.

4.4.2 Should human remains be excavated, all excavation and post-excavation will be in accordance with the standards set out in CIfA Technical Paper 13 *Excavation and post-excavation treatment of cremated and inhumed remains* (1993) and Historic England 2004 *Human Bones from Archaeological Sites A guideline for best practice for producing human osteological assessments and analytical reports.* The final placing of human remains following analysis will be subject to the requirements of the Ministry of Justice Licence.

4.5 Treasure

4.5.1 In the event of discovery of artefacts covered or potentially covered by The Treasure Act 1996, their excavation and removal will be undertaken following notification of the Client, Coroner, British Museum and OCAS. Advice on reporting and

management of any Treasure finds will be sought from the appropriate Finds Liaison Officer.

5 PUBLIC IMPACT AND ENGAGEMENT

5.1 Accessible archaeology

5.1.1 DigVentures specialises in delivering participatory archaeological projects in collaboration with communities, researching and recording the past to professional standards. Earth Trust has identified the ambition to include public impact and engagement throughout the development programme, linked in with the archaeological works. The desired outcomes for public engagement and participation within the project have been articulated below.

5.1.2 DigVentures will offer a range of opportunities for local community members, school children and visitors to the area to get involved and learn more about the archaeology of Wittenham Clumps. Working closely with the wider project team at Earth Trust and responding to allowances within the development schedule, appropriate participation opportunities should include a community dig, guided site tours, finds laboratory sessions and an embedded public programme of events and school's sessions. Specifically, this will;

- involve volunteers in digging and supervised finds handling and processing sessions during the excavation, learning how archaeological materials are recovered and managed from professional staff
- engage with local school children with DigVentures' CyberDig sessions
- host a series of open-days where visitors will enjoy a guided tour of the site
- reach thousands through digital engagement with project microsite
- provide full access to the archaeological results via the project microsite as the trenches, finds and feature are recorded
- disseminate results of the excavations via media, broadcast, print and popular publications.

5.1.3 During the excavation, regular site tours will be included as appropriate, providing opportunities for local community members and visitors to the area to look around the excavations. A public programme will aim to present the results of the excavation and the online archaeological archive using DigVentures unique Digital Dig Team software will provide direct access to the finds and features we record. Results should be published directly onto the project microsite, providing live updates of both technical data and social media.

5.1.4 Following the excavations, a community fieldwork project will be undertaken in which volunteers will be able to learn some of the skills necessary for becoming an archaeologist. An area will be stripped for the proposed community dig which will be discussed and finalised, in terms of area and strategy, once the strip and map has commenced. Each volunteer will learn a variety of archaeological skills as guided through the DigVentures Fieldschool Curriculum (Appendix 3) by professionally qualified archaeologists. All work will conform to relevant guidelines including the Chartered Institute for Archaeologists' (2014) *Standard and guidance for archaeological field evaluation*.

6 POST-EXCAVATION AND REPORTING

6.1 Archaeological fieldwork report

6.1.1 Within six weeks of completion of all fieldwork, a draft report setting out the results will be produced and forwarded to the Client and OCAS for approval. The report will be prepared in accordance with the guidance given in the CIfA *Standard and Guidance for excavation* (Revised 2014) and CIfA *Standard and Guidance for an archaeological watching brief* (Revised 2014), except where superseded by statements below. On approval, a final of the report will be submitted the CHER and a digital copy uploaded to OASIS within two weeks of approval.

6.1.2 Emphasis will be given to placing the results into the context of the archaeology of the region, and their significance in the context of the priorities outlined in the research framework for the Regional Research Framework for the Solent-Thames Region (Hey and Hind 2015). The report will comply with the requirements of OCAS and, in any case, may include:

- a non-technical summary
- a site location plan to at least 1:10,000 scale and with an 8-figure grid reference
- the site code, planning application number, and dates of work carried out
- aims, objectives and methodology of the work undertaken
- a summary by category of the material types recovered
- a summary of the palaeoenvironmental evidence
- results and conclusions, including a consideration of the archaeological evidence from within the site set in its broader landscape and historic setting
- plans and sections at an appropriate scale locating the site, the, known and projected archaeological deposits and the extent and nature of colluvial and/or alluvial deposits, including od heights
- tabulation of finds data by context and by material type
- tabulation of contexts and archaeological features recorded
- statement of archive location

6.1.3 The preparation of the report may involve the following elements:

- the conservation of appropriate material, including x-rays of ironwork
- the spot dating of all pottery from excavated contexts. Spot dating will be corroborated by scanning of other categories of material
- the preparation of a preliminary phased site matrix with supporting lists of contexts by type (ditch fill, pit fill etc.), by spot-dated phase (early bronze age, middle iron age, roman etc.), by structural grouping (e.g. contexts by pit, by building etc.), supported by preliminary phase plans
- a statement on each category of material, including reference to quantity, provenance, range and variety, condition and existence of other primary sources
- the selection and prioritisation of bulk soil samples taken for environmental and artefactual data in the light of preliminary phasing. sieving, processing and scanning of selected soil samples will be undertaken and an assessment statement on charred food and plant remains, including references as for the categories of material

- a statement of potential for each material category and for the data collection as a whole will be prepared, including specific questions that can be answered and the potential value of the data to local, regional and national investigation priorities

6.1.4 All specialist reporting will be undertaken by experienced specialists, including;

- Animal bone – Hannah Russ
- Environmental – Rosalind McKenna
- Geoarchaeology – Joanne MacKenzie
- Prehistory pottery – Emily Edwards
- Roman pottery – Rob Perrin
- Human bone – Natasha Powers
- Medieval / post medieval pottery – Stephanie Ratkái
- Glass – Cecily Cropper
- Lithics – Joshua Hogue
- Small finds and leather – Quita Mould

6.1.5 Where appropriate and subject to further agreement, further analysis may be undertaken and the results published in a journal appropriate to the significance of finds.

7 ARCHIVE

7.1 Preparation and deposition

7.1.1 The complete project archive will be prepared in accordance with the CIfA *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives* (2014), and in line with guidance from the Oxfordshire County Council.

7.1.2 The Earth Trust Visitor Centre unique archaeological event number will be clearly marked on any documentation relating to the work. The material archive from the project, including the finds and subject to the wishes of the landowner will be deposited at the County Archive Facility. Transfer of Title will be secured from the landowner where agreement has been achieved to deposit the archive with the County Archive Facility.

7.1.3 Guidelines for preparation and deposition have been fully reviewed to ensure that the curator's requirements can be fully met. Deposition of the Digital Archive will follow guidelines outlined by the Archaeological Data Service (ADS 2015), and a digital version of the project archive will be deposited with ADS.

8 PROJECT MANAGEMENT, STAFFING AND PROFESSIONAL STANDARDS

8.1 Staffing

8.1.1 The fieldwork will be directed and supervised by Chris Casswell MCIfA, Head of Fieldwork, DigVentures, supported by a team of professional archaeologists, who will be on site, having been given prior notification by the Client, as soon as groundworks are being undertaken that could have an impact on potential

archaeological features. No groundworks that could have an impact on extant archaeology should be undertaken prior to the archaeological excavation if it has been determined that mitigation is required. The overall responsibility for the conduct and management of the project will be held by one of DigVentures' Projects Directors, Brendon Wilkins MCIfA, who will visit the fieldwork as appropriate to monitor progress and to ensure that the scope of works is adhered to. The appointed Projects Director and Head of Fieldwork will be involved in all phases of the project through to its completion.

8.1.2 The analysis of the finds and environmental data will be undertaken by DigVentures' core staff or external specialists (identified above), using DigVentures' standard pro forma recording system. The work will be carried out under the supervision of the following departmental managers under the overall direction of the Projects Director. Further information on DigVentures' external finds and environmental specialists can be provided on request.

8.2 Quality and professional standards

8.2.1 DigVentures is a Registered Organisation with the Chartered Institute for Archaeologists. All senior managers are MCIfA registered. The company endorses the *Code of conduct* of the Chartered Institute for Archaeologists and complies with the Institutes' *Standards and guidance* documents.

8.2.2 All core staff employed by DigVentures are appropriately qualified and employed in line with Chartered Institute for Archaeologists *Code of conduct*. DigVentures operates a Project Management System based on MoRPHE. All projects are undertaken under the direction of the Project Manager who is responsible to the Projects Director, who ensures the maintenance of quality standards within the organisation. The Managing Director has ultimate responsibility for all of the company's work. CVs of core staff can be found in the Appendices.

9 INSURANCE, HEALTH AND SAFETY

9.1 Policy and Risk Assessment

9.1.1 Health and safety considerations will be of paramount importance in conducting all fieldwork. Safe working practices will override archaeological considerations at all times. DigVentures will ensure that all work is carried out in accordance with its company Health and Safety Policy (2018), to standards defined in The Health and Safety at Work etc. Act 1974, and The Management of Health and Safety Regulations 1992, and in accordance with the SCAUM (Standing Conference of Archaeological Unit Managers) health and safety manual Health and Safety in Field Archaeology (1996). Trench excavation and design shall conform to Health and Safety legislation, incorporating current best engineering practice where possible.

9.1.2 A Risk Assessment will be undertaken in advance of fieldwork, under the direction of Chris Casswell (Head of Fieldwork) and approved by Brendon Wilkins (Projects Director) in liaison with the Client and OCAS. A copy will be given to OCAS prior to the commencement of works. DigVentures holds public liability insurance

(£5,000,000), employers liability insurance (£10,000,000) and professional indemnity insurance (£5,000,000).

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DigVentures

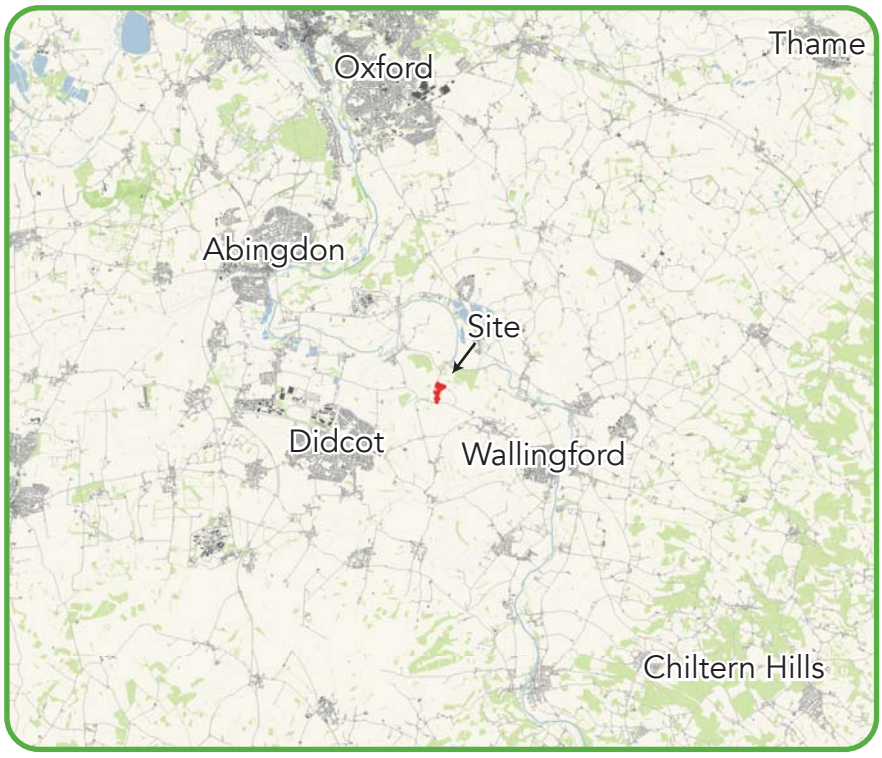




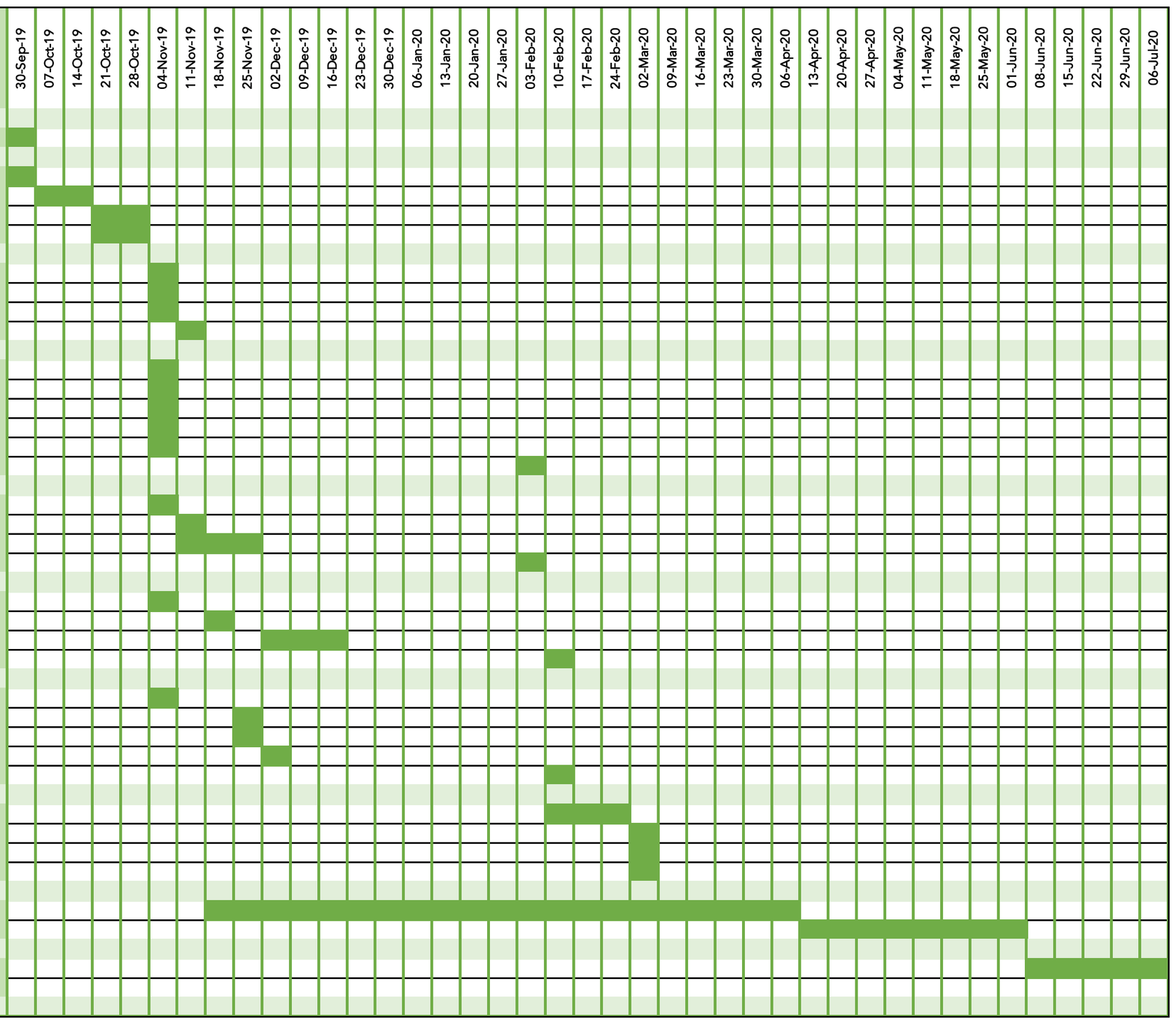
Figure 1 - Earth Trust: Site location



Figure 2 - Gateway Project staged plan of archaeological works in Phases 2 & 3

APPENDIX 1 – PROGRAMME DELIVERY FOR MINIMUM LEVEL OF ARCHAEOLOGY

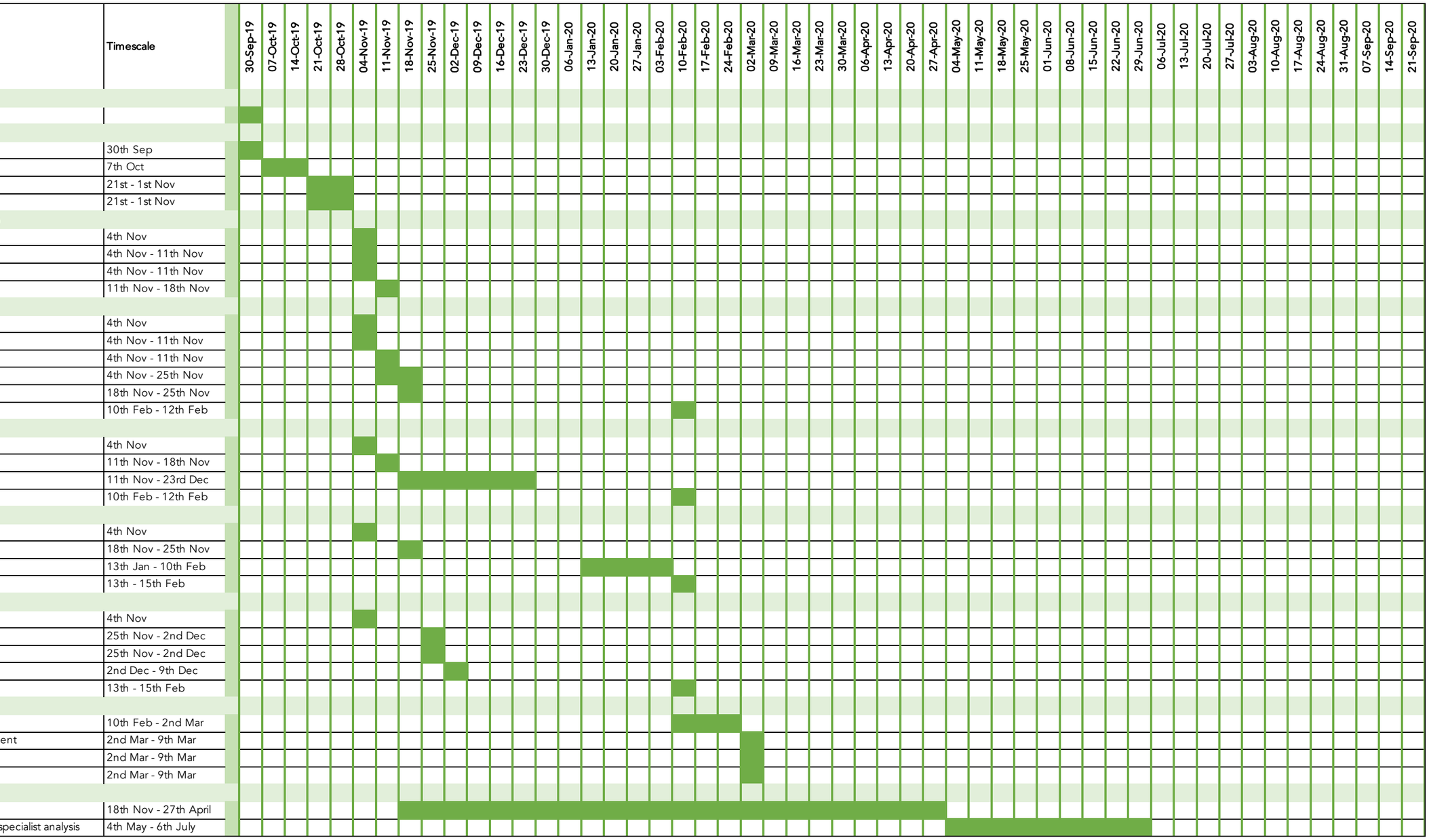
Tasks	Stage and Task details	Timescale
Project Initiation		
0.1	Commission and initiation	
Stage 1	**Project start up**	
1.1	Comprehensive WSI	30th Sep
1.2	Health and Safety (RAMS)	7th Oct
1.3	DDT set up	21st - 1st Nov
1.4	Mobilisation	21st - 1st Nov
Stage 2	**Area B excavation - sewage tank (60m^2)**	
2.1	Survey areas	4th Nov
2.2	Machine topsoil strip	4th Nov - 11th Nov
2.3	Hand excavation and recording	4th Nov - 11th Nov
2.4	Machine backfill	11th Nov - 18th Nov
Stage 3	**Area C excavation (3,200m^2)**	
3.1	Survey areas	4th Nov
3.2	Machine topsoil strip	4th Nov - 11th Nov
3.4	Strip Map	4th Nov - 11th Nov
3.3	Hand excavation and recording	4th Nov - 11th Nov
3.5	Review of Strip Map area	4th Nov - 11th Nov
3.6	Machine backfill	3rd - 5th Feb
Stage 4	**Area D excavation (3,350m^2)**	
4.1	Survey areas	4th Nov
4.2	Machine topsoil strip	11th Nov - 18th Nov
4.3	Hand excavation and recording	11th Nov - 2nd Dec
4.4	Machine backfill	20th - 27th Jan
Stage 5	**Area A excavation (2,945m^2)**	
5.1	Survey areas	4th Nov
5.2	Machine topsoil strip	18th Nov - 25th Nov
5.3	Hand excavation and recording	18th Nov - 25th Nov
5.4	Machine backfill	10th Feb - 12th Feb
Stage 6	**Area B excavation (1,400m^2)**	
6.1	Survey areas	4th Nov
6.2	Machine topsoil strip	11th Nov - 18th Nov
6.3	Strip Map	11th Nov - 18th Nov
6.4	Hand excavation and recording	18th Nov - 25th Nov
6.5	Machine backfill	10th Feb - 12th Feb
Stage 7	**Community Fieldwork**	
7.1	Community setup and engagement	Dates TBC
7.2	Mobilistation of team, plant and equipment	
7.3	Excavation	
7.4	Finds lab	
Stage 8	**Archaeological Post-Excavation**	
8.1	Post-excavation processing	18th Nov - 13th April
8.2	Post-excavation assessment reporting / specialist analysis	13th April - 8th June
Stage 9	**Post-excavation analysis, publication and archiving**	
9.1	Post-excavation analysis and reporting	8th June - 2nd Nov
9.2	Preparation / deposition archive	28th Sept - 2nd Nov
	Project Closure	



Tasks	Stage and Task details	Timescale	13-Jul-20	20-Jul-20	27-Jul-20	03-Aug-20	10-Aug-20	17-Aug-20	24-Aug-20	31-Aug-20	07-Sep-20	14-Sep-20	21-Sep-20	28-Sep-20	05-Oct-20	12-Oct-20	19-Oct-20	26-Oct-20	02-Nov-20
Project Initiation																			
0.1	Commission and initiation																		
Stage 1	**Project start up**																		
1.1	Comprehensive WSI	30th Sep																	
1.2	Health and Safety (RAMS)	7th Oct																	
1.3	DDT set up	21st - 1st Nov																	
1.4	Mobilisation	21st - 1st Nov																	
Stage 2	**Area B excavation - sewage tank (60m^2)**																		
2.1	Survey areas	4th Nov																	
2.2	Machine topsoil strip	4th Nov - 11th Nov																	
2.3	Hand excavation and recording	4th Nov - 11th Nov																	
2.4	Machine backfill	11th Nov - 18th Nov																	
Stage 3	**Area C excavation (3,200m^2)**																		
3.1	Survey areas	4th Nov																	
3.2	Machine topsoil strip	4th Nov - 11th Nov																	
3.4	Strip Map	4th Nov - 11th Nov																	
3.3	Hand excavation and recording	4th Nov - 11th Nov																	
3.5	Review of Strip Map area	4th Nov - 11th Nov																	
3.6	Machine backfill	3rd - 5th Feb																	
Stage 4	**Area D excavation (3,350m^2)**																		
4.1	Survey areas	4th Nov																	
4.2	Machine topsoil strip	11th Nov - 18th Nov																	
4.3	Hand excavation and recording	11th Nov - 2nd Dec																	
4.4	Machine backfill	20th - 27th Jan																	
Stage 5	**Area A excavation (2,945m^2)**																		
5.1	Survey areas	4th Nov																	
5.2	Machine topsoil strip	18th Nov - 25th Nov																	
5.3	Hand excavation and recording	18th Nov - 25th Nov																	
5.4	Machine backfill	10th Feb - 12th Feb																	
Stage 6	**Area B excavation (1,400m^2)**																		
6.1	Survey areas	4th Nov																	
6.2	Machine topsoil strip	11th Nov - 18th Nov																	
6.3	Strip Map	11th Nov - 18th Nov																	
6.4	Hand excavation and recording	18th Nov - 25th Nov																	
6.5	Machine backfill	10th Feb - 12th Feb																	
Stage 7	**Community Fieldwork**																		
7.1	Community setup and engagement	Dates TBC																	
7.2	Mobilistation of team, plant and equipment																		
7.3	Excavation																		
7.4	Finds lab																		
Stage 8	**Archaeological Post-Excavation**																		
8.1	Post-excavation processing	18th Nov - 13th April																	
8.2	Post-excavation assessment reporting / specialist analysis	13th April - 8th June																	
Stage 9	**Post-excavation analysis, publication and archiving**																		
9.1	Post-excavation analysis and reporting	8th June - 2nd Nov																	
9.2	Preparation / deposition archive	28th Sept - 2nd Nov																	
	Project Closure																		

APPENDIX 2 – PROGRAMME DELIVERY FOR MAXIMUM LEVEL OF ARCHAEOLOGY

Tasks	Stage and Task details	Timescale
Project Initiation		
0.1	Commission and initiation	
Stage 1	**Project start up**	
1.1	Comprehensive WSI	30th Sep
1.2	Health and Safety (RAMS)	7th Oct
1.3	DDT set up	21st - 1st Nov
1.4	Mobilisation	21st - 1st Nov
Stage 2	**Area B excavation - sewage tank (60m^2)**	
2.1	Survey areas	4th Nov
2.2	Machine topsoil strip	4th Nov - 11th Nov
2.3	Hand excavation and recording	4th Nov - 11th Nov
2.4	Machine backfill	11th Nov - 18th Nov
Stage 3	**Area C excavation (3,200m^2)**	
3.1	Survey areas	4th Nov
3.2	Machine topsoil strip	4th Nov - 11th Nov
3.4	Strip Map	4th Nov - 11th Nov
3.3	Hand excavation and recording	4th Nov - 25th Nov
3.5	Review of Strip Map area	18th Nov - 25th Nov
3.6	Machine backfill	10th Feb - 12th Feb
Stage 4	**Area D excavation (3,350m^2)**	
4.1	Survey areas	4th Nov
4.2	Machine topsoil strip	11th Nov - 18th Nov
4.3	Hand excavation and recording	11th Nov - 23rd Dec
4.4	Machine backfill	10th Feb - 12th Feb
Stage 5	**Area A excavation (2,945m^2)**	
5.1	Survey areas	4th Nov
5.2	Machine topsoil strip	18th Nov - 25th Nov
5.3	Hand excavation and recording	13th Jan - 10th Feb
5.4	Machine backfill	13th - 15th Feb
Stage 6	**Area B excavation (1,400m^2)**	
6.1	Survey areas	4th Nov
6.2	Machine topsoil strip	25th Nov - 2nd Dec
6.3	Strip Map	25th Nov - 2nd Dec
6.4	Hand excavation and recording	2nd Dec - 9th Dec
6.5	Machine backfill	13th - 15th Feb
Stage 7	**Community Fieldwork**	
7.1	Community setup and engagement	10th Feb - 2nd Mar
7.2	Mobilistation of team, plant and equipment	2nd Mar - 9th Mar
7.3	Excavation	2nd Mar - 9th Mar
7.4	Finds lab	2nd Mar - 9th Mar
Stage 8	**Archaeological Post-Excavation**	
8.1	Post-excavation processing	18th Nov - 27th April
8.2	Post-excavation assessment reporting / specialist analysis	4th May - 6th July



Tasks	Stage and Task details	Timescale	28-Sep-20	05-Oct-20	12-Oct-20	19-Oct-20	26-Oct-20	02-Nov-20	09-Nov-20	16-Nov-20	23-Nov-20	30-Nov-20	07-Dec-20	14-Dec-20						
Project Initiation																				
0.1	Commission and initiation																			
Stage 1	**Project start up**																			
1.1	Comprehensive WSI	30th Sep																		
1.2	Health and Safety (RAMS)	7th Oct																		
1.3	DDT set up	21st - 1st Nov																		
1.4	Mobilisation	21st - 1st Nov																		
Stage 2	**Area B excavation - sewage tank (60m^2)**																			
2.1	Survey areas	4th Nov																		
2.2	Machine topsoil strip	4th Nov - 11th Nov																		
2.3	Hand excavation and recording	4th Nov - 11th Nov																		
2.4	Machine backfill	11th Nov - 18th Nov																		
Stage 3	**Area C excavation (3,200m^2)**																			
3.1	Survey areas	4th Nov																		
3.2	Machine topsoil strip	4th Nov - 11th Nov																		
3.4	Strip Map	4th Nov - 11th Nov																		
3.3	Hand excavation and recording	4th Nov - 25th Nov																		
3.5	Review of Strip Map area	18th Nov - 25th Nov																		
3.6	Machine backfill	10th Feb - 12th Feb																		
Stage 4	**Area D excavation (3,350m^2)**																			
4.1	Survey areas	4th Nov																		
4.2	Machine topsoil strip	11th Nov - 18th Nov																		
4.3	Hand excavation and recording	11th Nov - 23rd Dec																		
4.4	Machine backfill	10th Feb - 12th Feb																		
Stage 5	**Area A excavation (2,945m^2)**																			
5.1	Survey areas	4th Nov																		
5.2	Machine topsoil strip	18th Nov - 25th Nov																		
5.3	Hand excavation and recording	13th Jan - 10th Feb																		
5.4	Machine backfill	13th - 15th Feb																		
Stage 6	**Area B excavation (1,400m^2)**																			
6.1	Survey areas	4th Nov																		
6.2	Machine topsoil strip	25th Nov - 2nd Dec																		
6.3	Strip Map	25th Nov - 2nd Dec																		
6.4	Hand excavation and recording	2nd Dec - 9th Dec																		
6.5	Machine backfill	13th - 15th Feb																		
Stage 7	**Community Fieldwork**																			
7.1	Community setup and engagement	10th Feb - 2nd Mar																		
7.2	Mobilistation of team, plant and equipment	2nd Mar - 9th Mar																		
7.3	Excavation	2nd Mar - 9th Mar																		
7.4	Finds lab	2nd Mar - 9th Mar																		
Stage 8	**Archaeological Post-Excavation**																			
8.1	Post-excavation processing	18th Nov - 27th April																		
8.2	Post-excavation assessment reporting / specialist analysis	4th May - 6th July																		

APPENDIX 3 – FIELDSCHOOL CURRICULUM

Archaeology Field Schools 2019

DigVentures' field school curriculum for archaeology forms the basis of all our on-site vocational training opportunities. Field schools are available to participants of all skills levels to attend and receive hands-on training over the course of one day, two days or one week (or more). Field schools are designed and run by professional archaeologists, working alongside our Venturers to excavate and record archaeology to the highest standards. Due the unique nature of each of the archaeological sites we work at, the content of the field schools may vary from project to project. However, our core learning curriculum will remain consistent across all our projects and provides an outline of the minimum our participants (or Venturers) should expect to achieve during their time with us on site.

Our archaeology field school is endorsed by the Chartered Institute for Archaeologists and designed to support the Archaeology Skills Passport.

About the projects

Each of our archaeological sites has a specific Project Design attached to it. This document will provide the research background to the excavation, outlining some very important details about the period, the location and what we hope to find. This is the place to find out what the aims and objectives are, where we will be putting our archaeological trenches and what the overarching strategy is for recovering all that vital archaeological information. You can also find the general methods statements here, and learn about the particular approaches we might be taking.

Each archaeological project is supported by a project microsite – and this should be your first point of call for your site preparations. Once you have had a look through the archaeological project design, you can have a look over the 'Plan Your Visit' section which includes the project set up and all the information you need to know to make your archaeological experience run as smoothly as possible. As the archaeological project continues, this is the place where the technical data recovered will be stored and where you can look up the archaeological information you have helped to excavate and record!

About the field school

Archaeology is a profession, as well as an academic field of study. Many years of experience, skills development and education are necessary in order to develop the expertise, and attain the necessary qualifications, to run archaeological excavations. Archaeology is also an activity which inspires enthusiasts all around the world, from active volunteers through to armchair archaeologists who devour every book, programme and magazine they can get their hands on. We are consistently amazed at the passion and level of knowledge of the people we meet through our work at DigVentures, and everyone has one thing in common: they want to learn more about how to do archaeology.

We have designed our field schools to help support anyone who is keen to roll up their sleeves, jump in the trenches and learn how archaeology is done. Whether you can join us

for one day, a weekend or a full week (or two), we can teach you what you need to know to get the most out of your archaeological experience.

Our core learning curriculum

Our field schools provide a step-by-step guide through the core skills needed to contribute to an archaeological excavation. What do you need to know about the archaeology before you begin to dig? How do you recognise and excavated archaeological layers? What's the point of drawing in the age of digital? What's with all the string, and funny red and white sticks in the trenches? If you are with us for a single day, we will make sure you get to grips with the fundamental skills, such as using a trowel. The longer you can stay, the more you will learn. You can use the look-up table below to see which of the core archaeological skills you will learn on a DigVentures field school depending on the length of your experience.

Skill	Learning outcome	One Day	Two Days	Week +
Professional ethics	Can anyone just turn up and dig an archaeological site? Or is there more to it than that?	✓	✓	✓
Site Safety	Be aware of the particular Health & Safety issues on the archaeological project	✓	✓	✓
Small hand tools	Understand the correct use of the trowel and other smaller hand tools including their safe use and maintenance.	✓	✓	✓
Large hand tools	Understand the correct and safe use of larger tools as well as appropriate loading for buckets and wheelbarrows.	✓	✓	✓
Site formation processes	Understand the process of site formation, including fills, layers, structures or natural deposits. Everything is in the ground for a reason and sites come to look the way they do now for a number of different reasons. By the time you leave site you will have a basic understanding of why the site looks the way it does.	✓	✓	✓
Stratigraphic excavation	Understand the concept of physical and chronological stratigraphy as well as the methods of recording the sequences and be able to remove layers and fills in the correct order for structured excavation.		✓	✓
Artefact recording	Understand how to recover artefacts safely from archaeological deposits, how to store finds on-site and how to complete the Small Finds record.		✓	✓
Context recording	Understand the procedure for the completion of a standard context record sheet using Digital Dig Team.		✓	✓
Survey	Appreciate the concept of site/national			✓

Skill	Learning outcome	One Day	Two Days	Week +
	grid systems and placement of trenches within this. It is important we know exactly where archaeological remains were found and you will be familiarised with the use of traditional hand tape measurements and in the application of GPS and total station readings.			
Measured drawing (planning and section drawing)	Understand the various elements that must be present on a plan and section drawing, including the use of conventions and how the drawing is located.			✓
Photography	Have a basic grasp of the fundamental requirements for camera use and the sequenced methodology of photographic recording.			✓
Sampling	Understand the procedure for the collecting archaeological samples for artefacts and ecofacts, including why we take them, how they are recorded and what happens next.			✓

National Occupational Standards

All our training programmes are built upon the framework of National Occupational Standards (NOS) developed by the Chartered Institute of Archaeologists. The NOS for archaeological practice defines the range of skills that archaeologists may need to perfect in order to do their job. They provide the perfect framework for training programmes as they break down a complicated job into a collection of individual skills and tasks. This is great for both practising and avocational archaeologists as it provides a clear roadmap for skills development.

To help that skills development, you can find the individual NOS standards which this course supports below. If you would like to record your own skills development, we recommend you use the Archaeology Skills Passport. This has been developed in line with NOS, and provides a simple record book of your learning achievements.

The learning outcomes from this course are defined using National Occupational Standards (NOS). This course *supports* and *contributes* to the Knowledge Requirements for particular units within the NOS for Archaeological Practice. These are:

AC5 Contribute to intrusive investigations
https://www.ukstandards.org.uk/PublishedNos/CCSAPAC5.pdf

This includes:

- Preparing for operations, including understanding the methods used, the safety arrangements, identifying suitable equipment and applying technical standards

- Undertaking intrusive investigation, including identifying, investigating and recording archaeology and using appropriate tools competently
- Preparing records and schedules, including making accurate records and verifying data

Recording your archaeology skills

For those participants who are keen to develop their archaeological skills-set, we recommend using the Archaeology Skills Passport to record the skills you learn as you progress. Depending on whether you are joining us for a couple of days or a full week, you will have the opportunity to learn or add to the skills you already have. The course contributes to a number of Core Skills as identified in the Skills Passport, and the table above provides an outline of which should be expected to be achieved during your experience.

Providing feedback

Once you have completed your fieldwork with us, we will ask a couple of additional questions about your experience. This helps us see how much you have learnt while you have been part of our excavations and also makes sure we are doing a great job! If there is anything you would like to know or would like to tell us while you are still digging, just speak to a member of the team.

The Field School Curriculum – what to expect!

Dig For One Day

Morning briefing

On the first morning of your arrival to site, you will be greeted by the DigVentures welcoming party where members of the team will introduce themselves and their roles. We will ask you to introduce yourself as well, and ask a little about why you decided to join the dig. All new Venturers will then receive a full project briefing and site induction, while existing Venturers will head out to the trenches to make a start. The project briefing will include a background to the archaeological research, detailing why we are digging the site, what we are hoping to achieve and what our archaeological strategy and methodology is. As part of the site induction, all Venturers will be talked through our site Risk Assessment, where a member of the team will highlight any particular Health and Safety issues or advice. We will also create your own Venturer profile on the project Digital Dig Team website and then head out to the trenches.

To the trenches!

When you arrive on site you will receive a full orientation from one of the DigVentures team. This begins with a background to the period we are investigating, re-capping the aims of the dig and the site's significance. You'll be shown any relevant aerial maps, previous research and geophysics results of the area. Venturers are then introduced to each trench, where you can see what we've found so far and what we plan to achieve by the end of the dig. You will learn about the tools of the trade, why we excavate and record the way we do and what to do when you find something. Finally, we will run through the day's tasks and what you will be doing while you are on-site.

Trowelling 101

The most important tool in an archaeologist's kit is their trowel. No matter what site you're on there's always plenty of trowelling to be done. This may be the first time you come face to face with archaeology which is still in the ground and yet to be discovered - it's important we get the basics nailed before developing your skills further.

Skills and learning

Learning opportunities will present themselves throughout the day while we are on site and will vary from site to site, depending on what we are investigating, what we have found and what stage the project is at. As a minimum, you will walk away from site having learnt the following skills:

Skill	Learning outcome
Professional ethics	Can anyone just turn up and dig an archaeological site? Or is there more to it than that?
Site Safety	Be aware of the particular Health & Safety issues on the archaeological project
Small handtools	Understand the correct use of the trowel and other smaller hand tools including their safe use and maintenance.
Large handtools	Understand the correct and safe use of larger tools as well as appropriate loading for buckets and wheelbarrows.
Site formation processes	Understand the process of site formation, including fills, layers, structures or natural deposits. Everything is in the ground for a reason and sites come to look the way they do now for a number of different reasons. By the time you leave site you will have a basic understanding of why the site looks the way it does.

Dig For Two Days

Morning briefing

On the first morning of your arrival to site, you will be greeted by the DigVentures welcoming party where members of the team will introduce themselves and their roles. We will ask you to introduce yourself as well, and ask a little about why you decided to join the dig. All new Venturers will then receive a full project briefing and site induction, while existing Venturers will head out to the trenches to make a start. The project briefing will include a background to the archaeological research, detailing why we are digging the site, what we are hoping to achieve and what our archaeological strategy and methodology is. As part of the site induction, all Venturers will be talked through our site Risk Assessment, where a member of the team will highlight any particular Health and Safety issues or advice. We will also create your own Venturer profile on the project Digital Dig Team website and then head out to the trenches.

To the trenches!

When you arrive on site you will receive a full orientation from one of the DigVentures team. This begins with a background to the period we are investigating, re-capping the aims of the dig and the site's significance. You'll be shown any relevant aerial maps, previous research and geophysics results of the area. Venturers are then introduced to each trench, where you can see what we've found so far and what we plan to achieve by the end of the dig. You will learn about the tools of the trade, why we excavate and record the way we do and what to do when you find something. Finally, we will run through the day's tasks and what you will be doing while you are on-site.

Trowelling 101

The most important tool in an archaeologist's kit is their trowel. No matter what site you're on there's always plenty of trowelling to be done. This may be the first time you come face to face with archaeology which is still in the ground and yet to be discovered - it's important we get the basics nailed before developing your skills further.

Skills and learning

Learning opportunities will present themselves throughout the day while we are on site and will vary from site to site, depending on what we are investigating, what we have found and what stage the project is at. As a minimum, you will walk away from site having learnt the following skills:

Skill	Learning outcome
Professional ethics	Can anyone just turn up and dig an archaeological site? Or is there more to it than that?
Site Safety	Be aware of the particular Health & Safety issues on the archaeological project
Small handtools	Understand the correct use of the trowel and other smaller hand tools including their safe use and maintenance.
Large handtools	Understand the correct and safe use of larger tools as well as appropriate loading for buckets and wheelbarrows.
Site formation processes	Understand the process of site formation, including fills, layers, structures or natural deposits. Everything is in the ground for a reason and sites come to look the way they do now for a number of different reasons. By the time you leave site you will have a basic understanding of why the site looks the way it does.
Artefact recovery and recording	Understand how to recover artefacts safely from archaeological deposits, how to store finds on-site and how to complete the Small Finds record. Where possible, participants will also learn how to wash and quantify different artefact types and materials.
Stratigraphic excavation	Understand the concept of physical and chronological stratigraphy as well as the methods of recording the sequences and be able to remove layers and fills in the correct order for structured excavation.
Context recording	Understand the procedure for the completion of a standard context record sheet using Digital Dig Team.

Dig For A Week (or more)

Morning briefing

On the first morning of your arrival to site, you will be greeted by the DigVentures welcoming party where members of the team will introduce themselves and their roles. We will ask you to introduce yourself as well, and ask a little about why you decided to join the dig. All new Venturers will then receive a full project briefing and site induction, while existing Venturers will head out to the trenches to make a start. The project briefing will include a background to the archaeological research, detailing why we are digging the site, what we are hoping to achieve and what our archaeological strategy and methodology is. As part of the site induction, all Venturers will be talked through our site Risk Assessment, where a member of the team will highlight any particular Health and Safety issues or advice. We will also create your own Venturer profile on the project Digital Dig Team website and then head out to the trenches.

To the trenches!

When you arrive on site you will receive a full orientation from one of the DigVentures team. This begins with a background to the period we are investigating, re-capping the aims of the dig and the site's significance. You'll be shown any relevant aerial maps, previous research and geophysics results of the area. Venturers are then introduced to each trench, where you can see what we've found so far and what we plan to achieve by the end of the dig. You will learn about the tools of the trade, why we excavate and record the way we do and what to do when you find something. Finally, we will run through the day's tasks and what you will be doing while you are on-site.

Trowelling 101

The most important tool in an archaeologist's kit is their trowel. No matter what site you're on there's always plenty of trowelling to be done. This may be the first time you come face to face with archaeology which is still in the ground and yet to be discovered - it's important we get the basics nailed before developing your skills further.

Skills and learning

Learning opportunities will present themselves throughout the day while we are on site and will vary from site to site, depending on what we are investigating, what we have found and what stage the project is at. As a minimum, you will walk away from site having learnt the following skills:

Skill	Learning outcome
Professional ethics	Can anyone just turn up and dig an archaeological site? Or is there more to it than that?
Small handtools	Understand the correct use of the trowel and other smaller hand tools including their safe use and maintenance.
Large handtools	Understand the correct and safe use of larger tools as well as appropriate loading for buckets and wheelbarrows.
Site formation processes	Understand the process of site formation, including fills, layers, structures or natural deposits. Everything is in the ground for a reason and sites come to look the way they do now for a number of different reasons. By the time you leave site you will have a basic understanding of why the site looks the way it does.

Skill	Learning outcome
Artefact recovery and recording	Understand how to recover artefacts safely from archaeological deposits, how to store finds on-site and how to complete the Small Finds record. Where possible, participants will also learn how to wash and quantify different artefact types and materials.
Stratigraphic excavation	Understand the concept of physical and chronological stratigraphy as well as the methods of recording the sequences and be able to remove layers and fills in the correct order for structured excavation.
Context recording	Understand the procedure for the completion of a standard context record sheet using Digital Dig Team.
Survey	Appreciate the concept of site/national grid systems and placement of trenches within this. It is important we know exactly where archaeological remains were found and you will be familiarised with the use of traditional hand tape measurements and in the application of GPS and total station readings.
Measured drawing (planning and section drawing)	Understand the various elements that must be present on a plan and section drawing, including the use of conventions and how the drawing is located.
Photography	Have a basic grasp of the fundamental requirements for camera use and the sequenced methodology of photographic recording.
Sampling	Understand the procedure for the collecting archaeological samples for artefacts and ecofacts, how to record them, why we take them and what happens next.